

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 3968496		Quote #:		Sales Order #: 0906102298				
Customer: NOBLE ENERGY INC-EBUS				Customer Rep: Charles Cullver						
Well Name: WELLS RANCH STATE		Well #: AA32-783		API/UWI #: 05-123-50174-00						
Field: WATTENBERG		City (SAP): GILL		County/Parish: WELD		State: COLORADO				
Legal Description: 5-5N-63W-300FNL-700FWL										
Contractor: H & P DRLG				Rig/Platform Name/Num: H & P 517						
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HB31357				Srv Supervisor: Adam Covington						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST		230 degF				
Job depth MD		16924ft		Job Depth TVD						
Water Depth				Wk Ht Above Floor						
Perforation Depth (MD)		From		To						
Well Data										
Description	New / Used	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Casing		9.625	8.921	36			0	1954	0	0
Casing		5.5	4.892	17			0	16924	0	6850
Open Hole Section			8.5				1954	16936	0	6850
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5			16924		Top Plug	5.5	1	HES	
Float Shoe	5.5					Bottom Plug	5.5	2	HES	
Float Collar	5.5					SSR plug set	5.5		HES	
Insert Float	5.5					Plug Container	5.5	1	HES	
Stage Tool	5.5					Centralizers	5.5		HES	
Fluid Data										
Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name		Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal

1	Tuned Prime Spacer	SBM FDP-C1337-18 CEMENT SPACER SYS	120	bbl	11.5	3.87		6		
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
2	ElastiCem	ELASTICEM (TM) SYSTEM	140	sack	13.2	1.67		8	8.03	
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
3	ElastiCem w/ SCBL	ELASTICEM (TM) SYSTEM	457	sack	13.2	1.67		8	8.04	
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
4	NeoCem NT1	NeoCem TM	1140	sack	13.2	2.04		8	9.79	
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
5	Displacement	Displacement	392	bbl	8.33			10		
Cement Left In Pipe		Amount	42 ft		Reason			Shoe Joint		
Mix Water:		pH 7	Mix Water Chloride:			0 ppm		Mix Water Temperature:		87 °F
Cement Temperature:		87 °F	Plug Displaced by:			8.33 lb/gal		Disp. Temperature:		87 °F
Plug Bumped?		Yes	Bump Pressure:			2100 psi		Floats Held?		Yes
Cement Returns:		0 bbl	Returns Density:			9.5 lb/gal		Returns Temperature:		
Comment FCP-2100 PSI THEN TOOK PRESSURE UP TO 2500 PSI. HOLD FOR 5 MINUTES AS PER CO. MAN. 4.5 BBLS BACK WHEN CHECKED FLOATS. GOT INTERFACE BACK @380 BBLS INTO DISPLACEMENT. DIDN'T GET GOOD SPACER BACK. TOCC-2411' TOLC-3440' TOTC-6773'										

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Comb Pump Total (bbl)	Comments
Event	1	Call Out	Call Out	11/14/2019	19:00:00	USER					HES CREW MEMBERS WERE CALLED OUT BY SERVICE COORDINATOR FOR AN ON LOCATION TIME OF 0100
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	11/14/2019	21:00:00	USER					MET WITH ALL HES CREW MEMBERS AND DISCUSSED DIRECTIONS, NIGHT TIME DRIVING AND FOLLOWING DISTANCES.
Event	3	Depart Shop for Location	Depart Shop for Location	11/14/2019	21:30:00	USER					CREW DEPARTED YARD FOR LOCATION.
Event	4	Arrive At Loc	Arrive At Loc	11/14/2019	23:00:00	USER					ARRIVED AT LOCATION EARLY. PERFORMED HAZARD HUNT AND TALKED TO CO. MAN. WAS NOT READY FOR US TO SPOT YET. GOT NUMBERS. OH-8.5" TD-16936' TP-16924' 5.5" 17#. SHOE-16876' SC-1954' 9 5/8" 36#. TVD-6850' MUD-9.5#. WATER-- 87 DEGREES, CHLORIDES-0, PH-7.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	11/15/2019	05:00:00	USER					MET WITH ALL HES CREW MEMBERS AND DISCUSSED SWINGS, TEAM LIFTS AND PINCH POINTS.
Event	6	Pre-Job Safety Meeting	Pre-Job Safety Meeting	11/15/2019	07:30:00	USER	3.00	0.00	0.00	0.00	MET WITH ALL HES CREW AND RIG CREW MEMBERS. DISCUSSED EMERGENCY

											PROTOCOL, JOB PROCEDURE AND PRESSURES.
Event	7	Start Job	Start Job	11/15/2019	08:03:17	COM5	5.00	7.51	0.00	0.00	FILLED LINES WITH 3 BBLS OF FRESH WATER. 3 BPM, 150 PSI.
Event	8	Test Lines	Test Lines	11/15/2019	08:05:16	COM5	173.00	8.94	0.00	3.10	PERFORMED A 500 PSI KICKOUT TEST (1156 PSI). THEN PERFORMED A 5TH GEAR STALL OUT (1891 PSI). THEN WENT UP TO 4800 PSI PRESSURE TEST.
Event	9	Drop Bottom Plug	Drop Bottom Plug	11/15/2019	08:20:00	USER	2161.00	8.81	0.00	5.20	CO. MAN DROPPED HALLIBURTON 5.5" BOTTOM PLUG 1. ADAM COVINGTON WITNESSED.
Event	10	Pump Spacer 1	Pump Spacer 1	11/15/2019	08:21:57	COM5	27.00	8.68	0.00	5.20	PUMPED 120 BBLS OF 11.5#, 3.87y, 24.5wr TUNED PRIME SPACER AT 6 BPM, 377 PSI. ADDED 20 GALLONS OF D-AIR ON THE FLY.
Event	11	Check Weight	Check Weight	11/15/2019	08:25:03	COM5	377.00	11.56	5.80	16.80	USED PRESSURIZED MUD SCALES TO WEIGH UP SPACER. SPACER WEIGHED UP AT 11.5#.
Event	12	Drop Bottom Plug	Drop Bottom Plug	11/15/2019	08:44:18	COM5	201.00	11.52	6.00	126.50	CO. MAN DROPPED HALLIBURTON 5.5" 2ND BOTTOM PLUG. ADAM COVINGTON WITNESSED.
Event	13	Pump Lead Cement	Pump Cap Cement	11/15/2019	08:45:33	COM5	193.00	11.45	6.00	133.90	PUMPED 42 BBLS (140 SKS) OF 13.2#, 1.67y, 8.03wr CAP LEAD CEMENT AT 8 BPM, 854 PSI. CALCULATED MIXED GALLONS 1,124 G/ ACTUAL 1,010 G.

Event	14	Pump Lead Cement	Pump Lead Cement	11/15/2019	08:54:43	COM5	524.00	13.04	8.00	183.00	PUMPED 136 BBLS (457 SKS) OF 13.2#, 1.67y, 8.04wr ELASTICEM LEAD CEMENT AT 8 BPM, 650 PSI. CALCULATED MIX GALLONS 3,674 G/ ACTUAL 3,350 G.
Event	15	Check Weight	Check Weight	11/15/2019	09:06:31	COM5	660.00	13.30	7.90	276.60	USED PRESSURIZED MUD SCALES TO WEIGH UP CEMENT. CEMENT WEIGHED UP AT 13.3#.
Event	16	Pump Tail Cement	Pump Tail Cement	11/15/2019	09:13:13	COM5	576.00	12.94	8.00	329.70	PUMPED 414 BBLS (1140 SKS) OF 13.2#, 2.04y, 9.79wr NEOCEM TAIL CEMENT AT 8 BPM, 576 PSI. CALCULATED MIXED GALLONS 11,160 G/ ACTUAL 10,780 G.
Event	17	Check Weight	Check Weight	11/15/2019	09:16:11	COM5	767.00	13.16	7.80	353.10	USED PRESSURIZED MUD SCALES TO WEIGH UP CEMENT. CEMENT WEIGHED UP AT 13.1#.
Event	18	Check Weight	Check Weight	11/15/2019	09:27:54	COM5	749.00	13.14	7.80	444.80	USED PRESSURIZED MUD SCALES TO WEIGH UP CEMENT. CEMENT WEIGHED UP AT 13.1#.
Event	19	Check Weight	Check Weight	11/15/2019	09:51:12	COM5	784.00	13.24	7.80	626.90	USED PRESSURIZED MUD SCALES TO WEIGH UP CEMENT. CEMENT WEIGHED UP AT 13.2#.
Event	20	Shutdown	Shutdown	11/15/2019	10:10:56	COM5	73.00	13.01	0.00	759.30	SHUTDOWN TO BLOW LINES TO TANK, WASH UP PUMPS AND LINES AND TO DROP TOP PLUG.
Event	21	Drop Top Plug	Drop Top Plug	11/15/2019	10:20:22	COM5	47.00	1.64	0.00	773.60	CO. MAN DROPPED 5.5" HALLIBURTON TOP PLUG. ADAM COVINGTON WITNESSED.

Event	22	Pump Displacement	Pump Displacement	11/15/2019	10:20:26	COM5	37.00	6.69	0.00	773.60	PUMPED 392 BBLS OF FRESH WATER DISPLACEMENT. FIRST 20 BBLS HAD 10 GALLONS OF MMCR DISPERSED. THEN DISPLACEMENT UP TO 300 BBLS GONE HAD 3 LBS OF BE-3 DROPPED INTO TANKS. STARTED OFF AT 9.5 BPM, 228 PSI.
Event	23	Bump Plug	Bump Plug	11/15/2019	11:13:28	COM5	2456.00	8.19	0.00	1180.10	SLOWED DOWN AT 360 BBLS AWAY TO 3 BPM. BUMPED PLUG AT 3 BPM, FCP-2100 PSI THEN TOOK PRESSURE UP TO 2500 PSI. HOLD FOR 5 MINUTES AS PER CO. MAN.
Event	24	Other	Check Floats	11/15/2019	11:18:16	COM5	2516.00	8.17	0.00	1180.10	CHECKED FLOATS. FLOW STOPPED AFTER 4.5 BBLS BACK TO THE TRUCK. INDICATING THAT THE FLOATS HELD.
Event	25	End Job	End Job	11/15/2019	11:20:32	COM5	24.00	8.11	0.00	1180.10	GOT INTERFACE BACK @380 BBLS INTO DISPLACEMENT. DIDN'T GET GOOD SPACER BACK. TOCC-2411' TOLC-3440' TOTC-6773'.
Event	26	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	11/15/2019	11:30:00	USER					MET WITH HES CREW MEMBERS, DISCUSSED TEAM LIFTS, PINCH POINTS AND WALKING SURFACES.
Event	27	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/15/2019	12:45:00	USER					MET WITH HES CREW AND DISCUSSED HOS, DIRECTIONS AND FOLLOWING DISTANCES.
Event	28	Depart Location	Depart Location	11/15/2019	13:00:00	USER					JOB COMPLETED SAFELY BY ADAM COVINGTON AND

CREW. THANKS FOR
CHOOSING HALLIBURTON.

3.0 Attachments

3.1 Wells Ranch State AA32-783-Custom Results.png

