

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 3727306		Quote #: 0022181142		Sales Order #: 0903287775					
Customer: NOBLE ENERGY INC - EBUS				Customer Rep: Charles Colln							
Well Name: SHADOW STATE			Well #: A26-614		API/UWI #: 05-123-42920-00						
Field: WATTENBERG		City (SAP): GILL		County/Parish: WELD		State: COLORADO					
Legal Description: SE SW-30-6N-63W-425FSL-1553FEL											
Contractor: H & P DRLG				Rig/Platform Name/Num: H & P 343							
Job BOM: 7523											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HB61755				Srcv Supervisor: Joseph Scileppi							
Job											
Formation Name											
Formation Depth (MD)		Top 0		Bottom		17675					
Form Type				BHST		230 degF					
Job depth MD		17673ft		Job Depth TVD		7050					
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	1924	0	1924
Casing			5.5	4.778	20			0	17673	0	7050
Open Hole Section				8.5				1921	17675	1921	7050
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	5.5			17673		Top Plug	5.5	1	HES		
Float Shoe	5.5					Bottom Plug	5.5	2	HES		
Float Collar	5.5			17626.5		SSR plug set	5.5				
Insert Float	5.5					Plug Container	5.5	1	HES		
Stage Tool	5.5					Centralizers	5.5				
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 lb/gal Tuned Spacer III	Tuned Spacer III			40	bbl	11	4.72			
118.19 lbm/bbl		BARITE, BULK (100003681)									
0.40 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)									
0.40 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)									
35.80 gal/bbl		FRESH WATER									

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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	11 lb/gal Tuned Spacer III	Tuned Spacer III	40	bbl	11	36.6				
118.19 lbm/bbl		BARITE, BULK (100003681)								
36.60 gal/bbl		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	
3	ExpandaCem w/o SCBL	EXPANDACEM (TM) SYSTEM	150	sack	13.2	1.6		5	7.68	
7.68 Gal		FRESH WATER								
0.50 %		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	
4	ExpandaCem	EXPANDACEM (TM) SYSTEM	615	sack	13.2	1.6		5	7.69	
0.50 %		SCR-100 (100003749)								
7.69 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	
5	EconoCem	ECONOCEM (TM) SYSTEM	1552	sack	13.5	1.68		5	7.98	
7.98 Gal		FRESH WATER								
0.40 %		HR-5, 50 LB SK (100005050)								
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	
6	Displacement	Displacement	389.5	bbl	8.33					
Cement Left In Pipe		Amount	46 ft		Reason			Shoe Joint		
Mix Water:		pH ##	Mix Water Chloride:		## ppm	Mix Water Temperature: ## °F °C				
Cement Temperature:		## °F °C	Plug Displaced by:			## lb/gal kg/m3 XXXX	Disp. Temperature: ## °F °C			
Plug Bumped?		Yes/No	Bump Pressure:		#### psi MPa	Floats Held? Yes/No				
Cement Returns:		## bbl m3	Returns Density:		## lb/gal kg/m3	Returns Temperature: ## °F °C				
Comment no cmt or spacer to surface										

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)	PS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	5/12/2016	06:00:00	USER				CALLOUT FOR ON LOCATION AT 1200
Event	2	Crew Leave Yard	Crew Leave Yard	5/12/2016	10:00:00	USER				PRE JOURNEY JSA W/ CREW
Event	3	Arrive At Loc	Arrive At Loc	5/12/2016	11:15:00	USER				UPON ARRIVAL RIG HAD 30 JOINTS LEFT TO RUN, MET W/ COMPANY REP TO DISCUSS JOB PROCEDURE
Event	4	Rig-Up Equipment	Rig-Up Equipment	5/12/2016	13:00:00	USER				PRE RIG UP HAZARD HUNT JSA W/ CREW
Event	5	Other	Other	5/12/2016	13:30:00	USER				FIELD MIX WATER ANALYSIS: TEMP-58, PH-7, CHLORIDES-0, IRON-0, SULFATES- <200,
Event	6	Pre-Job Safety Meeting	Pre-Job Safety Meeting	5/12/2016	16:20:00	USER				JSA W/ ALL INVOLVED PERSONNEL
Event	7	Start Job	Start Job	5/12/2016	16:39:33	COM5				
Event	8	Test Lines	Test Lines	5/12/2016	16:50:18	COM5				TESTED LINES THROUGH KELLY HOSE TO 3500 PSI FOR 3 MIN, NO VISIBLE LEAKS
Event	9	Test Lines	Test Lines	5/12/2016	16:57:32	COM5				TESTED LINES TO 2" VALVE ON STAND PIPE TO 4500 PSI FOR 3 MIN, NO VISIBLE LEAKS
Event	10	Pump Spacer 1	Pump Spacer 1	5/12/2016	17:07:10	COM5	4.00	11.00	136.00	PUMPED 80 BBLS OF 11 PPG TUNED SPACER AT 4 BPM AND 136 PSI, FIRST 40 BLLS OF SPACER HAD 16 GAL OF MUSOL A AND 16 GAL OF DUAL SURFACTACT B IN IT
Event	11	Drop Bottom Plug	Drop Bottom Plug	5/12/2016	17:07:30	COM5				PLUG LOADED AND WITNESSED BY COMPANY REP
Event	12	Drop Bottom Plug	Drop Bottom Plug	5/12/2016	17:30:00	COM5				PLUG LOADED AND WITNESSED BY COMPANY REP
Event	13	Shutdown	Shutdown	5/12/2016	17:30:30	COM5				
Event	14	Pump Lead Cement	Pump Lead Cement	5/12/2016	17:35:55	COM5	7.50	13.20	668.00	PUMPED 765 SKS OR 218 BBLS OF 13.2 CMT AT 7.5 BPM AND 668 PSI, FIRST 150 SKS OF LEAD WAS W/O CBL
Event	15	Pump Tail Cement	Pump Tail Cement	5/12/2016	18:11:51	COM5	7.50	13.50	714.00	PUMPED 1552 SKS OR 464.3 BBLS OF 13.5 TAIL CMT

AT 7.5 BPM AND 785 PSI

Event	16	Shutdown	Shutdown	5/12/2016	19:18:12	COM5				
Event	17	Drop Top Plug	Drop Top Plug	5/12/2016	19:18:27	COM5				PLUG LOADED AND WITNESSED BY COMPANY REP
Event	18	Other	Other	5/12/2016	19:20:00	USER				WASHED PUMPS AND LINES
Event	19	Pump Displacement	Pump Displacement	5/12/2016	19:30:20	COM5	10.00	8.33	1203.00	PUMPED 389BBL OF FRESH WATER DISPLACEMENT WITH 10GAL OF MMCR IN THE FIRST 20BBL AND BIOCIDES THROUGHOUT THE REST. NO SPACER OR CEMENT RETURNED TO SURFACE AS WAS EXPECTED.
Event	20	Bump Plug	Bump Plug	5/12/2016	20:17:58	COM5	0.00	8.33	2408.00	FINAL CIRCULATE PRESSURE: 1780PSI FINAL BUMP PRESSURE: 2400PSI
Event	21	End Job	End Job	5/12/2016	20:30:19	COM5				
Event	22	Depart Location	Depart Location	5/12/2016	21:30:00	USER				HELD JOURNEY MANAGEMENT MEETING BEFORE DEPARTING FOR YARD. THANK YOU FOR CHOOSING HALLIBURTON.