Generell informasjon

Brønnbane navn	6506/3-1
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORWEGIAN SEA
Brønn navn	6506/3-1
Seismisk lokalisering	DTW2000-xline7757 & inline5120
Utvinningstillatelse	259
Boreoperatør	Norsk Chevron AS
Boretillatelse	1007-L
Boreinnretning	BYFORD DOLPHIN
Boredager	26
Borestart	22.07.2001
Boreslutt	19.08.2001
Frigitt dato	19.08.2003
Publiseringsdato	07.11.2005
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	DRY
Funnbrønnbane	NO
Avstand, boredekk - midlere havflate [m]	25.0
Vanndybde ved midlere havflate [m]	341.0
Totalt målt dybde (MD) [m RKB]	3667.0
Totalt vertikalt dybde (TVD) [m RKB]	3662.0
Maks inklinasjon [°]	4.5
Temperatur ved bunn av brønnbanen [°C]	121
Eldste penetrerte alder	LATE CRETACEOUS
Eldste penetrerte formasjon	LANGE FM
Geodetisk datum	ED50
NS grader	65° 48' 20.75'' N
ØV grader	6° 44' 32.64'' E
NS UTM [m]	7300300.07
ØV UTM [m]	396769.02
UTM sone	32
NPDID for brønnbanen	4344

Brønnhistorie

General

Well 6506/3-1 is located west of the Skarv Discovery on the western Margin of the Dønna Terrace, off shore Mid Norway. The primary objective of the well was to demonstrate the economic potential of two prognosed hydrocarbon reservoirs in Structure A in the Brygge (Paleogene) and Lysing (Cretaceous) Formations. The corresponding prospects were called the Harran and the Grong-A prospects respectively. In addition, Cretaceous Nise and Lange Formation sands were seen as high-risk leads.

Operations and results

Wildcat well 6506/3-1 was spudded with the semi-submersible installation Byford Dolphin on 22 July 2001 and drilled to TD at 3667 m in the Early Cretaceous Lange Formation. Operations went without significant problems. The well was drilled with seawater and hi-vis pills down to 1382 m and with Versavert oil based mud from 1382 m to TD.

The Tertiary Brygge Formation reservoir sands were not present in the well. The Brygge, Tare and 37 m of the Tang Formation contained a total of 140.5m (Measured Thickness) of diatomaceous material and volcanics. The diatomite unit has an average porosity of 38% (max.60%) and very low permeability. SEM and XRD results show diatomite to be the dominant lithofacies in this interval with some component of volcanic glass. The Opal A to Opal CT transformation has only partly taken place at the base of the unit. The unit was water filled and significantly over-pressured. The fluid content in the Brygge unit was crudely identified as water, due to a water kick. MDT sampling of the Brygge unit was not possible to perform due to the physical properties of the encountered diatomite lithofacies. Hydrocarbon migration through the formation could only be inferred from the gas log data, which indicated a significant amount of methane present when the formation back-flowed. The well found 21 m gross Lysing reservoir sands from 3090 m to 3110.5 m by logging, coring and SWC. The formation shows an upward increase in grain-size from claystones to medium grained sandstones. At best some 3 m of the uppermost sands had porosity of 20%. The fluid type after recovering MDT samples from 3091.2 m (3 bottles of fluids) were identified to be water containing traces of phenols and organic acids. The water was very fresh with a total salinity of 11366 mg/l and with a low $CaCO_3$ saturation at initial conditions. The water was highly unsaturated in gas: no free gas was found in any of the samples. Methane and longer chain hydrocarbons were present. The samples had 6-9 vol-% contamination from the oil-based mud. The high-risk Nise and Lange sands were not present in the well.

A single core was cut in the interval 3101.5 m to 3171.5 m in the Lysing Formation and into the Lange Formation.

The well was permanently abandoned on 19 August 2001 as a dry well.

Testing

No drill stem test was performed.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1390.00	3662.00

Borekaks tilgjengelig for prøvetaking?	YES

Borekjerner i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	3101.5	3169.0	[m]

Total kjerneprøve lengde [m]	67.5
Kjerner tilgjengelig for prøvetaking?	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
366	NORDLAND GP
366	NAUST FM
1624	HORDALAND GP
1624	BRYGGE FM
1657	ROGALAND GP
1657	TARE FM
1756	TANG FM
1797	SHETLAND GP
1797	SPRINGAR FM
2023	NISE FM
2300	KVITNOS FM
3090	CROMER KNOLL GP
3090	LYSING FM
3111	LANGE FM

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
4344	pdf	0.52

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
4344_6506_3_1__COMPLETION_LOG	.pdf	6.19
4344_6506_3_1__COMPLETION_REPORT	.pdf	4.14

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
AIT PEX HNGS	1374	3665
CST GR	1447	3650
DSI GR AMS OBDT	1374	3665
LWD - CDR	453	1382
LWD - CDR	3171	3667
LWD - ISONIC CDR	1382	3101
MDT GR	1655	3107
PEX	1590	2000
VSP GR	790	3660

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	451.0	36	454.0	0.00	LOT
INTERM.	13 3/8	1374.0	17 1/2	1382.0	1.84	LOT
OPEN HOLE		3667.0	8 1/2	3667.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
456	1.03			SEAWATER	
1382	1.20			SW/GEL	
1698	1.57	32.0		OBM	
3128	1.57	45.0		OBM	
3437	1.60	41.0		OBM	
3667	1.60	37.0		OBM	

Tynnslip i Sokkeldirektoratet

Dybde	Enhet
3104.41	[m]
3106.00	[m]
3106.64	[m]
3108.25	[m]
3108.50	[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]
4344_Formation_pressure_(Formasjonstrykk)	PDF	0.28