

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 3924008		Quote #:		Sales Order #: 0905819455					
Customer: NOBLE ENERGY INC-EBUS				Customer Rep: Thomas Charvat							
Well Name: GUTTERSEN			Well #: D23-711		API/UWI #: 05-123-48845-00						
Field: WATTENBERG		City (SAP): KEENESBURG		County/Parish: WELD		State: COLORADO					
Legal Description: SW SE-23-3N-64W-761FSL-1399FEL											
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: Prince Perez							
Job											
Formation Depth (MD)		Top 0'		Bottom		17,757'					
Job depth MD		17740ft		Job Depth TVD		7,400					
Water Depth				Wk Ht Above Floor		5'					
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	1933	
Casing		5.5	4.892	17			0	17740	0	7400	
Open Hole Section			8.5				1933	17757	1933	7400	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	5.5	1		17740		Top Plug	5.5	1	HES		
Float Shoe	5.5					Bottom Plug	5.5	2	HES		
Float Collar	5.5	1		17,694		SSR plug set	5.5				
Insert Float	5.5					Plug Container	5.5				
Stage Tool	5.5					Centralizers	5.5	114			
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	Tuned Spacer III			120	bbl	11.5	3.79	23.5	5.5	4,178

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comments
Event	1	Call Out	Call Out	7/8/2019	11:00:00	USER	CREW CALLED OUT AT 11:00, REQUESTED ON LOCATION 18:00. CREW PICKED UP CEMENT, CHEMICALS, AND PLUG CONTAINER FROM FT. LUPTON, CO. BULK 660, 10867098, 10867431, 10867521, AND PUMP 11189145.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/8/2019	16:50:00	USER	CREW DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Shop	Crew Leave Shop	7/8/2019	17:00:00	USER	STARTED JOURNEY MANAGEMENT.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	7/8/2019	18:00:00	USER	END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING- 9/58" 36 LB/FT @ 1,933.3', 5.5" CASING: 17 LB/FT TOTAL 17,739.8', 8 1/2" HOLE, TD 17,757', 46' SHOE TRAC, TVD- 7,400'. PUMP FRESH WATER DISPLACEMENT. CASING LANDED @ 19:00 7/8/2019.

Event	5	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	7/8/2019	18:10:00	USER	HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	7/8/2019	18:20:00	USER	RIG UP BULK AND MIXING EQUIPMENT.
Event	7	Rig-Up Completed	Rig-Up Completed	7/8/2019	19:50:00	USER	
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	7/8/2019	20:00:00	USER	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	9	Start Job	Start Job	7/8/2019	20:46:08	COM4	BEGIN RECORDING JOB DATA.
Event	10	Test Lines	Test Lines	7/8/2019	20:51:12	COM4	PRESSURE TESTED IRON TO 4,700 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1,100 PSI, 5TH GEAR STALL OUT @ 2,050 PSI. 4,700 PRESSURE TEST KICKED OUT @ 4,600 PSI
Event	11	Test Lines	Test Lines	7/8/2019	20:56:43	COM4	TESTED IBOP TO 3,000 PSI. KICKED OUT @ 2,830 PSI.
Event	12	Drop Bottom Plug	Drop Bottom Plug	7/8/2019	21:01:03	COM4	LOADED BY THE COMPANY MAN.

Event	13	Pump Spacer 1	Pump Spacer 1	7/8/2019	21:02:10	COM4	PUMP 120 BBLS OF TUNED SPACER III @ 11.5 LB/GAL, 3.79 CUFT/SK, 23.5 GALL/SK. 20 GALS D-AIR, 70 GALLONS OF DUAL B, 70 GALLONS OF MUSOL A. HOS CALCULATED @ 2,465.1'. 6 BBLS CALCULATED TO RETURN TO SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 5.5 BBLS/MIN @ 160 PSI.
Event	14	Check Weight	Check Weight	7/8/2019	21:17:43	COM4	
Event	15	Drop Bottom Plug	Drop Bottom Plug	7/8/2019	21:26:22	COM4	LOADED BY THE COMPANY MAN.
Event	16	Pump Cap Cement	Pump Cap Cement	7/8/2019	21:30:07	COM4	PUMPED 140 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.68 FT3/SK, 8.04 GAL/SK. 41.9 BBLS. HOC CALCULATED @ 1,026.7'. TOC CALCULATED @ 2,465.1'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 8 BBLS/MIN @ 450 PSI
Event	17	Check Weight	Check Weight	7/8/2019	21:32:28	COM4	
Event	18	Pump Lead Cement	Pump Lead Cement	7/8/2019	21:40:07	COM4	PUMPED 533 SKS OF ELASTICEM W/SCBL @ 13.2 LB/GAL, 1.68 FT3/SK, 8.06 GAL/SK. 159.5 BBLS. HOL CALCULATED @ 3,908.8', TOL CALCULATED @ 3,491.8'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 7 BBLS/MIN @ 600 PSI
Event	19	Check Weight	Check Weight	7/8/2019	21:55:15	COM4	

PUMP 1,164 SKS OF NEOCEM @ 13.2 LB/GAL, 2.04 FT3/SK, 9.75 GAL/SK, 422.9 BBLS. HOT CALCULATED @ 10,339.2', TOT CALCULATED @ 7,400.6'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 8 BBLS/MIN @ 610 PSI.

Event	20	Pump Tail Cement	Pump Tail Cement	7/8/2019	22:10:01	COM4	
Event	21	Check Weight	Check Weight	7/8/2019	22:11:41	COM4	
Event	22	Check Weight	Check Weight	7/8/2019	22:41:31	COM4	
Event	23	Check Weight	Check Weight	7/8/2019	22:54:48	COM4	
Event	24	Shutdown	Shutdown	7/8/2019	23:06:56	COM4	SHUTDOWN TO WASH LINES.
Event	25	Drop Top Plug	Drop Top Plug	7/8/2019	23:20:36	COM4	LOADED AND DROPPED BY THE COMPANY MAN.
Event	26	Pump Displacement	Pump Displacement	7/8/2019	23:20:39	COM4	BEGIN CALCULATED DISPLACEMENT OF 410.5 BBLS WITH FRESH WATER. MMCR IN THE FIRST 20 BBLS AND ALDACIDE THROUGHOUT. PUMP RATE 10 BPM @ 2,500 PSI. CAUGHT CEMENT @ 40 BBLS INTO DISPLACEMENT. NO SPACER TO SURFACE. SLOW RATE TO 3 BPM @ 390 BBLS INTO DISPLACEMENT.
Event	27	Bump Plug	Bump Plug	7/9/2019	00:08:37	COM4	PLUG BUMPED AT CALCULATED DISPLACEMENT. 2,022 PSI PRESSURED 500 PSI OVER BUMP. SHUTDOWN FOR 5 MINUTES.

Event	28	Check Floats	Check Floats	7/9/2019	00:14:23	USER	RELEASED PRESSURE, FLOATS HELD, 5 BBLS BACK.
Event	29	End Job	End Job	7/9/2019	00:16:36	COM4	STOP RECORDING JOB DATA.
Event	30	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	7/9/2019	00:20:00	USER	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	31	Rig-Down Equipment	Rig-Down Equipment	7/9/2019	00:30:00	USER	RIG DOWN BULK AND MIXING EQUIPMENT.
Event	32	Rig-Down Completed	Rig-Down Completed	7/9/2019	01:50:00	USER	
Event	33	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/9/2019	02:00:00	USER	CREW DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	34	Crew Leave Location	Crew Leave Location	7/9/2019	02:10:00	USER	THANK YOU FOR USING HALLIBURTON – PRINCE PEREZ AND CREW.

3.0 Attachments

3.1 Job Chart



