



Great Western Operating Company, LLC

SURFACE POST JOB REPORT

JOB PURPOSE: PRIMARY

Brant LE 08-359HN 05-001-10327
S:11 T:1S R:67W Adams CO

CallSheet #: 75258
Proposal #: 50415



Attention: Great Western Operating Company LLC,
Great Western Operating Company, LLC
1001 17TH STREET, SUITE 2000 | DENVER, CO 80202

Dear Great Western Operating Company LLC,

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

Sincerely,

Jason Creel

Field Engineer | (307) 256-0306 | Jason.creel@americacementing.com

Field Office 1716 E Allison Rd, Cheyenne, WY 82007
Phone: (307) 638-5585

Table of Contents

1 Job Details & Summary	3
1.1 Geometry	3
1.2 Equipment / People	3
1.3 Timing	3
1.4 Casing Equipment	3
• 1.4.1 Casing Equipment - Centralizer Depths	3
1.5 General Job Information	3
1.6 Job Details	4
1.7 Job Details (cont.)	4
1.8 Circulation	4
1.9 Job Execution Information	4
1.10 Job Fluid Details	4
2 Job Logs	5
3 Water Analysis	6
4 Pump Diagrams	7

1 Job Details & Summary

1.1 Geometry

Type	Function	OD (in)	ID (in)	Weight (lb/ft)	Top (ft)	Bottom (ft)	Excess (%)
Open Hole	Outer	n/a	13.5	n/a	0	2016	30
Casing	Inner	9.625	8.921	36	0	2016	0

1.2 Equipment / People

Unit Type	Unit
Cement Pump	CPF-136
Light Duty Trailers	FIF-161
Field Bin	CTF-013
Pneumatic Trailer	FUF-308

1.3 Timing

Event	Date/Time
Call Out	10/21/2020 06:00
Depart Facility	10/21/2020 07:00
On Location	10/21/2020 09:30
Rig Up Iron	10/21/2020 10:00
Job Started	10/21/2020 13:00
Job Completed	10/21/2020 15:07
Rig Down Iron	10/21/2020 15:30
Depart Location	10/21/2020 16:00

1.4 Casing Equipment

Type	Description	Qty	MD	TVD
Bow Spring Centralizers	9.625"	19		
Landing/Float Collar			1972	1972
Float Shoe			2016	2016

- 1.4.1 Casing Equipment - Centralizer Depths

Surface Centralizers, 41.72, 83.42, 125.52, 251.84, 377.7, 503.99, 628.89, 755.01, 881.33, 1007.24, 1133.28, 1257.52, 1383.44, 1509.31, 1635.7, 1761.64, 1887.95, 1930.11, 1999.8

1.5 General Job Information

Metrics	Value
Well Fluid Density	8.4 lb/gal
Well Fluid Type	Water
Rig Circulation Vol	240 bbls
Rig Circulation Time	30 hours
Calculated Displacement	152.3 bbls
Actual Displacement	152 bbls
Total Spacer to Surface	20 bbls
Total CMT to Surface	32 bbls
Well Topped Out	No
Top Out Volume	0 bbls

1.6 Job Details

Metrics	Value
Flare Prior to Job	No
Flare During Job	No
Flare at End of Job	No
Well Full Prior to Job	Yes
Well Fluid Density Into Well	8.4 lb/gal
Well Fluid Density Out of Well	8.4 lb/gal

1.7 Job Details (cont.)

Metrics	Value
BHCT	86 °F
BHST	110 °F
Ambient Temperature	76 °F

1.8 Circulation

Lost Circulation Experienced
No

1.9 Job Execution Information

Job	Fluid	Product	Function	Density (lb/gal)	Yield (ft ³ /sk)	Water Rq. (gal/sk)	Water Rq. (gal/bbl)	Volume (sk)	Volume (bbl)	Volume (cu.ft)	Top (ft)
1	1	Fresh Water	Spacer	8.34			42.00		20.00		0
1	2	ACem S100.3.XC	Primary	14.50	1.39	6.81		930.00	230.29	1292.70	0
1	3	Fresh Water	Displacement Final	8.34			42.00		152.00		0

1.10 Job Fluid Details

Job	Fluid	Type	Fluid	Product	Function	Conc.	Uom
1	2	Primary	ACem S100.3.XC	ASTM TYPE III	Cement	100.00	%

2 Job Logs

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Called out to location	10/21/2020	06:00					Crew called out to location
2	On location	10/21/2020	10:00					Crew on location
3	Rig up	10/21/2020	10:10					Rig up pumping lines
4	Safety meeting	10/21/2020	12:30					Safety meeting with company man and rig crew
5	Pressure test	10/21/2020	13:00	8.34	0.2	0.2	3000	Pressure test lines to 3000 psi
6	Spacer	10/21/2020	13:02	8.34	5.6	20	120	Pump 20bbl of water w/blue dye as spacer
7	Slurry	10/21/2020	13:08	14.5	5.6	230.2	120	Pump cement slurry @ 14.5 # / 930 sk / 230.2 bbl / yield 1.39 / mix water 6.81 / wet and dry samples taken, and weight verified
8	Slurry	10/21/2020	13:12	14.5	4		120	Slow down to keep density to 4 bpm
9	Slurry	10/21/2020	13:15	14.5	5.6		160	Back to 5.6 bpm, 160 psi
10	Slurry	10/21/2020	13:25	14.5	4		110	Had to slow down to keep density again
11	Slurry	10/21/2020	13:54	14.5				Stop to batch up again due to lose of density, having trouble with field bin
12	Slurry	10/21/2020	13:56	14.5	4		110	Back to pumping at 4 bpm, 110 psi
13	Drop plug	10/21/2020	14:05					Release pre-loaded plug from container, and wash tubs on top of plug
14	Displacement	10/21/2020	14:09	8.34	6		70	Start pumping displacement, 6 bpm 70 psi
15	Displacement	10/21/2020	14:18	8.34	6	50	170	50 bbl on to displacement, 170 psi 6 bpm
16	Displacement	10/21/2020	14:20	8.34	8	60	300	60 bbl on displacement, bring rate up to 8 bpm, 300 psi
17	Displacement	10/21/2020	14:24	8.34	8	100	600	100 bbl on displacement, 600 psi, 8 bpm
18	Displacement	10/21/2020	14:28	8.34	8	120	700	120 bbl on displacement, have cement back to surface, 700 psi, 8 bpm
19	Displacement	10/21/2020	14:30	8.34	3	130	630	130 bbl on displacement, slow down to 3 bpm to land plug, 630 psi, 3 bpm
20	Land plug	10/21/2020	14:36			152	782	Land plug from 782 psi to 1288 psi, hold for a minute
21	Pressure test	10/21/2020	14:37	8.34			1523	Bring up pressure to 1500 psi to pressure test casing for 30 min
22	Check floats	10/21/2020	15:07	8.34				After 30 min, pressure test, is holding, check floats, 1 bbl back
23	Wash sellar	10/21/2020	15:10	8.34				Wash sellar with 10 bbl water

3 Water Analysis

Metrics	Value	Recommended
Water Source	None	
Temperature	60 °F	50-80 °F
pH Level	6	5.5-8.5
Chlorides	500 mg/L	0-3000 mg/L
Total Alkalinity	200	0-1000
Total Hardness	100 mg/L	0-500 mg/L
Carbonates	20 mg/L	0-100 mg/L
Sulfates	200 mg/L	0-1500 mg/L
Potassium	300 mg/L	0-3000 mg/L
Iron	20 mg/L	0-300 mg/L

4 Pump Diagrams

Well Name: BRANT LE 08-359HN

