

# HALLIBURTON

iCem® Service

## **VERDAD OIL & GAS CORP**

United States of America, COLORADO

### **For:**

Date: Friday, June 30, 2017

WELD

Verdad Homestead 21

Job Date: Friday, June 30, 2017

Sincerely,

**Nick Peterson**

## 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. Accordingly, 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

---

Real-Time Job Summary .....4

    Job Event Log..... 4

Attachments.....8

    Verdad Homestead 21-Custom Results.png ..... 8

Custom Graphs.....9

    Custom Graph..... **Error! Bookmark not defined.**

1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	6/29/2017	12:30:00	USER					CREW CALLED OUT AT 12:30, REQUESTED ON LOCATION 18:30. CREW PICKED UP CEMENT, CHEMICALS, AND PLUG CONTAINER FROM FT. LUPTON, CO. BULK 660 E-14, 10867096, AND PUMP 10378461.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	6/29/2017	17:30:00	USER					DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Yard	Crew Leave Yard	6/29/2017	18:00:00	USER					STARTED JOURNEY MANAGEMENT.
Event	4	Arrive at Location from Service Center	Arrive at Location	6/29/2017	18:30:00	USER					END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING- 9.625" 36 LB/FT @ 1,771', 5.5" CASING: 20 LB/FT TOTAL 14,654', 8.5" HOLE, TD 14,665', 129.45 SHOE TRAC, TVD- 7,559'. PUMP FRESH WATER DISPLACEMENT WITH MMCR AND BIOCID. CASING LANDED @ 19:00 06/29/2017. RIG

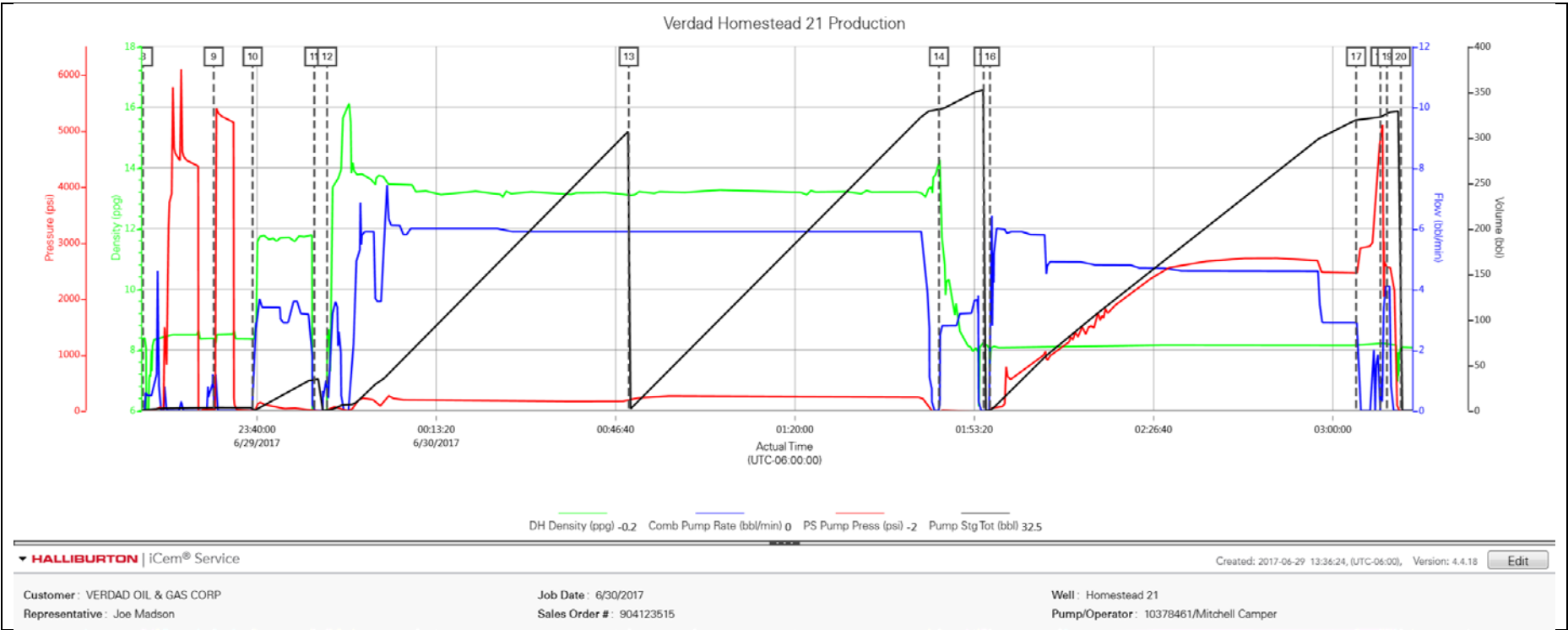
											CIRCULATED 2 BOTTOMS UP.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	6/29/2017	18:45:00	USER					HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	6/29/2017	19:00:00	USER					CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON, AND WATER HOSES TO PERFORM JOB.
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	6/29/2017	22:15:00	USER					MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	8	Start Job	Start Job	6/29/2017	23:18:48	COM5					BEGIN RECORDING JOB DATA.
Event	9	Test Lines	Test Lines	6/29/2017	23:31:56	COM5					PRESSURE TESTED IRON TO 5000 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1420 PSI, 5TH GEAR STALL OUT @ 1800 PSI. POP OFF WAS LEAKING AND DROPPING PRESSURE. RELEASED PRESSURE AND ADJUSTED POP OFF.
Event	10	Pump Spacer 1	Pump Spacer 1	6/29/2017	23:39:10	COM5	11.50	3.50	108.0	40.0	PUMP 40 BBLS OF TUNED SPACER @ 11.5 LB/GAL, WITH 30 GALS MUSOL A, 30 GALS DUAL SPACER B, AND 10 GALLONS D-AIR. DENSITY VERIFIED BY PRESSURIZED MUD SCALES.

Event	11	Drop Bottom Plug	Drop Bottom Plug	6/29/2017	23:50:39	USER						PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	12	Pump Lead Cement	Pump Lead Cement	6/29/2017	23:53:01	COM5	13.20	6.0	220.0	310.0		PUMPED 1110 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.57 FT3/SK, 7.55 GAL/SK. 310.37 BBLS, HOL CALCULATED @ 6,180.96, TOL @ SURFACE 46 BBLS CALCULATED BACK TO SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	13	Pump Tail Cement	Pump Tail Cement	6/30/2017	00:49:06	COM5	1320	5.90	181.00	339.70		PUMP 935 SKS OF NEOCEM @ 13.2 LB/GAL, 2.04 FT3/SK, 9.75 GAL/SK, 339.70 BBLS. HOT CALCULATED @ 8,325.98', TOT CALCULATED @ 6,180.96. DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	14	Shutdown	Shutdown	6/30/2017	01:46:46	COM5						SHUTDOWN TO WASH PUMPS AND LINES BEFORE DROPPING TOP PLUG.
Event	15	Drop Top Plug	Drop Top Plug	6/30/2017	01:55:04	COM5						PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	16	Pump Displacement	Pump Displacement	6/30/2017	01:56:15	COM5	8.73	5.10	2700.0	321.0		BEGIN CALCULATED DISPLACEMENT OF 321 BBLS WITH FRESH WATER. PUMPED THE FIRST 20 BBLS WITH MMCR, PUMPED UNTIL 290 AWAY WITH BIOCID. SAW TUNED SPACER TO SURFACE @ 235 BBLS INTO DISPLACEMENT. CEMENT TO SURFACE 275 BBLS AWAY, 46 BBLS CEMENT TO SURFACE.

Event	17	Bump Plug	Bump Plug	6/30/2017	03:04:19	USER	8.35	2.90	2444.00	320.50	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED UP TO 4700 PSI TO RUPTURE WET SHOE.
Event	18	Pump Water	Pump Water	6/30/2017	03:08:50	USER	8.34	4.00	4700.0	6.0	PUMPED 6 BBLS WET SHOE PER COMPANY MAN REQUEST.
Event	19	Check Floats	Check Floats	6/30/2017	03:10:03	USER					FLOATS HELD GOT 3 BBLS BACK TO PUMP.
Event	20	End Job	End Job	6/30/2017	03:12:38	COM5					STOP RECORDING JOB DATA.
Event	21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	6/30/2017	03:30:00	USER					DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	22	Rig-Down Completed	Rig-Down Completed	6/30/2017	04:45:00	USER					ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	23	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	6/30/2017	05:00:00	USER					DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	24	Depart Location	Depart Location	6/30/2017	05:30:00	USER					THANK YOU FOR USING HALLIBURTON - NICK PETERSON AND CREW.

2.0 Attachments

2.1 Verdad Homestead 21-Custom Results.png





## 3.0 Custom Graphs

---