

6.2.2 Well 30/9-21 A

Table 6-2 MDT Pressure Summary 8½" section, Well 30/9-21 A

| Test no | Depth (m MD RT) | Depth (m TVD RT) | Formation pressure (bar) | (sg EMW) | Formation | Comments |
|---------|-----------------|------------------|--------------------------|----------|------------|--------------------------------|
| 1 | 3659.3 | 3104.8 | | | Draupne Fm | Tight |
| 2 | 3656.5 | 3102.8 | 341.18 | 1.12 | Draupne Fm | Mobility 11mD Vol 10cc. Good |
| 3 | 3653.3 | 3100.6 | | | Draupne Fm | 300 bar drawdown. Supercharged |
| 4 | 3652.3 | 3099.9 | | | Draupne Fm | No seal |
| 5 | 3657.6 | 3103.6 | 341.28 | 1.12 | Draupne Fm | Mobility 115mD 10cc. Good test |
| 6 | 3654.3 | 3101.3 | | | Draupne Fm | Supercharged |
| 7 | 3653.1 | 3100.5 | | | Draupne Fm | No seal |
| 8 | 3638.9 | 3090.7 | | | Draupne Fm | No seal |
| 9 | 3800.1 | 3199.5 | | | Heather Fm | No seal |
| 10 | 3794.5 | 3195.9 | | | Heather Fm | No seal |
| 11 | 3788.5 | 3192.0 | | | Heather Fm | No seal |
| 12 | 3638.9 | 3090.7 | | | Draupne Fm | Tight |
| 13 | 3788.9 | 3192.2 | | | Heather Fm | No seal |
| 14 | 3783.5 | 3188.7 | | | Heather Fm | No seal |
| 15 | 3780.0 | 3186.4 | | | Heather Fm | No seal |

6.3 Reservoir fluid sampling summary, Well 30/9-21 S

Oil sampling was performed at two levels, and water sampling at one level. In total 187 litres were pumped-out during the sampling run of which 135 litres oil was pumped into the well bore.

Table 6-3: Fluid sampling details

| Depth (m MD RKB) | Sample Size | Opening Pressure (bar) | Sample type | Pumped volume before filling (ltr) | Avg. flow. drawdown (bar) | Comments |
|------------------|--------------|------------------------|-------------|------------------------------------|---------------------------|------------------|
| 3 822.5 | 2 3/4 gallon | 180 | Oil | 10 | 15 | |
| 3 822.5 | 1 gallon | 200 | Oil | 25 | 15 | |
| 3 822.5 | 450cc | 200 | Oil | 27 | 15 | 19% contaminated |
| 3 822.5 | 450cc | 200 | Oil | 29 | 15 | 20% contaminated |
| 3 852.0 | 2 3/4 gallon | 220 | Oil | 33 | 2 | |
| 3 852.0 | 450cc | 220 | Oil | 55 | 1 | 7% contaminated |
| 3 852.0 | 1 gallon | 220 | Oil | 76 | 1 | |
| 3 852.0 | 450cc | 170 | Oil | 95 | 1 | |
| 3 860.5 | 450cc | 20 | Water | 23 | 18 | |
| 3 860.5 | 450cc | 40 | Water | 27 | 15 | |

**End of Well Report
30/9-21 S, Delta S2, PL 104 and
30/9-21 A, Richards, PL 079**

Restricted
Doc. no. Well 30/9-21

StatoilHydro

Date 15.05.2009

Rev. no. 112 of 169
0

7.16.5 Drilling fluids

Table 5.2 Summary of drilling fluids program 30/9-21 S, Delta S2

| Well: | | 30/9-21 S | | DRILLING FLUIDS FWR | | | | | | | | | | | | | | | | | | |
|---------|--------------|-------------------|--------------|--|--------------|--------------------------|--------------|--------------|--------------|------------|-----------|----------|------------|-------------|--------------------------|----|--------------------------|-----------|--------------|---------|--------------------------------|------|
| Field: | | Delta S2 | | All depths refers to RKB. | | | | | | | | | | | | | | | | | | |
| Rig: | | Transocean Winner | | RKB-MSL TOW: 26 m | | | | | | | | | | | | | | | | | | |
| HOLE | | CASING | | MUD TYPE | MW [SG] | LGS [kg/m ³] | 10 sec. [Pa] | 10 min. [Pa] | Funnel Visc. | Fann 3 rpm | O/W ratio | PV [mPa] | API FL [m] | HTHP FL [m] | MBT [KG/m ³] | pH | KCl [KG/m ³] | Glyc. [%] | Ca ++ [mg/l] | ES [mV] | Usage Volume [m ³] | |
| SIZE | TVD MD | SIZE | TVD MD | | | | | | | | | | | | | | | | | | | |
| 36" | 182 182 | 30" | 180 180 | SW/sweeps bentonit | 1.02 1.50 | | | | 100+ | | | | | | | | | | | | | 389 |
| | | | | Comments: Drill the section with seawater and Bentonite (hvis pills 3/std. Displaced hole x 1.5 to 1.50 sg bentonite mud. Tried to run 30" conductor, but unable to run in the last 5m. POOH and perform wipetrip. Reamed 135-153m and found indication of boulders. Reamed 153-182m. Pumped a 15m ³ hvis pill and displaced the hole with 50m ³ of 1.50 sg mud. Pulled back one stand and repeated the previous operation. Ran 30" without incidence. | | | | | | | | | | | | | | | | | | |
| 26" | 1222 1222 | 20" | 1215 1215 | SW/sweeps Glydril | 1.02 1.30 | | | | 100+ | | | | | | | | | | | | | 2187 |
| | | | | Comments: Drill the section with seawater and Bentonite (60-80 kg/m ³) hvis pills down to base Utsira fm (863m MD). Use 1.30 sg Glydril pills to TD. No boat to unload inhibitive mud so this was mixed on board at 100kg/m ³ KCl, 8-11 kg/m ³ CMC-EHV & 1.5-2.5 Duotec NS. Displaced well to 1.30 sg Formpro up to ~550m. POOH reamed and lubricated at 1138m & 1120m-978m. POOH to 550m and displace upper hole to Formpro mud. Ran 20" casing filling with Formpro. Took weight at 1018 & 1079m. Landed 20" casing at 2215m. | | | | | | | | | | | | | | | | | | |
| 17 1/2" | 2071 2131 | 13 3/8" | 2058 2123 | Glydril | 1.28 1.52 | 41-182 | 5-8 | - | | 9-11 | | 26-30 | 1.8-2.4 | | 28-49 | - | 200-220 | 4-4.5 | 260-840 | - | | 548 |
| | | | | Comments: Sheared and pretreated Glydril mud with 2 kg/m ³ Citric Acid and Sod. Bicarbonate prior to drill out cement and casing shoe. Kept adding Glycol to mud high for the first 700m to ensure high inhibition. KCl salt added at the base of section as well for inhibition. Multiple problems with MWD throughout the section. Hole found to be in Excellent condition prior to running in with the 13 3/8" CSG. | | | | | | | | | | | | | | | | | | |

End of Well Report
30/9-21 S, Delta S2, PL 104 and
30/9-21 A, Richards, PL 079

Restricted
 Doc. no. Well 30/9-21

StatoilHydro

Date 15.05.2009

Rev. no. 113 of 169
 0

| Well: 30/9-21 S DRILLING FLUIDS FWR | | | | | | | | | | | | | | | | | | | | |
|--|--------------|-----------------|--------------|---|-------------------|---|--------|--------|--|--------|---------------------|-------|--|---------|--|--|--|-----------------------------------|---------|-----|
| Field: Delta S2 | | | | | | | | | | | | | | | | | | | | |
| Rig: Transocean Winner | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | All depths refers to RKB. | | |
| | | | | | | | | | | | | | | | | | | RKB-MSL TOW: 26 m | | |
| 12 1/4" | 3137 3680 | 9 5/8" L | 3130 3671 | Paratec | 1.40 - 1.44 | - | 5 | 12 | | 8-14 | 75/25 - 78/22 | 26-35 | | 2-6 | | | | CaCl2 187 - 229 kg/m3 | 628-951 | 163 |
| | | | | Comments: Drilled out shoetrack and performed FIT to 1,72 sg with Glydriil. Displaced to Paratec after a period of WOW (had a high WBM/OBM due to no havis spacer) and drilled on. Mud spec. were kept by moderate additions of chemicals as expected. Had to work pipe in some areas (stringers and Dogleg) but overall the hole was in very good condition. Run 9 5/8" liner without incidence. Added 2 kg/m3 og G-Seal /std, and CaCO3 to keep the concentration at 15 kg/m3. | | | | | | | | | | | | | | | | |
| 8 1/2" | 3463 4090 | OH | | Paratec | 1.30 | - | 06.jul | 08.okt | | 10.nov | 75/25 - 78/22 | 29-33 | | 2,7-3,0 | | | | CaCl2 178 - 201 kg/m3 | 872-990 | 32 |
| | | | | Comments: Displaced well to 1,30 sg mud. Drilled section without incidences to mud apart for minor adjustments to keep the mud in spec. P&A hole to 1240m MD. | | | | | | | | | | | | | | | | |