

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 300466	Ship To #: 0003800280	Quote #: 0022354110	Sales Order #: 0904313276
Customer: ANADARKO PETROLEUM CORP-EBUS		Customer Rep: Ruben Hernandez	
Well Name: MARRS STATE	Well #: 30N-10HZ	API/UWI #: 05-123-44783-00	
Field: WATTENBERG	City (SAP): DACONO	County/Parish: WELD	State: COLORADO
Legal Description: SW NW-22-1N-67W-2120FNL-795FWL			
Contractor:		Rig/Platform Name/Num:	
Job BOM: 7529 7529			
Well Type: HORIZONTAL GAS			
Sales Person: HALAMERICA\HX41066		Srv Supervisor: Nicholas Roles	
Job			

Formation Name	
Formation Depth (MD)	Top Bottom
Form Type	BHST
Job depth MD	7504ft Job Depth TVD
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	1888		
Drill Pipe		5	4.276	19.5			0	6291		0
Open Hole Section			8.75				1888	7518	0	0
Tubing		2.875	2.441	6.4			6291	7504	0	0

Tools and Accessories									
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make	
Guide Shoe	2.875				Top Plug	2.875		HES	
Float Shoe	2.875				Bottom Plug	2.875		HES	
Float Collar	2.875				SSR plug set	2.875		HES	
Insert Float	2.875				Plug Container	2.875		HES	
Stage Tool	2.875			7504	Centralizers	2.875		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	37	bbl	10.5	6.25		3.5		
		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)
		0.70 gal/bbl								MUSOL A, 330 GAL TOTE - (790828)

last updated on 9/20/2017 7:56:34 AM

Page 1 of 4

iCem® Service

(v. 4.4.18)

Created: Tuesday, October 24, 2017

HALLIBURTON

Cementing Job Summary

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
2	PlugCem	PLUGCEM (TM) SYSTEM	150	sack	15.8	1.515		5	6.22
	6.22 Gal	FRESH WATER							
	0.40 %	HR-5, 50 LB SK (100005050)							
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
3	Tuned Spacer III	Tuned Spacer III	3	bbl	10.5	6.25		3	
	88.91 lbm/bbl	BARITE, BULK (100003681)							
	0.70 gal/bbl	DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)							
	0.70 gal/bbl	MUSOL A, 330 GAL TOTE - (790828)							
	37.58 gal/bbl	FRESH WATER							
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
4	OBM Displacement		101	bbl	9.05			5	
Cement Left in Pipe Amount ft Reason Shoe Joint									
Fluid Data									
Stage/Plug #: 2									
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	37	bbl	10.5	6.25		4	
	0.70 gal/bbl	MUSOL A, 330 GAL TOTE - (790828)							
	37.58 gal/bbl	FRESH WATER							
	0.70 gal/bbl	DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)							
	88.91 lbm/bbl	BARITE, BULK (100003681)							
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
2	GraniteCem	GRANITECEM (TM) SYSTEM	360	sack	17	0.99		5	3.73
	0.25 %	HR-5, 50 LB SK (100005050)							
	3.73 Gal	FRESH WATER							

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	9/19/2017	14:30:00	USER				Called out by Service Coordinator for O/L at 2030
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	9/19/2017	19:45:00	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	9/19/2017	20:00:00	USER				Journey Management prior to departure
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	9/19/2017	20:30:00	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 Up Safety Meeting	9/19/2017	20:45:00	USER				Discussed rigging up hazards and procedure according to HMS.
Event	6	Other	Other	9/19/2017	21:00:00	USER				Water test- PH-6, Chlor-0, Temp-65. Cement temp-70.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	9/20/2017	00:45:00	USER	8.49	0.00	-1.00	Held safety meeting with all job associated personnel to discuss job procedure, hazards and stop work authority.
Event	8	Start Job	Start Job	9/20/2017	01:28:45	COM4	0.10	1.00	-1.00	OH-8.75" ,DP-5" 19.5# 6291', TUB-2.875" 6.5# 1213',TP-7504', MUD-9.05#.
Event	9	Test Lines	Test Lines	9/20/2017	01:32:40	COM4	8.27	0.00	1.00	Pumped 5bbls fresh water to fill lines, closed 2" lo-torc

										and performed 500psi k/o function test, continued with 5th gear stall at 1350psi, followed with 3500psi test. Pressure held and no leaks.
Event	10	Pump Spacer 1	Pump Spacer 1	9/20/2017	01:35:27	COM4	8.36	0.00	3505.00	Pumped 37bbls of 10.5# 6.25y 40.2g/s Tuned Spacer III with 30g Musol A, 30g Dual Spacer B and 10g D-Air at 3.5bpm 203psi.
Event	11	Check Weight	Check weight	9/20/2017	01:42:50	COM4	8.24	0.00	18.00	Weight verified with pressurized mud scales.
Event	12	Check Weight	Check weight	9/20/2017	01:47:48	COM4	10.84	3.50	232.00	Weight verified with pressurized mud scales.
Event	13	Pump Cement	Pump Cement	9/20/2017	02:00:11	COM4	11.68	0.00	1.00	Pumped 150sks or 40.5bbls of 15.8# 1.515y 6.2g/s Plugcem at 5bpm 324psi.
Event	14	Check Weight	Check weight	9/20/2017	02:13:14	COM4	15.80	2.70	138.00	Weight verified with pressurized mud scales.
Event	15	Pump Spacer 2	Pump Spacer 2	9/20/2017	02:20:25	COM4	12.02	3.40	140.00	Pumped 3bbls of Tuned Spacer at 3bpm.
Event	16	Pump Displacement	Pump Displacement	9/20/2017	02:21:27	COM4	10.57	0.00	34.00	Pumped 101bbls of OBM to see pressure and shutdown, pressure fell and was on vacuum.
Event	17	Shutdown	Shutdown	9/20/2017	02:45:17	COM4	8.86	0.00	4.00	Rig pulled pipe to 6969' at recommended 30ft/min, plug stayed balanced. Rig continued to circulate 2 bottoms up and got _bbls spacer back.
Event	18	Pump Spacer 1	Pump Spacer 1	9/20/2017	04:55:15	COM4	7.05	0.00	60.00	Pumped 37bbls of 10.5# 6.25y 40.2g/s Tuned Spacer III with 30g Musol A, 30g Dual Spacer B and 10g D-Air

										at 3.5bpm 203psi.
Event	19	Check Weight	Check weight	9/20/2017	05:07:17	COM4	10.50	3.60	206.00	Weight verified with pressurized mud scales.
Event	20	Pump Cement	Pump Cement	9/20/2017	05:14:30	COM4	10.74	0.00	111.00	Pumped 360sks or 63.5bbls of 17# 0.99y 3.73g/s Granitecem at 5bpm 397psi.
Event	21	Check Weight	Check weight	9/20/2017	05:24:32	COM4	17.16	3.60	262.00	Weight verified with pressurized mud scales.
Event	22	Check Weight	Check weight	9/20/2017	05:29:38	COM4	17.04	4.10	300.00	Weight verified with pressurized mud scales.
Event	23	Pump Spacer 1	Pump Spacer 1	9/20/2017	05:35:54	COM4	6.70	4.40	174.00	Pumped 3bbls of Tuned Spacer at 3bpm.
Event	24	Pump Displacement	Pump Displacement	9/20/2017	05:36:37	COM4	9.43	4.40	80.00	Pumped 91bbls of OBM to see pressure and shutdown, pressure fell and was on vacuum.
Event	25	Shutdown	Shutdown	9/20/2017	05:57:04	COM4	8.89	0.00	2.00	Shut down and rig crew TOO H to 5606' to circulate clean.
Event	26	End Job	End Job	9/20/2017	06:12:14	COM4				Estimated 1st plug TOP-6960', 2nd plug TOP-6106'.Circulated 40bbls spacer to surface on first plug circulation
Event	27	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	9/20/2017	06:20:00	USER	6.46	3.10	18.00	Discussed rigging down hazards and procedure according to HMS.
Event	28	Depart Location Safety Meeting	Depart Location Safety Meeting	9/20/2017	08:45:00	USER				Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	29	Depart Location for Service Center or Other	Depart Location for Service Center or Other	9/20/2017	09:00:00	USER				Pre journey management prior to departure.

3.0 Job Charts

3.1 Plug Back



3.2 KOP

