General information

Wellbore name	2/1-9 A
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	GYDA
Discovery	2/1-9 Gyda Sør
Well name	2/1-9
Seismic location	GYDA 3D IN LINE 580 x- LINE 556
Production licence	019 B
Drilling operator	BP Norway Limited U.A.
Drill permit	713-L
Drilling facility	ROSS ISLE
Drilling days	51
Entered date	18.01.1992
Completed date	08.03.1992
Plugged date	08.03.1992
Plugged and abondon date	02.03.2014
Release date	08.03.1994
Publication date	17.10.2007
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL
Discovery wellbore	NO
1st level with HC, age	LATE JURASSIC
1st level with HC, formation	ULA FM
Kelly bushing elevation [m]	23.0
Water depth [m]	66.0
Total depth (MD) [m RKB]	4379.0
Final vertical depth (TVD) [m RKB]	4124.0
Maximum inclination [°]	60
Bottom hole temperature [°C]	138
Oldest penetrated age	LATE JURASSIC
Oldest penetrated formation	ULA FM
Geodetic datum	ED50
NS degrees	56° 51' 37.77'' N
EW degrees	3° 5' 4.77'' E

NS UTM [m]	6302000.77
EW UTM [m]	505162.30
UTM zone	31
NPDID wellbore	1867

Wellbore history

General

Well 2/1 ?9 A was drilled to appraise the 2/1-9 discovery in the Late Jurassic "Gyda sandstone member" (Ula Formation), by side-tracking up-dip to the crest of the Gyda South structure. If successful, the well could at a later stage be completed as a producer and tie back to Gyda platform. The structure is a fault/dip closure, which lies in the Late Jurassic fairway on the eastern flank of the Central Graben, 6 kilometres south of the Gyda field in the North Sea.

Operations and results

Well 2/1-9 was re-entered on 18 January 1992 by the semi submersible installation Ross Isle. The appraisal sidetrack well 2/1-9 A was kicked off in the 8 1/2" hole from 3270 m in the Late Cretaceous Tor Formation and drilled to TD 4379 m in the Late Jurassic Ula Formation. It took 25 1/2 days (18 1/2 days longer than planned) to drill to coring point at 4140 m. This delay was mainly due to difficulties in controlling the directional tendencies of the BHA's, which required a number of correction runs. In addition, poor bit performance and harder than expected formations exacerbated the slow progress. Hole inclination was 52.8 degrees at coring point. Problems were also experienced during TD logging with stuck logging tools and stuck pipe whilst attempting to retrieve the tool. In addition a 9 bbl influx had to be circulated out during this time. The well was drilled with Novamul ether-based mud from kick-off to TD.

The target Ula Formation sandstone was encountered at 4099 m (3966 m TVD RKB). It was 120 m thick (TVD) and oil-bearing all through. The logs observed no OWC.

Six cores (178 m) were cut in the 8 1/2" hole. All cores had 100% recovery with excellent shows being observed throughout. Core 1 to 5 covered the sandstone of the Ula Formation while core 6 entered into a mud stone member at the base. No H2S was observed whilst coring -despite having high level contingency due to H2S seen on well 2/1-9. The RFT was run and pressure points were recorded, but no fluid samples were taken.

The well was suspended on 8 March 1983 as a potential future Gyda sub sea producer.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
3280.00	4379.00

Cuttings available for sampling?	YES

Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	4141.0	4178.0	[m]
2	4178.0	4223.6	[m]
3	4223.5	4251.5	[m]
4	4251.5	4279.4	[m]
5	4279.4	4307.4	[m]
6	4307.5	4319.1	[m]

Total core sample length [m]	178.1
Cores available for sampling?	YES

Core photos


4141-4146m


4146-4151m


4151-4156m


4156-4161m


4161-4166m


4166-4171m


4171-4176m


4176-4178m


4178-4183m


4183-4188m


4188-4193m


4193-4198m


4198-4203m


4203-4208m


4208-4213m


4213-4218m


4218-4223m


4223-4224m


4223-4228m


4228-4233m


4233-4238m


4238-4243m


4243-4248m


4248-4251m


4251-4256m


4256-4261m


4261-4266m


4266-4271m


4271-4276m


4276-4279m


4279-4284m


4284-4289m


4289-4294m


4294-4299m


4299-4304m


4304-4307m


4307-4312m


4312-3217m


4317-4319m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
4142.6	[m]	C	APT
4152.9	[m]	C	APT
4157.4	[m]	C	APT

4161.7	[m]	C	APT
4166.0	[m]	C	APT
4176.0	[m]	C	APT
4179.0	[m]	C	APT
4185.9	[m]	C	APT
4195.0	[m]	C	APT
4197.9	[m]	C	APT
4213.7	[m]	C	APT
4230.0	[m]	C	APT
4248.0	[m]	C	APT
4251.8	[m]	C	APT
4263.0	[m]	C	APT
4268.0	[m]	C	APT
4274.0	[m]	C	APT
4277.0	[m]	C	APT
4282.6	[m]	C	APT
4284.0	[m]	C	APT
4290.5	[m]	C	APT
4292.2	[m]	C	APT
4292.4	[m]	C	APT
4293.5	[m]	C	APT
4295.0	[m]	C	APT
4295.6	[m]	C	APT
4296.0	[m]	C	APT
4296.5	[m]	C	APT
4297.5	[m]	C	APT
4298.5	[m]	C	APT
4299.4	[m]	C	APT
4300.1	[m]	C	APT
4300.7	[m]	C	APT
4301.0	[m]	C	APT
4301.5	[m]	C	APT
4302.0	[m]	C	APT
4303.2	[m]	C	APT
4303.5	[m]	C	APT
4304.0	[m]	C	APT
4304.4	[m]	C	APT
4304.7	[m]	C	APT
4305.0	[m]	C	APT
4305.3	[m]	C	APT

4305.6	[m]	C	APT
4313.2	[m]	C	APT
4313.5	[m]	C	APT
4314.1	[m]	C	APT
4314.5	[m]	C	APT
4314.9	[m]	C	APT
4315.1	[m]	C	APT
4316.2	[m]	C	APT
4316.8	[m]	C	APT
4316.9	[m]	C	APT
4317.1	[m]	C	APT
4317.4	[m]	C	APT
4317.6	[m]	C	APT
4317.9	[m]	C	APT
4318.1	[m]	C	APT
4318.2	[m]	C	APT
4319.0	[m]	C	APT
4319.1	[m]	C	APT

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
89	NORDLAND GP
1814	HORDALAND GP
2898	ROGALAND GP
2898	BALDER FM
2915	SELE FM
2923	FORTIES FM
2982	LISTA FM
3055	VIDAR FM
3143	LISTA FM
3159	VÅLE FM
3168	SHETLAND GP
3168	EKOFISK FM
3256	TOR FM
3618	HOD FM
3788	BLODØKS FM
3799	HIDRA FM
3819	CROMER KNOLL GP

3819	RØDBY FM
3870	SOLA FM
3881	TUXEN FM
3900	ÅSGARD FM
4068	TYNE GP
4068	MANDAL FM
4084	FARSUND FM
4099	VESTLAND GP
4099	ULA FM

Composite logs

Document name	Document format	Document size [MB]
1867	pdf	0.51

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

Document name	Document format	Document size [MB]
1867_01_WDSS_General_Information	pdf	0.50
1867_02_WDSS_completion_log	pdf	0.22

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

Document name	Document format	Document size [MB]
1867_2_1_9_A_COMPLETION_REPORT_AND_LOG	pdf	18.77

Logs

Log type	Log top depth [m]	Log bottom depth [m]
DIL BHC GR AMS	3272	4385
LDL CNL GR AMS	4320	4385
RFT RPQS GR AMS	4135	4298

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	164.0	36	165.0	0.00	LOT
INTERM.	20	895.0	26	896.0	0.00	LOT
INTERM.	13 3/8	2893.0	17 1/2	2895.0	0.00	LOT
INTERM.	9 5/8	3938.0	12 1/4	3940.0	0.00	LOT
LINER	7	4378.0	8 1/2	4385.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
140	0.00	39.0		OIL BASED	
3200	1.56	70.0		OIL BASED	
3300	1.56	58.0		OIL BASED	
3347	1.60	79.0		OIL BASED	
3464	1.56	51.0		OIL BASED	
3560	1.60	80.0		OIL BASED	
3681	1.60	82.0		OIL BASED	
3860	1.60	87.0		OIL BASED	
4000	1.61	91.0		OIL BASED	
4223	1.62	90.0		OIL BASED	
4318	1.60	88.0		OIL BASED	
4379	1.60	101.0		OIL BASED	

Pressure plots

The pore pressure data is sourced from well logs if no other source is specified. In some wells where pore pressure logs do not exist, information from Drill stem tests and kicks have been used. The data has been reported to the NPD, and further processed and quality controlled by IHS Markit.

Document name	Document format	Document size [MB]
1867_Formation_pressure_(Formasjonstrykk)	PDF	0.21