

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

Date: Thursday, January 12, 2017

### **Matrix F-29HN Production**

Job Date: Wednesday, December 28, 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 **Matrix F-29HN** cement **Production** 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 40 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 #: 369404		Ship To #: 3627233		Quote #:		Sales Order #: 0903741191				
Customer: EXTRACTION OIL & GAS				Customer Rep: Shane Hackford						
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-2361FWL										
Contractor: H & P DRLG				Rig/Platform Name/Num: H & P 321						
Job BOM: 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199				Srvc Supervisor: Vaughn Oteri						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		11690ft		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		8.625	8.921	36			0	1570	0	1570
Casing		5.5	4.778	20			0	11678	0	6800
Open Hole Section			8.5				1570	11690	1570	6800
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5					Top Plug	5.5	1	KLX	
Float Shoe	5.5			11678		Bottom Plug	5.5			
Float Collar	5.5			11675		SSR plug set	5.5			
Insert Float	5.5					Plug Container	5.5	1	HES	
Stage Tool	5.5					Centralizers	5.5			
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	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	50	bbl	11.5	3.74		6		
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	

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*Cementing Job Summary*

2	ElastiCem W/O CBL	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		6	7.48
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	ElastiCem Tail	ELASTICEM (TM) SYSTEM	1400	sack	13.2	1.57		6	7.49
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	Displacement	Displacement	258	bbl	8.33			8	
Cement Left In Pipe		Amount	5 ft		Reason			Shoe Joint	
Comment 40bbl of cement back to surface									

## 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	Call Out	Call Out	12/28/2016	01:30:00	USER				Call out from Arc hub
Event	2	Arrive At Loc	Arrive At Loc	12/28/2016	05:00:00	USER				Requested on location at 0600 Arrived on location at 0500 met with company rep to discuss job process and concerns
Event	3	Other	Other	12/28/2016	05:01:01	USER				TD-11690 TP-11678 FC-11675 Surf-1570 Casing-5.5 20#
Event	4	Start Job	Start Job	12/28/2016	08:14:40	COM4				Held pre-job safety meeting with all hands on location to discuss job process and hazards
Event	5	Test Lines	Test Lines	12/28/2016	08:17:43	COM4	4727.00	8.71	0.00	Pressure tested pumps and lines with fresh water 4745psi found no leaks and pressure held good
Event	6	Pump Spacer 1	Pump Spacer 1	12/28/2016	08:26:38	COM4	59.00	11.41	2.80	Mixed 50bbl of 11.5ppg Tuned spacer III at 4.0 bpm 182psi
Event	7	Pump Cement	Pump Cement	12/28/2016	08:40:33	COM4	75.00	14.80	3.20	Mixed 1550sk or 433bbl of 13.2ppg Y1.57 g/sk-7.48 Elasticem at 8.0bpm 490psi
Event	8	Check Weight	Check weight	12/28/2016	08:41:04	COM4	86.00	14.84	3.20	Confirmed weight on scales of 13.2ppg
Event	9	Shutdown	Shutdown	12/28/2016	09:42:25	COM4	19.00	13.47	0.00	
Event	10	Clean Lines	Clean Lines	12/28/2016	09:42:32	COM4	1.00	13.82	0.00	Washed pumps and lines with fresh water
Event	11	Drop Top Plug	Drop Top Plug	12/28/2016	09:42:37	COM4	-6.00	13.87	0.00	KLX tool hand released plug witnessed by company rep and HES supervisor
Event	12	Pump Displacement	Pump Displacement	12/28/2016	09:50:35	COM4	-7.00	8.05	0.00	Pumped 258bbl of fresh water to displace cement
Event	13	Bump Plug	Bump Plug	12/28/2016	10:19:55	COM4	1927.00	8.14	0.00	Bumped plug 500psi over final pump pressure
Event	14	Pressure Up Well	Pressure Up Well	12/28/2016	10:20:43	COM4	1804.00	8.13	0.70	Pressure up on rupture disc 3560psi
Event	15	Other	Other	12/28/2016	10:22:48	COM4	1993.00	8.12	0.00	Pumped 5bbl of fresh water for wet shoe
Event	16	End Job	End Job	12/28/2016	10:29:07	COM4	-30.00	8.05	0.00	40bbl of cement back to surface

## 3.0 Attachments

### 3.1 Custom Results – Job Chart with Events





3.2 Custom Results – Job Chart without Events

