

Cementing Treatment



Start Date	7/23/2018	Field Ticket#	FT-08962-F2L4S60202-772060775
End Date	7/24/2018	Well	Thornton F-29-30HN
Client	BAYSWATER EXPLORATION & PRODUCTION, LLC	API#	05-123-43593
Service Sup.	Zachary Hyde	County	WELD
District	Cheyenne, WY	State/Province	CO
Type of Job	Long String	Rig	True 38
Execution ID	EXC-08962-F2L4S602	Project ID	PRJ1008891

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	1,550.00	
Open Hole	8.50	0.00	0.00	17,506.00	7,146.00	7.00
Casing	4.78	5.50	20.00	17,488.00	7,146.00	

Shoe Length (ft): 42.00

HARDWARE

Top Plug Used?	Yes	Landing Collar Depth (ft)	17,479
Top Plug Provided By	Rig	Pipe Movement	None
Top Plug Size	5.500	Job Pumped Through	No Manifold
Centralizers Used	Yes	Top Connection Thread	BTC
Centralizers Quantity	206.00	Top Connection Size	5.5
Centralizers Type	Rigid		

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	PV Mud Out	14
Circulation Prior to Job	Yes	YP Mud In	22
Circulation Time (min)	360	YP Mud Out	22
Circulation Rate (bpm)	8	Solids Present at End of Circulation	No
Circulation Volume (bbls)	2,880	10 sec SGS	13
Lost Circulation Prior to Cement Job	No	10 min SGS	17
Mud Density In (ppg)	9.80	30 min SGS	20
Mud Density Out (ppg)	9.80	Flare Prior to/during the Cement Job	No
PV Mud In	14	Gas Present	No

TEMPERATURE

Ambient Temperature (°F)	70	Slurry Cement Temperature (°F)	80
Mix Water Temperature (°F)	80	Flow Line Temperature (°F)	170

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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	6850	945	1,717.0000	305.6000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4777	7.45	6,850.00	10671	1780	2,621.0000	466.8000
Displacement 2	Retarded Water w/ Clay Protection & Biocide	8.3331				0	0	0.0000	20.0000
Displacement Final	Water w/ Clay Protection & Biocide	8.3331			0.00			0.0000	367.7000

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

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TREATMENT SUMMARY

Fluid	Rate (bpm)	Fluid Vol. (bbls)
IntegraGuard EZ Spacer	5.00	80.00
BJCem P100.3.01C	6.00	305.60
BJCem P50.6.02C	6.00	466.80
Retarded Water w/ Clay Protection & Biocide	8.00	20.00
Water w/ Clay Protection & Biocide	8.00	367.70

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ Services	Amount of Cement Returned/Reversed	18
Calculated Displacement Volume (bbls)	387	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	374	Amount of Spacer to Surface	80
Did Float Hold?	Yes	Amount Bled Back After Job	5
Bump Plug	Yes	Total Volume Pumped (bbls)	1,240.10
Bump Plug Pressure (psi)	2,400	Top Out Cement Spotted	No
Were Returns Planned at Surface	Yes	Lost Circulation During Cement Job	No
Cement returns During Job	Full		

EVENT LOG



Customer Name: BAYSWATER EXPLORATION & PRODUCTION, LLC
Well Name: Thornton F-29-30HN
Job Type: Long String
Quote ID: QUO-15687-J8L0G6
Plan ID: ORD-08962-F2L4S6
Execution ID: EXC-08962-F2L4S602
District: Cheyenne, WY
BJ Supervisor: Zachary Hyde

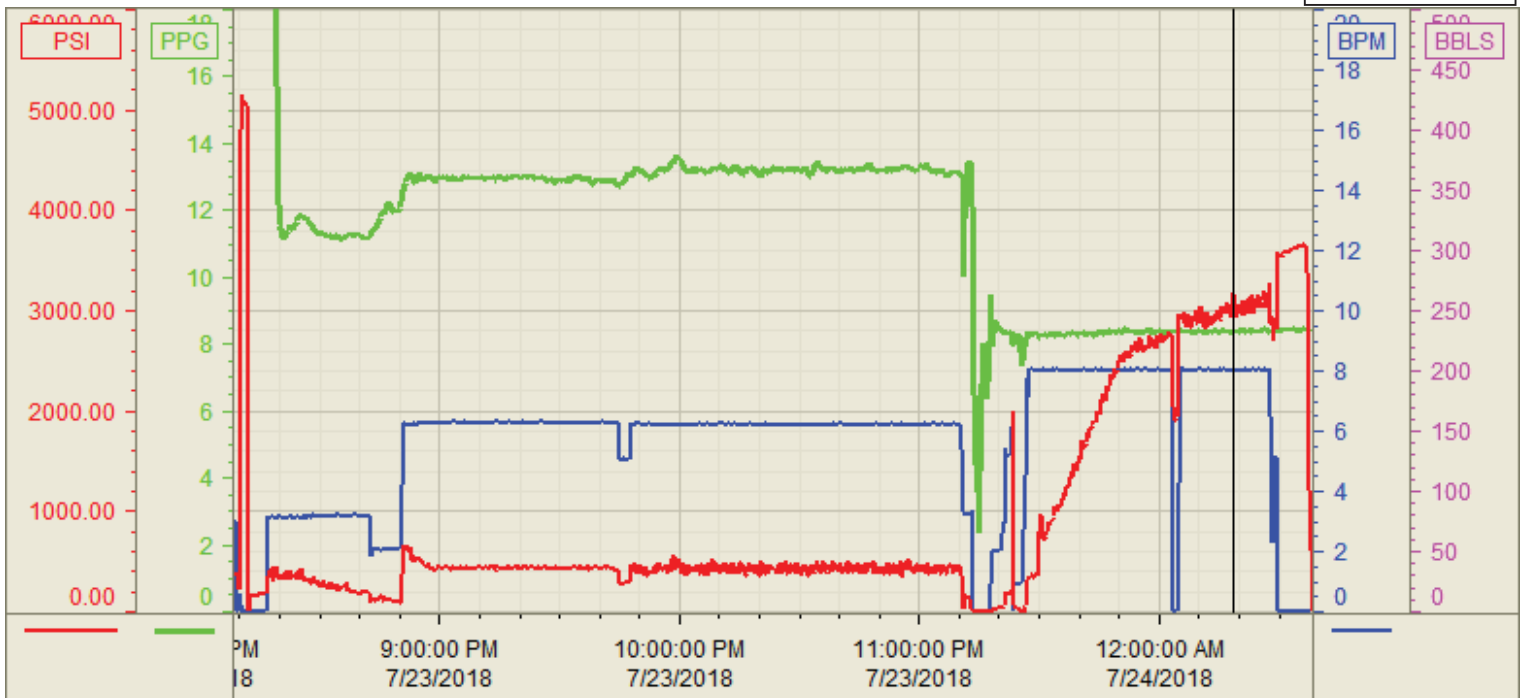
Seq.	Start Dt./Time	Event	Density (ppg)	Pump Rate (bpm)	Pump Vol(bbls)	Pipe Pressure(psi)	Comments
1	07/23/2018 12:00	Callout					Crew gets called out at 1200, Requested time is 1800
2	07/23/2018 14:00	Arrive on Location					Crew arrives on location. I went and got numbers from company man
3	07/23/2018 14:15	Spot Units					Crew spots units to rig up
4	07/23/2018 14:20	Rig Up					Crew rigs up iron and hoses needed for the job
5	07/23/2018 15:30	3rd Party Other					Crew waits for rig to finish running casing and to circulate the well
6	07/23/2018 20:00	Safety Meeting					Crew has a safety meeting the rig crew and company man discussing the job
7	07/23/2018 20:16	Prime Up	8.3300	2.00	3.00	300.00	Filled lines with 3 bbls at 2 bpm with 300 psi
8	07/23/2018 20:19	Pressure Test					Pressure tested lines to 5000 psi
9	07/23/2018 20:24	Pump Spacer	11.0000	3.00	80.00		Pumped 80 bbls of EZ Spacer at 11.5 ppg at 3 bpm with surfactants
10	07/23/2018 20:59	Pump Lead Cement	13.2000	6.00	305.00		Pumped 305 bbls of Lead at 13.2 ppg at 6 bpm(945sks,1.82yld,9.88gal/sk)
11	07/23/2018 21:46	Pump Tail Cement	13.5000	6.00	466.00		Pumped 466 bbls of Tail at 13.5 ppg at 6 bpm (1780sks,1.47yld,7.45gal/sk)
12	07/23/2018 23:22	Clean Pumps and Lines					Shutdown swapped lines out to the pit to wash pump
13	07/23/2018 23:26	Pump Displacement	8.3300	8.00	367.00		Pumped 367 bbls at 8 bpm. First 20 bbls had retarder in it
14	07/24/2018 00:36	Other (See comment)					Slowed rate to 5 bpm to land the plug
15	07/24/2018 00:36	Pump Displacement	8.3300	5.00	20.00		397 bbls away landed plug
16	07/24/2018 00:38	Land Plug					Landed the plug on calculated displacement which was 397 bbls. Went 1000 psi over FCP. Got 18 bbls of cement to surface and 80 bbls of Spacer
17	07/24/2018 00:42	Check Floats					Checked floats got 5 bbls back
18	07/24/2018 01:00	Rig Down					Crew rigs down iron and hoses

Customer: Bayswater
 Well Number: F-29-30HN
 Lease Info: Thorton



Print Date/Time

7/24/2018 1:15:24 AM



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)	3182.3	7/24/2018 12:18:27 AM	Cementer\DS_DISCHARGE_PRESS_DIAL
2	DH - Density (PPG)	8.30	7/24/2018 12:18:27 AM	Cementer\DENSITY2_ACTUAL_RATE
3	Combined Rate (BPM)	8.02	7/24/2018 12:18:29 AM	Cementer\Flow_Combined
4				
5				

Source: Control1 1:15:18 AM