

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	1550	25
Casing	Inner	9.625	8.921	36	LTC	0	1541	0

1.2 Equipment / People

Unit Type	Unit	Employee #1	Mileage
Bulk Trailer	E435	Groneman, Josh	150
Bulk Trailer	502	Vasquez, Mike	150
Cement Pump	101	Dent, Jerod	150
Cement Chemical	403	Casciato, Luke	150

1.3 Timing

Event	Date/Time
Call Out	5/18/2017 22:00
Depart Facility	5/18/2017 23:00
On Location	5/19/2017 01:00
Rig Up Iron	5/19/2017 04:40
Job Started	5/19/2017 06:43
Job Completed	5/19/2017 07:58
Rig Down Iron	5/19/2017 08:30
Depart Location	5/19/2017 10:00

1.4 General Job Information

Metrics	Value
Well Fluid Density	9.8 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	250 bbls
Rig Circulation Time	0.5 hours
Calculated Displacement	115.3 bbls
Actual Displacement	115.3 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	4
10 sec. SGS	1
10 min. SGS	2
30 min. SGS	3
Filtrate	0.3
Flow Line Temp.	70

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	8.6 lb/gal
Well Fluid Density Out of Well	8.6 lb/gal

1.7 Job Details (cont.)

Metrics	Value
BHCT	88 °F
BHST	110 °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)	Top (ft)
1	1	Water	Flush	8.33			42.00		20.00	0
1	2	ALTCem S100-12	Lead	12.00	2.53	14.85		260.00	116.99	0
1	3	ALTCem S100-12	Tail	12.50	2.22	12.58		146.00	57.82	1045
1	4	Water	DisplacementFinal	8.33			42.00		117.00	0

1.10 Job Fluid Details

Job	Fluid	Type	Fluid	Product	Function	Conc.	Uom
1	2	Lead	ALTCem S100-12	AC3-10	Cement	100.00	%
1	2	Lead	ALTCem S100-12	ACL-10	Accelerator	2.00	lb/sk
1	2	Lead	ALTCem S100-12	ACL-20	Accelerator	5.00	%BWOB
1	2	Lead	ALTCem S100-12	ADF-11	Defoamer	0.30	%BWOB
1	2	Lead	ALTCem S100-12	ALC-10	LostCirculation	0.13	lb/sk
1	2	Lead	ALTCem S100-12	AXE-30	Extender	2.00	lb/sk
1	3	Tail	ALTCem S100-12	AC3-10	Cement	100.00	%
1	3	Tail	ALTCem S100-12	ACL-10	Accelerator	2.00	lb/sk
1	3	Tail	ALTCem S100-12	ACL-20	Accelerator	5.00	%BWOB
1	3	Tail	ALTCem S100-12	ADF-11	Defoamer	0.30	%BWOB
1	3	Tail	ALTCem S100-12	ALC-10	LostCirculation	0.13	lb/sk
1	3	Tail	ALTCem S100-12	AXE-30	Extender	2.00	lb/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	5/18/2017	22:00					BJ Crew was called out
2	Pre-Convoy Safety Meeting	5/18/2017	22:30					BJ Crew discussed road conditions, and hazards associated such as, ice on roads, visibility, and wildlife.
3	Depart Facility	5/18/2017	23:00					BJ Crew departs facility to head to Cub Creek location
4	Arrive on Location	5/19/2017	01:00					BJ Crew arrived on location
5	Assess Location	5/19/2017	01:15					BJ Crew conducted walk around and discussed how to spot equipment in. also discussed hazards associated with rig up
6	Rig Up Iron	5/19/2017	04:40					BJ Crew Rigged up all iron and ground fittings
7	Other	5/19/2017	05:00					Rig landed 9.625" J55, 36# casing at 05:00 circulated 250 BBL of WBM at 8BPM for 30 min. 350 psi
8	Start Job	5/19/2017	06:43					BJ Crew started job on computer
9	Fill Lines	5/19/2017	06:45	8.33	2	2	70	Pumped 2 BBL of H2O at 2 BPM, 70 psi
10	Shutdown	5/19/2017	06:46					Shutdown in order to shut in well for pressure test.
11	Pressure Test	5/19/2017	06:48	8.33			3000	Pressure tested all lines to cement head to 3000 psi held pressure, bled back to truck.
12	Pump Spacer	5/19/2017	06:53	8.33	2	10	70	Pumped 10 BBL of H2O spacer at 2 BPM in order to mix up cmt.
13	Icrease Rate	5/19/2017	06:58	8.33	6	10	70	pumped 10 BBL of H2O spacer with dye at six BPM.
14	Pump Lead	5/19/2017	07:00	12	6	117	220	Pumped a total of 117 BBL of lead cmt at 12.0ppg, 6BPM, full returns
15	Pump Tail	5/19/2017	07:21	12.5	6	56	220	Pumped a total of 56 BBL of tail cmt at 6BPM, full returns
16	Shutdown	5/19/2017	07:36					Shutdown in order to drop top plug
17	Drop Top Plug	5/19/2017	07:37	12.5	2	1	20	pumped 1BBL of cmt, as per customers request on top of plug, plug left plug container, verified by customer representative.
18	Displacement	5/19/2017	07:38	8.33	8	105	450	Pumped a 105 BBL of H2O displacement at 8 BPM, 450psi



19	Spacer to Surface	5/19/2017	07:43					Received spacer to surface with 57 BBL of Displacement away. Full returns
20	Cement to Surface	5/19/2017	07:46					Received cmt to surface with 77 BBL of displacement away. Full returns
21	Slow Rate	5/19/2017	07:50	8.33	2	10	400	Slowed rate to 2 BPM in order to land plug.
22	Land Plug	5/19/2017	07:55	8.33			450	Landed plug, final circulating pressure 400psi, landed plug at 450psi, bumped to 950psi held for 3 min.
23	Check Floats	5/19/2017	07:58	8.33				Floats held, received .5 BBL of H2O back to truck.
24	Pre-Rig Down Safety Meeting	5/19/2017	08:15					BJ Crew discussed the hazards associated with rig down such as, slips trips and falls, pinch points, and hammer swings
25	Rig Down Iron	5/19/2017	08:30					BJ Crew rigged down all iron and fittings on ground as well as the rig floor.
26	Pre-Convoy Safety Meeting	5/19/2017	09:30					BJ Crew discussed road conditions, and hazards associated such as, ice on roads, visibility, and wildlife.
27	Depart Location	5/19/2017	10:00					BJ Crew departs location to BJ Facility.

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	1500 mg/L	0-3000 mg/L
Total Alkalinity	180	0-1000
Total Hardness	>375 mg/L	0-500 mg/L
Carbonates	0 mg/L	0-100 mg/L
Sulfates	>200 mg/L	0-1500 mg/L
Potassium	80 mg/L	0-3000 mg/L
Iron	25 mg/L	0-300 mg/L

4 Pump Diagrams

