

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS-EBUS**

Date: Wednesday, October 03, 2018

### **VT-Glenmere C1-16-18 Surface**

Job Date: Monday, May 21, 2018

Sincerely,

**Bryce Hinsch**

## Legal Notice

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### Disclaimer:

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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 **VT-Glenmere C1-16-18** 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.

**No cement was 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 Fort Lupton**

*The Road to Excellence Starts with Safety*

Sold To #: 369404	Ship To #: 3786956	Quote #:	Sales Order #: 0904869262
Customer: EXTRACTION OIL & GAS -		Customer Rep: Shawn McIntyre	
Well Name: VT-GLENMERE		Well #: C1-16-18	API/UWI #: 05-123-44424-00
Field: WATTENBERG	City (SAP): GREELEY	County/Parish: WELD	State: COLORADO
Legal Description: SW NW-15-5N-65W-1877FNL-697FWL			
Contractor: Shawn McIntyre		Rig/Platform Name/Num: Cartel 88	
Job BOM: 7521 7521			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX38199		Srvc Supervisor: Adam Covington	

**Job**

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	1553ft	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	0	9.625	8.921	36	8 RD	J-55	0	1553	0	0
Open Hole Section			13.5				0	1554	0	0

**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			1511	Bottom Plug	9.625		HES
Float Collar	9.625				SSR plug set	9.625		HES
Insert Float	9.625				Plug Container	9.625	1	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 ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Red Dye Spacer	Red Dye Spacer	50	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
2	SwiftCem	SWIFTCEM (TM) SYSTEM	575	sack	13.5	1.74		8	9.2
9.20 Gal		<b>FRESH WATER</b>							
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			8	
<b>Cement Left In Pipe</b>									
<b>Amount</b>		44 ft			<b>Reason</b>			<b>Shoe Joint</b>	
Mix Water: pH 7		Mix Water Chloride: 0 ppm			Mix Water Temperature: 65°F				
Cement Temperature: 65 °F		Plug Displaced by: 8.33 lb/gal			Disp. Temperature: 65 °F				
Plug Bumped? Yes		Bump Pressure: 480 psi			Floats Held? Yes				
Cement Returns: 0 bbl		Returns Density: 8.33 lb/gal			Returns Temperature: ## °F °C				
<b>Comment</b> TD 1554', TP 1553, 42' SHOE, 13.5" OH, WATER TEMP 65 DEGREES, 0 CHLORIDES, 7 PH, 0 SULFATES. NO CEMENT TO SURFACE AND AS A RESULT, BLM WILL BE TAGGING AND FIGURING OUT WHAT THEY NEED TO DO TO BRING CEMENT TO SURFACE. FLOATS HELD, ONE BBL BACK TO TRUCK. .									

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press <i>(psi)</i>	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	Comb Pump Total <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	5/20/2018	06:00:00	USER					CALLED OUT BY SERVICE COORDINATOR FOR O/L AT 1130
Event	2	Pre-Convoy Safety Meeting	Depart Shop for Location	5/20/2018	09:00:00	USER					HELD MEETING WITH ALL PERSONNEL IN CONVOY TO DISCUSS DIRECTIONS AND HAZARDS ASSOCIATED WITH DRIVING, ALL FIT TO DRIVE.
Event	3	Depart Shop for Location	Depart Shop for Location	5/20/2018	09:30:00	USER					JOURNEY MANAGEMENT PRIOR TO DEPARTURE
Event	4	Arrive At Loc	Arrive At Loc	5/20/2018	10:30:00	USER					UPON ARRIVAL MET WITH COMPANY MAN TO DISCUSS JOB DETAILS AND CALCULATIONS, PERFORMED HAZARD HUNT AND SITE ASSESSMENT.
Event	5	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	5/20/2018	10:45:00	USER					DISCUSSED RIGGING UP HAZARDS AND PROCEDURE ACCORDING TO HMS.
Event	6	Safety Meeting - Pre Job	Safety Meeting - Pre Job	5/20/2018	21:30:00	USER	-4.00	8.39	0.00	0.00	HELD SAFETY MEETING WITH ALL JOB ASSOCIATED PERSONNEL TO DISCUSS JOB PROCEDURE, HAZARDS AND STOP WORK AUTHORITY. Water test-PH-6, Chlor-0, Temp-65. Cement temp-70.
Event	7	Start Job	Start Job	5/20/2018	21:45:34	COM4	-4.00	8.19	0.00	0.00	FILLED LINES WITH 3 BBLS OF FRESH WATER. 2 BPM

Event	Seq	Activity	Location	Date	Time	Code	Start	End	Flow	Pressure	Description
										16 PSI.	
Event	8	Test Lines	Test Lines	5/20/2018	21:51:42	COM4	4.00	8.40	0.00	2.90	PRESSURE TESTED TO 3000 PSI. AFTER A 500 PSI KICKOUT TEST AND A 5TH GEAR STALL. COULDN'T GET PRESSURE TO HOLD. HAD TO SWAP 1" LOTORQ VALVES ON RELEASE LINE TO GET PRESSURE TO HOLD.
Event	9	Test Lines	Test Lines	5/20/2018	22:41:20	COM4	41.00	8.42	0.00	29.10	PRESSURE TESTED LINES TO 3000 PSI AGAIN AND HELD FOR 2 MINUTES. OPERATOR INDICATED THAT IT WAS FALLING AT 3 PSI A SECOND.
Event	10	Pump Spacer 1	Pump Spacer 1	5/20/2018	22:45:13	COM4	4.00	8.40	0.00	29.10	PUMPED 10 BBLS OF FRESH WATER SPACER AT 3.5 BPM. 160 PSI. FULL RETURNS.
Event	11	Pump Spacer 2	Pump Spacer 2	5/20/2018	22:48:59	COM4	63.00	8.39	2.80	39.10	PUMPED 10 BBL OF DYE WATER SPACER AT 3.5 BPM, 160 PSI. FULL RETURNS.
Event	12	Pump Cement	Pump Cement	5/20/2018	22:57:01	COM4	5.00	8.42	0.00	51.90	PUMPED 178 BBLS (575 SKS) OF 13.5#, 1.74y, 9.2wr. 8 BPM, 290 PSI. FULL RETURNS.
Event	13	Drop Top Plug	Drop Top Plug	5/20/2018	23:27:32	COM4	0.00	18.26	0.00	241.70	DROPPED HALLIBURTON 9 5/8" TOP PLUG DRILLER WITNESSED ADAM COVINGTON DROP PLUG.
Event	14	Pump Displacement	Pump Displacement	5/20/2018	23:30:28	COM4	5.00	14.82	0.00	241.70	PUMPED 117 BBLS OF FRESH WATER DISPLACEMENT AT 8 BPM TO START THEN SLOWED TO 6 BPM. BUMPED AT 3 BPM. FULL RETURNS. STARTED TO SEE TRACES OF CEMENT AT THE TIME OF THE PLUG

												BEING BUMPED, BUT NO CEMENT TO SURFACE.
Event	15	Bump Plug	Bump Plug	5/20/2018	23:53:52	COM4	944.00	8.11	0.00	363.40		PLUG BUMPED. FCP WAS 480 PSI. BUMP PRESSURE WAS 980 PSI.
Event	16	Other	Other	5/20/2018	23:57:21	COM4	1608.00	8.12	0.00	363.70		5 MIN CASING PRESSURE TEST TO 1500 PSI. NO LEAKS.
Event	17	Check Floats	Check Floats	5/21/2018	00:02:34	USER	1616.00	8.12	0.00	363.70		CHECKED FLOATS AFTER PRESSURE TEST. GOT 1 BBL OF WATER BACK TO TRUCK. FLOATS HELD.
Event	18	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	5/21/2018	00:15:00	USER	0.00	8.11	0.00	383.70		DISCUSSED RIGGING DOWN HAZARDS AND PROCEDURE ACCORDING TO HMS.
Event	19	End Job	End Job	5/21/2018	00:44:24	COM4	-1.00	0.11	0.00	402.40		TD 1554', TP 1553, 42' SHOE, 13.5" OH, WATER TEMP 65 DEGREES, 0 CHLORIDES, 7 PH, 0 SULFATES. NO CEMENT TO SURFACE AND AS A RESULT, BLM WILL BE TAGGING AND FIGURING OUT WHAT THEY NEED TO DO TO BRING CEMENT TO SURFACE.
Event	20	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/21/2018	02:00:00	USER						HELD MEETING WITH ALL HES EMPLOYESS IN CONVOY TO DISCUSS DIRECTIONS AND HAZARDS ASSOCIATED WITH DRIVING, ALL FIT TO DRIVE.
Event	21	Depart Location	Depart Location	5/21/2018	02:30:00	USER						PRE JOURNEY MANAGEMENT PRIOR TO DEPARTURE.

3.0 Attachments

3.1 Extraction VT-Glenmere C1-16-18 Surface Job Chart

