

The Road to Excellence Starts with Safety

Sold To #: 300466	Ship To #: 3848085	Quote #: 0022439470	Sales Order #: 0904838041
Customer: ANADARKO PETROLEUM CORP-EBUS		Customer Rep: Josh Johnson	
Well Name: AZUL		Well #: 13-16HZ	API/UWI #: 05-123-46117-00
Field: WATTENBERG	City (SAP): HUDSON	County/Parish: WELD	State: COLORADO
Legal Description: SE SW-13-1N-66W-837FSL-2327FWL			
Contractor: PRECISION DRLG		Rig/Platform Name/Num: PRECISION 464	
Job BOM: 7523 7523			
Well Type: HORIZONTAL GAS			
Sales Person: HALAMERICA\HX41066		Srvc Supervisor: Thomas Haas	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	12694ft	Job Depth TVD	7328
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	1873	0	1873
Casing	0	5.5	4.892	17	LTC	HCP110	0	12694	0	7328
Open Hole Section			7.875				1873	12704	1873	7328

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5				Top Plug	5.5		
Float Shoe	5.5	1	HES	12694	Bottom Plug	5.5	2	HES
Float Collar	5.5	1	HES	12682	SSR plug set	5.5		
Insert Float	5.5				Plug Container	5.5	1	HES
Stage Tool	5.5				Centralizers	5.5		

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	6.96	44.4	4	2131	
37.58 gal/bbl		FRESH WATER								
0.70 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								
0.25 gal/bbl		D-AIR 3000L, 5 GAL PAIL (101007444)								

0.70 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)							
79.92 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	1.6	7.58	6	3032
0.10 %		FE-2 (100001615)							
0.60 %		SCR-100 (100003749)							
5.08 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	730	sack	13.5	1.68	7.99	8	5833
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				
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	274	bbl	8.34				
Cement Left In Pipe	Amount	0				Reason WET SHOE			Shoe Joint
Mix Water:	pH 7	Mix Water Chloride: <300 ppm			Mix Water Temperature: 68 °F				
Cement Temperature:	N/A	Plug Displaced by: 8.33 lb/gal FW			Disp. Temperature: N/A				
Plug Bumped?	Yes	Bump Pressure: 2370 psi			Floats Held?: Yes				
Cement Returns:	0 bbl	Returns Density: N/A			Returns Temperature: N/A				
Comment : Pumped calculated displacement of 294 BBL, plug bumped at 2370 PSI, checked floats floats held 3bbl back to truck. Pressured up to 2750 for 15 min casing, ruptured disk at 5100 psi 2.5 BBL back to truck. No cement 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	5/8/2018	17:30:00	USER	CREW CALLED OUT AT 17:30 5/8/2018, REQUESTED ON LOCATION 21:30 5/8/2018. 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: 11071589/10867439, BULK 660: 11360555/11689672, CHEMICAL TRUCK: 11859221/12051659, IORN TRUCK: 12100990 PUMP ELITE 11897034/11545460.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/8/2018	20:45:00	USER	DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW
Event	3	Crew Leave Yard	Crew Leave Yard	5/8/2018	21:00:00	USER	STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Arrive At Loc	5/8/2018	21:15:00	USER	END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING: 9.625" 36# @ 1873', CASING: 5.5" 17# @ 12694', 12' SHOE JOINT, 7.875" OPEN HOLE, TVD @ 7328', 10.1 PPG WELL FLUID, FRESH WATER DISPLACEMENT.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	5/8/2018	21:30:00	USER	HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	5/8/2018	21:45:00	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	5/8/2018	23:45:00	USER	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.

Event	8	Start Job	Start Job	5/9/2018	00:22:26	COM4	START JOB DATA RECORDING
Event	9	Test Lines	Test Lines	5/9/2018	00:25:02	COM4	PRESSURE TESTED IRON TO 6615 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1000 PSI, 5TH GEAR STALL OUT @ 2060 PSI.
Event	10	Pump Spacer 1	Pump Spacer 1	5/9/2018	00:39:33	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	5/9/2018	00:59:40	COM4	SHUT DOWN TO DROP BOTTOM PLUG
Event	12	Drop Bottom Plug	Drop Bottom Plug	5/9/2018	01:11:00	USER	PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	13	Pump Cement	Pump Lead Cement	5/9/2018	01:13:21	COM4	PUMP 400 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.6 YIELD, 7.58 GAL/SK, 113 BBLS, CALCULATED TOL @ 1950', 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	5/9/2018	01:33:57	COM4	PUMP 730 SKS OF ECONOCEM @ 13.5 LB/GAL, 1.68 YIELD, 7.98 GAL/SK, 218 BBLS, CALCULATED TOT @ 5639', DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	15	Other	Bottom Plug Reached Bottom	5/9/2018	01:59:28	USER	BOTTOM PLUG REACHED BOTTOM AND BURST @ 782 PSI
Event	16	Shutdown	Shutdown	5/9/2018	02:07:22	COM4	SHUTDOWN TO WASH PUMPS AND LINES
Event	17	Drop Top Plug	Drop Top Plug	5/9/2018	02:19:15	COM4	PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	18	Pump Displacement	Pump Displacement	5/9/2018	02:20:29	COM4	BEGIN CALCULATED DISPLACEMENT OF 294 BBLS WITH FRESH WATER. MMCR AND BIOCIDES ADDED TO 1ST 20 BBLS. BIOCIDES ADDED THROUGH REST OF DISPLACEMENT.
Event	19	Bump Plug	Bump Plug	5/9/2018	03:14:05	COM4	PLUG BUMPED AT CALCULATED DISPLACEMENT. FINAL CIRCULATING

							PRESSURE OF 2470 PSI. NOTHING RETURNED TO SURFACE.
Event	20	Check Floats	Check Floats	5/9/2018	03:14:10	COM4	RELEASED PRESSURE, FLOATS HELD, 3 BBLs BACK.
Event	21	Test Lines	Test Lines	5/9/2018	03:19:25	COM4	PRESSURE UP TO 2750 PSI FOR 15 MIN CASING TEST.
Event	22	Release Casing Pressure	Release Pressure	5/9/2018	03:35:00	USER	RELEASE PRESSURE. 2.5 BBL BACK TO TRUCK.
Event	23	End Job	End Job	5/9/2018	03:36:38	COM4	STOP JOB DATA RECORDING
Event	24	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	5/9/2018	03:40:00	USER	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	25	Rig-Down Completed	Rig-Down Completed	5/9/2018	05:00:00	USER	ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL.
Event	26	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/9/2018	05:15:00	USER	DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	27	Crew Leave Location	Crew Leave Location	5/9/2018	05:30:00	USER	THANK YOU FOR USING HALLIBURTON - THOMAS HAAS AND CREW.

3.0 Attachments

3.1 Job Chart

