

**General information**

Wellbore name	6406/12-3 A
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Field	FENJA
Discovery	6406/12-3 A (Bue)
Well name	6406/12-3
Seismic location	Seismic data set MC3D-HT2007-08
Production licence	586
Drilling operator	VNG Norge AS
Drill permit	1514-L
Drilling facility	TRANSOCEAN ARCTIC
Drilling days	41
Entered date	26.04.2014
Completed date	22.07.2014
Release date	22.07.2016
Publication date	22.07.2016
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL
Discovery wellbore	YES
1st level with HC, age	LATE JURASSIC
1st level with HC, formation	ROGN FM
Kelly bushing elevation [m]	24.0
Water depth [m]	324.0
Total depth (MD) [m RKB]	4356.0
Final vertical depth (TVD) [m RKB]	3657.0
Maximum inclination [°]	45.2
Oldest penetrated age	MIDDLE JURASSIC
Oldest penetrated formation	MELKE FM
Geodetic datum	ED50
NS degrees	64° 1' 52.32" N
EW degrees	6° 45' 17.58" E
NS UTM [m]	7102598.45
EW UTM [m]	390320.66



UTM zone	32
NPDID wellbore	7432

Wellbore history

General

The 6406/12-3 S, 6406/12-3 A, and 6406/12-3 B wellbores were drilled in concert on the Pil and Bue prospects in the southern end of the Halten Terrace in the Norwegian Sea. The S and B wells were planned to target the Pil and the Bue prospects, respectively. Well 6406/12-3 S found gas over oil in Intra Melke Formation sandstones in the Pil prospect. This result led to the decision within the partnership to drill an appraisal of the discovery. The appraisal well was designated 6406/12-3 B, which confirmed oil in Melke Formation Sandstones in pressure communication with the primary well 6406/12-3 S. The last sidetrack well, 6406/12-3 A, was designed to test the Bue prospect and to evaluate fluid contacts and connectivity with the Pil discovery.

Operations and results

Wildcat well 6406/12-3 A was kicked off from 1259 m in well 6406/12-3 S on 26 April 2014. It was drilled with the semi-submersible installation Transocean Arctic and drilled to 2355 m in the Springar Formation. Once the 13 3/8" casing was cemented on 2 May 2014 the well was suspended while 6406/12-3 B well operations were carried out. After that well bore was plugged and abandoned the 6406/12-3 A sidetrack was resumed on 11 June 2014 and drilled to TD at 4315 m in Late Jurassic (Callovian) sediments belonging to the Melke Formation. No significant problem was encountered in the operations. The well was drilled with XP-07 oil based mud from kick-off to TD.

The 6406/12-3 A well entered the Jurassic reservoir rocks approximately 900 m to the northwest of the 6406/12-3 B Pil reservoir entry point. The well encountered Spekk Formation claystones on either side of a Rogn Formation sandstone reservoir and below this is a Melke Formation heterolithic package. Top Rogn Formation was at 4053 m (3421 m TVD) with top reservoir sands at 4059 m (3426 m TVD). The Rogn reservoir was of good to very good quality and contained an 18 m oil column with an OWC at 4083 m (3444 m TVD). No gas cap was anticipated or present. Data including the oil water contact position and oil type indicates the 6406/12-3 A discovery is separate from 6406/12-3 S discovery.

A total of 93 m of core was cut from 4085 m in the Rogn Formation to 4178 m in the Intra Melke Formation sandstone. The overall core recovery was close to 100%. RCX oil samples were taken at 4072.53m.

The well was permanently abandoned on 16 July 2014 as an oil discovery well.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1260.00	4356.00



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	4085.0	4142.5	[m]
2	4142.5	4167.7	[m]
3	4168.0	4177.5	[m]

Total core sample length [m]	92.2
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
348	NORDLAND GP
348	NAUST FM
1091	KAI FM
1230	HORDALAND GP
1230	BRYGGE FM
1961	ROGALAND GP
1961	TARE FM
2087	TANG FM
2332	SHETLAND GP
2332	SPRINGAR FM
2678	KVITNOS FM
3715	CROMER KNOLL GP
3715	LANGE FM
4019	LYR FM
4041	VIKING GP
4041	SPEKK FM
4053	ROGN FM
4114	SPEKK FM
4124	INTRA MELKE FM SS
4180	MELKE FM

Logs



Log type	Log top depth [m]	Log bottom depth [m]
IAC	3993	4353
LWD - AT	2339	4085
LWD - AT LT	4117	4356
LWD - OT BCPM	2322	2330
LWD - OT II	1246	2355
RCX	3993	4180
RCX PS	0	0
RCX SP	4073	4073
SBT CBL	3447	4006
SGR MREX FLEX	4023	4227
SLAM 3DEX	3993	4353
VSP	1426	4376

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	415.0	36	418.0	0.00	
SURF.COND.	20	1239.0	26	1246.0	1.70	FIT
INTERM.	13 3/8	2348.0	17 1/2	2355.0	1.92	FIT
PROD.	9 5/8	3998.0	12 1/4	4005.0	1.85	FIT
OPEN HOLE		4356.0	8 1/2	4356.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1274	1.49	25.0		Yellow XP-07	
1765	1.53	26.0		Yellow XP-07	
1895	1.61	36.0		Yellow XP-07	
2330	1.61	47.0		XP-07	
2355	1.61	39.0		Yellow XP-07	
2522	1.61	50.0		XP-07	
4005	1.62	46.0		XP-07	
4080	1.62	43.0		Yellow XP-07	
4085	1.62	44.0		XP-07	
4137	1.62	44.0		Yellow XP-07	



4168	1.62	46.0		XP-07	
4177	1.62	43.0		Yellow XP-07	
4356	1.63	52.0		Yellow XP-07	