

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Thursday, November 09, 2017

Jesser 3E-10-13N SURFACE

Job Date: Sunday, November 05, 2017

Sincerely,

Julia Nichols

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **JESSER 3E-10-13N** cement **SURFACE** 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 29 barrels 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]

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*Cementing Job Summary**The Road to Excellence Starts with Safety*

Sold To #: 389404	Ship To #: 3830595	Quote #:	Sales Order #: 0904417427							
Customer: EXTRACTION OIL & GAS -		Customer Rep: Larry Siegel								
Well Name: JESSER	Well #: 3E-10-13N	API/UWI #: 05-123-45670-00								
Field: WATTENBERG	City (SAP): BERTHOUD	County/Parish: WELD	State: COLORADO							
Legal Description: NW SW-3-4N-68W-2314FSL-596FWL										
Contractor: PATTERSON-UTI ENERGY		Rig/Platform Name/Num: PATTERSON 341								
Job BOM: 7521 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199		Srvc Supervisor: Steven Markovich								
Job										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type		BHST								
Job depth MD	1544ft	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	1544	0	0
Open Hole Section			13.5				0	1600	0	1600
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	9.625			1544		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								

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Cementing Job Summary

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	119	bbl	8.33				
Cement Left In Pipe		Amount	44 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 Cement to surface at 90bbbls away bringing 29bbbls to surface.									

2.0 Real-Time Job Summary

2.1 Job Event Log

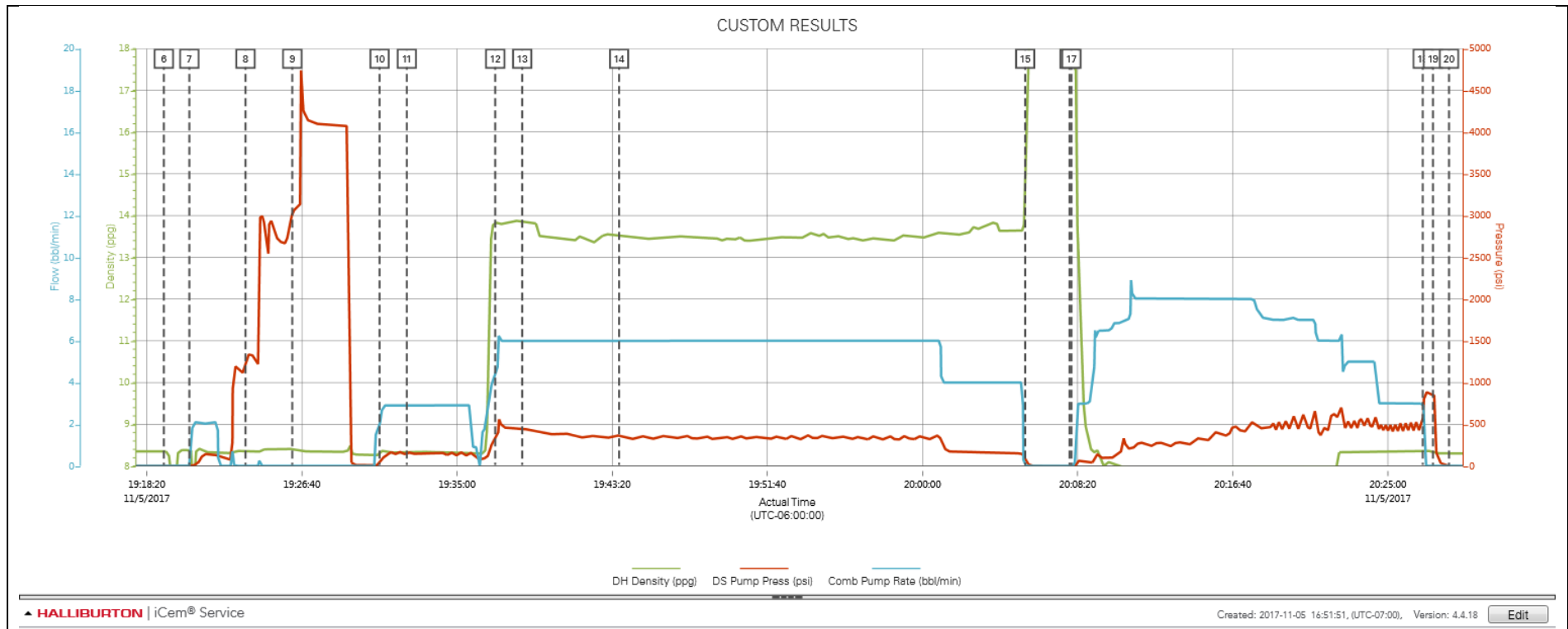
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	DS Pump Press (psi)	Comb Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	11/5/2017	11:00:00	USER				Job called out with an on location time of 18:00
Event	2	Arrive At Loc	Arrive At Loc	11/5/2017	16:00:00	USER				Arrived on location, rig still drilling.
Event	3	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	11/5/2017	16:30:00	USER				JSA and hazard hunt with HES crew.
Event	4	Rig-Up Equipment	Rig-Up Equipment	11/5/2017	17:00:00	USER				Rigged up HES lines and equipment.
Event	5	Pre-Job Safety Meeting	Pre-Job Safety Meeting	11/5/2017	19:00:00	USER	8.35	1.00	0.00	JSA with HES and rig crew on job procedure.
Event	6	Start Job	Start Job	11/5/2017	19:19:15	COM4	8.35	1.00	0.00	TD 1600' TP 1585' FC 1544' 9 5/8" 36# surface casing, 13 1/2" open hole.
Event	7	Other	Other	11/5/2017	19:20:37	COM4	8.38	-2.00	0.00	Fill lines.
Event	8	Test Lines	Test Lines	11/5/2017	19:23:38	COM4	8.36	1241.00	0.00	Set kikk outs to 500psi and do kick out test.
Event	9	Test Lines	Test Lines	11/5/2017	19:26:09	COM4	8.40	3020.00	0.00	Bring pressure up to 3000psi and hold.
Event	10	Pump Spacer 1	Pump Spacer 1	11/5/2017	19:30:50	COM4	8.33	28.00	2.00	Break circulation. We achieved circulation at 2bbls away.
Event	11	Pump Spacer 2	Pump Spacer 2	11/5/2017	19:32:18	COM4	8.32	163.00	2.90	Pump 10bbls of Red Dye.
Event	12	Pump Cement	Pump Cement	11/5/2017	19:37:03	COM4	13.84	340.00	4.30	Pump 170bbls (550sks) of 13.5ppg 1.74yield cement. Pumped at 6bbl/min 501psi.
Event	13	Check Weight	Check weight	11/5/2017	19:38:30	COM4	13.86	434.00	6.00	Weight verified by pressurized scales,
Event	14	Check Weight	Check weight	11/5/2017	19:43:42	COM4	13.49	372.00	6.00	Weight verified by pressurized scales.
Event	15	Shutdown	Shutdown	11/5/2017	20:05:31	COM4	14.73	65.00	0.00	Shutdown.
Event	16	Drop Top Plug	Drop Top Plug	11/5/2017	20:07:54	COM4	17.74	-4.00	0.00	Plug pre loaded into HES head. Plug drop and loaded in front of company rep.
Event	17	Pump Displacement	Pump Displacement	11/5/2017	20:08:00	COM4	17.70	-4.00	0.00	Pump 119.35bbls of H2O. Pumped at 8bbl/min and slowed rate with pressure increase. Red dye to surface at

77bbls away, cement to surface at 90bbls away bringing 29bbls of cement to surface.

Event	18	Bump Plug	Bump Plug	11/5/2017	20:26:52	COM4	8.33	553.00	3.00	Bumped plug at 119bbls away, final lifting pressure was 579psi, took pressure 500psi over and held.
Event	19	Check Floats	Check Floats	11/5/2017	20:27:25	USER	8.36	862.00	0.00	Opened release line to check floats, after 1 bbl back the floats held.
Event	20	End Job	End Job	11/5/2017	20:28:17	COM4	8.30	-4.00	0.00	Thank you Steve Markovich and crew.

3.0 Attachments

3.1 CUSTOM RESULTS – JOB CHART WITH EVENTS



3.2 CUSTOM RESULTS – JOB CHART WITH EVENTS

