

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

United States of America

Date: Saturday, March 04, 2017

TC Mosier Hill 3-9-11

Job Date: Thursday, February 16, 2017

Sincerely,

Justin Lansdale

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 **TC Mosier Hill 3-9-11** 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.

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 #: 3762927		Quote #:		Sales Order #: 0903838673					
Customer: EXTRACTION OIL & GAS				Customer Rep: Hans Cary							
Well Name: TC MOISER HILL			Well #: 3-9-11		API/UWI #: 05-123-43742-00						
Field: WATTENBERG		City (SAP): GREELEY		County/Parish: WELD		State: COLORADO					
Legal Description: SE NE-8-5N-66W-2439FNL-1195FEL											
Contractor: PATTERSON-UTI ENERGY				Rig/Platform Name/Num: PATTERSON 341							
Job BOM: 7521											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199				Srvc Supervisor: Nicholas Roles							
Job											
Formation Name											
Formation Depth (MD)		Top		Bottom							
Form Type					BHST						
Job depth MD		1587ft			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		9.625	8.921	36			0	1587		1587	
Open Hole Section			13.5				0	1605		1605	
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			1587		Bottom Plug	9.625		HES		
Float Collar	9.625			1545		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 Water Spacer	Red Dye Water Spacer			20	bbl	8.34			4	

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	550	sack	13.5	1.74		8	9.2
94 lbm		TYPE I / II CEMENT, BULK (101439798)							
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	Displacement	Displacement	119	bbl	8.34			8	
Cement Left In Pipe		Amount	42 ft		Reason			Shoe Joint	
Comment Got 40bbbls cement to surface.									

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comments
Event	1	Call Out	Call Out	2/16/2017	17:00:00	USER	Crew call out for o/l at 2200
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/16/2017	20:30:00	USER	All crew aware of hazards and directions. All fit to drive.
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	2/16/2017	20:45:00	USER	Started journey management.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	2/16/2017	21:30:00	USER	Met with company man to discuss job details and procedure. Performed hazard hunt and site assessment. Rig had 200ft left to drill.
Event	5	Other	Other	2/16/2017	22:00:00	USER	Water Test- PH-6 Chlo-0 Temp-60 Cement temp-70
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	2/16/2017	22:15:00	USER	All hse present. Discussed bulk and iron placement and all red zone areas. Caution taped high pressure zones.
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	2/16/2017	00:45:00	USER	Discussed job associated hazards, contingencies and job procedure with all job associated personnel.
Event	8	Start Job	Start Job	2/16/2017	01:12:48	COM1	TD-1605', TP-1587' 9.625" 36#, FC-1545', OH-13.5", MUD-9.7#
Event	9	Test Lines	Test Lines	2/16/2017	01:15:24	COM1	Pumped 5bbls fresh water to fill lines, established circulation, shutdown and closed manifold, performed 500psi k/o function test, proceeded to bring pressure to 3000psi. Held good no leaks.
Event	10	Pump Spacer 1	Pump Spacer 1	2/16/2017	01:21:23	COM1	Pumped 20bbls fresh water with 2# Red Dye at 4bpm 200psi
Event	11	Pump Cement	Pump Cement	2/16/2017	01:31:19	COM1	Pumped 550sks or 170.4bbls 13.5# 1.74y 9.2g/s Swiftcem at 8bpm 350psi.

Event	12	Check Weight	Check Weight	2/16/2017	01:32:57	COM1	Weight verified with pressurized mud scales.
Event	13	Check Weight	Check Weight	2/16/2017	01:40:32	COM1	Weight verified with pressurized mud scales.
Event	14	Check Weight	Check Weight	2/16/2017	01:49:35	COM1	Weight verified with pressurized mud scales.
Event	15	Shutdown	Shutdown	2/16/2017	02:01:22	COM1	Shutdown to break cap and load top plug.
Event	16	Drop Top Plug	Drop Top Plug	2/16/2017	02:03:37	COM1	Dropped by HES supervisor, witnessed by company man.
Event	17	Pump Displacement	Pump Displacement	2/16/2017	02:05:20	COM1	Pumped 119.4bbls Fresh water at 8bpm 500psi
Event	18	Bump Plug	Bump Plug	2/16/2017	02:26:21	COM1	Slowed down to 3bpm at 110bbls away, final circulating pressure - 440psi, bumped at 940psi.
Event	19	Pressure Up Well	Pressure Up Well	2/16/2017	02:27:26	COM1	Brought pressure to 1500psi for 15min casing test.
Event	20	Other	Other	2/16/2017	02:38:18	COM1	Released pressure and got 1bbl back to truck.
Event	21	End Job	End Job	2/16/2017	02:38:46	COM1	Got 40bbls cement to surface.
Event	22	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	2/16/2017	02:40:00	USER	All HSE present. Discussed red zone areas and trapped pressure hazards. Watch for suspended loads and rig down procedures, including hand placement, lifting techniques, and swing radius.
Event	23	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/16/2017	09:00:00	USER	All HSE present and fit to drive. Aware of directions and hazards.

Event	24	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	2/16/2017	09:15:00	USER	Pre journey managment prior to departure.
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2.2 Custom Graph

