Cementing Treatment

Start Date	7/10/18	**Well**	Thornton D-29-30HN
End Date	7/10/18	**API#**	05-123-43604
Client	BAYSWATER EXPLORATION & PRODUCTION, LLC	**County**	WELD
Client Field Rep.	Scott	**State/Province**	CO
Service Sup.	Anthony Staples	**Rig**	True 38
District	Cheyenne, WY		
Type of Job	Long String		
Execution ID	EXC-08458-Z4D6Q302		
Project ID	PRJ1008414		

WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)
Previous Casing	8.92	9.63	36.00	1,552.00	1,552.00	
Open Hole	8.50			17,619.00	7,220.00	7.00
Casing	4.78	5.50	20.00	17,600.00	7,220.00	

Shoe Length (ft): 27

HARDWARE

Bottom Plug Used?	No	**Landing Collar Depth (ft)**	17,573
Top Plug Used?	Yes	**Max Casing Pressure - Rated (psi)**	12,640
Top Plug Provided By	3rd Party	**Max Casing Pressure - Operated (psi)**	3500
Top Plug Size	5.5	**Pipe Movement**	no
Centralizers Used	yes	**Job Pumped Through**	Head
Centralizers Quantity	215	**Top Connection Thread**	Butt
		Top Connection Size	5.5

Cementing Treatment

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	**Solids Present at End of Circulation**	No
Circulation Prior to Job	Yes	**10 sec SGS**	10
Circulation Time (min)	180	**10 min SGS**	15
Circulation Rate (bpm)	10	**30 min SGS**	17
Circulation Volume (bbls)	1800	**Flare Prior to/during the Cement Job**	No
Lost Circulation Prior to Cement Job	No	**Gas Present**	No
Mud Density In (ppg)	10		
Mud Density Out (ppg)	10		
PV Mud In	17		
PV Mud Out	17		
YP Mud In	9		
YP Mud Out	9		

TEMPERATURE

Ambient Temperature (°F)	95	**Slurry Cement Temperature (°F)**	60
Mix Water Temperature (°F)	60	**Flow Line Temperature (°F)**	155

Cementing Treatment

BJ FLUID DETAILS

Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Planned Top of Fluid (Ft)	Length (Ft)	Vol (sk)	Vol (Cu Ft)	Vol (bbls)
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	11.5000			0.00				80.0000
Lead Slurry	BJCem P100.3.01C	13.2000	1.8254	9.88	0.00	6,830.00	940	1,712.0000	304.8000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4777	7.45	6,830.00	10,808.00	1,800	2,655.0000	472.7000
Displacement 2	Retarded Water w/ Clay Protection & Biocide	8.3331				0.00	0	0.0000	20.0000
Displacement Final	Water w/ Clay Protection & Biocide	8.3331			0.00			0.0000	370.3000

Cementing Treatment

Fluid Type	Fluid Name	Component	Concentration	UOM
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	SPACER SURFACTANT, SS-247	0.7000	GPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	GELLANT WATER, GW-86	0.9000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	SPACER SURFACTANT, SS-267	0.7000	GPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	SAND, S-8, Silica Flour, 200 Mesh	215.0000	PPB
Lead Slurry	BJCem P100.3.01C	CEMENT, ASTM TYPE III	100.0000	PCT
Lead Slurry	BJCem P100.3.01C	FOAM PREVENTER, FP-25	0.3000	BWOB
Lead Slurry	BJCem P100.3.01C	FLUID LOSS, FL-66	0.5000	BWOB
Lead Slurry	BJCem P100.3.01C	BONDING AGENT, EC-2	3.0000	BWOB
Lead Slurry	BJCem P100.3.01C	GELLANT WATER, GW-86	0.0500	BWOB
Lead Slurry	BJCem P100.3.01C	RETARDER, R-31	0.1700	BWOB
Tail Slurry	BJCem P50.6.02C	FOAM PREVENTER, FP-25	0.3000	BWOB
Tail Slurry	BJCem P50.6.02C	FLUID LOSS, FL-66	0.2000	BWOB
Tail Slurry	BJCem P50.6.02C	RETARDER, SR-20	0.1500	BWOB
Tail Slurry	BJCem P50.6.02C	GELLANT WATER, GW-86	0.1000	BWOB
Tail Slurry	BJCem P50.6.02C	Flyash (Rockies)	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	EXTENDER, BENTONITE	2.0000	BWOB
Tail Slurry	BJCem P50.6.02C	CEMENT, CLASS G	50.0000	PCT
Displacement 2	Retarded Water w/ Clay Protection & Biocide	BIOCIDE, BIOC11139W	0.0100	GPB
Displacement 2	Retarded Water w/ Clay Protection & Biocide	RETARDER, R-8L	0.5000	GPB
Displacement 2	Retarded Water w/ Clay Protection & Biocide	CLAY STABILIZER ResCare CS	0.0800	GPB
Displacement Final	Water w/ Clay Protection & Biocide	BIOCIDE, BIOC11139W	0.0100	GPB
Displacement Final	Water w/ Clay Protection & Biocide	CLAY STABILIZER ResCare CS	0.0800	GPB

Cementing Treatment

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	**Method Used to Verify Returns**	Visual
Calculated Displacement Volume (bbls)	389.7	**Amount of Spacer to Surface**	80
Actual Displacement Volume (bbls)	400	**Pressure Left on Casing (psi)**	0
Did Float Hold?	Yes	**Amount Bled Back After Job**	3
Bump Plug	No	**Total Volume Pumped (bbls)**	1266
Were Returns Planned at Surface	Yes	**Top Out Cement Spotted**	No
Cement returns During Job	Yes	**Lost Circulation During Cement Job**	No
Amount of Cement Returned/Reversed	50		

Event Log

Customer Name: BAYSWATER EXPLORATION &
Well Name: Thornton D-29-30HN
Job Type: Long String
TMD (ft): 17619

District: Cheyenne, WY
Field Leader: Anthony Staples
Quote ID: QUO-14908-C6Z6S2
Plan ID: ORD-08458-Z4D6Q3
Execution ID: EXC-08458-Z4D6Q302

Seq.	Start Dt./Time	Event	Density (ppg)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	07/10/2018 04:00	Callout					Customer Called Out Crew For a Production CMT Job RTS 10:30
2	07/10/2018 05:00	Callout					Crew Getting Equipment Ready For Job
3	07/10/2018 7:44	Arrive on Location					Arrived With All Equipment and Crew
4	07/10/18 9:20	Spot Units					Trucks Spotted In
5	07/10/18 9:30	Safety Meeting					Held STEACS With Crew and Assigned Tasks
6	07/10/18 9:40	Rig Up					All Ground Iron Rigged in as Well as Water and Bulk
7	07/10/18 11:30	Safety Meeting					Held Pre-Job STEACS Briefing with all Personel and Outlined the Job
8	07/10/18 11:44	Prime Up					Operator Primed Up Pump While the Head was being Rigged In.
9	07/10/2018 12:03	Pressure Test	8.3400	2.00	2.00	4,500.00	Loaded Lines With 2 Bbls Of H2O and Conducted Psi Test
10	07/10/2018 12:14	Pump Spacer	11.5000	3.50	80.00	200.00	Spacer @ 11.5# +Chemicals
11	07/10/2018 13:05	Pump Lead Cement	13.2000	5.00	300.00	350.00	Batch, Weigh, and Pump 940sks of 13.2# Lead CMT, Y.P. 1.83 (304 Bbls)
12	07/10/2018 14:06	Pump Tail Cement	13.5000	5.50	486.00	410.00	Weigh, and Pump 1800sks of 13.5# Tail CMT, Y.P. 1.48 (472.7 Bbls) Top of CMT@ 6032ft
13	07/10/2018 15:42	Clean Pumps and Lines	8.3400	3.00	10.00	50.00	Cleaning Up/Loading Plug
14	07/10/2018 15:50	Drop Top Plug	8.3400				Plug Away
15	07/10/2018 15:51	Pump Displacement	8.3400	7.80	100.00	2,200.00	100 Bbls Away
16	07/10/2018 16:06	Pump Displacement	8.3400	7.80	100.00	3,500.00	200 Bbls Away
17	07/10/2018 16:18	Pump Displacement	8.3400	7.80	100.00	3,500.00	300 Bbls Away
18	07/10/2018 16:42	Pump Displacement	8.3400	7.80	75.00	3,500.00	375 Bbls Away, Dropped Rate to 3 bpm.

Event Log

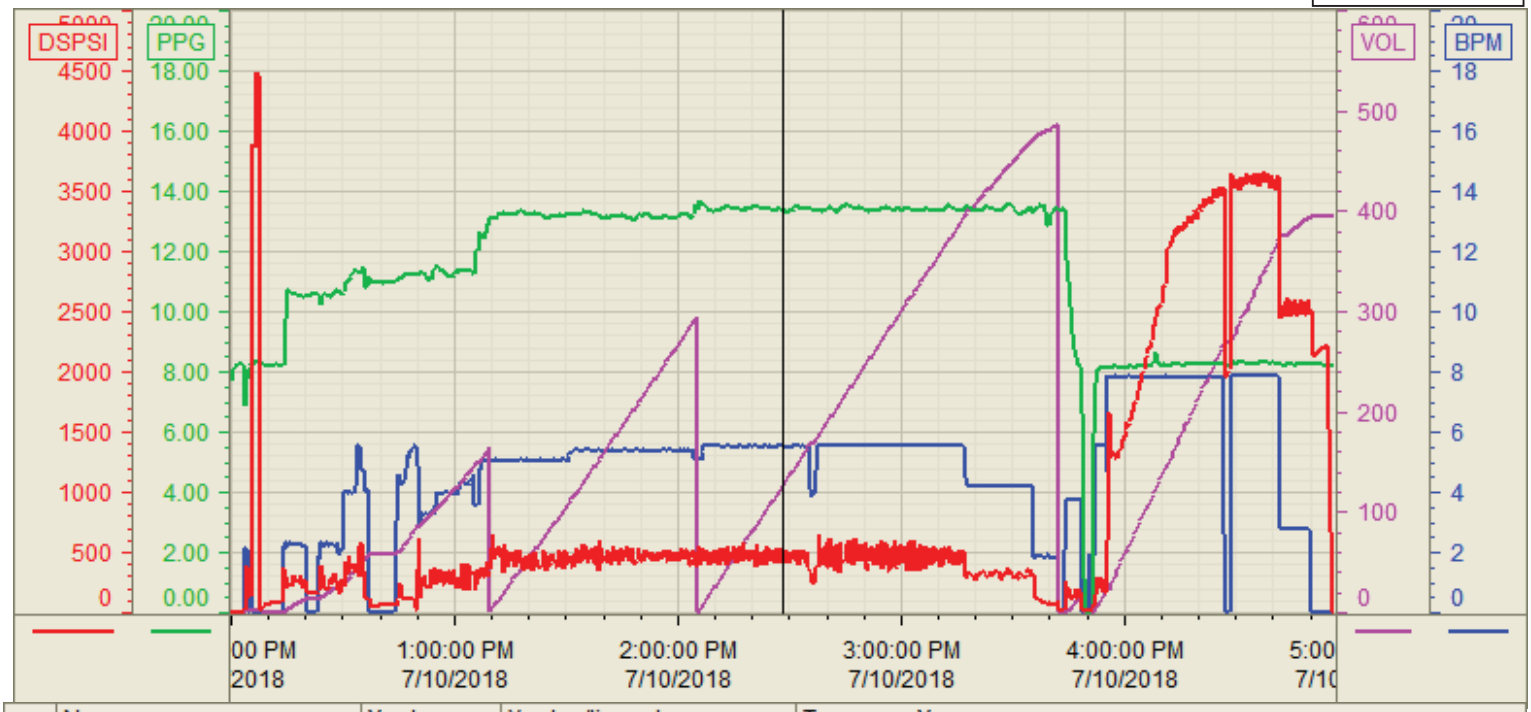
Customer Name: BAYSWATER EXPLORATION &
Well Name: Thornton D-29-30HN
Job Type: Long String
TMD (ft): 17619

District: Cheyenne, WY
Field Leader: Anthony Staples
Quote ID: QUO-14908-C6Z6S2
Plan ID: ORD-08458-Z4D6Q3
Execution ID: EXC-08458-Z4D6Q302

Seq.	Start Dt./Time	Event	Density (ppg)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
19	07/10/2018 16:50	Other (See comment)	8.3400	3.00	25.00	3,200.00	Pumped Until We Reached 400 Bbls away, Per Customer, Calculated Displacement was 389.7 Bbls. 80 bbls of Spacer and 50 Bbls of CMT to Surface
20	07/10/2018 16:54	Check Floats	8.3400			2,174.00	Floats Held 3Bbls Back
21	07/10/2018 17:00	Safety Meeting					Held Rig Down STEACS with Crew
22	07/10/2018 17:15	Rig Down			75.00	2,200.00	Rig Down
23	07/10/2018 19:00	Leave Location			75.00	2,200.00	Leave Location

Customer: Bayswater
Well Number: D-29-30HN
Lease Info: THORNTON

Print Date/Time
7/10/2018 5:51:08 PM



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press(PSI)	428.2	7/10/2018 2:28:13 PM	Cementer\DS_DISCHARGE_PRESS_DIAL
2	DH - Density (PPG)	13.39 i.	7/10/2018 2:28:15 PM i.	Cementer\DENSITY2_ACTUAL_RATE
3	Down Hole Total (BBLS)	126.9	7/10/2018 2:28:15 PM	Cementer\DOWNHOLE_FLOW_TOTAL
4	Combined rate (BPM)	5.55	7/10/2018 2:28:15 PM	Cementer\Flow_Combined
5				

Source: Control1 5:51:01 PM