

The Road to Excellence Starts with Safety

Sold To #: 345242	Ship To #: 3943963	Quote #:	Sales Order #: 0905790357
Customer: NOBLE ENERGY INC-EBUS		Customer Rep: Jim Turner/Gary Stapleton	
Well Name: STARS FEDERAL		Well #: LD17-770	API/UWI #: 05-123-49610-00
Field: WATTENBERG	City (SAP): RAYMER	County/Parish: WELD	State: COLORADO
Legal Description: SW SW-5-9N-58W-285FSL-1128FWL			
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: Nicholas Roles	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type			BHST 230 degF
Job depth MD	16602ft		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	0	9.625	8.921	36			0	1919	0	1919
Casing	0	5.5	4.778	20			0	16602	0	5938
Open Hole Section			8.5				2483	6136	2483	5938
Open Hole Section			8.5				6136	16619	0	0

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5			16602	Top Plug	5.5	1	HES
Float Shoe	5.5				Bottom Plug	5.5	2	HES
Float Collar	5.5			16555	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	3.86		6	
0.60 gal/bbl		MUSOL(R) A, 5 GAL PAIL (100064220)							

145.30 lbm/bbl	BARITE, BULK (100003681)
36.09 gal/bbl	FRESH WATER
1 lbm/bbl	FE-2 (100001615)
0.60 gal/bbl	DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)
5 lbm/bbl	BRIDGEMAKER II LCM, 50 LB SACK - (1062609)

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	1.71		5	8.15
8.15 Gal		FRESH WATER							
0.25 %		SCR-100 (100003749)							

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	358	sack	13.2	1.68		8	8.06
0.15 %		SCR-100 (100003749)							
8.08 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	1179	sack	13.2	2.04		8	9.75
9.75 Gal		FRESH WATER							
0.05 %		SCR-100 (100003749)							

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	384	bbl	8.33			8	

Cement Left In Pipe	Amount	47 ft	Reason	Shoe Joint	
Mix Water:	pH 06	Mix Water Chloride:	0 ppm	Mix Water Temperature:	60 °F °C
Cement Temperature:	## °F °C	Plug Displaced by:	8.33 lb/gal	Disp. Temperature:	60 °F °C
Plug Bumped?	Yes	Bump Pressure:	2080 psi MPa	Floats Held?	Yes
Cement Returns:	## bbl m3	Returns Density:	## lb/gal kg/m3	Returns Temperature:	## °F °C

Comment Got 0bbls spacer to surface. Started to see trace amount at end of displacement, based on spacer at surface estimated TOCap-2586', TOL-3617', TOT-6240'

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate <i>(bbl/min)</i>	DH Density <i>(ppg)</i>	DS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Check Floats	Call Out	6/29/2019	15:00:00	USER					Called out by Service Coordinator for O/L at 2200
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	6/29/2019	18:45:00	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	6/29/2019	19:00:00	USER					Journey Management prior to departure
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	6/29/2019	21:15:00	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	6/29/2019	21:30:00	USER					Discussed rigging up hazards and procedure according to HMS.
Event	6	Other	Other	6/29/2019	23:00:00	USER					Water test- PH-6, Chlor-0, Temp-60. Cement temp-60.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	6/30/2019	02:00:00	USER	0.00	8.49	91.00	32.30	Held safety meeting with all job associated personnel to discuss job procedure, hazards and stop work authority.
Event	8	Start Job	Start Job	6/30/2019	03:26:29	COM4	0.00	8.51	-2.00	0.00	TD-16619', TP-16602' 5.5" 17#, FC-16555', TVD-5938', SURF-1919' 9.625" 36#, OH-8.5" MUD-9.4#
Event	9	Drop Top Plug	Drop Top Plug	6/30/2019	03:33:02	USER	0.00	8.48	0.00	3.20	Dropped by HES supervisor, witnessed by company man.

Event	10	Test Lines	Test Lines	6/30/2019	03:36:56	COM4	0.00	8.51	49.00	5.20	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. 2" lo-torc on floor was leaking through bonnet, replaced, re-pressured and 1" on manifold leaked as well as 1" on release line. Changed out, Held pressure, no leaks. Bled off pressure, pumped 1bbl to ensure lines still full and closed valve. Proceeded to bring pressure to 2500psi on Kelly line, pressure stabilized and held with no leaks.
Event	11	Pump Spacer 1	Pump Spacer 1	6/30/2019	04:08:32	COM4	0.00	8.49	6.00	9.00	Pumped 120bbls Tuned Spacer III 11.5# 3.86y 23.8g/s with 70g Musol A, 70g Dual Spacer B and 10g D-Air at 6bpm 240psi.
Event	12	Pump Lead Cement	Pump Lead Cement	6/30/2019	04:33:48	COM4	6.50	11.66	268.00	0.10	Pumped 140sks or 42.6bbls Elasticem w/o CBL 13.2# 1.71y 8.15g/s at 5bpm 330psi.
Event	13	Drop Bottom Plug	Drop Bottom Plug	6/30/2019	04:37:08	COM4	0.00	12.17	31.00	3.20	Dropped by HES supervisor, witnessed by company man.
Event	14	Check Weight	Check Weight	6/30/2019	04:44:08	COM4	4.30	13.46	255.00	28.30	Weight verified with pressurized mud scales.
Event	15	Pump Cement	Pump Cement	6/30/2019	04:48:31	COM4	4.30	13.11	242.00	47.00	Pumped 358sks or 107bbls Elasticem w/CBL 13.2# 1.68y 8.06g/s at 8bpm 550psi.
Event	16	Check Weight	Check Weight	6/30/2019	04:53:56	COM4	8.10	13.22	567.00	24.60	Weight verified with pressurized mud scales.
Event	17	Pump Tail Cement	Pump Tail Cement	6/30/2019	05:06:26	COM4	8.10	13.03	498.00	0.10	Pumped 1179sks or 428bbls 13.2# 2.04y 9.75g/s Neocem at 8bpm 700psi.
Event	18	Check Weight	Check Weight	6/30/2019	05:07:42	COM4	8.10	13.16	712.00	10.30	Weight verified with pressurized mud scales.
Event	19	Check Weight	Check Weight	6/30/2019	05:16:46	COM4	8.10	13.04	745.00	83.80	Weight verified with pressurized mud scales.

Event	20	Check Weight	Check Weight	6/30/2019	05:33:31	COM4	8.10	13.25	795.00	219.60	Weight verified with pressurized mud scales.
Event	21	Check Weight	Check Weight	6/30/2019	05:45:51	COM4	8.10	13.24	774.00	319.60	Weight verified with pressurized mud scales.
Event	22	Shutdown	Shutdown	6/30/2019	06:03:41	COM4	0.00	12.99	133.00	447.60	Shutdown, rig blew air through lines to pits, followed with 5bbls fresh water through pumps and lines.
Event	23	Drop Top Plug	Drop Top Plug	6/30/2019	06:11:54	COM4	0.00	8.50	-7.00	456.80	Dropped by HES supervisor, witnessed by company man.
Event	24	Pump Displacement	Pump Displacement	6/30/2019	06:11:57	COM4	0.00	8.55	-9.00	456.80	Pumped 384bbls fresh water with 10g MMCR in first 20bbls, 15g Algicide throughout.
Event	25	Bump Plug	Bump Plug	6/30/2019	07:12:03	COM4	0.00	8.15	2090.00	393.20	Slowed down to 3bpm at 365bbls away, final circulating pressure-1500psi, Bump pressure-2080psi.
Event	26	Check Floats	Check Floats	6/30/2019	07:16:42	USER	0.00	8.16	2163.00	393.20	Released pressure and got 4bbls fresh water to truck, floats held.
Event	27	End Job	End Job	6/30/2019	07:19:18	COM4	0.00	8.08	-13.00	393.20	Got 0bbls spacer to surface. Started to see trace amount at end of displacement, based on spacer at surface estimated TOCap-2586', TOL-3617', TOT-6240'
Event	28	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	6/30/2019	07:20:00	USER	0.00	8.09	-13.00	393.20	Discussed rigging down hazards and procedure according to HMS with all HES personnel
Event	29	Safety Meeting - Departing Location	Safety Meeting - Departing Location	6/30/2019	08:45:00	USER					Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	30	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	6/30/2019	09:00:00	USER					Pre journey management prior to departure.

3.0 Attachments

3.1 Stars Federal LD17-770-Custom Results.png

