

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

United States of America

Well#8CDH

Tuesday, July 17, 2018

Respectfully,

Fernando A. Luna & Crew

## 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 Real-Time Job Summary ..... 7

    1.1 Job Event Log .....7

2.0 Attachments..... 10

    2.1 Surface Casing.png .....10

    2.2 Casing Pressure Test.png .....11

3.0 Custom Graphs..... 12

    3.1 Custom Graph .....12

The Road to Excellence Starts with Safety

Sold To #: 369404		Ship To #: 3791395		Quote #:		Sales Order #: 0904995999					
Customer: EXTRACTION OIL & GAS -				Customer Rep: .....							
Well Name: ALMA 1S-66-2524			Well #: 8CDH		API/UWI #: 05-001-10026-00						
Field: WATTENBERG		City (SAP): IRONDALE		County/Parish: ADAMS		State: COLORADO					
Legal Description: SW SE-25-1S-66W-287FSL-1859FEL											
Contractor: Shawn McIntyre				Rig/Platform Name/Num: Cartel 11							
Job BOM: 7521 7521											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Fernando Luna							
Job											
Formation Name											
Formation Depth (MD)		Top		Bottom							
Form Type				BHST							
Job depth MD		1644ft		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	0	9.625	8.921	36	8 RD	J-55	0	1621	0	0	
Open Hole Section			13.5				0	1625	0	0	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	9.625			1644		Top Plug	9.625		HES		
Float Shoe	9.625					Bottom Plug	9.625		HES		
Float Collar	9.625					SSR plug set	9.625		HES		
Insert Float	9.625					Plug Container	9.625		HES		
Stage Tool	9.625					Centralizers	9.625		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	Red Dye Spacer	Red Dye Spacer			10	bbl	8.33				
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	SwiftCem	SWIFTCM (TM) SYSTEM			550	sack	13.5	1.74		5	9.2
9.20 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
3	Fresh Water	Fresh Water	123.5	bbl	8.33				
Cement Left In Pipe		Amount	43 ft		Reason			Shoe Joint	
Mix Water:		pH ##	Mix Water Chloride:## ppm			Mix Water Temperature:## °F °C			
Cement Temperature:## °F °C		Plug Displaced by:## lb/gal kg/m3 XXXX			Disp. Temperature:## °F °C				
Plug Bumped?		Yes/No	Bump Pressure:#### psi MPa			Floats Held?		Yes/No	
Cement Returns:## bbl m3		Returns Density:## lb/gal kg/m3			Returns Temperature:## °F °C				
Comment									



## 1.0 Real-Time Job Summary

## 1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	Comb Pump Total (bbl)	DH Density (ppg)	PS Pump Press (psi)	Comments
Event	1	Arrive At Location	Arrive At Location	7/17/2018	00:00:00	USER					HES crew arrives on location, signs in with rig safety captain, conducts hazard hunt, spots equipment, conducts pre-rig up safety meeting, completes jsa, and verify volumes with co-rep
Event	2	Water Test	Water Test	7/17/2018	00:01:00	USER					Water test=pH: 7, Cl: <120, temp 66 degrees, Well Fluid density: 8.4 water temp: approx.. 86, calibrate pressurized mud scales via provided fresh water source @ 8.33ppg
Event	3	Well Info	Well Info	7/17/2018	00:02:00	USER					TD: 1625' , TP : 1629.32', SJ: 42.15', OH: 13 1/2", Casing: Size/Weight/: 9 5/8" 36# J-55, Previous Casing Shoe: n/a'
Event	4	Job Info	Job Info	7/17/2018	00:03:00	USER					Spacer 1: 30bbl fresh water TOS: approx.. surface' Spacer 2: 10bbbls red dye water TOS: Surface Lead Cement: approx.. 170bbbls/957cuft/550sk lead cement @ +/- 13.5 density/1.74 yield/9.2 waterTOC: approx.. surface' , Displacement: 123.5bbbls fresh water, CMT left in Pipe: 42.15' Reason:

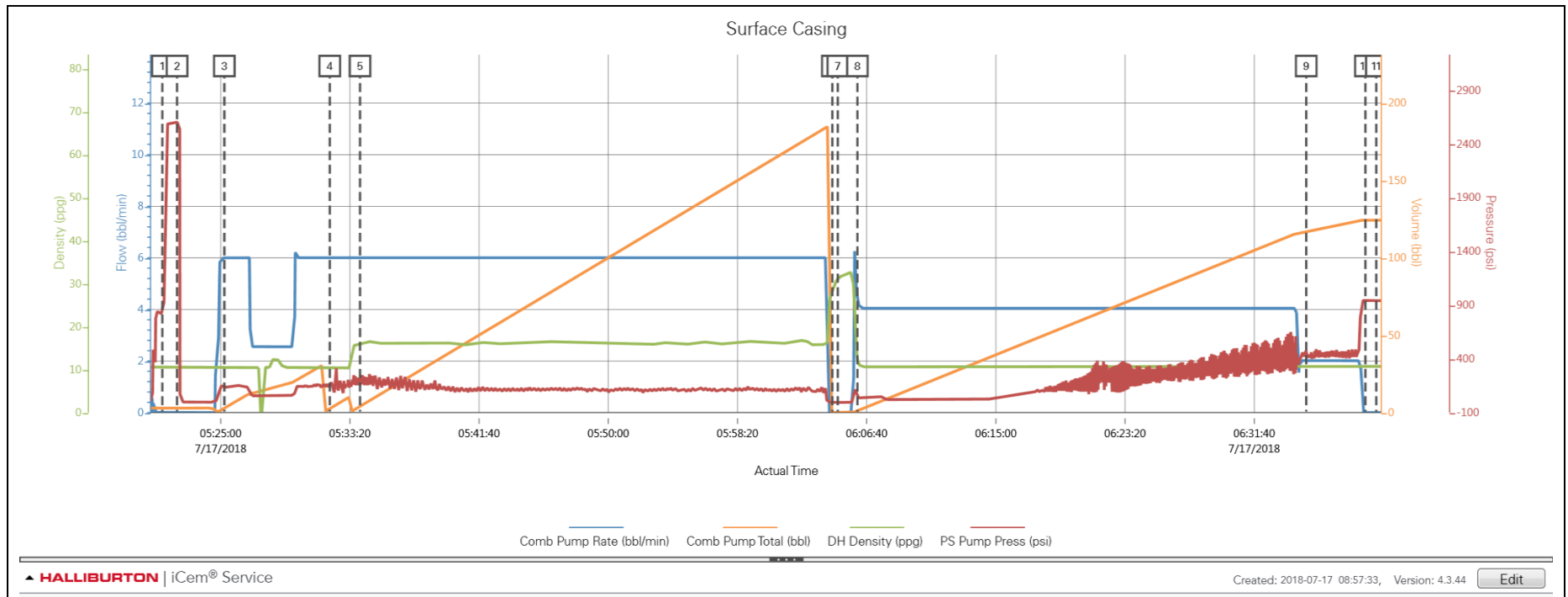
											shoe joint
Event	5	Safety Meeting - Pre Job	Safety Meeting - Pre Job	7/17/2018	05:00:00	USER					Conduct safety meeting with all on location: discuss job procedure/contingency plans/hazards involved prior to pumping
Event	6	Pressure Test	Pressure Test	7/17/2018	05:21:14	USER	0.00	2.95	8.62	819.61	Low pressure test surface lines @ 818psi
Event	7	Pressure Test	Pressure Test	7/17/2018	05:22:11	USER	0.00	2.96	8.67	2601.54	High pressure test surface lines @ 2601psi
Event	8	Pump Water Spacer	Pump Water Spacer	7/17/2018	05:25:14	USER	6.00	2.70	8.63	159.68	Pump 30bbls fresh water spacer
Event	9	Pump Red Dye Water	Pump Red Dye Water	7/17/2018	05:32:02	USER	6.00	2.60	8.41	187.68	Pump 10bbls red dye water
Event	10	Pump Cement	Pump Cement	7/17/2018	05:33:59	USER	6.01	4.10	13.64	127.94	Scale and pump approx. 170bbls/957cuft/550sks lead cement @ +/- 13.5 density/1.74 yield/9.2 water (Type I-II Cement Pre-Mix Dry 94 Poly-E-Flake Pre-Mix Dry 0.1250 Enhancer 923, CMT Pre-Mix Dry 2 Cal-Seal 60 Pre-Mix Dry 2 Econolite Pre-Mix Dry 1.25 Versaset Pre-Mix Dry 0.20
Event	11	Shutdown	Shutdown	7/17/2018	06:04:27	USER	0.00	0.00	14.02	-3.67	
Event	12	Drop Top Plug	Drop Top Plug	7/17/2018	06:04:48	USER	0.00	0.00	13.32	-4.61	HES service supervisor drops hwe top plug
Event	13	Pump Displacement	Pump Displacement	7/17/2018	06:06:04	USER	4.44	1.35	9.04	38.33	Pump 124bbls fresh water displacement
Event	14	Slow Rate	Slow Rate	7/17/2018	06:35:01	USER	2.02	117.24	8.72	405.17	Slow rate to 2bpm
Event	15	Comment	Comment	7/17/2018	06:38:50	USER	0.00	124.34	8.74	938.16	No distinguishable cement



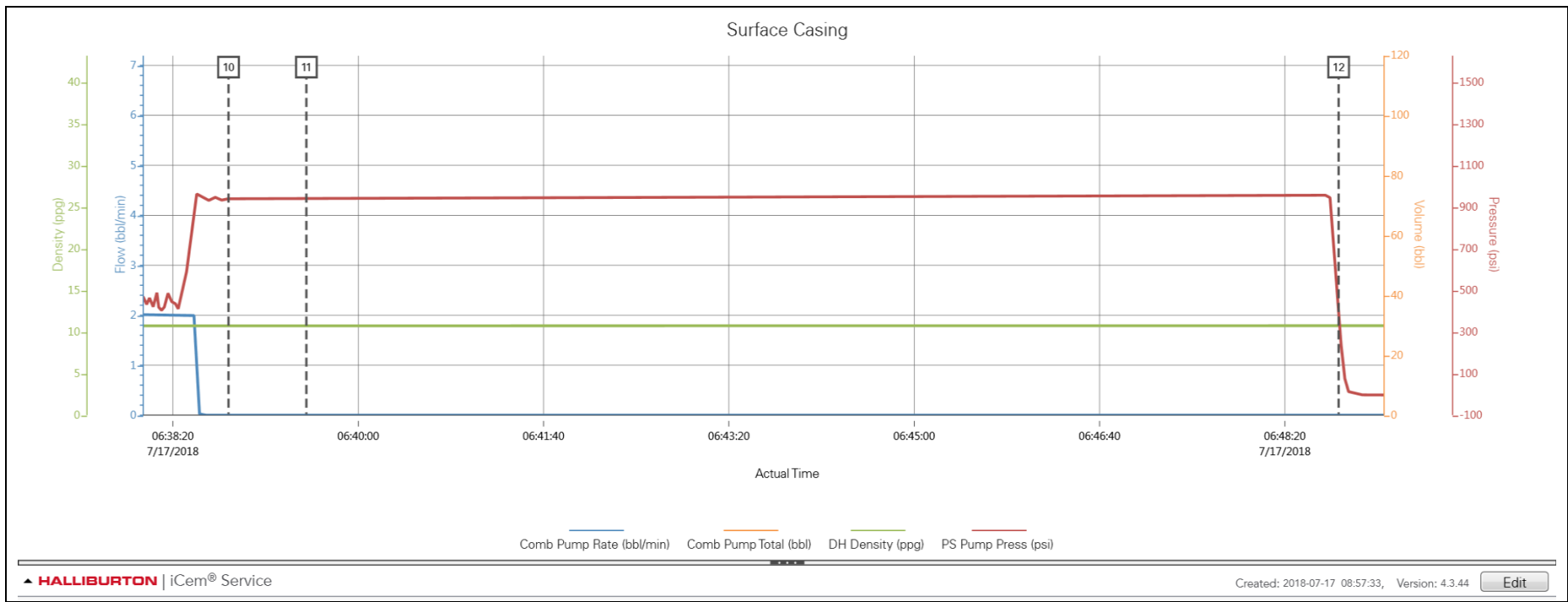
											returns observed to surface/contaminated red dye water/cement observed
Event	16	Bump Plug/Pressure Test	Bump Plug/Pressure Test	7/17/2018	06:39:32	USER	0.00	124.34	8.75	937.23	Bump top plug @ 935psi/Pressure test casing for 10min @ 935psi
Event	17	Bleed Casing	Bleed Casing	7/17/2018	06:48:49	USER	0.00	124.34	8.78	337.96	Bleed off casing/surface lines and verify float collar holds (successful casing test)
Event	18	Depart Location	Depart Location	7/17/2018	10:00:00	USER					HES crew conducts pre-rig down safety meeting, signs out with rig safety captain and departs location
Event	19	Depart Location	Gratitude	7/17/2018	10:01:00	USER					Thank you for choosing Halliburton Energy Services

## 2.0 Attachments

### 2.1 Surface Casing.png



2.2 Casing Pressure Test.png



## 3.0 Custom Graphs

### 3.1 Custom Graph

