

The Road to Excellence Starts with Safety

Sold To #: 300466		Ship To #: 3799267		Quote #: 0022347786		Sales Order #: 0904280375				
Customer: ANADARKO PETROLEUM CORP-EBUS				Customer Rep: J McKinley						
Well Name: RW			Well #: 27N-5HZ			API/UWI #: 05-123-44766-00				
Field: WATTENBERG		City (SAP): HUDSON		County/Parish: WELD		State: COLORADO				
Legal Description: SW SE-29-3N-65W-372FSL-1651FEL										
Contractor: Precision				Rig/Platform Name/Num: Precision 464						
Job BOM: 7523 7523										
Well Type: HORIZONTAL GAS										
Sales Person: HALAMERICA\HX41066				Srvc Supervisor: Bryan Kraft						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		13374ft		Job Depth TVD		7043ft				
Water Depth				Wk Ht Above Floor		4ft				
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	1834	0	1834
Casing		5.5	4.778	20	LTC	HCP110	0	13374	0	7043
Open Hole Section			7.875				1834	13384	1834	7043
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	13374		Bottom Plug	5.5	1	WF	
Float Collar	5.5	1	WF	13282		SSR plug set				
Insert Float						Plug Container	5.5	1	HES	
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	Spacer	TUNED SPACER III	60	bbl	10.5	6.25	40.2	3	2171
0.70 gal/bbl	MUSOL A, 330 GAL TOTE - (790828)								
0.70 gal/bbl	DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								
88.91 lbm/bbl	BARITE, BULK (100003681)								
37.58 gal/bbl	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
2	Cap Cement	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57	7.54	8	1128
7.52 Gal	FRESH WATER								
0.60 %	SCR-100 (100003749)								
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 %	SUPER CBL, 50 LB PAIL (100003668)								
0.25 %	SCR-100 (100003749)								
7.54 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
4	Tail Cement	ECONOCHEM (TM) SYSTEM	800	sack	13.5	1.68	7.99	8	6392
7.99 Gal	FRESH WATER								
0.30 %	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
5	Displacement	BIOCIDE & MMCR WATER	40	bbl	8.34			8	1680
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

6	Displacement	BIOCIDE WATER		254	bbl	8.33			8	10668
Cement Left In Pipe		Amount	92 ft			Reason			Shoe Joint	
Mix Water:		Ph 7.0	Mix Water Chloride:			< 100 ppm		Mix Water Temperature:		52 °F
Cement Temperature:		N/A	Plug Displaced by:			8.3 lb/gal Fresh Water		Disp. Temperature:		52 °F
Plug Bumped?		Yes	Bump Pressure:			2200 psi		Floats Held?		Yes
Cement Returns:		0 bbl	Returns Density:			N/A		Returns Temperature:		N/A
Comment The plug bumped @ calculated displacement @ 2200 PSI, shutdown @ 2600 PSI. Casing Pressure test of 3000 PSI for 15 minutes. Checked the floats, the floats held and received 3 BBLS back to the truck. Spacer returned to surface @ 280 BBLS into displacement. 14 BBLS of spacer to surface.										

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)	Comments
Event	1	Call Out	Call Out	9/7/2017	03:00:00	USER				CREW CALLED OUT AT 3:00 9/7/2017, REQUESTED ON LOCATION 9:00 9/7/2017. CREW PICKED UP CEMENT, CHEMICALS (45 GAL MUSOL A, 45 GAL DUAL SPACER B, 20 GAL D-AIR, 10 GAL MCCR), 200 LBS SUGAR, PLUG CONTAINER AND MANIFOLD FROM FORT LUPTON,CO. BULK 660: 10988836/11527037, BULK 660: 11699247/11689672, PUMP ELITE 11897034/11645460.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	9/7/2017	06:45:00	USER				DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Yard	Crew Leave Yard	9/7/2017	07:00:00	USER				STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Arrive At Loc	9/7/2017	08:00:00	USER				END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING: 9.625" 36# J-55 @ 1834', 5.5" CASING: 20# @ 13374', 92' SHOE JOINT, 7.875" OPEN HOLE, TVD @ 7043', 9.3 PPG WELL FLUID, FRESH WATER DISPLACEMENT.
Event	5	Pre-Rig Up Safety	Pre-Rig Up Safety	9/7/2017	08:15:00	USER				HAZARD HUNT. DISCUSSED

		Meeting	Meeting							POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	9/7/2017	08:20:00	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	9/7/2017	11:15:00	USER	8.41	0.00	125.00	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	8	Start Job	Start Job	9/7/2017	11:48:46	COM5	8.30	0.00	2.00	START RECORDING JOB DATA.
Event	9	Test Lines	Test Lines	9/7/2017	11:53:44	USER	8.42	0.00	143.00	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	9/7/2017	12:01:28	USER	10.24	2.90	359.00	PUMP 60 BBLS OF TUNED SPACER @ 10.5 LB/GAL, ADDED 45 GAL MUSOL A, 45 GAL DUAL SPACER B, 20 GAL D-AIR, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	11	Drop Bottom Plug	Drop Bottom Plug	9/7/2017	12:15:00	USER	10.40	4.00	344.00	DROP BOTTOM PLUG, VERIFIED BY DRILLER.
Event	12	Pump Cement	Pump Cap Cement @ 13.2 ppg	9/7/2017	12:15:31	USER	10.55	6.40	442.00	PUMP 150 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.57 YIELD, 7.54 GAL/SK, 42 BBLS, TOC @ 1178", DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	13	Pump Lead Cement	Pump Lead Cement @	9/7/2017	12:22:03	USER	13.12	7.00	412.00	PUMP 390 SKS OF

13.2 ppg

ELASTICEM @ 13.2 LB/GAL,
1.57 YIELD, 7.54 GAL/SK,
109 BBLS, TOL @ 2176',
DENSITY VERIFIED BY
PRESSURIZED MUD SCALES.

Event	14	Pump Tail Cement	Pump Tail Cement @ 13.5 ppg	9/7/2017	12:37:14	USER	13.39	7.20	298.00	PUMP 800 SKS OF ECONOCEM @ 13.5 LB/GAL, 1.68 YIELD, 7.99 GAL/SK, 239 BBLS, TOT @ 5704', DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	15	Shutdown	Shutdown	9/7/2017	13:11:15	USER	13.82	0.00	12.00	SHUTDOWN TO WASH PUMPS/LINES AND DROP TOP PLUG.
Event	16	Drop Top Plug	Drop Top Plug	9/7/2017	13:18:52	USER	8.24	0.00	-13.00	PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	17	Pump Displacement	Pump Fresh Water Displacement	9/7/2017	13:19:43	USER	8.18	1.70	26.00	BEGIN CALCULATED DISPLACEMENT OF 294 BBLS WITH FRESH WATER. MMCR & BIOCIDES ADDED TO 1ST 40 BBLS, BIOCIDES ADDED THROUGH REST OF DISPLACEMENT.
Event	18	Spacer Returns to Surface	Spacer Returns to Surface	9/7/2017	14:02:30	USER	8.14	3.00	2207.00	SPACER TO SURFACE @ 280 BBLS INTO DISPLACEMENT. 14 BBLS OF TUNED SPACER TO SURFACE.
Event	19	Bump Plug	Bump Plug	9/7/2017	14:05:29	USER	8.13	3.10	2306.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED 400 PSI OVER FINAL CIRCULATING PRESSURE OF 2200 PSI.
Event	20	Shutdown	Shutdown	9/7/2017	14:05:48	USER	8.15	0.00	2602.00	SHUTDOWN FOR 1 MINUTE @ 2600 PSI.
Event	21	Pressure Test	Casing Pressure Test	9/7/2017	14:08:17	USER	8.17	0.00	3007.00	CASING PRESSURE TEST, 3000 PSI FOR 15 MINUTES.

iCem® Service

(v. 4.4.18)

Created: Tuesday, October 17, 2017

Event	22	Check Floats	Check Floats	9/7/2017	14:24:44	USER	8.16	0.00	3337.00	RELEASED PRESSURE, FLOATS HELD, 3 BBLS BACK.
Event	23	End Job	End Job	9/7/2017	14:25:32	COM5				STOP RECORDING JOB DATA.
Event	24	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	9/7/2017	14:30:00	USER	8.15	2.50	17.00	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	25	Rig-Down Completed	Rig-Down Completed	9/7/2017	15:00:00	USER				ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	26	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	9/7/2017	15:15:00	USER				DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	27	Crew Leave Location	Crew Leave Location	9/7/2017	15:30:00	USER				THANK YOU FOR USING HALLIBURTON - BRYAN KRAFT AND CREW.

3.0 Job Chart

3.1 Job Chart

