

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 300466		<b>Ship To #:</b> 3811897		<b>Quote #:</b> 0022403579		<b>Sales Order #:</b> 0904625099					
<b>Customer:</b> ANADARKO PETROLEUM CORP-EBUS				<b>Customer Rep:</b> Josh							
<b>Well Name:</b> NEWBY STATE			<b>Well #:</b> 36N-4HZ		<b>API/UWI #:</b> 05-123-45091-00						
<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-1485FEL											
<b>Contractor:</b> NABORS DRLG				<b>Rig/Platform Name/Num:</b> NABORS X22							
<b>Job BOM:</b> 7523 7523											
<b>Well Type:</b> HORIZONTAL GAS											
<b>Sales Person:</b> HALAMERICA\HX41066				<b>Srv Supervisor:</b> Nicholas Peterson							
<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>		13,736'		<b>Job Depth TVD</b>		7,243					
<b>Water Depth</b>				<b>Wk Ht Above Floor</b>		5'					
<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	2288	0	0	
Casing	0	5.5	4.892	17	LTC	HCP110	0	13736	0	0	
Open Hole Section			7.875				2288	13743	2289	7243	
<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	1	WEATH	13,736		<b>Top Plug</b>	5.5	1	WEATH		
<b>Wet Shoe Sub</b>	5.5	1	WEATH	13,723.8		<b>Bottom Plug</b>	5.5	1	WEATH		
						<b>Plug Container</b>	5.5	1	HES		
						<b>Centralizers</b>	5.5	196	WEATH		
<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	40.2	4	57
35.80 gal/bbl		<b>FRESH WATER</b>									

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	ElastiCemLead	ELASTICEM (TM) SYSTEM	560	sack	13.2	1.57	7.53	8	4217
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 Tail	ECONOCEM (TM) SYSTEM	830	sack	13.5	1.68	7.99	6	6632
7.99 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	Biocide Water and MMCR	Biocide Water and MMCR	20	bbl	8.34			8	
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	295	bbl	8.34			6	
Cement Left In Pipe		Amount	5 ft		Reason			Shoe Joint	
Mix Water:		pH 7.0	Mix Water Chloride:		0 ppm		Mix Water Temperature:		68 °F
Cement Temperature:		## °F	Plug Displaced by:		8.33 lb/gal		Disp. Temperature:		68 °F
Plug Bumped?		Yes	Bump Pressure:		2,401 psi		Floats Held?		Yes
Cement Returns:		0 bbl	Returns Density:		10.5 lb/gal		Returns Temperature:		## °F
Comment:45 BBLS Spacer back to surface.Plug bumped @ 315 bbls displacement, Wet shoe sub ruptured @ 4,613 psi pumped 3 bbls wet shoe.									

## 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)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	Call Out	2/8/2018	09:30:00	USER					CREW CALLED OUT AT 09:30, REQUESTED ON LOCATION 14:00. CREW PICKED UP CEMENT, CHEMICALS, AND PLUG CONTAINER FROM FT. LUPTON, CO. BULK 660 10924982, Bulk 660 111566182, AND PUMP 11189145.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/8/2018	12:30:00	USER					CREW DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Arrive At Loc	Arrive At Loc	2/8/2018	14:00:00	USER					END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING- 9.625" 36 LB/FT @ 2,288', 5.5" CASING: 17 LB/FT TOTAL 13,735.8', 7.875" HOLE, TD 13,743', SHOE TRAC 11.97', TVD- 7,243'. PUMP FRESH WATER DISPLACEMENT WITH BIOCID. CASING LANDED @ 17:00 02/08/2018. RIG CIRCULATED 2 BOTTOMS UP.
Event	4	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	2/8/2018	14:15:00	USER					HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH

											LOCATION, RIG UP, AND WEATHER.
Event	5	Rig-Up Equipment	Rig-Up Equipment	2/8/2018	14:30:00	USER					CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON AND WATER HOSES TO PERFORM JOB.
Event	6	Rig-Up Completed	Rig-Up Completed	2/8/2018	15:30:00	USER	0.34	0.00	4.00	0.1	RIG UP COMPLETE WAITED ON RIG TO FINISH RUNNING CASING DUE TO BUFFER ZONE.
Event	7	Other	Other	2/8/2018	15:35:00	USER	0.34	0.00	3.00	0.1	CASING LANDED @ 17:00. RIG CIRCULATED 2 BOTTOMS UP.
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	2/8/2018	18:30:00	USER	8.40	0.00	4.00	0.0	SAFETY MEETING WITH HALLIBURTON, AND RIG PERSONNEL. CREW COMMUNICATED POTENTIAL SAFETY HAZARDS, AND JOB DETAILS.
Event	9	Start Job	Start Job	2/8/2018	18:40:04	COM5	8.38	0.00	13.00	0.0	BEGIN RECORDING JOB DATA.
Event	10	Test Lines	Test Lines	2/8/2018	18:43:03	USER	8.38	0.00	70.00	3.0	PRESSURE TESTED IRON TO 5,500 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 900 PSI, 5TH GEAR STALL OUT @ 1,930 PSI.
Event	11	Pump Spacer	Pump Spacer	2/8/2018	19:05:23	USER	8.40	0.00	108.00	0.0	PUMP 60 BBLS OF TUNED SPACER @ 10.5 LB/GAL, 20 GALLONS D-AIR, 45 GALS DUAL SPACER B, 45 GALS MUSOL A. CALCULATED HOSPCR @ 1,219.13' TOSPCR CALCULATED @ SURFACE CALCULATED SPACER BACK 1.60 BBLS. DENSITY VERIFIED BY

											PRESSURIZED MUD SCALES. PUMP RATE 4 BBLS/MIN @ 316 PSI.
Event	12	Drop Bottom Plug	Drop Bottom Plug	2/8/2018	19:17:58	USER	10.57	3.80	236.00	45.2	PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	13	Pump Lead Cement	Pump Lead Cement	2/8/2018	19:21:12	USER	12.65	3.90	295.00	0.6	PUMPED 560 SKS OF ELASTICEM WITH CBL @ 13.2 LB/GAL, 1.57 FT3/SK, 7.54 GAL/SK. 156.58 BBLS, HOL CALCULATED @ 4,479.59', TOL CALCULATED @ 1,219.13. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 6 BBLS/MIN 295 PSI.
Event	14	Pump Tail Cement	Pump Tail Cement	2/8/2018	19:49:27	USER	13.58	6.10	362.00	2.8	PUMP 830 SKS OF ECONOCHEM @ 13.5 LB/GAL, 1.68 FT3/SK, 7.99 GAL/SK, 248.34 BBLS. HOT CALCULATED @ 8,036.89', TOT CALCULATED @ 5,698.91'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 6 BBLS/MIN @ 460 PSI.
Event	15	Clean Lines	Clean Lines	2/8/2018	20:33:31	USER	8.22	2.00	8.00	0.3	CLEANED PUMPS AND LINES WITH 12 BBLS FRESH WATER.
Event	16	Drop Top Plug	Drop Top Plug	2/8/2018	20:37:29	USER	8.57	0.00	46.00	0.0	PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	17	Pump Displacement	Pump Displacement	2/8/2018	20:38:48	USER	0.60	0.00	-4.00	0.0	BEGIN CALCULATED DISPLACEMENT OF 318 BBLS WITH FRESH WATER. PUMPED THE FIRST 20 BBLS WITH MMCR, PUMPED 200 BBLS WITH BIOCIDES.
Event	18	Slow Rate	Slow Rate	2/8/2018	21:06:31	USER	8.54	0.30	1509.00	196.3	LOST WATER HAD TO SLOW

											RATE TO KEEP PRIME ON WATER PUMP.
Event	19	Bump Plug	Bump Plug	2/8/2018	21:44:38	USER	8.55	3.20	2387.00	313.5	PLUG BUMPED AT CALCULATED DISPLACEMENT. 2,401 PSI PRESSURED 500 PSI OVER BUMP.
Event	20	Test Lines	Test Lines	2/8/2018	21:46:13	USER	8.57	0.00	3119.00	315.4	PRESSURE TESTED CASING @ 3,000 PSI FOR 15 MIN CUSTOMER REQUEST.
Event	21	Shift Tool Lower	Shift Tool Lower	2/8/2018	22:04:43	USER	8.81	0.80	3070.00	1.1	SHIFTED TOOL @ 4,613 PSI. PUMPED 3 BBLS FOR WET SHOE.
Event	22	Check Floats	Check Floats	2/8/2018	22:07:40	USER	8.58	0.00	3.00	0.0	RELEASED PRESSURE, FLOATS HELD, 2 BBLS BACK.
Event	23	End Job	End Job	2/8/2018	22:09:00	COM5	8.57	0.00	0.00	0.0	STOP RECORDING JOB DATA.
Event	24	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/8/2018	22:15:00	USER	1.02	0.00	1.00	0.0	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	25	Rig-Down Equipment	Rig-Down Equipment	2/8/2018	22:30:00	USER					RIG DOWN BULK AND MIXING EQUIPMENT.
Event	26	Rig-Down Completed	Rig-Down Completed	2/8/2018	23:30:00	USER					ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	27	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/8/2018	23:45:00	USER					CREW DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	28	Crew Leave Location	Crew Leave Location	2/9/2018	23:55:00	USER					THANK YOU FOR USING HALLIBURTON – NICK PETERSON AND CREW.

## 3.0 Attachments

### 3.1 Anadarko Newby State 36N-4HZ Production Job Chart

