

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 300466		<b>Ship To #:</b> 3848047		<b>Quote #:</b> 0022434102		<b>Sales Order #:</b> 0904806381					
<b>Customer:</b> ANADARKO PETROLEUM CORP-EBUS				<b>Customer Rep:</b> Levi							
<b>Well Name:</b> AZUL			<b>Well #:</b> 13-13HZ			<b>API/UWI #:</b> 05-123-46103-00					
<b>Field:</b> WATTENBERG		<b>City (SAP):</b> HUDSON		<b>County/Parish:</b> WELD		<b>State:</b> COLORADO					
<b>Legal Description:</b> SE SW-13-1N-66W-912FSL-2327FWL											
<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>Srvc Supervisor:</b> Ryan Stevens							
<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>		12937ft				<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	1879	0	0	
Casing	New	5.5	4.892	17	LTC	HCP110	0	12937	0	0	
Open Hole Section			7.875				1879	12950	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>		
<b>Guide Shoe</b>						<b>Top Plug</b>	5.5	1	Weath		
<b>Float Shoe</b>	5.5	1	Weath	12,937		<b>Bottom Plug</b>	5.5	1	Weath		
<b>Float Collar</b>	5.5	1	Weath	12,935		<b>SSR plug set</b>					
<b>Insert Float</b>	5.5					<b>Plug Container</b>	5.5	1	HES		
<b>Stage Tool</b>						<b>Centralizers</b>					
<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	6.43		4	2,142
37.58 gal/bbl		<b>FRESH WATER</b>									
0.70 gal/bbl		<b>DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)</b>									
0.50 gal/bbl		<b>D-AIR 3000L, 5 GAL PAIL (101007444)</b>									

0.70 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)							
86.45 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	Gasstop B1	GASSTOP (TM) SYSTEM	400	sack	13.2	1.59	7.69	5	3,076
0.10 %		FE-2 (100001615)							
0.40 %		SCR-100 (100003749)							
5.09 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	750	sack	13.5	1.68	7.99	8	5992
0.20 %		SA-1015, 50 LB SACK (102077046)							
7.99 Gal		FRESH WATER							
0.35 %		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			10	
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	280	bbl	8.34			10	
Cement Left In Pipe		Amount	0		Reason			Wet Shoe Joint	
Mix Water:		pH 7	Mix Water Chloride:		0 ppm		Mix Water Temperature:		55 °F
Cement Temperature:			Plug Displaced by:		8.34 Lbs/Gal		Disp. Temperature:		60°F
Plug Bumped?		Yes	Bump Pressure:		3698 Psi		Floats Held?		Yes
Cement Returns:		0 bbl	Returns Density:				Returns Temperature:		
Comment Calculated top of lead cement @ 1997									
Calcuated top of Tail cement @ 5665Final circulating pressure was 3,488 PSI No cement or Spacer to surface.									

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

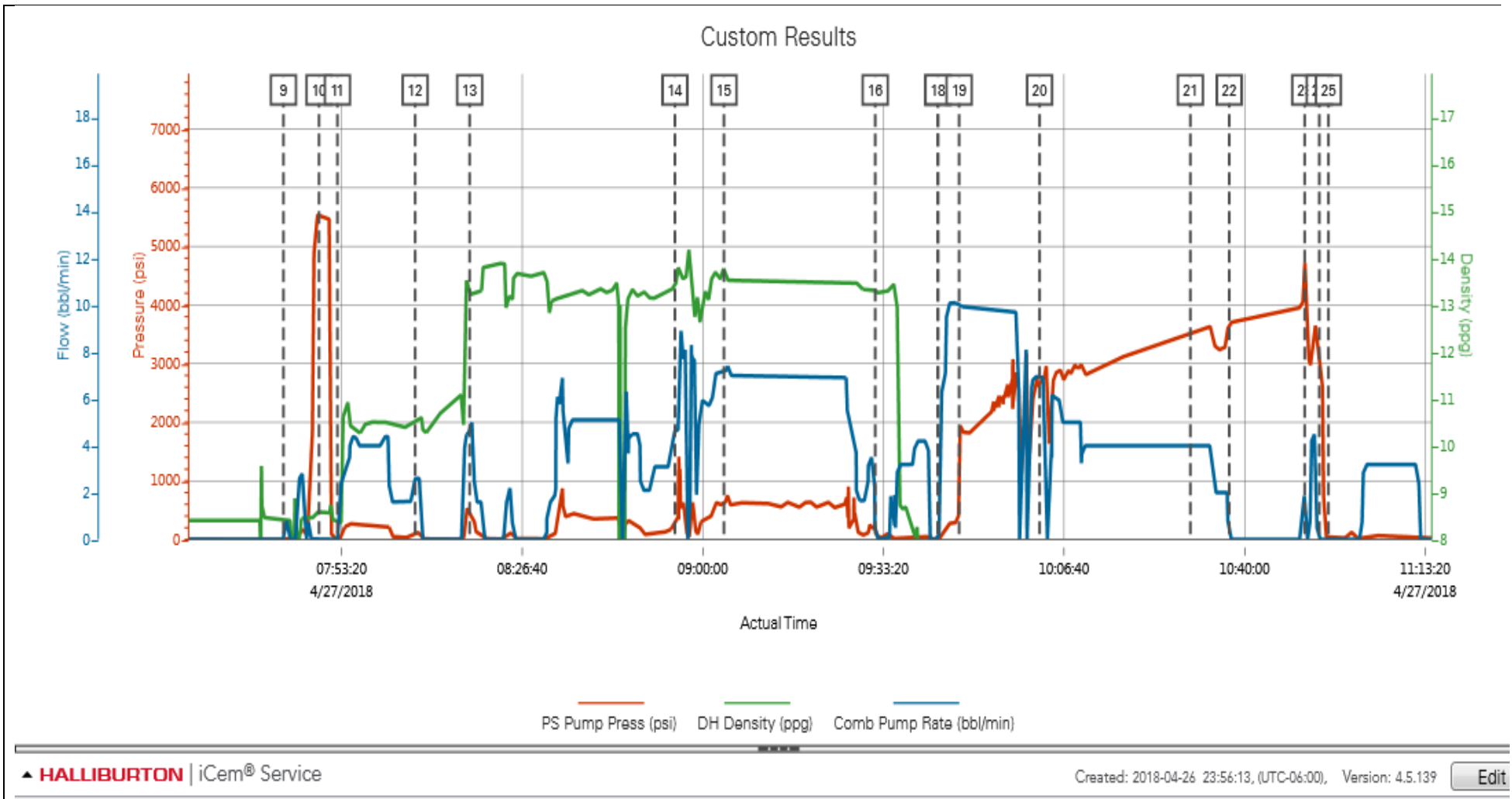
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comments
Event	1	Call Out	Call Out	4/25/2018	22:00:00	USER	CREW CALLED OUT AT 22:00, REQUESTED ON LOCATION 03:30. CREW PICKED UP CEMENT, CHEMICALS, AND PLUG CONTAINER FROM FT. LUPTON, CO, AND PUMP 11368474.
Event	2	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	4/27/2018	00:34:00	USER	HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP, AND WEATHER.
Event	3	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	4/27/2018	01:45:00	USER	CREW DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW
Event	4	Crew Leave Yard	Crew Leave Yard	4/27/2018	02:00:00	USER	STARTED JOURNEY MANAGEMENT.
Event	5	Arrive At Loc	Arrive At Loc	4/27/2018	02:20:00	USER	END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING- 9.625" 36 LB/FT @ 1,879', 5.5" CASING: 17 LB/FT TOTAL 12,937', 7 7/8 @ 12,950" TO TD, 2' SHOE TRAC, TVD- 7,346'. PUMP FRESH WATER DISPLACEMENT WITH MMCR, AND BIOCID.
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	4/27/2018	02:21:00	USER	SAFETY MEETING WITH HALLIBURTON, AND RIG PERSONNEL. CREW COMMUNICATED POTENTIAL SAFETY HAZARDS, AND JOB DETAILS.
Event	7	Rig-Up Equipment	Rig-Up Equipment	4/27/2018	02:30:00	USER	CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON AND WATER HOSES TO PERFORM JOB.
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	4/27/2018	06:00:00	USER	SAFETY MEETING WITH HALLIBURTON, AND RIG PERSONNEL. CREW COMMUNICATED POTENTIAL SAFETY HAZARDS, AND JOB DETAILS.
Event	9	Start Job	Start Job	4/27/2018	07:42:36	COM4	START RECORDING JOB DATA

Event	10	Test Lines	Test Lines	4/27/2018	07:49:10	COM4	PRESSURE TESTED IRON TO 5,504 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1,807 PSI, 5TH GEAR STALL OUT @ 2,203 PSI.
Event	11	Pump Spacer 1	Pump Spacer 1	4/27/2018	07:52:33	COM4	PUMP 60 BBLS OF TUNED SPACER @ 10.50 LBS/GAL. DENSITY VERIFIED BY PRESSUREIZED MUD SCALES
Event	12	Drop Bottom Plug	Drop Bottom Plug	4/27/2018	08:06:54	COM4	VERIFIED BY COMPANY MAN
Event	13	Pump Lead Cement	Pump Lead Cement	4/27/2018	08:16:57	COM4	PUMPED 400 SKS OF GASSTOP CEMENT @ 13.2 LB/GAL, 1.59 FT3/SK, 7.69 GAL/SK. 113 BBLS, TOL CALCULATED @ 1,997. DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	14	Pump Tail Cement	Pump Tail Cement	4/27/2018	08:54:51	COM4	PUMP 750 SKS OF ECONOCEM @ 13.5 LB/GAL, 1.68 FT3/SK, 7.99 GAL/SK, 224 BBLS., TOT CALCUALTED @ 5,665 DENSITY VERIFIED BY PRESSUREIZED MUD SCALES.
Event	15	Check Weight	Check weight	4/27/2018	09:03:53	COM4	VERIFIED WEIGHT
Event	16	Shutdown	Shutdown	4/27/2018	09:31:50	COM4	SHUTDOWN TO WASHPUMPS AND LINES
Event	17	Drop Top Plug	Drop Top Plug	4/27/2018	09:43:23	COM4	VERIFIED BY COMPANY REP
Event	18	Pump Displacement	Pump Displacement	4/27/2018	09:43:25	COM4	PUMP CALCULATED DISPLACEMENT OF 300BBLS
Event	19	Displ Reached Cement	Displ Reached Cmnt	4/27/2018	09:47:19	COM4	CAUGHT CEMENT
Event	20	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	4/27/2018	10:02:09	USER	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.

Event	21	Rig-Down Completed	Rig-Down Completed	4/27/2018	10:30:00	USER	ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	22	Bump Plug	Bump Plug	4/27/2018	10:37:10	COM4	BUMPED PLUG @ CALCULATED DISPALCEMENT, FINAL CIRCULATING PRESSURE 3,406 PSI, BUMP PRESSURE @ 3,662. HOLD FOR 10 MIN CASING TEST
Event	23	Open Valve Downhole	Open Valve Downhole	4/27/2018	10:51:06	USER	OPEN WET SHOE SUB AND PUMP 5 BBLS WET SHOE.
Event	24	Check Floats	Check Floats	4/27/2018	10:53:47	USER	CHECK FLOATS, FLOATS HELD, 2 BBLS BACK
Event	25	End Job	End Job	4/27/2018	10:55:29	COM4	STOP RECORDING JOB DATA
Event	26	Rig-Down Completed	Rig-Down Completed	4/27/2018	12:00:00	USER	ALL EQUIPENT WAS STOED AND READY FOR TRAVEL
Event	27	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	4/27/2018	12:10:00	USER	CREW DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	28	Crew Leave Location	Crew Leave Location	4/27/2018	12:15:00	USER	THANKS FOR CHOOSING HALLIBURTON RYAN STEVENS AND CREW

## 3.0 Attachments

### 3.1 Job Chart



iCem® Service

(v. 4.5.139)

Created: Wednesday, May 23, 2018