

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 300466		<b>Ship To #:</b> 3790953		<b>Quote #:</b> 0022389469		<b>Sales Order #:</b> 0904529176					
<b>Customer:</b> ANADARKO PETROLEUM CORP-EBUS				<b>Customer Rep:</b> Carlton Cooley							
<b>Well Name:</b> NEWBY			<b>Well #:</b> 27N-33HZ			<b>API/UWI #:</b> 05-123-44566-00					
<b>Field:</b> WATTENBERG		<b>City (SAP):</b> LONGMONT		<b>County/Parish:</b> WELD		<b>State:</b> COLORADO					
<b>Legal Description:</b> SW SE-33-3N-68W-589FSL-1410FEL											
<b>Contractor:</b> NABORS DRLG				<b>Rig/Platform Name/Num:</b> NABORS X22							
<b>Job BOM:</b> 7525 7525											
<b>Well Type:</b> HORIZONTAL GAS											
<b>Sales Person:</b> HALAMERICA\HX41066				<b>Srv Supervisor:</b> Bryce Muir							
<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>		12697ft		<b>Job Depth TVD</b>		6968 FT					
<b>Water Depth</b>				<b>Wk Ht Above Floor</b>		3 FT					
<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>	
Drill Pipe		4	3.34	14			0	5888	0	0	
Casing		7	6.276	26	LTC	HCP110	0	6140	0	0	
Casing		4.5	4	11.6	LTC	HCP110	5888	12697	0	0	
Open Hole Section			6.125				6140	12703	0	0	
<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	4.5					Top Plug	4.5	1	WF		
Float Shoe	4.5	1	WF	12697		Bottom Plug	4.5				
Float Collar	4.5	1	WF	12650		SSR plug set	4.5				
Insert Float	4.5					Plug Container	4.5				
Stage Tool	4.5					Centralizers	4.5			WF	
<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	6.25			
0.70 gal/bbl		<b>MUSOL A, 330 GAL TOTE - (790828)</b>									
88.91 lbm/bbl		<b>BARITE, BULK (100003681)</b>									

37.58 gal/bbl		FRESH WATER							
0.70 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	EconoCem	ECONOCHEM (TM) SYSTEM	420	sack	13.5	1.68		6	7.98
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
3	Displacement Fluid	Displacement Fluid	162	bbl	8.34				
Cement Left In Pipe		Amount	47 ft		Reason			Shoe Joint	
Comment: WE ARRIVED ON LOCATION AND BEGAN TO RIG UP OUR EQUIPMENT. THE RIG WAS STILL RUNNING THE LINER INTO THE WELL. AFTER THE LINER WAS ON BOTTON AND THE RIG CIRULATED THE WELL WE HELD OUR RIG SAFETY MEETING. WE THEN RIGGED UP OUR IRON AND BEGAN PUMPING THE JOB. WE PUMPED THE QUANTITIES OF FLUID STATED IN THE TABLE ABOVE. WE LANDED THE PLUG AT 156 BBLS OF DISPLACEMENT PUMPED. AFTER WE BLED OFF PRESSURE AND CHECKED FLOATES THE RIG CONDUCTED A BACKSIDE PRESSURE AT 3000 PSI FOR 15 MINUTES. THE RIG BLED OFF PRESSURE AFTER 15 MINUTES AND WE CLEANED THE WELL WITH FRESH WATER. WE PUMPED 175 BBLS OF FRESH WATER. WE GOT 60 BBLS OF TUNED SPACER AND 10 BBLS OF GOOD CEMENT TO SURFACE.									

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Driv-Side Pump Pressure (psi)	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Water Stg Tot (gal)	Comments
Event	1	Call Out	Call Out	12/25/2017	05:00:00	USER					CREW CALLED OUT TO PERFORM A 4.5" PRODUCTION LINER CASING JOB.
Event	2	Other	Other	12/25/2017	06:30:00	USER					LOAD UP ALL MATERIALS AND DOWNLOAD ALL REQUIRED PAPERWORK FOR THE JOB. CHECK ALL TAGS ON BULK EQUIPMENT.
Event	3	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	12/25/2017	10:45:00	USER					DISCUSS HAZARDS ASSOCIATED WITH DRIVING TRUCKS TO LOCATION. IDENTIFY SAFEST ROUTE OF TRAVEL, CONVOY ORDER, AND PLACES TO STOP IF NEEDED.
Event	4	Depart from Service Center or Other Site	Depart from Service Center or Other Site	12/25/2017	11:00:00	USER					
Event	5	Arrive at Location from Service Center	Arrive at Location from Service Center	12/25/2017	12:00:00	USER					
Event	6	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	12/25/2017	12:05:00	USER					ASSESS LOCATION TO IDENTIFY POTENTIAL HAZARDS. DISCUSS BEST WAY TO SPOT PUMPING EQUIPMENT. SPOT EQUIPMENT.
Event	7	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	12/25/2017	12:15:00	USER					DISCUSS HAZARDS ASSOCIATED WITH RIGGING UP AND PACKING IRON ON LOCATION. DISCUSS

WINTER CONDITIONS AND  
TO CHANGE OUT GLOVES  
AS NEEDED.

Event	8	Rig-Up Equipment	Rig-Up Equipment	12/25/2017	12:30:00	USER	
Event	9	Other	Other	12/25/2017	13:00:00	USER	RIG CREW STILL RUNNING LINER. AFTER RIG WAS ON BOTTOM THEY CIRCULATED THE WELL. RIG WAS ON BOTTOM AT 1245 AND CIRCULATED AT 5 BPM @ 1340 PSI.
Event	10	Pre-Job Safety Meeting	Pre-Job Safety Meeting	12/25/2017	14:30:00	USER	DISCUSS HES SAFETY AND JOB PROCEDURES WITH COMPANY MAN AND RIG CREW. IDENTIFY CLOSEST HOSPITALS, MUSTER AREAS, FIRST AID LOCATIONS, AND EMERGENCY VEHICLE IF NEEDED. DISCUSSED IN DEPTH THE JOB PROCEDURES AND ORDER OF OPERATION AND AMOUNT OF FLUID TO BE PUMPED.
Event	11	Rig-Up Equipment	Rig-Up Equipment	12/25/2017	14:55:00	USER	RIG UP IRON AND PUMPING LINES ON THE RIG FLOOR.
Event	12	Start Job	Start Job	12/25/2017	15:38:16	COM6	
Event	13	Test Lines	Test Lines	12/25/2017	15:41:33	COM6	CONDUCT A PRESSURE TEST TO 500 PSI TO TEST PRESSURE KICKOUTS ON THE RCM. MAKE SURE THAT THEY ARE FUNCTIONING PROPERLY. CONDUCTED A HIGH PRESSURE TEST TO 4700 PSI TO TEST PUMPS AND LINES.

Event	14	Pump Spacer 1	Pump Spacer 1	12/25/2017	15:47:20	COM6						PUMPED 60 BBLS OF TUNED SPACER. 10.5 #/GAL 6.25 CUFT/SK 40.2 GAL/SK. TUNED SPACER WAS PUMPED AT 4 BPM WITH A CIRCULATING PRESSURE OF 930 PSI. GOOD WELL CIRCULATION.
Event	15	Check Weight	Check Weight	12/25/2017	15:48:00	USER						TUNED SPACER VERIFIED BY PRESSURIZED MUD BALANCE.
Event	16	Pump Cement	Pump Cement	12/25/2017	16:03:37	COM6						PUMPED 126 BBLS OF PRIMARY CEMENT. 420 SACKS @ 13.5 #/GAL 1.68 CUFT/SK 7.98 GAL/SK. WE PUMPED CEMENT AT 5 BPM WITH A CIRCULATING PRESSURE OF 1250 PSI.
Event	17	Check Weight	Check weight	12/25/2017	16:04:21	COM6						PRIMARY CEMENT VERIFIED BY PRESSURIZED MUD BALANCE.
Event	18	Check Weight	Check weight	12/25/2017	16:07:38	COM6						PRIMARY CEMENT VERIFIED BY PRESSURIZED MUD BALANCE.
Event	19	Shutdown	Shutdown	12/25/2017	16:29:42	COM6						BLOW DOWN AND WASH PUMPS AND LINES. REMOVE DP CIRCULATING SWAGE TO LOAD DART.
Event	20	Drop Top Plug	Drop Top Plug	12/25/2017	16:36:00	USER	1822.36	8.35	0.00	370		DROPPED DP DART TO SHEAR TOP PLUG. DART DROPPED BY WEATHERFORD REP AND WITNESSED BY BRYCE MUIR.
Event	21	Pump Displacement	Pump Displacement	12/25/2017	16:39:38	COM6	195.12	8.41	0.00	412		PUMPED 162 BBLS OF FRESH WATER DISPLACEMENT. THE FIRST

											20 BBLS WE ADDED MMCR. THE NEXT 80 BBLS WE ADDED BIO-CIDE TO EACH TANK OF 10 BBLS.
Event	22	Displ Reached Cmnt	Displ Reached Cmnt	12/25/2017	16:43:00	USER	744.81	10.61	3.05	260	DART REACHED CEMENT AT 27 BBLS PUMPED. WE SLOWED OUR RATE AT 45 BBLS OF DISPLACEMENT PUMPED TO SEE THE DART SHEAR THE PINS. AT 52 BBLS AWAY THE DART SHEARED THE PINS AT 1000 PSI. WE INCREASED OUR RATE TO 5 BPM. WE SLOWED OUR RATE AT 150 BBLS OF DISPLACEMENT AWAY. WE LANDED THE PLUG AT 156 BBLS OF DISPLACEMENT PUMPED.
Event	23	Bump Plug	Bump Plug	12/25/2017	17:12:00	USER	618.55	13.52	5.04	1960	WE LANDED THE PLUG AT 156 BBLS OF DISPLACEMENT. PLUG WAS LANDED AT 1635 PSI AND WE PRESSURED UP 500 PSI OVER FINAL CIRCULATING PRESSURE TO 2145 PSI. WE ENGAGED OUR PUMPS TO PUT 2500 PSI ON THE LINES AND HELD FOR 5 MINUTES.
Event	24	Check Floats	Check Floats	12/25/2017	17:17:00	USER	479.94	13.49	5.04	2632	FLOATS HELD AND WE GOT 1 1/2 BBLS BACK TO THE RCM.
Event	25	Pressure Up Well	Pressure Up Well	12/25/2017	17:34:00	USER	100.18	8.12	3.36	0	RIG CONDUCTED A BACKSIDE PRESSURE TEST TO 3000 PSI AND HELD FOR 15 MINUTES.
Event	26	Clean Hole	Clean Hole	12/25/2017	17:58:00	USER	1721.73	8.42	4.96	4315	WE PUMPED 175 BBLS OF FRESH WATER TO CLEAN THE WELL. WE ADDED THE

REMAINING BIO-CIDE TO THE DISPLACEMENT TANKS WAS WE CLEANED THE WELL. WE GOT GOOD SPACER TO SURFACE AT 64 BBLS AWAY AND GOOD CEMENT TO SURFACE AT 124 BBLS OF FRESH WATER PUMPED. WE GOT 60 BBLS OF SPACER AND 10 BBLS OF CEMENT TO SURFACE.

Event	27	Shutdown	Shutdown	12/25/2017	18:27:00	USER	6.19	8.33	0.00	6244	
Event	28	End Job	End Job	12/25/2017	18:30:00	USER	6.19	8.33	0.00	6244	
Event	29	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	12/25/2017	19:00:00	USER	1732.17	8.46	8.08	1014	DISCUSS HAZARDS ASSOCIATED WITH RIGGING DOWN AND PACKIG IRON ON A DARK LOCATION.
Event	30	Rig-Down Equipment	Rig-Down Equipment	12/25/2017	19:15:00	USER	232.15	8.41	3.48	5326	
Event	31	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	12/25/2017	21:00:00	USER					DISCUSSED HAZARDS ASSOCIATED WITH DRIVING TRUCKS BACK TO THE SERVICE CENTER. DISCUSSED SAFEST ROUTE OF TRAVEL, CONVOY ORDER, AND PLACES TO REFUEL TRUCKS.
Event	32	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	12/25/2017	21:15:00	USER					JOB WAS COMPLETED SAFELY BY BRYCE MUIR AND CREW. THANK YOU FOR USING HALLIBURTON ENERGY SERVICES. STAY SAFE OUT HERE.

## 3.0 Attachments

### 3.1 Anadarko Newby 27N-33HZ Production Liner Job Chart

