

HALLIBURTON

iCem[®] Service

EXTRACTION

Jesser 3E-10-2C Surface

Job Date: Tuesday, October 31, 2017

Sincerely,
Ryan Keeran

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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-10-2C** 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.

33 bbls of cement 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 #: 369404		Ship To #: 3830534		Quote #:		Sales Order #: 0904408048					
Customer: EXTRACTION OIL & GAS -				Customer Rep: LARRY SIEGEL							
Well Name: JESSER			Well #: 3E-10-2C		API/UWI #: 05-123-45658-00						
Field: WATTENBERG		City (SAP): BERTHOUD		County/Parish: WELD		State: COLORADO					
Legal Description: NW SW-3-4N-68W-2314FSL-376FWL											
Contractor: PATTERSON-UTI ENERGY				Rig/Platform Name/Num: PATTERSON 341							
Job BOM: 7521 7521											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Bryce Muir							
Job											
Formation Name											
Formation Depth (MD)		Top		Bottom							
Form Type				BHST							
Job depth MD		1579ft		Job Depth TVD							
Water Depth				Wk Ht Above Floor		2 FT					
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	1579	0	0	
Open Hole Section			13.5				0	1604	0	0	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	9.625			1		Top Plug	9.625	1	HES		
Float Shoe	9.625	1	TOPCO	1579		Bottom Plug	9.625				
Float Collar	9.625	1	TOPCO	1537		SSR plug set	9.625				
Insert Float	9.625					Plug Container	9.625	1	HES		
Stage Tool	9.625					Centralizers	9.625	18	TOPCO		
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		118	bbl	8.33				
Cement Left In Pipe		Amount	42 ft			Reason			Shoe Joint	
Comment: WE ARRIVED ON LOCATION AT 0800 HOURS ON 10/31/2017. WE SPOTTED IN OUR EQUIPMENT AND RIGGED UP OUR IRON. WE WAITED ON LOCATION UNTIL THE CASING WAS RAN. AFTER THE CASING WAS LANDED WE RIGGED UP THE PLUG CONTAINER AND LOADED THE PLUG. WE HELD A SAFETY MEETING BEFORE WE STARTED THE JOB. WE TESTED OUR IRON AND THEN PUMPED FRESH WATER TO BREAK CIRCULATION. IT TOOK 7 BBLS TO BREAK CIRCULATION. WE THEN PUMPED 10 BBLS DYED SPACER FOLLOWED BY 170 BBLS OF CEMENT. TOP PLUG WAS DROPPED BY BRYCE MUIR AND WITNESSED BY COMPANY REP. WE PUMPED 118 BBLS OF DISPLACEMENT. WE GOT 10 BBLS DYE SPACER TO SURFACE FOLLOWED BY 33 BBLS OF GOOD CEMENT. WE LANDED THE PLUG AT 118 BBLS DISPLACEMENT PUMPED. WE LANDED THE PLUG AT 506 PSI AND PRESSURED UP TO 1150 PSI. HELD FOR ONE MINUTE AND CHECKED FLOATS. FLOATS HELD AND WE GOT ½ BBL BACK TO THE RCM.										

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Driv-Side Pump Pressure (psi)	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	10/31/2017	02:00:00	USER				CREW CALLED OUT TO PERFORM SURFACE CASING JOB FOR EXTRACTION OIL AND GAS.
Event	2	Other	Other	10/31/2017	02:30:00	USER				LOAD UP ALL REQUIRED EQUIPMENT AND MATERIALS FOR THE JOB. DOWNLOAD ALL REQUIRED PAPERWORK.
Event	3	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	10/31/2017	07:15:00	USER				DISCUSS HAZARDS ASSOCIATED WITH DRIVING TRUCKS TO LOCATION. DISCUSS CONVOY ORDER, SAFEST ROUTE OF TRAVEL, AND PLACES TO STOP IF NEEDED.
Event	4	Depart from Service Center or Other Site	Depart from Service Center or Other Site	10/31/2017	07:30:00	USER				
Event	5	Arrive at Location from Service Center	Arrive at Location from Service Center	10/31/2017	08:00:00	USER				
Event	6	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	10/31/2017	08:15:00	USER				ASSESS LOCATION TO IDENTIFY POTENTIAL HAZARDS AND THE BEST WAY TO SPOT PUMPING EQUIPMENT. SPOT EQUIPMENT.
Event	7	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	10/31/2017	08:30:00	USER				DISCUSS HAZARDS ASSOCIATED WITH RIGGING UP AND PACKING IRON ON LOCATION.

Event	8	Rig-Up Equipment	Rig-Up Equipment	10/31/2017	08:45:00	USER				RIG UP IRON TO THE RED ZONE.
Event	9	Other	Other	10/31/2017	09:15:00	USER				RIG PERFORMING WIPER TRIP AND RUNNING CASING.
Event	10	Pre-Job Safety Meeting	Pre-Job Safety Meeting	10/31/2017	14:30:00	USER	-13.70	8.41	0.00	DISCUSS HES SAFETY AND JOB PROCEDURES WITH RIG CREW AND COMPANY REPS. IDENTIFY CLOSEST HOSPITALS, MUSTER AREAS, AND FIRST AID LOCATIONS. REVIEW JOB PROCEDURES AND ORDER OF FLUID OPERATION.
Event	11	Rig-Up Equipment	Rig-Up Equipment	10/31/2017	14:40:00	USER	-13.70	8.41	0.00	RIG UP PLUG CONTAINER AND PUMPING LINES ON RIG FLOOR. PRE LOAD 9.625" TOP PLUG. PLUG LOADED BY BRYCE MUIR AND WITNESSED BY COMPANY REP.
Event	12	Start Job	Start Job	10/31/2017	14:42:59	COM6	-14.70	8.41	0.00	
Event	13	Test Lines	Test Lines	10/31/2017	14:46:33	COM6	47.30	8.49	0.00	CONDUCT A LOW PRESSURE TEST TO 500 PSI TO TEST RCM PRESSURE KICKOUTS. THEN WE CONDUCTED A HIGH PRESSURE TEST TO 3000 PSI TO TEST PUMPS AND LINES. MONITOR PRESSURE LOSS.
Event	14	Pump Spacer 1	Pump Spacer 1	10/31/2017	14:50:15	COM6	27.30	8.47	0.00	PUMP FRESH WATER AT A LOW RATE TO BREAK CIRCULATION. PUMPED AT 3.5 BPM WITH A CIRCULATING PRESSURE OF 130 PSI. PUMPED 7 BBLs TO ESTABLISH

										CIRCULATION.
Event	15	Pump Spacer 2	Pump Spacer 2	10/31/2017	14:53:29	COM6	117.30	8.49	3.40	PUMP 10 BBLS OF RED DYED SPACER. SPACER PUMPED AT 3.5 BPM WITH A CIRCULATING PRESSURE OF 130 PSI. WE HAD GOOD RETURNS TO SURFACE.
Event	16	Pump Cement	Pump Cement	10/31/2017	14:56:56	COM6	158.30	11.87	3.40	PUMP 170 BBLS OF PRIMARY CEMENT. 550 SACKS @ 13.5 #/GAL 1.74 CUFT/SK 9.2 GAL/SK. WE PUMPED CEMENT AT 7.5 BPM WITH A CIRCULATING PRESSURE OF 540 PSI. WE HAD GOOD RETURNS TO SURFACE.
Event	17	Check Weight	Check weight	10/31/2017	15:04:42	COM6	442.30	13.53	7.50	CEMENT VERIFIED BY PRESSURIZED MUD BALANCE.
Event	18	Check Weight	Check weight	10/31/2017	15:10:31	COM6	421.30	13.47	7.50	CEMENT VERIFIED BY PRESSURIZED MUD BALANCE.
Event	19	Shutdown	Shutdown	10/31/2017	15:19:02	COM6	83.30	15.09	0.00	
Event	20	Pump Displacement	Pump Displacement	10/31/2017	15:20:30	COM6	-1.70	17.79	1.80	PUMPED 118 BBLS OF FRESH WATER DISPLACEMENT. WE USED THE FIRST 10 BBLS TO WASH UP ON TOP OF THE PLUG. WE PUMPED DISPLACEMENT AT 8 BPM WITH A CIRCULATING PRESSURE OF 350 PSI.
Event	21	Displ Reached Cmnt	Displ Reached Cmnt	10/31/2017	15:26:34	USER	282.30	7.82	8.20	AFTER PUMPING 40 BBLS OF DISPLACEMENT THE PLUG REACHED CEMENT. AFTER PUMPED 75 BBLS WE

										GOT GOOD DYED SPACER TO SURFACE. AT 85 BBLS OF DISPLACEMENT PUMPED WE GOT GOOD CEMENT TO SURFACE. WE GOT 33 BBLS OF CEMENT TO SURFACE.
Event	22	Bump Plug	Bump Plug	10/31/2017	15:43:11	COM6	1077.30	7.82	0.00	WE LANDED THE PLUG AT 118 BBLS OF DISPLACEMENT PUMPED. WE LANDED THE PLUG AT 506 PSI AND PRESSURED UP TO 1150 PSI. WE HELD FOR ONE MINUTE.
Event	23	Check Floats	Check Floats	10/31/2017	15:44:00	USER	36.30	7.77	0.00	FLOATS HELD. WE GOT 1/2 BBL BACK TO THE RCM.
Event	24	End Job	End Job	10/31/2017	15:44:56	COM6	-14.70	7.77	0.00	
Event	25	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	10/31/2017	16:00:00	USER				DISCUSS HAZARDS ASSOCIATED WITH RIGGING DOWN AND PACKING IRON ON LOCATION.
Event	26	Rig-Down Equipment	Rig-Down Equipment	10/31/2017	16:15:00	USER				
Event	27	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	10/31/2017	16:30:00	USER				DISCUSS HAZARDS ASSOCIATED WITH DRIVING TRUCKS BACK TO THE SERVICE CENTER.
Event	28	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	10/31/2017	16:45:00	USER				JOB WAS COMPLETED SAFELY BY BRYCE MUIR AND CREW. THANK YOU FOR USING HALLIBURTON ENERGY SERVICES. STAY SAFE OUT HERE.

3.0 Job Chart

3.1 Job Chart

