

BJ Cementing Treatment Report

SERVICE SUPERVISOR	Zachary Hyde	RIG	True 38
CLIENT FIELD REPRESENTATIVE	Trevor Smith	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	4.78	5.50	20.00	15,702.00	7,430.00	
Open Hole	8.50	0.00	0.00	15,709.00	7,430.00	5.00
Previous Casing	8.92	9.63	36.00	1,576.00	1,576.00	

HARDWARE

Bottom Plug Used?	No	Centralizers Type	Rigid
Top Plug Used?	Yes	Landing Collar Depth (ft)	15,675
Top Plug Provided By	Non BJ	Pipe Movement	None
Top Plug Size	5.500	Job Pumped Through	No Manifold
Centralizers Used	Yes	Top Connection Thread	BTC
Centralizers Quantity	184.00	Top Connection Size	5.5

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	PV Mud Out	19
Circulation Prior to Job	Yes	YP Mud In	8
Circulation Time (min)	180.00	YP Mud Out	8
Circulation Rate (bpm)	8.00	Solids Present at End of Circulation	No
Circulation Volume (bbls)	1440.00	10 sec SGS	6
Lost Circulation Prior to Cement Job	No	10 min SGS	12
Mud Density In (ppg)	10.20	30 min SGS	15
Mud Density Out (ppg)	10.20	Flare Prior to / during the Cement Job	No
PV Mud In	19	Gas Present	No

TEMPERATURE

Ambient Temperature (°F)	30.00	Slurry Cement Temperature (°F)	70.00
Mix Water Temperature (°F)	70.00	Flow Line Temperature (°F)	110.00

Client: Bayswater Exploration & Production, LLC

Well: COT EAST #W-30-29HC

Well API: 05-123-50508

Start Date: 1/18/2020

End Date: 1/18/2020



FLUID DETAILS

FLUID TYPE	FLUID NAME	DENSITY (ppg)	YIELD (Cu Ft/sk)	H ₂ O REQ (gals/sk)	PLN TOP FLD (ft)	LENGTH (ft)	VOL (sk)	VOL (Cu Ft)	VOL (bbls)
Spacer / Pre Flush / Flush	Dye Flush	8.3300			0.00				2.0000
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	1.8295	9.87	0.00	7,067.00	955	1748.0000	311.2000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4774	7.45	7,067.00	8,642.00	1405	2076.0000	369.7000
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	337.5000

FLUID TYPE	FLUID NAME	COMPONENT	CONCENTRATION	UOM
Spacer / Pre Flush / Flush	Dye Flush	DYE,LIQUID,BLUE	1.0000	GPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	RETARDER, R-7C	2.0000	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	243.3100	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	WEIGHTING ADDITIVE, W-11	243.3100	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-7C	2.0000	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	243.3100	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	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	FLUID LOSS, FL-66	0.5000	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	RETARDER, SR-20	0.7000	BWOB
Lead Slurry	BJCem P100.3.01C	FOAM PREVENTER, FP-25	0.3000	BWOB
Lead Slurry	BJCem P100.3.01C	IntegraCare EC-2	3.0000	BWOB
Tail Slurry	BJCem P50.6.02C	FOAM PREVENTER, FP-25	0.3000	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	CEMENT, CLASS G	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	CEMENT, FLY ASH (ROCKIES)	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	IntegraGuard GW-86	0.1000	BWOB
Tail Slurry	BJCem P50.6.02C	EXTENDER, BENTONITE	2.0000	BWOB
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	ResCare CS-2	0.0800	GPB
Displacement Final	Water w/ Clay Protection & Biocide	BIOCIDE, BIOC11139W	0.0100	GPB



DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amt of Cement Returned / Reversed	28.00
Calculated Displacement Vol (bbls)	348.00	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	4.50
Bump Plug Pressure (psi)	2500.00	Total Volume Pumped (bbls)	1180.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement Returns During Job	Full	Lost Circulation During Cement Job	No

BJ Cementing Event Log

Long String - Cheyenne, WY

SEQ	START DATE / TIME	EVENT	DENSITY (ppg)	PUMP RATE (bpm)	PUMP VOL (bbls)	PIPE PRESSURE (psi)	COMMENTS
1	01/18/2020 07:15	Callout					Crew gets called out. Requested time 1200
2	01/18/2020 08:00	Depart for Location					Crew departs for location
3	01/18/2020 10:00	Arrive on Location					Crew arrives on location
4	01/18/2020 10:00	Spot Units					Spotted units
5	01/18/2020 10:10	Rig Up					Crew rigs up iron and hoses needed for job
6	01/18/2020 11:00	Rig					Crew waits on rig to finish running casing and to circulate 2 bottoms up
7	01/18/2020 13:45	STEACS Briefing					Crew has a briefing with company man and rig crew discussing the job
8	01/18/2020 14:10	Prime Up	8.3300	3.00	3.00	250.00	Filled lines 3 bbls
9	01/18/2020 14:12	Pressure Test					Pressure tested pump and lines to 5500psi
10	01/18/2020 14:14	Pump Spacer	12.0000	6.00	28.00	500.00	Pumped 28bbls of Spacer at 12ppg with surfactant
11	01/18/2020 14:21	Pump Spacer	11.5000	6.00	26.00	500.00	Pumped 26bbls of Spacer at 11.5ppg with surfactant
12	01/18/2020 14:26	Pump Spacer	11.0000	6.00	26.00	500.00	Pumped 26bbls of Spacer at 11ppg with surfactant
13	01/18/2020 14:31	Pump Lead Cement	13.2000	8.00	311.00	800.00	Pumped 311bbls of Lead at 13.2ppg(955sks,1.82yld,9.87gal/sk)
14	01/18/2020 15:14	Pump Tail Cement	13.5000	8.00	370.00	800.00	Pumped 370bbls of Tail at 13.5ppg(1405sks,1.47yld,7.45gal/sk)
15	01/18/2020 16:02	End Pumping					Shutdown
16	01/18/2020 16:02	Wash Pumps and Lines					Washed pump and lines to pit
17	01/18/2020 16:11	Drop Top Plug					Dropped top plug
18	01/18/2020 16:11	Pump Displacement	8.3300	8.00	10.00	500.00	Pumped the first 10bbls of displacement with fresh water and retarder
19	01/18/2020 16:12	Pump Displacement	8.3300	8.00	318.00	2700.00	Pumped 318 bbls of displacement with rescare and biocide
20	01/18/2020 16:54	Spacer Back-to-Surface					At 240 away got spacer to surface
21	01/18/2020 16:54	Cement Back-to-Surface					At 220 away got cement to surface
22	01/18/2020 16:54	Pump Displacement	8.3300	3.00	20.00	2500.00	Slowed rate last 20bbls to 3bpm to land the plug
23	01/18/2020 16:56	Land Plug					Landed plug at 341 FCP was 2500psi brought it up to 3500psi
24	01/18/2020 16:59	Check Floats					Checked floats got 4.5 bbls back
25	01/18/2020 17:00	Rig Down					Crew rigs down iron and hoses

Client: Bayswater Exploration & Production, LLC

Well Name / API: COT EAST #W-30-29HC / 05-123-50508

Well MD: 15709



Quote #: QUO-41295-F4T250

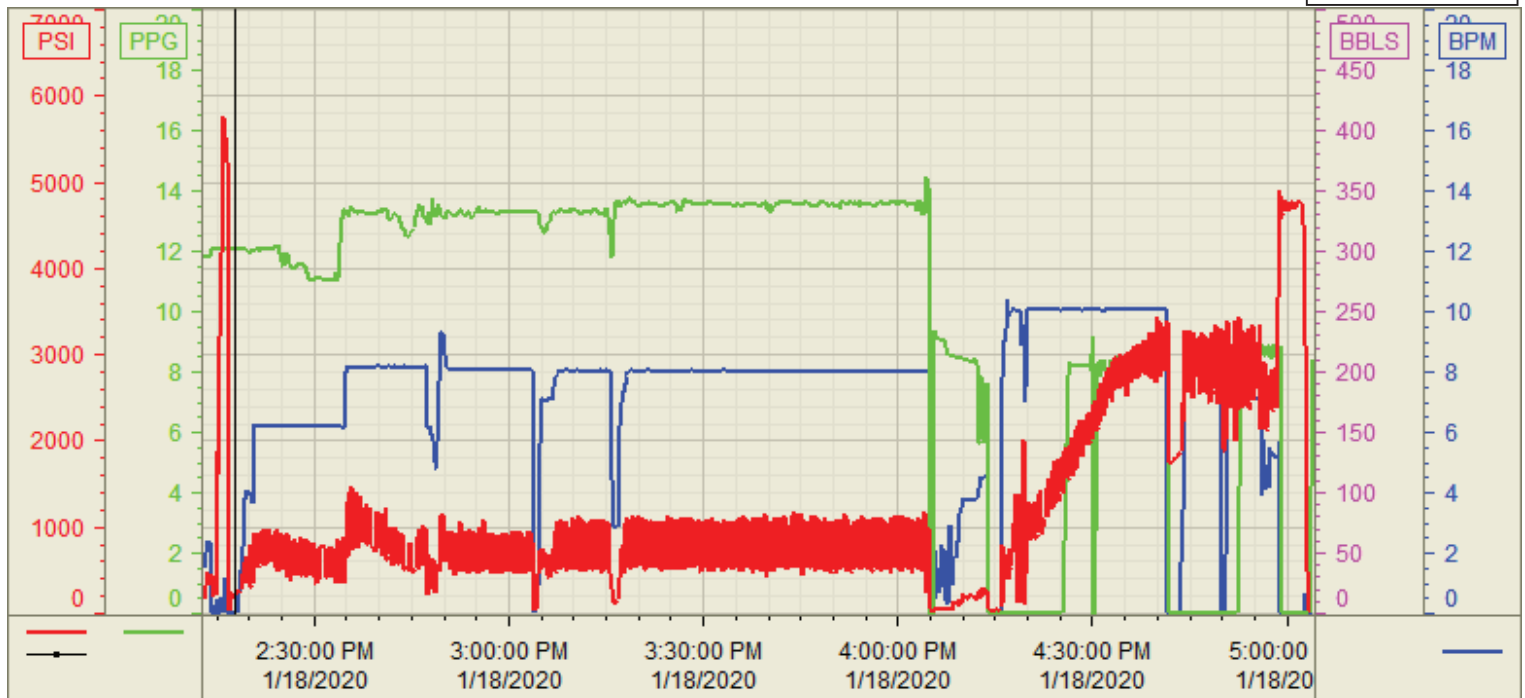
Plan #: ORD-23944-D4Y5J8

Execution #: EXC-23944-D4Y5J802

Customer: Bayswater
 Well Number: #W-30-29HC
 Lease Info: COT EAST



Print Date/Time
 1/18/2020 5:38:20 PM



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)	230.0	1/18/2020 2:17:46 PM	CementerDS_DISCHARGE_PRESS_DIAL
2	Den - Density (PPG)	12.06	1/18/2020 2:17:46 PM	CementerDENSITY_ACTUAL_RATE
3	Combined Rate (BPM)	0.00	1/18/2020 2:17:46 PM	CementerFlow_Combined
4	Trend 1			
5				

Source: Control1 5:38:16 PM