

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 3924719		Quote #:		Sales Order #: 0906784679				
Customer: NOBLE ENERGY INC-EBUS				Customer Rep: John Drahota						
Well Name: BECKER			Well #: D17-725			API/UWI #: 05-123-48861-00				
Field: WATTENBERG		City (SAP): KERSEY		County/Parish: WELD		State: COLORADO				
Legal Description: NW SE-5-3N-64W-1815FSL-1314FEL										
Contractor: H & P DRLG				Rig/Platform Name/Num: H & P 517						
Job BOM: 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX41066				Srvc Supervisor: Nicholas Peterson						
Job										
Formation Name										
Formation Depth (MD)		Top			Bottom					
Form Type				BHST	220 degF					
Job depth MD		15,000'		Job Depth TVD	6,854'					
Water Depth				Wk Ht Above Floor	5'					
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	1932	0	1932
Casing	0	5.5	4.892	17			0	15000	0	6854
Open Hole Section			8.5				1932	15018	1932	6854
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Float Shoe	5.5	1	HES	14,998'		Top Plug	5.5	1	HES	
Float Collar	5.5	1	HES	14,952.2		Bottom Plug	5.5	2	HES	
RSI Tool	5.5	1	HES	14,856'		Centralizers	5.5	178	Summit/HES	

Fluid Data									
Stage #: 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 PRIME CEMENT SPACER	80	bbl	11.5	3.87	24.46	6	2,839
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	ELASTICEM (TM) SYSTEM	140	sack	13.2	1.6	7.63	8	1,068
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	ELASTICEM (TM) SYSTEM	752	sack	13.2	1.67	8.03	8	6,039
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	NeoCem TM	867	sack	13.2	2.04	9.79	8	8,488
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	Treated Water	347	bbl	8.33			10	
Cement Left In Pipe									
Amount		48 ft			Reason			Shoe Joint	
Mix Water:		pH 7.0		Mix Water Chloride:		200 ppm		Mix Water Temperature:	
								65 °F	
Cement Temperature:				Plug Displaced by:		8.33 lb/gal		Disp. Temperature:	
								45 °F	
Plug Bumped?		Yes/No		Bump Pressure:		2,680 psi		Floats Held?	
								Yes	
Spacer Returns:		5 bbls		Returns Density:		11.5 lb/gal		Returns Temperature:	
Comment: Pumped 80 bbls Spacer, 39 bbls Cap, 224 bbls Lead, 315 bbls Tail. Pumped 347 bbls Displacement with treated water MMCR in first 20 bbls. 5 bbls spacer back to surface @ 342 bbls into displacement. Interface @ 320 bbls away ES meter reading 280-320 kicked over @ 170 on ES meter/ spacer flowing over shaker screens. Bumped plug @ 2,680 psi took 500 over held for 7 mins. Floats held with 5 bbls back to pump.									

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Dwnhole Density (ppg)	Cmb Pump Rate (bbl/min)	Pump A Pressure (psi)	Cmb Stg Total (bbl)	Comments
Event	1	Spacer Returns to Surface	Call Out	10/27/2020	08:30:00	USER					CREW CALLED OUT AT 08:30, REQUESTED ON LOCATION 16:00. CREW PICKED UP CEMENT, CHEMICALS, AND PLUG CONTAINER FROM FT. LUPTON, CO. BULK 660 10866493 AND PUMP 11368474.
Event	2	Safety Meeting	Safety Meeting	10/27/2020	13:00:00	USER					CREW DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Yard	Crew Leave Yard	10/27/2020	13:30:00	USER					STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Arrive At Loc	10/27/2020	14:30:00	USER					END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING- 9.625" 36 LB/FT @ 1,932', 5.5" CASING: 17 LB/FT TOTAL 15,000', TD 15,018', OH 8.5", SHOE TRAC 48', TVD- 6,854', 9.8 LB/GAL WF, HALLIBURTON FLOATS, 93 SUMMIT CENTRALIZERS, 85 HES CENTRILIZERS IN VERTICAL SECTION. HES RSI SLEEVE@ 14,856'.
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	10/27/2020	16:45:00	USER					HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP, AND WEATHER. DISCUSSED. WATCHING HAND PLACEMENT, PINCH POINTS AND USING PROPER PPE IMPACT GLOVES. DISCUSSED SLIPS DUE TO SNOW/ICY

											CONDITIONS, SLOWING DOWN, USING GOOD COMMUNICATION AND ICE CLEATS IF NECESSARY.
Event	6	Rig-Up Equipment	Rig-Up Equipment	10/27/2020	17:00:00	USER					CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON AND WATER HOSES TO PERFORM JOB.
Event	7	Rig-Up Completed	Rig-Up Completed	10/27/2020	18:00:00	USER					WAITED ON RIG TO FINISH CIRCULATING WELL PRIOR TO CEMENT JOB. RIG CIRCULATED BOTTOMS UP, 803 PSI @ 10 BBLS/MIN.
Event	8	Safety Meeting - Pre Job	Safety Meeting - Pre Job	10/27/2020	19:15:00	USER					SAFETY MEETING WITH HALLIBURTON, AND RIG PERSONNEL. CREW COMMUNICATED POTENTIAL SAFETY HAZARDS, AND JOB DETAILS.
Event	9	Start Job	Start Job	10/27/2020	19:37:16	NONE					BEGIN RECORDING JOB DATA.
Event	10	Drop Bottom Plug	Drop Bottom Plug	10/27/2020	19:38:31	NONE					BOTTOM PLUG LOADED IN CASING BY JOHN DRAHOTA.
Event	11	Test Lines	Test Lines	10/27/2020	19:41:12	NONE					PRESSURE TESTED IRON TO 4,500 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1,470 PSI, 5TH GEAR STALL OUT @ 1,700 PSI.
Event	12	Test Lines	Test Lines	10/27/2020	19:46:06	NONE					TESTED RIGS IBOP @ 2,000 PSI.
Event	13	Pump Spacer 1	Pump Spacer 1	10/27/2020	19:48:07	NONE	11.51	6.00	379.58	80.00	PUMP 80 BBLS OF TUNED PRIME @ 11.5 LB/GAL, 3.87 FT3/SK, 24.46 GAL/SK. INJECTED 30 GALLONS D-AIR ON THE FLY, DRY SURFACTANTS MIXED IN WITH BLEND. CALCULATED 32 BBLS SPACER TO SURFACE, HEIGHT OF SPACER @ 1,008.61'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 6 BBLS/MIN @ 430 PSI. ESTIMATED HEIGHT OF

SPACER 1,565.76' BASED ON RETURNS TO SURFACE.										
Event	14	Drop Bottom Plug	Drop Bottom Plug	10/27/2020	20:04:26	NONE				BOTTOM PLUG LOADED IN CASING BY JOHN DRAHOTA.
Event	15	Pump Cement	Pump Cement	10/27/2020	20:07:15	NONE	13.22	8.00	632.91	40.00
PUMPED 140 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.6 FT3/SK, 7.63 GAL/SK. 39.89 BBLS, HOC CALCULATED @ 832.78', TOC CALCULATED @ 1,008.61'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 6 BBLS/MIN @ 680 PSI. ESTIMATED TOP OF CEMENT 1,565.76' BASED ON SPACER RETURNS TO SURFACE.										
Event	16	Pump Lead Cement	Pump Lead Cement	10/27/2020	20:14:22	NONE	13.22	8.5	993.94	224.00
PUMPED 752 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.67 FT3/SK, 8.03 GAL/SK. 223.66 BBLS, HOL CALCULATED @ 5,66.21', TOL CALCULATED @ 1,841.39'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 8.5 BBLS/MIN @ 990 PSI. ESTIMATED TOP OF LEAD 2,398.54' BASED ON SPACER RETURNS TO SURFACE.										
Event	17	Pump Tail Cement	Pump Tail Cement	10/27/2020	20:41:12	USER	13.21	8.55	1106.44	315.01
PUMP 867 SKS OF NEOCEM @ 13.2 LB/GAL, 2.04 FT3/SK, 9.79 GAL/SK, 315 BBLS. HOT CALCULATED @ 7,692.40', TOT CALCULATED @ 7,307.6'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 8.5 BBLS/MIN @ 1,003 PSI. ESTIMATED TOP OF TAIL 7,864.75' BASED ON SPACER RETURNS TO SURFACE.										
Event	18	Clean Lines	Clean Lines	10/27/2020	21:19:31	NONE				
WASHED PUMPS AND LINES WITH 15 BBLS FRESH WATER PRIOR TO DROPPING TOP PLUG.										

Event	19	Drop Top Plug	Drop Top Plug	10/27/2020	21:27:26	NONE						BOTTOM PLUG LOADED IN CASING BY JOHN DRAHOTA.
Event	20	Pump Displacement	Pump Displacement	10/27/2020	21:29:24	NONE	8.34	10.00	2990.00	347.00		BEGIN CALCULATED DISPLACEMENT OF 347 BBLS WITH TREATED WATER. PUMPED THE FIRST 20 BBLS WITH MMCR, PUMPED REMAINDER WITH TREATED WATER. PUMP RATE 10 BBLS/MIN @ 2,800 PSI. SPACER TO SURFACE @ 342 BBLS AWAY.
Event	21	Displ Reached Cement	Displ Reached Cement	10/27/2020	21:32:42	USER	8.04	9.99	1259.05	25.23		CAUGHT CEMENT @ 26 BBLS INTO DISPLACEMENT.
Event	22	Spacer Returns to Surface	Spacer Returns to Surface	10/27/2020	22:09:17	USER	8.33	4.15	2686.20	332.69		SPACER TO SURFACE @ 342 BBLS INTO DISPLACEMENT. 5 BBLS OF SPACER TO SURFACE. STARTED TO SEE INTERFACE @ 320 BBLS AWAY.
Event	23	Bump Plug	Bump Plug	10/27/2020	22:10:55	NONE	8.33	0.00	3040.58	338.48		PLUG BUMPED AT CALCULATED DISPLACEMENT. 2,680 PSI PRESSURED 500 PSI OVER BUMP.
Event	24	Check Floats	Check Floats	10/27/2020	22:19:23	USER						RELEASED PRESSURE, FLOATS HELD WITH 5 BBLS BACK.
Event	25	End Job	End Job	10/27/2020	22:20:42	NONE						STOP RECORDING JOB DATA.
Event	26	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	10/27/2020	22:30:00	USER						DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES. WATCHING HAND PLACEMENT, PINCH POINTS AND USING PROPER PPE IMPACT GLOVES. DISCUSSED SLIPS DUE TO SNOW/ICY CONDITIONS, SLOWING DOWN, USING GOOD COMMUNICATION AND ICE CLEATS IF NECESSARY.
Event	27	Rig-Down Equipment	Rig-Down Equipment	10/27/2020	22:45:00	USER						RIG DOWN BULK AND MIXING EQUIPMENT.

Event	28	Rig-Down Completed	Rig-Down Completed	10/27/2020	23:30:00	USER	ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN. COMPRESSOR SKID TOPPED OFF WITH TREATED FUEL.
Event	29	Depart Location Safety Meeting	Depart Location Safety Meeting	10/28/2020	00:15:00	USER	CREW DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	30	Crew Leave Location	Crew Leave Location	10/28/2020	00:30:00	USER	THANK YOU FOR USING HALLIBURTON – NICK PETERSON AND CREW.

3.0 Attachments

3.1 Job Chart

