

WDSS Report

Date: 21/10/96

PE/SKR

Page: 1 / 4

Well no:	Operator:
7120/02-02	HYDRO

Well

<p>Coordinates : 71° 50' 23.99" N 20° 36' 03.59" E</p> <p>License no : 109</p> <p>Rig : POLAR PIONEER</p> <p>Contractor : POLAR FRONTIER A.S</p> <p>Bottom hole temp: 85 °C</p> <p>Spud. date : 91.01.27</p> <p>Compl. date : 91.03.23</p> <p>Spud. class : WILDCAT</p> <p>Compl. class : P&A. OIL SHOWS</p> <p>Seisloca : NH8904 - 005 SP 470</p>	<p>UTM coord. : 7971348.28 N 486119.44 E</p> <p>Permit no : 665</p> <p>Rig type : SEMI-SUB.</p> <p>Elev. KB : 23 M</p> <p>Water depth : 337 M</p> <p>Total depth : 2800 M</p> <p>Form. at TD : M.JURASSIC</p> <p>Prod.form. : CRETACEOUS</p>
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Licensees

10.000000 ESSO EXPL. & PROD. NORWAY A/S
 15.000000 NORSK HYDRO PRODUKSJON AS
 15.000000 MOBIL DEVELOPMENT NORWAY AS
 50.000000 DEN NORSKE STATS OLJESELSKAP A.S
 10.000000 CONOCO PETROLEUM NORGE AS

Casing and Leak-off Tests

Type	Casing diam	Depth below KB	Hole diam.	Hole depth below KB	Lot mud eqv. g/cm3
CONDUCTOR	30	459.0	36	460.0	
INTERM.	18 5/8	785.0	24	788.0	1.44
INTERM.	13 3/8	1785.0	17 1/2	1790.0	1.29

WDSS Report

Date: 21/10/96

PB/SKR

Page: 2 / 4

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Conventional Cores

Core no.	Intervals cored meters	Recovery m	%
1	1895.0 - 1922.7	27.7	100.0
2	2163.0 - 2163.5	0.5	100.0
3	2180.0 - 2201.5	21.5	100.0
4	2393.0 - 2400.9	7.9	100.0
5	2636.0 - 2645.8	9.8	100.0
6	2720.0 - 2723.5	3.5	100.0

Mud

Depth	Mud weight	Visc.	Mud type
360.0	1.08		WATER BASED
380.0	1.14	16.0	WATER BASED
421.0	1.08		WATER BASED
459.0	1.08		WATER BASED
583.0	1.08		WATER BASED
720.0	1.14	9.0	WATER BASED
800.0	1.05	18.0	WATER BASED
853.0	1.06	9.0	WATER BASED
1155.0	1.08	13.0	WATER BASED
1350.0	1.09	13.0	WATER BASED
1497.0	1.09	13.0	WATER BASED
1544.0	1.08	13.0	WATER BASED
1662.0	1.10	14.0	WATER BASED
1685.0	1.14	16.0	WATER BASED
1786.0	1.12	15.0	WATER BASED
1805.0	1.12	15.0	WATER BASED
1886.0	1.14	15.0	WATER BASED
1895.0	1.14	15.0	WATER BASED
1923.0	1.14	17.0	WATER BASED
1933.0	1.14	17.0	WATER BASED
2050.0	1.14	18.0	WATER BASED
2163.0	1.14	18.0	WATER BASED
2180.0	1.14	18.0	WATER BASED
2201.0	1.14	20.0	WATER BASED
2205.0	1.14	19.0	WATER BASED
2337.0	1.14	20.0	WATER BASED
2402.0	1.15	18.0	WATER BASED
2461.0	1.15	16.0	WATER BASED

WDSS Report

Date: 21/10/96

PB/SKR

Page: 3 / 4

Well no:	Operator:
7120/02-02	HYDRO

2568.0	1.14	19.0	WATER BASED
2636.0	1.14	18.0	WATER BASED
2646.0	1.14	17.0	WATER BASED
2720.0	1.15	16.0	WATER BASED
2726.0	1.14	15.0	WATER BASED
2795.0	1.14	17.0	WATER BASED
2800.0	1.14	18.0	WATER BASED

Drill Stem Test (intervals and pressures)

Test no.	Test interval meter	Choke size	Pressure (psi) WHP	BTHP	FFP
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Drill Stem Test (recovery)

Test no.	Oil Sm ³ /d	Gas Sm ³ /d	Oil grav. g/cm ³	Gas grav. rel. air	GOR m ³ /m ³
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Drill Bit Cuttings and Wet Samples

Sample type	Interval below KB	Number of samples
WET SAMPLES	810 - 2799.3	330
CUTTINGS	800 - 2799.0	720

Shallow Gas

Interval below KB	Remarks

Available Logs

Log type	Intervals logged	1/200	1/500	
AMS	786.0 - 2796.0			

WDSS Report

Date: 21/10/96

PB/SKR

Page: 4 / 4

Well no:	Operator:
7120/02-02	HYDRO

ARRAY SONIC	1450.0 - 1800.0			
CDM AP/SHDT MSD	1785.0 - 2798.0			
CST GR	1810.0 - 2783.0			
DIL SDT GR	786.0 - 1268.0			
DIL SDT SGR	786.0 - 2796.0			
DLL MSFL SP GR	2100.0 - 2794.0			
DLL MSFL SP GR	2100.0 - 2795.0			
DRILLING DATA PRESS.	358.0 - 2800.0			
FMS AMS GR	1785.0 - 2798.0			
LDL CNL GR	786.0 - 1268.0			
LDL CNL NGL	786.0 - 2796.0			
LDL CNL SGR	1200.0 - 2796.0			
MUD	358.0 - 2800.0			
MWD	359.0 - 1800.0			
NGT RATIOS	1200.0 - 2796.0			
RFTA HP GR	2584.0 - 2766.0			
RFTB AMS GR	2134.0 - 2693.0			
SDT SGR	1200.0 - 2796.0			
SYNTHETIC SEISMOGRAM				
WSC	500.0 - 2790.0			
VSP	500.0 - 2790.0			
VSP COMPOSITE				

Main operations for well: 7120/2-2**Main operation: DRILLING**

Sub operation:	Minutes:	Hours:	% of total:
BOP ACTIVITIES	1350	22,5	2,98
BOP/WELLHEAD EQ	2760	46,0	6,10
CASING	6210	103,5	13,73
CIRC/COND	810	13,5	1,79
DRILL	21990	366,5	48,61
HOLE OPEN	930	15,5	2,06
OTHER	30	0,5	0,07
PRESS DETECTION	60	1,0	0,13
REAM	2010	33,5	4,44
SURVEY	180	3,0	0,40
TRIP	8910	148,5	19,69
Total	45240	754,0	100,00

Main operation: FORMATION EVAL

Sub operation:	Minutes:	Hours:	% of total:
CIRC SAMPLES	330	5,5	1,76
CIRC/COND	3150	52,5	16,83
CORE	4290	71,5	22,92
LOG	4260	71,0	22,76
OTHER	30	0,5	0,16
RFT/FIT	1560	26,0	8,33
TRIP	5100	85,0	27,24
Total	18720	312,0	100,00

Main operation: INTERRUPTION

Sub operation:	Minutes:	Hours:	% of total:
FISH	660	11,0	3,77
LOST CIRC	990	16,5	5,66
MAINTAIN/REP	6780	113,0	38,77
OTHER	240	4,0	1,37
WAIT	7500	125,0	42,88
WELL CONTROL	1320	22,0	7,55
Total	17490	291,5	100,00

Main operation: MOVING

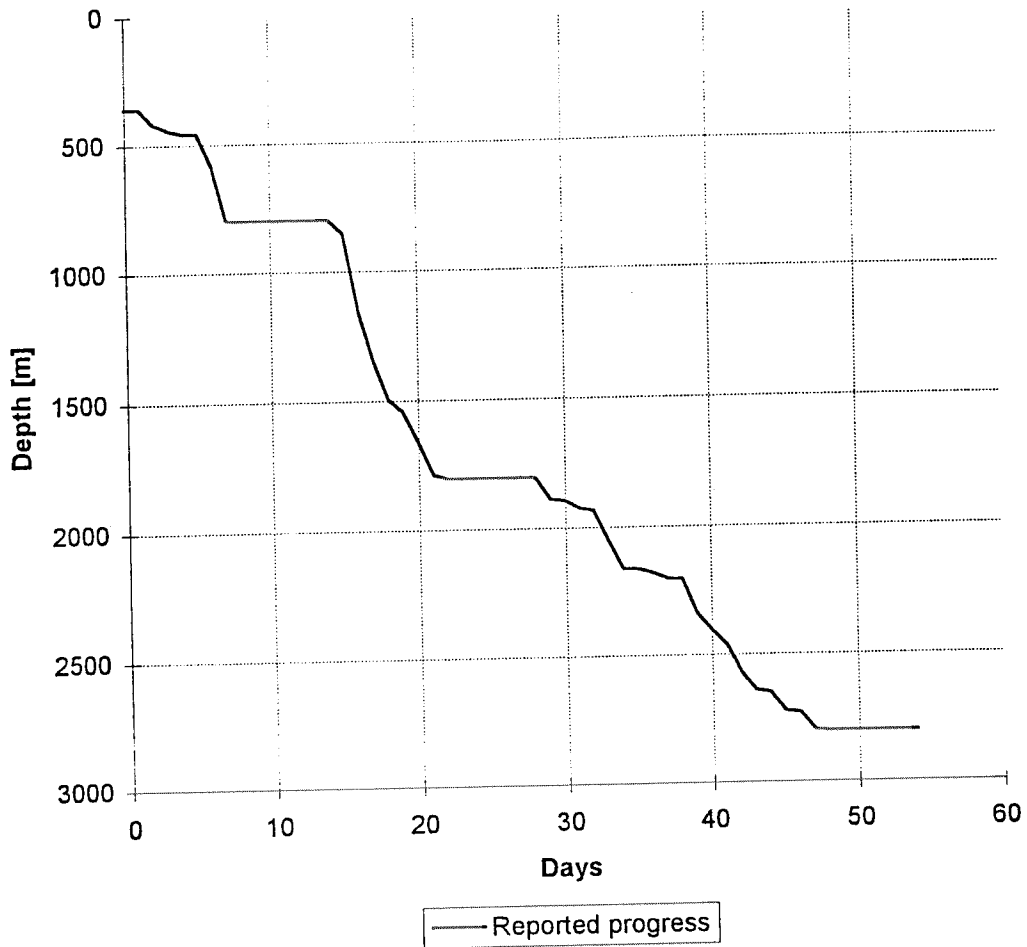
Sub operation:	Minutes:	Hours:	% of total:
ANCHOR	1470	24,5	7,94
TRANSIT	17040	284,0	92,06
Total	18510	308,5	100,00

Main operation: PLUG & ABANDON

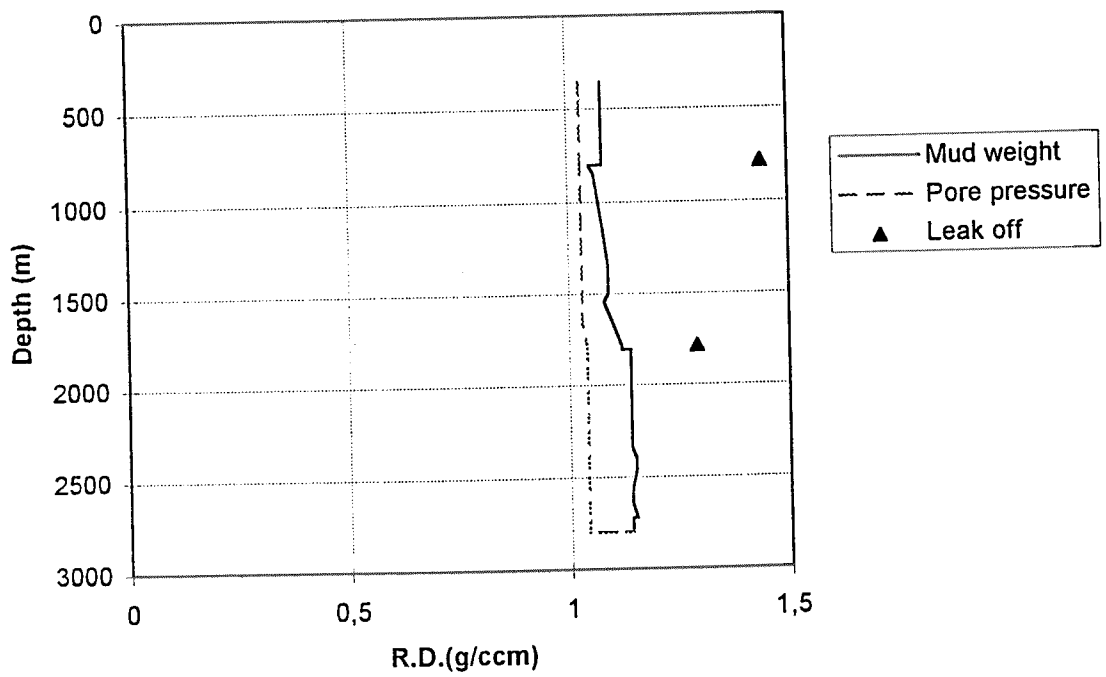
Sub operation:	Minutes:	Hours:	% of total:
CEMENT PLUG	1050	17,5	28,23
CIRC/COND	210	3,5	5,65
CUT	660	11,0	17,74
EQUIP RECOVERY	840	14,0	22,58
MECHANICAL PLUG	180	3,0	4,84
TRIP	780	13,0	20,97
Total	3720	62,0	100,00

Total time used: 1728,0 Hours

Depth vs time for well: 7120/2-2



Composite plot for well: 7120/2-2



Well History 7120/2-2

General:

Well 7120/2-2 was designed to test the Mesozoic rocks on a downfaulted position south of the Loppa High, where the neighbouring well 7120/2-1 tested minor amounts of oil in Lower Cretaceous. This was a new play concept on the Barents Shelf, related to structural/ stratigraphic combination traps as a result of wedge sedimentation in conjunction with the Kimmeridgian tectonic phase. The main objectives of the well were:

- 1) to test the prospectivity of the Lower Cretaceous fan systems (wedge I and II) in an optimal position.

- 2) to test the prospectivity of Middle Jurassic Sto Formation

The pore pressure was expected to be normal throughout the well. Shallow gas warnings were given to two levels down to 1437 m RKB. A fault with displacement less than 10 m is seen at the planned well location at depth 565 ±20 m

Operations:

Wildcat well 7120/2-2 was spudded 27 January 1991 by the semi-submersible rig Polar Pioneer and completed 21 March 1991 at a total depth of 2800 m RKB within the Lower-Middle Jurassic sandstones of the Sto Formation. The primary target horizon (expected to be sandstones of Knurr Formation/ Lower Wedge) was penetrated at 2125 m RKB. These sandstones exhibited low porosity and permeability with minor oil shows. A total of six conventional cores were cut in the well. A total of 120 sidewall cores were attempted, and 97 were recovered. No shallow gas intervals were penetrated. No major problems were experienced while drilling the hole. The well was permanently plugged and abandoned as a dry hole with minor shows in Cretaceous and Jurassic siltstones and sandstones.

Testing:

No DST tests were performed

Geological Tops.

Well: 7120/2-2.

	Depth m (RKB)
Nordland Group	359.5
Sotbakken Group	436.0
Torsk Fm	436.0
Nygrunnen Group	1443.0
Kvitling Fm	1443.0
Nordvestbanken Group	1450.0
Kolmule Fm	1450.0
U.Wedge	1712.0
Kolje Fm	1948.0
Knurr Fm	2120.0
L.Wedge	2125.0
Teistengrunnen Group	2502.5
Fuglen Fm	2656.0
Realgrunnen Group	2692.0
Sto Fm	2692.0
T.D.	2800.0