

EXPLORATION DIVISION  
Received... 10/9-74.

	Visa	Copy
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DRILLING REPORT

11/9-1

**3713**  
**WELLFILE**

# TIME-SHARING

F 6/2-67

COMPANY	LEASE	WELL	RIG	CONTRACTOR	MONTH
ELF NORGE	11/9	1	DSD	DSDC	JAN. 76

Days of the month	Number of days since starting drilling	Moving rigging up	Drilling	Coring	Trips drilling	Trips - coring	Reaming	Opening hole	Tests	Logging - surveys	Completions	Casing - cementation	Circulation MUD	Fishing jobs	Shutting well	Repair greasing maintenance	Waiting - various	Clearance	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8			STARTED			WELL		10/1-76		AT	02 <sup>00</sup>		HRS.						
9																			
10	1		22 <sup>00</sup>																
11	2		24 <sup>00</sup>																
12	3		24 <sup>00</sup>																
13	4		24 <sup>00</sup>																
14	5		24 <sup>00</sup>																
15	6		24 <sup>00</sup>																
16	7		16 <sup>00</sup>															8 <sup>00</sup>	
17	8		4 <sup>00</sup>			0 <sup>30</sup>				1 <sup>00</sup>		7 <sup>30</sup>	1 <sup>00</sup>				10 <sup>00</sup>		
18	9		7 <sup>00</sup>			3 <sup>00</sup>						13 <sup>00</sup>	1 <sup>00</sup>						
19	10		1 <sup>00</sup>			1 <sup>30</sup>						17 <sup>30</sup>					4 <sup>00</sup>		
20	11																	24 <sup>00</sup>	
21	12																	24 <sup>00</sup>	
22	13											3 <sup>00</sup>						21 <sup>00</sup>	
23	14		12 <sup>00</sup>			3 <sup>30</sup>						3 <sup>00</sup>				5 <sup>30</sup>			
24	15		17 <sup>30</sup>			4 <sup>30</sup>				1 <sup>30</sup>			0 <sup>30</sup>						
25	16		20 <sup>00</sup>			3 <sup>00</sup>				0 <sup>30</sup>			0 <sup>30</sup>						
26	17		12 <sup>00</sup>			5 <sup>00</sup>				5 <sup>30</sup>			1 <sup>30</sup>						
27	18					5 <sup>00</sup>						19 <sup>00</sup>							
28	19								3 <sup>30</sup>			19 <sup>30</sup>					1 <sup>00</sup>		
29	20					1 <sup>00</sup>				5 <sup>00</sup>		9 <sup>30</sup>				8 <sup>30</sup>			
30	21		15 <sup>00</sup>			8 <sup>00</sup>							1 <sup>00</sup>						
31	22		20 <sup>00</sup>			2 <sup>00</sup>				1 <sup>00</sup>			1 <sup>00</sup>						
<b>TOTAL</b>			158 <sup>00</sup>	108 <sup>30</sup>	0	37 <sup>00</sup>	0	0	0	3 <sup>30</sup>	14 <sup>30</sup>	0	92 <sup>00</sup>	6 <sup>30</sup>	0	0	15 <sup>00</sup>	91 <sup>00</sup>	0

# TIME-SHARING

F 6/2-67

COMPANY	LEASE	WELL	RIG	CONTRACTOR	MONTH
ELF NORGE	11-9-1	1	DSD	DSPC	FEB 76.

Days of the month	Number of days since starting drilling	Moving, rigging up	Drilling		Trips drilling	Trips - coring	Reaming	Opening hole	Tests	Logging - surveys	Completions	Casing cementation	Circulation MUD	Fishing jobs	Shutting well	Repair greasing maintenance	Waiting, various	Clearance
			1	2														
1			21 <sup>30</sup>		2 <sup>00</sup>					0 <sup>30</sup>								
2			16 <sup>00</sup>		7 <sup>30</sup>					0 <sup>30</sup>								
3			19 <sup>30</sup>		2 <sup>00</sup>					0 <sup>30</sup>							2 <sup>00</sup>	
4			22 <sup>30</sup>		1 <sup>30</sup>													
5			21 <sup>00</sup>		2 <sup>30</sup>					0 <sup>30</sup>								
6			18 <sup>30</sup>		4 <sup>30</sup>					1 <sup>00</sup>								
7			21 <sup>30</sup>		2 <sup>00</sup>					0 <sup>30</sup>								
8			20 <sup>00</sup>		3 <sup>30</sup>					0 <sup>30</sup>								
9			16 <sup>00</sup>		5 <sup>00</sup>					0 <sup>30</sup>				1 <sup>30</sup>			1 <sup>00</sup>	
10			10 <sup>30</sup>		3 <sup>30</sup>		1 <sup>30</sup>							6 <sup>30</sup>				2 <sup>00</sup>
11			13 <sup>00</sup>		4 <sup>00</sup>					0 <sup>30</sup>				6 <sup>30</sup>				
12									4 <sup>30</sup>					18 <sup>00</sup>			1 <sup>30</sup>	
13			8 <sup>00</sup>		11 <sup>30</sup>		1 <sup>30</sup>										3 <sup>00</sup>	
14			18 <sup>00</sup>		2 <sup>00</sup>					1 <sup>30</sup>							2 <sup>30</sup>	
15			18 <sup>00</sup>		3 <sup>00</sup>												3 <sup>00</sup>	
16			21 <sup>00</sup>		3 <sup>00</sup>													
17			13 <sup>30</sup>		10 <sup>30</sup>													
18					9 <sup>00</sup>													
19					3 <sup>00</sup>					11 <sup>00</sup>				3 <sup>00</sup>			1 <sup>00</sup>	
20			10 <sup>30</sup>		8 <sup>30</sup>				0 <sup>30</sup>				15 <sup>00</sup>	3 <sup>00</sup>			2 <sup>30</sup>	
21			20 <sup>00</sup>		3 <sup>30</sup>				2 <sup>30</sup>				2 <sup>30</sup>					
22			20 <sup>00</sup>		3 <sup>30</sup>					0 <sup>30</sup>								
23			20 <sup>30</sup>		0 <sup>30</sup>					1 <sup>00</sup>				2 <sup>00</sup>				
24			18 <sup>30</sup>		5 <sup>00</sup>					0 <sup>30</sup>								
25			6 <sup>30</sup>		2 <sup>00</sup>					12 <sup>30</sup>				3 <sup>00</sup>				
26										13 <sup>00</sup>							11 <sup>00</sup>	
27																	24 <sup>00</sup>	
28																	24 <sup>00</sup>	
29																	8 <sup>00</sup>	
30																		
31																		
<b>TOTAL</b>	0	35 <sup>30</sup>	0	99 <sup>30</sup>	0	3 <sup>00</sup>	0	7 <sup>30</sup>	45 <sup>00</sup>	0	17 <sup>30</sup>	12 <sup>30</sup>	31 <sup>00</sup>	67 <sup>00</sup>	16 <sup>30</sup>	2 <sup>00</sup>	0	

# COMPLEMENTARY OFF-SHORE TIME SHARING CHART

F 6/3 - 68

WELL : 11 - 9 - 1 NORGE

MONTH : JAN. - 76

Day of the month	I. - MOVING			(1)	II. - CEMENTATIONS			REPAIR 15. - MAINTENANCE			WAITING 16. - (Various)			TOTAL, to be reported on F. 6
	Duration of moving	Anchor handling	W.O.W.	TOTAL, to be reported on F. 6	Casing, cementation, W.O.C.	Put underwater equipment into work.	TOTAL, to be reported on F. 6	Repair on underwater equipment	Other repairing, Lubrication, Maintenance.	TOTAL, to be reported on F. 6	W.O.W.	Waiting due to repositioning of platform and repairing on anchor equipm.	Waiting, various reasons.	
1	START OF WELL 11-9-1 AT 0200 HRS. THE 10. JAN. 1976													
2														
3														
4														
5														
6														
7														
8														
9														
10	22 <sup>00</sup>	-	-	22 <sup>00</sup>	-	-	-	-	-	-	-	-	-	-
11	24 <sup>00</sup>	-	-	24 <sup>00</sup>	-	-	-	-	-	-	-	-	-	-
12	23 <sup>30</sup>	-	0 <sup>30</sup>	24 <sup>00</sup>	-	-	-	-	-	-	-	-	-	-
13	-	-	24 <sup>00</sup>	24 <sup>00</sup>	-	-	-	-	-	-	-	-	-	-
14	7 <sup>30</sup>	12 <sup>30</sup>	24 <sup>00</sup>	24 <sup>00</sup>	-	-	-	-	-	-	-	-	-	-
15	-	24 <sup>00</sup>	-	24 <sup>00</sup>	-	-	-	-	-	-	-	-	-	-
16	-	16 <sup>00</sup>	-	16 <sup>00</sup>	-	-	-	-	-	-	8 <sup>00</sup>	-	-	8 <sup>00</sup>
17	-	-	-	-	7 <sup>30</sup>	-	7 <sup>30</sup>	-	-	-	10 <sup>00</sup>	-	-	10 <sup>00</sup>
18	-	-	-	-	13 <sup>00</sup>	-	13 <sup>00</sup>	-	-	-	-	-	-	-
19	-	-	-	-	3 <sup>00</sup>	14 <sup>1/2</sup>	17 <sup>30</sup>	-	-	-	4 <sup>00</sup>	-	-	4 <sup>00</sup>
20	-	-	-	-	-	-	-	-	-	-	24 <sup>00</sup>	-	-	24 <sup>00</sup>
21	-	-	-	-	-	-	-	-	-	-	24 <sup>00</sup>	-	-	24 <sup>00</sup>
22	-	-	-	-	-	3 <sup>00</sup>	3 <sup>00</sup>	-	-	-	18 <sup>00</sup>	3 <sup>00</sup>	-	21 <sup>00</sup>
23	-	-	-	-	-	3 <sup>00</sup>	3 <sup>00</sup>	5 <sup>30</sup>	-	5 <sup>30</sup>	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	8 <sup>00</sup>	11 <sup>00</sup>	19 <sup>00</sup>	-	-	-	-	-	-	-
28	-	-	-	-	12 <sup>00</sup>	7 <sup>30</sup>	19 <sup>30</sup>	1 <sup>00</sup>	-	1 <sup>00</sup>	-	-	-	-
29	-	-	-	-	-	9 <sup>30</sup>	9 <sup>30</sup>	8 <sup>30</sup>	-	8 <sup>30</sup>	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL (H)	77 <sup>00</sup>	52 <sup>30</sup>	28 <sup>30</sup>	158	43 <sup>30</sup>	48 <sup>30</sup>	92 <sup>00</sup>	15 <sup>00</sup>	-	15 <sup>00</sup>	88 <sup>00</sup>	3 <sup>00</sup>	-	91 <sup>00</sup>

(1) The time spent on a single well corresponds to the duration of the rig contract. In the event of several wells in succession the starting up moment takes place at the preceding drilling site.  
 - when the last anchor has been picked up (Semi-sub, Drillship)  
 - when the jacking down operations are completed and the rig is afloat.

# COMPLEMENTARY OFF-SHORE TIME SHARING CHART

F 6/3 - 00

WELL: 11/9-1 NORWAY

MONTH: FEB. 76

Day of the month	I. MOVING				(11) CASING AND CEMENTATIONS			REPAIR MAINTENANCE			WAITING (Various)			TOTAL, to be reported on F. 6
	Duration of moving	Anchor handling	W.O.W.	TOTAL, to be reported on F. 6	Casing, cementation, W.O.C.	Put underwater equipment into work	TOTAL, to be reported on F. 6	Repair on underwater equipment	Other repairing, Lubrication, Maintenance	TOTAL, to be reported on F. 6	W.O.W.	Waiting due to repositioning of platform and repairing on anchor equipm.	Waiting, various reasons	
1														
2														
3									2 <sup>00</sup>	2 <sup>00</sup>				
4														
5														
6														
7														
8														
9									1 <sup>00</sup>	1 <sup>00</sup>				
10											2 <sup>00</sup>			2 <sup>00</sup>
11														
12									1 <sup>30</sup>	1 <sup>30</sup>				
13									3 <sup>00</sup>	3 <sup>00</sup>				
14									2 <sup>30</sup>	2 <sup>30</sup>				
15									3 <sup>00</sup>	3 <sup>00</sup>				
16														
17														
18									1 <sup>00</sup>	1 <sup>00</sup>				
19					15 <sup>00</sup>		15 <sup>00</sup>		2 <sup>30</sup>	2 <sup>30</sup>				
20					2 <sup>30</sup>		2 <sup>30</sup>							
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
31														
TOTAL (H)	a	b	c	d	17 <sup>30</sup> <sup>e</sup>	f	17 <sup>30</sup> <sup>g</sup>	h	16 <sup>30</sup> <sup>i</sup>	16 <sup>30</sup> <sup>j</sup>	2 <sup>00</sup> <sup>k</sup>	l	m	2 <sup>00</sup> <sup>n</sup>

(1) The time spent on a single well corresponds to the duration of the rig contract. In the event of several wells in succession the starting up moment takes place at the preceding drilling site. - when the last anchor has been picked up. (Samidob, Drillship) - when the jacking down operations are completed and the rig is arised.

# BIT RECORD

# F 7/2-67

OPERATOR:  
ELF-NORGE

WELL:  
11/9-1

CONTRACTOR:  
DSDC

RIG:  
DSD

PUMPS AND LINERS:  
2 pumps NATIONAL 1600 P: 12" x 6 3/4

Bit ID	Ø Bit Dia	Make	Type	Jots	Serie No	Reaming		Opening		Drilling			Depth out (m)	Parameters				Mud		Bit wear				Type of formation
						Time (h)	Length (m)	Time (h)	Length (m)	Time (h)	Prog. m/n	W.O.B. (T)		R.P.M.	Pump press PSI	Flow rate	S.G.	Vis	T	B	G	RG		
1/0	26"	SmF	TSK35	16/32	5140T	W/36"	H.O.	—	46.50	7 <sup>00</sup>	6.64	145	3 7/16"	60	500	3360	1.06	100	2	2	I			
1/0	"	"	"	—	"	drilled out cement and shoe at 145 m.																		
2	17 1/2"	Hughes	DSC3A	16/32	CZ238	—	—	—	343	29 <sup>30</sup>	11.62	488	1° 3/4	10 1/2"	120	2700	3900	1.15	90	5	2	I	shales-sandstone	
3	"	"	"	22/32	DH566	—	—	—	92	13 <sup>00</sup>	7.07	580	2 1/2"	10"	160	2000	4400	"	70	2	1	I	" "	
4	"	SmF	TS5	"	2616	—	—	—	77	16 <sup>00</sup>	4.81	657	"	"	"	"	"	"	"	2	1	I	" "	
3R	"	Hughes	DSC3A	"	DH566	—	—	—	6	3 <sup>00</sup>	2.00	663	2 1/4"	"	"	"	"	1.16	"	3	2	I	" "	
5	12 1/4"	SmF	ES5J	16	50193N				129	5 <sup>00</sup>	2.60	657	5/7"	70	"	3360	1.08	36	1	1	I	Drill out cmT.		
5.R	"	"	"	"	"				97	16 <sup>00</sup>	6.00	760	2 1/4"	7"	100/150	3000	3800	"	3 1/4	6	6	I	shale-sandstone	
6	"	"	"	12	51351N				145	20 <sup>00</sup>	7.25	905	3"	"	150	3200	2520	1.10	46	5	5	I	" "	
7	"	"	ES5K	"	50216				71	16 <sup>00</sup>	4.40	976	3 1/2"	"	"	3250	2500	1.12	43	4	3	I	" "	
8	"	"	"	"	69680				54	14 <sup>00</sup>	3.86	1030	4 1/4"	"	"	"	"	"	44	4	2	I	Sandstone-shale	
9	"	"	Em2K	"	50638				49	19 <sup>30</sup>	2.50	1079	"	"	"	"	"	1.13	43	5	6	I	shale-sandstone	
10	"	"	"	"	51345				58	23 <sup>00</sup>	2.50	1137	4 1/2"	7/8"	"	"	"	1.12	46	6	6	I	shale + sandstone	
11	"	Hughes	J-33	"	CS901				77	30 <sup>30</sup>	2.52	1214	5"	"	50	"	"	"	48	I	I	I	SANDSTONE + SHALE	
12	12 7/32"	Chris	MD311	◇	P3476				107	41 <sup>00</sup>	2.60	1321	6° 19/20	160	"	1850	1.13	47		8	%		SAND-SILT + SHALE	
13	12 1/4"	SmF	Em2K	16/32	50633				48	15 <sup>00</sup>	3.20	1369	"	9/10	120/150	"	1650	1.16	45	5	6	I	SANDSTONE + SILT	
14	12 7/32"	Chris	MD311	◇	P444				31	10 <sup>00</sup>	3.10	1400		15/20	200/250	"	"	1.21	47		5	%		SANDSTONE
15	12 1/4"	SmF	Em2K	16/32					42	16 <sup>30</sup>	2.54	1442	5° 3/4	20"	80/100	"	"	"	50	5	7	I	— " —	

TOTAL >



# CORING AND DRILL BIT PERFORMANCE

WELL: 11/9-1

No	TYPE OF BIT	Dia. Ø	From..... To.....	W.O.B. T	R.P.M.	Footage m	Time s H	Progress m/H
1U	26" bit-TSK3S <sup>W</sup> / <sub>H.O.</sub>	36"	98,5 - 145	3 <sup>+</sup> -6 <sup>+</sup>	60	46,50	7 <sup>00</sup>	6,64
1U	TSK3S	26"	drilled out cement and shoe			at	145 m	
2	Hughes-OSC 3A-3X <sup>16</sup> / <sub>32</sub>	17 1/2	145 - 488	10 <sup>+</sup> -12 <sup>+</sup>	120	343	29 <sup>30</sup>	11,62
3	" " " - 3x <sup>22</sup> / <sub>32</sub>	"	488 - 580	10 <sup>+</sup>	160	92	13 <sup>00</sup>	7,07
4	SMF-TSS - 3x <sup>22</sup> / <sub>32</sub>	"	580 - 657	10 <sup>+</sup>	"	77	16 <sup>00</sup>	4,81
3R	Hughes-OSC 3A-3x <sup>22</sup> / <sub>32</sub>	"	657 - 663	10 <sup>+</sup>	"	6	3 <sup>00</sup>	2,00
5	SmF ES5J 3x16	12 1/4	529 - 657	7 <sup>+</sup>	80	129	5 <sup>00</sup>	26,cm <sup>T</sup>
5RR	" " "	"	663 - 760	"	100/150	97	16 <sup>00</sup>	6
6	SmF ES5J 3x12	"	760 - 905	"	150	145	20 <sup>00</sup>	7,25
7	" " "	"	905 - 976	"	"	71	16 <sup>00</sup>	4,44
8	" " "	"	976 - 1030	"	"	54	14 <sup>00</sup>	3,86
9	SmF Em2K 3x12	"	1030 - 1079	"	"	49	19 <sup>30</sup>	2,50
10	" " "	"	1079 - 1137	7/8 <sup>T</sup>	"	58	23 <sup>00</sup>	"
11	H.T.C. J-33 - 3x12	"	1137 - 1214	"	50	77	30 <sup>30</sup>	2,52
12	CHRIS mD 311	12 7/32	1214 - 1321	19/20 <sup>T</sup>	160	107	41 <sup>00</sup>	2,60
13	SmF Em2K 3x16	12 1/4	1321 - 1369	9/10	120-150	48	15 <sup>00</sup>	3,20
14	CHRIS mD 311	12 7/32	1369 - 1400	15/20	200/250	31	10 <sup>00</sup>	3,10
15	SmF Em2K 3x16	12 1/4	1400 - 1442	20 <sup>T</sup>	80-100	42	16 <sup>30</sup>	2,54
16	BORT TB16 - DIA	12 3/16	1442 - 1455	10-20	90/200	13	7 <sup>00</sup>	1,90
17	HTC J-33 3x12	12 1/4	1455 - 1523	15 <sup>T</sup>	50	68	26 <sup>00</sup>	2,60
17RR	" " "	"	1523 - 1687	"	"	164	39 <sup>00</sup>	4,21
18	SmF Em2k 3x12	"	1687 - 1727	"	90	40	13 <sup>30</sup>	2,96
19	HTC XV 3x13	8 1/2	1727 - 1752	10/17 <sup>T</sup>	50/90	25	10 <sup>30</sup>	2,38
20	HTC J-33 3x10	"	1752 - 1920	20/22	50/60	168	55 <sup>00</sup>	3,05
21	HTC XV 3x13	"	1920 - 1972	12/15	100/110	52	10 <sup>30</sup>	5,00

# CASING AND CEMENTING REPORT

## F5/2-67

OPERATOR	COUNTRY	WELL	CONTR.	RIG	DIAMETER	DATE
ELF NORGE	NORWAY	11/9-1	DSDC	DSD	30"	THE JAN. 18th. 1975

**IMPORTANT.** - All depths calculated from RKB

**WELL CONDITION**

Open hole size 36" Deviation: Max 0 ° at 145 m. Min:     ° at     m  
 Cavings (depths - size....)    

Mud losses during drilling      
 (depth - quantities)

Nº of reamings     Reamer at:     m from bit  
 Last casing diameter:     shoe at:     m  
 BOP-stack during RIH (type, equipm., test pressure):    

MUD: TYPE Hivis H-921, Polymer s.g = 1.06 vis. = 100 f?    

OBSERVATIONS OR REMARKS    

**CASING DETAILS**

ELEMENTS	TYPE	WALL THICKNESS m m.	GRADE	WEIGHT P.P.F.	VOLUME INSIDE	LENGTH (m)	Nº OF JOINTS
SHOE	BAKER	1 inch	Weld seamed	309		60	×
FLOAT COLLAR	Squinch Jts.	1 inch	"	309		12.23	1
	" "	1 inch	"	309		12.68	1
	" "	1 inch	"	309		12.75	1
	" "	1 inch	"	309		10.59	1
LANDING STRING					19m <sup>3</sup>	98.15	×
DRIFT DIAMETER: <u>28"</u>						TOTAL >	145, <u>   </u> m, <u>   </u> 4
MAX ALLOWED TENSION: <u>Set on bottom</u>							
WEIGHT OF CASING STRING: in air <u>22</u> tons in mud <u>19.9</u> tons							

**CASING EQUIPMENT**

CENTRALIZERS	SCRATCHERS	SPECIAL EQUIPMENT (SPECIFICATION — DEPTH)
TYPE <u>   </u>	TYPE <u>   </u>	
QUANTITY <u>   </u>	QUANTITY <u>   </u>	
DEPTH — RKB	DEPTH — RKB	

R.I.H.

TYPE OF POWER TONG \_\_\_\_\_  
 THREAD DOPE \_\_\_\_\_  
 MAKE UP TORQUE \_\_\_\_\_ lbs. ft or m kg  
 FILLING UP EACH . . . . JOINTS \_\_\_\_\_  
 CIRCULATION WHILE RIH (duration-depth) \_\_\_\_\_  
 TOTAL RIH TIME (circ. included) \_\_\_\_\_ h. \_\_\_\_\_ RATE \_\_\_\_\_ joints/h  
 CASING SHOE SET AT \_\_\_\_\_ → 145.00 m  
 DISTANCE, RKB-MUD LINE \_\_\_\_\_ 98.50  
 DATUM OR DATE PLAN DEFINITION \_\_\_\_\_  
 CIRCULATED AT TD: Hours \_\_\_\_\_ Flow Rate \_\_\_\_\_ Pressure \_\_\_\_\_  
 HANDLING CASING: Hours \_\_\_\_\_ Cadence \_\_\_\_\_ Amplitude \_\_\_\_\_  
 M.D. READINGS AFTER CIRCULATION \_\_\_\_\_  
 OBSERVATIONS (OR REMARKS) \_\_\_\_\_

FIRST STAGE OR ONE STAGE CEMENT

CEMENTING OPERATOR: DOWELL SCHL STARTED SLURRY FABRICATION AT 14.30 h.  
 MIXING PUMP \_\_\_\_\_ ENDED SLURRY PUMPING AT 15.15 h.  
 SLURRY PUMP \_\_\_\_\_ ENDED DISPLACEMENT AT 15.20 h.  
 SLURRY DISPLACEMENT PUMP \_\_\_\_\_ BLEEDED OFF AT 15.23 h.

TYPE OF CEMENT	SACKS, BULK	% ADDITIONAL CEMENT	ADDITIVES USED	d SLURRY	QUANTITY
G	28 <sup>T</sup>	200	2% Gel - 8% Gel	1.60	<span style="border: 1px solid black; padding: 2px;">28</span> T.
					<span style="border: 1px solid black; padding: 2px;"></span> T.
					<span style="border: 1px solid black; padding: 2px;"></span> T.

WATER PLUG, TYPE \_\_\_\_\_ VOLUME \_\_\_\_\_ ADDITIVES \_\_\_\_\_  
 SLURRY FLOW RATE \_\_\_\_\_ DISPLACING FLOW RATE \_\_\_\_\_  
 TYPE OF DISPLACING FLUID SEA WATER PUMPED VOLUME 1.9 m<sup>3</sup>  
 DISPLACING PRESSURE START \_\_\_\_\_ END \_\_\_\_\_ BUMPED PLUG AT: \_\_\_\_\_ kg/cm<sup>2</sup>  
 ESTIMATED LOSSES NONE  
 TESTED CASING TO \_\_\_\_\_ RESULT \_\_\_\_\_  
 EVENT, PRESSURE AFTER BLEED OFF \_\_\_\_\_

CASING ON SPOOL

M.D. READING AFTER DISPLACEMENT \_\_\_\_\_  
 M.D. READING AFTER WOC \_\_\_\_\_ Casing tension on spool →  T.  
 AID DOWN CASING ON SPOOL \_\_\_\_\_ h. after displacement  
 SPOOL: TYPE \_\_\_\_\_ DIMENSION \_\_\_\_\_ SERIE \_\_\_\_\_  
 TYPE OF SLIPS AND PACK ASSY. \_\_\_\_\_  
 SUPPLEMENTARY PACK OFF (SEAL) \_\_\_\_\_  
 DISTANCE «SPOOL-ROTARY TABLE» \_\_\_\_\_  
 CUT CASING \_\_\_\_\_ cm OVER SPOOL \_\_\_\_\_

TEST CASING

TEMP. LOGGING \_\_\_\_\_ h. after woc  
 CBL \_\_\_\_\_ h. after woc Cement Top annulus →  m  
 RESULTS: \_\_\_\_\_  
 TEST CASING AND BOP (hydril and rams) Pressure test →   
 PACKER SET AT: \_\_\_\_\_  
 RESULTS: \_\_\_\_\_

# CASING AND CEMENTING REPORT

F5/2-67

OPERATOR	COUNTRY	WELL	CONTR.	RIG	DIAMETER	DATE
ELF-NORGE	NORWAY	11/9-1	DSDC	DSD	13 <sup>3</sup> / <sub>8</sub>	THE 27-01-76

IMPORTANT. - All depths calculated from RKB

WELL CONDITION

Open hole size 17<sup>1</sup>/<sub>2</sub> Deviation: Max 2° 30' at \_\_\_\_\_ m. Min: 0° at 145 m  
 Cavings (depths - size....) No caliper log

Mud losses during drilling Nil  
 (depth - quantities)

No of reamings None Reamer at: \_\_\_\_\_ m from bit  
 Last casing diameter: 30" shoe at: 145 m m  
 BOP-stack during RIH (type, equipm., test pressure): No BOP-stack

MUD: TYPE Bentonite-H921-Sea Water s.g. = 1.15 vis. = 70 ft 8,5

OBSERVATIONS OR REMARKS  
Drilling 17<sup>1</sup>/<sub>2</sub> hole with 24" Riser connected on 30" housing  
w/30" hydraulic latch.

CASING DETAILS

ELEMENTS	TYPE	WALL THICKNESS m m.	GRADE	WEIGHT P.P.F.	VOLUME INSIDE	LENGTH (m)	NO OF JOINTS
SHOE	BAKER Float Shoe	12.19	K55		78.08	0.50	X
13 <sup>3</sup> / <sub>8</sub> Joint	Casing-LTC-68#	12.19	K55	99.61	78.08	11.96	1
FLOAT COLLAR	BAKER Float-Collar	12.19	K55		78.08	0.50	X
13 <sup>3</sup> / <sub>8</sub> Joints	Casing-LTC-68#	12.19	K55	99.61	78.08	290.79	24
13 <sup>3</sup> / <sub>8</sub> X. Over	Csg. LTC pin-Butt. box-68#	12.19	N80	99.61	78.08	12.35	X
13 <sup>3</sup> / <sub>8</sub> Joints	Casing-Buttress-68#	12.19	K55	100.00	78.08	143.31	12
13 <sup>3</sup> / <sub>8</sub> Joints	Casing-Buttress-68#	12.19	N80	100.00	78.08	92.70	8
13 <sup>5</sup> / <sub>8</sub> housing	10000-SGI-by pass 20 <sup>3</sup> / <sub>4</sub>	12.19	N80		78.08	5.78	X
LANDING STRING	5" DP-19#5-5135					95.15	X
						TOTAL >	653.04 m. 45

DRIFT DIAMETER: 311.4  
 MAX ALLOWED TENSION: 326<sup>t</sup> collar to LTC casing  
 WEIGHT OF CASING STRING: in air 55<sup>t</sup> 7 tons in mud 1.14 SG : 47<sup>t</sup> 5 tons

CASING EQUIPMENT

CENTRALIZERS	SCRATCHERS	SPECIAL EQUIPMENT (SPECIFICATION — DEPTH)
<u>WEATHERFORD</u>		
TYPE <u>NW STI</u>	TYPE _____	
QUANTITY <u>6</u>	QUANTITY _____	
DEPTH — RKB	DEPTH — RKB	
<u>650m - 645m -</u>		
<u>636m - 631m -</u>		
<u>621m - 609m -</u>		

TYPE OF POWER TONG ECKEL Model 20"  
 THREAD DOPE Jet Lube 21  
 MAKE UP TORQUE 13<sup>3/8</sup> LTC: 6800 Ft<sup>2</sup>/lbs 13<sup>3/8</sup> Bultress: 9600 Ft<sup>2</sup>/lbs lbs. ft or m kg  
 FILLING UP EACH . . . JOINTS 13<sup>3/8</sup> Csg. and each stand of 5" DP to landing string  
 CIRCULATION WHILE RIH (duration-depth) NONE

TOTAL RIH TIME (circ. included) 10 h. 00 RATE W/L.S. 5 joints/h 653 m  
 CASING SHOE SET AT \_\_\_\_\_  
 DISTANCE, RKB-MUD LINE 98<sup>m</sup> 50  
 DATUM OR DATE PLAN DEFINITION RKB - Mud line: 98<sup>m</sup> 50  
RKB - O. Hydro: 25<sup>m</sup> 50  
Water depth: 73<sup>m</sup> 00

CIRCULATED AT TD: Hours 01<sup>h</sup> 30 Flow Rate 1500 liters/mn Pressure 500 PSI  
 HANDLING CASING: Hours NONE Cadence \_\_\_\_\_ Amplitude \_\_\_\_\_  
 M.D. READINGS AFTER CIRCULATION 13<sup>5/8</sup> housing set in 30" housing before circulation  
 OBSERVATIONS (OR REMARKS) Run in 13<sup>3/8</sup> casing without problem.

R.I.H.

FIRST STAGE OR ONE STAGE CEMENT

CEMENTING OPERATOR: DOWELL STARTED SLURRY FABRICATION AT 03<sup>h</sup> 25 h.  
 MIXING PUMP BJ centrifugal ENDED SLURRY PUMPING AT 05<sup>h</sup> 20 h.  
 SLURRY PUMP "D" type 4 1/2 x 5" ENDED DISPLACEMENT AT 06<sup>h</sup> 02 h.  
 SLURRY DISPLACEMENT PUMP National Triplex 12" x 6 3/4" BLEEDED OFF AT 06<sup>h</sup> 12 h.

TYPE OF CEMENT	SACKS, BULK	% ADDITIONAL CEMENT	ADDITIVES USED	d SLURRY	QUANTITY
Class "G"	Bulk	} 100%	12% gel w/drilling water	1.53 SG	36 T
Class "G"	Bulk		Mixed w/drilling water	1.70 SG	34.5 T
					T

WATER PLUG, TYPE Drilling water VOLUME 1500 liters ADDITIVES No  
 SLURRY FLOW RATE 600 to 800 l/mn DISPLACING FLOW RATE 1500 to 800 l/mn  
 TYPE OF DISPLACING FLUID drilling mud PUMPED VOLUME 43341 liters  
 DISPLACING PRESSURE START 550 PSI END 700 PSI BUMPED PLUG AT: 900 PSI kg/cm<sup>2</sup>  
 ESTIMATED LOSSES Run in 13<sup>3/8</sup> Csg, circulation and cementation without Riser  
 TESTED CASING TO 1200 PSI RESULT OK  
 EVENT. PRESSURE AFTER BLEED OFF Float Collar and Shoe not holding - Pressure: 500 PSI

CASING ON SPOOL

M.D. READING AFTER DISPLACEMENT 13<sup>5/8</sup> housing set in 30"  
 M.D. READING AFTER WOC 13<sup>5/8</sup> housing set in 30" housing Casing tension on spool / T.  
 AID DOWN CASING ON SPOOL \_\_\_\_\_ h. after displacement  
 SPOOL: TYPE 30" housing DIMENSION 30" SERIE \_\_\_\_\_  
 TYPE OF SLIPS AND PACK ASSY. 13<sup>5/8</sup>-10000 -SG1- to land in 30" housing- by pass 20 3/4 housing  
 SUPPLEMENTARY PACK OFF (SEAL) \_\_\_\_\_  
 DISTANCE «SPOOL-ROTARY TABLE» 95<sup>m</sup> 15 RKB - top 13<sup>5/8</sup> housing  
 CUT CASING \_\_\_\_\_ cm OVER SPOOL \_\_\_\_\_

TEST CASING

TEMP. LOGGING \_\_\_\_\_ h. after woc  
 CBL \_\_\_\_\_ h. after woc Cement Top annulus   m  
 RESULTS: \_\_\_\_\_  
 TEST CASING AND BOP (hydril and rams) Pressure test    
 PACKER SET AT: \_\_\_\_\_  
 RESULTS: \_\_\_\_\_

# CASING STRING COMPOSITION

**F 5<sup>ter</sup> / 2-67**

well	11/9-1		casing diameter	13 <sup>3</sup> / <sub>8</sub>	distance RKB mud-line	98 <sup>m</sup> 50			
JOINT NO.	WEIGHT GRADE	THREAD JOINT	LENGTH OF JOINT	CUMUL. LENGTH	JOINT NO.	WALLTHICKNESS AND GRADE	THREAD	LENGTH OF JOINT	CUMUL. LENGTH
3 stands	5" - 19.5#	S135	11.35		33	68#-K55	LTC	11.45	507.68
1 single	5" - 19.5#	S135			34			13.24	520.87
2 - 5" Pup-joint	19.5#	S135			35			11.73	532.60
Top part of 13 <sup>5</sup> / <sub>8</sub> setting tool				95.15	36			10.08	542.68
					37			11.51	554.19
13 <sup>5</sup> / <sub>8</sub> housing			5.78	100.93	38			13.00	567.19
1	68#-N80	Butt.	10.68	111.61	39			13.00	580.19
2			11.54	123.15	40			11.60	591.79
3			12.32	135.47	41			11.59	603.38
4			11.93	147.40	42			11.84	615.22
5			11.66	159.06	43			11.35	626.57
6			11.27	170.33	44			13.51	640.08
7			11.95	182.28	Float-Collar			0.50	640.58
8			11.35	193.63	45			11.96	652.54
9	68#-K55	Butt.	12.96	206.59	Shoe			0.50	653.04
10			12.92	219.51					
11			13.25	232.76					
12			12.00	244.76					
13			13.24	258.00					
14			11.65	269.65					
15			11.37	281.02					
16			10.81	291.83					
17			10.93	302.76					
18			10.98	313.74					
19			11.85	325.59					
20			11.35	336.94					
13 <sup>3</sup> / <sub>8</sub> X O. N80-LTC pin-Butt. box			12.35	349.29					
21	68#-K55	LTC	12.01	361.30					
22			13.30	374.60					
23			13.45	388.05					
24			13.48	401.53					
25			13.02	414.55					
26			11.72	426.27					
27			11.17	437.44					
28			12.42	449.86					
29			11.15	461.01					
30			11.61	472.62					
31			12.10	484.72					
32			11.46	496.18					

**IMPORTANT.** - THE CASING STRING COMPOSITION BEGINS WITH THE LANDING STRING LENGTH FROM RRB TO WELL HEAD, THEN ADD THE LENGTH JOINT BY JOINT FROM THE WELLHEAD.

# CASING AND CEMENTING REPORT

F5/2-67

OPERATOR	COUNTRY	WELL	CONTR.	RIG	DIAMETER	DATE
ELF-NORGE	NORWAY	11-9-1	DSDC	DSD	9 5/8	THE 19-2-76

**IMPORTANT.** - All depths calculated from RKB

**WELL CONDITION**

Open hole size 12 1/4 Deviation: Max 6 ° at 1369 m. Min: \_\_\_\_\_ ° at \_\_\_\_\_ m  
 Cavings (depths - size....) CALIPER Log.

Mud losses during drilling NIL.  
 (depth - quantities)

No of reamings NONE Reamer at: \_\_\_\_\_ m from bit  
 Last casing diameter: 13 3/8 shoe at: 653 m

BOP-stack during RIH (type, equipm., test pressure): B.OP. STACK 13 5/8 - 10000 PSI. - H4 Connector.  
13 5/8 - 10000 PSI Lower and upper spherical B.OP. Dual Spherical B.OP. 13 5/8 - 10000 PSI  
Blind shear Ram's single 10000 PSI. Triple pipe Ram's 13 5/8 10000 5" upper + lower 3 1/2" middle

MUD: TYPE POLYMER S.G. = 1.18 VIS. = 44 <sup>17</sup> 4.7

OBSERVATIONS OR REMARKS 12 1/4 HOLE DEVIATION PROBLEM DUE TO  
FORMATION ANGLE  
6° 1369m. 4° 1727m.

**CASING DETAILS**

ELEMENTS	TYPE	WALL THICKNESS m m.	GRADE	WEIGHT P.P.F.	VOLUME INSIDE	LENGTH (m)	NO OF JOINTS
SHOE 9 5/8 JOINT	BAKER FLOAT SHOE	11.99	N 80		38.18	0.50	×
	CASING BUTT. 47#	11.99	N 80		38.18	12.24	1
FLOAT COLLAR	BAKER FLOAT COLLAR	11.99	N 80		38.18	0.50	×
	9 5/8 JOINTS	CASING BUTTRESS 47#	11.99	N 80		1610.11	132
9 5/8 HANGER	SGI Type w/EXTEN	11.99	N 80		38.18	1.80	
LANDING STRING	Running Tool and 5" DP.	19.5#	S 135			93.50	×
DRIFT DIAMETER: <u>216.5</u>						TOTAL >	<u>1718.5</u> m.

MAX ALLOWED TENSION: \_\_\_\_\_  
 WEIGHT OF CASING STRING: in air 125 tons in mud 104 tons

**CASING EQUIPMENT**

CENTRALIZERS	SCRATCHERS	SPECIAL EQUIPMENT (SPECIFICATION — DEPTH)
<u>WEATHER FORD</u>		
TYPE <u>NW ST1</u>	TYPE _____	
QUANTITY <u>5</u>	QUANTITY _____	
DEPTH — RKB	DEPTH — RKB	
<u>1715 m - 1702 m</u>		
<u>1678 m - 1643 m</u>		
<u>1619 m -</u>		

TYPE OF POWER TONG ECKEL model 13<sup>3</sup>/<sub>8</sub>  
 THREAD DOPE JET LUBE 21  
 MAKE UP TORQUE 9<sup>5</sup>/<sub>8</sub> BUTTRESS = 5600 FT/LL. lbs. ft or m kg  
 FILLING UP EACH .1. JOINTS 9<sup>5</sup>/<sub>8</sub> Csg. and each stand 5" DRILL PIPE  
 CIRCULATION WHILE RIH (duration-depth)

TOTAL RIH TIME (circ. included) 10<sup>00</sup> h. RATE 13.3 joints/h  
 CASING SHOE SET AT 1718.65 m  
 DISTANCE, RKB-MUD LINE 98m 50  
 DATUM OR DATE PLAN DEFINITION RKB 0 hydro 25m 50  
WATER DEPTH 75m

CIRCULATED AT TD: Hours 1<sup>00</sup> Flow Rate 1500 To 1700 L Pressure 800 To 1000 PSI  
 HANDLING CASING: Hours 11<sup>1</sup>/<sub>2</sub> Cadence \_\_\_\_\_ Amplitude \_\_\_\_\_  
 M.D. READINGS AFTER CIRCULATION 9<sup>5</sup>/<sub>8</sub> Hanger set in 13<sup>5</sup>/<sub>8</sub> HOUSING BEFORE CIRC  
 OBSERVATIONS (OR REMARKS)  
RAN 9<sup>5</sup>/<sub>8</sub> CASING To 1718.87m NO PROBLEMS  
NO MUDLOSS WHILE CIRC 9<sup>5</sup>/<sub>8</sub> CASING

CEMENTING OPERATOR: DOWELL STARTED SLURRY FABRICATION AT 20<sup>30</sup> h.  
 MIXING PUMP BJ. CENTRIFUGAL ENDED SLURRY PUMPING AT 21<sup>15</sup> h.  
 SLURRY PUMP 'D' Type 4<sup>1</sup>/<sub>2</sub> x 5 ENDED DISPLACEMENT AT 21<sup>55</sup> h.  
 SLURRY DISPLACEMENT PUMP National Triplex 12x6<sup>3</sup>/<sub>4</sub> BLEEDED OFF AT 22<sup>00</sup> h.

TYPE OF CEMENT	SACKS, BULK	% ADDITIONAL CEMENT	ADDITIVES USED	d SLURRY	QUANTITY
GLASS "G"	Bulk	-	mixed w/ drill water	1.8556	<u>50</u> T.
					T.
					T.

WATER PLUG, TYPE DRILL WATER VOLUME 795 LITER'S ADDITIVES NO  
 SLURRY FLOW RATE 525 L/m DISPLACING FLOW RATE 1828  
 TYPE OF DISPLACING FLUID DRILLING MUD PUMPED VOLUME 63943 LITER'S  
 DISPLACING PRESSURE START 1200 PSI END 1500 BUMPED PLUG AT: 2000 kg/cm<sup>2</sup>  
 ESTIMATED LOSSES NIL  
 TESTED CASING TO 3000 PSI RESULT O.K.  
 EVENT. PRESSURE AFTER BLEED OFF NIL

M.D. READING AFTER DISPLACEMENT 9<sup>5</sup>/<sub>8</sub> HANGER SET IN 13<sup>3</sup>/<sub>8</sub>  
 M.D. READING AFTER WOC 9<sup>5</sup>/<sub>8</sub> HANGER SET IN 13<sup>3</sup>/<sub>8</sub> HOUSING Casing tension on spool > \_\_\_\_\_ T.  
 AID DOWN CASING ON SPOOL \_\_\_\_\_ h. after displacement  
 SPOOL: TYPE VETCO SGT DIMENSION 13<sup>5</sup>/<sub>8</sub> SERIE 10.000 PSI  
 TYPE OF SLIPS AND PACK ASSY. 9<sup>5</sup>/<sub>8</sub> 10.000 SGI Type  
 SUPPLEMENTARY PACK OFF (SEAL)  
 DISTANCE «SPOOL-ROTARY TABLE» RKB Top 9<sup>5</sup>/<sub>8</sub> Hanger 93m 50  
 CUT CASING \_\_\_\_\_ cm OVER SPOOL \_\_\_\_\_

TEMP. LOGGING \_\_\_\_\_ h. after woc  
 CBL \_\_\_\_\_ h. after woc  
 RESULTS: \_\_\_\_\_ Cement Top annulus > \_\_\_\_\_ m

TEST CASING AND BOP (hydriil and rams) Pressure test > \_\_\_\_\_  
 PACKER SET AT: TEST 9<sup>5</sup>/<sub>8</sub> SEAL AT HANGER  
 RESULTS: TEST 13<sup>5</sup>/<sub>8</sub> B.O.P STACK (50% working pressure) Sphericals B.O.P Lower and upper to 2500 PSI. 5" RAM'S, CHOKE AND KILL-LINE CHOKE MANUFOLD To 5000 PSI.

R.I.H.

FIRST STAGE OR ONE STAGE CEMENT

CASING ON SPOOL

TEST CASING

# CASING STRING COMPOSITION

**F 5<sup>ter</sup> / 2-67**

well	11-9-1		casing diameter	9 5/8	distance RKB mud-line				98m.50
JOINT NO.	WEIGHT GRADE	THREAD JOINT	LENGTH OF JOINT	CUMUL. LENGTH	JOINT NO.	WALLTHICKNESS AND GRADE	THREAD	LENGTH OF JOINT	CUMUL. LENGTH
Landing String		5"	8-135	93.50	99		Butt.	12.20	524.45
					98			12.80	537.25
Qsg HANGER.			.80	94.30	97			12.25	549.50
Csg pup.			1.00	95.30	96			11.71	561.21
					95			13.63	574.84
133	47 <sup>#</sup> N80	Butt.	12.31	107.61	94			13.70	588.54
132			12.00	119.61	93			13.24	601.17
131			10.54	130.15	92			12.17	613.95
130			11.96	142.11	91			10.93	624.88
129			12.02	154.13	90			10.38	635.26
128			11.99	166.12	89			12.50	647.76
127			12.25	178.37	88			12.10	659.86
126			12.06	190.43	87			12.44	672.30
125			12.19	202.62	86			12.34	684.64
124			11.88	214.50	85			12.22	696.86
123			12.04	226.54	84			12.38	709.24
122			12.03	238.57	83			12.22	721.46
121			12.35	250.92	82			11.96	733.42
120			12.41	263.33	81			10.63	744.05
119			12.32	275.65	80			12.25	756.30
118			11.86	287.45	79			12.18	768.48
117			12.48	299.93	78			11.83	780.31
116			12.23	312.16	77			12.37	792.68
115			12.20	324.36	76			12.08	804.76
114			12.25	336.61	75			12.43	817.19
113			11.73	348.34	74			10.60	827.79
112			11.98	360.32	73			12.24	840.03
111			12.48	372.80	72			12.26	852.29
110			12.13	384.93	71			12.19	864.48
109			12.27	397.20	70			12.50	876.98
108			13.04	410.24	69			12.14	889.12
107			12.80	423.04	68			12.91	902.03
106			12.86	435.90	67			12.86	914.29
105			12.20	448.10	66			12.39	926.59
104			12.03	460.13	65			12.92	938.51
103			13.46	473.59	64			12.96	950.47
102			13.50	487.09	63			12.58	962.05
101			12.78	499.87	62			12.75	974.20
100			12.38	512.25	61			11.90	985.50

**IMPORTANT.** - THE CASING STRING COMPOSITION BEGINS WITH THE LANDING STRING LENGTH FROM RRB TO WELL HEAD, THEN ADD THE LENGTH JOINT BY JOINT FROM THE WELLHEAD.

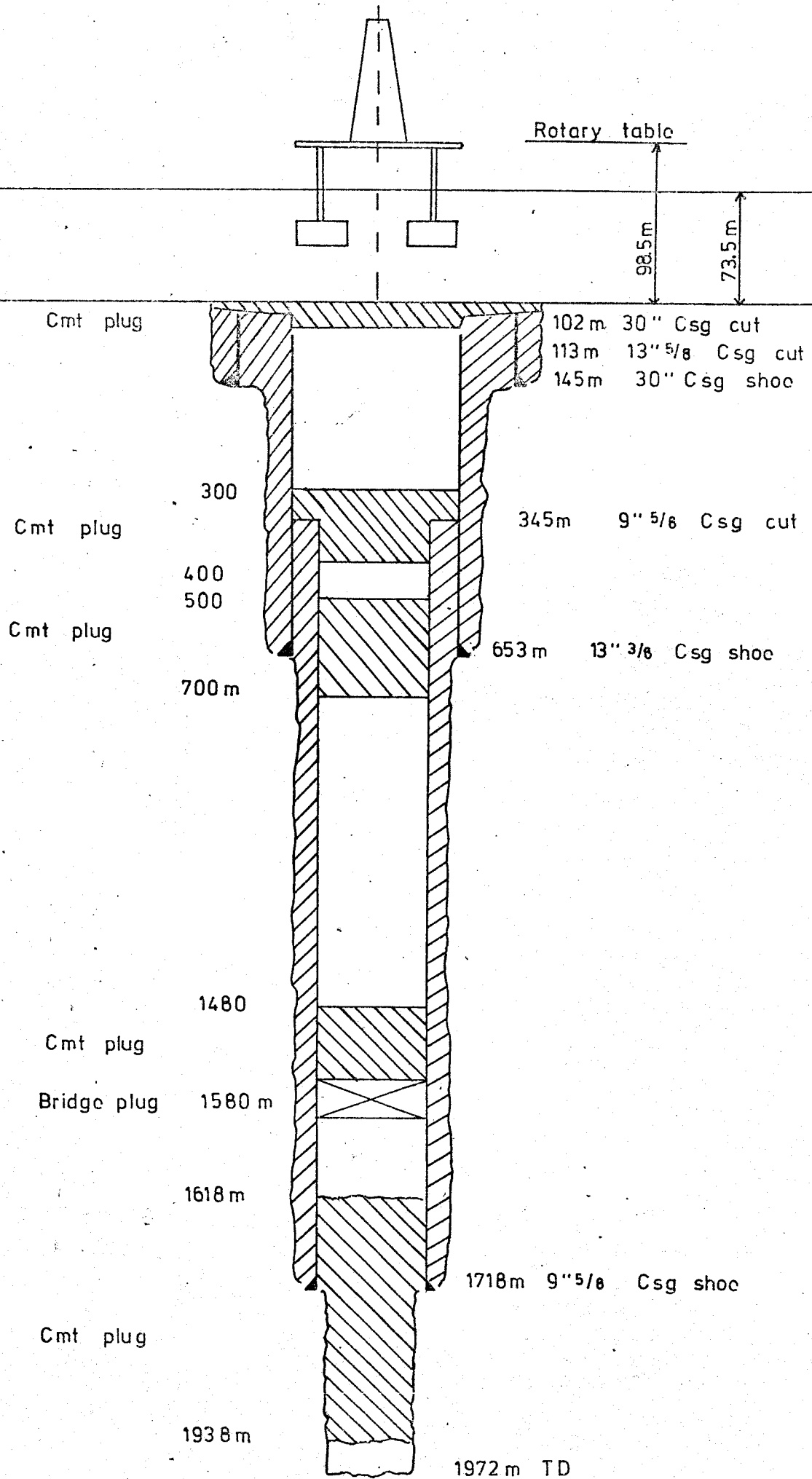
# CASING STRING COMPOSITION

F 5<sup>ter</sup> / 2-67

well		11-9-1		casing diameter	9 5/8		distance RKB mud-line			98 m 50	
JOINT NO.	WEIGHT GRADE	THREAD JOINT	LENGTH OF JOINT	CUMUL. LENGTH	JOINT NO.	WALLTHICKNESS AND GRADE	THREAD	LENGTH OF JOINT	CUMUL. LENGTH		
60	47 N 80	B45T	12.13	997.63	21		B45T	11.91	1495.20		
59			12.23	1009.86	20			12.10	1487.30		
58			11.97	1021.18	19			11.95	1499.25		
57			12.18	1034.01	18			11.29	1510.54		
56			11.87	1045.88	17			11.95	1522.49		
55			12.39	1058.25	16			12.30	1534.79		
54			12.14	1070.39	15			11.97	1546.76		
53			11.91	1082.30	14			12.18	1558.94		
52			11.97	1094.27	13			12.25	1571.19		
51			11.86	1106.13	12			12.23	1583.42		
50			12.20	1118.33	11			12.00	1595.42		
49			12.20	1130.53	10			12.03	1607.45		
48			12.35	1142.88	9			11.81	1619.26		
47			11.97	1154.85	8			12.42	1631.68		
46			12.14	1166.99	7			12.28	1643.96		
45			12.28	1179.27	6			12.30	1656.26		
44			12.07	1191.34	5			12.16	1668.42		
43			12.26	1203.60	4			12.12	1680.54		
42			12.38	1215.98	3			13.00	1693.54		
41			11.97	1227.95	2			11.87	1705.41		
40			12.55	1240.50	F 10AT			0.50	1705.91		
39			12.02	1252.52	1			12.24	1718.15		
38			12.13	1264.65	SHOE			0.50	1718.65		
37			12.28	1276.93							
36			12.22	1289.15							
35			12.96	1302.11							
34			12.15	1314.26							
33			12.39	1326.65							
32			12.06	1338.71							
31			13.23	1351.94							
30			12.68	1364.62							
29			12.04	1376.66							
28			12.58	1389.24							
27			11.70	1400.94							
26			12.06	1413.00							
25			13.07	1426.07							
24			12.03	1438.10							
23			12.94	1451.04							
22			12.25	1463.29							

**IMPORTANT.** - THE CASING STRING COMPOSITION BEGINS WITH THE LANDING STRING LENGTH FROM RRB TO WELL HEAD, THEN ADD THE LENGTH JOINT BY JOINT FROM THE WELLHEAD.

# 11/9-1 ABANDONMENT SCHEME



TECHNICAL STATUS-END OF DRILLING						WELL: 11/9-1					
COUNTRY: NORWAY		OPERATOR: ELF		CONTRACTOR: DSDC		RIG: Deep Sea Driller	T.D.: 1972 m				
GENERALIZATIONS	Wildcat	<input checked="" type="checkbox"/>	OPEN HOLES		CASING						
	Extention drilling	<input type="checkbox"/>									
	Development drilling	<input type="checkbox"/>	DIA Ø	TO	DIA Ø	SHOE	CEMENTED FROM.... ..... TO .....				
	Injection well	<input type="checkbox"/>	36"	145m	30"	145m	145-Sea bottom				
	Onshore well	<input type="checkbox"/>	17 1/2"	663m	13 5/8"	653m	653-Sea bottom				
	Offshore well (waterdepth.)	<input type="checkbox"/>	12 1/4"	1727m	9 5/8"	1718m	1718m-350m				
	Oil well	<input type="checkbox"/>	8 1/2"	1972m							
	Gas well	<input type="checkbox"/>									
	Oils shows	<input type="checkbox"/>									
	Gas shows	<input type="checkbox"/>									
Dry	<input checked="" type="checkbox"/>										
Producing	<input type="checkbox"/>										
Completed	<input type="checkbox"/>										
Abandoned	<input checked="" type="checkbox"/>										
All depths calculated from RKB											
FOOTAGE	Hole Dia Ø	Length pr. diameter	Drilled		Coring		Opening	Turbine Drilling	Direct. Drilling	Air - Drilling	Length abandoned
			Dia Ø	Footage (m)	Dia Ø	Footage (m)					
	36"	145m	36"	46,5m							
	17 1/2"	518m	17 1/2"	518,0m							
	12 1/4"	913m	12 1/4"	913,0m							
	12 7/8"	138m	12 7/8"	138,0m							
	12 3/16"	13m	12 3/16"	13,0m							
	8 1/2"	245m	8 1/2"	245,0m							
TOTAL	1972m		1873,5m								
TESTS	NUMBER OF TEST	EXECUTED	NOT SUCCEED	REASON FOR FAILURE		No	TIME SHARING		HOURS	%	
	Open hole			Packer leakage			1. Mooving	158 <sup>00</sup>	13,38		
	Casing			Formation plugged			2. Drilling	463 <sup>00</sup>	39,20		
	TOTAL	0		Failed to open			3. Coring	0 <sup>00</sup>			
FISHING JOBS	Causes		Object dropping into hole	Stuck pipe	Twist off	Drill bit	Core barrel	Casing	Logging	TOTAL	
	Duration										
	Less than 24 h.			1						1	
	From 1 to 5 days.			1						1	
	More than 5 days.										
	Not succeeded.										
NUMBERS TOTAL			2							2	
								17. Waiting various	93 <sup>00</sup>	7,87	
								TOTAL	1181 <sup>30</sup> H	100%	
								RIG UTILISATION	1164	month rig	



# MAJOR WELL CONSUMPTIONS

WELL: 11/9-1

DIA. Ø	FROM ... TO ...	LENGTH	WALL THICKNESS	GRADE	THREAD	TYPES AND WEIGHTS OF CEMENT PER. CASING STRING
30"	98,5 - 145 m	46,5 m	25,4 mm	B	Squid Joint Veto	6:28 <sup>T</sup>
13 <sup>13</sup> / <sub>8</sub>	95,0 - 193 m	98,0 m	12,19 mm	N80	Buttress	
13 <sup>13</sup> / <sub>8</sub>	193,0 - 349 m	156,0 m	12,19 mm	K55	Buttress	6:70,5 <sup>T</sup>
13 <sup>13</sup> / <sub>8</sub>	349,0 - 653 m	304,0 m	12,19 mm	K55	LTC	
9 <sup>5</sup> / <sub>8</sub>	93,5 - 1718	1624,5 m	11,99	N80	Buttress	6:50 <sup>T</sup>

TYPE OF PRODUCT	QUANTITIES	OTHER CEMENTATIONS	FOR.	TYPE AND CLASS OF CEMENT	WEIGHT	
						MUD PRODUCTS
Baite	74,000 <sup>T</sup>	OTHER CEMENTATIONS	LOST CIRCULATION			
Bentonite	118,000 <sup>T</sup>					
Salt Gel	23,600 <sup>T</sup>					
Brixel	8,700 <sup>T</sup>		PLUGGING HOLE. VARIOUS	Shutting well	6:40 <sup>T</sup>	
Borregaard - LFC	16,250 <sup>T</sup>					
Caustic Soda	8,200 <sup>T</sup>					
Soda Ash	0,100 <sup>T</sup>					
Sodium Bicarbon	0,100 <sup>T</sup>		WELLHEAD	DIMENSIONS-SERIES-TYPES of WELLHEAD		
H921	4,000 <sup>T</sup>			30" Housing + permanent base plate		
Drispac	0,750 <sup>T</sup>			13 <sup>5</sup> / <sub>8</sub> housing 10000 psi SG1		
Dextrid	8,150 <sup>T</sup>	13 <sup>5</sup> / <sub>8</sub> BOP stack 10000 psi				
CHE-LV	0,775 <sup>T</sup>	13 <sup>5</sup> / <sub>8</sub> - 9 <sup>5</sup> / <sub>8</sub> casing hanger SG1				
BEVALOID	49 CANS					
MD	8 Drums					
MIL PLATE	3 Drums					
TORQUE TRIM	2 Drums					
FORABUM	2,700 <sup>T</sup>					
MUD - LOSSES	m <sup>3</sup>					
WATER	m <sup>3</sup>					
OIL OR FUEL OIL	m <sup>3</sup>					

# INFORMATION ON OFFSHORE OPERATIONS

F 15/3-88

Well: 11/9-1

Rig: DEEP SEA DRILLER (AKER H3)

1. Time sharing percentages due to marine operations.

Items	Duration (h)	% of total time of well
MOVING+ OTHER OPERATIONS BEFORE SPUDDING IN AND AFTER ENDED DRILLING (a+b)	129 <sup>30</sup>	10,96
WORKING ON UNDERWATER EQUIPMENT (f+h)	63 <sup>30</sup>	5,37
WOW (c+k)	118 <sup>30</sup>	10,03
WAITING DUE TO REPOSITIONING OF PLATFORM AND REPAIRING ANCHORS EQUIPMENT (1)		

2. Further or additional information  
 Specificate on offshore drilling - Interesting the Elf Group

Subject	Observation	Reference
1st BOP stack	20 <sup>3</sup> / <sub>4</sub> BOP Stack including: One lagtype preventer 2000 psi, One 5" pipe ram 2000 psi	} Not used on this well!
Riser + CL + KL	24" Riser CL+KL 3" x 2000 psi	
2nd BOP stack	13 <sup>5</sup> / <sub>8</sub> BOP Stack including: Two lagtype preventers 5000 psi, Four pipe and shear/blind rams 10000 psi	
Riser + CL + KL	16" Riser CL+KL 3" x 10000 psi	
Pods		
BOP Control	Koomey Model 35240-35 Accumulator Unit	
CHOKE Manifold	Koomey Model U2K-21-1/4H-1M	
GUIDE Line Tensioner	6 Rucker : Cap. 16000 lbs each	
Riser Tensioner	4 Rucker : Cap 80000 lbs each	
Miscellaneous		

SUBJECT	OBSERVATIONS	REFERENCES
<p>DRILLING RIG (Design. anchoring .....) AKER. H3 DEEP SEA DRILLER</p> <p>LOCATION: 06°44'52,6" E 57°16'33,2" N</p> <p>WATER DEPTH: 73,00m</p>	<p>- Semisubmersible drilling platform, self propelled - Length: 355' Width: 220' Weight: 8100LT</p> <p>- 2 Bowthrusters 1000 HP each - 2 Reciprocating propellers 2750 HP each</p> <p>- 8 Anchors 30000 LWT each - 8 Anchor chains: 3" x 3000'</p> <p>- Rig heading 315°</p>	
<p>OPERATIONS ON WELL AND DRILLING EQUIPMENT (Drilling, coring, reaming, testing, SPE .....)</p>	<p>- 36" hole to 145m, 30" csg set at 145m - 17 1/2" hole to 663m, 13 3/8" csg set at 653m - 12 1/4" hole to 1727m, 9 5/8" csg set at 1718m - 8 1/2" hole to 1972m (T.D).</p> <p>LOGS: BHC-GR before 13 3/8" csg BHC-GR-CAL, IES, SWC 1 before 9 5/8" csg BHC-GR-CBL-HDT-IES-PS-VEL.SURV.-SWC 2 at TD.</p>	
<p>MOVING</p> <p>SUPPLY logistic (Supply boats, Helicopters, distance: base — location)</p>	<p>Distance average speed in moving. 8,5 Kts</p> <p>Total power used Name on tugs Bollard pull</p> <p>DISTANCE STAVANGER - 11/9-1: 123 NAUTIC MILES</p> <p>HELICOPTERS: HELICOPTER-SERVICE WITH BELL 212 AND SIKORSK 561</p> <p>SUPPLY BOATS: GEORGTURM 6000 HP MARTINITURM 4000 HP</p> <p>STAND BY BOAT: INGER LISE</p>	

ELF NORGE G/S DRILLING MUD Phase Nr. 1 <del>End of Well</del>	DATE	HOLE SIZE	CASING	RIG
	from 17/1-76 to 18/1-76	Ø 36" to 145 in Ø to m Ø to m Ø to m	Ø at m Ø at m Ø at m Ø at m	DSD CONTRACTOR CECA (KHIATI)
Well Nr 11/9-1				

Mud Properties				Monetary Unit Kr.			
Depth	195			Products	Consumption	Price m/tonn	Total Price
MUD TYPE	spud - mud			BENTONITE	8250	906,11	7475
SPECIFIC GRAVITY	1,06			H 921	2500	13788,96	34472
SOLIDS %Vol	-			DRISPAC	300	27489,60	8247
OIL "	-			CAUSTIC SODA	500	2797,54	1399
WATER "	-						
SAND "	-						
FUNNEL VISCOSITY	110+						
APPARENT VISCOSITY	-						
PLASTIC VISCOSITY	-						
YIELD VALUE	-						
GEL 0	-						
GEL 10	-						
WATER LOSS 30mm	6						
WATER LOSS HT/HP	-						
CALIB mm	-						
ALKALINITY PF	-						
ALKALINITY MF	-						
ALKALINITY PM	-						
RATIO MF/PF	-						
RATIO PL/PL'	-						
pH	-						
NaCl	-						
Ca Cl <sub>2</sub>	-						
Mg	-						
Ca++	-						
SO <sub>4</sub> Ca	-						
				U.S.\$1 = 5,52 Kr			
				Total Price: Kr	51593		

Geology		Observation	Volumes	
Depth	Formation			
	Sands + Clays	Drilling 36" hole with Sea Water - Spotted spud mud each connection - Running 30" casing - Cementing with : 28T Class"G" + 12% Bentonite and 2% CaCl <sub>2</sub> - d = 1,50	FABRICATION DILUTION	360 m <sup>3</sup>
			VOLUME WELL	
			VOLUME PITS	-
			VOLUME RESERVE	-
			LOSS:	
			SURFACE INSTALLATIONS	360 m <sup>3</sup>
			EJECTION	
			FORMATION	
			DEPTH OF LOSS	
			OCCURRENCE:	
			TYPE	
			VOLUME	
			DEPTH	
			CALIPER:	/

<b>OF NORGE a/s</b> <b>DRILLING MUD</b> Phase Nr. 2 End of Well	<b>DATE</b> from 19/1-76 to 28/1-76	<b>HOLE SIZE</b> Ø 17½" to 663 Ø to m Ø to m Ø to m	<b>CASING</b> Ø 30" at 145 m Ø at m Ø at m Ø at m	<b>RTG</b> DSD CONTRACTOR CECA (KHIATT HOPKEN)
	<b>Well Nr:</b> 11/9-1	<b>Monetary Unit</b> Kr.		

Mud Properties				Products	Consumption	Price m/tonn	Total Price
Depth	310	480	660				
TYPE	Bentonite / H 921			BARITE	14.000	564,42	7902
SPECIFIC GRAVITY	1,11	1,15	1,16	BENTONITE	35 750	906,11	32393
SOLIDS %Vol	7	8	10	SALT GEL	15 000	1575,96	23639
OIL "	-	-	-	DRISPAC	350	27489,60	9586
WATER "	93	92	90	DEXTRID	1 100	8451,12	9296
SAND "	2	2	0,2	H 921	1 500	13788,96	20683
FUNNEL VISCOSITY	76	90	70	CAUSTIC SODA	2 400	2797,94	6715
APPARENT VISCOSITY	33	44	26				
PLASTIC VISCOSITY	24	32	15				
YIELD VALUE	18	24	22				
GEL 0	8	12	24				
GEL 10	12	28	36				
WATER LOSS 30mm	7.3	8.5	10				
WATER LOSS HT/HP	-	-	-				
CANL mm	1	2	2				
ALKALINITY PF	0,2	0,2	0,2				
ALKALINITY MF	-	-	-				
ALKALINITY PM	-	-	-				
RATIO MF/PF	-	-	-				
RATIO PL/PF	-	-	-				
pH	9,5	9,5	9,5				
NaCl	29	30	29				
Ca Cl <sub>2</sub>	-	-	-				
LIME	-	-	-				
Ca++	-	-	-				
SO <sub>4</sub> Ca	-	-	-				
				U.S.1 = 5,52			
				Total Price Kr	110216		

Geology		Observation	Volumes					
Depth	Formation		FABRICATION DILUTION	600 m <sup>3</sup>				
	Clays and Sand	- Drilling 17½" hole with mud - Running 13"3/8 Casing - Cementing with : 36T Clas "G" + 12% Bentonite Weight: 1,53 and 34,5T Class "G" neat Weight: 1,70	VOLUME WELL VOLUME PITS VOLUME RESERVE	<table border="1"> <tr> <th>START</th> <th>END</th> </tr> <tr> <td></td> <td></td> </tr> </table>	START	END		
START	END							
		LOSS: SURFACE INSTALLATIONS EJECTION FORMATION DEPTH OF LOSS OCCURRENCE: TYPE VOLUME DEPTH	600 m <sup>3</sup>					
		CALIPER:	/					

ELF NORGE G/S	DATE	HOLE SIZE	CASING	RIG
DRILLING MUD	from	Ø 12 1/4 to 1721 m	Ø 13 3/8 at 653 m	DSD
Phase Nr. 3	29/1/76	Ø to m	Ø at m	CONTRACTOR
End of Well	to	Ø to m	Ø at m	CECA
Well Nr : 11/9-1	19/2/76	Ø to m	Ø at m	(HOPKEN KHIATT)

Mud Properties					Monetary Unit Kr.			
Depth m	740	1125	1455	1725	Products	Consumption	Price m/tonn	Total Price
MUD TYPE	Bentonite / FCL				BARITE	50 000	5564,42	28221
SPECIFIC GRAVITY	1,10	1,13	1,19	1,18	BENTONITE	72 000	906,11	65240
SOLIDS %Vol	9	10	10	12	SALT GEL	8 600	1575,96	13553
OIL "	-	-	-	-	BRIXEL	8 700	3329,11	28963
WATER "	91	90	90	88	BORREGAARD. LFC	12 750	2439,84	31108
SAND "	-	0,3	0,2	0,4	DEXTRID	6 650	8451,12	56200
FUNNELL VISCOSITY	43	42	48	44	BEVALOID (cans)	36	397,05	14294
APPARENT VISCOSITY	15	18	29	20	MILCHEM DETERG. (drums)	8	1899,98	15200
PLASTIC VISCOSITY	12	15	24	16	CAUSTIC SODA	5 050	2797,94	14128
YIELD VALUE	6	6	10	8	FORAGUM	1 700	19035,72	32361
GEL 0	3	1	3	2	MILPLATE (drums)	3	3726,00	11178
GEL 10	6	2	14	5	TORQ-TRIM (drums)	2	3726,00	7452
WATER LOSS 30mn	2	4,8	7	4,7	SODA ASH	100	1127,18	113
WATER LOSS HT/HP	-	-	-	-	SODIUM BICARBON.	100	1268,50	127
CANL mm	0,5	0,5	1	1	CMC	775	1909,95	9230
ALKALINITY PF	0,2	0,2	0,2	0,2				
ALKALINITY MF	-	-	-	-				
ALKALINITY PM	-	-	-	-				
RATIO MF/PF	-	-	-	-				
RATIO PA/PF	-	-	-	-				
pH	10	10	9,5	10				
NaCl	34	20	18,7	30				
Ca Cl <sub>2</sub>	-	-	-	-				
LIME	-	-	-	-				
Ca++	-	-	-	-				
SO <sub>4</sub> Ca	-	-	-	-				
					U.S.\$1 = 5,52Kr			
Total Price: Kr						327368		

Geology		Observation	Volumes	
Depth	Formation			
663-1000	- Shales - Sands - Siltstones	- No problems while drilling	FABRICATION 815 m <sup>3</sup>	
100 - 1450	- Sandstones Siltstones	- Treat the mud by FCL and Bentonite prehydrated	DILUTION 135 m <sup>3</sup>	
1450-1700	- Shales - Marls	- Very hard formation, no "Gumbos"		
1700-1725	- Clays	- Running 9 5/8" Casing		
		Cementing with :		
		75T Class "G" - Weight: 1,85		
			VOLUME WELL	68 84
			VOLUME PITS	112 154
			VOLUME RESERVE	
			LOSS:	
			SURFACE INSTALLATIONS	353
			EJECTION	359
			FORMATION	
			DEPTH OF LOSS	
			OCCURRENCE:	
			TYPE	
			VOLUME	
			DEPTH	
CALIPER: Between 12 1/4 to 14"				

ELF NORGE a/s DRILLING MUD Phase Nr. 4 End of Well	DATE	HOLE SIZE		CASING		RIG
	from 20/2/76 to 24/2/76	Ø 8½ Ø Ø Ø	to to to to	1972 m m m m	Ø 9 5/8 at 1718 m Ø at m Ø at m Ø at m	DSD CONTRACTOR CECA (KHIATI)
Well Nr : 11/9-1						

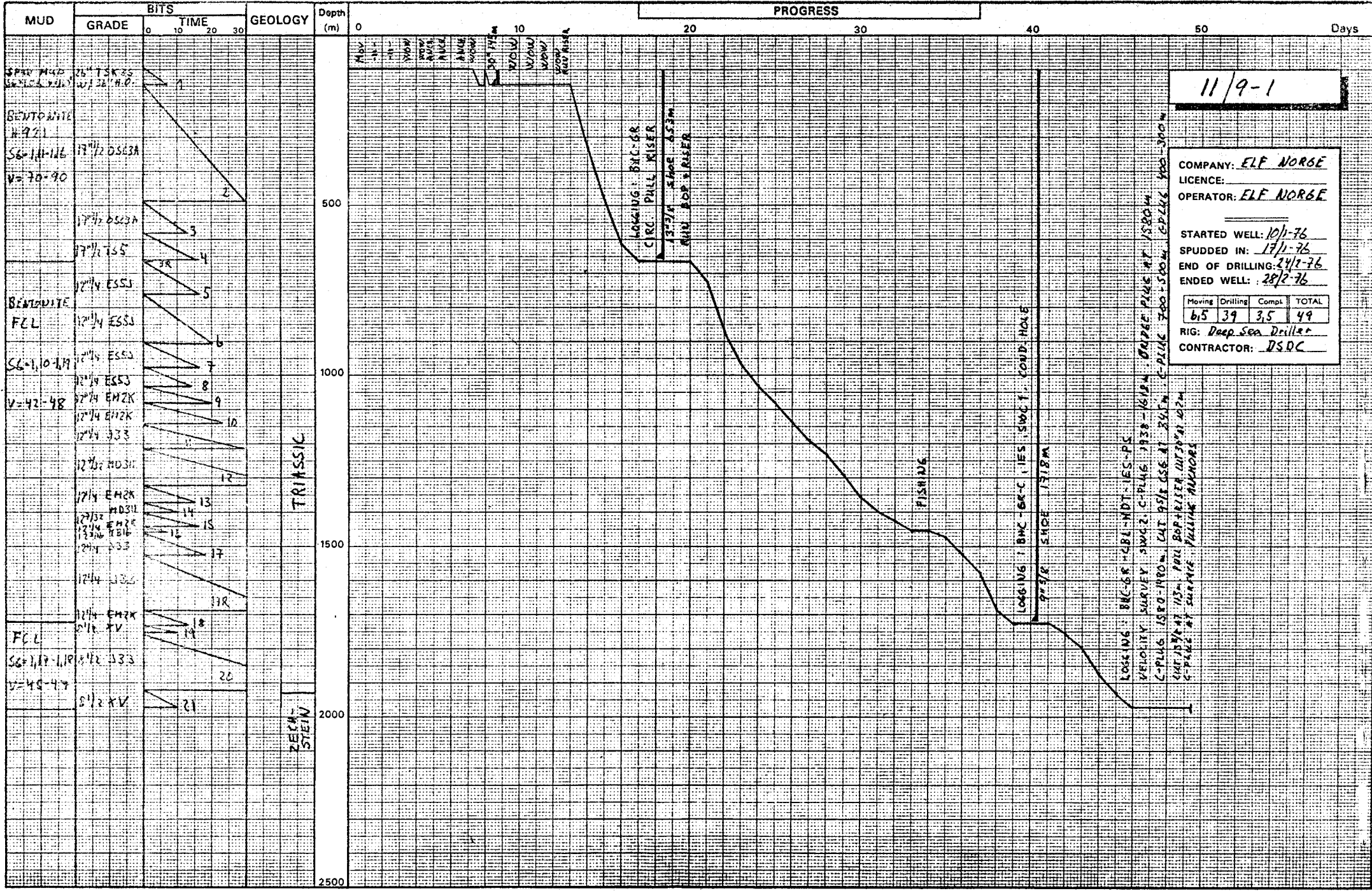
Mud Properties					Monetary Unit Kr.			
Depth	1740	1870	1929	1950	Products	Consumption	Price m/tonn	Total Price
MUD TYPE		FCL			BARITE	10 000	564,42	5644
SPECIFIC GRAVITY	1,17	1,17	1,17	1,18	BENTONITE	2 000	906,11	1812
SOLIDS %Vol	11	8	8	10	DEXTRID	400	8451,12	3380
OIL "	-	-	-	-	BORREGAARD - LFC	3 500	2439,84	8539
WATER "	89	92	92	90	DRISPAC	100	27489,60	2749
SAND "	-	0,3	-	-	CAUSTIC SODA	250	2797,94	699
FUNNEL VISCOSITY	47	45	47	47	BEVALOID (cans)	13	397,05	5162
APPARENT VISCOSITY	26	22	23	23				
PLASTIC VISCOSITY	23	19	19	20				
YIELD VALUE	6	6	7	6				
GEL 0	0	2	2	2				
GEL 10	10	6	5	5				
WATER LOSS 30mm	3,6	3,7	3,7	3				
WATER LOSS HT/HP	-	-	-	-				
CANL mm	0,5	0,5	0,5	0,5				
ALKALINITY PF	0,3	0,2	0,2	0,2				
ALKALINITY MF	-	-	-	-				
ALKALINITY PM	-	-	-	-				
RATIO MF/PF	-	-	-	-				
RATIO PL/PF	-	-	-	-				
pH	10	9	9,5	9,5				
NaCl	30	29,7	34,8	49				
Ca Cl <sub>2</sub>	-	-	-	-				
LIME	-	-	-	-				
Ca++	-	-	-	-				
SO <sub>4</sub> Ca	-	-	-	-				
U.S.\$1 = 5,52Kr. Total Price:						27986		

Geology		Observation	Volumes	
Depth	Formation		START	END
1725-1930	- Cly-Sdst Sh/Sltst	<ul style="list-style-type: none"> <li>- Drilling 8½ hole to 1972</li> <li>- Salinity increase from 30 to 35-40-45-49 while circulation</li> <li>- Stopped drilling</li> <li>- Logging</li> <li>- Abandonment well</li> </ul>	FABRICATION 50 m <sup>3</sup> DILUTION	
1930-1972	- Anhydr. Salt Massive		VOLUME WELL	84
		VOLUME PITS	154	
		VOLUME RESERVE		
		<u>LOSS:</u> SURFACE INSTALLATIONS 73 EJECTION 36 FORMATION DEPTH OF LOSS <u>OCCURRENCE:</u> TYPE VOLUME DEPTH		
		CALIPER: 8 ½		

<b>ELF NORGE a/s</b> <b>DRILLING MUD</b> End of Well	<b>DATE</b> from 17/1-76 to 19/2/76	<b>HOLE SIZE</b> Ø36" to 145 m Ø17½" to 663 m Ø12"1/4 to 1727 m Ø 8½" to 1972 m	<b>CASING</b> Ø30" at 145 m Ø13 3/8" at 653 m Ø9"5/8 at 1718 m Ø at m	<b>RIG</b> DSD CONTRACTOR CECA
	Well Nr: 11/9-1			

Mud Properties					Monetary Unit Kr.			
Depth					Products	Consumption	Price m/tonn	Total price
MUD TYPE					BARITE	74 000		41767
SPECIFIC GRAVITY					BENTONITE	118 000		106920
SOLIDS %Vol					SALT GEL	23 600		37192
OIL "					BRIXEL	8 700		28963
WATER "					BORREGAARD - LFC	16 250		39647
SAND "					CAUSTIC SODA	8 200		22941
FUNNEL VISCOSITY					SODA ASH	100		113
APPARENT VISCOSITY					SODIUM BICARBON.	100		127
PLASTIC VISCOSITY					H 921	4 000		55155
YIELD VALUE					DRISPAC	750		20582
GEL 0					DEXTRID	88 150		68876
GEL 10					CMC - LV	775		9230
WATER LOSS 30min					BEVALOID (cans)	49		19456
WATER LOSS HT/HP					MD (drums)	8		15200
CARE mm					MILPLATE (drums)	3		11178
ALKALINITY PF	SEE PHASES	1-2-3-4			TORQ TRIM "	2		7452
ALKALINITY MI					FORAGUM	1 700		32361
ALKALINITY PM								
RATIO MI/PF								
RATIO PI/PF								
pH								
NaCl								
Ca Cl <sub>2</sub>								
LIME								
Ca++								
SO <sub>4</sub> Ca								
<b>Total Price: Kr</b>						517160		

Geology		Observation	Volumes	
Depth	Formation			
		See Phases 1,2,3,4	FABRICATION DILUTION	
			VOLUME WELL	
			VOLUME PITS	
			VOLUME RESERVE	
			LOSS:	
			SURFACE INSTALLATIONS	
			EJECTION	
			FORMATION	
			DEPTH OF LOSS	
			OCCURENCE:	
			TYPE	
			VOLUME	
			DEPTH	
			CALIPER:	



11/9-1

COMPANY: ELF NORSE  
 LICENCE:  
 OPERATOR: ELF NORSE

STARTED WELL: 10/1-76  
 SPUDDED IN: 17/1-76  
 END OF DRILLING: 24/2-76  
 ENDED WELL: 28/2-76

Moving	Drilling	Compl.	TOTAL
65	39	35	49

RIG: Deep Sea Driller  
 CONTRACTOR: DSDC

LOGGING: BHC-GR CIRC PALL RISER 13 3/4\"/>

LOGGING: BHC-GR CIRC PALL RISER 13 3/4\"/>

LOGGING: BHC-GR CIRC PALL RISER 13 3/4\"/>

FISHING

TRIASSIC

ZECLA-STEIN