



Great Western Operating Company, LLC

SURFACE POST JOB REPORT

Marcus LD 11-367HN 05-123-44037
S:34 T:1N R:67W Weld CO

3/18/2017
CallSheet #: 642
Proposal #: 13050



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
3/18/2017

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



Table of Contents

1 Job Details & Summary 3

 1.1 Geometry 3

 1.2 Equipment / People 3

 1.3 Timing 3

 1.4 General Job Information 3

 1.5 Job Details 3

 1.6 Job Details (cont.) 3

 1.7 Circulation 3

 1.8 Job Execution Information 4

 1.9 Job Fluid Details 4

2 Job Logs 5

3 Water Analysis 6

4 Pump Diagrams 6

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
Cement Chemical	402		180
Bulk Trailer	504	Creel, Jason	180
Bulk Trailer	506	Nepgen, AJ	180
Cement Pump	103	Montoya, Hector	180
Light Duty Pickups	8	Hyde, Andrew	180

1.3 Timing

Event	Date/Time
Call Out	3/17/2017 19:00
Depart Facility	3/17/2017 20:00
On Location	3/17/2017 21:30
Rig Up Iron	3/18/2017 01:30
Job Started	3/18/2017 04:14
Job Completed	3/18/2017 05:49
Rig Down Iron	3/18/2017 06:00
Depart Location	3/18/2017 07:00

1.4 General Job Information

Metrics	Value
Well Fluid Density	9 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	100 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	28 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	9 lb/gal
Well Fluid Density Out of Well	9 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
1	2	Primary	ALTCem S100-22	AC3-10	Cement	100.00	%
1	2	Primary	ALTCem S100-22	ADF-20	Defoamer	0.03	gal/sk

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	Call Out	3/17/2017	19:00					BJ crew got called out and requested on location at 1:00
2	Depart Yard	3/17/2017	20:00					BJ crew left yard
3	Arrive On Location	3/17/2017	21:30					BJ crew arrived on location
4	Safety Meeting	3/18/2017	01:15					BJ crew talked about the hazards of spotting in equipment and rigging up
5	Rig Up	3/18/2017	01:30					Rig Up
6	Waiting	3/18/2017	02:30					Wait for casing crew to finish running casing
7	Safety Meeting	3/18/2017	03:45					BJ and rig crew talked about the hazards of pumping the job
8	Fill Lines	3/18/2017	04:14	8.33	2	3	60	Pump 3 bbls to fill lines
9	Pressure Test	3/18/2017	04:18					Pressure test pumps and lines to 3000 psi
10	Pump Spacer	3/18/2017	04:21	8.33	2	20	70	Pump 20 bbls of dye water spacer
11	Pump Cement	3/18/2017	04:28	14.5	6	188	150	Mix up and pump 761 sks of ALTCem S100-22 primary cement at 14.5 ppg, yield 1.39, 6.76 gal/sk
12	Shutdown	3/18/2017	05:08					Shutdown to line out manifold to drop top plug
13	Drop Top Plug	3/18/2017	05:09					Company man witness plug leave manifold
14	Pump Displacement	3/18/2017	05:10	8.33	6	118	300	Pump 128 bbls of displacement, biocide
15	Slow Rate	3/18/2017	05:30	8.33	2	10	700	Slow rate the last 10 bbls to 2 bpm
16	Bump Plug	3/18/2017	05:32					Bump plug at 750 psi, took it up to 1410 psi, hold for 1 min
17	Casing Test	3/18/2017	05:33					Casing test 2400 psi for 10 min
18	Check Floats	3/18/2017	05:49					got .5 bbls back to the truck
19	Safety Meeting	3/18/2017	05:55					BJ crew talked about the hazards of rigging down
20	Rig down	3/18/2017	06:00					Rig down
21	Depart Location	3/18/2017	07:00					Depart location
22	Other	3/18/2017	07:01					Got 28 bbls cement back to surface

3 Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	60 °F	50-80 °F
pH Level	6	5.5-8.5
Chlorides	56 mg/L	0-3000 mg/L
Total Alkalinity	120	0-1000
Total Hardness	>250 mg/L	0-500 mg/L
Carbonates	140 mg/L	0-100 mg/L
Sulfates	<200 mg/L	0-1500 mg/L
Potassium	250 mg/L	0-3000 mg/L
Iron	6 mg/L	0-300 mg/L

4 Pump Diagrams

