

## Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 3918989		Quote #:		Sales Order #: 0906410929				
Customer: NOBLE ENERGY INC-EBUS				Customer Rep: CHARLES						
Well Name: GUTTERSEN			Well #: D35-760		API/UWI #: 05-123-48592-00					
Field: WATTENBERG		City (SAP): KEENESBURG		County/Parish: WELD		State: COLORADO				
Legal Description: SE SW-23-3N-64W-817FSL-2089FWL										
Contractor: H & P DRLG				Rig/Platform Name/Num: H & P 517						
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HB31357				Srvc Supervisor: JOSHUA WASHBURN						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		17401ft		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	1934	0	0
Casing	0	5.5	4.892	17			0	17401	0	7074
Open Hole Section			8.5				1934	17411	1934	7074
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5			17401		Top Plug	5.5		HES	
Float Shoe	5.5					Bottom Plug	5.5		HES	
Float Collar	5.5					SSR plug set	5.5		HES	
Insert Float	5.5					Plug Container	5.5		HES	
Stage Tool	5.5					Centralizers	5.5		HES	
Fluid Data										
Stage/Plug #: 1										

## Cementing Job Summary

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	24.42	6	4249
0.10 gal/bbl		D-AIR 3000L, 5 GAL PAIL (101007444)							
1 lbm/bbl		FE-2, 2000 LB BAG - (1005549)							
3.50 lbm/bbl		SEM-94P, 35 LB SACK - (1023987)							
3.50 lbm/bbl		SEM-93P, 35 LB SACK - (1023977)							
145.2420 lbm/bbl		BARITE, BULK (100003681)							

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		sack	13.2	1.65	8.4	8	1,176
0.33 %		SCR-100, 1200 LB BAG - (1126328)							
8.40 Gal		FRESH WATER							

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		sack	13.2	1.67	8.05	8	3,896
0.18 %		SCR-100, 1200 LB BAG - (1126328)							
8.05 Gal		FRESH WATER							

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		sack	13.2	2.04	9.79	8	11,493
0.08 %		SCR-100, 1200 LB BAG - (1126328)							
0.08 %		FE-2, 2000 LB BAG - (1005549)							
9.79 Gal		FRESH WATER							

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	402.60	bbl	8.33				

Cement Left In Pipe		Amount	47 ft	Reason				Shoe Joint	

## *Cementing Job Summary*

Mix Water:	pH ##	Mix Water Chloride:	## ppm	Mix Water Temperature:	## °F °C
Cement Temperature:	## °F °C	Plug Displaced by:	## lb/gal kg/m3 XXXX	Disp. Temperature:	## °F °C
Plug Bumped?	Yes/No	Bump Pressure:	#### psi MPa	Floats Held?	Yes/No
Cement Returns:	## bbl m3	Returns Density:	## lb/gal kg/m3	Returns Temperature:	## °F °C
Comment					

## 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	3/30/2020	21:30:00	USER	CREW CALLED OUT, ON LOCATION TIME 03:30.
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	3/31/2020	00:45:00	USER	DISCUSS ROUTE AND HAZARDS
Event	3	Crew Leave Yard	Crew Leave Yard	3/31/2020	01:00:00	USER	CREW DEPART YARD
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	3/31/2020	02:00:00	USER	ARRIVE ON LOCATION, RIG RUNNING CASING UPON HES ARRIVAL, GOT NUMBERS. TD- 17,411 TP- 17,401.1 FC-17,353.5 TVD-7074 CSG- 5.5" 17# OPEN HOLE-8.5" PREV CSG- 9 5/8 36# 1934.1 MUD WEIGHT-10.3 PPG
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	3/31/2020	02:15:00	USER	DISCUSS LOCATION HAZARDS AND HOW TO MITIGATE THEM, TESTED WATER TANKS, PH-7 CHLORIDES-0 TEMP-65 DEGREES.
Event	6	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	3/31/2020	06:15:00	USER	DISCUSS HAZARDS AND WAYS TO MITIGATE THEM
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	3/31/2020	08:45:00	USER	PRE JOB SAFETY MEETING WITH RIG CREW AND CO REP
Event	8	Start Job	Start Job	3/31/2020	08:56:36	COM4	STARTED RECORDING DATA.
Event	9	Drop Bottom Plug	Drop Bottom Plug	3/31/2020	08:56:48	COM4	LAUNCHED 1ST BOTTOM PLUG.
Event	10	Test Lines	Test Lines	3/31/2020	08:59:46	COM4	TESTED LINES TO 4800PSI. TESTED IBOB TO 2000PSI.
Event	11	Pump Spacer 1	Pump Spacer 1	3/31/2020	09:07:09	COM4	MIXED AND PUMPED 174SKS, 120BBLs OF SPACER. 11.5PPG, 3.87 YIELD, 24.42 GAL/SK, PUMPED AT 6BPM, 600PSI. CALCULATED TOS TO SURFACE. 7BBLs TO SURFACE.
Event	12	Check Weight	Check Weight	3/31/2020	09:11:10	COM4	CHECKED WEIGHT WITH PRESSURIZED SCALE.
Event	13	Drop Bottom Plug	Drop Bottom Plug	3/31/2020	09:30:13	COM4	LAUNCHED 2ND BOTTOM PLUG.
Event	14	Pump Lead Cement	Pump Lead Cement	3/31/2020	09:30:37	COM4	MIXED AND PUMPED 140SKS, 41.14BBLs OF CAP CEMENT. 13.2PPG, 1.65 YIELD, 8.4 GAL/SK. PUMPED AT 8BPM, 850PSI. CALCULATED TOCC AT 2451FT.
Event	15	Check Weight	Check Weight	3/31/2020	09:38:20	COM4	CHECK WEIGHT WITH PRESSURIZED SCALE.

Event	16	Pump Cement	Pump Cement	3/31/2020	09:40:18	COM4	MIXED AND PUMPED 484SKS, 144BBLs OF LEAD CEMENT. 13.2PPG, 1.67 YIELD, 8.05 GAL/SK. PUMPED AT 8BPM, 770PS. CALCULATED TOLC AT 3455FT.
Event	17	Check Weight	Check Weight	3/31/2020	10:04:21	COM4	CHECK WEIGHT WITH PRESSURIZED SCALE.
Event	18	Pump Tail Cement	Pump Tail Cement	3/31/2020	10:09:37	COM4	MIXED AND PUMPED 1174 SKS, 426.54 BBLs OF TAIL CEMENT. 13.2 PPG, 2.04 YIELD, 9.79 GAL/SK, PUMPED AT 8 BPM, 1050 PSI. CALCULATED TOTC 6973.65
Event	19	Shutdown	Shutdown	3/31/2020	11:05:49	COM4	SHUTDOWN TO WASH PUMPS AND LINES.
Event	20	Drop Top Plug	Drop Top Plug	3/31/2020	11:14:18	COM4	LAUNCHED TOP PLUG.
Event	21	Pump Displacement	Pump Displacement	3/31/2020	11:14:22	COM4	PUMPED 402.60 BBLs OF FRESH WATER DISPLACEMENT, FIRST 20 BBLs WITH MMCR, AND 6 #'S OF BE-3 THROUGHOUT THE REST OF DISPLACEMENT. PUMPED AT 10 BPM, AT 2850 PSI. SAW INTERFACE RIGHT WHEN WE BUMPED THE PLUG.
Event	22	Bump Plug	Bump Plug	3/31/2020	12:03:50	COM4	BUMPED THE PLUG AT CALCULATED DISPLACEMENT, LAST RECIRCULATING PSI WAS 2225. K/O PUMPS AT 2680, AND THE PRESSURE LEVELED OUT AT 2850.
Event	23	Other	Other	3/31/2020	12:09:28	COM4	CHECKED FLOATS BACK TO THE PUMP. 5.5 BBLs RETURNED.
Event	24	End Job	End Job	3/31/2020	12:12:07	COM4	STOPPED RECORDING DATA.
Event	25	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	3/31/2020	12:15:00	USER	DISCUSS HAZARDS AND WAYS TO MITIGATE THEM
Event	26	Depart Location Safety Meeting	Depart Location Safety Meeting	3/31/2020	12:45:00	USER	DISCUSS HAZARDS AND ROUTE
Event	27	Crew Leave Location	Crew Leave Location	3/31/2020	13:30:00	USER	THANK YOU FOR USING HALLIBURTON, KYLE BATH AND CREW

## 3.0 Attachments

### 3.1 Job Chart

