



Great Western Operating Company, LLC

SURFACE POST JOB REPORT

Raindance FC 26-369HC 05-123-45007
S:30 T:6N R:67W Weld CO

CallSheet #: 1270
Proposal #: 13892



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,

Jason Creel

Field Engineer | (307) 256-0306 | Jason.Creel@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	1558	25
Casing	Inner	9.625	8.921	36	n/a	0	1558	0

1.2 Equipment / People

Unit Type	Unit	Employee #1	Mileage
Bulk Trailer	E435	Snyder, Albert	150
Bulk Trailer	E696	Borst, David	150
Cement Pump	102	Groneman, Josh	150
Light Duty Pickups	7	Casciato, Luke	150

1.3 Timing

Event	Date/Time
Call Out	8/30/2017 19:00
Depart Facility	8/30/2017 19:30
On Location	8/30/2017 21:00
Rig Up Iron	8/30/2017 23:00
Job Started	8/31/2017 02:10
Job Completed	8/31/2017 03:36
Rig Down Iron	8/31/2017 04:00
Depart Location	8/31/2017 05:00

1.4 General Job Information

Metrics	Value
Well Fluid Density	8.4 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	150 bbls
Rig Circulation Time	0.25 hours
Calculated Displacement	117 bbls
Actual Displacement	117 bbls
Total Spacer to Surface	20 bbls
Total CMT to Surface	32 bbls
Well Topped Out	No

1.5 Well Fluid Details

Metrics	Value
Plastic Viscosity	1
Yield Point	2
10 sec. SGS	1
10 min. SGS	2
30 min. SGS	3
Filtrate	0
Flow Line Temp.	85

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	88 °F
BHST	109 °F



1.8 Circulation

Lost Circulation Experienced
No

Circulation Details:

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)
1	1	Water	Flush	8.33			42.00		20.00
1	2	S100-22	Primary	14.50	1.39	6.76		687.00	169.87
1	3	Water	DisplacementFinal	8.33			42.00		116.00

1.10 Job Fluid Details

Job	Fluid	Type	Fluid	Product	Function	Conc.	Uom	Start (gal)	End (gal)	Used (gal)
1	2	Primary	S100-22	AC3-10	Cement	100.00	%			
1	2	Primary	S100-22	ADF-20	Defoamer	0.03	gal/sk	21	11	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	CALLOUT	8/30/2017	19:00					CREW WAS CALLED OUT TO GREAT WESTERN RAINDANCE FC 26-369HC SURFACE.
2	STEACS	8/30/2017	19:30					CREW CONDUCTED JOURNEY MANAGEMENT.
3	DEPART CAMP	8/30/2017	20:00					CREW DEPARTS CAMP.
4	ARRIVE ON LOCATION	8/30/2017	21:00					CREW ARRIVES ON LOCATION.
5	SPOT EQUIPMENT	8/30/2017	23:00					CREW SPOTS ALL EQUIPMENT.
6	STEACS	8/30/2017	23:10					CREW CONDUCTED STEACS PRIOR TO RIG UP.
7	RIG UP	8/30/2017	23:15					CREW RIGGED UP ALL IRON AND FITTINGS.
8	WAITING	8/30/2017	23:45					CREW WAITING ON RIG TO RUN CASING.
9	OTHER	8/31/2017	01:22					RIG LANDED 9.625" CASING, CIRCULATED FOR 15 MIN, FOR A TOTAL OF 150BBL 10BPM.
10	STEACS	8/31/2017	01:30					BJ CREW, RIG CREW, COSTUMER REP CONDUCTED STEACS BRIEFING PRIOR TO JOB.
11	START JOB	8/31/2017	02:10					CREW BEGINS JOB.
12	FILL LINES	8/31/2017	02:12	8.33	2	2	70	PUMP 2BBL OF H2O TO FILL LINES FOR PRESSURE TEST.
13	PRESSURE TEST	8/31/2017	02:15				3500	PRESSURE TESTED ALL LINES TO 3500PSI. NO LEAKS.
14	PUMP SPACER	8/31/2017	02:19	8.33	6	18	300	PUMPED 18BBL OF H2O AT 6BPM, FULL RETURNS.
15	PUMP CEMENT	8/31/2017	02:27	14.5	6	170	250	MIXED AND PUMPED 170BBL OF CEMENT (687SKS, 1.39YLD, 6.76GL/SK) AT 6BPM. FULL RETURNS.
16	SHUTDOWN	8/31/2017	02:47					SHUTDOWN IN ORDER TO DROP TOP PLUG.
17	DROP TOP PLUG.	8/31/2017	02:48					PLUG LEFT PLUG CONTAINER, VERIFIED BY COSTUMER REP.
18	DISPLACEMENT	8/31/2017	03:05	8.33	8	102	500	PUMPED 102BBL OF H2O AT 8BPM. FULL RETURNS.
19	SLOW RATE	8/31/2017	03:15	8.33	3	15	400	SLOWED RATE TO LAND TOP PLUG.
20	LAND TOP PLUG	8/31/2017	03:18				2400	LANDED TOP PLUG AT 600PSI, FCP 500PSI, BUMPED TO 2400 FOR CASING TEST. 32 BBL OF CEMENT TO SURFACE



21	CASING TEST	8/31/2017	03:20				2400	HELD 2400PSI FOR 15 MIN CASING TEST.
22	CHECK FLOATS	8/31/2017	03:35					FLOATS HELD. 1BBL IN RETURN.
23	END JOB.	8/31/2017	03:36					CREW ENDS JOB.
24	STEACS	8/31/2017	03:45					CREW CONDUCTS STEACS.
25	RIG DOWN	8/31/2017	04:00					CREW RIGGED DOWN ALL IRON AND FITTINGS.
26	STEACS	8/31/2017	04:30					CREW CONDUCTED JOURNEY MANAGEMENT.
27	DEPART LOCATION.	8/31/2017	05:00					CREW DEPARTS LOCATION, HEADS TO CAMP.

3 Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	60 °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

