

HALLIBURTON

iCem[®] Service

TEP ROCKY MOUNTAIN LLC-EBUS

For: Terra

Date: Friday, October 20, 2017

GM 423-4 Production

API#05-045-23508

Sincerely,

Grand Junction Cement Engineering

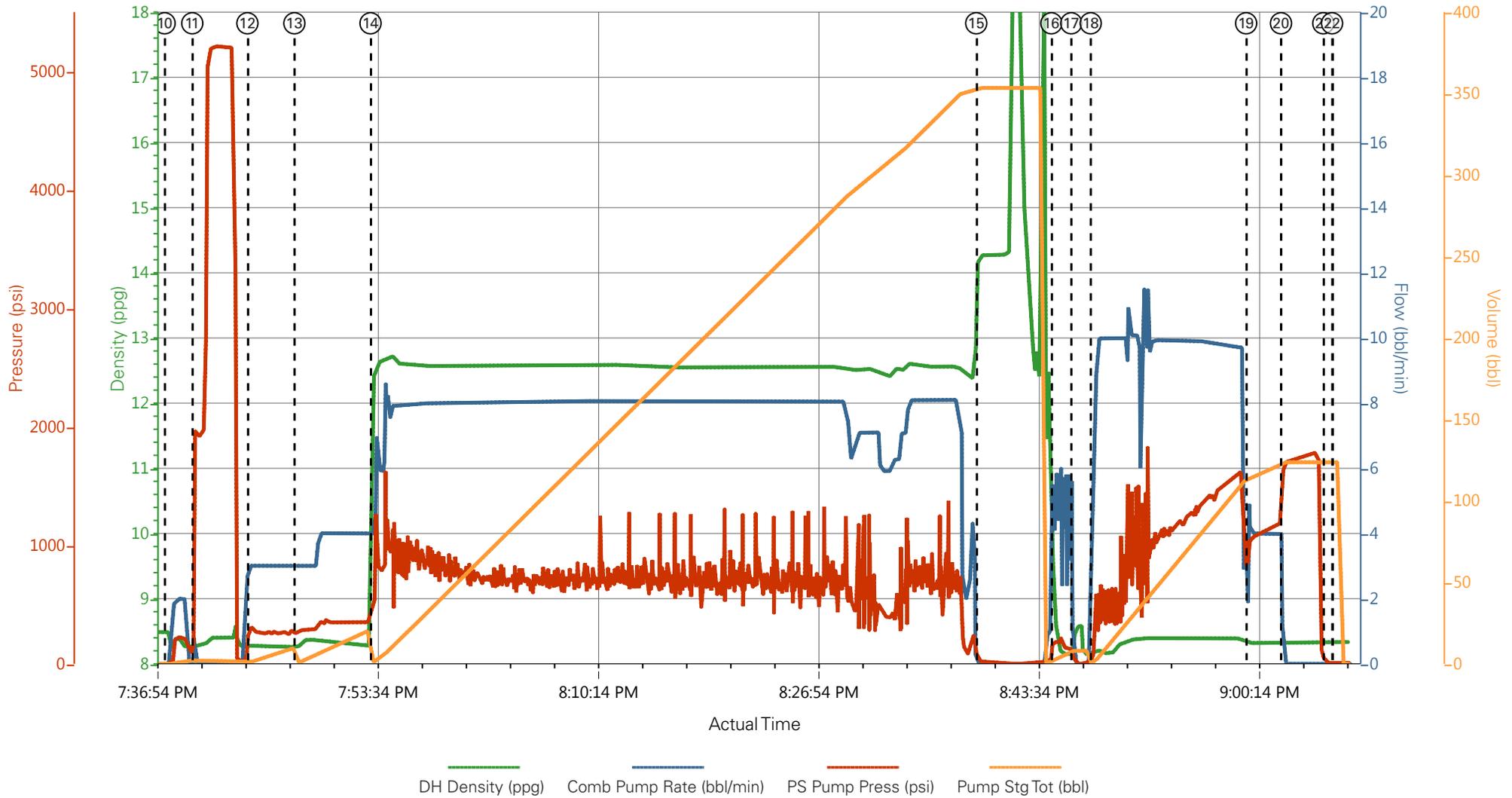
2.0 Real-Time Job Summary

2.1 Job Event Log

| Type | Seq. No. | Activity | Graph Label | Date | Time | Source | DH Density <i>(ppg)</i> | Comb Pump Rate <i>(bbl/min)</i> | PS Pump Press <i>(psi)</i> | Pump Stg Tot <i>(bbl)</i> | Comments |
|-------|----------|---------------------------------------|---------------------------------------|------------|----------|--------|----------------------------|------------------------------------|-------------------------------|------------------------------|---|
| Event | 1 | Call Out | Call Out | 10/20/2017 | 10:00:00 | USER | | | | | |
| Event | 2 | Pre-Convoy Safety Meeting | Pre-Convoy Safety Meeting | 10/20/2017 | 12:00:00 | USER | | | | | |
| Event | 3 | Crew Leave Yard | Crew Leave Yard | 10/20/2017 | 12:05:00 | USER | | | | | |
| Event | 4 | Arrive At Loc | Arrive At Loc | 10/20/2017 | 13:30:00 | USER | | | | | |
| Event | 5 | Assessment Of Location Safety Meeting | Assessment Of Location Safety Meeting | 10/20/2017 | 13:35:00 | USER | | | | | |
| Event | 6 | Other | Spot Equipment | 10/20/2017 | 13:40:00 | USER | | | | | |
| Event | 7 | Pre-Rig Up Safety Meeting | Pre-Rig Up Safety Meeting | 10/20/2017 | 13:45:00 | USER | | | | | |
| Event | 8 | Rig-Up Equipment | Rig-Up Equipment | 10/20/2017 | 13:50:00 | USER | | | | | |
| Event | 9 | Pre-Job Safety Meeting | Pre-Job Safety Meeting | 10/20/2017 | 18:15:56 | USER | | | | | TD 7325', TP 7315', SJ 35.6', MUD 9.8 PPG, 4 1/2" CASING IN 8 3/4" OPEN HOLE, WATER TEMP 62, PH 6.4, CHLORIDES 0, SULFATES <200, POTASSIUM 450. |
| Event | 10 | Start Job | Start Job | 10/20/2017 | 19:37:41 | COM5 | | | | | |
| Event | 11 | Test Lines | Test Lines | 10/20/2017 | 19:39:47 | USER | | | 5000.00 | | 5000 PSI TEST |
| Event | 12 | Pump Spacer 1 | Pump Spacer 1 | 10/20/2017 | 19:43:57 | COM5 | 8.33 | 3.00 | 200.00 | 10.00 | 10 BBL FRESH H2O SPACER |
| Event | 13 | Pump Spacer 2 | Pump Spacer 2 | 10/20/2017 | 19:47:30 | COM5 | 8.4 | 4.00 | 350.00 | 20.00 | 20 BBL MUDFLUSH SPACER |
| Event | 14 | Pump Cement | Pump Cement | 10/20/2017 | 19:53:16 | COM5 | 12.50 | 8.00 | 800.00 | 303.7 | 870 SKS @ 12.5 PPG 1.96 YLD 9.38 GAL/SK H2O |
| Event | 15 | Shutdown | Shutdown | 10/20/2017 | 20:39:05 | USER | | | | | |

| | | | | | | | | | | | | |
|-------|----|-----------------------------|-----------------------------|------------|----------|------|------|-------|------|-------|--|--|
| Event | 16 | Clean Lines | Clean Lines | 10/20/2017 | 20:44:46 | COM5 | | | | | | |
| Event | 17 | Drop Top Plug | Drop Top Plug | 10/20/2017 | 20:46:16 | COM5 | | | | | | PLUG AWAY |
| Event | 18 | Pump Displacement | Pump Displacement | 10/20/2017 | 20:47:44 | COM5 | 8.40 | 10.00 | 1050 | 112.8 | | 112.8 BBL KCL WATER DISPLACEMENT |
| Event | 19 | Slow Rate | Slow Rate | 10/20/2017 | 20:59:30 | USER | 8.40 | 4.00 | 1600 | 102.0 | | SLOW RATE AT 102 TO 4 BBL/MIN |
| Event | 20 | Bump Plug | Bump Plug | 10/20/2017 | 21:02:08 | COM5 | 8.40 | 4.00 | 1170 | 112.8 | | PLUG BUMPED |
| Event | 21 | Check Floats | Check Floats | 10/20/2017 | 21:05:20 | USER | | | | | | FLOATS HELD, 1 BBL BACK |
| Event | 22 | End Job | End Job | 10/20/2017 | 21:06:00 | COM5 | | | | | | GOOD CIRCULATION THROUGHOUT, PIPE LEFT STATIC, 30 LBS SUGAR USED, NO ADD HOURS CHARGED |
| Event | 23 | Pre-Rig Down Safety Meeting | Pre-Rig Down Safety Meeting | 10/20/2017 | 21:15:00 | USER | | | | | | |
| Event | 24 | Rig-Down Equipment | Rig-Down Equipment | 10/20/2017 | 21:20:00 | USER | | | | | | THANK YOU FOR CHOOSING HALLIBURTON CEMENTING |
| Event | 25 | Pre-Convoy Safety Meeting | Pre-Convoy Safety Meeting | 10/20/2017 | 21:55:00 | USER | | | | | | OF GRAND JUNCTION, CO – ANTHONY ANDREWS AND |
| Event | 26 | Crew Leave Location | Crew Leave Location | 10/20/2017 | 22:00:00 | USER | | | | | | CREW |

TEP - GM 423-4 - 4 1/2" PRODUCTION



- | | | | |
|---|--------------------------|---------------------|-------------------------------|
| ① Call Out | ⑧ Rig-Up Equipment | ⑮ Shutdown | ⑳ End Job |
| ② Pre-Convoy Safety Meeting | ⑨ Pre-Job Safety Meeting | ⑯ Clean Lines | ㉑ Pre-Rig Down Safety Meeting |
| ③ Crew Leave Yard | ⑩ Start Job | ⑰ Drop Top Plug | ㉒ Rig-Down Equipment |
| ④ Arrive At Loc | ⑪ Test Lines | ⑱ Pump Displacement | ㉓ Pre-Convoy Safety Meeting |
| ⑤ Assessment Of Location Safety Meeting | ⑫ Pump Spacer 1 | ㉒ Slow Rate | ㉔ Crew Leave Location |
| ⑥ Spot Equipment | ⑬ Pump Spacer 2 | ㉓ Bump Plug | |
| ⑦ Pre-Rig Up Safety Meeting | ⑭ Pump Cement | ㉔ Check Floats | |

▼ **HALLIBURTON** | iCem® Service

Created: 2017-10-20 15:29:13, Version: 4.2.393

Edit

Customer: TEP ROCKY MOUNTAIN LLC-EBUS

Job Date: 10/20/2017 3:29:45 PM

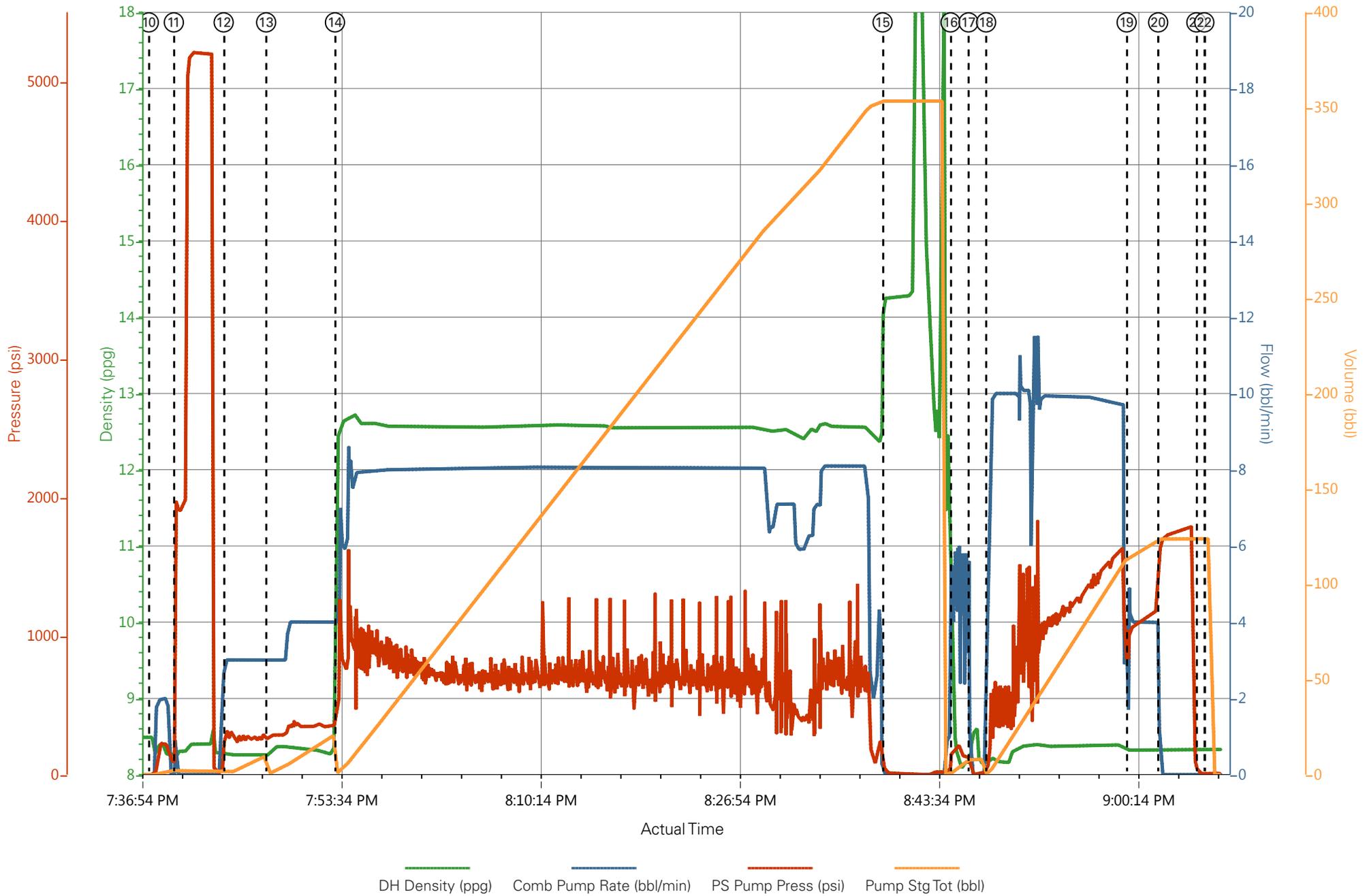
Well: GM 423-4

Representative: CRAIG BORGSTEDTE

Sales Order #: 904375449

ELITE 8: TRAVIS BROWN / ANTHONY ANDREWS

TEP - GM 423-4 - 4 1/2" PRODUCTION



Job Information

| | | | | | |
|-----------------------|-----------------------|-----------------|-------------------|-------------------|----------------|
| Request/Slurry | 2423798/1 | Rig Name | H&P 271 | Date | 17/OCT/2017 |
| Submitted By | Patrick Ealey | Job Type | Production Casing | Bulk Plant | Grand Junction |
| Customer | Terra Energy Partners | Location | Garfield | Well | GM 423-4 |

Well Information

| | | | | | |
|--------------------------|----------|------------------|---------|-------------|--------------|
| Casing/Liner Size | 4.5 in | Depth MD | 7337 ft | BHST | 89°C / 193°F |
| Hole Size | 8.75 in | Depth TVD | 6671 ft | BHCT | 54°C / 129°F |
| Pressure | 3970 psi | | | | |

Drilling Fluid Information

| | | | | | |
|--------------------------|--------|-----------------------|------------|----------------|-------------|
| Mud Supplier Name | Baroid | Mud Trade Name | BARADRIL-N | Density | 9.2 lbm/gal |
|--------------------------|--------|-----------------------|------------|----------------|-------------|

Cement Information - Primary Design 

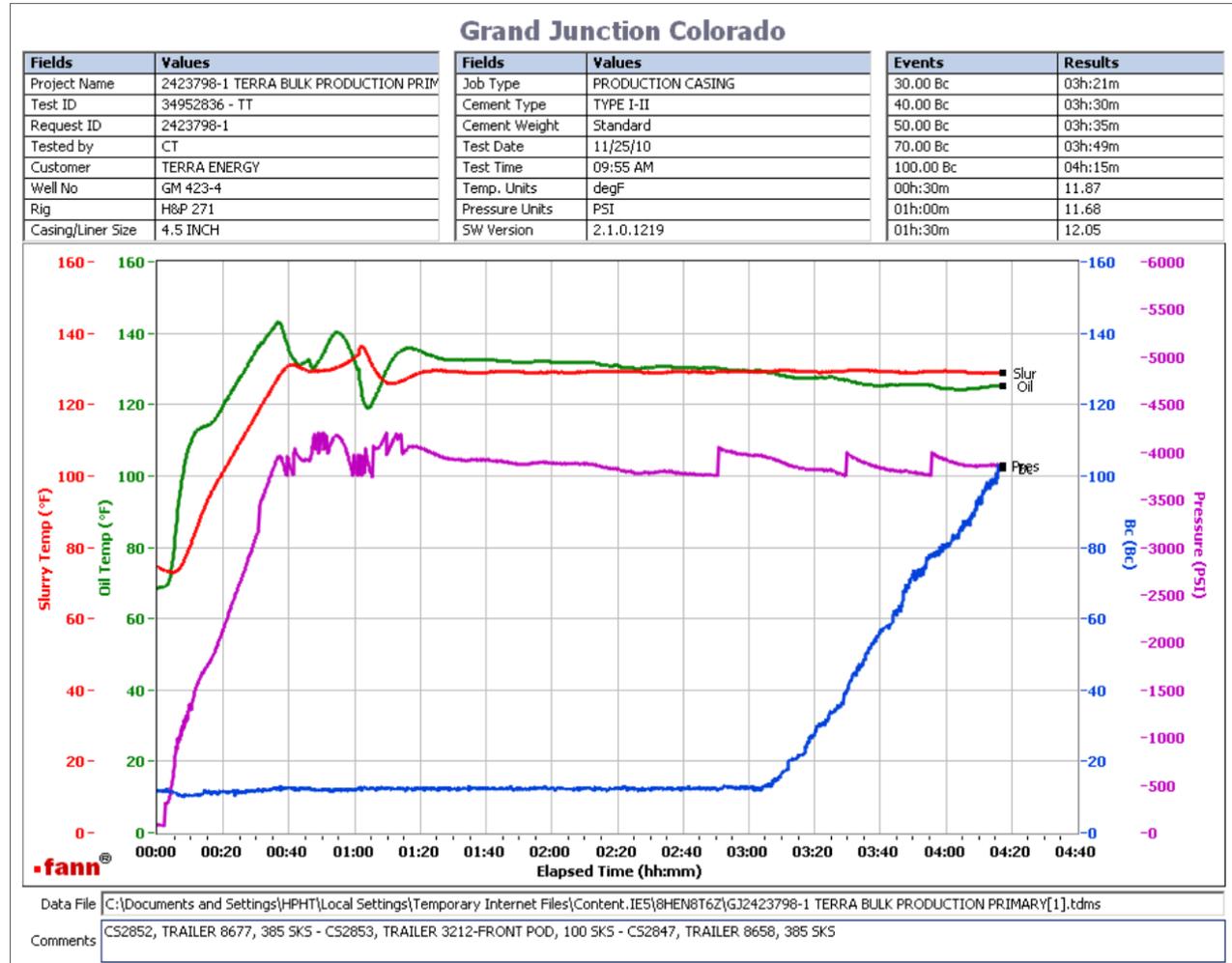
| <u>Conc</u> | <u>UOM</u> | <u>Cement/Additive</u> | <u>Sample Type</u> | <u>Sample Date</u> | <u>Lot No.</u> | Cement Properties | | |
|-------------|------------|------------------------|--------------------|--------------------|----------------|--------------------------|-------------|----------|
| | | NeoCem Primary | | | | Slurry Density | 12.5 | lbm/gal |
| | | | | | | Slurry Yield | 1.962 | ft3/sack |
| | | | | | | Water Requirement | 9.434 | gal/sack |
| | | | | | | Total Mix Fluid | 9.434 | gal/sack |
| | | | | | | Water Source | Fresh Water | |
| | | | | | | Water Chloride | | |

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Thickening Time - ON-OFF-ON

18/OCT/2017

| Test Temp (°F) | Pressure (psi) | Reached in (min) | 30 Bc (hh:min) | 50 Bc (hh:min) | 70 Bc (hh:min) | 100 Bc (hh:min) | Start Bc | Stirring before stop (mins) | Static Period (min) | Peak reading (BC) |
|----------------|----------------|------------------|----------------|----------------|----------------|-----------------|----------|-----------------------------|---------------------|-------------------|
| 129 | 3970 | 36 | 3:21 | 3:35 | 3:49 | 4:15 | 12 | 46 | 15 | 12 |



Total sks = 870
 Composite:
 CS2847 TR#8658 385 sks
 CS2852 TR#8677 385 sks
 CS2853, Trailer 3212-Front Pod, 100 sks
 Deflection: 12 - 12

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