

# Cementing Treatment



<b>Start Date</b>	9/24/2018	<b>Well</b>	KTC FARMS B-35-36HC
<b>End Date</b>	9/25/2018	<b>API#</b>	05-123-47271
<b>Client</b>	BAYSWATER EXPLORATION & PRODUCTION, LLC	<b>County</b>	WELD
<b>Service Sup.</b>	Wesley Bell	<b>State/Province</b>	CO
<b>District</b>	Cheyenne, WY	<b>Project ID</b>	PRJ1010972
<b>Type of Job</b>	Long String	<b>Rig</b>	True 38
<b>Execution ID</b>	EXC-11281-H4D1Q102		

## WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)
Previous Casing	8.92	9.63	36.00	1,555.00	1,555.00	
Open Hole	8.50	0.00	0.00	17,472.00	7,347.00	7.00
Casing	4.78	5.50	20.00	17,458.00	7,347.00	

**Shoe Length (ft):** 26.50

## HARDWARE

<b>Top Plug Used?</b>	Yes	<b>Tool Type</b>	Float Collar
<b>Top Plug Provided By</b>	Non BJ	<b>Tool Depth (ft)</b>	17,431.00
<b>Top Plug Size</b>	5.500	<b>Max Casing Pressure - Rated (psi)</b>	12,630.00
<b>Centralizers Used</b>	Yes	<b>Max Casing Pressure - Operated (psi)</b>	3,500.00
<b>Centralizers Quantity</b>	205.00	<b>Top Connection Thread</b>	BTC
<b>Centralizers Type</b>	Bow	<b>Top Connection Size</b>	5.5
<b>Landing Collar Depth (ft)</b>	17,431		

## CIRCULATION PRIOR TO JOB

<b>Well Circulated By</b>	BJ Services	<b>PV Mud Out</b>	16
<b>Circulation Prior to Job</b>	Yes	<b>YP Mud In</b>	7
<b>Circulation Time (min)</b>	210.00	<b>YP Mud Out</b>	7
<b>Circulation Rate (bpm)</b>	12.00	<b>Solids Present at End of Circulation</b>	No
<b>Circulation Volume (bbls)</b>	2,520.00	<b>10 sec SGS</b>	6.00
<b>Lost Circulation Prior to Cement Job</b>	No	<b>10 min SGS</b>	10.00
<b>Mud Density In (ppg)</b>	10.40	<b>30 min SGS</b>	12.00
<b>Mud Density Out (ppg)</b>	10.40	<b>Flare Prior to/during the Cement Job</b>	No
<b>PV Mud In</b>	16	<b>Gas Present</b>	No

## TEMPERATURE

<b>Ambient Temperature (°F)</b>	50.00	<b>Slurry Cement Temperature (°F)</b>	65.00
<b>Mix Water Temperature (°F)</b>	65.00	<b>Flow Line Temperature (°F)</b>	162.00

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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	1.8298	9.87	0.00	6680	920	1,675.0000	299.8000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4777	7.45	5,700.00	10780	1800	2,648.0000	473.5000
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	367.0000

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Fluid Type	Fluid Name	Component	Concentration	UOM
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
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
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	RETARDER, SR-20	0.8000	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
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	FLUID LOSS, FL-66	0.2000	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	FOAM PREVENTER, FP-25	0.3000	BWOB
Tail Slurry	BJCem P50.6.02C	RETARDER, SR-20	0.1500	BWOB
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

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## DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ Services	Amount of Cement Returned/Reversed	39.00
Calculated Displacement Volume (bbls)	387.10	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	389.00	Amount of Spacer to Surface	80.00
Did Float Hold?	No	Pressure Left on Casing (psi)	2,200.00
Bump Plug	Yes	Amount Bled Back After Job	0.00
Bump Plug Pressure (psi)	3,500.00	Total Volume Pumped (bbls)	1,240.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement returns During Job	Full	Lost Circulation During Cement Job	No

# EVENT LOG



**Customer Name:** BAYSWATER EXPLORATION & PRODUCTION, LLC

**Well Name:** KTC FARMS B-35-36HC

**Job Type:** Long String

**Quote ID:** QUO-19643-C2P4T4

**Plan ID:** ORD-11281-H4D1Q1

**District:** Cheyenne, WY

**Execution ID:** EXC-11281-H4D1Q102

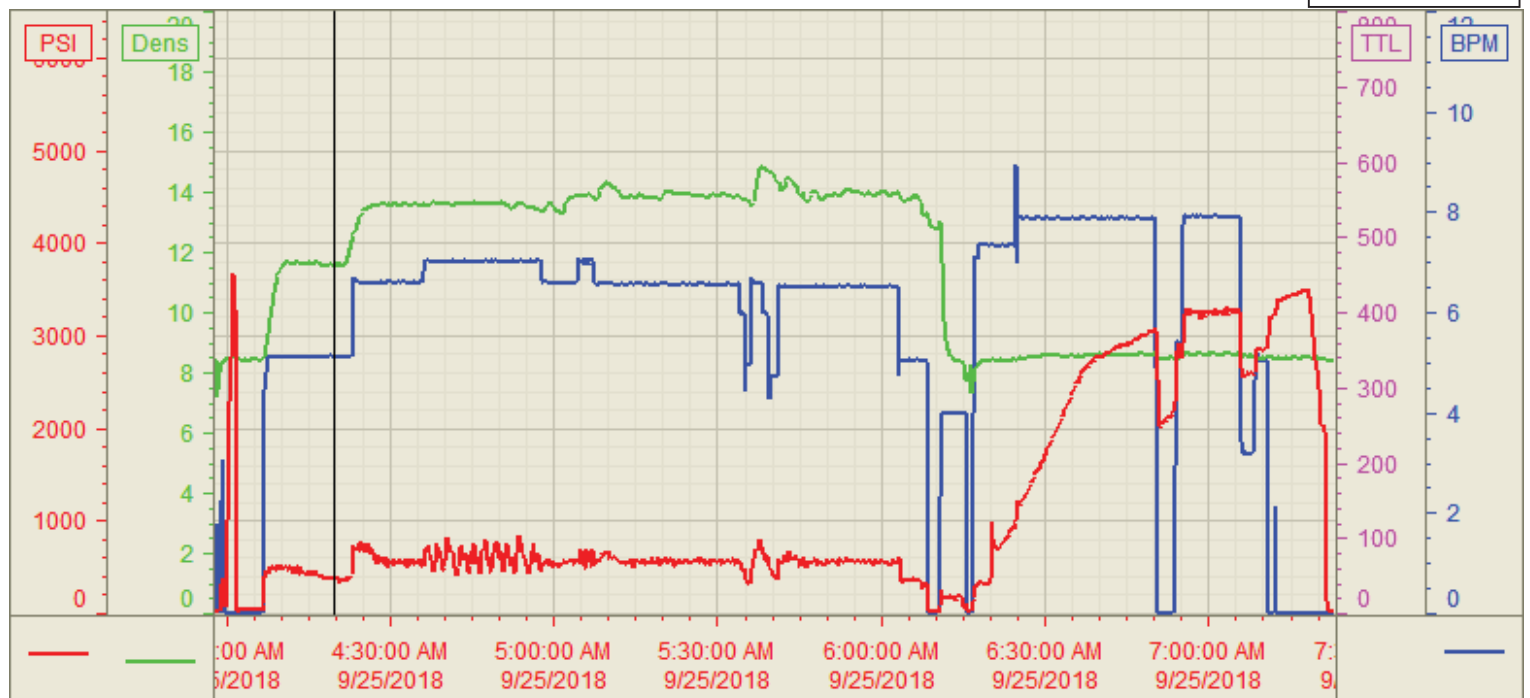
**BJ Supervisor:** Wesley Bell

Seq.	Start Dt./Time	Event	Density (ppg)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	09/24/2018 22:00	Arrive on Location					arrive on location, requested time was 01:00
2	09/24/2018 22:05	Rig Up					Rig up all equipment
3	09/24/2018 23:00	Customer					wait for rig to circulate well
4	09/25/2018 03:45	Safety Meeting					Hold STEACS briefing with rig crew and pump crew
5	09/25/2018 04:03	Pressure Test	8.3400	2.00	2.00	5,000.00	Pressure test lines, good test, no leaks
6	09/25/2018 04:09	Pump Spacer	11.5000	5.00	80.00	350.00	Pump 80bbls of spacer at 11.5ppg,
7	09/25/2018 04:25	Pump Lead Cement	13.2000	6.50	299.00	650.00	Pump 299.8bbls of Lead Cement at 13.2ppg, 920sk, Y: 1.83, WR: 9.87.
8	09/25/2018 05:03	Pump Tail Cement	13.5000	6.00	473.50	700.00	Pump 473.5bbls of Tail Cement at 13.5ppg, 1800sk, Y: 1.477, WR: 7.45. Top of Tail at 5780'
9	09/25/2018 06:03	Clean Pumps and Lines	8.3400				Clean pumps and lines to rig tank, drop top plug, begin displacement
10	09/25/2018 06:32	Pump Displacement	8.3400	8.00	100.00	1,400.00	100bbls of displacement away, first 20bbls had AR-61 retarder.
11	09/25/2018 06:44	Pump Displacement	8.3400	8.00	100.00	2,500.00	200bbls of displacement away
12	09/25/2018 06:50	Pump Displacement	8.3400	8.00	50.00	2,800.00	250bbls away on displacement
13	09/25/2018 07:00	Pump Displacement	8.3400	8.00	50.00	3,200.00	300bbls of displacement away, 270away divert returns to tanks, spacer to surface.
14	09/25/2018 07:06	Pump Displacement	8.3400	8.00	50.00	3,300.00	350bbls of displacement away, cement to surface. 39bbls total to surface
15	09/25/2018 07:13	Land Plug	8.3400	5.00	39.00	2,300.00	389bbls of displacement away land plug, bump to 3500psi
16	09/25/2018 07:16	Other (See comment)	8.3400			2,200.00	Bleed down to 2200psi, shut in PLH on casing until cement sets.
17	09/25/2018 07:20	Rig Down					
18	09/25/2018 08:30	Leave Location					

Customer: Bayswater  
Well Number: B-35-36HC  
Lease Info: KTC Farms



Print Date/Time  
9/25/2018 8:35:30 AM



	Name	Y value	X value/time stamp	Tag name Y
1	PS - Press (PSI)	374.2 i.	9/25/2018 4:19:38 AM i.	Cementer\PS_DISCHARGE_PRESS_DIAL
2	Den2 - Discharge Density (F	11.58 i.	9/25/2018 4:19:38 AM i.	Cementer\DENSITY2_ACTUAL_RATE
3	Flow Rate (BBLS)	5.12	9/25/2018 4:19:42 AM	Cementer\Flow_Combined
4				
5				
				Source: Control1 8:35:24 AM