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# Final Well Report

NO 34/9-1 S, NO 34/9-U-1

Cambozola

PL1049



Title:		
<b>Final well report Pilot well NO 34/9-U-1 and Exploration well NO 34/9-1 S Cambozola</b>		
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# 1 Introduction

Exploration well NO 34/9-1 S Cambozola is drilled in the Cambozola North prospect, located in the Magne Sub-Basin in the Northern Viking Graben. The nearest discoveries are the Afrodite gas/condensate discovery about 1km from the eastern extreme of Cambozola North and the Hyperion gas/condensate discovery about 20km to the west. The nearest producing field is the Kvitebjørn Field about 20km to the south-west of the westernmost part of the prospect (Figure 1-1).

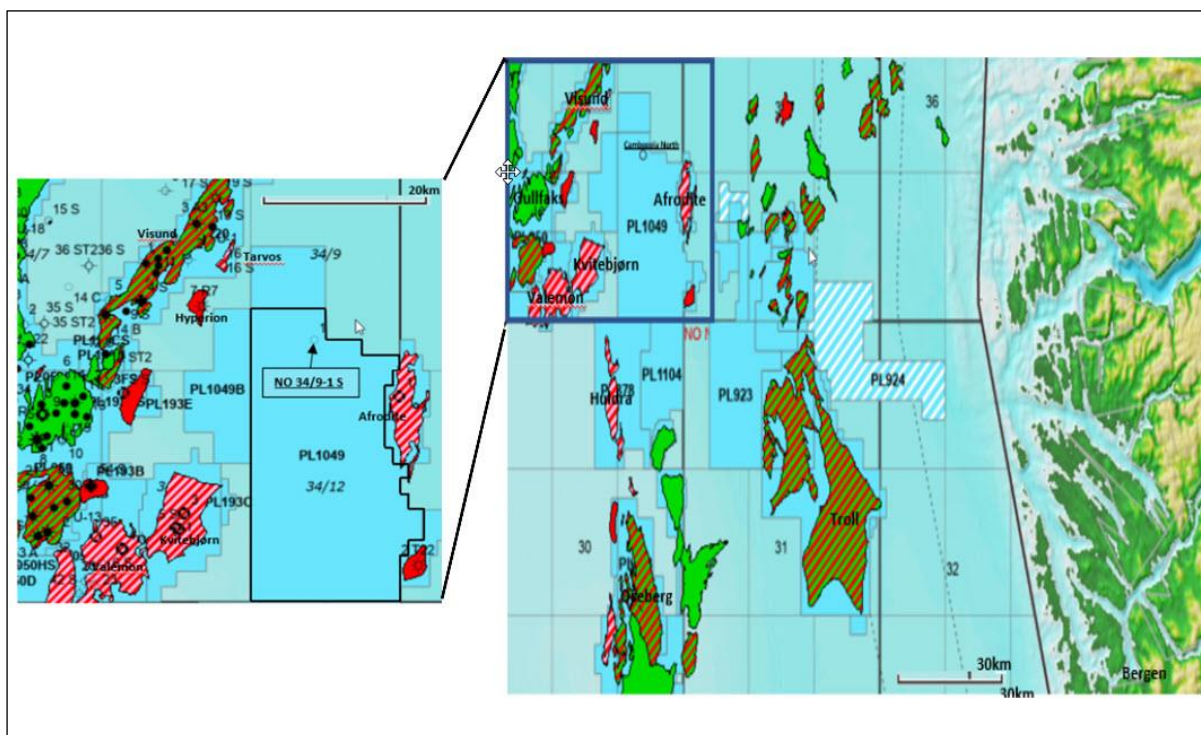


Figure 1-1 Location map

## 1.1 Well data record

Table 1-1 Well data NO 34/9-U-1

<b>Well name</b>	NO 34/9-U-1	
<b>Type of well</b>	Pilot hole	
<b>Prospect</b>	Cambozola North	
<b>Licence</b>	PL1049	
<b>Country</b>	Norway	
<b>Area</b>	North Sea	
<b>Licences</b>	Equinor Energy AS	35 %
	Longboat Energy AS	25 %
	Sval Energi AS	20 %
	Petoro AS	20 %
<b>Drilling unit</b>	Deepsea Stavanger	
<b>Type</b>	Semi-submersible	
<b>Water depth</b>	382m MSL	
<b>Air gap</b>	30.0m	
<b>On license</b>	09.04.2022	
<b>Rig released</b>	11.04.2022	
<b>TD of pilot hole</b>	Drillers Depth	1300m MD / 1299.6m TVD RKB
	Loggers Depth	N/A
<b>Formation at TD</b>		Undiff. Hordaland
<b>Surface coordinates</b>	<b>Geographic coordinates:</b>	
	Latitude	61° 16' 45.374" N
	Longitude	02° 48' 44.331" E
	Datum/EPSG code	ED50/ Int. 1924
	<b>UTM coordinates:</b>	
	Northing	6 794 070.5 m
	Easting	489 937.6 m
	UTM Zone/C.M.	31 N/03° E
<b>Seismic reference</b>	CGG18M01	
	Inline	5765
	X-line	29078

**Table 1-2 Well data NO 34/9-1 S**

<b>Well name</b>	NO 34/9-1 S Cambozola	
<b>Type of well</b>	Exploration, Wildcat, HPHT	
<b>Prospect</b>	Cambozola North	
<b>Licence</b>	PL1049	
<b>Country</b>	Norway	
<b>Area</b>	North Sea	
<b>Licences</b>	Equinor AS	35 %
	Longboat Energy AS	25 %
	Sval Energi AS	20 %
	Petoro AS	20 %
<b>Drilling unit</b>	Deepsea Stavanger	
<b>Type</b>	Semi-submersible	
<b>Water depth</b>	382 m MSL	
<b>Air gap</b>	30.0m	
<b>On license</b>	09.04.2022	
<b>Rig released</b>	19.06.2022	
<b>TD of Cambozola</b>	Drillers Depth	4455m MD / 4422.7m TVD RKB
	Loggers Depth	4455.7m MD / 4423.4m TVD RKB
<b>Formation at TD</b>		Sola
<b>Surface coordinates</b>	<b>Geographic coordinates:</b>	
	Latitude	61° 16' 45.676" N
	Longitude	02° 48' 44.443" E
	Datum/EPSPG code	ED50/ Int. 1924
	<b>UTM coordinates:</b>	
	Northing	6 794 079.9m
	Easting	489 939.3m
	UTM Zone/C.M.	31 N/03° E
<b>Seismic reference</b>	CGG18M01	
	Inline	5765
	X-line	29079

## 1.2 Well objectives

Primary objective for the NO 34/9-U-1 pilot well was:

- De-risk the well location with respect to shallow hazards (8 ½" pilot hole drilled 30m away from the main well location, drilled to the planned section TD of 26" hole section)

Primary objectives for the NO 34/9-1 S Cambozola exploration well were:

- Prove commercial volumes in Cambozola North segment
- Prove intra Sola Formation sandstone (Aptian) as a working play
- No commercial oil volumes left up-flank in Cambozola North segment
- Acquire data to establish reservoir presence and quality, fluid properties, pressure gradient and age of reservoir
- Establish the relation between seismic amplitude and reservoir

## 1.3 Result of the well

The pilot well NO 34/9-U-1 was spudded in a water depth of 382m MSL and was drilled as planned approximately 30m away from the main well location to the planned section TD of 26" hole section. The TD was set in the Hordaland Group at 1300m MD. The pilot well penetrated formations of Quaternary and Neogene age. The stratigraphy was as expected, and within the uncertainty range of the prognosis. No shallow gas was observed while drilling the pilot hole. A more detailed interpretation of the shallow sections can be found in the shallow hazards report in App E.

The main well NO 34/9-1 S was the first exploration well to be drilled within the area of licence PL1049. The well was designed and drilled in accordance with HPHT requirements. It was spudded in a water depth of 382m MSL and was drilled as an S-shaped well with a full casing design. In addition, an 11 ¾" liner was run as planned. To be able to reach TD, an unplanned 7" liner had to be added. TD was set in the Sola Formation at 4455m MD i.e. 117m MD shallower than planned.

The prognosed reservoir in Sola Formation is proved to not represent deep water turbidite reservoir as expected. However, top prognosed reservoir/top Sola Formation represents a transition from shales in the lower part of Rødby Formation to more silty shales and sparse traces of sandstone. The appearance of silt and traces of sandstone could be remobilisation of more proximal deposited material as mud/silt flow deposits, low density turbidites or slurry flows.



## 1.4 Drilling summary

Table 1-3 Drilling summary

Section	Start time	End time	Rig name
NO 34/9-1 S Move to Location	09.Apr.2022 00:00	09.Apr.2022 08:20	DEEPSEA STAVANGER
NO 34/9-U-1 Pre-Spud	09.Apr.2022 17:40	09.Apr.2022 20:20	DEEPSEA STAVANGER
NO 34/9-U-1 8 1/2"	09.Apr.2022 20:20	11.Apr.2022 05:15	DEEPSEA STAVANGER
NO 34/9-U-1 Permanent P&A (DP) w/ RIG	11.Apr.2022 05:15	11.Apr.2022 13:10	DEEPSEA STAVANGER
NO 34/9-1 S Pre-Spud	09.Apr.2022 08:20	09.Apr.2022 14:35	DEEPSEA STAVANGER
NO 34/9-1 S 26" x 42"	09.Apr.2022 14:35	11.Apr.2022 19:20	DEEPSEA STAVANGER
NO 34/9-1 S 26"	11.Apr.2022 19:20	18.Apr.2022 04:20	DEEPSEA STAVANGER
NO 34/9-1 S 17 1/2"	18.Apr.2022 04:20	25.Apr.2022 08:15	DEEPSEA STAVANGER
NO 34/9-1 S 17 1/2" x 20"	18.Apr.2022 04:20	18.Apr.2022 04:20	DEEPSEA STAVANGER
NO 34/9-1 S 12 1/4" x 13 1/2"	25.Apr.2022 08:15	04.May.2022 15:30	DEEPSEA STAVANGER
NO 34/9-1 S 10 5/8" x 12 1/4"	04.May.2022 15:30	20.May.2022 16:55	DEEPSEA STAVANGER
NO 34/9-1 S 8 1/2" HPHT	20.May.2022 16:55	28.May.2022 10:30	DEEPSEA STAVANGER
NO 34/9-1 S 6" HPHT	28.May.2022 10:30	03.Jun.2022 18:30	DEEPSEA STAVANGER
NO 34/9-1 S Permanent P&A (DP) w/ RIG	03.Jun.2022 18:30	19.Jun.2022 04:00	DEEPSEA STAVANGER
NO 34/9-1 S Move from Location	19.Jun.2022 04:00	19.Jun.2022 08:30	DEEPSEA STAVANGER

### 1.4.1 Casing

Table 1-4 Casing and liner depths

Casing/Liner	Shoe Depth (m MD)	FIT/LOT/XLOT (g/cm <sup>3</sup> EMW )
8 1/2" pilot hole	1139.0 (hole TD)	N/A
30"	466.7	N/A
20"	1286.8	1.55 (FIT)
14"	3449.6	1.94 (XLOT, FPP)
11 3/4" (liner)	3976.5	2.04 (LOT)
9 7/8"	4304.9	2.08 (LOT)
7" (liner)	4364.7	2.06 (LOT)

## 1.4.2 Drilling fluids

Table 1-5 Drilling fluids

Section	Section TD (m MD)	Mud weight (sg)	Mud type
8 ½" (pilot hole)	1300	1.03/1.30	Seawater, Hi-vis sweeps/KCl mud for displacement
26" x 42"	467.3	1.03	Seawater, Hi-vis sweeps
26"	1300	1.03/1.30	Seawater, Hi-vis sweeps/KCl mud for displacement
17 ½"	3460	1.40	RheGuard OBM
12 ¼ x 13 ½"	3989	1.70-1.71	RheGuard OBM
10 5/8" x 12 ½"	4322	1.96	BaraECD OBM
8 ½"	4367	1.96	BaraECD OBM
6"	4455	1.97-2.00	BaraECD OBM

## 1.5 Data acquisition summary

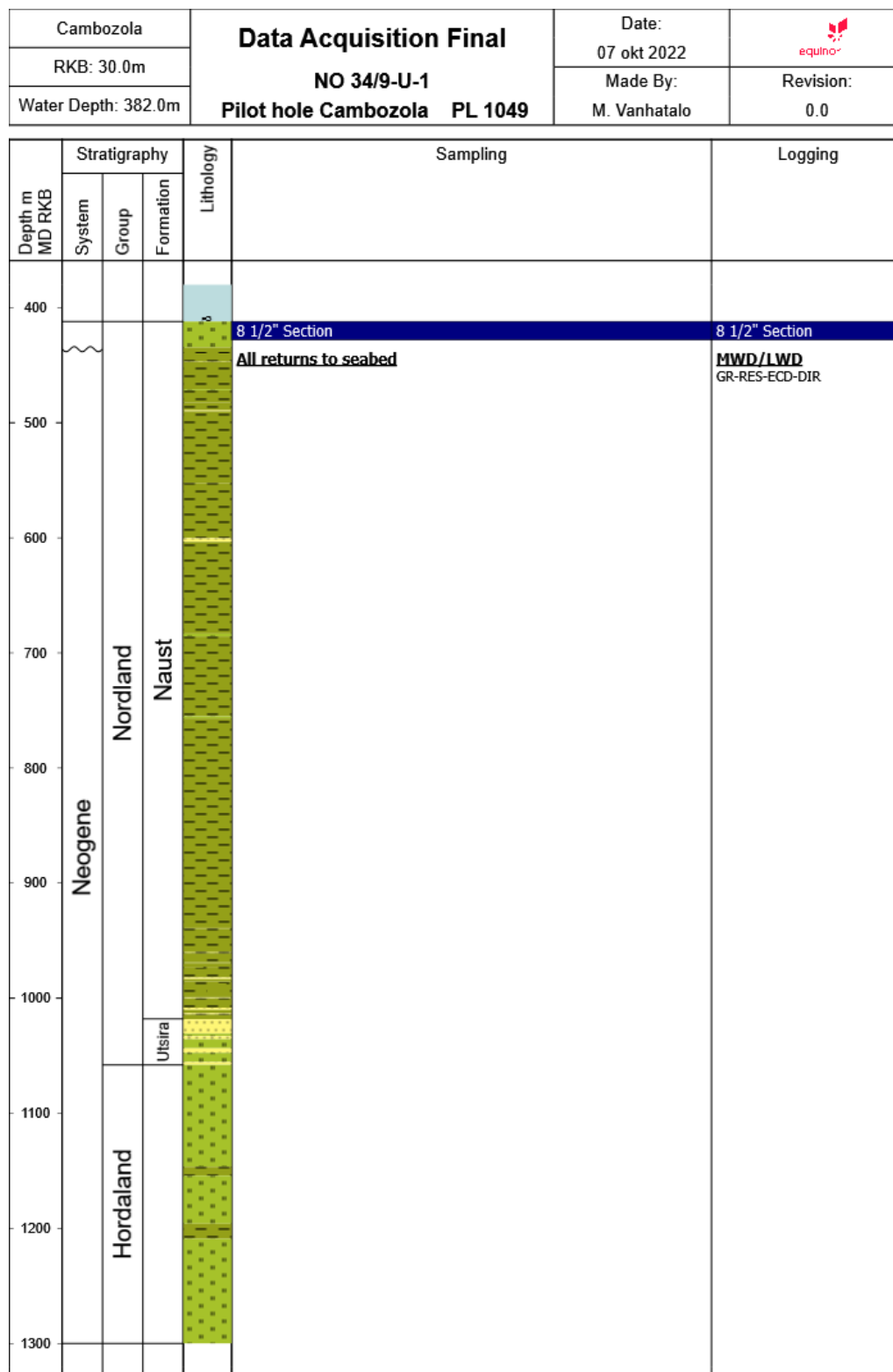


Figure 1-2 Data acquisition summary, NO 34/9-U-1





Cambozola			Data Acquisition Final		Date:		
RKB: 30.0m					22 okt 2022		
Water Depth: 382.0m					NO 34/9-1 S Cambozola PL1049		Made By: M. Vanhatalo
Depth m MD RKB	Stratigraphy			Lithology	Sampling	Logging	
	System	Group	Formation				
400	Neogene	Nordland	Naust		26" Section	26" Section	
500					All returns to seabed		MWD/LWD
600							GR-RES-ECD-DIR
700							
800							
900	Paleogene	Hordaland	Hordaland undiff.		17 1/2" Section	17 1/2" Section	
1000							MWD/LWD
1100							NBGR-GR-RES-ECD-DIR
1200							WL
1300							GR-CBL-IBC
1400							
1500							
1600							
1700							
1800							
1900							
2000							
2100							
2200							
2300							
2400	Cretaceous	Shetland	Kyrre		13 1/2" Section	13 1/2" Section	
2500							MWD/LWD
2600							NBGR-GR-RES-Sonic-ECD-DIR
2700							WL
2800							GR-CBL-IBC
2900							
3000							
3100							
3200							
3300							
3400							
3500							
3600							
3700							
3800							
3900							
4000							
4100							
4200							
4300							
4400							
4500							

Figure 1-3 Data acquisition summary, NO 34/9-1 S Cambozola



## 2 Exemptions and non-conformances

Disp no	Title	Doc no	Status
238400	17" liner centralization not according to requirement	Well Cementing. Author: Therese Karlbom	Registered
239519	Not taking SCR's with cement pump	Drilling Practice. Author: Børge E. Nygård	Terminated
239349	HPHT Exploration wells: Use of 5 7/8" DP string without freshly MPI Inspected prior to HPHT mode	Drilling Practice. Author: Børge E. Nygård	Approved
237207	Drilling pilot hole past the depth of investigation of site survey	Well Integrity Manual offshore operations. Author: Ronny Kvalsund	Approved
239290	Non standard casing sizes for exploration wells planned in PC2 EXPL	Casing, tie-back, liner and conductor string design. Author: Sylvester Rohan Marcou.	Approved
238673	Use of BM3 curve instead of B1 curve for Deepsea Stavanger wellhead fatigue analysis	Structural design and qualification of components for subsea WH, XT and WOS. Author: Morten Aga	Approved

## 3 Health, safety, environment and quality (HSE/Q)

### 3.1 RUH (Rapport Uønsket Hendelse), Safety Incident Cards

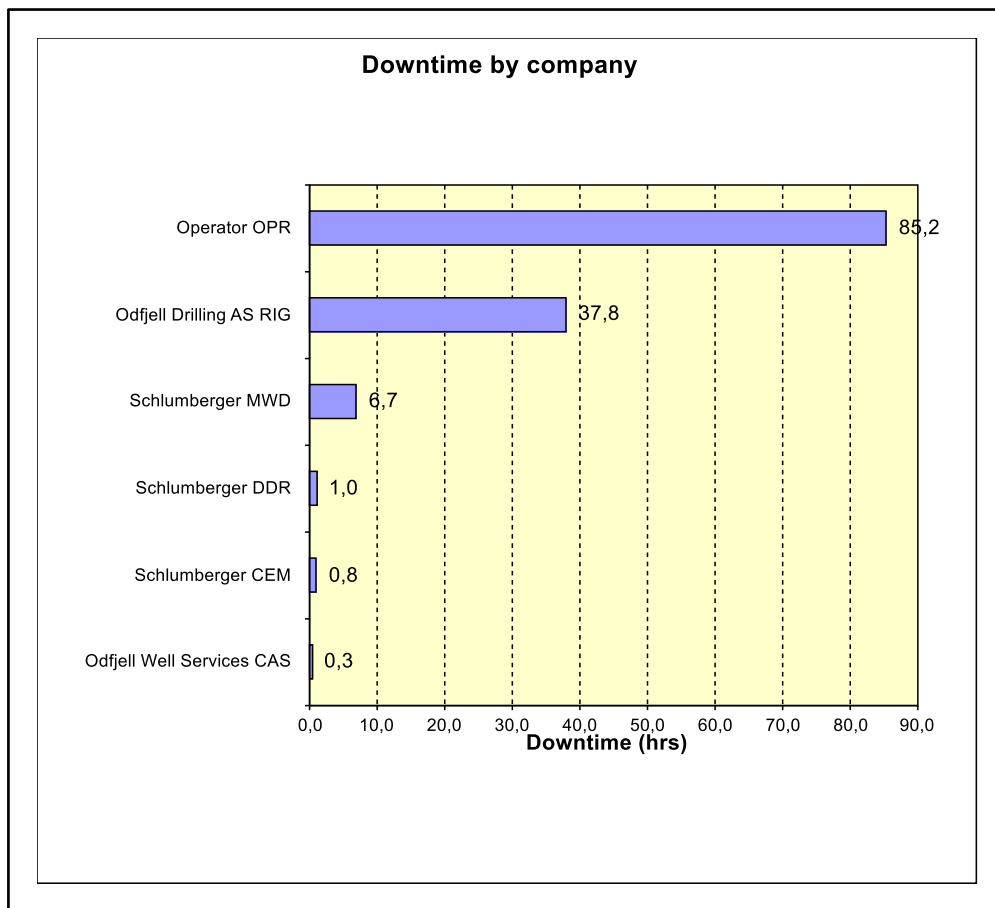
Type (color code)	Synergi code	Number of
Green	4	1
Yellow	3	1
Sum		2

### 3.1.1 RUH details

WELLBORE: NO 34/9-U-1

Synergi no	Hazard	Description
1944792	3	<p>Synergi 1944792 (Approved) - 10.Apr.2022 - Nonconformity/quality deviation - Water leakage/ingress/pumped into aft pump room</p> <p>DSS 10.04.2022 at 01:15: General alarm sounded. All personnel mustered according to station bill. POB control within 13 minutes. Full headcount within 15 minutes. Situation normalized and non essential personnel dismissed once full headcount achieved. Debrief with all personnel In messroom after.</p> <p>Detector causing the alarm was in starboard aft pump room.</p> <p>Emergency response team and CCTV confirmed water ingress in the area. Emergency team opened watertight door to pump room for visual inspection as the water level could be seen clearly on the CCTV screen to be below lower level of watertight door.</p> <p>Water leakage confirmed being from bursted GRE piping on seawater service pump discharge side. (GRE = Glass Reinforced Epoxy)</p> <p>Seawater service pump stopped, resulting water ingress to also stop. Water pumped out with bilge system.</p> <p>Estimated water volume ingress: 100m<sup>3</sup>-130m<sup>3</sup> and list of 0.8 degrees to starboard. (much equipment in room that will have displacement reducing the net water volume)</p>

### 3.2 Incidents by service and company



**Figure 3-1 Downtime distributed by company**

Figure 3-1 is based on the reported data found below.

**SERVICE COMPANY:** Casing CAS Odfjell Well Services

**WELLBORE:** NO 34/9-1 S

Incident start time	Failure code	Synergi no	Title	Downtime		
				Total hrs	Comp share %	Comp share hrs
08.mai.2022	CAS-E01 Remote oper. tongs w/integrated B-U	1985455	Communication issue with casing tong	0.3	100	0.3
			Total			0.3

**SERVICE COMPANY:** Cementing CEM Schlumberger

**WELLBORE:** NO 34/9-1 S

Incident start time	Failure code	Synergi no	Title	Downtime		
				Total hrs	Comp share %	Comp share hrs
10.mai.2022	CEM-E01 Equipment functions	1983307	Plug in cement bulk line to batch mixer	1.0	33	0.3
13.apr.2022	CEM-E01 Equipment functions	1949080	Unable to shear top plug when cementing 20" surface casing	0.5	100	0.5
			Total			0.8

**SERVICE COMPANY:** Directional Drilling DDR Schlumberger

**WELLBORE:** NO 34/9-1 S

Incident start time	Failure code	Synergi no	Title	Downtime		
				Total hrs	Comp share %	Comp share hrs
12.apr.2022	DDR-E31 Mechanical	1948895	Plugged nozzles in 26" bit leading to high SPP and bursted rupture discs on mud pumps.	1.0	100	1.0
			Total			1.0



**SERVICE COMPANY:** MWD - Measurement While Drilling MWD Schlumberger  
**WELLBORE:** NO 34/9-1 S

Incident start time	Failure code	Synergi no	Title	Downtime		
				Total hrs	Comp share %	Comp share hrs
26.apr.2022	MWD-E33 Software	1964837	No realtime MWD data due to software issues.	0.5	100	0.5
17.apr.2022	MWD-E33 Software	1953946	Lack of communication with 17 1/2" MWD tool.	6.2	100	6.2
			Total			6.8

**SERVICE COMPANY:** Operator OPR Operator  
**WELLBORE:** NO 34/9-1 S

Incident start time	Failure code	Synergi no	Title	Downtime		
				Total hrs	Comp share %	Comp share hrs
01.mai.2022	RIG-01 Procedure	1973605	Failed FIT below 11 3/4" liner shoe.	58.0	100	58.0
27.apr.2022	RIG-02 Doc./Spec.	1966007	Unable to run 11 3/4" liner due to high friction inside 14" casing. NPT: 21 hr, 20 min	21.3	100	21.3
10.mai.2022	CEM-E01 Equipment functions	1983307	Plug in cement bulk line to batch mixer	1.0	34	0.3
23.mai.2022	RIG-03 Procedure not followed	2000928	Using incorrect pump rate pumping out of hole.	8.3	66.7	5.5
			Total			85.2

**SERVICE COMPANY:** Rig Operations RIG Odfjell Drilling AS  
**WELLBORE:** NO 34/9-1 S

				<b>Downtime</b>		
<b>Incident start time</b>	<b>Failure code</b>	<b>Synergi no</b>	<b>Title</b>	<b>Total hrs</b>	<b>Comp share %</b>	<b>Comp share hrs</b>
24.mai.2022	RIG-E07 Top drive	2003131	Worn out dies on torque wrench.	1.3	100	1.3
10.jun.2022	RIG-E014 Other	2022058	Leak in choke line during high pressure testing of choke and kill manifold	32.3	100	32.3
10.mai.2022	CEM-E01 Equipment functions	1983307	Plug in cement bulk line to batch mixer	1.0	33	0.3
17.apr.2022	RIG-E348 Slips	1953764	Leakage in PS30 slips.	0.5	100	0.5
16.apr.2022	RIG-E01 BOP choke manifold	1952379	Leakage during testing of K/C lines	0.3	100	0.3
23.mai.2022	RIG-03 Procedure not followed	2000928	Using incorrect pump rate pumping out of hole.	8.3	33.3	2.7
27.apr.2022	RIG-E345 Elevator	1966036	Issue with no closed signal on AMS elevator.	0.5	100	0.5
			<b>Total</b>			<b>37.8</b>

### 3.3 Experience summary

<b>Subject:</b>	<b>Omitted 17" liner by drilling pilot hole and 26" section past site survey depth</b>		
<b>Section:</b>	NO 34/9-1 S, 26"		
<b>Rep date:</b>	11.Apr.2022		
<b>Keywords:</b>	DRILLING		
<b>Downtime:</b>	0	<b>Pot time improvements:</b>	120
<b>Comp inv:</b>	Equinor		

#### Description:

A dispensation was applied for and approved (dispensation: 237207) to drill the pilot hole and the following 26" section past the depth of investigation of the site survey.

A shallow geohazard evaluation and shallow gas classification was given for the well, with a depth of investigation down to 1041 mTVD RKB. The report stated that shallow water flow at the location was considered unlikely. A slight risk of gas was attached to a chaotic package on the seismic data between 610 and 655 m MSL, and therefore Class 1 was assigned to the planned well location down to Top Hordaland.

As a 20" casing shoe was needed at a setting depth of minimum 1250 m TVDRKB, to be able to drill a 17 1/2" section past the pressure build up in lower Hordaland, an in-depth investigation of possible sand/shallow gas in the Hordaland group was made on the CGG18M01 seismic. This concluded that there was no indication of gas filled sands. However, because of seismic resolution thin layers of sand/shallow gas was not likely but could not be ruled completely out. The application for dispensation was based on a thorough risk assessment, which included presence of gas in sands in thicknesses below seismic resolution, shallow gas incidents from reference wells, pore pressure prognosis, reference wells experiences with suggested well design, ECD simulations during dynamic kill and contingency plans if shallow gas or water flow was encountered.

No shallow gas or water flow was encountered in the pilot hole or the 26" section, and the 20" surface casing was installed on planned depth. A sufficient FIT was achieved to drill the 17 1/2" section to planned TD, and thus the 17" liner could be omitted from the well design.

#### Future recommended solution:

If the site survey depth is so shallow it will affect the well design by including an extra section, check if able to challenge site survey depth.

<b>Subject:</b>	<b>Dual drilling - drilling pilot hole in MAIN while drilling 26"x42" section in AUX</b>		
<b>Section:</b>	NO 34/9-1 S, 26"		
<b>Rep date:</b>	11.Apr.2022		
<b>Keywords:</b>	DRILLING		
<b>Downtime:</b>	0	<b>Pot time improvements:</b>	12
<b>Comp inv:</b>	Odfjell		

#### Description:

Drilling pilot hole in MAIN while drilling 26"x42" section and 26" section in AUX. Total time for pilot hole drilling and P&A was 1.8 days. Some waiting time for BOP in-between well scope reduced the actual time saving.

**Subject: Verification of barrier status for P&A**

**Section:** NO 34/9-1 S, 17 1/2"

**Rep date:** 23.Apr.2022

**Keywords:** WIRELINE ELECTRICAL

**Comp inv:** Schlumberger

**Description:**

This experience is related to an improvement idea to delay logging the 14" casing until after the 11 3/4" liner is installed to save rig up/down time and logging both casings in one run.

Lost 2m3 during pumping of cement and another 2m3 during cement displacement. Pumped half shoetrack above theoretical bump and still didn't bump the plug.

**Immediate solution:**

Since it was not possible to say where the loss zone was it was decided to log and verify sufficient barrier against Lista formation for P&A purposes. Therefore, the improvement opportunity was not achieved.

**Future recommended solution:**

The improvement opportunity can be tried on the next well with a similar design or improvement opportunity.

**Subject: Successfully achieved 1855m continuous interval of good cement behind 14" casing**

**Section:** NO 34/9-1 S, 17 1/2"

**Rep date:** 23.Apr.2022

**Keywords:** CEMENTING

**Downtime:** 0 **Pot time improvements:** 144

**Comp inv:** Schlumberger

**Description:**

Encountered sandy layers in Lista Formation, requiring a barrier for P&A. If able to achieve TOC above Lista during cementing of 14" casing, we can avoid cutting 14" casing deep to set an open hole barrier against Lista. By planning for a long (~1700 m) 14" casing cement job that will isolate Lista Formation, it was possible to omit 17" liner in the casing design

**Immediate solution:**

Several issues were encountered related to the 14" casing cement job. The cement head was sent out with XOs not rated for the heavy weight of the over 3000m long 14" casing. Excellent One Team collaboration involving Odfjell. Schlumberger and Equinor offshore and onshore ensured that we were able to rush mobilize a backup cement head and an extra boat from Mongstad. We were able to re-build the cement head offshore prior to the cement job with a set of various XOs already available on the rig.

Experienced significant challenges mixing and pumping 1,95sg G-silica cement slurry, see separate DBR experience. Not possible to pump the given slurry recipe from onshore. Pumped 118m3 1,91-1,92sg slurry vs 122m3 1,95sg planned. Top plug did not bump, see separate DBR experience. Floats were interpreted not to hold. Pumped and bled back volumes three times in an attempt to close the float. No-go. Needed to WOC while holding pressure on the line to prevent u-tubing of cement into the casing.

Performed clean-out run to remove uncertainty of the TOC inside casing, observed TOC just 5m above the landing collar.



Performed CBL logging on wireline. Observed 1855m continuous interval of good cement with high isolation potential behind 14" casing. TOC at 1474m which is far above Lista, meaning that it will be sufficient to just install a 14" EZSV and pump cement on top for P&A of Lista, saving many hours and risks compared to cut and pull casing in open hole.

#### Future recommended solution:

This experience shows that it is possible to achieve TOC above Lista in this area, despite casing shoe being 1500m deeper than top Lista.

<b>Subject:</b>	<b>Unable to run 11 3/4" liner due to high friction inside 14" casing</b>		
<b>Section:</b>	NO 34/9-1 S, 12 1/4" x 13 1/2"		
<b>Rep date:</b>	27.Apr.2022		
<b>Keywords:</b>	CASING/LINER		
<b>Downtime:</b>	21.3	<b>Pot time improvements:</b>	0
<b>Comp inv:</b>	Schlumberger		
<b>Synergi no:</b>	1966007		

#### Synergi desc:

Synergi 1966007 (Closed) - 27.Apr.2022 - Nonconformity/quality deviation - Unable to run 11 3/4" liner due to high friction inside 14" casing. NPT: 21 hr, 20 min

RIH with 11 3/4" liner to 693m. Observed higher weight required to run liner due to friction. Decided to POOH and remove centralizers and stop collars due to tight tolerances.

#### Description:

RIH with 11 3/4" liner on 5 7/8" DP to 693m. Observed high weight required to run liner due to friction. Decided to POOH with the liner. POOH compensated with ventilated standpipe due to tight clearances and volume control.

Meanwhile, measured backup shoe joint on deck OD: 11 3/4". Gap between the stop collar and the VariForm centralizer: 47 mm and 44 mm. Installation guide said that the gap should be min 63.5 mm and max 76.2 mm to allow room for the bow spring to be completely collapse.

Removed centralizers and ran a slick 11 3/4" liner, except for the shoe track with optimized number of centralizers and stop collars. Observed friction once shoe track entered 14" casing. Experienced friction during running, however we were able to rotate with 10 rpm/3 kNm. RIH and tagged 12 1/4" TD with 5 ton weight. Pulled back and set liner. Cemented liner without any losses and bumped plug. Logged 11 5/8" liner cement after 17 hours WOC, result was 73m good bonded cement above Svarte Formation.

#### Immediate solution:

Based on the findings, the possible root cause for the high friction while RIH is believed to be the gap between stop collar and centralizer being below recommended value preventing centralizer from collapsing enough when in contact with 14" casing while RIH.

Inspected all centralizers/stop collars, shoe joint on the way out for any damage. Measured gap from 42mm - 54mm, smaller than the recommended value and cut all the centralizers/stop collars below recommendation. That was all centralizers except the shoe track centralizers (min 63.5 mm and max 76.2 mm). Optimized the centralization on the shoe track by reducing from 2 per joint to 1 per joint ensuring good distance from stop collar to allow centralizers to sufficiently collapse while RIH. Grinder (Vinkelsliper) was used to cut centralizers/stop collars without any issues.

#### Future recommended solution:

When using the same type of centralizers, ensure those are installed as per the guidelines of vendor. Alternatively, consider using suitable low friction centralizers on casings with similar tight clearances.

**Subject:** Base Oil / PreMix / Light mud in mud cooler system while drilling  
**Section:** NO 34/9-1 S, 10 5/8" x 12 1/4"  
**Rep date:** 04.May.2022  
**Keywords:** OBM  
**Downtime:** 0      **Pot time improvements:** 0  
**Comp inv:** Halliburton

#### Description:

While discussing upcoming mud cooler operation with pump room team uncertainties regarding fluid in lines was raised. Procedure for mud cooler is to flush lines with Base Oil / Pre-Mix after use. 3.5 m3 of Base Oil / pre-mix / Light mud from the mud cooler system into active system will give a too high drop in mud weight.

#### Immediate solution:

Options were discussed to flush mud cooler mud lines to active mud and isolate current content into a separate pit to ensure no light spots of mud. Highlighted issue with drill floor. Flushed lines to BaraECD during pumps off for reamer operation to ensure no light mud pumped into wellbore.

#### Future recommended solution:

Include a point in the DOP checklist; ensure mud cooler flushed and replaced with fresh mud prior to drilling out of the casing shoe.

**Subject:** Good ECD management using BaraECD  
**Section:** NO 34/9-1 S, 10 5/8" x 12 1/4"  
**Rep date:** 05.May.2022  
**Keywords:** DRILLING FLUID  
**Downtime:** 0      **Pot time improvements:** 0  
**Comp inv:** Equinor

#### Description:

Low ECD values were experienced while drilling the section. It was on average 3 to 4 points between ECD and ESD. Reduced to 2 points when the hole was clean. This was very useful as the target FIT for the 11 3/4" shoe of 2.06sg was not achieved, but a LOT of 2.04sg. This reduced the operational margins since planned MW was 1.96sg. At TD mud rheology was optimized for running and cementing 9 7/8" casing in 11 3/4" liner.

#### Future recommended solution:

The mud performed well for the drilling, and it is recommended to be used when margins are tight.

**Subject: Ran short stands of 9 7/8" SLIJ-II casing**

**Section:** NO 34/9-1 S, 10 5/8" x 12 1/4"

**Rep date:** 08.May.2022

**Keywords:** CASING/LINER

**Downtime:** 0 **Pot time improvements:** 0

**Comp inv:** Equinor

**Description:**

Ran 35 short stands of VAM SLIJ-II 9 7/8" casing in the bottom part of the casing string (due to small clearance to 11 3/4" liner). These stands are made up of re-cut joints with average stand length of 34.9m (approximately ~2m short for the HR), conflicting with upper tail arm on HR. These leads to inconsistent running speed for the VAM SLIJ-II 9 7/8" casing stands.

**Immediate solution:**

Watchman on fingerboard when running these short stands. Use Aux HR for remaining stands.

**Future recommended solution:**

Plan not to use re-cut casing joints. If necessary to use re-cut casing evaluate sending out the joints with pups.

**Subject: Cement head sent out with too short pup joint**

**Section:** NO 34/9-1 S, 10 5/8" x 12 1/4"

**Rep date:** 09.May.2022

**Keywords:** CEMENTING

**Downtime:** 0 **Pot time improvements:** 0

**Comp inv:** Schlumberger

**Description:**

Cement head came out with a pup joint of 3.8 m length. This is too short to have elevator on when we screw in with Top Drive.

**Immediate solution:**

Cement head was made up with a longer pup joints offshore.

**Future recommended solution:**

All cement heads should be sent with pup joint length 6 - 6.5m.

**Subject: Use of sonic on LWD and VSP reduced uncertainty of Top Reservoir**

**Section:** NO 34/9-1 S, 10 5/8" x 12 1/4"

**Rep date:** 17.May.2022

**Keywords:** LOGGING/EVALUATION

**Downtime:** 0 **Pot time improvements:** 0

**Comp inv:** Equinor

**Description:**

Sonic while drilling was used in the 12 1/4" section, to confirm the velocity model and reduce uncertainty of Top Reservoir from ±75m TVD to ± 50m TVD. This allowed for setting the 9 7/8" shoe as 50m deeper than pre-drill estimates. Later a

VSP was run to further reduce the uncertainty of Top Reservoir to  $\pm 22$  m TVD, which provided the setting depth of the 7" liner contingency.

#### Future recommended solution:

When the setting depth of the shoe is critical to get as deep as possible, and there is a possibility to reduce the uncertainty of the formations tops with the use of sonic, SWD or a VSP, these measures should be evaluated.

<b>Subject:</b>	<b>Performing FIT with low margins with water in HPHT well.</b>		
<b>Section:</b>	NO 34/9-1 S, 10 5/8" x 12 1/4"		
<b>Rep date:</b>	20.May.2022		
<b>Keywords:</b>	DRILLING		
<b>Downtime:</b>	0	<b>Pot time improvements:</b>	0.5
<b>Comp inv:</b>	Odfjell Drilling AS		

#### Description:

The FIT below the 9 7/8" was planned with water. The mud system used for drilling new formation was 1.99 sg. The procedure for line up is to pump down the drill string and the annulus at the same time.

When filling pipe it was required to pump ca 1.2 m<sup>3</sup> to fill the system. Was observed that pressure increased when filling up the kelly hose (high stick up). After the kelly hose was filled up, the pressure dropped indicating filling the pipe and replacing the heavy mud with water (see attachment).

#### Immediate solution:

Used mud to perform the FIT.

#### Future recommended solution:

Use mud for performing marginal FITs and with mud systems that will be affected by water in the system. Risk of mud contamination with water needs to be evaluated prior to deciding to use water. An alternative could be to fill up lines ensure lines are filled with mud and build some pressure before lining up to the cement unit if using water.

<b>Subject:</b>	<b>Low ECD of mud enabled reaching the overall well objectives</b>		
<b>Section:</b>	NO 34/9-1 S, 8 1/2" HPHT		
<b>Rep date:</b>	20.May.2022		
<b>Keywords:</b>	DRILLING FLUID		
<b>Downtime:</b>	0	<b>Pot time improvements:</b>	36
<b>Comp inv:</b>	Equinor		

#### Description:

Even though the formation strength was lower than prognosed, and a 7" contingency liner had to be installed, the mud performed well and the low ECD mud enabled drilling to final TD.

#### Future recommended solution:

The mud performed well for the drilling operation, and it is recommended where tight margins are expected as was the case for this section after the low leak off test.

**Subject: Weak formation strength triggering 6" section**

**Section:** NO 34/9-1 S, 8 1/2" HPHT

**Rep date:** 21.May.2022

**Keywords:** CASING/LINER

**Downtime:** 0 **Pot time improvements:** 0

**Comp inv:** Equinor

**Description:**

Based on the 2.06+ sg LOT obtained prior to LCM squeeze and limited kick margin, and based on the LCM squeeze results and gas readings it was decided to stop drilling 8 1/2" section at 10 m above updated 2xTVD uncertainty above reservoir.

**Subject: Pumping rate in swab calculations**

**Section:** NO 34/9-1 S, 6" HPHT

**Rep date:** 02.Jun.2022

**Keywords:** DRILLING FLUID

**Downtime:** 0 **Pot time improvements:** 1.5

**Comp inv:** Halliburton

**Description:**

Background: For pulling out of hole in the 6" section swab simulation showed that it was necessary to pump OOH, due to low margins towards prognosed pore pressure at TD (2.01 sg limit in swab simulation including 2 point safety margin and 2.02 sg ESD).

Swab simulation: The swab simulations showed that it was possible to pull faster (0.50 m/s) when pumping with 720 lpm, compared to (0.38 m/s) when pumping with 550 lpm.

Operation: The driller experienced that even though the pulling speed was faster when pumping with 720 lpm, the extra flow caused additional time spent on ramping up the pumps + bleeding down pressure prior to connection. This resulted in that the total tripping time was faster when pumping with 550 lpm compared to 720 lpm.

**Immediate solution:**

Used the optimum pumping rate to achieve the lowest time spent on tripping including connections.

**Future recommended solution:**

For wells with low margins that need to pump out of hole, it can be beneficial to simulate with different pumping rates to allow driller to optimize tripping sequence.



**Subject:** Use of MWD for cement dress off  
**Section:** NO 34/9-1 S, Permanent P&A (DP) w/ RIG  
**Rep date:** 05.Jun.2022  
**Keywords:** PLUGBACK/KICK-OFF  
**Downtime:** 0 **Pot time improvements:** 0  
**Comp inv:** Equinor

#### Description:

The MWD tool was used in the dress off BHA for the cement plug#1. The tool was needed to have better control on ESD and ECD due to the tight drilling margins.

#### Future recommended solution:

The value of using the MWD for dress-off assembly in open hole should be evaluated on a case-by-case basis even though it was a success.

Based on the drilling operations parameters it should be possible to perform hydraulic simulations and establish the operational window. This could save the cost for using the MWD.

**Subject:** Filling pipe every 500m  
**Section:** NO 34/9-1 S, Permanent P&A (DP) w/ RIG  
**Rep date:** 10.Jun.2022  
**Keywords:** HTHP  
**Downtime:** 0 **Pot time improvements:** 1.5  
**Comp inv:** Odfjell Drilling AS

#### Description:

The HPHT manual states that while tripping in hole DP shall be filled every 500m. And this is based on GL3506. This requirement was challenged based on some of the implemented measures for tripping:

- The string will have at least 2 new floats
- The floats are pressure tested.
- The trip sheets are checked every 5 stands
- Circulate B/U when bit is on bottom

Filling the pipe every 1000m is the proposed filling interval and this does not increase the operational risk. Over several trips this becomes a big time saving.

#### Immediate solution:

Started filling pipe every 1000m.

#### Future recommended solution:

Feedback from expert center is that 500m is only a guideline. The proposed filling interval of 1000m should be ok. See attached mail. The necessary checks on floats and DP capacities need to be verified to ensure the equipment limits are not exceeded. Future DOP's should be updated accordingly.

**Subject:** Pulling seal assembly with SRT and pack off

**Section:** NO 34/9-1 S, Permanent P&A (DP) w/ RIG

**Rep date:** 13.Jun.2022

**Keywords:** FISHING

**Downtime:** 0 **Pot time improvements:** 6

**Comp inv:** Baker Hughes

#### Description:

Originally it was not planned to include a pack off in the BHA for pulling seal assembly, but Baker fishing had a backup on the rig and we decided to run that. In that way we were able to circulate up annulus through cut 9 7/8" casing prior to POOH with the SA.

#### Future recommended solution:

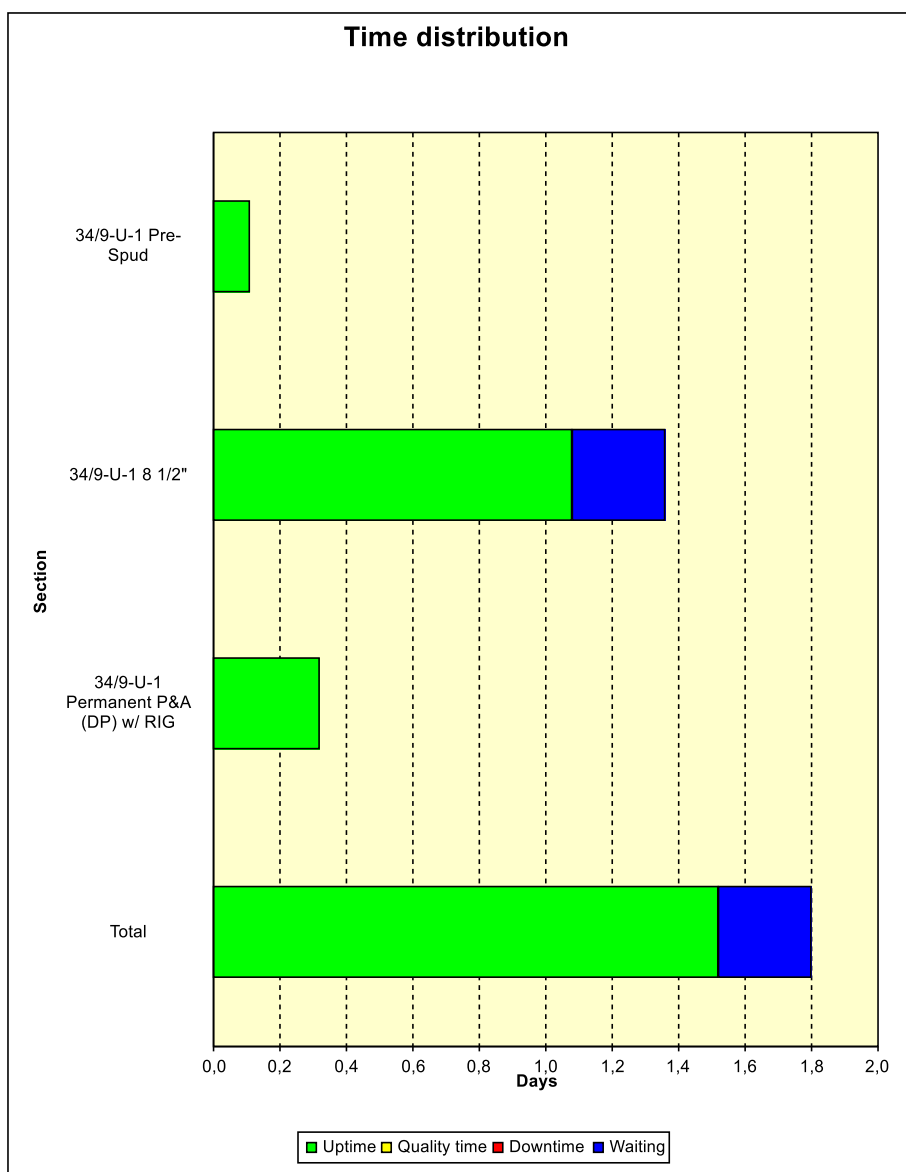
Benefits of using a pack-off in the BHA while pulling seal assembly:

- Well control is improved.
- If gas below seal assembly, it can be circulated out instead of waiting for it to migrate out. (Potential time saving).

### 3.4 Time distribution

#### 3.4.1 Pilot hole

Section	Start time	Length m	Budget		Actual		Ops (f)
			hrs	days	hrs	days	
NO 34/9-U-1 Pre-Spud	09.Apr.2022 17:40	0.0	3.5	0.1	2.7	0.1	100.0
NO 34/9-U-1 8 1/2"	09.Apr.2022 20:20	888.0	47.0	2.0	32.9	1.4	100.0
NO 34/9-U-1 Permanent P&A (DP) w/ RIG	11.Apr.2022 05:15	0.0		0.5	7.9	0.3	100.0
Sum			61.7	2.6	43.5	1.8	



**Figure 3-2 Time distribution, NO 34/9-U-1 Cambozola**

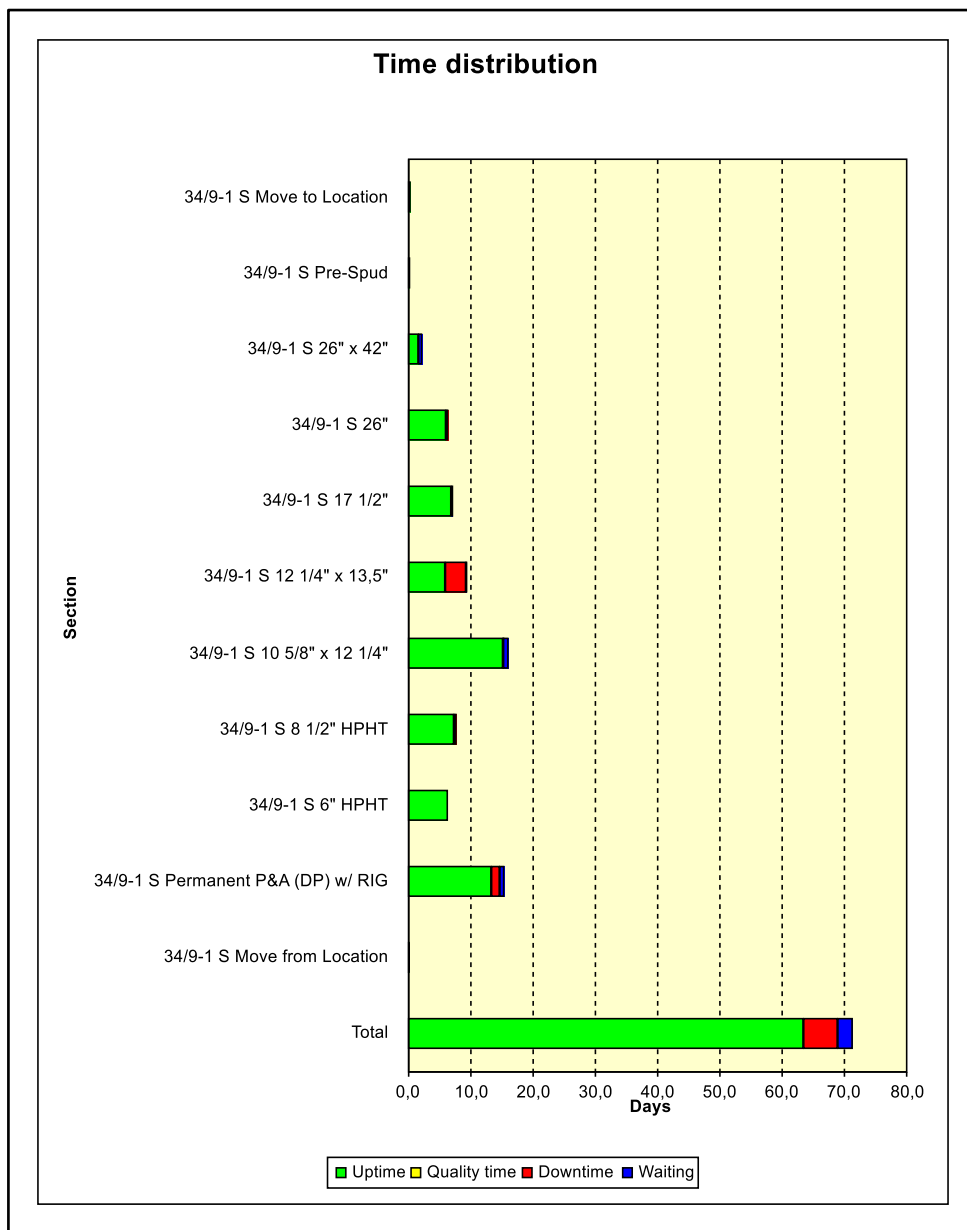
The graph above in Figure 3-2 is based on details found in Table 3-1.

**Table 3-1 Time distribution, NO 34/9-U-1 Cambozola**

Section	Downtime (days)	Uptime (days)	Quality time (days)	Waiting time (days)	Total time (days)
34/9-U-1 Pre-Spud	0.0	0.1	0.0	0.0	0.1
34/9-U-1 8 1/2"	0.0	1.1	0.0	0.3	1.4
34/9-U-1 Permanent P&A (DP) w/ RIG	0.0	0.3	0.0	0.0	0.3
Total	0.0	1.5	0.0	0.3	1.8

### 3.4.2 34/9-1 S well

Section	Start time	Length m	Budget		Actual		Ops (f)
			hrs	days	hrs	days	
NO 34/9-1 S Move to Location	09.Apr.2022 00:00		31.6	1.3	8.3	0.3	100.0
NO 34/9-1 S Pre-Spud	09.Apr.2022 08:20	- 13.0	5.5	0.2	6.3	0.3	100.0
NO 34/9-1 S 26" x 42"	09.Apr.2022 14:35	35.7	46.6	1.9	52.8	2.2	100.0
NO 34/9-1 S 26"	11.Apr.2022 19:20	835.3	223.0	9.3	153.5	6.4	94.5
NO 34/9-1 S 17 1/2"	18.Apr.2022 04:20	2160.0	390.6	16.3	171.9	7.2	100.0
NO 34/9-1 S 12 1/4" x 13 1/2"	25.Apr.2022 08:15	533.0	342.1	14.3	223.3	9.3	64.0
NO 34/9-1 S 10 5/8" x 12 1/4"	04.May.2022 15:30	329.0	317.8	13.2	385.4	16.1	99.7
NO 34/9-1 S 8 1/2" HPHT	20.May.2022 16:55	45.0	282.0	11.8	185.6	7.7	94.9
NO 34/9-1 S 6" HPHT	28.May.2022 10:30	85.0	437.0	18.2	152.0	6.3	100.0
NO 34/9-1 S Permanent P&A (DP) w/ RIG	03.Jun.2022 18:30		450.0	18.8	369.5	15.4	90.8
NO 34/9-1 S Move from Location	19.Jun.2022 04:00		5.0	0.2	4.5	0.2	100.0
Sum			2531.2	105.5	1713.1	71.4	



**Figure 3-3 Time distribution, NO 34/9-1S Cambozola**

The graph above in Figure 3-3 is based on details found in Table 3-2.

**Table 3-2 Time distribution, NO 34/9-1 S Cambozola**

Section	Downtime (days)	Uptime (days)	Quality time (days)	Waiting time (days)	Total time (days)
34/9-1 S Move to Location	0.0	0.3	0.0	0.0	0.3
34/9-1 S Pre-Spud	0.0	0.3	0.0	0.0	0.3
34/9-1 S 26" x 42"	0.0	1.6	0.0	0.6	2.2
34/9-1 S 26"	0.4	6.0	0.0	0.0	6.4
34/9-1 S 17 1/2"	0.0	6.9	0.0	0.3	7.2
34/9-1 S 12 1/4" x 13 1/2"	3.3	5.9	0.0	0.0	9.3
34/9-1 S 10 5/8" x 12 1/4"	0.1	15.2	0.0	0.8	16.1
34/9-1 S 8 1/2" HPHT	0.4	7.3	0.0	0.0	7.7
34/9-1 S 6" HPHT	0.0	6.3	0.0	0.0	6.3
34/9-1 S Permanent P&A (DP) w/ RIG	1.3	13.3	0.0	0.7	15.4
34/9-1 S Move from Location	0.0	0.2	0.0	0.0	0.2
Total	5.5	63.5	0.0	2.4	71.4

## 4 Geology and formation data report

### 4.1 Geological setting and results

The Cambozola North prospect is located in the Magne Sub-Basin in the Northern Viking Graben within PL1049. The concept of the prospect was deep water fan turbidites within the Sola Formation of Lower Cretaceous age (mid Aptian – early Albian). The nearest discoveries are the Afrodite gas/condensate discovery about 1km from the eastern extreme of Cambozola North and the Hyperion gas/condensate discovery about 20km to the west. The nearest producing field is the Kvitebjørn Field about 20km to the south-west of the westernmost part of the prospect.

No wells in the Northern Viking Graben have revealed viable reservoir of Aptian age hence this play has not been proven in this area. The model for the trap is an entirely encased reservoir in Early Cretaceous mudstones. The main trapping mechanism is lateral pinch-out of the reservoir around the perimeter of the fan. The feeder channels for the submarine fan are located down-dip of the main reservoir and unlikely to be hydrocarbon leakage points.

Upper Jurassic aged marine shales of the Heather and Draupne formations are the source rocks in the area. Both are mature and the fetch area is relatively large. Both gas and condensate could be expected. Hydrocarbon charge relies mainly on vertical migration of gas.

The well penetrated sediments of Quaternary to Cretaceous age. The stratigraphy was as expected, and the uncertainty of the formation tops were within the prognosis with some exceptions. Top Sele Formation (38m thickness), top Våle Formation (56m thickness) in the Rogaland Group as well as top Blodøks Formation (20m thickness) and top Rødby Formation (180m thickness) in the Cromer Knoll Group, were not in the pre well prognosis, but have been added to the lithostratigraphic table postwell (Table 4-3). In addition, the Tryggvason Formation came in 49m deeper than prognosis, the Svarte Formation came in 91m deeper, and the Sola Formation came in 53m deeper than prognosis. The mis-ties between prognosed vs actual formation tops are due to incorrect picked formation tops in reference wells or uncertainty in seismic interpretation.

The reservoir prognosed in Sola Formation is proved not to represent deep water turbidite reservoir. However, top prognosed reservoir/top Sola Formation represent a transition from shales in the lower part of Rødby Formation to more silty shales and sparse traces of sandstone. The appearance of silt and traces of sandstone might represent distal parts of deep water turbidites.

An illustration of prognosed vs actual stratigraphy and lithology for well NO 34/9-1 S is presented in Figure 4-1. The figure also represents what was observed in the pilot well NO 34/9-U-1.



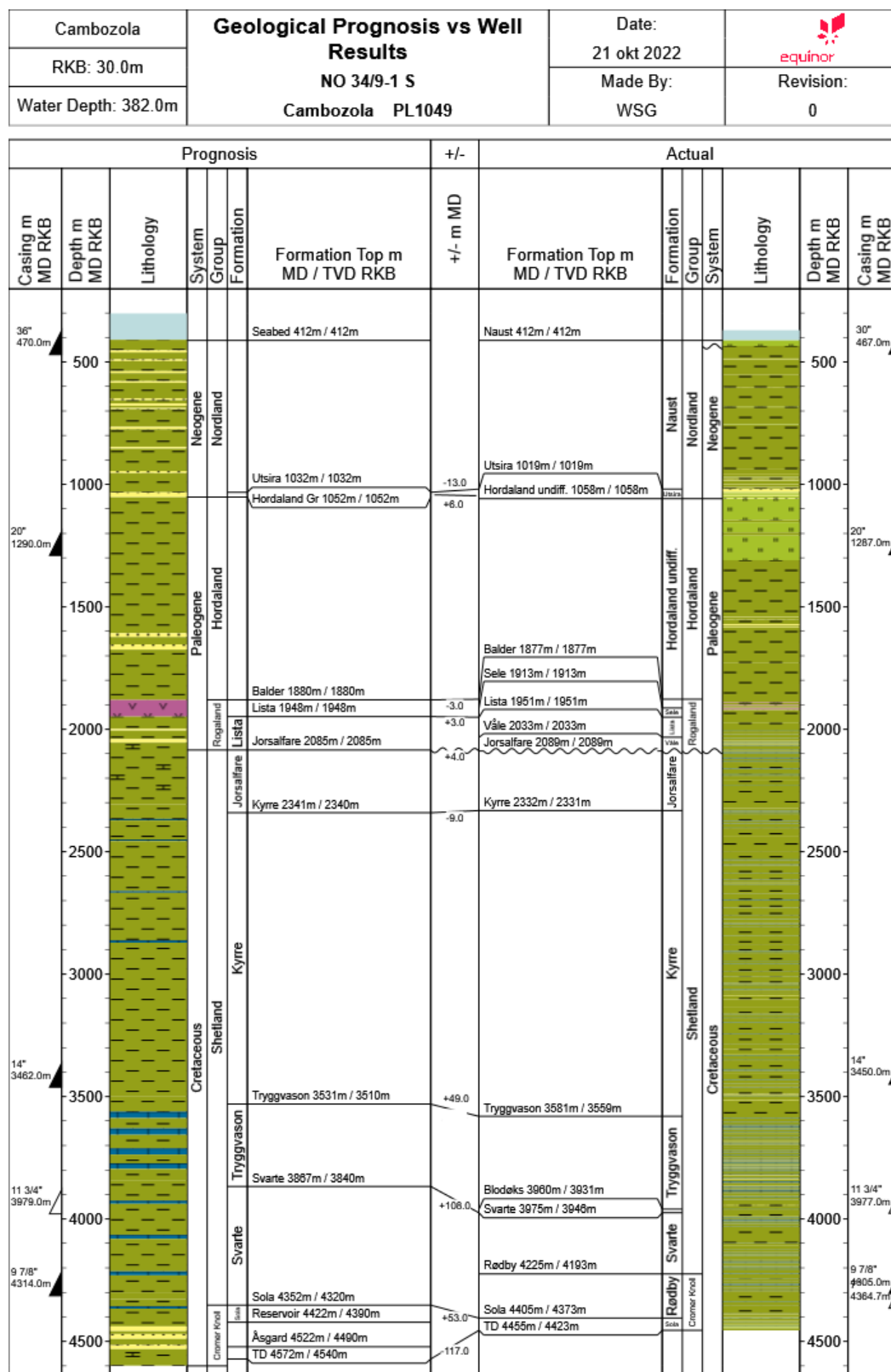


Figure 4-1 Geological prognosis versus well results, NO 34/9-1 S Cambozola

## 4.2 Shallow gas results

The Cambozola North site survey was completed in 2020 at the planned well location. The survey data was acquired by Gardline Ltd. The well location NO 34/9-1 S was assigned a 'Class 0' shallow gas warning from seabed to 640m  $\pm$ 10m TVD RKB. Below this depth and down to 685  $\pm$ 12m TVD RKB a 'Class 1' warning was given due to a chaotic package on seismic.

There was no history of shallow water flow in the area, hence shallow water flow at the Cambozola well location was considered unlikely.

The pilot hole NO 34/9-U-1 was drilled to TD at 1300m MD. No shallow gas nor shallow water flow were observed while drilling the shallow gas pilot NO 34/9-U-1 and no such observations were seen in NO 34/9-1 S Cambozola. A shallow hazards report can be found in App E.

## 4.3 Stratigraphy

An onsite biostratigraphy study was carried out offshore during drilling from the 14" casing shoe to the TD of the 10 5/8" x 12 1/4" hole. The biostratigraphy was used to identify top Svarte Formation and top Rødby Formation, as well as to identify lower part of the Rødby Formation with appearance of deposits of Albian age.

A more detailed post well biostratigraphy study was carried out and the chronostratigraphic evaluation has been incorporated into Equinor's interpretation. The chronostratigraphic divisions are summarised in Table 4-1.

The lithostratigraphy divisions presented in Table 4-3 are based on cutting descriptions, well log correlation with offset wells, and the lithostratigraphic description of formations and groups from NPD.

### 4.3.1 Table of chronostratigraphy

**Table 4-1 Observed chronostratigraphy, biozonation and depth (m MD) with depositional environment**

\* Confidence (green=high, yellow=middle, red=low).

Epoch	Stage/Substage	Biozone	Top (m MD)	Base (m MD)	*	Comments
Late Oligocene	Chattian	14.2	1310 CU	1310 CU		Top not seen.
		14.3	1320 CU	1430 CU		
Early Oligocene	Rupelian	15.1	1440 CU	1510 CU		
		15.2	1520 CU	1540 CU		
		15.4	1550 CU	1620 CU		
Late Eocene	Priabonian	16	1630 CU	1670 CU		
Middle Eocene	Bartonian	17.1 – 17.3	1680 CU	1710 CU		
	Lutetian	18.1 – 18.2	1720 CU	1750 CU		
		18.3	1760 CU	1770 CU		
		18.4	1780 CU	1800 CU		
Early Eocene	Ypresian	19.1	1810 CU	1810 CU		
		19.2	1820 CU	1820 CU		
		19.3	1830 CU	1830 CU		
		19.4	1840 CU	1860 CU		
		19.6	1870 CU	1910 CU		
		19.7	1920 CU	1920 CU		
Indeterminate	Indeterminate	Unassigned	1930 CU	1930 CU		Sample contains micro & paly assemblages typical of Lista Fm. (sample possibly mis-labelled).
Late Paleocene	Thanetian	20.1	1940 CU	1940 CU		Good Sele Fm. palynoflora.
		20.2	1950 CU	1950 CU		Probable top to <i>in situ</i> Lista Fm. assemblages.
		20.3	1960 CU	2000 CU		
Middle Paleocene	Selandian	21.1	2010 CU	2020 CU		
		21.2	2030 CU	2030 CU		
		21.3 – 21.4	2040 CU	2050 CU		
Early Paleocene	Danian	22.1	2060 CU	2060 CU		
		22.2	2070 CU	2080 CU		
Unconformity						
Late Cretaceous	Late Maastrichtian	23.1	2090 CU	2100 CU		
		23.2	2110 CU	2170 CU		
	Early Maastrichtian	23.3 – 23.4	2180 CU	2340 CU		
	Late Campanian	24.1	2360 CU	2420 CU		
	Middle Campanian	24.2	2430 CU	2510 CU		

	Early Campanian	24.3	2520 CU	2780 CU		
Late Cretaceous	Late – Middle Santonian	25.1 – 25.2	2790 CU	2900 CU		
	Early Santonian	25.3	2910 CU	2990 CU		
	Late Coniacian	26.1	3000 CU	3170 CU		
	Middle Coniacian	26.2	3180 CU	3230 CU		
	Early Coniacian – Late Turonian	26.3 – 27.1	3240 CU	3600 CU		Relatively poor recovery & absence of age-diagnostic events.
	Late Turonian	27.1	3610 CU	3670 CU		Age based on non-standard events.
	Middle Turonian	27.2	3700 CU	3770 CU		
	Early Turonian	27.3	3790 CU	3940 CU		
	Late Cenomanian	28.1	3950 CU	4070 CU		
	Middle Cenomanian	28.2	4080 CU	4160 CU		
	Early Cenomanian	28.3	4170 CU	4210 CU		
Early Cretaceous	Late Albian	29.1	4230 CU	4260 CU		Top defined on poor event (possible specimen of <i>A. grande</i> ).
		29.2	4270 CU	4325 CU		
	Middle Albian	29.3	4331 CU	4403 CU		
	?Unconformity					
	Early Albian – Late Aptian	29.4 – 30.1	4412 CU	4455 CU		Poor <i>in situ</i> recovery at base of interval. Base not seen.

## 4.3.2 Table of lithostratigraphic

**Table 4-2 Prognosis vs observed lithostratigraphy, NO 34/9-U-1**

Group	Formation	PROGNOSIS				OBSERVED			Difference
		Depth (m MD)	Depth (m TVD RKB)	Uncertainty +/- (m TVD)	Thickness (m TVD)	Depth (m MD)	Depth (m TVD RKB)	Thickness (m TVD)	
Nordland	Naust	412	412	1		412	412		
	Utsira	1032	1032	30	20	1019	1019	392	-13
Hordaland		1052	1052	30	828	1058	1058	819	+6
TD		1300	1300			1300	1299.6		

**Table 4-3 Prognosis vs observed lithostratigraphy, NO 34/9-1 S Cambozola**

Group	Formation	PROGNOSIS				OBSERVED			Difference
		Depth (m MD)	Depth (m TVD RKB)	Uncertainty +/- (m TVD)	Thickness (m TVD)	Depth (m MD)	Depth (m TVD RKB)	Thickness (m TVD)	
Nordland	Naust	412	412	1		412	412		
	Utsira	1032	1032	30	20	1019	1019	392	-13
Hordaland		1052	1052	30	828	1058	1058	819	+6
Rogaland	Balder	1880	1880	30	68	1877	1877	36	-3
	Sele	np				1913	1913	38	
	Lista	1948	1948	30	137	1951	1951	82	+3
	Våle	np				2033	2033	56	
Shetland	Jorsalfare	2085	2085	30	255	2089	2089	242	+4
	Kyrre	2341	2340	40	1170	2332	2331	1228	-9
	Tryggvason	3531	3510	50	330	3581	3559	379	+49
	Blodøks	np				3960	3931	15	
	Svarte	3867	3840	50	480	3975	3946	250	+106
Cromer Knoll	Rødby	np				4225	4193	180	
	Sola	4352	4320	50	70	4405	4373		+53
	Reservoir	4422	4390	75	100	np			
	Åsgard	4522	4490	100		np			
TD		4572	4540			4455	4422.7		

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## 4.4 Lithostratigraphic description

The lithological description of the Cambozola well is based on cuttings descriptions and log interpretations. See Figure 4-2 for an overview. Extended sample descriptions can be found in App D and in the Completion Log (in Enclosures).

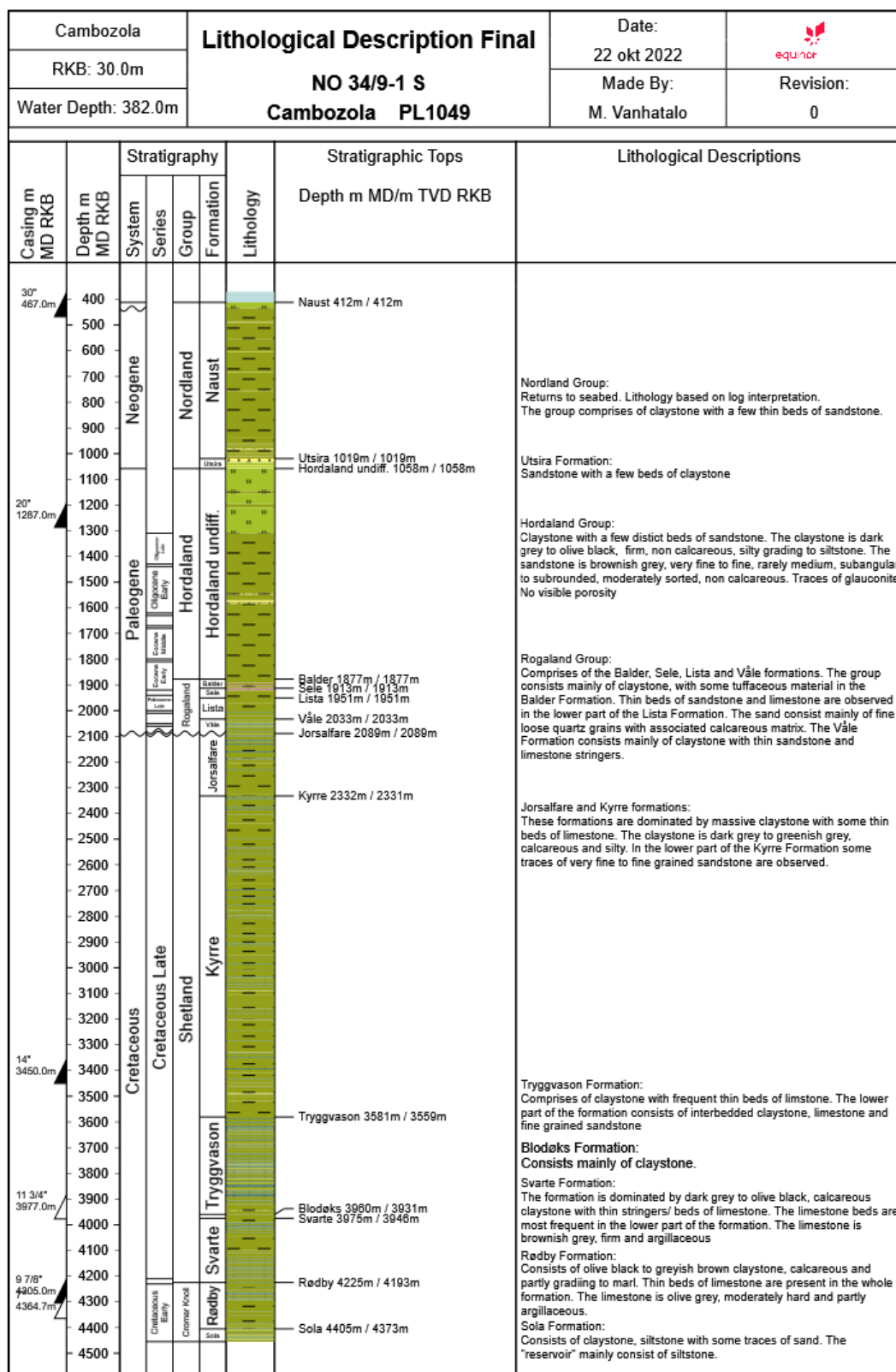


Figure 4-2 Lithological description chart, NO 34/9-1 S Cambozola

## 4.5 Hydrocarbon indications

Hydrocarbon indications in well NO 34/9-1 S were limited to drilling gas. No hydrocarbon shows were seen. Throughout the 17 ½" section the drilling gas levels were fairly constant and quite low, with gas values between 0.1% and 1.2% without any gas peaks within the Hordaland and Rogaland groups or the upper part of Shetland Group.

Gas readings remained low down to the lower part of the 12 ¼" x 13 ⅜" section in the Shetland Group where a slight increase in gas level was observed. Some gas peaks were seen in the Tryggvason Formation with the highest formation gas peak reading 3.8% at 3884m MD.

The gas levels were within the similar range throughout the 10 ⅝" x 12 ¼" section with the highest formation gas peak recorded to 4.84% at 4132m MD in the Svarte Formation.

The formation gas readings throughout the 8 ½" and 6" sections fluctuated on relative low values; however several peaks were seen resulting from connection gas and pumps-off gas. Resistivity logs did not indicate any sign of hydrocarbons in this section, and no permeable zones were encountered. No shows were observed above the OBM.

Hydrocarbon indications and gas peaks are presented in Table 4-4 to Table 4-7 and in Figure 4-3.



**Table 4-4 Gas peaks 12 1/4" x 13 1/2" section, NO 34/9-1 S Cambozola**

Depth (m MD)	Depth (m TVD RKB)	BG (%)	TG (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	iC5 (ppm)	nC5 (ppm)	Description
3755	3729.5	0.5	1.6	10327	408	134	8	27	4	5	Formation gas
3884	3856.3	0.8	3.8	25550	992	312	31	61	8	13	Formation gas
3936	3907.4	1.5	3.05	20251	1576	555	25	100	8	16	Connection gas

**Table 4-5 Gas peaks 10 5/8" x 12 1/4" section, NO 34/9-1 S Cambozola**

Depth (m MD)	Depth (m TVD RKB)	BG (%)	TG (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	iC5 (ppm)	nC5 (ppm)	Description
3993	3963	-	0.20	1506	35	7	2	0	0	0	Trip gas
3997	3967	0.07	0.48	3322	90	24	3	2	0	0	BU before FIT
4027.7	3997.5	0.19	0.63	4627	110	29	4	3	1	1	Formation gas
4046	4015.4	0.35	0.92	5638	550	168	4	21	3	1	Formation gas
4100	4068.6	0.75	1.42	9545	562	212	6	52	3	3	Pumps-off gas
4107	4075.5	0.95	2.17	14829	650	260	10	49	3	6	Formation gas
4120	4088.3	1.01	1.64	11202	586	235	8	45	0	9	Formation gas
4122	4090.3	0.84	1.52	10457	316	136	2	41	8	0	Connection
4125	4093.3	0.86	2.31	15388	644	245	11	47	13	0	Formation gas
4132	4100.2	1.50	4.84	33991	1119	388	20	70	6	8	Formation gas
4174.5	4142.4	0.80	4.06	27823	1187	427	20	83	5	17	Formation gas
4196	4163.8	2.00	3.5	23635	1065	376	18	74	5	15	Formation gas
4197.9	4165.6	2.00	4.41	31764	908	305	17	62	4	16	Connection gas
4222.5	4190.1	2.05	3.73	24461	1290	477	24	122	6	20	Formation gas
4236.8	4204.4	1.80	4.21	29954	928	345	18	77	4	34	Connection gas
4261.2	4228.8	2.05	3.86	26928	805	323	19	79	6	39	Dummy connection
4266	4233.6	3.50	4.79	32985	1481	502	26	100	7	43	Formation gas
4274.7	4242.3	2.70	5.3	38377	1067	346	22	77	6	20	Connection gas
4277	4244.7	0.32	2.24	16446	374	146	15	47	4	33	Pump-off test peak 1
4277	4244.7	0.37	1.18	8027	231	121	13	68	4	21	Pump-off test peak 2
4314	4281.9	2.28	6.7	50516	1255	348	21	65	6	17	Connection gas
4322	4289.9	0.55	2.20	15723	478	188	14	48	4	37	Dummy connection
4322	4289.9	0.43	2.20	15749	378	131	11	33	3	24	Conn gas - R/B stand
4322	4289.9	0.43	2.02	13825	534	193	11	43	7	26	Conn gas - drop ball
4322	4289.9	0.63	4.73	36042	951	295	16	57	3	32	Conn gas - reaming
4322	4289.9	0.28	3.53	26193	545	171	15	40	4	30	Conn gas - circ stop
4322	4289.9	0.17	2.75	20816	383	79	10	11	4	5	Conn gas - reamer
4322	4289.9	0.13	0.88	6184	122	33	5	6	3	9	Conn gas - 1 <sup>st</sup> ESD
4322	4289.9	0.13	0.55	3666	66	18	4	5	3	3	Conn gas - 2 <sup>nd</sup> ESD
4322	4289.9	0.13	1.03	7345	130	29	6	4	3	3	Conn gas - flush K&C
4322	4289.9	0.10	1.73	12708	245	56	8	7	4	6	Pump off - Take ESD
4322	4289.9	0.10	0.85	6133	116	27	6	4	3	5	Pump off - Take ESD
4322	4289.9	0.10	1.25	8945	171	40	7	5	1	3	Pump off - Take ESD
4322	4289.9	0.10	3.40	25476	513	116	9	13	2	5	Short trip

**Table 4-6 Gas peaks 8 1/2" section, NO 34/9-1 S Cambozola**

Depth (m MD)	Depth (m TVD RKB)	BG (%)	TG (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	iC5 (ppm)	nC5 (ppm)	Description
4280	4247.0	0.29	2.95	22128	388	29	4	1	0	1	Drilling shoe, inside casing
4300	4267.0	0.10	11.97	86462	1331	107	10	5	3	1	pumps off, depth check
4311	4278.0	0.18	2.03	15221	278	22	3	1	0	1	Red. flow due to SPP spike
4311	4278.0	0.18	1.68	12416	240	19	2	1	0	2	From rathole
4315	4282.0	0.38	2.70	20314	330	28	4	1	1	2	From rathole
4315	4283.0	0.38	2.72	20273	345	31	4	2	0	1	From rathole
4318	4767.0	0.38	6.60	50509	832	64	9	2	1	3	Circ. B/U after FIT *(Trip)
4333	4300.6	0.48	5.36	39263	677	53	7	2	0	2	Trip Gas
4336	4304	0.66	6.67	50716	900	70	9	3	0	1	Connection Gas
4367	4335.1	0.88	12.45	98482	1736	111	16	5	0	1	Pump off flowcheck
4367	4335.1	0.6	9.39	72860	1210	80	12	3	0	1	Circ B/U after test FIT
4190	4157.8	0.3	2.00	15198	243	18	2	1	1	1	Pump off gas
4190	4157.8	0.3	1.87	14012	259	21	3	1	0	2	Pump off gas
4364	4331.8	0.43	23.89	189185	3686	230	33	11	1	3	Pump off gas
175	175	0.43	4.49	33213	587	43	4	2	0	2	Form gas
4349	4316.4	0.43	23.06	169498	8039	601	54	22	3	3	Pump off - R/B drill stand
4349	4316.4	0.43	5.06	35827	1210	81	3	2	2	2	Pump off - flowcheck
241	241	0.43	3.09	22469	369	25	3	1	0	2	Trip gas
4342	4309.6	0.43	11.85	93528	2779	175	21	7	3	3	Form gas
4342	4309.6	0.43	6.25	45395	777	53	5	2	0	2	Trip gas
4366	4333.6	0	4.35	32176	702	53	8	3	1	2	Pump off
4366	4333.6	0	3.83	28459	617	45	7	2	1	2	Pump off

**Table 4-7 Gas peaks 6" section, NO 34/9-1 S Cambozola**

Depth (m MD)	Depth (m TVD RKB)	BG (%)	TG (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	iC5 (ppm)	nC5 (ppm)	Description
4369.8	4337.4	0.44	2.77	20975	341	14	1	1	1	2	Gas from using jar low flow
4369.8	4337.4	0.1	4.02	30849	505	21	2	1	1	2	Gas from Shoe
4370	4337.6	0.15	9.68	76240	1768	70	11	2	1	2	Pump Off gas (FIT)
4376.4	4344.0	0.1	2.71	20498	381	18	2	1	2	1	Pump Off gas
4377.5	4345.6	0.05	4.55	33882	566	25	2	1	0	0	Pumps off gas (Dummy Connection)
4385	4352.6	0.04	6.52	49942	842	35	7	0	0	1	Pumps Off Gas (Flowcheck before displacement)
4385.7	4343.3	0.02	1.29	9989	161	8	1	1	0	1	Pumps off gas after flowcheck 03:45
4394.1	4361.7	0.05	1.97	15496	241	10	1	0	0	1	Pumps off gas after flowcheck 11:45
4397.9	4365.5	0.07	1.54	11939	189	8	1	0	0	1	Pumps off gas after flowcheck 17:20
4403	4371.5	0.23	1.3	10103	167	9	1	0	0	0	Pumps off gas after flowcheck 00:00
4407	4374.6	0.5	1.48	11413	196	11	2	1	1	1	Pumps off gas after flowcheck 07:10
4413	4380.6	0.4	3.28	24902	421	21	4	0	0	1	Pumps off gas after flowcheck 14:20
4427	4394.7	0.4	2.11	16219	295	21	4	1	0	1	Pumps off gas after flowcheck 22:00
4427	4394.7	0.5	0.95	7288	115	8	1	1	0	1	Pumps off Gas after Dummy connection
4435	4404.9	0.6	10.17	81479	1298	87	13	4	0	2	Pumps off gas after flowcheck
4444	4412.1	0.2	3.73	28390	509	45	6	2	0	0	Pumps off gas after flowcheck
4444	4412.1	0.1	3.76	29351	429	37	4	2	2	1	Pumps off gas after flowcheck
4450	4421.7	0.39	7.32	54978	814	67	7	3	2	1	Pumps off gas after flowcheck
4455	4422.7	0.55	5.50	43168	683	62	6	3	2	0	Pumps off gas after flowcheck

**Figure 4-3 Hydrocarbon indication chart, NO 34/9-1 S Cambozola**

## 4.6 Geophysical results

The formation tops in NO 34/9-1 S came in close to prognosis and within the predrill uncertainty range, with some exceptions. See 4.3.2 for the complete overview of the prognosed vs. actual formation tops. The larger miss-ties for top Tryggvason, top Svarte and top Sola are due to difference in predrill and post drill definition of geological picks. Predrill velocity model was the CGG18M01 PSDM vertical velocity cube. Sonic while drilling was used in the 12 ¼" section, to confirm the velocity model and reduce uncertainty of Top Reservoir to  $\pm 50$ m TVD. VSP was run to further reduce the uncertainty of Top Reservoir to  $\pm 22$ m TVD.

A seismic to well tie of NO 34/9-1 S is shown in Figure 4-4. The synthetic seismogram is created directly from the sonic and density well logs. The seismic wavelet used in the synthetic seismogram (Ormsby 1-2-15-38) is based on a statistical extraction from more than 200 traces in both inline and crossline direction from the near stack CGG18M01 PSDM seismic data centred around the borehole at the target level. The wavelet is generated from a 1000ms interval from 3000-4000ms. The check shot time-depth relationship from the VSP is used in the synthetic seismogram but requires a stretch of 10ms from Intra Tryggvason level to prognosed top reservoir to provide an optimal match with the CGG18M01 near stack seismic data shown in the well tie.

The raw VSP data was processed by Schlumberger to corridor stack resulting in a good 3 way tie with frequency recovery up to 80 Hz shown in well tie Figure 4-10. Additional processing was made to image some possible near wellbore fault events that were evident on the 3-component raw data

Overall, the seismic well tie of NO 34/9-1 S is good. Decrease in both velocity and density sets up the strong trough for the predrill Top Reservoir seismic reflector. Density-neutron logs, gamma log and cuttings confirm that this interval consists of mainly shales with some silt and only traces of sand. Some increase in gas was observed. Post well modelling reveals a weak AVO class 3 – negative brightening with offset. This can be due to the slight increase in porosity and gas in the formation.

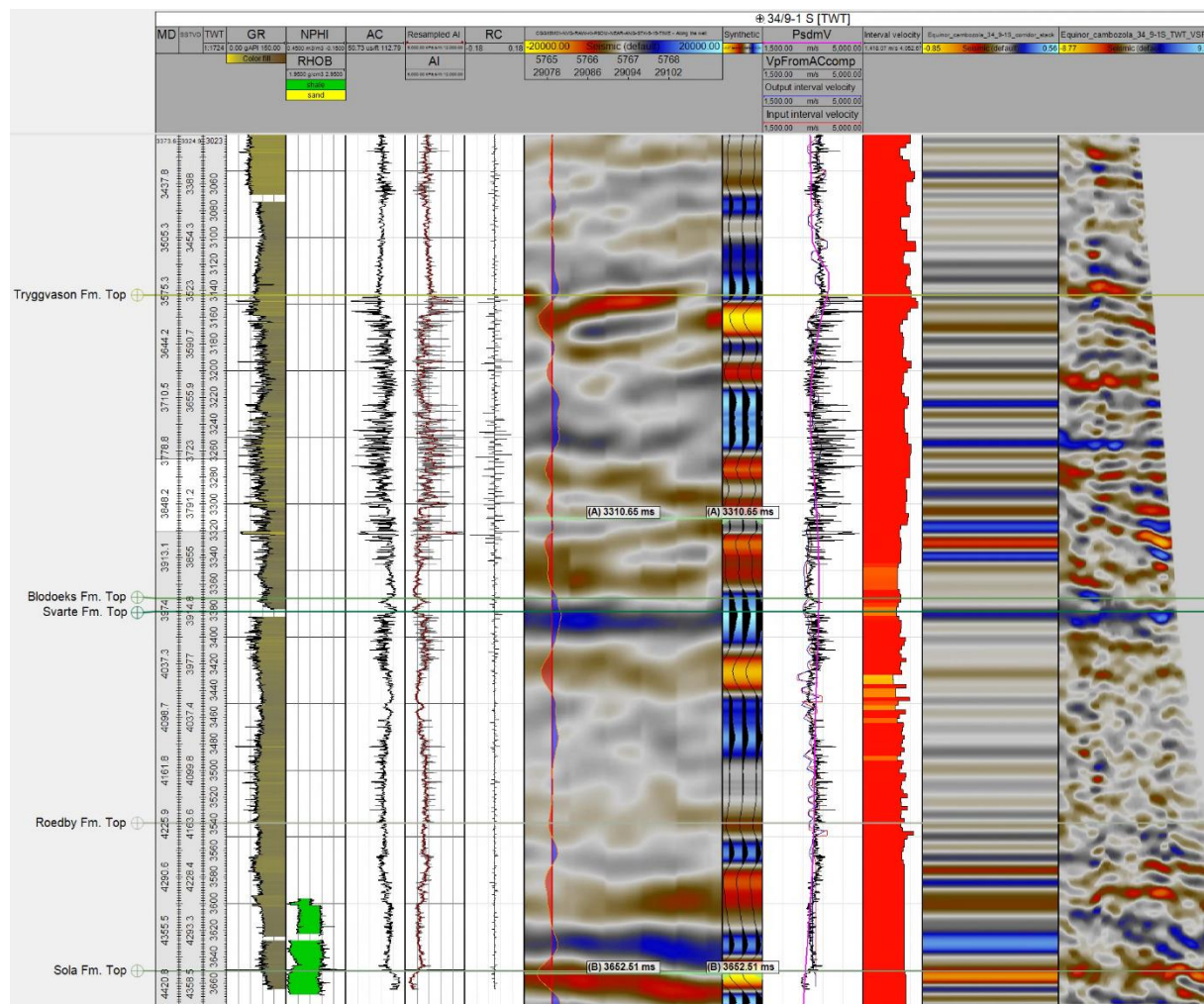


Figure 4-4 Seismic tie to well NO 34/9-1 S

## 4.7 Data acquisition

### 4.7.1 Cuttings and mud samples

Schlumberger (Geoservices) provided mudlogging services including chromatographic gas data collection and cuttings sampling. Cuttings, mud and gas sampling at various intervals are presented in tables below. Advanced mud gas analysis (Flair Flex) was used from 20" casing shoe to TD in this well.



**Table 4-8 Cuttings and gas sampling, NO 34/9-1 S Cambozola**

Hole section	Wet cuttings (5 litre buckets) (0.5 kg bag for biostrat)	Gas sampling (Isotubes) (2 x 110ml)
17 ½"	1300m - 3460m 5 litres wet cuttings, every 10m 0.5kg wet cuttings for biostrat, every 10m	Isotube, 2 x 100ml, every 100m
12 ¼" x 13 ½"	3460m - 3989m 5 litres wet cuttings, every 10m 0.5kg wet cuttings for biostrat, every 10m	Isotube, 2 x 100ml, every 100m
10 5/8" x 12 ¼"	3989m - 4322m 5 litres wet cuttings, every 10m 0.5kg wet cuttings for biostrat, every 10m	Isotube, 2 x 100ml, every 100m
8 ½"	4322m - 4367m 5 litres wet cuttings, every 3 m 0.5kg wet cuttings for biostrat, every 3 m	Isotube 2 x 100ml, every 21m
6"	4367m - 4455m 5 litres wet cuttings, every 3m 0.5kg wet cuttings for biostrat, every 3m	Isotube, 2 x 100ml, every 21m

**Table 4-9 Mud sampling, NO 34/9-1 S Cambozola**

Hole section	Mud (1 litre bottle)
17 ½"	1300m - 3460m 1 litre mud sample, every 200m
12 ¼" x 13 ½"	3460m - 3989m 1 litre mud sample, every 200m
10 5/8" x 12 ¼"	3989m - 4322m 1 litre mud sample, every 200m
8 ½"	4322m - 4367m 1 litre mud sample, every 21m
6"	4367m - 4455m 1 litre mud sample, every 21m

## 4.7.2 Conventional coring

No conventional coring was performed in this well, as coring was only planned to be performed in discovery case.



### 4.7.3 MWD/LWD

Table 4-10 MWD/LWD logging summary, NO 34/9-U-1 and NO 34/9-1 S Cambozola

Run	Section (in)	Depth interval (m MD)	Tool combination	Remarks
1*	8 ½"	412-1300	PowerDrive-ARC6-Tele675	GR-RES-ECD-DIR
2	26"	466.7-1300	ROS900- ARC9	GR-RES-ECD-DIR
3	17 ½"	1300-3460	PowerDrive-ROS900-ARC9	NBGR-GR-RES-ECD-DIR
4	12 ¼" x 13 ½"	3460-3989	PowerDrive-ROS900-ARC9-SonicScope	NBGR-GR-RES-Sonic-ECD-DIR
5	10 5/8" x 12 ¼"	3989-4322	Powerdrive-TeleScope25-ARCVision825-SonicScope	GR-RES-ECD-DIR
6	8 ½"	4322-4367	DV6MT-Tele675-SonicScope6	GR-RES-DEN-NEU-Sonic-CAL-ECD-DIR
7	6"	4367-4455	IMP-ADN4-VPWD	GR-RES-NEU-DEN-CAL-ECD-DIR

\* Pilot hole, well NO 34/9-U-1

### 4.7.4 Wireline logging

Table 4-11 Wireline logging summary, NO 34/9-1 S Cambozola

Run no.	Section	Tool combination	Logs	Depth interval (m MD)	Remarks
1	17 ½"	GR-CBL-IBC	Cement bond log	1370-3394	Logged 14" casing
2	12 ¼" x 13 ½"	GR-CBL-IBC	Cement bond log	3881-4257	Logged 9 7/8" casing
3	10 5/8" x 12 ¼"	VSI4-GR	Look ahead VSP	935-4285	
4	6"	GR-PPC-MSIP	Sonic P&S data	3970-4455.7	Logged inside casing

### 4.7.5 Data quality

#### 4.7.5.1 MWD/LWD

All realtime data and memory data were of good quality. Memory data proved no missing data. Some issues with GR and shallow RES sensors reading sand in both 8 ½" pilot hole and in 26" section in main well when pumping Hi-Vis sweeps.

#### 4.7.5.2 Mudlogging

No major issues or problems regarding gas or volumes monitoring. No major issues with transmitting realtime data. Some issues with both chromatograph and gas trap failing especially during drilling of the 6" section. No missed gas data.

No issues with Flair data monitoring and recording.

#### 4.7.5.3 Wireline

Four logging runs were performed in the main well. Two cement bond logs, one lookahead VSP and one sonic log. Data quality is largely of good quality.

### 4.8 Formation pressure

The pressure prognosis for the Cambozola well was based on data from the nearby wells, where the most relevant reference wells were the NO 34/12-1 Afrodite and wells on the Kvitebjørn field.

The pore pressure gradient is believed to follow prognosis and being close to hydrostatic down to mid-Hordaland, where the Hordaland Group is expected to be sand free (~1700m TVD RKB), from there the pore pressure gradient is based on the Kvitebjørn field model. The Lista Formation had a potential high case pressure based on pressure measurements in NO 34/11-A-16 on Kvitebjørn. However, no confirmation during drilling indicates that we have drilled with a mud weight close to pore pressure, which gives a higher confidence in the most expected pore pressure curve. From top Tryggvasen Formation the pore pressure gradient is expected to increase towards the planned top reservoir, however, exactly at which depth this pressure gradient increase starts and how fast it increases is uncertain, but it is estimated to increase with approximately 42bar/100m. The sonic and resistivity data gathered while drilling indicates that it is likely that the pressure follow a similar gradient as prognosed through Tryggvasen and into the Svarte Formations, where it has a flattening or decreasing trend towards Top Rødby Formation, where the pore pressure gradient has a rapid increase towards the Sola Formation. Towards TD of the well the pump-off events seems to indicate that it is likely that the mud column is close to being in balance with or just above the pore pressure of the formation.

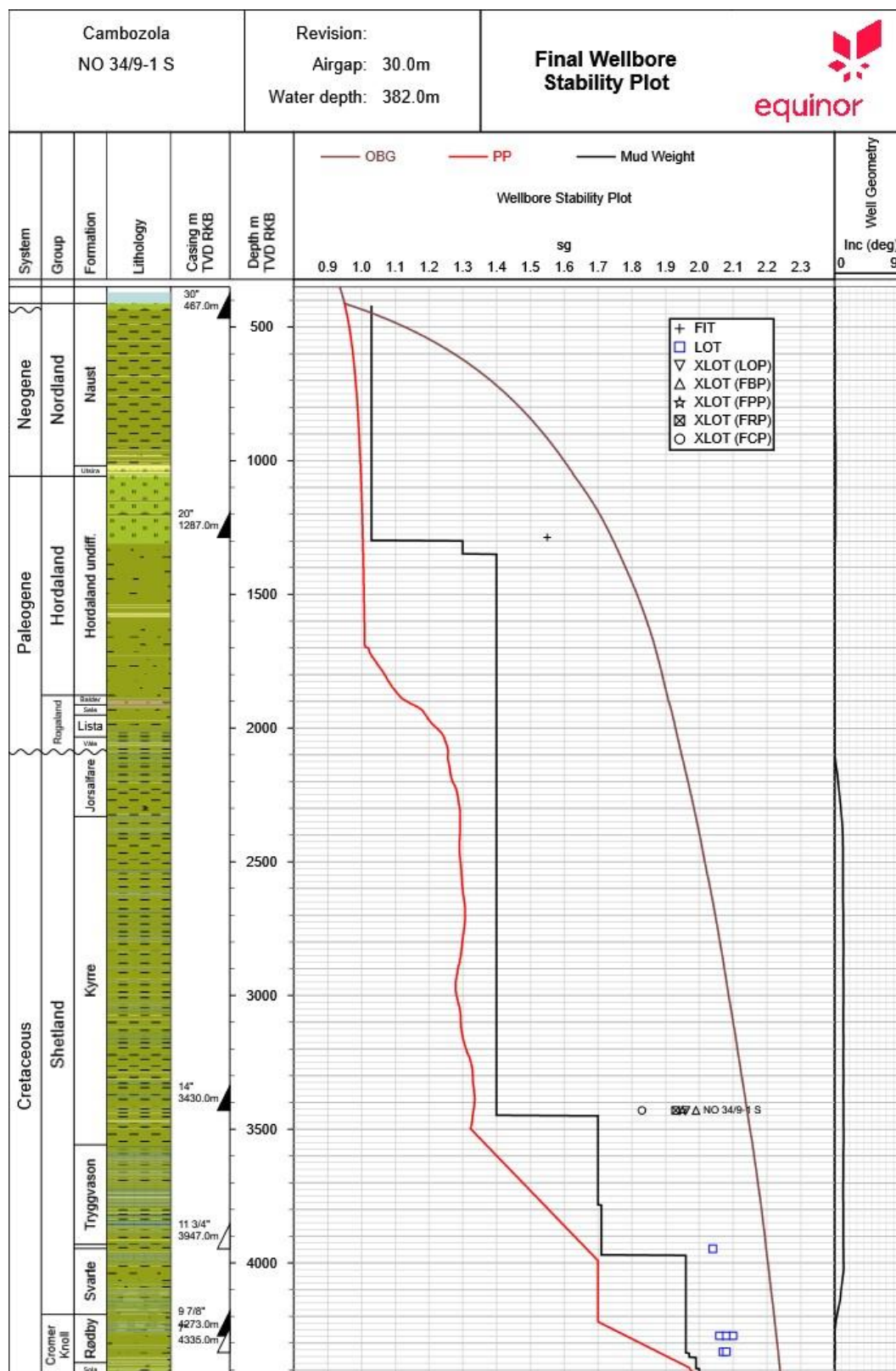


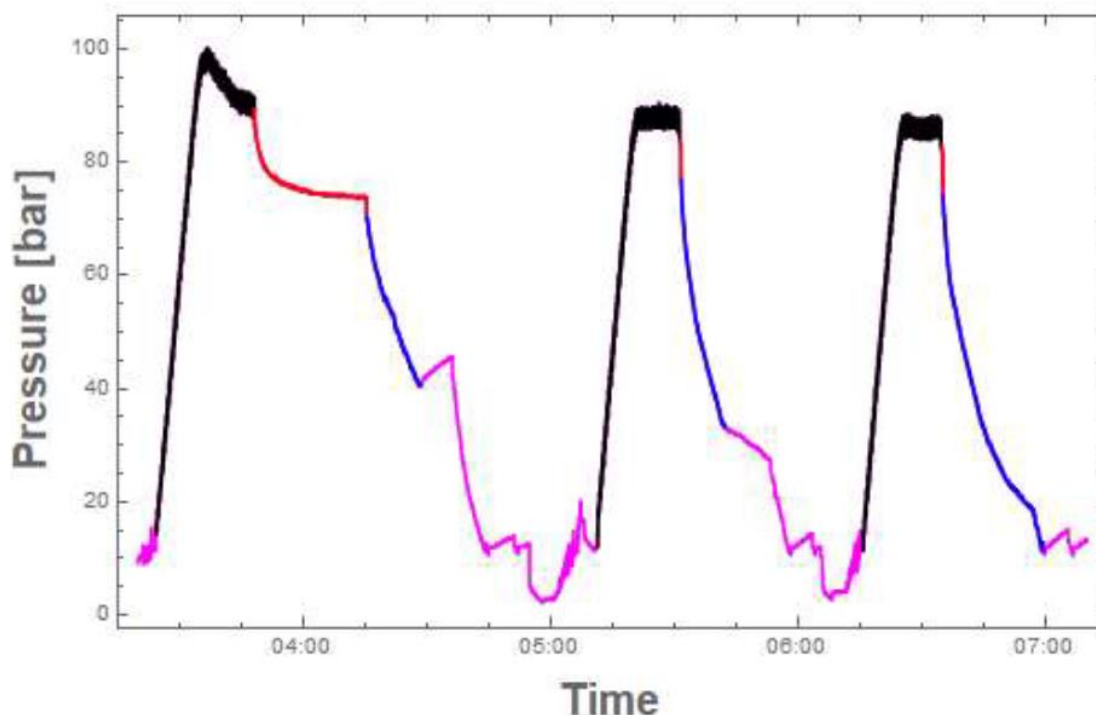
Figure 4-5 Final Wellbore Stability plot, NO 34/9-U-1 and NO 34/9-1 S Cambozola

## 4.9 Formation integrity

Two FITs were performed in the Cambozola well. One below the 20" casing shoe and one below the 11 3/4" liner shoe. An XLOT (Figure 4-6) was taken below the 14" casing shoe, and two LOTs were taken below the 9 7/8" casing and 7" liner. The results for all these tests are summarized in Table 4-12.

**Table 4-12 Summary of FIT/LOT/XLOT data in well NO 34/9-1 S Cambozola**

Test type	Casing	Type	Depth MD (m)	Depth TVD RKB (m)	FIT (g/cc)	LOP (g/cc)	FBP (g/cc)	FCP (g/cc)	FRP (g/cc)	FPP (g/cc)
FIT	20"	Casing	1286.8	1286.7	1.55					
XLOT	14"	Casing	3449.6	3429.6	-	1.96	1.99	1.83	1.94	1.95
FIT	11 3/4"	Liner	3976.5	3947.3	2.04					
LOT	9 7/8"	Casing	4304.9	4272.6	-	2.08				
LOT	7"	Liner	4364.7	4332.4	-	2.06				



**Figure 4-6 Time versus pressure during the XLOT in NO 34/9-1 S (Cambozola) showing cement unit data. Pump-in (black); Shut-in (red); Flowback (blue); Rebound/Other (magenta).**

### 4.9.1 Reservoir pressure summary

No pressure measurements were taken in NO 34/9-1 S Cambozola well.

## 4.10 Reservoir fluid sampling

No sampling was performed in NO 34/9-1 S Cambozola well.

## 4.11 Formation temperature

The final formation temperature plot is based on what was prognosed prior to drilling the well. As only one wireline run was performed in two different section a Horner correction cannot be made.

For the final plot a temperature gradient of 3.8°C/100m from seabed down to TD is used. The seabed temperature is assumed to be 4°C based on reference wells. This gives a temperature of 156°C at TD of 4423m TVD RKB. See Figure 4-7.

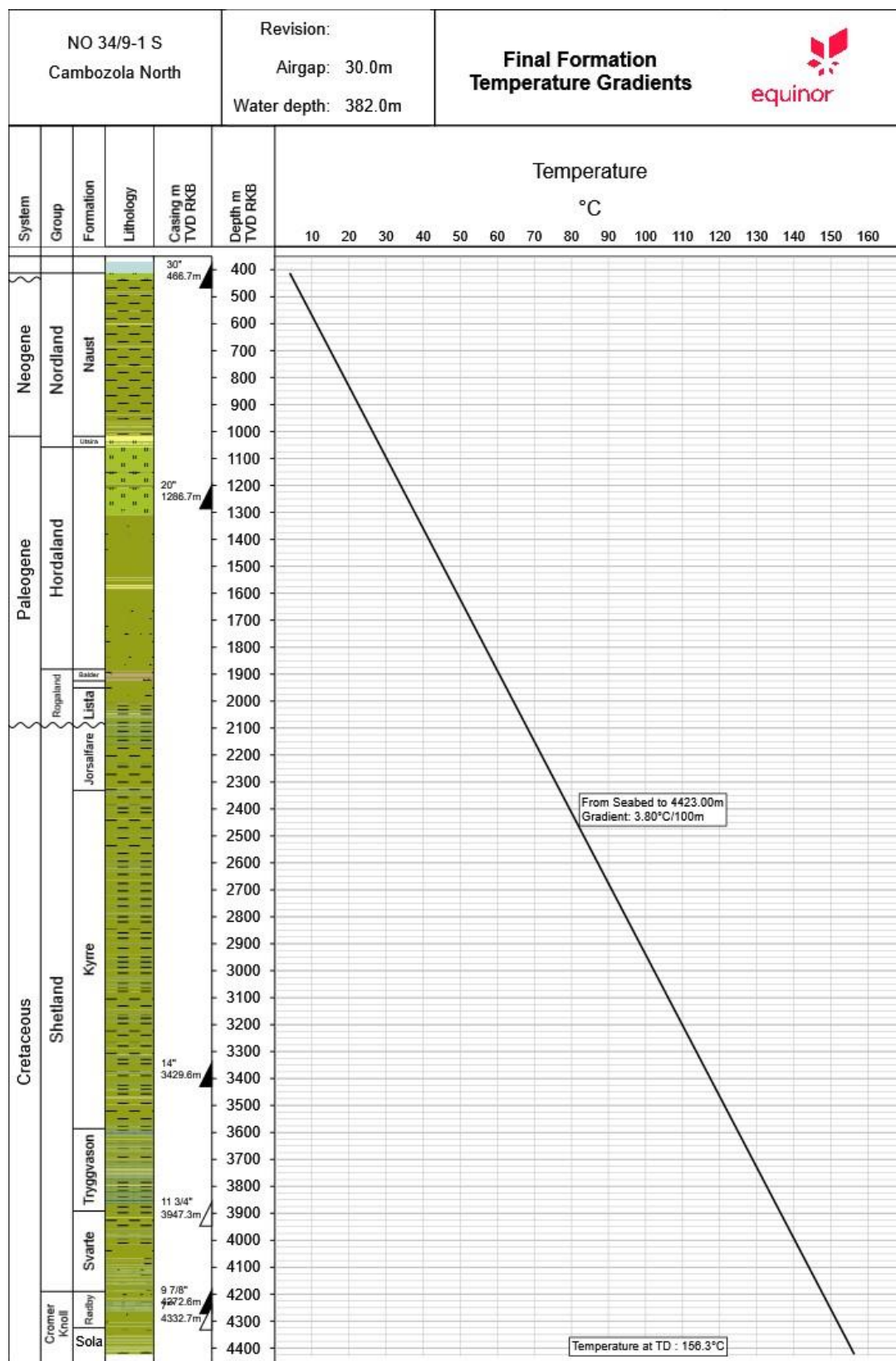


Figure 4-7 Temperature plot, NO 34/9-U-1 and NO 34/9-1 S Cambozola

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## 4.12 Experiences / recommendations

See Chapter 3.

Flair data provided an overall better control of gas in returns and provided a continuous hydrocarbon indication log. In addition, Flair data increased the understanding of the hydrocarbon system by separating gas response vs. formation gas: With Flair data it was easier to monitor the gas in/gas out levels and to evaluate the different gas responses and to have control of recycled gas.

## 5 Drilling operations report

### 5.1 NO 34/9-1 S, Move to Location (09.Apr.2022 00:00)

**START:** 09.Apr.2022 00:00 mMD  
**END** : 09.Apr.2022 08:20 0 mMD

#### OBJECTIVE

Move from Kveikje n'Roll to Cambozola

#### SUMMARY

Moving to NO 34/9-1 Cambozola from the previous location (NO 35/10-8 S Kveikje N' Roll).  
Performed DP trails, installed transponders and marker buoys.

### 5.2 NO 34/9-1 S, Pre-Spud (09.Apr.2022 08:20)

**START:** 09.Apr.2022 08:20 414 mMD  
**END** : 09.Apr.2022 14:35 401 mMD

#### SUMMARY

Ran 36" conductor to seabed in Main and hang off.

### 5.3 NO 34/9-U-1 (Pilot Hole), Pre-Spud (09.Apr.2022 17:40)

**START:** 09.Apr.2022 17:40 0 mMD  
**END** : 09.Apr.2022 14:35 414 mMD

#### SUMMARY

M/U and ran 8 ½" pilot BHA into sea. Tagged seabed at 414 m.

### 5.4 NO 34/9-U-1 (Pilot Hole), 8 ½" (09.Apr.2022 20:20)

**START:** 09.Apr.2022 20:20 414 mMD  
**END** : 11.Apr.2022 05:15 1300 mMD

#### OBJECTIVE

Drill pilot hole beyond identified shallow hazards to investigate for shallow gas and allow for drilling 26" hole to 1300 m.

#### SUMMARY

Washed down from 414 m to 429 m. Established drilling parameters and drilled 8 ½" pilot hole with sea water and sweeps to 1300 m. Had a stop in drilling at 552 m for 0.92 hrs due to a general alarm. During stop, picked off bottom, circulated and reciprocated string. Drilled to TD at 1300 m.

Pumped hi-vis sweeps and circulated hole clean. Flow checked well for 30 minutes prior to displace well to 1.30 sg KCl displacement mud.



## 5.5 NO 34/9-U-1 (Pilot Hole), 8 ½" Permanent P&A (11.Apr.2022 05:15)

**START:** 11.Apr.2022 05:15 1300 mMD

**END** : 11.Apr.2022 13:10 1100 mMD

### SUMMARY

Plugged back pilot hole by setting two balanced cement plugs, from 1300-1100 m and from 1100-900 m

## 5.6 NO 34/9-1 S, 26" x 42" (09.Apr.2022 20:20)

**START:** 09.Apr.2022 14:35 432 mMD

**END** : 11.Apr.2022 19:20 467.7 mMD

### OBJECTIVE

Drill 26"x42" hole with hole opener. to allow for 36" conductor casing to be set at sufficient depth.

The 36" conductor shall be the foundation for the well and support the subsequent casing strings and BOP.

### SUMMARY

Drilled 26"x42" hole from 412mRKB (seabed) to 467.7m (tide corrected) in AUX. Encountered boulders.

Struggled to achieve inclination <1deg, had to ream. Inclination survey at 464m was 0.53 deg.

The conductor was run and installed according to plan. Held 36" conductor in place with 20 ton tension while waiting on cement.

### BIT RUNS

This section was drilled with 26" XR+ Milled tooth bit.

At surface the 26" bit and hole opener were graded to 2-1-WT-M-X-I-NO-TD

### DRILLING FLUID

Seawater and Hi-vis sweeps.

### CASING

36" Conductor, X-56, 553.4#, TSH BlueDock LR ELS couplings

### MWD/BHA

D&I (TruLink)

### CEMENTING

The cement job was planned with 300% excess. Due to large crater observed after setting the conductor it was decided to increase excess to 350%. Job went according to plan. Mixed and pumped 61.5 m3 1.70 sg gas cement slurry (Class C neat) with 800 lpm (350% excess).

## 5.7 NO 34/9-1 S, 26" (11.Apr.2022 19:20)

**START:** 11.Apr.2022 19:20 467.7 mMD

**END** : 18.Apr.2022 04:20 1303 mMD

### OBJECTIVE

Provide integrity for drilling the 17 ½" section.

Run and install BOP.

### SUMMARY

Drilled 26" hole to 1300m RKB. Displaced to 1.30 sg Displacement mud. Run and cement 20" casing with C-cement. Plugged nozzles on the 26" bit.

### BIT RUNS

This section was drilled with a 26" XR+MT.

Dull grading after drilling was 1-1-WT-A-E-IN-PN-TD. 2 of the nozzles were plugged with rubber from motor.

### DRILLING FLUID

Seawater and hi-vis sweeps. Displaced well to 1.30 sg KCl mud prior to pull out of hole.

### CASING

20" 133lbs/ft, N-80, TSH ER couplings.

RKB Hanger on 408.40 m - Shoe depth 1286.77 m.

### MWD/BHA

GR-Res (ARC/TruLink)

### CEMENTING

Mixed and pumped 102 m3 Lead Slurry and 81m3 Tail Slurry. Slurry designed for shallow water/gas flow.

Original plan was to have 50% annular excess on the Lead Slurry and 100% annular excess on the Tail Slurry. Due to the change in plans for the 36" conductor job. it was decided to adjust the Tail Slurry to 50% annular excess.

## 5.8 NO 34/9-1 S, 17 1/2" (18.Apr.2022 04:20)

**START:** 18.Apr.2022 04:20 1303 mMD

**END** : 25.Apr.2022 08:15 3463 mMD

### OBJECTIVE

Provide integrity for drilling the 12 ¼" x 13 ½" section

### SUMMARY

Drilled 17 ½" section from 1303m to section TD at 3460 m with 4200-4700 lpm, 8-19 ton WOB, 160-230 rpm. Max gas reading during drilling was 1.2%.

Circulated well clean at TD with 2 ½ BU, performed cluster shots. Flow checked well OK (observed 150l loss). Pulled wet to 3183m. Pumped 5.9 m3 of 1.70 sg slug. No gain observed (expected gain 1250 l). POOH to surface. Pulled and retrieved wear bushing. RIH with 14" casing stands according to surge calculations. Run in open hole with CRTi to

3424m. Max flowrate of 1300 lpm (planned 2500 lpm) due to max 30 bar on string. Landed casing hanger by setting down all casing weight plus 7 ton of landing string. Circulated 1 1/2 BU, well stable.

Performed cement job. WOC with pressure on string due to floats not holding. Set and tested seal assembly. Installed wear bushing and pressure tested BOP. RIH with clean out BHA and tagged TOC at 3399m. Performed WL CBL from 3394 to 1370m.

RIH with 12 1/4" x 13 1/2" BHA. Displaced well to 1.70 sg OBM and fingerprinted. Drilled shoe track and 3m of new formation to 3463m. Performed XLOT w/ 1.96sg FPP, 1.92 sg FRP and 1.84 sg FCP.

#### **BIT RUNS**

This section was drilled in two runs with same Smith Hyperblade PDC bit.

Run 1: Drilled shoetrack and 3m of formation. Performed FIT. POOH due to MWD failure and changed MWD tool. Bit grading 2-1-CT-N-X-IN-NO-DTF

Run 2: Drilled to TD. Bit Grading 3-1-CT-C-X-IN-BF-TD.

Section was drilled in 41.1hrs (48 circulating hrs) giving 56.9/49.5 m/hr ROP (Net/Gross)

#### **DRILLING FLUID**

1.40sg RheGuard OBM

#### **CASING**

14" casing, 114 lb/ft. SM 125S, VamTop KB

#### **MWD/BHA**

BIT-PowerDrive-ArcVISION-TruLink

#### **CEMENTING**

Pumped 21.5m3 of 1.50sg spacer. Not able to weigh up G-silica lead cement slurry up to 1.95sg as planned. Only lead slurry pumped (added planed tail slurry to lead slurry volume to get correct total m3) Pumped 118m3 of 1.91-1.92sg lead cement with reduced flow of 350-450lpm to keep recycle pump going. Top plug sheared after 175 stroked (178 theoretical). Did not bump top plug. FCP 177 bar. Pumped half a shoe track above theoretical bump. 2 m3 loss during pumping cement and 2 m3 loss during displacement.

#### **LOGGING**

GR-RES-PRES acquired by LWD tool.

Cement bond log of 14" casing by Wireline.

## **5.9 NO 34/9-1 S, 12 1/4" x 13 1/2" (25.Apr.2022 08:15)**

**START:** 25.Apr.2022 08:15 3463 mMD

**END** : 04.May.2022 15:30 3996 mMD

#### **OBJECTIVE**

Provide integrity for drilling the 10 5/8" x 12 1/4" section

## SUMMARY

Drilled 12 ¼" x 13 ½" section from 3463m to section TD at 3989 m with 4000-4200 lpm, 8-18 tons WOB, 160-210 rpm/20-35 kNm. Max gas observed during drilling 3%.

Circulated 1x BU with additional 500 strokes to get declining gas trend. Pumped out of hole to above 13 ½" shoulder and closed upper underreamer. Activated lower underreamer and underreamed hole to 13 ½" from 3933 to 3989m. Circulated 1 1/2 BU while performing cluster shots. ESD recorded to 1.716 sg. Observed 1 m3/hr loss rate during flow check. Pumped OOH to 2995m according to swab calculations. Pumped slug and POOH.

RIH with 11 ¾" liner. Speed restricted due to friction at first DP stand at 646m. Broke circulation. RIH to 693m. Decision made to POOH due to high friction in well. When liner at surface, discovered that stop collars were mounted too close to the centralizers, leaving too little room for centralizers to collapse inside casing. Cut off 1 ea centralizer and 2 ea stop collars on shoe track, cut off all other centralizers and stop collars of the liner joints and ran back in hole with slick liner joints. Restricted running speed by either 35ton weight to overcome friction or 50 bar trapped pressure. Staged up flow and washed down to 4m and then 2 m above 13 ½" shoulder. No tag observed. Washed down to 12 ¼" TD and tagged with 5 ton. CBU and performed cement job. Dropped dart to set expandable hanger. Performed overpull test. Pumped slug and pulled out with RT. RIH with wireline and logged 11 ¾" cement. Pressure tested liner.

RIH with 10 5/8" x 12 ¼" drilling BHA. Displaced to 1.96sg OBM (BaraECD - switched mud supplier to Halliburton) while drilling plugs. Performed fingerprinting and drilled out shoe track and 3m new formation. Not able to get FIT to minimum criteria of 2.04sg (planned 2.06sg). Pumped and squeezed LCM pill. Pressure held at 40.9 bar for 10 min. Drilled 1 m of new formation to 3993m and performed FIT to same result of 2.02sg. POOH and RIH with cement stinger. Performed injectivity test to 40 bar, 400 l lost during test. Performed cement squeeze job and held pressure until 100Bc. POOH with cement stinger and performed BOP test.

RIH with 10 5/8 x 12 1/4" drilling BHA. Tagged TOC at 3900m. Drilled out cement and 3m of new formation to 3996m. Recorded ESD to 1.956sg and performed FIT. Formation broke off at 2.049sg EWM. Recorded 2.04 sg as LOT.

## BIT RUNS

This section was drilled in one run with Smith Sharc SDSi616 PDC bit. Bit grading 0-1-WT-G-X-IN-CT-TD  
Section was drilled in 21.8hrs (40 circulating hrs) giving 24.9/20.7 m/hr ROP (Net/Gross)

## DRILLING FLUID

1.71sg RheGuard OBM

## CASING

11 ¾" liner, 60 lb/ft, P 110, Hydri 513 couplings. 1 centralizer/joint in shoetrack, no centralizers from shoetrack and up.

## MWD/BHA

BIT-PowerDrive-Rhino Reamer XC-ArcVISION-TeleScope-SonicScope-Rhino Reamer XS

## CEMENTING

Pumped 21.5 m3 of 1.75sg spacer. Mixed and pumped 12.88 m3 of 1.95 sg cement. Top plug sheared after 2140 strokes at 155 bar. Did not observe burst of bottom plug but observed increase in torque and pressure (90 to 100bar) as cement was being pumped up annulus. Top plug bumped at 3984 strokes (3900 theoretical) at 130 bar (FCP 60 bar). No losses observed.

Performed cement squeeze job after not reaching required FIT value. Pumped 8m<sup>3</sup> of 1.96 sg spacer. Mixed and pumped 6m<sup>3</sup> of 1.97sg slurry and displaced with 1.96 sg OBM at 1500 lpm.

#### LOGGING

GR-RES-PRES-Sonic acquired by LWD tool

Cement bond log of 11 3/4" liner by Wireline

### 5.10 NO 34/9-1 S, 10 5/8" x 12 1/4" (04.May.2022 15:30)

**START:** 04.May.2022 15:30 3996 mMD

**END** : 20.May.2022 16:55 4325 mMD

#### OBJECTIVE

Provide integrity for drilling the 8 1/2" reservoir section.

#### SUMMARY

Drilled 10 5/8" x 12 1/4" section from 3996 m to section TD at 4322 m with 3000-3500 lpm/284-371 bar. 13-16 tons WOB, 150-170 rpm/11-30 kNm. Max gas reading during drilling was 6.74%.

Drilled to 4036m, picked off bottom and activated upper reamer. Connection gas observed. Performed dummy connection and 10-30-10 test according to HPHT manual at 4277m. Indicated gas response came from ballooning effect and not due to pore pressure. Drilled to TD at 4322mMD. Circulated hole clean and treated active system to casing running specifications. Performed HPHT short trip. Pumped/POOH with drilling BHA.

Retrieved wear bushing. Rigged up and RIH with 9 7/8" casing to above 11 3/4" liner and CBU.

Rigged up and ran ICB/CBL log in 9 7/8" casing with wireline

RIH with 8 1/2" BHA and drilled shoe track. It was time consuming to drill through the top plug set, spent ~16 hours. Drilled firm cement through side-track. Displaced mud from 1.96sg ESD to planned 2.05sg ESD, however measured ESD was around 2.08-2.09sg ESD. Broke through the shoe and went on losses. ECD: 2.12-2.14sg EMW. Reduced flow parameters and established loss free rate. Washed down rathole and tagged cement at 4318m.

Ran Seismic log VSP for lookahead purposes. The depths of the formations ahead did not change, however reduced the uncertainty from +/- 50m to +/-22m.

Performed squeeze cement job around 9 7/8" casing shoe.

Unable to perform planned FIT, resulted in a LOT with formation leaking off at 2.08 sg.

#### BIT RUNS

This section was drilled in one run with Sharc MDSi616 PDC bit. Bit grading: 0-1-WT-G-X-In-BT-TD

Section was drilled in 28.9hrs (79.9 circ hrs) giving 11.8/ 8.8 m/hrs (Net/Gross)

The cement and shoetrack was drilled with 8.5in HyperBlade YZ519S PDC bit. Bit grading: 0-1-BT-C-X-IN-PN-HP.

#### DRILLING FLUID

This section was drilled with 1.96sg ESD Halliburton BaraECD OBM.

## CASING

9 7/8" casing, 65.4 lb/ft, SM125S, VAM SLIJII. No centralizers/joint from hanger to 4056m, 2 centralizers/joint from 4056m

## MWD/BHA

BIT-PowerDrive-Rhino Reamer XC-ArcVISION-TeleScope-SonicScope-Rhino Reamer XS.

For 8 1/2" BHA: BIT-EcoScope-Telescope-SonicScope

## CEMENTING

Cement 9 7/8" Liner. Pumped 15 m3, 1.96sg of spacer #1. Experienced plugging of cement bulk line to batch mixer. Pumped 7 m3, 2.10sg of spacer #2. Pumped 8.1m3 of 2.15 sg pre-mixed cement slurry. Sheared top plug with 175 bar after 134 stks. Observed burst of bottom plug with 83 bar after 7464 stks (7492 theoretical). Top plug bumped at 7910 stks (7947 theoretical) with 108 bar. (FCP 38 bar). Total losses observed 116m3.

## LOGGING

GR-RES-PRES-Sonic acquired by LWD tool.

Cement bond log (IBC-CBL) of 9 7/8" casing by Wireline.

Seismic log VSP acquired by Wireline. Deepest survey at 4295m, shallowest survey at 949.82m

## 5.11 NO 34/9-1 S, 8 1/2" HPHT (20.May.2022 16:55)

**START:** 20.May.2022 16:55 4325 mMD

**END** : 28.May.2022 10:30 4370 mMD

## OBJECTIVE

Drill/core 8 1/2" hole to well TD. Perform data acquisition as per plan

## SUMMARY

Objective not met. Decided to stop drilling 8 1/2" section above prognosed reservoir due to weak formation strength. Was not able to achieve planned FIT, which limited the kick margin.

Drilled 8 1/2" section from 4322 m to 4367 m with 1200-1300 lpm/165-190 bar, 8-11 tons WOB, 100-150 rpm/3-16 kNm. Stopped at 2x uncertainty (+/-22m) +10m safety margin above prognosed reservoir (prognosed reservoir was 4421m) and circulated 1 1/2 BU. Flow checked well until 30 min stable trip tank, well stable. Circulated 1 BU after flow check, max gas after drilled to 4367m: 12%

Pumped out of hole with 500 lpm/33 bar from 4362-4398 m. Attempted to take a new FIT but formation leaked off to a LOT at 2.06 sg. RIH and circulated BU. Pumped 7.5m3 LCM pill and performed a LCM squeeze. Formation holding pressure at start of cement squeeze was 58 bar, but decreased to a stable pressure of 38 bar. Stopped the LCM squeeze due to the decreasing pressure indication break down of formation.

RIH and tagged TD, circulated BU. Max gas reading after LCM squeeze 23.9%.

Decided to pump/POOH and run 7" liner. RIH a 9 7/8" Casing Scraper Assembly and scraped the liner setting area from 4255m - 4240 m. CBU, max gas 23%. Pumped out of hole from 4355m to 3650m. Observed lower pump rate than the required 800 lpm in the tripping schedule in the swab calculations. Decided to RIH and circulate bottoms up. At 4360m circulated bottoms up. Max gas 11.83%. Pumped OOH to 2600. POOH.

Ran 7" liner and cemented same.

RIH with 6" drilling assembly and washed down inside 7" liner. Tagged cement at 4297 m. Observed some torque fluctuation and string stall outs during drilling of shoe track. Jar was used two times to pull string free. Fingerprinting was performed while drilling/washing shoe track down to 4367 m.

Drilled 3 m with new formation and attempted to take a FIT. Formation leaked off to a LOT at 2.06 sg, giving a MAASP of 30 bar at 7" shoe for continued drilling.

#### **BIT RUNS**

This section was drilled in one run with HyperBlade YZ519S PDC bit, same bit as previous run.

Bit grading: 2-1-BT-C-X-0-NO-TD

Section was drilled in 15.2hr (32.1 circ hr, 28.7 other hr) giving 3.0 m/hrs

9 7/8" Casing Scraper Assembly (CSA) was ran to scrape liner setting area 4255 m - 4240 m.

#### **DRILLING FLUID**

1.99 sg BaraECD OBM from Halliburton.

#### **CASING**

7" Liner. 32.0 lb/ft. VAM HTTC. P-110.

Total length 133.95m. Length of shoetrack 66.2m

#### **MWD/BHA**

BIT-EcoScope-Telescope-SonicScope

#### **CEMENTING**

7in liner cement job. Pumped 9 m3 2.10 SG spacer ahead of cement. Batch mixed & Pumped 5 m3 2.15 SG slurry DH  
Observed bump of top plug

#### **LOGGING**

M/LWD: CALI-DEN-GR-NEU-PRES-REMP-SONIC

### **5.12 NO 34/9-1 S, 6" HPHT (28.May.2022 10:30)**

**START:** 28.May.2022 10:30 4370 mMD

**END** : 03.Jun.2022 18:30 4455 mMD

#### **OBJECTIVE**

Drill/core 6" hole to well TD. Perform data acquisition as per plan

#### **SUMMARY**

Objective not met. Was not able to reach desired well TD, stopped at 4455.0 mMD due too narrow drilling window.

Drilled 6" section from 4370.0 mMD to 4455.0 mMD with 550-620 lpm/129-156 bar, 3-7 tons WOB, 85-120 rpm/3-9 kNm.

Drilled 6" hole from 4370 m to 4386 m where well was displaced from 1.965 sg to 1.985 sg MW50. During drilling from 4386 m to 4413 m the well was flow checked and circulated BU every 5 m. Max gas observed with 1.965 sg mud was 9.68 % TG (Pump off gas) and with 1.985 sg 10.19% TG (Pump off gas).

ESD values measured after the stops were measured to 2.012-2.013 sg, except from at 4413 m where ESD reading was 2.005 sg.

Drilled 6" hole from 4413 m to 4427 m and performed a new flow check, well static. ESD reading was 2.005 sg and decision were made to weigh up to 2.105 sg ESD/1.995 sg MW50. New ESD measurement after displacing well was 2.020 sg.

Drilled 6" hole from 4427 m to 4455 m. Had to pick off bottom on several occasions from 4435 m to 4445 due to pressure peaks and pack off tendencies. Rotated with 5-10 rpm during flow checks and experienced some torque spikes up to 7-9 kNm. Well static. Max gas measured 7.32%.

TD set @4455 mMD due to narrow drilling window.

Pumped out of hole until 2700 mMD and pull out of hole on trip tank to surface.

#### **BIT RUNS**

This section was drilled in one run with VSX613 PDC bit. Bit grading: 0-1-VT-S-X-I-JD-TD

Section was drilled in 262.5 hr (40.4 hr on formation, 20.8 hr on cement, 150.6 circ. hr and 50.7 other hr) giving 2.58 m/hrs

#### **DRILLING FLUID**

This section was drilled with 1.965 sg to 1.995 sg Halliburton BaraECD OBM. Due to pump off gas measurements mud weight was raised to 1.985 sg at 4413 m and to 1.995 sg at 4427 m.

#### **MWD/BHA**

BIT-Impulse VPWD – AND Vision

MWD/LWD with gamma ray, resistivity, directional, density and neutron acquired.

#### **LOGGING**

LEH\_FAA, EDTG\_B, PPC, AH\_184

### **5.13 NO 34/9-1 S, Permanent P&A (DP) w/ RIG (03.Jun.2022 18:30)**

**START:** 03.Jun.2022 18:30 mMD

**END** : 19.Jun.2022 04:00 4455 mMD

#### **OBJECTIVE**

Permanent plug and abandonment of the 34/9-1 S

#### **SUMMARY**

RIH to 4428m with cement stinger, restricted by surge calculation. Washed down and tagged TD at 4455m with 3 ton. Observed obstruction/ledge at 4425m which was also seen on wireline logs. Pumped OOH to above PBR and circulated out gas (Max 6.7%) through kill and choke. Slight losses observed in active.



Cement plug #1: (Primary barrier to Intra Sola Fm.). Pumped 8m<sup>3</sup> of 2.10sg spacer and 5 m<sup>3</sup> of 2.15 cement slurry. Slurry was Batch mixed. Cut cement at 4355m. Reduced flowrate from 1200 to 1100lpm due to loss trend. Max gas recorded to 8.06%.

Pumped OOH according to swab calculations. Observed gain due to overflow on shaker pits into active volume and pits that were not included in active system.

RIH with 6" dress-off BHA. Tagged TOC @ 4410m (theoretical TOC @ 4355m). Decision made to redo cement plug #1. RIH with stinger and tagged TOC @ 4407m. Observed losses while circulating BU with 1200lpm. 2-300l gain when flow reduced to 700lpm. Max gas of 8.8% from tagged TOC. Obstruction seen at 4397m when attempting to wash down. Re attempted with no success.

Cement plug #2 (re-attempt of plug #1): Pumped 8m<sup>3</sup> of 2.10sg spacer and 6m<sup>3</sup> of 2.15sg cement slurry. Slurry was Batch mixed. Cut cement at 4310m with 500lpm. Max gas recorded when circulating BU was 4.7%.

Pumped and pulled OOH according to swab calculations. RIH with 6" dress-off BHA. Speed restricted by surge calculations. Tagged firm cement @ 4321m with 2 ton. Dressed off cement to 4366m and tagged with 10ton. CBU and max gas recorded to 0.4% and ESD to 2.109sg. Pumped and pulled OOH according to swab calculations. RIH with 3 1/2" stinger and tagged TOC @ 4367m.

Cement plug #3 (Secondary barrier to Intra Sola fm and primary and secondary barrier to stringers in Rødby fm): Pumped 8m<sup>3</sup> of 2.10sg spacer and 9.2 m<sup>3</sup> of 2.15 SG cement slurry. Slurry was Batch mixed. Cut cement at 4066m with 500lpm.

RIH with 8 1/2" dress-off BHA and tagged firm cement @ 4106m with 10 ton. Displaced well from 1.995sg to 1.955sg Bara ECD OBM MW50. POOH unrestricted.

Disconnected LMRP and changed choke coflex hose due observed leak. Re-connected LMRP and performed BOP test.

M/U 9 7/8" cutting BHA and RIH. Speed restricted due to tight clearance inside casing. Positioned cutters at 2670m. Increased flow in steps up to 1200lpm and observed pressure drop from 106 to 80 bar. Pressure gradually increasing back up to 98 bar causing inconclusive verification of cut. Recorded reference pressures and stalling test until good cut could be verified. POOH with cutting BHA and RIH with SRT. Took 15ton overpull to free seal assembly. Observed 120 ltrs gain on strip tank, no pressure build-up on kill/choke. Circulated BU through MGS to verify cut. Total losses of 5m<sup>3</sup> and max gas of 0.8%. RIH with spear, engaged same and pulled 9 5/8" casing to surface.

RIH with 14" EZSV plug. Speed restricted by plug limitation. EZSV set at 2657m, tagged with 10 ton and pressure tested to 150bar for 10min. Displaced well from 1.96sg BaraECD OBM (HAL) to 1.43sg Rheguard (SLB) OBM.

Cement plug #4: (Primary and secondary barrier to Tryggvasen Formation). Pumped 8m<sup>3</sup> of 1.50sg spacer. Mixed and pumped 15.6m<sup>3</sup> of 1.95sg cement slurry. Experienced some difficulties maintaining correct density during mixing. Pulled above cement with EZSV RT. Speed restricted due to wet pipe. Circulated to cut cement at 2457m and POOH.

RIH with 12 1/4" dress-off BHA. Float in NB Stab causing discrepancies between trip sheet and theoretical OE volume. Washed down and tagged TOC with 5 ton at 2467m. Dressed off to 2487m and tagged with 11 ton.

RIH with 14" EZSV. Speed restricted by plug limitations. Washed setting area, set plug and tagged with 9 ton at 1805m.

Cement plug #5 (Primary and secondary barrier to Lista Fm): Pumped 8m<sup>3</sup> of 1.50sg spacer with 2500lpm. Mixed and pumped 15.6m<sup>3</sup> of 1.96sg cement slurry. Started fly-mixing, however changed over to manual due to difficulties seen

with high density slurry, same as previous cement plug. Mixed 1.93sg manually. Pulled above cement with EZSV RT with restricted speed. Circulated to cut cement at 1605m and POOH.

RIH with 12 ¼" dress-off BHA to 1534m. Circulated to reduce MW from 1.43 to 1.40sg OBM MW50 while WOC. Washed down and tagged cement at 1609m with 5 ton. Dressed off to 1620 and tagged firm cement with 10 ton. POOH.

RIH with 14" cutter BHA and positioned cutters at 706m. Observed a pressure spike of 100 bar before pressure dropped to 40 bar. Immediately after cutting also experience vibration on the rig and loss of stack bore pressure and BOP alarms. Lost signal on blue pod. Decision made to continue with only yellow pod functional.

RIH with SRT and pulled seal free with 10 ton. No issues pulling seal free despite probable impact during cut, no pressure build up and no gas observed while circulating BU. Observed restriction while pulling SRT, need for additional waiting time for UAP to fully retract. Overpull seen when pulling casing hanger above BOP. POOH and racked back 14" casing.

RIH with 20" EZSV and riser bristle assembly. Tagged cut at 704.5m and set EZSV at 700.38m. Displaced well to seawater.

Cement plug #6: (Environmental plug): Mixed and pumped 17.8m3 of 1.95 sg cement slurry with 600lpm. Displaced with 7.7m3 of SW.

POOH with EZSV RT, jet wash BOP and. POOH while washing/brush riser. R/U and pulled BOP to surface while cutting wellhead (cumulative 8.5hrs time spent cutting) in AUX.

## 5.14 NO 34/9-1 S, Move from Location (19.Jun.2022 04:00)

**START:** 19.Jun.2022 04:00 mMD

**END** : 19.Jun.2022 08:30 0 mMD

### OBJECTIVE

Move off location

### SUMMARY

Anchor handling of 4 last anchors and moved out of 500m zone

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## 6 Appendices

## App A Operational listing

**WELLBORE ID:** NO 34/9-1 S

**INTERVAL:** 26" x 42"

**START TIME:** 09.Apr.2022 14:35

**END TIME:** 11.Apr.2022 19:20

Report date	Description
10.Apr.2022	Rig in transit to Cambozola location. Prepared to spud well. Tagged seafloor at 412 m. Spudded well and drilled 26"x42" section from 412 m to 446 m.
11.Apr.2022	Drilled 26"x42" hole to TD at 468.3 m. RIH with 36" conductor. Cement conductor in place. Held conductor in tension while waiting on cement.

**INTERVAL:** 26"

**START TIME:** 11.Apr.2022 19:20

**END TIME:** 18.Apr.2022 04:20

Report date	Description
12.Apr.2022	Held 36" conductor while waiting on cement. Drilled 26" section to 665 m.
13.Apr.2022	Drilled 26" hole to section TD at 1300m RKB and circulated hole clean. Meanwhile in AUX: Ran 20" casing to seabed.
14.Apr.2022	POOH with 26" BHA. Ran and cemented 20" surface casing.
15.Apr.2022	Released HPWHH running tool, POOS and L/D running tool. Performed in between wells BOP planned maintenance.
16.Apr.2022	Performed BOP in between wells maintenance scope. Performed conductor grouting job.
17.Apr.2022	Finalized BOP in between wells maintenance scope. Performed second grouting job outside conductor. Ran and landed BOP. Pressure tested wellhead connector and 20" surface casing. Installed diverter and rigged down BOP/riser handling equipment.

**INTERVAL:** 17 1/2"

**START TIME:** 18.Apr.2022 04:20

**END TIME:** 25.Apr.2022 08:15

Report date	Description
18.Apr.2022	R/D riser handling equipment. RIH with 17 1/2" BHA. Drilled shoetrack and displaced well to 1.40sg OBM. Performed FIT below 20" shoe. POOH to replace failed MWD tool.
19.Apr.2022	RIH with backup 17 1/2" BHA. Performed new FIT below 20" shoe. Drilled 17 1/2" hole from 1303m to 2204m.
20.Apr.2022	Drilled 17 1/2" hole from 2204m to 3378m.
21.Apr.2022	Drilled 17 1/2" hole to TD. Circulated hole clean, POOH and R/B BHA. Pulled and retrieved wearbushing. RIH with 14" casing stands.
22.Apr.2022	Ran 14" casing to TD. Circulated hole clean and started cement job.
23.Apr.2022	Cemented 14" casing. WOC with pressure on string due to floats not holding. Set and tested seal assembly. Installed wearbushing. Pressure tested BOP.

Report date	Description
24.Apr.2022	Pressure tested shear rams. Performed clean-out run to tag TOC inside 14" casing. Performed rig up test of simplified kick assembly. Performed cement bond logging of 14" casing on wireline.
25.Apr.2022	Performed cement bond logging on wireline. Pressure tested 14" casing. M/U and RIH with 12 1/4" x 13 1/2" BHA. Drilled shoetrack. Displaced well to 1.70sg OBM. Performed finger printing and well control drills.

**INTERVAL:** 12 1/4" x 13 1/2"

**START TIME:** 25.Apr.2022 08:15

**END TIME:** 04.May.2022 15:30

Report date	Description
26.Apr.2022	Drilled out shoetrack and 3m new formation. Performed XLOT below 14" shoe. Drilled 12 1/4" x 13 1/2" hole from 3463m to 3775m.
27.Apr.2022	Drilled and underreamed 12 1/4" x 13 1/2" hole to TD, circulated hole clean, flow checked well, pumped/pulled out of hole to 703m.
28.Apr.2022	POOH with 12 1/4" x 13 1/2" drilling BHA, R/U and RIH with 11 3/4" liner to 693m, high friction in the well experienced. POOH 11 3/4" liner to surface.
29.Apr.2022	RIH with slick 11 3/4" liner with restricted speed due to high friction experienced in the well.
30.Apr.2022	RIH with 11 3/4" liner to setting depth and tagged bottom. Circulated BU. M/U cement stand and cemented liner. Set expandable liner hanger and released RT. POOH with the RT to below BOP and performed flow check.
01.May.2022	POOH with liner RT, wait on cement, performed training to handle and rig up simplified kick assembly, RIH with wireline and logged 11 3/4" cement, POOH with wireline. Pressure tested 11 3/4" liner. RIH with 10 5/8" x 12 1/4" drilling BHA to 3927m.
02.May.2022	RIH 10 5/8" x 12 1/4" drilling BHA, displaced to 1.96 sg OBM while drilling plugs, performed fingerprinting, drilled out remaining shoetrack and 3 m fresh formation, failed FIT, pumped LCM pill for squeeze.
03.May.2022	Performed LCM squeeze, drilled 1 m new formation, re-attempted FIT - no go, POOH, RIH with cement stinger, performed injectivity test, circulated and conditioned well prior to cement squeeze operation.
04.May.2022	Performed cement squeeze, held pressure till 100 BC. POOH with the cement stinger, performed BOP test.

**INTERVAL:** 10 5/8" x 12 1/4"

**START TIME:** 04.May.2022 15:30

**END TIME:** 20.May.2022 16:55

Report date	Description
05.May.2022	RIH with 10 5/8" x 12 1/4" BHA, drilled cement and 3 m new formation, performed FIT, drilled 10 5/8" x 12 1/4" hole to 4043m.
06.May.2022	Drilled 10 5/8" x 12 1/4" hole from 4043 m to 4277m in HPHT mode
07.May.2022	Circulated BU to check for connection gas. Performed HPHT 10-30-10 test and circulated out gas from pump off events. Drilled to TD at 4322 m MD, activated lower reamer and reamed down to TD. Circulated hole clean and started to dilute mud to optimize rheology for casing running.
08.May.2022	Circulated and conditioned mud system, flowchecked at TD, performed HPHT short trip. Circulated bottoms up, and evaluated gas response, max gas 3.3%. Pumped and pulled out of hole to 4041m with 500 lpm.

Report date	Description
09.May.2022	Pumped/POOH with 10 5/8" x 12 1/4" drilling BHA to surface. retrieved 14" Wear Bushing, R/U and RIH with 9 7/8" casing to 876m.
10.May.2022	Ran 9 7/8" casing to above 11 3/4" liner, circulated BU, observed losses and reduced flow to loss free rate at 600 lpm, continued to run 9 7/8" casing 3890m. P/U and M/U casing hanger, ran 9 7/8" casing on 5 7/8" HWLS to 3969m.
11.May.2022	Ran 9 7/8" casing and landed casing hanger. Cemented 9 7/8" casing in place. Set seal assembly and pressure tested same.
12.May.2022	Installed 9 7/8" Wearbushing. Ran BOP test tool and performed BOP test part 1. Performed planned maintenance on Top Drive.
13.May.2022	Completed planned maintenance on Top Drive. Completed BOP test part 2. Rigged up and ran ICB/CBL log on 9 7/8" casing. Pressure tested 9 7/8" casing. Started to RIH with 8 1/2" BHA.
14.May.2022	RIH with 8 1/2" BHA. Started to drill plugs. Displaced well from 1.96 sg to 2.05 sg OBM.
15.May.2022	Continued to drill plug set. Circulated and conditioned mud. Performed fingerprinting. Drilled shoetrack.
16.May.2022	Finished fingerprinting procedures. Drilled shoetrack and 9 7/8" shoe. Experienced losses, when drilled out shoe. Circulated bottoms up with closed BOP. Flowchecked well on trip tank, closed in well. Monitored for pressure build up on choke.
17.May.2022	Flowchecked well. Pumped slug and POOH with 8 1/2" Drilling BHA. Rigged up and commenced VSP wireline logging.
18.May.2022	Performed VSP wireline logging. RIH with cement stinger and performed squeeze cement job around 9 7/8" casing shoe.
19.May.2022	Squeezed cement around 9 7/8" casing shoe. Waited on cement. RIH to theoretical top of cement.
20.May.2022	Performed cement squeeze and waited on cement. POOH with cement stinger. RIH with 8 1/2" drilling BHA. Washed down and started to displace well to 1.99 sg.

**INTERVAL:** 8 1/2" HPHT

**START TIME:** 20.May.2022 16:55

**END TIME:** 28.May.2022 10:30

Report date	Description
21.May.2022	Displaced well from 2.05 sg to 1.99 sg. Washed down and drilled 9 7/8" shoetrack and rathole. Performed LOT in rathole. Drilled 3m new formation and performed open hole LOT. Drilled 8 1/2" section to 4348 m.
22.May.2022	Drilled 8 1/2" hole to 4367 m. Circulated hole clean. Performed open hole LOT. Performed LCM squeeze.
23.May.2022	Circulated bottoms up. Flowchecked well. Pumped and pulled out of hole with 8 1/2" BHA. Made up and RIH with casing scraper assembly.
24.May.2022	Scraped 9 7/8" casing and circulated bottoms up. Flow checked well. Pumped out of hole with 9 7/8" casing scraper assembly. Made up and RIH with 7" liner.
25.May.2022	Ran and cemented 7" liner.
26.May.2022	POOH with liner RT. Performed BOP test. Pressure tested 7" liner.
27.May.2022	M/U and RIH with 6" BHA and performed fingerprinting and well control drills. Started drilling shoetrack.
28.May.2022	Drilled 7" liner shoetrack with 6" BHA and cleaned rat hole.

**INTERVAL:** 6" HPHT

**START TIME:** 28.May.2022 10:30

**END TIME:** 03.Jun.2022 18:30

Report date	Description
29.May.2022	Drilled 3m new formation and performed LOT below 7" shoe. Drilled 6" hole from 4370m to 4386m. Flowchecked well and started displacing well to 1.985sg MW50 (2.02sg ESD).
30.May.2022	Displaced well from 1.965sg to 1.985sg MW50. Drilled 6" hole from 4386m to 4403m, flowchecking and circulating B/U every 5m for monitoring trend in gas response.
31.May.2022	Drilled 6" hole from 4403m to 4427m in steps. Flowchecked and circulated up pumps off events after each step to monitor development in gas response to interpret overbalance against pore pressure. Started displacing well to 2.015sg ESD (1.995sg MW50).
01.Jun.2022	Displaced well to 2.015+sg ESD (1.995sg MW50). Drilled 6" hole in steps from 4427m to 4445m. flowchecked well and circulated gas out after each step to monitor development in gas response to interpret overbalance against pore pressure.
02.Jun.2022	Drilled 6" hole in steps to TD at 4455m. Flowchecked and circulated out gas peaks after each step to monitor development in gas response to interpret overbalance against pore pressure. Started performing 2hr extended flowcheck at TD prior to POOH.
03.Jun.2022	Performed extended flowchecks at TD and inside 7" liner. Ran back to bottom and circulated out gas. Started pumping out of hole with 6" drilling BHA.

**INTERVAL:** Permanent P&A (DP) w/ RIG

**START TIME:** 03.Jun.2022 18:30

**END TIME:** 19.Jun.2022 04:00

Report date	Description
04.Jun.2022	POOH and L/D 6" BHA. Performed OH wireline logging. Started RIH with cement stinger from surface for P&A.
05.Jun.2022	Circulated out gas prior to setting P&A plug #1. Set P&A plug #1 from TD and into 7" liner. Started pulling out of hole with cement stinger.
06.Jun.2022	POOH with cement stinger. RIH with 6" dress-off assembly. Tagged TOC at 4410m (55m deeper than theoretical TOC). Circulated hole clean and started pumping out of hole.
07.Jun.2022	POOH with 6" dress-off assembly. RIH with 3 1/2" cement stinger. Started circulating bottoms up prior to setting cement plug from open hole and into 7" liner.
08.Jun.2022	Circulated BU till low gas levels achieved, flow checked well. Washed down with cement stinger, unable to go any deeper than 4397m. Placed cement plug#2, pulled out to 4310m and circulated 1.2 BU. Flow checked well, pumped/POOH, function tested BOP and continued to POOH with 3 1/2" cement stinger to 309m.
09.Jun.2022	RIH with 6" dress off BHA, dress/tag firm cement, circulated BU, POOH.
10.Jun.2022	RIH with 3 1/2" cement stinger, circulated BU, placed cement plug, pulled out of cement, circulated clean, POOH with 3 1/2" cement stinger to 383m.
11.Jun.2022	RIH with 8 1/2" dress off BHA, dressed off/tagged firm cement, displaced well to 1.96 sg OBM, POOH, displaced kill/choke lines and riser to seawater.
12.Jun.2022	Laid out diverter, lifted off LMRP, changed choke line coflex hose and tested same, Closed and locked Split Tension Ring, prepared to land LMRP.

Report date	Description
13.Jun.2022	RIH with WBRTT and pressure tested BOP. Pulled WB and laid down WBRTT. RIH with 9 7/8" cutter BHA to 2670m, closed BOP. Established circulation to activate cutter.
14.Jun.2022	POOH with 9 7/8" cutter BHA, RIH and engaged SRT to seal assembly, closed UAP and circulated BU, flow checked, opened UAP, POOH with SRT and seal assembly. RIH with spear and pulled casing hanger to surface, POOH with 9 7/8" casing to surface. M/U and RIH with 14" EZSV to 515m.
15.Jun.2022	RIH and set 14" EZSV, displaced well to 1.43 sg Rhegaurd OBM, placed 200m cement plug, pulled out of cement and circulated BU, POOH. RIH with 12 1/4" dress off BHA, dressed off and tagged firm cement, POOH and RIH with 14" EZSV plug to 775m.
16.Jun.2022	RIH and set 14" EZSV, place 200m cement plug, pulled out of cement and circulate BU, POOH with EZSV RT. RIH with 12 1/4" dress off BHA, cut back MW from 1.44 sg MW50 to 1.40 sg MW50, dressed/tagged firm cement, POOH with dress off BHA, RIH with 14" cutter BHA. closed UAP and cut 14" casing. Flow checked well on strip tank prior to opening UAP.
17.Jun.2022	RIH with SRT/Spear BHA. pulled and laid out SA and casing hanger, POOH with 14" casings. RIH and set 20" EZSV plug, displaced well to seawater.
18.Jun.2022	Placed 100m cement plug above EZSV, pulled out of cement, activated jetting sub and washed BOP/riser, POOH with 20" EZSV plug RT. R/U for pulling riser/BOP, L/D diverter, disconnected BOP. opened STR and L/D slip joint. Meanwhile, RIH with WH cutter from aux to cut and pull wellhead. Meanwhile started anchor handling

**INTERVAL:** Move from Location

**START TIME:** 19.Jun.2022 04:00

**END TIME:** 19.Jun.2022 08:30

Report date	Description
19.Jun.2022	Pulled BOP on riser to 60m, WOW for pulling BOP through splash zone, performed DP trials.

From DBR



## App B Directional data. survey listing

### Norway

Q0034 EXPLORATION

34/09-1 Cambozola

34/9-1

NO 34/9-1

34/9-1 S

Design: 34/9-1 S

### Standard Survey Report

17 august, 2022

## Survey Report

<b>Company:</b>	Norway	<b>Local Co-ordinate Reference:</b>	Site 34/09-1 Cambozola
<b>Project:</b>	Q0034 EXPLORATION	<b>TVD Reference:</b>	Deepsea Stavanger RT @ 30.00m
<b>Site:</b>	34/09-1 Cambozola	<b>MD Reference:</b>	Deepsea Stavanger RT @ 30.00m
<b>Well:</b>	34/9-1	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	34/9-1 S	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	34/9-1 S	<b>Database:</b>	Production EDM P246N

<b>Project</b>	Q0034 EXPLORATION		
<b>Map System:</b>	Universal Transverse Mercator	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	European 1950 - Mean		
<b>Map Zone:</b>	Zone 31N (0 E to 6 E)		Using geodetic scale factor

<b>Site</b>	34/09-1 Cambozola, 34/9		
<b>Site Position:</b>		<b>Northing:</b>	6,794,080.30 m
<b>From:</b>	Map	<b>Easting:</b>	489,939.60 m
<b>Position Uncertainty:</b>	0.00 m	<b>Slot Radius:</b>	13.200 in
		<b>Latitude:</b>	61° 16' 45.6892 N
		<b>Longitude:</b>	2° 48' 44.4633 E

<b>Well</b>	34/9-1		
<b>Well Position</b>	+N/-S	0.00 m	<b>Northing:</b> 6,794,080.30 m
	+E/-W	0.00 m	<b>Easting:</b> 489,939.60 m
<b>Position Uncertainty</b>		0.00 m	<b>Wellhead Depth:</b> 382.00 m
<b>Grid Convergence:</b>		-0.16 °	<b>Water Depth:</b> 382.00 m

<b>Wellbore</b>	34/9-1 S		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>
	3NETICREFERENCE	05.04.2022	0.66
			<b>Dip Angle (°)</b> 73.37
			<b>Field Strength (nT)</b> 51,412

<b>Design</b>	34/9-1 S		
<b>Audit Notes:</b>			
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL
		<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (m)</b>	<b>+N/-S (m)</b>	<b>+E/-W (m)</b>
	0.00	0.00	0.00
			<b>Direction (°)</b> 13.59

<b>Survey Program</b>	Date 01.07.2022		
<b>From (m)</b>	<b>To (m)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>
412.00	450.66	42" x 26" SPUD BHA (34/9-1 S)	Inclination Only
487.72	1,266.11	26" MWD_Motor BHA (34/9-1 S)	Inclination Only Plan
1,327.06	3,443.57	17 1/2" MWD_RSS BHA (34/9-1 S)	Magn, IFR, non-mag, reduce Magnetic Tools (MWD, EMS) without gyro-verification
3,485.00	3,960.03	12 1/4" x 13 1/2" MWD_RSS BHA (34/9-1 S)	Magn, IFR, non-mag, reduce Magnetic Tools (MWD, EMS) without gyro-verification
4,004.60	4,294.45	10 5/8" x 12 1/4" MWD_RSS BHA (34/9-1 S)	Magn, IFR, non-mag, reduce Magnetic Tools (MWD, EMS) without gyro-verification
4,348.20	4,348.20	8 1/2" MWD_Rotary BHA (34/9-1 S)	Magn, IFR, non-mag, reduce Magnetic Tools (MWD, EMS) without gyro-verification

<b>Survey</b>									
<b>Measured Depth (m)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (m)</b>	<b>+N/-S (m)</b>	<b>+E/-W (m)</b>	<b>Vertical Section (m)</b>	<b>Dogleg Rate (°/30m)</b>	<b>Build Rate (°/30m)</b>	<b>Turn Rate (°/30m)</b>
0.00	0.00	0.00	0.00	-0.40	-0.30	-0.46	0.000	0.000	0.000
412.00	0.00	0.00	412.00	-0.40	-0.30	-0.46	0.000	0.000	0.000
418.76	0.23	23.13	418.76	-0.39	-0.29	-0.45	1.021	1.021	0.000
428.39	1.09	113.73	428.39	-0.41	-0.20	-0.44	3.478	2.679	282.243
438.19	0.51	43.08	438.19	-0.41	-0.11	-0.43	3.997	-2.231	-271.731

### Survey Report

<b>Company:</b>	Norway	<b>Local Co-ordinate Reference:</b>	Site 34/09-1 Cambozola
<b>Project:</b>	Q0034 EXPLORATION	<b>TVD Reference:</b>	Deepsea Stavanger RT @ 30.00m
<b>Site:</b>	34/09-1 Cambozola	<b>MD Reference:</b>	Deepsea Stavanger RT @ 30.00m
<b>Well:</b>	34/9-1	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	34/9-1 S	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	34/9-1 S	<b>Database:</b>	Production EDM P246N

Survey									
Measured Depth (m)	Inclination (°)	Azimuth (°)	Vertical Depth (m)	+N/-S (m)	+E/-W (m)	Vertical Section (m)	Dogleg Rate (°/30m)	Build Rate (°/30m)	Turn Rate (°/30m)
444.50	0.14	343.78	444.50	-0.37	-0.09	-0.38	1.642	-1.336	-214.079
450.66	0.53	65.63	450.66	-0.36	-0.07	-0.36	2.575	1.899	398.620
487.72	0.45	97.38	487.72	-0.30	0.24	-0.24	0.226	-0.065	25.702
580.72	0.49	94.99	580.71	-0.38	0.99	-0.14	0.014	0.013	-0.771
689.67	0.52	135.54	689.66	-0.71	1.66	-0.30	0.118	0.010	13.676
680.00	0.36	109.90	679.99	-0.75	1.72	-0.33	0.728	-0.465	-74.463
773.68	0.50	127.10	773.67	-1.10	2.32	-0.52	0.061	0.045	5.508
850.97	0.59	113.95	850.95	-1.46	2.95	-0.73	0.060	0.035	-5.104
930.46	1.02	117.93	930.44	-1.96	3.95	-0.98	0.164	0.162	1.502
1,029.55	1.22	122.37	1,029.51	-2.94	5.62	-1.53	0.066	0.061	1.344
1,126.78	0.91	117.98	1,126.72	-3.85	7.18	-2.06	0.099	-0.096	-1.355
1,266.11	1.01	108.00	1,266.03	-4.75	9.32	-2.43	0.042	0.022	-2.149
1,327.06	0.32	133.70	1,326.98	-5.04	9.96	-2.56	0.362	-0.340	12.650
1,365.45	0.14	313.55	1,365.37	-5.08	10.00	-2.59	0.359	-0.141	140.544
1,403.99	0.14	256.91	1,403.91	-5.06	9.92	-2.58	0.103	0.000	-44.089
1,442.81	0.22	179.22	1,442.73	-5.14	9.88	-2.68	0.181	0.062	-60.039
1,481.32	0.13	148.11	1,481.24	-5.25	9.90	-2.78	0.100	-0.070	-24.235
1,520.35	0.14	264.02	1,520.27	-5.29	9.88	-2.83	0.176	0.008	89.093
1,598.03	0.22	158.26	1,597.95	-5.44	9.84	-2.98	0.112	0.031	-40.844
1,636.29	0.15	102.98	1,636.21	-5.52	9.91	-3.04	0.143	-0.055	-43.346
1,674.64	0.09	163.64	1,674.56	-5.56	9.97	-3.06	0.103	-0.047	47.452
1,713.14	0.39	73.62	1,713.06	-5.56	10.11	-3.03	0.312	0.234	-70.145
1,751.43	0.15	178.94	1,751.35	-5.57	10.23	-3.01	0.355	-0.188	82.518
1,789.85	0.27	113.64	1,789.76	-5.66	10.31	-3.07	0.194	0.094	-50.989
1,828.23	0.13	355.09	1,828.14	-5.65	10.39	-3.05	0.275	-0.109	-92.665
1,867.38	0.18	358.60	1,867.29	-5.54	10.39	-2.95	0.039	0.038	2.690
1,904.88	0.21	14.95	1,904.79	-5.42	10.40	-2.82	0.050	0.024	13.080
1,943.38	0.15	147.02	1,943.29	-5.39	10.45	-2.78	0.257	-0.047	102.912
2,060.33	0.17	86.85	2,060.24	-5.51	10.71	-2.84	0.041	0.005	-15.435
2,098.81	0.14	107.21	2,098.72	-5.52	10.81	-2.83	0.049	-0.023	15.873
2,136.27	1.55	9.79	2,136.18	-5.03	10.94	-2.32	1.261	1.129	-78.019
2,173.64	3.44	7.04	2,173.51	-3.42	11.16	-0.71	1.520	1.517	-2.208
2,212.45	4.67	13.02	2,212.22	-0.73	11.66	2.03	1.004	0.951	4.623
2,289.41	7.34	12.50	2,288.76	7.12	13.43	10.08	1.041	1.041	-0.203
2,328.77	8.37	12.43	2,327.75	12.38	14.59	15.46	0.785	0.785	-0.053
2,366.36	9.52	10.75	2,364.88	18.10	15.76	21.30	0.941	0.918	-1.341
2,405.16	10.01	11.46	2,403.12	24.56	17.03	27.87	0.390	0.379	0.549
2,442.93	10.22	11.85	2,440.30	31.06	18.37	34.50	0.175	0.167	0.310
2,481.47	10.30	12.65	2,478.22	37.76	19.83	41.37	0.127	0.062	0.623
2,520.15	10.38	13.72	2,516.27	44.52	21.41	48.31	0.161	0.062	0.830
2,558.13	10.27	13.33	2,553.64	51.14	23.00	55.12	0.103	-0.087	-0.308
2,597.52	10.27	12.39	2,592.40	57.99	24.57	62.14	0.128	0.000	-0.716
2,635.88	10.18	10.19	2,630.15	64.66	25.90	68.94	0.313	-0.070	-1.721
2,674.24	10.51	10.44	2,667.89	71.44	27.13	75.82	0.260	0.258	0.196

### Survey Report

<b>Company:</b>	Norway	<b>Local Co-ordinate Reference:</b>	Site 34/09-1 Cambozola
<b>Project:</b>	Q0034 EXPLORATION	<b>TVD Reference:</b>	Deepsea Stavanger RT @ 30.00m
<b>Site:</b>	34/09-1 Cambozola	<b>MD Reference:</b>	Deepsea Stavanger RT @ 30.00m
<b>Well:</b>	34/9-1	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	34/9-1 S	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	34/9-1 S	<b>Database:</b>	Production EDM P246N

Survey										
Measured Depth (m)	Inclination (°)	Azimuth (°)	Vertical Depth (m)	+N/-S (m)	+E/-W (m)	Vertical Section (m)	Dogleg Rate (°/30m)	Build Rate (°/30m)	Turn Rate (°/30m)	
2,712.62	10.82	10.90	2,705.60	78.42	28.45	82.91	0.251	0.242	0.360	
2,750.23	10.75	8.69	2,742.55	85.36	29.65	89.93	0.335	-0.056	-1.763	
2,789.49	10.94	9.06	2,781.11	92.65	30.78	97.29	0.155	0.145	0.283	
2,828.13	10.95	9.06	2,819.04	99.90	31.94	104.61	0.008	0.008	0.000	
2,866.72	10.76	8.20	2,856.94	107.08	33.03	111.85	0.194	-0.148	-0.669	
2,905.78	10.62	8.23	2,895.33	114.25	34.07	119.06	0.108	-0.108	0.023	
2,943.64	10.82	7.25	2,932.52	121.23	35.01	126.07	0.214	0.158	-0.777	
2,982.37	10.92	7.70	2,970.56	128.47	35.96	133.33	0.102	0.077	0.349	
3,020.35	10.95	8.81	3,007.85	135.60	37.00	140.50	0.168	0.024	0.877	
3,059.01	10.68	10.92	3,045.82	142.75	38.24	147.74	0.372	-0.210	1.637	
3,097.31	10.78	11.43	3,083.45	149.75	39.62	154.86	0.108	0.078	0.399	
3,136.31	10.61	9.78	3,121.78	156.86	40.95	162.09	0.269	-0.131	-1.269	
3,174.74	10.86	10.99	3,159.53	163.90	42.25	169.24	0.263	0.195	0.945	
3,250.78	10.72	13.27	3,234.23	177.81	45.23	183.46	0.177	-0.055	0.900	
3,289.58	10.77	14.36	3,272.35	184.84	46.96	190.70	0.162	0.039	0.843	
3,328.23	10.83	12.93	3,310.32	191.88	48.67	197.94	0.213	0.047	-1.110	
3,365.97	10.64	11.38	3,347.39	198.75	50.15	204.97	0.275	-0.151	-1.232	
3,443.57	10.89	12.76	3,423.63	212.92	53.18	219.45	0.139	0.097	0.534	
3,485.00	11.00	14.89	3,464.31	220.56	55.06	227.32	0.303	0.080	1.542	
3,518.57	10.98	16.79	3,497.26	226.71	56.81	233.71	0.324	-0.018	1.698	
3,564.24	11.03	13.62	3,542.09	235.12	59.10	242.43	0.399	0.033	-2.082	
3,602.80	10.77	12.03	3,579.96	242.23	60.72	249.72	0.309	-0.202	-1.237	
3,641.07	10.63	10.51	3,617.56	249.20	62.10	256.81	0.247	-0.110	-1.192	
3,717.08	10.59	9.45	3,692.27	262.98	64.53	270.78	0.079	-0.016	-0.418	
3,756.21	10.46	9.90	3,730.74	270.03	65.73	277.91	0.118	-0.100	0.345	
3,794.86	10.57	11.19	3,768.74	276.96	67.02	284.96	0.202	0.085	1.001	
3,833.23	10.63	12.38	3,806.46	283.87	68.46	292.01	0.177	0.047	0.930	
3,871.98	10.76	13.36	3,844.54	290.88	70.07	299.20	0.173	0.101	0.759	
3,927.33	10.64	14.19	3,888.92	300.86	72.51	309.48	0.106	-0.065	0.450	
3,960.03	10.72	14.58	3,931.06	306.73	74.02	315.54	0.099	0.073	0.358	
4,004.60	10.97	15.91	3,974.83	314.82	76.22	323.92	0.238	0.168	0.895	
4,016.98	10.91	16.31	3,986.99	317.08	76.88	326.26	0.234	-0.145	0.969	
4,055.38	11.20	15.95	4,024.67	324.15	78.92	333.62	0.233	0.227	-0.281	
4,093.94	9.54	12.29	4,062.60	330.88	80.63	340.56	1.389	-1.291	-2.848	
4,132.11	8.05	14.45	4,100.32	336.55	81.97	346.39	1.199	-1.171	1.698	
4,169.95	6.85	14.35	4,137.84	341.31	83.19	351.30	0.951	-0.951	-0.079	
4,209.01	4.15	2.28	4,176.72	344.98	83.82	355.01	2.245	-2.074	-9.270	
4,232.97	2.64	352.29	4,200.64	346.39	83.79	356.38	2.024	-1.891	-12.508	
4,247.27	1.77	344.71	4,214.93	346.93	83.68	356.88	1.921	-1.825	-15.902	
4,285.97	0.28	58.86	4,253.62	347.55	83.61	357.47	1.329	-1.155	57.481	
4,294.45	0.23	102.76	4,262.10	347.56	83.64	357.48	0.694	-0.177	155.307	
4,348.20	0.63	75.89	4,315.85	347.61	84.03	357.62	0.244	0.223	-14.997	

Final well report,  
Pilot well NO 34/9-U-1  
and Exploration well NO 34/9-1 S Cambozola

Doc. No. 2022-013511

Valid from: Dec 2022

Rev. no.: 0

### Survey Report

<b>Company:</b>	Norway	<b>Local Co-ordinate Reference:</b>	Site 34/09-1 Cambozola
<b>Project:</b>	Q0034 EXPLORATION	<b>TVD Reference:</b>	Deepsea Stavanger RT @ 30.00m
<b>Site:</b>	34/09-1 Cambozola	<b>MD Reference:</b>	Deepsea Stavanger RT @ 30.00m
<b>Well:</b>	34/9-1	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	34/9-1 S	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	34/9-1 S	<b>Database:</b>	Production EDM P246N

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

## App C Contractors list

Service	Contract no	Contractor
Liner Hanger Equipment	Hall, LINHEQ	Halliburton
Subsea WH/X-mas tree	GEOG, SUBXM, BH	Baker Hughes GE Oil & Gas
Clean BHA	Hall CLN BHA	Halliburton
Directional survey	Gyrodatta, DIR SURV	Gyrodatta. Inc.
Casing	OWS, CAS	Odfjell Well Services
Fishing	BH, FISH	Baker Hughes
Drilling Fluids	Schlum, DRF	Schlumberger
Plug	Hall, PLUG	Halliburton
Directional Drilling	Schlum, DDR	Schlumberger
Mud Logging	Schlum, MLG	Schlumberger
MWD - Measurement While Drilling	Schlum, MWD	Schlumberger
Cementing	Schlum, CEM	Schlumberger
Electric Wireline Logging	Schlum, EWL	Schlumberger
Drilling Fluids	Hall, DRF	Halliburton
Rig Operations	ODS, RIG	Odfjell Drilling AS
Bit	Schlum, BIT	Schlumberger
Coring	Res Grp, CORE	Reservoir Group
Fluid transfer/analysis	Expro, Fluid transfer	Expro

## App D Wellsite sample description



CUTTINGS DESCRIPTION					Page 1 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, J. D. Jackson, A. G. Hesthagen		
Hole size:	17 1/2"				Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Rock name	Lithological Description		Remarks
			Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
1303	60	Clst	m-dk gry, olv gry, mod hd, amor-blky, slty, non calc, micromic		
	40	Sltst	m-dk gry, occ brnsh-olv gry, frm-mod hd, amor, occ fri, v f sdy, non calc, abd micromic		
			17 1/2" section		
1310	80	Clst	a.a.		
	20	Sltst	a.a.		
1320	80	Clst	a.a.		
	20	Sltst	a.a.		
1330	100	Sltty Clst	olv gry-olv blk, frm-mod hd, blk, non calc, v slty, grad Sltst, micromic, tr Glauc, Tr Carb Mat, Tr vf Qtz gn		
1340	100	Sltty Clst	a.a.		
1350	100	Sltty Clst	a.a.		
1370	100	Sltty Clst	a.a.		
1380	100	Sltty Clst	a.a.		
1390	100	Sltty Clst	a.a.		
1400	100	Sltty Clst	a.a.		
1410	100	Sltty Clst	a.a.		
1420	100	Clst	less slty, else a.a.		
1430	100	Clst	a.a.		
1440	100	Clst	a.a.		
1450	100	Clst	a.a.		
1460	100	Clst	a.a.		
1470	100	Clst	a.a.		
1480	100	Clst	a.a.		

CUTTINGS DESCRIPTION					Page 2 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, J. D. Jackson, A. G. Hesthagen		
Hole size:	17 1/2"				Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Lithological Description			Remarks
		Rock name	Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
1490	100	Clst	olv gry-olv blk, frm-mod hd, blk, non calc, v slty, grad Sltst, micromic, tr Glauc, Tr Carb Mat		
1500	100	Clst	a.a.		
1510	100	Clst	a.a.		
1520	100	Clst	a.a.		
1530	100	Clst	dk gry-olv gry-olv blk, frm-mod hd, blk, non calc, v slty, grad Sltst, micromic, tr Glauc, Tr Carb Mat		
1540	100	Clst	a.a.		
1550	100	Clst	a.a.		
	Tr	Sst	m gry-brnsh gry, frm, vf-f, r m, sbang-sbrnrd, mod srt, non calc, arg/Kaol Mtrx, Tr Glauc, Tr Carb Mat		
1560	90	Clst	a.a.		
	10	Sst	a.a.		
1570	70	Clst	a.a.		
	30	Sst	a.a.		
1580	90	Clst	a.a.		
	10	Sst	a.a.		
1590	80	Clst	a.a.		
	10	Sst	a.a.		
1600	90	Clst	a.a.		
	10	Sst	a.a.		
1610	70	Clst	a.a.		
	Tr	Sst	a.a.		
1620	100	Clst	a.a.		
	Tr	Sst	a.a.		
1630	100	Clst	a.a.		
	Tr	Sst	a.a.		



CUTTINGS DESCRIPTION					Page 3 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, J. D. Jackson, A. G. Hesthagen		
Hole size:	17 1/2"				Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Rock name	Lithological Description		Remarks
			Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
1640	100	Clst	gnsh blk-dk gry-olv gry-olv blk, frm-mod hd, blk, non calc, v slty, micromic, tr Glauc, Tr Carb Mat		
	Tr	Ls	dk yelsh brn, frm-mod hd, brit, vf sdy		
1650	100	Clst	a.a.		
	Tr	Ls	a.a.		
1660	100	Clst	dk gnsh gry, gnsh blk. also dk gry-olv gry-olv blk, frm-mod hd, blk, non calc, slty, micromic, tr Glauc, Tr Carb Mat		Top Green Clay
	Tr	Ls	a.a.		
1670	100	Clst	a.a.		
	Tr	Ls	a.a.		
1680	100	Clst	a.a.		
	Tr	Ls	a.a.		
1690	100	Clst	a.a.		
	Tr	Ls	a.a.		
1710	100	Clst	pred gnsh blk - also dk gnsh gry-olv gry, frm-mod hd, blk, non calc, slty, micromic, tr Glauc, Tr Carb Mat		
	Tr	Ls	a.a.		
1720	100	Clst	a.a.		
	Tr	Ls	a.a.		
1730	100	Clst	a.a.		
	Tr	Ls	a.a.		
1740	100	Clst	a.a.		
	Tr	Ls	a.a.		
1750	100	Clst	a.a.		
	Tr	Ls	a.a.		
1760	100	Clst	a.a.		
	Tr	Ls	a.a.		
1770	100	Clst	a.a.		
	Tr	Ls	a.a.		

CUTTINGS DESCRIPTION					Page 4 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, J. D. Jackson, A. G. Hesthagen		
Hole size:	17 1/2"				Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Lithological Description			Remarks
		Rock name	Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
1780	100	Clst	a.a.		
	Tr	Ls	a.a.		
1790	100	Clst	a.a.		
	Tr	Ls	a.a.		
1800	100	Clst	a.a.		
	Tr	Ls	a.a.		
1810	100	Clst	a.a.		
	Tr	Ls	a.a.		
1820	100	Clst	a.a.		
	Tr	Ls	a.a.		
1830	100	Clst	pred mod brn, i.p. dk gnsh gry-olv blk, frm-mod hd, blk, non calc, slty, micromic		
	Tr	Ls	a.a.		
1840	100	Clst	a.a.		
	Tr	Ls	a.a.		
1850	100	Clst	a.a.		
	Tr	Ls	a.a.		
1860	100	Clst	a.a.		
	Tr	Ls	a.a.		
1870	100	Clst	a.a.		
	Tr	Ls	a.a.		
1880	100	Clst	a.a.		
	Tr	Ls	a.a.		
1890	100	Clst	pred grysh blk-olv gry, i.p. olv blk, frm-mod hd, blk, non calc, slty, micromic		
	Tr	Ls	a.a.		
1900	80	Clst	a.a.		
	20	Tf	m gry-m dk gry, mott/spkld dk gry-blk, sft-frm, arg, i.p. vf Sd, slily calc		

CUTTINGS DESCRIPTION					Page 5 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, J. D. Jackson, A. G. Hesthagen		
Hole size:	17 1/2"				Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Rock name	Lithological Description		Remarks
			Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
1910	80	Clst	a.a.		
	20	Tf	a.a.		
1920	80	Clst	a.a.		
	20	Tf			
1930	100	Clst	dk gry-olv gry-olv blk, frm-mod hd, blk, non calc, slty, micromic, Tr Carb Mat		
		Tr	Tf	a.a.	
1940	80	Clst	a.a.		
	20	Tf			
1950	100	Clst	pred m dk gry-gnsh blk, i.p. olv gry-olv blk, frm-mod hd, blk, non calc, slty, micromic, Tr Carb Mat		
		Tr	Tf	a.a.	
1960	100	Clst	dk-olv gry, dk gnsh gry, mod hd, amor-blky, non-slily calc, slty, micromic, Tr Glauc i.p.		
		Tr	Tf	lt-m gry, mott/spkld dk gry-blk, sft-frm, amor, arg, i.p. v f sdy, slily calc	
1970	100	Clst	a.a.		
		Tr	Tf	a.a.	
1980	100	Clst	a.a.		
		Tr	Tf	a.a.	
		Tr	Ls	wh-lt gry, mod hd, amor-blky, microxln, arg i.p., lam, strkd blk i.p., occ mott brn	
1990	90	Clst	a.a.		
	10	Ls	a.a.		
2000	90	Clst	a.a.		
	10	Ls	a.a.		
2010	70	Clst	pred dk gnsh gry, dk-olv gry, mod hd, amor-blky, non-slily calc, slty, micromic, Tr Glauc i.p.		
	30	Ls	a.a.		
		Tr	Sst	m-brnsh gry, frm, occ wh-lt gry, r clr v f lse Qtz gr, rndd, Spher, mod-wl srt, wh-lt gry, fri calc cmt Mtrx, arg i.p., Tr Glauc, Tr Carb Mat	

CUTTINGS DESCRIPTION					Page 6 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, J. D. Jackson, A. G. Hesthagen		
Hole size:	17 1/2"				Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Lithological Description			Remarks
		Rock name	Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
2020	60	Clst	pred dk gnsh gry, dk-olv gry, mod hd, amor-blky, non-slily calc, slty, micromic, Tr Glauc i.p.		
	40	Ls	lt-brnsh gry, occ wh-lt gry, mod hd, amor-blky, microxln, arg i.p., lam, strkd blk i.p., occ mott brn		
	Tr	Sst	m-brnsh gry, frm, occ wh-lt gry, r clr v f lse Qtz gr, rndd, Spher, mod-wl srt, wh-lt gry, fri, calc cmt Mtrx, arg i.p., Tr Glauc, Tr Carb Mat		
2030	100	Clst	a.a.		
	Tr	Ls	a.a.		
2040	80	Clst	a.a.		
	20	Ls	a.a.		
	Tr	Sst	a.a.		
2050	90	Clst	a.a.		
	Tr	Ls	a.a.		
	10	Sst	a.a.		
2060	90	Clst	a.a.		
	10	Ls	a.a.		
	Tr	Sst	a.a.		
2070	100	Clst	a.a.		
	Tr	Ls	a.a.		
2080	80	Clst	lt-dk gnsh gry, mod brn, dk-olv gry, mod hd, amor-blky, slily calc, slty, micromic, Pyr, Glauc i.p.		
	10	Ls	wh-lt gry, brnsh gry i.p., mod hd, amor-blky, microxln, arg i.p., strkd blk i.p.		
	10	Sst	m-brnsh gry, frm, occ wh-lt gry, r clr v f lse Qtz gr, rndd, Spher, mod-wl srt, wh-lt gry, fri, calc cmt Mtrx, arg i.p., Tr Glauc, Tr Carb Mat		
2090	90	Clst	a.a.		
	10	Sst	a.a.		
2100	80	Clst	m-dk gry, dk-olv gry, occ mod brn, gnsh gry i.p., mod hd, amor-blky, slily calc, slty, micromic, Pyr i.p., Glauc i.p.		
	20	Ls	a.a.		
	Tr	Sst	a.a.		

CUTTINGS DESCRIPTION				Page 7 of 28
Country:	Norway	Area:	Northern North Sea	Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%	
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, J. D. Jackson, A. G. Hesthagen	
Hole size:	17 1/2"			Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Lithological Description		Remarks
		Rock name	Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Shows, cavings, mud additives, etc.
2110	90	Clst	m-dk gry, dk-olv gry, occ mod brn, gnsh gry i.p., mod hd, amor-blky, slily calc, slty, micromic, Pyr i.p., Glauc i.p.	
	10	Ls	wh-lt gry, brnsh gry i.p., mod hd, amor-blky, microxln, arg i.p., strkd blk i.p.	
2120	100	Clst	a.a.	
	Tr	Ls	a.a.	
2130	100	Clst	a.a.	
		Ls	a.a.	
2140	90	Clst	a.a.	
	10	Ls	a.a.	
			a.a.	
2150	80	Clst	a.a.	
	20	Ls	a.a.	
2160	70	Clst	a.a.	
	30	Ls	a.a.	
2170	90	Clst	m-dk gry, occ gnsh gry, mod hd, amor-blky, calc, slty, Pyr i.p., Glauc i.p.	
	10	Ls	wh-lt gry, pa yelsh or-brnsh gry i.p., mod hd, amor-blky, microxln, arg i.p., strkd blk i.p.	
2180	100	Clst	a.a.	
2190	90	Clst	a.a.	
	10	Ls	a.a.	
2200	90	Clst	m-dk gry, olv gry-olv blk, occ gnsh gry, mod hd, amor-blky, calc, slty, Pyr i.p., Glauc i.p.	
	10	Ls	a.a.	
2210	100	Clst	a.a.	
2220	90	Clst	a.a.	
	10	Ls	a.a.	
2230	100	Clst	a.a.	
	Tr	Ls	a.a.	
2240	100	Clst	a.a.	

CUTTINGS DESCRIPTION				Page 8 of 28
Country:	Norway	Area:	Northern North Sea	Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%	
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, J. D. Jackson, A. G. Hesthagen	
Hole size:	17 1/2"			Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Lithological Description		Remarks
		Rock name	Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Shows, cavings, mud additives, etc.
2250	100	Clst	m-dk gry, olv gry-olv blk, oec gnsh gry, mod hd, amor-blky, calc, slty, Pyr i.p., Glauc i.p.	
	Tr	Ls	lt-brnsh gry, mod hd, amor-blky, microxln, arg, strkd blk i.p.	
2260	100	Clst	a.a.	
2270	100	Clst	a.a.	
	Tr	Ls	a.a.	
2280	100	Clst	a.a.	
	Tr	Ls	a.a.	
2290	100	Clst	a.a.	
	Tr	Ls	a.a.	
2300	100	Clst	a.a.	
2310	100	Clst	a.a.	
	Tr	Ls	a.a.	
2320	100		a.a.	
2330	100		m-dk gry, mod brn, lt-gnsh gry, mod hd, amor-blky, calc, slty	
2340	100	Clst	a.a.	
	Tr	Ls	a.a.	
2350	100	Clst	a.a.	
	Tr	Ls	wh-lt gry, v pa gn, pa yelsh or, mod hd, brit, amor-blky, microxln	
2360	100		a.a.	
2370	100	Clst	m-dk gry, olv gry-olv blk, mod hd, amor-blky, calc, slty	
	Tr	Ls	lt-brnsh gry, mod hd, amor-blky, microxln, arg	
2380	100		a.a.	
2390	100	Clst	a.a.	
	Tr	Ls	a.a.	

CUTTINGS DESCRIPTION					Page 9 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, J. D. Jackson, A. G. Hesthagen		
Hole size:	17 1/2"				Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Lithological Description			Remarks
		Rock name	Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
2400	100	Clst	m dk gry, olv gry-olv blk, mod hd, amor-blky, calc, slty		
			lt-brnsh gry, mod hd, amor-blky, microxln, arg		
	Tr	Ls	a.a.		
2410	100	Clst	a.a.		
	Tr	Ls	a.a.		
2420	100	Clst	a.a.		
	Tr	Ls	a.a.		
2430	100	Clst	a.a.		
	Tr	Ls	a.a.		
2440	100	Clst	a.a.		
2450	100	Clst	a.a.		
	Tr	Ls	a.a.		
2460	100	Clst	a.a.		
	Tr	Ls	a.a.		
2470	90	Clst	a.a.		
	10	Ls	a.a.		
2480	100	Clst	a.a.		
	Tr	Ls	a.a.		
2490	100	Clst	a.a.		
2500	100	Clst	a.a.		
	Tr	Ls	a.a.		
2510	100	Clst	a.a.		
	Tr	Ls	a.a.		
2520	100	Clst	a.a.		
	Tr	Ls	a.a.		
xxx					
2530	100	Clst	a.a.		
2540	100	Clst	a.a.		
	Tr	Ls	a.a.		



CUTTINGS DESCRIPTION				Page 10 of 28
Country:	Norway	Area:	Northern North Sea	Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%	
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, J. D. Jackson, A. G. Hesthagen	
Hole size:	17 1/2"			Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Rock name	Lithological Description	Remarks
			Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Shows, cavings, mud additives, etc.
2550	100	Clst	m dk gry-olv gry-olv blk, mod hd, amor-blky, slily calc, i.p. slty, micromic	
	Tr	Ls	lt-brnsh gry, mod hd, amor-blky, crumb, microxln, arg	
2560	100	Clst	a.a.	
	Tr	Ls	a.a.	
2570	100	Clst	a.a.	
2580	100	Clst	a.a.	
	Tr	Ls	a.a.	
2590	100	Clst	a.a.	
	Tr	Ls	a.a.	
2600	100	Clst	a.a.	
	Tr	Ls	a.a.	
2610	100	Clst	a.a.	
	Tr	Ls	a.a.	
2620	100	Clst	a.a.	
	Tr	Ls	a.a.	
2630	100	Clst	a.a.	
	Tr	Ls	a.a.	
2640	100	Clst	a.a.	
2650	100	Clst	a.a.	
	Tr	Ls	a.a.	
2660	100	Clst	a.a.	
	Tr	Ls	a.a.	
2670	100	Clst	a.a.	
	Tr	Ls	a.a.	
2680	100	Clst	a.a.	
	Tr	Ls	a.a.	



CUTTINGS DESCRIPTION				Page 11 of 28
Country:	Norway	Area:	Northern North Sea	Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%	
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, J. D. Jackson, A. G. Hesthagen	
Hole size:	17 1/2"			Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Lithological Description		Remarks
		Rock name	Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Shows, cavings, mud additives, etc.
2690	100	Clst	a.a.	
	Tr	Ls	a.a.	
2700	100	Clst	a.a.	
2710	100	Clst	m dk gry-olv gry-olv blk, mod hd, amor-blky, slily calc, i.p., slty, micromic	
	Tr	Ls	lt-brnsh gry, mod hd, amor-blky, crumb, microxln, arg	
2720	100	Clst	a.a.	
	Tr	Ls	a.a.	
2730	100	Clst	a.a.	
	Tr	Ls	a.a.	
2740	100	Clst	a.a.	
	Tr	Ls	a.a.	
2750	100	Clst	a.a.	
	Tr	Ls	a.a.	
2760	100	Clst	a.a.	
	Tr	Ls	a.a.	
2770	100	Clst	a.a.	
2780	100	Clst	a.a.	
	Tr	Ls	a.a.	
2790	100	Clst	a.a.	
	Tr	Ls	a.a.	
2800	100	Clst	a.a.	
	Tr	Ls	a.a.	
2810	100	Clst	a.a.	
	Tr	Ls	a.a.	
2820	100	Clst	a.a.	
	Tr	Ls	a.a.	
2830	100	Clst	a.a.	

CUTTINGS DESCRIPTION				Page 12 of 28
Country:	Norway	Area:	Northern North Sea	Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%	
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, J. D. Jackson, A. G. Hesthagen	
Hole size:	17 1/2"			Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Lithological Description		Remarks
		Rock name	Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Shows, cavings, mud additives, etc.
	Tr	Ls	a.a.	
2840	100	Clst	m dk gry-dk gry, i.p. dk gnsh gry, mod hd, amor-blky, slily calc, i.p. slty, micromic	
	Tr	Ls	lt-brnsh gry, mod hd, amor-blky, crumb, microxln, arg	
2850	100	Clst	a.a.	
	Tr	Ls	a.a.	
2860	100	Clst	a.a.	
	Tr	Ls	a.a.	
2870	100	Clst	a.a.	
	Tr	Ls	a.a.	
2880	100	Clst	a.a.	
2890	100	Clst	a.a.	
	Tr	Ls	a.a.	
2900	100	Clst	a.a.	
	Tr	Ls	a.a.	
2910	100	Clst	a.a.	
	Tr	Ls	a.a.	
2920	100	Clst	a.a.	
	Tr	Ls	a.a.	
2930	100	Clst	a.a.	
	10	Ls	a.a.	
2940	100	Clst	a.a.	
	Tr	Ls	a.a.	
2950	100	Clst	a.a.	
	Tr	Ls	a.a.	
2960	100	Clst	a.a.	
	Tr	Ls	a.a.	
2970	100	Clst	a.a.	

CUTTINGS DESCRIPTION					Page 13 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, J. D. Jackson, A. G. Hesthagen		
Hole size:	17 1/2"				Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Rock name	Lithological Description		Remarks
			Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
2980	100	Clst	m dk gry-dk gry, i.p. dk gnsh gry, mod hd, amor-blky, slily calc, i.p. slty, micromic		
		Tr	lt-brnsh gry, mod hd, amor-blky, crumb, microxln, arg		
2990	100	Clst	a.a.		
		Tr	a.a.		
3000	100	Clst	a.a.		
		Tr	a.a.		
3010	100	Clst	a.a.		
		Tr	a.a.		
3020	100	Clst	a.a.		
		Tr	a.a.		
3030	100	Clst	m-dk gry, olv gry, occ gnsh gry, mod hd, amor-blky, slily calc, slty, micromic, Glauc i.p.		
		Tr	lt-brnsh gry, mod hd, amor-blky, microxln, arg, mott blk		
3040	100	Clst	a.a.		
		Tr	a.a.		
3050	100	Clst	a.a.		
		Tr	a.a.		
3060	100	Clst	a.a.		
3070	100	Clst	a.a.		
3080	100	Clst	a.a.		
		Tr	a.a.		
		Tr	clr, smky gry, v f, lsc Qtz gr, rndd, Spher, wl srt		
3090	100	Clst	a.a.		
		Tr	a.a.		
		Tr	a.a.		
3100	100	Clst	m-dk gry, olv gry, occ gnsh gry, lt blsh gry i.p., mod hd, amor-blky, slily calc, slty, micromic, Glauc i.p.		

CUTTINGS DESCRIPTION					Page 14 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, J. D. Jackson, A. G. Hesthagen		
Hole size:	17 1/2"				Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Rock name	Lithological Description		Remarks
			Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
3110	90	Clst	m-dk gry, olv gry, occ gnsh gry, lt blsh gry i.p., mod hd, amor-blky, slily calc, slty, micromic, Glauc i.p.		
	10	Ls	lt-brnsh gry, occ pa yelsh or, mod hd, amor-blky, microxln, arg, mott blk		
3120	100	Clst	a.a.		
		Tr	Ls		
3130	100	Clst	a.a.		
3140	100	Clst	a.a.		
3150	100	Clst	a.a.		
		Tr	Ls		
3160	100	Clst	a.a.		
		Tr	Ls		
3170	100	Clst	a.a.		
		Tr	Ls		
3180	100	Clst	a.a.		
		Tr	Ls		
3190	100	Clst	a.a.		
		Tr	Ls		
3200	100	Clst	a.a.		
		Tr	Ls		
3210	100	Clst	a.a.		
		Tr	Ls		
3220	100	Clst	a.a.		
3230	100	Clst	a.a.		
3340	100	Clst	a.a.		
3350	100	Clst	a.a.		
		Tr	Ls		

CUTTINGS DESCRIPTION					Page 15 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, J. D. Jackson, A. G. Hesthagen		
Hole size:	17 1/2"				Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Lithological Description			Remarks
		Rock name	Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
3260	90	Clst	m-dk gry, olv gry, occ gnsh gry, lt blsh gry i.p., mod hd, amor-blky, slily calc, slty, micromic, Glauc i.p.		
	10	Ls	lt-brnsh gry, occ pa yelsh or, mod hd, amor-blky, microxln, arg, mott blk		
3270	100	Clst	a.a.		
	Tr	Ls	a.a.		
3280	100	Clst	a.a.		
	Tr	Ls	lt-brnsh gry, occ pa yelsh or, wh-v pa gn, mod hd, amor-blky, microxln, arg i.p., mott blk		
3290	100	Clst	a.a.		
	Tr	Ls	a.a.		
3300	90	Clst	a.a.		
	10	Ls	a.a.		
3310	100	Clst			
3320	100	Clst	a.a.		
	Tr	Ls	a.a.		
	Tr	Sst	clr, smky gry, v f, lse Qtz gr, rndd, Spher, mod-wl srt		
3330	100	Clst	a.a.		
	Tr	Ls	a.a.		
	Tr	Sst	a.a.		
3340	100	Clst	a.a.		
	Tr	Ls	a.a.		
	Tr	Sst	a.a.		
3350	100	Clst	a.a.		
3360	100	Clst	a.a.		
	Tr	Ls	a.a.		
3370	100	Clst	a.a.		
3380	100	Clst	a.a.		

CUTTINGS DESCRIPTION				Page 16 of 28
Country:	Norway	Area:	Northern North Sea	Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%	
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, J. D. Jackson, A. G. Hesthagen	
Hole size:	17 1/2"			Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Lithological Description		Remarks
		Rock name	Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Shows, cavings, mud additives, etc.
3390	100	Clst	m-dk gry, olv gry-olv blk, mod hd, amor-blky, slily calc, slty, micromic	
3400	90	Clst	a.a.	
	10	Ls	lt-brnsh gry, occ pa yelsh or, wh-v pa gn, mod hd, amor-blky, microxln, arg i.p., mott blk	
3410	100	Clst	a.a.	
	Tr	Ls	a.a.	
	Tr	Sst	clr, smky gry, v f, lse Qtz gr, rndd, Spher, wl srt	
3420	100	Clst	a.a.	
3430	100	Clst	a.a.	
	Tr	Ls	a.a.	
3440	100	Clst	a.a.	
	Tr	Ls	a.a.	
3450	90	Clst	a.a.	
	10		a.a.	
3460	100	Clst	a.a.	
B/U	Tr	Ls	a.a.	
			TD	

CUTTINGS DESCRIPTION					Page 17 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. D. Jackson, A.G. Lauvås. E. Tvedt, M. Moslet		
Hole size:	12 ¼" x 13 ½"				Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Lithological Description			Remarks
		Rock name	Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
			12 ¼" x 13 ½" section		
3463	100	Clst	m-dk gry, olv gry-olv blk, mod hd, amor-blky, slily calc, slty, micromic		
	Tr	Ls	lt-brnsh gry, occ wh, mod hd, amor-blky, microxln, arg i.p., mott blk		
	Tr	Cmt			
3470	100	Clst	a.a.		
	Tr	Ls	a.a.		
	Tr	Sst	clr, trnspl-trnsl, smky gry, v f-f, lse Qtz gr, sbrndd, Spher, mod-wl srt, wh-lt gry, brnsh gry, fri, calc cmt Mtrx, arg i.p., occ Glauc, carb Mat i.p., n/s		
3480		Clst	a.a.		
		Ls	a.a.		
		Sst	a.a.		
3490	100	Clst	m-dk gry, olv gry-olv blk, mod hd, amor-blky, slily calc, slty, micromic		
	Tr	Ls	lt-brnsh gry, occ wh, mod hd, amor-blky, microxln, arg i.p., mott blk		
	Tr	Sst	clr, trnspl-trnsl, smky gry, v f-f, lse Qtz gr, sbrndd, Spher, mod-wl srt, wh-lt gry, brnsh gry, fri, calc cmt Mtrx, arg i.p., occ Glauc, carb Mat i.p.		
3500	80	Clst	a.a.		
	10	Ls	a.a.		
	10	Sst	a.a.		
3510	100	Clst	a.a.		
	Tr	Ls	a.a.		
	Tr	Sst	a.a.		
3520	100	Clst	dk gry, olv gry-olv blk, mod hd, amor-blky, slily calc, slty, micromic		
	Tr	Ls	a.a.		
3530	100	Clst	a.a.		
3540	100	Clst	a.a.		
3550	100	Clst	a.a.		



CUTTINGS DESCRIPTION					Page 18 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. D. Jackson, A.G. Lauvås, E. Tvedt, M. Moslet		
Hole size:	12 ¼" x 13 ½"				Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Rock name	Lithological Description Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Remarks Shows, cavings, mud additives, etc.
3560	90	Clst	dk gry, blk, a/a, also brnsh gry, hd, blk, calc-v calc, slily slty		
	10	Ls	lt brnsh gry a/a		
3570	100	Clst	a.a.		
	Tr	Ls	a.a.		
3580	100	Clst	a.a.		
	Tr	Ls	a.a.		
3590	40	Clst	a.a.		
	60	Ls	Lt gry – lt brnsh gry, blk, hd, microxln, slily sdy l.p., Glauc, slily arg		
3600	90	Clst	a.a.		
	10	Ls	a.a.		
3610	95	Clst	a.a.		
	5	Ls	a.a.		
3620	90	Clst	dk gry, blk, a/a, also brnsh gry, hd, blk, calc-v calc, slily slty		
	10	Ls	lt gry – lt brnsh gry, blk, hd, microxln, slily sdy i.p., Glauc, slily arg		
3630	70	Clst	a.a.		
	30	Ls	a.a.		
3640	70	Clst	a.a.		
	30	Ls	a.a.		
3650	100	Clst	a.a.		
	tr	Ls	a.a.		
	Tr	Sst	lt gry, lt m gry, frm, fri, blk, vf, wl srt, wk calc cmt Glauc, slily slty, n.v.p. n/s.		
3660	100	Clst	a.a.		
3670	90	Clst	a.a.		
	10	Ls	a.a.		
3680	90	Clst	a.a.		
	10	Ls	a.a.		
3690	100	Clst	dk gry to olv blk, mod hd, blk, slily calc-calc, slily slty, micropyr, micromic		



CUTTINGS DESCRIPTION					Page 19 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. D. Jackson, A.G. Lauvås, E. Tvedt, M. Moslet		
Hole size:	12 ¼" x 13 ½"				Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Rock name	Lithological Description		Remarks
			Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
	Tr	Ls	a.a.		
	Tr	Sst	a.a.		
3700	90	Clst	a.a.		
	10	Ls	a.a.		
	Tr	Sst	a.a.		
3710	90	Clst	a.a.		
	10	Ls	a.a.		
	Tr	Sst	a.a.		
3720	80	Clst	a.a.		
	10	Ls	a.a.		
	10	Sst	a.a.		
3730	90	Clst	a.a.		
	10	Ls	a.a.		
	Tr	Sst	a.a.		
3740	90	Clst	dk gry to olv blk, mod hd, blk, slily calc-calc, slily slty, micropyr, micromic		
	10	Ls	lt gry-lt brnsh gry, blk, hd, microxln, slily sdy i.p., Glauc, slily arg		
	Tr	Sst	lt gry, lt m gry, frm, fri, blk, vf, wl srt, wk calc cmt, Glauc, slily slty, n.v.p., n/s.		
3750	90	Clst	a.a.		
	10	Ls	a.a.		
	Tr	Sst	a.a.		
3760	70	Clst	a.a.		
	30	Ls	a.a.		
	Tr	Sst	a.a.		
3770	90	Clst	a.a.		
	10	Ls	a.a.		
	Tr	Sst	a.a.		
3780	90	Clst	a.a.		
	10	Ls	a.a.		
	Tr	Sst	a.a.		
3790	70	Clst	a.a.		
	20	Ls	a.a.		

CUTTINGS DESCRIPTION					Page 20 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. D. Jackson, A.G. Lauvås. E. Tvedt, M. Moslet		
Hole size:	12 ¼" x 13 ½"				Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Rock name	Lithological Description		Remarks
			Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
	10	Sst	a.a.		
3800	80	Clst	a.a.		
	10	Ls	a.a.		
	10	Sst	a.a.		
3810	100	Clst	a.a.		
	Tr	Ls	a.a.		
	Tr	Sst	a.a.		
3820	70	Clst	a.a.		
	20	Ls	a.a.		
	10	Sst	lt-m gry, frm, fri, amor-blky, v f-f, mod wl srt, calc cmt, Glauc, slty, slily arg, n.v.p., n/s.		
3830	90	Clst	a.a.		
	10	Ls	a.a.		
	Tr	Sst	a.a.		
3840	100		dk gry to olv blk, gnsh blk-blk, mod hd, amor-blky, calc, slty, micromic		
	10		lt-brnsh gry, blk, occ pa yelsh or, mod hd, microxln, lam i.p., occ arg, mott blk i.p.		
	Tr		clr, trnsp-trnsl, smky gry, lse Qtz gr, v f-f, sbrndd, Spher, mod-wl srt, wh-lt gry, brnsh gry, fri, calc cmt Mtrx, Glauc, occ slty, carb Mat i.p., n.v.p., n/s.		
3850	70	Clst	a.a.		
	30	Ls	a.a.		
	10	Sst	a.a.		
3860	100	Clst	a.a.		
	Tr	Ls	a.a.		
	Tr	Sst	a.a.		
3870	100	Clst	a.a.		
	Tr	Ls	a.a.		
	Tr	Sst	a.a.		
3880	70	Clst	a.a.		
	30	Ls	a.a.		
	Tr	Sst	a.a.		

CUTTINGS DESCRIPTION					Page 21 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. D. Jackson, A.G. Lauvås, E. Tvedt, M. Moslet		
Hole size:	12 1/4" x 13 1/2"				Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Rock name	Lithological Description		Remarks
			Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
3890	90	Clst	a.a.		
	10	Ls	a.a.		
3900	100	Clst	a.a.		
	Tr	Ls	a.a.		
	Tr	Sst	a.a.		
3910	100	Clst	a.a.		
	Tr	Ls	a.a.		
	Tr	Sst	a.a.		
3920	80	Clst	a.a.		
	20	Ls	a.a.		
	Tr	Sst	a.a.		
3930	100	Clst	a.a.		
	Tr	Ls	a.a.		
3940	100	Clst	dk gry to olv blk, gnsh blk-blk, mod hd, amor-blky, calc, slty, micromic		
	Tr	Sst	clr, trnspl-trnsl, smky gry, lse Qtz gr, v f-f, sbrndd, Spher, mod-wl srt, wh-lt gry, brnsh gry, fri, calc cmt Mtrx, Glauc, occ slty, carb Mat i.p., n.v.p., n/s.		
3950	100	Clst	a.a.		
	Tr	Ls	lt-brnsh gry, blk, occ pa yelsh or, mod hd, microxln, lam i.p., occ arg, mott blk i.p.		
	Tr	Sst	clr, trnspl-trnsl, smky gry, lse Qtz gr, v f-f, sbrndd, Spher, mod-wl srt, wh-lt gry, brnsh gry, fri, calc cmt Mtrx, Glauc, occ slty, carb Mat i.p., n.v.p., n/s.		
3960	90	Clst	a.a.		
	10	Ls	a.a.		
3970	90	Clst	a.a.		
	10	Ls	a.a.		
3980	100	Clst	a.a.		
	Tr	Ls	a.a.		
3990	90	Clst	a.a.		
B/U	10	Ls	a.a.		

CUTTINGS DESCRIPTION					Page 22 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. D Jackson, A.G. Lauvås. E. Tvedt, M. Moslet		
Hole size:	10 5/8" x 12 ¼"				Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Rock name	Lithological Description		Remarks
			Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
			10 5/8" x 12 ¼" section		
4000	100	Clst	olv blk-grysh blk, dk gry occ m dk gry, frm-mod hd, sbblky, calc		Cmt contaminated
	Tr	Ls	wh-lt gry, occ clr, sft-frm, microxln		
4010	100	Clst	olv blk-grysh blk, occ dk gry, mod hd, sbblky, v calc grad to Mrl		
	rTr	Ls	a.a.		
4020	100	Clst	Grad to Mrl, as above		
4030	100	Clst	a.a.		
4040	100	Clst	olv blk-grysh blk, else a.a.		
4050	100	Clst	a.a.		
4060	100	Clst	olv blk-grysh blk, mod hd, sbblky, v calc grad to Mrl		
4070	100	Clst	a.a.		
4080	100	Clst	a.a.		
4090	100	Clst	a.a.		
4100	100	Clst	pred grysh blk, mod hd, sbblky, v calc grad Mrl. also minor olv blk a.a.		CaCO3 mud additive contamination 30%
4110	100	Clst	a.a.		
4120	100	Clst	a.a.		
	Tr	Ls	lt brnsh gry, frm, sbblky, crmb, arg, grad Mrl		
4130	100	Clst	a.a.		
	Tr	Ls	a.a.		
4140			Sample a.a.		
4150			Sample a.a.		
4160			Sample a.a.		
4170			Sample a.a.		
4180	100	Clst	grysh blk-olv blk, dk gry, mod hd, sbblky, v calc grad to Mrl		
	Tr	Ls	a.a.		

CUTTINGS DESCRIPTION					Page 23 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. D Jackson, A.G. Lauvås. E. Tvedt, M. Moslet		
Hole size:	10 5/8" x 12 1/4"				Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Rock name	Lithological Description		Remarks
			Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
4190			Sample a.a.		
4200			Sample a.a.		
4210			Sample a.a.		
4220	100	Clst	olv blk-grysh blk, mod hd, sbblky, v calc grad to Mrl		
4230	100	Clst	olv blk-grysh blk, dk gry, mod hd, sbblky, v calc grad to Mrl		
		Tr	Ls a.a.		
4240	100	Clst	a.a.		
		Tr	Ls a.a.		
4250	100	Clst	olv blk-grysh blk, mod hd, sbblky, v calc grad to Mrl		
4260	100	Clst	a.a.		
		Tr	Ls lt brnsh gry, frm, sbblky, crmb, arg, grad Mrl		
4270	100	Clst	a.a.		
		Tr	Ls a.a.		
4280	100	Clst	Pred olv blk, else a.a.		
		Tr	Ls mod yelsh gry-olv gry, frm-mod hd, sbblky, tr crmb, tr-mod arg		
4290	100	Clst	a.a.		
		Gd tr	Ls a.a.		
4300	100	Clst	r tr slty, r tr micropyr, else a.a.		
		Tr	Ls a.a.		
4310	100	Clst	a.a.		
		Tr	Ls a.a.		
4320	100	Clst	a.a.		
		Tr	Ls Pred lt gnsh gry, else a.a.		
4322	100	Clst	a.a.		
		Tr	Ls lt gnsh gry-olv gry, else a.a.		

CUTTINGS DESCRIPTION				Page 24 of 28
Country:	Norway	Area:	Northern North Sea	Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%	
RKB:	30 meters	Geologist:	J. Alme, A.G. Lauvås, E. Tvedt, M. Moslet	
Hole size:	8 1/2"	Cut solvent:		Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Lithological Description		Remarks
		Rock name	Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Shows, cavings, mud additives, etc.

8 1/2" section				
4328	100	Clst	pred dk gry, occ dk gry - med dk gry, sft - mod hd, sbblky, slily calc	
4331	100	Clst	a.a.	
		Tr	Ls	lt olv gry, sft, blk, microxln
4334	100	Clst	a.a.	
		Tr	Ls	a.a.
4337	100	Clst	a.a.	
		Tr	Ls	a.a.
4340	100	Clst	r micropyr, else a.a.	
		Tr	Ls	a.a.
4343	90	Clst	dk gry, olv blk, sft - frm, sbblky - blk	
	10	Ls	lt olv gry, sft, blk, microxln	
4346	100	Clst	a.a.	
		Tr	Ls	a.a.
4349	100	Clst	a.a.	
		Tr	Ls	a.a.
4352	90	Clst	a.a.	
	10	Ls	a.a.	
4355	90	Clst	a.a.	
	10	Ls	a.a.	
4358	100	Clst	dk gry-grysh blk-olv blk, sft-frm, blk, slily calc, i.p., slily slty, micromic, Tr Carb Mat	
		Tr	Ls	a.a.
4361	100	Clst	a.a.	
		Tr	Ls	a.a.
4364	100	Clst	a.a.	
		Tr	Ls	a.a.
4367	100	Clst	a.a.	
		Tr	Ls	a.a.

CUTTINGS DESCRIPTION					Page 25 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, E. Tvedt, R. Ranjbar		
Hole size:	6"	Cut solvent:			Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Rock name	Lithological Description		Remarks
			Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
			6" section		
4370	20	Cmt			
	80	Clst	mod brn-dk gry-grysh blk-blk, frm-mod hd, blk, non calc, i.p., slily slty, micromic, Tr Carb Mat		
4373	100	Clst	dk gry-grysh blk, occ mod brn, mod hd, amor-blky, non calc, micromic, Tr Carb Mat		
4376	100	Clst	a.a.		
4379	100	Clst	a.a.		
	Tr	Ls	lt-brnsh gry, mod hd, blk, microxln, arg i.p., occ Glauc, lam, strkd blk i.p.		
4382	100	Clst	a.a.		
	Tr	Ls	a.a.		
4385	90	Clst	dk gry-grysh blk, occ mod brn, mod hd, amor-blky, non calc, micromic, Tr Carb Mat		
	10	Ls	a.a.		
4388	90	Clst	a.a.		
	10	Sltst	m dk gry-dk gnsh gry, blk, frm, non calc, lam, micromic, Tr Carb Mat		
	Tr	Ls	lt-brnsh gry, mod hd, blk, microxln, arg i.p., occ Glauc, lam, strkd blk i.p., Tr v f Qtz gr		
4391	70	Clst	a.a.		
	20	Sltst	a.a.		
	10	Ls	a.a.		
4394	70	Clst	a.a.		
	20	Sltst	a.a.		
			Possible loose vf Sd in bottom of tray? Or is it barite? No aggregates of cuttings with sand in it		
	10	Ls	a.a.		



CUTTINGS DESCRIPTION				Page 26 of 28
Country:	Norway	Area:	Northern North Sea	Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%	
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, E. Tvedt, R. Ranjbar	
Hole size:	6"	Cut solvent:		Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Rock name	Lithological Description Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Remarks Shows, cavings, mud additives, etc.
4397	70	Clst	dk gry-grysh blk, mod hd, amor-blky, non calc, micromic, Tr Carb Mat	A lot of Baracarb50 CaCO <sub>3</sub> in samples
	20	Sltst	m dk gry-dk gnsh gry, blk, frm, non calc, micromic, Tr Carb Mat, arg i.p.	
	10	Ls	wh-lt gry, brnsh gry, mod hd, blk, microxln, arg i.p., lam, strkd blk i.p.	
4400	60	Clst	a.a.	
	30	Sltst	a.a.	
	10	Ls	a.a.	
4403	70	Clst	dk gry-grysh blk, mod hd, amor-blky, non calc, micromic, adb Carb Mat	
	20	Sltst	m dk gry-dk gnsh gry, lt-brnsh gry i.p., blk, frm, occ lam, non calc, micromic, Tr Carb Mat, arg i.p., Tr Glauc i.p.	
	10	Ls	wh-lt gry, brnsh gry, mod hd, blk, microxln, arg i.p., lam, strkd blk i.p., Tr Glauc i.p.	
4406	70	Clst	a.a.	
	20	Sltst	a.a.	
	10	Ls	a.a.	
4409	60	Clst	dk gry-grysh blk, mod hd, amor-blky, non calc, micromic, Tr Carb Mat	
	30	Sltst	a.a.	
	10	Ls	a.a.	
4412	70	Clst	a.a.	
	30	Sltst	a.a.	
	Tr	Ls	a.a.	
4415	70	Clst	a.a.	
	30	Sltst	m dk gry-dk gnsh gry, lt-brnsh gry i.p., blk, frm, occ lam, non calc, occ sdy, r clr, smky gry, v f, rndd Qtz gr, micromic, Tr Carb Mat, arg i.p., Tr Glauc i.p.	
	Tr	Ls	a.a.	
4418	80	Clst	a.a.	
	20	Sltst	a.a.	
	Tr	Ls	a.a.	



CUTTINGS DESCRIPTION					Page 27 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, E. Tvedt, R. Ranjbar		
Hole size:	6"	Cut solvent:			
		Lithological Description			Remarks
Depth (m RKB)	Lith. (%)	Rock name	Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
4421	80	Clst	dk gry-grysh blk, mod hd, amor-blky, non calc, micromic, Tr Carb Mat		A lot of Baracarb50 CaCO <sub>3</sub> as well as micro-Barite in samples
	10	Sltst	m dk gry-dk gnsh gry, lt-brnsh gry i.p., blk, frm, occ lam, non calc, occ sdy, r clr, smky gry, v f, mdd Qtz gr, micromic, Tr Carb Mat, arg i.p., Tr Glauc i.p.		
	10	Sst	lt-brnsh gry, frm, amor, fri, slily calc cmt, r lse, clr, smky gry, v f, mdd Qtz gr, micromic, Carb Mat, arg i.p., n/s		
4424	80	Clst	a.a.		
	10	Sltst	a.a.		
	10	Sst	a.a.		
4427	80	Clst	a.a.		
	10	Sltst	a.a.		
	10	Sst	a.a.		
4430	70	Clst	a.a.		
	30	Sltst	a.a.		
	Tr	Sst	a.a.		No shows
4433	80	Clst	a.a.		
	20	Sltst	a.a.		
	Tr	Sst	a.a.		
	Tr	Ls	wh-lt gry, mod hd, occ crmb, blk, microxln, arg i.p., lam, strkd blk i.p.		
4436	70	Clst	a.a.		
	20	Sltst	m dk gry-dk gnsh gry, lt-brnsh gry i.p., blk, frm, occ lam, non calc, occ sdy, r clr, smky gry, v f, mdd Qtz gr, micromic, Tr Carb Mat, arg i.p., occ micropyr		
	10	Sst	a.a.		
	Tr	Ls	a.a.		
4439	70	Clst	a.a.		
	30	Sltst	a.a.		
	Tr	Sst	a.a.		
	Tr	Ls	a.a.		

CUTTINGS DESCRIPTION					Page 28 of 28
Country:	Norway	Area:	Northern North Sea		Field: Cambozola
Well no:	NO 34/9-1 S	Company:	Equinor Energy AS 35% (operator), Longboat Energy AS 25%, Spirit Energy Norway AS 20%, Petoro AS 20%		
RKB:	30 meters	Geologist:	J. Alme, M. Vanhatalo, E. Tvedt, R. Ranjbar		
Hole size:	6"	Cut solvent:			Date: 13.04-01.06.2022
Depth (m RKB)	Lith. (%)	Rock name	Lithological Description		Remarks
			Mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Shows, cavings, mud additives, etc.
4442	70		dk gry-grysh blk, mod hd, amor-blky, non calc, micromic, Tr Carb Mat		A lot of Baracarb50 CaCO3 as well as micro-Barite in samples
	30		m dk gry-dk gnsh gry, lt-brnsh gry i.p., blk, frm, occ lam, non calc, occ sdy, r clr, smky gry, v f, rndd Qtz gr, micromic, Tr Carb Mat, arg i.p., occ micropyr		
	Tr		lt-brnsh gry, frm, amor, fri, slily calc cmt, r lse, clr, smky gry, v f, rndd Qtz gr, micromic, Carb Mat, arg i.p., n/s		
	Tr		wh-lt gry, mod hd, occ crmb, blk, microxln, arg i.p., lam, strkd blk i.p.		
4444	60	Clst	a.a.		
B/U	20	Sltst	a.a.		
	10	Sst	a.a.		
	10	Ls	a.a.		
4445	60	Clst	dk gry-grysh blk, mod hd, amor-blky, non calc, micromic, slty, Tr Carb Mat		
	40	Sltst	m dk gry-dk gnsh gry, blk, frm, occ lam, non calc, occ sdy, r clr, smky gry, v f, Qtz gr, micromic, Tr Carb Mat, arg i.p., occ micropyr		
	Tr	Ls	a.a.		
4448	60	Clst	a.a.		
	40	Sltst	a.a.		
	Tr	Ls	a.a.		
4451	60	Clst	a.a.		
	40	Sltst	a.a.		
	Tr	Ls	a.a.		
4454	70	Clst	a.a.		
	30	Sltst	a.a.		
	Tr	Ls	a.a.		
4455	70	Clst	a.a.		TD B/U
	30	Sltst	a.a.		
	Tr	Ls	a.a.		

## App E Shallow geohazard report

### Shallow geohazard report (pilot hole and main well)

#### Well NO 34/9-U-1

##### 1. General data

Country - Area: Norway	Well number: NO 34/9-U-1
License number: PL1049	Structure: Pilot hole
Water depth (m MSL): 382 m	RKB: 30 m
30" depth: 466.7m MD	LOT/FIT: N/A

##### 2. Geology

Formation	Prognosed depth (m TVD RKB)	Observed depth (m TVD RKB)
Nordland	412	412
Utsira	1032	1019
Hordaland	1052	1058

Sand layer	Prognosed depth interval (m TVD RKB)	Observed depth interval	
		(m MD)	(m TVD RKB)
Unit 2 (Base Quaternary)	436	-	-
Unit 4	446	447	447
Unit 4	468	-	-
Base Unit 4	494	490	490
Unit 5	509	-	-
Unit 5	564	-	-
Unit 5	599	601 – 604	601 – 604
Unit 5	640	-	-
Unit 5	685	-	-
Unit 5	766	-	-
Unit 5	864	-	-
Unit 5	936	-	-
Unit 5	968	965	966
Unit 6 (Utsira)	1139	1018-1058	1018-1058

#### Boulders/gravel beds:

No indications of boulders in the pilot hole.

### 3. Shallow gas

Prognosed depth (m TVD RKB)	Observed depth (m TVD RKB)	Comments
640 - 648		No shallow gas observed

### 4. Shallow water flow

Shallow water flow was not expected and was not observed in the pilot.

### 5. Other shallow geohazard

**Faults:** No faults were prognosed, and none were observed

**Unconformities:** No unconformities were prognosed, and none were observed

**Loose or weak formation:** None was observed.

**Hydrates:** No gas hydrates were expected at well location, and no sign of such were observed while drilling the section

### 6. Summary

Much less sand was observed, than was prognosed. Only a few thin sands were encountered above Utsira Formation. the most prominent sand bed was found at 601-604m TVD RKB. No sign of shallow gas or water flow was observed from this sand.

## Well NO 34/9-1 S

### 1. General data

Country - Area: Norway	Well number: NO 34/9-1 S
Licence number: PL1049	Structure: Deepsea Stavanger
Water depth (m MSL): 482	RKB: 30m
30" depth: 466.7m	LOT/FIT: N/A
20" depth: 1286.8m MD	LOT/FIT: 1.55sg

### 2. Geology

Formation	Prognosed depth (m TVD RKB)	Observed depth (m TVD RKB)
Naust	412	412
Utsira	1032	1018
Hordaland	1052	1052

Sand layer	Prognosed depth interval (m TVD RKB)	Observed depth interval	
		(m MD)	(m TVD RKB)
Unit 2 (Base Quaternary)	436	-	-
Unit 4	446	-	-
Unit 4	468	-	-
Base Unit 4	494	-	-
Unit 5	509	-	-
Unit 5	564	-	-
Unit 5	599	601 – 604	601 – 604
Unit 5	640	-	-
Unit 5	685	-	-
Unit 5	766	-	-
Unit 5	864	-	-
Unit 5	936	-	-
Unit 5	968	-	-
Unit 6 (Utsira)	1139	1018	1018

Due to the poor data quality in the 26x42" and 26" section it is suggested that the Shallow geohazards report for the pilot is used for any assessment of sand layers.

### Boulders/gravel beds:

According to Shallow Hazards report boulders could be expected from seabed down to 436+-4mTVD RKB. Boulders and tough drilling were reported from 43m to 467m. very low ROP. 1-3m/hr

### 3. Shallow gas

Prognosed depth (m TVD RKB)	Observed depth (m TVD RKB)	Comments
640m		No sand observed at this depth

Other comments:

Shallow gas was not observed.

### 4. Shallow water flow

No water flow was expected at well location, and none were observed either while drilling the section.

Other comments:

Gamma Ray and Resistivity were run in the BHA, and ROV was available with Sonar to detect shallow gas flow from the well.

### 5. Other shallow geohazards

**Faults:** No faults were prognosed, and none were observed

**Unconformities:** No unconformities were prognosed, and none were observed

**Loose or weak formation:** None was observed.

**Hydrates:** No gas hydrates were expected at well location, and no sign of such were observed while drilling the section

### 6. Summary

Much less sand was observed, than was prognosed. Only one thin sand was encountered above Utsira Fm, at 601-604m. No sign of shallow gas or water flow was observed from this sand.

## App F Final well locations memos



### NAVIGATION REPORT

SANDSLI  
EPN JOS LE OPCLE OR  
MAGVAL  
11.04.2022

TO: Ottar Hunnes  
Jesus Hernandez EPN SUB CCN GGP WS3  
PDP DW DWCC EN DW9

COPY: GM GEOHAZARD  
Bernt Magne Christiansen GEOHAZARD@equinor.com  
Tore Klungsøyr EPI SUB CCI GGP GPH2  
Ingrid Enge Drange EPN SUB CCN GGP WS3  
EPN SUB CCN GGP GEO1

FROM: Magnus Valen  
CONTROLLED BY.: Trond Olav Groven

SUBJECT: FINAL POSITION

Location: 34/9-U-1 Cambozola North Pilot

RIG: Deepsea Stavanger

#### SURFACE POSITION:

<u>Geographical Co-ordinates:</u>	Latitude: 61° 16' 45.374" N	Spheroid: Int. 1924
	Longitude: 02° 48' 44.331" E	Datum: ED50
<u>UTM Co-ordinates:</u>	Northing: 6 794 070.5 m	UTM Zone: 31 N
	Easting: 489 937.6 m	C.M.: 03° E

Datum Shift Parameters WGS84 to ED50: EPSG 1613, South of 62°

#### Deviation:

The position was observed to be 0.3 meter on a bearing of 277.8° G from the intended location.

#### Position Accuracy:

± 3.56 meter at the 2σ confidence level (95%, 2 x Standard Deviation)



## NAVIGATION REPORT

SANDSLI  
EPN JOS LE OPCLE OR  
MAGVAL  
11.04.2022

TO: Ingrid Enge Drange  
Alfred Båtevik  
EPN SUB CCN GGP GEO1  
EPN SUB CCN GGP GEO2

COPY: GM GEOHAZARD  
Bernt Magne Christiansen  
Ottar Hunnes  
Tore Klungsøyr  
GEOHAZARD@equinor.com  
EPI SUB CCI GGP GPH2  
EPN SUB CCN GGP WS3  
EPN SUB CCN GGP WS3

FROM: Magnus Valen  
*Magnus Valen*  
CONTROLLED BY.: Trond Olav Groven  
*Trond Olav Groven*

SUBJECT: FINAL POSITION

Location: 34/9-1 S Cambozola North

RIG: Deepsea Stavanger

### SURFACE POSITION:

Geographical Co-ordinates: Latitude: 61° 16' 45.676" N  
Longitude: 02° 48' 44.443" E  
Spheroid: Int. 1924  
Datum: ED50

UTM Co-ordinates: Northing: 6 794 079.9 m  
Easting: 489 939.3 m  
UTM Zone: 31 N  
C.M.: 03° E

Datum Shift Parameters WGS84 to ED50: EPSG 1613, South of 62°

### Deviation:

The position was observed to be 0.5 meter on a bearing of 217.1° G from the intended location.

### Position Accuracy:

± 3.21 meter at the 2σ confidence level (95%, 2 x Standard Deviation)



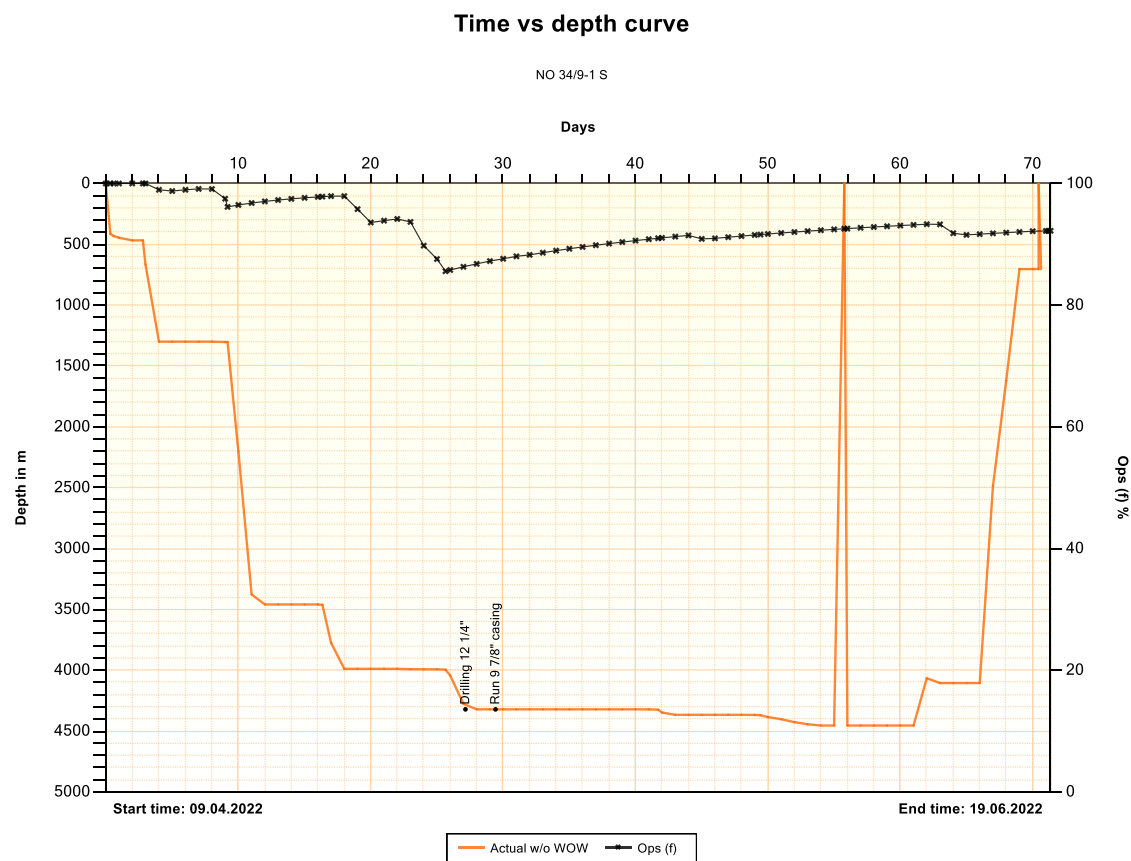
## App G Wellbore Schematic

Well: Cambozola Field: Exploration Rig: Deepsea Stavanger										WELL SCHEMATIC Mainbore				All depths refer to RKB. RKB-MSL = 30 m Date: 03.03.2022		
HOLE		CASING/LINER			LOT / FIT	TOC/TOL		CSG. SHOE		RKB			Max PP	Min FG	Fluid	
SIZE	TVD MD	SIZE	TYPE / RAD. MARKERS	CENTRALIZERS	[SG]	TVD	MD	TVD	MD				[SG]	[SG]	[SG]	
SB	412															
42" 57	469 469	36"	Interval: 412 m - 467 m Type: 553lb/ft, X-56, Tenaris LR 70 Drift: 31.22"		N/A	Seabed	Seabed	467	467			0,95	0,95	SW+PA 1,30		
26" 831	1300 1300	20"	Interval: 469 m - 1287 m Type: 133lb/ft, N80, Tenaris ER Drift: 18.542"	2/3 to SB 1/1 200m (tail) 2/1 shoetrack	FIT	Seabed	Seabed	1287	1287			1,00	1,03	SW+PA 1,30		
17 1/2" 2160	3440 3460	14"	Interval: 1300 m - 3450 m Type: 114lb/ft, SM125S, VamTop KB Drift: 12.25"	2/3 to TOC 1/1 200m 2/1 shoetrack		1539	1539									
						3350	3369					1,35	1,54	OBM 1,40		
					XLOT			3430	3450							
12 1/4"x13 1/2" 529	3959 3989	11 3/4"	Interval: 3460 m - 3989 m Type: 60lb/ft, P-110, Hydril 513 Drift: 10.625"	1/1 to TOC 2/1 shoetrack		3666	3691					1,67	1,94	OBM 1,70		
					FIT			3947	3977							
10 5/8"x12 1/4" 333	4290 4322	9 7/8"	Interval: 3989 m - 4322 m Type: 66.4lb/ft, SM125S, VamTop / SLU-II Drift: 8.5"	2/1 to TOC 2/1 shoetrack		4058	4089									
						4214	4246					1,93	2,06	OBM 1,96		
					LOT			4273	4305							
8 1/2" 45	4336 4367	7"	Interval: 4322 m - 4367 m Type: 32lb/ft, P-110, Vam HTTC Drift: 6.0"	2/1 to TOC 2/1 shoetrack				4335	4366			1,88	2,17	OBM 1,99		
6" 88	4423 4455	OH	Interval: 4367 m - 4455 m					4423	4455			1,99	2,18	OBM 1.99-2.20		

## App H P&A Wellbore Schematic

Well: Cambozola Field: Exploration Rig: Deepsea Stavanger				WELL SCHEMATIC Mainbore P&A				All depths refer to RKB. RKB-MSL = 30 m Date: 02.06.2022			
HOLE		CASING/LINER		TOC/TOL		CSG. SHOE		RKB	Cutting and Plugging		Verification
SIZE	TVD MD	SIZE	TYPE / RAD. MARKERS	TVD	MD	TVD	MD		m MD	Description (length)	
SB	412										
42" 57	469 469	36"	Interval: 412 m - 467 m Type: 553b/ft, X-56, Tenaris LR 70 Drift: 31.22"	Seabed	Seabed		467 467		415	Wellhead cut	
26" 831	1300 1300	20"	Interval: 469 m - 1287 m Type: 133b/ft, N80, Tenaris ER Drift: 18.542"	Seabed	Seabed		1287 1287	Plug #9	690,00	Open hole to surface plug	No verification
17 1/2" 2160	3440 3460	14"	Interval: 1300 m - 3450 m Type: 114b/ft, SM125S, VamTop KB Drift: 12.25"	1539	1539			Lista fm	1770 1800	Secondary towards Lista fm. Primary towards Lista fm.	Combined dress and tag
								Plug #8 Plug #7	2620 2650	Secondary towards Tryggevasson fm. Primary towards Tryggevasson fm.	Combined dress and tag
				3350	3369						
						3430	3450				
12 1/4"x13 1/2" 529	3959 3989	11 3/4"	Interval: 3460 m - 3989 m Type: 60b/ft, P-110, Hydril 513 Drift: 10.625"	3666	3691			Tryggevasson fm			
						3947	3977				
10 5/8"x12 1/4" 333	4290 4322	9 7/8"	Interval: 3989 m - 4322 m Type: 66.4b/ft, SM125S, VamTop / SL Drift: 8.5"	4058	4089						
				4214	4246	4273	4305	Redby fm	4216 4246	Secondary towards Redby fm Primary towards Redby fm	Combined dress and tag
8 1/2" 45	4336 4367	7"	Interval: 4322 m - 4367 m Type: 32b/ft, P-110, Vam HTTC Drift: 6.0"			4335	4366	Plug #4 Plug #3 Plug #2 Plug #1		Secondary towards Reservoir	
6" 88	4423 4455	OH	Interval: 4367 m - 4455 m					Intra Sola fm / Siltstone	4405	Primary towards Reservoir	Dress and tag
						4423	4455				

## App I Time vs. depth curve



## App J Time planner

**PROJECT NAME:** EXPL - NO 34/9-1 S, U-1 – Drilling, P&A - Cambozola

**PROJECT NUMBER:**

Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
09.Apr.2022 00:00	09.Apr.2022 08:20	31.6	1.3	0.0	0.0	8.0	8.4	0.4	0.0	Move to Location [NO 34/9-1 S]	
09.Apr.2022 00:00	09.Apr.2022 05:45	6.0	0.3	0.0	0.0	5.0	5.8	0.2	0.0	Transit to Cambozola from Kveikje n'Roll location	ODS
09.Apr.2022 05:45	09.Apr.2022 08:20	25.6	1.3	0.0	0.0	3.0	2.6	0.3	0.0	Field arrival, DP setup and logistics (Install transponders)	ODS,Schlum
09.Apr.2022 08:20	09.Apr.2022 14:35	5.5	0.2	0.0	0.0	0.3	6.2	0.3	0.0	Pre-Spud [NO 34/9-1 S]	
09.Apr.2022 08:20	09.Apr.2022 13:40	0.0	1.3	0.0	0.0	0.0	5.3	0.6	0.0	Unplanned: Run 36" conductor to seabed in Main and hang off	ODS,Schlum
09.Apr.2022 13:40	09.Apr.2022 14:35	2.5	1.4	0.0	0.0	0.3	0.9	0.6	0.0	Tag seabed and verify rig position with 26" x 42" BHA	ODS,Schlum
09.Apr.2022 14:35	11.Apr.2022 19:20	46.6	1.9	0.0	0.0	24.6	52.8	2.2	0.0	26" x 42" [NO 34/9-1 S]	
09.Apr.2022 14:35	09.Apr.2022 14:35	3.0	1.5	0.0	0.0	0.0	0.0	0.6	0.0	Sim ops: Anchor handling	ODS
09.Apr.2022 14:35	10.Apr.2022 11:20	20.0	2.4	0.0	0.0	8.0	20.8	1.5	0.0	Drill 26" x 42" section to TD @ 473 mMD (Gross ROP 11 m/hr)	ODS,Schlum
10.Apr.2022 11:20	10.Apr.2022 12:20	5.6	2.6	0.0	0.0	1.3	1.0	1.5	0.0	Circulate hole clean. Displace to displacement mud	ODS,Schlum

Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
10.Apr.2022 12:20	10.Apr.2022 16:30	2.0	2.7	0.0	0.0	2.0	4.2	1.7	0.0	POOH and LD BHA	ODS,Schlum
10.Apr.2022 16:30	10.Apr.2022 17:00	1.0	2.7	0.0	0.0	1.0	0.5	1.7	0.0	Pick up conductor from moonpool	ODS
10.Apr.2022 16:30	10.Apr.2022 16:30	1.0	2.8	0.0	0.0	0.5	0.0	1.7	0.0	Clean and clear + dropcheck.	ODS,Schlum
10.Apr.2022 17:00	10.Apr.2022 20:00	2.0	2.9	0.0	0.0	0.3	3.0	1.8	0.0	Run conductor on RT. Stab 36" conductor into hole and RIH to TD	BH,ODS,Schlum
10.Apr.2022 20:00	10.Apr.2022 20:50	2.0	2.9	0.0	0.0	0.5	0.8	1.9	0.0	Circulate prior to cement job	BH,ODS,Schlum
10.Apr.2022 20:50	10.Apr.2022 22:50	4.0	3.1	0.0	0.0	1.5	2.0	2.0	0.0	Cement 36" conductor	BH,ODS,Schlum
10.Apr.2022 22:50	11.Apr.2022 10:50	0.0	3.1	0.0	0.0	0.0	12.0	2.5	0.0	WOC prior to disconnect conductor RT	BH,ODS,Schlum
11.Apr.2022 10:50	11.Apr.2022 13:10	1.0	3.2	0.0	0.0	2.0	2.3	2.5	0.0	Release conductor RT and pull above conductor housing. Clean string. POOS and L/D RT.	BH,ODS,Schlum
11.Apr.2022 13:10	11.Apr.2022 13:10	4.0	3.3	0.0	0.0	0.0	0.0	2.8	0.0	P/U and rack 26" BHA	ODS,Schlum
11.Apr.2022 13:10	11.Apr.2022 13:10	0.0	3.3		0.0	2.0	0.0	2.8	0.0	Waiting for access to MAIN well center.	ODS
11.Apr.2022 13:10	11.Apr.2022 18:35	2.0	3.4	0.0	0.0	3.0	5.4	2.8	0.0	RIS with 26" BHA	ODS
11.Apr.2022 13:10	11.Apr.2022 13:10	2.0	3.5	0.0	0.0	0.5	0.0	2.8	0.0	Move MAIN well center over well	ODS,Schlum

Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
11.Apr.2022 18:35	11.Apr.2022 18:35	0.0	3.5	0.0	0.0	0.0	0.0	2.8	0.0	WOC prior to drilling out conductor shoe.	ODS,Schlum
11.Apr.2022 18:35	11.Apr.2022 19:20	0.0	3.5	0.0	0.0	2.0	0.8	2.8	0.0	Drill out 36" conductor shoe and clean out rathole	ODS,Schlum
11.Apr.2022 19:20	18.Apr.2022 04:20	223.0	9.3	0.0	0.0	137.4	153.2	6.4	8.6	26" [NO 34/9-1 S]	
11.Apr.2022 19:20	12.Apr.2022 17:40	39.3	5.1	0.0	0.0	15.0	22.3	3.7	1.0	Drill 26" hole to TD at +/- 1300 m (Gross ROP 70 m/hr)	ODS,Schlum
12.Apr.2022 17:40	12.Apr.2022 20:25	3.0	5.3	0.0	0.0	3.5	2.8	3.9	0.0	Circulate hole clean and flowcheck	ODS,Schlum
12.Apr.2022 20:25	12.Apr.2022 23:00	3.0	5.4	0.0	0.0	1.5	2.6	4.0	0.0	Displace to 1.30 sg displacement mud	ODS,Schlum
12.Apr.2022 23:00	13.Apr.2022 03:30	5.0	5.6	0.0	0.0	4.0	4.5	4.1	0.0	POOH to seabed with 26" BHA	ODS,Schlum
13.Apr.2022 03:30	13.Apr.2022 04:30	1.0	5.6	0.0	0.0	1.0	1.0	4.2	0.0	Move rig to have AUX above hole (Clean and clear + dropscheck)	OWS,ODS,Schlum
13.Apr.2022 04:30	13.Apr.2022 10:40	10.0	6.0	0.0	0.0	6.0	6.2	4.4	0.0	Stab 20" casing into conductor housing and continue to run casing	OWS,ODS,Schlum
13.Apr.2022 10:40	13.Apr.2022 12:00	3.0	6.2	0.0	0.0	1.8	1.3	4.5	0.0	Change handling equipment, P/U and M/U wellhead	OWS,BH,ODS,Schlum
13.Apr.2022 12:00	13.Apr.2022 14:30	4.0	6.3	0.0	0.0	1.0	2.5	4.6	0.0	RIH on landing string with 20" casing to TD	BH,ODS,Schlum
13.Apr.2022 14:30	13.Apr.2022 16:30	3.0	6.5	0.0	0.0	1.3	2.0	4.7	0.0	Install cement head and land 18 3/4" wellhead in conductor housing.	BH,ODS,Schlum
13.Apr.2022 16:30	13.Apr.2022 17:50	1.0	6.5	0.0	0.0	1.0	1.3	4.7	0.0	Circulate prior to cement job	BH,ODS,Schlum

Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
13.Apr.2022 17:50	14.Apr.2022 00:30	8.0	6.8	0.0	0.0	6.5	6.7	5.0	0.5	Cement 20" casing to seabed	BH,ODS,Schlum
14.Apr.2022 00:30	14.Apr.2022 02:05	1.0	6.9	0.0	0.0	0.5	1.6	5.1	0.0	L/D cement head	BH,ODS,Schlum
14.Apr.2022 02:05	14.Apr.2022 04:00	1.0	6.9	0.0	0.0	0.5	1.9	5.2	0.0	Release RT and pull above wellhead.	BH,ODS,Schlum
14.Apr.2022 04:00	14.Apr.2022 05:40	5.0	7.1	0.0	0.0	3.0	1.7	5.2	0.0	Continue POOS with RT and L/D same	BH,ODS,Schlum
14.Apr.2022 05:40	16.Apr.2022 01:30	62.7	9.7	0.0	0.0	45.0	43.8	7.1	0.0	In between well maintenance BOP (est 7 days from start of project)	ODS,Schlum
16.Apr.2022 01:30	16.Apr.2022 04:20	4.0	9.9	0.0	0.0	1.0	2.8	7.2	0.0	Prepare to run BOP	ODS
16.Apr.2022 04:20	16.Apr.2022 13:30	20.0	10.7	0.0	0.0	10.0	9.2	7.6	0.0	Run BOP	ODS,Schlum
16.Apr.2022 13:30	16.Apr.2022 16:20	10.0	11.2	0.0	0.0	8.0	2.8	7.7	0.3	Prepare to land BOP	ODS
16.Apr.2022 16:20	16.Apr.2022 18:00	0.0	11.2	0.0	0.0	0.9	1.7	7.7	0.0	Land BOP and perform overpull test.	ODS,Schlum
16.Apr.2022 18:00	16.Apr.2022 18:00	0.0	11.2	0.0	0.0	0.0	0.0	7.7	0.0	Offline: Test connector and 20" casing.	ODS,Schlum
16.Apr.2022 18:00	16.Apr.2022 19:10	2.0	11.2	0.0	0.0	1.1	1.2	7.8	0.0	Stroke out slip joint and L/D landing joint	ODS,Schlum
16.Apr.2022 19:10	16.Apr.2022 21:30	2.0	11.3	0.0	0.0	1.3	2.3	7.9	0.0	P/U and M/U diverter. Test diverter	ODS,Schlum
16.Apr.2022 21:30	16.Apr.2022 23:00	3.0	11.4	0.0	0.0	5.5	1.5	8.0	0.0	R/D diverter RT and riser spider.	ODS,Schlum

Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
16.Apr.2022 23:00	17.Apr.2022 02:10	0.0	11.4	0.0	0.0	0.0	3.2	8.1	0.0	Rig down riser handling equipment	ODS,Schlum
17.Apr.2022 02:10	17.Apr.2022 03:20	0.0	11.4	0.0	0.0	0.0	1.2	8.1	0.0	Pressure test of surface equipment	ODS,Schlum
17.Apr.2022 03:20	17.Apr.2022 08:20	12.0	11.9	0.0	0.0	7.0	5.0	8.3	0.5	RIH with 17 1/2" BHA on DP and tag TOC. Func test diverter. Displace well. Perform Choke/Strip drill.	ODS,Schlum
17.Apr.2022 08:20	17.Apr.2022 18:20	10.0	12.4	0.0	0.0	2.0	10.0	8.8	0.0	Drill shoetrack.	ODS,Schlum
17.Apr.2022 18:20	17.Apr.2022 20:30	10.0	12.8	0.0	0.0	1.5	2.2	8.9	0.0	Drill 3 m new formation & Perform FIT	ODS,Schlum
17.Apr.2022 20:30	18.Apr.2022 00:20	0.0	12.8	0.0	0.0	3.0	3.8	9.0	3.5	Unplanned: POOH to replaced failed MWD tool	ODS,Schlum
18.Apr.2022 00:20	18.Apr.2022 03:05	0.0	12.8	0.0	0.0	3.0	2.8	9.1	2.8	Unplanned: RIH with backup 17 1/2" BHA	ODS,Schlum
18.Apr.2022 03:05	18.Apr.2022 04:20	0.0	12.8	0.0	0.0	1.5	1.3	9.2	0.0	Unplanned: Perform new FIT	ODS,Schlum
18.Apr.2022 04:20	25.Apr.2022 08:15	390.6	16.3	0.0	0.0	165.3	172.1	7.2	0.0	17 1/2" [NO 34/9-1 S]	
18.Apr.2022 04:20	18.Apr.2022 04:20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17 1/2" x 20" [NO 34/9-1 S]	
18.Apr.2022 04:20	20.Apr.2022 02:40	207.6	21.4	0.0	0.0	50.0	46.3	11.1	0.0	Drill 17 1/2" hole to section TD. (Gross ROP: 33 m/hr)	ODS,Schlum
18.Apr.2022 04:20	18.Apr.2022 04:20	0.0	21.4		0.0	0.0	0.0	11.1	0.0	Contingency hole section for Running 17" Liner	ODS



Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
20.Apr.2022 02:40	20.Apr.2022 08:20	6.0	21.7	0.0	0.0	3.0	5.7	11.3	0.0	Circulate hole clean	ODS,Schlum
20.Apr.2022 08:20	20.Apr.2022 14:35	16.0	22.3	0.0	0.0	8.0	6.3	11.6	0.0	POOH and R/B 17 1/2" BHA	ODS,Schlum
20.Apr.2022 14:35	20.Apr.2022 17:30	6.0	22.6	0.0	0.0	5.0	2.9	11.7	0.0	M/U and RIH MPT tool. Pull free and POOH with Bore Protector. L/D the same	ODS,GEOG,Schlum
20.Apr.2022 14:35	20.Apr.2022 14:35	0.0	22.6		0.0	0.0	0.0	11.7	0.0	Optional pressure points in Lista fm	ODS,Schlum
20.Apr.2022 14:35	20.Apr.2022 14:35	8.0	22.9		0.0	0.0	0.0	11.6	0.0	Cancelled: Caliper log	ODS,Schlum
20.Apr.2022 17:30	20.Apr.2022 19:30	2.0	23.0	0.0	0.0	1.0	2.0	11.8	0.0	R/U casing handling equipment	ODS
20.Apr.2022 19:30	20.Apr.2022 19:45	0.0	23.0	0.0	0.0	0.0	0.3	11.8	0.0	M/U 14" shoetrack joints	ODS,Schlum
20.Apr.2022 19:45	21.Apr.2022 09:05	24.0	24.0	0.0	0.0	14.0	13.3	12.4	0.0	RIH with 14" shoe track and casing joints (Stands -8.4 stds/hr)	ODS,Schlum
21.Apr.2022 09:05	21.Apr.2022 11:00	3.0	24.1	0.0	0.0	2.5	1.9	12.5	0.0	Change handling equipment. P/U and M/U casing hanger	ODS,Schlum
21.Apr.2022 11:00	21.Apr.2022 14:25	10.0	24.6	0.0	0.0	2.5	3.4	12.6	0.0	RIH with 14" casing on 5 7/8" LS	ODS,Schlum
21.Apr.2022 14:25	21.Apr.2022 14:35	1.0	24.6	0.0	0.0	0.5	0.2	12.6	0.0	M/U cement head	ODS,Schlum
21.Apr.2022 14:35	21.Apr.2022 15:40	2.0	24.7	0.0	0.0	1.0	1.1	12.7	0.0	Land casing hanger	ODS,GEOG,Schlum

Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
21.Apr.2022 15:40	21.Apr.2022 18:35	3.0	24.8	0.0	0.0	2.0	2.9	12.8	0.0	Circulate prior to cement job	ODS,Schlum
21.Apr.2022 18:35	22.Apr.2022 03:15	10.0	25.2	0.0	0.0	6.0	8.7	13.1	0.0	Cement 14" casing	ODS,Schlum
22.Apr.2022 03:15	22.Apr.2022 10:15	0.0	25.2	0.0	0.0	11.0	7.0	13.4	0.0	Not planned: WOC (float not holding)	ODS
22.Apr.2022 10:15	22.Apr.2022 11:15	3.0	25.3	0.0	0.0	1.5	1.0	13.5	0.0	Set and test seal assembly	ODS,GEOG,Schlum
22.Apr.2022 11:15	22.Apr.2022 12:35	6.0	25.6	0.0	0.0	2.0	1.3	13.5	0.0	Release RT, POOH and L/D same	ODS,GEOG,Schlum
22.Apr.2022 12:35	22.Apr.2022 13:50	8.0	25.9	0.0	0.0	3.5	1.3	13.6	0.0	M/U and RIH with 14" wear bushing and BOP test tool. Set WB and test tool.	ODS,GEOG,Schlum
22.Apr.2022 13:50	23.Apr.2022 04:00	10.0	26.3	0.0	0.0	9.0	14.2	14.2	0.0	BOP pressure test including shear rams - 14 days interval	ODS
23.Apr.2022 04:00	23.Apr.2022 14:15	0.0	26.3	0.0	0.0	6.0	10.3	14.6	0.0	Clean-out run to tag TOC inside casing	ODS,Schlum
23.Apr.2022 14:15	23.Apr.2022 14:15	0.0	26.3		0.0	2.0	0.0	14.6	0.0	EHBS (BOP) test	ODS,Schlum
23.Apr.2022 14:15	23.Apr.2022 14:15	0.0	26.3		0.0	0.0	0.0	14.6	0.0	Optional: WOC for logging	ODS
23.Apr.2022 14:15	23.Apr.2022 18:15	12.0	26.8	0.0	0.0	2.5	4.0	14.8	0.0	Perform Rig-up test of 15K psi Simplified kick assembly	ODS
23.Apr.2022 18:15	24.Apr.2022 05:40	12.0	27.3	0.0	0.0	10.0	11.4	15.2	0.0	Perform IBC/CBL log inside 14" casing	ODS
24.Apr.2022 05:40	24.Apr.2022 07:45	1.0	27.4	0.0	0.0	2.0	2.1	15.3	0.0	Pressure test 14" casing and WH connector against BSR	ODS

Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
24.Apr.2022 07:45	24.Apr.2022 09:35	0.0	27.4	0.0	0.0	2.0	1.8	15.4	0.0	Pressure test top drive	ODS
24.Apr.2022 09:35	24.Apr.2022 17:45	16.0	28.1	0.0	0.0	10.0	8.2	15.7	0.0	M/U 12 1/4" BHA and RIH to above shoetrack. Displace to new Mud	ODS,Schlum
24.Apr.2022 17:45	24.Apr.2022 21:20	12.0	28.6	0.0	0.0	3.0	3.6	15.9	0.0	Perform specific Finger-printing & well control drills	ODS,Schlum
24.Apr.2022 21:20	25.Apr.2022 01:10	6.0	28.8	0.0	0.0	3.0	3.8	16.0	0.0	Drill-out Shoetrack	ODS,Schlum
25.Apr.2022 01:10	25.Apr.2022 01:30	6.0	29.1	0.0	0.0	1.0	0.3	16.1	0.0	Drill 3 m new fm	ODS,Schlum
25.Apr.2022 01:30	25.Apr.2022 08:15	0.0	29.1	0.0	0.0	1.3	6.8	16.3	0.0	Take XLOT	ODS,Schlum
25.Apr.2022 08:15	04.May.2022 15:30	342.1	14.3	0.0	0.0	162.3	223.6	9.3	80.6	12 1/4" x 13 1/2" [NO 34/9-1 S]	
25.Apr.2022 08:15	26.Apr.2022 10:50	105.1	33.4	0.0	0.0	43.0	26.6	17.5	0.5	Drill to section TD. Gross ROP: 12 m/hr	ODS,Schlum
26.Apr.2022 10:50	26.Apr.2022 13:30	10.0	33.9	0.0	0.0	3.0	2.7	17.6	0.0	De-activate upper reamer. Pull up, activate rat hole eliminator and UR to TD.	ODS,Schlum
26.Apr.2022 13:30	26.Apr.2022 15:50	10.0	34.3	0.0	0.0	3.0	2.3	17.7	0.0	Circulate hole clean	ODS,Schlum
26.Apr.2022 15:50	26.Apr.2022 16:45	12.0	34.8	0.0	0.0	1.0	0.9	17.7	0.0	Flow check & short trip (if required in DOP)	ODS,Schlum
26.Apr.2022 16:45	27.Apr.2022 03:30	32.0	36.1	0.0	0.0	10.0	10.8	18.1	0.0	POOH and R/B 12 1/4" x 13 1/2" BHA	ODS,Schlum

Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
27.Apr.2022 03:30	27.Apr.2022 04:35	4.0	36.3	0.0	0.0	2.0	1.1	18.2	0.0	R/U casing handling equipment	ODS
27.Apr.2022 04:35	27.Apr.2022 04:35	0.0	36.3	0.0	0.0	0.0	0.0	18.5	0.0	M/U 11 3/4" shoetrack joints	Hall,ODS,Schlum
27.Apr.2022 04:35	27.Apr.2022 12:00	10.0	36.7	0.0	0.0	3.0	7.4	18.5	0.5	Run 11 3/4" liner (30 jnts/hr)	ODS,Schlum
27.Apr.2022 12:00	27.Apr.2022 12:00	1.0	36.7	0.0	0.0	0.3	0.0	18.5	0.0	Change handling equipment	ODS
27.Apr.2022 12:00	27.Apr.2022 12:45	3.0	36.9	0.0	0.0	1.5	0.8	18.5	0.0	M/U Halliburton Versaflex liner hanger	Hall,ODS,Schlum
27.Apr.2022 12:45	27.Apr.2022 14:15	24.0	37.9	0.0	0.0	9.0	1.5	18.6	0.0	RIH with Liner on 5 7/8" string	Hall,ODS,Schlum
27.Apr.2022 14:15	28.Apr.2022 00:00	0.0	37.9	0.0	0.0	0.0	9.8	19.0	9.8	Unplanned:POOH with 11 3/4" liner	ODS,Hall,Schlum
28.Apr.2022 00:00	28.Apr.2022 11:25	0.0	37.9	0.0	0.0	0.0	11.4	19.5	11.4	Unplanned:Re-run 11 3/4" liner	ODS,Hall,Schlum
28.Apr.2022 11:25	29.Apr.2022 11:00	0.0	37.9	0.0	0.0	0.0	23.6	20.5	0.2	Unplanned:RIH with liner on 5 7/8" LS	ODS,Hall,Schlum
29.Apr.2022 11:00	29.Apr.2022 12:40	4.0	38.0	0.0	0.0	2.0	1.7	20.5	0.0	M/U cement head. Wash down and tag TD	Hall,ODS,Schlum
29.Apr.2022 12:40	29.Apr.2022 13:30	5.0	38.2	0.0	0.0	2.0	0.8	20.6	0.0	Circulate prior to cement job	Hall,ODS,Schlum
29.Apr.2022 13:30	29.Apr.2022 16:05	8.0	38.6	0.0	0.0	2.0	2.6	20.7	0.0	Cement Liner	Hall,ODS,Schlum
29.Apr.2022 16:05	29.Apr.2022 17:00	4.0	38.7	0.0	0.0	2.0	0.9	20.7	0.0	Set Expandable liner hanger	Hall,ODS,Schlum

Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
29.Apr.2022 17:00	30.Apr.2022 01:00	18.0	39.5	0.0	0.0	8.5	8.0	21.0	0.0	Release RT & POOH with RT and L/D same	Hall,ODS,Schlum
30.Apr.2022 01:00	30.Apr.2022 07:05	0.0	39.5	0.0	0.0	8.0	6.1	21.3	0.0	Optional: WOC for logging (total 17 hrs from cement is displaced in place)	ODS,Schlum
30.Apr.2022 01:00	30.Apr.2022 01:00	12.0	40.0	0.0	0.0	0.0	0.0	21.0	0.0	Pressure test BOP	ODS,GEOG,Schlum
30.Apr.2022 07:05	30.Apr.2022 16:00	20.0	40.8	0.0	0.0	7.0	8.9	21.7	0.0	Perform IBC/CBL log for 11 3/4" Liner to verify P&A barriers	ODS
30.Apr.2022 16:00	30.Apr.2022 21:25	2.0	40.9	0.0	0.0	1.0	5.4	21.9	0.0	Pressure test Liner according to WOC time	ODS
30.Apr.2022 21:25	01.May.2022 07:20	16.0	41.6	0.0	0.0	10.0	9.9	22.3	0.0	M/U drilling BHA and RIH to above shoetrack.	ODS,Schlum
01.May.2022 07:20	01.May.2022 11:50	24.0	42.6	0.0	0.0	4.0	4.5	22.5	0.0	Displace to New mud from Rheguard to BaraECD	ODS
01.May.2022 11:50	01.May.2022 15:30	8.0	42.9	0.0	0.0	6.0	3.7	22.6	0.0	Perform HPHT Finger-printing & well control drills	ODS,Schlum
01.May.2022 15:30	01.May.2022 18:05	6.0	43.1	0.0	0.0	4.0	2.6	22.8	0.0	Drill out shoetrack	Hall,ODS,Schlum
01.May.2022 18:05	02.May.2022 09:40	4.0	43.3	0.0	0.0	2.0	15.6	23.4	13.8	Drill 3 m new Fm and Perform FIT	Hall,ODS,Schlum
02.May.2022 09:40	02.May.2022 15:50	0.0	43.3	0.0	0.0	0.0	6.2	23.7	6.2	Unplanned: POOH with drilling BHA	ODS,Schlum
02.May.2022 15:50	02.May.2022 16:20	0.0	43.3	0.0	0.0	0.0	0.5	23.7	0.5	Unplanned: M/U cement stinger	ODS,Schlum
02.May.2022 16:20	02.May.2022 20:30	0.0	43.3	0.0	0.0	0.0	4.2	23.9	4.2	Unplanned: RIH with cement stinger	ODS,Schlum

Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
02.May.2022 20:30	03.May.2022 12:00	0.0	43.3	0.0	0.0	4.0	15.5	24.5	15.5	Unplanned: Perform shoe squeeze	ODS,Schlum
03.May.2022 12:00	03.May.2022 15:40	0.0	43.3	0.0	0.0	4.0	3.7	24.7	3.7	Unplanned: POOH with cement stinger	ODS,Schlum
03.May.2022 12:00	03.May.2022 12:00	0.0	43.3	0.0	0.0	0.0	0.0	24.7	0.0	Unplanned: WOC	ODS,Schlum
03.May.2022 15:40	04.May.2022 01:15	0.0	43.3	0.0	0.0	8.0	9.6	25.1	0.0	Unplanned: BOP test	ODS,Schlum
04.May.2022 01:15	04.May.2022 08:00	0.0	43.3	0.0	0.0	7.0	6.8	25.3	6.8	Unplanned: M/U drilling BHA and RIH to TOC	ODS,Hall,Schlum
04.May.2022 08:00	04.May.2022 10:55	0.0	43.3	0.0	0.0	4.0	2.9	25.5	2.9	Unplanned: Drill out cement	ODS,Hall,Schlum
04.May.2022 10:55	04.May.2022 15:30	0.0	43.3	0.0	0.0	1.0	4.6	25.6	4.6	Unplanned: Drill 3m new Fm and perform FIT	ODS,Hall,Schlum
04.May.2022 15:30	20.May.2022 16:55	317.8	13.2	0.0	0.0	237.0	385.8	16.1	1.3	10 5/8" x 12 1/4" [NO 34/9-1 S]	
04.May.2022 15:30	06.May.2022 12:00	100.8	47.5	0.0	0.0	35.0	44.5	27.5	0.0	Drill to section to 4367 m and Perform OH FIT. Drill to section TD.	Hall,ODS,Schlum
06.May.2022 12:00	06.May.2022 19:50	0.0	47.5	0.0	0.0	6.0	7.8	27.8	0.0	De-activate upper reamer. Pull up, activate rat hole eliminator and UR to TD.	ODS,Hall,Schlum
06.May.2022 19:50	07.May.2022 15:00	8.0	47.8	0.0	0.0	8.0	19.2	28.6	0.0	Circulate hole clean and dilute mud to cementing properties	Hall,ODS,Schlum
07.May.2022 15:00	07.May.2022 21:40	10.0	48.3	0.0	0.0	6.0	6.7	28.9	0.0	Flow check & short trip as per HPHT procedures	Hall,ODS,Schlum

Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
07.May.2022 21:40	08.May.2022 11:30	28.0	49.4	0.0	0.0	16.0	13.8	29.5	0.0	Pump & POOH as per DOP and R/B 12 1/4" BHA	Hall,ODS,Schlum
08.May.2022 11:30	08.May.2022 11:30	0.0	49.4	0.0	0.0	0.0	0.0	29.5	0.0	Optional: Perform VSP log	ODS,Schlum
08.May.2022 11:30	08.May.2022 16:30	8.0	49.8	0.0	0.0	2.5	5.0	29.7	0.0	Retrieve 14" WB	Hall,ODS,Schlum
08.May.2022 16:30	08.May.2022 18:30	3.0	49.9	0.0	0.0	2.0	2.0	29.8	0.0	R/U to run 9 7/8" casing	OWS,Hall,ODS,Schlum
08.May.2022 18:30	08.May.2022 19:45	0.0	49.9	0.0	0.0	0.0	1.3	29.8	0.0	M/U shoetrack joints & build casing stands	OWS,Hall,ODS,Schlum
08.May.2022 19:45	09.May.2022 02:25	0.0	49.9	0.0	0.0	5.0	6.7	30.1	0.3	RIH with 9 7/8" SLIJ-II casing	OWS,ODS,Schlum
09.May.2022 02:25	09.May.2022 09:00	36.0	51.4	0.0	0.0	8.0	6.6	30.4	0.0	Continue RIH with 9 7/8" VamTop casing.	OWS,ODS,Hall,Schlum
09.May.2022 09:00	09.May.2022 12:00	0.0	51.4	0.0	0.0	3.0	3.0	30.5	0.0	Circulate B/U above top of liner. change bails, LD CRTi, install BX5	Hall,ODS,Schlum
09.May.2022 12:00	09.May.2022 19:00	0.0	51.4	0.0	0.0	5.0	7.0	30.8	0.0	Continue RIH with 9 7/8" VamTop casing	OWS,Hall,ODS,Schlum
09.May.2022 19:00	09.May.2022 22:20	2.0	51.5	0.0	0.0	1.5	3.3	30.9	0.0	Change handling equipment. P/U and M/U casing hanger	Hall,ODS,Schlum
09.May.2022 22:20	10.May.2022 04:30	12.0	52.0	0.0	0.0	3.5	6.2	31.2	0.0	RIH with 9 7/8" casing on 5 7/8" LS	Hall,ODS,Schlum
10.May.2022 04:30	10.May.2022 04:40	2.0	52.1	0.0	0.0	1.0	0.2	31.2	0.0	P/U cement head	Hall,ODS,Schlum
10.May.2022 04:40	10.May.2022 06:10	2.0	52.1	0.0	0.0	1.0	1.5	31.3	0.0	Land casing hanger	Hall,ODS

Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
10.May.2022 06:10	10.May.2022 10:20	6.0	52.4	0.0	0.0	4.0	4.2	31.4	0.0	Circulate prior to cement job	Hall,ODS
10.May.2022 10:20	10.May.2022 19:15	10.0	52.8	0.0	0.0	5.0	8.9	31.8	1.0	Pump & displace cement	Hall,ODS,Schlum
10.May.2022 19:15	10.May.2022 21:15	4.0	53.0	0.0	0.0	2.0	2.0	31.9	0.0	Set and test seal assembly	Hall,ODS
10.May.2022 21:15	11.May.2022 00:45	4.0	53.1	0.0	0.0	2.5	3.5	32.0	0.0	Release RT, POOH and L/D same	Hall,ODS,Schlum
11.May.2022 00:45	11.May.2022 03:50	8.0	53.5	0.0	0.0	4.0	3.1	32.2	0.0	Install 10 3/4" WB	Hall,ODS,Schlum
11.May.2022 03:50	11.May.2022 10:30	12.0	54.0	0.0	0.0	8.0	6.7	32.4	0.0	BOP test part 1 - PRs and APs	ODS,Schlum
11.May.2022 10:30	12.May.2022 01:15	0.0	54.0	0.0	0.0	10.0	14.8	33.1	0.0	-Planned maintenance on top drive	ODS
12.May.2022 01:15	12.May.2022 11:30	0.0	54.0	0.0	0.0	3.0	10.3	33.5	0.0	-BOP test part 2 - BSRs	ODS,Schlum
12.May.2022 11:30	12.May.2022 20:45	16.0	54.6	0.0	0.0	8.0	9.3	33.9	0.0	Run ICB/CBL to log 9 7/8" casing	Gyrodatta,Hall,ODS,Schlum
12.May.2022 20:45	12.May.2022 23:15	2.0	54.7	0.0	0.0	1.0	2.5	34.0	0.0	Pressure test 9 7/8" casing	Hall,ODS,Schlum
12.May.2022 23:15	13.May.2022 08:05	20.0	55.6	0.0	0.0	10.0	8.8	34.3	0.0	M/U 8 1/2" drilling BHA and RIH to above shoetrack on 5" DP	Hall,ODS,Schlum
13.May.2022 08:05	14.May.2022 06:25	0.0	55.6	0.0	0.0	8.0	22.3	35.3	0.0	Weigh up mud, drill plug set and adjust MW	ODS,Schlum
14.May.2022 06:25	15.May.2022 03:30	12.0	56.1	0.0	0.0	10.0	21.1	36.1	0.0	Perform HPHT Finger-printing & well control drills	Hall,ODS,Schlum



Final well report,  
Pilot well NO 34/9-U-1

Doc. No. 2022-013511

and Exploration well NO 34/9-1 S Cambozola

Valid from: Dec 2022

Rev. no.: 0

Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
15.May.2022 03:30	15.May.2022 12:45	6.0	56.3	0.0	0.0	3.0	9.3	36.5	0.0	Drill out shoetrack	Hall,ODS,Schlum
15.May.2022 12:45	16.May.2022 17:15	0.0	56.3	0.0	0.0	12.0	28.5	37.7	0.0	-Losses: Circulate hole clean, POOH and R/B 8 1/2" BHA	ODS
16.May.2022 17:15	17.May.2022 11:45	0.0	56.3	0.0	0.0	14.0	18.5	38.5	0.0	-R/U WL, Run WL VSP, R/D WL	Gyrodata,ODS,Hall,Schlum
17.May.2022 11:45	17.May.2022 18:00	0.0	56.3	0.0	0.0	6.0	6.3	38.7	0.0	-P/U and RIH with cement stinger	ODS
17.May.2022 18:00	19.May.2022 03:50	0.0	56.3	0.0	0.0	6.0	33.8	40.2	0.0	-Perform squeeze cement around 9 7/8" shoe and WOC	ODS
19.May.2022 03:50	19.May.2022 12:50	0.0	56.3	0.0	0.0	5.0	9.0	40.5	0.0	- POOH with cement stinger	ODS
19.May.2022 12:50	20.May.2022 04:00	0.0	56.3	0.0	0.0	6.0	15.2	41.2	0.0	-M/U and RIH with 8 1/2" BHA	ODS
20.May.2022 04:00	20.May.2022 13:00	0.0	56.3	0.0	0.0	3.0	9.0	41.5	0.0	-Drill cement in 9 7/8" shoetrack and Perform rathole FIT	ODS
20.May.2022 13:00	20.May.2022 16:55	6.0	56.6	0.0	0.0	3.0	3.9	41.7	0.0	Drill 3 m new Fm and Perform OH FIT	Hall,ODS
20.May.2022 16:55	28.May.2022 10:30	282.0	11.8	0.0	0.0	119.0	185.6	7.7	9.6	8 1/2" HPHT [NO 34/9-1 S]	
20.May.2022 16:55	22.May.2022 04:40	48.0	58.6	0.0	0.0	15.0	35.7	43.2	0.0	Drill 8 1/2" hole to Top reservoir plus fm for 1st pressure point (Gross ROP 3 m/hr)	Hall,ODS,Schlum
22.May.2022 04:40	22.May.2022 17:40	20.0	59.4	0.0	0.0	16.0	13.0	43.7	0.0	-Pump and POOH with 8 1/2" BHA	ODS,Hall,Schlum

Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
22.May.2022 17:40	23.May.2022 00:00	12.0	59.9	0.0	0.0	7.0	6.3	44.0	0.0	-M/U and RIH with 9 7/8" casing scraper to 4250 m	ODS,Hall,Schlum
23.May.2022 00:00	23.May.2022 03:45	6.0	60.1	0.0	0.0	4.0	3.8	44.2	0.0	-Perform casing scrap run, CBU	ODS,Hall,Schlum
23.May.2022 03:45	23.May.2022 22:00	30.0	61.4	0.0	0.0	11.0	18.3	44.9	8.3	-POOH with casing scraper and L/D	ODS,Hall,Schlum
23.May.2022 22:00	24.May.2022 13:40	23.0	62.3	0.0	0.0	15.0	15.7	45.6	1.3	-M/U and RIH with 7" Liner	OWS,ODS,Hall,Schlum
24.May.2022 13:40	24.May.2022 22:00	13.0	62.9	0.0	0.0	6.0	8.3	45.9	0.0	-Circulate, cement 7" Liner and set 7" Liner	ODS,Hall,Schlum
24.May.2022 22:00	25.May.2022 00:20	5.0	63.1	0.0	0.0	4.0	2.3	46.0	0.0	-Release 7" Liner hanger RT and circulate	ODS,Hall,Schlum
25.May.2022 00:20	25.May.2022 06:00	9.0	63.5	0.0	0.0	4.0	5.7	46.2	0.0	-POOH with Liner RT	ODS,Hall,Schlum
25.May.2022 06:00	25.May.2022 23:20	25.0	64.5	0.0	0.0	10.0	17.3	47.0	0.0	-BOP test	BH,Hall,ODS,Schlum
25.May.2022 23:20	26.May.2022 00:30	3.0	64.6	0.0	0.0	2.0	1.2	47.0	0.0	-Pressure test 7" liner	Hall,ODS,Schlum
26.May.2022 00:30	26.May.2022 16:35	24.0	65.6	0.0	0.0	8.0	16.1	47.7	0.0	-M/U and RIH with 6" BHA and perform well control drills	Hall,ODS,Schlum
26.May.2022 16:35	27.May.2022 21:35	45.0	67.5	0.0	0.0	10.0	29.0	48.9	0.0	-Drill shoetrack and perform fingerprinting.	Hall,ODS,Schlum
27.May.2022 21:35	28.May.2022 02:25	7.0	67.8	0.0	0.0	4.0	4.8	49.1	0.0	-Clean rat hole and drill 3m new formation.	Hall,ODS,Schlum
28.May.2022 02:25	28.May.2022 10:30	12.0	68.3	0.0	0.0	3.0	8.1	49.4	0.0	-Perform FIT.	Hall,ODS,Schlum

Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
28.May.2022 10:30	03.Jun.2022 18:30	437.0	18.2	0.0	0.0	79.0	152.0	6.3	0.0	6" HPHT [NO 34/9-1 S]	
28.May.2022 10:30	28.May.2022 21:40	37.0	69.8	0.0	0.0	11.0	11.2	49.9	0.0	-Start drilling 6" hole (perfect time to be re-distributed)	Hall,ODS,Schlum
28.May.2022 21:40	29.May.2022 04:50	21.0	70.7	0.0	0.0	6.0	7.2	50.2	0.0	-Displace well to 2.02sg ESD	Hall,ODS,Schlum
29.May.2022 04:50	01.Jun.2022 16:40	110.0	75.3	0.0	0.0	24.0	83.8	53.7	0.0	- Drill 6" hole to core point or TD	ODS,Hall,Schlum
01.Jun.2022 16:40	01.Jun.2022 22:45	19.0	76.1	0.0	0.0	5.0	6.1	53.9	0.0	Circulate Hole clean	Hall,ODS,Schlum
01.Jun.2022 22:45	02.Jun.2022 16:50	17.0	76.8	0.0	0.0	8.0	18.1	54.7	0.0	Flow check & short trip as per HPHT procedures	ODS,Hall,Schlum
02.Jun.2022 16:50	03.Jun.2022 10:15	45.0	78.7	0.0	0.0	15.0	17.4	55.4	0.0	Pump & POOH as per DOP and R/B 6" BHA	ODS,Hall,Schlum
03.Jun.2022 10:15	03.Jun.2022 11:15	3.0	78.8	0.0	0.0	1.0	1.0	55.5	0.0	R/U WL equipment	Hall,ODS,Schlum
03.Jun.2022 11:15	03.Jun.2022 17:40	14.0	79.4	0.0	0.0	8.0	6.4	55.7	0.0	Perform WL run MSIP	ODS,Hall,Schlum
03.Jun.2022 17:40	03.Jun.2022 18:30	3.0	79.5	0.0	0.0	1.0	0.8	55.8	0.0	R/D WL equipment	Hall,ODS,Schlum
03.Jun.2022 18:30	19.Jun.2022 04:00	450.0	18.8	0.0	0.0	344.1	369.9	15.4	32.3	Permanent P&A (DP) w/ RIG [NO 34/9-1 S]	
03.Jun.2022 18:30	03.Jun.2022 18:30	0.0	79.5		0.0	0.0	0.0	55.8	0.0	Perform Pressure point on WL	ODS,Hall,Schlum
03.Jun.2022 18:30	03.Jun.2022 18:30	0.0	79.5		0.0	0.0	0.0	55.8	0.0	Short trip as per HPHT procedure	Hall,ODS,Schlum

Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
03.Jun.2022 18:30	03.Jun.2022 18:30	168.0	86.5		0.0	0.0	0.0	55.8	0.0	PCP Budget due to change in scope not distributed	ODS,Hall,Schlum
03.Jun.2022 18:30	03.Jun.2022 18:30	0.0	86.5		0.0	0.0	0.0	55.8	0.0	Drill 6" section to TD. Avg ROP 5 m/hr (including Pressure points)	ODS,Hall,Schlum
03.Jun.2022 18:30	03.Jun.2022 18:30	0.0	86.5	0.0	0.0	0.0	0.0	55.8	0.0	BOP test	ODS,Hall,GEOG,Schlum
03.Jun.2022 18:30	03.Jun.2022 18:30	0.0	86.5		0.0	0.0	0.0	55.8	0.0	Pump & POOH as per DOP and R/B 6" BHA	ODS,Hall,Schlum
03.Jun.2022 18:30	03.Jun.2022 18:30	0.0	86.5		0.0	0.0	0.0	55.8	0.0	Circulate Hole clean and Flow Check	ODS,Hall,Schlum
03.Jun.2022 18:30	04.Jun.2022 03:50	12.0	87.0	0.0	0.0	10.0	9.3	56.2	0.0	M/U and RIH with 3.5" cement stinger	ODS,Hall,Schlum
04.Jun.2022 03:50	04.Jun.2022 11:35	10.0	87.4	0.0	0.0	6.0	7.8	56.5	0.0	Circulate BU prior to cementing	ODS,Hall,Schlum
04.Jun.2022 11:35	04.Jun.2022 13:00	4.0	87.6	0.0	0.0	2.5	1.4	56.5	0.0	Set cement plug #1	ODS,Schlum
04.Jun.2022 13:00	04.Jun.2022 18:00	4.0	87.8	0.0	0.0	5.0	5.0	56.7	0.0	Pull out of cement and cut cement inside 7" shoe	ODS,Schlum
04.Jun.2022 18:00	05.Jun.2022 06:30	17.0	88.5	0.0	0.0	12.5	12.5	57.3	0.0	POOH with cement stinger	ODS,Schlum
05.Jun.2022 06:30	05.Jun.2022 14:00	9.0	88.8	0.0	0.0	7.0	7.5	57.6	0.0	Added: RIH with 6" dress-off BHA	ODS,Hall,Schlum
05.Jun.2022 14:00	05.Jun.2022 22:35	9.0	89.2	0.0	0.0	4.0	8.6	57.9	0.0	Dress and Tag cement plug #1. Circulate B/U	Hall,ODS,Schlum
05.Jun.2022 22:35	06.Jun.2022 14:30	16.0	89.9	0.0	0.0	12.0	15.9	58.6	0.0	POOH with 6" dress-off BHA	ODS,Hall,Schlum

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06.Jun.2022 14:30	06.Jun.2022 21:25	0.0	89.9	0.0	0.0	9.0	6.9	58.9	0.0	Unplanned: RIH with 3.5" cement stinger	Hall,ODS,Schlum
06.Jun.2022 21:25	07.Jun.2022 05:10	0.0	89.9	0.0	0.0	5.0	7.8	59.2	0.0	Unplanned: Circulate BU prior to cementing	Hall,ODS,Schlum
07.Jun.2022 05:10	07.Jun.2022 07:00	0.0	89.9	0.0	0.0	1.5	1.8	59.3	0.0	Unplanned: Set cement plug #2	Hall,ODS,Schlum
07.Jun.2022 07:00	07.Jun.2022 12:45	0.0	89.9	0.0	0.0	5.0	5.8	59.5	0.0	Unplanned: Pull out of cement and cut cement inside 7" liner.	Hall,ODS,Schlum
07.Jun.2022 12:45	08.Jun.2022 01:00	0.0	89.9	0.0	0.0	12.5	12.3	60.0	0.0	Unplanned: POOH with cement stinger	Hall,ODS,Schlum
08.Jun.2022 01:00	08.Jun.2022 07:10	0.0	89.9	0.0	0.0	7.5	6.2	60.3	0.0	Unplanned: RIH with 6" dress-off BHA	Hall,ODS,Schlum
08.Jun.2022 07:10	08.Jun.2022 14:50	0.0	89.9	0.0	0.0	7.0	7.7	60.6	0.0	Unplanned: Dress off and tag cement plug #2. Circulate BU	Hall,ODS,Schlum
08.Jun.2022 14:50	08.Jun.2022 23:15	0.0	89.9	0.0	0.0	10.0	8.4	61.0	0.0	Unplanned: POOH with 6" dress-off BHA	Hall,ODS,Schlum
08.Jun.2022 23:15	09.Jun.2022 07:35	8.0	90.2	0.0	0.0	6.0	8.3	61.3	0.0	RIH with 3.5" cement stinger	ODS,Hall,Schlum
09.Jun.2022 07:35	09.Jun.2022 12:40	8.0	90.6	0.0	0.0	4.0	5.1	61.5	0.0	Circulate BU prior to cementing	Hall,ODS,Schlum
09.Jun.2022 12:40	09.Jun.2022 14:25	4.0	90.7	0.0	0.0	2.5	1.8	61.6	0.0	Set combined cement plug #3, #4 and #5 from OH into 9 7/8" casing	ODS,Hall,Schlum
09.Jun.2022 14:25	09.Jun.2022 19:15	6.0	91.0	0.0	0.0	5.0	4.8	61.8	0.0	Pull out of cement and Circulate clean	ODS,Schlum
09.Jun.2022 19:15	10.Jun.2022 01:45	15.0	91.6	0.0	0.0	6.0	6.5	62.1	0.0	POOH with cement stinger	ODS,Hall,Schlum

Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
10.Jun.2022 01:45	10.Jun.2022 08:20	2.0	91.7	0.0	0.0	1.5	6.6	62.3	0.0	Change to 5 7/8" Saver sub	ODS,Schlum
10.Jun.2022 08:20	10.Jun.2022 13:10	8.0	92.0	0.0	0.0	6.0	4.8	62.5	0.0	RIH with 8 1/2" dressing BHA.	ODS,Hall,Schlum
10.Jun.2022 13:10	10.Jun.2022 16:10	2.0	92.1	0.0	0.0	1.5	3.0	62.7	0.0	Dress and tag cement barriers towards Rødby fm.	ODS,Hall,Schlum
10.Jun.2022 16:10	10.Jun.2022 17:30	6.0	92.3	0.0	0.0	5.0	1.3	62.7	0.0	Adjust mud weight to 1.96 sg	ODS,Hall,Schlum
10.Jun.2022 17:30	10.Jun.2022 22:00	8.0	92.7	0.0	0.0	6.0	4.5	62.9	0.0	POOH with dress-off BHA	ODS,Hall,Schlum
10.Jun.2022 22:00	12.Jun.2022 07:20	0.0	92.7	0.0	0.0	36.0	33.3	64.3	32.3	Repair leakage on coflex choke hose	ODS,Hall
12.Jun.2022 07:20	12.Jun.2022 14:30	9.0	93.1	0.0	0.0	6.0	7.2	64.6	0.0	Run BOP test plug and test BOP.	ODS,Schlum
12.Jun.2022 14:30	12.Jun.2022 16:00	5.0	93.3	0.0	0.0	2.0	1.5	64.7	0.0	Pull BOP test plug and 9 7/8" WB (on BOP test plug)	ODS,Hall,Schlum
12.Jun.2022 16:00	12.Jun.2022 18:00	0.0	93.3	0.0	0.0	2.0	2.0	64.7	0.0	Test kelly hose and TD valves	ODS,Schlum
12.Jun.2022 18:00	12.Jun.2022 21:20	6.0	93.5	0.0	0.0	5.0	3.3	64.9	0.0	M/U and RIH with Cutting BHA to 2665 m	BH,ODS,Hall,Schlum
12.Jun.2022 21:20	13.Jun.2022 02:55	2.0	93.6	0.0	0.0	2.0	5.6	65.1	0.0	Cut 9 7/8" casing	BH,ODS
13.Jun.2022 02:55	13.Jun.2022 07:30	6.0	93.8	0.0	0.0	2.0	4.6	65.3	0.0	POOH and L/D cutting BHA	BH,ODS
13.Jun.2022 07:30	13.Jun.2022 08:15	4.0	94.0	0.0	0.0	2.0	0.8	65.3	0.0	M/U and RIH with seal assembly retrieval tool	BH,ODS

Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
13.Jun.2022 08:15	13.Jun.2022 09:00	2.0	94.1	0.0	0.0	1.0	0.8	65.4	0.0	Jet and pull seal assembly	BH,ODS
13.Jun.2022 09:00	13.Jun.2022 11:10	3.0	94.2	0.0	0.0	1.5	2.2	65.5	0.0	Circulate BU (14" x 9 7/8" csg annulus volume)	BH,ODS
13.Jun.2022 11:10	13.Jun.2022 13:00	4.0	94.4	0.0	0.0	2.0	1.8	65.5	0.0	POOH with seal assembly running tool	BH,ODS
13.Jun.2022 13:00	13.Jun.2022 13:40	4.0	94.6	0.0	0.0	2.0	0.7	65.6	0.0	M/U and RIH with casing spear	BH,ODS
13.Jun.2022 13:40	13.Jun.2022 13:55	1.0	94.6	0.0	0.0	1.0	0.3	65.6	0.0	Engage spear and pull 9 7/8" casing free	BH,ODS
13.Jun.2022 13:55	13.Jun.2022 15:20	2.0	94.7	0.0	0.0	1.0	1.4	65.6	0.0	POOH with 9 7/8" casing and casing spear	BH,ODS
13.Jun.2022 15:20	13.Jun.2022 16:40	3.0	94.8	0.0	0.0	1.5	1.3	65.7	0.0	R/U casing handling equipment	OWS,ODS
13.Jun.2022 15:20	13.Jun.2022 15:20	1.0	94.8	0.0	0.0	1.0	0.0	65.7	0.0	L/D Casing spear	BH,ODS
13.Jun.2022 16:40	13.Jun.2022 21:35	15.0	95.5	0.0	0.0	8.0	4.9	65.9	0.0	Pull and R/B 9 7/8" casing from 2665 m	OWS,ODS
13.Jun.2022 21:35	13.Jun.2022 22:25	3.0	95.6	0.0	0.0	1.5	0.8	65.9	0.0	R/D casing handling equipment	OWS,ODS
13.Jun.2022 22:25	14.Jun.2022 02:35	8.0	95.9	0.0	0.0	4.0	4.2	66.1	0.0	M/U and RIH with 14" EZSV	Hall,ODS
14.Jun.2022 02:35	14.Jun.2022 04:10	2.0	96.0	0.0	0.0	1.0	1.6	66.2	0.0	Install mechanical plug in 14" Casing and pressure test same	ODS,Hall,Schlum
14.Jun.2022 04:10	14.Jun.2022 06:40	6.0	96.3	0.0	0.0	3.0	2.5	66.3	0.0	Displace well from 1.96 sg BaraECD to 1.40 sg Rheguard	Hall,ODS,Schlum

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14.Jun.2022 06:40	14.Jun.2022 09:05	5.0	96.5	0.0	0.0	2.0	2.4	66.4	0.0	Pump cement plug #6 & #7 (P&A Tryggvasson formation)	Hall,ODS,Schlum
14.Jun.2022 09:05	14.Jun.2022 11:15	4.0	96.6	0.0	0.0	1.0	2.2	66.5	0.0	Pull out of cement and circulate BU	Hall,ODS,Schlum
14.Jun.2022 11:15	14.Jun.2022 13:55	5.0	96.8	0.0	0.0	2.0	2.7	66.6	0.0	POOH with EZSV RT	Hall,ODS,Schlum
14.Jun.2022 13:55	14.Jun.2022 18:00	12.0	97.3	0.0	0.0	5.0	4.1	66.7	0.0	RIH with 12 1/4" Dress-off BHA and WOC	ODS,Schlum
14.Jun.2022 18:00	14.Jun.2022 18:40	3.0	97.5	0.0	0.0	1.0	0.7	66.8	0.0	Dress and tag cement plug	ODS
14.Jun.2022 18:40	14.Jun.2022 22:30	7.0	97.8	0.0	0.0	3.0	3.8	66.9	0.0	Pull OOH with Dress-off BHA	ODS
14.Jun.2022 22:30	15.Jun.2022 00:55	7.0	98.1	0.0	0.0	3.5	2.4	67.0	0.0	M/U and RIH with 14" EZSV	Hall,ODS
15.Jun.2022 00:55	15.Jun.2022 01:35	2.0	98.1	0.0	0.0	1.0	0.7	67.1	0.0	Install mechanical plug in 14" casing and load test	ODS,Hall,Schlum
15.Jun.2022 01:35	15.Jun.2022 04:00	3.0	98.3	0.0	0.0	2.0	2.4	67.2	0.0	Pump cement plug #8 & #9 (P&A towards Lista fm)	Hall,ODS
15.Jun.2022 04:00	15.Jun.2022 05:50	3.0	98.4	0.0	0.0	2.5	1.8	67.2	0.0	Pull out of cement and circulate BU	Hall,ODS
15.Jun.2022 05:50	15.Jun.2022 11:15	20.0	99.2	0.0	0.0	2.0	5.4	67.5	0.0	POOH with EZSV RT	Hall,ODS
15.Jun.2022 11:15	15.Jun.2022 17:20	14.0	99.8	0.0	0.0	10.0	6.1	67.7	0.0	RIH with 12 1/4" Dress-off BHA and WOC	ODS
15.Jun.2022 17:20	15.Jun.2022 17:40	3.0	99.9	0.0	0.0	2.0	0.3	67.7	0.0	Dress cement plug	ODS



Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
15.Jun.2022 17:40	15.Jun.2022 20:40	6.0	100.2	0.0	0.0	2.5	3.0	67.9	0.0	Pull OOH with 12 1/4" Dress-off BHA	ODS
15.Jun.2022 20:40	15.Jun.2022 22:45	4.0	100.3	0.0	0.0	2.0	2.1	67.9	0.0	M/U and RIH with 14in casing cutter	BH,ODS
15.Jun.2022 22:45	16.Jun.2022 00:20	2.0	100.4	0.0	0.0	1.0	1.6	68.0	0.0	Cut 14" casing	BH,ODS
16.Jun.2022 00:20	16.Jun.2022 02:35	4.0	100.6	0.0	0.0	2.0	2.3	68.1	0.0	POOH and L/D cutting assy	BH,ODS
16.Jun.2022 00:20	16.Jun.2022 00:20	2.0	100.7	0.0	0.0	1.0	0.0	68.1	0.0	Circulate BU through cut	BH,ODS
16.Jun.2022 02:35	16.Jun.2022 07:10	3.0	100.8	0.0	0.0	2.0	4.6	68.3	0.0	MU and RIH with jet sub and seal assy running tool and casing spear	BH,ODS
16.Jun.2022 07:10	16.Jun.2022 07:35	1.0	100.8	0.0	0.0	1.0	0.4	68.3	0.0	Pull seal assembly	BH,ODS
16.Jun.2022 07:35	16.Jun.2022 08:50	2.0	100.9	0.0	0.0	1.0	1.3	68.4	0.0	Circulate hole clean through cut	BH,ODS
16.Jun.2022 08:50	16.Jun.2022 10:00	1.0	101.0	0.0	0.0	1.0	1.2	68.4	0.0	Engage spear and pull 14" casing free	BH,ODS
16.Jun.2022 10:00	16.Jun.2022 11:50	2.0	101.1	0.0	0.0	1.5	1.8	68.5	0.0	POOH with casing spear and 14" casing	BH,ODS
16.Jun.2022 11:50	16.Jun.2022 14:00	1.0	101.1	0.0	0.0	0.5	2.2	68.6	0.0	L/D casing spear	BH,ODS
16.Jun.2022 14:00	16.Jun.2022 14:30	3.0	101.2	0.0	0.0	1.5	0.5	68.6	0.0	R/U casing handling equipment	OWS,BH,ODS
16.Jun.2022 14:30	16.Jun.2022 15:40	4.0	101.4	0.0	0.0	2.0	1.2	68.7	0.0	L/D 14" casing	OWS,BH,ODS

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Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
16.Jun.2022 15:40	16.Jun.2022 16:35	3.0	101.5	0.0	0.0	1.5	0.9	68.7	0.0	R/D casing handling equipment	OWS,ODS
16.Jun.2022 16:35	16.Jun.2022 20:05	5.0	101.7	0.0	0.0	2.0	3.5	68.8	0.0	M/U and RIH with 20in EZSV and MR/BOP clean assy	Hall,ODS
16.Jun.2022 20:05	16.Jun.2022 20:30	2.0	101.8	0.0	0.0	1.0	0.4	68.9	0.0	Set 20in EZSV and pressure test same	Hall,ODS
16.Jun.2022 20:30	17.Jun.2022 00:05	4.0	102.0	0.0	0.0	2.0	3.6	69.0	0.0	Displace well to SW	Hall,ODS
17.Jun.2022 00:05	17.Jun.2022 01:00	2.0	102.1	0.0	0.0	2.0	0.9	69.0	0.0	Set cement plug #10	Hall,ODS
17.Jun.2022 01:00	17.Jun.2022 03:10	3.0	102.2	0.0	0.0	1.0	2.2	69.1	0.0	Pull above cement and wash BOP	Hall,ODS
17.Jun.2022 03:10	17.Jun.2022 06:00	4.0	102.3	0.0	0.0	2.0	2.8	69.2	0.0	POOH with EZSV running tool and MR/BOP clean assy and L/D same	Hall,ODS
17.Jun.2022 06:00	17.Jun.2022 16:50	13.0	102.9	0.0	0.0	5.5	10.8	69.7	0.0	R/U BOP handling equipment	ODS
17.Jun.2022 16:50	17.Jun.2022 18:20	4.0	103.1	0.0	0.0	1.3	1.5	69.8	0.0	L/D diverter	ODS
17.Jun.2022 18:20	17.Jun.2022 19:45	3.0	103.2	0.0	0.0	1.2	1.4	69.8	0.0	P/U landing joint and collapse slip joint	ODS
17.Jun.2022 19:45	17.Jun.2022 20:15	5.0	103.4	0.0	0.0	0.8	0.5	69.8	0.0	Disconnect BOP and move rig to Aux	ODS
17.Jun.2022 20:15	17.Jun.2022 22:25	6.0	103.6	0.0	0.0	2.0	2.2	69.9	0.0	Split STR	ODS
17.Jun.2022 22:25	18.Jun.2022 02:30	9.0	104.0	0.0	0.0	3.3	4.1	70.1	0.0	Pull and L/D Slip joint and landing joint	ODS



Start time	End time	Budget time hrs	Acc budget days	Target time hrs	Acc tech days	Plan time hrs	Act time hrs	Acc actual days	Down time	Description	Companies
18.Jun.2022 02:30	19.Jun.2022 04:00	14.0	104.6	0.0	0.0	16.0	25.5	71.2	0.0	Pull BOP and land on carrier	ODS
19.Jun.2022 04:00	19.Jun.2022 08:30	5.0	0.2	0.0	0.0	2.0	4.5	0.2	0.0	Move from Location [NO 34/9-1 S]	
19.Jun.2022 04:00	19.Jun.2022 04:00	4.0	104.8	0.0	0.0	0.0	0.0	71.3	0.0	Offline in AUX: M/U and RIH with WH cutting assembly	BH,ODS,Schlum
19.Jun.2022 04:00	19.Jun.2022 04:00	4.0	104.9	0.0	0.0	0.0	0.0	71.3	0.0	Offline in AUX: Latch onto and cut wellhead	BH,ODS,Schlum
19.Jun.2022 04:00	19.Jun.2022 04:00	4.0	105.1	0.0	0.0	0.0	0.0	71.3	0.0	Offline in AUX: POOH with Wellhead and Cutting assembly	BH,ODS,Schlum
19.Jun.2022 04:00	19.Jun.2022 07:30	0.0	105.1	0.0	0.0	1.0	3.5	71.3	0.0	Perform anchor handling (4 anchors left)	ODS
19.Jun.2022 04:00	19.Jun.2022 04:00	0.0	105.1	0.0	0.0	0.0	0.0	71.2	0.0	WOW	ODS
19.Jun.2022 04:00	19.Jun.2022 04:00	4.0	105.3	0.0	0.0	1.0	0.0	71.3	0.0	R/D riser handling equipment	ODS
19.Jun.2022 07:30	19.Jun.2022 08:30	5.0	105.5	0.0	0.0	1.0	1.0	71.4	0.0	Move out of 500m zone	ODS

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## App K Bit record (table)

WELL: NO 34/9-1 S

Run no	Bit size	Bit no	BHA no	Bit type	IADC code	Bit manufacturer
2	26"	1	2	XR+VE	115	Smith International
4	26"	2	4	XR+VEC	115	Smith International
7	17 1/2"	3	7	MDI619	M223	Smith International
8	17 1/2"	3rr1	8	MDI619	M223	Smith International
14	12 1/4"		14	XR+C	117	Smith International
16		6	16	SMITH BITS		Smith Bits
19	10 5/8"	7	19	MDSI616LBPX	423	Smith International
23	10 5/8"	7	23	MDSI616LBPX	423	Smith International
31	8 1/2"	7	31	SVH	215	Smith International
33	8 1/2"	7RR1	33	BIT		UNKNOWN
37	6"	8	37	SMITH BITS		Smith Bits
40	6"	8RR	40	SMITH BITS		Smith Bits
42	6"	8RR2	42	SMITH BITS		Smith Bits
44			44	SMITH BITS		Smith Bits
49			49	GF15DODV		Smith International
51			51	GF15DODV		Smith International

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Run no	Bit size	Bit no	BHA no	Serial no	Nozzles (n/32")				Flow area in2
					no x n	no x n	no x n	no x n	
2	26"	1	2	RG4406	2 x 22	2 x 20	x	x	1.356
4	26"	2	4	RK9587	1 x 22	2 x 20	1 x 19	x	1.325
7	17 1/2"	3	7	JV6314	2 x 16	7 x 14	x	x	1.325
8	17 1/2"	3rr1	8	JV6314	2 x 16	7 x 14	x	x	1.325
14	12 1/4"		14	RH9874	3 x 25	1 x 16	x	x	1.634
16		6	16	JP6857	3 x 16	3 x 18	x	x	1.335
19	10 5/8"	7	19	QF1460	3 x 16	3 x 15	x	x	1.335
23	10 5/8"	7	23	QF1460	3 x 16	3 x 15	x	x	1.335
31	8 1/2"	7	31	JV2158	5 x 11	x	x	x	0.464
33	8 1/2"	7RR1	33	JV2158	5 x 11	x	x	x	0.464
37	6"	8	37	JV9056	3 x 10	x	x	x	
40	6"	8RR	40	JV9056	3 x 10	x	x	x	0.23
42	6"	8RR2	42	JV9056	3 x 10	x	x	x	0.23
44			44		3 x 10	3 x 11	x	x	0.509
49			49		3 x 22	1 x 16	x	x	1.31
51			51		3 x 22	1 x 16	x	x	1.31

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Run no	Bit size	Pump rate l/min	Pump press bar	Depth in mMD	Depth out mMD	Form drld m	Total drld m	Drld hrs	Circ hrs	ROP m/hr
2	26"	5000.0	125.0	412.00	468.00	56.00	56.00	8.3	21.7	6.7
4	26"	4317.5	317.5	467.70	1300.00	832.30	834.50	16.9	26.5	49.2
7	17 1/2"	3500.0	90.0	1300.00	1303.00	3.00	132.00	0.1	12.0	30.0
8	17 1/2"	4700.0	336.0	1303.00	3460.00	2157.00	2157.00	41.1	48.0	52.5
14	12 1/4"									
16		4100.0	400.5	3460.00	3989.00	529.00	591.00	21.8	40.0	24.3
19	10 5/8"	3000.0	284.0	3989.00	3993.00	4.00	47.00	0.9	16.0	4.4
23	10 5/8"	3335.0	348.0	3989.00	4277.00	288.00	332.00	25.3	37.9	11.4
31	8 1/2"	1243.3	213.3	4322.00	4318.00	- 4.00	0.00	0.0	45.5	
33	8 1/2"	1200.0	164.0	4322.00	4367.00	45.00	45.00	15.2	47.3	3.0
37	6"	580.0	138.8	4367.00	4455.00	88.00	158.00	40.4	150.6	2.2
40	6"	500.0	105.0	4455.00	4455.00	0.00	0.00	0.0	8.3	
42	6"			4455.00	4455.00	0.00	56.00	0.0	7.8	
44										
49				2447.00	2487.00	40.00				
51				2447.00	2487.00	40.00				

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Run no	Bit size	Min WOB tonne	Max WOB tonne	Min RPM	Max RPM	Torque Min Nm	Torque Max Nm	Con drag Min 1000 1000 daN	Con drag Max 1000 1000 daN
2	26"	2.50	4.50	50.00	90.00	3.00	12.00		
4	26"	9.50	25.50	40.00	75.00	7.00	19.50		
7	17 1/2"	5.00	10.00	40.00	80.00	2.00	11.00		
8	17 1/2"	6.67	15.33	160.00	200.00	17.00	29.33		
14	12 1/4"								
16		5.00	16.50	70.00	200.00	15.50	36.00		
19	10 5/8"	2.00	5.50	65.00	80.00	9.00	12.50		
23	10 5/8"	13.00	14.33	146.67	146.67	24.00	24.67		
31	8 1/2"	3.00	7.00	46.67	86.67	5.33	12.33		
33	8 1/2"	7.50	10.00	135.00	150.00	7.50	9.50		
37	6"	3.80	5.00	100.00	116.00	5.00	8.40		
40	6"	0.00	1.00	10.00	40.00	4.00	6.00		
42	6"								
44									
49									
51									

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Run no	Bit size	I	O	DC	L	B	G	OC	RP
2	26"	2	1	WT	M	E	IN	NO	TD
4	26"								
7	17 1/2"	2	1	CT	N	X	0	NO	DTF
8	17 1/2"	3	1	CT	C	X	In	BT	TD
14	12 1/4"								
16		0	1	WT	G	X	IN	CT	TD
19	10 5/8"	1	1	WT	G	X	IN	BT	HP
23	10 5/8"	0	1	WT	G	X	IN	BT	TD
31	8 1/2"	0	1	BT	C	X	0	PN	HP
33	8 1/2"	2	1	BT	C	X	0	NO	TD
37	6"	0	1	WT	S	X	IN	JD	TD
40	6"	0	1	WT	S	X	IN	NO	TD
42	6"	0	1	WT	S	X	IN	NO	TD
44									
49									
51									



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Run no	Bit size	Remarks
2	26"	Drill 26" x 42" section to TD @ 473 mMD
4	26"	Drill 26" hole to TD at +/- 1300 m
7	17 1/2"	Drill 17 1/2" hole to section TD.
8	17 1/2"	Unplanned: Drill 17 1/2" section to TD with backup BHA
14	12 1/4"	Clean-out run to tag TOC inside 14" casing
16		Drill 12 1/4" x 13 1/2" section
19	10 5/8"	Drill 10 5/8x12 1/2" section
23	10 5/8"	Drill 10 5/8" x 12 1/4" section to TD Run#2
31	8 1/2"	Drill 8 1/2" section
33	8 1/2"	Drill 8 1/2" section to TD
37	6"	Drill 6" hole to corepoint or TD
40	6"	Dress-off and verify primary barrier with 6" BHA
42	6"	Unplanned: Dress off and verify primary barrier against reservoir
44		Dress-off and tag 2nd cement plug inside 9 7/8" casing
49		Dress-off and verify cement plug inside 14" casing (Primary and secondary Tryggvason Fm.)
51		Dress-off and tag 2nd cement plug inside 14" casing. Primary and secondary barrier to Lista fm.

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## App L BHA Assemblies

**WELLBORE:** NO 34/9-1 S

**BHA NO:** 2

**RUN TYPE:** Drilling run

**DESCRIPTION:** Drill 26" x 42" section to TD @ 473 mMD

**RUN NAME:** 1

String component	OD in	ID in	Length m	Acc length m	Comment
BIT	26.000		0.66	0.66	Hole opener grading:
HOLE OPENER	42.000	4.000	2.48	3.14	
BIT SUB	9.500	2.813	0.90	4.04	NP float
PONY COLLAR, NM	9.625	3.000	4.08	8.12	
X/O	9.125	3.500	0.41	8.53	
TELESCOPE	9.125	5.900	9.07	17.60	
DRILL COLLAR	9.500	3.000	73.58	91.18	
X-OVER	9.500	3.250	0.93	92.11	
DRILL COLLAR	8.250	3.000	71.79	163.90	
X-OVER	8.000	3.000	0.94	164.84	
HW DRILL PIPE	7.000	4.000	73.65	238.49	

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**BHA NO: 4**

**RUN TYPE:** Drilling run

**DESCRIPTION:** Drill 26" hole to TD at +/- 1300 m

**RUN NAME:** 2

String component	OD in	ID in	Length m	Acc length m	Comment
BIT	26.000	3.750	0.65	0.65	2.3m cement / 0.66 cement hours.
MOTOR STEERABLE	25.750	9.500	9.58	10.23	1.15 deg bend, A1125M3436SP
FLOAT SUB	9.500	3.187	0.66	10.89	NP Float
PONY COLLAR, NM	9.625	3.000	3.99	14.88	
STABILIZER, NM	25.750	3.000	2.44	17.32	
PONY COLLAR, NM	9.375	3.062	2.73	20.05	
XO	9.125	3.000	0.77	20.82	
ARC	10.000	3.000	5.81	26.63	arcVision LWD
MWD	9.250	5.900	8.51	35.14	TeleScope 900 Rhossili
XO	9.125	4.250	0.60	35.74	
PONY COLLAR, NM	9.375	3.000	2.78	38.52	
STABILIZER, NM	25.750	3.000	2.41	40.93	
PONY COLLAR, NM	8.875	3.000	4.24	45.17	
DRILL COLLAR, NM	9.312	3.000	7.96	53.13	
DRILL COLLAR	9.500	3.000	36.86	89.99	4 x 9 1/2" DC
XO	9.500	3.000	0.75	90.74	Bottleneck XO
DRILL COLLAR	8.250	3.000	54.47	145.21	6 x 8 1/4" DC
JAR	8.000	3.000	13.26	158.47	Jar & Running Pup
DRILL COLLAR	8.250	3.000	44.49	202.96	5 x 8 1/4" DC
XO	8.000	3.000	0.77	203.73	
HWDP	7.000	4.000	73.64	277.37	8 x 5 7/8" HWDP

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String component	OD in	ID in	Length m	Acc length m	Comment
DRILL PIPE	7.000	5.045	9.72	287.09	DP to surface

**BHA NO:** 7

**RUN TYPE:** Drilling run

**DESCRIPTION:** Drill 17 1/2" hole to section TD.

**RUN NAME:** 3

String component	OD in	ID in	Length m	Acc length m	Comment
BIT	17.500	3.750	0.45	0.45	YS619S Hyperblade, 13 chipped cutters on nose and outer part of cone.
POWERDRIVE ORBIT	17.250	9.250	6.13	6.58	
ARC	10.000	3.000	5.86	12.44	arcVision LWD
MWD	9.125	5.900	8.42	20.86	MWD
XO	9.500	4.000	0.65	21.51	
FLOAT SUB	9.313	3.250	0.90	22.41	AutoFill float valve
DRILL COLLAR, NM	9.625	3.000	17.12	39.53	2 x 9 1/2" NMDC
XO	9.563	3.000	0.94	40.47	Bottleneck XO
COLLAR	8.250	3.000	94.50	134.97	10 x 8 1/2" DC
JAR	8.000	3.000	12.26	147.23	Jar & Running Pup
COLLAR	8.250	3.000	44.49	191.72	5 x 8 1/2" DC
XO	8.000	3.000	0.77	192.49	
HWDP	7.000	4.000	73.64	266.13	8 x 5 7/8" HWDP
DRILL PIPE	7.000	5.045	9.72	275.85	DP to surface

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**BHA NO:** 8

**RUN TYPE:** Drilling run

**DESCRIPTION:** Unplanned: Drill 17 1/2" section to TD with backup BHA

**RUN NAME:** 4

String component	OD in	ID in	Length m	Acc length m	Comment
BIT	17.500	3.750	0.45	0.45	YS619S Hyperblade. Chipped teeth. mainly in cone and nose. 1 tooth on shoulder with BF. A couple of small spots with "crazings" on hard-facing.
POWERDRIVE ORBIT	17.250	9.250	6.13	6.58	
ARC	10.000	3.000	5.86	12.44	arcVision LWD
MWD	9.125	5.900	8.51	20.95	MWD
XO	9.500	4.000	0.60	21.55	
FLOAT SUB	9.313	3.250	0.90	22.45	AutoFill float valve
DRILL COLLAR, NM	9.625	3.000	17.12	39.57	2 x 9 1/2" NMDC
XO	9.563	3.000	0.94	40.51	Bottleneck XO
COLLAR	8.250	3.000	94.50	135.01	10 x 8 1/2" DC
JAR	8.000	3.000	12.26	147.27	Jar & Running Pup
COLLAR	8.250	3.000	44.49	191.76	5 x 8 1/2" DC
XO	8.000	3.000	0.77	192.53	
HWDP	7.000	4.000	73.64	266.17	8 x 5 7/8" HWDP
DRILL PIPE	7.000	5.045	9.72	275.89	DP to surface

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**BHA NO:** 14

**RUN TYPE:** BOP Test run

**DESCRIPTION:** Clean-out run to tag TOC inside 14" casing

**RUN NAME:** 3

String component	OD in	ID in	Length m	Acc length m	Comment
BIT	12.250	3.250	0.30	0.30	12 1/4" MT XR+ CR 117
BIT SUB W/FLOAT	8.250	2.750	0.60	0.90	NP float
SPIRAL DC	8.250	3.000	75.60	76.50	
X-OVER	8.000	3.000	1.23	77.73	6 5/8" Reg x XT57
HWDP	7.000	4.000	113.40	191.13	Range 2
DRILL PIPE	7.000	5.045	9.72	200.85	

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**BHA NO:** 16

**RUN TYPE:** Drilling run

**DESCRIPTION:** Drill 12 1/4" x 13 1/2" section

**RUN NAME:** 5

String component	OD in	ID in	Length m	Acc length m	Comment
BIT			0.33	0.33	Sharc
POWERDRIVE ORBIT	11.800	5.125	4.26	4.59	
X-OVER	8.250	2.750	0.00	4.59	
C-LINK TRANSMITTER	10.000	5.900	2.30	6.89	
X-OVER	9.500	3.250	0.76	7.65	
REAMER	13.500	3.400	6.27	13.92	XC Rhino Reamer
X-OVER	9.500	3.250	0.51	14.43	
C-LINK RECEIVER	9.125	5.900	2.28	16.71	
ARC	10.000	3.000	5.86	22.57	arcVISION
MWD	9.125	5.900	7.92	30.49	Rhosilli
SONICVISION	12.000	4.000	9.90	40.39	SonicScope
X-OVER	9.500	3.250	0.38	40.77	
DRILL COLLAR, NM	9.500	3.000	9.06	49.83	
REAMER	13.500	3.400	4.95	54.78	XS2 Rhino Reamer
SPIRAL DC	8.250	3.000	54.47	109.25	
JAR	8.000	3.000	13.26	122.51	JAR + running pup
SPIRAL DC	8.250	3.000	44.49	167.00	
X-OVER	8.000	3.000	0.77	167.77	
HW DRILL PIPE	7.000	4.000	73.79	241.56	

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**BHA NO:** 18

**RUN TYPE:** Logging CH run

**DESCRIPTION:** Perform IBC/CBL log for 11 3/4" Liner to verify P&A barriers

**RUN NAME:** 2

String component	OD in	ID in	Length m	Acc length m	Comment
USIT-E / IBC			5.06	5.06	
CMIR-BD			1.16	6.22	
ASLT-B			4.47	10.69	
CMIR-BD			1.15	11.84	
EDTC-B			1.98	13.82	
LEH-QT			1.06	14.88	



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**BHA NO:** 19

**RUN TYPE:** Drilling run

**DESCRIPTION:** Drill 10 5/8x12 1/2" section

**RUN NAME:** 6

String component	OD in	ID in	Length m	Acc length m	Comment
BIT	10.625	3.000	0.27	0.27	Sharc MDSi616
POWERDRIVE ORBIT	10.390	5.100	4.29	4.56	
X-OVER	8.340	4.500	0.54	5.10	
C-LINK TRANSMITTER	9.125	2.850	1.81	6.91	
X-OVER	8.250	3.500	0.72	7.63	
REAMER	12.250	3.400	5.57	13.20	XC Rhino Reamer
X-OVER	8.340	2.750	0.55	13.75	
C-LINK RECEIVER	9.125	2.750	2.29	16.04	
ARC	9.063	2.810	5.80	21.84	arcVISION
MWD	8.340	5.109	8.25	30.09	Rhosilli
SONICVISION	10.500	5.807	9.88	39.97	SonicScope
X-OVER	8.250	3.500	0.50	40.47	
DRILL COLLAR, NM	8.063	3.000	6.55	47.02	
REAMER	10.000	3.400	4.37	51.39	XS2 Rhino Reamer
FLOAT SUB	8.100	2.825	1.09	52.48	
FLOAT SUB	7.870	3.125	1.09	53.57	
HANDLING JOINT	8.100	2.825	3.06	56.63	
SPIRAL DC	8.250	3.000	54.47	111.10	
JAR	8.000	3.000	13.26	124.36	JAR + running pup
SPIRAL DC	8.250	3.000	44.49	168.85	
X-OVER	8.000	3.000	0.77	169.62	



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String component	OD in	ID in	Length m	Acc length m	Comment
HW DRILL PIPE	7.000	4.000	73.79	243.41	
DART SUB	7.000	2.500	0.83	244.24	

**BHA NO:** 21

**RUN TYPE:** BOP Test run

**DESCRIPTION:** Test BOP prior to drilling 10 5/8"x12 1/4" section

**RUN NAME:** 4

String component	OD in	ID in	Length m	Acc length m	Comment
BOP TEST TOOL					

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**BHA NO:** 23

**RUN TYPE:** Drilling run

**DESCRIPTION:** Drill 10 5/8" x 12 1/4" section to TD Run#2

**RUN NAME:** 8

String component	OD in	ID in	Length m	Acc length m	Comment
BIT	10.625	3.000	0.27	0.27	Sharc MDSi616
POWERDRIVE ORBIT	10.390	5.100	4.29	4.56	
X-OVER	8.340	4.500	0.54	5.10	
C-LINK TRANSMITTER	9.125	2.850	1.81	6.91	
X-OVER	8.250	3.500	0.72	7.63	
REAMER	12.250	3.400	5.57	13.20	XC Rhino Reamer
X-OVER	8.340	2.750	0.55	13.75	
C-LINK RECEIVER	9.125	2.750	2.29	16.04	
ARC	9.063	2.810	5.80	21.84	arcVISION
MWD	8.340	5.109	8.25	30.09	Rhosilli
SONICVISION	10.500	5.807	9.88	39.97	SonicScope
X-OVER	8.250	3.500	0.50	40.47	
DRILL COLLAR, NM	8.063	3.000	6.55	47.02	
REAMER	10.000	3.400	4.37	51.39	XS2 Rhino Reamer
FLOAT SUB	7.870	2.825	1.10	52.49	
FLOAT SUB	8.000	3.125	1.28	53.77	
HANDLING JOINT	8.100	2.825	3.06	56.83	
SPIRAL DC	8.250	3.000	54.47	111.30	
JAR	8.000	3.000	13.26	124.56	JAR + running pup
SPIRAL DC	8.250	3.000	44.49	169.05	
X-OVER	8.000	3.000	0.77	169.82	



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String component	OD in	ID in	Length m	Acc length m	Comment
HW DRILL PIPE	7.000	4.000	73.79	243.61	
DART SUB	7.000	2.500	0.83	244.44	

**BHA NO:** 24

**RUN TYPE:** Wellhead run

**DESCRIPTION:** Retrieve 14" WB

**RUN NAME:** 3

String component	OD in	ID in	Length m	Acc length m	Comment
BULLNOSE					
JET SUB					
WBRRT					

**BHA NO:** 27

**RUN TYPE:** BOP Test run

**DESCRIPTION:** Test BOP prior to drilling 8 1/2" section

**RUN NAME:** 5

String component	OD in	ID in	Length m	Acc length m	Comment
BOP TEST TOOL					

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**BHA NO:** 31

**RUN TYPE:** Drilling run

**DESCRIPTION:** Drill 8 1/2" section

**RUN NAME:** 9

String component	OD in	ID in	Length m	Acc length m	Comment
BIT	8.500	2.250	0.22	0.22	Hyperblade YZ519S 42m cement drilled in 2.9 hours. No formation drilled
BIT SUB W/FLOAT	8.188	2.810	1.21	1.43	
XO SUB	6.875	3.875	0.79	2.22	
ECOSCOPE	8.250	2.000	8.46	10.68	w/8-1/4" stab
TELESCOPE	6.900	5.109	7.81	18.49	
SONICVISION	8.250	5.157	10.12	28.61	
X-OVER	6.875	3.875	1.10	29.71	
DRILL COLLAR, NM	6.750	2.810	8.09	37.80	
DRILL COLLAR, NM	6.690	2.813	8.61	46.41	
FLOAT SUB	6.750	3.000	0.71	47.12	Pressure tested 350 Bar, NP float
FLOAT SUB	6.750	3.000	1.20	48.32	Pressure tested 350 Bar, NP float
PUP JOINT	6.375	2.750	2.60	50.92	Running PUP
DRILL COLLAR	6.750	2.750	36.73	87.65	
DRILL COLLAR	6.750	2.750	35.41	123.06	
HYDRAULIC JAR	6.500	2.750	12.42	135.48	w/Running PUP
DRILL COLLAR	6.750	2.750	26.36	161.84	
HW DRILL PIPE	6.500	3.000	111.70	273.54	
DRILL PIPE	6.625	4.276	19.19	292.73	
DART SUB	6.750	3.000	0.60	293.33	
DRILL PIPE	6.625	4.276	4000.00	4293.33	DP to surface

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**BHA NO:** 33

**RUN TYPE:** Drilling run

**DESCRIPTION:** Drill 8 1/2" section to TD

**RUN NAME:** 10

String component	OD in	ID in	Length m	Acc length m	Comment
BIT	8.500	2.250	0.22	0.22	Bit Type Hyperblade YZ519S
BIT SUB	6.750	2.813	1.21	1.43	
XO	6.875	2.813	0.79	2.22	
ECOSCOPE	8.250	2.000	8.46	10.68	
TELESCOPE	6.900	5.100	7.81	18.49	
SONIC TOOL-CBL	8.250	5.160	10.12	28.61	
XO	6.875	2.813	1.10	29.71	
DRILL COLLAR, NM	6.750	2.813	8.09	37.80	
DRILL COLLAR, NM	6.750	2.875	8.69	46.49	
FLOAT SUB	6.750	2.875	1.24	47.73	pressure test 350 bar
FLOAT SUB	6.750	2.844	0.65	48.38	pressure test 350 bar
PUP JOINT	6.375	2.750	2.99	51.37	
DRILL COLLAR STEEL	6.750	2.750	72.14	123.51	
JARS-HYD	6.500	2.750	9.47	132.98	
DRILL COLLAR STEEL	6.750	2.750	2.97	135.95	
HWDP	6.500	3.000	111.70	247.65	
DRILL PIPE	6.625	4.276	19.19	266.84	
DART SUB	6.750	3.000	0.60	267.44	
DRILL PIPE			1.00	268.44	

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**BHA NO:** 37

**RUN TYPE:** Drilling run

**DESCRIPTION:** Drill 6" hole to corepoint or TD

**RUN NAME:** 11

String component	OD in	ID in	Length m	Acc length m	Comment
BIT	6.000		0.19	0.19	Bit Type VX613
NEAR BIT STAB	5.840		1.69	1.88	
XO	4.750		0.45	2.33	
IMPULSE	5.250		10.25	12.58	
VPWD	5.250		4.84	17.42	
ADN	5.875		7.62	25.04	
DRILL COLLAR, NM	4.750		9.21	34.25	
FLOAT SUB	4.813		0.95	35.20	
FLOAT SUB	4.800		0.96	36.16	
DRILL COLLAR STEEL	4.750		107.23	143.39	
JARS-HYD	4.800		8.84	152.23	
DRILL COLLAR STEEL	4.750		27.62	179.85	
XO	4.750		1.23	181.08	
HWDP	5.250		113.49	294.57	
DRILL PIPE	5.250		38.50	333.07	
XO	5.000		1.53	334.60	
DRILL PIPE	6.625		18.00	352.60	
DART SUB	4.750		1.00	353.60	
DRILL PIPE	5.000		10.00	363.60	

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**BHA NO:** 38

**RUN TYPE:** Logging OH Run

**DESCRIPTION:** OH WL run #1 (MSIP)

**RUN NAME:** 1

String component	OD in	ID in	Length m	Acc length m	Comment
BNS-BOTTOM NOSE	3.375		0.14	0.14	
PPC1-B	4.300		1.99	2.13	
MAST-B	5.122		12.59	14.72	
PPC1-B	4.300		1.99	16.71	
SFT-270	3.375		1.22	17.93	
AH-184	3.375		1.22	19.15	
EDTC-B	3.625		1.98	21.13	
LEH-QT	3.375		1.06	22.19	

**BHA NO:** 39

**RUN TYPE:** Cement run

**DESCRIPTION:** M/U and RIH with 3 1/2" cement stinger and set P&A plug #1

**RUN NAME:** 2

String component	OD in	ID in	Length m	Acc length m	Comment
CEMENT STINGER	5.000	2.438	308.00	308.00	8 stands with 3.5" cement stinger and 4m muleshoe
XO SUB	6.625	2.310	1.07	309.07	XO Pin x Box NC38 to NC50 BB
FLOAT SUB	6.750	2.810	1.01	310.08	
DRILL PIPE	6.625	4.276	4144.90	4454.98	5" OD Drill Pipe, S-135, NC-50 DSTJ Conn's.



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**BHA NO:** 40

**RUN TYPE:** Drilling run

**DESCRIPTION:** Dress-off and verify primary barrier with 6" BHA

**RUN NAME:** 12

String component	OD in	ID in	Length m	Acc length m	Comment
BIT	6.000		0.19	0.19	Bit Type VX613.
NEAR BIT STAB	5.840		1.69	1.88	
XO	4.750		0.45	2.33	
IMPULSE	5.250		10.25	12.58	
VPWD	5.250		4.84	17.42	
DRILL COLLAR, NM	4.750		9.93	27.35	
FLOAT SUB	4.813		0.73	28.08	
FLOAT SUB	4.800		0.89	28.97	
PUP JOINT	5.875		2.97	31.94	
DRILL COLLAR STEEL	4.750		116.54	148.48	
JARS-HYD	4.800		8.84	157.32	
DRILL COLLAR STEEL	4.750		27.62	184.94	
XO	4.750		1.23	186.17	
HWDP	5.250		113.49	299.66	
XO	5.000		1.53	301.19	
DRILL PIPE	6.625		19.19	320.38	
DART SUB	4.750		0.60	320.98	
DRILL PIPE	5.000		10.00	330.98	



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**BHA NO:** 41

**RUN TYPE:** Cement run

**DESCRIPTION:** Unplanned: RIH with cement stinger and set P&A plug #2

**RUN NAME:** 3

String component	OD in	ID in	Length m	Acc length m	Comment
CEMENT STINGER	5.000	2.438	308.00	308.00	8 stands with 3.5" cement stinger and 4m muleshoe
XO SUB	6.625	2.310	1.07	309.07	XO Pin x Box NC38 to NC50 BB
FLOAT SUB	6.750	2.810	1.01	310.08	
DRILL PIPE	6.625	4.276	4144.90	4454.98	5" OD Drill Pipe, S-135, NC-50 DSTJ Conn's.

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**BHA NO:** 42

**RUN TYPE:** Clean-out run

**DESCRIPTION:** Unplanned: Dress off and verify primary barrier against reservoir

**RUN NAME:** 2

String component	OD in	ID in	Length m	Acc length m	Comment
BIT	6.000		0.19	0.19	Bit Type VX613.
NEAR BIT STAB	5.840		1.69	1.88	
XO	4.750		0.45	2.33	
IMPULSE	5.250		10.25	12.58	
VPWD	5.250		4.84	17.42	
DRILL COLLAR, NM	4.750		9.93	27.35	
FLOAT SUB	4.813		1.06	28.41	
FLOAT SUB	4.800		0.96	29.37	
PUP JOINT	5.875		2.97	32.34	
DRILL COLLAR STEEL	4.750		116.54	148.88	
JARS-HYD	4.800		8.84	157.72	
DRILL COLLAR STEEL	4.750		27.62	185.34	
XO	4.750		1.23	186.57	
HWDP	5.250		113.49	300.06	
XO	5.000		1.53	301.59	
DRILL PIPE	6.625		19.19	320.78	
DART SUB	4.750		0.60	321.38	
DRILL PIPE	5.000		10.00	331.38	

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**BHA NO:** 43

**RUN TYPE:** Cement run

**DESCRIPTION:** Set cement plug from OH and into 9 7/8" casing. Secondary barrier to Intra Sola fm and Primary and secondary barriers to limestone stringers in Rødby fm

**RUN NAME:** 4

String component	OD in	ID in	Length m	Acc length m	Comment
CEMENT STINGER	5.000	2.438	383.00	383.00	10 stands with 3.5" cement stinger and 4m muleshoe
XO SUB	6.625	2.310	1.07	384.07	XO Pin x Box NC38 to NC50 BB
FLOAT SUB	6.750	2.810	1.01	385.08	
DRILL PIPE	6.625	4.276	3980.92	4366.00	5" OD Drill Pipe, S-135, NC-50 DSTJ Conn's.

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**BHA NO:** 44

**RUN TYPE:** Clean-out run

**DESCRIPTION:** Dress-off and tag 2nd cement plug inside 9 7/8" casing

**RUN NAME:** 3

String component	OD in	ID in	Length m	Acc length m	Comment
BIT		2.250	0.23	0.23	Milled tooth bit
NEAR BIT STAB		3.000	1.85	2.08	with NP float
FLOAT SUB		3.000	0.71	2.79	with NPFV (pressure tested)
FLOAT SUB		3.000	1.20	3.99	with NPFV (pressure tested)
PUP		3.000	2.60	6.59	
DRILL COLLAR		2.750	72.14	78.73	
DRILL PIPE		4.276	19.19	97.92	
DART SUB		3.000	0.60	98.52	
DRILL PIPE		4.276	10.00	108.52	

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**BHA NO:** 45

**RUN TYPE:** Cut casing run

**DESCRIPTION:** Cut 9 7/8" casing

**RUN NAME:** 1

String component	OD in	ID in	Length m	Acc length m	Comment
TAPER MILL		2.250	1.38	1.38	
CUTTER		0.750	2.09	3.47	
STABILIZER		2.813	2.09	5.56	
STRING MAGNET		3.000	2.70	8.26	
FLOAT SUB		2.250	0.57	8.83	
PUP JT		2.250	2.96	11.79	
XO		2.813	1.12	12.91	
XO		2.250	0.61	13.52	
ULTRA MOTOR			9.59	23.11	
CIRCULATION SUB		1.875	0.56	23.67	
FLOAT SUB		2.250	1.00	24.67	
PUP JT		3.000	2.73	27.40	

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**BHA NO:** 46

**RUN TYPE:** Wellhead run

**DESCRIPTION:** M/U and RIH with seal assembly retrieval tool

**RUN NAME:** 5

String component	OD in	ID in	Length m	Acc length m	Comment
JET SUB			0.85	0.85	
PUP JT			3.68	4.53	
DRILL PIPE			9.40	13.93	5 7/8" DP single
XO SUB			0.30	14.23	
SPEAR PACK-OFF		2.750	0.95	15.18	
PUP JT		2.750	2.86	18.04	
DRILL PIPE			9.40	27.44	5 7/8" DP single
PUP JOINT			2.37	29.81	5 7/8" pup joint
SRT				29.81	

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**BHA NO:** 49

**RUN TYPE:** Clean-out run

**DESCRIPTION:** Dress-off and verify cement plug inside 14" casing (Primary and secondary Tryggvason Fm.)

**RUN NAME:** 4

String component	OD in	ID in	Length m	Acc length m	Comment
BIT			0.33	0.33	
NB STAB W/FLOAT		3.250	1.52	1.85	
SPIRAL DC		3.000	75.60	77.45	
XO		3.000	1.23	78.68	6 5/8" Reg x XT57
HWDP		4.000	113.40	192.08	
DRILL PIPE		5.045	9.72	201.80	

**BHA NO:** 51

**RUN TYPE:** Clean-out run

**DESCRIPTION:** Dress-off and tag 2nd cement plug inside 14" casing. Primary and secondary barrier to Lista fm.

**RUN NAME:** 5

String component	OD in	ID in	Length m	Acc length m	Comment
BIT			0.33	0.33	
NB STAB W/FLOAT		3.250	1.52	1.85	
SPIRAL DC		3.000	75.60	77.45	
XO		3.000	1.23	78.68	6 5/8" Reg x XT57
HWDP		4.000	113.40	192.08	
DRILL PIPE		5.045	9.72	201.80	



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**BHA NO:** 52

**RUN TYPE:** Cut casing run

**DESCRIPTION:** M/U and RIH with 14in casing cutter

**RUN NAME:** 2

String component	OD in	ID in	Length m	Acc length m	Comment
TAPER MILL		3.500	1.62	1.62	
XO		3.000	0.47	2.09	6 5/8 Reg pin x 6 5/8 Reg pin
CUTTER		0.750	3.74	5.83	
STABILIZER		2.750	2.13	7.96	
STRING MAGNET		3.000	2.82	10.78	
FLOAT SUB		2.875	1.02	11.80	Non ported
XO		2.875	1.19	12.99	XT57 box x 6 5/8 Reg pin
PUP JT		4.000	2.85	15.84	
XO		2.813	1.12	16.96	4 1/2" IF Box x XT57 pin
XO		2.250	0.61	17.57	
ULTRA MOTOR			9.59	27.16	
CIRCULATION SUB		1.875	0.59	27.75	
FLOAT SUB		2.250	0.48	28.23	
PUP JT		3.000	2.91	31.14	

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**BHA NO:** 53

**RUN TYPE:** Wellhead run

**DESCRIPTION:** RIH with SRT and spear to pull 14" SA and casing

**RUN NAME:** 6

String component	OD in	ID in	Length m	Acc length m	Comment
BULL NOSE		3.500	0.38	0.38	
SPEAR PACK-OFF		2.750	0.94	1.32	
XO		2.750	1.23	2.55	NC50 box x 6 5/8 Reg pin
SPEAR			1.93	4.48	Hydraulic casing spear
BUMPER SUB		3.000	2.62	7.10	Lubr Bumper sub
PUP JOINT		3.000	2.79	9.89	5 7/8" pup joint
HWDP		4.000	28.80	38.69	5 7/8" HWDP
SRT			9.07	47.76	

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**BHA NO:** 56

**RUN TYPE:** Cut casing run

**DESCRIPTION:** Cut and pull LPWHHH/HPWHH

**RUN NAME:** 3

String component	OD in	ID in	Length m	Acc length m	Comment
BULLNOSE	9.000	2.750	0.95	0.95	
STABILIZER	17.500	2.750	1.83	2.78	
CUTTER	17.250	0.625	3.71	6.49	
EXTENSION	8.000	3.000	0.48	6.97	
EXTENSION	8.000	3.500	1.02	7.99	
PULLING TOOL	26.000	3.500	5.29	13.28	UWRS
BUMPER SUB	8.250	3.500	2.75	16.03	
DRILL COLLAR	8.250	2.800	72.00	88.03	6 5/8" Reg box x 6 5/8" Reg pin
XO				88.03	
HWDP	7.000	4.000	110.00	198.03	5 7/8" HWDP

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## App M Drilling fluids

See table 1-4 for details of the drilling fluid.

## App N Cementing data (table)

### *Casing/Liner cementing*

**WELLBORE ID:** NO 34/9-1 S

**CASING SIZE:** 36"

**STAGE CEMENTING:** 0

**REPORT DATE:** 11.Apr.2022

**THEORETHICAL TOC:** 412 mMD

**EVALUATED TOC:** mMD

**EVALUATED BY BOND LOG:**

**LINER ROTATION PLANNED:** N

**LINER ROTATION ACHIEVED:** N

**REMARKS:**

#### **Objective:**

4/11/2022 12:00:00 AM

Primary: Achieve Top of Cement at seabed

Secondary: Provide structural support for drilling ahead

#### **Execution:**

4/11/2022 12:00:00 AM

Excess was increased from 300% to 350% resulted that slurry volume increased from 54.6m<sup>3</sup> to 61.5m<sup>3</sup>

Job went according to the plan.

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Fluids pumped	Type	Density g/cm3	Volume m3	Pump Rate l/min	Pump Press bar	Return	Component	Quantity	Unit	Density g/cm3	Premixed in mixwater
Preflush	Sea Water	1.03	55.0	3000							
Slurry	#5-Slurry ST (IDWS)	1.70	61.5	900			Class C Cement	100.00	%	3.12	N
							D240 Dispersant	2.00	kg/100kg	1.13	N
							D242 Antifoam	0.10	kg/100kg	0.90	N
							Seawater	65.91	kg/100kg	1.03	N
Displacement	Sea Water	1.03	30.5	3000							

#### Evaluation:

4/11/2022 12:00:00 AM

Job went according to the plan

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**CASING SIZE:** 20"

**STAGE CEMENTING:** 0

**REPORT DATE:** 14.Apr.2022

**THEORETHICAL TOC:** 412 mMD

**EVALUATED TOC:** mMD

**EVALUATED BY BOND LOG:**

**LINER ROTATION PLANNED:** N

**LINER ROTATION ACHIEVED:** N

**REMARKS:**

**Objective:**

4/14/2022 12:00:00 AM

Primary: Provide sufficient shoe integrity for drilling ahead

Secondary: Provide structural support for the wellhead and BOP by having planned TOC at seabed

**Execution:**

4/14/2022 12:00:00 AM

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Fluids pumped	Type	Density g/cm3	Volume m3	Pump Rate l/min	Pump Press bar	Return	Component	Quantity	Unit	Density g/cm3	Premixed in mixwater
Preflush	Sea Water	1.03	206.0	3000							
Spacer before	MUDPUSH II	1.50	20.0	3000			D244 Viscosifier	3.30	kg/m3	1.50	Y
							D242 Antifoam	1.00	l/m3	0.90	Y
							DRILL WATER	842.57	l/m3	1.00	Y
							D31 BARITE	655.80	kg/m3	4.25	Y
Lead	#21-Slurry SHFP (IDWS)	1.65	102.0	900			D240 Dispersant	4.20	l/100kg	1.13	Y
							D242 Antifoam	0.10	l/100kg	0.90	Y
							D155 Antisedimentation agent	24.00	l/100kg	1.40	Y
							D193 Fluid Loss Control Additive	3.00	l/100kg	1.00	Y
							D81 Liquid Retarder	1.60	l/100kg	1.22	Y
							D903 Cement Class C	100.00	%	3.12	Y
Tail	#21-Slurry SHFP (IDWS)	1.65	81.0	900			D240 Dispersant	4.00	l/100kg	1.13	N
							D242 Antifoam	0.10	l/100kg	0.90	N
							D155 Antisedimentation agent	24.00	l/100kg	1.40	N
							D193 Fluid Loss Control Additive	3.20	l/100kg	1.00	N
							D903 Cement Class C	100.00	%	3.12	N
Spacer after	MUDPUSH II	1.50	2.4	3000			D244 Viscosifier	3.30	kg/m3	1.50	Y
							D242 Antifoam	1.00	l/m3	0.90	Y
							D31 BARITE	655.80	kg/m3	4.25	Y
							Drill Water	842.57	l/m3	1.00	Y



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**Evaluation:** 4/14/2022 12:00:00 AM

**CASING SIZE:** 36"

**STAGE CEMENTING:** 0

**REPORT DATE:** 16.Apr.2022

**THEORETHICAL TOC:** 412 mMD

**EVALUATED TOC:** mMD

**EVALUATED BY BOND LOG:**

**LINER ROTATION PLANNED:** N

**LINER ROTATION ACHIEVED:** N

**REMARKS:**

**Objective:**

4/16/2022 12:00:00 AM

Check for TOC outside 36" conductor

Grout outside 36" conductor

**Execution:**

4/16/2022 12:00:00 AM

Mix and pumped 17m3 G-cement slurry at 1.95sg until Silo 110 is empty

Fluids pumped	Type	Density g/cm3	Volume m3	Pump Rate l/min	Pump Press bar	Return	Component	Quantity	Unit	Density g/cm3	Premixed in mixwater
Slurry	#5-Slurry ST (IDWS)	1.95	17.0	600	50		D242 Antifoam	0.10	l/100kg	0.90	N
							D77 Liquid Accelerator	0.50	l/100kg	1.38	N
							Class G Cement	100.00	%	3.20	N
Displacement	Sea Water	1.03	1.5	500	40						

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**Evaluation:**

4/16/2022 12:00:00 AM

Job went according to Plan

**REPORT DATE:** 17.Apr.2022

**THEORETHICAL TOC:** 412 mMD

**EVALUATED TOC:** mMD

**EVALUATED BY BOND LOG:**

**LINER ROTATION PLANNED:** N

**LINER ROTATION ACHIEVED:** N

**REMARKS:**

**Objective:**

4/17/2022 12:00:00 AM

Check for "TOC" outside 36" conductor

Grout outside 36" conductor with cement, Pump ca 18 m3 C cement

**Execution:**

4/17/2022 12:00:00 AM

Mixed and pump 19.5 m3 slurry until silo was empty of c-cement.

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Fluids pumped	Type	Density g/cm3	Volume m3	Pump Rate l/min	Pump Press bar	Return	Component	Quantity	Unit	Density g/cm3	Premixed in mixwater
Slurry	#5-Slurry ST (IDWS)	1.70	19.5	700	25		Class C Cement	100.00	%	3.12	N
							D240 Dispersant	2.00	l/100kg	1.13	N
							D242 Antifoam	0.10	l/100kg	0.90	N
Displacement	Sea Water	1.03	1.0	850	35						

#### Evaluation:

4/17/2022 12:00:00 AM

Job went according to the plan

**CASING SIZE:** 14"

**STAGE CEMENTING:** 0

**REPORT DATE:** 22.Apr.2022

**THEORETHICAL TOC:** 1750 mMD

**EVALUATED TOC:** 1474 mMD

**EVALUATED BY BOND LOG:** Bond log

**LINER ROTATION PLANNED:** N

**LINER ROTATION ACHIEVED:** N

**REMARKS:**

#### Objective:

Place 1712 m of hydraulic isolating cement in the 14 x 17.5 annulus

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### Execution:

Not possible to pump the given slurry recipe.  
Reduced density to 1.92 sg with ca 400 lpm.

Fluids pumped	Type	Density g/cm3	Volume m3	Pump Rate l/min	Pump Press bar	Return	Component	Quantity	Unit	Density g/cm3	Premixed in mixwater
Slurry	#18-Slurry HTGT (IDWS)	1.95	117.0	400	20		D240 Dispersant	3.20	l/100kg		N
							D242 Antifoam	0.10	l/100kg		N
							D155 Antisedimentation agent	8.00	l/100kg		N
							D168 UNIFLAC L	3.80	l/100kg		N
							D75 Silicate Additive	1.00	l/100kg		N
							Freshwater	40.30	l/100kg		N
							Cement Silica Blend	101.32	l/100kg		N
Spacer before	SHIELDBOND spacer	1.50	20.0	2500	50		D241A	21.00	l/m3		Y
							B557	21.00	l/m3		Y
							CEMFIT Shield	20.00	kg/m3		Y
							D240 Dispersant	10.00	l/m3		Y
							D244 Viscosifier	2.00	kg/m3		Y
							D242 Antifoam	1.00	l/m3		Y
							D31 BARITE	647.95	kg/m3		Y
							Freshwater	780.17	kg/m3		Y
Spacer after	SHIELDBOND spacer	1.50	1.5	2500	60		D241A	21.00	l/m3		Y
							B557	21.00	l/m3		Y
							CEMFIT Shield	20.00	kg/m3		Y



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Fluids pumped	Type	Density g/cm3	Volume m3	Pump Rate l/min	Pump Press bar	Return	Component	Quantity	Unit	Density g/cm3	Premixed in mixwater
							D240 Dispersant	12.00	l/m3		Y
							D244 Viscosifier	2.00	kg/m3		Y
							D242 Antifoam	1.00	l/m3		Y
							Freshwater	780.17			Y

**Evaluation:**

Struggled with not enough mixing energy the whole job.

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**CASING SIZE:** 11 3/4"  
**STAGE CEMENTING:** 0  
**REPORT DATE:** 30.Apr.2022  
**THEORETHICAL TOC:** 3477 mMD  
**EVALUATED TOC:** 3450 mMD  
**EVALUATED BY BOND LOG:** Bond log  
**LINER ROTATION PLANNED:** Y  
**LINER ROTATION ACHIEVED:** Y  
**REMARKS:**

**Objective:**

4/30/2022 12:00:00 AM

**Execution:**

4/30/2022 12:00:00 AM

Fluids pumped	Type	Density g/cm3	Volume m3	Pump Rate l/min	Pump Press bar	Return	Component	Quantity	Unit	Density g/cm3	Premixed in mixwater
Spacer before	SHIELDBOND spacer	1.75	20.0	1850	115						
Tail	#17-Slurry HTGT (IDWS)	1.95	12.9	400	35						
Spacer after	SHIELDBOND spacer	1.75	1.5	1000	38						

**Evaluation:**

4/30/2022 12:00:00 AM

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**CASING SIZE:** 9 7/8"

**STAGE CEMENTING:** 0

**REPORT DATE:** 11.May.2022

**THEORETHICAL TOC:** 4217.3 mMD

**EVALUATED TOC:** mMD

**EVALUATED BY BOND LOG:**

**LINER ROTATION PLANNED:**

**LINER ROTATION ACHIEVED:**

**REMARKS:**

**Objective:**

5/11/2022 12:00:00 AM

**Execution:**

5/11/2022 12:00:00 AM

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Fluids pumped	Type	Density g/cm3	Volume m3	Pump Rate l/min	Pump Press bar	Return	Component	Quantity	Unit	Density g/cm3	Premixed in mixwater
Spacer before	SHIELDBOND spacer	1.96	15.0	300	17		D241A	21.00	l/m3	0.81	N
							B557	21.00	l/m3	0.99	N
							D244 Viscosifier	1.00	kg/m3	1.50	N
							D242 Antifoam	1.00	l/m3	0.90	N
							BARITE	1248.56	kg/m3	4.25	N
							B151 High-Temperature Retarder	16.00	l/m3	1.13	N
							B143 Antifoam	20.00	kg/m3	1.80	N
							Fresh water	635.58	l/m3	1.00	N
Spacer before #2	Spacer OBM (IDWS)	2.10	8.5	300	15		D241A	21.00	l/m3	0.81	N
							B557	21.00	l/m3	0.99	N
							D244 Viscosifier	1.40	kg/m3	1.50	N
							D242 Antifoam	1.00	l/m3	0.90	N
							BARITE	1442.92	kg/m3	4.25	N
							B151 High-Temperature Retarder	16.00	l/m3	1.13	N
							Fresh water	600.72	l/m3	1.00	N
Tail	#18-Slurry HTGT (IDWS)	2.15	8.1	400	23						

#### Evaluation:

5/11/2022 12:00:00 AM



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**CASING SIZE: 7"**

**STAGE CEMENTING: 0**

**REPORT DATE: 25.May.2022**

**THEORETHICAL TOC: 4244 mMD**

**EVALUATED TOC: mMD**

**EVALUATED BY BOND LOG:**

**LINER ROTATION PLANNED: Y**

**LINER ROTATION ACHIEVED: Y**

**REMARKS:**

**Objective:**

5/25/2022 12:00:00 AM

Primary: Pump 5.0 m3 of hydraulically isolating cement in the 7" x 8-1/2" annulus

Secondary: Provide sufficient shoe integrity for drilling the 6" section.

**Execution:**

5/25/2022 12:00:00 AM

Spacer 2.1 SG

Batchmixed 2.15 SG Slurry

Fluids pumped	Type	Density g/cm3	Volume m3	Pump Rate l/min	Pump Press bar	Return	Component	Quantity	Unit	Density g/cm3	Premixed in mixwater
Spacer before	MUDPUSH II	2.10	7.5	800	70		D241A	21.00	l/m3	0.81	Y
							B557	21.00	l/m3	0.99	Y
							DRILL WATER	600.72	l/m3	1.00	Y

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Fluids pumped	Type	Density g/cm3	Volume m3	Pump Rate l/min	Pump Press bar	Return	Component	Quantity	Unit	Density g/cm3	Premixed in mixwater
							D244 Viscosifier	1.40	kg/m3	1.50	Y
							D242 Antifoam	0.10	l/100kg	0.90	Y
							B151 High-Temperature Retarder	16.00	l/m3	1.13	Y
							D31 BARITE	1442.92	kg/m3	4.25	Y
Tail	#18-Slurry HTGT (IDWS)	2.15	5.0	600	50		DRILL WATER	39.46	l/100kg	1.00	Y
							D240 Dispersant	5.00	l/100kg	1.13	Y
							D242 Antifoam	0.10	l/100kg	0.90	Y
							D155 Antisedimentation agent	9.00	l/100kg	1.40	Y
							D168 UNIFLAC L	2.50	l/100kg	1.08	Y
							D194 Liquid Trifunctional Additive	2.80	l/100kg	1.31	Y
							D66 Silica Flour	35.00	%	2.65	Y
							D176High Temperature Expanding Additive	2.00	%	3.54	Y
							D157 Weighting Agent	40.00	%	4.80	Y
							Class G Cement	100.00	%	3.21	Y
Spacer after	MUDPUSH II	2.10	2.5	800	70		D241A	21.00	l/m3	0.81	Y
							B557	21.00	l/m3	0.99	Y
							DRILL WATER	600.72	l/100kg	1.00	Y
							D244 Viscosifier	1.40	kg/m3	1.50	Y
							D242 Antifoam	1.00	l/m3	0.90	Y



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Fluids pumped	Type	Density g/cm3	Volume m3	Pump Rate l/min	Pump Press bar	Return	Component	Quantity	Unit	Density g/cm3	Premixed in mixwater
							B151 High-Temperature Retarder	16.00	l/m3	1.13	Y
							D31 BARITE	1442.92	kg/m3	4.25	Y

**Evaluation:**

5/25/2022 12:00:00 AM

Job went according to the plan

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## Plugging

**WELLBORE ID:** NO 34/9-1 S

**REPORT DATE:** 05.Jun.2022

**PLUG NO:** 1

**TOP DEPTH:** 4355

**BOTTOM DEPTH:** 4455

**CASING SIZE:** 7"

**HOLE DIAMETER:** 6"

**CEMENTING TYPE:**

**REMARKS:** Primary barrier against Sola siltstone in 6" reservoir section. Theoretical TOC inside liner at 4355m. Tagged deep at 4410m which was 5m below potential influx zone (Sola siltstone) in reservoir. A new plug was needed to place primary barrier against reservoir.

### Objective:

6/5/2022 12:00:00 AM

### Execution:

6/5/2022 12:00:00 AM

Fluids pumped	Type	Density g/cm3	Volume m3	Pump Rate l/min	Pump Press bar	Return	Component	Quantity	Unit	Density g/cm3	Premixed in mixwater
Spacer before	MUDPUSH II	2.10	6.5	800	72						
Slurry	#18-Slurry HTGT (IDWS)	2.15	5.0	550	65						
Spacer after	MUDPUSH II	2.10	1.5	500	50						

### Evaluation:

6/5/2022 12:00:00 AM

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**REPORT DATE:** 08.Jun.2022

**PLUG NO:** 2

**TOP DEPTH:** 4310

**BOTTOM DEPTH:** 4410

**CASING SIZE:** 7"

**HOLE DIAMETER:** 6"

**CEMENTING TYPE:**

**REMARKS:** Plug 1 second attempt

**Objective:**

6/8/2022 12:00:00 AM

**Execution:**

6/8/2022 12:00:00 AM

Fluids pumped	Type	Density g/cm3	Volume m3	Pump Rate l/min	Pump Press bar	Return	Component	Quantity	Unit	Density g/cm3	Premixed in mixwater
Spacer before	MUDPUSH II	2.10	6.5	700	60						
Slurry	#18-Slurry HTGT (IDWS)	2.15	6.0	620	65						
Spacer after	MUDPUSH II	2.10	1.5	700	60						

**Evaluation:**

6/8/2022 12:00:00 AM

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**REPORT DATE:** 10.Jun.2022

**PLUG NO:** 3

**TOP DEPTH:** 4066

**BOTTOM DEPTH:** 4366

**CASING SIZE:** 7"

**HOLE DIAMETER:** 6"

**CEMENTING TYPE:**

**REMARKS:**

**Objective:**

6/10/2022 12:00:00 AM

**Execution:**

6/10/2022 12:00:00 AM

Fluids pumped	Type	Density g/cm3	Volume m3	Pump Rate l/min	Pump Press bar	Return	Component	Quantity	Unit	Density g/cm3	Premixed in mixwater
Spacer before	MUDPUSH II	2.10	6.5	700	60						
Slurry	#18-Slurry HTGT (IDWS)	2.15	9.2	620	70						
Spacer after	MUDPUSH II	2.10	1.5	700	60						

**Evaluation:**

6/10/2022 12:00:00 AM

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**REPORT DATE:** 16.Jun.2022

**PLUG NO:** 5

**TOP DEPTH:** 1605

**BOTTOM DEPTH:** 1805

**CASING SIZE:** 14"

**HOLE DIAMETER:** 14"

**CEMENTING TYPE:**

**REMARKS:**

**Objective:**

Place 200m cement plug above EZSV

**Execution:**

Job executed as per design

Fluids pumped	Type	Density g/cm3	Volume m3	Pump Rate l/min	Pump Press bar	Return	Component	Quantity	Unit	Density g/cm3	Premixed in mixwater
Spacer before	MUDPUSH II	1.50	6.5	2500	60						
Slurry	#17-Slurry HTGT (IDWS)	1.95	15.6	400	25						
Spacer after	MUDPUSH II	1.50	1.5	2500	65						

**Evaluation:**

6/16/2022 12:00:00 AM

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**REPORT DATE:** 18.Jun.2022

**PLUG NO:** 6

**TOP DEPTH:** 600

**BOTTOM DEPTH:** 700

**CASING SIZE:** 20"

**HOLE DIAMETER:** 26"

**CEMENTING TYPE:**

**REMARKS:**

**Objective:**

Place 17.8m<sup>3</sup> (~100\* m) cementplug inside the 20" casing on top of a bridge plug to permanently abandon the well.

**Execution:**

6/18/2022 12:00:00 AM

Fluids pumped	Type	Density g/cm <sup>3</sup>	Volume m <sup>3</sup>	Pump Rate l/min	Pump Press bar	Return	Component	Quantity	Unit	Density g/cm <sup>3</sup>	Premixed in mixwater
Slurry	#5-Slurry ST (IDWS)	1.95	17.8	600	20						

**Evaluation:**

6/18/2022 12:00:00 AM



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## Squeeze

**WELLBORE ID:** NO 34/9-1 S

**REPORT DATE:** 04.May.2022

**SQUEEZE NO:**

**TOP DEPTH:**

**BOTTOM DEPTH:**

**CASING SIZE:** 11 3/4"

**HOLE DIAMETER:**

**CEMENTING TYPE:**

**REMARKS:**

### Objective:

5/4/2022 12:00:00 AM

### Execution:

5/4/2022 12:00:00 AM

Fluids pumped	Type	Density g/cm3	Volume m3	Pump Rate l/min	Pump Press bar	Return	Component	Quantity	Unit	Density g/cm3	Premixed in mixwater
Spacer before	SHIELDBOND spacer	1.96	6.5	1500	50						
Slurry	Slurry 11 - GTLLT (Main)	1.97	6.0	600	55						
Spacer after	SHIELDBOND spacer	1.96	1.5	1500	55						

### Evaluation:

5/4/2022 12:00:00 AM

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**REPORT DATE:** 18.May.2022

**SQUEEZE NO:**

**TOP DEPTH:**

**BOTTOM DEPTH:**

**CASING SIZE:** 9 7/8"

**HOLE DIAMETER:**

**CEMENTING TYPE:**

**REMARKS:**

**Objective:**

5/18/2022 12:00:00 AM

**Execution:**

5/18/2022 12:00:00 AM

Final well report,  
Pilot well NO 34/9-U-1  
and Exploration well NO 34/9-1 S Cambozola

Doc. No. 2022-013511

Valid from: Dec 2022

Rev. no.: 0

Fluids pumped	Type	Density g/cm3	Volume m3	Pump Rate l/min	Pump Press bar	Return	Component	Quantity	Unit	Density g/cm3	Premixed in mixwater
Spacer before	MUDPUSH II	2.10	8.0	500	30		D241A	21.00	l/m3	0.81	N
							B557	21.00	l/m3	0.99	N
							D244 Viscosifier	1.20	kg/m3	1.50	N
							D242 Antifoam	1.00	l/m3	0.90	N
							BARITE	1443.00	kg/m3	4.25	N
							B151 High-Temperature Retarder	16.00	l/m3	1.13	N
Slurry	#18-Slurry HTGT (IDWS)	2.15	8.5	300	30		D240 Dispersant	5.00	l/100kg	1.13	N
							D242 Antifoam	1.00	l/100kg	0.90	N
							D155 Antisedimentation agent	9.00	l/100kg	1.40	N
							D168 UNIFLAC L	2.50	l/100kg	1.08	N
							D194 Liquid Trifunctional Additive	3.10	l/100kg	1.31	N
							D157 Weighting Agent	40.00	%	4.80	N

#### Evaluation:

5/18/2022 12:00:00 AM

## Enclosures

1. Completion log NO 34/9-U-1
2. Completion log NO 34/9-1 S