

HALLIBURTON

iCem® Service

CRESTONE PEAK RESOURCES-EBUS

State Antelope 34-31-30XRLNC Surface

Job Date: Sunday, January 30, 2022

Sincerely,

Meghan Van Zyl

Legal Notice

Disclaimer:

All information in this report is provided subject to the terms and conditions which govern the services provided by Halliburton. Halliburton personnel use their best efforts in gathering information and their best judgment in interpreting it, but any interpretation, research, analysis or recommendation furnished by Halliburton are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and empirical relationships and assumptions are not infallible, and with respect to which professionals in the industry may differ. iCem 3D Displacement results are used to understand how fluids intermix during a cement job. Simulation and 3D displacement results are not intended as and should not be used as a replacement for bond logs in determining top of cement. Current 3D model calculations are known to model more volume than the input volume for standard cases due to known calculation improvements required. For rotational cases, the modeled volume will be impacted by the same calculations impacting the standard cases, as well as additional constraints imposed to make the calculation time required operationally feasible. Therefore, until further notice, 3D displacement results should not be used for replacement of a bond log, or used as an identifier of top of cement. HALLIBURTON IS UNABLE TO GUARANTEE THE ACCURACY OF ANY CHART INTERPRETATION, RESEARCH ANALYSIS, OR JOB RECOMMENDATION and any interpretation or recommendation is not for use of or reliance upon by any third party. The customer has full responsibility for any of its decisions which are based on the information provided in this report.

Table of Contents

Cementing Job Summary 4

 Executive Summary 4

Real-Time Job Summary 7

 Job Event Log..... 7

Attachments..... 10

 Real Time iCem Job Chart 10

1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **State Antelope 34-31-30XRLNC** 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 50 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

Sold To #: 377645		Ship To #: 9048954		Quote #:		Sales Order #: 0907655173				
Customer: CRESTONE PEAK RESOURCES-EBUS					Customer Rep: Josh Kliesen					
Well Name: STATE ANTELOPE			Well #: 34-31-30XRLNC			API/UWI #: 05-123-51161-00				
Field: WATTENBERG		City (SAP): KERSEY		County/Parish: WELD			State: COLORADO			
Legal Description: SW SE-31-5N-62W-540FSL-2472FEL										
Contractor: ENSIGN DRLG					Rig/Platform Name/Num: ENSIGN 122					
Job BOM: 7521 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX41066					Srvc Supervisor: Nicholas Roles					
Job										
Formation Name										
Formation Depth (MD)		Top				Bottom				
Form Type				BHST						
Job depth MD		1689ft		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
Open Hole Section			13.5				0	1689		1689
Casing		9.625	8.921	36			0	1689		1689
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			1689		Bottom Plug	9.625		HES	
Float Collar	9.625			1646		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	Water with dye	Water with dye		20	bbl	8.34			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	SBM SWIFTCEM CEMENT SYSTEM CEM	650	sack	13.5	1.75		8	9.23	
9.23 Gal		FRESH WATER								
0.1250 lbm		POLY-E-FLAKE (101216940)								
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	127	bbl	8.34			6		
Cement Left In Pipe		Amount	43 ft		Reason			Shoe Joint		
Mix Water:		pH7	Mix Water Chloride:			>3000 ppm		Mix Water Temperature:		65 °F °C
Cement Temperature:		## °F °C	Plug Displaced by:			8.33 lb/gal		Disp. Temperature:		65 °F °C
Plug Bumped?		Yes	Bump Pressure:			1050 psi MPa		Floats Held?		Yes
Cement Returns:		50 bbl m3	Returns Density:			## lb/gal kg/m3		Returns Temperature:		## °F °C
Comment Est. 50bbbls cement to surface.										

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq No.	Activity	Graph Label	Date	Time	DH Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
1	Arrive at Location from Service Center	Arrive at Location from Service Center	1/30/2022	07:00:00					Upon arrival to location, signed in with onsite safety personnel. Met with company man and discussed job specific requirements and specifications.
2	Call Out	Call Out	1/30/2022	07:00:00					Called out by service coordinator for OL time of 1000.
3	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	1/30/2022	11:45:00					Held pre rig up JSA for hazards, hazard hunt with crew, and discussed plan for spotting equipment and rigging up lines for job. Discussed muster points and closest emergency location as well as coordinates.
4	Other	Other	1/30/2022	11:50:00					Mix water test results- PH-7, Chlo-0, Temp-65F.
5	Rig-Up Equipment	Rig-Up Equipment	1/30/2022	12:00:00					Begin rig up with crew.
6	Rig-Up Completed	Rig-Up Completed	1/30/2022	12:20:00	0.00	0.00	-11.00	0.00	Complete rig up for job to nearest point before red zone.
7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	1/30/2022	12:30:00	7.91	0.00	11.00	0.00	Held job specific hazards as well as confirming job procedure with co man and rest of crew associated with job.
8	Start Job	Start Job	1/30/2022	12:42:07	8.06	0.00	-15.00	9.20	TD-1689' 13.5", TP-1689' 9.625" 36#, with stickup 1692', FC-1646', Mud-9.3#
9	Test Lines	Test Lines	1/30/2022	12:45:50	8.29	0.00	26.00	3.20	Pumped 3bbbls to fill lines, established circulation, shutdown and closed manifold, performed 500psi k/o

function test, continued with 5th gear stall at 1850psi
proceeded to bring pressure to 3500psi. Pressure
stabilized and held with no leaks.

10	Pump Spacer 1	Pump Spacer 1	1/30/2022	12:48:17	8.27	0.00	15.00	0.00	Pumped 10bbls fresh water with 1/3btl green Dye at 4.5bpm 120psi.
11	Pump Spacer 2	Pump Spacer 2	1/30/2022	12:50:56	8.30	4.70	114.00	10.00	Pumped 10bbls fresh water at 4.5bpm 120psi.
12	Pump Cement	Pump Cement	1/30/2022	12:55:00	8.28	0.00	60.00	20.10	Pumped 650sks or 202.5bbls 13.5# 1.75y 9.23g/s Swiftcem at 8bpm 310psi.
13	Check Weight	Check Weight	1/30/2022	12:57:19	13.47	4.20	155.00	8.70	Weight verified with pressurized mud scales.
14	Check Weight	Check Weight	1/30/2022	13:18:11	13.55	6.00	116.00	172.40	Weight verified with pressurized mud scales.
15	Shutdown	Shutdown	1/30/2022	13:27:21	13.93	0.00	41.00	226.70	
16	Drop Top Plug	Drop Top Plug	1/30/2022	13:28:52	16.71	0.00	-24.00	226.70	Dropped by HES supervisor, witnessed by company man.
17	Pump Displacement	Pump Displacement	1/30/2022	13:28:54	16.75	0.00	-24.00	226.70	Pumped 127bbls of fresh water at 6bpm 255psi.
18	Shutdown	Shutdown	1/30/2022	13:48:13	8.21	0.00	289.00	99.80	
19	Bump Plug	Bump Plug	1/30/2022	14:11:02	8.21	0.00	1162.00	168.50	Slowed down to 4bpm at 110bbls away, final circulating pressure - 550psi, Bumped at 1050psi.
20	Other	Other	1/30/2022	14:12:46	8.21	0.00	1142.00	168.50	Released pressure to check floats, got 0.5bbls back. Floats held.
21	End Job	End Job	1/30/2022	14:13:33	8.21	0.00	-15.00	168.50	Est. 50bbls cement to surface.
22	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	1/30/2022	14:15:00	8.20	0.00	-20.00	168.50	Held safety meeting with crew prior to rig down, discussed possibility of trapped pressure, swing radius, slips trips and falls, pinch points and risks associated with rig down.

23	Rig Down Lines	Rig Down Lines	1/30/2022	14:20:00	8.23	0.10	169.00	25.00	Begin rig down
24	Rig-Down Completed	Rig-Down Completed	1/30/2022	14:45:00					Rig down complete with no injuries, spills or damage to equipment.
25	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	1/30/2022	14:45:00					Held safety meeting with convoy, discussed trip hazards, directions and all crew fit for duty prior to departure.
26	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	1/30/2022	15:00:00					Depart location, if applicable journey will be submitted.

3.0 Attachments

3.1 Real Time iCem Job Chart

