

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 345242		<b>Ship To #:</b> 3744993		<b>Quote #:</b>		<b>Sales Order #:</b> 0903536425				
<b>Customer:</b> NOBLE ENERGY INC - EBUS				<b>Customer Rep:</b> CHARLES COLLVER						
<b>Well Name:</b> HARPER			<b>Well #:</b> LD21-675		<b>API/UWI #:</b> 05-123-43292-00					
<b>Field:</b> WILDCAT		<b>City (SAP):</b> RAYMER		<b>County/Parish:</b> WELD		<b>State:</b> COLORADO				
<b>Legal Description:</b> SW NW-22-9N-58W-1708FNL-330FWL										
<b>Contractor:</b> H & P DRLG				<b>Rig/Platform Name/Num:</b> H & P 517						
<b>Job BOM:</b> 7523										
<b>Well Type:</b> HORIZONTAL OIL										
<b>Sales Person:</b> HALAMERICA\HB61755				<b>Srv Supervisor:</b> Jesse Slaughter						
<b>Job</b>										
<b>Formation Name</b>										
<b>Formation Depth (MD)</b>		<b>Top</b>		<b>Bottom</b>						
<b>Form Type</b>				<b>BHST</b>		230 degF				
<b>Job depth MD</b>		10809ft		<b>Job Depth TVD</b>		5729ft				
<b>Water Depth</b>				<b>Wk Ht Above Floor</b>		4ft				
<b>Perforation Depth (MD)</b>		<b>From</b>		<b>To</b>						
<b>Well Data</b>										
<b>Description</b>	<b>New / Used</b>	<b>Size in</b>	<b>ID in</b>	<b>Weight lbm/ft</b>	<b>Thread</b>	<b>Grade</b>	<b>Top MD ft</b>	<b>Bottom MD ft</b>	<b>Top TVD ft</b>	<b>Bottom TVD ft</b>
Casing		9.625	8.921	36			0	1924	0	1924
Casing		5.5	4.778	20		P-110	0	10809	0	6526
Open Hole Section			8.5				1924	10825	1924	6526
<b>Tools and Accessories</b>										
<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>	<b>Depth ft</b>		<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>	
<b>Guide Shoe</b>	5.5			10809		<b>Top Plug</b>	5.5	1	HES	
<b>Float Shoe</b>	5.5					<b>Bottom Plug</b>	5.5	1	HES	
<b>Float Collar</b>	5.5					<b>SSR plug set</b>	5.5		HES	
<b>Insert Float</b>	5.5					<b>Plug Container</b>	5.5		HES	
<b>Stage Tool</b>	5.5					<b>Centralizers</b>	5.5		HES	
<b>Fluid Data</b>										
<b>Stage/Plug #: 1</b>										
<b>Fluid #</b>	<b>Stage Type</b>	<b>Fluid Name</b>	<b>Qty</b>	<b>Qty UoM</b>	<b>Mixing Density lbm/gal</b>	<b>Yield ft3/sack</b>	<b>Mix Fluid Gal</b>	<b>Rate bbl/min</b>	<b>Total Mix Fluid Gal</b>	
1	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	40	bbl	11.5	3.78		4		
0.40 gal/bbl		<b>MUSOL(R) A, BULK (100003696)</b>								
35.10 gal/bbl		<b>FRESH WATER</b>								

0.40 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)							
147.42 lbm/bbl		BARITE, BULK (100003681)							
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	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	40	bbl	11.5	3.79		4	
35.90 gal/bbl		FRESH WATER							
147.42 lbm/bbl		BARITE, BULK (100003681)							
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 Lead w/o CBL	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		4	7.53
7.53 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	ElastiCem Lead W/ CBL	ELASTICEM (TM) SYSTEM	470	sack	13.2	1.6		6	7.69
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 Tail	ECONOCHEM (TM) SYSTEM	685	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	238.0	bbl	8.33			8.5	
Cement Left In Pipe		Amount	39 ft			Reason		Shoe Joint	

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	9/13/2016	21:00:00	USER				
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	9/14/2016	00:30:05	USER				WITH ALL HES PERSONNEL
Event	3	Crew Leave Yard	Crew Leave Yard	9/14/2016	00:45:00	USER				
Event	4	Arrive At Loc	Arrive At Loc	9/14/2016	02:50:00	USER				RIG WAS RUNNING CASING UPON HES ARRIVAL
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	9/14/2016	03:00:00	USER				WITH ALL HES PERSONNEL
Event	6	Other	Spot Equipment	9/14/2016	03:20:00	USER				
Event	7	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	9/14/2016	03:30:00	USER				WITH ALL HES PERSONNEL
Event	8	Rig-Up Equipment	Rig-Up Equipment	9/14/2016	03:45:00	USER				2 BULK TRUCKS 2 SILOS 1 RED TIGER
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	9/14/2016	05:00:00	USER				WITH ALL PERSONNEL. HES PUMPING JOB THROUGH RIG CRT TOOL.
Event	10	Start Job	Start Job	9/14/2016	06:28:00	USER	8.32	0.00	-3.00	TD 10825 FT, TP 10809 FT, SHOE 38.41 FT, CSG 5 1/2 IN 20 LB/FT, HOLE 8 1/2 IN, MUD WT 9.5 PPG, TVD 5729 FT, SFC CSG SET AT 1924 FT 9 5/8 IN 36 LB/FT
Event	11	Prime Pumps	Prime Pumps	9/14/2016	06:31:03	USER	8.34	0.00	-6.00	FRESH WATER
Event	12	Test Lines	Test IBOP	9/14/2016	06:33:02	USER	8.37	0.80	375.00	TESTED IBOP TO 3283 PSI PRESSURE HOLDING
Event	13	Test Lines	Test Lines	9/14/2016	06:40:01	USER	8.36	0.00	1439.00	TESTED LINES TO 4716 PSI PRESSURE HOLDING
Event	14	Pump Spacer 1	Pump Tuned Spacer	9/14/2016	06:52:07	COM5	8.33	1.10	-6.00	FIRST 40 BBLS SPACER WITH 16 GAL MUSOL A, 16 GAL DUAL SPACER, 20 GAL D-AIR.
Event	15	Pump Lead Cement	Pump Lead Cement	9/14/2016	07:14:02	COM5	13.18	4.00	222.00	150 SKS AT 13.2 PPG, 1.75 FT3/SK, 7.53 GAL/SK. WITHOUT SUPER CBL

Event	16	Shutdown	Shutdown	9/14/2016	07:23:07	USER	13.22	0.00	90.00	SHUTDOWN TO SWAP BULK LINES
Event	17	Pump Lead Cement	Pump Lead Cement	9/14/2016	07:25:10	COM5	13.25	1.60	69.00	470 SKS AT 13.2 PPG, 1.6 FT3/SK, 7.69 GAL/SK. WITH SUPER CBL
Event	18	Check Weight	Check weight	9/14/2016	07:28:59	COM5	13.42	6.00	477.00	WEIGHED UP 13.3 PPG
Event	19	Pump Tail Cement	Pump Tail Cement	9/14/2016	07:55:00	COM5	13.53	4.00	255.00	685 SKS AT 13.5 PPG, 1.68 FT3/SK, 7.98 GAL/SK
Event	20	Check Weight	Check weight	9/14/2016	07:56:24	COM5				WEIGHED 13.2 PPG
Event	21	Shutdown	Shutdown	9/14/2016	08:39:30	USER	13.38	2.80	186.00	
Event	22	Clean Lines	Clean Lines	9/14/2016	08:44:26	USER	0.25	0.00	-36.00	CLEANED PUMPS AND LINES TO OPEN TOP TANK
Event	23	Drop Top Plug	Drop Top Plug	9/14/2016	08:49:13	USER	8.45	0.00	-20.00	PLUG LAUNCHED DONE BY COMPANY REP.
Event	24	Pump Displacement	Pump Displacement	9/14/2016	08:52:11	USER	8.29	1.90	-19.00	FRESH WATER WITH 10 GAL MMCR IN FIRST 20 BBLS AND 15 GAL ALDOCIDE G IN REMAINDER OF DISPLACEMENT.
Event	25	Slow Rate	Slow Rate	9/14/2016	09:17:56	USER	8.33	8.30	2097.00	SLOWED RATE 20 BBLS PRIOR TO CALCULATED DISPLACEMENT
Event	26	Shutdown	Shutdown	9/14/2016	09:26:10	USER	8.33	3.00	1573.00	SHUTDOWN DUE TO PUMPING 6 BBLS OVER CALCULATED. AS PER COMPANY REP HES RESUMED PUMPING AND IMMEDIATELY BUMPED PLUG.
Event	27	Bump Plug	Bump Plug	9/14/2016	09:31:00	COM5	8.33	1.00	1474.00	
Event	28	Check Floats	Check Floats	9/14/2016	09:35:48	USER	8.32	0.00	2003.00	FLOATS HOLDING. HES RETURNED 3 BBLS H2O TO PUMP.
Event	29	End Job	End Job	9/14/2016	09:38:25	COM5	8.30	0.00	-54.00	PIPE WAS ROTATED DURING JOB. GOOD CIRCULATION THROUGHOUT JOB. HES USED ALL CHEMICALS EXCEPT 100 LB OF SUGAR
Event	30	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	9/14/2016	09:45:00	USER	8.30	0.00	-29.00	WITH ALL HES PERSONNEL
Event	31	Rig-Down Equipment	Rig-Down Equipment	9/14/2016	10:00:00	USER	8.31	8.20	230.00	
Event	32	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	9/14/2016	11:20:00	USER				WITH ALL HES PERSONNEL
Event	33	Crew Leave Location	Crew Leave Location	9/14/2016	11:30:00	USER				
Event	34	Comment	Comment	9/14/2016	11:31:00	USER				THANK YOU FOR USING HALLIBURTON CEMENT DEPARTMENT JESSE SLAUGHTER AND CREW