

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

Date: Wednesday, March 08, 2017

## **STROMBERGER #8 SURFACE**

Job Date: Monday, February 13, 2017

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 **Stromberger #8** 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 15 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 #: 3711301		Quote #:		Sales Order #: 0903842343	
Customer: EXTRACTION OIL & GAS -				Customer Rep: Shawn McIntyre			
Well Name: STROMBERGER			Well #: 8		API/UWI #: 05-123-42557-00		
Field: WATTENBERG		City (SAP): WINDSOR		County/Parish: WELD		State: COLORADO	
Legal Description: SE NE-22-6N-67W-2058FNL-150FEL							
Contractor:				Rig/Platform Name/Num: Spud Rig			
Job BOM: 7521							
Well Type: HORIZONTAL OIL							
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Bradley Hinkle			
Job							

Formation Name			
Formation Depth (MD)	Top	0	Bottom 1565ft
Form Type	BHST		
Job depth MD	1556ft	Job Depth TVD	1556ft
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			0	1556	0	1556
Open Hole Section			13.5				0	1565	0	1565

**Tools and Accessories**

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		1556	Bottom Plug	9.625		HES
Float Collar	9.625	1		1512	SSR plug set	9.625		HES
Insert Float	9.625				Plug Container	9.625		HES
Stage Tool	9.625				Centralizers	9.625		HES

**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	Red Dye Spacer	Red Dye Water	10	bbl	8.33			3	

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	Cement	SWIFTCEM	550	sack	13.5	1.74		7	9.2

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*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	Displacement	Fresh Water	117	bbl	8.33			8	
Cement Left In Pipe		Amount	44 ft				Reason		Shoe Joint
Mix Water:		pH 6.8	Mix Water Chloride:			0 ppm	Mix Water Temperature:		52°F °C
Cement Temperature:		67 °F °C	Plug Displaced by:			## lb/gal kg/m3 XXXX	Disp. Temperature:		## °F °C
Plug Bumped?		Yes	Bump Pressure:			500 psi MPa	Floats Held?		Yes
Cement Returns:		15 bbl	Returns Density:			## lb/gal kg/m3	Returns Temperature:		## °F °C
Comment 15 bbl of cement back to surface.									

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

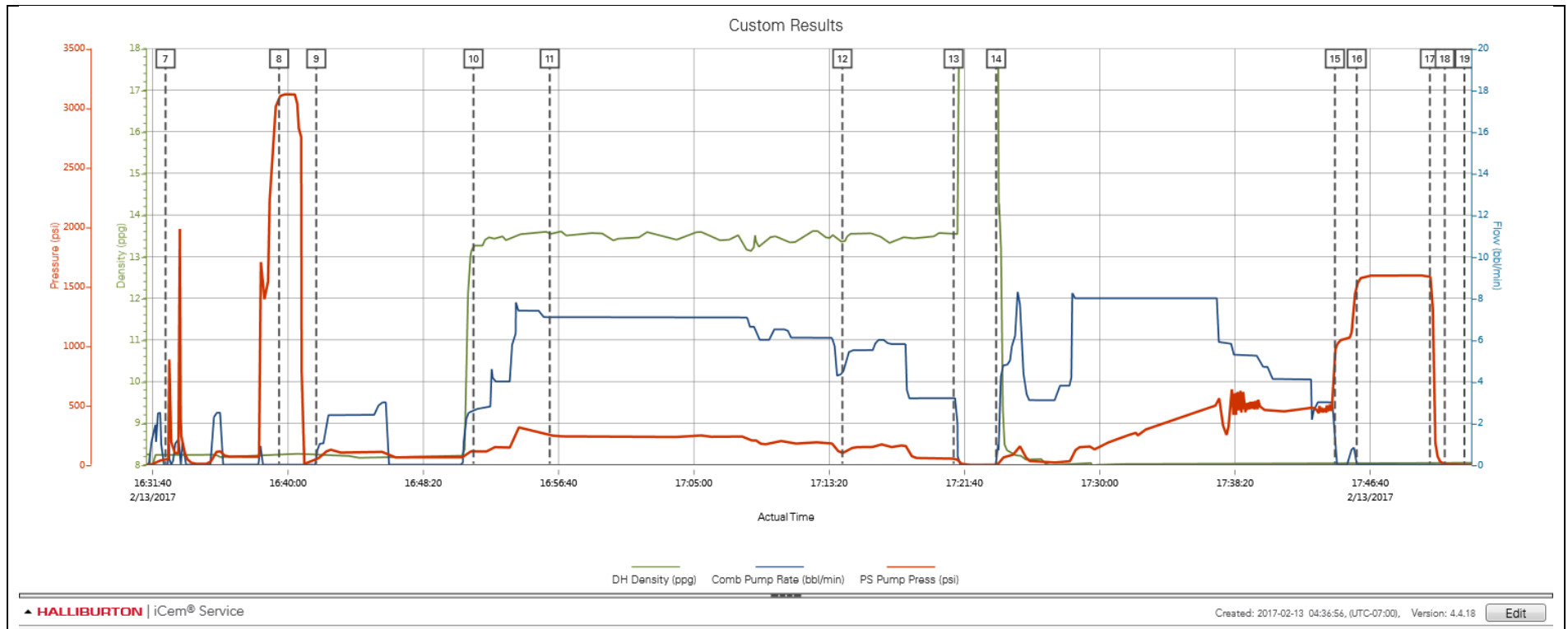
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	2/13/2017	04:00:00	USER				Crew called for an on location of 0830. Crew was Bradley Hinkle, Luke Kosakewich, Randy Blackham, Bryan Nielson and David Harris.
Event	2	Depart Shop for Location	Depart Shop for Location	2/13/2017	07:15:33	USER				Pre-journey safety meeting.
Event	3	Arrive at Location from Service Center	Arrive at Location from Service Center	2/13/2017	08:00:00	USER				Perform site assessment and held pre rig-up safety meeting with crew. Rig pulling drill pipe.
Event	4	Other	Check in with customer	2/13/2017	08:05:43	USER				Verified tubulars and well data needed to calculate the cement job with company man. TD: 1565. TP: 1556. FC: 1512. 9.625in. 36# casing inside a 13.5 OH. Mud weight 8.4#.
Event	5	Safety Meeting	Safety Meeting	2/13/2017	10:00:43	USER				Pre job safety meeting with all personnel on location.
Event	6	Start Job	Start Job	2/13/2017	16:17:46	COM5	8.24	0.00	1.00	
Event	7	Test Lines	Test Lines	2/13/2017	16:32:27	COM5	8.24	0.00	48.00	Leak on iron, bled off pressure, tighten wing back and fixed the leak.
Event	8	Test Lines	Test Lines	2/13/2017	16:39:26	COM5	8.26	0.00	3090.00	Pressure tested iron to 3000 psi. with a 500 psi kickout test.
Event	9	Pump Spacer 1	Pump Spacer 1	2/13/2017	16:41:44	COM5	8.24	0.00	45.00	Pumped 10 bbl. of red dye water.
Event	10	Pump Lead Cement	Pump Lead Cement	2/13/2017	16:51:25	COM5	13.26	2.60	115.00	Pumped 170 bbl. (550 sks) of SwiftCem mixed at 13.5 ppg. Density was verified by pressurized scales. Cement slurry temp was 65 degrees.
Event	11	Check Weight	Check weight	2/13/2017	16:56:07	COM5	13.52	7.10	252.00	Cement weighed at 13.53 ppg.
Event	12	Check Weight	Check weight	2/13/2017	17:14:09	COM5	13.35	4.50	98.00	Cement weighed at 13.37 ppg.
Event	13	Shutdown	Shutdown	2/13/2017	17:21:00	USER	13.54	3.20	52.00	
Event	14	Pump Displacement	Pump Displacement	2/13/2017	17:23:37	COM5	19.50	0.00	-4.00	Pumped 117 bbl of fresh water. Clean returns throughout all of displacement. Pumped 15 bbl of cement back to surface.

Event	15	Bump Plug	Bump Plug	2/13/2017	17:44:29	COM5	8.03	0.00	920.00	Bumped plug at 500 psi. Brought pressure up to 1000 psi.
Event	16	Pressure Up Well	Pressure Up Well	2/13/2017	17:45:50	COM5	8.04	0.00	1501.00	Increased pressure up to 1500 psi. Held pressure for 5 minutes.
Event	17	Check Floats	Check Floats	2/13/2017	17:50:20	USER	8.04	0.00	1590.00	1 bbl. back and floats held.
Event	18	End Job	End Job	2/13/2017	17:51:15	COM5	8.04	0.00	3.00	
Event	19	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/13/2017	17:52:28	USER	8.04	0.00	-2.00	Pre-Rig Down Safety Meeting.
Event	20	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	2/13/2017	18:38:13	USER				Pre journey safety meeting.



## 3.0 Attachments

### 3.1 Custom Results – Job Chart with Events



3.2 Custom Results – Job Chart without Events

