

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 3919174		Quote #:		Sales Order #: 0905790248					
Customer: NOBLE ENERGY INC-EBUS				Customer Rep: Chris Ewing							
Well Name: GUTTERSEN STATE			Well #: D23-731		API/UWI #: 05-123-48624-00						
Field: WATTENBERG		City (SAP): KEENESBURG		County/Parish: WELD		State: COLORADO					
Legal Description: SW SE-23-3N-64W-761FSL-1511FEL											
Contractor: H & P DRLG				Rig/Platform Name/Num: H & P 517							
Job BOM: 7523 7523											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HB31357				Srv Supervisor: Nicholas Roles							
Job											
Formation Name											
Formation Depth (MD)		Top		Bottom							
Form Type				BHST		230 degF					
Job depth MD		17525ft		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	1937	0	1937	
Casing		5.5	4.892	17			0	17525	0	7260	
Open Hole Section			8.5				1937	17538	1937	7260	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	5.5			17525		Top Plug	5.5	1	HES		
Float Shoe	5.5					Bottom Plug	5.5	2	HES		
Float Collar	5.5			17478		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 ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	11.5 lb/gal Tuned Spacer III	Tuned Spacer III			120	bbl	11.5	3.79		8	
36.09 gal/bbl		FRESH WATER									
1 lbm/bbl		FE-2 (100001615)									

iCem® Service
(v. 5.0.161.0)
Created: Friday, June 28, 2019

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DH Density (ppg)	DS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Check Floats	Call Out	6/27/2019	12:00:00	USER					Called out by Service Coordinator for O/L at 1900
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	6/27/2019	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	6/27/2019	18:00:00	USER					Journey Management prior to departure
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	6/27/2019	18:45:00	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	6/27/2019	19:00:00	USER					Discussed rigging up hazards and procedure according to HMS.
Event	6	Other	Other	6/27/2019	19:15:00	USER					Water test- PH-6, Chlor-0, Temp-65. Cement temp-65.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	6/27/2019	22:00:00	USER					Held safety meeting with all job associated personnel to discuss job procedure, hazards and stop work authority.
Event	8	Start Job	Start Job	6/28/2019	00:37:34	COM4	0.00	8.29	16.00	0.00	TD-17538', TP-17525' 5.5" 17#, FC-17478', TVD-7260', SURF-1937' 9.625" 36#, OH-8.5" MUD-9.6#
Event	9	Drop Bottom Plug	Drop Bottom Plug	6/28/2019	00:38:50	COM4	2.90	8.33	110.00	2.20	Dropped by HES supervisor, witnessed by company man.
Event	10	Test Lines	Test Lines	6/28/2019	00:39:28	COM4	0.00	8.33	164.00	3.10	Pumped 5bbls fresh water to fill lines, closed 2" lo torc, performed 500psi k/o

function test, followed with 5th gear stall at 1290psi, 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 3000psi on Kelly line, pressure stabilized and held with no leaks.

Event	11	Pump Spacer 1	Pump Spacer 1	6/28/2019	00:51:41	COM4	0.00	8.32	53.00	5.00	Pumped approx 40bbls of Tuned Spacer III 11.5# 3.79y 23.5g/s with 5g musol A and 5g Dual Spacer B.
Event	12	Shutdown	Shutdown	6/28/2019	01:30:44	USER	0.00	11.40	20.00	44.10	Flow meter on pump 9145 was not working, tried to diagnose and pull apart to check on condition or if something was blocking meter. Lines were clear and meter would work at high rate through inside water but as soon as we went to mix it was jumping from 40gpm to 280gpm. When we went to hand mix it was showing no water flow through meter. Decided that would be best interest to get a proper working truck and not guess what flow we were getting. Rig rolled approx. 20bbls of interface spacer to pits.
Event	13	Start Job	Start Job	6/28/2019	04:26:00	COM4					Called for new pump and 60bbls of spacer, when arrived we retested lines batched up new spacer and began pumping. About 3.5 hours NPT
Event	14	Pump Spacer 1	Pump Spacer 1	6/28/2019	05:03:49	COM4					Pumped 120bbls Tuned Spacer III 11.5# 3.79y 23.5g/s with 70g Musol A, 70g Dual Spacer B and 10g D-Air at 8bpm 540psi.
Event	15	Drop Bottom Plug	Drop Bottom Plug	6/28/2019	05:04:22	USER					Dropped by HES supervisor, witnessed by company man.

Event	16	Pump Lead Cement	Pump Lead Cement	6/28/2019	05:22:03	COM4	Pumped 140sks or 41.9bbls Elasticem w/o CBL 13.2# 1.68y 8.04g/s at 8bpm 590psi.
Event	17	Drop Bottom Plug	Drop Bottom Plug	6/28/2019	05:24:31	COM4	Dropped by HES supervisor, witnessed by company man.
Event	18	Check Weight	Check Weight	6/28/2019	05:27:51	COM4	Weight verified with pressurized mud scales.
Event	19	Pump Cement	Pump Cement	6/28/2019	05:32:53	COM4	Pumped 501sks or 150bbls Elasticem w/CBL 13.2# 1.68y 8.06g/s at 8bpm 550psi.
Event	20	Check Weight	Check Weight	6/28/2019	05:36:43	COM4	Weight verified with pressurized mud scales.
Event	21	Pump Tail Cement	Pump Tail Cement	6/28/2019	05:54:34	COM4	Pumped 1164sks or 423bbls 13.2# 2.04y 9.75g/s Neocem at 8bpm 700psi.
Event	22	Check Weight	Check Weight	6/28/2019	06:03:56	COM4	Weight verified with pressurized mud scales.
Event	23	Check Weight	Check Weight	6/28/2019	06:20:17	COM4	Weight verified with pressurized mud scales.
Event	24	Check Weight	Check Weight	6/28/2019	06:37:00	COM4	Weight verified with pressurized mud scales.
Event	25	Shutdown	Shutdown	6/28/2019	06:53:33	COM4	Shutdown, rig blew air through lines to pits, followed with 5bbls fresh water through pumps and lines.
Event	26	Drop Top Plug	Drop Top Plug	6/28/2019	07:03:15	COM4	Dropped by HES supervisor, witnessed by company man.
Event	27	Pump Displacement	Pump Displacement	6/28/2019	07:03:20	COM4	Pumped 406bbls fresh water with 10g MMCR in first 20bbls, 20g Algicide throughout.
Event	28	Bump Plug	Bump Plug	6/28/2019	07:48:00	COM4	Slowed down to 3bpm at 380bbls away, final circulating pressure-2000psi, Bump pressure-2510psi. Held for 5min test.

Event	29	Check Floats	Check Floats	6/28/2019	07:54:05	USER	Released pressure and got 4.75bbbls fresh water to truck, floats held.
Event	30	End Job	End Job	6/28/2019	07:56:55	COM4	Got 25bbbls interface to surface. Estimated TOCap-2475', TOL-3505', TOT-7182'
Event	31	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	6/28/2019	08:00:00	USER	Discussed rigging down hazards and procedure according to HMS with all HES personnel
Event	32	Safety Meeting - Departing Location	Safety Meeting - Departing Location	6/28/2019	09:45:00	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	6/28/2019	10:00:00	USER	Pre journey management prior to departure.

3.0 Attachments

3.1 Guttersen State D23-731-Custom Results (1).png

