

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

Date: Sunday, November 20, 2016

## **MATRIX F-29HN Surface**

Job Date: Friday, November 11, 2016

Sincerely,

**Julia Nichols**

## Legal Notice

---

### Warning Disclaimer

Although the information contained in this report is based on sound engineering practices, the copyright owner(s) does (do) not accept any responsibility whatsoever, in negligence or otherwise, for any loss or damage arising from the possession or use of the report whether in terms of correctness or otherwise. The application, therefore, by the user of this report or any part thereof, is solely at the user's own risk.

### Limitations of Liability

Except as expressly set forth herein, there are no representations or warranties by Halliburton, express or implied, including implied warranties of merchantability and/or fitness for a particular purpose. In no event will Halliburton or its suppliers be liable for consequential, incidental, special, punitive or exemplary damages (including, without limitation, loss of data, profits, use of hardware, or software). Customer accepts full responsibility for any investment made based on results from the Software. Any interpretations, analyses or modeling of any data, including, but not limited to Customer data, and any recommendation or decisions based upon such interpretations, analyses or modeling are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional may differ. Accordingly, Halliburton cannot and does not warrant the accuracy, correctness or completeness of any such interpretation, recommendation, modeling or other products of the Software Product. As such, any interpretation, recommendation or modeling resulting from the Software for the purpose of any drilling, well treatment, production or financial decision will be at the sole risk of Customer. Under no circumstances will Halliburton or its suppliers be liable for any damages.

Table of Contents

---

1.0    Cementing Job Summary ..... 4

    1.1    Executive Summary .....4

2.0    Real-Time Job Summary ..... 7

    2.1    Job Event Log .....7

3.0    Attachments..... 9

    3.1    Custom Results – Job Chart with Events .....9

    3.2    Custom Results – Job Chart without Events.....10

## 1.0 Cementing Job Summary

---

### 1.1 Executive Summary

---

Halliburton appreciates the opportunity to perform the cementing services on the **Matrix F-29HN** 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 26 barrels of cement 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]**

HALLIBURTON

## Cementing Job Summary

## The Road to Excellence Starts with Safety

Sold To #: 369404	Ship To #: 3627233	Quote #:	Sales Order #: 0903654708							
Customer: EXTRACTION OIL & GAS -		Customer Rep:								
Well Name: MATRIX	Well #: F-29HN	API/UWI #: 05-123-40694-00								
Field: GREELEY	City (SAP): GREELEY	County/Parish: WELD	State: COLORADO							
Legal Description: SE SW-29-6N-65W-470FSL-2381FWL										
Contractor:		Rig/Platform Name/Num: Spud Rig								
Job BOM: 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199		Srv Supervisor: Andrew Brennecke								
Job										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type	BHST									
Job depth MD	1554ft	Job Depth TVD								
Water Depth		Wk Ht Above Floor	3							
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			0	1554	0	1554
Open Hole Section			13.5				0	1587	0	1587
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	9.625	1		1554		Top Plug	9.625	1	HES	
Float Shoe						Bottom Plug				
Float Collar	9.625	1		1511		SSR plug set				
Insert Float						Plug Container	9.625	1	HES	
Stage Tool						Centralizers	9.625			
Fluid Data										
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	Fresh Water	Fresh Water	10	bbl	8.33			4		
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	525	sack	13.5	1.74		6.5	9.2	
9.20 Gal		FRESH WATER								

last updated on 11/20/2016 9:50:37 AM

Page 1 of 2

iCem® Service

(v. 4.2.393)

Created: Sunday, November 20, 2016

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	116.8	bbl	8.33			8		
Cement Left In Pipe		Amount	42 ft		Reason			Shoe Joint		
Mix Water:		pH 7	Mix Water Chloride:			Dppm		Mix Water Temperature:		58°F
Cement Temperature:			Plug Displaced by:			8.40 lb/gal		Disp. Temperature:		
Plug Bumped?		Yes	Bump Pressure:			#### psi		Floats Held?		Yes
Cement Returns:		## bbl	Returns Density:					Returns Temperature:		
Comment										

## 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)	PS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	11/11/2016	07:00:00	USER				
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/11/2016	09:45:00	USER				ALL HES PRESENT
Event	3	Crew Leave Yard	Crew Leave Yard	11/11/2016	10:00:00	USER				
Event	4	Arrive At Loc	Arrive At Loc	11/11/2016	10:50:00	USER				RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	11/11/2016	11:14:29	USER				
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	11/11/2016	13:00:00	USER				ALL HES PRESENT
Event	7	Rig-Up Completed	Rig-Up Completed	11/11/2016	14:20:00	USER				1-ELITE, 2-400 BODY LOAD, 9.625" QUICK LATCH PLUG CONTAINER, 2" PUMP IRON, 4" SUCTION
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	11/11/2016	14:30:00	USER				ALL HES AND RIG CREW PRESENT
Event	9	Start Job	Start Job	11/11/2016	14:48:20	COM5				
Event	10	Start Job	Start Job	11/11/2016	14:58:00	USER				TD-1586', TP-1554', SJ-43.5', OH-13.5", CSG-9.625" 36#, MUD-8.6PPG, CNDT-16" 0-60'
Event	11	Prime Pumps	Prime Pumps	11/11/2016	14:58:49	COM5				FRESH WATER
Event	12	Test Lines	Test Lines	11/11/2016	15:03:24	COM5	8.43	0.00	2717.00	ALL PRESSURE HELD ON LINES
Event	13	Pump Spacer 1	Pump Spacer 1	11/11/2016	15:10:47	COM5	8.37	0.00	14.00	FRESH WATER WITH DYE
Event	14	Check Weight	Check weight	11/11/2016	15:12:40	COM5				WEIGHT VERIFIED BY PRESSURIZED MUD SCALES
Event	15	Pump Lead Cement	Pump Lead Cement	11/11/2016	15:17:47	COM5	13.64	3.90	138.00	SWIFTCEM 525SKS, 13.5PPG, 1.74CF/SK, 9.2GAL/SK
Event	16	Shutdown	Shutdown	11/11/2016	15:59:11	USER				WASHED UP ON TOP OF PLUG
Event	17	Drop Top Plug	Drop Top Plug	11/11/2016	16:01:17	COM5				PLUG DROP VERIFIED BY TATTLE TALE

Event	18	Pump Displacement	Pump Displacement	11/11/2016	16:02:03	COM5	14.49	0.00	0.00	FRESH WATER
Event	19	Bump Plug	Bump Plug	11/11/2016	16:22:24	USER	8.36	6.70	595.00	PLUG BUMPED
Event	20	Check Floats	Check Floats	11/11/2016	16:24:13	USER	8.39	0.00	616.00	FLOATS HELD, 1/2 BBL BACK TO DISPLACEMENT TANK
Event	21	Other	Other	11/11/2016	16:26:44	COM5				CASING TEST, PRESSURED UP TO 1428PSI
Event	22	End Job	End Job	11/11/2016	16:31:01	COM5				GOOD RETURNS THROUGH OUT JOB, 26BBLS CEMENT TO SURFACE
Event	23	Crew Leave Location	Crew Leave Location	11/11/2016	17:30:00	USER				THANK YOU FOR CHOOSING HALLIBURTON, ANDREW BRENNECKE AND CREW



3.0 Attachments

3.1 Custom Results – Job Chart with Events



3.2 Custom Results – Job Chart without Events

