



Great Western Operating Company, LLC

POSTLE IC 09-222HN

API # 05-123-47376

Surface

February 01, 2020

Quote #: QUO-41604-M8R5L8

Execution #: EXC-24302-P7N8Y102



Great Western Operating Company, LLC

Great Western Operating Company, LLC | 1801 Broadway, Suite 500 | Denver, CO 80202

Dear Great Western Operating Company, LLC,

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 I | (307) 256-0306 | Jason.Creel@BJServices.com

Field Office
1716 East Allison Rd., Cheyenne WY. 82007 | (307) 638-5585

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

BJ Cementing Treatment Report

SERVICE SUPERVISOR	Gregory Black	RIG	Ikon 12
CLIENT FIELD REPRESENTATIVE	Kyle Hibbert	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 (%)	GRADE	THREAD
Casing	8.92	9.63	36.00	1,550.00	1,549.00		J-55	LTC
Open Hole	13.50	0.00	0.00	1,550.00	1,549.00	30.00		

HARDWARE

Bottom Plug Used?	No	Tool Type	Float Collar
Top Plug Used?	Yes	Tool Depth (ft)	1,505.16
Top Plug Provided By	Non BJ	Max Casing Pressure - Rated (psi)	3012.00
Top Plug Size	9.625	Max Casing Pressure - Operated (psi)	2020.00
Centralizers Used	Yes	Pipe Movement	None
Centralizers Quantity	15.00	Job Pumped Through	Manifold
Centralizers Type	Bow	Top Connection Thread	LTC
Landing Collar Depth (ft)	1,505.16	Top Connection Size	9.625

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	Mud Density In (ppg)	8.40
Circulation Prior to Job	Yes	Mud Density Out (ppg)	8.40
Circulation Time (min)	30.00	Solids Present at End of Circulation	No
Circulation Rate (bpm)	8.00	Flare Prior to / during the Cement Job	No
Circulation Volume (bbls)	240.00	Gas Present	No
Lost Circulation Prior to Cement Job	No		

TEMPERATURE

Ambient Temperature (°F)	28.00	Slurry Cement Temperature (°F)	65.00
Mix Water Temperature (°F)	60.00		

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	Water	8.3300			0.00				20.0000
Tail Slurry	BJCem S100.3.XC	14.5000	1.3902	6.81	0.00	1,525.00	710	987.0000	175.6000
Displacement Final	Water	8.3300			0.00			0.0000	114.7000

FLUID TYPE	FLUID NAME	COMPONENT	CONCENTRATION	UOM
Tail Slurry	BJCem S100.3.XC	CEMENT, ASTM TYPE III	100.0000	PCT

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amt of Cement Returned / Reversed	39.00
Calculated Displacement Vol (bbls)	115.00	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	115.00	Amt of Spacer to Surface	20.00
Did Float Hold?	Yes	Pressure Left on Casing (psi)	0.00
Bump Plug	Yes	Amt Bled Back After Job	0.50
Bump Plug Pressure (psi)	1257.00	Total Volume Pumped (bbls)	312.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement Returns During Job	Yes	Lost Circulation During Cement Job	No

BJ Cementing Event Log

Surface - Cheyenne, WY - Gregory Black

SEQ	START DATE / TIME	EVENT	DENSITY (ppg)	PUMP RATE (bpm)	PUMP VOL (bbls)	PIPE PRESSURE (psi)	COMMENTS
1	01/31/2020 23:00	Callout					Crew called out with a RTS of 05:00
2	02/01/2020 03:00	Arrive on Location					Crew arrived on location.
3	02/01/2020 03:00	STEACS Briefing					Crew hold a pre rig up safety meeting and spotting equipment plan.
4	02/01/2020 03:05	Rig Up					Crew rigged up.
5	02/01/2020 05:00	Rig					Crew waited for rig to finish circulating and running casing.
6	02/01/2020 06:10	STEACS Briefing					Crew holds a pre job procedure and safety meeting.
7	02/01/2020 06:27	Prime Up	8.3400	3.00	2.00	50.00	Crew primes treating iron.
8	02/01/2020 06:30	Pressure Test					Pressure test.
9	02/01/2020 06:32	Pump Spacer	8.3400	4.50	20.00	170.00	Pumped water spacer with red dye.
10	02/01/2020 06:38	Pump Tail Cement	14.5000	5.30	175.00	300.00	Pumped 710 sks; Yield:1.39; GPS: 6.81.
11	02/01/2020 07:15	Drop Top Plug					Dropped top plug while pumper preps pump to washup on plug and displace.
12	02/01/2020 07:20	Pump Displacement	8.3400	5.50	20.00	100.00	Pumped displacement with good returns.
13	02/01/2020 07:25	Pump Displacement	8.3400	6.90	75.00	700.00	Pumped displacement with good returns.
14	02/01/2020 07:37	Spacer Back-to-Surface					20 bbls of cement to surface.
15	02/01/2020 07:37	Cement Back-to-Surface					39 bbls of cement to surface.
16	02/01/2020 07:37	Pump Displacement	8.3400	2.60	20.00	550.00	Slowed rate to land plug.
17	02/01/2020 07:41	Land Plug					Plug landed with 115 bbls pumped. Final circulation psi of 600 took to 1257 psi.
18	02/01/2020 07:41	Pressure Test					15 min csg test: start 1250 psi, end 1255 psi.
19	02/01/2020 07:57	Check Floats					Floats held with .5 bbls back.
20	02/01/2020 07:57	STEACS Briefing					Rig down safety meeting.
21	02/01/2020 08:05	Rig Down					Rigged down.
22	02/01/2020 08:30	STEACS Briefing					Return journey safety meeting.
23	02/01/2020 08:35	Leave Location					Crew left location.

Client: Great Western Operating Company, LLC

Well Name / API: POSTLE IC 09-222HN / 05-123-47376



Quote #: QUO-41604-M8R5L8

Plan #: ORD-24302-P7N8Y1

Execution #: EXC-24302-P7N8Y102



JobMaster Program Version 5.00C1

Job Number:

Customer: Great Western

Well Name: POSTLE IC 09-222HN

