

HALLIBURTON

iCem[®] Service

CRESTONE PEAK RESOURCES-EBUS

Prosper Farms 4-65 2-1-6 3AH Production

Job Date: Tuesday, April 04, 2023

Sincerely,

Meghan Van Zyl

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 **Prosper Farms 4-65 2-1-6 3AH - Production**. 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 56bbls 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 Rockies Cement Team

1.2 Job Overview

Job Details	
API #:	05-005-07516
City, County:	Araphahoe

	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	04/04/2023	08:00
Called Out Time:	04/04/2023	02:00
Arrived On Location:	04/04/2023	07:30
Job Started:	04/04/2023	16:30
Job Completed:	04/04/2023	22:27
Departed Location:	04/05/2023	00:00

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	45
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	9.7
4	Casing set depth (shoe)	ft	23637
5	TVD	ft	7686
6	Float collar depth	ft	23632
7	Length of rate hole	ft	12
8	Previous casing shoe depth	ft	3364
9	Pre-job mud circulation time	hh:mm	2.5
10	Pre-job mud circulation rate	bpm	10
11	Pre-job mud circulation volume	bbls	1350

12	Pre-job mud circulation pressure	psi	1710
13	Annual flow before the start of job	Y/N	N
14	Pipe movement during cement job	Y/N	N
15	Calculated displacement	bbls	524
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	Cement, 50bbls
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2920psi @4bpm
20	Number of Centralizers	-	
21	Number of plugs	-	2

1.3 Water Field Test

	Recorded Value	Unit	Acceptable Limit	Potential Problems if Values Exceed the Limit
pH	7		6.0 - 8.0	Chemicals in water can cause severe retardation
Temperature	65	F	60 - 80 F	
Chlorides	0	ppm	3000 ppm	Can shorten thickening time

1.4 Actual Pump Schedule

	Density (ppg)	Volume (bbls)	Yield (ft ³ /sk)	Water Requirement (gal/sk)	Bulk Sacks (sks)	Total Water (gals)
Spacer Fluid	11.5	120	3.88	24.45	176	4250
Cap Cement	13	171	1.67	8.25	575	4743
Lead Cement	13	239	1.55	7.16	865	6193
Tail Cement	13.2	671	1.59	7.78	2370	18438
Top Plug	1					
Displacement Fluid	8.33	524				22008

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq No.	Activity	Date	Time	Comments
1	Call Out	4/4/2023	02:00:00	Called out by service coordinator for OL time of 0800. Customer later changed OL to 1100.
2	Pre-Convoy Safety Meeting	4/4/2023	06:45:00	Discuss all hazards associated with journey, directions to destination, complete journey management if needed, and ensure all convoy is fit for duty.
3	Depart from Service Center or Other Site	4/4/2023	07:00:00	Depart from service center or other job site.
4	Arrive at Location from Service Center	4/4/2023	08:00:00	Upon arrival to location, signed in with onsite safety personnel. Met with company man and discussed job specific requirements and specifications.
5	Other	4/4/2023	08:15:00	Mix water test results- PH-7, Chlo-0, Temp-65F.
6	Pre-Rig Up Safety Meeting	4/4/2023	08:30:00	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.
7	Rig-Up Equipment	4/4/2023	08:45:00	Begin rig up with crew.
8	Rig-Up Completed	4/4/2023	10:00:00	Complete rig up for job to nearest point before red zone.
9	Safety Meeting - Pre Job	4/4/2023	17:00:00	Held job specific hazards as well as confirming job procedure with co man and rest of crew associated with job.
10	Start Job	4/4/2023	18:30:03	TD-3364'-12070" 8.75" OH, 12070'-23649' 8.5" OH, TP-23637' 5.5" 20#, FC-23632', TVD-7686', SURF-3364' 9.625" 36#, MUD 9.7#
11	Drop Bottom Plug	4/4/2023	18:30:56	Dropped by HES supervisor, witnessed by company man.

12	Test Lines	4/4/2023	18:31:42	Pumped 5bbls fresh water to fill lines at 4bpm 320psi, shut manifold, and performed 500psi k/o function test, followed with 5th gear stall at 1800psi, proceeded to bring pressure to 6000psi, pressure stabilized and held with no leaks.
13	Check Weight	4/4/2023	18:32:50	Weight verified with pressurized mud scales.
14	Pump Spacer 1	4/4/2023	18:37:11	Pumped 120bbls of 11.5# 3.83y 24.16g/s TP Spacer with 20g D-air at 6bpm 447psi.
15	Pump Cap Cement	4/4/2023	18:56:37	Pumped 575sks or 171bbls of 13# 1.67y 8.25g/s Elasticem at 8bpm 498psi.
16	Check Weight	4/4/2023	19:00:51	Weight verified with pressurized mud scales.
17	Pump Lead Cement	4/4/2023	19:20:53	Pumped 865sks 239bbls 13# 1.55y 7.16g/s Gasstop at 9bpm 550psi.
18	Pump Tail Cement	4/4/2023	19:47:45	Pumped 2370sks or 671bbls 13.2# 1.59y 7.78g/s Elasticem at 9bpm 750psi.
19	Check Weight	4/4/2023	19:49:22	Weight verified with pressurized mud scales.
20	Shutdown	4/4/2023	21:04:26	Shutdown, washed up through pumps and lines with fresh water. Pumped total of 20bbls until clean.
21	Drop Top Plug	4/4/2023	21:17:18	Dropped by HES supervisor, witnessed by company man.
22	Pump Displacement	4/4/2023	21:17:24	Pumped 524bbls fresh water at 10bpm.
23	Bump Plug	4/4/2023	22:24:07	Slowed down at 500bbls away to 4bpm, final circulating pressure-2700psi. Bump pressure-3300psi.
24	Other	4/4/2023	22:27:30	Released pressure and got 6bbls back. Floats held.
25	End Job	4/4/2023	22:27:54	Got 56bbls Cement to surface. Est TOT-7648', TOL-2399'. Total fresh water used-1350bbls
26	Pre-Rig Down Safety Meeting	4/4/2023	22:55:00	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.
27	Rig Down Lines	4/4/2023	23:00:00	Begin rig down

28	Pre-Convoy Safety Meeting	4/4/2023	23:45:00	Held safety meeting with convoy, discussed trip hazards, directions and all crew fit for duty prior to departure.
29	Rig-Down Completed	4/4/2023	23:45:00	Rig down complete with no injuries, spills, or damage to equipment.
30	Depart Location for Service Center or Other Site	4/5/2023	00:00:00	Depart location if applicable journey will be submitted.

3.0 Attachments

3.1 Real Time iCem Job Chart

