

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Tuesday, December 18, 2018

Merlin 29E-10-6N Surface

Job Date: Tuesday, November 27, 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 **Merlin 29E-10-6N** 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 20 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 #: 3895062		Quote #:		Sales Order #: 0905302144					
Customer: EXTRACTION OIL & GAS -				Customer Rep: Chris Kelly							
Well Name: MERLIN			Well #: 29E-10-6N		API/UWI #: 05-123-47469-00						
Field: WATTENBERG		City (SAP): WINDSOR		County/Parish: WELD		State: COLORADO					
Legal Description: SW NW-29-6N-67W-2431FNL-341FWL											
Contractor:				Rig/Platform Name/Num: Cartel 88							
Job BOM: 7521 7521											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Nicholas Roles							
Job											
Formation Name											
Formation Depth (MD)		Top		Bottom							
Form Type				BHST							
Job depth MD		1621ft		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	1621	0	1621	
Open Hole Section			13.5				0	1621	0	1621	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	9.625			1621		Top Plug	9.625	1	HES		
Float Shoe	9.625					Bottom Plug	9.625		HES		
Float Collar	9.625			1576.5		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			30	bbl	8.33			5	

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	
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	122	bbl	8.33			8		
Cement Left In Pipe		Amount	45 ft		Reason			Shoe Joint		
Mix Water:		pH 06	Mix Water Chloride:			0 ppm		Mix Water Temperature:		55 °F °C
Cement Temperature:		## °F °C	Plug Displaced by:			8.33 lb/gal		Disp. Temperature:		55 °F °C
Plug Bumped?		Yes	Bump Pressure:			8.33 psi MPa		Floats Held?		Yes
Cement Returns:		20 bbl m3	Returns Density:			## lb/gal kg/m3		Returns Temperature:		## °F °C
Comment Got 20bbbls cement 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)	PS Pump Press (psi)	Pump Stg Tot (bbl)	PS Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	11/27/2018	03:30:00	USER					Called out by Service Coordinator for O/L at 0700
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	11/27/2018	06:45:00	USER					Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	11/27/2018	07:00:00	USER					Journey Management prior to departure
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	11/27/2018	08:00:00	USER	0.20	-19.00	0.00	0.00	Upon arrival met with company man to discuss job details and calculations, performed hazard hunt and site assessment.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	11/27/2018	08:15:00	USER	0.18	-17.00	0.00	0.00	Discussed rigging up hazards and procedure according to HMS.
Event	6	Other	Other	11/27/2018	08:30:00	USER	8.40	-2.00	1.30	1.80	Water test- PH-6, Chlor-0, Temp-55.
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	11/27/2018	08:45:00	USER	8.42	-11.00	12.80	0.00	Held safety meeting with all job associated personnel to discuss job procedure, hazards and stop work authority.
Event	8	Start Job	Start Job	11/27/2018	08:49:03	COM2	8.41	-12.00	0.00	0.00	TD-1621' OH-13.5", TP-1621' 9.625" 36#, FC-1576.5, Mud-8.9#
Event	9	Test Lines	Test Lines	11/27/2018	08:55:44	COM2	8.54	22.00	2.70	0.00	Pumped 3bbls to fill lines, established circulation, shutdown and closed

manifold, performed 500psi k/o function test, continued with 5th gear stall at 1400psi proceeded to bring pressure to 3000psi. Held good no leaks.											
Event	10	Pump Spacer 1	Pump Spacer 1	11/27/2018	09:02:05	COM2	8.49	5.00	0.00	0.00	Pumped 20bbls fresh water at 5bpm
Event	11	Pump Spacer 2	Pump Spacer 2	11/27/2018	09:07:44	COM2	7.59	46.00	21.10	5.20	Pumped 10bbls fresh water with 2# Red Dye at 5bpm 140psi.
Event	12	Pump Cement	Pump Cement	11/27/2018	09:10:45	COM2	8.51	7.00	0.00	0.00	Pumped 550sk or 170.5bbls 13.5# 1.74y 9.2g/s Swiftcem at 8bpm 310psi.
Event	13	Check Weight	Check Weight	11/27/2018	09:18:16	COM2	13.77	265.00	45.50	7.50	Weight verified with pressurized mud scales.
Event	14	Check Weight	Check Weight	11/27/2018	09:26:29	COM2	13.52	335.00	112.50	8.20	Weight verified with pressurized mud scales.
Event	15	Shutdown	Shutdown	11/27/2018	09:36:07	COM2	3.07	52.00	180.90	0.00	
Event	16	Drop Top Plug	Drop Top Plug	11/27/2018	09:36:10	COM2	15.26	38.00	180.90	0.00	Dropped by HES supervisor, witnessed by company man.
Event	17	Pump Displacement	Pump Displacement	11/27/2018	09:36:12	COM2	20.17	30.00	180.90	0.00	Pumped 122bbls of fresh water at 8bpm.
Event	18	Bump Plug	Bump Plug	11/27/2018	09:56:36	COM2	8.24	940.00	128.10	0.00	Slowed down to 3bpm at 110bbls away, final circulating pressure - 500psi, Bumped at 1020psi. Held 1050psi for 5min casing test.
Event	19	Check Floats	Check Floats	11/27/2018	10:00:03	USER	8.23	939.00	128.10	0.00	Released pressure and got 0.5bbls back. Floats held.
Event	20	End Job	End Job	11/27/2018	10:02:48	USER	8.19	-9.00	128.10	0.00	Got 20bbls cement to

8											surface.
Event	21	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	11/27/2018	10:05:00	USER	8.22	56.00	133.70	0.00	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	22	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/27/2018	11:15:00	USER					All HSE present and fit to drive. Aware of directions and hazards.
Event	23	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	11/27/2018	11:30:00	USER					Pre journey managment prior to departure.

3.0 Attachments

3.1 Extraction Merlin 29E-10-6N Surface Job Chart

