

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 3919199		Quote #: 0022709615		Sales Order #: 0906422124					
Customer: NOBLE ENERGY INC-EBUS				Customer Rep: JIM TURNER							
Well Name: GUTTERSEN			Well #: D35-780			API/UWI #: 05-123-48588-00					
Field: WATTENBERG		City (SAP): KEENESBURG		County/Parish: WELD		State: COLORADO					
Legal Description: SE SW-23-3N-64W-817FSL-2014FWL											
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: Nikolaus Kornafel							
Job											
Formation Name											
Formation Depth (MD)		Top		Bottom							
Form Type				BHST							
Job depth MD		17567ft		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	1933	0	0	
Casing		5.5	4.892	17			0	17567	0	0	
Open Hole Section			8.5				1933	17587	0	6859	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	5.5	1		17567		Top Plug	5.5	1	HES		
Float Shoe	5.5					Bottom Plug	5.5	2	HES		
Float Collar	5.5	1		17525							
Insert Float	5.5					Plug Container	5.5	1	HES		
Stage Tool	5.5					Centralizers	5.5		Summit		
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	Spacer	SBM FDP-C1337-18 CEMENT SPACER SYS			120	bbl	11.5	3.87	24.5	7	4,251
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	Cap Cement	ELASTICEM (TM) SYSTEM			140	sack	13.2	1.65	8.4	7	1,176

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	Lead Cement	ELASTICEM (TM) SYSTEM	493	sack	13.2	1.67	8.05	8	3,969	
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	Tail Cement	NeoCem TM	1174	sack	13.2	2.04	9.79	8	11,493	
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	407	bbl	8.33			10		
Cement Left In Pipe		Amount	42 ft		Reason			Shoe Joint		
Mix Water:		pH 6.9	Mix Water Chloride:			0 ppm		Mix Water Temperature:		69 °F
Cement Temperature:		N/A	Plug Displaced by:			8.33 lb/gal		Disp. Temperature:		69 °F
Plug Bumped?		Yes	Bump Pressure:			2041 PSI		Floats Held?		Yes
Cement Returns:		0 bbl	Returns Density:			N/A		Returns Temperature:		N/A
Comment PUMPED 120 BARRELS OF 11.5 LB/GAL TUNED SPACER WITH 40 GAL D-AIR THEN DROPPED THE BOTTOM PLUG, THEN PUMPED 42BBLS OF CAP CEMENT FOLLOWED BY PUMPED 147 BBLS OF LEAD CEMENT FOLLOWED BY 427 BBLS OF TAIL CEMENT. SHUTDOWN TO WASH PUMPS AND LINES THEN DROPPED THE TOP PLUG AND DISPLACED WITH 407 BBLS OF FRESH WATER. BUMPED THE PLUG AT 2,041 PSI AND BROUGHT PRESSURE TO 2,760 PSI FOR A 5 MIN CASING TEST. BLEED OFF PRESSURE TO CHECK FLOATS AND FLOATS HELD. 5 BBLS BACK.										

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press <i>(psi)</i>	Comb Pump Rate <i>(bbl/min)</i>	DH Density <i>(ppg)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	4/10/2020	09:00:00	USER					CREW CALLED OUT AT 09:00, REQUESTED ON LOCATION 16:00. CREW PICKED UP CEMENT, CHEMICALS, AND PLUG CONTAINER FROM FT. LUPTON, CO. BULK 660 11764054, BULK 660 10867521, AND PUMP 11645460.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	4/10/2020	12:55:00	USER					CREW DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Yard	Crew Leave Yard	4/10/2020	13:00:00	USER					STARTED JOURNEY MANAGEMENT.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	4/10/2020	14:00:00	USER					END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING- 9.625" 36 LB/FT @ 1,933, 5.5" CASING: 17 LB/FT TOTAL 17,567', 8.5 OH HOLE 17,587' SHOE TRAC- 42', TVD- 6,859'. PUMP FRESH WATER DISPLACEMENT 407 BBLs. CASING LANDED @ 17:30 4/10/2020. RIG CIRCULATED BOTTOMS UP.

Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	4/10/2020	16:30:00	USER						HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP, AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	4/10/2020	16:45:00	USER						CREW STAGED EQUIPMENT, RIGGED UP BULK, IRON, AND WATER HOSES TO PERFORM JOB.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	4/10/2020	17:30:00	USER						SAFETY MEETING WITH HALLIBURTON, AND RIG PERSONNEL. CREW COMMUNICATED POTENTIAL SAFETY HAZARDS, AND JOB DETAILS.
Event	8	Start Job	Start Job	4/10/2020	19:52:40	COM11	0.00	0.00	8.56	0.00		BEGIN RECORDING JOB DATA.
Event	9	Test Lines	Test Lines	4/10/2020	19:55:54	COM11	154.00	0.00	8.33	3.60		PRESSURE TESTED IRON TO 5,000 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 950 PSI, 5TH GEAR STALL OUT @ 2,200 PSI. HALLIBURTON IRON HELD PRESSURE WITH NO LEAKS. PRESSURE TESTED THE RIGS STAND PIPE TO 2,500 PSI, PRESSURE HELD WITH NO LEAKS
Event	10	Drop Bottom Plug	Drop Bottom Plug	4/10/2020	20:03:08	COM11	16.00	0.00	8.32	5.10		LOADED THE BOTTOM PLUG INTO THE CASING

Event	11	Pump Spacer 1	Pump Spacer 1	4/10/2020	20:03:11	COM11	17.00	0.00	8.32	5.10	PUMP 120 BBLS OF SPACER @ 11.5 LB/GAL, 3.87 FT3/SK, 24.5 GAL/SK. 40 GALLONS OF D-AIR ADDED TO THE SLURRY ON THE FLY. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 6.5 BBLS/MIN @ 407 PSI.
Event	12	Check Weight	Check Weight	4/10/2020	20:10:57	COM11	482.00	6.20	11.58	12.20	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	13	Check Weight	Check Weight	4/10/2020	20:22:03	COM11	343.00	6.80	11.57	85.20	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	14	Shutdown	Shutdown	4/10/2020	20:28:57	COM11	145.00	0.00	12.05	131.20	SHUTDOWN PUMPS AFTER SPACER IS PUMPED.
Event	15	Drop Bottom Plug	Drop Bottom Plug	4/10/2020	20:29:17	COM11	58.00	0.00	11.98	131.20	BOTTOM PLUG WAS LOADED INTO THE CASING
Event	16	Pump Cement	Pump Cement	4/10/2020	20:31:23	COM11	41.00	0.00	11.97	131.20	PUMPED 140 SKS OF ELASTICEM LEAD CEMENT @ 13.2 LB/GAL, 1.65 FT3/SK, 8.4 GAL/SK. TOC @ 2,536. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 7 BBLS/MIN @ 425 PSI.
Event	17	Check Weight	Check Weight	4/10/2020	20:35:20	COM11	390.00	6.70	13.40	5.70	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	18	Pump Lead Cement	Pump Lead Cement	4/10/2020	20:40:15	COM11	418.00	6.70	13.14	38.80	PUMPED 493 SKS OF ELASTICEM LEAD CEMENT @ 13.2 LB/GAL, 1.67 FT3/SK, 8.04 GAL/SK. TOL @ 3,544. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 8 BBLS/MIN @ 518 PSI.

Event	19	Check Weight	Check Weight	4/10/2020	20:41:06	COM11	421.00	6.80	13.18	5.70	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	20	Pump Tail Cement	Pump Tail Cement	4/10/2020	21:06:28	COM11	279.00	4.00	13.25	0.00	PUMPED 1174 SKS OF NEOCEM TAIL CEMENT @ 13.2 LB/GAL, 2.04 FT3/SK, 9.79 GAL/SK. TOT CALCULATED @ 7,138'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 8 BBLS/MIN @ 630 PSI.
Event	21	Check Weight	Check Weight	4/10/2020	21:07:24	COM11	502.00	6.70	13.25	5.80	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	22	Shutdown	Shutdown	4/10/2020	21:11:37	USER	53.00	0.00	13.19	19.20	SHUTDOWN TO REPLACE CHIKSAN ON STAND PIPE
Event	23	Check Weight	Check Weight	4/10/2020	21:36:35	COM11	605.00	7.70	13.17	151.20	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	24	Check Weight	Check Weight	4/10/2020	21:52:46	COM11	586.00	7.70	13.18	275.90	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	25	Shutdown	Shutdown	4/10/2020	22:21:28	COM11	135.00	0.00	13.26	469.60	SHUTDOWN AFTER CEMENT IS PUMPED
Event	26	Start Job	Start Job	4/10/2020	22:28:39	COM11	6.00	0.00	8.12	0.00	ELITE 8474 WAS TIED IN AND USED TO PUMP DISPLACEMENT
Event	27	Test Lines	Test Lines	4/10/2020	22:31:30	COM11	16.00	0.00	8.23	0.10	IRON WAS PRESSURE TESTED TO 5,000 PSI AND PRESSURE HELD WITH NO LEAKS
Event	28	Drop Top Plug	Drop Top Plug	4/10/2020	22:33:52	COM11	16.00	0.00	8.21	0.20	TOP PLUG WAS LOADED INTO THE CASING

Event	29	Pump Displacement	Pump Displacement	4/10/2020	22:33:56	COM11	13.00	0.00	8.22	0.20	BEGIN CALCULATED DISPLACEMENT OF 407 BBLS WITH FRESH WATER. 10 GAL OF MMCR IN THE FIRST 20 BBLS AND 6 LBS OF BE3S THROUGHOUT THE REST.
Event	30	Bump Plug	Bump Plug	4/10/2020	23:24:43	COM11	2569.00	0.00	8.21	417.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. 2,041 PSI PRESSURED UP TO 2,760 PSI AND HELD FOR A 5 MINUTE TEST
Event	31	Other	Other	4/10/2020	23:29:33	COM11	22.00	0.00	8.20	417.00	RELEASED PRESSURE, FLOATS HELD, 5 BBLS BACK.
Event	32	End Job	End Job	4/10/2020	23:29:59	COM11	7.00	0.00	8.19	0.00	STOP RECORDING JOB DATA.
Event	33	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	4/10/2020	23:35:00	USER					DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	34	Rig-Down Completed	Rig-Down Completed	4/11/2020	01:00:00	USER					ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	35	Safety Meeting - Departing Location	Safety Meeting - Departing Location	4/11/2020	01:30:00	USER					CREW DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.

3.0 Attachments

3.1 NOBLE GUTTERSEN D35-780-Custom Results.png

