

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 300466		<b>Ship To #:</b> 3890108		<b>Quote #:</b> 0022502868		<b>Sales Order #:</b> 0905217360				
<b>Customer:</b> ANADARKO PETROLEUM CORP-EBUS				<b>Customer Rep:</b> Josh Johnson						
<b>Well Name:</b> HENDU			<b>Well #:</b> 23-6HZ		<b>API/UWI #:</b> 05-123-47261-00					
<b>Field:</b> WATTENBERG		<b>City (SAP):</b> IONE		<b>County/Parish:</b> WELD		<b>State:</b> COLORADO				
<b>Legal Description:</b> NE NE-23-2N-66W-293FNL-539FEL										
<b>Contractor:</b> PRECISION DRLG				<b>Rig/Platform Name/Num:</b> PRECISION 464						
<b>Job BOM:</b> 7523 7523										
<b>Well Type:</b> HORIZONTAL GAS										
<b>Sales Person:</b> HALAMERICA\HX41066				<b>Srv Supervisor:</b> Nicholas Roles						
<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>						
<b>Job depth MD</b>		13304ft		<b>Job Depth TVD</b>						
<b>Water Depth</b>				<b>Wk Ht Above Floor</b>						
<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		J-55	0	1868	0	1868
Casing		5.5	4.892	17	LTC	HCP110	0	13304	0	7405
Open Hole Section			7.875				1868	13314	1868	7405
<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>	
Guide Shoe	5.5			13304		Top Plug	5.5	1	WTF	
Float Shoe	5.5					Bottom Plug	5.5	1	WTF	
Float Collar	5.5			13302		SSR plug set	5.5		HES	
WS SUB	5.5			13295		Plug Container	5.5	1	WTF	
Stage Tool	5.5					Centralizers	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	Tuned Spacer III	Tuned Spacer III	60	bbl	10.5	6.96		5		
79.92 lbm/bbl		<b>BARITE, BULK (100003681)</b>								
0.70 gal/bbl		<b>MUSOL(R) A, 5 GAL PAIL (100064220)</b>								
37.58 gal/bbl		<b>FRESH WATER</b>								

0.70 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)							
0.25 gal/bbl		D-AIR 3000L, 5 GAL PAIL (101007444)							
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	Gasstop B1	GASSTOP (TM) SYSTEM	640	sack	13.2	1.59		6	7.81
0.10 Gal		D-AIR 3000L, TOTETANK (101396181)							
1.20 %		SCR-100 (100003749)							
5.21 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
3	EconoCem	ECONOCEM (TM) SYSTEM	580	sack	13.5	1.68		8	7.98
0.10 %		SA-1015, 50 LB SACK (102077046)							
7.99 Gal		FRESH WATER							
0.45 %		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
4	Biocide Water and MMCR	Biocide Water and MMCR	20	bbl	8.34			9	
0.50 gal/bbl		MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)							
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	Biocide Water	Biocide Water	288	bbl	8.34			9	
Cement Left In Pipe		Amount	0 ft		Reason			Wet Shoe	
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:		2600psi MPa		Floats Held?		Yes
Cement Returns:		0 bbl m3	Returns Density:		9.2 lb/gal		Returns Temperature:		°F °C
Comment Got 0bbls spacer back to pits. Estimated TOT-7705', TOL-1847', TOS-595'									

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comments
Event	1	Call Out	Call Out	10/20/2018	10:00:00	USER	Called out by Service Coordinator for O/L at 1400
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	10/20/2018	12:45:00	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	10/20/2018	13:00:00	USER	Journey Management prior to departure
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	10/20/2018	13:30:00	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	10/20/2018	13:45:00	USER	Discussed rigging up hazards and procedure according to HMS.
Event	6	Other	Other	10/20/2018	14:45:00	USER	Water test- PH-6, Chlor-0, Temp-60.
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	10/20/2018	18:00:00	USER	Held safety meeting with all job associated personnel to discuss job procedure, hazards and stop work authority.
Event	8	Start Job	Start Job	10/20/2018	18:35:49	COM4	TD-13314', TP-13304' 5.5" 17#, WS-13295', TVD-7405', OH-7.875", SURF-1868' 9.625" 36#, MUD-9.2#
Event	9	Test Lines	Test Lines	10/20/2018	18:45:20	COM4	Pumped 5bbls fresh water to fill lines, shutdown, closed manifold, performed 500psi k/o function test, continued with 5th gear stall at 2100psi, proceeded to bring pressure to 6500psi. Pressure stabilized and held with no leaks.
Event	10	Pump Spacer 1	Pump Spacer 1	10/20/2018	18:53:06	COM4	Pumped 60bbls of 10.5# 6.96Y 44.4g/s Tuned Spacer III with 40g Musol A, 40g Dual Spacer B, 15g D-Air and 0.6g biocide at 5bpm 500psi.

Event	11	Drop Bottom Plug	Drop Bottom Plug	10/20/2018	19:08:26	COM4	Dropped by Weatherford tool hand, witnessed by company man and HES supervisor.
Event	12	Pump Lead Cement	Pump Lead Cement	10/20/2018	19:09:14	COM4	Pumped 640sk or 181bbls of 13.2# 1.59y 7.82g/s Gasstop at 6bpm 400psi.
Event	13	Check Weight	Check Weight	10/20/2018	19:14:21	COM4	Weight verified with pressurized mud scales.
Event	14	Check Weight	Check Weight	10/20/2018	19:31:19	COM4	Weight verified with pressurized mud scales.
Event	15	Pump Tail Cement	Pump Tail Cement	10/20/2018	19:45:06	COM4	Pumped 580sk or 173bbls of 13.5# 1.68Y 7.98G/S Econocem at 8bpm 550psi.
Event	16	Check Weight	Check Weight	10/20/2018	19:47:52	COM4	Weight verified with pressurized mud scales.
Event	17	Check Weight	Check Weight	10/20/2018	19:59:18	COM4	Weight verified with pressurized mud scales.
Event	18	Shutdown	Shutdown	10/20/2018	20:13:46	COM4	Shutdown, let lines gravity feed cement to pits from floor, proceeded to pump 5bbls fresh water through pumps and lines.
Event	19	Drop Top Plug	Drop Top Plug	10/20/2018	20:13:50	COM4	Dropped by Weatherford tool hand, witnessed by company man and HES supervisor.
Event	20	Pump Displacement	Pump Displacement	10/20/2018	20:13:53	COM4	Pumped 308bbls fresh water with 10g MMCR in first 20bbls, followed with 4.4g biocide throughout at 9bpm.
Event	21	Bump Plug	Bump Plug	10/20/2018	20:56:58	COM4	Slowed down at 290bbls away to 3bpm, Final Circulating Pressure-1980psi, Bump Pressure-2520psi.

Event	22	Test Lines	Test Lines	10/20/2018	20:58:02	COM4	pressure lined out brought pressure up to 3000psi and held for 15min test.
Event	23	Pressure Up Well	Pressure Up Well	10/20/2018	21:05:32	COM4	Pressured up with fresh water to 4795psi to shear pins and pumped 3bbls at 3bpm 2100psi, for wet shoe.
Event	24	Check Floats	Check Floats	10/20/2018	21:08:51	USER	Released pressure and got 2bbls back to truck.
Event	25	End Job	End Job	10/20/2018	21:10:32	COM4	Got 0bbls spacer back to pits. Estimated TOT-7705', TOL-1847', TOS-595'
Event	26	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	10/20/2018	21:15:00	USER	All HSE present. Discussed red zone areas and trapped pressure hazards. Watch for suspended loads and rig down procedures, including hand placement, lifting techniques, and swing radius.
Event	27	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	10/20/2018	22:45:00	USER	All HSE present and fit to drive. Aware of directions and hazards.
Event	28	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	10/20/2018	23:00:00	USER	Pre journey management prior to departure.

## 3.0 Attachments

### 3.1 Job Chart – With Torque and RPM

