

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	1552	25
Casing	Inner	9.625	8.921	36	LTC	0	1543	0

1.2 Equipment / People

Unit Type	Unit	Employee #1	Mileage
Cement Pump	C992	Boyd, Brian	150
Light Duty Pickups	4	Valenzuela, Yannick	150
Bulk Trailer	503	Zuniga, Jesus	150
Bulk Trailer	PPC41311	Garcia, Anthony	150

1.3 Timing

Event	Date/Time
Call Out	7/22/2017 18:00
Depart Facility	7/22/2017 21:00
On Location	7/22/2017 21:30
Rig Up Iron	7/22/2017 21:35
Job Started	7/22/2017 23:45
Job Completed	7/23/2017 00:58
Rig Down Iron	7/23/2017 01:10
Depart Location	7/23/2017 02:00

1.4 General Job Information

Metrics	Value
Well Fluid Density	8.4 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	250 bbls
Rig Circulation Time	0.5 hours
Calculated Displacement	116 bbls
Actual Displacement	116 bbls
Total Spacer to Surface	20 bbls
Total CMT to Surface	37 bbls
Well Topped Out	No

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	8.4 lb/gal
Well Fluid Density Out of Well	8.4 lb/gal

1.6 Job Details (cont.)

Metrics	Value
BHCT	88 °F
BHST	110 °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 S100-12	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	862
1	4	Water	DisplacementFinal	8.33			42.00		117.00	0

1.9 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	7/22/2017	18:00					Customer requested crew on location at 23:30
2	Depart Shop	7/22/2017	19:30					Crew departs shop after journey management
3	Arrive On Location	7/22/2017	21:30					Crew arrives on location meet with customer to get numbers
4	STEACS Briefing	7/22/2017	21:35					Steacs briefing with BJ crew on rigging up iron
5	Rig Up Iron	7/22/2017	21:40					Crew rigs up iron and hoses
6	Waiting	7/22/2017	23:00					Waiting on rig to land casing
7	Rig Lands Casing	7/22/2017	23:10					Rig lands casing and recirculates for half hour
8	STEACS Briefing	7/22/2017	23:20					Steacs briefing with BJ crew, rig crew and company man over job and hazards
9	Fill Lines	7/22/2017	23:45	8.33	3	3	79	Fill pumps and lines
10	Pressure Test	7/22/2017	23:46	8.33	0.5	0.5	4300	Pressure test iron and cement head to 4300 PSI
11	Pump Flush	7/22/2017	23:48	8.33	5	20	115	Pump 20 bbls of red dye ahead
12	Pump Lead	7/22/2017	23:55	12	5.5	117	270	Pump 117 bbls of lead cement 12 PPG (260 Sks, 2.53 Yield, 14.85 Gals/Sks)
13	Pump Tail	7/23/2017	00:19	12.5	5.5	59	205	Pump 59 bbls of tail cement 12.5 PPG (146 Sks, 2.22 Yield, 12.58 Gals/Sks)
14	Shut Down	7/23/2017	00:30					Shut down pumping
15	Drop Plug	7/23/2017	00:34	8.33				Drop Top plug with company man to verify plug went down hole
16	Pump Displacement	7/23/2017	00:35	8.33	6	116	335	Pump 116 bbls of fresh water displacement
17	Cement To Surface	7/23/2017	00:45	8.33	6	78	459	78 bbls into displacement got cement to surface for total of 37 bbls back of cement
18	Slow Rate	7/23/2017	00:51	8.33	2.5	106	472	106 bbls into displacement slow rate to 2.5 bpm for last 10
19	Land Plug	7/23/2017	00:55	8.33			1000	Land plug at 116 bbls bump to 1000 PSI, FCP 471 PSI
20	Check Floats	7/23/2017	00:58					Hold for 3 mins and check floats got .5 bbl back to truck
21	STEACS Briefing	7/23/2017	01:05					Steacs briefing with BJ crew over rigging down iron and trucks
22	Rig Down Iron	7/23/2017	01:10					Crew rigs down iron and equipment
23	Depart Location	7/23/2017	02:00					Crew has journey management and departs from location

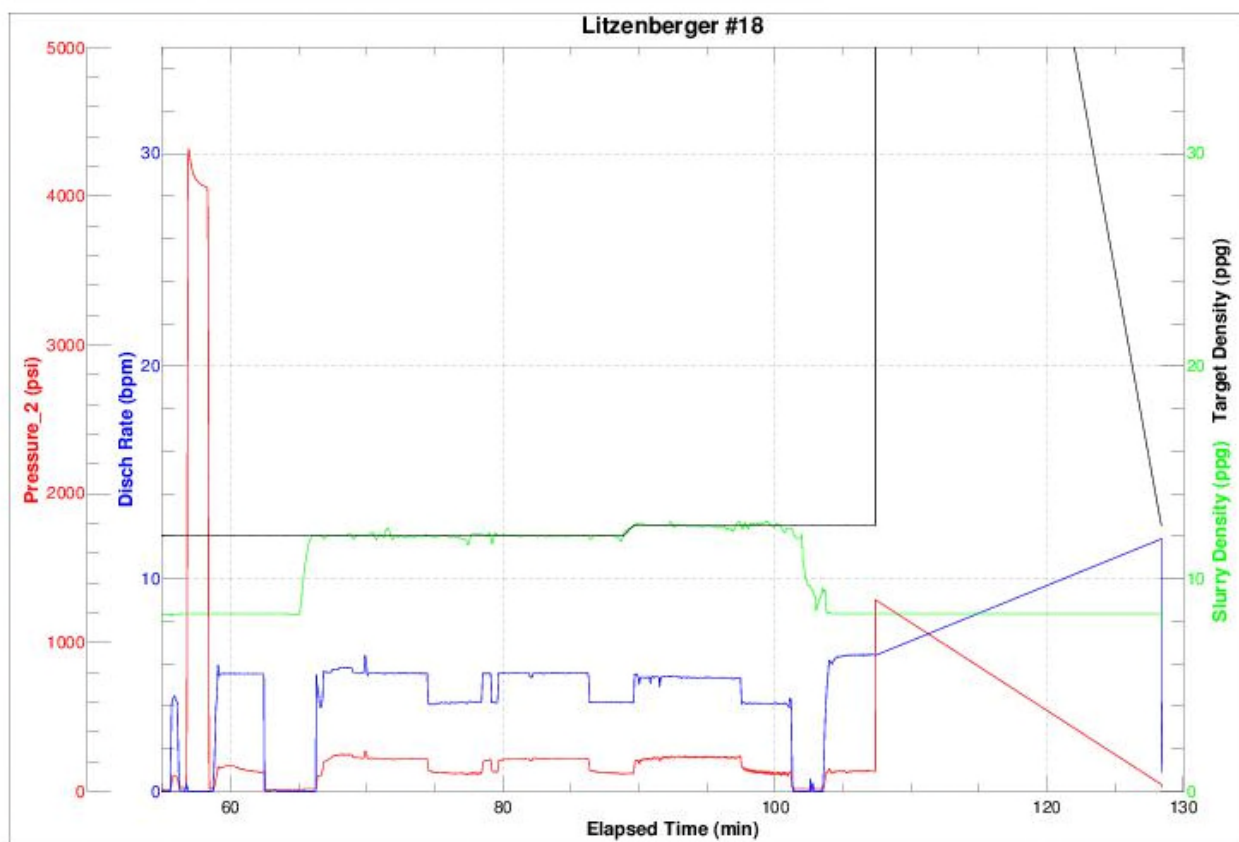
3 Water Analysis

Metrics	Value	Recommended
Water Source	Flat Tank	
Temperature	65 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	4 mg/L	0-3000 mg/L
Total Alkalinity	80	0-1000
Total Hardness	250 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	0.15 mg/L	0-300 mg/L

4 Pump Diagrams



JobMaster Program Version 4.02C1
Job Number: 1059
Customer: CUB CREEK ENERGY
Well Name: LITZENBERGER #18



BJ Services

Job Start: Saturday, July 22, 2017