

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 3944051		Quote #:		Sales Order #: 0905812053					
Customer: NOBLE ENERGY INC-EBUS					Customer Rep: JIM TURNER						
Well Name: STARS FEDERAL			Well #: LD17-760			API/UWI #: 05-123-49603-00					
Field: WATTENBERG		City (SAP): RAYMER		County/Parish: WELD			State: COLORADO				
Legal Description: SW SW-5-9N-58W-285FSL-1166FWL											
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											
Formation Name											
Formation Depth (MD)		Top			Bottom						
Form Type					BHST		230 degF				
Job depth MD		11968			Job Depth TVD		5921				
Water Depth					Wk Ht Above Floor		4				
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	1918	0	1918	
Casing	0	5.5	4.778	20			0	11968	0	5921	
Open Hole Section			8.5				1918	6215	1918	5921	
Open Hole Section			8.5				6215	11968	5901	5921	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	5.5	1		11968		Top Plug	5.5	1	HES		
Float Shoe	5.5					Bottom Plug	5.5	2	HES		
Float Collar	5.5	1		11921		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	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	120	bbbl	11.5	3.79		5	
0.60 gal/bbl		MUSOL(R) A, 5 GAL PAIL (100064220)							
148.31 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)							

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	8.06
8.06 Gal		FRESH WATER							
0.20 %		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	367	sack	13.2	1.67		8	8.07
0.15 %		SCR-100 (100003749)							
8.07 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	649	sack	13.2	2.04		8	9.75
9.75 Gal		FRESH WATER							
0.06 %		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	277	bbbl	8.33				

Cement Left In Pipe	Amount	44 ft	Reason	Shoe Joint	
Mix Water:	pH 7	Mix Water Chloride:	100 ppm	Mix Water Temperature:	64 °F
Cement Temperature:	## °F °C	Plug Displaced by:	8.4 lb/gal Water	Disp. Temperature:	## °F °C
Plug Bumped?	Yes	Bump Pressure:	1760 psi	Floats Held?	Yes
Cement Returns:	## bbl m3	Returns Density:	## lb/gal kg/m3	Returns Temperature:	## °F °C

Comment

JOB WENT WELL. CEMENT VOLUMES AND WEIGHTS VERIFIED THROUGHOUT. BOTTOM PLUG DROPPED BEFORE AND AFTER SPACER. TOP PLUG DROPPED AND DISPLACED, CATCHING CEMENT AT 46 BBL AWAY. PLUG BUMPED AT 4 BPM AT 1760 PSI. HELD FOR 3 MINUTES. VERIFIED FLOATS HOLDING AND GOT 3.5 BBL BACK. NO ACCIDENT OR INJURY.

CALCULATED TOPS

TOP OF TAIL – 6233'

TOP OF LEAD – 3562'

TOP OF CAP – 2558'

TOP OF SPACER - SURFACE

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	DS Pump Press (psi)	Comb Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	7/2/2019	18:15:12	USER				CREW CALLED OUT. ON LOCATION TIME 0030
Event	2	Depart Shop for Location	Depart Shop for Location	7/2/2019	20:00:55	USER				CREW HAS VERIFIED EQUIPMENT AND MATERIALS FOR JOB. CREW HAS JOURNEY MANAGEMENT SAFETY MEETING DISCUSSING ROUTE, CONVOY ORDER, FOLLOWING DISTANCE, HAZARDS, WALK AROUNDS AND DEPARTS FOR LOCATION
Event	3	Arrive At Loc	Arrive At Loc	7/3/2019	00:10:00	USER				CREW ARRIVES AT LOCATION. RIG RIH CASING 11300'. CREW DOES HAZARD HUNT AND ASSESSES LOCATION FOR EQUIPMENT LAYOUT
Event	4	Casing on Bottom	Casing on Bottom	7/3/2019	01:19:15	USER				CASING ON BOTTOM. RIG UP TO STANDPIPE. DELIVER VALVE AND HOSE TO RIG FLOOR.
Event	5	Pre-Job Safety Meeting	Pre-Job Safety Meeting	7/3/2019	02:50:28	USER	0.00	-22.00	0.00	CREW, RIG CREW AND CUSTOMER REP HAVE PRE JOB SAFETY MEETING DISCUSSING CONTINGENCIES, RED ZONES, ROLES, COMMUNICATION, HAZARDS, MUSTER AREAS,

PINCH POINTS, LEAKS, 3 POINTS OF CONTACT, SLIPS TRIPS FALLS AND JOB PROCEEDURE. CONTINUE TO CIRCULATE. 1 BTMS UP IN, 7BPM, 642PSI. CONTINUED TO CIRCULATE WELL.

Event	6	Start Job	Start Job	7/3/2019	03:28:05	COM8	0.00	-24.00	0.00	START JOB. TD 11988', TP 11967' OF 5.5" 17#, OH 8.5", FC 11921', TVD 5921', MW 9.3#, SC 1918' OF 9.625" 36#.
Event	7	Test Lines	Test Lines	7/3/2019	03:43:27	COM8	8.36	85.00	0.00	FILL LINES WITH 3 BBL WATER. 5TH GEAR STALL 1950PSI. PRESSURE TEST HES LINES TO 4500 PSI AND HOLD FOR A FEW MINUTES. TEST GOOD
Event	8	Other	Other	7/3/2019	03:49:17	USER	8.38	36.00	0.80	PRESSURE TEST IBOP VALVE TO 2500PSI. TEST GOOD
Event	9	Drop Bottom Plug	Drop Bottom Plug	7/3/2019	03:55:47	USER	8.34	44.00	1.80	DROP FIRST BOTTOM PLUG. WITNESSED BY HES AND NE
Event	10	Pump Spacer 1	Pump Spacer 1	7/3/2019	03:57:36	COM8	11.61	346.00	4.50	PUMP 120 BBL TUNED SPACER III 11.5# 3.79 YIELD 23.5 GAL WITH 0.6 GAL/BBL MUSOL A AND DUAL B LIQUID SURFACTANT
Event	11	Drop Bottom Plug	Drop Bottom Plug	7/3/2019	04:18:14	COM8	11.38	26.00	0.00	DROP SECOND BOTTOM PLUG. WITNESSED BY HES AND NE
Event	12	Pump Lead Cement	Pump Lead Cement	7/3/2019	04:19:48	COM8	11.41	26.00	0.00	PUMP 42 BBL ELASTICEM CAP 13.2# 1.67 YIELD 8.06 GAL 140 SACKS
Event	13	Pump Cement	Pump Cement	7/3/2019	04:25:40	COM8	13.21	378.00	6.00	PUMP 109 BBL ELASTICEM LEAD 13.2# 1.67 YIELD 8.07 GAL 367 SACKS

Event	14	Pump Tail Cement	Pump Tail Cement	7/3/2019	04:43:29	COM8	13.20	460.00	6.90	PUMP 235 BBL NEOCEM TAIL 13.2# 2.04 YIELD 9.75 GAL 649 SACKS
Event	15	Shutdown	Shutdown	7/3/2019	05:14:13	USER	13.27	124.00	0.00	SHUTDOWN. BLOW DOWN LINES TO THE PIT. WASH PUMPS TO THE PIT
Event	16	Clean Lines	Clean Lines	7/3/2019	05:19:27	USER	0.06	33.00	0.00	CLEAN LINES
Event	17	Drop Top Plug	Drop Top Plug	7/3/2019	05:25:53	COM8	8.36	23.00	0.00	DROP TOP PLUG. WITNESSED BY HES AND NE
Event	18	Pump Displacement	Pump Displacement	7/3/2019	05:26:51	COM8	0.58	24.00	0.00	PUMP 277 BBL DISPLACEMENT WATER 8.4# WITH BIOCIDES IN THE FIRST 100 BBLs
Event	19	Slow Rate	Slow Rate	7/3/2019	05:59:48	USER	8.43	1936.00	6.40	SLOW RATE TO 3 BPM TO BUMP PLUG
Event	20	Bump Plug	Bump Plug	7/3/2019	06:03:12	COM8	8.44	2350.00	0.00	BUMP PLUG AT 3 BPM AT 2350 PSI. FINAL CIRCULATING PRESSURE OF 1760PSI.
Event	21	Comment	Comment	7/3/2019	06:04:07	USER	8.43	2370.00	0.00	HOLD CASING TEST FOR 5 MIN. NO RETURNS OF SPACER OR CEMENT. BASED ON SPACER AT SURFACE, TOC = 2558', TOL = 3562', TOT = 6233'
Event	22	Check Floats	Check Floats	7/3/2019	06:07:42	USER	8.38	40.00	0.00	bled off pressure, got 3.5 BBL BACK, FLOATS HELD
Event	23	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	7/3/2019	06:11:08	USER	8.38	22.00	0.00	CREW HAS PRE RIG DOWN SAFETY MEETING DISCUSSING RIG OPERATIONS, RED ZONES, SLIPS TRIPS FALLS, PROPER LIFTING, TAG LINES, PINCH POINTS, SPOTTERS, TRAPPED PRESSURE AND BEGIN RIGGING DOWN

Event	24	Depart Location	Depart Location	7/3/2019	08:30:44	USER
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CREW IS RIGGED DOWN
AND READY TO DEPART.
CREW HAS JOURNEY
MANAGEMENT SAFETY
MEETING DISCUSSING
ROUTE, FOLLOWING
DISTANCE, CONVOY ORDER,
HAZARDS,
COMMUNICATION AND
DEPARTS FROM LOCATION

3.0 Attachments

3.1 Stars Federal LD17-760 Production.png

