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# **Great Western Operating Company, LLC**

## **PRODUCTION POST JOB REPORT**

Schneider HD 11-299HNX 05-123-44683  
S:7 T:4N R:66W Weld CO

CallSheet #: 917  
Proposal #: 13394



**PRODUCTION 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

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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,

**Jacob Ojeda**

Field Engineer | (763) 516-3012 | Jacob.Ojeda@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  
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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 (%)
Casing	Outer	9.625	8.921	36	n/a	0	1569	0
Open Hole	Outer	n/a	8.5	n/a	n/a	1569	7000	10
Open Hole	Outer	n/a	8.5	n/a	n/a	7000	16909	5
Casing	Inner	5.5	4.892	17	n/a	0	16909	0

### 1.2 Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Mileage
Bulk Trailer	E467		Garcia, Anthony	
Silo	653			
Silo	659			
Silo	660			
Light Duty Pickups	4		Hyde, Andrew	
Cement Pump	103	203	Seghetti, Joshua	
Tractor	3Y10		Cook, John	
Plug Container	1312196			140
Swage	150529			140

### 1.3 Timing

Event	Date/Time
Call Out	6/17/2017 11:30
Depart Facility	6/17/2017 13:00
On Location	6/17/2017 15:30
Rig Up Iron	6/17/2017 16:00
Job Started	6/17/2017 20:34
Job Completed	6/18/2017 00:03
Rig Down Iron	6/18/2017 00:30
Depart Location	6/18/2017 02:00

### 1.4 General Job Information

Metrics	Value
Well Fluid Density	10.4 lb/gal
Well Fluid Type	OBM
Rig Circulation Vol	660 bbls
Rig Circulation Time	1.5 hours
Calculated Displacement	392 bbls
Actual Displacement	392 bbls
Total Spacer to Surface	50 bbls
Total CMT to Surface	25 bbls

### 1.5 Well Fluid Details

Metrics	Value
Plastic Viscosity	19
Yield Point	9
10 sec. SGS	7
10 min. SGS	8
30 min. SGS	9
Filtrate	15.4
Flow Line Temp.	135

### 1.6 Job Details

Metrics	Value
Flare Prior to Job	Yes
Flare Prior to Job	3627 units
Flare During Job	No
Flare at End of Job	No
Well Full Prior to Job	Yes
Well Fluid Density Into Well	10.4 lb/gal
Well Fluid Density Out of Well	10.4 lb/gal

### 1.7 Job Details (cont.)

Metrics	Value
BHCT	224 °F
BHST	224 °F



### 1.8 Circulation

Lost Circulation Experienced
No

### 1.9 Job Execution Information

Job	Fluid	Product	Function	Density (lb/gal)	Yield (ft <sup>3</sup> /sk)	Water Rq. (gal/sk)	Water Rq. (gal/bbl)	Volume (sk)	Volume (bbl)	Top (ft)
1	1	CD Spacer - OBM	Spacer	11.50			31.21		50.00	0
1	2	ALTCem P100-X2	Lead	13.20	1.82	9.89		981.00	318.83	0
1	3	ALTCem P50-X1	Tail	13.50	1.47	7.43		1620.00	425.47	7000
1	4	MMCR Water	Displacement	8.33			41.90		20.00	16002
1	5	3% KCl	Displacement	8.33			42.00		367.00	215
1	6	Water	DisplacementFinal	8.33			42.00		5.00	0

### 1.10 Job Fluid Details

Job	Fluid	Type	Fluid	Product	Function	Conc.	Uom
1	1	Spacer	CD Spacer - OBM	ASR-20	StrengthRetrogression	213.49	lb/bbl
1	1	Spacer	CD Spacer - OBM	AR-31	Retarder	0.58	lb/bbl
1	1	Spacer	CD Spacer - OBM	ASF-20	Surfactant	0.50	gal/bbl
1	1	Spacer	CD Spacer - OBM	ASF-80	Surfactant	0.50	gal/bbl
1	1	Spacer	CD Spacer - OBM	AVS-10	Viscosifier	0.90	lb/bbl
1	2	Lead	ALTCem P100-X2	AC3-10	Cement	100.00	%
1	2	Lead	ALTCem P100-X2	ABX-20	BondEnhancer	3.00	%BWOB
1	2	Lead	ALTCem P100-X2	ADF-11	Defoamer	0.30	%BWOB
1	2	Lead	ALTCem P100-X2	AFL-50	FluidLoss	0.50	%BWOB
1	2	Lead	ALTCem P100-X2	AR-31	Retarder	0.17	%BWOB
1	2	Lead	ALTCem P100-X2	AVS-20	Viscosifier	0.10	%BWOB
1	3	Tail	ALTCem P50-X1	ACG-10	Cement	50.00	%
1	3	Tail	ALTCem P50-X1	AFA-10	Extender	50.00	%
1	3	Tail	ALTCem P50-X1	ADF-11	Defoamer	0.30	%BWOB
1	3	Tail	ALTCem P50-X1	AFL-50	FluidLoss	0.20	%BWOB
1	3	Tail	ALTCem P50-X1	AR-20	Retarder	0.10	%BWOB
1	3	Tail	ALTCem P50-X1	AVS-10	Viscosifier	0.10	%BWOB
1	3	Tail	ALTCem P50-X1	AVS-50	Viscosifier	2.00	%BWOB
1	4	Displacement	MMCR Water	AR-61	Retarder	0.10	gal/bbl

## 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	Safety Meeting	6/17/2017	13:00					BJ rew talks about the hazards while driving.
2	Depart Yard	6/17/2017	13:30					depart
3	Arrive at location	6/17/2017	15:15					Arrive at location
4	Safety Meeting	6/17/2017	15:30					BJ crew talks about hazards of spotting in and rigging up.
5	Rig Up	6/17/2017	16:00					Rig up
6	Waiting	6/17/2017	18:00					waiting for casing crew to finish running casing
7	Safety Meeting	6/17/2017	19:25					BJ and rig crew talk about the hazards of pumping the job.
8	Fill Lines	6/17/2017	20:34	8.33	2	3	347	Pump 3 bbls of water
9	Pressure test	6/17/2017	20:36					pressure test to 6000 PSI
10	Pump Spacer	6/17/2017	20:41	11.5	4	50	450	Mix and Pump 50 bbls of cd spacer at 11.5ppg ASF-20 25 gals, ASF-80 25 gals
11	Pump Lead	6/17/2017	21:53	13.2	6	318	600	Mix up and pump 918 sacks, 318 bbls of Altcem P100-x2 lead cement at 13.2ppg, 1.82 yield and 9.89 water requirement.
12	Pump Tail	6/17/2017	22:47	13.5	6	425	560	Mix and pump 1620 sacks, 425 bbls of Altcem P50-x1 tail cement at 13.5 ppg, 1.47 yield, 7.43 water requirement.
13	Shutdown/ Wash up	6/17/2017	23:00					Shut down and wash pumps to pit.
14	Drop top plug	6/17/2017	23:05					Company man witness plug leave manifold
15	Pump Displacement	6/17/2017	23:06	8.33	8	372	1850	Pump 392 bbls of KCl water.
16	Slow rate	6/17/2017	23:53	8.33	3.5	20	2500	Slow rate the last 20 bbls to 3.5 bpm
17	Bump plug	6/17/2017	23:59					Bump plug at 2540 psi took to 3050 ps
18	Check floats	6/18/2017	00:03					Check floats got 3.5 bbls back to the truck
19	Safety meeting	6/18/2017	00:10					BJ crew talks about dangers of rigging down
20	Rig Down	6/18/2017	00:25					Rig down
21	Depart Location	6/18/2017	02:00					Depart location.

### 3 Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	65 °F	50-80 °F
pH Level	6	5.5-8.5
Chlorides	72 mg/L	0-3000 mg/L
Total Alkalinity	120	0-1000
Total Hardness	300 mg/L	0-500 mg/L
Carbonates	140 mg/L	0-100 mg/L
Sulfates	<200 mg/L	0-1500 mg/L
Potassium	300 mg/L	0-3000 mg/L
Iron	7 mg/L	0-300 mg/L

### 4 Pump Diagrams

