

The Road to Excellence Starts with Safety

Sold To #: 345242	Ship To #: 3919643	Quote #:	Sales Order #: 0906152890
Customer: NOBLE ENERGY INC-EBUS		Customer Rep: NOBLE REP	
Well Name: GUTTERSEN STATE		Well #: DD30-725	API/UWI #: 05-123-48665-00
Field: WATTENBERG	City (SAP): ROGGEN	County/Parish: WELD	State: COLORADO
Legal Description: SE SE-30-3N-63W-481FSL-854FEL			
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: Kyle Bath	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type			BHST
Job depth MD	16966ft		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	1927	0	0
Casing		5.5	4.892	17			0	16966	0	6732
Open Hole Section			8.5				1927	16989	0	0

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5			16966	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									
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft/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	6	4263
	1 lbm/bbl	FE-2, 2000 LB BAG - (1005549)							
	145.09 lbm/bbl	BARITE, BULK (100003681)							

3.50 lbm/bbl	SEM-94P, 35 LB SACK - (1023987)
3.50 lbm/bbl	SEM-93P, 35 LB SACK - (1023977)
0.34 gal/bbl	D-AIR 3000L, 5 GAL PAIL (101007444)

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	1.67	8.03	8	1124
8.03 Gal		FRESH WATER							
0.40 %		SCR-100, 1200 LB BAG - (1126328)							

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	8.04	8	3794
8.04 Gal		FRESH WATER							
0.27 %		SCR-100, 1200 LB BAG - (1126328)							

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	11,131
0.08 %		FE-2, 2000 LB BAG - (1005549)							
9.79 Gal		FRESH WATER							
0.08 %		SCR-100, 1200 LB BAG - (1126328)							

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	FRESH WATER	393	bbl	8.33				

Cement Left In Pipe	Amount	49 ft	Reason	Shoe Joint	
Mix Water:	pH 7	Mix Water Chloride:	0 PPM	Mix Water Temperature:	75 °F
Cement Temperature:	N/A	Plug Displaced by:	8.33 lb/gal	Disp. Temperature:	75 °F
Plug Bumped?	Yes	Bump Pressure:	2270 psi	Floats Held?	Yes
Cement Returns:	0 bbl	Returns Density:	N/A	Returns Temperature:	N/A

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	12/7/2019	10:00:00	USER	CREW CALLED OUT, TRUCKS
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	12/7/2019	13:45:00	USER	DISCUSS ROUTE AND HAZARDS
Event	3	Crew Leave Yard	Crew Leave Yard	12/7/2019	14:00:00	USER	CREW DEPART YARD
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	12/7/2019	15:30:00	USER	ARRIVE ON LOCATION, RIG WAS RUNNING CASING UPON HES ARRIVAL, RECIEVED NUMBERS FROM COMPANY MAN, TD-16898, TP-16966.3, FC16918.5, TVD-6732, 5.5" CSG 17#, 8.5" OH, 9.625 SURFACE CASING 1927.5, MW 9.6#,
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	12/7/2019	15:45:00	USER	DISCUSS LOCATION HAZARDS AND HOW TO MITIGATE THEM, WATER TEST TEMP 75, CHLORIDES 0, PH 7
Event	6	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	12/7/2019	16:00:00	USER	DISCUSS HAZARDS AND WAYS TO MITIGATE THEM
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	12/7/2019	18:45:00	USER	PRE JOB SAFETY MEETING WITH RIG CREW AND CO REP
Event	8	Start Job	Start Job	12/7/2019	19:16:08	COM4	STARTED RECORDING DATA.
Event	9	Drop Bottom Plug	Drop Bottom Plug	12/7/2019	19:16:24	COM4	DROPPED BOTTOM PLUG, VERIFIED BY COMPANY MAN.

Event	10	Test Lines	Test Lines	12/7/2019	19:23:01	COM4	TEST LINES TO 4500 , K/O 4300 .
Event	11	Pump Spacer 1	Pump Spacer 1	12/7/2019	19:33:32	COM4	PUMPED 174 SACKS AND 120 BBLS OF TUNED PRIME SPACER AT 11.5 PPG, 3.87 YIELD, AND 24.5 WATER REQUIREMENT. PUMPED AT 6 BPM AND WITH A PSI OF 620.
Event	12	Check Weight	Check Weight	12/7/2019	19:48:07	COM4	CHECKED WEIGHT WITH PRESSURIZED SCALES.
Event	13	Drop Bottom Plug	Drop Bottom Plug	12/7/2019	20:01:02	COM4	DROPPED 2ND BOTTOM PLUG, VERIFIED BY COMPANY MAN.
Event	14	Pump Cap Cement	Pump Cap Cement	12/7/2019	20:01:22	COM4	PUMPED 140 SACKS 41.64 BBLS CAP CEMENT, 13.2 PPG, 1.67 YIELD, 8.03 WATER REQUIREMENT. PUMPED AT 8 BPM WITH A PSI OF 600. CALCULATED TOP OF CAP AT 2406'.
Event	15	Pump Lead Cement	Pump Lead Cement	12/7/2019	20:06:48	COM4	PUMPED 472 SACKS 140.39 BBLS OF LEAD CEMENT. 13.2 PPG , 1.67 YIELD, 8.04 WATER REQUIREMENT. PUMPED AT 8 BPM WITH A PSI OF 670. CALCUALATED TOP OF LEAD AT 3427'
Event	16	Check Weight	Check Weight	12/7/2019	20:08:01	COM4	CHECKED WEIGHT WITH PRESSURIZED SCALES.
Event	17	Check Weight	Check Weight	12/7/2019	20:19:56	COM4	CHECKED WEIGHT WITH PRESSURIZED SCALES.

Event	18	Pump Tail Cement	Pump Tail Cement	12/7/2019	20:24:39	COM4	PUMPED 1137 SACKS 413.1 BBLS OF TAIL CEMENT. 13.2 PPG, 2.04 YIELD, 9.79 WATER REQUIRMENT. PUMPED AT 8 BPM WITH A PRESSURE OF 800. CALCULATED TOP OF TAIL AT 6868'.
Event	19	Check Weight	Check Weight	12/7/2019	20:25:22	COM4	CHECKED WEIGHT WITH PRESSURIZED SCALES.
Event	20	Check Weight	Check Weight	12/7/2019	20:33:15	COM4	CHECKED WEIGHT WITH PRESSURIZED SCALES.
Event	21	Check Weight	Check Weight	12/7/2019	20:38:00	COM4	CHECKED WEIGHT WITH PRESSURIZED SCALES.
Event	22	Check Weight	Check Weight	12/7/2019	21:07:59	COM4	CHECKED WEIGHT WITH PRESSURIZED SCALES.
Event	23	Shutdown	Shutdown	12/7/2019	21:20:06	COM4	SHUTDOWN TO WASH PUMPS AND LINES.
Event	24	Drop Top Plug	Drop Top Plug	12/7/2019	21:32:38	COM4	DROPPED TOP PLUG VERIFIED BY COMPANY MAN.
Event	25	Pump Displacement	Pump Displacement	12/7/2019	21:32:40	COM4	PUMPED 393 BBLS OF FRESH WATER DISPLACEMENT, WITH MMCR IN THE FIRST 20 BBLS, AND 6#'S OF BE-3 DISTRIBUTED THROUGHOUT. PUMPED AT A RATE OF 10 BPM WITH A PSI OF 2780.
Event	26	Bump Plug	Bump Plug	12/7/2019	22:20:15	COM4	BUMPED PLUG AT CALCULATED DISPLACEMENT. BROUGHT PSI 500 OVER AND HELD FOR 5 MINS. CHECKED FLOATS AND 5 BBLS FRESH WATER WAS RETURNED TO THE PUMP.

Event	27	Other	Other	12/7/2019	22:24:47	COM4	CHECKED FLOATS, 5 BBLs RETURNED TO THE PUMP.
Event	28	End Job	End Job	12/7/2019	22:27:07	COM4	STOPPED RECORDING DATA.
Event	29	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	12/7/2019	22:30:00	USER	DISCUSS HAZARDS AND WAYS TO MITIGATE THEM
Event	30	Depart Location Safety Meeting	Depart Location Safety Meeting	12/8/2019	00:00:00	USER	DISCUSS HAZARDS AND ROUTE
Event	31	Crew Leave Location	Crew Leave Location	12/8/2019	00:30:00	USER	THANK YOU FOR USING HALLIBURTON, KYLE BATH AND CREW

NOBLE GUTTERSEN STATE DD30-725 PRODUCTION 906152890

