

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	1549	0
Open Hole	Outer	n/a	8.5	n/a	n/a	1555	17652	8
Casing	Inner	5.5	4.778	20	Buttress	0	17641	0

1.2 Equipment / People

Unit Type	Unit	Employee #1	Employee #2	Mileage
Bulk Trailer	502	Montoya, Hector		100
Bulk Trailer	509	Chaparro, Hector		100
Silo	654			
Silo	661			
Silo	656			
Cement Pump	103	Groneman, Josh		100
Light Duty Pickups	8	Casciato, Luke	Boyd, Brian	100

1.3 Timing

Event	Date/Time
Call Out	9/21/2017 14:00
Depart Facility	9/21/2017 15:30
On Location	9/21/2017 17:00
Rig Up Iron	9/22/2017 00:00
Job Started	9/22/2017 03:23
Job Completed	9/22/2017 07:36
Rig Down Iron	9/22/2017 07:45
Depart Location	9/22/2017 08:30

1.4 General Job Information

Metrics	Value
Well Fluid Density	9.9 lb/gal
Well Fluid Type	OBM
Rig Circulation Vol	1500 bbls
Rig Circulation Time	3 hours
Calculated Displacement	390 bbls
Actual Displacement	390 bbls
Total Spacer to Surface	80 bbls
Total CMT to Surface	40 bbls

1.5 Well Fluid Details

Metrics	Value
Plastic Viscosity	18
Yield Point	6
10 sec. SGS	6
10 min. SGS	8
30 min. SGS	9
Filtrate	12
Flow Line Temp.	165

1.6 Job Details

Metrics	Value
Flare Prior to Job	Yes
Flare During Job	No
Flare at End of Job	No
Well Full Prior to Job	Yes
Well Fluid Density Into Well	10.3 lb/gal
Well Fluid Density Out of Well	10.2 lb/gal

1.7 Job Details (cont.)

Metrics	Value
BHCT	220 °F
BHST	220 °F



1.8 Circulation

Lost Circulation Experienced
No

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	CD Spacer	Spacer	11.00			32.76		80.00	0
1	2	P100-X2	Lead	13.20	1.82	9.89		910.00	295.76	0
1	3	P50-X1	Tail	13.50	1.47	7.43		1870.00	491.23	6563
1	4	Water w/ Clay Protection and Biocide	DisplacementFinal	8.33			41.91		392.00	0

1.10 Job Fluid Details

Job	Fluid	Type	Fluid	Product	Function	Conc.	Uom
1	1	Spacer	CD Spacer	ASR-20	Strength Retrogression	180.06	lb/bbl
1	1	Spacer	CD Spacer	ASF-20	Surfactant	0.50	gal/bbl
1	1	Spacer	CD Spacer	ASF-80	Surfactant	0.50	gal/bbl
1	1	Spacer	CD Spacer	AVS-10	Viscosifier	1.00	lb/bbl
1	2	Lead	P100-X2	AC3-10	Cement	100.00	%
1	2	Lead	P100-X2	ABX-20	Bond Enhancer	3.00	%BWOB
1	2	Lead	P100-X2	ADF-11	Defoamer	0.30	%BWOB
1	2	Lead	P100-X2	AFL-50	Fluid Loss	0.50	%BWOB
1	2	Lead	P100-X2	AR-31	Retarder	0.17	%BWOB
1	2	Lead	P100-X2	AVS-20	Viscosifier	0.10	%BWOB
1	3	Tail	P50-X1	ACG-10	Cement	50.00	%
1	3	Tail	P50-X1	AFA-10	Extender	50.00	%
1	3	Tail	P50-X1	ADF-11	Defoamer	0.30	%BWOB
1	3	Tail	P50-X1	AFL-50	Fluid Loss	0.20	%BWOB
1	3	Tail	P50-X1	AR-20	Retarder	0.15	%BWOB
1	3	Tail	P50-X1	AVS-10	Viscosifier	0.10	%BWOB
1	3	Tail	P50-X1	AVS-50	Viscosifier	2.00	%BWOB
1	4	Displacement Final	Water w/ Clay Protection and Biocide	ASF-50	Clay Protection	0.08	gal/bbl
1	4	Displacement Final	Water w/ Clay Protection and Biocide	Biocide	Other	0.01	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	CALLOUT	9/21/2017	14:00					CREW WAS CALLED OUT TO BAYSWATER PRODUCTION REQUESTED ON LOCATION AT 20:00.
2	STEACS	9/21/2017	15:00					CREW CONDUCTED JOURNEY MANAGEMENT.
3	DEPART CAMP	9/21/2017	15:30					CREW HEADS TO LOCATION.
4	ARRIVE ON LOCATION	9/21/2017	17:00					CREW ARRIVES ON LOCATION, CONDUCTS WALK AROUND OF LOCATION TO DISCUSS SPOTTING EQUIPMENT.
5	WAITING	9/21/2017	17:15					WAITING ON CASING CREW PRIOR TO SPOTTING EQUIPMENT AS PER CUSTOMERS REQUEST.
6	STEACS	9/21/2017	17:20					CREW CONDUCTED STEACS PRIOR TO RIG UP.
7	RIG UP	9/22/2017	00:00					CREW RIGS UP ALL IRON AND FITTINGS
8	OTHER	9/22/2017	03:00					RIG LANDED 5.5" BTC CASING CIRCULATED AT 8BPM FOR 3HRS. FOR A TOTAL OF 1500BBL, 750PSI.
9	STEACS	9/22/2017	03:15					BJ CREW, RIG CREW, AND CUSTOMER REP CONDUCTED STEACS PRIOR TO RIG UP.
10	START JOB	9/22/2017	03:23					CREW BEGINS JOB.
11	FILL LINES	9/22/2017	03:24	8.33	2	2	50	FILL LINES TO PRESSURE TEST.
12	PRESSURE TEST	9/22/2017	03:26				5000	PRESSURE TESTED ALL LINES TO 5000PSI.
13	PUMP CD SPACER	9/22/2017	03:38	11	4	80	500	MIXED AND PUMPED 80BBL OF CD SPACER @11PPG, 4BPM, 500PSI, WITH 40GL ASF-20, 40GL ASF-80. FULL RETURNS.
14	PUMP LEAD	9/22/2017	03:56	13.2	6	5	600	MIXED AND PUMPED 5BBL OF LEAD CMT @13.2ppg, (910SKS, 1.82YLD, 9.89GL/SK) AT 6BPM. FULL RETURNS.
15	SHUTDOWN	9/22/2017	04:03					BULK FITTING LEAKING, SHUTDOWN IN ORDER TO FIX CONNECTION, 8MIN SHUTDOWN.
16	PUMP LEAD	9/22/2017	04:11	13.2	6	290	600	MIXED AN PUMPED 290 BBL OF LEAD CMT @13.2PPG (910SKS, 1.82YLD, 9.89GL/SK) @6BPM



								FULL RETURNS. FOR A TOTAL OF 295BBL.
17	PUMP TAIL	9/22/2017	04:05	13.5	6	490	700	MIXED AND PUMPED 490BBL OF TAIL CMT @13.5PPG (1870SKS, 1.47YLD, 7.43GL/SK.) AT 6BPM 700PSI. FULL RETURNS
18	SHUTDOWN	9/22/2017	06:21					SHUTDOWN TO WASH PUMPS AND LINES
19	WASH PUMPS AND LINES	9/22/2017	06:22	8.33	3	10	50	WASHED PUMPS AND LINES FROM FLOOR.
20	DROP TOP PLUG	9/22/2017	06:29					PLUG LEFT PLUG CONTAINER, VERIFIED BY COSTUMER REP.
21	DISPLACEMENT	9/22/2017	06:30	8.33	8	370	2700	PUMPED 370BBL OF H2O WITH BIOCIDES AND ASF-80, PUMPED AT 8BPM, 2700PSI, FULL RETURNS.
22	SLOW RATE	9/22/2017	07:26	8.33	3	20	2400	SLOWED RATE LAST 20BBL TO LAND PLUG.
23	LAND PLUG	9/22/2017	07:31				2900	LANDED PLUG AT 2500PSI, BUMPED TO 2900PSI FOR 3 MIN CASING TEST.
24	SHUTDOWN	9/22/2017	07:32				2900	SHUTDOWN AFTER LANDING PLUG
25	CHECK FLOATS	9/22/2017	07:35					FLOATS HELD, 4 BBL IN RETURN.
26	END JOB	9/22/2017	07:36					CREW ENDS JOB.
27	STEACS	9/22/2017	07:40					CREW CONDUCTED STEACS PRIOR TO RIG DOWN.
28	RIG DOWN	9/22/2017	07:45					CREW RIGGED DOWN ALL IRON AND FITTINGS.
29	STEACS	9/22/2017	08:15					CREW CONDUCTED JOURNEY MANAGEMENT.
30	DEPART LOCATION	9/22/2017	08:30					CREW HEADS TO CAMP.

3 Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	65 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	250	0-1000
Total Hardness	250 mg/L	0-500 mg/L
Carbonates	0 mg/L	0-100 mg/L
Sulfates	<200 mg/L	0-1500 mg/L
Potassium	450 mg/L	0-3000 mg/L
Iron	0 mg/L	0-300 mg/L

4 Pump Diagrams

