Generell informasjon

Brønnbane navn	25/7-2
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Funn	25/7-2
Brønn navn	25/7-2
Seismisk lokalisering	CN 8525 - 6 SP 390
Utvinningstillatelse	103
Boreoperatør	Conoco Norway Inc.
Boretillatelse	628-L
Boreinnretning	DYVI STENA
Boredager	161
Borestart	08.02.1990
Boreslutt	18.07.1990
Frigitt dato	18.07.1992
Publiseringsdato	17.12.2003
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	GAS/CONDENSATE
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	LATE JURASSIC
1. nivå med hydrokarboner, formasjon.	INTRA DRAUPNE FM SS
2. nivå med hydrokarboner, alder	MIDDLE JURASSIC
2. nivå med hydrokarboner, formasjon	HUGIN FM
Avstand, boredekk - midlere havflate [m]	25.0
Vanndybde ved midlere havflate [m]	124.0
Totalt målt dybde (MD) [m RKB]	4850.0
Totalt vertikalt dybde (TVD) [m RKB]	4847.0
Maks inklinasjon [°]	12.9
Temperatur ved bunn av brønnbanen [°C]	163
Eldste penetrerte alder	MIDDLE JURASSIC
Eldste penetrerte formasjon	SLEIPNER FM

Geodetisk datum	ED50
NS grader	59° 16' 28.59'' N
ØV grader	2° 12' 26.09'' E
NS UTM [m]	6571051.25
ØV UTM [m]	454816.14
UTM sone	31
NPDID for brønnbanen	1494

Brønnhistorie

General

Norwegian Continental Shelf Block 25/7 is located west of the Utsira basement High on the eastern flank of the Southern Viking Graben. The location is 5.3 km southwest of 25/7-1 which drilled into basement after the Cretaceous section without penetrating any Jurassic sediments and thus failed to test its target, Late Jurassic sandstones. With the 25/7-2 location further to the west one expected to penetrate a complete Brae analogue sequence. The main objectives of the well were to test the hydrocarbon potential of the Late Jurassic sands, the hydrocarbon potential of a structural closure at the Middle Jurassic sand level, and the hydrocarbon bearing potential of the Paleocene Heimdal sands. Trapping at Late and Middle Jurassic was assumed by sealing basement rocks to the east, and by dip closure elsewhere. Events interpreted as possible gas bearing sands occur between 200 and 300 m below sea level.

Operations and results

Wildcat well 25/7-2 was spudded 8 February 1990by the semi-submersible rig Dyvi Stena, and completed 18 July 1990 at a depth of 4850 m in the Middle Jurassic Sleipner Formation. The well was drilled with Seawater and hi-vis pills down to 1220 m and with KCl Polymer WBS/200 mud from 1220 m to TD. Drilling took 131 days from spud and 142 days from taking over the rig. A further 29 days were used to log, test, and plug and abandon the well. The rig was on contract for a total of 171 days. One hundred and thirty days were used for planned operations while wait-on-weather, fishing operations, and equipment trouble accounted for the NPT. No indications of shallow gas were observed.

Forty-seven metres of Cenomanian sand was encountered in the well. A gross thickness of 174 meters of hydrocarbon bearing Late Jurassic conglomerates and sandstones were encountered in the well. The Late Jurassic conglomerates and sandstones represent deposition by debris-flows, slumps and slides and minor turbidites on a fault-scarp submarine slope apron. The sequence had poor reservoir properties in the 25/7-2 location. Sedimentological interpretation and modelling as well as the DST analysis have shown the reservoir to be of limited size. It was therefore concluded that the 25/7-2 well encountered the Upper Jurassic conglomerate/sandstone sequence in a non-producible reservoir facies. The Middle Jurassic Hugin formation was 206 meters thick and was composed of sands deposited in an overall transgressive coastal barrier system. Hydrocarbons were present down to the base of the sands; however, the reservoir quality was extremely poor. The sandstones were intensely cemented and contained large amounts of fibrous illite. The Middle Jurassic Sleipner Formation had a very low sand/shale ratio. The FMS evaluation showed the sandstones to be intensely cemented. No net sand was interpreted from the log analysis.

A total of 210 sidewall cores were attempted and 91 were recovered. Four conventional cores were cut in the interval from 4125 to 4169.2 m, and two in the interval from 4345 to 4488 m. No fluid samples were taken on wire line. The well was permanently plugged and abandoned on 18 July 1990 as gas and condensate discovery.

Testing

A single drill stem test was conducted over the hydrocarbon-bearing interval of the Late Jurassic Intra Draupne and Intra Heather -Formation Sandstone. The perforated intervals were 4148 m to 4173 m, 4194 m to 4219 m, and 4248 m to 4273 m. Contribution to flow was from the Intra Draupne Formation Sandstone in the upper set of perforations (4148 ? 4173 m). Initial flow rates through a 40/64" choke were 255700 Sm3 gas, 228 Sm3 condensate, and 2.7 Sm3 water pr day through a 15.9 mm choke. Initial GOR was 1121 Sm3/ Sm3. Pressure and flow rates declined while GOR increased during the test. Separator condensate density was 0.784 g/cm3 (at 15°C) while separator gas gravity was 0.710 (air = 1). From PVT analyses the stock tank oil density was found to be 0.775 g/cm3 and the stock tank gas gravity 0.756 (air = 1).

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1230.00	4850.00

Borekaks tilgjengelig for prøvetaking?	YES

Borekjerner i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	4125.0	4136.3	[m]
2	4136.2	4145.7	[m]
3	4145.7	4154.6	[m]
4	4154.7	4169.2	[m]
5	4345.0	4347.4	[m]
6	4461.5	4488.6	[m]

Total kjerneprøve lengde [m]	73.7
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder

4125-4130m

4130-4135m

4135-4136m

4136-4141m

4141-4145m

4145-4150m

4150-4154m

4154-4159m

4159-4164m

4164-4169m

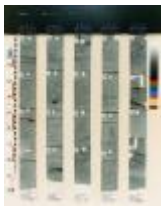

4169-4347m


4461-4466m


4466-4471m


4471-4476m


4476-4481m


4481-4486m


4486-4488m

Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
4109.0	[m]	DC	RRI
4115.0	[m]	DC	RRI
4125.1	[m]	C	RRI
4127.4	[m]	C	RRI
4162.6	[m]	C	RRI
4163.3	[m]	C	RRI
4164.4	[m]	C	RRI
4226.0	[m]	C	RRI
4245.0	[m]	C	RRI
4265.0	[m]	C	RRI

Oljeprøver i Sokkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
DST		4148.00	4273.00		11.07.1990 - 00:00	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
149	NORDLAND GP
446	UTSIRA FM
651	UNDIFFERENTIATED
687	HORDALAND GP
687	SKADE FM
1003	NO FORMAL NAME
2098	ROGALAND GP
2098	BALDER FM
2185	SELE FM
2216	HERMOD FM
2222	SELE FM
2258	LISTA FM
2318	HEIMDAL FM
2470	LISTA FM
2529	TY FM
2698	SHETLAND GP
2698	EKOFISK FM
2749	JORSALFARE FM
2925	KYRRE FM
3060	TRYGGVASON FM
3260	BLODØKS FM
3295	SVARTE FM
3399	NO FORMAL NAME
3447	SVARTE FM
3714	CROMER KNOLL GP
3714	RØDBY FM
3875	SOLA FM
3948	ÅSGARD FM
4056	VIKING GP
4056	DRAUPNE FM
4119	INTRA DRAUPNE FM SS
4212	HEATHER FM
4247	INTRA HEATHER FM SS
4293	HEATHER FM
4407	VESTLAND GP
4407	HUGIN FM
4613	SLEIPNER FM

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
1494	pdf	0.71

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
1494_1	pdf	1.26
1494_2	pdf	0.91

Dokumenter - eldre Sokkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
1494_01_WDSS_General_Information	pdf	0.25
1494_02_WDSS_completion_log	pdf	0.27

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
1494_25_7_2_COMPLETION_REPORT_AND_LOG	pdf	34.48

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsventil til størrelse [mm]
1.0	4148	4273	15.9

Test nummer	Endelig avstengningstrykk [MPa]	Endelig strømningstrykk [MPa]	Bunnhullstrykk [MPa]	Borehullstemperatur [°C]
1.0	9.000			129

Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstyngde rel. luft	GOR [m3/m3]
1.0	228	255700	0.781	0.732	1121

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CST	1225	2691
CST	3952	4121
CST	4176	4310
CST	4300	4340
CST	4365	4839
DIL GR SLS SP AMS	3911	4851
DIL LSS MSFL GR SP AMS	1210	2963
DIL SLS GR SP AMS	3911	4344
DLL MSFL GR SP	4050	4849
DLL MSFL NGS CAL SP	3911	4012
DLL MSFL NGS CAL SP	3911	4340
FMS GR	4010	4852
LDL CNL GR CAL	3911	4345
LDL CNL NGL CAL	4050	4852
LDL DIL LSS GR CAL SP AMS	259	1925
LDL DIL SLS MSFL GR CAL AMS	2969	3918
LDL GR CAL	1210	2964
MWD DPR	3914	4345
MWD RGD	265	1030
MWD RGD	3589	3914
MWD RGD	4349	4850
MWD RGD-M	1030	3440
RFT	4138	4292
RFT	4255	4567

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	259.0	36	265.0	0.00	LOT
INTERM.	20	1210.5	26	1220.0	1.57	LOT

INTERM.	13 3/8	2965.0	17 1/2	2974.0	1.94	LOT
INTERM.	9 5/8	3906.0	12 1/4	3914.0	1.96	LOT
LINER	7	4850.0	8 1/2	4850.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
195	1.92	26.0	12.0	WATER BASED	17.07.1990
195	1.92	22.0	11.0	WATER BASED	17.07.1990
265	1.07			WATER BASED	12.02.1990
265	1.06			WATER BASED	09.02.1990
342	1.07			WATER BASED	12.02.1990
1030	1.07			WATER BASED	12.02.1990
1030	1.08			WATER BASED	13.02.1990
1050	1.08			WATER BASED	14.02.1990
1050	1.08			WATER BASED	15.02.1990
1218	1.08			WATER BASED	16.02.1990
1220	1.08			WATER BASED	19.02.1990
1220	1.20	17.0	20.0	WATER BASED	20.02.1990
1220	1.20	17.0	11.5	WATER BASED	21.02.1990
1220	1.02	19.0	11.5	WATER BASED	23.02.1990
1220	1.20	18.0	10.5	WATER BASED	26.02.1990
1220	1.20	19.0	11.5	WATER BASED	26.02.1990
1220	1.20	19.0	11.0	WATER BASED	27.02.1990
1220	1.20	19.0	10.5	WATER BASED	28.02.1990
1220	1.20	18.0	12.0	WATER BASED	22.02.1990
1220	1.20	18.0	11.5	WATER BASED	26.02.1990
1250	1.20	16.0	10.0	WATER BASED	01.03.1990
1476	1.25	15.0	9.5	WATER BASED	02.03.1990
1684	1.29	19.0	9.0	WATER BASED	06.03.1990
1938	1.35	21.0	9.5	WATER BASED	06.03.1990
1938	1.39	21.0	9.5	WATER BASED	06.03.1990
1938	1.39	21.0	9.5	WATER BASED	06.03.1990
1940	1.41	22.0	9.5	WATER BASED	07.03.1990
1940	1.41	21.0	8.5	WATER BASED	08.03.1990
1958	1.41	24.0	8.0	WATER BASED	09.03.1990
2005	1.41	27.0	9.0	WATER BASED	12.03.1990
2113	1.25	29.0	13.5	WATER BASED	12.03.1990

2130	1.41	29.0	11.0	WATER BASED	12.03.1990
2178	1.41	27.0	9.5	WATER BASED	13.03.1990
2315	1.25	32.0	11.0	WATER BASED	14.03.1990
2437	1.40	30.0	11.5	WATER BASED	16.03.1990
2440	1.40	31.0	11.0	WATER BASED	16.03.1990
2504	1.40	39.0	12.0	WATER BASED	20.03.1990
2545	1.40	29.0	12.5	WATER BASED	20.03.1990
2545	1.40	29.0	11.0	WATER BASED	20.03.1990
2566	1.40	27.0	13.0	WATER BASED	20.03.1990
2630	1.40	27.0	13.0	WATER BASED	21.03.1990
2695	1.40	33.0	11.0	WATER BASED	22.03.1990
2707	1.40	26.0	9.0	WATER BASED	23.03.1990
2707	1.40	27.0	9.0	WATER BASED	26.03.1990
2707	1.40	26.0	9.0	WATER BASED	26.03.1990
2707	1.40	22.0	10.0	WATER BASED	26.03.1990
2737	1.40	30.0	11.5	WATER BASED	27.03.1990
2747	1.40	35.0	12.5	WATER BASED	28.03.1990
2747	1.40	30.0	11.0	WATER BASED	29.03.1990
2747	1.40	29.0	11.0	WATER BASED	30.03.1990
2747	1.40	28.0	11.0	WATER BASED	02.04.1990
2747	1.40	27.0	10.5	WATER BASED	02.04.1990
2811	1.40	23.0	11.5	WATER BASED	02.04.1990
2843	1.40	27.0	11.5	WATER BASED	05.04.1990
2843	1.40	22.0	10.0	WATER BASED	04.04.1990
2864	1.41	29.0	10.0	WATER BASED	06.04.1990
2895	1.40	28.0	10.5	WATER BASED	09.04.1990
2924	1.40	32.0	12.0	WATER BASED	10.04.1990
2958	1.40	27.0	12.0	WATER BASED	10.04.1990
2974	1.40	27.0	10.5	WATER BASED	11.04.1990
2974	1.40	28.0	11.0	WATER BASED	18.04.1990
2974	1.40	26.0	10.0	WATER BASED	18.04.1990
2974	1.40	22.0	9.0	WATER BASED	18.04.1990
2974	1.34	16.0	2.5	WATER BASED	18.04.1990
2974	1.40	21.0	8.5	WATER BASED	18.04.1990
2974	1.40	28.0	11.0	WATER BASED	10.04.1990
2974	1.40	26.0	10.0	WATER BASED	18.04.1990
3034	1.34	22.0	7.5	WATER BASED	18.04.1990
3135	1.34	21.0	8.5	WATER BASED	19.04.1990
3250	1.34	23.0	12.0	WATER BASED	23.04.1990
3349	1.34	25.0	12.5	WATER BASED	23.04.1990

3422	1.44	26.0	13.0	WATER BASED	23.04.1990
3440	1.44	26.0	12.0	WATER BASED	24.04.1990
3445	1.44	26.0	12.0	WATER BASED	25.04.1990
3506	1.44	19.0	9.0	WATER BASED	26.04.1990
3561	1.47	21.0	10.0	WATER BASED	27.04.1990
3589	1.47	22.0	10.0	WATER BASED	30.04.1990
3642	1.51	24.0	11.5	WATER BASED	30.04.1990
3713	1.92	20.0	5.0	WATER BASED	16.07.1990
3912	1.65	21.0	6.5	WATER BASED	03.05.1990
3914	1.65	16.0	6.0	WATER BASED	08.05.1990
3914	1.65	16.0	5.5	WATER BASED	08.05.1990
3914	1.65	20.0	5.5	WATER BASED	04.05.1990
3920	1.68	17.0	4.5	WATER BASED	08.05.1990
3969	1.76	18.0	5.5	WATER BASED	08.05.1990
4031	1.87	21.0	6.0	WATER BASED	09.05.1990
4079	1.92	21.0	7.0	WATER BASED	10.05.1990
4120	1.92	18.0	7.5	WATER BASED	11.05.1990
4125	1.92	19.0	9.5	WATER BASED	15.05.1990
4131	1.92	17.0	8.0	WATER BASED	15.05.1990
4136	1.92	18.0	5.5	WATER BASED	15.05.1990
4146	1.92	17.0	5.0	WATER BASED	15.05.1990
4155	1.92	16.0	4.5	WATER BASED	16.05.1990
4169	1.92	18.0	5.5	WATER BASED	18.05.1990
4195	1.92	17.0	6.0	WATER BASED	21.05.1990
4240	1.92	15.0	7.0	WATER BASED	21.05.1990
4302	1.94	16.0	8.0	WATER BASED	21.05.1990
4342	1.98	14.0	7.5	WATER BASED	22.05.1990
4345	1.95	15.0	7.0	WATER BASED	23.05.1990
4345	1.92	14.0	7.0	WATER BASED	25.05.1990
4345	1.92	14.0	7.5	WATER BASED	29.05.1990
4345	1.92	14.0	7.0	WATER BASED	29.05.1990
4345	1.92	14.0	7.5	WATER BASED	29.05.1990
4345	1.92	13.0	6.0	WATER BASED	30.05.1990
4345	1.92	13.0	11.0	WATER BASED	01.06.1990
4345	1.92	15.0	9.0	WATER BASED	06.06.1990
4345	1.92	14.0	9.0	WATER BASED	06.06.1990
4345	1.98	14.0	8.0	WATER BASED	22.05.1990
4345	1.92	14.0	7.5	WATER BASED	25.05.1990
4345	1.92	14.0	4.5	WATER BASED	31.05.1990
4345	1.92	14.0	9.0	WATER BASED	05.06.1990

4349	1.92	15.0	10.0	WATER BASED	06.06.1990
4349	1.92	15.0	10.0	WATER BASED	07.06.1990
4349	1.92	14.0	10.0	WATER BASED	08.06.1990
4398	1.92	18.0	14.0	WATER BASED	08.06.1990
4462	1.92	17.0	12.0	WATER BASED	08.06.1990
4489	1.92	16.0	13.0	WATER BASED	12.06.1990
4495	1.92	16.0	11.0	WATER BASED	12.06.1990
4520	1.92	16.0	10.0	WATER BASED	12.06.1990
4624	1.92	17.0	12.0	WATER BASED	12.06.1990
4643	1.92	17.0	15.0	WATER BASED	13.06.1990
4727	1.92	17.0	7.5	WATER BASED	14.06.1990
4739	1.92	10.0	11.0	WATER BASED	15.06.1990
4769	1.92	15.0	5.0	WATER BASED	19.06.1990
4802	1.92	14.0	6.0	WATER BASED	19.06.1990
4809	1.92	16.0	8.5	WATER BASED	19.06.1990
4812	1.92	12.0	5.0	WATER BASED	05.07.1990
4812	1.93	12.0	5.0	WATER BASED	09.07.1990
4812	1.92	13.0	5.0	WATER BASED	10.07.1990
4812	1.92	10.0	5.0	WATER BASED	10.07.1990
4812	1.92	11.0	6.0	WATER BASED	02.07.1990
4812	1.92	11.0	5.5	WATER BASED	02.07.1990
4812	1.92	12.0	5.5	WATER BASED	03.07.1990
4812	1.92	12.0	5.0	WATER BASED	10.07.1990
4812	1.92	12.0	7.0	WATER BASED	16.07.1990
4830	1.92	14.0	7.5	WATER BASED	19.06.1990
4850	1.92	14.0	7.0	WATER BASED	20.06.1990
4850	1.92	14.0	7.5	WATER BASED	21.06.1990
4850	1.92	13.0	7.5	WATER BASED	25.06.1990
4850	1.92	12.0	7.5	WATER BASED	25.06.1990
4850	1.92	13.0	6.5	WATER BASED	27.06.1990
4850	1.92	14.0	5.5	WATER BASED	28.06.1990
4850	1.92	12.0	5.5	WATER BASED	04.07.1990
4850	1.92	10.0	5.0	WATER BASED	10.07.1990
4850	1.92	8.0	14.0	WATER BASED	11.07.1990
4850	1.92	12.0	7.5	WATER BASED	12.07.1990
4850	1.92	20.0	7.0	WATER BASED	02.07.1990
4850	1.92	13.0	6.5	WATER BASED	02.07.1990
4850	1.92	12.0	7.5	WATER BASED	13.07.1990
4850	1.92	15.0	6.5	WATER BASED	22.06.1990
4850	1.92	12.0	8.0	WATER BASED	25.06.1990

4850	1.92	12.0	5.5	WATER BASED	26.06.1990

Tynnslip i Sokkeldirektoratet

Dybde	Enhet
4131.00	[m]
4146.25	[m]
4148.25	[m]
4152.75	[m]
4160.25	[m]
4166.00	[m]
4168.00	[m]

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]
1494_Formation_pressure_(Formasjonstrykk)	pdf	0.22