

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS-EBUS

United States of America, COLORADO

For: Terra

Date: Sunday, December 09, 2018

TEP CLOUGH NR 314-3 SURFACE
API# 05-045-23915

Sincerely,

Grand Junction Cement Engineering

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	12/8/2018	21:30:00	USER					CREW CALLED OUT TO H&P 318 FOR TEP SURFACE JOB. REQUESTED ON LOCATION AT 02:00.
Event	2	Pre-Convoy Safety Meeting	12/8/2018	23:45:00	USER					WITH ALL HES PERSONNEL
Event	3	Crew Leave Yard	12/9/2018	00:00:00	USER					
Event	4	Arrive at Location	12/9/2018	01:30:00	USER					RIG WAS RUNNING CASING UPON HES ARRIVAL
Event	5	Assessment of Location Safety Meeting	12/9/2018	01:35:00	USER					WITH ALL HES PERSONNEL
Event	6	Spot Equipment	12/9/2018	01:40:00	USER					SPOT EQUIPMENT
Event	7	Pre-Rig Up Safety Meeting	12/9/2018	01:50:00	USER					WITH ALL HES PERSONNEL
Event	8	Rig-Up Equipment	12/9/2018	02:00:00	USER					1-RCM ELITE PUMP TRUCK, 1-660 FT3 BULK TRUCK, 1-PICKUP
Event	9	Rig-Up Completed	12/9/2018	02:45:00	USER					RIG UP COMPLETED. WAIT FOR RIG TO FINISH RUNNING CASING.
Event	10	Pre-Job Safety Meeting	12/9/2018	05:45:00	USER	0.00	0.00	0.00	0.30	WITH ALL PERSONNEL ON LOCATION
Event	11	Check Weight	12/9/2018	06:14:00	USER	98.00	8.28	0.00	1.00	PRESSURIZED MUD SCALES CALIBRATED ON FRESH WATER BEFORE JOB. ALL FLUID DENSITIES VERIFIED USING PRESSURIZED MUD SCALES THROUGHOUT JOB.
Event	12	Start Job	12/9/2018	06:15:30	USER	88.00	8.26	0.00	1.80	
Event	13	Pump Water	12/9/2018	06:15:46	USER	79.00	8.25	0.00	1.80	PUMP 2 BBL H2O AHEAD TO PRIME LINES. PUMPED AT 2 BPM WITH 60 PSI
Event	14	Shutdown	12/9/2018	06:17:05	USER	122.00	8.27	2.10	3.90	SHUTDOWN TO LINE OUT VALVES ON MANIFOLD FOR PRESSURE TEST

Event	15	Pressure Test	12/9/2018	06:20:20	USER	3957.00	8.32	0.00	0.00	SET KICKOUTS TO 500 PSI FOR LOW TEST TO ENSURE KICKOUTS ARE FUNCTIONING PROPERLY. BROUGHT PRESSURE UP TO 3960 PSI FOR HIGH TEST.
Event	16	Pump Spacer	12/9/2018	06:24:11	USER	31.00	8.16	2.30	0.10	PUMP 20 BBL H2O SPACER. PUMPED AT 4 BPM WITH 100 PSI.
Event	17	Pump Lead Cement	12/9/2018	06:31:51	USER	164.00	12.08	4.10	20.20	PUMP 53 BBL VARICEM GJ1 LEAD CEMENT. 125 SKS AT 12.3 PPG, 2.38 FT3/SK, 13.77 GAL/SK. PUMPED AT 8 BPM WITH 475 PSI
Event	18	Pump Tail Cement	12/9/2018	06:39:30	USER	471.00	12.63	8.00	57.50	PUMP 65.8 BBL VARICEM GJ1 TAIL CEMENT. 175 SKS AT 12.8 PPG, 2.11 FT3/SK, 11.78 GAL/SK. PUMPED AT 8 BPM WITH 480 PSI
Event	19	Shutdown	12/9/2018	06:53:18	USER	267.00	12.91	4.90	81.40	SHUTDOWN TO DROP TOP PLUG.
Event	20	Drop Top Plug	12/9/2018	06:54:27	USER	-22.00	14.24	0.00	0.00	DROP HES TOP PLUG. PLUG LAUNCHED. WITNESSED BY CUSTOMER REP.
Event	21	Pump Displacement	12/9/2018	06:55:20	USER	-22.00	14.31	0.90	0.00	PUMP 72.7 BBL H2O DISPLACEMENT AT 9 BPM WITH 580 PSI.
Event	22	Slow Rate	12/9/2018	07:07:30	USER	533.00	8.44	7.70	81.70	SLOW RATE TO 2 BPM 10 BBL PRIOR TO CALCULATED DISPLACEMENT TO BUMP PLUG.
Event	23	Bump Plug	12/9/2018	07:11:50	USER	778.00	8.44	0.00	90.40	PLUG BUMPED AT 2 BPM. FCP-250 PSI. BROUGHT PRESSURE UP TO 830 PSI
Event	24	Check Floats	12/9/2018	07:15:04	USER	837.00	8.42	0.00	0.00	FLOATS HOLDING. RETURNED 0.5 BBL FLUID TO TRUCK
Event	25	End Job	12/9/2018	07:16:00	USER	-21.00	8.43	0.00	0.00	PIPE WAS STATIC DURING JOB. GOOD CIRCULATION THROUGHOUT JOB.
Event	26	Pre-Rig Down Safety Meeting	12/9/2018	07:20:00	USER	29.00	0.17	0.00	0.00	WITH ALL HES PERSONNEL
Event	27	Rig-Down Equipment	12/9/2018	07:30:00	USER	-36.00	8.46	0.00	0.00	
Event	28	Rig-Down Completed	12/9/2018	08:15:00	USER					
Event	29	Pre-Convoy Safety Meeting	12/9/2018	08:20:00	USER					WITH ALL HES PERSONNEL
Event	30	Crew Leave Location	12/9/2018	08:30:00	USER					
Event	31	Well Info	12/9/2018	08:31:00	USER					TD-1,119', TP-1,112.29' SET AT 1,109', SHOE-42.43', HOLE

13 1/2", MUD-9.7 PPG WBM, CSG-9 5/8" 36 LB/FT J-55

Event	32	Rig Info	12/9/2018	08:32:00	USER	RIG ON BOTTOM AT 05:00 , CIRCULATED AT 10.7 BPM WITH 65 PSI, 490 BBL CIRCULATED
Event	33	Job Info	12/9/2018	08:33:00	USER	ESTIMATED TOP OF TAIL CEMENT-394', RETURNED 37 BBL LEAD CEMENT TO SURFACE. USED 40 LBS SUGAR IN CEMENT RETURNS. TOP PLUG WAS USED FOR JOB.
Event	34	Comment	12/9/2018	08:34:00	USER	THANK YOU FOR USING HALLIBURTON CEMENT DEPARTMENT. JEREMY YOUNG AND CREW.

3.0 Attachments

3.1 TEP CLOUGH NR 314-3 SURFACE-WITH EVENTS.png

