

**HALLIBURTON**

**Cementing Job Summary**

*The Road to Excellence Starts with Safety*

Sold To #: 300466	Ship To #: 0003798650	Quote #: 0022352022	Sales Order #: 0904306857							
Customer: ANADARKO PETROLEUM CORP-EBUS		Customer Rep: J. MCKINLEY								
Well Name: RW	Well #: 1N-5HZ	API/UWI #: 05-123-44751-00								
Field: WATTENBERG	City (SAP): HUDSON	County/Parish: WELD	State: COLORADO							
Legal Description: SW SE-29-3N-65W-372FSL-1576FEL										
Contractor: Precision		Rig/Platform Name/Num: Precision 464								
Job BOM: 7523 7523										
Well Type: HORIZONTAL GAS										
Sales Person: HALAMERICA\HX41066		Srvc Supervisor: David Hahn								
<b>Job</b>										
<b>Formation Name</b>										
Formation Depth (MD)	Top	Bottom								
Form Type		BHST								
Job depth MD	13706ft	Job Depth TVD								
Water Depth		Wk Ht Above Floor								
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	1852	0	1852
Casing		5.5	4.778	20	LTC	HCP110	0	13562	0	0
Open Hole Section			7.875				1852	13666	1852	7011
<b>Tools and Accessories</b>										
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make		
Guide Shoe	5.5			13666	Top Plug	5.5	1	WFD		
Float Shoe	5.5				Bottom Plug	5.5	1	WFD		
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 R3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Tuned Spacer III	Tuned Spacer III	60	bbl	10.5	6.25				
	0.70 gal/bbl	MUSOL A, 330 GAL TOTE - (790828)								
	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)								
	0.33 gal/bbl	D-AIR 3000L, 5 GAL PAIL (101007444)								

last updated on 9/18/2017 4:29:35 PM

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Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /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		5	7.52
	7.52 Gal	FRESH WATER							
	0.70 %	SCR-100 (100003749)							
3	ElastiCem	ELASTICEM (TM) SYSTEM	390	sack	13.2	1.57		5	7.53
	0.10 %	SUPER CBL, 50 LB PAIL (100003668)							
	0.35 %	SCR-100 (100003749)							
	7.53 Gal	FRESH WATER							
4	EconoCem	ECONOCEM (TM) SYSTEM	840	sack	13.5	1.68		5	7.99
	7.99 Gal	FRESH WATER							
	0.35 %	HR-5, 50 LB SK (100005050)							
5	Biocide Water and MMCR	Biocide Water and MMCR	20	bbl	8.34				
	0.50 gal/bbl	MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)							
6	Biocide Water	Biocide Water	280	bbl	8.34				
Cement Left In Pipe			Amount	Reason			Shoe Joint		
			93 ft						
Comment 20 BBL SPACER TO SURFACE									

## 2.0 Real-Time Job Summary

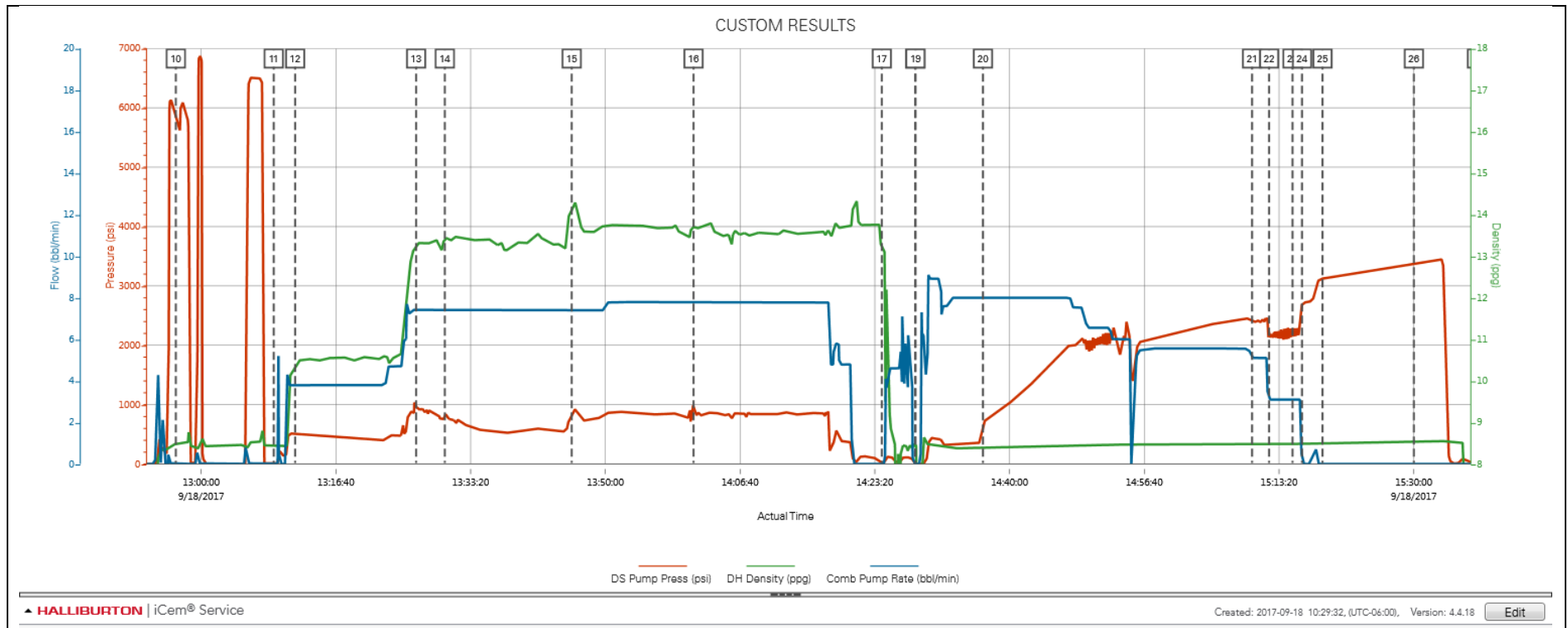
### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press <i>(psi)</i>	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	Comments
Event	1	Call Out	Call Out	9/18/2017	04:00:00	USER				CALLED OUT FROM CHEYENNE WY
Event	2	Depart from Service Center or Other Site	Depart from Service Center or Other Site	9/18/2017	04:30:00	USER				LEAVE YARD AFTER SAFTEY MEETING
Event	3	Arrive at Location from Service Center	Arrive at Location from Service Center	9/18/2017	07:00:00	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	9/18/2017	07:15:00	USER				ASSESSED LOCATION AN TOOK WATER SAMPLE
Event	5	Rig-Up Equipment	Rig-Up Equipment	9/18/2017	09:00:00	USER				SPOTTED EQUIPMENT AND RIGGED UP TO FLOOR RIG IS RUNNING CASING
Event	6	Other	Other	9/18/2017	09:05:00	USER				Water test=pH: <u>  7  </u> , Cl: <u> 1200 </u> , temp <u> 69 </u> degrees Tannin-Lignin: <u>  NEG </u> ; Sulfate: <u>  200 </u>
Event	7	Other	Other	9/18/2017	10:25:00	USER				TD: 13666, TP 13655 SJ: 93 OH: 7.7/8Casing: Size/Weight/Grade: 5.5 20 P110 Previous Casing Shoe: 1851
Event	8	Rig-Up Completed	Rig-Up Completed	9/18/2017	12:15:00	USER	0.00	8.31	0.00	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	9	Start Job	Start Job	9/18/2017	12:30:00	COM5	-1.00	8.30	0.00	
Event	10	Test Lines	Test Lines	9/18/2017	12:56:51	COM5	5909.00	8.48	0.00	TEST LINES LOW TO 500 HIGH TO 6000, 2 INCH LEAKING BY ON THE MANIFOLD, TIGHTEND IT UP AND IT TESTED GOOD.
Event	11	Drop Bottom Plug	Drop Bottom Plug	9/18/2017	13:08:58	COM5	9.00	8.45	0.00	DROP WEATHERFORD BOTTOM PLUG
Event	12	Pump Spacer 1	Pump Spacer 1	9/18/2017	13:11:37	COM5	511.00	10.34	3.80	PUMP 60 BBL SPACER @ 10.5 PPG 5 BPM

Event	13	Pump Cement	Pump Cement	9/18/2017	13:26:34	COM5	948.00	13.28	7.40	PUMP 1ST LEAD 150 SKS 42 BBL @13.2 PPG 7 BPM
Event	14	Pump Lead Cement	Pump Lead Cement	9/18/2017	13:30:08	COM5	841.00	13.48	7.40	PUMP 2ND LEAD 390 SKS109 BBL @ 13.2 PPG 7 BPM
Event	15	Pump Tail Cement	Pump Tail Cement	9/18/2017	13:45:50	COM5	793.00	14.08	7.40	840 SKS 251 BBL @ 8 BPM
Event	16	Other	Other	9/18/2017	14:00:54	COM5	911.00	13.69	7.70	BOTTOM PLUG ON FLOAT COLLAR
Event	17	Clean Lines	Clean Lines	9/18/2017	14:24:11	COM5	9.00	13.24	0.00	
Event	18	Drop Top Plug	Drop Top Plug	9/18/2017	14:28:19	COM5	7.00	8.46	0.00	DROP WEATHERFORD TOP PLUG
Event	19	Pump Displacement	Pump Displacement	9/18/2017	14:28:22	COM5	5.00	8.46	0.00	PUMP 300 BBL FRESH WATER WITH BIO SIDE
Event	20	Displ Reached Cement	Displ Reached Cmnt	9/18/2017	14:36:42	COM5	667.00	8.39	8.00	DISPLACEMENT REACHED CEMENT
Event	21	Check Floats	Check Floats	9/18/2017	15:10:00	USER	2428.00	8.48	5.10	FLOATS HELD GOT 2 BBL BACK AND COMPANY MAN IS HAPPY
Event	22	Other	Other	9/18/2017	15:12:06	COM5	2198.00	8.48	3.10	PUMP KICKED OUT 2500 MAX PSI PER COMPANY MAN
Event	23	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	9/18/2017	15:15:00	USER	2138.00	8.49	3.10	SAFETY MEETING OVER RIGGING DOWN
Event	24	Bump Plug	Bump Plug	9/18/2017	15:16:10	COM5	2662.00	8.49	0.00	BUMP PLUG @ 2370 TAKE TO 3000
Event	25	Pressure Up Well	Pressure Up Well	9/18/2017	15:18:42	COM5	3124.00	8.50	0.00	TEST WELL @ 3000 PSI FOR 15 MIN, CHECK FLOATS 3 BBL BACK TO TRUCK
Event	26	Rig-Down Equipment	Rig-Down Equipment	9/18/2017	15:30:00	USER	3380.00	8.53	0.00	RIG DOWN EQUIPMENT AND HOSES
Event	27	End Job	End Job	9/18/2017	15:37:49	COM5	6.00	0.22	0.00	
Event	28	Rig-Down Completed	Rig-Down Completed	9/18/2017	17:00:00	USER				RIG DOWN COMPLETE
Event	29	Safety Meeting - Departing Location	Safety Meeting - Departing Location	9/18/2017	17:15:00	USER				SAFETY MEETING OVER DEPARTURE AND JOURNEY HOME
Event	30	Depart Location for Home	Depart Location for Home	9/18/2017	18:00:00	USER				LEAVE LOCATION

3.0 Attachments

3.1 Custom Results – Job Chart with Events



3.2 Custom Results – Job Chart without Events

