

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Rinn Valley East N17-20-8N Surface

Sincerely,
Meghan Jacobs

Legal Notice

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Rinn Valley East N17-20-8N** 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 25bbls of cement 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 [Ft. Lupton]

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 369404		Ship To #: 3892442		Quote #:		Sales Order #: 0905049630				
Customer: EXTRACTION OIL & GAS -				Customer Rep: Shawn McIntyre						
Well Name: RINN VALLEY EAST			Well #: N17-20-8N			API/UWI #: 05-123-47314-00				
Field: WATTENBERG		City (SAP): FIRESTONE		County/Parish: WELD		State: COLORADO				
Legal Description: SW SE-17-2N-68W-758FSL-1775FEL										
Contractor:				Rig/Platform Name/Num: Cartell 11						
Job BOM: 7521 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199					Srvc Supervisor: Adam Covington					
Job										
Formation Name										
Formation Depth (MD)		Top			Bottom					
Form Type										
BHST										
Job depth MD		1605ft			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	1605	0	0
Open Hole Section			13.5				0	1606	0	0
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	9.625			1605		Top Plug	9.625	1	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	1	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 ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Red Dye Spacer	Red Dye Spacer	10	bbl	8.33			6		
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
2	SwiftCem	SWIFTCEM (TM) SYSTEM	550	sack	13.5	1.74		7	9.2	

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Cementing Job Summary

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
3	Fresh Water	Fresh Water	120.4	bbl	8.33			8	
Cement Left In Pipe		Amount	44 ft		Reason			Shoe Joint	
Comment TD-1606 13.5" OH, TP-1605 9 5/8" 36#, FC-1561. WATER-70 DEGREES, PH-7, CHLORIDES-0, SULFATES-0. 25 BBLS OF CEMENT TO SURFACE.									

2.0 Real-Time Job Summary

2.1 Job Event Log

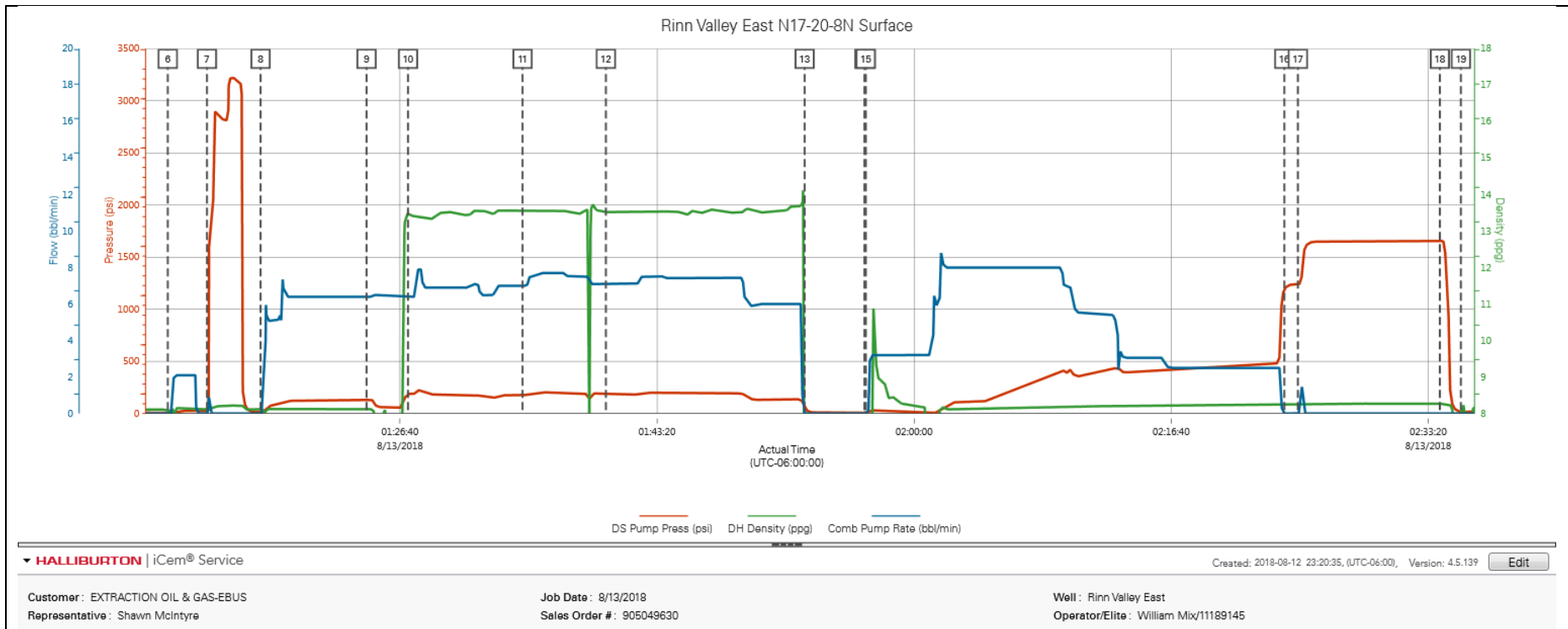
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press <i>(psi)</i>	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	Comments
Event	1	Call Out	Call Out	8/12/2018	17:30:00	USER				CALLED OUT BY SERVICE COORDINATOR FOR O/L AT 0000
Event	2	Depart Shop for Location	Depart Shop for Location	8/12/2018	18:30:00	USER				HELD MEETING WITH ALL PERSONNEL IN CONVOY TO DISCUSS DIRECTIONS AND HAZARDS ASSOCIATED WITH DRIVING, ALL FIT TO DRIVE.
Event	3	Arrive At Loc	Arrive At Loc	8/12/2018	23:30:00	USER				UPON ARRIVAL MET WITH COMPANY MAN TO DISCUSS JOB DETAILS AND CALCULATIONS, PERFORMED HAZARD HUNT AND SITE ASSESSMENT.
Event	4	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	8/13/2018	00:20:00	USER				DISCUSSED RIGGING UP HAZARDS AND PROCEDURE ACCORDING TO HMS.
Event	5	Safety Meeting - Pre Job	Safety Meeting - Pre Job	8/13/2018	00:30:00	USER				HELD SAFETY MEETING WITH ALL JOB ASSOCIATED PERSONNEL TO DISCUSS JOB PROCEDURE, HAZARDS AND STOP WORK AUTHORITY. Water test- PH-6, Chlor-0, Temp-65. Cement temp-70.
Event	6	Start Job	Start Job	8/13/2018	01:11:37	COM4	7.00	8.11	0.00	FILLED LINES WITH 3 BBLS OF FRESH WATER. 2 BPM, 28 PSI.
Event	7	Test Lines	Test Lines	8/13/2018	01:14:09	COM4	16.00	8.12	0.00	PERFORMED A 3000 PSI PRESSURE TEST AFTER PERFORMING A 500 PSI KICKOUT TEST AND A 5TH GEAR STALL.
Event	8	Pump Spacer 1	Pump Spacer 1	8/13/2018	01:17:38	COM4	11.00	8.12	0.00	PUMPED 40 BBLS OF FRESH WATER SPACER AT 6 BPM, 120 PSI. FULL RETURNS.
Event	9	Pump Spacer 2	Pump Spacer 2	8/13/2018	01:24:30	COM4	130.00	8.12	6.40	PUMPED 10 BBLS OF DYE SPACER WATER AT 6.5 BPM, 120 PSI. FULL RETURNS.
Event	10	Pump Cement	Pump Cement	8/13/2018	01:27:11	COM4	186.00	13.48	6.40	PUMPED 170.4 BBLS (550 SKS) OF 13.5#, 1.74y, 9.2wr. SWIFTCEM CEMENT AT 7.5 BPM, 145 PSI. FULL RETURNS.
Event	11	Check Weight	Check Weight	8/13/2018	01:34:37	COM4	178.00	13.56	7.00	USED PRESSURIZED MUD SCALES TO WEIGH UP

CEMENT. CEMENT WEIGHED UP AT 13.5#

Event	12	Check Weight	Check Weight	8/13/2018	01:40:01	COM4	184.00	13.52	7.10	USED PRESSURIZED MUD SCALES TO WEIGH UP CEMENT. CEMENT WEIGHED UP AT 13.5#
Event	13	Shutdown	Shutdown	8/13/2018	01:52:54	COM4	49.00	4.33	0.00	SHUTDOWN TO WASH UP ON PLUG.
Event	14	Drop Top Plug	Drop Top Plug	8/13/2018	01:56:47	COM4	7.00	6.80	0.00	ADAM COVINGTON DROPPED HALLIBURTON 9 5/8" TOP PLUG. DRILLER WITNESSED.
Event	15	Pump Displacement	Pump Displacement	8/13/2018	01:56:52	COM4	7.00	6.80	0.00	PUMPED 120 BBLS OF FRESH WATER DISPLACEMENT AT 8 BPM, 100 PSI TO START HAD TO SLOW DOWN DEPENDING ON THE PRESSURE.
Event	16	Bump Plug	Bump Plug	8/13/2018	02:24:00	COM4	1188.00	8.26	0.00	BUMPED PLUG AT 2.5 BPM. FCP 465 PSI. WENT UP TO 900 PSI. HELD FOR A MINUTE. GOT 25 BBLS OF CEMENT BACK TO SURFACE.
Event	17	Pressure Up Well	Pressure Up Well	8/13/2018	02:24:53	COM4	1239.00	8.25	0.00	PERFORMED A 10 MINUTE CASING TEST TO 1500 PSI. NO BLEED BACK.
Event	18	Other	Other	8/13/2018	02:34:05	COM4	1664.00	8.26	0.00	CHECKED FLOATS. GOT 1.5 BBLS OF WATER BACK TO THE TRUCK. INDICATING THAT THE FLOATS HELD.
Event	19	End Job	End Job	8/13/2018	02:35:27	COM4	16.00	7.87	0.00	TD-1606 13.5" OH, TP-1605 9 5/8" 36#, FC-1561. WATER-70 DEGREES, PH-7, CHLORIDES-0, SULFATES-0. 25 BBLS OF CEMENT TO SURFACE.
Event	20	Safety Meeting - Pre Rig-Down	Pre-Rig Down Safety Meeting	8/13/2018	02:45:00	USER	-9.00	0.09	0.00	DISCUSSED RIGGING DOWN HAZARDS AND PROCEDURE ACCORDING TO HMS.
Event	21	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	8/13/2018	03:40:00	USER				HELD MEETING WITH ALL HES EMPLOYESS IN CONVOY TO DISCUSS DIRECTIONS AND HAZARDS ASSOCIATED WITH DRIVING, ALL FIT TO DRIVE.
Event	22	Depart Location	Depart Location	8/13/2018	03:50:00	USER				PRE JOURNEY MANAGEMENT PRIOR TO DEPARTURE.
Event	23	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	8/13/2018	18:20:00	USER				HELD MEETING WITH ALL HES EMPLOYESS IN CONVOY TO DISCUSS DIRECTIONS AND HAZARDS ASSOCIATED WITH DRIVING, ALL FIT TO DRIVE.

3.0 Attachments

3.1 Rinn Valley East N17-20-8N Surface – Job Chart with Events



3.2 Rinn Valley East N17-20-8N Surface – Job Chart without Events

