



Bayswater Exploration & Production, LLC

East Ault 13-18-19HC

API # 05-123-47059

Production

July 27, 2020

Quote #: QUO-46488-X0G7K1

Execution #: EXC-26559-K9D1J702



Bayswater Exploration & Production, LLC

Attention: Mr. Trevor Smith | (720) 335-9045 | trevor.smith@iptenergyservices.com

Bayswater Exploration & Production | 730 17th Street, Suite 610 | Denver, CO. 80202

Dear Mr. Trevor Smith,

Thank you for the opportunity to provide cementing services on this well. BJ Services strives to achieve complete customer satisfaction. If you have any questions regarding the services or data provided, please contact BJ Services at any time.

Sincerely,
Jason Creel
Field Engineer | (307) 365-9038 | Jason.Creel@bjservices.com

Field Office 1716 East Allison Rd., Cheyenne WY, 82007
Phone: (307) 459-6487

Sales Office 999 18th St. Suite 1200 Denver, CO 80202
Phone: (281) 408-2361

BJ Cementing Treatment Report

SERVICE SUPERVISOR	Eric Dewit	RIG	True 38
CLIENT FIELD REPRESENTATIVE	Siji	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	17,535.00	7,400.00	
Previous Casing	8.92	9.63	36.00	1,565.00	1,565.00	
Open Hole	8.50	0.00	0.00	17,546.00	7,400.00	7.00

HARDWARE

Bottom Plug Used?	No	Tool Type	Float Collar
Top Plug Used?	Yes	Tool Depth (ft)	17,515.00
Top Plug Provided By	Non BJ	Max Casing Pressure - Rated (psi)	7352.00
Top Plug Size	5.500	Max Casing Pressure - Operated (psi)	3500.00
Centralizers Used	Yes	Pipe Movement	None
Centralizers Quantity	212.00	Job Pumped Through	Manifold
Centralizers Type	Bow	Top Connection Thread	BTC
Landing Collar Depth (ft)	17,515	Top Connection Size	5.5

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	PV Mud Out	14
Circulation Prior to Job	Yes	YP Mud In	7
Circulation Time (min)	4.00	YP Mud Out	7
Circulation Rate (bpm)	12.50	Solids Present at End of Circulation	No
Circulation Volume (bbls)	3000.00	10 sec SGS	7
Lost Circulation Prior to Cement Job	No	10 min SGS	13
Mud Density In (ppg)	10.50	30 min SGS	15
Mud Density Out (ppg)	10.50	Flare Prior to / during the Cement Job	Yes
PV Mud In	14	Gas Present	No

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Well: EAST AULT 13-18-19HC

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Start Date: 7/27/2020

End Date: 7/27/2020

Field Ticket #:



TEMPERATURE

Ambient Temperature (°F)	65.00	Slurry Cement Temperature (°F)	65.00
Mix Water Temperature (°F)	64.00		

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	1.8290	9.86	0.00	6,810.00	935	1711.0000	304.6000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4769	7.45	6,810.00	10,705.00	1775	2622.0000	466.9000
Displacement 2	Retarded Water + Chems	8.3331				0.00	0	0.0000	10.0000
Displacement Final	Water + Chems	8.3331			0.00			0.0000	378.2000

FLUID TYPE	FLUID NAME	COMPONENT	CONCENTRATION	UOM
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	WEIGHTING ADDITIVE, W-11	242.6900	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	WEIGHTING ADDITIVE, W-11	242.6900	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	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	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	242.6900	PPB
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

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FLUID TYPE	FLUID NAME	COMPONENT	CONCENTRATION	UOM
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
Lead Slurry	BJCem P100.3.01C	FLUID LOSS, FL-66	0.5000	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	CEMENT, FLY ASH (ROCKIES)	50.0000	PCT
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
Displacement 2	Retarded Water + Chems	BIOCIDE, BIOC11139W	0.0100	GPB
Displacement 2	Retarded Water + Chems	ResCare CS-2	0.0800	GPB
Displacement 2	Retarded Water + Chems	RETARDER, SR-61L	0.1000	GPB
Displacement 2	Retarded Water + Chems	CORROSION INHIBITORS, CI-27	0.2100	GPB
Displacement 2	Retarded Water + Chems	OXYGEN SCAVENGER, OS-30	0.1680	GPB
Displacement Final	Water + Chems	ResCare CS-2	0.0800	GPB
Displacement Final	Water + Chems	CORROSION INHIBITORS, CI-27	0.2100	GPB
Displacement Final	Water + Chems	BIOCIDE, BIOC11139W	0.0100	GPB
Displacement Final	Water + Chems	OXYGEN SCAVENGER, OS-30	0.1680	GPB

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amt of Cement Returned / Reversed	30.00
Calculated Displacement Vol (bbls)	388.40	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	388.40	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)	2900.00	Total Volume Pumped (bbls)	1241.00
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	07/26/2020 22:20	Callout					Customer calls with an OL time of 04:30 on 7/27/20, crew gets equipment, and materials ready to travel to location
2	07/27/2020 00:50	Depart for Location					Depart yard to travel to location
3	07/27/2020 02:10	Arrive on Location					Arrive on location (rig on bottom circulating for about an hour already) Pre-rig up safety meeting before spotting trucks
4	07/27/2020 02:15	Spot Units					Spot trucks on location
5	07/27/2020 02:20	Rig Up					Rig up bulk, water, and treating line to the stand pipe
6	07/27/2020 03:00	Rig					Waiting on the rig to finish circulating
7	07/27/2020 05:05	Rig Up					Rig up stand pipe, wash up line, and treating line on the floor
8	07/27/2020 05:20	STEACS Briefing					Pre-job safety meeting with BJ crew, rig crew, and company man
9	07/27/2020 05:47	Other (See comment)	8.3400	4.00	3.00	800.00	Load pumps, and lines with 3 bbls of fresh water
10	07/27/2020 05:49	Pressure Test	8.3400	0.00	0.00	5700.00	Test pumps and lines
11	07/27/2020 05:55	Pump Spacer	12.0000	5.00	28.00	800.00	Pump 28 bbls of spacer @12 ppg (Front pod of CTF-006)
12	07/27/2020 06:02	Pump Spacer	11.5000	5.00	26.00	900.00	Pump 26 bbls of spacer @11.5 ppg (Front pod of CTF-006)
13	07/27/2020 06:07	Pump Spacer	11.0000	5.00	26.00	700.00	Pump 26 bbls of spacer @11 ppg (Front pod of CTF-006)
14	07/27/2020 06:13	Pump Lead Cement	13.2000	7.10	304.00	800.00	Pump 935 sks of lead cement @13.2 ppg from Silo 449 (Yield: 1.82 Mix Water: 9.86)
15	07/27/2020 07:00	Pump Tail Cement	13.5000	7.10	205.00	800.00	Pump 775 sks of tail cement @13.5 ppg from silo 453 (Yield: 1.47 Mix Water: 7.45)
16	07/27/2020 07:29	Pump Tail Cement	13.5000	7.10	261.00	500.00	Pump 1000 sks of tail cement @13.5 ppg from Silo 664
17	07/27/2020 08:01	Pump Tail Cement	13.5000	7.10		400.00	Had to drop rate the 20 bbls of cement making sure we get all the cement out of the silo
18	07/27/2020 08:06	Drop Top Plug		0.00	0.00	0.00	Shut down to drop the plug
19	07/27/2020 08:10	Wash Pumps and Lines		0.00	0.00	0.00	Finish washing pumps and lines
20	07/27/2020 08:13	Pump Displacement	8.3400	10.00	0.00	800.00	Send plug, start fresh water displacement (first 10 bbls retarded water)

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Well Name / API: EAST AULT 13-18-19HC / 05-123-47059

Well MD: 17515



Quote #: QUO-46488-X0G7K1

Plan #: ORD-26559-K9D1J7

Execution #: EXC-26559-K9D1J702

SEQ	START DATE / TIME	EVENT	DENSITY (ppg)	PUMP RATE (bpm)	PUMP VOL (bbls)	PIPE PRESSURE (psi)	COMMENTS
21	07/27/2020 08:15	Pump Displacement	8.3400	10.00	10.00	800.00	Pump fresh water displacement + Chems
22	07/27/2020 08:24	Pump Displacement	8.3400	10.00	100.00	1800.00	Pump fresh water displacement + Chems
23	07/27/2020 08:29	Pump Displacement	8.3400	10.00	150.00	2500.00	Pump fresh water displacement + Chems
24	07/27/2020 08:31	Pump Displacement	8.3400	8.00	170.00	2300.00	Pump fresh water displacement + Chems (drop rate)
25	07/27/2020 08:35	Pump Displacement	8.3400	8.00	200.00	2500.00	Pump fresh water displacement + Chems
26	07/27/2020 08:47	Spacer Back-to-Surface	8.3400	8.00	300.00	2200.00	Start seeing some spacer back to surface
27	07/27/2020 08:49	Pump Displacement	8.3400	6.00	314.00	2200.00	Pump fresh water displacement + Chems (Drop rate)
28	07/27/2020 08:51	Other (See comment)	8.3400	0.00	320.00		Shut down for rig to swap to cement tank to take returns (getting good spacer to surface)
29	07/27/2020 08:53	Pump Displacement	8.3400	6.00		2200.00	Start pumping again
30	07/27/2020 08:58	Cement Back-to-Surface	8.3400	4.00	358.00	2400.00	Start getting good cement to surface (Drop rate to 4 bbls/min to land the plug)
31	07/27/2020 09:00	Land Plug	8.3400	4.00	388.00	2900.00	Land plug, 2,400 psi FCP, Bumped up to 2,900 psi (30 bbls of cement to surface)
32	07/27/2020 09:07	Check Floats	8.3400	0.00	0.00	0.00	Check floats (floats held) 4 bbls back
33	07/27/2020 09:12	STEACS Briefing					Pre-rig down safety meeting
34	07/27/2020 09:14	Rig Down					Rig down
35	07/27/2020 10:00	Leave Location					Leave location to travel back to the yard

Summary Trend

Bayswater

13-18-19HC



Lease: East Ault



7/27/2020 9:31:30 AM