

# BJ Cementing Treatment Report

SERVICE SUPERVISOR	Richard White	RIG	True 38
DISTRICT	Cheyenne, WY	COUNTY	WELD
SERVICE	Cementing	STATE / PROVINCE	CO

## WELL GEOMETRY

TYPE	ID (in)	OD (in)	WEIGHT (lb/ft)	MD (ft)	TVD (ft)	EXCESS (%)
Casing	4.78	5.50	20.00	15,791.00	7,200.00	
Previous Casing	8.92	9.63	36.00	1,560.00	1,560.00	
Open Hole	8.50	0.00	0.00	15,802.00	7,200.00	7.00

## HARDWARE

Bottom Plug Used?	No	Landing Collar Depth (ft)	15,794.00
Top Plug Used?	Yes	Tool Type	Float Collar
Top Plug Provided By	Non BJ	Tool Depth (ft)	15,768.00
Top Plug Size	5.500	Pipe Movement	None
Centralizers Used	No	Job Pumped Through	Manifold
Centralizers Quantity	63.00	Top Connection Thread	BTC
Centralizers Type	Rigid	Top Connection Size	5.5

## CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	YP Mud In	9
Circulation Prior to Job	No	YP Mud Out	9
Circulation Time (min)	2.00	Solids Present at End of Circulation	No
Lost Circulation Prior to Cement Job	No	10 sec SGS	10
Mud Density In (ppg)	10.20	10 min SGS	17
Mud Density Out (ppg)	10.20	30 min SGS	20
PV Mud In	23	Flare Prior to / during the Cement Job	No
PV Mud Out	23	Gas Present	No

## TEMPERATURE

Ambient Temperature (°F)	50.00	Slurry Cement Temperature (°F)	65.00
Mix Water Temperature (°F)	68.00	Flow Line Temperature (°F)	65.00

## 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	IntegraGuard EZ Spacer II	12.0000			0.00				28.0000
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	11.5000			0.00				26.0000
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	11.0000			0.00				26.0000
Lead Slurry	BJCem P100.3.01C	13.2000	1.8290	9.86	0.00	6,995.00	960	1756.0000	312.7000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4769	7.45	6,100.00	8,963.00	1485	2194.0000	390.6000
Displacement 2	Retarded Water w/ Clay Protection & Biocide	8.3331				0.00	0	0.0000	10.0000
Displacement Final	Water w/ Clay Protection & Biocide	8.3331			0.00			0.0000	340.0000

FLUID TYPE	FLUID NAME	COMPONENT	CONCENTRATION	UOM
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	SPACER SURFACTANT, SS-267	1.0000	GPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	IntegraGuard GW-86	1.2000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	RETARDER, R-7C	2.0000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	WEIGHTING ADDITIVE, W-11	242.6900	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	RETARDER, R-31	0.5000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	IntegraGuard GW-86	1.2000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	WEIGHTING ADDITIVE, W-11	242.6900	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	RETARDER, R-7C	2.0000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	SPACER SURFACTANT, SS-267	1.0000	GPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	RETARDER, R-31	0.5000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	WEIGHTING ADDITIVE, W-11	242.6900	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	RETARDER, R-31	0.5000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	SPACER SURFACTANT, SS-267	1.0000	GPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	IntegraGuard GW-86	1.2000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	RETARDER, R-7C	2.0000	PPB
Lead Slurry	BJCem P100.3.01C	CEMENT, ASTM TYPE III	100.0000	PCT
Lead Slurry	BJCem P100.3.01C	IntegraCare EC-2	3.0000	BWOB
Lead Slurry	BJCem P100.3.01C	FLUID LOSS, FL-66	0.5000	BWOB
Lead Slurry	BJCem P100.3.01C	FOAM PREVENTER, FP-24	0.3000	BWOB

Client: Bayswater Exploration & Production, LLC

Well: COT WEST #QA-30-25HN

Well API: 05-123-50404

Start Date: 3/26/2020

End Date: 3/27/2020



Lead Slurry	BJCem P100.3.01C	RETARDER, SR-20	0.7000	BWOB
Lead Slurry	BJCem P100.3.01C	IntegraGuard GW-86	0.1000	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-24	0.3000	BWOB
Tail Slurry	BJCem P50.6.02C	CEMENT, FLY ASH (ROCKIES)	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	FLUID LOSS, FL-66	0.2000	BWOB
Tail Slurry	BJCem P50.6.02C	RETARDER, SR-20	0.1000	BWOB
Tail Slurry	BJCem P50.6.02C	IntegraGuard GW-86	0.1000	BWOB
Displacement 2	Retarded Water w/ Clay Protection & Biocide	BIOCIDE, BIOC11139W	0.0100	GPB
Displacement 2	Retarded Water w/ Clay Protection & Biocide	ResCare CS-2	0.0800	GPB
Displacement 2	Retarded Water w/ Clay Protection & Biocide	RETARDER, SR-61L	0.1000	GPB
Displacement Final	Water w/ Clay Protection & Biocide	ResCare CS-2	0.0800	GPB
Displacement Final	Water w/ Clay Protection & Biocide	BIOCIDE, BIOC11139W	0.0100	GPB

### DISPLACEMENT AND END OF JOB SUMMARY

<b>Displaced By</b>	BJ	<b>Were Returned Planned at Surface</b>	No
<b>Calculated Displacement Vol (bbls)</b>	350.00	<b>Method Used to Verify Returns</b>	Visual
<b>Actual Displacement Vol (bbls)</b>	350.00	<b>Amt of Spacer to Surface</b>	63.00
<b>Did Float Hold?</b>	Yes	<b>Pressure Left on Casing (psi)</b>	0.00
<b>Bump Plug</b>	Yes	<b>Top Out Cement Spotted</b>	No
<b>Bump Plug Pressure (psi)</b>	2100.00	<b>Lost Circulation During Cement Job</b>	No
<b>Cement Returns During Job</b>	None		

# BJ Cementing Event Log

Long String - Cheyenne, WY - Richard White

SEQ	START DATE / TIME	EVENT	DENSITY (ppg)	PUMP RATE (bpm)	PUMP VOL (bbls)	PIPE PRESSURE (psi)	COMMENTS
1	03/26/2020 09:00	Callout					crew called out for job, verified and confirmed materials and equipment
2	03/26/2020 11:00	Depart for Location					Steacs briefing and depart for location
3	03/26/2020 14:00	Arrive on Location					crew arrived on location, evaluated site for operations
4	03/26/2020 14:10	STEACS Briefing					pre rig up and equipment spotting briefing
5	03/26/2020 14:30	Rig Up					rig up treating equipment
6	03/26/2020 15:20	Rig					wait for rig to finish running casing and circulating
7	03/26/2020 16:00	STEACS Briefing					Safety briefing with company rep and rig crew
8	03/26/2020 16:39	Prime Up	8.3300	3.00	5.00	300.00	Fill lines with 5 bbl fresh water
9	03/26/2020 16:42	Pressure Test				5400.00	Pressure test lines to 5400 psi
10	03/26/2020 16:50	Pump Spacer	12.0000	4.00	28.00	500.00	Pump 28 bbl spacer @ 12 ppg ( with surfactant) samples taken and verified from FB CTF-004
11	03/26/2020 16:59	Pump Spacer	11.5000	4.00	26.00	400.00	Pump 26 bbl spacer @ 11.5ppg (with surfactant) samples taken and verified from FB CTF-004
12	03/26/2020 17:06	Pump Spacer	11.0000	4.00	26.00	250.00	Pump 26 bbl spacer @ 11ppg (with surfactant) sample taken and verified from FB CTF-004
13	03/26/2020 17:15	Pump Lead Cement	13.2000	5.00		280.00	Pump 78 bbl cmt@13.2ppg 1.829y 240sks 9.86gps samples taken and verified from tier 1 CTF-012
14	03/26/2020 17:24	Pump Lead Cement	13.2000	5.00		280.00	Pump 78 bbl cmt@13.2ppg 1.829y 240sks 9.86gps samples taken and verified from tier 2 CTF-012
15	03/26/2020 17:36	Pump Lead Cement	13.2000	5.00		280.00	Pump 78 bbl cmt@13.2ppg 1.829y 240sks 9.86gps samples taken and verified from tier 3 CTF-012
16	03/26/2020 17:37	Pump Lead Cement	13.2000	5.00		280.00	Pump 78 bbl cmt@13.2ppg 1.829y 240sks 9.86gps samples taken and verified from tier 4 CTF-012/ slowed rates to finish off field bin
17	03/26/2020 17:56	Pump Lead Cement	13.2000	3.00	312.70	280.00	Pump a total312.7 bbl cmt@13.2ppg 1.829y 960sks 9.86gps from bin CTF-012
18	03/26/2020 18:21	Pump Tail Cement	13.5000	6.00	0.00	300.00	Pump 97.5 bbl tail cmt@13.5ppg 1.4769y 371sks 7.45 gps samples taken and verified from tier 1 CTF-014
19	03/26/2020 18:42	Pump Tail Cement	13.5000	6.00		300.00	Pump 97.5 bbl tail cmt@13.5ppg 1.4769y 371sks 7.45 gps samples taken and verified from tier 2 CTF-014

Client: Bayswater Exploration & Production, LLC

Well Name / API: COT WEST #QA-30-25HN / 05-123-50404

Well 15802 MD:



Quote #: QUO-44020-M4F7B3

Plan #: ORD-25438-Z6C8X7

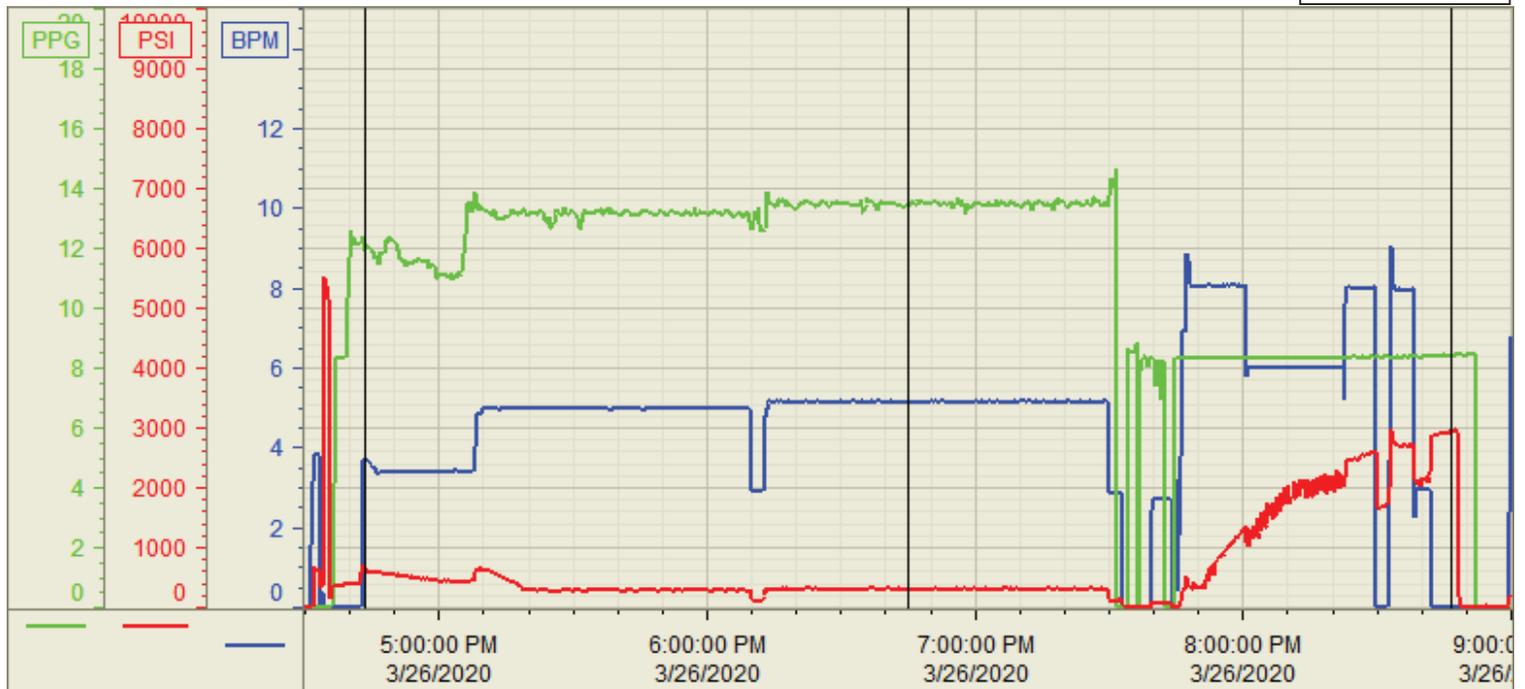
Execution #: EXC-25438-Z6C8X702

20	03/26/2020 19:05	Pump Tail Cement	13.5000	6.00		300.00	Pump 97.5 bbl tail cmt@13.5ppg 1.4769y 371sks 7.45 gps samples taken and verified from tier 3 CTF-014
21	03/26/2020 19:37	Pump Tail Cement	13.5000	6.00		300.00	Pump 97.5 bbl tail cmt@13.5ppg 1.4769y 371sks 7.45 gps samples taken and verified from tier 4 CTF-014 and slowed rates to finish product in field bin
22	03/26/2020 19:37	Pump Tail Cement	13.5000	6.00	390.60	300.00	Pump a total 390.6 bbl tail cmt@13.5ppg 1.4769y 1485sks 7.45 gps samples taken and verified from field bin CTF-014
23	03/26/2020 19:42	Wash Pumps and Lines					
24	03/26/2020 19:44	Drop Top Plug					
25	03/26/2020 19:53	Pump Displacement	8.3300	8.00	110.00	1700.00	Pump 110 bbl disp away until we caught pressure then slowed rate
26	03/26/2020 20:30	Pump Displacement	8.3300	6.00	220.00	2500.00	@ 220 away brought rates back up to 8bpm
27	03/26/2020 20:38	Pump Displacement	8.3300	8.00	287.00	2500.00	@ 287 away shutdown to move to catch spacer returns in catch tanks
28	03/26/2020 20:40	Pump Displacement	8.3300	8.00	287.00	2500.00	back on line @ 8bm
29	03/26/2020 20:46	Pump Displacement	8.3300	3.00	330.00	2000.00	Slowed Rate to 3 bpm to land plug
30	03/26/2020 20:50	Pump Displacement	8.3300	6.00	350.00	2000.00	Finish pump total disp of 350 bbl water bio-side and res-care (first 10 bbl Disp. had retarder in it.) 63 bbl spacer to surface
31	03/26/2020 20:51	Land Plug				2800.00	Landed plug @ 2100 psi took to 2800 psi
32	03/26/2020 20:55	Check Floats					floats held 3.5 bbl back
33	03/26/2020 21:00	STEACS Briefing					
34	03/26/2020 21:15	Rig Down					
35	03/26/2020 22:00	STEACS Briefing					
36	03/26/2020 22:15	Leave Location					

Customer: Bayswater  
 Well Number: QA-30-25HN  
 Lease Info: COT West



Print Date/Time  
 3/26/2020 9:45:12 PM



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)	318.4	3/26/2020 6:45:01 PM	Cementer\DS_DISCHARGE_PRESS_DIAL
2	Den - Density (PPG)	13.57	3/26/2020 6:44:55 PM	Cementer\DENSITY_ACTUAL_RATE
3	Combined Rate (BPM)	5.15	3/26/2020 6:45:07 PM	Cementer\Flow_Combined
4				
5				

Source: Control1 9:45:07 PM