

The Road to Excellence Starts with Safety

Sold To #: 300466		Ship To #: 3848086		Quote #: 0022419160		Sales Order #: 0904720250				
Customer: ANADARKO PETROLEUM CORP-EBUS				Customer Rep: Josh Johnson						
Well Name: AZUL			Well #: 13-25HZ			API/UWI #: 05-123-46100-00				
Field: WATTENBERG		City (SAP): HUDSON		County/Parish: WELD		State: COLORADO				
Legal Description: SE SW-13-1N-66W-880FSL-2447FWL										
Contractor: PRECISION DRLG				Rig/Platform Name/Num: PRECISION 464						
Job BOM: 7523 7523										
Well Type: HORIZONTAL GAS										
Sales Person: HALAMERICA\HX41066				Srv Supervisor: Nicholas Roles						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		13354ft		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	0	1884	0	1884
Casing		5.5	4.892	17	LTC	HCP110	0	13354	0	7516
Open Hole Section			7.875				1884	13364	1884	7516
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5			13354		Top Plug	5.5		HES	
Float Shoe	5.5					Bottom Plug	5.5		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	6.43		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)								

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	ElastiCem	ELASTICEM (TM) SYSTEM	540	sack	13.2	1.57		8	7.53
0.10 %		SUPER CBL, 50 LB PAIL (100003668)							
0.45 %		SCR-100 (100003749)							
7.53 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	ECONOCER (TM) SYSTEM	790	sack	13.5	1.68		8	7.99
7.99 Gal		FRESH WATER							
0.37 %		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	289	bbl	8.34			9	
Cement Left In Pipe		Amount	0ft		Reason			Wet Shoe	
Comment Got 10bbbls spacer back. Estimated TOT-5489', TOL-1010'									

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)	DS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	Call Out	3/20/2018	04:00:00	USER					Called out by Service Coordinator for O/L at 0800
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	3/20/2018	07:45:00	USER					Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	3/20/2018	08:00:00	USER					Journey Management prior to departure
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	3/20/2018	08:30:00	USER					Upon arrival met with company man to discuss job details and calculations, performed hazard hunt and site assessment. Rig had 20 joints casing left to run.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	3/20/2018	08:40:00	USER					Discussed rigging up hazards and procedure according to HMS.
Event	6	Other	Other	3/20/2018	08:45:00	USER					Water test- PH-6, Chlor-0, Temp-85.
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	3/20/2018	10:30:00	USER					Held safety meeting with all job associated personnel to discuss job procedure, hazards and stop work authority.
Event	8	Start Job	Start Job	3/20/2018	11:05:38	COM4	8.75	0.00	-5.00	17.50	TD-13364', TP-13354' 5.5" 17#, WS-13343', TVD-7516', OH-7.875", SURF-1884' 9.625" 36#, MUD-9.3#

Event	9	Test Lines	Test Lines	3/20/2018	11:10:11	COM4	8.88	0.00	98.00	20.70	Pumped 5bbls fresh water to fill lines, shutdown, closed manifold, performed 500psi k/o function test, continued with 5th gear stall at 1350psi, proceeded to bring pressure to 6000psi. Pressure stabilized and held with no leaks.
Event	10	Pump Spacer 1	Pump Spacer 1	3/20/2018	11:21:07	COM4	8.83	0.00	12.00	20.80	Pumped 60bbls of 10.5# 6.25Y 40.2g/s Tuned Spacer III with 40g Musol A, 40g Dual Spacer B, 20g D-Air at 4bpm 328psi.
Event	11	Drop Bottom Plug	Drop Bottom Plug	3/20/2018	11:37:41	COM4	12.61	8.00	787.00	65.80	Dropped by HES supervisor, witnessed by company man.
Event	12	Pump Lead Cement	Pump Lead Cement	3/20/2018	11:37:47	COM4	12.77	8.00	654.00	0.10	Pumped 540sk or 151bbls of 13.2# 1.57y 7.54g/s Elasticem at 8bpm 400psi.
Event	13	Check Weight	Check Weight	3/20/2018	11:40:31	COM4	13.47	6.00	359.00	21.40	Weight verified with pressurized mud scales.
Event	14	Pump Tail Cement	Pump Tail Cement	3/20/2018	12:00:39	COM4	12.96	7.20	313.00	0.10	Pumped 790sk or 236bbls of 13.5# 1.68Y 7.98G/S Econocem at 8bpm 505psi.
Event	15	Check Weight	Check Weight	3/20/2018	12:03:29	COM4	13.46	7.50	422.00	21.10	Weight verified with pressurized mud scales.
Event	16	Check Weight	Check Weight	3/20/2018	12:34:58	COM4	13.53	7.00	509.00	249.10	Weight verified with pressurized mud scales.
Event	17	Shutdown	Shutdown	3/20/2018	12:38:06	USER	12.32	0.00	101.00	270.40	Shutdown, rig blew down iron with air, followed with 5bbls fresh water through pumps and lines.
Event	18	Drop Top Plug	Drop Top Plug	3/20/2018	12:46:17	COM4	8.16	0.00	-6.00	281.50	Dropped by HES supervisor, witnessed by company man.
Event	19	Pump Displacement	Pump Displacement	3/20/2018	12:46:21	COM4	8.10	0.00	-5.00	0.00	Pumped 309bbls fresh

											water with 10g MMCR in first 20bbls, followed with 5g biocide throughout at 8bpm.
Event	20	Bump Plug	Bump Plug	3/20/2018	13:40:48	COM4	8.15	0.00	2818.00	354.70	Slowed down at 290bbls away to 3bpm, Final Circulating Pressure- 2450psi, Bump Pressure- 3000psi.
Event	21	Other	Other	3/20/2018	13:43:17	COM4	8.14	0.00	2876.00	354.70	Held 3000psi for 15min casing test.
Event	22	Pressure Up Well	Pressure Up Well	3/20/2018	13:53:14	COM4	8.13	0.00	3078.00	354.70	Pressured up with fresh water to 4900psi to shear pins and pumped 3bbls at 3bpm 2380psi, for wet shoe.
Event	23	Check Floats	Check Floats	3/20/2018	13:57:56	USER	8.14	0.00	1959.00	362.90	Released pressure and got 2bbls back to truck.
Event	24	End Job	End Job	3/20/2018	13:58:24	USER	8.11	0.00	158.00	362.90	Got 10bbls spacer back. Estimated TOT-5489', TOL-1010'
Event	25	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	3/20/2018	14:15:00	USER	8.21	2.90	19.00	395.30	All HSE present. Discussed red zone areas and trapped pressure hazards. Watch for suspended loads and rig down procedures, including hand placement, lifting techniques, and swing radius.
Event	26	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	3/20/2018	15:15:00	USER					All HSE present and fit to drive. Aware of directions and hazards.
Event	27	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	3/20/2018	15:30:00	USER					Pre journey management prior to departure.

3.0 Attachments

3.1 Anadarko Azul 13-25HZ Production Job Chart

