

The Road to Excellence Starts with Safety

Sold To #: 345242	Ship To #: 3919038	Quote #:	Sales Order #: 0906088930
Customer: NOBLE ENERGY INC-EBUS		Customer Rep: DAVE	
Well Name: GUTTERSEN STATE		Well #: DD30-775	API/UWI #: 05-123-48664-00
Field: WATTENBERG	City (SAP): KEENESBURG	County/Parish: WELD	State: COLORADO
Legal Description: SE SW-30-3N-63W-450FSL-2538FWL			
Contractor: H & P DRLG		Rig/Platform Name/Num: H & P 321	
Job BOM: 7523 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA/HB31357		Srvc Supervisor: Lance Carpenter	

**Job**

<b>Formation Name</b>			
<b>Formation Depth (MD)</b>	<b>Top</b>		<b>Bottom</b>
<b>Form Type</b>			BHST 230 degF
<b>Job depth MD</b>	16845ft		<b>Job Depth TVD</b> 6750
<b>Water Depth</b>			<b>Wk Ht Above Floor</b> 4
<b>Perforation Depth (MD)</b>	<b>From</b>		<b>To</b>

**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	1929	0	1929
Casing		5.5	4.892	17			0	16845	0	6750
Open Hole Section			8.5				1930	16865		6750

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5				Top Plug	5.5	1	HES
Float Shoe	5.5				Bottom Plug	5.5	1	HES
Float Collar	5.5			16797.8	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										
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	24.5			
1 lbm/bbl		<b>FE-2, 2000 LB BAG - (1005549)</b>								
145.09 lbm/bbl		<b>BARITE, BULK (100003681)</b>								

3.50 lbm/bbl		<b>SEM-94P, 35 LB SACK - (1023987)</b>							
3.50 lbm/bbl		<b>SEM-93P, 35 LB SACK - (1023977)</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
2	ElastiCem	ELASTICEM (TM) SYSTEM	140	sack	13.2	1.67	8.03	6	8.03
0.40 %		<b>SCR-100, 2000 LB BAG - (1005967)</b>							
8.03 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	499	sack	13.2	1.67	8.04	6	8.04
0.27 %		<b>SCR-100, 2000 LB BAG - (1005967)</b>							
8.04 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	1101	sack	13.2	2.04	9.79	6	9.79
0.08 %		<b>FE-2, 2000 LB BAG - (1005549)</b>							
9.79 Gal		<b>FRESH WATER</b>							
0.08 %		<b>SCR-100, 2000 LB BAG - (1005967)</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	390	bbl	8.33				
<b>Cement Left In Pipe</b>	<b>Amount</b>	21 ft			<b>Reason</b>			<b>Shoe Joint</b>	
Mix Water:	PH 7 ##	Mix Water Chloride:	200 ppm		Mix Water Temperature:			## °F °C	
Cement Temperature:	## °F °C	Plug Displaced by:	8.33 lb/gal		Disp. Temperature:			## °F °C	
Plug Bumped?	Yes	Bump Pressure:	1965 psi MPa		Floats Held?			Yes	
Cement Returns:	## bbl m3	Returns Density:	## lb/gal kg/m3		Returns Temperature:			## °F °C	

## Comment

JOB WENT WELL CEMENT WAS WEIGHED AND VERRIFIED ON SCALES THROUGHOUT JOB. PUMPED 390 BBLS OF DISPLACEMENT WATER WITH MMCR IN THE FIRST 20BBLS AND 3 BAGS OF BE-3. SLOWED RATE TO 3BPM AT 360BBL AWAY. BUMPED PLUG AND TOOK 500 PSI OVER FINAL CIRCULATING PRESSURE 1965PSI HELD FOR 5 MINS FLOATS HELD AND GOT 5 BBLS BACK.

CALCULATED TOPS AND PRESSURE

TOP OF TAIL CEMENT 7067'

TOP OF LEAD CEMENT 3430'

TOP OF CAP CEMENT 2410'

8BBLS OF SPACER BACK TO SURFACE

PRESSURE TO LAND 1491 PSI

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comments
Event	1	Pressure Test	Call Out	11/8/2019	04:30:00	USER	CREW CALLED OUT FOR ON LOCATION AT 11:00
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	11/8/2019	10:00:00	USER	AFTER CHECKING ALL EQUIPMENT WAS RUNNING AND CEMENT WAS LOADED CREW HAD A PRE CONVOY SAFETY MEETING AND DISCUSSED SAFE FOLLOWING DISTANCE AND ROUTE TO LOCATION.
Event	3	Arrive at Rig	Arrive at Rig	11/8/2019	10:30:00	USER	CREW ARRIVED ON LOCATION, RIG WAS STILL RUNNING CASING WITH 2000' LEFT.
Event	4	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	11/8/2019	11:00:00	USER	HES HAD A PRE RIG SAFETY MEETING AND DISCUSSED TEAM CARRY ON IRON, SLIP TRIPS AND FALLS, PINCH POINTS AND GOOD FOOTING PLACEMENT.
Event	5	Casing on Bottom	Casing on Bottom	11/8/2019	15:30:00	USER	RIG LANDED CASING ON BOTTOM AND STARTED CIRCULATING AT 9BPM.
Event	6	Pre-Job Safety Meeting	Pre-Job Safety Meeting	11/8/2019	16:30:00	USER	HAD SAFETY MEETING WITH HES AND NOBLE AND DISCUSSED S.W.A, MUSTER AREA, PRESSURE TESTING, NEAREST HOSPITAL, THREE POINTS OF CONTACT, AND GOOD COMMUNICATION THROUGHOUT JOB.

Event	7	Start Job	Start Job	11/8/2019	17:08:58	COM7	START JOB
Event	8	Test Lines	Test Lines	11/8/2019	17:13:41	COM7	PRESSURE TESTED HES LINES TO 4500 PSI.
Event	9	Drop Bottom Plug	Drop Bottom Plug	11/8/2019	17:17:25	COM7	DROPPED FIRST BOTTOM PLUG WITH COMPANY MAN ON RIG FLOOR.
Event	10	Pressure Test	Pressure Test	11/8/2019	17:20:26	USER	BLEED OFF PRESSURE AND LINED UP TO TEST RIG VAVLE. THEN PRESSURE TESTED IBOP TO 2500 PSI. BLEED OFF PRESSURE
Event	11	Pump Spacer 1	Pump Spacer 1	11/8/2019	17:24:39	COM7	PUMP 120 BBL TUNED SPACER 11.5# 3.87 YIELD 24.5 GAL 24.5
Event	12	Drop Bottom Plug	Drop Bottom Plug	11/8/2019	17:56:50	COM7	SHUT DOWN AND DROPPED SECOND BOTTOM PLUG
Event	13	Pump Cement	Pump Cement	11/8/2019	17:56:54	COM7	PUMPED 41 BBL ELASTICEM CAP 13.2# 1.67 YIELD 8.03 GAL 140 SACKS AND PUMPED 148 BBL ELASTICEM LEAD 13.2# 1.67 YIELD 8.04 GAL 499 SACKS
Event	14	Pump Tail Cement	Pump Tail Cement	11/8/2019	18:26:25	COM7	PUMP 400 BBL NEOCEM TAIL 13.2# 2.04 YIELD 9.79 GAL 1101 SACKS
Event	15	Shutdown	Shutdown	11/8/2019	19:25:49	COM7	SHUTDOWN. BLEW DOWN LINES TO THE PIT. WASHED PUMPS AND LINES
Event	16	Drop Top Plug	Drop Top Plug	11/8/2019	19:41:10	COM7	DROPPED TOP PLUG WITH COMPANY MAN ON RIG FLOOR.

Event	17	Pump Displacement	Pump Displacement	11/8/2019	19:41:14	COM7	PUMPED 390 BBL OF WATER DISPLACEMENT FIRST 20BBL MMCR AND BIOCIDES THROUGHOUT.
Event	18	Bump Plug	Bump Plug	11/8/2019	20:37:05	COM7	BUMPED PLUG AND TOOK 500 PSI OVER FINAL CIRCULATING PRESSURE 1965PSI
Event	19	End Job	End Job	11/8/2019	20:44:27	COM7	END JOB
Event	20	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	11/8/2019	21:00:00	USER	HAD PRE RIG DOWN SAFETY MEETING WITH CREW AND DISCUSSED TEAM CARRY ON IRON, SLIP TRIPS AND FALLS, GOOD FOOTING PLACEMENT AND PINCH POINTS.
Event	21	Depart Location	Depart Location	11/8/2019	22:30:00	USER	CREW HAD PRE CONVOY SAFETY MEETING AND DISCUSSED SAFE FOLLOWING DISTANCE AND ROUTE BACK TO YARD.

3.0 Attachments

3.1 5.5 PRODUCTION GUTTERSEN RANCH DD30-775 -Custom Results.png

