

*The Road to Excellence Starts with Safety*

Sold To #: 345242	Ship To #: 3923834	Quote #:	Sales Order #: 0906508136
Customer: NOBLE ENERGY INC-EBUS		Customer Rep: Gary Stapleton	
Well Name: GUTTERSEN STATE		Well #: D35-790	API/UWI #: 05-123-48843-00
Field: WATTENBERG	City (SAP): KEENESBURG	County/Parish: WELD	State: COLORADO
Legal Description: SWSE-23-3N-64W-911FSL-1398FEL			
Contractor: H & P DRLG		Rig/Platform Name/Num: H & P 517	
Job BOM: 7523 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX41066		Srvc Supervisor: Nicholas Roles	

**Job**

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type			BHST 220 degF
Job depth MD	17430ft		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	1933
Casing		5.5	4.892	17			0	17430	0	6843
Open Hole Section			8.5				1933	17447	0	6843

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe					Top Plug	5.5	1	HES
Float Shoe	5.5			17430	Bottom Plug	5.5	2	HES
Float Collar	5.5			17382.5	SSR plug set			
Insert Float					Plug Container			
Stage Tool					Centralizers			

**Fluid Data**

Stage/Plug #: 1									
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /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		8	

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	1.65		6	8.4	
0.35 %		<b>SCR-100, 1200 LB BAG - (1126328)</b>								
8.40 Gal		<b>FRESH WATER</b>								
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	518	sack	13.2	1.67		9	8.05	
0.20 %		<b>SCR-100, 1200 LB BAG - (1126328)</b>								
8.05 Gal		<b>FRESH WATER</b>								
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	1144	sack	13.2	2.04		9	9.79	
0.08 %		<b>SCR-100, 1200 LB BAG - (1126328)</b>								
0.08 %		<b>FE-2, 2000 LB BAG - (1005549)</b>								
9.79 Gal		<b>FRESH WATER</b>								
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	403	bbl	8.33			10		
Cement Left In Pipe		Amount	42 ft			Reason			Shoe Joint	
Mix Water:		pH 07	Mix Water Chloride: 0 ppm			Mix Water Temperature: 65 °F				
Cement Temperature:		65 °F °C	Plug Displaced by: 8.33 lb/gal			Disp. Temperature: 65 °F				
Plug Bumped?		Yes	Bump Pressure: 2760 psi			Floats Held? Yes				
Cement Returns:		0 bbl	Returns Density:			Returns Temperature:				
<b>Comment</b> Got 6bbls spacer to surface. Started to see trace amount at end of displacement, based on spacer at surface estimated TOCap-2495', TOL-3500', TOT-7275'										

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Cmb Pump Rate <i>(bbl/min)</i>	Dwnhole Density <i>(ppg)</i>	Cmb Stg Total <i>(bbl)</i>	Pump A Pressure <i>(psi)</i>	Comments
Event	1	Pump Tail Cement	Call Out	5/19/2020	14:30:00	USER					Called out by Service Coordinator for O/L at 2100
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/19/2020	17:45:00	USER					Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	5/19/2020	18:00:00	USER					Journey Management prior to departure
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	5/19/2020	19:00:00	USER					Upon arrival met with company man to discuss job details and calculations, performed hazard hunt and site assessment.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	5/19/2020	19:15:00	USER					Discussed rigging up hazards and procedure according to HMS.
Event	6	Rig-Up Date/Time	Rig-Up Date/Time	5/19/2020	19:30:00	USER					Started rig up
Event	7	Rig-Up Completed	Rig-Up Completed	5/19/2020	20:30:00	USER					Rig up complete,
Event	8	Start Circulate or Reverse	Start Circulate or Reverse	5/19/2020	20:45:00	USER					Started mixing SCR-100 Retarder in 400bbl upright.
Event	9	Other	Other	5/19/2020	21:00:00	USER					Water test- PH-7, Chlor-0, Temp-65. Cement temp-65.
Event	10	Stop Circulate or Reverse	Stop Circulate or Reverse	5/19/2020	23:45:00	USER	0.00	8.41	0.00	-9.43	Finished mixing SCR-100, shut down 4x4.

Event	11	Pre-Job Safety Meeting	Pre-Job Safety Meeting	5/20/2020	00:00:00	USER	0.00	8.41	0.00	-7.80	Held safety meeting with all job associated personnel to discuss job procedure, hazards and stop work authority.
Event	12	Start Job	Start Job	5/20/2020	00:37:13	NONE	1.65	4.82	0.14	-9.62	TD-17447', TP-17429.7' 5.5" 17#, FC-17382.5', Alpha Sleeve- 17289', TVD-6843', SURF-1933' 9.625" 36#, OH-8.5" MUD-9.8#
Event	13	Drop Bottom Plug	Drop Bottom Plug	5/20/2020	00:37:30	NONE	2.77	8.35	0.67	2.01	Dropped by HES supervisor, witnessed by company man.
Event	14	Test Lines	Test Lines	5/20/2020	00:38:49	NONE	0.00	8.31	4.26	219.43	Pumped 5bbls fresh water to fill lines, closed 2" lo torc, performed 500psi k/o function test, followed with 5th gear stall at 1580psi, perform 4500psi test on line. Held pressure, no leaks. Bled off pressure, pumped 1bbl to ensure lines still full and closed valve. Proceeded to bring pressure to 2000psi on Kelly line, pressure stabilized and held with no leaks.
Event	15	Pump Spacer 1	Pump Spacer 1	5/20/2020	00:51:27	NONE	0.00	8.33	0.00	38.71	Pumped 120bbls Tuned Prime 11.5# 3.87y 24.42g/s with 20g D-Air at 8bpm 580psi, with SRC mix water.
Event	16	Check Weight	Check Weight	5/20/2020	00:52:49	USER	3.03	12.56	3.31	230.75	Weight verified with pressurized mud scales.
Event	17	Drop Bottom Plug	Drop Bottom Plug	5/20/2020	01:11:21	NONE	0.00	11.10	118.48	27.18	Dropped by HES supervisor, witnessed by company man.

Event	18	Pump Lead Cement	Pump Lead Cement	5/20/2020	01:11:28	NONE	0.00	11.11	0.00	26.95	Pumped 140sk or 41.7bbbls Elasticem w/o CBL 13.2# 1.65y 8.4g/s at 6bpm 530psi, with SRC mix water.
Event	19	Pump Cement	Pump Cement	5/20/2020	01:20:59	NONE	6.51	13.13	0.05	523.09	Pumped 518sk or 154bbbls Elasticem w/CBL 13.2# 1.67y 8.05g/s at 9bpm 550psi, with SRC mix water.
Event	20	Check Weight	Check Weight	5/20/2020	01:22:44	USER	6.47	13.23	11.45	553.29	Weight verified with pressurized mud scales.
Event	21	Pump Tail Cement	Pump Tail Cement	5/20/2020	01:43:43	USER	7.87	13.10	2.36	699.74	Pumped 1144sk or 416bbbls 13.2# 2.04y 9.79g/s Neocem at 9bpm 900psi, with fresh water.
Event	22	Check Weight	Check Weight	5/20/2020	01:54:45	USER	7.91	13.16	89.37	941.90	Weight verified with pressurized mud scales.
Event	23	Shutdown	Shutdown	5/20/2020	02:37:40	NONE	0.00	12.78	418.18	117.82	Shutdown, rig blew down iron to pit, swapped valves and washed up pump with 10bbbls fresh water until clean.
Event	24	Drop Top Plug	Drop Top Plug	5/20/2020	02:49:52	NONE	0.00	-0.56	435.11	-9.63	Dropped by HES supervisor, witnessed by company man.
Event	25	Pump Displacement	Pump Displacement	5/20/2020	02:49:57	NONE	0.00	-0.56	0.00	-8.96	Pumped 403bbbls production water with 10g MMCR in first 20bbbls.
Event	26	Bump Plug	Bump Plug	5/20/2020	03:34:00	USER	0.00	8.11	396.51	2691.89	Slowed down to 3bpm at 385bbbls away, final circulating pressure- 2232psi, Bump pressure- 2760psi.
Event	27	Other	Other	5/20/2020	03:39:22	NONE	0.00	8.09	396.51	2859.35	Released pressure and got 5bbbls fresh water to truck, floats held.

Event	28	End Job	End Job	5/20/2020	03:40:18	NONE	0.00	8.02	0.00	34.33	Got 6 bbls spacer to surface estimated TOCap-2495', TOL-3500', TOT-7275'
Event	29	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	5/20/2020	03:45:00	USER	0.00	8.04	0.00	-14.60	Discussed rigging down hazards and procedure according to HMS with all HES personnel
Event	30	Rig-Down Date/Time	Rig-Down Date/Time	5/20/2020	03:55:00	USER	4.72	0.48	49.85	3.54	Begin rig-down.
Event	31	Rig-Down Completed	Rig-Down Completed	5/20/2020	04:40:00	USER					All HES equipment rigged down, left water hoses and airlines rigged up.
Event	32	Safety Meeting - Departing Location	Safety Meeting - Departing Location	5/20/2020	04:45:00	USER					Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	33	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	5/20/2020	05:00:00	USER					Pre journey management prior to departure.

## 3.0 Attachments

### 3.1 Guttersen State D35-790-Custom Results.png

