

BJ Cementing Treatment Report

SERVICE SUPERVISOR	Eric Dewit	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 (%)	GRADE	THREAD
Previous Casing	8.92	9.63	36.00	1,567.00	1,567.00		J-55	
Casing	4.78	5.50	20.00	15,320.00	7,273.00			
Open Hole	8.50	0.00	0.00	15,330.00	7,273.00	5.00	P-110	BTC

HARDWARE

Bottom Plug Used?	No	Tool Depth (ft)	15,295.00
Top Plug Used?	Yes	Max Casing Pressure - Rated (psi)	12640.00
Top Plug Provided By	Non BJ	Max Casing Pressure - Operated (psi)	2943.00
Top Plug Size	5.500	Pipe Movement	None
Centralizers Used	Yes	Job Pumped Through	Manifold
Landing Collar Depth (ft)	15,295	Top Connection Thread	BTC
Tool Type	Float Collar	Top Connection Size	5.5

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	PV Mud Out	18
Circulation Prior to Job	Yes	YP Mud In	8
Circulation Time (min)	120.00	YP Mud Out	87
Circulation Rate (bpm)	10.00	Solids Present at End of Circulation	No
Circulation Volume (bbls)	1200.00	10 sec SGS	7
Lost Circulation Prior to Cement Job	No	10 min SGS	13
Mud Density In (ppg)	10.30	30 min SGS	15
Mud Density Out (ppg)	10.30	Flare Prior to / during the Cement Job	No
PV Mud In	18	Gas Present	No

TEMPERATURE

Ambient Temperature (°F)	18.00	Slurry Cement Temperature (°F)	67.00
Mix Water Temperature (°F)	65.00		

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	6,809.00	920	1683.0000	299.6000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4774	7.45	6,809.00	8,526.00	1390	2054.0000	365.7000
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	329.2000

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	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	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-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	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	RETARDER, R-7C	2.0000	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	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	RETARDER, SR-20	0.7000	BWOB
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
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	Flyash (Rockies)	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	CEMENT, CLASS G	50.0000	PCT
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	IntegraGuard GW-86	0.1000	BWOB
Displacement 2	Retarded Water w/ Clay Protection & Biocide	ResCare CS-2	0.0800	GPB
Displacement 2	Retarded Water w/ Clay Protection & Biocide	BIOCIDE, BIOC11139W	0.0100	GPB
Displacement 2	Retarded Water w/ Clay Protection & Biocide	RETARDER, SR-61L	0.1000	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

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amt of Cement Returned / Reversed	26.00
Calculated Displacement Vol (bbls)	339.00	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	339.00	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	3.00
Bump Plug Pressure (psi)	2943.00	Total Volume Pumped (bbls)	1085.00
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 - Eric Dewit

SEQ	START DATE / TIME	EVENT	DENSITY (ppg)	PUMP RATE (bpm)	PUMP VOL (bbls)	PIPE PRESSURE (psi)	COMMENTS
1	12/15/2019 14:30	Callout					Customer calls with an RTS of 21:00 on 12/15/19 Crew gets equipment and materials ready to travel to location
2	12/15/2019 18:45	Depart for Location					Crew leaves yard to travel to location
3	12/15/2019 20:10	Arrive on Location					Arrive on location (rig is circulating)
4	12/15/2019 20:10	STEACS Briefing					Pre-rig up safety meeting
5	12/15/2019 20:15	Spot Units					Spot trucks
6	12/15/2019 20:20	Rig Up					Rig up everything
7	12/15/2019 22:15	STEACS Briefing					Pre-job safety meeting with BJ crew, rig crew, and company man
8	12/15/2019 22:50	Prime Up					Prime the pump up, dump 2 gals of dye directly into the casing.
9	12/15/2019 23:26	Other (See comment)	8.3400	5.00	3.00	700.00	Load lines with 2 bbls of fresh water
10	12/15/2019 23:30	Pressure Test	8.3400	0.00	0.00	5400.00	Test pumps and lines
11	12/15/2019 23:42	Pump Spacer	12.0000	5.00	28.00	750.00	Pump 28 bbls of spacer @12 ppg
12	12/15/2019 23:49	Pump Spacer	11.5000	4.00	26.00	600.00	Pump 26 bbls of spacer @11.5 ppg
13	12/15/2019 23:57	Pump Spacer	11.0000	4.00	26.00	600.00	Pump 26 bbls of spacer @11 ppg
14	12/16/2019 00:07	Pump Lead Cement	13.2000	6.00	299.00	633.00	Pump 920 sks of lead cement @13.2 ppg (Yield: 1.82 Mix Water: 9.87)
15	12/16/2019 01:24	Pump Tail Cement	13.5000	7.54	365.00	650.00	Pump 1,390 sks of tail cement @13.5 ppg (Yield: 1.47 Mix Water: 7.45)
16	12/16/2019 02:30	Drop Top Plug					Shut down wash pumps and lines, drop top plugs
17	12/16/2019 02:33	Pump Displacement	8.3400	6.00	0.00	150.00	Send plug, start displacement with 10 bbls of retarded water
18	12/16/2019 02:35	Pump Displacement	8.3400	8.00	10.00	180.00	Fresh water + Chems displacement
19	12/16/2019 02:51	Pump Displacement	8.3400	8.00	100.00	1400.00	Fresh water + Chems displacement
20	12/16/2019 03:05	Spacer Back-to-Surface	8.3400	8.00	210.00	2700.00	Start getting spacer to surface
21	12/16/2019 03:30	Cement Back-to-Surface	8.3400	4.00	313.00	2900.00	Start getting good cement to surface
22	12/16/2019 03:33	Other (See comment)	8.3400	3.00	320.00	2469.00	Drop rate to land the plug

Client: Bayswater Exploration & Production, LLC

Well Name / API: COT EAST #R-30-29HN / 05-123-50420

Well 15335 MD:



Quote #: QUO-40147-D3S7R9

Plan #: ORD-23187-C5W7R2

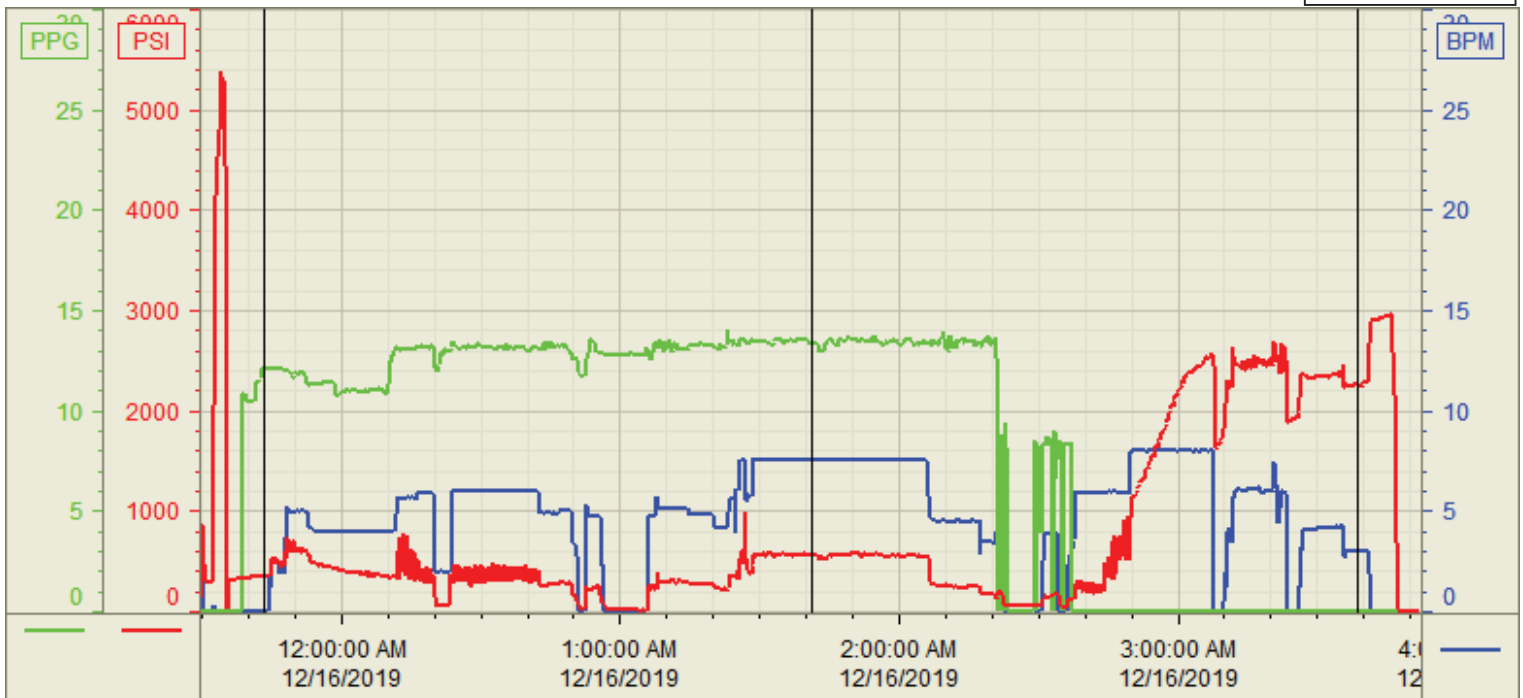
Execution #: EXC-23187-C5W7R202

23	12/16/2019 03:39	Land Plug	8.3400	3.00	339.00	2943.00	Land the plug (Final circulating pressure was 2600)
24	12/16/2019 03:43	Check Floats	8.3400	0.00	0.00	0.00	Check floats, floats held (3 bbls back)
25	12/16/2019 03:48	STEACS Briefing					Pre-rig down safety meeting
26	12/16/2019 04:00	Rig Down					Rig everything down
27	12/16/2019 04:55	Leave Location					Crew ready to leave location

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



Print Date/Time
 12/16/2019 4:47:48 AM



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)	572.4 i.	12/16/2019 1:41:06 AM i.	Cementer\DS_DISCHARGE_PRESS_DIAL
2	Den - Density (PPG)	13.32	12/16/2019 1:41:00 AM	Cementer\DENSITY_ACTUAL_RATE
3	Combined Rate (BPM)	7.52 i.	12/16/2019 1:41:06 AM i.	Cementer\Flow_Combined
4				
5				

Source: Control1 4:47:43 AM