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	1533	25
Casing	Inner	9.625	8.921	36	LTC	0	1523	0

1.2 Equipment / People

Unit Type	Unit	Employee #1	Mileage
Bulk Trailer	PPC41311	Zuniga, Jesus	170
Bulk Trailer	503	Garcia, Anthony	170
Light Duty Pickups	4	Boyd, Brian	170
Cement Pump	C992	Valenzuela, Yannick	170

1.3 Timing

Event	Date/Time
Call Out	7/24/2017 04:00
Depart Facility	7/24/2017 04:30
On Location	7/24/2017 06:30
Rig Up Iron	7/24/2017 08:30
Job Started	7/24/2017 10:47
Job Completed	7/24/2017 12:11
Rig Down Iron	7/24/2017 12:20
Depart Location	7/24/2017 13:00

1.5 General Job Information

Metrics	Value
Well Fluid Density	8.7 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	250 bbls
Rig Circulation Time	0.5 hours
Calculated Displacement	115 bbls
Actual Displacement	117 bbls
Total Spacer to Surface	20 bbls
Total CMT to Surface	27 bbls
Well Topped Out	No

1.6 Well Fluid Details

Metrics	Value
Plastic Viscosity	1
Yield Point	3
Filtrate	0.05
Flow Line Temp.	75

1.7 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	8.7 lb/gal
Well Fluid Density Out of Well	8.7 lb/gal

1.8 Job Details (cont.)

Metrics	Value
BHCT	88 °F
BHST	110 °F

1.9 Circulation

Lost Circulation Experienced
No

1.10 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	S100-12	Lead	12.00	2.53	14.85		260.00	116.99	0
1	3	S100-12	Tail	12.50	2.22	12.58		146.00	57.82	893
1	4	Water	DisplacementFinal	8.33			42.00		117.00	0

1.11 Job Fluid Details

Job	Fluid	Type	Fluid	Product	Function	Conc.	Uom
1	2	Lead	S100-12	AC3-10	Cement	100.00	%
1	2	Lead	S100-12	ACL-10	Accelerator	2.00	lb/sk
1	2	Lead	S100-12	ACL-20	Accelerator	5.00	%BWOB
1	2	Lead	S100-12	ADF-11	Defoamer	0.30	%BWOB
1	2	Lead	S100-12	ALC-10	Lost Circulation	0.13	lb/sk
1	2	Lead	S100-12	AXE-30	Extender	2.00	lb/sk
1	3	Tail	S100-12	AC3-10	Cement	100.00	%
1	3	Tail	S100-12	ACL-10	Accelerator	2.00	lb/sk
1	3	Tail	S100-12	ACL-20	Accelerator	5.00	%BWOB
1	3	Tail	S100-12	ADF-11	Defoamer	0.30	%BWOB
1	3	Tail	S100-12	ALC-10	Lost Circulation	0.13	lb/sk
1	3	Tail	S100-12	AXE-30	Extender	2.00	lb/sk
1	5	Topout	S100-12	AC3-10	Cement	100.00	%
1	5	Topout	S100-12	ACL-10	Accelerator	2.00	lb/sk
1	5	Topout	S100-12	ACL-20	Accelerator	5.00	%BWOB
1	5	Topout	S100-12	ADF-11	Defoamer	0.30	%BWOB
1	5	Topout	S100-12	ALC-10	Lost Circulation	0.13	lb/sk
1	5	Topout	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	7/24/2017	04:00					Customer requested crew on location at 9:00
2	Depart Shop	7/24/2017	00:00					Crew departs shop after journey Management
3	Arrive On Location	7/24/2017	06:30					Arrive on location meet customer and get numbers
4	Steacs	7/24/2017	07:00					Steacs with Bj crew over rig up
5	Rig Up Iron	7/24/2017	08:30					Rig up iron and hoses
6	Waiting	7/24/2017	09:00					Waiting on rig to run casing
7	Rig Lands Casing	7/24/2017	10:27					Rig lands casing and recirculates through cement head
8	Steacs	7/24/2017	10:30					Steacs with BJ, rig crew And company man over job and hazards
9	Fill Linea	7/24/2017	10:47	8.33	3	3	55	Fill pumps and lines
10	Pressure Test	7/24/2017	10:49	8.33	0.5	0.5	4200	Pressure test iron and head to 4000 PSI
11	Pump Flush	7/24/2017	10:52	8.33	5	20	143	Pump 20 bbls of red dye ahead
12	Pump Lead	7/24/2017	10:59	12	5.5	117	222	Pump 117 BBls lead Cement 12 PPG (260 sks, 2.53 Yield, 14.85 Gals/Sks)
13	Pump Tail	7/24/2017	11:26	12.5	5.5	58	109	Pump 58 BBls Of Tail 12.5 PPG (146 Sks, 2.22 Yield, 12.58 Gals/Sks)
14	Shut Down	7/24/2017	11:40					Shut Down
15	Drop Plug	7/24/2017	11:43	8.33				Drop Top Plug
16	Pump Displacement	7/24/2017	11:44	8.33	6	117	357	Pump 117 bbls of fresh water displacement
17	Cement To Surface	7/24/2017	11:59	8.33	6	90	380	90 bbls away into displacement got 27 bbls of cement to surface
18	Slow Rate	7/24/2017	12:02	8.33	2.5	10	297	Last 10 bbls slow rate to 2.5 bpm
19	Land Plug	7/24/2017	12:07	8.33			27	Bump plug to 297 PSI did not bump plug to 1000 PSI landed at calculated pressure to land of 297 PSI and hold for 5 mins
20	Check Floats	7/24/2017	12:11					Check floats and got .5 bbl back to truck
21	Steacs	7/24/2017	12:15					Steacs with Bj crew over rigging down iron
22	Rig Down Iron	7/24/2017	12:20					Crew rigs down iron
23	Depart Location	7/24/2017	13:00					crew departs shop

3 Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	68 °F	50-80 °F
pH Level	6	5.5-8.5
Chlorides	4 mg/L	0-3000 mg/L
Total Alkalinity	140	0-1000
Total Hardness	250 mg/L	0-500 mg/L
Carbonates	4 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