

HALLIBURTON

iCem[®] Service

SRC ENERGY INC

Troudt 1C-23-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 1C-23-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 30bbbls 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 #: 3851306	Quote #:	Sales Order #: 0905068240							
Customer: SRC ENERGY INC-EBUS		Customer Rep: Kevin Brakovec								
Well Name: TROUDT	Well #: 1C-23-M	API/UWI #: 05-123-46242-00								
Field: WATTENBERG	City (SAP): LUCERNE	County/Parish: WELD	State: COLORADO							
Legal Description: NE NW-27-6N-66W-760FNL-1654FWL										
Contractor: PRECISION DRLG		Rig/Platform Name/Num: PRECISION 562								
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HB41307		Srv Supervisor: Nicholas Roles								
Job										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type	BHST									
Job depth MD	15524ft	Job Depth TVD	7159ft							
Water Depth		Wk Ht Above Floor	3ft							
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		9.625	8.921	36	LTC	J-55	0	1816		1816
Casing		5.5	4.778	20	TXP-BTC	P110IC	0	15524		7159
Open Hole Section			8.5				1816	15540	1816	7159
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5			15524		Top Plug	5.5	1	WTF	
Float Shoe	5.5					Bottom Plug	5.5	1	WTF	
Float Collar	5.5			15474		SSR plug set	5.5		HES	
WS SUB	5.5			15415		Plug Container	5.5	1	HES	
Stage Tool	5.5					Centralizers	5.5		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	Tuned Spacer III	Tuned Spacer III	40	bbl	11.5	3.86		5		
Stage/Plug #: 2										
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	1276	sack	13.2	1.57		8	7.54	

last updated on 8/20/2018 11:38:37 AM

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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	848	sack	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	40	bbl	8.34			10	
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	232	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	0 ft		Reason			Wet Shoe	
Mix Water:		pH 06	Mix Water Chloride:		0 ppm		Mix Water Temperature:		68 °F °C
Cement Temperature:		## °F °C	Plug Displaced by:		8.33 lb/gal		Disp. Temperature:		68 °F °C
Plug Bumped?		Yes	Bump Pressure:		2900 psi MPa		Floats Held?		Yes
Cement Returns:		30 bbl m3	Returns Density:		## lb/gal kg/m3		Returns Temperature:		## °F °C
Comment Got 30bbls cement to surface. Estimated TOT-7730'									

2.0 Real-Time Job Summary

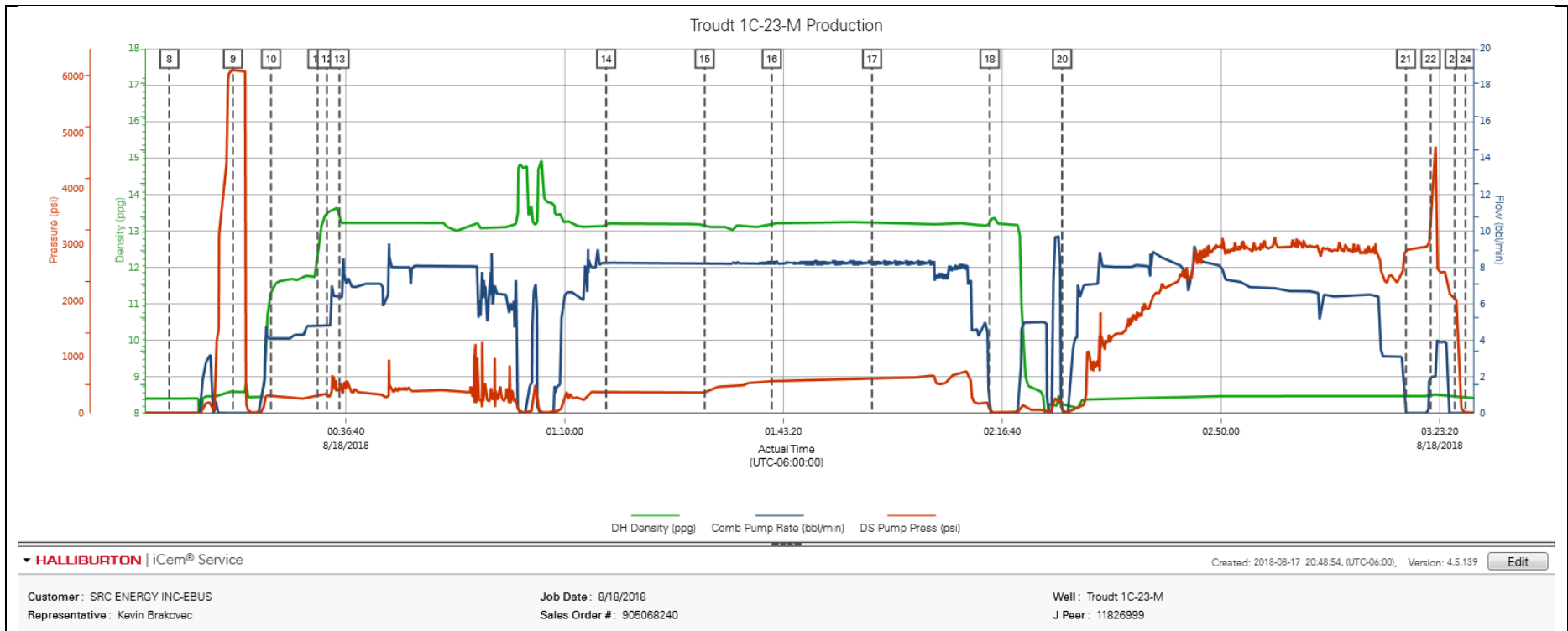
2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	8/17/2018	14:00:00	USER				Called out by Service Coordinator for O/L at 2000
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	8/17/2018	18:45:00	USER				Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	8/17/2018	19:00:00	USER				Journey Management prior to departure
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	8/17/2018	20:00:00	USER				Upon arrival met with company man to discuss job details and calculations, performed hazard hunt and site assessment.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	8/17/2018	20:15:00	USER				Discussed rigging up hazards and procedure according to HMS.
Event	6	Other	Other	8/17/2018	21:00:00	USER				Water test- PH-6, Chlor-0, Temp-68.
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	8/17/2018	23:30:00	USER				Held safety meeting with all job associated personnel to discuss job procedure, hazards and stop work authority.
Event	8	Start Job	Start Job	8/18/2018	00:09:45	COM4	8.40	0.00	7.00	TD-15540', TP-15524' 5.5" 20#, WS Sub-15415', TVD-7159', OH-8.5", SURF-1816' 9.625" 36#, MUD-10.1#
Event	9	Test Lines	Test Lines	8/18/2018	00:19:27	COM4	8.59	0.00	6122.00	Pumped 5bbls fresh water to fill lines, closed manifold and performed 500psi k/o function test, proceeded to perform 5th gear stall at 1452psi, continued to bring pressure up to 6000psi. Pressure stabilized and held with no leaks
Event	10	Pump Spacer 1	Pump Spacer 1	8/18/2018	00:25:15	COM4	11.31	4.10	338.00	Pumped 40bbls 11.5# 3.8y 23.8g/s Tuned Spacer III with 20g Musol A, 20g Dual Spacer B and 10g D-Air at 5bpm 340psi.
Event	11	Drop Bottom Plug	Drop Bottom Plug	8/18/2018	00:32:20	COM4	12.28	4.80	323.00	Dropped by HES supervisor, witnessed by company man.

Event	12	Pump Lead Cement	Pump Lead Cement	8/18/2018	00:33:45	COM4	13.49	4.80	345.00	Pumped 1276sks or 357bbls 13.2# 1.57y 7.54g/s Elasticem at 8bpm 400psi.
Event	13	Check Weight	Check Weight	8/18/2018	00:35:41	COM4	13.21	6.40	389.00	Weight verified with pressurized mud scales.
Event	14	Check Weight	Check Weight	8/18/2018	01:16:19	COM4	13.19	8.20	359.00	Weight verified with pressurized mud scales.
Event	15	Pump Tail Cement	Pump Tail Cement	8/18/2018	01:31:19	COM4	13.10	8.20	375.00	Pumped 848sks or 308bbls 13.2# 2.04y 9.77g/s Neocem at 8bpm 475psi.
Event	16	Check Weight	Check Weight	8/18/2018	01:41:33	COM4	13.22	8.10	581.00	Weight verified with pressurized mud scales.
Event	17	Check Weight	Check Weight	8/18/2018	01:56:50	COM4	13.23	8.30	602.00	Weight verified with pressurized mud scales.
Event	18	Shutdown	Shutdown	8/18/2018	02:14:46	COM4	13.31	0.00	53.00	Pumped 5bbls fresh water to clean through pumps and lines.
Event	19	Drop Top Plug	Drop Top Plug	8/18/2018	02:25:46	COM4	8.22	0.00	59.00	Dropped by HES supervisor, witnessed by company man.
Event	20	Pump Displacement	Pump Displacement	8/18/2018	02:25:49	COM4	8.22	0.00	49.00	Pumped 342bbls fresh water with 10g MMCR in first 40bbls, 10g MMCR in the last 70bbls, 20g clayweb and 3# biocide throughout.
Event	21	Bump Plug	Bump Plug	8/18/2018	03:18:11	COM4	8.48	0.00	2901.00	Slowed down to 3bpm at 320bbls away, final circulating pressure-2400psi, bump pressure-2900psi.
Event	22	Pressure Up Well	Pressure Up Well	8/18/2018	03:21:57	COM4	8.54	2.00	3423.00	Pumped fresh water to sheer at 4750psi, continued to pump 6bbls fresh water at 4bpm 2500psi.
Event	23	Check Floats	Check Floats	8/18/2018	03:25:37	USER	8.46	0.00	2053.00	Released pressure and got 2.5bbls back to pump. Floats held.
Event	24	End Job	End Job	8/18/2018	03:27:16	COM4	8.41	0.00	7.00	Got 30bbls cement to surface. Estimated TOT-7730'
Event	25	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	8/18/2018	03:30:00	USER				All HSE present. Discussed red zone areas and trapped pressure hazards. Watch for suspended loads and rig down procedures, including hand placement, lifting techniques, and swing radius.
Event	26	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	8/18/2018	05:45:00	USER				All HSE present and fit to drive. Aware of directions and hazards.
Event	27	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	8/18/2018	06:00:00	USER				Pre journey management prior to departure.

3.0 Attachments

3.1 Troutd 1C-23-M Production – Job Chart with Events



3.2 Troutd 1C-23-M Production – Job Chart without Events

