

**HALLIBURTON**

*Cementing Job Summary*

*The Road to Excellence Starts with Safety*

Sold To #: 300466		Ship To #: 3798736		Quote #: 0022348649		Sales Order #: 0904291829				
Customer: ANADARKO PETROLEUM CORP-EBUS				Customer Rep: JIM KINLEY						
Well Name: RW			Well #: 2N-29HZ		API/UWI #: 05-123-44750-00					
Field: WATTENBERG		City (SAP): HUDSON		County/Parish: WELD		State: COLORADO				
Legal Description: SW SE-29-3N-65W-372FSL-1621FEL										
Contractor: Precision				Rig/Platform Name/Num: Precision 464						
Job BOM: 7523 7523										
Well Type: HORIZONTAL GAS										
Sales Person: HALAMERICA/HX41066				Srvc Supervisor: Robert Davis						
<b>Job</b>										
Formation Name										
Formation Depth (MD)		Top 1850		Bottom		12405				
Form Type				BHST						
Job depth MD		12395ft		Job Depth TVD		5378				
Water Depth				Wk Ht Above Floor 4						
Perforation Depth (MD)		From		To						
<b>Well Data</b>										
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	1850	0	1850
Casing		5.5	4.778	20	LTC	HCP110	0	12395	0	0
Open Hole Section			7.875				1850	12405	1850	5378
<b>Tools and Accessories</b>										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5			12395		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	
<b>Fluid Data</b>										
Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Tuned Spacer III	Tuned Spacer III	60	bbl	10.5	6.25		4		
88.91 lbm/bbl		BARITE, BULK (100003681)								
35.80 gal/bbl		FRESH WATER								
0.70 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								
0.50 gal/bbl		D-AIR 3000L, 5 GAL PAIL (101007444)								
0.70 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)								

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Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
2	ElastiCem - Cap Cement	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		8	7.52
7.52 Gal		FRESH WATER							
0.65 %		SCR-100 (100003749)							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
3	ElastiCem	ELASTICEM (TM) SYSTEM	390	sack	13.2	1.57		7	7.54
0.10 %		SUPER CBL, 50 LB PAIL (100003668)							
0.30 %		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/mi n	Total Mix Fluid Gal
4	EconoCem	ECONOCEM (TM) SYSTEM	700	sack	13.5	1.68		7	7.99
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/mi n	Total Mix Fluid Gal
5	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/mi n	Total Mix Fluid Gal
6	Biocide Water	Biocide Water	253.2	bbl	8.34			8	
<b>Cement Left In Pipe</b>		<b>Amount</b>	<b>Reason</b>			<b>Shoe Joint</b>			
Mix Water: Ph 7		Mix Water Chloride: 200 ppm	Mix Water Temperature: 80°F °C						
Cement Temperature: ## °F °C		Plug Displaced by: 8.33lb/gal kg/m3 XXXX	Disp. Temperature: ## °F °C						
Plug Bumped? Yes		Bump Pressure: 2141-2737 psi MPa	Floats Held? Yes						
Cement Returns: n/a bbl m3		Returns Density: ## lb/gal kg/m3	Returns Temperature: ## °F °C						
<b>Comment</b>									

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

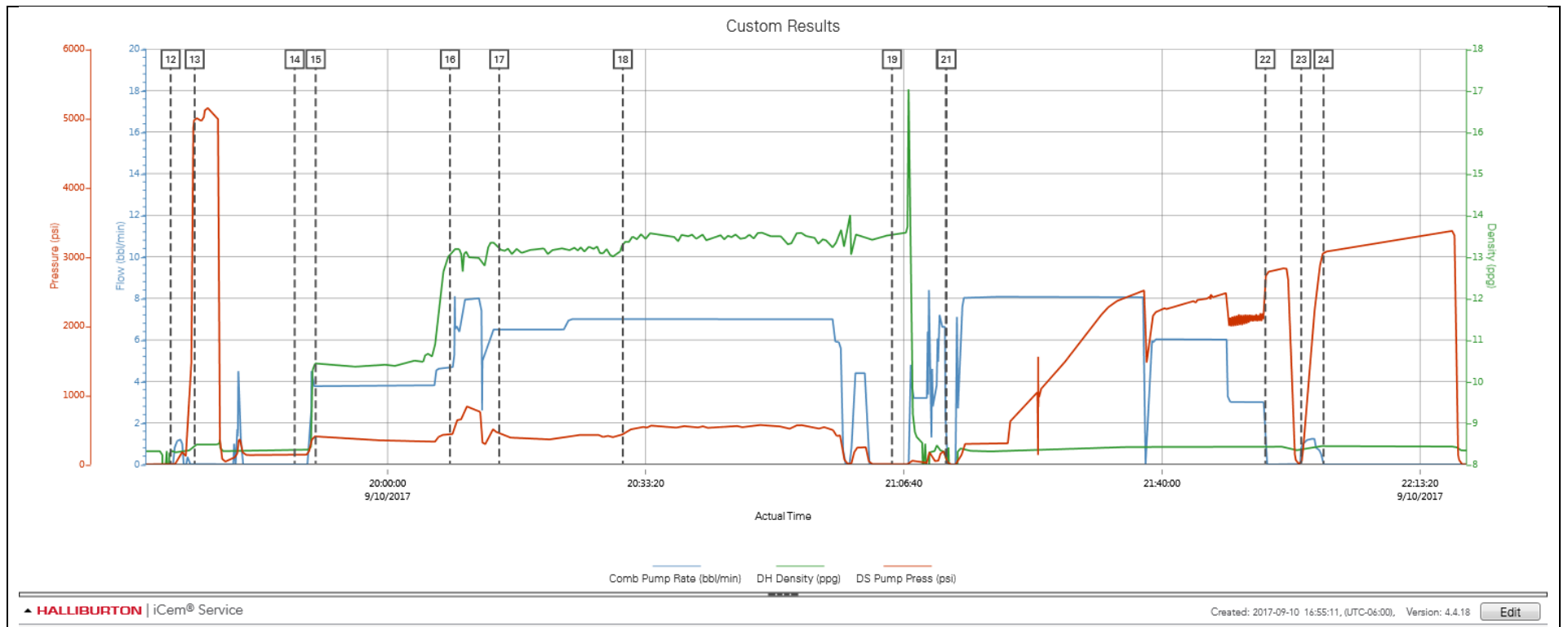
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate <i>(bbl/min)</i>	DH Density <i>(ppg)</i>	DS Pump Press <i>(psi)</i>	Comments
Event	1	Call Out	Call Out	9/10/2017	10:00:00	USER				CALLED OUT FROM FT LUPTON COLORADO
Event	2	Depart from Service Center or Other Site	Depart from Service Center or Other Site	9/10/2017	12:00:00	USER				LEAVE YARD AFTER SAFTEY MEETING
Event	3	Arrive at Location from Service Center	Arrive at Location from Service Center	9/10/2017	13:30:00	USER				ARRIVED ON LOCATION AND TALKED TO COMPANY MAN ABOUT JOB FIGURES AND THE SPOTTING OF OUR EQUIPMENT
Event	4	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	9/10/2017	14:00:00	USER				ASSESSED LOCATION AN TOOK WATER SAMPLE
Event	5	Rig-Up Equipment	Rig-Up Equipment	9/10/2017	14:30:00	USER				SPOTTED EQUIPMENT AND RIGGED UP TO FLOOR RIG IS RUNNING CASING
Event	6	Other	Other	9/10/2017	14:45:00	USER				Water test=pH: __7__, Cl: __200__, temp __80__degrees Tannin-Lignin: __NEG.__; Sulfate: __150__
Event	7	Other	Other	9/10/2017	15:00:00	USER				Rig Circulation: __ bbls Circulation Rate: __ bbl/min Mud Density __9.3__ lb/gal Mud YP/PV: _____
Event	8	Other	Other	9/10/2017	15:30:00	USER				Spacer: __60__ bbl TOS __0__ Lead Cement: __151__ bbl, __540__ sks, TOC __1158__ Tail Cement: __209__ bbl, __700__ sks, TOC __5696__ Displacement: __272__ bbICMT left in Pipe __2__ Reason __SHOE__
Event	9	Other	Other	9/10/2017	16:00:00	USER				TD: __12405__, TP __12395__, SJ: __91__, OH: __7 7/8__, Casing: Size/Weight/Grade: __5.5/20#/P110_____, Previous Casing Shoe: __1850__
Event	10	Rig-Up Completed	Rig-Up Completed	9/10/2017	18:30:00	USER	0.00	8.31	-10.00	RIG UP COMPLETE SAFETY MEETING WITH RIG HANDS AND HALLIBURTON ABOUT THE DANGERS OF OUR EQUIPMENT AND WENT OVER JOB FIGURES. READY TO TEST LINES

Event	11	Start Job	Start Job	9/10/2017	19:14:00	COM4	0.00	8.32	0.00	
Event	12	Other	Other	9/10/2017	19:31:59	COM4	0.00	8.33	1.00	FLOOD LINES WITH 2 BBLS FW
Event	13	Test Lines	Test Lines	9/10/2017	19:35:05	COM4	0.00	8.48	5002.00	LOW TEST TO 500 PSI, HIGH TEST TO 5000 PSI
Event	14	Drop Bottom Plug	Drop Bottom Plug	9/10/2017	19:48:00	USER	0.00	8.34	139.00	WEATHFORD BOTTOM PLUG
Event	15	Pump Spacer 1	Pump Spacer 1	9/10/2017	19:50:43	COM4	3.70	10.41	405.00	TUNED SPACER, WITH SURFACTANTS, 60 BBLS @ 10.5 PPG, PUMPED @ 4 BPM @ 400 PSI, HOS-1158, TOS-0
Event	16	Pump Lead Cement	Pump Lead Cement	9/10/2017	20:08:03	COM4	4.60	13.07	435.00	ELASTICEM, 150 SKS @ 13.2 PPG, YEILD @ 1.57, GAL/SK @ 7.52, 235.5 FT3, 42 BBLS, 27 BBLS OF WATER TO MIX, PUMPED @ 8 BPM @ 840 PSI, HOL1-1011, TOL1-1158
Event	17	Pump Lead Cement	Pump Lead Cement	9/10/2017	20:14:25	COM4	6.50	13.22	456.00	ELASTICEM, 390 SKS @ 13.2 PPG, YEILD @ 1.57, GAL/SK @ 7.54, 612.3 FT3, 109 BBLS, 70 BBLS OF WATER TO MIX, PUMPED @ 6.5 BPM @ 370 PSI, HOL2-3527, TOL2-2169
Event	18	Pump Tail Cement	Pump Tail Cement	9/10/2017	20:30:23	COM4	7.00	13.33	445.00	ECONOCEM, 700 SKS @ 13.5 PPG, YEILD @ 1.68, GAL/SK @ 7.99, 1176 FT3, 209 BBLS, 133 BBLS OF WATER TO MIX, PUMPED @ 7 BPM @ 500 PSI, HOT-6699 FT, TOT-5696 FT
Event	19	Clean Lines	Clean Lines	9/10/2017	21:05:08	COM4	0.00	13.54	1.00	
Event	20	Drop Top Plug	Drop Top Plug	9/10/2017	21:12:06	COM4	0.00	8.31	114.00	WEATHERFORD TOP PLUG
Event	21	Pump Displacement	Pump Displacement	9/10/2017	21:12:10	COM4	0.00	8.04	75.00	FRESH WATER FIRST 20 BBLS MMCR DISPLACEMENT, THE REST BIOCIDES DISPLACEMENT, PUMPED @ 8 BPM @ 2400 PSI FOR THE FIRST 190 BBLS, THEN SLOWED RATE TO 6 BPM @ 2300 PSI, THEN SLOWED RATE LAST 20 BBLS TO 3 BPM @ 2000 PSI, 15 BBLS OF SPACER RETURNS TO SURFACE
Event	22	Bump Plug	Bump Plug	9/10/2017	21:53:21	COM4	0.00	8.43	2685.00	BUMPED PLUG 500 PSI OVER , BUMPED @ 2141 TOOK TO 2737 PSI, FLOATS HELD 3 BBLS BACK
Event	23	Other	Other	9/10/2017	21:57:59	COM4	0.80	8.34	20.00	
Event	24	Pressure Up Well	Pressure Up Well	9/10/2017	22:00:52	COM4	0.00	8.44	3061.00	CSG TEST @ 3000 PSI FOR 15 MIN,. HELD.
Event	25	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	9/10/2017	22:30:00	USER	0.00	8.32	-2.00	SAFETY MEETING OVER RIGGING DOWN
Event	26	Rig-Down Equipment	Rig-Down Equipment	9/10/2017	22:45:00	USER	0.00	0.00	-5.00	RIG DOWN EQUIPMENT AND HOSES
Event	27	End Job	End Job	9/10/2017	23:17:04	COM4				

Event	28	Rig-Down Completed	Rig-Down Completed	9/10/2017	23:30:00	USER	RIG DOWN COMPLETE
Event	29	Safety Meeting - Departing Location	Safety Meeting - Departing Location	9/10/2017	23:45:00	USER	SAFETY MEETING OVER DEPARTURE AND JOURNEY HOME
Event	30	Depart Location for Home	Depart Location for Home	9/11/2017	00:00:00	USER	LEAVE LOCATION

3.0 Attachments

3.1 Custom Results – Job Chart with Events



3.2 Custom Results – Job Chart without Events

