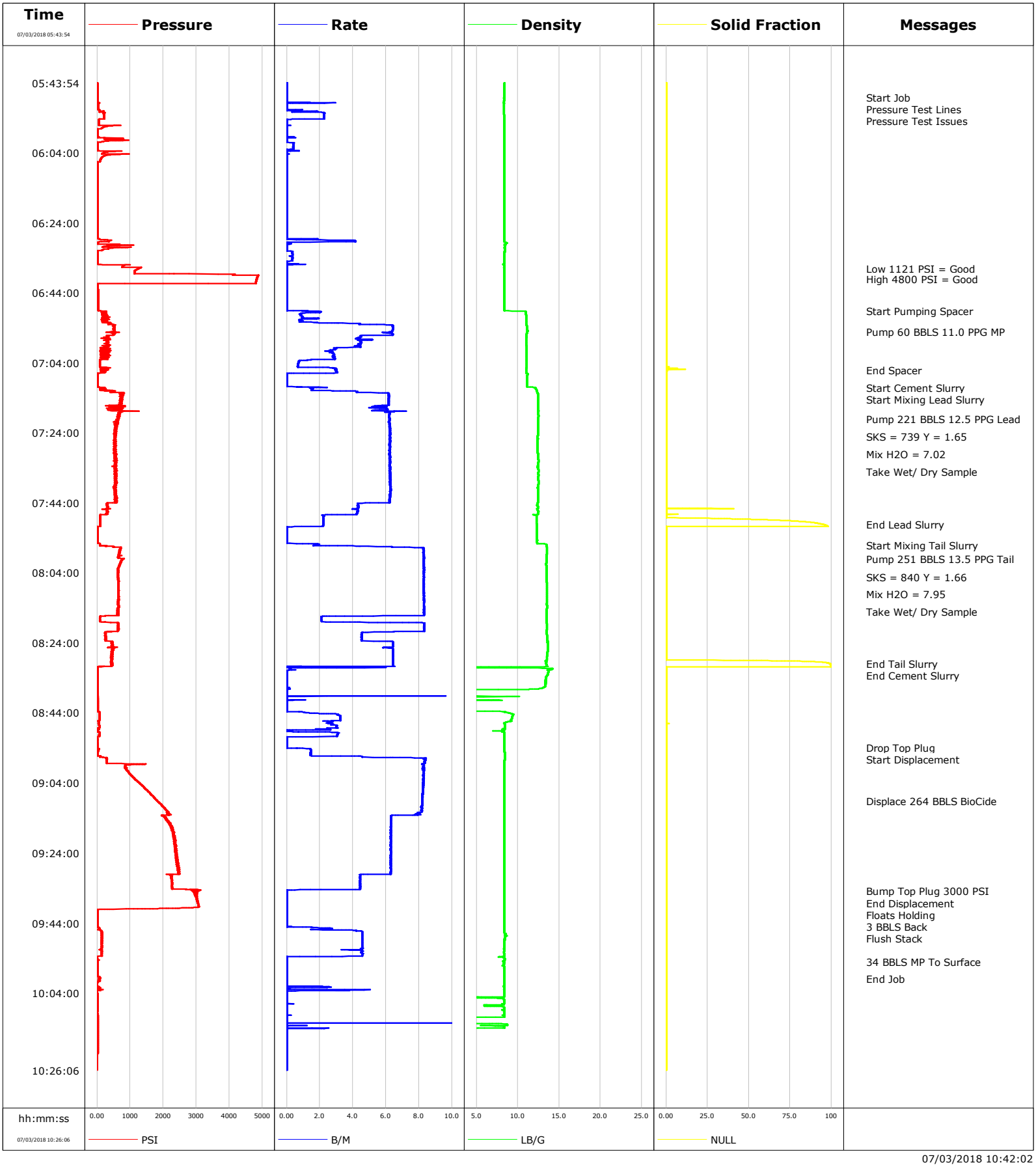
Schlumberger

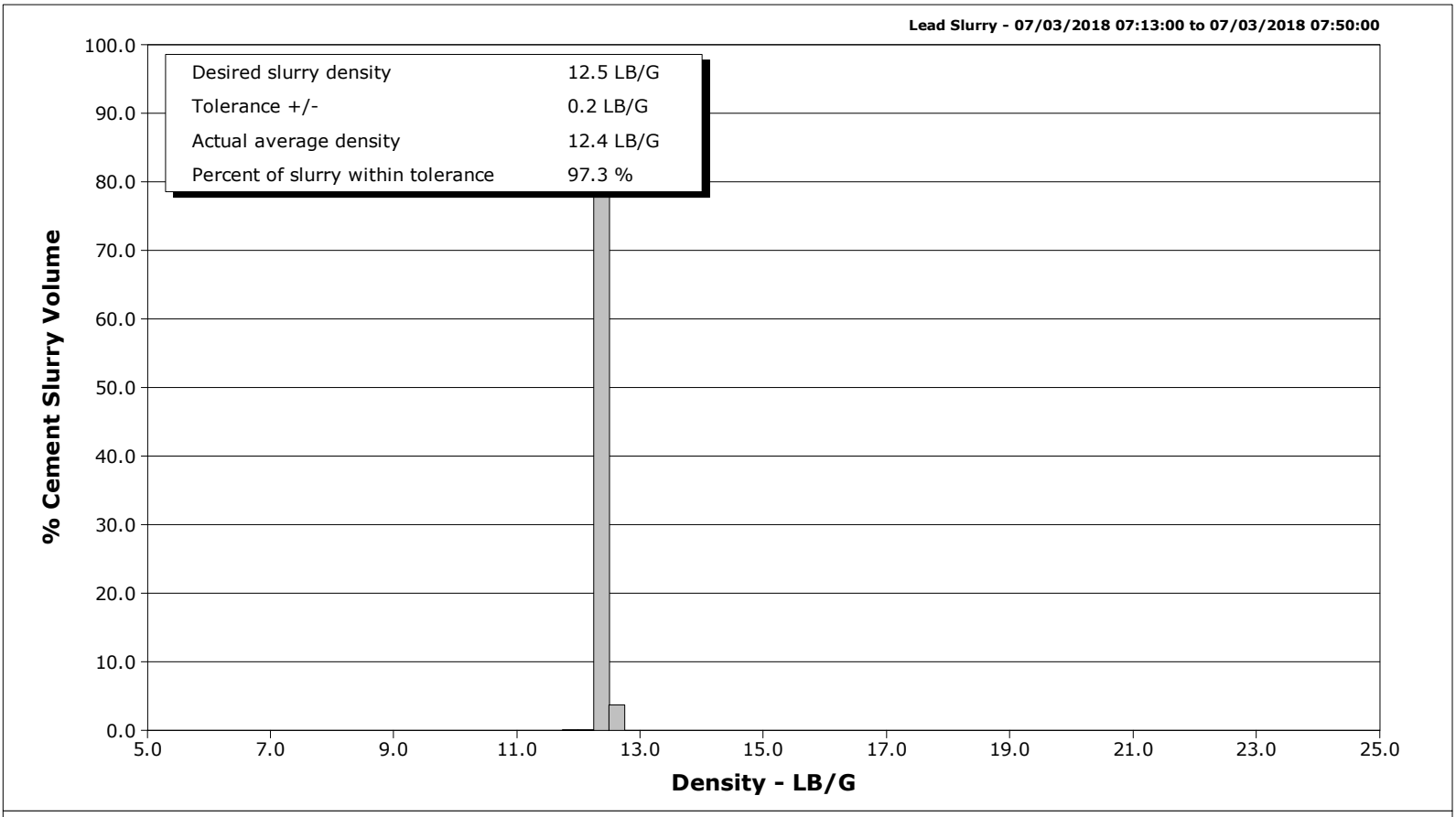
Cementing Job Report

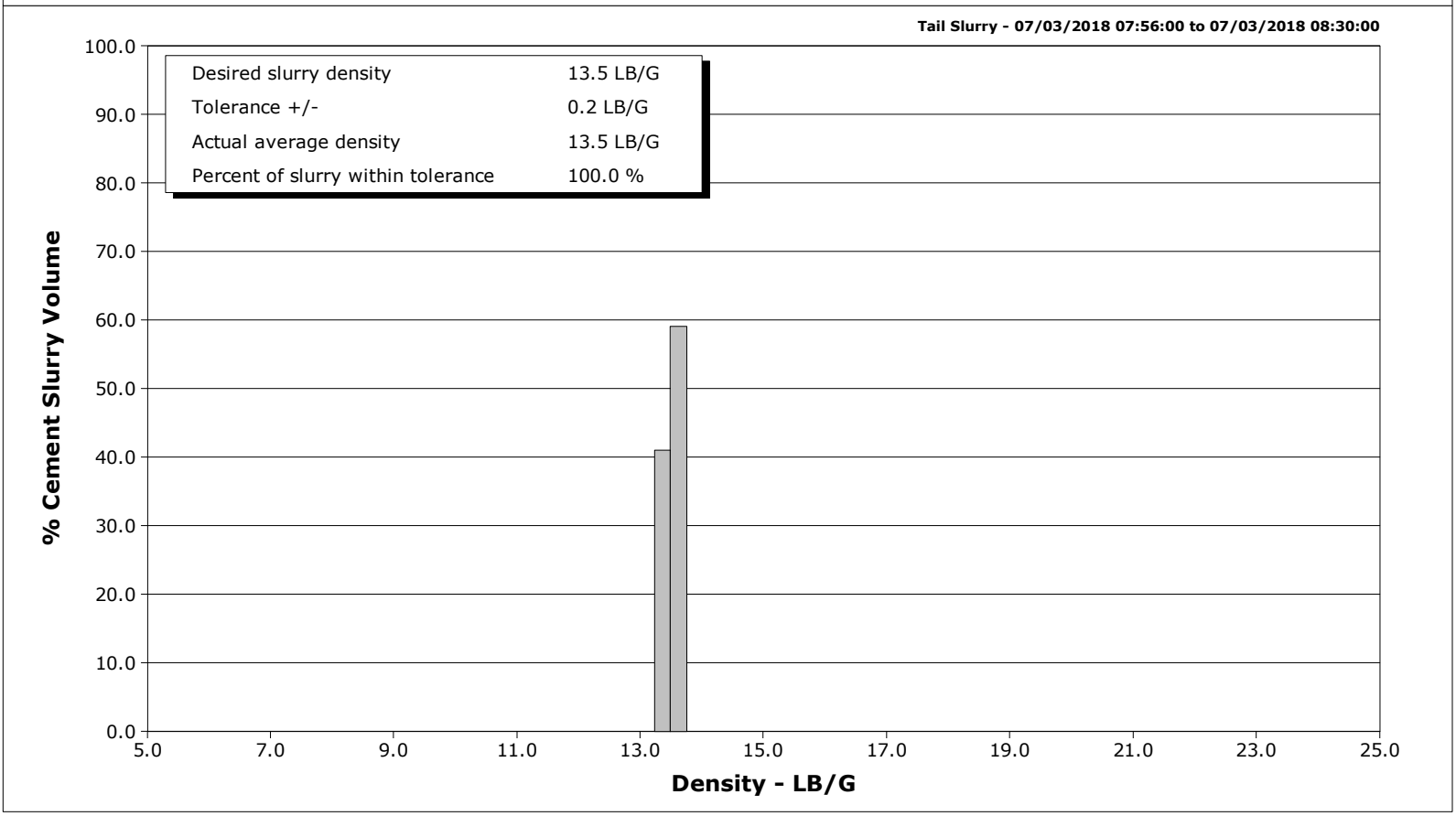
Well	Ruegge	**Client**	Crestone Peak
Field	Wattenberg	**SIR No.**	2741115
Engineer	Conley Jensen/ Kyle Jaramillo	**Job Type**	5.5" Monobore
Country	United States	**Job Date**	07-03-2018



Schlumberger Cementing Qa/Qc Density Report

Well	Ruegge	**Client**	Crestone Peak
Field	Wattenberg	**SIR No.**	2741115
Engineer	Conley Jensen/ Kyle Jaramillo	**Job Type**	5.5" Monobore
Country	United States	**Job Date**	07-03-2018





Schlumberger Cementing Service Report

Customer	Job Number
Crestone Peak	2741115

Well	Location (legal)	Schlumberger Location	Job Start
Ruegge 3K-4H-N165		CWY	Jul/03/2018

Field	Formation Name/Type	Deviation	Bit Size	Well MD	Well TVD
Wattenberg	Shale	deg	8.5 in	11918.0 ft	7154.0 ft

County	State/Province	BHP	BHST	BHCT	Pore Press. Gradient
	Colorado	psi	225 degF	194 degF	lb/gal

Well Master	API/UWI
0631761978	05123465630000

Rig Name	Drilled For	Service Via
Ensign 140	Oil	Land

Offshore Zone	Well Class	Well Type
	New	Development

Drilling Fluid Type	Max. Density	Plastic Viscosity
	lb/gal	cP

Service Line	Job Type
Cementing	5.5" Monobore

Max. Allowed Tub. Press	Max. Allowed Ann. Press	WH Connection
psi	psi	Single Cement head

Service Instructions

Perform 5.5" Monobore Per Proposal Design.
Top of 12.5 ppg FlexSEAL WELLBOND = 1,200 ft
Top of 13.5 ppg PozG Tail = 6,000 ft
8.5" open hole to TD
10% excess from surface – 6,000 ft
0% excess from 6,000 ft – TD

Casing/Liner

Depth, ft	Size, in	Weight, lb/ft	Grade	Thread
2483.0	9.6	40.0	J55	8RD
11918.0	5.5	20.0	P110	8RD

Tubing/Drill Pipe

T/D	Depth, ft	Size, in	Weight, lb/ft	Grade	Thread

Perforations/Open Hole

Top, ft	Bottom, ft	shot/ft	No. of Shots	Total Interval
ft	ft			ft
ft	ft			Diameter
ft	ft			in

Treat Down	Displacement	Packer Type	Packer Depth
Casing	264.0 bbl		ft

Tubing Vol.	Casing Vol.	Annular Vol.	Openhole Vol.
bbl	264.0 bbl	500.0 bbl	779.0 bbl

Casing/Tubing Secured	1 Hole Vol. Circulated prior to Cement
X	X

Lift Pressure	psi

Pipe Rotated	Pipe Reciprocated
☐	☐

No. Centralizers	Top Plugs	Bottom Plugs
	1	

Cement Head Type	Single

Job Scheduled For	Arrived on Location	Leave Location
Jul/03/2018 02:00	Jul/03/2018 02:00	Jul/03/2018 11:00

Casing Tools		Squeeze Job	
Shoe Type	Float	Squeeze Type	
Shoe Depth	11918.0 ft	Tool Type	
Stage Tool Type		Tool Depth	ft
Stage Tool Depth	ft	Tail Pipe Size	in
Collar Type	Float	Tail Pipe Depth	ft
Collar Depth	11907.0 ft	Sqz. Total Vol.	bbl

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
07/03/2018	05:43:54	7	0.0	8.36	0.0	Started Acquisition
07/03/2018	05:45:24	7	0.0	8.36	0.0	
07/03/2018	05:46:54	5	0.0	8.36	0.0	
07/03/2018	05:48:00	5	0.0	8.36	0.0	Start Job
07/03/2018	05:48:24	5	0.0	8.35	0.0	
07/03/2018	05:49:00	5	0.0	8.34	0.0	Pressure Test Lines
07/03/2018	05:49:54	42	0.0	8.33	0.4	
07/03/2018	05:51:00	29	0.0	8.31	0.4	Pressure Test Issues
07/03/2018	05:51:24	31	0.0	8.31	0.4	
07/03/2018	05:52:54	209	2.3	8.34	2.3	
07/03/2018	05:54:24	50	0.0	8.37	5.4	
07/03/2018	05:55:54	46	0.0	8.37	5.4	
07/03/2018	05:57:24	7	0.0	8.37	5.5	
07/03/2018	05:58:54	13	0.0	8.37	5.5	
07/03/2018	06:00:24	693	0.0	8.36	5.5	
07/03/2018	06:01:54	7	0.4	8.36	5.9	
07/03/2018	06:03:24	659	0.3	8.37	6.3	
07/03/2018	06:04:54	191	0.0	8.37	6.4	
07/03/2018	06:06:24	86	0.0	8.37	6.4	
07/03/2018	06:07:54	6	0.0	8.37	6.4	
07/03/2018	06:09:24	6	0.0	8.37	6.4	

Well	Field	Job Start	Customer	Job Number
Ruegge 3K-4H-N165	Wattenberg	Jul/03/2018	Crestone Peak	2741115

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
07/03/2018	06:12:24	5	0.0	8.37	6.4	
07/03/2018	06:13:54	5	0.0	8.37	6.4	
07/03/2018	06:15:24	5	0.0	8.37	6.4	
07/03/2018	06:16:54	5	0.0	8.37	6.4	
07/03/2018	06:18:24	5	0.0	8.37	6.4	
07/03/2018	06:19:54	5	0.0	8.37	6.4	
07/03/2018	06:21:24	5	0.0	8.37	6.4	
07/03/2018	06:22:54	5	0.0	8.37	6.4	
07/03/2018	06:24:24	5	0.0	8.37	6.4	
07/03/2018	06:25:54	5	0.0	8.37	6.4	
07/03/2018	06:27:24	6	0.0	8.37	6.4	
07/03/2018	06:28:54	421	3.9	8.37	6.9	
07/03/2018	06:30:24	625	0.0	8.43	9.0	
07/03/2018	06:31:54	129	0.0	8.42	9.0	
07/03/2018	06:33:24	7	0.2	8.39	9.4	
07/03/2018	06:34:54	5	0.0	8.37	9.9	
07/03/2018	06:36:24	769	0.0	8.37	10.0	
07/03/2018	06:37:00	1256	0.0	8.37	10.0	Low 1121 PSI = Good
07/03/2018	06:37:54	1126	0.0	8.37	10.0	
07/03/2018	06:39:24	4855	0.0	8.37	10.0	
07/03/2018	06:40:00	4836	0.0	8.37	10.0	High 4800 PSI = Good
07/03/2018	06:40:54	4815	0.0	8.37	10.0	
07/03/2018	06:42:24	9	0.0	8.37	0.0	
07/03/2018	06:43:54	30	0.0	8.37	0.0	
07/03/2018	06:45:24	32	0.0	8.37	0.0	
07/03/2018	06:46:54	35	0.0	8.37	0.0	
07/03/2018	06:48:24	38	0.0	8.37	0.0	
07/03/2018	06:49:00	39	0.0	8.37	0.0	Start Pumping Spacer
07/03/2018	06:49:54	140	0.9	10.97	1.3	
07/03/2018	06:51:24	313	1.8	11.02	2.9	
07/03/2018	06:52:54	332	4.4	11.03	5.5	
07/03/2018	06:54:24	536	6.4	11.14	14.9	
07/03/2018	06:55:00	463	6.4	11.17	18.8	Pump 60 BBLS 11.0 PPG MP
07/03/2018	06:55:54	507	6.4	11.04	24.4	
07/03/2018	06:57:24	313	5.1	11.01	31.6	
07/03/2018	06:58:54	284	4.3	11.04	38.3	
07/03/2018	07:00:24	426	2.8	11.09	43.6	
07/03/2018	07:01:54	221	2.8	11.08	47.7	
07/03/2018	07:03:24	87	0.7	11.07	51.4	
07/03/2018	07:04:54	85	0.7	11.07	52.4	
07/03/2018	07:06:00	268	3.0	11.03	54.8	End Spacer
07/03/2018	07:06:24	154	3.0	11.03	56.0	
07/03/2018	07:07:54	9	0.0	11.16	0.0	
07/03/2018	07:09:24	8	0.0	11.16	0.0	
07/03/2018	07:10:54	71	1.3	11.78	0.1	
07/03/2018	07:11:00	100	1.8	12.08	0.2	Start Cement Slurry
07/03/2018	07:12:24	449	4.2	12.38	3.6	
07/03/2018	07:13:00	728	6.2	12.44	7.2	Start Mixing Lead Slurry
07/03/2018	07:13:54	746	6.2	12.45	12.7	
07/03/2018	07:15:24	694	6.2	12.44	22.0	
07/03/2018	07:16:54	476	5.5	12.46	30.7	
07/03/2018	07:18:24	645	6.2	12.47	39.8	
07/03/2018	07:19:54	635	6.2	12.47	49.1	
07/03/2018	07:20:00	607	6.2	12.46	49.8	Pump 221 BBLS 12.5 PPG Lead

Well	Field	Job Start	Customer	Job Number
Ruegge 3K-4H-N165	Wattenberg	Jul/03/2018	Crestone Peak	2741115

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
07/03/2018	07:22:54	532	6.3	12.45	67.8	
07/03/2018	07:24:24	534	6.3	12.44	77.2	
07/03/2018	07:25:00	537	6.3	12.42	81.0	SKS = 739 Y = 1.65
07/03/2018	07:25:54	557	6.2	12.41	86.6	
07/03/2018	07:27:24	518	6.2	12.42	96.0	
07/03/2018	07:28:54	540	6.2	12.42	105.3	
07/03/2018	07:30:00	580	6.2	12.49	112.2	Mix H2O = 7.02
07/03/2018	07:30:24	539	6.3	12.45	114.7	
07/03/2018	07:31:54	554	6.2	12.49	124.1	
07/03/2018	07:33:24	538	6.3	12.43	133.4	
07/03/2018	07:34:54	544	6.2	12.50	142.8	
07/03/2018	07:35:00	542	6.2	12.50	143.4	Take Wet/ Dry Sample
07/03/2018	07:36:24	532	6.3	12.48	152.2	
07/03/2018	07:37:54	549	6.3	12.50	161.6	
07/03/2018	07:39:24	512	6.3	12.44	171.0	
07/03/2018	07:40:54	533	6.3	12.46	180.4	
07/03/2018	07:42:24	541	6.3	12.48	189.8	
07/03/2018	07:43:54	527	6.2	12.43	199.2	
07/03/2018	07:45:24	308	4.3	12.46	205.9	
07/03/2018	07:46:54	299	4.3	12.44	212.3	
07/03/2018	07:49:54	96	2.2	12.30	219.9	
07/03/2018	07:50:00	96	2.2	12.31	220.1	End Lead Slurry
07/03/2018	07:51:24	7	0.0	12.34	221.8	
07/03/2018	07:52:54	11	0.0	12.34	0.0	
07/03/2018	07:54:24	13	0.0	12.34	0.0	
07/03/2018	07:55:54	79	1.9	13.46	0.6	
07/03/2018	07:56:00	81	1.7	13.46	0.8	Start Mixing Tail Slurry
07/03/2018	07:57:24	699	8.3	13.54	9.5	
07/03/2018	07:58:54	649	8.3	13.49	21.9	
07/03/2018	08:00:00	788	8.3	13.47	31.1	Pump 251 BBLS 13.5 PPG Tail
07/03/2018	08:00:24	759	8.3	13.47	34.4	
07/03/2018	08:01:54	682	8.3	13.45	46.8	
07/03/2018	08:03:24	645	8.3	13.49	59.3	
07/03/2018	08:04:54	640	8.3	13.45	71.8	
07/03/2018	08:05:00	632	8.3	13.45	72.6	SKS = 840 Y = 1.66
07/03/2018	08:06:24	641	8.3	13.50	84.2	
07/03/2018	08:07:54	651	8.3	13.54	96.7	
07/03/2018	08:09:24	639	8.3	13.56	109.1	
07/03/2018	08:10:00	634	8.3	13.54	114.1	Mix H2O = 7.95
07/03/2018	08:10:54	655	8.3	13.54	121.6	
07/03/2018	08:12:24	637	8.3	13.53	134.1	
07/03/2018	08:13:54	643	8.4	13.58	146.5	
07/03/2018	08:15:00	633	8.4	13.47	155.7	Take Wet/ Dry Sample
07/03/2018	08:15:24	602	8.3	13.47	159.0	
07/03/2018	08:16:54	88	2.1	13.47	167.7	
07/03/2018	08:18:24	631	8.3	13.51	172.7	
07/03/2018	08:19:54	617	8.3	13.54	185.1	
07/03/2018	08:21:24	246	4.5	13.48	195.4	
07/03/2018	08:22:54	247	4.5	13.62	202.2	
07/03/2018	08:24:24	461	6.4	13.63	210.8	
07/03/2018	08:25:54	478	6.4	13.66	220.3	
07/03/2018	08:27:24	446	6.4	13.57	229.9	
07/03/2018	08:28:54	442	6.4	13.51	239.6	
07/03/2018	08:30:00	439	6.4	13.44	246.6	End Tail Slurry

Well	Field	Job Start	Customer	Job Number
Ruegge 3K-4H-N165	Wattenberg	Jul/03/2018	Crestone Peak	2741115

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
07/03/2018	08:31:54	12	0.0	13.78	252.2	
07/03/2018	08:33:24	12	0.0	13.52	252.2	
07/03/2018	08:34:54	13	0.0	13.39	0.0	
07/03/2018	08:36:24	14	0.0	13.34	0.0	
07/03/2018	08:37:54	15	0.0	0.01	0.1	
07/03/2018	08:39:24	15	0.0	2.49	0.4	
07/03/2018	08:40:54	15	0.0	0.01	0.5	
07/03/2018	08:42:24	16	0.0	0.01	0.5	
07/03/2018	08:43:54	71	1.2	8.81	0.7	
07/03/2018	08:45:24	69	3.2	9.31	4.9	
07/03/2018	08:46:54	52	2.5	8.39	9.4	
07/03/2018	08:48:24	44	2.5	8.38	13.7	
07/03/2018	08:49:54	62	3.1	8.36	16.2	
07/03/2018	08:51:24	1	0.0	8.37	19.0	
07/03/2018	08:52:54	1	0.0	8.37	19.0	
07/03/2018	08:54:00	0	0.0	8.37	0.0	Drop Top Plug
07/03/2018	08:54:24	45	1.4	8.38	0.4	
07/03/2018	08:55:54	13	1.4	8.41	2.6	
07/03/2018	08:57:24	303	8.4	8.41	10.5	
07/03/2018	08:58:54	873	8.3	8.38	23.0	
07/03/2018	09:00:24	894	8.3	8.37	35.4	
07/03/2018	09:01:54	1035	8.3	8.37	47.9	
07/03/2018	09:03:24	1206	8.3	8.37	60.3	
07/03/2018	09:04:54	1382	8.3	8.37	72.7	
07/03/2018	09:06:24	1537	8.2	8.37	85.1	
07/03/2018	09:07:54	1700	8.2	8.37	97.4	
07/03/2018	09:09:06	1819	8.2	8.37	107.3	Displace 264 BBLS BioCide
07/03/2018	09:09:24	1850	8.2	8.37	109.8	
07/03/2018	09:10:54	2020	8.2	8.37	122.1	
07/03/2018	09:12:24	2163	8.2	8.37	134.3	
07/03/2018	09:13:54	2057	6.3	8.36	145.2	
07/03/2018	09:15:24	2166	6.3	8.36	154.7	
07/03/2018	09:16:54	2246	6.3	8.36	164.2	
07/03/2018	09:18:24	2305	6.3	8.36	173.6	
07/03/2018	09:19:54	2317	6.3	8.36	183.1	
07/03/2018	09:21:24	2351	6.3	8.36	192.5	
07/03/2018	09:22:54	2357	6.3	8.36	202.0	
07/03/2018	09:24:24	2392	6.3	8.36	211.5	
07/03/2018	09:25:54	2448	6.3	8.36	220.9	
07/03/2018	09:27:24	2446	6.3	8.36	230.3	
07/03/2018	09:28:54	2501	6.3	8.36	239.8	
07/03/2018	09:30:24	2228	4.4	8.36	248.8	
07/03/2018	09:31:54	2262	4.4	8.36	255.5	
07/03/2018	09:33:24	2262	4.4	8.36	262.1	
07/03/2018	09:34:54	3056	0.0	8.36	267.2	
07/03/2018	09:34:58	2930	0.0	8.36	267.2	Bump Top Plug 3000 PSI
07/03/2018	09:36:24	3012	0.0	8.36	267.2	
07/03/2018	09:37:54	3033	0.0	8.37	267.2	
07/03/2018	09:39:24	3087	0.0	8.37	267.2	
07/03/2018	09:40:21	3	0.0	8.37	267.2	Floats Holding
07/03/2018	09:40:54	5	0.0	8.37	267.2	
07/03/2018	09:42:24	6	0.0	8.37	267.2	
07/03/2018	09:43:54	4	0.0	8.37	267.2	
07/03/2018	09:45:00	6	0.0	8.37	267.2	Flush Stack

Well	Field	Job Start	Customer	Job Number
Ruegge 3K-4H-N165	Wattenberg	Jul/03/2018	Crestone Peak	2741115

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
07/03/2018	09:46:54	152	4.6	8.37	5.0	
07/03/2018	09:48:24	153	4.6	8.42	11.9	
07/03/2018	09:49:54	150	4.6	8.40	18.7	
07/03/2018	09:51:24	128	4.5	8.34	25.6	
07/03/2018	09:52:54	146	4.6	8.37	32.3	
07/03/2018	09:54:24	1	0.0	8.42	35.6	
07/03/2018	09:55:00	0	0.0	8.35	35.6	34 BBLS MP To Surface
07/03/2018	09:55:54	3	0.0	8.31	35.6	
07/03/2018	09:57:24	1	0.0	8.37	35.6	
07/03/2018	09:58:54	1	0.0	8.37	35.6	
07/03/2018	10:00:00	37	0.0	8.37	35.6	End Job
07/03/2018	10:00:24	68	0.0	8.37	35.6	
07/03/2018	10:01:54	-2	0.0	8.37	35.6	
07/03/2018	10:03:24	-20	1.2	8.37	37.5	
07/03/2018	10:04:54	4	0.0	8.37	37.6	
07/03/2018	10:06:24	3	0.0	8.37	37.6	
07/03/2018	10:07:54	3	0.0	7.91	37.6	
07/03/2018	10:09:24	0	0.0	8.36	37.6	
07/03/2018	10:10:54	20	0.0	8.37	37.6	
07/03/2018	10:12:24	21	0.0	2.49	37.6	
07/03/2018	10:13:54	22	0.0	8.37	38.5	
07/03/2018	10:15:24	23	0.0	0.01	38.7	
07/03/2018	10:16:54	23	0.0	0.01	38.7	
07/03/2018	10:18:24	22	0.0	0.01	38.7	
07/03/2018	10:19:54	23	0.0	0.01	38.7	
07/03/2018	10:21:24	-2	0.0	0.01	38.7	
07/03/2018	10:24:24	-2	0.0	0.01	38.7	

Post Job Summary

Average Pump Rates, bbl/min				Volume of Fluid Injected, bbl			
Slurry	N2	Mud	Maximum Rate	Total Slurry	Mud	Spacer	N2
5.4			25.0	867.1	0.0	60.0	

Treating Pressure Summary, psi					Breakdown Fluid		
Maximum	Final	Average	Bump Plug to	Breakdown	Type	Volume	Density
4879	-2	594	3000			bbl	lb/gal

Avg. N2 Percent	Designed Slurry Volume	Displacement	Mix Water Temp		
%	466.0 bbl	264.0 bbl	70 degF	Cement Circulated to Surface? ☐	Volume bbl
				Washed Thru Perfs ☐	To ft

Customer or Authorized Representative	Schlumberger Supervisor	Circulation Lost	Job Completed
Nate Curley	Conley Jensen/ Kyle Jaramillo	-	- ☒

Schlumberger Service Quality Evaluation

Client:	Crestone Peak
Field:	Wattenberg
Rig:	Ensign 140
Well:	Ruegge
Service Line:	Cementing
Job Type:	5.5" Monobore

Service Order #:	
Date:	Jul/03/2018
Operating Time (hh:mm):	00:00
Client Rep:	Nate Curley
Schlumberger Engineer:	Conley Jensen/ Kyle Jaramillo
Schlumberger FSM:	

Main Objective:

To be completed by Company Rep. Please answer Y (Yes) or N (No) and add any comments below.

		Score	Yes / No		Result
1	**HSE**				
1a	Free of lost time injury and compliance with SLB and loc. spec. HSE practice	5	**yes** ☐	**no** ☒	0
1b	Free of environmental spill or non-compliant discharge	5	**yes** ☐	**no** ☒	0
1c	Wellsite left clean	4	**yes** ☐	**no** ☒	0
				Sub-total	0%
2	**Design / Preparation**				
2a	Program incl. job simulation (CemCADE) & pump schedule / tool hydraulic calcs	3	**yes** ☐	**no** ☒	0
2b	Equipment maintenance schedule completed / Green tagged	2	**yes** ☐	**no** ☒	0
2c	All materials and equipment required for job/contingency checked & on location	2	**yes** ☐	**no** ☒	0
2d	Safety / pre-job meeting conducted with all involved present	2	**yes** ☐	**no** ☒	0
				Sub-total	0%
3	**Execution**				
3a	Lost time < 30 mins	3	**yes** ☐	**no** ☒	0
3b	Equipment pressure tested succesfully	3	**yes** ☐	**no** ☒	0
3c	All key parameters monitored and recorded accurately (Pressure, Rate, Density)	2	**yes** ☐	**no** ☒	0
3d	Plugs / darts released and tested succesfully	2	**yes** ☐	**no** ☒	0
3e	Density variation met expectations	2	**yes** ☐	**no** ☒	0
3f	Personnel performed as per expectations	2	**yes** ☐	**no** ☒	0
3g	Equipment performed as per expectations	2	**yes** ☐	**no** ☒	0
3h	Job pumped as per design	3	**yes** ☐	**no** ☒	0
3i	Did job start on time	2	**yes** ☐	**no** ☒	0
3j	Free of Operational failures (screen out, Cementing Example, etc.)	3	**yes** ☐	**no** ☒	0
				Sub-total	0%
4	**Evaluation**				
4a	Main job objective achieved with no consequential non-productive time	10	**yes** ☐	**no** ☒	0
				Sub-total	0%

Total 0%

Comments: (Please include a brief explanation for a "NO" response and summarize any innovations attempted on this well.)

Client:	**Schlumberger:**
Client Signature:	**Schlumberger Signature:**