

# Cementing Treatment



<b>Start Date</b>	9/17/2018	<b>Field Ticket#</b>	FT-11140-X2G6M40202-1498321800
<b>End Date</b>	9/17/2018	<b>Well</b>	KTC FARMS BA-35-36HN
<b>Client</b>	BAYSWATER EXPLORATION & PRODUCTION, LLC	<b>API#</b>	05-123-47270
<b>Client Field Rep.</b>	Marsh	<b>County</b>	WELD
<b>Service Sup.</b>	Roger Acuna	<b>State/Province</b>	CO
<b>District</b>	Cheyenne, WY	<b>Rig</b>	True 38
<b>Type of Job</b>	Long String	<b>Project ID</b>	PRJ1010847
<b>Execution ID</b>	EXC-11140-X2G6M402		

## WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)	Grade	Thread
Previous Casing	8.92	9.63	36.00	1,555.00	1,555.00		J-55	LTC
Open Hole	8.50	0.00	0.00	17,293.00	7,086.00	7.00		
Casing	4.78	5.50	20.00	17,275.00	7,086.00		P-110	BTC

**Shoe Length (ft):** 29.00

## 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>	17,246.00
<b>Top Plug Size</b>	5.500	<b>Max Casing Pressure - Rated (psi)</b>	11,080.00
<b>Centralizers Used</b>	Yes	<b>Max Casing Pressure - Operated (psi)</b>	3,500.00
<b>Centralizers Quantity</b>	202.00	<b>Job Pumped Through</b>	Manifold
<b>Centralizers Type</b>	Rigid	<b>Top Connection Thread</b>	BTC
<b>Landing Collar Depth (ft)</b>	17,246	<b>Top Connection Size</b>	5.5

## CIRCULATION PRIOR TO JOB

<b>Well Circulated By</b>	Rig	<b>YP Mud In</b>	10
<b>Circulation Prior to Job</b>	Yes	<b>YP Mud Out</b>	10
<b>Circulation Time (min)</b>	210.00	<b>Solids Present at End of Circulation</b>	No
<b>Circulation Rate (bpm)</b>	12.00	<b>10 sec SGS</b>	8.00
<b>Circulation Volume (bbls)</b>	2,520.00	<b>10 min SGS</b>	14.00
<b>Lost Circulation Prior to Cement Job</b>	No	<b>30 min SGS</b>	16.00
<b>Mud Density In (ppg)</b>	10.40	<b>Flare Prior to/during the Cement Job</b>	Yes
<b>Mud Density Out (ppg)</b>	10.40	<b>Gas Present</b>	Yes
<b>PV Mud In</b>	16	<b>Gas Units</b>	3500
<b>PV Mud Out</b>	16		

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## TEMPERATURE

Ambient Temperature (°F)	70.00	Slurry Cement Temperature (°F)	65.00
Mix Water Temperature (°F)	65.00	Flow Line Temperature (°F)	160.00

## 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	6735	930	1,688.0000	300.6000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4777	7.45	6,735.00	10539	1760	2,589.0000	461.0000
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	352.0000

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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	GELLANT WATER, GW-86	0.9000	PPB
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
Lead Slurry	BJCem P100.3.01C	FLUID LOSS, FL-66	0.5000	BWOB
Lead Slurry	BJCem P100.3.01C	GELLANT WATER, GW-86	0.0500	BWOB
Lead Slurry	BJCem P100.3.01C	FOAM PREVENTER, FP-25	0.3000	BWOB
Lead Slurry	BJCem P100.3.01C	BONDING AGENT, EC-2	3.0000	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
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	Flyash (Rockies)	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	CEMENT, CLASS G	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	FOAM PREVENTER, FP-25	0.3000	BWOB
Tail Slurry	BJCem P50.6.02C	GELLANT WATER, GW-86	0.1000	BWOB
Tail Slurry	BJCem P50.6.02C	EXTENDER, BENTONITE	2.0000	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

## TREATMENT SUMMARY

Fluid	Rate (bpm)	Fluid Vol. (bbls)
IntegraGuard EZ Spacer	3.00	80.00
BJCem P100.3.01C	6.00	300.60
BJCem P50.6.02C	8.00	461.00
Retarded Water w/ Clay Protection & Biocide	8.00	20.00
Water w/ Clay Protection & Biocide	8.00	352.00

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## DISPLACEMENT AND END OF JOB SUMMARY

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<b>Displaced By</b>	BJ Services	<b>Amount of Cement Returned/Reversed</b>	12.00
<b>Calculated Displacement Volume (bbls)</b>	381.00	<b>Method Used to Verify Returns</b>	Visual
<b>Actual Displacement Volume (bbls)</b>	372.00	<b>Amount of Spacer to Surface</b>	80.00
<b>Did Float Hold?</b>	Yes	<b>Amount Bled Back After Job</b>	5.00
<b>Bump Plug</b>	Yes	<b>Total Volume Pumped (bbls)</b>	1,248.00
<b>Bump Plug Pressure (psi)</b>	3,500.00	<b>Top Out Cement Spotted</b>	No
<b>Were Returns Planned at Surface</b>	Yes	<b>Lost Circulation During Cement Job</b>	No
<b>Cement returns During Job</b>	Full		

# EVENT LOG



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

**Well Name:** KTC FARMS BA-35-36HN

**Job Type:** Long String

**Quote ID:** QUO-19314-V4S9T2

**Plan ID:** ORD-11140-X2G6M4

**District:** Cheyenne, WY

**Execution ID:** EXC-11140-X2G6M402

**BJ Supervisor:** Roger Acuna

Seq.	Start Dt./Time	Event	Density (ppg)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	09/17/2018 04:30	Callout					CALLED OUT RTS 10:30AM
2	09/17/2018 05:00	Safety Meeting					JOURNEY MANAGEMENT
3	09/17/2018 05:15	Leave Location					DEPART CHEYENNE WY CAMP
4	09/17/2018 06:15	Arrive on Location					ARRIVE TO LOCATION
5	09/17/2018 06:15	Safety Meeting					STEACS RIG UP
6	09/17/2018 06:30	Rig Up					RIG UP IRON AND HOSES
7	09/17/2018 06:30	Customer	10.4000	12.00	2,520.00	1,350.00	WAITING ON RIG TO CIRCUALTE
8	09/17/2018 10:00	Safety Meeting					PRE JOB SAFETY MEETING TO DISCUSS JOB PROCEDURES
9	09/17/2018 10:07	Start Pumping	8.3300	3.00	3.00	500.00	PUMP FRESH WATER
10	09/17/2018 10:08	Pressure Test				6,000.00	TEST LINES
11	09/17/2018 10:10	Pump Spacer	11.5000	3.00	20.00	500.00	PUMP 10BBLs INTEGRAGUARD EZ SPACER @ 11.5PPG WITH SURFACTANTS, SHUTDOWN DUE TO THE SPACER NOT BEING RIGHT LOOKED WATERY, MADE PHONE CALLS TO SEE WHAT TO D MIXED UP 10 MORE BBLs TO CHECK THE VISCOSITY AND CALLED TO GET NEW SPACER TO LOCATION.
12	09/17/2018 10:30	Product Issue	10.4000	10.00	2,100.00	1,200.00	SHUTDOWN SPACER HAD NO VISCOSITY TO IT, PUMPED 10BBLs TO THE PIT, WAITING ON NEW SPACER TO GET LOADED AND

# EVENT LOG

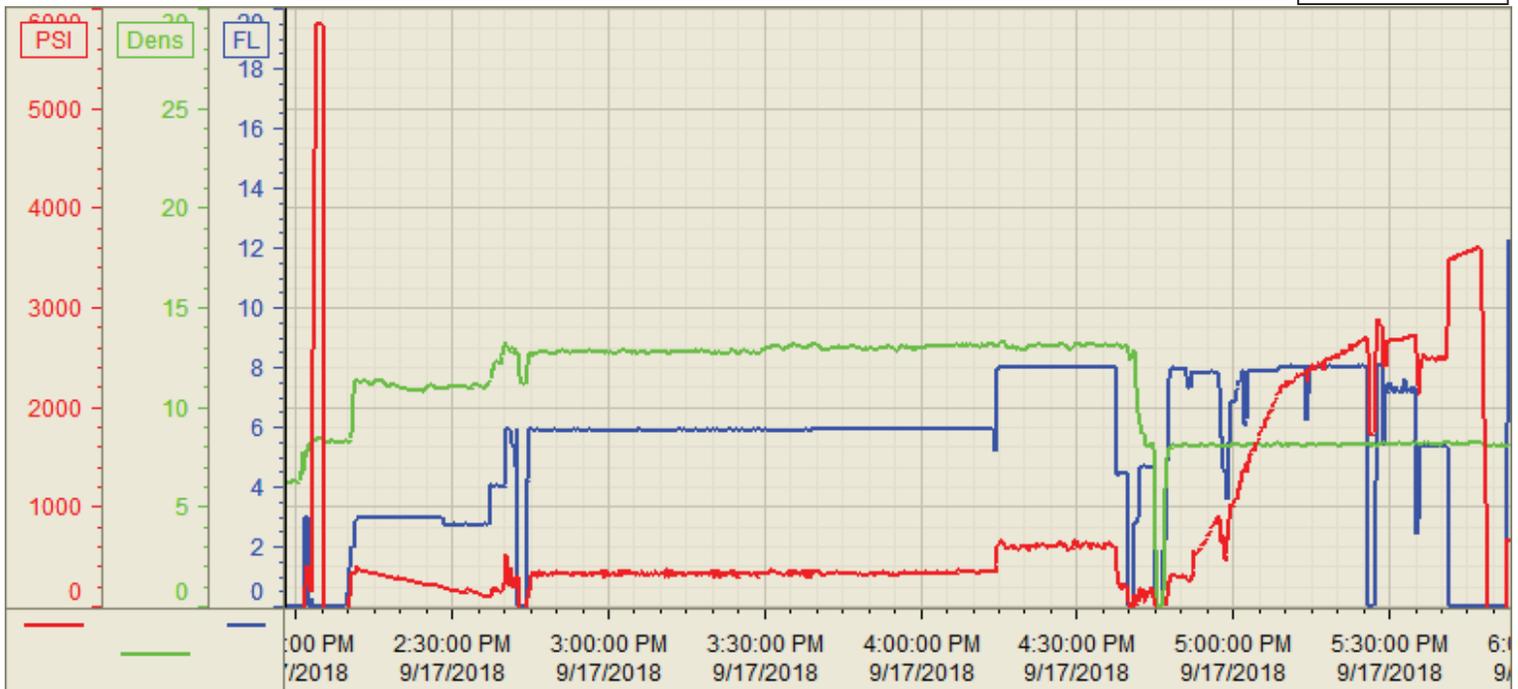


							DELIVERED TO LOCATION, RIG CIRCULATING ON WELL WHILE WAITING
13	09/17/2018 14:01	Pressure Test	8.3300	3.00	3.00	6,000.00	PUMP 3 BBLS FRESH WATER AND RE-TEST LINES
14	09/17/2018 14:10	Pump Spacer	11.5000	3.00	80.00	300.00	PUMP 80BBLS INTEGRAGUARD EZ SPACER @ 11.5PPG WITH SURFACTANTS
15	09/17/2018 14:37	Pump Lead Cement	13.2000	6.00	300.00	300.00	PUMP 300BBLS BJCEM P100.3.01C @ 13.2PPG (930SKS 1.83YLD 9.87GPS) CALCULATED TO SURFACE
16	09/17/2018 15:30	Pump Tail Cement	13.5000	8.00	461.00	500.00	PUMP 461BBLS BJCEM P50.6.02C @ 13.5PPG (1760SKS 1.48YLD 7.45GPS) CALCULATED TOP 6000'
17	09/17/2018 16:40	End Pumping					SHUTDOWN, WASH PUMPS AND LINES TO THE PIT
18	09/17/2018 16:45	Drop Top Plug					DROP TOP PLUG
19	09/17/2018 16:46	Pump Displacement	8.3300	8.00	340.00	2,700.00	PUMP FRESH WATER DISPLACEMENT WITH BIOCIDES AND RESCARE
20	09/17/2018 17:26	Spacer Back to Surface					SPACER TO SURFACE @ 285BBLS INTO DISPLACEMENT
21	09/17/2018 17:36	Pump Displacement	8.3300	5.00	31.00	2,500.00	SLOW RATE TO LAND PLUG
22	09/17/2018 17:39	Cement Back to Surface					CEMENT TO SURFACE @ 360BBLS INTO DISPLACEMENT
23	09/17/2018 17:42	Land Plug	8.3300			3,500.00	LAND PLUG 1000PSI OVER FINAL CIRCULATING PRESSURE
24	09/17/2018 17:47	Check Floats					CHECK FLOATS, FLOATS HELD GETTING 5BBLS BACK TO THE PUMP
25	09/17/2018 17:48	End Pumping					END JOB
26	09/17/2018 17:48	Safety Meeting					STEACS RIG DOWN
27	09/17/2018 18:00	Rig Down					RIG DOWN IRON AND HOSES
28	09/17/2018 18:30	Safety Meeting					JOURNEY MANAGEMENT
29	09/17/2018 18:45	Leave Location					DEPART LOCATION

Customer: BAYSWATER  
 Well Number: BA-35-36HN  
 Lease Info: KTC FARMS



Print Date/Time  
 9/17/2018 6:18:34 PM



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)		9/17/2018 1:58:00 PM i.	Cementer\DS_DISCHARGE_PRESS_DIAL
2	DH Density (PPG)	6.26	9/17/2018 1:58:03 PM	Cementer\DENSITY2_ACTUAL_RATE
3	Combined pump rate	0.00	9/17/2018 1:57:59 PM	Cementer\Flow_Combined
4				
5				

Source: Control1 6:18:33 PM