

## HALLIBURTON

## Cementing Job Summary

*The Road to Excellence Starts with Safety*

Sold To #: 300486	Ship To #: 3790689	Quote #: 0022388857	Sales Order #: 0904507261							
Customer: ANADARKO PETROLEUM CORP-EBUS		Customer Rep: Levi Rogers								
Well Name: NEWBY	Well #: 2N-33HZ	API/UWI #: 05-123-44568-00								
Field: WATTENBERG	City (SAP): LONGMONT	County/Parish: WELD	State: COLORADO							
Legal Description: SW SE-33-3N-88W-589FSL-1455FEL										
Contractor: NABORS DRLG		Rig/Platform Name/Num: NABORS X22								
Job BOM: 7522 7522										
Well Type: HORIZONTAL GAS										
Sales Person: HALAMERICA\HX41066		Srvc Supervisor: Nicholas Roles								
<b>Job</b>										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type	BHST									
Job depth MD	6126ft	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	805	0	805
Casing		7	6.276	26	LTC	J-55	0	6126	0	6126
Open Hole Section			8.5				805	6136	805	6136
<b>Tools and Accessories</b>										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	7					Top Plug	7		HES	
Float Shoe	7			6126		Bottom Plug	7		HES	
Float Collar	7					SSR plug set	7		HES	
Insert Float	7					Plug Container	7	1	HES	
Stage Tool	7					Centralizers	7		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	40	bbl	10.5	6.25		5		
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)								

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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	400	sack	13.2	1.57		8	7.53
		0.20 % HR-5, 50 LB SK (100005050)							
		7.53 Gal FRESH WATER							
		0.10 % SUPER CBL, 50 LB PAIL (100003668)							
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	Displacement Fluid	Displacement Fluid	232	bbl	9.5			8	
<b>Cement Left In Pipe</b>		<b>Amount</b>	45 ft		<b>Reason</b>			Shoe Joint	
<b>Comment</b> Got 12bbls spacer to surface. Estimated TOC-1245'									

## 2.0 Real-Time Job Summary

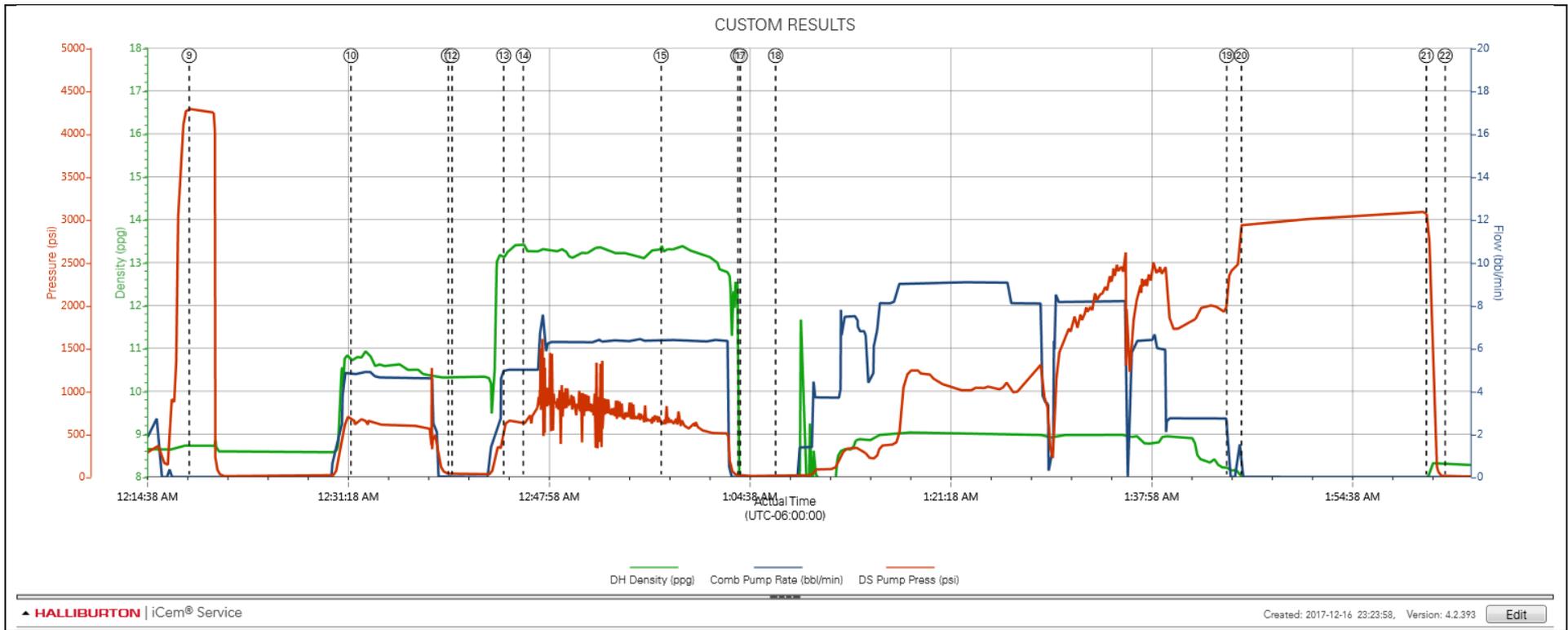
### 2.1 Job Event Log

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	12/16/2017	18:00:00	USER				Called out by Service Coordinator for O/L at 2200
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	12/16/2017	20:45:00	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	12/16/2017	21:00:00	USER				Journey Management prior to departure
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	12/16/2017	22:00:00	USER				Upon arrival met with company man to discuss job details and calculations, performed hazard hunt and site assessment.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Down Safety Meeting	12/16/2017	22:15:00	USER				Discussed rigging up hazards and procedure according to HMS.
Event	6	Other	Other	12/16/2017	22:30:00	USER				Water test- PH-6, Chlor-0, Temp-50. Cement temp-55.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	12/16/2017	23:45:00	USER	0.03	0.00	-210.00	Held safety meeting with all job associated personnel to discuss job procedure, hazards and stop work authority.
Event	8	Start Job	Start Job	12/17/2017	00:12:34	COM4	8.55	0.00	67.00	TD-6136', TP-6126' 7" 26#, FC-6081', OH-8.5", SURF-805' 9.625" 36#, MUD-9#
Event	9	Test Lines	Test Lines	12/17/2017	00:18:17	COM4	8.73	0.00	4288.00	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 4500psi. Pressure stabilized and held with no leaks.
Event	10	Pump Spacer 1	Pump Spacer 1	12/17/2017	00:31:42	COM4	10.72	4.80	657.00	Pumped 40bbls of 10.5# 6.25Y 40.2g/s Tuned Spacer III with 30g Musol A, 30g Dual Spacer B, 10g D-Air at 5bpm 588psi.
Event	11	Shutdown	Shutdown	12/17/2017	00:39:48	COM4	10.32	0.00	34.00	
Event	12	Drop Plug	Drop Plug	12/17/2017	00:40:06	COM4	10.32	0.00	32.00	Dropped by HES supervisor witnessed by company man.
Event	13	Pump Cement	Pump Cement	12/17/2017	00:44:23	COM4	13.19	5.00	637.00	Pumped 400sks or 112bbls of 13.2# 1.57y 7.53g/s Elasticem at 8bpm 400psi.
Event	14	Check Weight	Check weight	12/17/2017	00:46:01	COM4	13.26	5.00	625.00	Weight checked with pressurized mud scales.

Event	15	Check Weight	Check weight	12/17/2017	00:57:27	COM4	13.26	6.40	624.00	Weight checked with pressurized mud scales.
Event	16	Shutdown	Shutdown	12/17/2017	01:03:49	COM4	2.94	0.00	15.00	Weight checked with pressurized mud scales.
Event	17	Drop Top Plug	Drop Top Plug	12/17/2017	01:04:01	COM4	-0.33	0.00	14.00	Dropped by HES supervisor witnessed by company man.
Event	18	Pump Displacement	Pump Displacement	12/17/2017	01:06:57	COM4	-0.48	0.00	12.00	Displaced with 232bbls, 9# OBM, first 10bbls cement water.
Event	19	Bump Plug	Bump Plug	12/17/2017	01:44:23	COM4	8.15	0.00	2355.00	Slowed down to 3bpm 20bbls out, final circulating pressure 1950psi, Bump Pressure_2420psi.
Event	20	Pressure Up Well	Pressure Up Well	12/17/2017	01:45:36	COM4	7.95	0.00	2943.00	Brought pressure to 3000psi for 15min casing test.
Event	21	Check Floats	Check Floats	12/17/2017	02:00:57	USER	8.01	0.00	2858.00	Released pressure and got 3bbls back, floats held.
Event	22	End Job	End Job	12/17/2017	02:02:30	COM4	8.29	0.00	2.00	Got 12bbls spacer back, Estimated TOC-1245'
Event	23	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	12/17/2017	02:10:00	USER	8.26	0.00	32.00	Discussed rigging down hazards and procedure according to HMS.
Event	24	Depart Location Safety Meeting	Depart Location Safety Meeting	12/17/2017	03:45:00	USER				Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	25	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	12/17/2017	04:00:00	USER				Pre journey management prior to departure.

3.0 Attachments

3.1 Custom Results – Job Chart with Events



3.2 Custom Results – Job Chart without Events

