



Generell informasjon

Brønnbane navn	31/2-9
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	TROLL
Funn	31/2-1 (Troll Vest)
Brønn navn	31/2-9
Seismisk lokalisering	79403 SP 435
Utvinningstillatelse	054
Boreoperatør	A/S Norske Shell
Boretillatelse	344-L
Boreinnretning	BORGNY DOLPHIN
Boredager	34
Borestart	29.08.1982
Boreslutt	01.10.1982
Frigitt dato	01.10.1984
Publiseringsdato	19.12.2007
Opprinnelig formål	APPRAISAL
Gjenåpnet	NO
Innhold	OIL/GAS
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	LATE JURASSIC
1. nivå med hydrokarboner, formasjon.	SOGNEFJORD FM
Avstand, boredekk - midlere havflate [m]	25.0
Vanndybde ved midlere havflate [m]	339.0
Totalt målt dybde (MD) [m RKB]	1770.0
Totalt vertikalt dybde (TVD) [m RKB]	1770.0
Maks inklinasjon [°]	2.25
Temperatur ved bunn av brønnbanen [°C]	46
Eldste penetrerte alder	MIDDLE JURASSIC
Eldste penetrerte formasjon	FENSFJORD FM
Geodetisk datum	ED50
NS grader	60° 52' 54.34" N



ØV grader	3° 28' 3.43" E
NS UTM [m]	6749867.74
ØV UTM [m]	525386.67
UTM sone	31
NPDID for brønnbanen	88

Brønnhistorie

General

Well 31/2-9 was drilled northeast of the well 31/2-7 in the Troll West oil province in the Northern North Sea. The main objectives were to establish the extent of a previously proven thick oil column province in the Troll Field and to complete the well near the OWC in order to follow the development of water coning.

Operations and results

Well 31/2-9 was spudded with the semi-submersible installation Borgny Dolphin on 29 August 1982 and drilled to TD at 1770 m in the Late Jurassic Fensfjord Formation. Some problems were encountered with the well head after running the 20" casing (2.5 days lost), and with the BOP after running the 13 3/8" casing (3.5 days lost). The well was drilled with spud mud down to 460 m, with seawater and gel from 460 m to 816 m, with KCl/polymer mud from 816 m to 1509 m, and with seawater/Drispac mud from 1509 m to TD.

Well 31/2-9 encountered a hydrocarbon bearing column of 34.5 m in the Late Jurassic Sognefjord Formation. The reservoir was gas bearing from 1549 -1570 m (21 m gas column) and oil bearing down to 1583.5 m (13.5 m oil column). This was a thinner oil column than expected. The gas reservoir consisted of very fine to medium grained bioturbated sandstones with a high mica content. The sandstones were very silty and well sorted. Around 1570 m a change in lithology to medium/ coarse grained sandstones with low mica content and less bioturbation was seen. In the lower part of the oil reservoir the mica content was slightly more than in the upper part and the sandstones were siltier. Below the OWC shows (moderate to very weak direct fluorescence) were observed on cores throughout the cored section down to 1628 m.

Five fiberglass sleeved cores were taken in the 12 1/4" section from 1554 to 1628 m. Four RFT runs were made and 5 samples were obtained: at 1573 m (29 deg API oil), 1571 m (oil), 1565 m (gas), and two samples at 1575 m (oil)

The well was permanently abandoned on 1 October 1982 as a gas and oil appraisal well.

Testing

No drill stem test was performed.

Borekaks i Sökkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
470.00	1768.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	1554.0	1563.0	[m]
2	1563.0	1571.3	[m]
3	1573.0	1591.6	[m]
4	1591.6	1607.8	[m]
5	1610.0	1627.7	[m]

Total kjerneprøve lengde [m]	69.8
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder



1554-1559m



1559-1563m



1563-1568m



1568-1571m



1573-1578m



1578-1583m



1583-1589m



1589-1591m



1591-1597m



1597-1602m



1602-1607m



1610-1615m



1615-1620m



1620-1626m



1628-1627m

Palynologiske preparater i Sokkeldirektoratet



Faktasider

Brønnbane / Leting

Utskriftstidspunkt: 15.5.2024 - 02:50

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
1279.0	[m]	DC	RRI
1288.0	[m]	DC	RRI
1297.0	[m]	DC	RRI
1306.0	[m]	DC	RRI
1315.0	[m]	DC	RRI
1324.0	[m]	DC	RRI
1333.0	[m]	DC	RRI
1342.0	[m]	DC	RRI
1351.0	[m]	DC	RRI
1357.0	[m]	DC	RRI
1369.0	[m]	DC	RRI
1378.0	[m]	DC	RRI
1387.0	[m]	DC	RRI
1396.0	[m]	DC	RRI
1405.0	[m]	DC	RRI
1414.0	[m]	DC	RRI
1423.0	[m]	DC	RRI
1432.0	[m]	DC	RRI
1441.0	[m]	DC	RRI
1450.0	[m]	DC	RRI
1459.0	[m]	DC	RRI
1468.0	[m]	DC	RRI
1477.0	[m]	DC	RRI
1486.0	[m]	DC	RRI
1538.0	[m]	SWC	GEOCH
1539.0	[m]	SWC	GEOCH
1540.0	[m]	C	GEOCH
1540.0	[m]	SWC	GEOCH
1541.0	[m]	SWC	GEOCH
1542.0	[m]	C	GEOCH
1543.0	[m]	C	GEOCH
1544.0	[m]	C	GEOCH
1545.0	[m]	C	GEOCH
1546.0	[m]	C	GEOCH
1547.0	[m]	C	GEOCH
1548.0	[m]	SWC	GEOCH
1549.0	[m]	SWC	GEOCH
1552.0	[m]	SWC	GEOCH
1554.0	[m]	SWC	GEOCH



1555.0 [m]	C	GEOCH
1559.0 [m]	C	GEOCH
1560.0 [m]	C	GEOCH
1564.0 [m]	C	GEOCH
1570.0 [m]	C	GEOCH
1574.0 [m]	C	GEOCH
1578.0 [m]	C	GEOCH
1583.0 [m]	C	GEOCH
1592.0 [m]	C	GEOCH
1602.0 [m]	C	GEOCH
1614.0 [m]	C	GEOCH
1622.0 [m]	C	GEOCH
1624.0 [m]	C	GEOCH
1625.0 [m]	C	GEOCH
1628.0 [m]	C	GEOCH
1633.0 [m]	C	GEOCH
1643.0 [m]	SWC	GEOCH
1656.0 [m]	C	GEOCH
1667.0 [m]	SWC	GEOCH
1678.0 [m]	C	GEOCH
1688.0 [m]	SWC	GEOCH
1698.0 [m]	C	GEOCH
1707.0 [m]	SWC	GEOCH
1713.0 [m]	C	GEOCH
1725.0 [m]	C	GEOCH
1730.0 [m]	SWC	GEOCH
1735.0 [m]	SWC	GEOCH
1747.0 [m]	SWC	GEOCH
1756.0 [m]	SWC	GEOCH

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
364	NORDLAND GP
767	HORDALAND GP
1292	ROGALAND GP
1292	BALDER FM
1356	SELE FM
1402	LISTA FM



1526	VÅLE FM
1540	CROMER KNOLL GP
1544	VIKING GP
1544	DRAUPNE FM
1549	SOGNEFJORD FM
1600	HEATHER FM
1708	FENSEFJORD FM

Dokumenter - eldre Sokkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
88_01_WDSS_General_Information	pdf	0.16
88_02_WDSS_completion_log	pdf	0.13

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
88_01_31_2_9_Completion_Report_and_Completion_log	pdf	8.07
88_02_31_2_9_Biostratigraphy_appraisal	pdf	2.03
88_02_31_2_9_Cutting_description	pdf	0.71
88_02_31_2_9_Drilling_programme	pdf	1.31
88_02_31_2_9_Drilling_programme_encl_1	pdf	0.38
88_02_31_2_9_Grain_size_distr.analysis	pdf	0.10
88_02_31_2_9_High_res.dipmeter_arrow_listing	pdf	0.02
88_02_31_2_9_High_res.dipmeter_arrow_listing_encl_1	pdf	2.62
88_02_31_2_9_Mudlogging_and_cutting_description	pdf	3.40
88_02_31_2_9_Partial_fluid_study	pdf	0.24
88_02_31_2_9_Partial_fluid_study_Final_report	pdf	0.37
88_02_31_2_9_Prod_test_programme	pdf	1.68
88_02_31_2_9_Reservoir_fluid_study	pdf	0.77
88_02_31_2_9_Sedimentologi_av_kjerne	pdf	10.09
88_02_31_2_9_Special_core_analysis	pdf	3.31
88_02_31_2_9_Special_core_analysis_Sintef	pdf	3.03
88_02_31_2_9_Technical_report_on_core	pdf	1.37





88_02_31_2_9_Well_summary	pdf	1.40
88_02_31_2_9_Overlagringstrykk_fra_bronn	pdf	0.82

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CBL VDL	520	1500
CST	816	1496
CST	1498	1770
DLL MSFL	1498	1767
FDC CNL GR CAL	450	814
HDT	1498	1770
ISF BHC GR	350	812
ISF BHC GR	808	1406
ISF BHC GR	1406	1501
ISF BHC GR	1498	1769
LDT CNL GR CAL	803	1502
LDT CNL GR CAL	1498	1770
RFT	1550	1752
WST	776	1769

Foringsrør og formasjonsstyrketester

Type utforing	Utforing diam. [tommer]	Utforing dybde [m]	Brønnbane diam. [tommer]	Brønnbane dyp [m]	LOT/FIT slam eqv. [g/cm3]	Type formasjonstest
CONDUCTOR	30	450.0	36	460.0	0.00	LOT
SURF.COND.	20	808.0	26	816.0	1.47	LOT
INTERM.	13 3/8	1498.0	17 1/2	1509.0	1.54	LOT
OPEN HOLE		1770.0	12 1/4	1770.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	flytegrense [Pa]	Type slam	Dato, måling
480	1.05			waterbased	
780	1.12			waterbased	
990	1.28			waterbased	
1290	1.31			waterbased	





1750	1.18		waterbased	
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Trykkplott

Porertrykksdataene kommer fra logging i brønnen hvis ingen annen kilde er oppgitt. I noen brønner der trykk ikke er logget, er det brukt informasjon fra formasjonstester eller brønnspark. Trykkdataene er rapportert inn til Oljedirektoratet og videre prosessert og kvalitetssikret av IHS Markit.

Dokument navn	Dokument format	Dokument størrelse [KB]
88 Formation pressure (Formasjonstrykk)	pdf	0.15

