

The Road to Excellence Starts with Safety

Sold To #: 300466		Ship To #: 3848048		Quote #: 0022441795		Sales Order #: 0904855557				
Customer: ANADARKO PETROLEUM CORP-EBUS				Customer Rep: Carlton Cooley						
Well Name: AZUL			Well #: 13-18HZ		API/UWI #: 05-123-46120-00					
Field: WATTENBERG		City (SAP): HUDSON		County/Parish: WELD		State: COLORADO				
Legal Description: SE SW-13-1N-66W-792FSL-2326FWL										
Contractor: PRECISION DRLG				Rig/Platform Name/Num: PRECISION 464						
Job BOM: 7523 7523										
Well Type: HORIZONTAL GAS										
Sales Person: HALAMERICA\HX41066				Srv Supervisor: Kendall Broom - H194727						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		12646ft		Job Depth TVD						
Water Depth				Wk Ht Above Floor						
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		9.625	8.921	36		J-55				
Casing		5.5	4.892	17	LTC	HCP110				
Open Hole Section			7.875							
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5					Top Plug	5.5	1	HES	
Float Shoe	5.5			12636		Bottom Plug	5.5	1	HES	
Float Collar	5.5					SSR plug set	5.5		HES	
Insert Float	5.5					Plug Container	5.5	1	HES	
Stage Tool	5.5					Centralizers	5.5		HES	
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			
37.58 gal/bbl		FRESH WATER								
0.70 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								
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		6	5.08
0.10 %		FE-2 (100001615)							
0.55 %		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	715	sack	13.5	1.68		6	7.99
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	293	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	273	bbl	8.34				
Cement Left In Pipe		Amount	5 ft		Reason			Shoe Joint	
Comment Blew plug at 5630psi, got 2.5 bbls back on the truck floats held. Estimated tolc is 2036 and totc 5725. Pumped 3 bbl wet shoe									

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	5/16/2018	11:00:00	USER	Called out crew to be on location at 1700
Event	2	Depart Shop for Location	Depart Shop for Location	5/16/2018	15:45:00	USER	Held a safety meeting before leaving for location
Event	3	Arrive At Loc	Arrive At Loc	5/16/2018	16:10:00	USER	Arrived on location and met with the company man
Event	4	Rig-up Lines	Rig-up Lines	5/16/2018	16:30:00	USER	Held a hazard hunt before spotting in trucks and rigging up
Event	5	Other	Other	5/16/2018	19:45:00	USER	Mixed up latex mix water into the silo, 1000 gals of latex and 50 gals of D-Air.
Event	6	Safety Meeting	Safety Meeting	5/16/2018	20:15:00	USER	Held a safety meeting with the rig crew to discuss the operation and safety
Event	7	Start Job	Start Job	5/16/2018	20:55:00	COM5	Filled lines with 3 bbls water
Event	8	Test Lines	Test Lines	5/16/2018	20:58:41	COM5	Test lines to 6500 psi with a 500psi kick out and the 5th gear stall out, and climbed it to 6920psi.
Event	9	Pump Spacer 1	Pump Spacer 1	5/16/2018	21:14:28	COM5	Pumped 60 bbls Tuned Spacer 10.5#, 6.96 yield, 44.4 gals/sks. Pumped at 6 bpm and 800psi. Musol and dual spacer were added

on the fly

Event	10	Shutdown	Shutdown	5/16/2018	21:36:49	COM5	Shut down to weigh up lead cement and drop the plug
Event	11	Drop Top Plug	Drop Top Plug	5/16/2018	21:36:52	COM5	Dropped the plug. preloaded and witnessed by the company man
Event	12	Pump Lead Cement	Pump Lead Cement	5/16/2018	21:39:58	COM5	Pumped 114 bbls gasstop latex cement. 400 sks, 13.2#, 1.6 yield, 5.08 gal/sks. pumped at 6bpm and 1100psi. used premixed latex water to mix with. Estimated tolc is 2036.
Event	13	Other	Other	5/16/2018	21:47:03	COM5	
Event	14	Check Weight	Check Weight	5/16/2018	22:05:42	COM5	Verified weight with the pressurized scales
Event	15	Pump Tail Cement	Pump Tail Cement	5/16/2018	22:14:52	COM5	Pumped 214 bbls Econocem. 715 sks, 13.5#, 1.68 Yield, 7.99 gal/sks. Pumped at 6.5bpm and 530 psi. Estimated totc 5725.
Event	16	Check Weight	Check Weight	5/16/2018	22:18:12	COM5	Verified weight with the pressurized scales
Event	17	Shutdown	Shutdown	5/16/2018	22:50:15	COM5	Shut down and lew down the lines with the rig air. washed lines and cement head.
Event	18	Drop Top Plug	Drop Top Plug	5/16/2018	23:04:45	COM5	Dropped top plug preloaded and witnessed by the company man.
Event	19	Pump Displacement	Pump Displacement	5/16/2018	23:04:48	COM5	Pumped 293 bbls water displacement. Pumped at 8.5 bpm and 2900psi. first 40 bbls had MMCR. Biocide in the remainder

bbls.

Event	20	Bump Plug	Bump Plug	5/16/2018	23:51:04	COM5	Bumped plug at calculated and at 2.7 bpm. Final lift was 3000psi and climbed to 3551psi held it for 15 min casing test. Pressured up well to 5630 to blow the plug and then pumped 3 bbls water for a wet shoe. Checked floats and got 2.5 bbls back on the truck
Event	21	End Job	End Job	5/17/2018	00:22:50	COM5	
Event	22	Rig Down Lines	Rig Down Lines	5/17/2018	00:30:00	USER	Held a safety meeting before rigging down the lines
Event	23	Depart Location for Shop	Depart Location for Shop	5/17/2018	01:30:00	USER	Held a safety huddle before leaving location

3.0 Attachments

3.1 Job Chart

