

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Wednesday, October 03, 2018

VT-Glenmere 3-16-18 Surface

Job Date: Tuesday, May 22, 2018

Sincerely,

Bryce Hinsch

Legal Notice

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **VT Glenmere 3-16-18 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.

Approximately 10 bbls 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 Fort Lupton

The Road to Excellence Starts with Safety

Sold To #: 369404		Ship To #: 3786919		Quote #:		Sales Order #: 0904869264					
Customer: EXTRACTION OIL & GAS -				Customer Rep: Shawn McIntyre							
Well Name: VT-GLENMERE			Well #: 3-16-18			API/UWI #: 05-123-44423-00					
Field: WATTENBERG		City (SAP): GREELEY		County/Parish: WELD			State: COLORADO				
Legal Description: SW NW-15-5N-65W-1879FNL-673FWL											
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		1559ft			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											
Open Hole Section											
Tools and Accessories											
Type											
Size in											
Qty											
Make											
Depth ft											
Type											
Size in											
Qty											
Make											
Guide Shoe											
Float Shoe											
Float Collar											
Insert Float											
Stage Tool											
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	625	sack	13.5	1.74		5	9.2
9.20 Gal		FRESH WATER							
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				
Cement Left In Pipe	Amount	43 ft			Reason			Shoe Joint	
Mix Water:	pH 7	Mix Water Chloride:	0 ppm			Mix Water Temperature:	60°F		
Cement Temperature:	60 °F	Plug Displaced by:	8.33 lb/gal			Disp. Temperature:	60 °F		
Plug Bumped?	Yes	Bump Pressure:	520 psi MPa			Floats Held?	Yes		
Cement Returns:	10 bbl	Returns Density:	13.5 lb/gal			Returns Temperature:	## °F °C		
Comment OH-13.5" AT 1560'. TP 9 5/8, 36" AT 1559' SHOE TRACK WAS 43' AT 1516. WATER TEMP 60 DEGREES, CHLORIDES-0, PH-7, SULFATES-0. 10 BBLS OF CEMENT TO SURFACE. PLUG BUMPED, AT 117 BBLS AWAY. FCP WAS 520 PSI BUMP PRESSURE WAS 980 PSI.									

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	5/21/2018	13:00:00	USER					CALLED OUT BY SERVICE COORDINATOR FOR O/L AT 0500
Event	2	Pre-Convoy Safety Meeting	Depart Shop for Location	5/21/2018	16:00:00	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	5/21/2018	16:10:00	USER					JOURNEY MANAGEMENT PRIOR TO DEPARTURE
Event	4	Arrive At Loc	Arrive At Loc	5/21/2018	17:30:00	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	5/21/2018	19:30:00	USER					DISCUSSED RIGGING UP HAZARDS AND PROCEDURE ACCORDING TO HMS.
Event	6	Safety Meeting - Pre Job	Safety Meeting - Pre Job	5/22/2018	01:00:00	USER	3.00	8.43	0.00	28.70	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	5/22/2018	01:31:03	COM4	-2.00	8.48	0.00	0.90	FILL LINES WITH 3 BBLS OF FRESH WATER. 2.5 BPM. 50

											PSI
Event	8	Test Lines	Test Lines	5/22/2018	01:34:16	COM4	1463.00	8.41	0.00	2.90	PERFORMED A 3000 PSI PRESSURE TEST (OPERATOR REPORTED IT DROPPING 1 PSI PER 3 SECONDS) AFTER WE PERFORMING A 500 PSI KICKOUT TEST AND A 5TH GEAR STALL HELD FOR 2 MINUTES. NO LEAKS.
Event	9	Pump Spacer 1	Pump Spacer 1	5/22/2018	01:42:22	COM4	3.00	8.38	0.00	3.00	PUMPED 10 BBLS OF FRESH WATER SPACER AT 5.5 BPM 145 PSI.
Event	10	Pump Spacer 2	Pump Spacer 2	5/22/2018	01:45:05	COM4	146.00	8.40	5.60	15.00	PUMPED 10 BBLS OF DYED WATER SPACER AT 5.5 BPM, 145 PSI.
Event	11	Pump Cement	Pump Cement	5/22/2018	01:48:11	COM4	21.00	8.39	0.00	26.20	PUMPED 193.6 BBLS (625 SKS) OF 13.5#, 1.74y, 9.2wr. CEMENT AT 6 BPM. 245 PSI.
Event	12	Check Weight	Check Weight	5/22/2018	01:57:28	COM4	193.00	13.54	6.00	75.90	CHECKED WEIGHT USING A PRESSURIZED MUD SCALE. CEMENT WEIGHED UP AT 13.5#.
Event	13	Shutdown	Shutdown	5/22/2018	02:28:15	COM4	12.00	17.04	0.00	226.00	SHUTDOWN TO DROP PLUG AND TO WASH UP ON TOP OF PLUG.
Event	14	Drop Top Plug	Drop Top Plug	5/22/2018	02:29:41	USER	0.00	15.90	0.00	226.00	ADAM COVINGTON DROPPED 9 5/8" HALLIBURTON TOP PLUG. DRILLER WITNESSED.
Event	15	Pump Displacement	Pump Displacement	5/22/2018	02:30:25	COM4	43.00	11.04	3.40	226.60	PUMPED 117 BBLS OF FRESH WATER DISPLACEMENT AT 6 BBLS A MINUTE. SLOWED DOWN AT 80 BBLS AWAY TO 5 BPM, THEN SLOWED TO 4 BPM AT 100 AWAY, THEN

												TO 3 BPM AT 110 AWAY. GOT 10 BBLS OF CEMENT BACK TO SURFACE.
Event	16	Bump Plug	Bump Plug	5/22/2018	02:58:46	COM4	992.00	8.07	0.00	343.20		BUMPED HALLIBURTON 9 5/8" PLUG AT 117 BBLS AWAY. FCP WAS 520 PSI BUMP PRESSURE WAS 980 PSI. 10 BBLS OF 13.5# CEMENT TO SURFACE.
Event	17	End Job	End Job	5/22/2018	03:27:03	COM4	-2.00	-0.30	0.00	32.60		END JOB. OH-13.5" AT 1560'. TP 9 5/8, 36" AT 1559' SHOE TRACK WAS 43' AT 1516. WATER TEMP 60 DEGREES, CHLORIDES-0, PH- 7, SULFATES-0
Event	18	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	5/22/2018	03:45:00	USER	-2.00	-0.33	0.00	32.60		DISCUSSED RIGGING DOWN HAZARDS AND PROCEDURE ACCORDING TO HMS.
Event	19	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/22/2018	04:20:00	USER						HELD MEETING WITH ALL HES EMPLOYEES IN CONVOY TO DISCUSS DIRECTIONS AND HAZARDS ASSOCIATED WITH DRIVING, ALL FIT TO DRIVE.
Event	20	Depart Location	Depart Location	5/22/2018	04:30:00	USER						PRE JOURNEY MANAGEMENT PRIOR TO DEPARTURE.

3.0 Attachments

3.1 VT-Glenmere 3-16-18-Job Chart

