

Sold To #: 345242		Ship To #: 3727307		Quote #:		Sales Order #: 0903307598	
Customer: NOBLE ENERGY INC - EBUS				Customer Rep: Gary Stapleton			
Well Name: SHADOW STATE			Well #: A26-618		API/UWI #: 05-123-42921-00		
Field: WATTENBERG		City (SAP): GILL		County/Parish: WELD		State: COLORADO	
Legal Description: SW SE-30-6N-63W-462FSL-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: Vaughn Oteri			

Job

Formation Name			
Formation Depth (MD)		Top	Bottom
Form Type		BHST	230 degF
Job depth MD		17415ft	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	1921	0	1921
Casing		5.5	4.778	20			0	17405	0	6662
Open Hole Section			8.5				1921	17415	1921	6662

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5				Top Plug	5.5	1	HES
Float Shoe	5.5			17405	Bottom Plug	5.5	2	HES
Float Collar	5.5			17363	SSR plug set	5.5		
Insert Float	5.5				Plug Container	5.5		
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		3.0	

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		6.0		
3	Expandacem w/o SCBL	EXPANDACEM (TM) SYSTEM	150	sack	13.2	1.6		8.0	7.68	
4	Expandacem	EXPANDACEM (TM) SYSTEM	615	sack	13.2	1.6		8.0	7.69	
5	EconoCem	ECONOCEM (TM) SYSTEM	1513	sack	13.5	1.68		8.0	7.98	
6	Displacement	Displacement	383	bbl	8.33					
Cement Left In Pipe		Amount	42 ft		Reason			Shoe Joint		
Comment 10bbl of Tuned Spacer III back to surface										

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press <i>(psi)</i>	DH Density <i>(ppg)</i>	Pass-Side Pump Rate <i>(bbl/min)</i>	Pump Stage Total <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	5/20/2016	19:00:00	USER					Call out from ARC hub
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/20/2016	23:00:00	USER					Held pre-convoy meeting with all HES hands to discuss route and hazards
Event	3	Arrive At Loc	Arrive At Loc	5/21/2016	00:45:00	USER					Requested on location @0300 Arrived on location @0045 met with company rep to discuss job process and concerns advised they had about 1 rack of casing to run into hole
Event	4	Other	Other	5/21/2016	01:00:00	USER					TD-17415 TP-17405 FC-17363 Mud-10.0ppg OH-8.5 Casing 5.5 20# Surf Casing 9.625 36# Set @1921 Water info- temp 60 CI-0 PH-7
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	5/21/2016	01:15:00	USER					Held pre-job safety meeting with all HES hands to discuss job process and hazards
Event	6	Rig-Up Equipment	Rig-Up Equipment	5/21/2016	01:20:00	USER					Rig up iron to rig floor
Event	7	Casing on Bottom	Casing on Bottom	5/21/2016	04:00:00	USER					Advised by company rep that casing was on bottom, but was take alot of gas and had to circulate well for awhile
Event	8	Start Job	Start Job	5/21/2016	07:47:02	COM4					Held pre-job safety meeting with all hands on location to discuss job process and

											hazards
Event	9	Other	Other	5/21/2016	07:50:15	COM4					Prime pumps and lines with fresh water
Event	10	Test Lines	Test Lines	5/21/2016	07:52:52	COM4	4957.00	8.47	0.00	1.4	Pressure tested pumps and lines to rigs stand pipe found no leaks and pressure held good
Event	11	Test Lines	Test Lines	5/21/2016	07:55:47	COM4	46.00	8.31	0.00	1.4	Pressure tested rig Kelly hose found no leaks and pressure held good
Event	12	Drop Bottom Plug	Drop Bottom Plug	5/21/2016	08:00:06	COM4	5.00	8.39	0.00	1.9	Released 1st bottom plug witnessed by company rep
Event	13	Check Weight	Check weight	5/21/2016	08:00:40	COM4	4.00	8.38	0.00	1.9	Confirm weight of Tuned spacer III 11.0ppg on scales
Event	14	Pump Spacer 1	Pump Spacer 1	5/21/2016	08:02:17	COM4	4.00	8.37	0.00	0.0	Mixed 40bbl of 11.0ppg Tuned spacer III with surfactants @6.0bpm 380psi
Event	15	Pump Spacer 2	Pump Spacer 2	5/21/2016	08:16:17	COM4	400.00	11.13	6.00	40.5	Mixed 11.0ppg Tuned spacer at 6.0bpm 400psi
Event	16	Shutdown	Shutdown	5/21/2016	08:33:49	COM4	32.00	11.05	0.00	102.1	Shut down so that rig can release top drive and load plug into casing
Event	17	Drop Bottom Plug	Drop Bottom Plug	5/21/2016	08:33:53	COM4	30.00	11.05	0.00	102.1	Rig stung back into casing to release plug witnessed by company rep
Event	18	Other	Other	5/21/2016	08:57:54	COM4	446.00	8.27	9.00	133.7	Shut down due to lead cement was discharged into spacer pod while mixing spacer informed Noble company rep right way, and was advised to roll hole clean
Event	19	End Job	End Job	5/21/2016	09:13:13	COM4					

Event	20	Other	Other	5/21/2016	13:08:45	USER					New bulk truck arrived on location with 80bbl of spacer and 150sks of lead cement
Event	21	Start Job	Start Job	5/21/2016	15:43:18	COM4					Received E-mail confirmation that cement was good to pump from Adam Mckay
Event	22	Prime Pumps	Prime Pumps	5/21/2016	15:44:32	COM4					Prime pumps and lines with fresh water
Event	23	Check Weight	Check weight	5/21/2016	16:06:11	COM4					Confrim weight of Tuned spacer III at 11.0ppg
Event	24	Drop Bottom Plug	Drop Bottom Plug	5/21/2016	16:10:14	COM4					Released 1st bottom plug witnessed by company rep
Event	25	Pump Spacer 1	Pump Spacer 1	5/21/2016	16:10:15	COM4	36.00	8.40	0.00	0.0	Mixed 40bbl of 11.0ppg Tuned spacer with surfactants at 3bpm 150psi
Event	26	Pump Spacer 2	Pump Spacer 2	5/21/2016	16:23:50	COM4					Mixed 40bbl of 11.0ppg Tuned spaer III at 6.0bpm 300psi
Event	27	Shutdown	Shutdown	5/21/2016	16:31:17	COM4					Shut down so that rig can sting out of the casing
Event	28	Drop Bottom Plug	Drop Bottom Plug	5/21/2016	16:31:23	COM4					Placed 2nd bottom plug into casing and had CRT push it down
Event	29	Check Weight	Check weight	5/21/2016	16:34:21	COM4					Confrim weight of lead cement of 13.2ppg on scales
Event	30	Pump Lead Cement	Pump Lead Cement	5/21/2016	16:38:43	COM4	660.00	13.42	8.00	16.4	Mixed 765sks or 217bbl of 13.2ppg Y-1.6 G/SK-7.68 Expandacem at 8.0bpm 542psi
Event	31	Check Weight	Check weight	5/21/2016	16:52:25	COM4					Confirm weight of lead cement of 13.2ppg on

							scales				
Event	32	Pump Tail Cement	Pump Tail Cement	5/21/2016	17:08:10	COM4	Mixed 1513sks or 452bbl of 13.5ppg Y-1.68 G/SK-7.98 Econocem at 8.0bpm514psi				
Event	33	Check Weight	Check weight	5/21/2016	17:08:49	COM4	Confrim weight of Tail cement of 13.5ppg on scales				
Event	34	Check Weight	Check weight	5/21/2016	17:39:56	COM4	Confrim weight of Tail cement of 13.5ppg on scales				
Event	35	Shutdown	Shutdown	5/21/2016	18:10:19	COM4	Shut down so that rig could pull out of casing and blow lines clear with air				
Event	36	Drop Plug	Drop Plug	5/21/2016	18:10:29	COM4	Release plug into casing witnessed by company rep				
Event	37	Pump Displacement	Pump Displacement	5/21/2016	18:24:23	COM4	422.00	8.29	12.00	16.0	Pumped 20bbl of fresh water with MMCR and 363bbl of fresh water with BIO_Cide
Event	38	Displ Reached Cmnt	Displ Reached Cmnt	5/21/2016	18:26:14	COM4	Caught cement 36bbl away				
Event	39	Bump Plug	Bump Plug	5/21/2016	19:12:27	COM4	Bumped plug 500psi over final pump pressure lift 1830 final 2305				
Event	40	Other	Other	5/21/2016	19:16:58	COM4	Released pressure back to pump truck to check floats. Floats held good 4bbl back				
Event	41	Other	Other	5/21/2016	19:41:48	COM4	Met with rig crew for pre-rig down safety meeting				
Event	42	End Job	End Job	5/21/2016	19:41:57	COM4	10bbl of spacer back to surface				