

## Overview of formate case histories

No.	Location	Start date	Fluid	Density		Operator	Field	Depth		Job type D, C, S, I, O	Temp.		Dev.	Comments
			Formate	s.g.	ppg			Metres	Feet		°C	°F	Deg.	
1	UKNS	Sep 99	Cs/K	1.80	15.00	Shell Expro	Shearwater	5,427	17,800	I	185	365	32	Workover – under-balanced perforating
2	UKNS	Oct 99	Cs/K	1.90	15.86	TotalFina	Dunbar	7,353	24,118	C	–	–	78	Record displacement, coiled tubing
3	UKNS	Nov 99	Cs	2.19	18.20	Elf	Elgin/Franklin G-3	6,448	21,149	C	207	405	45	Completion in world's largest HPHT field
4	UKNS	Dec 99	Cs	2.19	18.20	Elf	Elgin/Franklin G-1	5,633	18,475	C	191	375	–	Completion in world's largest HPHT field
5	UKNS	Mar 00	Cs	2.19	18.20	Elf	Elgin/Franklin G-5	5,673	18,607	I	184	363	13	Workover
6	UKNS	Mar 00	Cs	2.19	18.20	Elf	Elgin/Franklin G-6	5,929	19,447	I	184	363	29	Workover
7	UKNS	Mar 00	Cs	2.19	18.20	Elf	Elgin/Franklin G-8	6,095	19,992	I	187	368	39	Workover
8	UKNS	May 00	Cs	2.19	18.20	Elf	Elgin/Franklin G-4	6,095	19,992	I	187	368	39	Workover
9	UKNS	Jun 00	Cs	2.19	18.20	Elf	Elgin/Franklin G-7	6,095	19,992	I	187	368	39	Workover
10	Norway	Oct 00	Cs/K	1.89	15.75	Statoil	Huldra A-4	4,840	15,875	O	147	297	40	Stand-by kill pill
11	UKNS	Dec 00	Cs/K	1.80	15.00	Shell Expro	Shearwater	5,427	17,800	O	185	365	–	Well control operation
12	UKNS	Jan 01	Cs	2.19	18.20	Elf	Elgin/Franklin G-3	6,448	21,149	S	207	405	45	Kill and suspension
13	Norway	Jan 01	Cs/K	1.92	16.00	Statoil	Huldra A-8	4,657	15,278	D	147	297	45	1st drilling job with cesium formate: 264 metres in six days
14	Norway	Jan 01	Cs/K	1.92	16.00	Statoil	Huldra A-8	4,657	15,278	C	147	297	45	Completion after drill-in with cesium formate
15	Norway	Mar 01	Cs/K	1.89	15.75	Statoil	Huldra A-4T2	4,651	15,259	D	147	297	43	2nd Huldra drilling job: 189 metres in two days
16	Norway	Mar 01	Cs/K	1.89	15.75	Statoil	Huldra A-4T2	4,651	15,259	C	147	297	43	Completion after drill-in with cesium formate
17	UKNS	Mar 01	Cs	2.19	18.20	Elf	Elgin/Franklin F-4	–	–	O	191	375	40	Standby kill pill
18	UKNS	Mar 01	Cs/K	1.80	15.00	Shell Expro	Shearwater	5,427	17,800	O	185	365	–	Standby kill pill
19	UKNS	Apr 01	Cs	2.19	18.20	Elf	Elgin	N/A	N/A	O	191	375	–	Standby kill pill
20	UKNS	Apr 01	Cs	2.19	18.20	Elf	Elgin/Franklin F-3	N/A	N/A	O	191	375	–	Standby kill pill

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21	UKNS	Apr 01	Cs/K	1.80	15.00	Shell Expro	Shearwater	5,427	17,800	O	185	365	–	Standby kill pill
22	UKNS	May 01	Cs	2.19	18.20	Elf	Elgin/Franklin F-2	N/A	N/A	O	191	375	–	Standby kill pill
23	UKNS	May 01	Cs	2.19	18.20	Elf	Elgin/Franklin F-1	N/A	N/A	O	191	375	–	Standby kill pill
24	Norway	May 01	Cs/K	1.89	15.75	Statoil	Huldra A-4 ST	4,840	15,875	O	147	297	40	Standby kill pill
25	Norway	May 01	Cs/K	1.89	15.75	Statoil	Huldra A-4 ST	4,840	15,875	O	147	297	40	Well test
26	Norway	Jun 01	Cs/oil	1.65	13.77	Norsk Hydro	Visund A-23	N/A	N/A	C	121	250	–	Oil-based completion fluid (LSOBM)
27	Norway	Jun 01	Cs/K	1.94	16.17	Statoil	Huldra A-5	4,090	13,415	D	145	293	45	3rd Huldra drilling job: 272 metres in four days
28	Norway	Jun 01	Cs/K	1.94	16.17	Statoil	Huldra A-5	4,090	13,415	C	145	293	45	Completion after drill-in with cesium formate
29	UKNS	Aug 01	Cs	2.19	18.20	Elf	Franklin	N/A	N/A	O	207	405	–	Standby kill pill
30	Norway	Aug 01	Cs/K	1.94	16.17	Statoil	Huldra A-6	4,330	14,202	D	145	293	45	4th Huldra drilling job: 344 metres in seven days
31	Norway	Aug 01	Cs/K	1.94	16.17	Statoil	Huldra A-6	4,330	14,202	C	145	293	45	Completion after drill-in with cesium formate
32	UKNS	Aug 01	Cs/K	1.66	13.83	BP	Devenick 9/24b-4	5,000	16,400	D	122	252	70	First UK drill-in job
33	UKNS	Aug 01	Cs/K	1.66	13.83	BP	Devenick 9/24b-4	5,000	16,400	C	122	252	70	Completion after drill-in with cesium formate
34	Norway	Jan 02	Cs/K	1.89	15.80	Statoil	Huldra A-09	5,710	18,735	D	145	293	45	5th Huldra drilling job: 230 metres in 14 days (interval duration)
35	Norway	Jan 02	Cs/K	1.89	15.80	Statoil	Huldra A-09	5,710	18,735	C	145	293	45	Completion after drill-in with cesium formate
36	UKNS	Feb 02	Cs	2.19	18.20	Elf	Elgin/Franklin G-3	6,448	21,149	O	207	405	45	Plug and abandon
37	USA	Feb 02	Cs/K	2.11	17.60	BP	High Island 5	4,833	15,853	I	177	350	–	First job in USA: Intervention and potassium formate packer fluid
38	Norway	Apr 02	Cs/K	1.90	15.86	Statoil	Huldra A-11	5,048	16,562	D	145	293	52	6th Huldra drilling job: 336 metres in 14 days (interval duration)
39	Norway	Apr 02	Cs/K	1.90	15.86	Statoil	Huldra A-11	5,048	16,562	C	145	293	52	Completion after drill-in with cesium formate
40	Norway	May 02	Cs/K	2.17	18.11	Norsk Hydro	Snorre A	N/A	N/A	O	85	185	–	Standby kill pill

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41	Norway	May 02	Cs/K	1.65	13.77	Norsk Hydro	Tune A-11	5,450	17,881	C	131	267	–	Completion and long well suspension (6 months)
42	Norway	Jul 02	Cs/K	1.65	13.77	Norsk Hydro	Snorre P-15	3,626	11,896	C	85	185	–	Completion
43	Norway	Jul 02	Cs/oil	1.65	13.77	Statoil	Statfjord Sat. M-1 AH	3,014	9,885	C	85	185	–	Oil-based completion fluid (LSOBM)
44	UKNS	Jul 02	Cs/K	2.12	17.69	Shell Expro	Shearwater SW-09	5,400	17,709	I	182	360	–	Workover
45	UKNS	Aug 02	Cs/K	2.06	17.19	Shell Expro	Shearwater SW-04	5,270	17,288	I	177	350	–	Workover
46	UKNS	Nov 02	Cs/K	2.15	17.94	Shell Expro	Janus	N/A	N/A	O	N/A	N/A	–	Stuck pipe release pill
47	Norway	Dec 02	Cs/K	1.65	13.77	Norsk Hydro	Visund A-21 H	7,322	24,022	C	121	250	–	Completion and kill pill
48	UKNS	Feb 03	Cs	2.20	18.36	Total E&P	Franklin	N/A	N/A	O	N/A	N/A	–	Stuck pipe release pill for use in OBM (standby)
49	Norway	Mar 03	Cs/oil	1.65	13.77	Statoil	Statfjord Sat. M-2 AH	5,221	17,129	C	85	185	–	Oil-based completion fluid (LSOBM)
50	Norway	Apr 03	Cs/oil	1.65	13.77	Statoil	Statfjord Sat. F-4 AH	3,473	11,394	C	85	185	–	Oil-based completion fluid (LSOBM)
51	Norway	Apr 03	Cs/oil	1.65	13.77	Norsk Hydro	Njord A-10 BY-3H	5,108	16,759	C	121	250	–	Oil-based completion fluid (LSOBM)
52	Norway	Apr 03	Cs/oil	1.65	13.77	Statoil	Gullfaks C-23 C	4,072	13,360	C	85	185	–	Oil-based completion fluid (LSOBM)
53	UKNS	Aug 02	Cs/K	2.06	17.19	Shell Expro	Shearwater SW-05	5,270	17,288	I	177	350	–	Workover
54	UKNS	Apr 03	Cs	2.24	18.64	Shell Expro	Shearwater SW-05	4,957	16,262	O	193	380	–	Well kill
55	UKNS	May 03	Cs/K	1.86	15.52	Marathon	Braemar 16/36b-8Z	4,514	14,807	C	136	276	–	Completion and well test
56	Norway	Jul 03	Cs/K	1.65	13.77	Statoil	Visund A-25 AH	4,549	14,925	C	121	250	–	Completion (perforation) and kill in oil well
57	UKNS	Jun 03	Cs	2.12	17.66	Total E&P	Franklin F-7Z	6,439	20,656	I	207	405	–	Workover and kill
58	Norway	Aug 03	Cs/K	1.65	13.77	Statoil	Snorre B D-4 H	5,011	16,440	C	85	185	–	Completion
59	Norway	Sep 03	Cs/K	2.09	17.40	Statoil	Kristin S 3 H	5,354	17,565	D	175	347	–	1st HPHT production well from floater. Drilled, cored and logged
60	Norway	Sep 03	Cs	2.09	17.40	Statoil	Kristin S 3 H	5,354	17,565	O	175	347	–	Plug and abandon

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			Formate	s.g.	ppg			Metres	Feet		°C	°F		
61	UKNS	Oct 03	Cs	2.15	17.94	Total E&P	Elgin G-6	N/A	N/A	O	N/A	N/A	–	B annulus kill pill
62	Norway	Oct 03	Cs/K	–	–	Statoil	Visund A-22 H	8,263	27,110	C	121	250	–	Completion (perforation) in oil well
63	Norway	Jan 04	Cs/oil	1.63	13.60	Statoil	Snorre P-03	5,060	16,601	C	85	185	–	Oil-based completion fluid (LSOBM) – perforation
64	Norway	Jan 04	Cs/K	–	–	Statoil	Visund A-08 H	5,375	17,635	C	121	250	–	Completion (perforation)
65	Norway	Jan 04	Cs/oil	1.45	12.10	Statoil	Snorre BD-1 HT-5	6,805	22,326	I	85	185	–	Oil-based intervention fluid (LSOBM)
66	Norway	Jun 04	Cs	2.09	17.40	Statoil	Kristin N-3 H	5,354	17,565	D	175	347	–	2nd HPHT production well from floater. Drilled, cored and logged
67	Norway	Jun 04	Cs	2.09	17.40	Statoil	Kristin N-3 H	5,354	17,565	O	175	347	–	Plug and abandon
68	Norway	Jun 04	Cs/K	2.09	17.40	Statoil	Kvitebjørn 34/11 A-4	4,386	14,389	D	149	300	24	1st Kvitebjørn drill-in: 290 metres in 13.5 days
69	Norway	Jun 04	Cs/K	2.09	17.40	Statoil	Kvitebjørn 34/11 A-4	4,386	14,389	C	149	300	24	Completion after drill-in with CsF: Openhole screen completion 17 days
70	Norway	May 04	Cs/K	1.65	13.77	Statoil	Visund A-19 AHT2	6,260	20,538	C	–	–	–	Completion (perforation)
71	USA	Jun 04	Cs/K	1.90	15.86	W.O.G.	Mobile Area 862	6,699	21,972	I	–	–	–	2nd job in USA – workover
72	Denmark	Jul 04	Cs/K	1.82	15.19	Dong	South Arne	2,500	8,202	C	–	–	–	1st job in carbonate. Low losses with CaCO <sub>3</sub> /Polymer kill pill
73	UKNS	Jul 04	Cs	2.12	17.66	Total E&P	Franklin F-7Z	6,280	20,603	I	207	405	–	Recovery/Re-entry
74	Norway	Jul 04	Cs/K	1.53	12.77	Statoil	Gullfaks C	–	–	D	85	185	–	Drill-in. Cesium formate spike fluid
75	Norway	Aug 04	Cs/K	2.09	17.40	Statoil	Kvitebjørn 34/11 A-5	4,338	14,232	D	149	300	30	2nd Kvitebjørn drill-in: 302 metres in 11.5 days
76	Norway	Aug 04	Cs/K	2.09	17.40	Statoil	Kvitebjørn 34/11 A-5	4,338	14,232	C	149	300	–	Completion after drill-in with CsF: Openhole screen completion in 17.8 days
77	UKNS	Sep 04	Cs/K	2.19	18.28	BP	Rhum NF-1	4,750	15,584	S	149	300	7	Well suspension for 250 days with S13Cr and Alloy 718 exposed
78	Norway	Oct 04	Cs/K	–	–	Statoil	Snorre B D-2 H/AH	–	–	C	85	185	–	Completion
79	Norway	Nov 04	Cs/K	2.09	17.40	Statoil	Kvitebjørn 34/11 A-11	4,483	14,708	D	149	300	23	3rd Kvitebjørn drill-in: 279 metres in 15.8 days
80	Norway	Nov 04	Cs/K	2.09	17.40	Statoil	Kvitebjørn 34/11 A-11	4,483	14,708	C	149	300	23	Completion after drill-in with cesium formate: Liner completion in 26.3 days

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			Formate	s.g.	ppg			Metres	Feet		°C	°F	Deg.	
81	Norway	Dec 04	Cs/K	2.09	17.40	Statoil	Kvitebjørn 34/7 A-3AHT3	–	–	C	149	300	–	Completion
82	UKNS	Jan 05	Cs/K	2.19	18.28	BP	Rhum SF-1	4,750	15,584	C	149	300	–	Dynamic underbalance perf. Completion took 6.3 days with 4 bbl brine losses after perforating
83	Norway	Jan 05	–	–	–	Statoil	Gullfaks C-46	–	–	C	85	185	–	Completion
84	Norway	Jan 05	Cs/K	2.06	17.19	Statoil	Kvitebjørn A-14	4,785	15,699	D	149	300	28	4th Kvitebjørn drill-in: 350 metres in 8.1 days
85	Norway	Jan 05	Cs/K	2.06	17.19	Statoil	Kvitebjørn A-14	4,785	15,699	C	149	300	28	Completion after drill-in with cesium formate: Liner completion in 31.3 days
86	USA	Jan 05	Cs/K	2.06	17.19	WOG	Mobile Area 862	6,811	22,346	C	216	420	–	Barefoot completion. 12 ppg formate brine used as packer fluid over 12 months
87	UKNS	Mar 05	Cs	2.12	17.66	Total E&P	Franklin 29/5b F-7Z	6,280	20,604	I	207	405	–	Well kill operation
88	Norway	Mar 05	Cs/K	2.06	17.19	Statoil	Kvitebjørn	–	–	O	–	–	–	Standby in PLT campaign
89	Norway	Mar 05	Cs/K	2.09	17.40	Statoil	Kristin R-3 H	5,996	19,672	C	170	338	–	Upper completion after drill-in and perforating in OBM
90	Norway	Apr 05	Cs/K	1.65	13.77	Statoil	Snorre B K-7 H	5,102	16,739	C	85	185	–	Completion
91	UKNS	Apr 05	Cs/K	2.19	18.20	BP	Rhum NF-1	4,750	15,584	C	149	300	–	Re-entry
92	UKNS	Mar 05	Cs	2.12	17.69	Total E&P	Franklin 29/5b F-7Z	6,280	20,604	S	207	405	–	18-month well suspension
93	Norway	Jun 05	Cs/K	2.09	17.40	Statoil	Kristin S-4 H	5,433	17,825	C	175	347	–	Upper completion after drill-in and perforating in OBM
94	Norway	Jul 05	Cs/K	2.06	17.19	Statoil	Kvitebjørn A-15	5,568	18,268	D	149	300	40	5th Kvitebjørn drill-in: 376 metres in 14.5 days
95	Norway	Jul 05	Cs/K	2.06	17.19	Statoil	Kvitebjørn A-15	5,568	18,268	C	149	300	40	Completion after drill-in with CsF: Openhole screen completion in 14.8 days
96	UKNS	Jul 05	Cs/K	1.98	16.52	COP	Judy P-20	11,353	37,247	C	160	320	80	Overbalanced perf. Production (33 MMscf/d gas, 13,000 bopd, 31% choke) "above expectations"
97	Norway	Jun 05	Cs/K	2.09	17.40	Statoil	Kristin S-1 H	5,433	17,825	C	175	347	–	Upper completion after drill-in and perforating in OBM
98	Norway	Jul 05	Cs/K	2.06	17.19	Statoil	Kvitebjørn A-10	5,568	18,268	D	149	300	40	6th Kvitebjørn drill-in: 513 metres in 13.9 days
99	Norway	Jul 05	Cs/K	2.06	17.19	Statoil	Kvitebjørn A-10	5,568	18,268	C	149	300	40	Completion after drill-in with CsF: Openhole screen completion in 15.9 days
100	Norway	Oct 05	Cs/K	2.09	17.40	Statoil	Kristin P-3 H	6,117	20,069	C	175	347	–	Upper completion after drill-in and perforating in OBM

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101	Norway	Oct 05	Cs/K	2.06	17.19	Statoil	Kvitebjørn A-14	–	–	O	149	300	–	Standby kill pill
102	Hungary	Oct 05	Cs/K	1.90	15.86	MOL	Vetyém 1	2,500	8,202	C	160	320	–	1st frac pac in onshore HPHT well with cesium formate brine
103	UK	Oct 05	Cs	2.22	18.53	Total E&P	Glenelg 22/30 G-10Y	–	–	O	–	–	–	Stuck pipe release pill
104	Norway	Jul 05	Cs/K	2.06	17.19	Statoil	Kvitebjørn A-6	5,568	18,268	D	149	300	23	7th Kvitebjørn drill-in: 583 metres in 35.1 days
105	Norway	Jul 05	Cs/K	2.06	17.19	Statoil	Kvitebjørn A-6	5,568	18,268	C	149	300	23	Completion after drill-in with CsF: Openhole screen completion in 12.7 days (new North Sea record)
106	UKNS	Jan 06	Cs/K	2.19	18.20	BP	Rhum NF-1	4,750	15,584	C	149	300	–	10 e-line perforating runs at balance. Reservoir skin: + 3 at 150 MMscf/day production
107	Norway	Jan 06	Cs/K	2.09	17.40	Statoil	Kristin S-3 H	5,433	17,825	C	175	347	–	Upper completion after drill-in with cesium formate brine
108	UKNS	Jan 06	Cs/K	2.19	18.20	BP	Rhum AF-1	4,750	15,584	C	149	300	–	Dynamic underbalance perf., isolation and inflow testing took 6.8 days. 60 MM scf/day in test
109	Norway	Jan 06	Cs/K	1.65	13.77	Statoil	Snorre B K-1 H	6,000	19,685	C	85	185	–	Completion
110	UKNS	Feb 06	Cs/K	1.78	14.84	Total E&P	Glenelg G10Y	7,385	24,229	C	195	383	–	Perf. of one of the UK's deepest and most highly pressured wells (5,600 metres TVD and 1,150 bar)
111	Norway	Apr 06	Cs/K	1.65	13.77	Statoil	Snorre B D-6	6,280	20,604	C	85	185	–	Completion
112	Norway	May 06	Cs/oil	1.64	13.69	Norsk Hydro	Oseberg Vestflanke	6,256	20,525	C	–	–	–	Oil-based completion fluid (LSOBM)
113	Norway	May 06	Cs/K	2.06	17.19	Statoil	Kvitebjørn/Valemon 34/11 5 S	7,380	24,213	D	150	302	69	8th drill-in from Kvitebjørn platform: 705 metres in 33 days. Longest HPHT well in North Sea
114	Norway	May 06	Cs/K	2.06	17.19	Statoil	Kvitebjørn/Valemon 34/11 5 S	7,380	24,213	C	150	302	69	Completion after drill-in with CsF
115	Norway	Jun 06	Cs/K	2.09	17.40	Statoil	Kristin S-2 H	5,632	18,478	C	175	347	–	Upper completion after drill-in and perforating in OBM
116	Norway	–	Cs/K	2.09	17.40	Statoil	Kristin	–	–	O	–	–	–	Standby kill pill
117	Norway	Aug 06	Cs/K	2.09	17.40	Statoil	Kristin P-2 H	5,904	19,370	C	175	347	–	Upper completion after drill-in and perforating in OBM
118	Norway	Jul 06	Cs/K	1.75	14.60	Statoil	Visund A-3 AH	5,433	17,825	C	–	–	–	Completion
119	Norway	Jul 06	Cs/K	1.98	16.52	Statoil	Kvitebjørn A-02	5,172	16,968	D	–	–	–	9th Kvitebjørn drill-in. Last at overbalance (reservoir depletion)
120	Argentina	Aug 06	Cs/K	1.95	16.27	Petrobras	El Campamento	3,057	10,030	D	165	329	–	Drill-in operation in Argentina

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121	Norway	Oct 06	Cs/K	2.05	17.11	Statoil	Kristin R-1 H	6,352	20,840	C	175	347	–	Upper completion after drill-in and perforating in OBM
122	Argentina	Oct 06	Cs/K	2.15	17.94	Petrobras	El Cerrito	–	–	O	–	–	–	Kill pill
123	Norway	–	Cs/K	1.87	15.61	Statoil	Kvitebjørn	–	–	O	–	–	–	Standby kill pill PLT campaign
124	Norway	Nov 06	Cs/K	2.05	17.11	Statoil	Kristin R-1 H	6,352	20,840	I	175	347	–	Re-completion
125	Norway	Dec 06	Cs/oil	1.63	13.60	Statoil	Rimfaks N-3 AH	4,762	15,623	C	–	–	–	LSOBM open hole pill weighted with cesium formate brine
126	Norway	Dec 06	Cs/K	1.87	15.61	Statoil	Ullrig	2,300	7,546	C	–	–	–	MPD gel/pill test project
127	Norway	Jan 07	Cs/K	1.70	14.19	Statoil	Njord	–	–	O	–	–	–	Kill pill
128	Norway	Feb 07	Cs/K	2.04	17.03	Statoil	Kristin R-4 BH	5,505	18,601	C	–	–	–	Upper completion after drill-in and perforating in OBM
129	Norway	Mar 07	Cs/K	1.87	15.61	Statoil	Kvitebjørn A-13	6,351	20,836	D	–	–	–	10th Kvitebjørn drill-in. MPD with designer fluid
130	Norway	Mar 07	Cs/K	1.87	15.61	Statoil	Kvitebjørn A-13	6,351	20,836	C	–	–	–	Completion after drill-in with cesium formate designer fluid
131	Hungary	Mar 07	Cs/K	2.15	17.94	TXM	Mako-6	5,680	18,635	O	235	455	–	HPHT frac. Sets new record for highest temperature operation with Cs formate
132	Norway	Mar 07	Cs/K	2.07	17.23	Statoil	Kristin R-4 H	5,262	17,263	O	–	–	–	Kill fluid
133	Norway	Mar 07	Cs/oil	2.12	17.69	Statoil	Gullfaks Satellite N-5 H	5,143	16,873	C	–	–	–	Oil-based completion fluid (LSOBM)
134	UKNS	Mar 07	Cs/K	2.20	18.36	Total	Kessog	4,696	15,406	O	–	–	–	Pipe free pill
135	Norway	Apr 07	Cs/K	2.20	18.36	Statoil	Snorre B C5	4,783	15,692	C	–	–	–	Completion
136	UKNS	Apr 07	Cs	2.19	18.28	Total	Franklin F7z	6,279	20,600	I	–	–	–	Workover
137	Norway	May 07	Cs/K	2.07	17.26	Statoil	Kristin R-1 H	5,340	17,519	C	–	–	–	Recompletion
138	Norway	May 07	Cs/oil	2.12	17.69	Statoil	Rimfaks N-4 H	4,817	15,803	C	–	–	–	Oil-based completion fluid (LSOBM)
139	Norway	Jun 07	Cs/K	2.20	18.36	Statoil	Snorre P32	4,923	16,151	C	–	–	–	Completion with 1.65 s.g./13.77 ppg FLS system
140	Norway	Jul 07	Cs/oil	2.12	17.69	Statoil	Rimfaks N-2 H	4,568	14,986	C	–	–	–	Oil-based completion fluid (LSOBM)

## Overview of formate case histories

No.	Location	Start date	Fluid	Density		Operator	Field	Depth		Job type D, C, S, I, O	Temp.		Dev.	Comments
			Formate	s.g.	ppg			Metres	Feet		°C	°F	Deg.	
141	Norway	Jul 07	Cs/K	2.20	18.36	Statoil	Snorre B C-07	5,325	17,470	C	–	–	–	Completion with FLS system
142	Norway	Jul 07	Cs/K	1.75/2.20	14.60/18.36	Statoil	Statfjord B B-17	4,637	15,213	D	–	–	–	1st drill-in on Statfjord
143	Norway	Jul 07	Cs/K	1.75/2.20	14.60/18.36	Statoil	Statfjord B B-17	4,637	15,213	C	–	–	–	Gravel pack after drill-in with Cs formate
144	Norway	Jul 07	Cs/K	2.07	17.26	Statoil	Gulfaks C	–	–	C	170	338	–	Completion
145	Norway	Aug 07	Cs/K	2.07	17.26	Statoil	Kristin R-2 H	5,961	19,557	C	170	338	–	Upper completion after drill-in and perforating in OBM
146	Norway	Aug 07	Cs/oil	–	–	Statoil	Gulfaks Satellite N-1 H	4,330	14,206	C	–	–	–	Oil-based completion fluid (LSOBM)
147	Norway	Aug 07	Cs/K	1.81/1.91	15.11/15.94	Statoil	Kvitebjørn A-13	6,351	20,836	D	–	–	–	11th Kvitebjørn drill-in. MPD with designer fluid
148	Norway	Sep 07	Cs/K	1.81/1.91	15.11/15.94	Statoil	Kvitebjørn A-12	6,035	19,799	D	–	–	–	12th Kvitebjørn drill-in. MPD with designer fluid
149	Norway	Sep 07	Cs/K	–	–	Statoil	Statfjord AA-02	4,174	13,694	D	–	–	–	2nd drill-in on Statfjord
150	Norway	Sep 07	Cs/K	–	–	Statoil	Statfjord AA-02	4,174	13,694	C	–	–	–	Gravel pack after drill-in with Cs formate
151	Norway	Sep 07	Cs/K	1.75/2.20	14.60/18.36	Statoil	Statfjord B B-01 C	3,772	12,375	D	–	–	–	3rd drill-in on Statfjord
152	Norway	Sep 07	Cs/K	1.75/2.20	14.60/18.36	Statoil	Statfjord B B-01 C	3,772	12,375	C	–	–	–	Gravel pack after drill-in with Cs formate
153	Norway	Oct 07	Cs/K	2.20	18.36	Statoil	Snorre A P-1	7,230	23,720	C	–	–	–	Completion with FLS system
154	Norway	Oct 07	Cs/K	2.20	18.36	Statoil	G-3 H	5,029	16,499	C	–	–	–	Completion with FLS system
155	Malaysia	Oct 07	Cs/K	1.68	14.02	Exxon Mobil	Tapis F9	2,866	9,402	C	155	310	46.93	1st cesium formate job in Asia Pacific
156	Norway	Nov 07	Cs/K	2.20	18.36	Statoil	347- G-1 H	5,300	17,388	C	–	–	–	Completion with FLS system
157	Norway	Nov 07	Cs/K	2.07	17.26	Statoil	Kristin S-4 H	5,433	17,824	I	170	338	–	Workover
158	Norway	Nov 07	Cs/K	2.20	18.36	Statoil	Snorre B C-1 H	5,104	16,745	C	–	–	–	Completion with FLS system
159	Malaysia	Nov 07	Cs/K	1.71	14.23	Exxon Mobil	Tapis F8	2,750	9,022	C	160	320	44.43	2nd completion in Tapis field, Malaysia
160	Malaysia	Dec 07	Cs/K	1.71	14.23	Exxon Mobil	Tapis F7	2,826	9,272	C	160	320	41.27	3rd completion in Tapis field, Malaysia

# JOB LIST

## Overview of formate case histories

No.	Location	Start date	Fluid	Density		Operator	Field	Depth		Job type D, C, S, I, O	Temp.		Dev. Deg.	Comments
			Formate	s.g.	ppg			Metres	Feet		°C	°F		
161	UKNS	Dec 07	Cs	2.20	18.36	Total	Jura 2	4,442	14,573	O	–	–	–	Stuck pipe release pill for use in OBM (standby)
162	Norway	Dec 07	Cs/K	1.81/1.91	15.11/15.94	Statoil Hydro	Kvitebjørn A-12	6,035	19,799	C	108	226	–	Completion after drill-in with cesium formate designer fluid. MPD mode
163	Brunei	Dec 07	Cs	2.16	18.03	Total Borneo	Maharaja Lela/ Jamalulalam MLJ2-06	5,850	19,193	O	–	–	–	Stuck pipe release pill for use in OBM (standby)
164	UKNS	Dec 07	Cs	2.20	18.36	Total	West Franklin B F9	7,327	24,038	O	204	399	–	Stuck pipe release pill for use in OBM (standby)
165	Holland	Jan 08	Cs/K	1.90	15.86	NAM	GSV-1	3,499	11,479	I	–	–	–	Workover – well suspended
166	UKNS	Jan 08	Cs/K	2.09	17.44	Total	Jura 1	3,935	12,910	C	123	253	–	Completion
167	Norway	Feb 08	Cs/oil	2.13	17.78	Statoil Hydro	Gullfaks AA-32 CT6	–	–	C	–	–	–	Oil-based completion fluid (LSOBM)
168	Norway	Feb 08	Cs/K	1.81/1.91	15.11/15.94	Statoil Hydro	Kvitebjørn A-13	6,351	20,836	C	134	273	–	Completion after drill-in with cesium formate designer fluid
169	Norway	Mar 08	Cs/K	2.037	17.00	Statoil Hydro	Kristin N-2 H	5,853	19,202	C	170	338	–	Upper completion after drill-in and perforating in OBM
170	USA	Apr 08	Cs/K	1.98	16.50	COP	Baker family Trust A-40#1	–	–	C	–	–	–	Well kill and open hole completion
171	Norway	Apr 08	Cs/K	1.75	14.60	Statoil Hydro	Snorre A P29 A	4,572	15,000	C	–	–	–	Injection well
172	Norway	Apr 08	Cs/K	1.96	16.36	Statoil Hydro	Gullfaks B B-12-T3	4,848	15,905	C	–	–	–	Completion
173	Norway	Apr 08	Cs/K	1.60	13.35	Statoil Hydro	Gullfaks C C-52 A	7,515	24,655	C	–	–	–	Completion
174	Hungary	May 08	Cs	2.30	19.19	TXM	Mako-6	4,979	16,335	I	207	404	–	Workover
175	Norway	May 08	Cs/K	1.76	14.69	Statoil Hydro	G-2 H	5,600	18,372	C	–	–	–	Completion
176	Brunei	May 08	Cs/K	1.608	13.42	Brunei Shell	Champion West CW40	5,908	19,383	C	116	241	63.4	Completion
177	UKNS	Jun 08	Cs/K	1.94	16.19	Total	West Franklin F9	7,327	24,038	C	204	399	–	Coiled-tubing underbalanced perforation in one of the North Sea's deepest commercial gas wells
178	Norway	Jun 08	Cs/K	1.96	16.36	Statoil Hydro	Kvitebjørn A6	N/A	N/A	O	–	–	–	PLT campaign. Standby kill pill during A6 workover
179	UKNS	Jun 08	Cs/K	1.57	13.10	Shell	Shearwater SW7	5,425	17,800	I	–	–	–	Workover
180	Kazakhstan	Jun 08	Cs	2.03	16.94	AgipKCO	Kashagan KED 04	4,973	16,315	C	100	212	–	1st completion in Kashagan field

## Overview of formate case histories

No.	Location	Start date	Fluid	Density		Operator	Field	Depth		Job type D, C, S, I, O	Temp.		Dev.	Comments
			Formate	s.g.	ppg			Metres	Feet		°C	°F	Deg.	
181	Norway	Jul 08	Cs/K	1.76	14.69	Statoil Hydro	Snorre A P-10 A	5,600	18,372	C	–	–	–	Injection well
182	Kazakhstan	Jul 08	Cs	2.03	16.94	AgipKCO	Kashagan KED 03	4,474	14,678	C	100	212	–	2nd completion in Kashagan field
183	Kazakhstan	Jul 08	Cs	2.03	16.94	AgipKCO	Kashagan KED 01	4,666	15,308	C	100	212	–	3rd completion in Kashagan field
184	Brunei	Aug 08	Cs	2.22	18.53	Total Borneo	Maharaja Lela/ Jamalulalam MLJ4	N/A	N/A	O	–	–	–	Stuck pipe release pill for use in OBM (standby)
185	Kazakhstan	Aug 08	Cs	2.03	16.94	AgipKCO	Kashagan KED 05	4,915	16,125	C	100	212	–	4th completion in Kashagan field
186	Norway	Aug 08	Cs/K	1.66	13.85	Statoil Hydro	Visund A-9 AH	4,314	14,153	C	113	235	–	Completion
187	Norway	Aug 08	Cs/K	1.76	14.68	Statoil Hydro	Snorre B K-8	6,699	21,978	C	–	–	–	Injection well
188	Kazakhstan	Aug 08	Cs	2.03	16.94	AgipKCO	Kashagan KED 08	4,595	15,075	C	100	212	–	5th completion in Kashagan field
189	Kazakhstan	Aug 08	Cs	2.03	16.94	AgipKCO	Kashagan KED 09	5,088	16,692	C	100	212	–	6th completion in Kashagan field
190	Malaysia	Sep 08	Cs/K	1.65	13.77	Exxon Mobil	Jerneh-B1	–	–	C	–	–	–	Completion
191	Norway	Sep 08	Cs/K	1.84–2.00	15.35–16.69	Statoil Hydro	Kvitebjørn A-03	5,950	19,521	D	150	302	–	13th Kvitebjørn drill-in. MPD with designer fluid
192	Norway	Sep 08	Cs/K	1.84–2.00	15.35–16.69	Statoil Hydro	Kvitebjørn A-03	5,950	19,521	C	150	302	–	Completion after drill-in with cesium formate designer fluid
193	Norway	Sep 08	Cs/K	1.76	14.68	Statoil Hydro	Snorre A P-10 A	5,600	18,373	C	–	–	–	Injection well. K-FLS pill
194	Norway	Oct 08	Cs/K	1.95	16.27	Statoil Hydro	Visund A-10	–	–	O	–	–	–	Slug
195	Norway	Nov 08	Cs/K	2.07	17.27	Statoil Hydro	Njord AA-18 BH	4,370	14,337	O	–	–	–	Slug
196	Norway	Dec 08	Cs	2.20	18.36	Statoil Hydro	Gullfaks A A-28	2,529	8,297	C	–	–	–	Completion
197	Norway	Dec 08	Cs	2.20	18.36	Statoil Hydro	Gullfaks B B-02 A	2,723	8,934	C	–	–	–	Completion
198	Norway	Feb 09	Cs/K	2.07	17.27	Statoil Hydro	Snorre A P-33	–	–	?	–	–	–	K-FLS pill/slug
199	Norway	Feb 09	Cs/K	1.76–1.95	14.69–16.27	Statoil Hydro	Snorre A P-22	6,141	20,147	?	–	–	–	Injection well. K-FLS pill/slug
200	UKNS	Mar 09	Cs	2.14	17.83	Total	Kessog 09	4,500	14,760	C	170	305	–	Completion – overbalanced perforation

## Overview of formate case histories

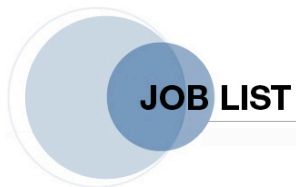
No.	Location	Start date	Fluid	Density		Operator	Field	Depth		Job type D, C, S, I, O	Temp.		Dev. Deg.	Comments
			Formate	s.g.	ppg			Metres	Feet		°C	°F		
201	UKNS	Mar 09	Cs	2.25	18.73	Total	Elgin G-11	–	–	O	–	–	–	Stuck pipe release pill for use in OBM (standby)
202	Norway	Mar 09	Cs/K	2.07	17.27	Statoil Hydro	Njord A A-11 AH	4,081	13,389	O	–	–	–	Slug
203	Norway	Mar 09	Cs/oil	2.20	18.36	Statoil Hydro	Gulfaks AA-28 T4	–	–	C	–	–	–	Oil-based completion fluid (LSOBM)
204	Norway	Mar 09	Cs	2.20	18.36	Statoil Hydro	Gulfaks C C-01 A	N/A	N/A	O	–	–	–	X-linked pill
205	Norway	Mar 09	Cs/K	–	–	Statoil Hydro	Snorre B L-2 AH	5,410	17,749	O	–	–	–	1.63 s.g. (8.35 ppg) K-FLS pill/slug for injection well
206	Norway	Mar 09	Cs	2.07	12.10	Statoil Hydro	Tune Sør A-21 AH	4,482	14,705	C	–	–	90	Standby spike for potassium formate mud
207	UKNS	May 09	Cs/K	1.85	15.40	Total	Jura 2 3/15-11	3,638	11,935	I	–	–	–	Well kill and recompletion
208	Kazakhstan	Jun 09	Cs	2.03	16.94	AgipKCO	Kashagan KED 02	5,088	16,692	C	100	212	–	Completion
209	USA	Jun 09	Cs	2.20	18.36	Murphy	OCSG 21778	–	–	C	–	–	–	Held on standby against mechanical failure
210	Norway	Jun 09	Cs/oil	2.20	18.36	Statoil Hydro	Gulfaks AA-48 CT2	–	–	C	–	–	–	Oil-based completion fluid (LSOBM)
211	Kazakhstan	Jun 09	Cs	2.03	16.94	AgipKCO	Kashagan KED 12	5,088	16,692	C	100	212	–	7th completion in Kashagan field
212	Kazakhstan	Jul 09	Cs	2.03	16.94	AgipKCO	Kashagan KED 07	5,088	16,692	C	100	212	–	8th completion in Kashagan field
213	Norway	Jul 09	Cs/K	1.91	15.94	Statoil Hydro	Snorre A P-27 A	–	–	O	–	–	–	Slug
214	Norway	Jul 09	Cs/K	1.76	14.69	Total	Victoria 6506/9-1	5,664	18,583	C	200	405	–	Drill stem test
215	Norway	Jul 09	Cs/K	1.85–2.17	15.44–17.94	Statoil Hydro	Kvitebjørn A-09 T2	–	–	D	–	–	–	14th Kvitebjørn drill-in
216	Norway	Jul 09	Cs/K	1.85–2.17	15.44–17.94	Statoil Hydro	Kvitebjørn A-09 T2	–	–	C	–	–	–	Completion after drill-in with cesium formate
217	Kazakhstan	Aug 09	Cs	2.03	16.94	AgipKCO	Kashagan KED 11	5,088	16,692	C	100	212	–	9th completion in Kashagan field
218	Kazakhstan	Aug 09	Cs	2.03	16.94	AgipKCO	Kashagan KED 09	5,088	16,692	C	100	212	–	10th completion in Kashagan field
219	Brunei	Aug 09	Cs	2.22	18.53	Total Borneo	Maharaja Lela/ Jamalulalam MLJ5	N/A	N/A	O	–	–	–	Stuck pipe release pill for use in OBM (standby)
220	Norway	Aug 09	Cs/K	1.76	14.68	Statoil Hydro	Visund A-26 H	–	–	O	–	–	–	Slug

## Overview of formate case histories

No.	Location	Start date	Fluid	Density		Operator	Field	Depth		Job type D, C, S, I, O	Temp.		Dev.	Comments
			Formate	s.g.	ppg			Metres	Feet		°C	°F	Deg.	
221	Kazakhstan	Sep 09	Cs	2.03	16.94	AgipKCO	Kashagan KED 06	5,088	16,692	C	100	212	–	11th completion in Kashagan field
222	Kazakhstan	Oct 09	Cs	2.03	16.94	AgipKCO	Kashagan KED 10	5,088	16,692	C	100	212	–	12th completion in Kashagan field
223	Norway	Nov 09	Cs/K	1.63	13.59	Statoil	Vega 35/11-R-14 AH	4,650	15,256	D	130	266	101.5	1st Vega drill-in
224	Norway	Nov 09	Cs/K	1.63	13.59	Statoil	Vega 35/11-R-14 AH	4,650	15,256	C	130	266	101.5	Open hole screen completion after drill-in with cesium formate fluid
225	Kazakhstan	Dec 09	Cs	2.03	16.94	AgipKCO	Kashagan KED 06	5,088	16,692	I	100	212	–	Workover
226	Norway	Jan 10	Cs/K	1.63	13.59	Statoil	Vega 35/11-R-12 AH	4,400	14,436	D	130	266	92.5	2nd Vega drill-in
227	Norway	Jan 10	Cs/K	1.63	13.59	Statoil	Vega 35/11-R-12 AH	4,400	14,436	C	130	266	92.5	Open hole screen completion after drill-in with cesium formate fluid
228	Norway	Jan 10	Cs/K	–	–	Statoil	Njord A 6407/7-A-05 CH	–	–	C	–	–	–	Completion
229	Norway	Feb 10	Cs/K	–	–	Statoil	Snorre B 34/4-K-5 H	–	–	C	–	–	–	Completion
230	Norway	Mar 10	Cs/Oil	1.95	16.24	Statoil	Morvin 6506/11-B-3 HT2	5,934	19,463	C	160	320	90	Oil-based completion fluid (LSOBM)
231	Norway	Mar 10	Cs/K	1.73	14.49	Statoil	Vega 35/8-P-13 H2	3,841	12,602	D	130	266	21	3rd Vega drill-in
232	Norway	Mar 10	Cs/K	1.73	14.49	Statoil	Vega 35/8-P-13 H2	3,841	12,602	C	130	266	21	Open hole screen completion after drill-in with cesium formate fluid
233	Norway	Apr 10	Cs/K	1.74	14.51	Statoil	Vega 35/8-P-11 H	4,863	15,956	D	130	266	98	4th Vega drill-in
234	Norway	Apr 10	Cs/K	1.74	14.51	Statoil	Vega 35/8-P-11 H	4,863	15,956	C	130	266	98	Open hole screen completion after drill-in with cesium formate fluid
235	Norway	Apr 10	Cs/K	1.83	15.27	Statoil	Vega 35/8-P-13 HT2	3,841	12,602	C	130	266	21	TP&A and upper completion
236	Norway	Apr 10	Cs/K	MP: 1.85 OB: 2.00	MP: 15.44 OB: 16.70	Statoil	Kvitebjørn A7	5,490	18,007	D	151	303	9.5	15th Kvitebjørn drill-in. MPD mode
237	Norway	May 10	Cs/K	1.71/1.60	14.27/13.35	Statoil	Gullfaks A 34/10-A-43	4,329	14,199	I	–	–	–	Recompletion/fishing (collapsed tubing)
238	Norway	May 10	Cs/oil	1.95	16.24	Statoil	Morvin 6506/11-B-3 HT2	5,934	19,463	C	160	320	90	Oil-based completion fluid (LSOBM)
239	Norway	May 10	Cs/K	1.77	14.74	Statoil	Snorre A 34/7-P-35 A	5,567	18,259	C	95	203	65	Completion
240	USA	May 10	Cs/K	1.94	16.20	Conoco	Malek #1	–	–	I	–	–	–	Well kill – Eagleford shale

## Overview of formate case histories

No.	Location	Start date	Fluid	Density		Operator	Field	Depth		Job type D, C, S, I, O	Temp.		Dev. Deg.	Comments
			Formate	s.g.	ppg			Metres	Feet		°C	°F		
241	Kazakhstan	Jun 10	Cs	2.03	16.94	AgipKCO	Kashagan KED 02	5,088	16,692	I	100	212	–	Workover
242	Norway	Jun 10	Cs/K	2.04	16.99	Total	Hild 30/4-D1 AH	4,500	14,760	C	139	282	53	Completion
243	Norway	Jun 10	Cs/K	2.00	16.70	Statoil	Kvitebjørn A7	5,490	18,007	C	151	303	9.5	Completion after drill-in with cesium formate
244	Norway	Jun 10	Cs/K	1.77	14.74	Statoil	Snorre B 34/4-K-8 H	–	–	O	–	–	–	Slugs and pills for potassium formate FLS completion
245	Norway	Jun 10	Cs/K	1.83	15.24	Statoil	Vega 35/8-P-11 H	4,863	15,956	C	130	266	98	TP & A/Upper completion
246	Norway	Jul 10	Cs/K	1.64	13.66	Statoil	Vega 35/11-R-14 H	4,560	14,957	C	125	257	102	Upper completion
247	Norway	Jul 10	Cs/oil	2.00	16.70	Statoil	Alve 6507/3-L-4 H	6,137	20,129	C	141	286	90	Oil-based completion fluid (LSOBM)
248	Norway	Jul 10	Cs/K	2.00	16.70	Statoil	Kvitebjørn A7	5,490	18,007	O	151	303	9.5	TP & A
249	Norway	Aug 10	Cs/K	1.62	13.50	Statoil	Vega 35/11-R-12 H	4,400	14,432	C	125	257	91	Upper completion
250	Norway	Aug 10	Cs/oil	1.96	16.33	Statoil	Morvin 6506/11-A-1 H	5,934	19,463	C	160	320	90	Oil-based completion fluid (LSOBM)
251	Norway	Aug 10	Cs/K	2.04	16.99	Total	Hild 30/4-D1 AH	4,500	14,760	O	139	282	53	P & A
252	Norway	Aug 10	Cs/K	1.58	13.16	Statoil	Visund 34/8-A25	3,040	9,974	C	120	248	90	–
253	Norway	Aug 10	Cs/oil	2.19	18.24	Statoil	Gullfaks B 34/10-B-24 A	–	–	C	–	–	–	Oil-based completion fluid (LSOBM)
254	Norway	Sep 10	Cs/K	2.00	16.70	Statoil	Kvitebjørn A7	5,490	18,007	S	151	303	9.5	TP & A/well suspension
255	PNG	Oct 10	Cs/K	1.66	13.85	Oil Search (PNG) Ltd.	Moran M15 ST1	2,292	7,520	C	38	100	35.9	First use of Cs formate in PNG. Multi-zonal perforation with two brine densities
256	Norway	Oct 10	Cs/oil	2.20	18.33	Statoil	Morvin 6506/11-A-4 H	–	–	C	–	–	–	Oil-based completion fluid (LSOBM)
257	Norway	Nov 10	Cs/oil	1.97	16.41	Statoil	Morvin 6506/11-A-4 H	–	–	C	–	–	–	Oil-based completion fluid (LSOBM)
258	Norway	Nov 10	Cs/K	2.13	17.74	Dong	Trym 3/7-A-1 AH	–	–	C	–	–	–	Completion – gas/condensate producer
259	Norway	Nov 10	Cs/K	1.97	16.41	Statoil	6407/7-A-08 AH	–	–	O	–	–	–	Slug on rental in exploration well
260	Norway	Dec 10	Cs/K	2.01	16.74	Statoil	Snorre 34/7-P-06	–	–	O	–	–	–	Slug on rental in injection well



### Overview of formate case histories

No.	Location	Start date	Fluid	Density		Operator	Field	Depth		Job type	Temp.		Dev.	Comments
			Formate	s.g.	ppg			Metres	Feet	D, C, S, I, O	°C	°F	Deg.	
261	Norway	Dec 10	Cs/K	2.01	16.74	Statoil	Snorre 34/7-P-06			C				Completion – K-FLS system in injection well
262	Norway	Dec 10	Cs/K	1.72	14.33	Statoil	Snorre 34/4-D-7			O				Slug on rental in oil production well
263	Norway	Jan 11	Cs/K	1.64	13.66	Statoil	Vega 35/8-Q 12H	5,530	18,138	D	133		94	Fifth Vega drill-in: 1,851 metres
264	Norway	Feb 11	Cs/K	1.99	16.58	Statoil	Snorre 34/4-D-7			C				Completion – K-FLS system in oil production well
265	Norway	Feb 11	Cs/oil	2.20	18.33	Statoil	Morvin 6506/11-A 2H			C				Oil-based completion fluid (LSOBM)
266	Norway	Feb 11	Cs/K	1.64	13.66	Statoil	Vega 35/8-Q 12H	5,530	18,138	C	133		94	Open-hole screen completion after drill-in with cesium formate fluid
267	Norway	Mar 11	Cs/K	2.14	17.83	Dong	Trym 3/7-A-2 H			C				Completion – HPHT gas/condensate producer
268	Norway	Mar 11	Cs/K	1.98	16.49	Statoil	A-04 AH			O				Slug on rental
269	Norway	Mar 11	Cs/K	1.99	16.58	Statoil	Snorre 34/7-P-17 A			C				Completion – K-FLS system in injection well
270	Norway	Mar 11	Cs/K	1.64	13.66	Statoil	Vega 35/8-Q-12 AH	5,530	18,138	C	133		94	Log and perforating fluid after OBM drill-in
271	Norway	Apr 11	Cs/K	1.85	15.41	Statoil	Snorre 34/7-P-17 A			O				Slug on rental in injection well
272	Norway	Apr 11	Cs/oil	1.98	16.49	Statoil	Morvin 6506/11-A-2H			C				Oil-based completion fluid (LSOBM)
273	Norway	Apr 11	Cs/K	1.85	15.41	Statoil	Snorre 34/4-D-7			O				Slug on rental in oil production well
274	Norway	Apr 11	Cs/K	1.64	13.66	Statoil	Vega-Q-12 AH T2	5,530	18,138	C	133		94	Log and perforating fluid after OBM drill-in
275	USA	Apr 11	Cs	2.17	18.10	Conoco	Edith Gray Unit B1			I				Well kill in Eagle Ford shale
276	USA	May 11	Cs/K	1.81	15.10	Delta Petroleum	North Vega 2C			C	193	380		Completion in Piceance Basin shale
277														
278														
279														
280														