

1.4.2 *Drilling fluids*

Table 1.2 Drilling fluids summary

Section	Section TD [m MD, drillers depth]	Max mud weight [g/cm ³]	Mud type
36"	280.0	1.05	Spud Mud/WBM
12 ¼ Pilot	640.0	1,08	Spud Mud/WBM
17 ½"	640.0	1.08	Spud Mud/WBM
12 ¼"	1695.0	1.35	KCL/Polymer/Glycol
8 ½"	1905.0	1.20	KCL/Polymer/Glycol

Table 2.1.3 Sample information

Sample no	Bottle no.	Fluid type	Sampling depth m MD	Drawdown during sampling bar	Sample volume cc	Water drained cc	Used for analysis cc	Sample left in bottle cc	Comments
1B-4a	TS-51403	Mud/oil	1716.8	124	400	0			Contained gas, no water and mud
1B-4b	TS-28705	Gas/oil	1716.8		100	100		Empty	Needle valve damaged by mud particles
1A-1a-1	TS-47504	Oil	1720.5	8	3700	2010	25	1665	
1A-1a-2	0.5 L Glass	Oil/water	1720.5		500		40	460	
1A-1b	TS-111102	Oil	1720.5	8	Approx 400	Approx 315	85	70	
1A-1c	TS-93404	Oil	1720.5	8	Approx 400	Approx 250	150	Empty	
1A-1d	TS-64603	Oil/water	1720.5	8	Approx 400	Approx 155	125	120	
1A-2a	TS-61403	Water	1736.0				15		Pressurised water sample
1A-2b	TS-110801	Water	1736.0				15		Pressurised water sample
1A-2c	TS-109401	Water	1736.0				40		Pressurised water sample
1A-2d-1	1L Glass	Water	1736.0		1000			1000	Sample acidified with H ₂ SO ₄
1A-2d-2	1L Glass	Water	1736.0		1000			1000	Sample acidified with H ₂ SO ₄
1A-2d-3	1L Plastic	Water	1736.0		250			250	
1A-2d-4	1L Plastic	Water	1736.0		1000		15	985	
1B-1a-1	TS-108902	Mud/oil	1742.6	140	270	270	20	Empty	Water based mud. Trace of oil
1B-1a-2	TS-68502	Mud/oil	1742.6		500	500		Empty	Water based mud. Trace of oil
1B-1a-3	Glass Bottle	Mud/oil	1742.6						Thin layer of oil on the top
1B-1a-4	Glass Bottle	Mud/oil	1742.6						Thin layer of oil on the top
1B-1b-1	TS-109603	Mud/oil	1742.6	140	110	60	50	Empty	50 cc oil and 60 cc water based mud
1B-1b-2	XAMPLE 50326	Mud/oil	1742.6						Sent to West Lab on order by Statoil
1B-1b-3	Glass Bottle	Mud/oil	1742.6						Thin layer of oil on the top
1B-3a	TS-18209	Mud/oil	1769.9		Empty			Empty	Valve on backside was damaged. No sample
1B-3b	TS-109301	Mud/oil	1769.9		200	200		Empty	Water based mud. Trace of oil.
1B-2a	TS-99105	Mud/oil	1781.7		100	100		Empty	Water based mud. Trace of oil.
1B-2b	TS-97302	Mud/oil	1781.7		250	250		Empty	Water based mud. Trace of oil.

All drained water samples were sent to Intertek West Lab AS for analyses.

Table 4.8 Pressure points

No	Wireline DEPTHS			Hydrostatic press.before bar	Eqv mud weight g/cc	Formation pressure (ref. RKB)		Hydrostatic press.after bar	Eqv mud weight g/cc	Temp. degr C	Mobility md/cP	Comments
	m MD	m TVD RT	m TVD MSL			bar	g/cc					
MDT run 1A - Pretests with probe												
1	1717.100	1717.100	1668.100	205.990	1.223	197.046	1.170	206.020	1.223	64.7	n/a	Tight
2	1717.600	1717.600	1668.600	206.076	1.223	192.673	1.143	206.080	1.223	64.9	0.60	Supercharged
3	1718.000	1718.000	1669.000	206.125	1.223	189.745	1.126	206.116	1.223	65.0	1.60	Supercharged
4	1720.300	1720.300	1671.300	206.388	1.223	188.641	1.118	206.380	1.223	65.3	6.60	Supercharged
5	1721.500	1721.500	1672.500	206.520	1.223	188.166	1.114	206.520	1.223	65.7	7.60	Good
6	1722.000	1722.000	1673.000	206.631	1.223	190.392	1.127	206.628	1.223	65.9	0.30	Supercharged
7	1722.800	1722.800	1673.800	206.671	1.223	190.212	1.125	206.670	1.223	66.2	1.30	Supercharged
8	1724.900	1724.900	1675.900	206.921	1.223	193.177	1.142	206.920	1.223	66.7	0.30	Supercharged
9	1726.900	1726.900	1677.900	207.160	1.223			207.160	1.223	66.8	0.07	tight
10	1727.800	1727.800	1678.800	207.266	1.223			207.300	1.223	67.6		tight
11	1724.900	1724.900	1675.900	206.895	1.223	193.172	1.142	206.910	1.223	66.8	0.30	Supercharged
12	1729.900	1729.900	1680.900	207.500	1.223	194.190	1.144	207.518	1.223	67.5	0.10	Supercharged
13	1730.600	1730.600	1681.600	207.592	1.223	192.255	1.132	207.600	1.223	67.9	0.60	Supercharged
14	1731.300	1731.300	1682.300	207.676	1.223	192.089	1.131	207.670	1.223	68.1	0.60	Supercharged
15	1732.100	1732.100	1683.100	207.763	1.223	192.123	1.131	207.770	1.223	68.5	0.20	Supercharged
16	1733.400	1733.400	1684.400	207.923	1.223	192.065	1.129	207.920	1.223	68.8	0.30	Supercharged
17	1735.200	1735.200	1686.200	208.136	1.223	191.068	1.122	208.140	1.223	68.9	1.70	Supercharged
18	1736.500	1736.500	1687.500	208.291	1.223	191.072	1.122	208.300	1.223	69.3	0.90	Supercharged
19	1739.800	1739.800	1690.800	208.682	1.223			208.690	1.223			tight
20	1740.000	1740.000	1691.000	208.714	1.223	197.107	1.155	208.714	1.223	69.9	0.30	Supercharged
21	1743.000	1743.000	1694.000	209.069	1.223			209.072	1.223	70.0		Tight
22	1743.700	1743.700	1694.700	209.153	1.223	197.913	1.157	209.153	1.223	70.5	0.20	Supercharged
23	1751.700	1751.700	1702.700	210.092	1.223			210.100	1.223	71.0		tight
24	1751.800	1751.800	1702.800	210.114	1.223			210.120	1.223	71.0		tight
25	1755.700	1755.700	1706.700	210.579	1.223			210.590	1.223	71.1		tight
26	1759.0	1759.0	1710.0	210.983	1.223			210.990	1.223	71.6		tight
27	1761.2	1761.2	1712.2	211.257	1.223			211.262	1.223	71.9		tight
28	1770.4	1770.4	1721.4	212.348	1.223			212.350	1.223	72.4		tight
29	1773.8	1773.8	1724.8	212.762	1.223	206.718	1.188	212.767	1.223	72.8	0.07	Supercharged
30	1778.9	1778.9	1729.9	213.367	1.223	206.691	1.184	213.395	1.223	73.1	0.01	Supercharged
31	1780.5	1780.5	1731.5	213.583	1.223	206.608	1.183	213.580	1.223	73.3		tight
32	1782.8	1782.8	1733.8	213.855	1.223	207.716	1.188	213.852	1.223	73.5	0.02	Supercharged
33	1785.8	1785.8	1736.8	214.070	1.222	207.128	1.182	214.220	1.223	73.9	0.01	Supercharged
34	1793.9	1793.9	1744.9	215.175	1.223	207.195	1.177	215.183	1.223	74.4	0.02	Supercharged
35	1801.2	1801.2	1752.2	216.055	1.223	204.037	1.155	216.074	1.223	75.0	0.03	Supercharged
36	1803.9	1803.9	1754.9	216.395	1.223	203.119	1.148	216.395	1.223	75.4	0.07	Supercharged
37	1810.9	1810.9	1761.9	217.224	1.223	204.920	1.154	217.229	1.223	75.7	0.06	Supercharged
38	1812.5	1812.5	1763.5	217.415	1.223	204.987	1.153	217.421	1.223	75.9	0.05	Supercharged
39	1814.2	1814.2	1765.2	217.624	1.223	205.690	1.156	217.645	1.223	76.0		Supercharged
40	1829.7	1829.7	1780.7	219.474	1.223			219.480	1.223	76.4		tight
41	1835.3	1835.3	1786.3	220.142	1.223			220.150	1.223	76.9		tight
42	1852.5	1852.5	1803.5	222.193	1.223	214.782	1.182	222.220	1.223	78.0	0.02	Supercharged
43	1865.4	1865.4	1816.4	223.760	1.223			223.780	1.223	78.8		tight
MDT run 1A - Pretests with packer												
1	1720.9	1720.9	1671.9	206.896	1.226	188.200	1.115	206.900	1.226	73.6		PA pretest. Good.
2	1720.9	1720.9	1671.9	206.896	1.226	189.198	1.115	206.900	1.226	73.9		PA pretest, sampling, miniDST. Good.
3	1734.5	1734.5	1685.5	205.716	1.209	191.810	1.127	207.931	1.222	71.4		Probe pretest. Supercharged.
4	1736.5	1736.5	1687.5	205.846	1.208	190.049	1.116	208.739	1.225	76.0		PA pretest, sampling, miniDST. Good.
5	1725.0	1725.0	1676.0	206.960	1.223	192.520	1.138	206.380	1.220	74.5		Probe pretest. Supercharged.
6	1727.0	1727.0	1678.0	206.240	1.217	184.850	1.091	207.710	1.226			PA pretest, scanning, miniDST, pretest aborted.
7	1721.1	1721.1	1672.1	206.930	1.226	187.650	1.111					WIT probe
8	1723.1	1723.1	1674.1									PA miniDST no pretest
MDT run 1B - Dual packer run												
1	1743.1	1743.1	1694.1									PA miniDST no pretest
2	1762.2	1762.2	1733.2					214.170	1.225			Pretest, sample and mini DST. No pretest, too tight.
3	1770.4	1770.4	1721.4	212.380	1.223							Sampling and mini DST (aborted). Pretest still increasing.
4	1750.9	1750.9	1701.9			184.250	1.073	209.700	1.221			Extended pretest. Undetermined pressure measurement.
5	1717.3	1717.3	1668.3	205.860	1.222	185.625	1.102					Pretest, gas sample and mini DST. Tight
6	1812.2	1812.2	1763.2	217.430	1.223	211.093	1.187	217.490	1.223	79.8		Supercharged. Not stable.
7	1812.2	1812.2	1763.2	217.430	1.223	202.631	1.140	217.490	1.223	79.8		Supercharged. Not stable.
8	1812.2	1812.2	1763.2	217.430	1.223	202.017	1.136	217.490	1.223	79.8		Supercharged. Not stable.
9	1812.2	1812.2	1763.2	217.430	1.223	200.734	1.129	217.490	1.223	79.8		Supercharged. Not stable.
10	1852.5	1852.5	1803.5	222.460	1.224	208.998	1.150	222.510	1.224	81.9		Supercharged. Not stable.
11	1852.5	1852.5	1803.5	222.460	1.224	207.411	1.141	222.510	1.224	81.9		Supercharged. Not stable.
12	1852.5	1852.5	1803.5	222.460	1.224	207.250	1.140	222.510	1.224	81.9		Supercharged. Not stable.
13	1852.5	1852.5	1803.5	222.460	1.224	208.250	1.146	222.510	1.224	81.9		Supercharged. Not stable.
14	1865.3	1865.3	1816.3	224.100	1.225	211.299	1.155			83.3		Supercharged. Not stable.
15	1865.3	1865.3	1816.3	224.100	1.225	208.923	1.142			83.6		Supercharged. Not stable.