

HALLIBURTON

iCem[®] Service

CRESTONE PEAK RESOURCES

SKY RANCH 4-65 10-9-8-7 3BH Production

Job Date: Saturday, November 11, 2023

Sincerely,

Rafael Giorgana

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **SKY RANCH 6-45 10-9-8-7 #3BH**. 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.

No returns of cement to surface. 20 bbls of Spacer

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 #:	05-005-07542-00
City, County:	WAKINS, ARAPAHOE
SO#:	0908961504

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	11/11/2023	07:30
Called Out Time:	11/11/2023	01:30
Arrived On Location:	11/11/2023	07:00
Job Started:	11/11/2023	13:39
Job Completed:	11/11/2023	18:53
Departed Location:	11/11/2023	21:30

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	65
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	9.0
4	Casing set depth (shoe)	ft	28,815
5	TVD	ft	8,094
6	Float collar depth	ft	28,809
7	Length of rate hole	ft	5
8	Previous casing shoe depth	ft	3,282
9	Pre-job mud circulation time	hh:mm	3:00

10	Pre-job mud circulation rate	bpm	11.8
11	Pre-job mud circulation volume	bbls	1,900
12	Mud circulation pressure at start of cement	psi	1,143
13	Annual flow before the start of job	Y/N	YES
14	Pipe movement during cement job	Y/N	NO
15	Calculated displacement	bbls	754.8
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	LOST RETURNS @710 BBLs INTO DISP.
18	Fluid returns to surface	Spacer/Cement, bbls	20 BBLs SPACER
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	5900 PSI @ 4 BPM
20	Number of Centralizers	-	
21	Number of bottom plugs	-	1
22	Number of trucks used preparing/during job	-	13
23	Add hours? If Yes, put #	Y/N and hours	YES 4 HRS
24	NPT? If Yes, put #	Y/N and hours	NO

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	71	F	60 - 80 F	Can can pre-mature setting of cement
Chlorides	290	ppm	3000 ppm	Can shorten thickening time

1.4 Actual Pump Schedule

Stage 1

	Density (ppg)	Volume (bbls)	Yield (ft ³ /sk)	Water Requirement (gal/sk)	Bulk Sacks (sks)	Total Water (gals)
Spacer Fluid	11.5	120	2.57	16.21	262	4,250
Cap Cement	13	185.1	1.65	8.07	630	5084.1
Lead Cement	13	178.7	1.58	7.43	635	4718.1
Tail Cement	13.2	830.7	1.56	7.51	2,990	22,455
Top Plug	N/A	N/A	N/A	N/A	N/A	N/A
Displacement Fluid	8.4	754.8	N/A	N/A	N/A	31,701.6

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq No.	Activity	Date	Time	Source	Comments
1	Call Out	11/11/2023	01:30:00	USER	CIVITAS RESOURCES SKY RANCH 4-65 10-9-8-7 #3BH 6" PRODUCTION JOB - On location 11/11/23 @ 07:30 AM
2	Safety Meeting - Service Center or other Site	11/11/2023	04:45:00	USER	Review Journey Management And Route With Crew Members
3	Depart from Service Center or Other Site	11/11/2023	05:00:00	USER	Depart From Yard
4	Arrive At Loc	11/11/2023	07:00:00	USER	Talk To Company Man () : TD = 28,820', TP = 28,815', ST = 6', OH = 8 3/4", CSG = 6" 24.1#, Previous Casing 9 5/8" 36# Set @ 3282', WF = OBM @ 9.0#, Test Water = pH - 7, Chlorides - < 290 ppm, 71 F
5	Safety Meeting - Assessment of Location	11/11/2023	07:10:00	USER	Spot Equipment
6	Safety Meeting - Pre Rig-Up	11/11/2023	07:20:00	USER	Review JSA With Crew Members
7	Rig-Up Equipment	11/11/2023	07:30:00	USER	Rig Up Iron And Hoses Needed For Job
8	Rig-Up Completed	11/11/2023	08:30:00	USER	Rigged Up All Iron And Hoses Needed For CMT Job With No Issues Or Incidents.

9	Rig-Up Equipment	11/11/2 023	10:00:0 0	USER	Rigged Up Plug Container And Rig Floor To Circulate With Rig Pumps. Rig Filled Pipe To Bust Air Lock With 1.900 psi @300 GPM, Then Rig Circulated 1,900 BBLS @ 11.8 BPM With 1,143 psi. (10:30 AM To 13:30 PM) Then They Pumped 30 bbls Of Base Oil @ 6.5 PPG
10	Safety Meeting - Pre Job	11/11/2 023	13:15:0 0	USER	Review Job Procedure And JSA With Rig Hands, Co. Man, And HES Members
11	Start Job	11/11/2 023	13:39:2 8	NONE	Start Job
12	Test Lines	11/11/2 023	13:42:4 0	NONE	Performed A Pressure Kick Out Test To 500 psi On Both Pumps Then Tested Lines To 8,000 psi, Good Test
13	Drop Bottom Plug	11/11/2 023	13:47:5 2	NONE	Dropped Bottom Plug
14	Pump Spacer 1	11/11/2 023	13:49:4 7	NONE	Pumped 120 bbls Of Tuned Prime Spacer @ 11.5 PPG @ 6 BPM With 425 psi, Good Returns.
15	Check Weight	11/11/2 023	13:52:0 1	NONE	Performed A Weight Check With A Pressurized Mud Scale 11.5 ppg.
16	Pump Cap Cement	11/11/2 023	14:08:0 3	NONE	Pumped 185.1 bbls Cap Cmt 630 Sacks @ 13 PPG Yield 1.65 And A Water Requirement Of 8.07 Gal/Sks. 8.5 BPM With 1,000 psi, HEIGHT OF CAP CMT 4,372' TOP OF CAP CMT INCOCLUSIVE', Good Returns.
17	Check Weight	11/11/2 023	14:13:3 9	NONE	Performed A Weight Check With A Pressurized Mud Scale 13 ppg.
18	Pump Lead Cement	11/11/2 023	14:33:2 4	NONE	Pumped 178.7 bbls Lead Cmt 635 Sacks @ 13 PPG Yield 1.58 And A Water Requirement Of 7.43 Gal/Sks. 8.5 BPM With 868 psi, HOLC 4,530' TOLC 3,202', Good Returns.
19	Check Weight	11/11/2 023	14:40:1 3	NONE	Performed A Weight Check With A Pressurized Mud Scale 13 ppg.
20	Pump Tail Cement	11/11/2 023	14:57:5 9	NONE	Pumped 830.7 bbls Cmt 2,990 Sacks @ 13.2 PPG Yield 1.56 And A Water Requirement Of 7.51 Gal/Sks. 8.5 BPM With 1,056 psi, HOLC 21,077' TOLC 7,738', Good Returns.

21	Check Weight	11/11/2 023	15:01:4 6	NONE	Performed A Weight Check With A Pressurized Mud Scale 13.2 ppg.
22	Shutdown	11/11/2 023	16:46:3 1	NONE	Shutdown To Wash Lines
23	Clean Lines	11/11/2 023	16:47:0 6	NONE	Washed Pumps And Lines Into Open Top Tank With 20 bbls Of Fresh Water.
24	Drop Top Plug	11/11/2 023	16:57:0 0	NONE	Dropped Top Plug And 2 Foam Balls
25	Pump Displacement	11/11/2 023	16:58:1 2	NONE	Pump Displacement 754.8 Total bbls First 565 bbls With 100 Gallons Of MMCR Followed By 189.8 BBLs Of Treated Biocide Water
26	Pump Displacement	11/11/2 023	17:12:1 0	USER	100 bbls Gone Into Displacement 8.5 BPM With 1,960 psi, Good Returns
27	Pump Displacement	11/11/2 023	17:24:1 5	USER	200 bbls Gone Into Displacement 8.5 BPM With 2,060 psi, Good Returns
28	Pump Displacement	11/11/2 023	17:37:2 1	USER	300 bbls Gone Into Displacement 8.5 BPM With 2,040 psi, Good Returns
29	Pump Displacement	11/11/2 023	17:50:3 7	USER	400 bbls Gone Into Displacement 8 BPM With 2,061 psi, Good Returns
30	Pump Displacement	11/11/2 023	18:04:0 4	USER	500 bbls Gone Into Displacement 7 BPM With 2,200 psi, Good Returns
31	Pump Displacement	11/11/2 023	18:19:1 0	USER	600 bbls Gone Into Displacement 6.5 BPM With 2,760 psi, Good Returns
32	Spacer Returns to Surface	11/11/2 023	18:34:3 6	USER	At 690 bbls Into Displacement We Saw Spacer To Surface, Then We Lost Returns @ 710 BBLs Into Displacement We Got A Total Of 20 bbls Of Spacer To Surface.
33	Pump Displacement	11/11/2 023	18:37:2 7	USER	700 bbls Gone Into Displacement 5 BPM With 3,640 psi, Good Returns

34	Bump Plug	11/11/2 023	18:45:5 3	NONE	Bumped Plug With Calculated Displacement And Went 500 psi Over final Circulating psi, Pressure Climbed From 5,900 to 6,500 psi.
35	Bleed Casing	11/11/2 023	18:48:0 9	USER	Bled Pressure Back To Zero And Got 17 bbls Back To Pump Truck
36	Check Floats	11/11/2 023	18:52:0 5	USER	Floats Held Good.
37	End Job	11/11/2 023	18:53:0 9	NONE	End Job. Flushed Rig Stack With 30 bbls Of Sugar Water. Total Water Used For This Job Was 1,680 bbls
38	Safety Meeting - Pre Rig-Down	11/11/2 023	19:00:5 4	USER	Review JSA With HES Crew Members
39	Rig-Down Equipment	11/11/2 023	19:10:5 7	USER	Rig Down Iron, Plug Container, And Hoses Used On Job
40	Rig-Down Completed	11/11/2 023	20:10:5 8	USER	All Equipment Rigged Down With No Issues Or Incidents
41	Safety Meeting - Departing Location	11/11/2 023	20:20:5 9	USER	Review Journey Management And Route With Crew Members
42	Depart Location	11/11/2 023	20:30:0 2	USER	Depart location

3.0 Attachments

3.1 Real Time Job Chart

