

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 300466	Ship To #: 3819717	Quote #: 0022371129	Sales Order #: 0904420306							
Customer: ANADARKO PETROLEUM CORP-EBUS		Customer Rep: JOHN TRUETT								
Well Name: ROBIN	Well #: 9-16HZ	API/UWI #: 05-123-45250-00								
Field: WATTENBERG	City (SAP): HUDSON	County/Parish: WELD	State: COLORADO							
Legal Description: SE SE-9-1N-65W-317FSL-859FEL										
Contractor: NABORS DRLG		Rig/Platform Name/Num: NABORS X22								
Job BOM: 7523 7523										
Well Type: HORIZONTAL GAS										
Sales Person: HALAMERICA\HX41066		Srvc Supervisor: Jason Welton								
Job										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type	BHST									
Job depth MD	18341ft	Job Depth TVD	7115							
Water Depth	Wk Ht Above Floor									
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	1848	0	1848
Casing		5.5	4.892	17	LTC	HCP110	0	18270	0	7162
Open Hole Section			7.875				1848	18280	1848	7162
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5			18341		Top Plug	5.5	1	WF	
Float Shoe	5.5					Bottom Plug	5.5	1	WF	
Float Collar	5.5					SSR plug set	5.5		HES	
Insert Float	5.5					Plug Container	5.5		HES	
Stage Tool	5.5					Centralizers	5.5		HES	
Fluid Data										
Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Tuned Spacer III	Tuned Spacer III	80	bbl	10.5	6.25				
0.70 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)								
88.91 lbm/bbl		BARITE, BULK (100003681)								
37.58 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/mi n	Total Mix Fluid Gal
2	ElastiCem	ELASTICEM (TM) SYSTEM	630	sack	13.2	1.57		6	7.54
0.10 %		SUPER CBL, 50 LB PAIL (100003888)							
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
3	EconoCem	ECONOCEM (TM) SYSTEM	1320	sack	13.5	1.68		6	7.98
7.98 Gal		FRESH WATER							
0.40 %		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
4	Biocide Water and MMCR	Biocide Water and MMCR	20	bbl	8.34				
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
5	Biocide Water	Biocide Water	405.5	bbl	8.34				
Cement Left In Pipe		Amount	5 ft			Reason		Shoe Joint	
Mix Water: pH ##		Mix Water Chloride: ## ppm			Mix Water Temperature: ## °F °C				
Cement Temperature: ## °F °C		Plug Displaced by: ## lb/gal kg/m3 XXXX			Disp. Temperature: ## °F °C				
Plug Bumped? Yes/No		Bump Pressure: ##### psi MPa			Floats Held? Yes/No				
Cement Returns: ## bbl m3		Returns Density: ## lb/gal kg/m3			Returns Temperature: ## °F °C				
Comment JOB EXECUTED AS PER DESIGN.									

2.0 Real-Time Job Summary

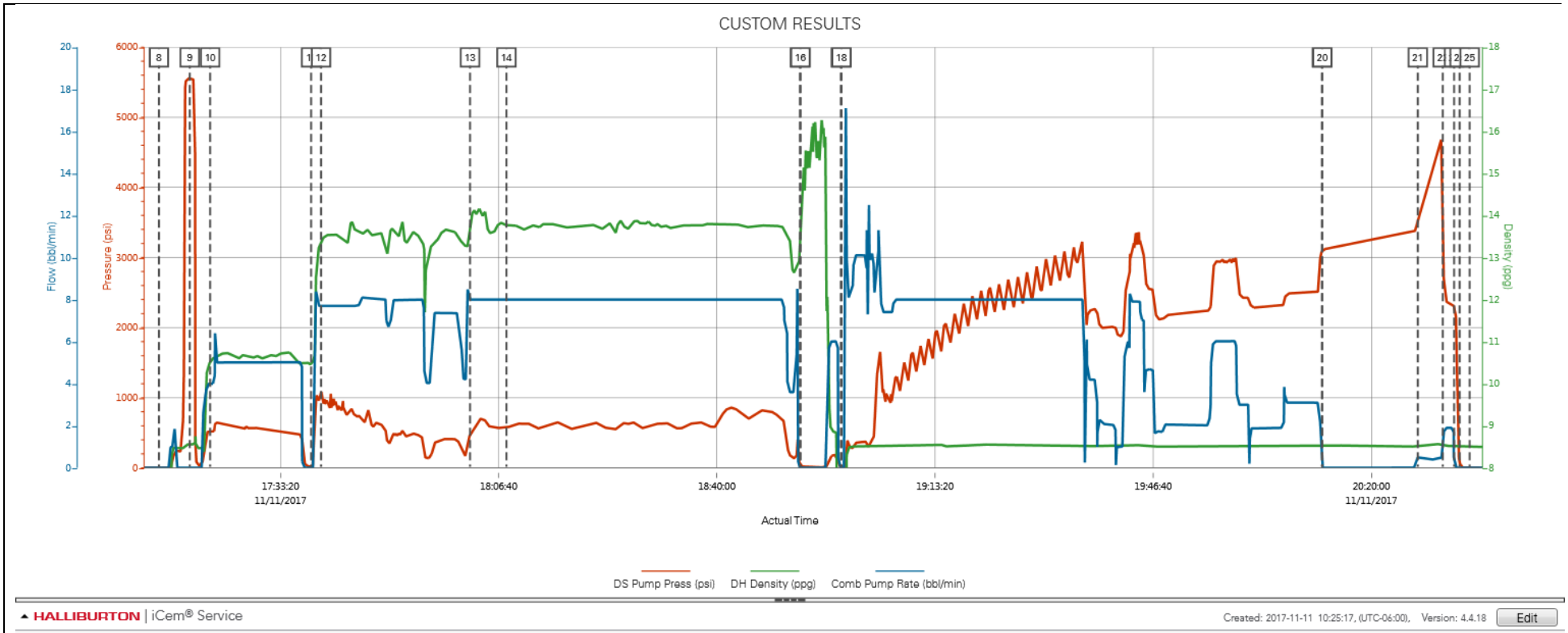
2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Comments
Event	1	Arrive At Loc	Arrive At Loc	11/11/2017	08:45:00	USER				CREW CALLED OUT AT 0530/REQUESTED ON LOCATION AT 1000/RIG RUNNING CASING 4000' OFF BOTTOM
Event	2	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	11/11/2017	09:00:00	USER				TEST WATER/SPOT IN HES EQUIPMENT
Event	3	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	11/11/2017	09:30:00	USER				TEAM LIFTS/PPE
Event	4	Rig-Up Equipment	Rig-Up Equipment	11/11/2017	09:35:00	USER				
Event	5	Rig-Up Completed	Rig-Up Completed	11/11/2017	10:30:00	USER				HES READY
Event	6	Wait on Customer or Customer Sub-Contractor Equip - Start Time	Wait on Customer or Customer Sub-Contractor Equip - Start Time	11/11/2017	10:35:00	USER				RIG FINISH RUNNING CASING/CONDITION WELL
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	11/11/2017	12:51:32	USER	108.00	8.45	0.00	REVIEW JOB AND SAFETY PROCEDURES
Event	8	Start Job	Start Job	11/11/2017	17:14:45	COM4	-1.00	0.00	0.00	
Event	9	Test Lines	Test Lines	11/11/2017	17:19:27	COM4	5556.00	8.56	0.00	500PSI LOW/5500PSI HIGH/TESTS GOOD
Event	10	Pump Spacer 1	Pump Spacer 1	11/11/2017	17:22:35	COM4	532.00	10.51	4.00	80BBLS TUNED SPACER III @ 10.5PPG/5BPM/600PSI
Event	11	Drop Bottom Plug	Drop Bottom Plug	11/11/2017	17:38:00	USER	16.00	10.56	0.00	WEATHERFORD BOTTOM PLUG
Event	12	Pump Lead Cement	Pump Lead Cement	11/11/2017	17:39:31	COM4	949.00	13.38	7.70	630SKS/176BBLS @ 13.2PPG/7.7BPM/1000PSI
Event	13	Pump Tail Cement	Pump Tail Cement	11/11/2017	18:02:17	COM4	472.00	13.82	8.00	1320SKS/395BBLS @ 13.5PPG/8BPM/475PSI
Event	14	Check Weight	Check weight	11/11/2017	18:07:51	COM4	581.00	13.80	8.00	DENSITY VERIFIED
Event	15	Shutdown	Shutdown	11/11/2017	18:52:41	COM4	50.00	13.26	0.00	
Event	16	Clean Lines	Clean Lines	11/11/2017	18:52:46	COM4	34.00	13.39	0.00	TO HALF ROUND

Event	17	Drop Plug	Drop Plug	11/11/2017	18:58:56	COM4	13.00	0.03	0.00	WEATHERFORD TOP PLUG
Event	18	Pump Displacement	Pump Displacement	11/11/2017	18:59:02	COM4	10.00	0.02	0.00	425BBLS FRESHWATER/FIRST 20 w/MMCR/REMAINDER w/BIOCIDE/8BPM/350PSI
Event	19	Bump Plug	Bump Plug	11/11/2017	20:12:26	COM4	3098.00	8.53	0.00	PLUG LANDED AT 425BBLS DISPLACED/3100PSI/FULL RETURNS THROUGHOUT JOB/CIRCULATED 55BBLS SPACER TO SURFACE
Event	20	Other	Other	11/11/2017	20:12:30	COM4	3099.00	8.51	0.00	15MIN CASING TEST AT 3000PSI/TEST GOOD
Event	21	Other	Other	11/11/2017	20:27:05	COM4	3463.00	8.53	0.50	OPEN WET SHOE SUB AT 4730PSI
Event	22	Pump Spacer 1	Pump Spacer 1	11/11/2017	20:30:54	COM4	3174.00	8.54	0.60	PUMP 3BBLS FRESHWATER PER WET SHOE PROCESS
Event	23	Other	Other	11/11/2017	20:32:38	COM4	2297.00	8.53	0.00	CHECK FLOATS/HELD/3BBLS BACK
Event	24	End Job	End Job	11/11/2017	20:33:28	COM4				
Event	25	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	11/11/2017	20:35:00	USER	-3.00	8.50	0.00	
Event	26	Rig-Down Equipment	Rig-Down Equipment	11/11/2017	20:40:00	USER	-3.00	8.48	0.00	
Event	27	Rig-Down Completed	Rig-Down Completed	11/11/2017	21:40:00	USER				
Event	28	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/11/2017	21:50:00	USER				
Event	29	Depart Location	Depart Location	11/11/2017	22:00:00	USER				THANK YOU

3.0 Attachments

3.1 CUSTOM RESULTS – JOB CHART WITH EVENTS



3.2 CUSTOM RESULTS – JOB CHART WITHOUT EVENTS

