

# BJ Cementing Treatment Report

SERVICE SUPERVISOR	Brian Boyd	RIG	True 38
CLIENT FIELD REPRESENTATIVE	Marsh	COUNTY	WELD
DISTRICT	Cheyenne, WY	STATE / PROVINCE	CO
SERVICE	Cementing		

## WELL GEOMETRY

TYPE	ID (in)	OD (in)	WEIGHT (lb/ft)	MD (ft)	TVD (ft)	EXCESS (%)
Casing	8.92	9.63	36.00	1,556.00	1,556.00	
Open Hole	13.50	0.00	0.00	1,568.00	1,568.00	25.00

## HARDWARE

Bottom Plug Used?	No	Tool Type	Float Collar
Top Plug Used?	Yes	Tool Depth (ft)	1,517.00
Top Plug Provided By	Non BJ	Max Casing Pressure - Rated (psi)	3512.00
Top Plug Size	9.625	Max Casing Pressure - Operated (psi)	2015.00
Centralizers Used	Yes	Pipe Movement	None
Centralizers Quantity	16.00	Job Pumped Through	Manifold
Centralizers Type	Bow	Top Connection Thread	LTC
Landing Collar Depth (ft)	1,517	Top Connection Size	9.625

## CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	PV Mud In	2
Circulation Prior to Job	Yes	YP Mud In	4
Circulation Time (min)	40.00	Solids Present at End of Circulation	No
Circulation Rate (bpm)	6.00	10 sec SGS	1
Circulation Volume (bbls)	130.00	10 min SGS	1
Lost Circulation Prior to Cement Job	No	Flare Prior to / during the Cement Job	No
Mud Density In (ppg)	9.00	Gas Present	No

## TEMPERATURE

Ambient Temperature (°F)	66.00	Slurry Cement Temperature (°F)	70.00
Mix Water Temperature (°F)	65.00	Flow Line Temperature (°F)	88.00

Client: Bayswater Exploration & Production, LLC

Well: LEFFLER #F-26-28HN

Well API: 05-123-49490

Start Date: 7/4/2019

End Date: 7/4/2019



## FLUID DETAILS

FLUID TYPE	FLUID NAME	DENSITY (ppg)	YIELD (Cu Ft/sk)	H <sub>2</sub> O REQ (gals/sk)	PLN TOP FLD (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	255	646.0000	114.9000
Tail Slurry	BJCem S100.03.1C	12.5000	2.2255	12.59	899.00	500.00	145	323.0000	57.5000
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	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.0000	LBS/SK
Lead Slurry	BJCem S100.03.1C	CEMENT EXTENDER, GYPSUM, A-10	5.0000	BWOB
Lead Slurry	BJCem S100.03.1C	Cement Additive, Sodium Metasilicate A-2	2.0000	LBS/SK
Lead Slurry	BJCem S100.03.1C	CEMENT, ASTM TYPE III	100.0000	PCT
Lead Slurry	BJCem S100.03.1C	FOAM PREVENTER, FP-25	0.3000	BWOB
Lead Slurry	BJCem S100.03.1C	IntegraSeal POLI	0.1300	LBS/SK
Tail Slurry	BJCem S100.03.1C	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.0000	LBS/SK
Tail Slurry	BJCem S100.03.1C	FOAM PREVENTER, FP-25	0.3000	BWOB
Tail Slurry	BJCem S100.03.1C	Cement Additive, Sodium Metasilicate A-2	2.0000	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	IntegraSeal POLI	0.1300	LBS/SK
Displacement Final	Water	Fresh Water	100.0000	PCT

## DISPLACEMENT AND END OF JOB SUMMARY

<b>Displaced By</b>	BJ	<b>Amt of Cement Returned / Reversed</b>	37.00
<b>Calculated Displacement Vol (bbls)</b>	117.00	<b>Method Used to Verify Returns</b>	Visual
<b>Actual Displacement Vol (bbls)</b>	117.00	<b>Amt of Spacer to Surface</b>	20.00
<b>Did Float Hold?</b>	Yes	<b>Pressure Left on Casing (psi)</b>	0.00
<b>Bump Plug</b>	Yes	<b>Amt Bled Back After Job</b>	0.50
<b>Bump Plug Pressure (psi)</b>	1050.00	<b>Total Volume Pumped (bbls)</b>	312.00
<b>Were Returns Planned at Surface</b>	Yes	<b>Top Out Cement Spotted</b>	No
<b>Cement Returns During Job</b>	Full	<b>Lost Circulation During Cement Job</b>	No

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End Date: 7/4/2019



# BJ Cementing Event Log

Surface - Cheyenne, WY - Brian Boyd

SEQ	START DATE / TIME	EVENT	DENSITY (ppg)	PUMP RATE (bpm)	PUMP VOL (bbls)	PIPE PRESSURE (psi)	COMMENTS
1	07/04/2019 06:23	Callout					Customer requested BJ crew to be on location at 11:00
2	07/04/2019 08:00	Arrive on Location					BJ crew has journey management and depart from shop, BJ crew arrives on location and meet with customer
3	07/04/2019 08:10	STEACS Briefing					BJ crew has steacs briefing over rigging up iron
4	07/04/2019 08:15	Rig Up					BJ crew rigs up iron and hoses
5	07/04/2019 12:30	STEACS Briefing					Steacs briefing with BJ crew, rig crew and company man over job and hazards
6	07/04/2019 12:36	Prime Up	8.3300	2.00	3.00	60.00	Fill pumps and lines
7	07/04/2019 12:38	Pressure Test	8.3300	0.50	0.50	3300.00	Pressure test iron and hoses to 3000 PSI
8	07/04/2019 12:40	Pump Spacer	8.3300	4.00	20.00	120.00	Pump 20 bbls of spacer ahead
9	07/04/2019 12:46	Pump Lead Cement	12.0000	6.00	115.00	288.00	Pump 115 bbls of 12 PPG lead cement ( 2.52 Yield, 255 SKS, 14.86 Gals/Sks)
10	07/04/2019 13:07	Pump Tail Cement	12.5000	6.00	57.50	317.00	Pump 57.5 bbls of 12.5 PPG tail cement ( 145 Sks, 2.22 Yield, 12.86 Gals/Sks)
11	07/04/2019 13:19	End Pumping					Shut down pumping
12	07/04/2019 13:22	Drop Top Plug					Drop top plug with company man
13	07/04/2019 13:22	Pump Displacement	8.3300	6.50		280.00	Pump 116 bbls of fresh water displacement
14	07/04/2019 13:34	Cement Back-to-Surface	8.3300	6.50	80.00	470.00	80 bbls into displacement got cement to surface for total of 37 bbls back
15	07/04/2019 13:39	Pump Displacement	8.3300	3.00	100.00	415.00	Last 17 bbls of displacement slow rate
16	07/04/2019 13:43	Land Plug			117.00	1050.00	Bump plug to 1050 PSI, FCP of 415 PSI, total displacement of 117 bbls
17	07/04/2019 13:46	Check Floats					Check floats got .5 bbl back
18	07/04/2019 13:48	STEACS Briefing					BJ has steacs over rigging down iron and hoses
19	07/04/2019 13:55	Rig Down					BJ crew rigs down iron and hoses
20	07/04/2019 14:15	Leave Location					BJ crew has journey management and departs from location

