

HALLIBURTON

iCem[®] Service

CHEVRON - MID-CONTINENT EBIZ

For:

Date: Sunday, March 05, 2017

Coltharp 9X

Case 1

Job Date: Friday, March 03, 2017

Sincerely,

Brandon Parker

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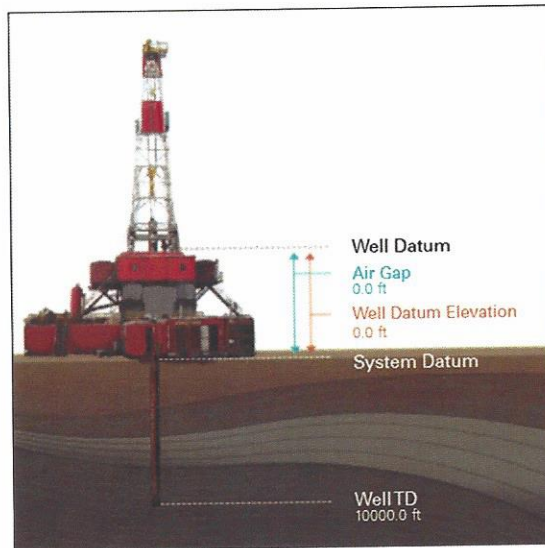
 3D Wellbore Schematic 29

1.0 Job Design

1.1 Overview

Job Type	Primary Cement Job
Injection Path	Casing/Conventional
Foam Job	No

Well Snapshot



Simulations Performed

1.2 Pressure Schedule Inputs

Pressure Mode	Conventional
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1.3 Pressure Schedule Table

Start (Pump Volume in bbl)	End (Pump Volume in bbl)	Pressure (psi)
0.00	End	0.00

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)	Pump Stage Total (bbl)	BKS Pump Pressure	Comments
Event	1	Call Out	Call Out	3/2/2017	22:00:00	USER						crew called out to chevron squeeze in Rangely, Co, e8 pump trk, 1 job trk and 1 crew pickup. cmt and crew came out of grand junction co
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	3/2/2017	23:30:00	USER						meeting with all hes personnel to discuss safety/hazards associated with driving to location
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	3/2/2017	23:35:00	USER						hes went into stand by mode waiting for day break and on location time
Event	4	Standby Other	Standby Other	3/3/2017	03:00:00	USER						met with Chevron company rep Gabe Collins and went over job numbers, water sources and iron placement. company rep signed hes work order
Event	5	Arrive at Location from Service Center	Arrive at Location from Service Center	3/3/2017	06:10:00	USER						water temp 40.6, ph 7, chlo 0, bottom perf 6382, top perf 5732, retainer 4990, 2.875 6.5# tubing, 7"23# casing, fw all the way around
Event	6	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	3/3/2017	06:15:00	USER						meeting with all hes personnel to discuss safety/hazards associated
Event	7	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	3/3/2017	06:45:00	USER						

using high pressure mud
 scales, weight was
 confirmed by hes
 supervisor. wet and dry
 sample left on location. lost
 returns half way through
 pumping cmt

Event 19	Shutdown	Shutdown/Sting In	3/3/2017	10:08:28	USER	12.00	4.96	0.00	27.3	-55.00	hes shut down so rig crew could sting into retainer
Event 20	Pump Tail Cement	Pump Tail Cement	3/3/2017	10:09:00	USER	5.00	7.70	0.90	27.5	-55.00	hes pumped 5.7bbbls of tail cmt, 28 sks, 15.8ppg, 1.15yield, 4.96gal/sk, pumped 2.5bpm psi at 86psi.
Event 21	Pump Displacement	Pump Displacement	3/3/2017	10:12:22	COM10	43.00	9.57	2.50	0.7	138.00	hes calculated 28.9bbbls of fw displacement for tubular volume, customer wanted 3bbbls of tail cmt above retainer, hes pumped a total of 25bbbls
Event 22	Sting out	Sting out/Pull 3 Joints	3/3/2017	10:22:22	USER	768.00	8.55	0.00	0.0	-74.00	rig crew pulled three joints of tubing, all three pulled dry, pulled to 4893ft
Event 23	Reverse Out	Reverse Out	3/3/2017	10:35:25	USER	7.00	8.55	0.00	0.0	-70.00	hes reversed out 1.5 tubing volume, pumped 45bbbls. no cmt, no psi increase at 2.5bpm and pressure at 250
Event 24	End Job	End Job	3/3/2017	10:56:45	USER	7.00	8.58	0.00	46.8	-74.00	
Event 25	Start Job	Start Job	3/4/2017	08:42:00	COM10	5.00	8.64	0.00	1.7	14.00	watertemp 40, ph 7, chlo 0. plug #1
Event 26	Test Lines	Test Lines	3/4/2017	08:42:37	COM10	2102.00	8.72	0.00	1.8	12.00	test electronic kick outs, 5th gear stall and test lines to 3478 psi held great, had returns when priming cmt lines
Event 27	Pump Water	Pump fw to Fill Well	3/4/2017	08:50:52	USER	35.00	8.12	1.40	0.4	16.00	hes came on line with fw

and had full returns, kept pumping at 1.5bpm psi at 90 why weighing up cmt

Event	28	Pump Tail Cement	Pump Tail Cement	3/4/2017	09:05:58	USER	82.00	10.57	1.50	20.7	14.00		pumped 8.8bbbls of tail cmt, 43sk, 15.8ppg, 1.15 yield, 4.96 gal/sk, pumped at 2bpm and pressure was 46psi. weight confirmed using high pressure mud scales. wet sample left on location. bottom of plug at 4886ft, 229ftplug dp out.
Event	29	Pump Displacement	Pump FW Displacement	3/4/2017	09:10:58	COM10	41.00	9.42	2.00	0.3	42.00		hes calculated 26.9bbbls of fw displacement, hes shut down at 26bbbls and open release line on mixing unit to balance plug, pumped at 2bpm and average pressure was 25
Event	30	Shutdown	Shutdown	3/4/2017	09:22:00	USER	21.00	8.60	2.00	22.4	5.00		shut down for rig to pull 7 joints
Event	31	Reverse Circ Well	Reverse Circ Well	3/4/2017	09:24:03	COM10	72.00	8.35	4.50	23.2	20.00		hes reversed out 80bbbls at 2bpm and average pressure was 150. seen traces of cmt at 62 away for 5bbbls, wasn't good solid cmt
Event	32	Shutdown	Shutdown	3/4/2017	10:44:47	USER	14.00	8.61	0.00	81.6	-9.00		plug #2, pumped 2bbbls at 1bpm psi at 40psi to establish returns and mix up poz mix
Event	33	Pump Water	Establish Returns	3/4/2017	10:47:00	USER	7.00	8.75	0.00	0.0	1.00		pumped 23bbbls of poz mix, 14.7sk, 9ppg, 8.82 yield, 61.11 gal/sk, pumped at 2bpm and average pressure was 50. weight confirmed using high pressure mud
Event	34	Pump Tail Cement	Pump Poz Mix	3/4/2017	10:49:13	USER	45.00	8.74	1.10	0.6	-3.00		

Event 35	Pump Displacement	Pump Displacement	3/4/2017	11:07:05	COM10	43.00	8.59	2.00	0.8	11.00	scales . at 4661ft 585ft plug hes calculated 24bbbls of fw displacement, pumped 23.5bbbls and opened release on mixing unit, no flow or no suction. pumped at 2bpm and average pressure was 36	
Event 36	Shutdown	Shutdown	3/4/2017	11:18:00	USER	115.00	8.41	0.00	22.1	9.00	shutdown for rig to pull 18 joints	
Event 37	Other	Wash Pump	3/4/2017	11:26:13	USER	14.00	-0.04	0.90	0.1	-1.00		
Event 38	Reverse Circ Well	Reverse Circ Well	3/4/2017	11:36:32	COM10	14.00	0.75	1.30	0.3	-10.00	reversed out 35.5bbbls	
Event 39	Shutdown	Shutdown	3/4/2017	11:57:06	USER	19.00	8.39	0.00	0.0	-2.00	plug#3, pumped 10bbbls at 1bpm to establish returns and bring cmt to weight. psi at 48	
Event 40	Pump Spacer 2	Establish returns	3/4/2017	12:00:11	COM10						confirmed by hes supervisor	
Event 41	Check Weight	Check weight	3/4/2017	12:06:30	COM10						pumped 11.9bbbls of tail cmt, 58sks, 15.8ppg, 1.15 yield, 4.96 gal/sk, pumped at 2bpm and average psi was 58. weight confirmed by using high pressure mud scales, weight confirmed by hes supervisor. wet sample on location. at 4080 ft 302.8ft plug	
Event 42	Pump Tail Cement	Pump Tail Cement	3/4/2017	12:10:16	USER	113.00	12.93	2.00	0.7	6.00		
Event 43	Pump Displacement	Pump Displacement	3/4/2017	12:16:33	COM10	50.00	10.75	1.90	0.6	41.00	hes calculated 22.1bbbls of fw displacement, hes shut down at 21.5bbbls and opened release on mixing unit to check flow back, zero flow back. pumped at 2bpm psi at 28	

Event	Description	Date	Time	User	Duration	Pressure	Flow	Volume	Notes	
44	Shutdown	3/4/2017	12:25:00	USER	28.00	8.39	2.00	17.1	0.00	shutdown for rig to pull 9 joints
45	Other	3/4/2017	12:29:02	USER	8.00	8.39	0.90	0.0	0.00	
46	Reverse Circ Well	3/4/2017	12:42:17	COM10	27.00	8.27	1.70	0.1	-22.00	reversed out 22bbbls
47	Shutdown	3/4/2017	12:55:41	USER	55.00	8.39	0.00	25.2	32.00	plug#4, pumped 4bbbls at 1bpm to establish returns and bring cmt up to weight psi 33
48	Pump Water	3/4/2017	12:58:58	USER	20.00	6.32	1.20	0.3	-2.00	
49	Pump Cement	3/4/2017	13:03:40	COM10	51.00	9.08	1.70	0.5	10.00	pumped 115bbbls of poz mix, 73.2bbbls, 9ppg, 8.82 yield, 61.11 gal/sk, pumped at 3.5bpm and average pressure was 325. weight confirmed by using high pressure mud scales. wet sample left on location. at 3790ft 2926.20ft plug
50	Pump Displacement	3/4/2017	13:37:30	COM10	353.00	8.47	3.50	1.2	44.00	hes calculated 7.2bbbls of fw displacement
51	Shutdown	3/4/2017	13:39:47	USER	49.00	6.16	0.10	6.2	10.00	shut down for rig to pull 93 joints and set perms at 841ft
52	Pump Water	3/4/2017	16:45:39	USER	19.00	8.22	1.30	0.2	2.00	hes pumped 35bbbls at 4bpm to establish flow through surface annulus, psi 375
53	Shutdown	3/4/2017	16:56:03	USER	24.00	8.37	0.00	35.1	25.00	pumped 41bbbls of tail cmt, 200sks, 1.15 yield, 4.96 gal/sk, pumped at 2bpm and average pressure was 50. weight confirmed using high pressure mud scales. pumped cmt until it came to surface. perms at 871, retainer at 776
54	Pump Tail Cement	3/4/2017	17:09:47	USER	85.00	9.93	1.60	0.7	0.00	

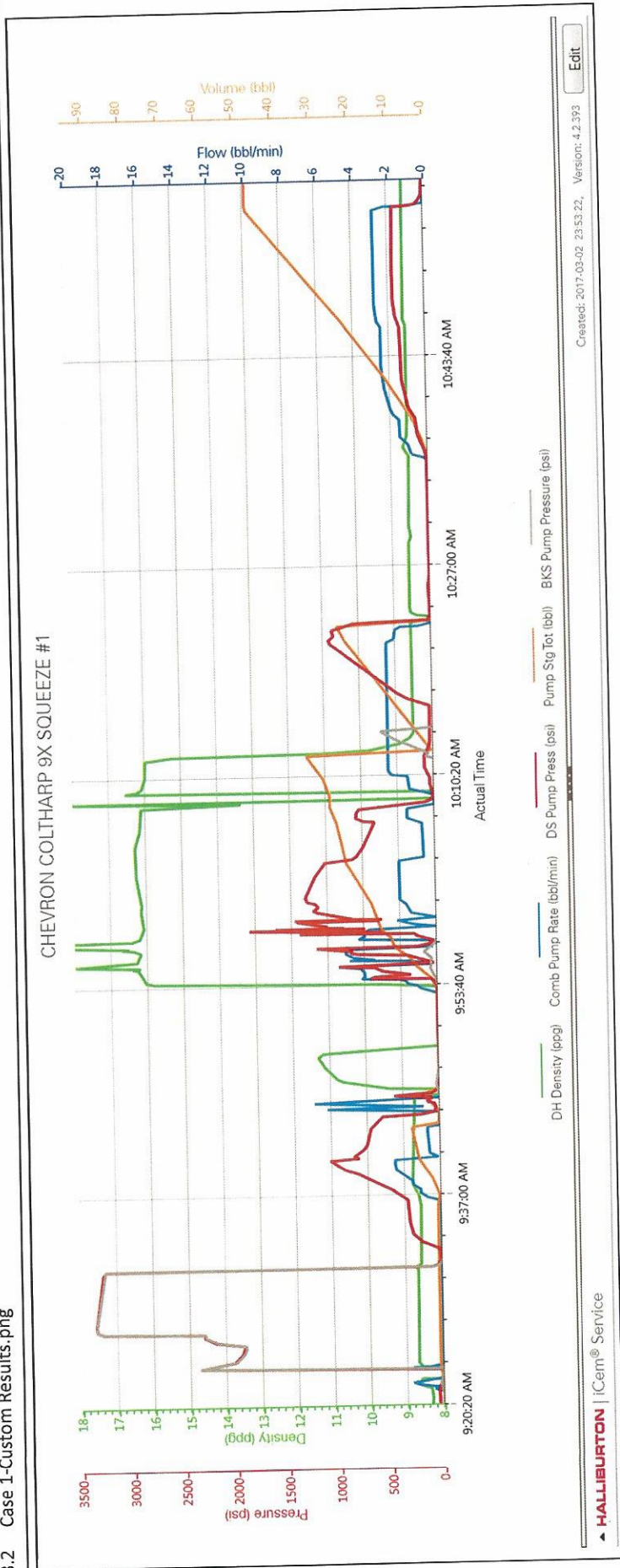
Event 55	Shutdown	Shutdown	3/4/2017	17:46:36	USER	43.00	14.21	0.90	50.2	7.00	cmt to surface	
											pumped 1.5bbblsof fw displacement, leaving 3bbls of cmt in 2.875 tubing, left 3bbls in tubing to be spot above retainer	
Event 56	Pump Displacement	Pump Displacement	3/4/2017	17:47:19	COM10	168.00	10.45	1.40	0.7	15.00		
Event 57	Shutdown	Shutdown	3/4/2017	17:48:13	USER	53.00	9.26	0.00	1.6	4.00		
											pumped 3bbls of tail cmt, 14.5sks, 15.8ppg, 1.15, 4.96 gal/sk, pumped at 1bpm and psi at 75. weight confirmed using hig ps mud scales	
Event 58	Pump Lead Cement	Pump Tail Cement	3/4/2017	19:44:07	COM10	69.00	15.61	1.30	1.1	142.00		
Event 59	Shutdown	Shutdown	3/4/2017	19:45:22	USER	124.00	15.97	0.50	2.6	197.00		cmt to surface, shutdown for 2 minutes to see if cmt fell, cmt held hes pumped another .5bbls
Event 60	End Job	End Job	3/4/2017	19:46:00	USER	13.00	0.35	0.00	2.6	88.00		meeting with all hes personnel to discuss safety/hazards associated with rigging down
Event 61	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	3/4/2017	19:50:00	USER	18.00	9.72	0.00	0.0	99.00		
Event 62	Rig-Down Equipment	Rig-Down Equipment	3/4/2017	20:00:00	USER							meeting with hes personnel to discuss safety/hazards associated with driving to vernal
Event 63	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	3/4/2017	20:55:00	USER							
Event 64	Depart Location Safety Meeting	Depart Location Safety Meeting	3/4/2017	21:00:00	USER							Thank You for Choosing Halliburton Cement. Parker and Crew.(713)703-3283
Event 65	Other	Other	3/4/2017	21:01:00	USER							

3.0 Attachments

3.1 Case 1-Custom eventsResults.png

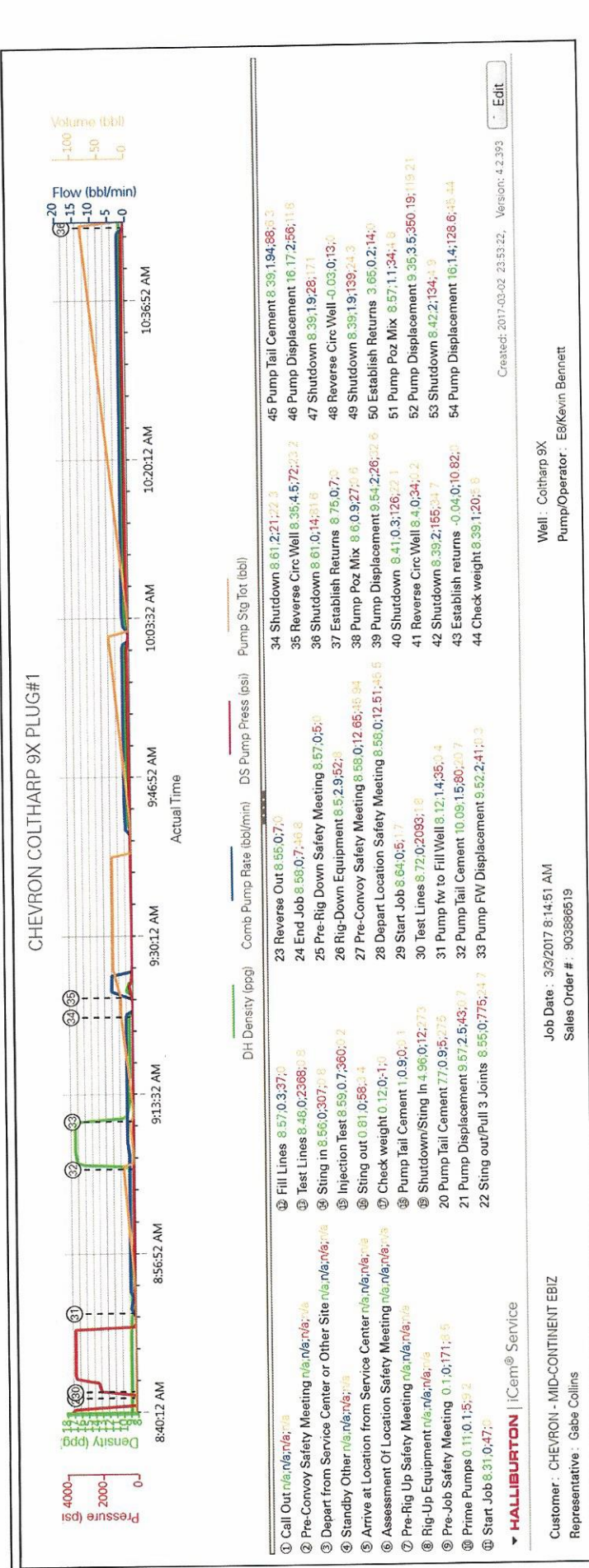


3.2 Case 1-Custom Results.png



Created: 2017-03-02 23:53:22, Version: 4.2.393

3.3 Case 1-Custom PLUG 1 Results (1).png



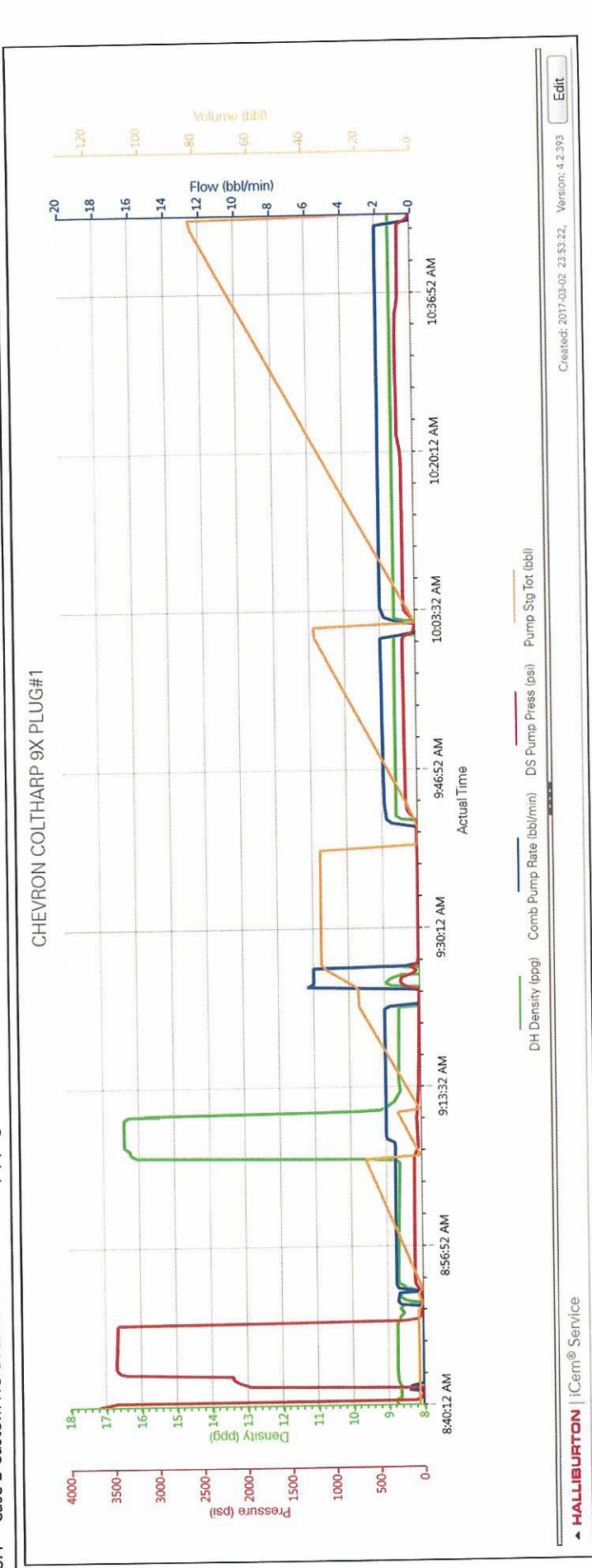
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Well: Coltharp 9X
 Pump/Operator: E8/Kevin Bennett

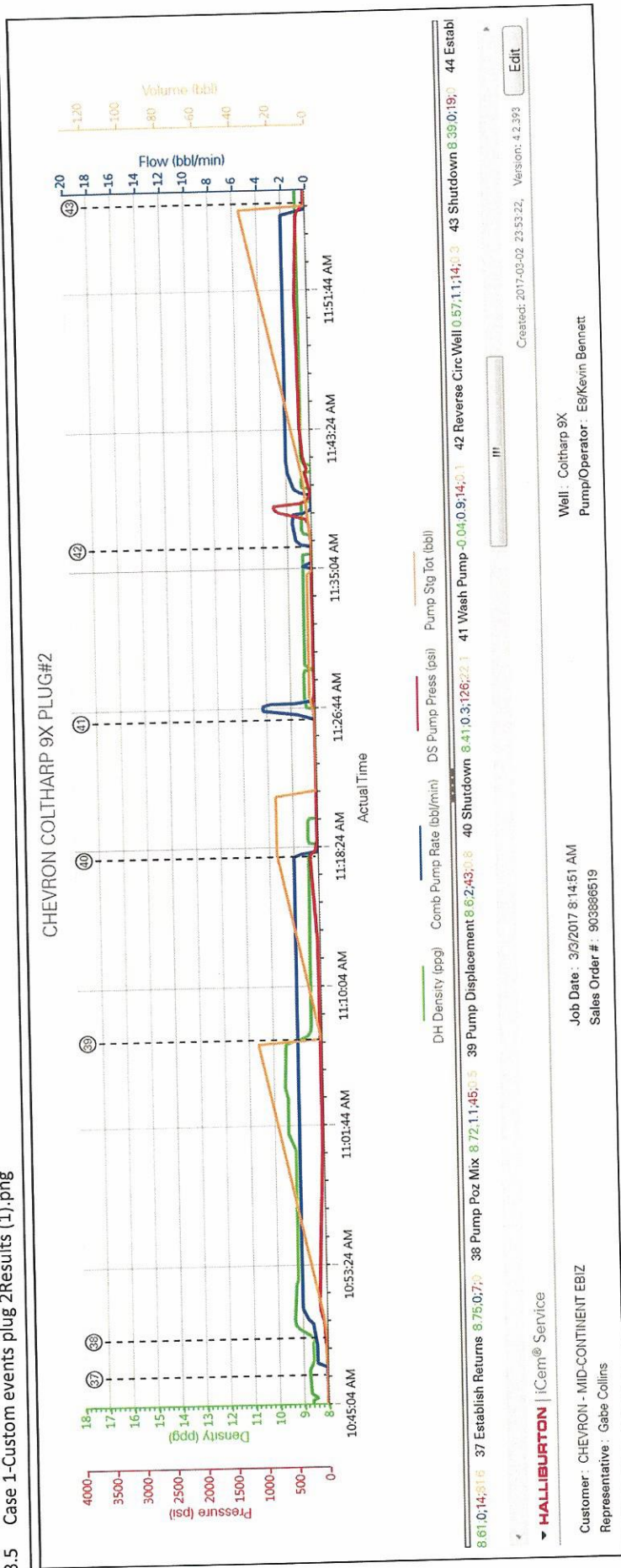
Job Date: 3/2/2017 8:14:51 AM
 Sales Order #: 903886519

Customer: CHEVRON - MID-CONTINENT EBIZ
 Representative: Gabe Collins

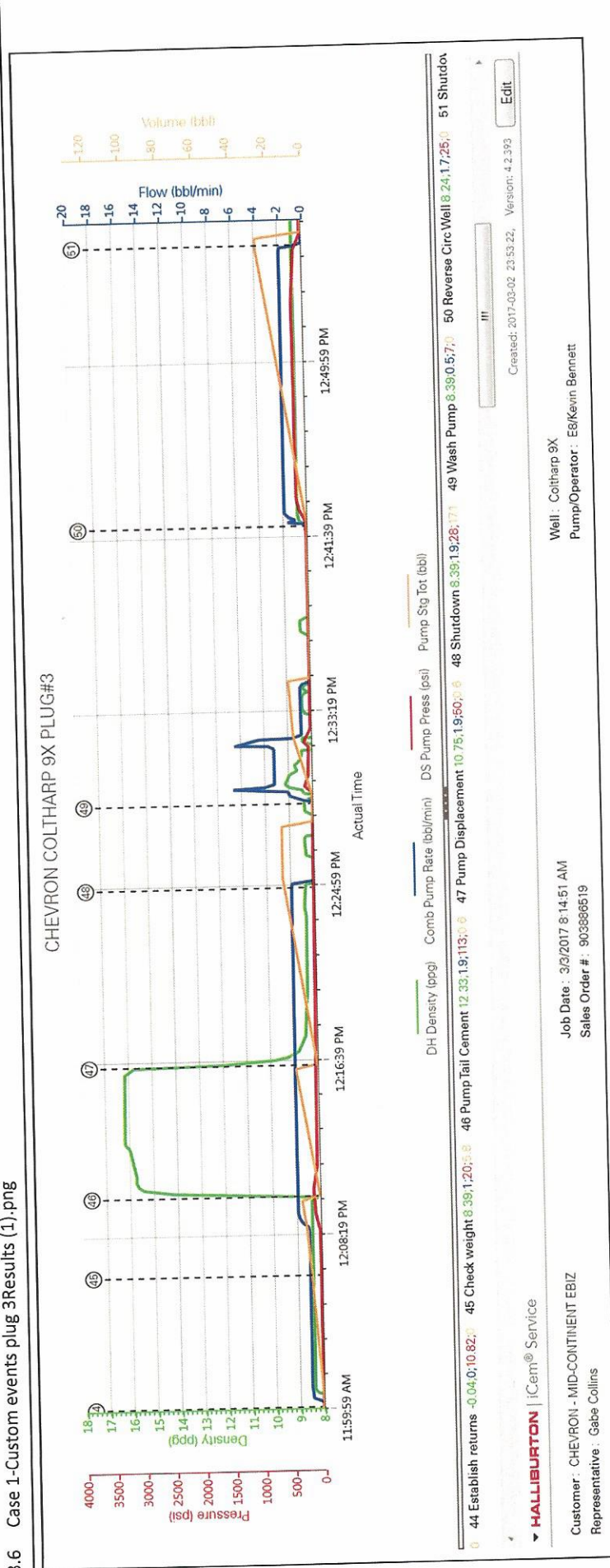
3.4 Case 1-Custom NO EVENTS PLUG 1Results (1).png



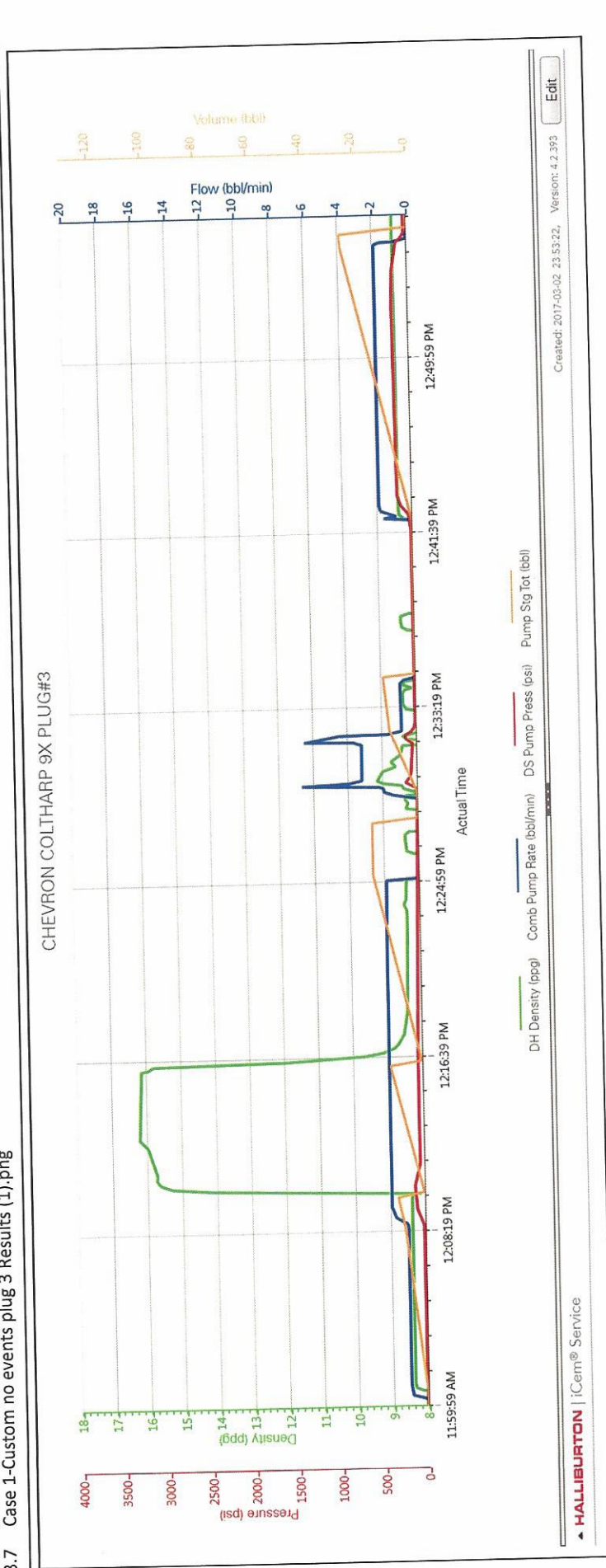
3.5 Case 1-Custom events plug 2Results (1).png



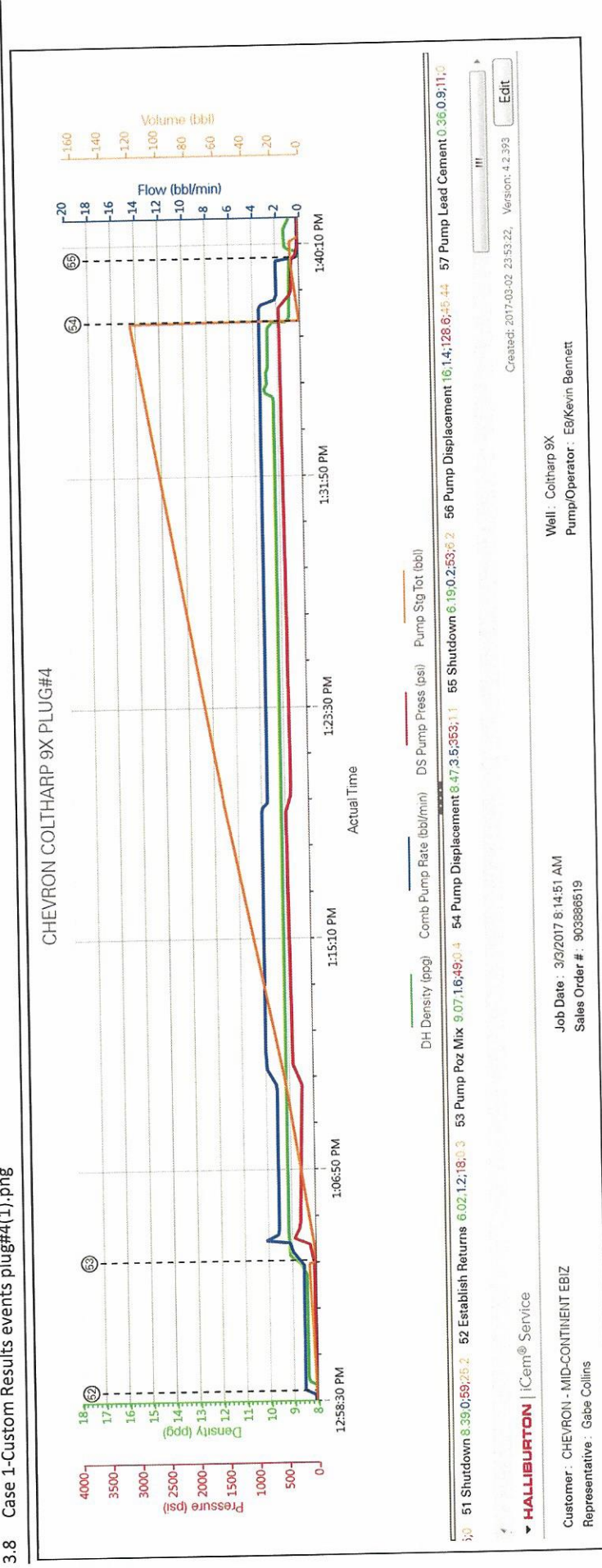
3.6 Case 1-Custom events plug 3 Results (1).png



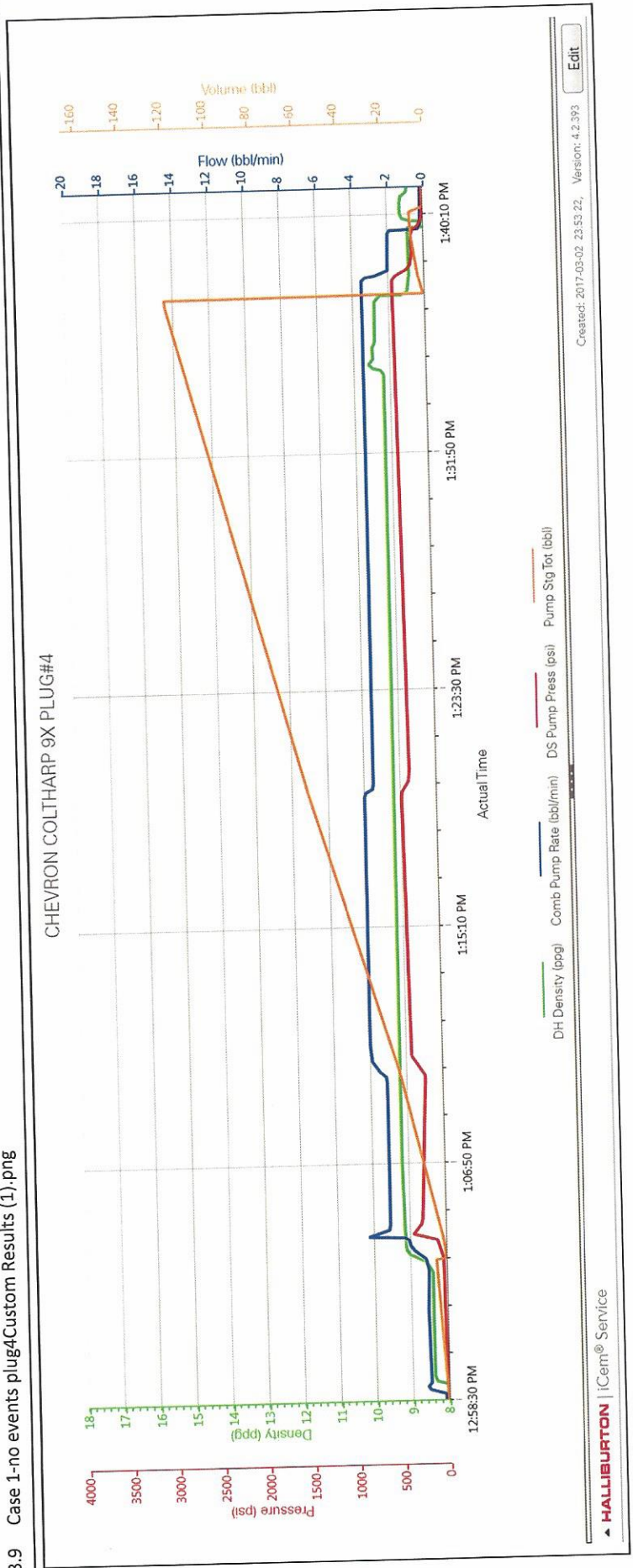
3.7 Case 1-Custom no events plug 3 Results (1).png



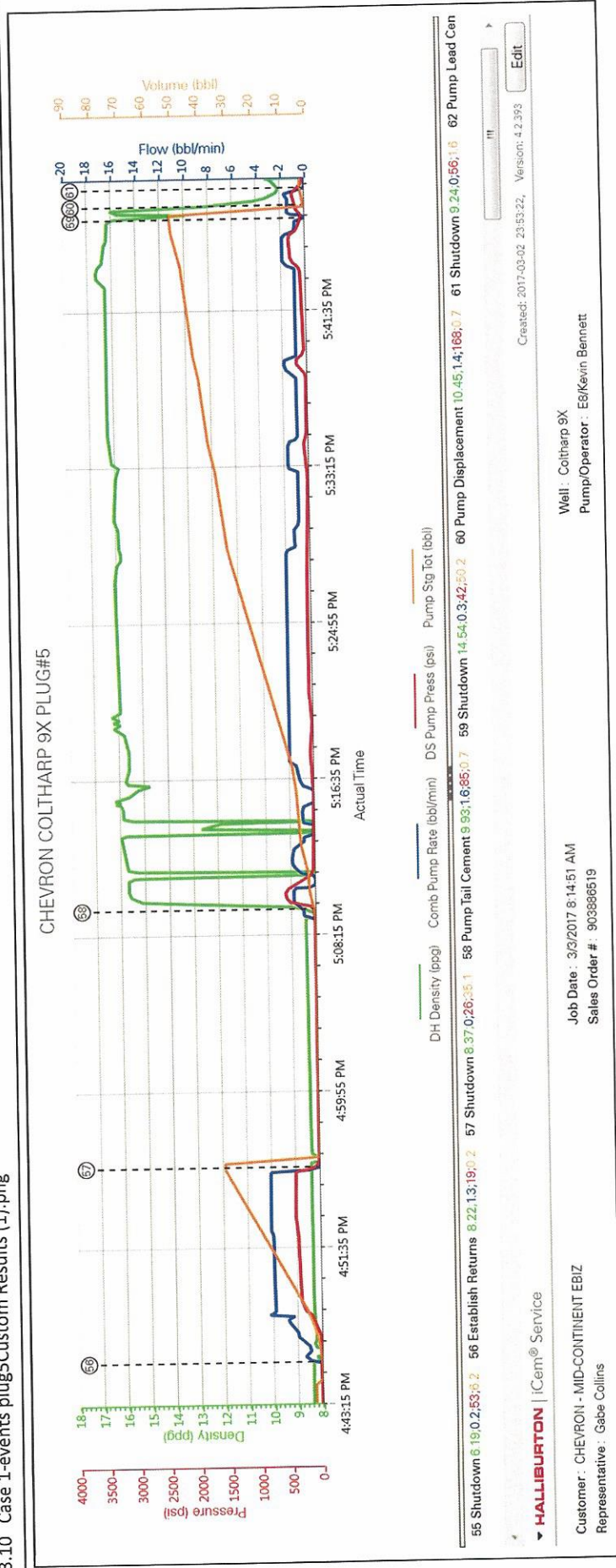
3.8 Case 1-Custom Results events plug#4(1).png



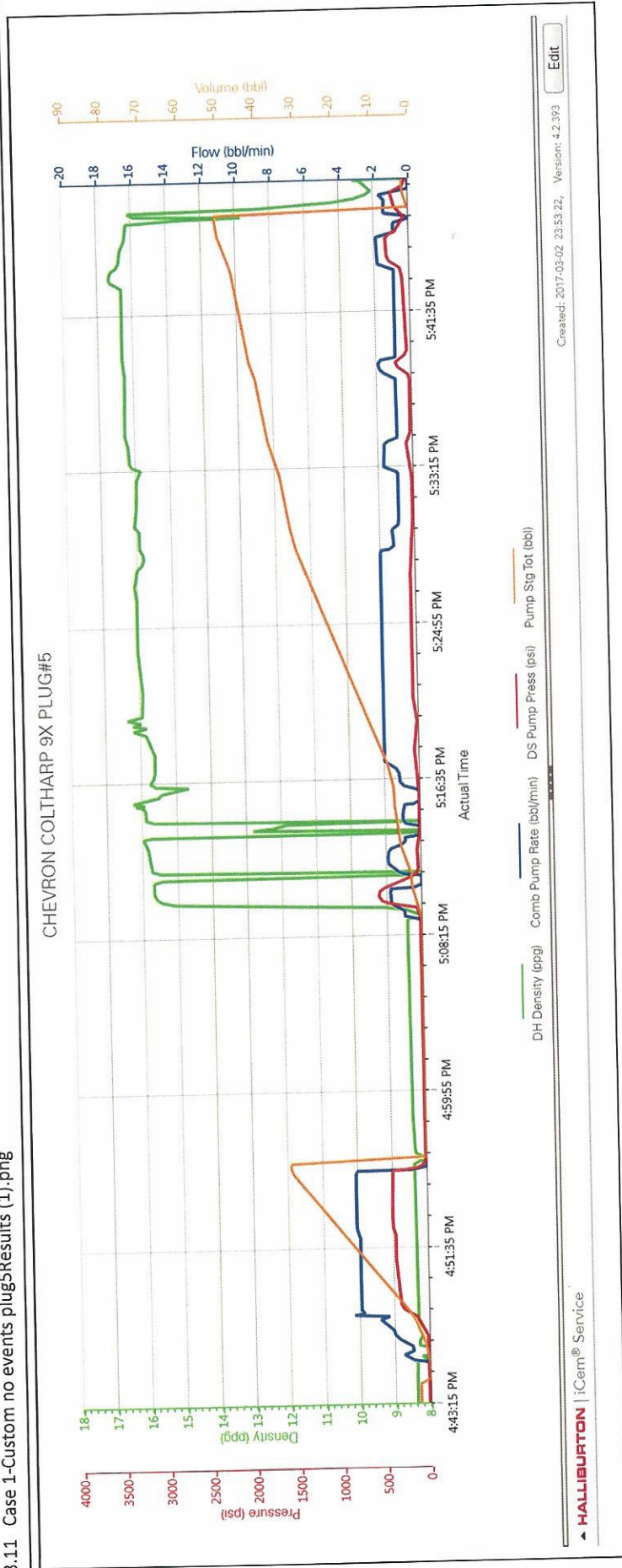
3.9 Case 1-no events plug4Custom Results (1).png



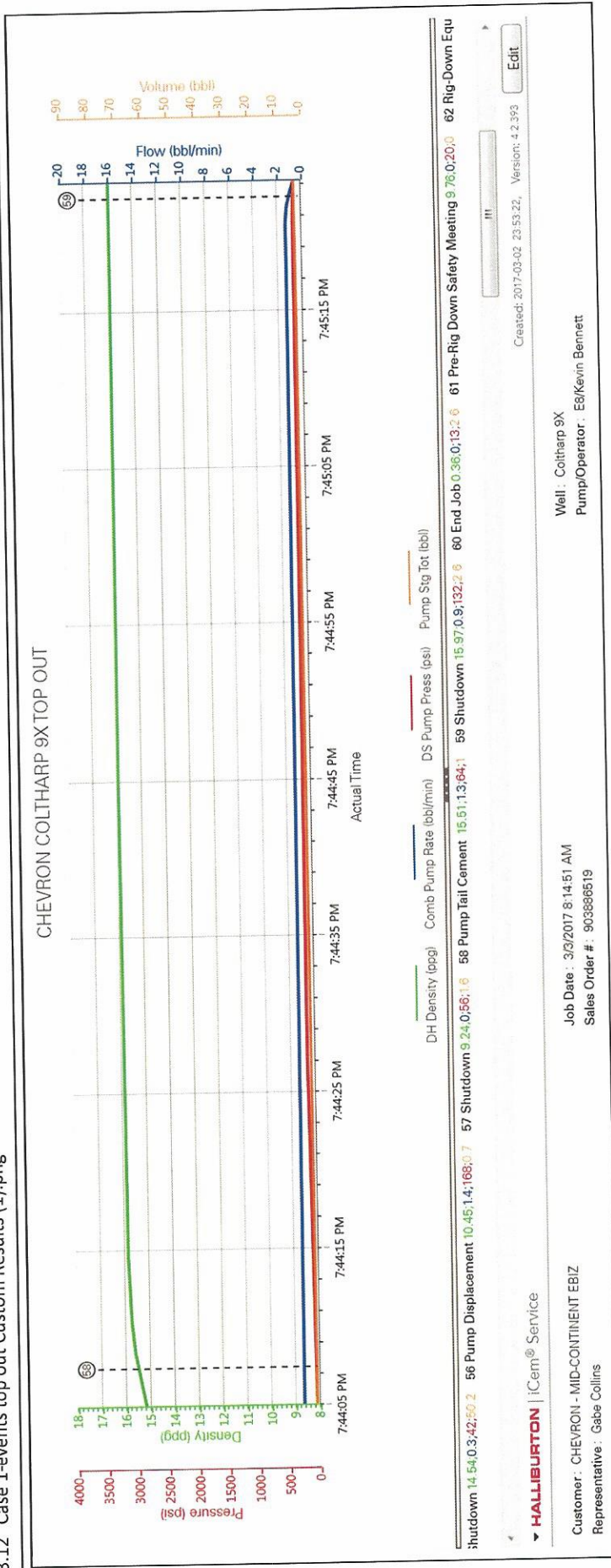
3.10 Case 1-events plug5Custom Results (1).png



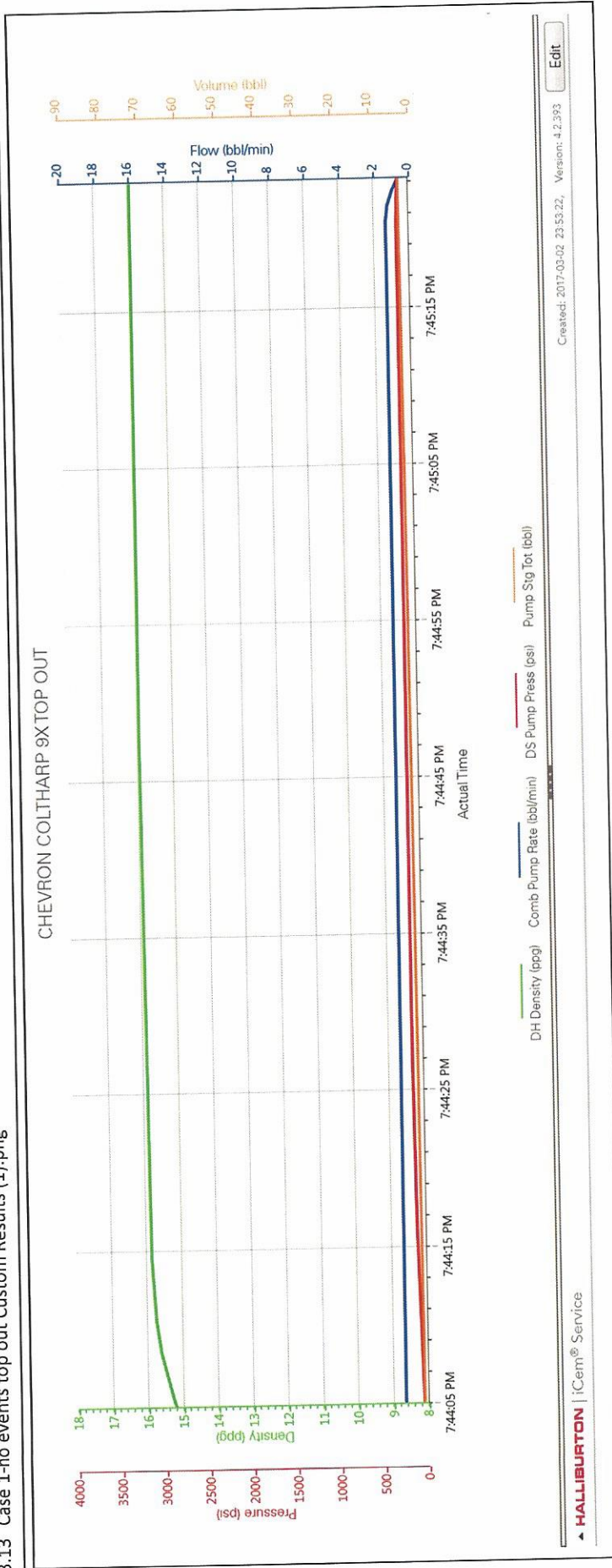
3.1.1 Case 1-Custom no events plug5Results (1).png



3.12 Case 1-events top out Custom Results (1).png

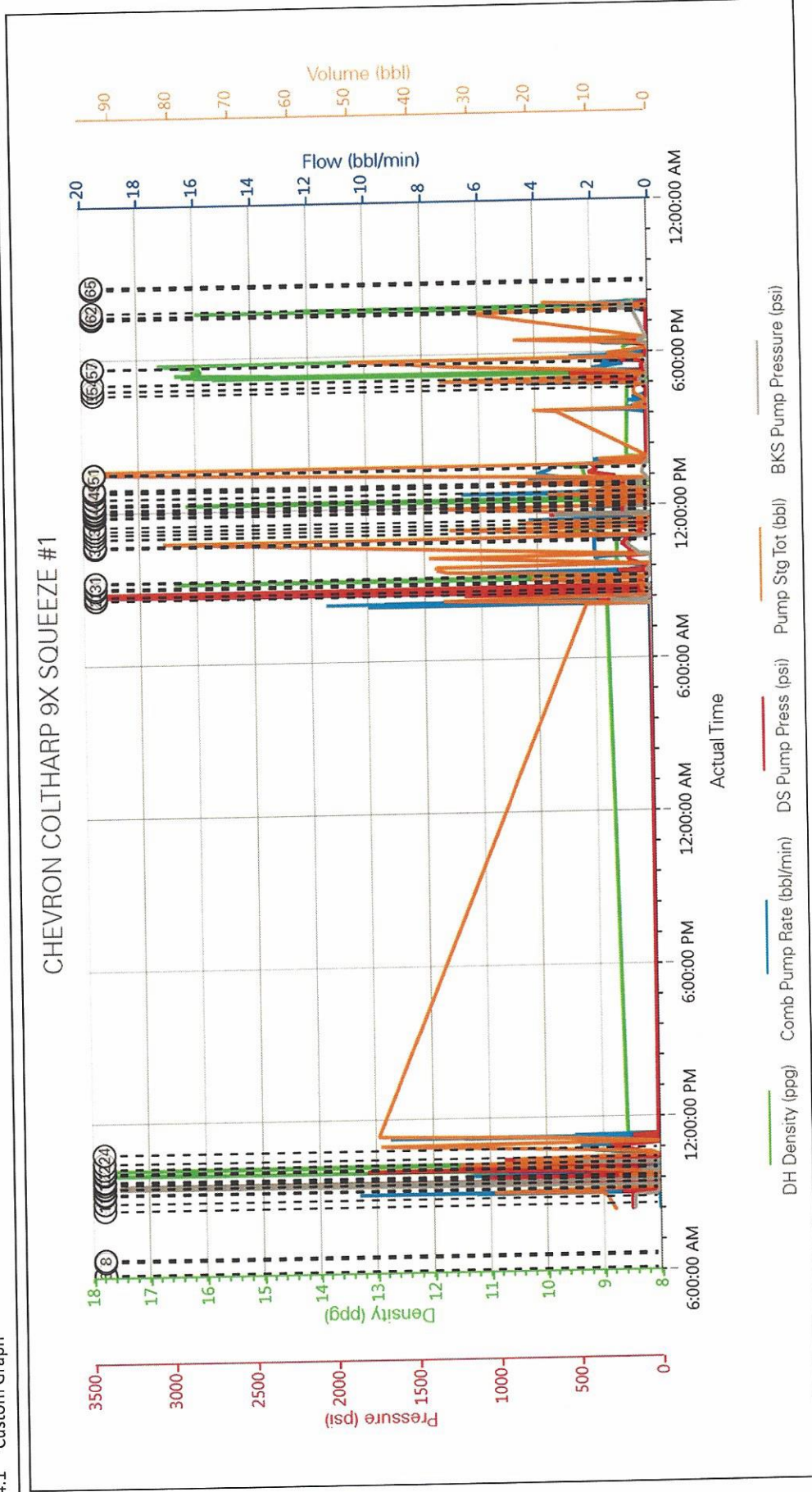


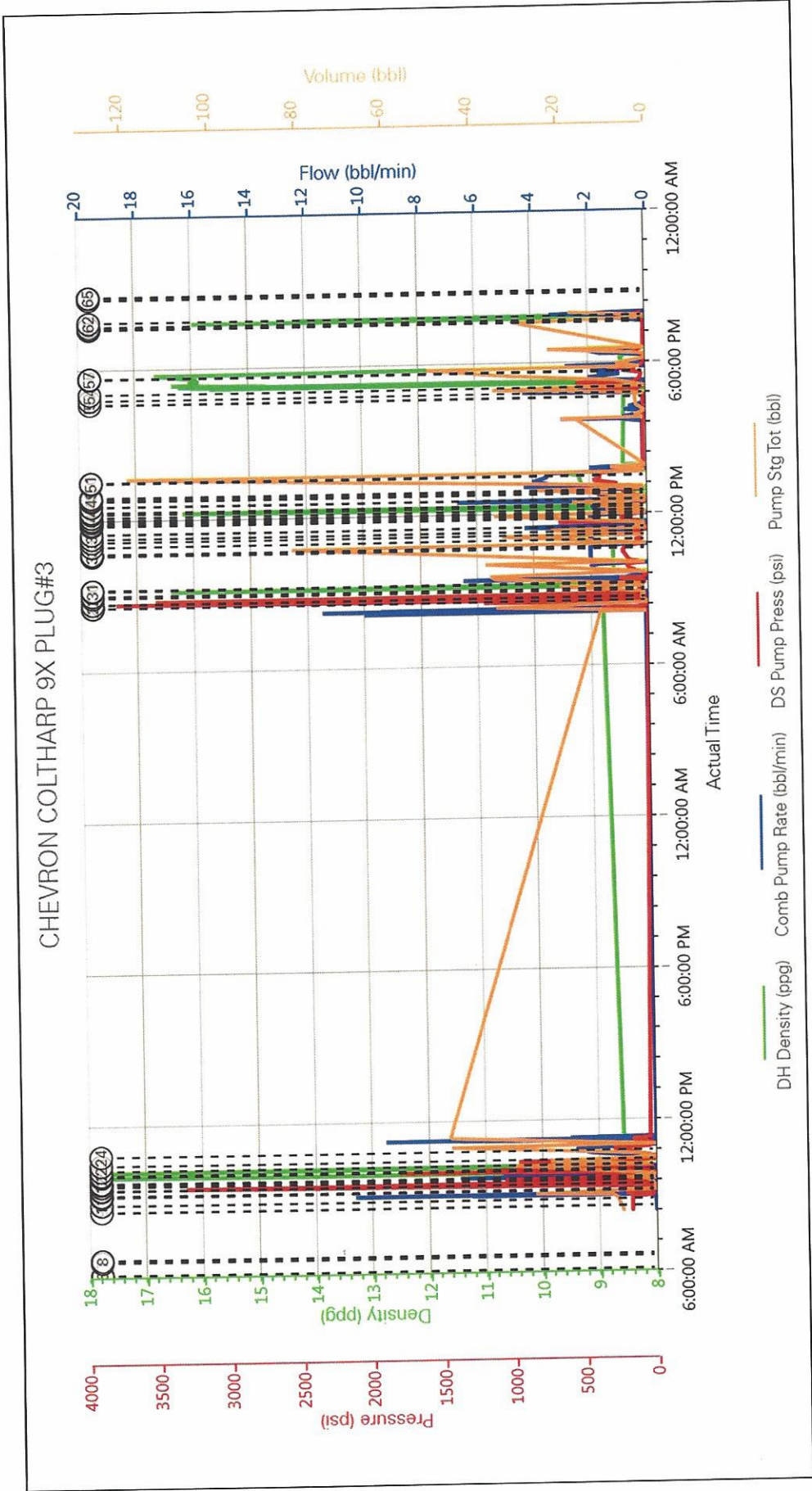
3.13 Case 1-no events top out Custom Results (1).png

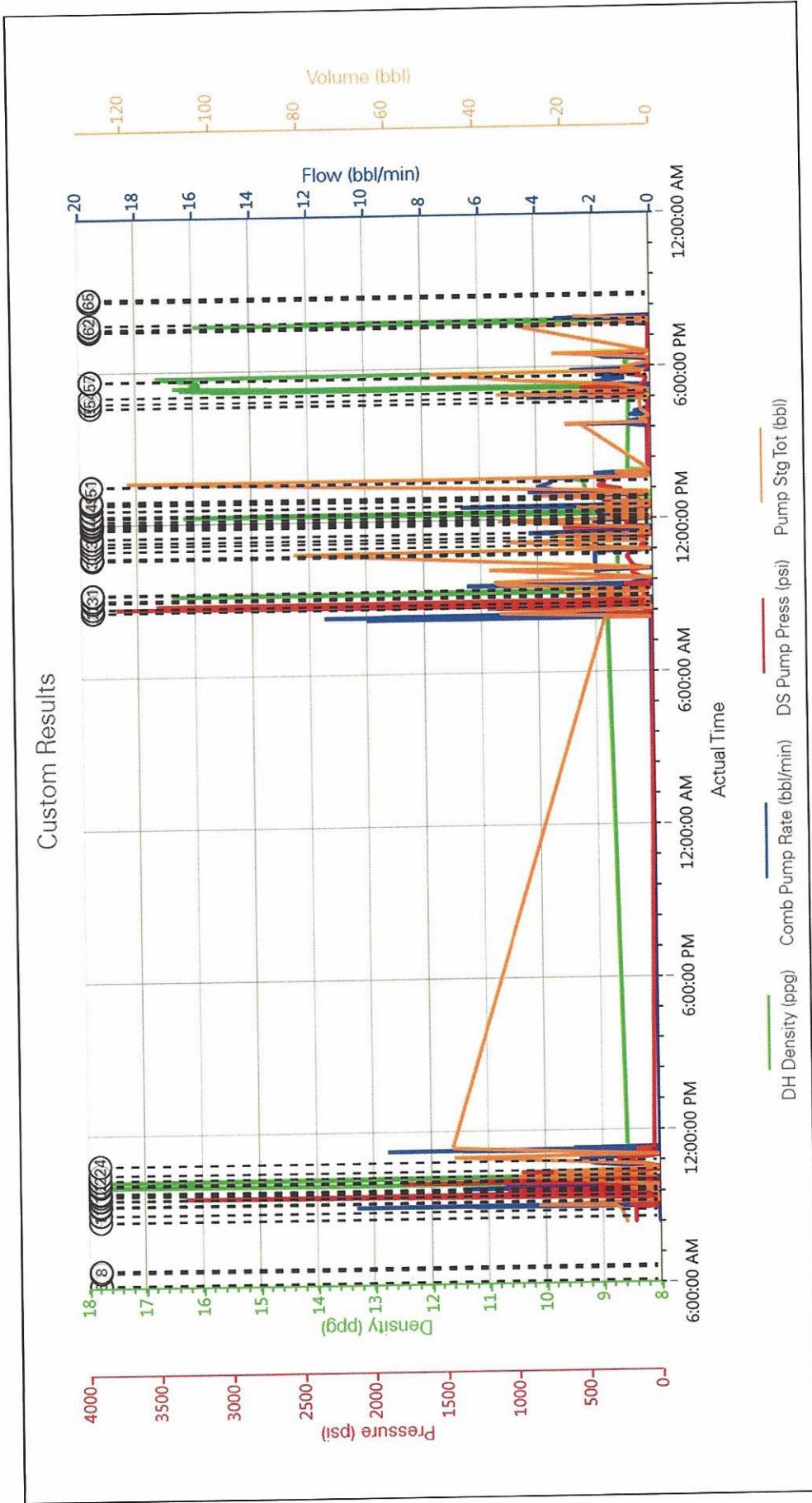


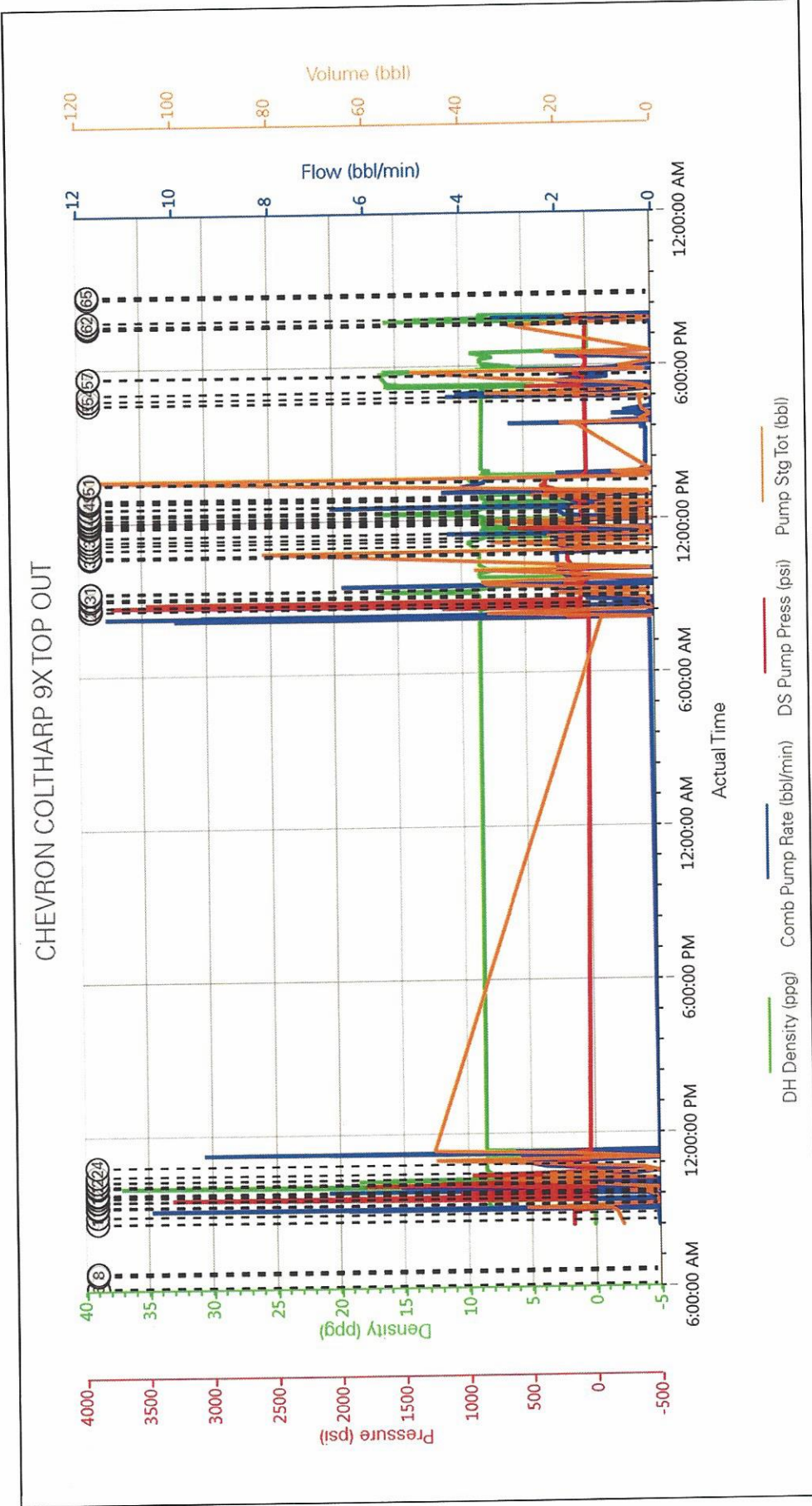
4.0 Custom Graphs

4.1 Custom Graph









5.0 Appendix

5.1 3D Wellbore Schematic

