

BJ Cementing Treatment Report

SERVICE SUPERVISOR	Hector Montoya	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 (%)
Open Hole	8.50	0.00	0.00	15,576.00	7,201.00	5.00
Casing	4.78	5.50	20.00	15,565.00	7,021.00	
Previous Casing	8.92	9.63	36.00	1,569.00	1,569.00	

HARDWARE

Bottom Plug Used?	No	Landing Collar Depth (ft)	15,565
Top Plug Used?	Yes	Max Casing Pressure - Rated (psi)	11080.00
Top Plug Provided By	Non BJ	Max Casing Pressure - Operated (psi)	8864.00
Top Plug Size	5.500	Job Pumped Through	Manifold
Centralizers Used	Yes	Top Connection Thread	BTC
Centralizers Quantity	136.00	Top Connection Size	5.5
Centralizers Type	Rigid		

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	PV Mud Out	17
Circulation Prior to Job	Yes	YP Mud In	10
Circulation Time (min)	270.00	YP Mud Out	10
Circulation Rate (bpm)	12.00	Solids Present at End of Circulation	No
Circulation Volume (bbls)	3240.00	10 sec SGS	9
Lost Circulation Prior to Cement Job	No	10 min SGS	20
Mud Density In (ppg)	10.00	30 min SGS	24
Mud Density Out (ppg)	10.00	Flare Prior to / during the Cement Job	No
PV Mud In	17	Gas Present	No

Client: Bayswater Exploration & Production, LLC

Well: COT EAST #X-30-29HN

Well API: 05-123-50500

Start Date: 1/23/2020

End Date: 1/24/2020



TEMPERATURE

Ambient Temperature (°F)	30.00	Slurry Cement Temperature (°F)	70.00
Mix Water Temperature (°F)	65.00	Flow Line Temperature (°F)	90.00

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	7,148.00	965	1764.0000	314.1000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4774	7.45	7,148.00	8,415.00	1370	2025.0000	360.5000
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	334.3000

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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	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	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	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	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	WEIGHTING ADDITIVE, W-11	243.3100	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	IntegraGuard GW-86	1.2000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	SPACER SURFACTANT, SS-267	1.0000	GPB
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	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	IntegraGuard GW-86	0.1000	BWOB
Tail Slurry	BJCem P50.6.02C	FOAM PREVENTER, FP-25	0.3000	BWOB
Tail Slurry	BJCem P50.6.02C	EXTENDER, BENTONITE	2.0000	BWOB
Tail Slurry	BJCem P50.6.02C	FLUID LOSS, FL-66	0.2000	BWOB
Tail Slurry	BJCem P50.6.02C	IntegraGuard GW-86	0.1000	BWOB
Tail Slurry	BJCem P50.6.02C	RETARDER, SR-20	0.1000	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
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DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amt of Cement Returned / Reversed	26.00
Calculated Displacement Vol (bbls)	344.00	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	344.00	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	3.50
Bump Plug Pressure (psi)	3200.00	Total Volume Pumped (bbls)	1103.00
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 - Hector Montoya

SEQ	START DATE / TIME	EVENT	DENSITY (ppg)	PUMP RATE (bpm)	PUMP VOL (bbls)	PIPE PRESSURE (psi)	COMMENTS
1	01/23/2020 18:00	Callout					BJ Crew gets called out
2	01/23/2020 19:30	Other (See comment)					Load Up for job
3	01/23/2020 20:30	Arrive on Location					BJ Crew safely arrives on location
4	01/23/2020 22:30	Rig Up					Rig Up
5	01/23/2020 23:45	STEACS Briefing					BJ Crew and Rig Crew discuss hazards of pumping the job and go over job procedure
6	01/24/2020 00:19	Pressure Test					Pressure Test to 5000psi
7	01/24/2020 00:30	Pump Spacer	12.0000	4.00	28.00	500.00	Pump 28bbl Spacer w/ surfactant at 12ppg
8	01/24/2020 00:36	Pump Spacer	11.5000	4.00	26.00	510.00	Pump 26bbl Spacer w/ surfactant at 11.5ppg
9	01/24/2020 00:44	Pump Spacer	11.0000	4.00	26.00	480.00	Pump 26bbl Spacer w/ surfactant at 11ppg
10	01/24/2020 00:51	Pump Lead Cement	13.2000	7.00	314.00	1299.00	Lead- 314bbl at 13.2ppg, 965sks BJ Cem P100.3.01C, y-1.82, gps-9.87, mix water 226bbl
11	01/24/2020 01:42	Pump Tail Cement	13.5000	7.00	360.00	1400.00	Tail- 360bbl at 13.5ppg, 1370sks BJ Cem P50.6.02C, y-1.46, gps- 7.45, mix water-243bbl. Estimated Height of Tail Cement at 8832ft, Estimated Top of Cement at 6752ft
12	01/24/2020 02:41	Wash Pumps and Lines					Wash pumps and lines out to the pit
13	01/24/2020 02:48	Drop Top Plug					Customer Witnesses Top Plug leave
14	01/24/2020 02:50	Pump Displacement	8.3300	9.00	324.00	3100.00	Total Displacement 344bbl Fresh Water. First 10bbl with SR-61L, ResCare
15	01/24/2020 03:32	Pump Displacement	8.3300	4.00	20.00	2700.00	Slow rate last 20bbl to 4bpm to land the plug
16	01/24/2020 03:36	Land Plug				3200.00	Final Circulating pressure was 2700psi took to 3200psi
17	01/24/2020 03:39	Check Floats					Floats Hold. 3.5bbl back to the trailer. 26bbl of cement to surface
18	01/24/2020 03:42	Rig Down					Rig Down
19	01/24/2020 05:00	Leave Location					Leave Location

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Well Name / API: COT EAST #X-30-29HN / 05-123-50500

Well 15563
MD:



Quote #: QUO-41529-C3H3H9

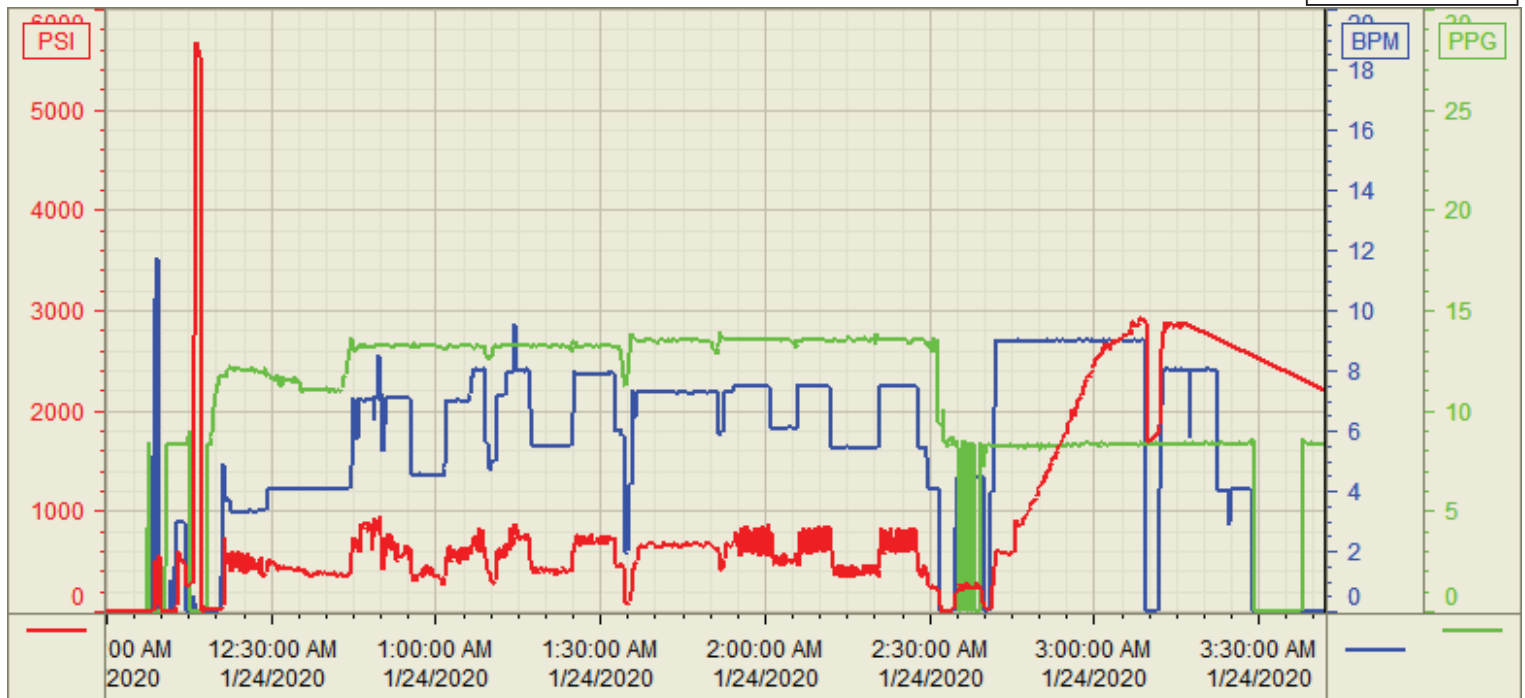
Plan #: ORD-24022-Y7K3S9

Execution #: EXC-24022-Y7K3S902

Customer: Bayswater
 Well Number: X-30-29HN
 Lease Info: COT EAST



Print Date/Time
 1/24/2020 5:15:26 AM



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)	2213.6 i. u.	1/24/2020 3:42:00 AM i.	Cementer\DS_DISCHARGE_PRESS_DIAL
2	Recirc - Density (PPG)	8.36	1/24/2020 3:42:02 AM	Cementer\DENSITY_ACTUAL_RATE
3	Combined Rate	0.00	1/24/2020 3:42:02 AM	Cementer\Flow_Combined
4				
5				

Source: Control1 5:15:21 AM