

# HALLIBURTON

iCem<sup>®</sup> Service

## **VERDAD OIL & GAS CORP**

Date: Tuesday, August 15, 2017

### **Homestead 22 Production**

Job Date: Tuesday, August 08, 2017

Sincerely,

**Bryce Hinsch**

## 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

---

1.0    Cementing Job Summary ..... 4

    1.1    Executive Summary .....4

2.0    Real-Time Job Summary ..... 7

    2.1    Job Event Log .....7

3.0    Attachments..... 11

    3.1    Verdad Homestead #22 Production Job Chart .....11

## 1.0 Cementing Job Summary

---

### 1.1 Executive Summary

---

Halliburton appreciates the opportunity to perform the cementing services on the **Homestead 22** cement **production** 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 40 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]**

*The Road to Excellence Starts with Safety*

Sold To #: 306259		Ship To #: 3796870		Quote #:		Sales Order #: 0904218280				
Customer: VERDAD OIL & GAS CORP -				Customer Rep: Jason Hansen						
Well Name: HOMESTEAD			Well #: 22		API/UWI #: 05-123-44644-00					
Field: WATTENBERG		City (SAP): IONE		County/Parish: WELD		State: COLORADO				
Legal Description: NE SE-34-1N-66W-2446FSL-968FEL										
Contractor: XTREME DRLG				Rig/Platform Name/Num: XTREME 20						
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Nicholas Roles						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		14432ft		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
Casing		9.625	8.921	36	LTC	J-55	0	1730		1730
Casing		5.5	4.778	20	LTC	P-110	0	14432		7900
Open Hole Section			8.5				1730	14442	1730	7900
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5					Top Plug	5.5		HES	
Float Shoe	5.5			14432		Bottom Plug	5.5		HES	
Float Collar	5.5					SSR plug set	5.5		HES	
Insert Float	5.5					Plug Container	5.5	1	HES	
Stage Tool	5.5					Centralizers	5.5		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	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	40	bbl	11.5	3.79		6		
34.30 gal/bbl		FRESH WATER								
147.42 lbm/bbl		BARITE, BULK (100003681)								

0.70 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)							
0.70 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)							
0.25 gal/bbl		D-AIR 3000L, 5 GAL PAIL (101007444)							
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	ElastiCem	ELASTICEM (TM) SYSTEM	1090	sack	13.2	1.57		8	7.55
0.40 %		SCR-100 (100003749)							
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	NeoCem	NeoCem TM	915	sack	13.2	2.04		8	9.75
9.75 Gal		FRESH WATER							
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
4	Displacement Fluid	Displacement Fluid	317	bbl	8.4			8	
Cement Left In Pipe		Amount	0 ft		Reason			Wet shoe	
Comment Got 40bbbls cement to surface. Estimated TOT-6080'									

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	8/8/2017	02:00:00	USER				Called out by Service Coordinator for O/L at 0730
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	8/8/2017	06:15:00	USER				Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	8/8/2017	06:30:00	USER				Journey Management prior to departure
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	8/8/2017	07:00:00	USER				Upon arrival met with company man to discuss job details and calculations, performed hazard hunt and site assessment. Rig had 3000' casing left to run.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	8/8/2017	07:15:00	USER				Discussed rigging up hazards and procedure according to HMS.
Event	6	Other	Other	8/8/2017	08:00:00	USER				Water test- PH-6, Chlor-0, Temp-65. Cement temp-70.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	8/8/2017	11:00:00	USER	8.57	0.00	63.00	Held safety meeting with all job associated personnel to discuss job procedure, hazards and stop work authority.
Event	8	Start Job	Start Job	8/8/2017	11:31:10	COM4	8.57	0.00	35.00	TD-14442', TP-14432' 5.5" 20#, WS Sub-14288', TVD-7900', OH-8.5", SURF-1730' 9.625" 36#, MUD-10#

Event	9	Test Lines	Test Lines	8/8/2017	11:50:23	COM4	8.50	0.00	66.00	Pumped 5bbls fresh water to fill lines, closed manifold and performed 500psi k/o function test, proceeded to perform 5th gear stall at 1955psi, continued to bring pressure up to 6000psi. Pressure stabilized and held with no leaks
Event	10	Other	Other	8/8/2017	12:10:56	USER	8.65	0.00	5198.00	Truck would not pressure test, had to swap a valve and a double wing chix. Once replaced was able to get a stable pressure test to 6000psi.
Event	11	Pump Spacer 1	Pump Spacer 1	8/8/2017	12:18:09	COM4	8.54	0.00	4.00	Pumped 40bbls 11.5# 3.79y 23.3g/s Tuned Spacer III with 30g Musol A, 30g Dual Spacer B and 10g D-air at 6bpm 390psi.
Event	12	Shutdown	Shutdown	8/8/2017	12:27:59	COM4	11.49	0.00	83.00	
Event	13	Drop Bottom Plug	Drop Bottom Plug	8/8/2017	12:28:25	COM4	11.56	0.00	3.00	Dropped by HES supervisor, witnessed by company man.
Event	14	Pump Lead Cement	Pump Lead Cement	8/8/2017	12:28:28	COM4	11.55	0.00	1.00	Pumped 1090sks or 304.8bbls 13.2# 1.57y 7.55g/s Elasticem at 8bpm 460psi.
Event	15	Check Weight	Check weight	8/8/2017	12:34:19	COM4	13.31	8.00	655.00	Weight verified with pressurized mud scales.
Event	16	Check Weight	Check weight	8/8/2017	12:46:00	COM4	13.18	8.00	348.00	Weight verified with pressurized mud scales.
Event	17	Pump Tail Cement	Pump Tail Cement	8/8/2017	13:13:51	COM4	13.18	8.00	360.00	Pumped 915sks or 332.4bbls 13.2# 2.04y 9.75g/s Neocem at 8bpm 480psi.
Event	18	Check Weight	Check weight	8/8/2017	13:16:53	COM4	13.15	8.00	482.00	Weight verified with



										pressurized mud scales.
Event	19	Shutdown	Shutdown	8/8/2017	14:02:34	COM4	13.27	0.40	88.00	Shutdown, pumped 5bbls fresh water through pumps and lines to wash up, rig blew down iron of residual cement in lines.
Event	20	Drop Top Plug	Drop Top Plug	8/8/2017	14:10:08	COM4	3.13	0.00	7.00	Dropped by HES supervisor, witnessed by company man.
Event	21	Pump Displacement	Pump Displacement	8/8/2017	14:10:11	COM4	5.86	0.00	5.00	Pumped 317bbls fresh water with 5g MMCR in first 10bbls, 20g biocide throughout at 8bpm.
Event	22	Bump Plug	Bump Plug	8/8/2017	15:03:43	COM4	8.40	0.00	2850.00	Slowed down to 3bpm at 300bbls away, final circulating pressure- 2350psi. Bump pressure- 2890psi
Event	23	Pressure Up Well	Pressure Up Well	8/8/2017	15:05:44	COM4	8.41	0.00	2888.00	Pressured up to release sub at 4854psi, followed with 5bbls fresh water at 3bpm 2325psi, for wet shoe.
Event	24	Check Floats	Check Floats	8/8/2017	15:11:12	USER	8.40	0.00	2125.00	Released pressure and got 1.5bbls back to pump. Floats held.
Event	25	End Job	End Job	8/8/2017	15:24:09	COM4				Got 40bbls cement to surface.
Event	26	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	8/8/2017	15:30:00	USER	1.73	3.40	7.00	Discussed rigging down hazards and procedure according to HMS.
Event	27	Safety Meeting - Departing Location	Safety Meeting - Departing Location	8/8/2017	16:45:00	USER				Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	28	Depart Location for	Depart Location for	8/8/2017	17:00:00	USER				Pre journey management

Service Center or Other Site	Service Center or Other Site
---------------------------------	---------------------------------

prior to departure.

3.0 Attachments

3.1 Verdad Homestead #22 Production Job Chart

