

# BJ Cementing Treatment Report

SERVICE SUPERVISOR	Gregory Black	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	15,812.00	7,273.00	
Open Hole	8.50	0.00	0.00	15,822.00	7,273.00	10.00
Previous Casing	8.92	9.63	36.00	1,570.00	1,570.00	

## HARDWARE

Bottom Plug Used?	No	Tool Type	Float Collar
Top Plug Used?	Yes	Tool Depth (ft)	15,789.00
Top Plug Provided By	Non BJ	Max Casing Pressure - Rated (psi)	11,080.00
Top Plug Size	5.500	Max Casing Pressure - Operated (psi)	8864.00
Centralizers Used	Yes	Pipe Movement	None
Centralizers Quantity	190.00	Job Pumped Through	Manifold
Centralizers Type	Rigid	Top Connection Thread	BTC
Landing Collar Depth (ft)	15,789	Top Connection Size	5.5

## CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	PV Mud Out	21
Circulation Prior to Job	Yes	YP Mud In	8
Circulation Time (min)	120.00	YP Mud Out	8
Circulation Rate (bpm)	6.00	Solids Present at End of Circulation	No
Circulation Volume (bbls)	720.00	10 sec SGS	9
Lost Circulation Prior to Cement Job	No	10 min SGS	17
Mud Density In (ppg)	10.10	30 min SGS	20
Mud Density Out (ppg)	10.10	Flare Prior to / during the Cement Job	No
PV Mud In	21	Gas Present	No

## TEMPERATURE

Ambient Temperature (°F)	55.00	Slurry Cement Temperature (°F)	65.00
Mix Water Temperature (°F)	65.00	Flow Line Temperature (°F)	86.00

Client: Bayswater Exploration & Production, LLC

Well: COT WEST #0-30-25HN

Well API: 05-123-50422

Start Date: 4/5/2020

End Date: 4/6/2020

Field Ticket #: FT-25639-T5Y1S00201-99768872



## 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	6,965.00	980	1793.0000	319.2000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4769	7.45	6,965.00	8,856.00	1510	2231.0000	397.2000
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

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FLUID TYPE	FLUID NAME	COMPONENT	CONCENTRATION	UOM
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	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-31	0.5000	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	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	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-31	0.5000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	WEIGHTING ADDITIVE, W-11	242.6900	PPB
Lead Slurry	BJCem P100.3.01C	FLUID LOSS, FL-66	0.5000	BWOB
Lead Slurry	BJCem P100.3.01C	RETARDER, SR-20	0.7000	BWOB
Lead Slurry	BJCem P100.3.01C	CEMENT, ASTM TYPE III	100.0000	PCT
Lead Slurry	BJCem P100.3.01C	IntegraGuard GW-86	0.1000	BWOB
Lead Slurry	BJCem P100.3.01C	FOAM PREVENTER, FP-24	0.3000	BWOB
Lead Slurry	BJCem P100.3.01C	IntegraCare EC-2	3.0000	BWOB
Tail Slurry	BJCem P50.6.02C	FOAM PREVENTER, FP-24	0.3000	BWOB
Tail Slurry	BJCem P50.6.02C	IntegraGuard GW-86	0.1000	BWOB
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	EXTENDER, BENTONITE	2.0000	BWOB
Tail Slurry	BJCem P50.6.02C	CEMENT, FLY ASH (ROCKIES)	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	CEMENT, CLASS G	50.0000	PCT
Displacement 2	Retarded Water w/ Clay Protection & Biocide	RETARDER, SR-61L	0.1000	GPB
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 Final	Water w/ Clay Protection & Biocide	BIOCIDE, BIOC11139W	0.0100	GPB
Displacement Final	Water w/ Clay Protection & Biocide	ResCare CS-2	0.0800	GPB

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## DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	Rig	Amt of Cement Returned / Reversed	40.00
Calculated Displacement Vol (bbls)	350.00	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	341.00	Amt of Spacer to Surface	80.00
Did Float Hold?	Yes	Pressure Left on Casing (psi)	0.00
Bump Plug	Yes	Amt Bled Back After Job	4.00
Bump Plug Pressure (psi)	3000.00	Total Volume Pumped (bbls)	1140.00
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

Long String - Cheyenne, WY - Gregory Black

SEQ	START DATE / TIME	EVENT	DENSITY (ppg)	PUMP RATE (bpm)	PUMP VOL (bbls)	PIPE PRESSURE (psi)	COMMENTS
1	04/05/2020 15:00	Callout					Crew called out with a rts of 22:00.
2	04/05/2020 18:10	Depart for Location					Left for location @ 18:10.
3	04/05/2020 19:15	Arrive on Location					Arrived @ location @ 19:15.
4	04/05/2020 19:15	STEACS Briefing					Pre rig up safety meeting and spotting procedure.
5	04/05/2020 19:30	Rig Up					Rigged up.
6	04/05/2020 21:30	Rig					Waited on rig to finish circulating.
7	04/06/2020 00:00	STEACS Briefing					Pre job safety/procedure meeting.
8	04/06/2020 00:13	Prime Up	8.3400	3.00	5.00		Primed up pumps and lines.
9	04/06/2020 00:18	Pressure Test	8.3400			6000.00	Pressure tested to 6000.
10	04/06/2020 00:25	Pump Spacer	12.0000	3.00	28.00	600.00	Pumped spacer from fp of ctf-006.
11	04/06/2020 00:36	Pump Spacer	11.5000	3.00	26.00	600.00	Pumped spacer from fp of ctf-006.
12	04/06/2020 00:46	Pump Spacer	11.0000	3.00	26.00	600.00	Pumped spacer from fp of ctf-006.
13	04/06/2020 00:55	Pump Lead Cement	13.2000	6.00	32.00	800.00	Pumped 100 sks from rp of ctf-006; yield 1.82; gps:9.86.
14	04/06/2020 01:00	Pump Lead Cement	13.2000	6.00	71.00	700.00	Pumped 220 sks from tier 1 of ctf-453; yield 1.82; gps:9.86.
15	04/06/2020 01:07	Pump Lead Cement	13.2000	6.00	71.00	500.00	Pumped 220 sks from tier 2 of ctf-453; yield 1.82; gps:9.86.
16	04/06/2020 01:24	Pump Lead Cement	13.2000	6.00	71.00	500.00	Pumped 220 sks from tier 3 of ctf-453; yield 1.82; gps:9.86.
17	04/06/2020 01:41	Pump Lead Cement	13.2000	6.00	71.00	450.00	Pumped 220 sks from tier 4 of ctf-453; yield 1.82; gps:9.86.
18	04/06/2020 01:51	Pump Tail Cement	13.5000	6.00	65.00	500.00	Pumped 250 sks from tier 1 of ctf-410; yield 1.47; gps: 7.45.
19	04/06/2020 02:01	Pump Tail Cement	13.5000	6.00	65.00	500.00	Pumped 250 sks from tier 2 of ctf-410; yield 1.47; gps: 7.45.
20	04/06/2020 02:12	Pump Tail Cement	13.5000	6.00	83.00	500.00	Pumped 320 sks from tier 3 of ctf- 410; yield 1.47 gps: 7.45.
21	04/06/2020 02:28	Pump Tail Cement	13.5000	6.00	83.00	500.00	Pumped 320 sks from tier 4 of ctf- 410; yield 1.47 gps: 7.45.
22	04/06/2020 02:42	Pump Tail Cement	13.5000	6.00	48.00	500.00	Pumped 185 sks from ctf-577 fp; yield 1,47; gps: 7.45.
23	04/06/2020 02:50	Pump Tail Cement	13.5000	6.00	48.00	500.00	Pumped 185 sks from ctf-577 rp; yield 1,47; gps: 7.45.

Client: Bayswater Exploration & Production, LLC

Well Name / API: COT WEST #O-30-25HN / 05-123-50422

Well MD: 15822



Quote #: QUO-44451-R0G9H0

Plan #: ORD-25639-T5Y1S0

Execution #: EXC-25639-T5Y1S002

24	04/06/2020 02:59	Drop Top Plug						Dropped top plug while pumper washed pumps and lines to the pit.
25	04/06/2020 03:10	Pump Displacement	8.3400	8.00	10.00	400.00		Pumped displacement with retarded water.
26	04/06/2020 03:13	Pump Displacement	8.3400	8.00	300.00	2500.00		Pumped displacement with retarded water.
27	04/06/2020 03:40	Other (See comment)						Shutdown to switch returns to four-sided tank from shakers.
28	04/06/2020 03:44	Pump Displacement	8.3400	8.00	21.00	2900.00		Pumped displacement with good returns.
29	04/06/2020 03:56	Spacer Back-to-Surface						80 bbls of spacer to surface.
30	04/06/2020 03:56	Cement Back-to-Surface						40 bbls of cement back to surface.
31	04/06/2020 03:56	Pump Displacement	8.3400	3.00	10.00	2200.00		Slowed rate to land plug.
32	04/06/2020 04:03	Land Plug						Plug landed with 341 bbls pumped; fcp was 2500 took to 3000 psi.
33	04/06/2020 04:08	Check Floats						Floats held 4 bbls back.
34	04/06/2020 04:08	STEACS Briefing						Rig down safety meeting.
35	04/06/2020 04:15	Rig Down						Rigged down.
36	04/06/2020 04:45	STEACS Briefing						Return journey safety meeting.
37	04/06/2020 04:50	Leave Location						Left location.

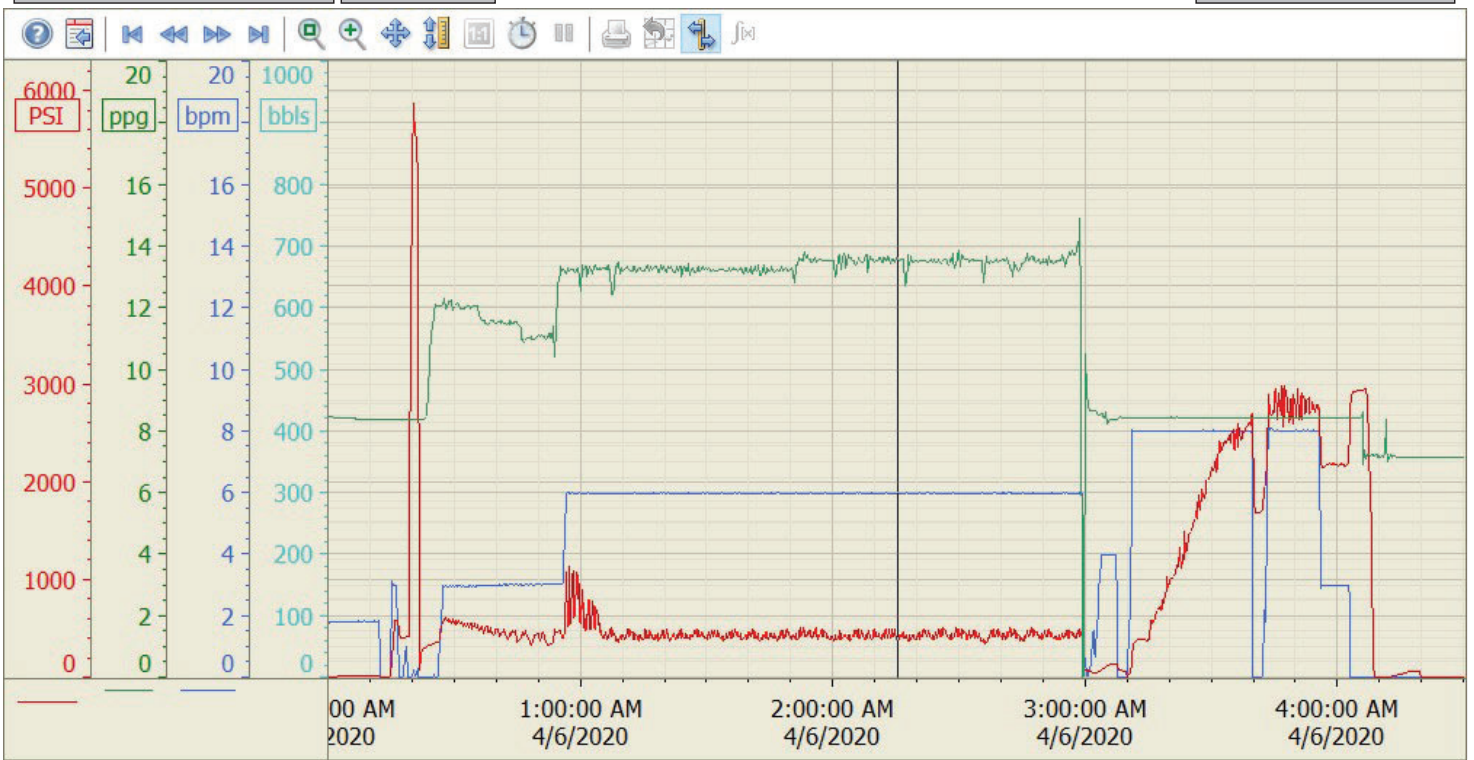
Summary Trend

Bayswater

O-30-25HN



Lease: COT WEST



4/6/2020 4:35:20 AM