Well no : 31/ 2-14 **Operator :** SHELL

Coordinates	: 60 51 26.52 N 03 25 37.68 E	UTM coord. UTM zone 31	: 6747135 N 523206 E
Licence no	: 054	Permit no	: 411
Rig	: BORGNY DOLPHIN	Rig type	: SEMI-SUB.
Contractor	: DOLPHIN SERVICES A/S		
Bottom hole temperature	: 45 deg.C	Elev. KB	: 25 M
Spud date	: 84.04.23	Water depth	: 339 M
Compl. date	: 84.06.21	Total depth	: 1725 M
Spud class.	: APPRAISAL	Age at TD	: JURASSIC
Compl. class.	: P&A. OIL DISCOVERY		
Seis. loc.	: 8007-147 SP. 324 & 81007-147 SP. 324		

LICENSEES

5.000	CONOCO NORWAY INC.
5.000	NORSK HYDRO PRODUKSJON A.S
35.000	A/S NORSKE SHELL
50.000	DEN NORSKE STATS OLJESELSKAP A.S
5.000	SUPERIOR OIL NORGE A/S

CASING AND LEAK-OFF TESTS

Type	Casing diam.	Depth below KB	Hole diam.	Hole depth below KB	Lot mud eqv. g/cm3
CONDUCTOR	30	464.0	36	474.0	
SURF.COND.	20	799.0	26	810.0	1.37
INTERM.	13 3/8	1498.0	17 1/2	1514.0	1.52
INTERM.	9 5/8	1724.0	12 1/4	1725.0	

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery M	Recovery %	Series
1	1535.0 - 1544.5	7.2	75.8	UPPER JURASSIC
2	1544.5 - 1560.0	9.3	60.0	UPPER JURASSIC
3	1560.0 - 1564.0	2.9	72.5	UPPER JURASSIC
4	1564.0 - 1571.0	6.1	87.1	UPPER JURASSIC
5	1571.0 - 1580.0	5.9	65.6	UPPER JURASSIC
6	1580.0 - 1589.5	6.3	66.3	UPPER JURASSIC
7	1589.5 - 1599.0	8.7	91.6	UPPER JURASSIC

MUD PROPERTIES

Depth below KB meter	Mud weigth g/cm3	Mud type
500.0	1.03	WATER BASED
550.0	1.12	WATER BASED
600.0	1.14	WATER BASED
650.0	1.10	WATER BASED
750.0	1.11	WATER BASED
800.0	1.12	WATER BASED
850.0	1.25	WATER BASED
900.0	1.26	WATER BASED
1000.0	1.27	WATER BASED
1200.0	1.31	WATER BASED
1250.0	1.30	WATER BASED
1515.0	1.16	WATER BASED
1535.0	1.13	WATER BASED
1545.0	1.16	WATER BASED
1570.0	1.17	WATER BASED

DRILL STEM TEST

INTERVALS AND PRESSURES

Test no.	Interval meter	Choke size	Pressure (PSI) FSIP	BTHP	WHP
1.0	1590.0 - 1583.0	38.1	2293.0		420.0

RECOVERY

Test no.	Oil Sm3/d	Gas M Sm3/d	Oil grav. g/cm3	Gas grav. rel. air	GOR m3/m3
1.0	1335		0.890	0.640	57

DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
CUTTINGS		
WET SAMPLES	490 - 1725	175

SHALLOW GAS

INTERVAL BELOW KB	REMARKS
	NONE

AVAILABLE LOGS

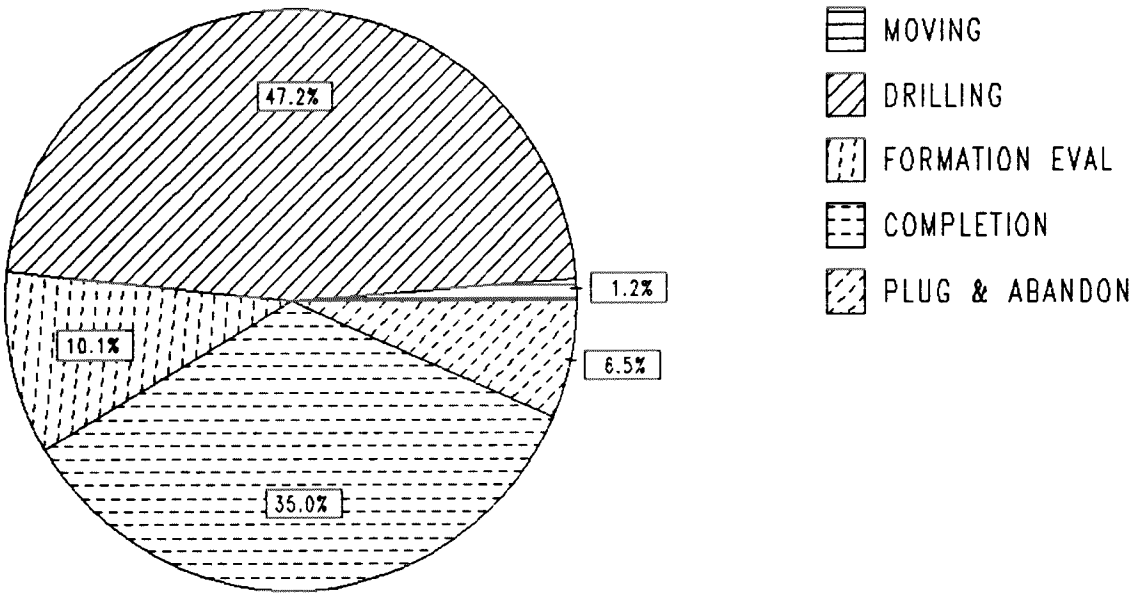
LOG TYPE	INTERVALS	1/200	1/500
ISF BHC GR	350 - 814	X	X
ISF BHC	814 - 1504	X	X
ISF BHC	1503 - 1719	X	X
LDL CNL	464 - 814	X	X
LDL CNL	814 - 1511	X	X
LDL CNL	1513 - 1654	X	X
CNL GRAV. PACK	1530 - 1580	X	
CNL GRAV. PACK	1510 - 1581	X	
DLL MSFL	1496 - 1714	X	X
CDM AP	1496 - 1716	X	X
SHDT	1496 - 1718	X	X
*NGS	1496 - 1654	X <==>	X
*BGL	345 - 515	X <==>	1:40
RFT HP	1534 - 1693		
RFT	1534 - 1693		
CBL VDL	364 - 1488	X	
CBL VDL	900 - 1690	X	
MUD	464 - 1725		X
VELOCITY	350 - 1719	1:1000	X

(+ Air Gun Velocity Survey and Calibr. log data 1 stk)
(+ Synthetic Seismogram, 10 - 20 cm/s, 350 - 1650, 2 stk)
(+ Synthetic Seismogram, 10 - 20 cm/s, 2 stk)
(+ Synthetic Seismogram, Marine, 10 - 20 cm/s, 2 stk)
(+ Two Way Travel Time, 10 - 20 cm/s, 2 stk)

* BOTH SCALES ON SAME LOG

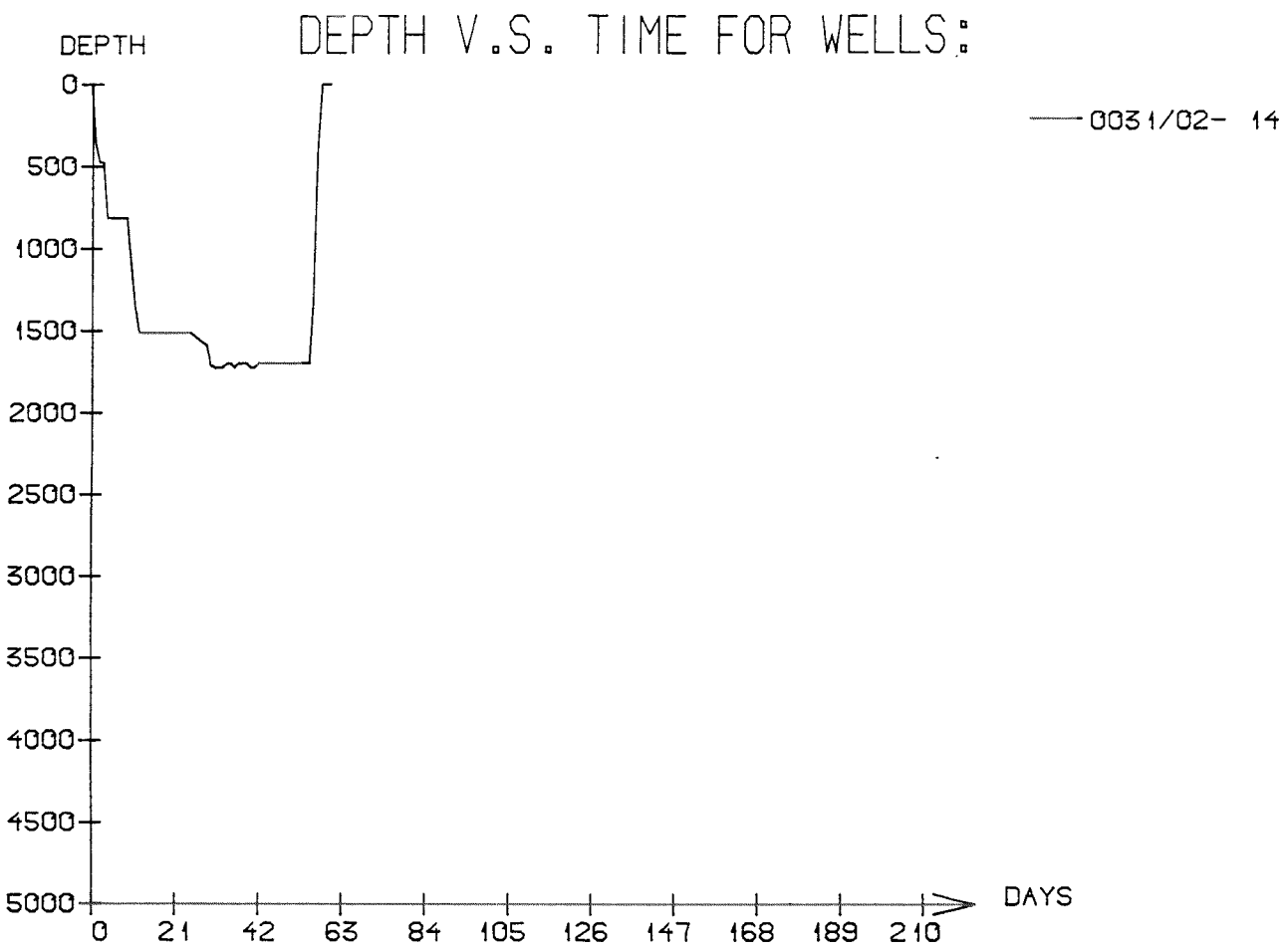
DAILY DRILLING REPORT SYSTEM

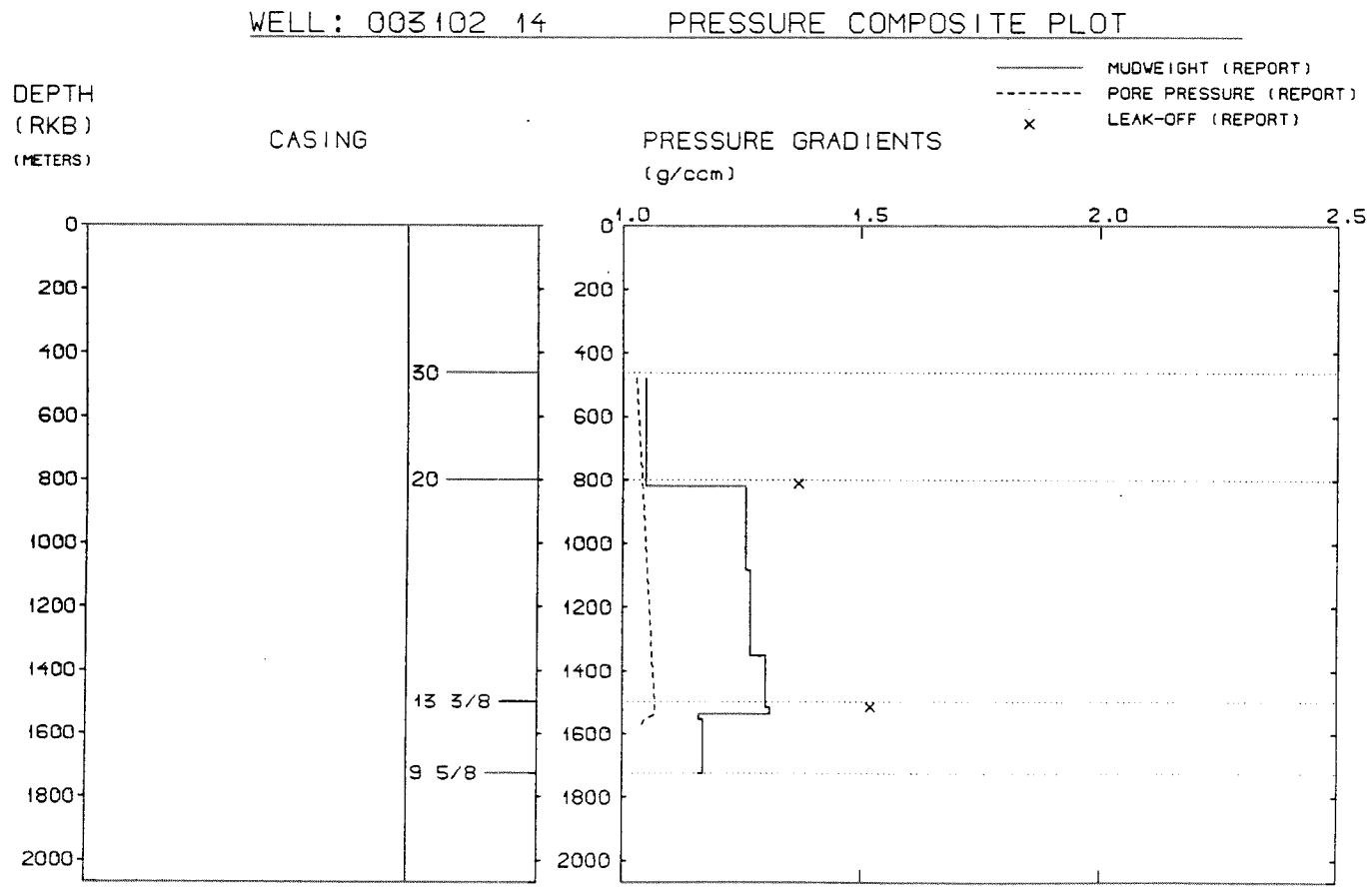
Main operation : 31/02-14



Total : 1449,00 HRS

Main operation	Hours	% of total
MOVING	17,50	1,21
DRILLING	683,00	47,14
FORMATION EVAL	146,50	10,11
COMPLETION	507,50	35,02
PLUG & ABANDON	94,50	6,52


DEPTH V.S. TIME FOR WELLS:
DEPTH
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
0
21
42
63
84
105
126
147
168
189
210
DAYS
0031/02- 14


WELL: 003102 14 PRESSURE COMPOSITE PLOT
DEPTH
(RKB)
(METERS)
CASING
PRESSURE GRADIENTS
(g/ccm)
MUDWEIGHT (REPORT)
PORE PRESSURE (REPORT)
LEAK-OFF (REPORT)
30
20
13 3/8
9 5/8
1.0
1.5
2.0
2.5

WELL HISTORY - 31/2-14

GENERAL:

The main objectives of the appraisal well 31/2-14 were to demonstrate the production potential in the northern part of the oil province, to evaluate the proposed template development scheme and to confirm the predicted extension of high energy progradational sands in the northern region. The well encountered hydrocarbons in the Upper Jurassic Sognefjord Formation.

OPERATIONS:

The well was spudded 23.04.84 by the semi-submersible rig Borgny Dolphin. Seven cores were cut in the Upper Jurassic sequence. When testing the BOP after running 13 3/8" casing, the kill line was found leaking, and had to be repaired before further drilling. The well was drilled using water based mud.

TESTING:

A long duration test was performed in the Upper Jurassic Sognefjord Formation. The test produced oil, no gas breakthrough occured.

GEOLOGICAL TOPS

WELL: 31/ 2-14

	Depth m (RKB)
Nordland Group	*340.000*
Hordaland Group	*799.000*
Rogaland Group	*1326.000*
Balder Fm	*1326.000*
Sele Fm	*1375.000*
Lista Fm	*1421.000*
Viking Group	*1526.000*
Sognefjord Fm	*1526.000*
Heather Fm	*1591.000*
Fensfjord Fm	*1684.500*
TD =	*1725.000*