



Generell informasjon

Brønnbane navn	15/9-19 SR
Type	EXPLORATION
Formål	WILDCAT
Status	SUSPENDED
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	VOLVE
Funn	15/9-19 S Volve
Brønn navn	15/9-19
Seismisk lokalisering	ST 8215 R - 571 CROSSLINE 491
Utvinningstillatelse	046
Boreoperatør	Den norske stats oljeselskap a.s
Boretillatelse	749-L2
Boreinnretning	TREASURE PROSPEC
Boredager	72
Borestart	17.02.1993
Boreslutt	29.04.1993
Frigitt dato	29.04.1995
Publiseringsdato	15.12.2006
Opprinnelig formål	WILDCAT
Gjenåpnet	YES
Årsak til gjenåpning	DRILLING
Innhold	OIL
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	HUGIN FM
Avstand, boredekk - midlere havflate [m]	22.0
Vanndybde ved midlere havflate [m]	84.0
Totalt målt dybde (MD) [m RKB]	4641.0
Totalt vertikalt dybde (TVD) [m RKB]	3132.0
Maks inklinasjon [°]	55.9
Eldste penetrerte alder	TRIASSIC
Eldste penetrerte formasjon	SKAGERRAK FM
Geodetisk datum	ED50
NS grader	58° 26' 9.25" N
ØV grader	1° 55' 47.05" E



NS UTM [m]	6477887.72
ØV UTM [m]	437506.71
UTM sone	31
NPDID for brønnbanen	2105

Brønnhistorie

General

The re-entry 15/9-19 SR is a continuation of wildcat well 15/9-19 S, which was temporarily suspended at 3569.0 m (2394.0 m TVD RKB), immediately above the Heimdal sands. The target of the well was the Theta Vest Structure north of the Sleipner East Field. The primary objective was to test gas from the Heimdal reservoir, and to provide geological and reservoir data enabling optimal reservoir management. The secondary target was the Hugin/Skagerrak Sands, which were to be fully evaluated if hydrocarbon bearing.

Operations and results

Well 15/9- 19 S was re-entered (15/9-19 SR) with the semi-submersible installation Treasure Prospect on 17 February 1993, from Slot 3 of the Loke Discovery template. The well was drilled to TD at 4641 m (3132.3 m TVD RKB) in the Triassic Skagerrak Formation. No significant technical problems were encountered in this well bore. The well bore was drilled with oil-based mud (Petrofree).

The Heimdal sandstone was penetrated at 3623 m (2427 m TVD RKB), 50 m low to prognosis. This Formation was the main target in the well. No hydrocarbons were encountered. The Hugin Formation was penetrated at 4317 m (2886 m TVD RKB), 2 m low to prognosis. The entire Hugin Formation was oil filled (18 m TVD). The core from this formation was filled with H₂S (650 ppm). Sandstones of the Skagerrak Formation were water wet. No shows were recorded due to invasion of petrofree mud.

One core was cut from 3643 m to 3648 m in the Heimdal Formation, and two cores were cut from 4328 m to 4383 m in the Hugin and Skagerrak Formations. No fluid samples were taken.

The well was suspended on 29 March 1993 as an oil discovery.

Testing

One Drill Stem Test from the interval 4316 to 4338 m in the Hugin Formation was performed. The test produced 680 Sm³ oil /day through a 12.7 mm choke. The GOR was 98 Sm³/Sm³, the oil density was 0.870 g/cm³, and the gas gravity was 0.740 (air =1)

Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	3643.0	3647.8	[m]
2	4328.0	4354.2	[m]



3	4355.0	4383.0	[m]
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Total kjerneprøve lengde [m]	59.0
Kjerner tilgjengelig for prøvetaking?	YES

Oljeprøver i Sökkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
DST	TEST1	4338.00	4316.00		19.04.1993 - 00:00	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
106	NORDLAND GP
846	UTSIRA FM
1080	UNDIFFERENTIATED
1108	HORDALAND GP
1313	SKADE FM
1451	NO FORMAL NAME
3008	GRID FM
3240	NO FORMAL NAME
3302	ROGALAND GP
3302	BALDER FM
3403	SELE FM
3483	LISTA FM
3623	HEIMDAL FM
3827	SHETLAND GP
3827	EKOFISK FM
3850	TOR FM
4047	HOD FM
4110	TRYGGVASON FM
4150	BLODØKS FM
4168	SVARTE FM
4176	CROMER KNOLL GP
4176	RØDBY FM



4188	SOLA FM
4201	ÅSGARD FM
4304	VIKING GP
4304	DRAUPNE FM
4310	HEATHER FM
4317	VESTLAND GP
4317	HUGIN FM
4340	NO GROUP DEFINED
4340	SKAGERRAK FM

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
2105 15 9 19 SR COMPLETION LOG	pdf	0.86
2105 15 9 19 SR COMPLETION REPORT	pdf	18.35

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsven til størrelse [mm]
1.0	4316	4338	12.7

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

Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstygde rel. luft	GOR [m3/m3]
1.0	680	66640	0.870	0.740	98

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
LINER	7	4640.0	8 1/2	4640.0	0.00	LOT



