

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 (%)
Previous Casing	8.92	9.63	36.00	1,569.00	1,569.00	
Casing	4.78	5.50	20.00	15,260.00	7,209.00	
Open Hole	8.50	0.00	0.00	15,273.00	7,209.00	5.00

HARDWARE

Bottom Plug Used?	No	Landing Collar Depth (ft)	15,260
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	181.00	Top Connection Size	5.5
Centralizers Type	Rigid		

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	PV Mud Out	15
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	7
Lost Circulation Prior to Cement Job	No	10 min SGS	16
Mud Density In (ppg)	9.80	30 min SGS	18
Mud Density Out (ppg)	9.80	Flare Prior to / during the Cement Job	No
PV Mud In	15	Gas Present	No

Client: Bayswater Exploration & Production, LLC

Well: COT EAST #NA-30-29HN

Well API: 05-123-50507

Start Date: 11/21/2019

End Date: 11/22/2019



TEMPERATURE

Ambient Temperature (°F)	27.00	Slurry Cement Temperature (°F)	57.00
Mix Water Temperature (°F)	55.00	Flow Line Temperature (°F)	120.00

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	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	6,780.00	920	1684.0000	299.8000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4774	7.45	6,780.00	8,506.00	1385	2047.0000	364.4000
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	328.1000

FLUID TYPE	FLUID NAME	COMPONENT	CONCENTRATION	UOM
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	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	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	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	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

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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	WEIGHTING ADDITIVE, W-11	243.3100	PPB
Lead Slurry	BJCem P100.3.01C	IntegraCare EC-2	3.0000	BWOB
Lead Slurry	BJCem P100.3.01C	FOAM PREVENTER, FP-25	0.3000	BWOB
Lead Slurry	BJCem P100.3.01C	FLUID LOSS, FL-66	0.5000	BWOB
Lead Slurry	BJCem P100.3.01C	IntegraGuard GW-86	0.1000	BWOB
Lead Slurry	BJCem P100.3.01C	CEMENT, ASTM TYPE III	100.0000	PCT
Lead Slurry	BJCem P100.3.01C	RETARDER, SR-20	0.7000	BWOB
Tail Slurry	BJCem P50.6.02C	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	RETARDER, SR-20	0.1000	BWOB
Tail Slurry	BJCem P50.6.02C	FLUID LOSS, FL-66	0.2000	BWOB
Tail Slurry	BJCem P50.6.02C	Flyash (Rockies)	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	FOAM PREVENTER, FP-25	0.3000	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

Displaced By	BJ	Amt of Cement Returned / Reversed	40.00
Calculated Displacement Vol (bbls)	338.00	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	338.00	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)	3800.00	Total Volume Pumped (bbls)	1078.00
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	11/21/2019 23:30	Callout					BJ Crew gets called out
2	11/22/2019 00:30	Other (See comment)					Load Up for Job
3	11/22/2019 02:00	Arrive on Location					Arrive safely on location
4	11/22/2019 04:00	Rig Up					Rig Up
5	11/22/2019 05:30	Other (See comment)					Wait on Rig to finish circulating
6	11/22/2019 08:30	Prime Up					Fill lines
7	11/22/2019 08:47	Pressure Test					Pressure test to 5000psi
8	11/22/2019 08:55	Pump Spacer	12.0000	4.00	28.00	400.00	Pump 28bbl at 12ppg w/surfactant
9	11/22/2019 09:00	Pump Spacer	11.5000	4.00	26.00	400.00	Pump 26bbl at 11.5ppg w/surfactant
10	11/22/2019 09:11	Pump Spacer	11.0000	4.00	26.00	400.00	Pump 26bbl at 11\ppg w/surfactant
11	11/22/2019 09:16	Pump Lead Cement	13.2000	7.00	299.00	500.00	Pump Lead 299bbl at 13.2ppg, 920sks BJ Cem P100.3.01C, y-1.89, gps-9.87, mix water
12	11/22/2019 10:11	Pump Tail Cement	13.5000	7.00	364.00	600.00	Pump Tail at 364 at 13.5ppg, 1384sks BJ Cem P50.6.02C, y-1.47, gps-7.45, mix water-163bbl. Estimated Height of Tail at 8921ft, Estimated Top of Tail at 6351ft
13	11/22/2019 11:13	Wash Pumps and Lines					Clean Lines out the to pit
14	11/22/2019 11:22	Drop Top Plug					Customer witnesses Top Plug leave
15	11/22/2019 11:23	Pump Displacement	8.3300	8.00	318.00	2800.00	Total Displacement 338bbl, w/ ResCare and Biocide
16	11/22/2019 12:14	Pump Displacement	8.3300	3.00	20.00	3100.00	Slow rate last 20bbl to 3bpm, . 40bbl cement to surface
17	11/22/2019 12:18	Land Plug				3800.00	Land Plug, Final Circulating Pressure 3100psi took to 3800psi
18	11/22/2019 12:22	Check Floats					Check Floats. 4.5bbl back, Floats held.
19	11/22/2019 12:24	Rig Down					Rig Down
20	11/22/2019 13:30	Leave Location					Leave location

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Well 15272 MD:



Quote #: QUO-39020-P2K5R8

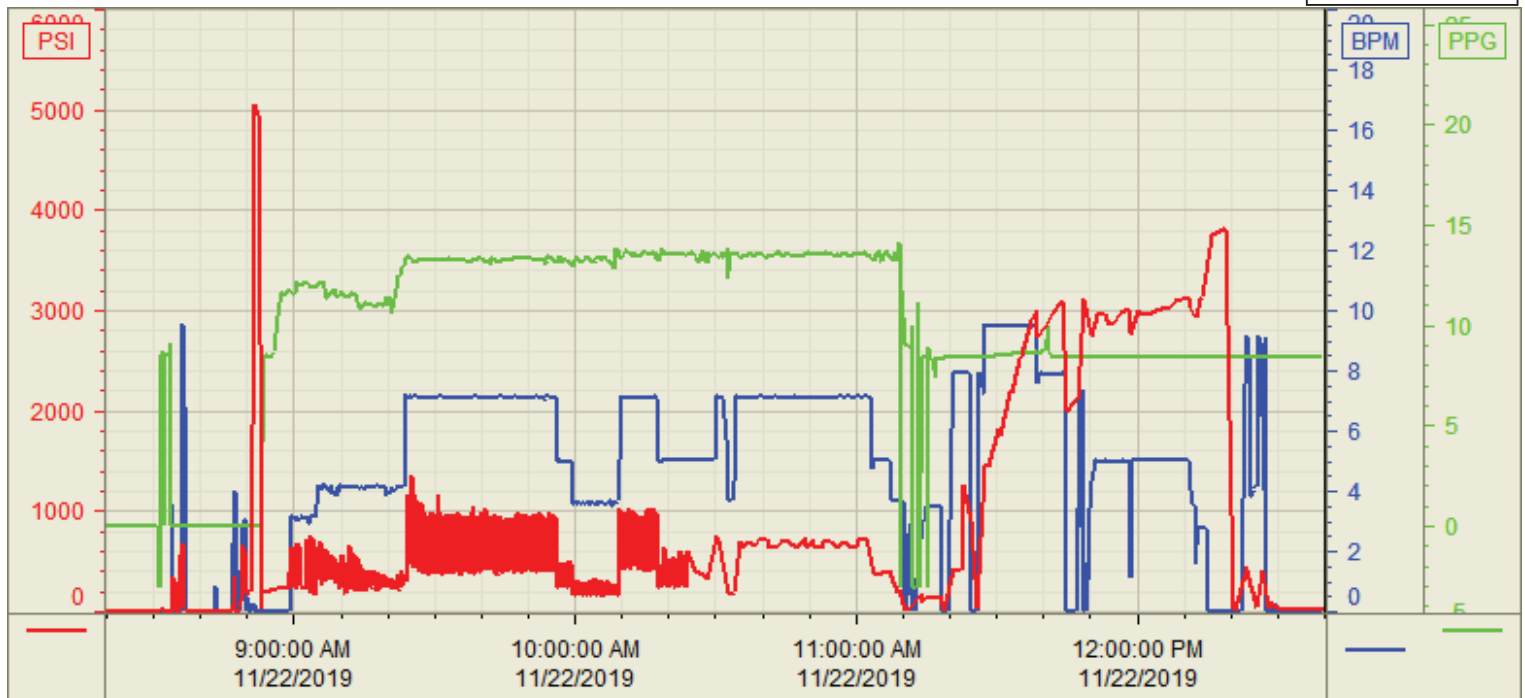
Plan #: ORD-22649-X9Q1K6

Execution #: EXC-22649-X9Q1K602

Customer: BAYSWATER
 Well Number: NA-30-29HN
 Lease Info: COT EAST



Print Date/Time
 11/22/2019 12:45:38 PM



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)	21.7 i.	11/22/2019 12:40:00 PM i.	Cementer\DS_DISCHARGE_PRESS_DIAL
2	Recirc - Density (PPG)		11/22/2019 12:40:00 PM i.	Cementer\DENSITY_ACTUAL_RATE
3	Combined Rate		11/22/2019 12:40:00 PM i.	Cementer\Flow_Combined
4				
5				

Source: Control1 12:45:33 PM