



Great Western Operating Company, LLC

SURFACE POST JOB REPORT

Kodak North FD 25-040HN 05-123-39386
S:26 T:6N R:67W Weld CO

CallSheet #: 490
Proposal #: 12796



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 | zenkeith@altcem.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	1517	25
Casing	Inner	9.625	8.921	36	n/a	0	1517	0

1.2 Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Mileage
Cement Pump	102	202	Hyde, Zack	120
Cement Chemical	403	221	Bell, Wesley	120
Bulk Trailer	503	218	Kresge, Adam	20
Bulk Trailer	506	211	Pena, James	120
Plug Container	150519			
Swage	150539			
Bulk Trailer	509	210	Staples, AJ	120

1.3 Timing

Event	Date/Time
Call Out	1/25/2017 06:00
Depart Facility	1/25/2017 10:30
On Location	1/25/2017 12:00
Rig Up Iron	1/25/2017 16:00
Job Started	1/25/2017 16:48
Job Completed	1/25/2017 19:00
Rig Down Iron	1/25/2017 19:10
Depart Location	1/25/2017 20:00

1.4 General Job Information

Metrics	Value
Well Fluid Density	8.34 lb/gal
Well Fluid Type	Water
Rig Circulation Time	0.75 hours
Calculated Displacement	113.8 bbls
Actual Displacement	113 bbls
Total Spacer to Surface	20 bbls
Total CMT to Surface	15 bbls
Well Topped Out	No
Top Out Volume	29 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	8.34 lb/gal
Well Fluid Density Out of Well	8.34 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		680.00	168.14	0
1	3	Water	DisplacementFinal	8.33			42.00		114.00	0
1	4	ALTCem S100-22	Topout	14.50	1.39	6.76		115.00	28.50	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	1	4
1	4	Topout	ALTCem S100-22	AC3-10	Cement	100.00	%			
1	4	Topout	ALTCem S100-22	ADF-20	Defoamer	0.03	gal/sk	1	0	1



2 Job Logs

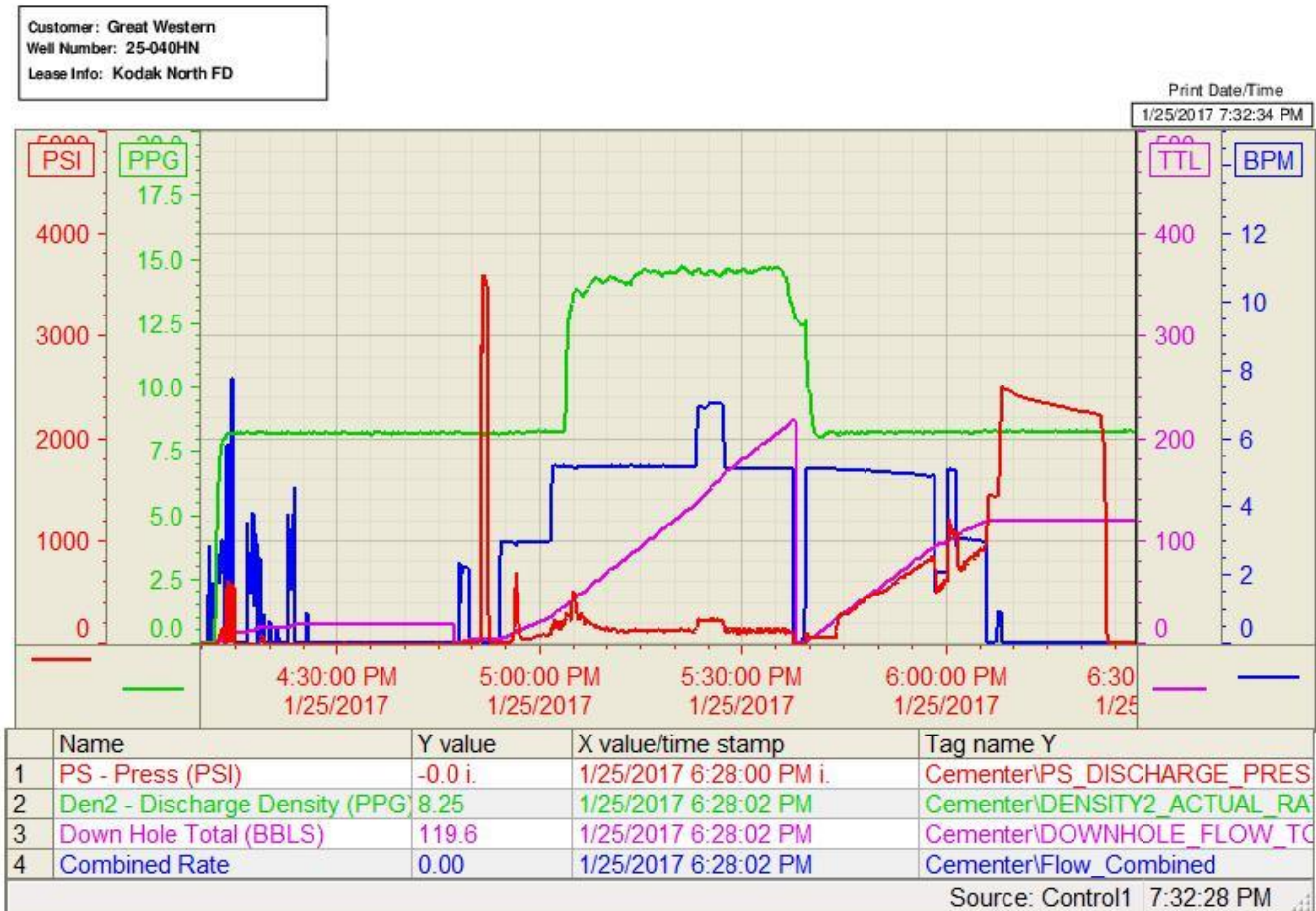
Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Arrive on location	1/25/2017	12:00					All units arrived on location for surface job, requested time was 13:00
2	Spot units	1/25/2017	15:50					spot pump, bulk, iron units
3	Rig In	1/25/2017	16:00					Rig in all bulk, water, treating lines
4	Safety meeting	1/25/2017	16:30					hold safety meeting with rig crew and pump crew, discuss job procedure and hazards. Focus on pressure and watching footing around cellars during top off. Rig circulated from 16:00 to 16:35
5	Fill Lines	1/25/2017	16:48	8.34	1	2	50	Fill lines with fresh water
6	Pressure test lines	1/25/2017	16:50	8.34	0.5	0	3500	Lines test, no leaks
7	Pump spacer	1/25/2017	16:54	8.34	5	20	100	Pump 20bbls fresh water ahead, last ten bbls add 1lb of dye
8	Pump cement	1/25/2017	17:04	14.5	5	168.1	250	Mix and pump cement at 14.5ppg, 680sks, Y:1.39, WR: 6.76
9	Shut Down/Drop Plug	1/25/2017	17:38					Drop 9 5/8 top rubber plug, wire tattle tale showed plug left head
10	Displacement	1/25/2017	17:40	8.34				Start displacement, calculated displacement 114bbls, Float collar at 1473', casing is 9 5/8 36# with a capacity of .0773bbl/ft
11	Displacement	1/25/2017	17:50	8.34	5	50	400	First 50bbls away, good returns at well
12	Displacement	1/25/2017	17:59	8.34	5	48	750	Cement to surface, dye had been seen at 80bbls away
13	Decrease Rate	1/25/2017	18:01	8.34	3	2	750	100bbls away, slowed rate prior to plug landing
14	Plug landed	1/25/2017	18:06	8.34	3	13	900	Land plug at 900psi, bump pressure up to 1400psi
15	Casing Test	1/25/2017	18:07	8.34	0.5	0	2400	Casing test, 15min at 2400psi
16	Check floats	1/25/2017	18:23	8.34			0	Pressure was 2250 prior to checking floats, floats held, 1bbl back
17	Top off	1/25/2017	18:33	14.5	2	29	30	Top off well Kodak FD 25-120HC, API# 05-123-39387 115sks, 14.5ppg, Y:1.39, WR:6.76
18	Rig down	1/25/2017	19:00					rig down iron, bulk, and water lines
19	Job complete	1/25/2017	20:00					
20	Leave location	1/25/2017	20:15					

3 Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	40 °F	50-80 °F
pH Level	5.5	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	0	0-1000
Total Hardness	<55 mg/L	0-500 mg/L
Carbonates	45 mg/L	0-100 mg/L
Sulfates	<200 mg/L	0-1500 mg/L
Potassium	300 mg/L	0-3000 mg/L
Iron	0 mg/L	0-300 mg/L

4 Pump Diagrams

Kodak FD 25-040HN Job Chart

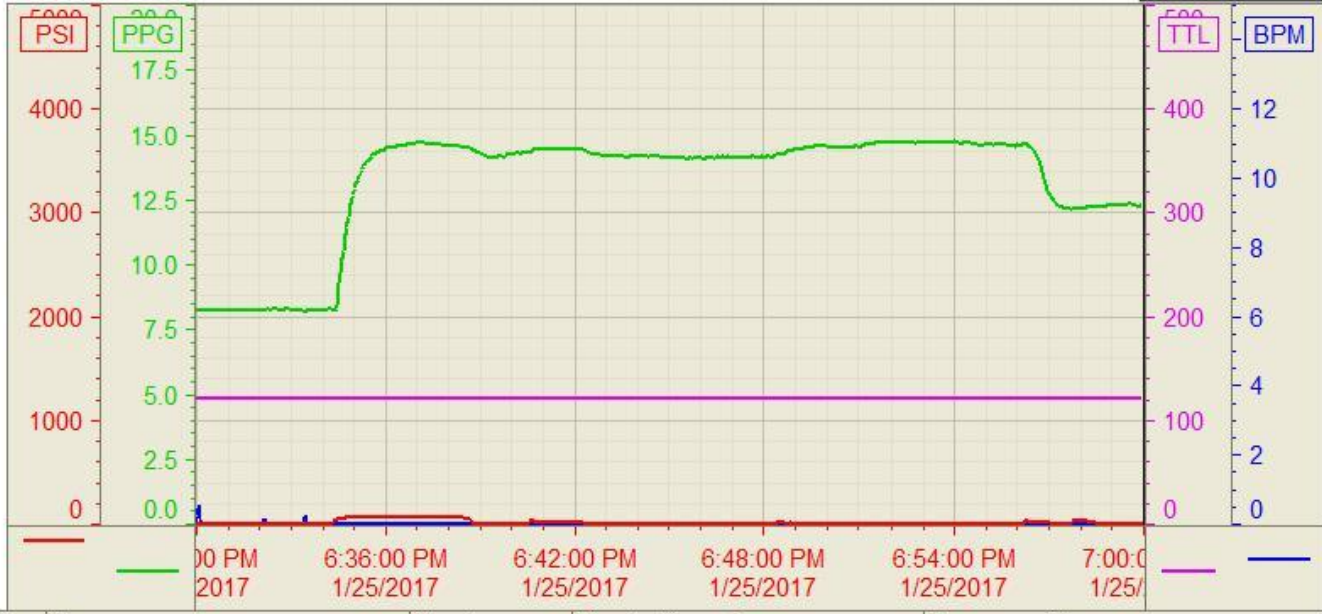




Kodak FD 25-128C Top Out

Customer: Great Western
Well Number: 25-040HN
Lease Info: Kodak North FD

Print Date/Time
1/25/2017 7:33:48 PM



	Name	Y value	X value/time stamp	Tag name Y
1	PS - Press (PSI)	-4.3 i.	1/25/2017 7:00:00 PM i.	Cementer\PS_DISCHARGE_PRES
2	Den2 - Discharge Density (PPG)		1/25/2017 7:00:00 PM i.	Cementer\DENSITY2_ACTUAL_RA
3	Down Hole Total (BBLs)		1/25/2017 7:00:00 PM i.	Cementer\DOWNHOLE_FLOW_TC
4	Combined Rate		1/25/2017 7:00:00 PM i.	Cementer\Flow_Combined

Source: Control1 7:33:43 PM