



General information





Wellbore name	2/7-9
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	EMBLA
Discovery	2/7-20 Embla
Well name	2/7-9
Seismic location	LINE PGE 217 M SP: 220
Production licence	018
Drilling operator	Phillips Petroleum Company Norway
Drill permit	87-L
Drilling facility	ZAPATA NORDIC
Drilling days	107
Entered date	25.12.1973
Completed date	10.04.1974
Release date	10.04.1976
Publication date	05.12.2012
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL
Discovery wellbore	NO
1st level with HC, age	DEVONIAN
1st level with HC, formation	NO GROUP DEFINED
Kelly bushing elevation [m]	37.0
Water depth [m]	71.0
Total depth (MD) [m RKB]	4448.0
Maximum inclination [°]	1
Bottom hole temperature [°C]	156
Oldest penetrated age	DEVONIAN
Oldest penetrated formation	NO GROUP DEFINED
Geodetic datum	ED50
NS degrees	56° 19' 50.6" N
EW degrees	3° 14' 29.3" E
NS UTM [m]	6243053.76
EW UTM [m]	514931.95
UTM zone	31
NPDID wellbore	268

**Wellbore history****General**

Well 2/7-9 is located in the Ål Basin south of the Eldfisk structure in the southern North Sea. The main purpose of the well was to test Danian -Cretaceous limestone and Jurassic sandstone on a north-south trending anticline 6 - 8 km south of Eldfisk, where these intervals had proven commercial oil in several wells.

Operations and results

Appraisal well 2/7-9 was spudded with the jack-up installation Zapata Nordic on 25 December 1973 and drilled to TD 4448 m in Devonian sediments.

Appraisal well 2/7-9 was spudded with the jack-up installation Zapata Nordic on 25 December 1973 and drilled to TD 4448 m in Devonian sediments. The Danian Limestone (Ekofisk Formation) came in at 3086 m. It was expected to be 90 m thick while 77 m was found. The Late Cretaceous Chalk (Cromer Knoll Group) was anticipated to be 695 m thick, but a greater thickness of 800 m was found. Good shows were seen in both intervals, but no hydrocarbons were produced when tested. Sands initially dated Late Jurassic were encountered at 4313 m and proved to be hydrocarbon bearing with a 111 m pay section with average porosity of 13% and 55% oil saturation. A clear OWC was found at 4424 m. These sands have later been interpreted as of Devonian age.

No cores were cut and no wire line fluid samples were taken.

The well was permanently abandoned on 10 April 1974.

Testing

Three drill stem tests were conducted in the well.

DST 1 tested the interval 4313 to 4356 m in the Devonian sandstones. It produced, after acidization, 36 Sm³ oil and 10000 Sm³ gas /day through a 32/64" choke. The GOR was 278 Sm³/Sm³ and the oil gravity was 45 deg API.

DST 2 in the interval 3417 to 3436 m in Late Cretaceous limestone (Tor Formation). It produced no hydrocarbons to surface only 1.6 m³ load water. Samples of formation fluid were taken while reversing out the string content.

DST 3 in the interval 3098 to 3109 m in Danian Limestone (Ekofisk Formation). It produced no hydrocarbons to surface only 1 m³ load water.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1234.44	4447.95

Cuttings available for sampling?	YES
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**Lithostratigraphy**

Top depth [mMD RKB]	Lithostrat. unit
108	NORDLAND GP
2949	ROGALAND GP
2949	BALDER FM
2968	SELE FM
3011	LISTA FM
3086	SHETLAND GP
3086	EKOFISK FM
3163	TOR FM
3578	HOD FM
3891	BLODØKS FM
3898	HIDRA FM
3962	CROMER KNOLL GP
3962	RØDBY FM
4076	TYNE GP
4076	MANDAL FM
4311	UNDEFINED GP

Geochemical information

Document name	Document format	Document size [MB]
268_GCH_1	pdf	0.35
268_GCH_2	pdf	3.63

Documents - older Norwegian Offshore Directorate WDSS reports and other related documents

Document name	Document format	Document size [MB]
268_01_WDSS_General_Information	pdf	0.26

Documents - reported by the production licence (period for duty of secrecy expired)





Document name	Document format	Document size [MB]
268 2 7 9 COMPLETION LOG	pdf	2.74
268 2 7 9 COMPLETION REPORT	pdf	26.38

Documents - Norwegian Offshore Directorate papers

Document name	Document format	Document size [MB]
268 01 NPD Paper No.30 Geology of the E Idfisk Area Well 2 7 9	pdf	72.88
268 02 NPD Paper No.32 Stratigraphic Correlation chart Profile 4 Well 2 7 9	pdf	0.54
268 03 NPD Paper No.30 Early Tertiary-Late Jurassic Correlation chart Well 2 7 9	pdf	0.56

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	4313	4356	0.0
2.0	3417	3436	0.0
3.0	3098	3109	0.0

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0	38.400			
2.0				
3.0				

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0	36	9996	0.800		278
2.0					
3.0					

Logs





Log type	Log top depth [m]	Log bottom depth [m]
BHC	1226	4454
CBL	2743	3450
CDM	2745	4455
CDM AP	2745	4455
FDC	3011	4455
IES	1226	4455
ML MLL	4071	4454
PML C	3011	3970
SNP	3011	3970
SRS	1226	4454

Casing and leak-off tests

Casing type	Casing diam. [inch]	Casing depth [m]	Hole diam. [inch]	Hole depth [m]	LOT/FIT mud eqv. [g/cm3]	Formation test type
CONDUCTOR	30	145.0	36	146.0	0.00	LOT
SURF.COND.	20	501.0	26	511.0	0.00	LOT
INTERM.	13 3/8	1226.0	17 1/2	1228.0	0.00	LOT
INTERM.	9 5/8	2745.0	12 1/4	2752.0	0.00	LOT
LINER	7	4064.0	8 1/2	4075.0	0.00	LOT
OPEN HOLE		4448.0	5 7/8	4448.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
2523	1.85			waterbased	
2892	1.72			waterbased	
2941	1.72			waterbased	
3353	1.71			waterbased	
3401	1.89			waterbased	