



Great Western Operating Company, LLC

BRANT LE 08-199HC

API # 05-001-10332

Surface

December 09, 2019

Quote #: QUO-39496-B4H4C5

Execution #: EXC-23048-P8C8Q002



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	JW Cooper	COUNTY	ADAMS
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	1,771.00	1,771.00		J-55	LTC
Open Hole	13.50	0.00	0.00	1,771.00	1,771.00	30.00		

HARDWARE

Bottom Plug Used?	No	Tool Type	Float Collar
Top Plug Used?	Yes	Tool Depth (ft)	1,726.23
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	17.00	Job Pumped Through	Manifold
Centralizers Type	Bow	Top Connection Thread	LTC
Landing Collar Depth (ft)	1,726.23	Top Connection Size	9.625

CIRCULATION PRIOR TO JOB

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

TEMPERATURE

Ambient Temperature (°F)	40.00	Slurry Cement Temperature (°F)	60.00
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	1,725.00	800	1113.0000	198.1000
Displacement Final	Water	8.3300			0.00			0.0000	130.1000

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	42.00
Calculated Displacement Vol (bbls)	132.00	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	132.00	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)	1522.00	Total Volume Pumped (bbls)	342.00
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	12/08/2019 21:30	Callout					Crew called out with a RTS of 03:30
2	12/09/2019 02:00	Arrive on Location					Crew arrived on location.
3	12/09/2019 02:00	STEACS Briefing					Crew holds a rig up safety meeting.
4	12/09/2019 02:05	Rig Up					Crew rigs up.
5	12/09/2019 03:00	Rig					Crew waiting on rig to finish running casing and circulating.
6	12/09/2019 05:00	STEACS Briefing					Crew hold a job procedure and safety meeting with rig crew and company man.
7	12/09/2019 05:15	Prime Up	8.3400	2.50	2.00	11.00	Crew primes lines for pressure test.
8	12/09/2019 05:16	Pressure Test	8.3400	0.00	0.00	0.00	Crew performs pressure test.
9	12/09/2019 05:18	Pump Spacer	8.3400	5.50	20.00	72.00	Crew pumps water spacer with blue dye.
10	12/09/2019 05:25	Pump Tail Cement	14.5000	5.50	198.00	90.00	Crew pumps 800 SKS; Yield:1.62; GPS:6.81.
11	12/09/2019 06:20	Drop Top Plug	0.0000	0.00	0.00	0.00	Dropped top plug with company man verification.
12	12/09/2019 06:24	Pump Displacement	8.3400	5.80	20.00	64.00	Crew washes on the plug and displaces (Good returns).
13	12/09/2019 06:30	Pump Displacement	8.3400	7.80	92.00	500.00	Crew displaces with good returns.
14	12/09/2019 06:30	Spacer Back-to-Surface	0.0000	0.00	0.00	0.00	Spacer to surface @ 70 bbls away.20 bbls back.
15	12/09/2019 06:30	Cement Back-to-Surface	0.0000	0.00	0.00	0.00	Cement to surface @ 90 bbls away. 42 bbls back.
16	12/09/2019 06:30	Pump Displacement	8.3400	2.80	20.00	550.00	Slowed rate to land plug.
17	12/09/2019 06:54	Land Plug	0.0000	0.00	0.00	0.00	Plug landed total volume pumped 132 bbls. Final circulation pressure was 750 took to 1522 psi.
18	12/09/2019 06:54	Pressure Test	0.0000	0.00	0.00	1522.00	30 min csg test - start 1522 psi end 1550 psi.
19	12/09/2019 07:24	Check Floats					Floats held .5 bbls back.
20	12/09/2019 07:25	STEACS Briefing					Rig down safety meeting.
21	12/09/2019 07:27	Rig Down					Crew rigs down.
22	12/09/2019 07:35	STEACS Briefing					Return journey management.
23	12/09/2019 07:35	Leave Location					Crew leaves location.

Client Name: Great Western Operating Company, LLC

Well Name / API : BRANT LE #08-199HC / 05-001-10332

Well MD:1,756.00

Quote #: QUO-39496-B4H4C5

Plan #: ORD-23048-P8C8Q0

Execution #: EXC-23048-P8C8Q002





JobMaster Program Version 4.02C1

Job Number:

Customer: Great Western

Well Name: BRANT LE 08-199HC

