

# 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 (%)
Open Hole	13.50	0.00	0.00	1,584.00	1,584.00	25.00
Casing	8.92	9.63	36.00	1,574.00	1,574.00	

## HARDWARE

Bottom Plug Used?	No	Tool Type	Float Collar
Top Plug Used?	Yes	Tool Depth (ft)	1,536.00
Top Plug Provided By	Non BJ	Max Casing Pressure - Rated (psi)	3512.00
Top Plug Size	9.625	Max Casing Pressure - Operated (psi)	2012.00
Centralizers Used	Yes	Pipe Movement	None
Centralizers Quantity	17.00	Job Pumped Through	Manifold
Centralizers Type	Bow	Top Connection Thread	LTC
Landing Collar Depth (ft)	1,536	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)	45.00	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)	60.00	Slurry Cement Temperature (°F)	70.00
Mix Water Temperature (°F)	63.00	Flow Line Temperature (°F)	81.00

Client: Bayswater Exploration & Production, LLC

Well: LEFFLER #1-26-28HN

Well API: 05-123-49491

Start Date: 7/6/2019

End Date: 7/6/2019



## 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	1,050.00	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	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	IntegraSeal POLI	0.1300	LBS/SK
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	FOAM PREVENTER, FP-25	0.3000	BWOB
Tail Slurry	BJCem S100.03.1C	CEMENT, ASTM TYPE III	100.0000	PCT
Tail Slurry	BJCem S100.03.1C	CEMENT EXTENDER, GYPSUM, A-10	5.0000	BWOB
Tail Slurry	BJCem S100.03.1C	Cement Additive, Sodium Metasilicate A-2	2.0000	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	IntegraSeal POLI	0.1300	LBS/SK
Displacement Final	Water	Fresh Water	100.0000	PCT

## DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amt of Cement Returned / Reversed	36.00
Calculated Displacement Vol (bbls)	119.00	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	119.00	Amt of Spacer to Surface	20.00
Did Float Hold?	Yes	Pressure Left on Casing (psi)	0.00
Bump Plug	Yes	Amt Bled Back After Job	0.50
Bump Plug Pressure (psi)	1040.00	Total Volume Pumped (bbls)	314.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement Returns During Job	Full	Lost Circulation During Cement Job	No

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# 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	07/06/2019 03:00	Callout					Customer requested BJ crew on location at 10:00, BJ crew already on location
2	07/06/2019 08:00	STEACS Briefing					BJ crew has steacs over rigging down iron and hoses
3	07/06/2019 08:30	Rig Up					BJ crew rigs up iron and hoses
4	07/06/2019 10:54	STEACS Briefing					Steacs briefing with BJ crew, rig crew and company man over job and hazards
5	07/06/2019 11:18	Prime Up	8.3300	2.00	3.00	50.00	Fill pumps and lines
6	07/06/2019 11:21	Pressure Test	8.3300	0.50	0.50	3500.00	Pressure test iron and head to 3000 PSI
7	07/06/2019 11:23	Pump Spacer	8.3300	4.00	20.00	160.00	Pump 20 bbls of red dye ahead
8	07/06/2019 11:27	Pump Lead Cement	12.0000	6.00	115.00	280.00	Pump 115 bbls of 12 PPG lead cement
9	07/06/2019 11:46	Pump Tail Cement	12.5000	6.00	57.50	300.00	Pump 57.5 bbls of 12.5 PPG tail cement
10	07/06/2019 11:54	End Pumping					Shut down pumping
11	07/06/2019 11:58	Drop Top Plug					Drop top plug with company man
12	07/06/2019 11:58	Pump Displacement	8.3300	7.00		160.00	
13	07/06/2019 12:13	Cement Back-to-Surface	8.3300	7.00	83.00	400.00	83 bbls into displacement got cement to surface for total of 36 bbls of cement to surface
14	07/06/2019 12:17	Pump Displacement	8.3300	3.00	100.00		Last 19 bbls slow rate to 3 bpm
15	07/06/2019 12:23	Land Plug			119.00	1040.00	Bump plug tp 1040 PSI, FCP of 450 PSI, total displacement of 119 bbls
16	07/06/2019 12:26	Check Floats					Hold for 3 mins and check floats got .5 bbl back
17	07/06/2019 12:28	Rig Down					BJ crew rigs down iron and hoses
18	07/06/2019 12:45	Leave Location					BJ crew has journey management and departs from location

