

HALLIBURTON

iCem[®] Service

SRC ENERGY INC

Troudt 41N-23A-M Production

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 **Troudt 41N-23A-M** 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 29bbls 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 #: 359915		Ship To #: 3851238		Quote #:		Sales Order #: 0905117437				
Customer: SRC ENERGY INC-EBUS				Customer Rep: Kent Priddy						
Well Name: TROUDT			Well #: 41N-23A-M			API/UWI #: 05-123-46240-00				
Field: WATTENBERG		City (SAP): LUCERNE		County/Parish: WELD		State: COLORADO				
Legal Description: NE NW-27-6N-66W-760FNL-1700FWL										
Contractor: PRECISION DRLG					Rig/Platform Name/Num: PRECISION 562					
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HB41307					Srv Supervisor: Adam Covington					
Job										
Formation Name										
Formation Depth (MD)		Top			Bottom					
Form Type										
Job depth MD		14938ft			BHST			Job Depth TVD		
Water Depth										
Perforation Depth (MD)		From			To			Wk Ht Above Floor		
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	1830		1830
Casing		5.5	4.778	20	TXP-BTC	P110IC	0	14938		0
Open Hole Section			8.5				1830	14960	6877	0
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5			14938		Top Plug	5.5	1		
Float Shoe	5.5					Bottom Plug	5.5	1		
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	214		
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	Tuned Spacer III	Tuned Spacer III	40	bbl	11.5	3.86		6		
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	1176	sack	13.2	1.57		8	7.54	

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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	NeoCem	NeoCem TM	312.8	bbl	13.2	2.04		8	9.77
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	MMCR Displacement	MMCR Displacement	20	bbl	8.34			8	
0.2220 gal/bbl			MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)						
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
5	Clay-web Displacement	Clay-web Displacement	239	bbl	8.33			8	
1 gal/bbl			CLA-WEB - BULK (101985043)						
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
6	MMCR Displacement	MMCR Displacement	70	bbl	8.34			8	
0.20 gal/bbl			MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)						
Cement Left In Pipe	Amount	104 ft	Reason					Shoe Joint	
<p>Comment TD- 14960' 8.5", TP-14938' 5.5" 20#. WET SHOE SUB-14834'. TVD-6906', SURFACE CASING-1830' 9 5/8" 36#. MUD 10.2#, WATER- 74 DEGREES, CHLORIDES-0, PH-7, SULFATES-0. ESTIMATED TOP OF TAIL CEMENT IS 7327'</p> <p>PUMPED 40 BBL OF 11.5#, 3.86y, 24.10 wr, TUNED SPACER III WITH 20 GALLONS OF DUAL SPACER B, 20 GALLONS OF MUSOL A AND 10 GALLONS OF D-AIR. AT 4 BPM, 380 PSI. FULL RETURNS.</p> <p>PUMPED 328.8 BBLs (1176 SKS) OF 13.2#, 1.57y, 7.54wr, ELASTICEM LEAD CEMENT. AT 8 BPM, 500 PSI. FULL RETURNS.</p> <p>PUMPED 313 BBLs (861 SKS) OF 13.2#, 2.04y, 9.77wr, NEOCEM TAIL CEMENT. AT 8 BPM, 639 PSI. FULL RETURNS.</p> <p>PUMPED 329 BBLs OF DISPLACEMENT. FIRST 20 BBLs AND LAST 70 BBLs WITH MMCR DISPERSED THE REST WAS PUMPED WITH CLA-WEB AND BE 3, WATER DISPLACEMENT AT 10.5 BPM, 430 PSI. CAUGHT CEMENT AT 20 BBLs AWAY.</p> <p>29 BBLs OF CEMENT BACK TO SURFACE</p>									

2.0 Real-Time Job Summary

2.1 Job Event Log

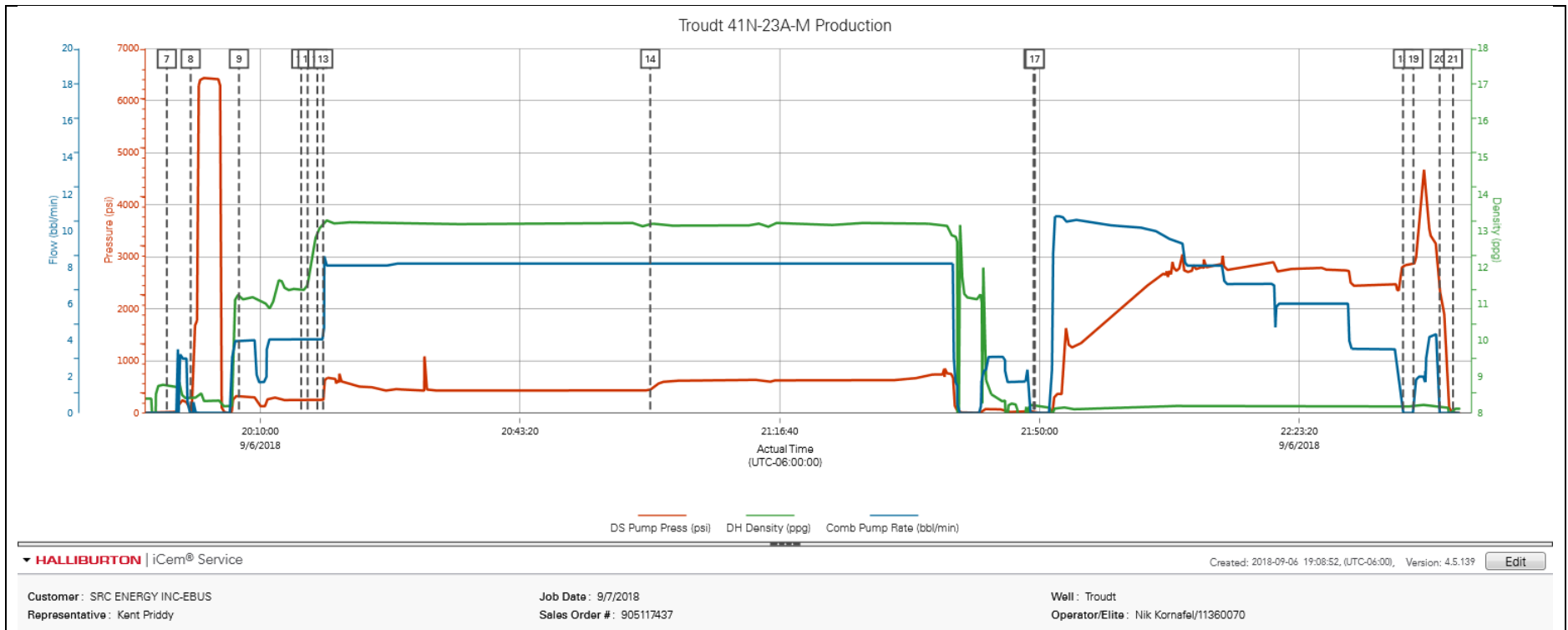
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	9/6/2018	11:00:00	USER				CALLED OUT BY SERVICE COORDINATOR FOR O/L AT 1700
Event	2	Depart Yard Safety Meeting	Pre-Convoy Safety Meeting	9/6/2018	15:45:00	USER				HELD MEETING WITH ALL HES EMPLOYEES IN CONVOY TO DISCUSS DIRECTIONS AND HAZARDS ASSOCIATED WITH DRIVING, ALL FIT TO DRIVE.
Event	3	Depart Shop for Location	Depart Shop for Location	9/6/2018	16:00:00	USER				HELD MEETING WITH ALL PERSONNEL IN CONVOY TO DISCUSS DIRECTIONS AND HAZARDS ASSOCIATED WITH DRIVING, ALL FIT TO DRIVE.
Event	4	Arrive At Loc	Arrive At Loc	9/6/2018	17:00:00	USER				UPON ARRIVAL MET WITH COMPANY MAN TO DISCUSS JOB DETAILS AND CALCULATIONS, PERFORMED HAZARD HUNT AND SITE ASSESSMENT.
Event	5	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	9/6/2018	17:10:00	USER				DISCUSSED RIGGING UP HAZARDS AND PROCEDURE ACCORDING TO HMS.
Event	6	Safety Meeting - Pre Job	Safety Meeting - Pre Job	9/6/2018	19:35:00	USER	-1.00	8.40	0.00	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	7	Start Job	Start Job	9/6/2018	19:58:01	COM4	4.00	8.76	0.00	FILLED LINES WITH 3 BBLs OF FRESH WATER. 300 PSI, 3 BPM. FULL RETURNS.
Event	8	Test Lines	Test Lines	9/6/2018	20:01:04	COM4	33.00	8.40	0.00	PRESSURE TESTED LINES TO 6500 PSI, AFTER PERFORMING A 500 PSI KICKOUT TEST AND A 5TH GEAR STALL. HELD FOR 3 MINUTES. NO LEAKS.
Event	9	Pump Spacer 1	Pump Spacer 1	9/6/2018	20:07:17	COM4	321.00	11.25	4.00	PUMPED 40 BBL OF 11.5#, 3.86y, 24.10 wr, TUNED SPACER III WITH 20 GALLONS OF DUAL SPACER B, 20 GALLONS OF MUSOL A AND 10 GALLONS OF D-AIR. AT 4 BPM, 380 PSI. FULL RETURNS.
Event	10	Check Weight	Check Weight	9/6/2018	20:15:15	COM4	232.00	11.41	4.10	USED PRESSURIZED MUD SCALES TO WEIGH UP SPACER. SPACER WEIGHED UP AT 11.5#

Event	11	Drop Bottom Plug	Drop Bottom Plug	9/6/2018	20:16:05	COM4	230.00	11.56	4.00	ADAM COVINGTON DROPPED NON HALLIBURTON 5.5" BOTTOM PLUG. CO. MAN WITNESSED.
Event	12	Pump Lead Cement	Pump Lead Cement	9/6/2018	20:17:20	COM4	264.00	12.95	4.00	PUMPED 328.8 BBLs (1176 SKS) OF 13.2#, 1.57y, 7.54wr, ELASTICEM LEAD CEMENT. AT 8 BPM, 500 PSI. FULL RETURNS.
Event	13	Check Weight	Check Weight	9/6/2018	20:18:04	COM4	246.00	13.20	4.10	USED PRESSURIZED MUD SCALES TO WEIGH UP CEMENT. CEMENT WEIGHED UP AT 13.2#
Event	14	Pump Tail Cement	Pump Tail Cement	9/6/2018	21:00:03	COM4	443.00	13.19	8.20	PUMPED 313 BBLs (861 SKS) OF 13.2#, 2.04y, 9.77wr, NEOCEM TAIL CEMENT. AT 8 BPM, 650 PSI. FULL RETURNS.
Event	15	Shutdown	Shutdown	9/6/2018	21:49:14	COM4	32.00	8.18	0.00	SHUTDOWN TO WASH UP PUMPS AND LINES.
Event	16	Drop Top Plug	Drop Top Plug	9/6/2018	21:49:18	COM4	22.00	8.26	0.00	ADAM COVINGTON DROPPED 5.5" NON HALLIBURTON TOP PLUG. CO. MAN WITNESSED.
Event	17	Pump Displacement	Pump Displacement	9/6/2018	21:49:24	COM4	12.00	8.18	0.00	PUMPED 329 BBLs OF DISPLACEMENT. FIRST 20 BBLs AND LAST 70 BBLs WITH MMCR DISPERSED THE REST WAS PUMPED WITH CLA-WEB AND BE 3, WATER DISPLACEMENT AT 10.5 BPM, 430 PSI. CAUGHT CEMENT AT 20 BBLs AWAY.
Event	18	Bump Plug	Bump Plug	9/6/2018	22:36:39	COM4	2831.00	8.19	0.00	BUMPED PLUG. 2490 PSI FCP, 2963 PSI BUMP PRESSURE. 2 BPM
Event	19	Pressure Up Well	Pressure Up Well	9/6/2018	22:37:59	COM4	2866.00	8.18	0.00	STARTED PUMPING TO PRESSURE UP AND SHIFT SLEEVE. SLEEVE SHIFTED AT 4910 PSI, 2 BPM. THEN IMMEDIATELY WENT INTO PUMPING A 6 BBL WET SHOE (AS PER SRC), 3 BPM, 3450 PSI.
Event	20	Other	Other	9/6/2018	22:41:21	COM4	2381.00	8.18	0.00	CHECKED FLOATS. GOT 2.5 BBLs BACK TO THE TRUCK, INDICATING THAT THE FLOATS HELD.
Event	21	End Job	End Job	9/6/2018	22:43:04	COM4	7.00	8.11	0.00	TD- 14960' 8.5". TP-14938' 5.5" 20#. WET SHOE SUB-14834'. TVD-6906', SURFACE CASING-1830' 9 5/8" 36#. MUD 10.2#, WATER- 74 DEGREES, CHLORIDES-0, PH-7, SULFATES-0. ESTIMATED TOP OF TAIL CEMENT IS 7327' 29 BBLs OF CEMENT BACK TO SURFACE.
Event	22	Safety Meeting - Pre Rig-Down	Pre-Rig Down Safety Meeting	9/6/2018	23:30:00	USER				DISCUSSED RIGGING DOWN HAZARDS AND PROCEDURE ACCORDING TO HMS.
Event	23	Pre-Convoy Safety	Pre-Convoy Safety	9/7/2018	00:20:00	USER				HELD MEETING WITH ALL HES EMPLOYEES IN CONVOY TO

	Meeting	Meeting						
Event	24	Depart Location	Depart Location	9/7/2018	00:30:00	USER		
								DISCUSS DIRECTIONS AND HAZARDS ASSOCIATED WITH DRIVING, ALL FIT TO DRIVE.
								PRE JOURNEY MANAGEMENT PRIOR TO DEPARTURE.

3.0 Attachments

3.1 Troudt 41N-23A-M Production – Job Chart with Events



3.2 Troudt 41N-23A-M Production – Job Chart without Events

