



# Great Western Operating Company, LLC

POSTLE IC 09-022HC

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API # 05-123-47381

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## Surface

February 08, 2020

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Quote #: QUO-41616-D2H9Z0

Execution #: EXC-24364-B0Q2J302



# Great Western Operating Company, LLC

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

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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

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# BJ Cementing Treatment Report

SERVICE SUPERVISOR	Eric Dewit	RIG	Ikon 12
CLIENT FIELD REPRESENTATIVE	Brad	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	1,552.00	1,551.00		J-55	LTC
Open Hole	13.50	0.00	0.00	1,552.00	1,551.00	30.00		

## HARDWARE

Bottom Plug Used?	No	Tool Type	Float Collar
Top Plug Used?	Yes	Tool Depth (ft)	1,507.84
Top Plug Provided By	Non BJ	Max Casing Pressure - Rated (psi)	3000.00
Top Plug Size	9.630	Max Casing Pressure - Operated (psi)	1500.00
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)	1,507.84	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
Lost Circulation Prior to Cement Job	No	Flare Prior to / during the Cement Job	No
		Gas Present	No

## TEMPERATURE

Ambient Temperature (°F)	28.00	Slurry Cement Temperature (°F)	51.00
Mix Water Temperature (°F)	50.00		

## FLUID DETAILS

FLUID TYPE	FLUID NAME	DENSITY (ppg)	YIELD (Cu Ft/sk)	H <sub>2</sub> 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	38.00
Calculated Displacement Vol (bbls)	115.50	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	115.50	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)	1230.00	Total Volume Pumped (bbls)	312.50
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 - Eric Dewit

SEQ	START DATE / TIME	EVENT	DENSITY (ppg)	PUMP RATE (bpm)	PUMP VOL (bbls)	PIPE PRESSURE (psi)	COMMENTS
1	02/07/2020 19:00	Callout					Customer calls with an OL time of 1:00 on 2/8/20 Crew is already on location and rigged up
2	02/08/2020 01:00	Requested Time					Rig running casing
3	02/08/2020 01:00	Rig					Waiting on rig to finish running casing
4	02/08/2020 02:55	STEACS Briefing					Pre-job safety meeting with BJ crew, Rig crew, and Company man
5	02/08/2020 03:16	Other (See comment)	8.3400	2.80	2.00	60.00	Load lines with 2 bbls of fresh water
6	02/08/2020 03:43	Pressure Test	8.3400	0.00	0.00	2660.00	One of the pumps was not holding pressure, had to isolate that pump and only pump the job with a single pump
7	02/08/2020 03:45	Pump Spacer	8.3400	4.10	20.00	130.00	Pump 20 bbls of fresh water + Dye ahead
8	02/08/2020 03:53	Pumping Cement	14.5000	4.10	175.00	481.00	Pump 710 sks of cement @14.5 ppg
9	02/08/2020 04:36	Drop Top Plug					Shut down and drop plug
10	02/08/2020 04:39	Pump Displacement	8.3400	8.00	0.00	405.00	Send plug start fresh water displacement
11	02/08/2020 04:48	Spacer Back-to-Surface	8.3400	8.00	57.00	702.00	
12	02/08/2020 04:51	Cement Back-to-Surface	8.3400	8.00	77.00	750.00	38 bbls of cement to surface
13	02/08/2020 04:53	Pump Displacement	8.3400	2.80	95.00	524.00	Drop rate to land the plug
14	02/08/2020 05:01	Land Plug	8.3400	2.80	115.50	1226.00	15 min csg test: start 1226 psi, end 1234 psi.
15	02/08/2020 05:17	Check Floats	8.3400	0.00	0.00	0.00	Floats held (.5 bbls back)
16	02/08/2020 05:19	STEACS Briefing					Pre-rig down safety meeting
17	02/08/2020 05:26	Rig Down					Rig everything down
18	02/08/2020 06:30	Leave Location					

### Great Western - Postle 09-022HC - Surface

