



Great Western Operating Company, LLC

SURFACE POST JOB REPORT

Marcus LD 11-369HN 05-123-44041
S:34 T:1N R:67W Weld CO

CallSheet #: 634
Proposal #: 13047



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

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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
Bulk Trailer	508	Casciato, Luke	200
Bulk Trailer	509	Mathews, Travis	200
Cement Pump	105	Cook, John	
Light Duty Pickups	5	Boyd, Brian	

1.3 Timing

Event	Date/Time
Call Out	3/15/2017 07:00
Depart Facility	3/15/2017 09:00
On Location	3/15/2017 11:30
Rig Up Iron	3/15/2017 11:40
Job Started	3/15/2017 15:11
Job Completed	3/15/2017 16:55
Rig Down Iron	3/15/2017 17:05
Depart Location	3/15/2017 19:00

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	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	10	0	10



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	3/15/2017	07:30					Customer requested crew to be on location at 11:30
2		Depart Shop	3/15/2017	09:00					Crew departs shop
3		Arrive On Location	3/15/2017	11:30					Crews on location and meet with customer to get numbers
4		Safety Meeting	3/15/2017	11:35					Safety meeting with BJ crew over spotting equipment and rigging up
5		Rig Up Iron	3/15/2017	11:40					Rig up iron and hoses
6		Waiting	3/15/2017	12:00					Waiting on rig to run casing
7		Rig Lands Casing	3/15/2017	14:30					Rig lands casing and recirculates
8		Safety Meeting	3/15/2017	14:45					Safety meeting with BJ crew, company man and rig crew over job and hazards
9	1	Fill Lines	3/15/2017	15:11	8.33	3	2	30	Fill pumps and lines
10	2	Pressure Test	3/15/2017	15:15	8.33	0.5	0.5	3500	Pressure test iron and head to 3500 PSI
11	3	Pump Spacer	3/15/2017	15:17	8.33	2	20	150	Pump 20 bbls of spacer with red dye
12	4	Pump Cement	3/15/2017	15:29	14.5	6	188	300	Pump 188 bbls of 14.5 PPG primary cement (761 Sks, 1.39 Yield, 6.76 Gals/sks, 14.5 PPG)
13		Shut Down	3/15/2017	16:00					Shut down pump
14		Drop Plug	3/15/2017	16:12					Drop plug and have company verify plug goes down hole
15	5	Pump Displacement	3/15/2017	16:13	8.33	7	128	125	Pump 128 bbls of fresh water displacement
16	6	Cement To Surface	3/15/2017	16:31	14.5	7		600	At 120 bbls away got 28 bbls of cement to surface
17	7	Slow Rate	3/15/2017	16:32	8.33	2.5	120	950	At 120 bbls away slow rate to 2.5 bpm
18	8	Land Plug	3/15/2017	16:37			128	1400	Landed plug at 128 bbls FCP-950PSI bump to 1400 PSI
19	9	Casing Test	3/15/2017	16:38	8.33	0.5		2400	Perform 15 min casing test pressure up to 2400 PSI
20		Check Floats	3/15/2017	16:55					Check floats. 2 bbls back
21		Safety Meeting	3/15/2017	17:00					Safety meeting with BJ crew over rigging down iron
22		Rig Down Iron	3/15/2017	17:05					Rig down equipment and iron
23		Depart Location	3/15/2017	19:00					Crew departs location

3 Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	68 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	80	0-1000
Total Hardness	70 mg/L	0-500 mg/L
Carbonates	140 mg/L	0-100 mg/L
Sulfates	<200 mg/L	0-1500 mg/L
Potassium	450 mg/L	0-3000 mg/L
Iron	0 mg/L	0-300 mg/L

4 Pump Diagrams

