



Great Western Operating Company, LLC

SURFACE POST JOB REPORT

JOB PURPOSE: PRIMARY

Brant LE 08-319HN 05-001-10341
S:11 T:1S R:67W Adams CO

CallSheet #: 75233
Proposal #: 50414



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@americancementing.com

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

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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	2007	30
Casing	Inner	9.625	8.921	36	0	2007	0

1.2 Equipment / People

Unit Type	Unit
Cement Pump	CPF-074
Field Bin	CTF-014
Light Duty Trailers	FIF-161
Pneumatic Trailer	FUF-308

1.3 Timing

Event	Date/Time
Call Out	10/20/2020 06:00
Depart Facility	10/20/2020 07:00
On Location	10/20/2020 10:00
Rig Up Iron	10/20/2020 10:20
Job Started	10/20/2020 15:23
Job Completed	10/20/2020 17:19
Rig Down Iron	10/20/2020 17:30
Depart Location	10/20/2020 18:00

1.4 Casing Equipment

Type	Description	Qty	MD	TVD
Bow Spring Centralizers	9.625"	19		
Landing/Float Collar			1963	1963
Float Shoe			2007	2007

1.4.1 Casing Equipment - Centralizer Depths

Surface Centralizers, 41.15, 82.7, 124.26, 248.54, 373.2, 497.87, 623.61, 748.26, 874.59, 1000.88, 1127.19, 1253.49, 1379.43, 1505.15, 1630.4, 1755.01, 1879.63, 1921.18, 1990.8

1.5 General Job Information

Metrics	Value
Well Fluid Density	8.4 lb/gal
Well Fluid Type	Water
Rig Circulation Vol	285 bbls
Rig Circulation Time	30 hours
Calculated Displacement	151.8 bbls
Actual Displacement	151.8 bbls
Total Spacer to Surface	20 bbls
Total CMT to Surface	27 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	51 °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 (sks)	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		151.80		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	Callout	10/20/2020	06:00					Crew called out, requested on location at 12:00
2	Safety Meeting	10/20/2020	06:45					Talked with the American Cementing Crew about the hazards of driving to location.
3	Depart For Location	10/20/2020	07:00					Crew departed for location
4	Arrive On Location	10/20/2020	10:00					Crew arrived on location and talked about the hazards of spotting in equipment.
5	Safety Meeting	10/20/2020	10:15					Talked with crew about the hazards of rigging up water bulk and iron lines.
6	Rig Up Iron	10/20/2020	10:20					Crew rigged up
7	Waiting	10/20/2020	11:00					Waited for rig to finish Running casing and to circulating the well.
8	Safety Meeting	10/20/2020	15:00					Talked with American Cementing Crew and rig Crews about the hazards of pumping the job.
9	Fill Lines	10/20/2020	15:23	8.33	5.2	5	150	Pump 5 bbls water ahead to fill lines for the pressure test.
10	Shutdown	10/20/2020	15:25	8.33				Shutdown to line out valves for pressure test
11	Pressure Test Lines	10/20/2020	15:26	8.33			3029	Pressure Test AC lines to 2500 PSI.
12	Pump Spacer	10/20/2020	15:29	8.33	5.7	20	166	Pump 20 bbls water spacer with blue dye
13	Pump Cement	10/20/2020	15:34	14.5	5.7	0	172	Mix and Pump 930 sacks of ACem Cement at 14.5 lb/gal, 1.39 cuft/sk and 6.81 gals/sk from Pods 1, 2 and 3 on CTF-014.
14	Pump Cement	10/20/2020	15:49	14.5	5.7	87	195	Switch to pod 2 on CTF-014 with 87 bbls away.
15	Pump Cement	10/20/2020	15:59	14.5	5.7	147	190	Switch to pod 3 on CTF-014 with 147 bbls away.
16	Slow Pump Rate	10/20/2020	16:11	14.5	4.2	220	106	Slow last 10 bbls of cement to maintain density.
17	Shutdown	10/20/2020	16:16	14.5	0	230	0	Shutdown to drop top plug and line out valves for displacement.
18	Pump Displacement	10/20/2020	16:20	8.33	6.7	0	76	Pump 152.4 bbls water displacement with Biocide and O2 scavenger.
19	Pump Displacement	10/20/2020	16:26	8.33	6.7	50	216	50bbls away.
20	Pump Displacement	10/20/2020	16:33	8.33	6.7	92	500	Blue dye to surface
21	Pump Displacement	10/20/2020	16:38	8.33	6.7	124	791	Cement to Surface
22	Slow Pump Rate	10/20/2020	16:39	8.33	2.8	132	799	Slow rate to land the plug.
23	Land Plug	10/20/2020	16:47	8.33	0	151.8	1512	Land plug, bring pressure up to 1512 psi for 30 min casing test. FCP was 870 psi
24	Test Casing	10/20/2020	16:57	8.33	0	151.8	1495	10 min into casing test.
25	Test Casing	10/20/2020	17:07	8.33	0	151.8	1491	20 min into casing test.
26	Test Casing	10/20/2020	17:17	8.33	0	151.8	1500	30 min into casing test.
27	Check Floats	10/20/2020	17:19					Floats held with 1 bbl back
28	Safety Meeting	10/20/2020	17:25					Talked with AC Crew about the hazards of rigging down.
29	Rig Down Iron	10/20/2020	17:30					Rig Down



Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
30	Safety Meeting	10/20/2020	17:55					Talked with AC Crew about the hazards of driving back to the yard.
31	Depart Location	10/20/2020	18:00					Crew Departed Location.

3 Water Analysis

Metrics	Value	Recommended
Water Source	None	
Temperature	55 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	120	0-1000
Total Hardness	25 mg/L	0-500 mg/L
Carbonates	0 mg/L	0-100 mg/L
Sulfates	<200 mg/L	0-1500 mg/L
Potassium	0 mg/L	0-3000 mg/L
Iron	0 mg/L	0-300 mg/L

4 Pump Diagrams

