

# HALLIBURTON

iCem<sup>®</sup> Service

## **WPX ENERGY ROCKY MOUNTAIN LLC-EBUS**

**For: Dylan Goudie and Kinzie Beavers**

### **RU 441-8 Production**

API# 05-045-22777-00

Job Date: Tuesday, December 29, 2015

Sincerely,

**Grand Junction Cement Engineering**

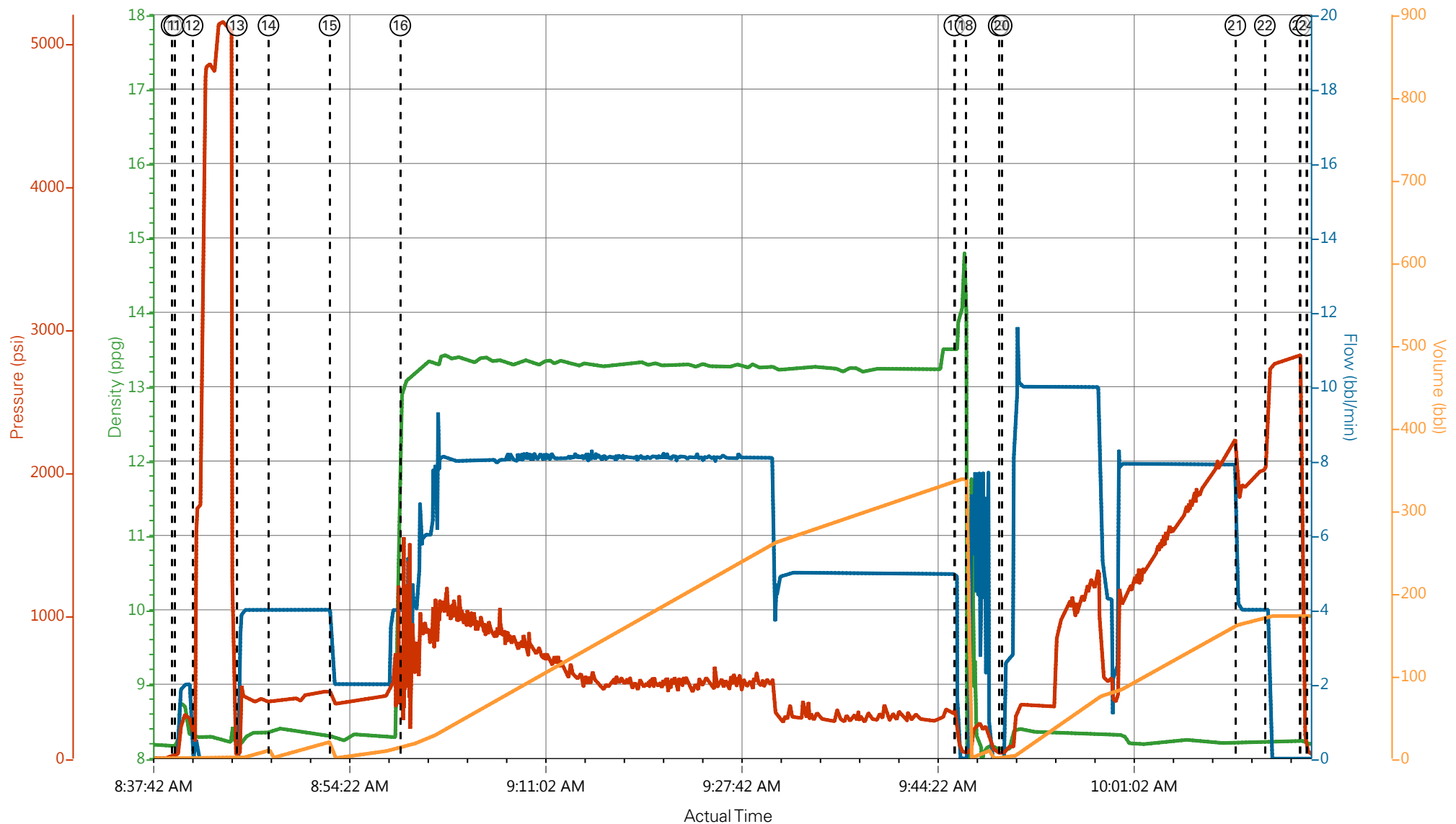
## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

Type	Seq. No.	Activity	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	12/29/2015	00:30:00	USER					
Event	2	Depart Yard Safety Meeting	12/29/2015	02:50	USER					ATTENDED BY ALL HES CREW
Event	3	Crew Leave Yard	12/29/2015	03:00	USER					
Event	4	Arrive At Loc	12/29/2015	05:30	USER					RIG RUNNING CASING, COMPANY REP OFFERED MSDS FOR CEMENT AND ADDITIVES
Event	5	Assessment Of Location Safety Meeting	12/29/2015	06:30	USER					ATTENDED BY ALL HES CREW
Event	6	Other	12/29/2015	06:40	USER					SPOT EQUIPMENT
Event	7	Pre-Rig Up Safety Meeting	12/29/2015	06:50	USER					ATTENDED BY ALL HES CREW
Event	8	Rig-Up Equipment	12/29/2015	07:00	USER					
Event	9	Pre-Job Safety Meeting	12/29/2015	08:00	USER					ATTENDED BY ALL HES CREW, RIG CREW AND COMPANY REP
Event	10	Other	12/29/2015	08:39:32	USER					TP 10690', TD 10700', MW 10.4 PPG, CASING 4.5", 11.6#, P-110, SJ 31', HOLE 8.75", SURFACE CASING 9,625", 32.3# SET AT 1219', RIG CIRCULATED FOR 1.5 HR'S PRIOR TO JOB
Event	11	Other	12/29/2015	08:39:45	USER	8.34	2	320	2	FRESH WATER, PH 7, TEMP 70, CHLORIDES 150

Event	12	Test Lines	12/29/2015	08:41:19	USER					PRESSURED UP TO 5150 PSI, PRESSURE HELD
Event	13	Pump Spacer	12/29/2015	08:45:04	USER	8.34	4	440	10	FRESH WATER, BOTTOM PLUG LAUNCHED
Event	14	Pump Spacer	12/29/2015	08:47:46	USER	8.4	4	480	20	MUD FLUSH III
Event	15	Pump Spacer	12/29/2015	08:52:57	USER	8.34	4	550	10	FRESH WATER
Event	16	Pump Tail Cement	12/29/2015	08:58:58	USER	13.3	8	1100	297.3	965 SKS THERMACEM MIXED AT 13.3 PPG, 1.73 YIELD, 7.81 GL/SK
Event	17	Shutdown	12/29/2015	09:46:04	USER					CEMENT DENSITY VERIFIED WITH CALLIBRATED SCALES
Event	18	Clean Lines	12/29/2015	09:47:00	USER					CLEANED LINES TO WASH UP TRUCK
Event	19	Drop Top Plug	12/29/2015	09:49:49	USER					PLUG LAUNCHED
Event	20	Pump Displacement	12/29/2015	09:50:05	USER	8.4	9	2320	155.7	FRESH WATER WITH KCL, BE-6 AND MMCR
Event	21	Slow Rate	12/29/2015	10:09:56	USER	8.4	4	2020	10	
Event	22	Bump Plug	12/29/2015	10:12:26	USER			2820		PLUG LANDED
Event	23	Check Floats	12/29/2015	10:15:25	USER					FLOATS HELD
Event	24	Other	12/29/2015	10:15:58	USER					GOOD CIRCULATION THROUGHOUT JOB, PIPE RECIPROCATED DURING CEMENT, 0 BBLS CEMENT TO SURFACE
Event	25	Post-Job Safety Meeting (Pre Rig-Down)	12/29/2015	10:20	USER					ATTENDED BY ALL HES CREW
Event	26	Rig-Down Equipment	12/29/2015	10:30	USER					
Event	27	Depart Location Safety Meeting	12/29/2015	11:20	USER					ATTENDED BY ALL HES CREW
Event	28	Crew Leave Location	12/29/2015	11:30	USER					THANK YOU FOR USING HALLIBURTON CEMENT,

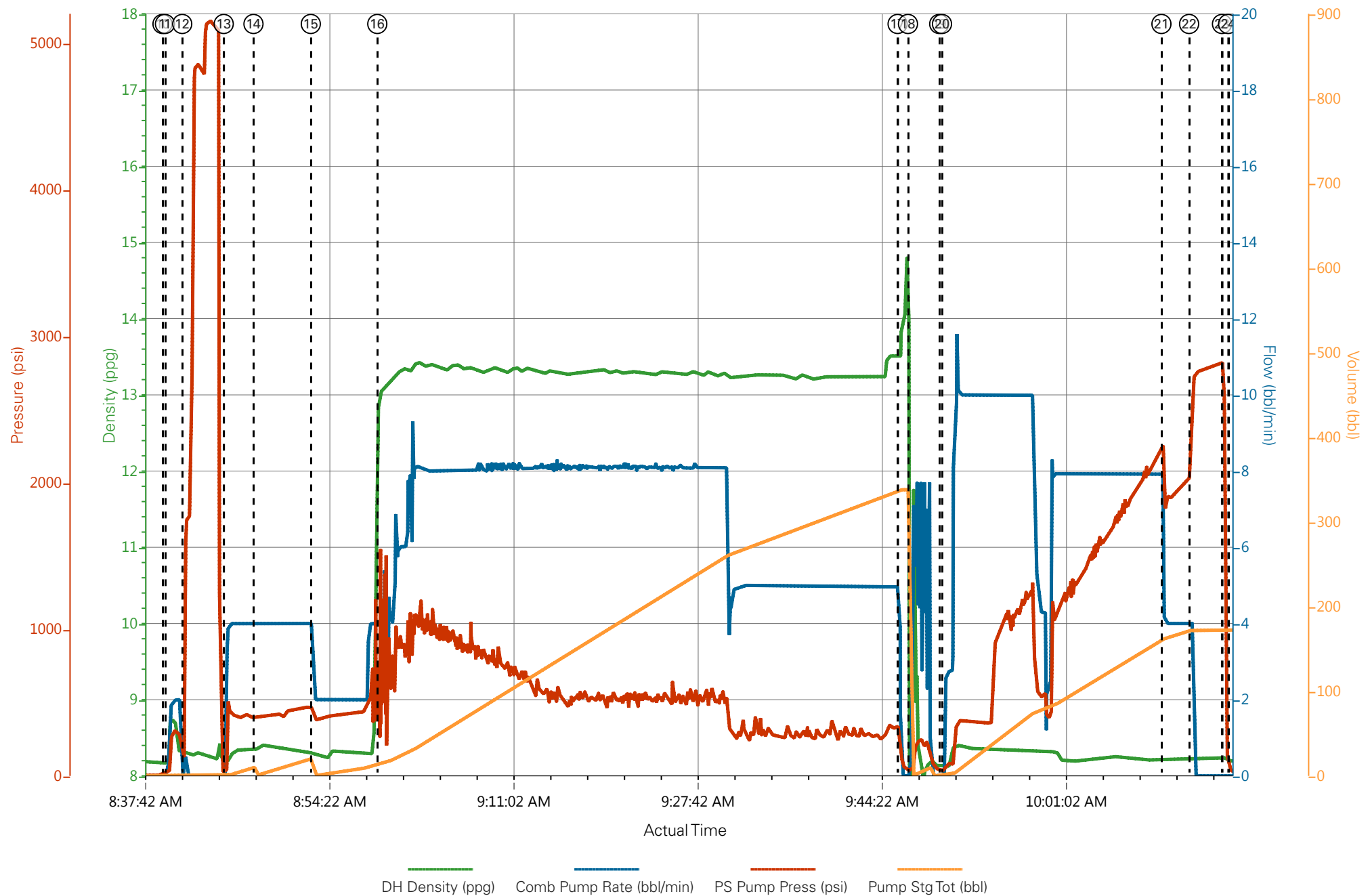
# WPX - RU 441-8 - PRODUCTION



DH Density (ppg) Comb Pump Rate (bbl/min) PS Pump Press (psi) Pump Stg Tot (bbl)

① Call Out n/a;n/a;n/a;n/a	⑦ Pre-Rig Up Safety Meeting n/a;n/a;n/a;n/a	⑬ Pump Spacer 8.18;3.3;128;0.2	⑲ Drop Top Plug 8.12;0;35;0	25 Post-Job Safety Meeting
② Depart Yard Safety Meeting n/a;n/a;n/a;n/a	⑧ Rig-Up Equipment n/a;n/a;n/a;n/a	⑭ Pump Spacer 8.34;4;400;0.7	20 Pump Displacement 8.11;1.2;46;0.1	26 Rig-Down Equipment
③ Crew Leave Yard n/a;n/a;n/a;n/a	⑨ Pre-Job Safety Meeting n/a;n/a;n/a;n/a	⑮ Pump Spacer 8.3;2;365;0.2	21 Slow Rate 8.22;4;1842;162.4	27 Depart Location Safety
④ Arrive At Loc n/a;n/a;n/a;n/a	⑩ Start Job 8.17;0;30;0	⑯ Pump Tail Cement 13.03;4;353;14.4	22 Bump Plug 8.22;4;2489;172.5	28 Crew Leave Location
⑤ Assessment Of Location Safety Meeting n/a;n/a;n/a;n/a	⑪ Fill Lines 8.16;0.3;37;0	⑰ Shutdown 13.67;0;168;338	23 Check Floats 8.25;0;1279;172.5	
⑥ Other n/a;n/a;n/a;n/a	⑫ Test Lines 8.29;0.5;1569;2	⑱ Clean Lines 6.03;0.5;44;0	24 End Job 8.2;0;30;172.5	

# WPX - RU 441-8 - PRODUCTION



### Job Information

<b>Request/Slurry</b>	2293217/1	<b>Rig Name</b>	H&P 318	<b>Date</b>	21/DEC/2015
<b>Submitted By</b>	Aaron Katz	<b>Job Type</b>	Production Casing	<b>Bulk Plant</b>	Grand Junction
<b>Customer</b>	WPX Energy, Inc.	<b>Location</b>	Garfield	<b>Well</b>	RU 441-8

### Well Information

<b>Casing/Liner Size</b>	4.5 in / 114.3 mm	<b>Depth MD</b>	3251 m / 10666 ft	<b>BHST</b>	121°C / 249°F
<b>Hole Size</b>	8.75 in / 222.25 mm	<b>Depth TVD</b>	3036 m / 9962 ft	<b>BHCT</b>	82°C / 179°F
<b>Pressure</b>	432 bar / 6270 psi				

### Drilling Fluid Information

<b>Mud Supplier Name</b>	<b>Mud Trade Name</b>	<b>Density</b>
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### Cement Information - Primary Design

<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	<u>Cement Properties</u>		
		> Mountain G	Bulk Blend	23.12.15	Tank 29	Slurry Density	13.3	lbm/gal
		> San Juan	Bulk Blend	23.12.15	tank 16 &22	Slurry Yield	1.733	ft3/sack
		Cement Blend				Water Requirement	77.116	L/100kg
		Fresh Water	Lab	12.03.13		Total Mix Fluid	77.116	L/100kg
		HALAD-344 (PB)	Bulk Blend	23.12.15	15031940			
		SA-1015 (PB)	Bulk Blend	23.12.15	5A0007W			
		SUPER CBL	Bulk Blend	23.12.15	15L0056	Water Source	Fresh Water	
		SS-200 silica flour	Bulk Blend	23.12.15	tank 6 &25	Water Chloride		
		Kol-Seal	Bulk Blend	23.12.15	tank 1&20			
		Pol-E-Flake	Bulk Blend	23.12.15				
		HR-601	Bulk Blend	23.12.15				
		HALAD-413 (PB)	Bulk Blend	23.12.15	ZM5B0425A0			

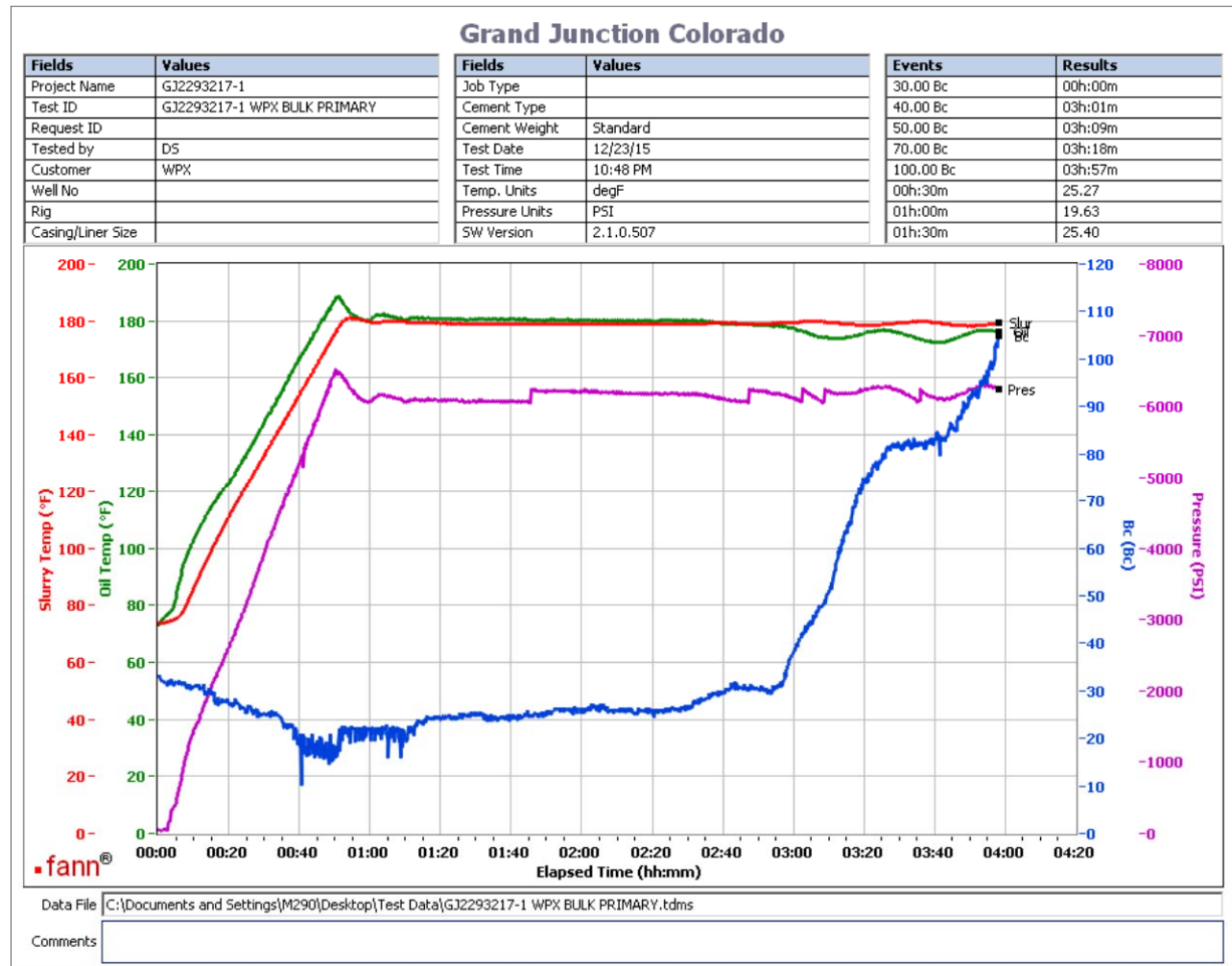
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## Thickening Time

23/DEC/2015

Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	40 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)
179	6270	50	31	0:00	3:01	3:09	3:18	3:57



965 Total Sacks  
CS3282 TR#8678 425 SKS

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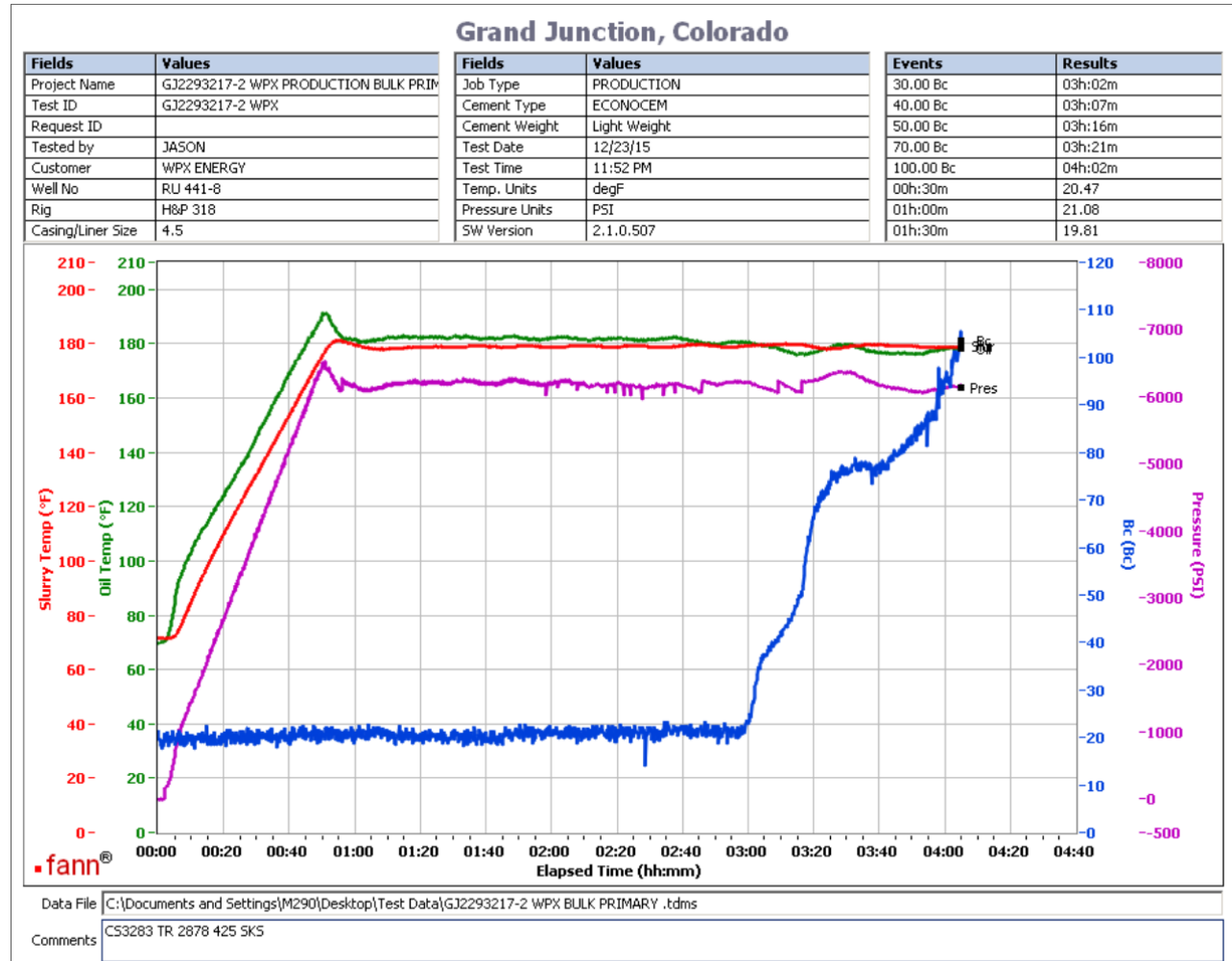
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## Operation Test Results Request ID 2293217/2

### Thickening Time

23/DEC/2015

Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	40 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)
179	6270	50	21	3:02	3:07	3:16	3:21	4:02



965 Total Sacks  
CS3283 TR 2878 425 SKS

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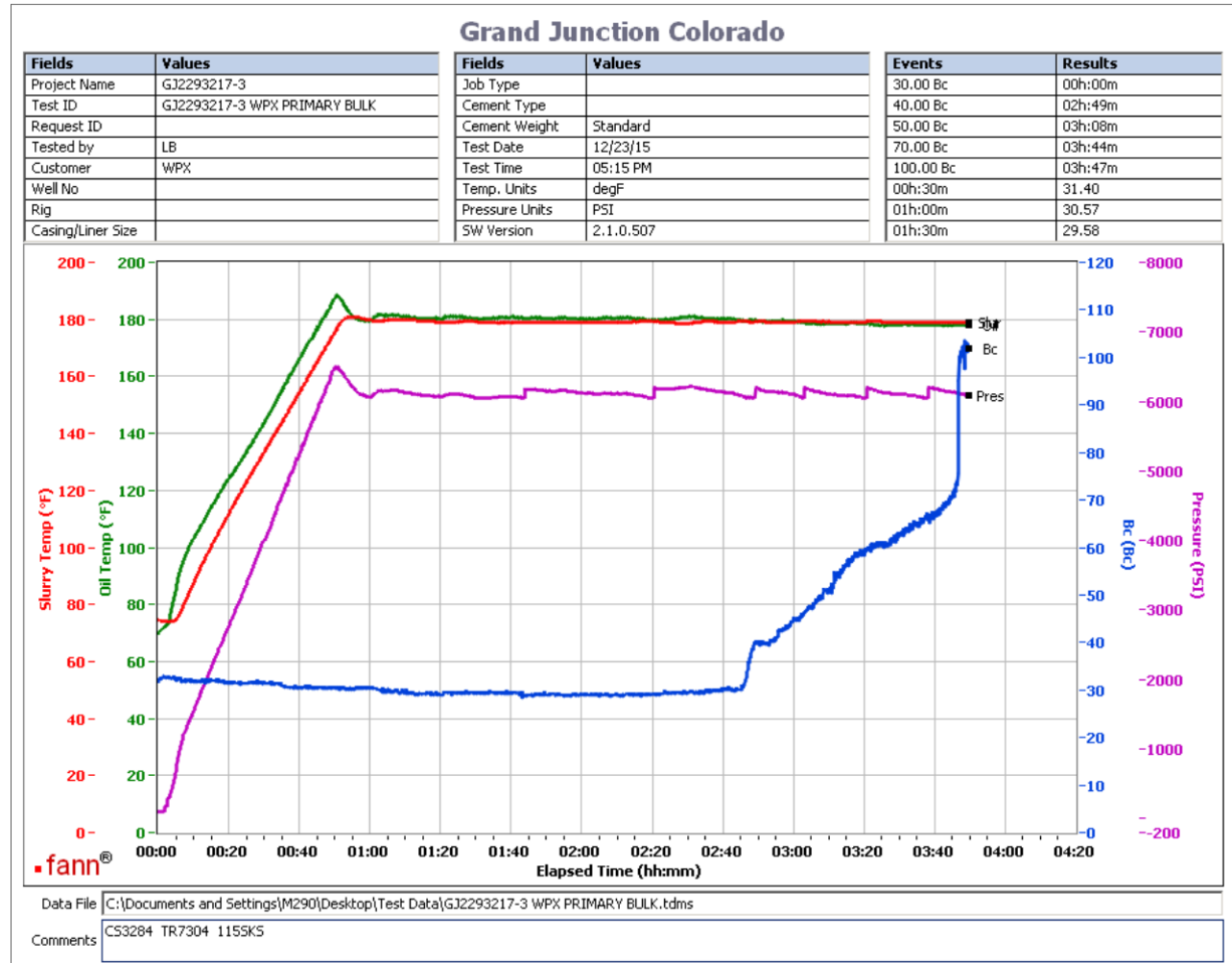
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# Operation Test Results Request ID 2293217/3

## Thickening Time

23/DEC/2015

Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	40 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)
179	6270	50	32	0:00	2:49	3:08	3:44	3:47



965 Total Sacks  
CS3284 TR7304 115SKS

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