

The Road to Excellence Starts with Safety

Sold To #: 300466		Ship To #: 3847919		Quote #: 0022431082		Sales Order #: 0904789025				
Customer: ANADARKO PETROLEUM CORP-EBUS				Customer Rep: Carlton Cooley						
Well Name: AZUL			Well #: 13-33HZ		API/UWI #: 05-123-46108-00					
Field: WATTENBERG		City (SAP): HUDSON		County/Parish: WELD		State: COLORADO				
Legal Description: SE SW-13-1N-66W-700FSL-2446FWL										
Contractor: PRECISION DRLG				Rig/Platform Name/Num: PRECISION 464						
Job BOM: 7523 7523										
Well Type: HORIZONTAL GAS										
Sales Person: HALAMERICA\HX41066				Srv Supervisor: Thomas Haas						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		13086ft		Job Depth TVD		7471				
Water Depth				Wk Ht Above Floor		6				
Perforation Depth (MD)		From		To						
Well Data										
Description	New / Used	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Casing	0	9.625	8.921	36		J-55	0	1899	0	1899
Casing	0	5.5	4.892	17	LTC	HCP110	0	13086	0	7471
Open Hole Section			7.875				1899	13094	1899	7471
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe						Top Plug	5.5	1	WF	
Float Shoe	5.5	1	WF	13087		Bottom Plug	5.5	1	WF	
Float Collar	5.5	1	WF	13086		SSR plug set				
Insert Float						Plug Container				
Stage Tool						Centralizers				
Fluid Data										
Stage/Plug #: 1										
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	
1	Tuned Spacer III	Tuned Spacer III	60	bbl	10.5	6.43	6.43	5	2164	
37.58 gal/bbl		FRESH WATER								
0.70 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								
0.50 gal/bbl		D-AIR 3000L, 5 GAL PAIL (101007444)								

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	6	2076	
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	770	sack	13.5	1.68	7.99	6	6152	
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			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	284	bbl	8.34			8		
Cement Left In Pipe		Amount	5 ft		Reason			Shoe Joint		
Mix Water:		pH 7	Mix Water Chloride:			<300 ppm		Mix Water Temperature:		55 °F
Cement Temperature:		N/A	Plug Displaced by:			8.33 lb/gal FW		Disp. Temperature:		55 °F
Plug Bumped?		Yes	Bump Pressure:			3100 psi		Floats Held?		Yes
Cement Returns:		NONE	Returns Density:			N/A		Returns Temperature:		
Comment Plug bumped at calculated displacement, held 15 Min pressure test @3200 PSI, pressured up to shift sleeve, sleeve shifted at 4530 PSI, checked floats floats held, 2.5 bbl back to truck. Nothing returned 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	4/19/2018	05:00:00	USER	CREW CALLED OUT AT 5:00 4/19/2018, REQUESTED ON LOCATION 11:00 4/19/2018. CREW PICKED UP CEMENT, CHEMICALS (40 GAL MUSOL A, 40 GAL DUAL SPACER B, 70 GAL D-AIR, 10 GAL MMCR), 200 LBS SUGAR, PLUG CONTAINER AND MANIFOLD FROM FORT LUPTON, CO. BULK 660: 12154546/10991603, BULK 660: 10995045/11566182, CHEMICAL TRUCK: 11859221/12051659, IORN TRUCK: 12100990 PUMP ELITE 12663023/11512092.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	4/19/2018	09:15:00	USER	DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW
Event	3	Crew Leave Yard	Crew Leave Yard	4/19/2018	09:30:33	USER	STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Arrive At Loc	4/19/2018	10:00:00	USER	END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING: 9.625" 36# @ 1899', CASING: 5.5" 17# @ 13087', 1' SHOE JOINT, 7.875" OPEN HOLE, TVD @ 7471', 9.2 PPG WELL FLUID, FRESH WATER DISPLACEMENT.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	4/19/2018	10:15:00	USER	HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	4/19/2018	10:30:00	USER	CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON, AND WATER HOSES TO PERFORM JOB.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	4/19/2018	13:30:00	USER	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	8	Start Job	Start Job	4/19/2018	13:53:59	COM4	START DATA RECORDING

Event	9	Test Lines	Test Lines	4/19/2018	14:06:55	COM4	PRESSURE TESTED IRON TO 5808 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 877 PSI, 5TH GEAR STALL OUT @ 2400 PSI.
Event	10	Pump Spacer 1	Pump Spacer 1	4/19/2018	14:11:56	COM4	PUMP 60 BBLS OF TUNED SPACER @ 10.5 LB/GAL, ADDED 40 GAL MUSOL A, 40 GAL DUAL SPACER B, 20 GAL D-AIR, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	11	Shutdown	Shutdown	4/19/2018	14:25:00	USER	SHUT DOWN TO DROP BOTTOM PLUG
Event	12	Drop Bottom Plug	Drop Bottom Plug	4/19/2018	14:30:00	USER	PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	13	Pump Lead Cement	Pump Lead Cement	4/19/2018	14:33:11	COM4	PUMP 400 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.59 YIELD, 7.6 GAL/SK, 113 BBLS, CALCULATED TOL @ 1964', MIX WATER MIXED WITH 1000 GAL OF LATEX AND 70 GAL D-AIR, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	14	Pump Tail Cement	Pump Tail Cement	4/19/2018	14:52:33	COM4	PUMP 770 SKS OF ECONOCEM @ 13.5 LB/GAL, 1.68 YIELD, 7.98 GAL/SK, 230 BBLS, CALCULATED TOT @ 5630', DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	15	Shutdown	Shutdown	4/19/2018	15:27:44	COM4	SHUT DOWN TO CLEAN PUMP AND LINES.
Event	16	Drop Top Plug	Drop Top Plug	4/19/2018	15:36:19	COM4	PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	17	Pump Displacement	Pump Displacement	4/19/2018	15:36:30	COM4	BEGIN CALCULATED DISPLACEMENT OF 304 BBLS WITH FRESH WATER. MMCR AND BIOCIDES ADDED TO 1ST 20 BBLS. BIOCIDES ADDED THROUGH REST OF DISPLACEMENT.
Event	18	Displ Reached Cement	Displ Reached Cement	4/19/2018	15:43:30	USER	DISPLACEMENT REACHED CEMENT 55BLS INTO DISPLACEMENT
Event	19	Bump Plug	Bump Plug	4/19/2018	16:28:00	USER	PLUG BUMPED AT CALCULATED DISPLACEMENT. FINAL CIRCULATING PRESSURE OF 2800 PSI. NOTHING RETURNED TO SURFACE.
Event	20	Shutdown	Shutdown	4/19/2018	16:28:17	COM4	SHUTDOWN TO HOLD 15 MIN CASING TEST

AT 3200 PSI.							
Event	21	Other	PRESSURE UP TO OPEN SLEEVE	4/19/2018	16:34:00	USER	PRESSURE UP TO OPEN SLEEVE. SLEEVE OPENED @ 4530 PSI.
Event	22	Check Floats	Check Floats	4/19/2018	16:36:00	USER	RELEASED PRESSURE, FLOATS HELD, 2.5 BBLS BACK.
Event	23	End Job	End Job	4/19/2018	16:41:32	COM4	STOP DATA RECORDING
Event	24	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	4/19/2018	16:45:00	USER	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	25	Rig-Down Completed	Rig-Down Completed	4/19/2018	18:00:00	USER	ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL.
Event	26	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	4/19/2018	18:15:00	USER	DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	27	Crew Leave Location	Crew Leave Location	4/19/2018	18:30:00	USER	THANK YOU FOR USING HALLIBURTON - THOMAS HAAS AND CREW.

3.0 Attachments

3.1 Job Chart

