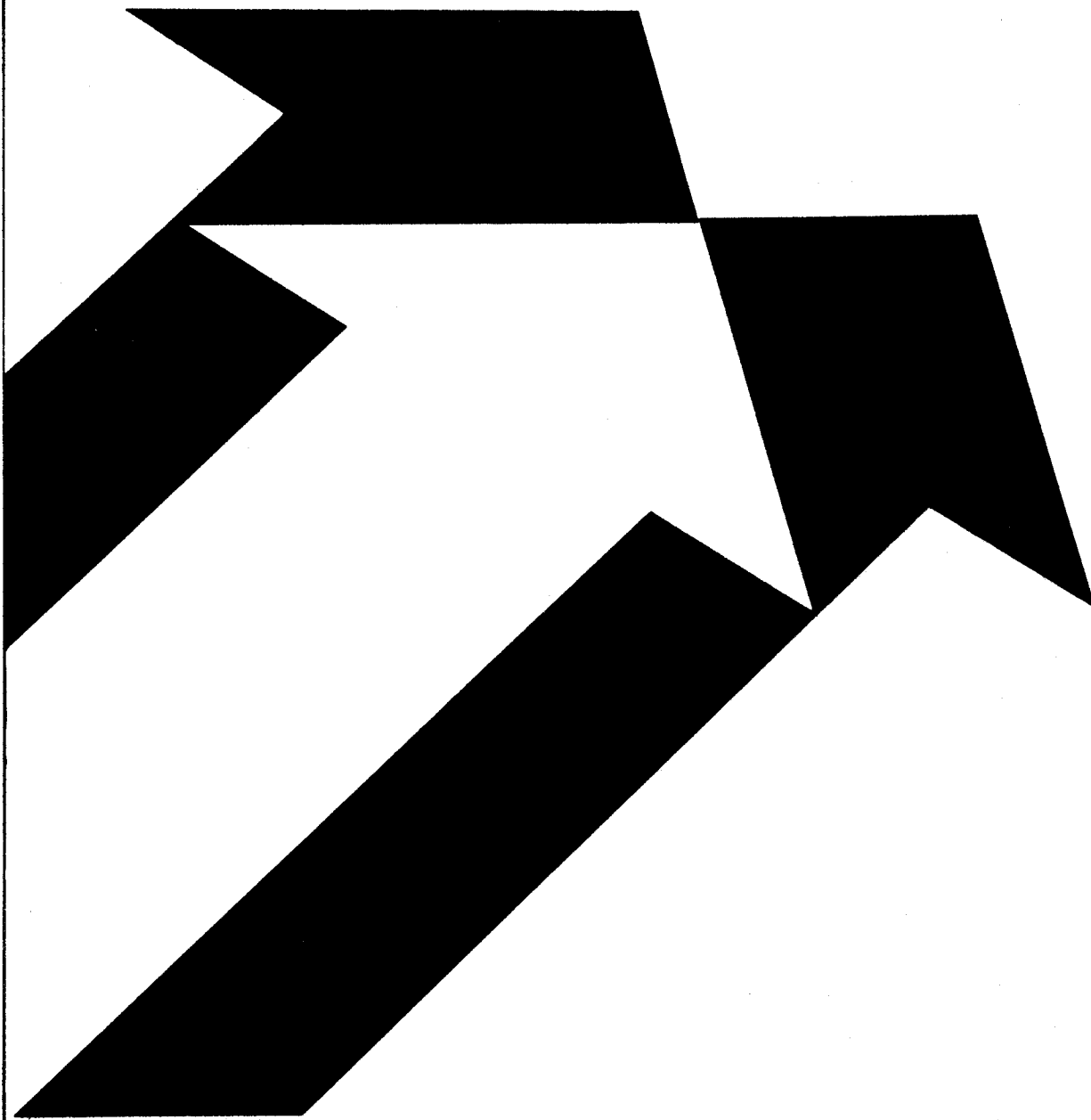




DRILLING FLUIDS

ARKIV	A:	88.
NR.	D:	61.03.22

WELL SUMMARY



COMPANY

NORSK HYDRO

WELL NO. 16/3-1

AREA

COUNTRY

NORWAY



CASING INTERVAL

COMPANY NORSK HYDRO Well No. 16/3-1 Page 1 of 2

Casing Size 20 " from _____ ' to 630 ' (Bit Size) 36 " hole from _____ ' to _____ '

Material Consumption for Interval:

Product	Units	Size	Cost/Unit	Total Cost
Bentonite	1075	cwt	7,52	8084
Caustic Soda	10	50 kg	29,65	296,50
Lignosulfonate	20	50 lb	14,37	287,40

Material Cost for Interval \$ 8667,90 Average Cost per Foot \$ 13,76

Number of Days 1 Average Cost per Day \$ 8667,90

Comments:



CASING INTERVAL

COMPANY NORSK HYDRO Well No. 16/3-1 Page 2 of 2

Casing Size 13-3/8 " from surf. , to 1447 , (Bit Size) 20 " hole from 630 ' to 1460 ' .

Material Consumption for Interval:

Product	Units	Size	Cost/Unit	Total Cost
Caustic Soda	15	25 kg	14.83	222.38
Lignosulfonate	5	50 lb	14.37	71.85
Bentonite	355	cwt	10.80	3834.00
Bulk Barite	50	cwt	4.57	228.48
Calcium Chloride	21	50 kg	8.36	175.56
Mica	5	50 lb	11.79	58.95

Material Cost for Interval \$ 4362.74 Average Cost per Foot \$ 5.33

Number of Days 1 Average Cost per Day \$ 4363.74

Comments:



DRILLING FLUIDS

DAILY ACTIVITY REPORT

COMPANY NORSK HYDRO WELL NO. 16/3-1 PAGE 1 OF 2

DATE 4.2.76 DEPTH 630 TIME 0400 ENGINEER Mark

Dress B.O.P. on well head. Test diverters.

DATE 5.2.76 DEPTH 1464 TIME 0400 ENGINEER Mark

Drill out of 20 " casing and drill 17½" hole with sea water to 1464 ft, ease in 120 sec/qt. mud to sea water mud. Average visc. 45 sec/qt. Company orders to P.O.O.H. and log. Log would not go down. T.I.H. and mix and pump 300 bbls 150 sec/qt mud. Average visc. then 53 sec/qt Co. orders P.O.O.H. to log.

DATE 6.2.76 DEPTH 1448 TIME 0100 ENGINEER Mark

Ran log and 13-3/8 inch casing to 1448 ft.

DATE 7.2.76 DEPTH 1448 TIME 0100 ENGINEER Mark

No activity.



DRILLING FLUIDS

DAILY ACTIVITY REPORT

COMPANY NORSK HYDRO WELL NO. 16/3-1 PAGE 2 OF 2

DATE 8.2.76 DEPTH 1448 TIME 0100 ENGINEER Mark

No activity.

DATE 9.2.76 DEPTH 1448 TIME 0100 ENGINEER Mark

Company orders to move off location due to 5° angle in stack. Set cement plug and move off location.

DATE _____ DEPTH _____ TIME _____ ENGINEER _____

DATE _____ DEPTH _____ TIME _____ ENGINEER _____



DRILLING FLUIDS

TOTAL MUD MATERIALS USED FOR WELL

COMPANY NORSK HYDRO WELL NO. 16/3-1 PAGE 1 of 1

Quantity	Material	Unit/Weight	Unit Cost	Total Cost	%
1430	Bentonite	cwt	10.80	11,918.00	
35	Caustic Soda	25 kg	14.83	518.88	
25	Lignosulfonate	50 lb	14.37	359.25	
21	Calcium Chloride	50 kg	8.36	175.56	
50	Barite	cwt	4.57	228.48	
5	Mica	50 lb	11.79	58.95	

TOTAL COST FOR WELL \$ 13,259.12

DEPTH AT T.D. 1448 FT. AVERAGE COST per FOOT for WELL \$ 9.16

AVERAGE COST per DAY \$ 2209.83

CHEM INCORPORATED / P. O. BOX 22111 / HOUSTON, TEXAS 77027

Tractor RASHUSSEN GLOBAL MARINE OPERATOR

NORSK HYDRO

LEGAL DESCRIPTION

No. 2046 DMPR DRILLER

Well Name And No. 16/3-1

Field

COUNTY NORTH SEA

STATE NORWAY

Milchem Warehouse DUSEVIK

Spud Date JAN 31.76 No. Drilling Days To T.D. 7

DATE T.D. REACHED 6 FEB. 76 TOTAL DEPTH 1448

TOTAL COST \$ 12.802

CASING PROGRAM		BITS		TYPE MUD SYSTEM		SOLIDS CONTROL EQUIPMENT		ADDITIONAL INFORMATION			
Depth (ft)	Size (in)	No.	Size (in)	Type	Depth Interval (ft)	Type	Depth Interval (ft)	Pump Specifications <u>6 1/4 x 12 EMSCO FA 1600.</u>			
<u>30</u>	<u>20"</u>			<u>PREHYDR. BENT.</u>	<u>SURF-TO</u>			D.P. and D.C.			
<u>47</u>	<u>13 3/8</u>							Other			

TIME	DEPTH (ft)	WT (ppg)	FUNNEL VISCOSITY (sec/qt)		PLASTIC VISCOSITY		YIELD POINT (lb/100ft ²)	GELS (lb/100ft ²) 0/10	pH	FILTRATE (ml/30 min)			Cake (32nd in)	Alkalinity			Chloride (ppm)	Calcium (ppm)	Sand (% by Vol.)	Solids (% by Vol.)	Oil (% by Vol.)	Water (% by Vol.)	Methy. Blue (me/ml mud)	Circ. Volume (bbt)	REMARKS
			API	HT-HP	OF	P _m				P _r /M _r															
	<u>587</u>	<u>8.7</u>	<u>130</u>	<u>48</u>	<u>44</u>	<u>9.5</u>	<u>N/C</u>																	<u>300 FILLED 36" HOLE PRIOR 30" CSE</u>	
	<u>649</u>	<u>8.7</u>	<u>125</u>	<u>46</u>	<u>42</u>	<u>9.5</u>	<u>N/C</u>																		<u>150 SPOT 150 bbl MUD PRIOR 20" CSE</u>
<u>0400</u>	<u>630</u>	<u>8.7</u>	<u>120</u>	<u>45</u>	<u>41</u>	<u>9.5</u>	<u>N/C</u>																		
<u>0400</u>	<u>1448</u>	<u>8.7</u>	<u>56</u>	<u>68</u>	<u>4</u>	<u>3.3</u>	<u>9.0</u>	<u>2.0</u>		<u>2</u>	<u>.3/</u>	<u>10000</u>	<u>1000</u>	<u>TR</u>	<u>7</u>	<u>0</u>	<u>93</u>								<u>963 DRILLED 13 3/8"</u>
<u>0400</u>	<u>1448</u>	<u>8.7</u>	<u>56</u>	<u>4</u>	<u>41</u>	<u>9.0</u>	<u>2.2</u>			<u>2</u>	<u>.3/</u>	<u>10000</u>	<u>1000</u>	<u>TR</u>	<u>7</u>	<u>0</u>	<u>93</u>								<u>963 LOG 13 3/8" HOLE</u>

Contractor RASMUSSEN GLOBAL MARINE OPERATOR

NORS. HYDRO

LEGAL DESCRIPTION

Milchem Well No.

Log No. POLYGLOMAR DRILLER

Well Name And No. 16/3-1

Field

COUNTY NORTH SEA

STATE NORWAY

Start Date JAN. 31. 76

No. Drilling Days To T.D. 6

Date T.D. Reached 6 FEB. 76

TOTAL DEPTH 1448

Pump And Equipment Information EMSCO FA-1600

DATE (19)	DEPTH (ft)	BIT NO.	BIT TYPE	JETS (In/32)	DEPTH BIT (ft)		Bit Footage (ft)	Rotating Hours	Cumulative Rotating Hours	Dull Condition			Rotary RPM	Weight on Bit (1,000 lb)	R. Rate Average (fpm)	Pump Pressure (psi)	Pump Rate (gpm)	GPM	Nozzle Velocity (fps)	Annular Velocity (fpm)		MUD			REMARKS		
					IN	OUT				T	B	G								D.P.	D.C.	Weight (ppg)	P.V. (cp)	Yield Point (lb/100ft ²)			
JAN 31	575	1	36"	OPEN	456	575	119						60/80	12	500	200	956									DRILLING W/ SEAWATER SPOTTED 300 PPM V.S. MU	
FEB 1		2	26"		575	630	55	2					60/80	12	27	400	200	956									DRILLING W/ SEAWATER
FEB 2																											

Milchem Technical Representative ROY MARK

District STAVANGER

Region NORWAY

Contractor RASMUSSEN GLOBAL MARINE OPERATOR

NORSK HYDRO

LEGAL DESCRIPTION

Log No. POLYELOMAR DRILLER

Well Name And No. 1613-1

Field

COUNTY NORTH SEA

STATE NORWAY

Milchem Well No. _____
Milchem Warehouse DUSEVIK

Spud Date 31 JAN. 76 No. Drilling Days To T.D. 6

DATE T.D. REACHED 6 FEB. 76 TOTAL DEPTH 1448

TOTAL COST \$ 12,802

DATE (1976)	DEPTH (ft)	BENTONITE (EUDREARY)		CAUSTIC		SODA		SODIUM SULFONATE		LUNICAL		CALCIUM CHLORIDE		WYOMING BENTONITE		MICA		STARLOSE		SODA ASH		SODA BICARB.		BARITE (BULK)						\$ US DAILY COST	\$ US CUMULATIVE COST
		Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost		
1-29	-	1075	10	20																										8667.90	8667.90
30	-																													-	8667.90
31	-																													-	8667.90
2-1	587									15	12																		255.00	8922.90	
2	649									6	7	5																	187.71	9107.61	
3	-																													-	9107.61
4	649																													-	9107.61
5	1445										336																			3694.55	12802.16
6	1448																													-	12802.16
7	1447																													-	12802.16
8	1447																													-	12802.16
9	-																													-	12802.16
10																															