Cementing Treatment

BJ

Start Date	6/6/18	**Field Ticket#**	07434-V9P4S80202-62867
End Date	6/6/18	**Well**	Thornton D-29-30HN
Client	BAYSWATER EXPLORATION & PRODUCTION, LLC	**API#**	05-123-43604
Client Field Rep.	Scott	**County**	WELD
Service Sup.	Brian Boyd	**State/Province**	CO
District	Cheyenne, WY	**Rig**	True 38
Type of Job	Surface	**Project ID**	PRJ1007438
Execution ID	EXC-07434-V9P4S802		

WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)
Open Hole	13.50			1,562.00	1,562.00	30.00
Casing	8.92	9.63	36.00	1,552.00	1,552.00	

Shoe Length (ft): 42

HARDWARE

Top Plug Used?	Yes	**Tool Type**	Float collar
Top Plug Provided By	Bayswater	**Tool Depth (ft)**	1509
Top Plug Size	9 5/8"	**Max Casing Pressure - Rated (psi)**	3520
Centralizers Used	Yes	**Max Casing Pressure - Operated (psi)**	2015
Centralizers Quantity	16	**Pipe Movement**	No
Centralizers Type	Catamount	**Job Pumped Through**	BJ cement head
Landing Collar Depth (ft)	1,509	**Top Connection Thread**	LTC
		Top Connection Size	9 5/8"

CIRCULATION PRIOR TO JOB

Well Circulated By	True 38	**YP Mud In**	1
Circulation Prior to Job	Yes	**Solids Present at End of Circulation**	No
Circulation Time (min)	60	**10 sec SGS**	1
Circulation Rate (bpm)	5	**10 min SGS**	1
Circulation Volume (bbls)	140	**30 min SGS**	2
Lost Circulation Prior to Cement Job	No	**Flare Prior to/during the Cement Job**	No
Mud Density In (ppg)	8.33	**Gas Present**	No
PV Mud In	4		

TEMPERATURE

Ambient Temperature (°F)	90	**Slurry Cement Temperature (°F)**	70
Mix Water Temperature (°F)	67	**Flow Line Temperature (°F)**	79

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	Water	8.3337			0.00				20.0000
Lead Slurry	BJCem S100.03.1C	12.0000	2.5298	14.86	0.00	1,050.00	265	667.0000	118.7000
Tail Slurry	BJCem S100.03.1C	12.5000	2.2256	12.59	1,050.00	500.00	150	336.0000	59.8000
Displacement Final	Water	8.3337			0.00			0.0000	116.6000

Fluid Type	Fluid Name	Component	Concentration	UOM
Spacer / Pre Flush / Flush	Water	Fresh Water	100.0000	PCT
Lead Slurry	BJCem S100.03.1C	CEMENT EXTENDER,SODIUM METASILICATE A-2 ANHYDROUS	2.0000	LBS/SK
Lead Slurry	BJCem S100.03.1C	FOAM PREVENTER, FP-25	0.3000	BWOB
Lead Slurry	BJCem S100.03.1C	CEMENT EXTENDER, GYPSUM, A-10	5.0000	BWOB
Lead Slurry	BJCem S100.03.1C	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.0000	LBS/SK
Lead Slurry	BJCem S100.03.1C	CEMENT, ASTM TYPE III	100.0000	PCT
Lead Slurry	BJCem S100.03.1C	IntegraSeal CELLO	0.1300	LBS/SK
Tail Slurry	BJCem S100.03.1C	CEMENT EXTENDER, GYPSUM, A-10	5.0000	BWOB
Tail Slurry	BJCem S100.03.1C	CEMENT, ASTM TYPE III	100.0000	PCT
Tail Slurry	BJCem S100.03.1C	FOAM PREVENTER, FP-25	0.3000	BWOB
Tail Slurry	BJCem S100.03.1C	CEMENT EXTENDER,SODIUM METASILICATE A-2 ANHYDROUS	2.0000	LBS/SK
Tail Slurry	BJCem S100.03.1C	IntegraSeal CELLO	0.1300	LBS/SK
Tail Slurry	BJCem S100.03.1C	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.0000	LBS/SK
Displacement Final	Water	Fresh Water	100.0000	PCT

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ Services	**Amount of Cement Returned/Reversed**	32 bbls
Calculated Displacement Volume (bbls)	116	**Method Used to Verify Returns**	Visual/Dye
Actual Displacement Volume (bbls)	117	**Amount of Spacer to Surface**	20 bbls
Did Float Hold?	Yes	**Amount Bled Back After Job**	0.5 bbls
Bump Plug	No	**Total Volume Pumped (bbls)**	320
Bump Plug Pressure (psi)	331	**Top Out Cement Spotted**	No
Were Returns Planned at Surface	Yes	**Lost Circulation During Cement Job**	No
Cement returns During Job	Yes		

Event Log

BJ

Customer Name: BAYSWATER EXPLORATION
Well Name: Thornton D-29-30HN
Job Type: Surface
TMD (ft): 1551

District: Cheyenne, WY
Field Leader: Brian Boyd
Quote ID: QUO-12897-Z3V5D9
Plan ID: ORD-07434-V9P4S8
Execution ID: EXC-07434-V9P4S802

Seq.	Start Dt./Time	Event	Density (ppg)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	06/06/2018 0:30	Callout					Customer requested crew to be on location at 6:30
2	06/06/2018 5:00	Arrive on Location					BJ crew is on location from previous job, meet with customer
3	06/06/2018 5:05	Safety Meeting					BJ crew has Steacs over rigging up iron and hoses
4	06/06/2018 5:10	Rig Up					BJ crew rigs up iron and hoses
5	06/06/2018 05:36	Other (See comment)					Waiting on rig to finish wiper trip and running casing
6	06/06/2018 10:36	Circulate Well					Rig lands casing and begins to recirculate well
7	06/06/2018 10:48	Safety Meeting					Steacs breifing with BJ crew, rig crew and company man over job and hazards
8	06/06/2018 11:09	Start Pumping	8.3300	2.00	4.00	30.00	Fill pumps and lines
9	06/06/2018 11:12	Pressure Test	8.3300	0.50	0.50	3,000.00	Pressure test iron and head to 3000 PSI
10	06/06/2018 11:23	Pump Spacer	8.3300	5.00	20.00	44.00	Pump 20 bbls of red dye ahead
11	06/06/2018 11:31	Pump Lead Cement	12.0000	5.00	118.00	156.00	Pump 118 bbls of 12 PPG lead cement (2.52 Yield, 14.89 Gals/Sks, 275 Sks)
12	06/06/2018 11:58	Pump Tail Cement	12.5000	5.00	59.00	132.00	Pump 59 bbls of 12.5 PPG Tail Cement (2.22 Yield, 12.54 Gals/Sks, 150 Sks)
13	06/06/2018 12:14	End Pumping					Shut down pumping
14	06/06/2018 12:20	Drop Top Plug					Drop top plug with company man to verify plug went downhole
15	06/06/2018 12:20	Pump Displacement	8.3300	5.00	116.00	132.00	Pump fresh water displacement
16	06/06/2018 12:36	Cement Back to Surface	8.3300	5.00	83.00	1,034.00	83 bbls into displaceement got cement to surface for total of 32 bbls back
17	06/06/2018 12:40	Other (See comment)	8.3300	2.50	106.00	235.00	Last 10 bbls slow rate to 2.5 bpm
18	06/06/2018 12:44	Land Plug	8.3300		117.00	331.00	Did not land plug, company man wanted us to pump 1 bbl over and hold for 3 mins and check floats
19	06/06/2018 12:48	Check Floats					Check floats and got .5 bbl back to pump truck
20	06/06/2018 12:51	Safety Meeting					BJ crew has steacs breifing over riggin down iron and head
21	06/06/2018 12:55	Rig Down					BJ crew rigs down iron and head
22	06/06/2018 13:40	Leave Location					BJ crew has journey mangement and departs from location

Bayswater