

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

Date: Tuesday, December 20, 2016

### **Mickey #9 Surface**

Job Date: Saturday, December 03, 2016

Sincerely,

**Julia Nichols**

## Legal Notice

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## 1.0 Cementing Job Summary

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### 1.1 Executive Summary

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Halliburton appreciates the opportunity to perform the cementing services on the **Mickey #9** cement **Surface** casing job. A pre-job safety meeting was held before the job where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined.

**Approximately 35 barrels of cement were returned to surface.**

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

**Halliburton [Ft. Lupton]**

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*Cementing Job Summary**The Road to Excellence Starts with Safety*

Sold To #: 389404	Ship To #: 3788830	Quote #:	Sales Order #: 0903890415							
Customer: EXTRACTION OIL & GAS -		Customer Rep: SEAN MCINTYRE								
Well Name: MICKEY	Well #: 9	API/UWI #: 05-123-43846-00								
Field: WATTENBERG	City (SAP): WINDSOR	County/Parish: WELD	State: COLORADO							
Legal Description: SW NE-5-6N-67W-2421FNL-1888FEL										
Contractor:		Rig/Platform Name/Num: Spud Rig								
Job BOM: 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA/HX38199		Srvc Supervisor: John Keane								
<b>Job</b>										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type		BHST								
Job depth MD	1555 ft	Job Depth TVD	1555 FT							
Water Depth		Wk Ht Above Floor	5 FT							
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			0	1555	0	1555
Open Hole Section			13.5				0	1588	0	1588
<b>Tools and Accessories</b>										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	9.625					Top Plug	9.625	1	HES	
Float Shoe	9.625	1		1555		Bottom Plug	9.625		HES	
Float Collar	9.625	1		1513		SSR plug set	9.625		HES	
Insert Float	9.625					Plug Container	9.625	1	HES	
Stage Tool	9.625					Centralizers	9.625		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	Red Dye Spacer	Red Dye Spacer	20	bbl	8.33					
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	
2	SwiftCem	SWIFTCM (TM) SYSTEM	550	sack	13.5	1.74		5	9.2	
9.20 Gal		FRESH WATER								

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## HALLIBURTON

*Cementing Job Summary*

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	Fresh Water	Fresh Water	117	bbl	8.33				
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
4	Top out	HALCEM (TM) SYSTEM	190	sack	15.8	1.15		2	5
4.99 Gal		FRESH WATER							
Cement Left In Pipe		Amount	42 ft		Reason			Shoe Joint	
Mix Water:		pH 7.5	Mix Water Chloride:		0 ppm		Mix Water Temperature:		59 °F °C
Cement Temperature:		## °F °C	Plug Displaced by:		8.33 lb/gal kg/m3		Disp. Temperature:		## °F °C
Plug Bumped?		Yes	Bump Pressure:		529 psi MPa		Floats Held?		Yes
Cement Returns:		35 bbl m3	Returns Density:		## lb/gal kg/m3		Returns Temperature:		## °F °C
Comment									

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

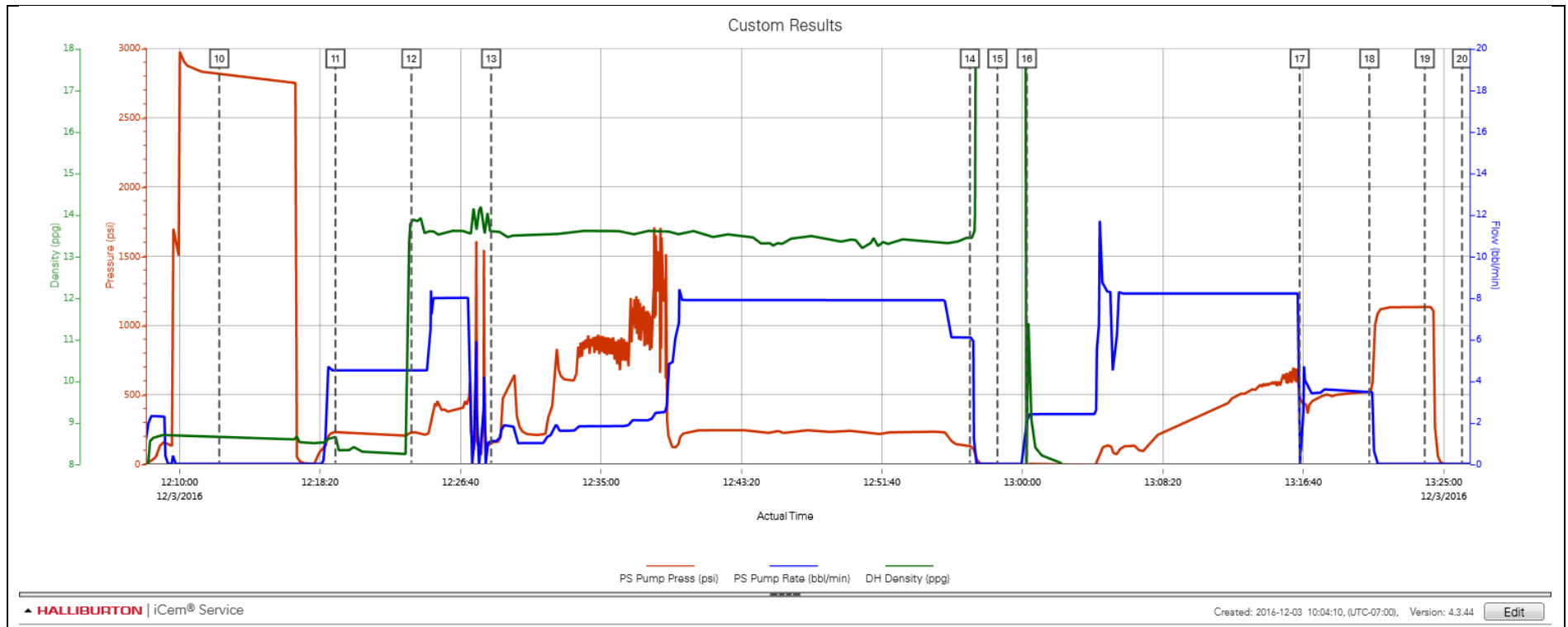
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press (psi)	PS Pump Rate (bbl/min)	DH Density (ppg)	Comments
Event	1	Call Out	Call Out	12/3/2016	06:00:00	USER				REQUESTED ON LOCATION TIME 10:30
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	12/3/2016	08:15:00	USER				WITH HES, 1 F-450, 1 RED TIGER CEMENTING UNIT, 2 660 BULK TRUCKS
Event	3	Arrive At Loc	Arrive At Loc	12/3/2016	09:30:00	USER				RIG RUNNING CASING UPON HES, ARRIVAL
Event	4	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	12/3/2016	09:50:00	USER				WITH HES, DISCUSSED JOB PROCEDURE WITH COMPANY REP, TESTED WATER ( CHLOR 0, PH 7.5, TEMP 41 F), SDS OFFERED FOR ALL HES MATERIALS
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	12/3/2016	10:15:00	USER				WITH HES
Event	6	Rig-Up Equipment	Rig-Up Equipment	12/3/2016	10:30:00	USER				1 LINE RAN TO THE FLOOR, 1 9.625 IN QUICK-LATCH PLUG CONTAINER
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	12/3/2016	10:45:00	USER				WITH HES, EXTRACTION, AND RIG CREW
Event	8	Start Job	Start Job	12/3/2016	12:00:00	USER				TD 1588 FT, TP 1555 FT, CSG 9.625 IN 36 LB/FT J-55, HOLE 13.5 IN, SHOE 43 FT, MWT 9.0 LB/GAL WBM, RIG CIRCULATING 12 BBL/MIN, 600 PSI
Event	9	Prime Pumps	Prime Pumps	12/3/2016	12:05:00	USER				FRESH WATER
Event	10	Pressure Test	Pressure Test	12/3/2016	12:12:21	USER	2810.00	0.00	8.65	LOW TEST AT 1800 PSI, HIGH TEST AT 2810 PSI, PRESSURE HOLDING
Event	11	Pump Spacer	Pump Fresh Water Spacer	12/3/2016	12:19:15	USER	233.00	4.50	8.65	RED DYE ADDED, RETURNS AT 1 BBL AWAY
Event	12	Pump Cement	Pump Cement	12/3/2016	12:23:45	USER	230.00	4.50	13.89	MIXED AT 13.5 LB/GAL, 550 SKS, 1.74 FT3/SK, 9.2 GAL/SK, DENSITY VERIFIED USING PRESSURIZED MUD SCALES
Event	13	Comment	Comment	12/3/2016	12:28:29	USER	156.00	1.10	13.59	SLOWED RATE TO DEAL WITH ERRATIC PRESSURE, FULL RETURNS MAINTAINED, RESUMED RATE ONCE PRESSURE STABILIZED
Event	14	Shutdown	Shutdown	12/3/2016	12:56:53	USER	131.00	6.10	13.43	

Event	15	Drop Top Plug	Drop Top Plug	12/3/2016	12:58:31	USER	-15.00	0.00	40.72	PLUG LAUNCHED
Event	16	Pump Displacement	Pump Displacement	12/3/2016	13:00:16	USER	-4.00	2.10	6.56	FRESH WATER, 116.9 BBL DISPLACEMENT
Event	17	Slow Rate	Slow Rate	12/3/2016	13:16:27	USER	486.00	1.10	7.54	SLOWED AT 107 BBL AWAY
Event	18	Bump Plug	Bump Plug	12/3/2016	13:20:35	USER	529.00	3.50	7.52	PLUG BUMPED AT CALCULATED DISPLACEMENT, 529 PSI
Event	19	Check Floats	Check Floats	12/3/2016	13:23:52	USER	1132.00	0.00	7.54	FLOATS HOLDING, 1 BBL RETURNED TO THE TRUCK
Event	20	Comment	Comment	12/3/2016	13:26:05	USER				HES ON STANDBY TO PUMP TOP OUT JOB ON MICKEY-6, RIG CREW RUNNING 1 IN. TUBING



## 3.0 Attachments

### 3.1 Custom Results – Job Chart with Events



3.2 Custom Results – Job Chart without Events

