



Great Western Operating Company, LLC

SURFACE POST JOB REPORT

Marcus LD 11-371HN 05-123-44040
S:34 T:1N R:67W Weld CO

CallSheet #: 628
Proposal #: 13045



SURFACE Post Job Report

Attention: Mr. Matt Mount | (303) 398-0373 | mmount@gwogco.com
Great Western Operating Company, LLC
1801 Broadway, Suite 500 | Denver, CO 80202

Dear Mr. Mount,

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,

Zen Keith

Technical Specialist-II | (307) 757-7178 | Zen.Keith@bjservices.com

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

Sales Office 475 17th St. Suite 460 Denver Co., 80202
Phone: (303) 296-1158



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1 Job Details & Summary

1.1 Geometry

Type	Function	OD (in)	ID (in)	Weight (lb/ft)	Thread	Top (ft)	Bottom (ft)	Excess (%)
Open Hole	Outer	n/a	13.5	n/a	n/a	0	1700	25
Casing	Inner	9.625	8.921	36	n/a	0	1700	0

1.2 Equipment / People

Unit Type	Unit	Employee #1	Mileage
Light Duty Pickups	3	Dewit, Eric	168
Cement Chemical	402		168
Bulk Trailer	508	Mellon, Zacahria	168
Bulk Trailer	509	Scott, Matthew	168

1.3 Timing

Event	Date/Time
Call Out	3/13/2017 19:00
Depart Facility	3/13/2017 18:00
On Location	3/13/2017 20:00
Rig Up Iron	3/14/2016 00:10
Job Started	3/14/2017 02:54
Job Completed	3/14/2017 04:25
Rig Down Iron	3/14/2017 04:50
Depart Location	3/14/2017 05:50

1.4 General Job Information

Metrics	Value
Well Fluid Density	8.4 lb/gal
Well Fluid Type	Water
Rig Circulation Vol	150 bbls
Rig Circulation Time	0.5 hours
Calculated Displacement	128 bbls
Actual Displacement	128 bbls
Total Spacer to Surface	20 bbls
Total CMT to Surface	25 bbls
Well Topped Out	No
Top Out Volume	0 bbls

1.5 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

1.6 Job Details (cont.)

Metrics	Value
BHCT	88 °F
BHST	109 °F

1.7 Circulation

Lost Circulation Experienced
No



1.8 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)	Top (ft)
1	1	Water	Flush	8.33			42.00		20.00	0
1	2	ALTCem S100-22	Primary	14.50	1.39	6.76		761.00	188.17	0
1	3	Water	DisplacementFinal	8.33			42.00		129.00	0

1.9 Job Fluid Details

Job	Fluid	Type	Fluid	Product	Function	Conc.	Uom	Start (gal)	End (gal)	Used (gal)
1	2	Primary	ALTCem S100-22	AC3-10	Cement	100.00	%			
1	2	Primary	ALTCem S100-22	ADF-20	Defoamer	0.03	gal/sk	5	0	5

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	Leave yard	3/13/2017	18:00					Bulk trucks leave yard, pump and cementer are already on location
2	Customer call out	3/13/2017	19:00					Customer calls with RTS of 01:00
3	Arrive on location	3/13/2017	20:00					Bulk trucks arrive on location, rig still drilling
4	Spot trucks	3/14/2017	00:00					Spot trucks, rig is done drilling and pulling pipe
5	Safety meeting	3/14/2017	00:10					Pre-rig up safety meeting
6	Rig up	3/14/2017	00:15					Rig high pressure line, bulk lines, and water line
7	Waiting	3/14/2017	00:45					Waiting on rig to finish running in the hole with casing
8	Safety meeting	3/14/2017	02:35					Pre-job safety meeting with the rig crew, and company man
9	Rig up	3/14/2017	02:42					Rig up head
10	Load lines	3/14/2017	02:54	8.34	2	2	50	Load pumps and lines
11	Pressure test	3/14/2017	02:56	8.34	0	0	3800	Pressure test pumps and lines
12	Pump spacer	3/14/2017	03:04	8.34	5	20	207	Fresh water + Dye spacer
13	Pump Cement	3/14/2017	03:09	14.5	6.3	188	282	Batch, weigh, and pump 761 sacks of cement @14.5 ppg
14	Shut down	3/14/2017	03:44	14.5				Shut down
15	Drop plug	3/14/2017	03:46					Drop top plug
16	Displacement	3/14/2017	03:48	8.34	4.5	0	122	Send plug start Fresh Water + Biocide displacement
17	Displacement	3/14/2017	03:56	8.34	7.9	50	489	Fresh Water + Biocide displacement
18	Spacer Back	3/14/2017	04:00	8.34	7.9	84	784	Start getting spacer back
19	Cement back	3/14/2017	04:03	8.34	7.9	103	901	Good cement to surface
20	Drop rate	3/14/2017	04:05	8.34	2.2	120	701	Drop rate
21	Land plug	3/14/2017	04:08	8.34	2.4	128	739	Land plug @739 psi, bumped it up to 1321
22	Casing test	3/14/2017	04:09	8.34				Start casing test
23	Check floats	3/14/2017	04:24	8.34				Check floats, ending pressre on casing test 2407 psi (floats held)
24	Safety meeting	3/14/2017	04:50					Pre-rig down safety meeting
25	Rig down	3/14/2017	04:55					Rig everything down
26	Leave location	3/14/2017	05:50					Leave location, headed back to the yard

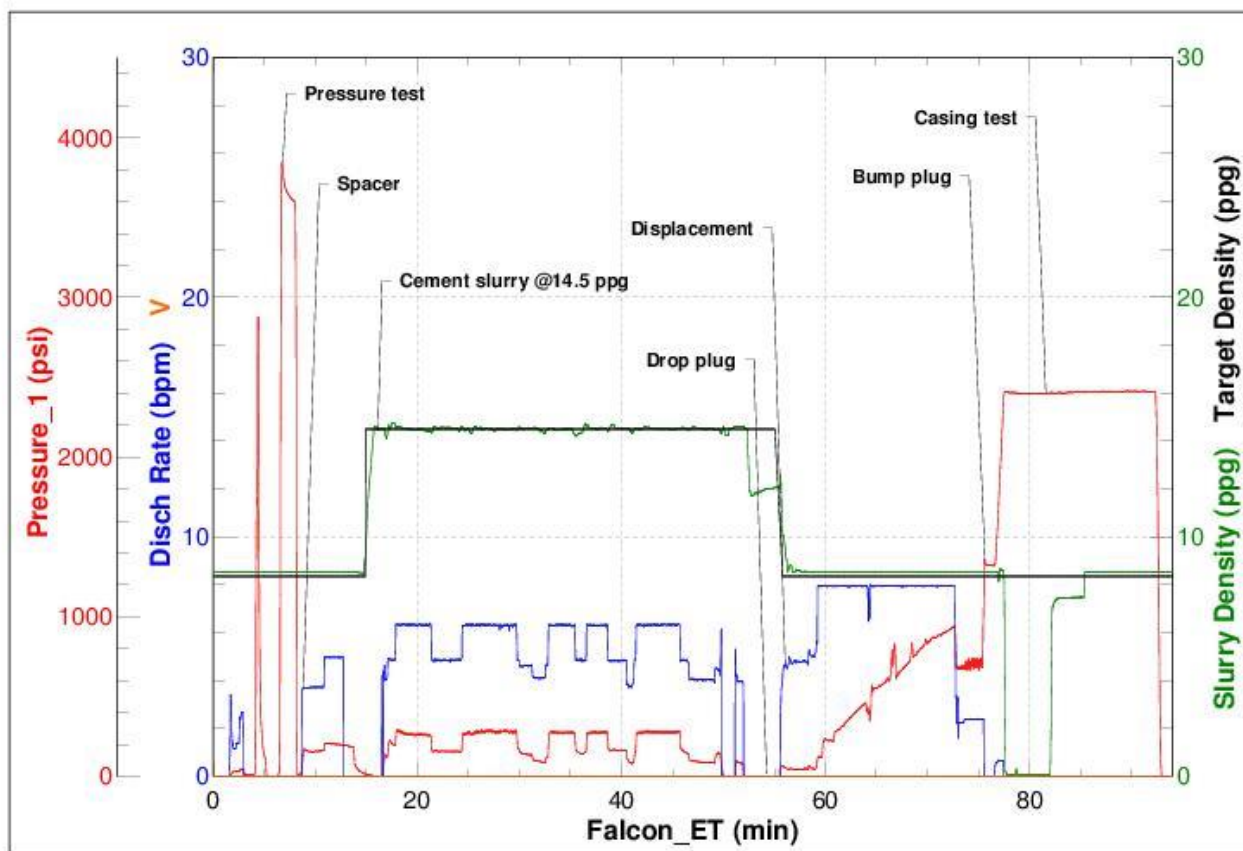


3 Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	50 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	0	0-1000
Total Hardness	0 mg/L	0-500 mg/L
Carbonates	0 mg/L	0-100 mg/L
Sulfates	0 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

Job Number: 628
Customer: Great Western
Well Name: Marcus LD 11-371HN



Job Start: Tuesday, March 14, 2017