

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 300466	<b>Ship To #:</b> 3794489	<b>Quote #:</b> 0022348108	<b>Sales Order #:</b> 0904285012
<b>Customer:</b> ANADARKO PETROLEUM CORP-EBUS		<b>Customer Rep:</b> David	
<b>Well Name:</b> RW		<b>Well #:</b> 28C-5HZ	<b>API/UWI #:</b> 05-123-44617-00
<b>Field:</b> WATTERBERG	<b>City (SAP):</b> HUDSON	<b>County/Parish:</b> WELD	<b>State:</b> COLORADO
<b>Legal Description:</b> SE SW-29-3N-65W-440FSL-1809FWL			
<b>Contractor:</b> Xtreme		<b>Rig/Platform Name/Num:</b> Xtreme 22	
<b>Job BOM:</b> 7523 7523			
<b>Well Type:</b> HORIZONTAL GAS			
<b>Sales Person:</b> HALAMERICA\HX41066		<b>Srvc Supervisor:</b> Bryan Kraft	

**Job**

<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>	14505ft		<b>Job Depth TVD</b> 7251ft
<b>Water Depth</b>			<b>Wk Ht Above Floor</b> 3ft
<b>Perforation Depth (MD)</b>	<b>From</b>		<b>To</b>

**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	1859	0	1859
Casing		5.5	4.778	20	LTC	P-110	0	14505	0	7251
Open Hole Section			7.875				1859	14532	1859	7251

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
<b>Guide Shoe</b>					<b>Top Plug</b>	5.5	1	Antelope
<b>Float Shoe</b>	5.5	1	Antelope	14505	<b>Bottom Plug</b>	5.5	1	Antelope
<b>Float Collar</b>	5.5	1	Antelope	14456	<b>SSR plug set</b>			
<b>Insert Float</b>					<b>Plug Container</b>	5.5	1	HES
<b>Stage Tool</b>					<b>Centralizers</b>			

**Fluid Data**

<b>Stage/Plug #: 1</b>										
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	Spacer	Tuned Spacer III	60	bbl	10.5	6.25	40.2	3	2167	
		88.91 lbm/bbl	<b>BARITE, BULK (100003681)</b>							
		37.58 gal/bbl	<b>FRESH WATER</b>							
		0.70 gal/bbl	<b>DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)</b>							

0.70 gal/bbl		<b>MUSOL A, 330 GAL TOTE - (790828)</b>								
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	Cap Cement	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57	7.54	4	1128	
7.52 Gal		<b>FRESH WATER</b>								
0.60 %		<b>SCR-100 (100003749)</b>								
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	Lead Cement	ELASTICEM (TM) SYSTEM	390	sack	13.2	1.57	7.54	8	2941	
0.10 %		<b>SUPER CBL, 50 LB PAIL (100003668)</b>								
0.25 %		<b>SCR-100 (100003749)</b>								
7.54 Gal		<b>FRESH WATER</b>								
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	Tail Cement	ECONOCEM (TM) SYSTEM	920	sack	13.5	1.68	7.99	8	7351	
7.99 Gal		<b>FRESH WATER</b>								
0.30 %		<b>HR-5, 50 LB SK (100005050)</b>								
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	Displacement	Biocide & MMCR Water	40	bbl	8.33			10	1680	
0.50 gal/bbl		<b>MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)</b>								
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	
6	Displacement	Biocide Water	280	bbl	8.33			10	11760	
Cement Left In Pipe		Amount	49 ft			Reason			Shoe Joint	
Mix Water:		pH 6.0	Mix Water Chloride:< 100 ppm			Mix Water Temperature:			51 °F	
Cement Temperature:		N/A	Plug Displaced by: 8.3 lb/gal Fresh Water			Disp. Temperature:			51 °F	
Plug Bumped?		Yes	Bump Pressure: 2150 psi			Floats Held?			Yes	
Cement Returns:		N/A	Returns Density: N/A			Returns Temperature:			N/A	

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	DS Pump Press <i>(psi)</i>	Comments
Event	1	Call Out	Call Out	9/7/2017	15:00:00	USER				CREW CALLED OUT AT 15:00 9/7/2017, REQUESTED ON LOCATION 19:30 9/7/2017. CREW PICKED UP CEMENT, CHEMICALS (40 GAL MUSOL A, 40 GAL DUAL SPACER B, 20 GAL D-AIR, 10 GAL MMCR), 200 LBS SUGAR, PLUG CONTAINER AND MANIFOLD FROM FORT LUPTON,CO. BULK 660: 12644849/12649238, BULK 660: 11610927/11633848, PUMP ELITE 11897034/11645460.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	9/7/2017	18:15:00	USER				DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Yard	Crew Leave Yard	9/7/2017	18:30:00	USER				STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Arrive At Loc	9/7/2017	19:00:00	USER				END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING: 9.625" 36# J-55 @ 1859', 5.5" CASING: 20# @ 14504.95', 48.62' SHOE JOINT, 7.875" OPEN HOLE, TVD @ 7251', 9.6 PPG WELL FLUID, FRESH WATER DISPLACEMENT.

Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	9/7/2017	19:10:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	9/7/2017	19:15:00	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	9/8/2017	00:45:00	USER	8.41	0.00	-12.00	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	8	Start Job	Start Job	9/8/2017	00:56:23	COM5				BEGIN REOCRDNIG JOB DATA.
Event	9	Test Lines	Test Lines	9/8/2017	01:10:37	USER	8.49	0.00	154.00	PRESSURE TESTED IRON TO 4500 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1000 PSI, 5TH GEAR STALL OUT @ 1700 PSI.
Event	10	Pump Spacer	Pump Tuned Spacer @ 10.5 ppg	9/8/2017	01:17:40	USER	10.08	1.80	209.00	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	Other	Other	9/8/2017	01:32:52	USER	10.76	0.00	151.00	SHUTDOWN TO DROP TOP PLUG. THE WELL WAS NOT ON A VACUUM AFTER SPACER AND WAS NOT ABLE TO DROP BOTTOM PLUG AFTER SPACER. PUMPED CAP CEMENT AND WAS ABLE TO DROP BOTTOM PLUG AT THAT

										TIME.
Event	12	Pump Cement	Pump Cap Cement @ 13.2 ppg	9/8/2017	01:40:56	USER	13.24	3.50	399.00	PUMP 150 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.57 YIELD, 7.54 GAL/SK, 42 BBLS, TOC @ 1144", DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	13	Drop Bottom Plug	Drop Bottom Plug	9/8/2017	01:53:59	USER	14.11	0.00	-14.00	DROP BOTTOM PLUG, VERIFIED BY CO.MAN.
Event	14	Pump Lead Cement	Pump Lead Cement @ 13.2 ppg	9/8/2017	01:55:48	USER	13.23	4.30	141.00	PUMP 390 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.57 YIELD, 7.54 GAL/SK, 109 BBLS, TOL @ 2110', DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	15	Pump Tail Cement	Pump Tail Cement @ 13.5 ppg	9/8/2017	02:11:09	USER	13.28	8.40	469.00	PUMP 920 SKS OF ECONOCEM @ 13.5 LB/GAL, 1.68 YIELD, 7.99 GAL/SK, 275 BBLS, TOT @ 5638', DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	16	Shutdown	Shutdown	9/8/2017	02:47:41	USER	13.70	0.00	-7.00	SHUTDOWN TO WASH PUMPS/LINES AND DROP TOP PLUG.
Event	17	Drop Top Plug	Drop Top Plug	9/8/2017	02:52:53	USER	10.98	0.00	43.00	PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	18	Pump Displacement	Pump Fresh Water Displacement	9/8/2017	03:00:17	USER	7.96	2.30	18.00	BEGIN CALCULATED DISPLACEMENT OF 320 BBLS WITH FRESH WATER. MMCR & BIOCIDES ADDED TO 1ST 40 BBLS, BIOCIDES ADDED THROUGH REST OF DISPLACEMENT.
Event	19	Bump Plug	Bump Plug	9/8/2017	03:41:08	USER	8.01	2.10	2163.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED 500 PSI OVER

										FINAL CIRCULATING PRESSURE OF 2150 PSI. DID NOT SEE ANY SPACER RETURN TO SURFACE.
Event	20	Shutdown	Shutdown	9/8/2017	03:41:56	USER	8.02	0.00	2603.00	SHUTDOWN FOR 1 MINUTE @ 2600 PSI.
Event	21	Pressure Test	Casing Pressure Test	9/8/2017	03:43:56	USER	8.04	0.00	3052.00	CASING PRESSURE TEST, 3000 PSI FOR 15 MINUTES.
Event	22	Check Floats	Check Floats	9/8/2017	03:55:49	USER	8.08	0.00	1500.00	RELEASED PRESSURE, FLOATS HELD, 3.5 BBLS BACK.
Event	23	End Job	End Job	9/8/2017	03:56:46	COM5				STOP RECORDING JOB DATA.
Event	24	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	9/8/2017	04:05:00	USER				DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	25	Rig-Down Completed	Rig-Down Completed	9/8/2017	04:45:00	USER				ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	26	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	9/8/2017	04:55:00	USER				DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	27	Crew Leave Location	Crew Leave Location	9/8/2017	05:00:00	USER				THANK YOU FOR USING HALLIBURTON - BRYAN KRAFT AND CREW.

3.0 Job Chart

3.1 Job Chart

