

| | | | | | |
|---------------------------|-------------|--|--|--|--|
| Rm @ Max Tool Temp (degF) | N/A @ 46.10 | | | | |
| Lead MWD Engineer | Nick Weeks | | | | |
| Customer Representative | Doug Sloan | | | | |

SENSOR INFORMATION

Downhole Processor Information

| | | | | | |
|---------------------------|-----------------|--|--|--|--|
| Tool Type | HCIM | | | | |
| Software Version | 88.58 | | | | |
| Sub Serial Number | 12562642 | | | | |
| Insert Serial Number | 11753209 | | | | |
| Date and Time Initialized | 18-Aug-15 20:47 | | | | |
| Date and Time Read | 20-Aug-15 15:15 | | | | |
| ECMB SW Version | N/A | | | | |

Directional Sensor Information

| | | | | | |
|------------------------|----------|--|--|--|--|
| Tool Type | PCDC | | | | |
| Distance From Bit (ft) | 123.78 | | | | |
| Software Version | 6.21 | | | | |
| Sub Serial Number | 12185782 | | | | |
| Sonde Serial Number | 11477951 | | | | |
| Sensor ID Number | N/A | | | | |
| Toolface Offset (deg) | 0.00 | | | | |

Pressure Sensor Information

| | | | | | |
|------------------------------|----------|--|--|--|--|
| Tool Type | PWD | | | | |
| Distance From Bit (ft) | 133.70 | | | | |
| Recorded Sample Period (sec) | 2 | | | | |
| Software Version | 4.14 | | | | |
| Collar Serial Number | 11905281 | | | | |
| Insert Serial Number | 11996744 | | | | |

DDSr-HCIM Sensor Information

| | | | | | |
|------------------------------|-----------|--|--|--|--|
| Tool Type | DDSr-HCIM | | | | |
| Distance From Bit (ft) | 140.14 | | | | |
| Recorded Sample Period (sec) | 16 | | | | |
| Software Version | 20.88 | | | | |
| Sub Serial Number | 12562642 | | | | |
| Insert Serial Number | 11463449 | | | | |
| Sensor ID Number | 7194 | | | | |

REMARKS

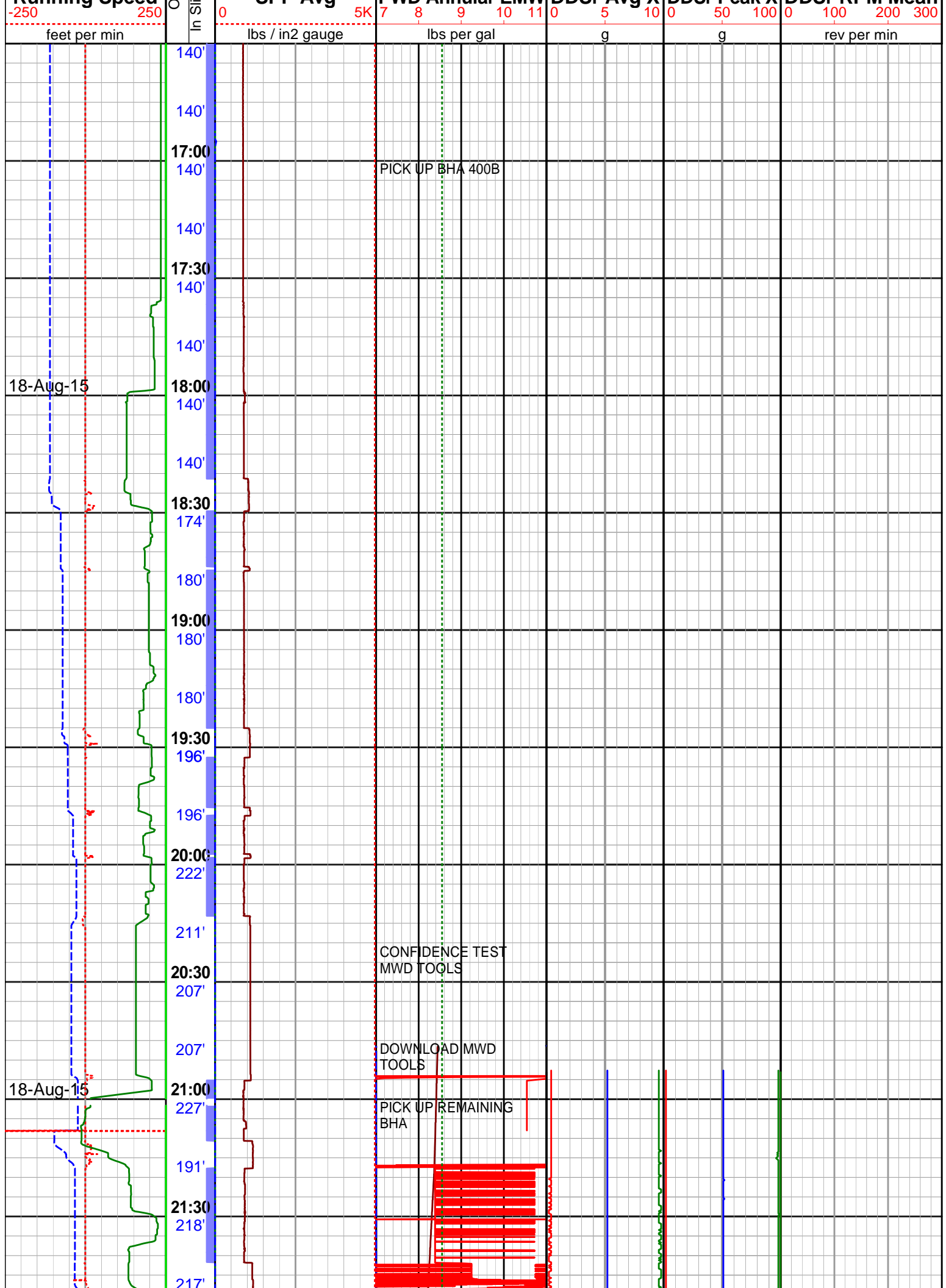
1. ALL DEPTHS ARE MEASURED DEPTHS (MD), UNLESS OTHERWISE NOTED. THESE DEPTHS ARE BIT DEPTHS AND ARE CALLIBRATED TO THE DRILLERS PIPE TALLY. NO DEPTH CORRECTIONS HAVE BEEN MADE FOR PIPE STRETCH OR COMPRESSION.
2. ALL VERTICAL DEPTHS ARE TRUE VERTICAL DEPTHS (TVD), UNLESS OTHERWISE NOTED. ONLY INVERTED / REVERTED SECTIONS GREATER THAN 30' TVD ARE PRESENTED
3. ALL DATA PRESENTED IS RECORDED DATA UNLESS OTHERWISE STATED.
4. LWD RUN 1 WAS COMPRISED OF DIRECTIONAL, DUAL GAMMA RAY (DGR) UTILIZING GEIGER-MUELLER TUBE TYPE DETECTORS, AZIMUTHAL DEEP ELECTROMAGNETIC WAVE RESISTIVITY (ADR), PRESSURE WHILE DRILLING (PWD) DRILLSTRING DYNAMICS SENSOR (DDSr), AZIMUTHAL LITHODENSITY (ALD), COMPENSATED THERMAL NEUTRON (CTN), MAGNETIC RESONANCE WHILE DRILLING (MRIL-WD), AZIMUTHAL BIMODAL ACOUSTIC TOOL (XBAT), AND THE AZIMUTHAL ACOUSTIC CALIPER TOOL (XCAL).

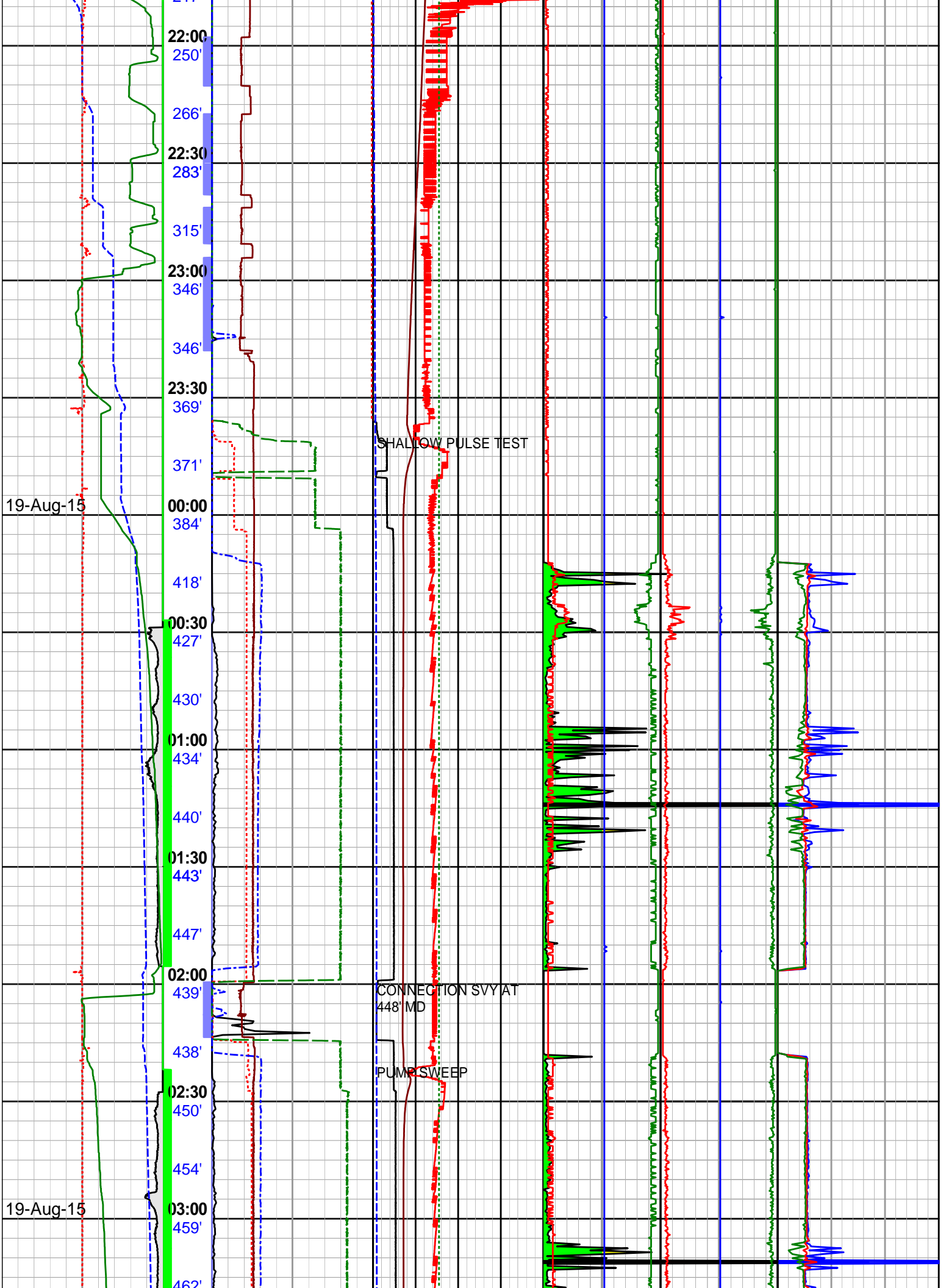
5. RUN 200 WAS A 36" HOLE OPENING RUN, NO MWD TOOLS WERE PRESENT THEREFOR IT IS NOT PRESENTED.
6. RUN 300 WAS A 42" HOLE OPENING RUN, NO MWD TOOLS WERE PRESENT THEREFOR IT IS NOT PRESENTED.
7. RUN 400 WAS A CLEANOUT RUN TO DRILL OUT THE SHOE TRACK AND 30' OF NEW FORMATION, NO MWD TOOLS WERE PRESENT THEREFOR IT IS NOT PRESENTED.
8. RUN 401 WAS A 26" HOLE OPENING RUN UTILIZING DIRECTIONAL, DRILL STRING DYNAMICS SENSOR AND PRESSURE WHILE DRILLING. NO LOGGING SENSORS WERE PRESENT.
9. MWD RUN 500 WAS A 17.5" DRILLING RUN UTILIZING DIRECTIONAL, DRILL STRING DYNAMICS SENSOR AND PRESSURE WHILE DRILLING. NO LOGGING SENSORS WERE PRESENT.
10. LWD RUN 6 WAS COMPRISED OF DIRECTIONAL, DUAL GAMMA RAY (DGR) UTILIZING GEIGER-MUELLER TUBE TYPE DETECTORS, ELECTROMAGNETIC WAVE RESISTIVITY PHASE 4 (EWR-P4), PRESSURE WHILE DRILLING (PWD) DRILLSTRING DYNAMICS SENSOR (DDSr), AZIMUTHAL LITHODENSITY (ALD), COMPENSATED THERMAL NEUTRON (CTN), AZIMUTHAL BIMODAL ACOUSTIC TOOL (XBAT), AND THE AZIMUTHAL ACOUSTIC CALIPER TOOL (XCAL).
11. LWD RUN 7 WAS COMPRISED OF DIRECTIONAL, DUAL GAMMA RAY (DGR) UTILIZING GEIGER-MUELLER TUBE TYPE DETECTORS, AZIMUTHAL DEEP ELECTROMAGNETIC WAVE RESISTIVITY (ADR), PRESSURE WHILE DRILLING (PWD) DRILLSTRING DYNAMICS SENSOR (DDSr), AZIMUTHAL LITHODENSITY (ALD), COMPENSATED THERMAL NEUTRON (CTN), MAGNETIC RESONANCE WHILE DRILLING (MRIL-WD), AZIMUTHAL BIMODAL ACOUSTIC TOOL (XBAT), AND THE AZIMUTHAL ACOUSTIC CALIPER TOOL (XCAL).
12. OVER THE COURSE OF THE 12.25" HOLE SECTION THERE ARE SEVERAL INSTANCES WHERE THE BOREHOLE RUGOSITY HAS CREATED "SPIKES" IN THE RESISTIVITY DATA. THIS IS DUE TO ONE RECIEVER READING THE HIGH SALINITY BOREHOLE FLUID (WASHOUT) AND THE OTHER READING THE FORMATION. THERE ARE ALSO AREAS ACROSS THE LOGGED INTERVAL THAT SHOW AN UNDERGAUGE HOLE.
13. RUNS 1- 7 REPRESENT THE OCS-Y-2321 BJ001 ST00BP00 WELL WITH AN API# OF 55-352-00004-00. THIS WELL REACHED A TOTAL DEPTH OF 6,800'MD / 6,795'TVD

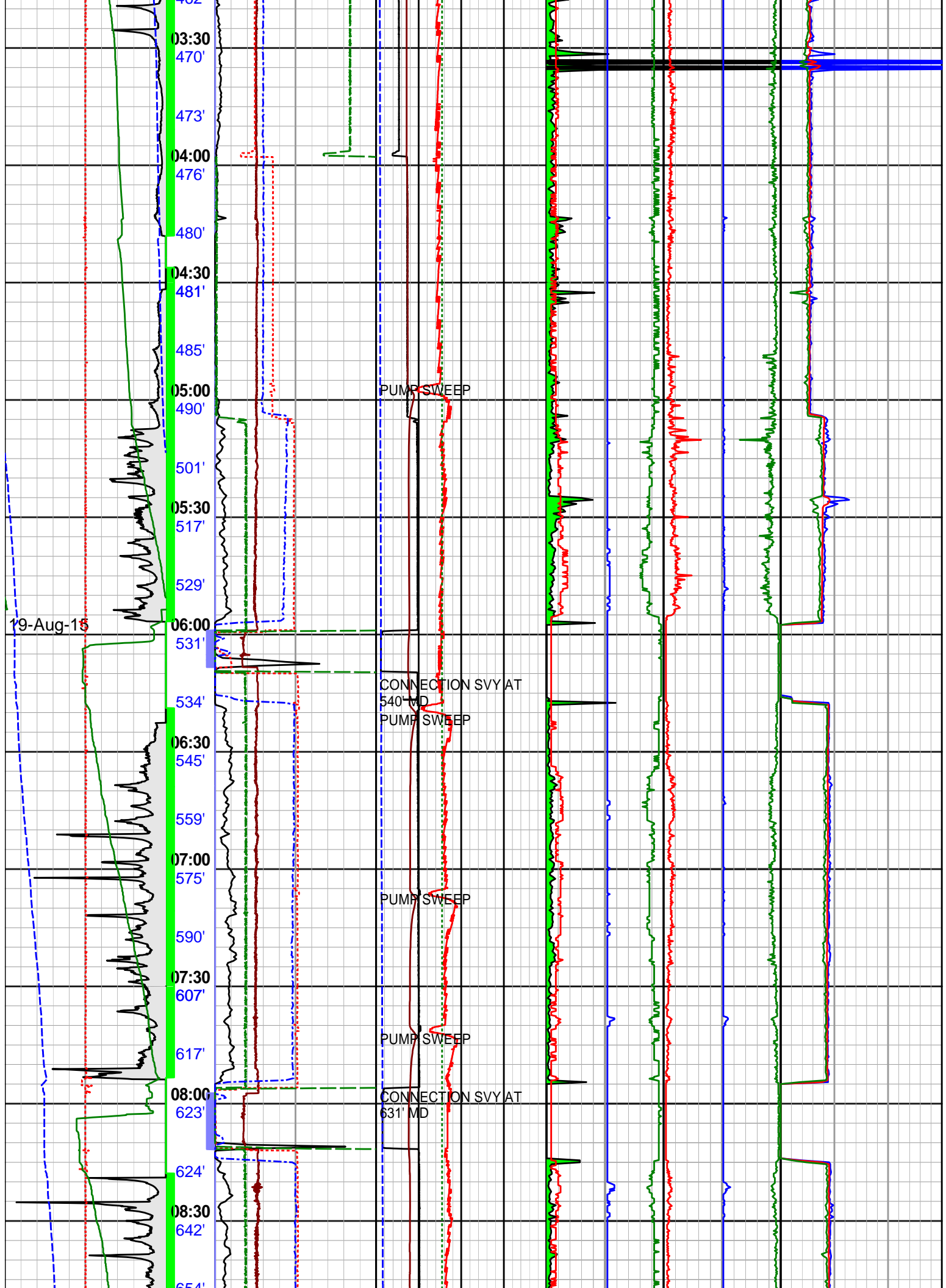
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| | | | | | | | | | | | | |
|-----------------------|--|------------------------|--|------------------------------|--|---------------------------------|--|--------------------|--|----------------------|--|--|
| | | Hookload Avg | | PWD Ann Gauge Temp | | DDSr Stick Slip | | | | | | |
| | | 0 400 | | 0 50 100 150 200 | | 0 100 200 300 400 | | | | | | |
| | | kilo pounds | | fahrenheit | | | | | | | | |
| ROP Avg | | Torque Abs | | PWD Internal Pressure | | | | | | | | |
| 400 0 | | 0 25K | | 0 1.25K 2.5K 3.75K 5K | | < 100% 100-150% 150-200% > 200% | | | | | | |
| feet per hr | | foot-pound | | lbs / in2 gauge | | Low Med High Full Stall | | | | | | |
| Bit Depth | | RPM Surface Avg | | PWD Annular Pressure | | DDSr Avg Z | | DDSr Peak Z | | DDSr RPM Max | | |
| 0 500 | | 0 200 | | 0 1.25K 2.5K 3.75K 5K | | -5 0 5 | | -50 0 50 | | 0 100 200 300 | | |
| feet | | rev per min | | lbs / in2 gauge | | g | | g | | rev per min | | |
| Block Position | | Flow In | | Dens Mud In | | DDSr Avg Y | | DDSr Peak Y | | DDSr RPM Min | | |
| 205 -5 | | 0 1K 7 | | 8 9 10 11 | | 10 5 0 | | 100 50 0 | | 0 100 200 300 | | |
| feet | | gallon per min | | lbs per gal | | g | | g | | rev per min | | |
| Running Speed | | SPP Avg | | PWD Annular EMW | | DDSr Avg X | | DDSr Peak X | | DDSr RPM Mean | | |
| in Btm | | | | | | | | | | | | |
| ps Status | | | | | | | | | | | | |







19-Aug-15

09:00

671'

09:30

702'

713'

10:00

711'

723'

10:30

733'

748'

11:00

759'

773'

11:30

785'

791'

19-Aug-15

12:00

799'

806'

12:30

801'

808'

13:00

823'

834'

13:30

846'

862'

14:00

879'

PUMP SWEEP

PUMP SWEEP

CONNECTION SVY AT
724' MD

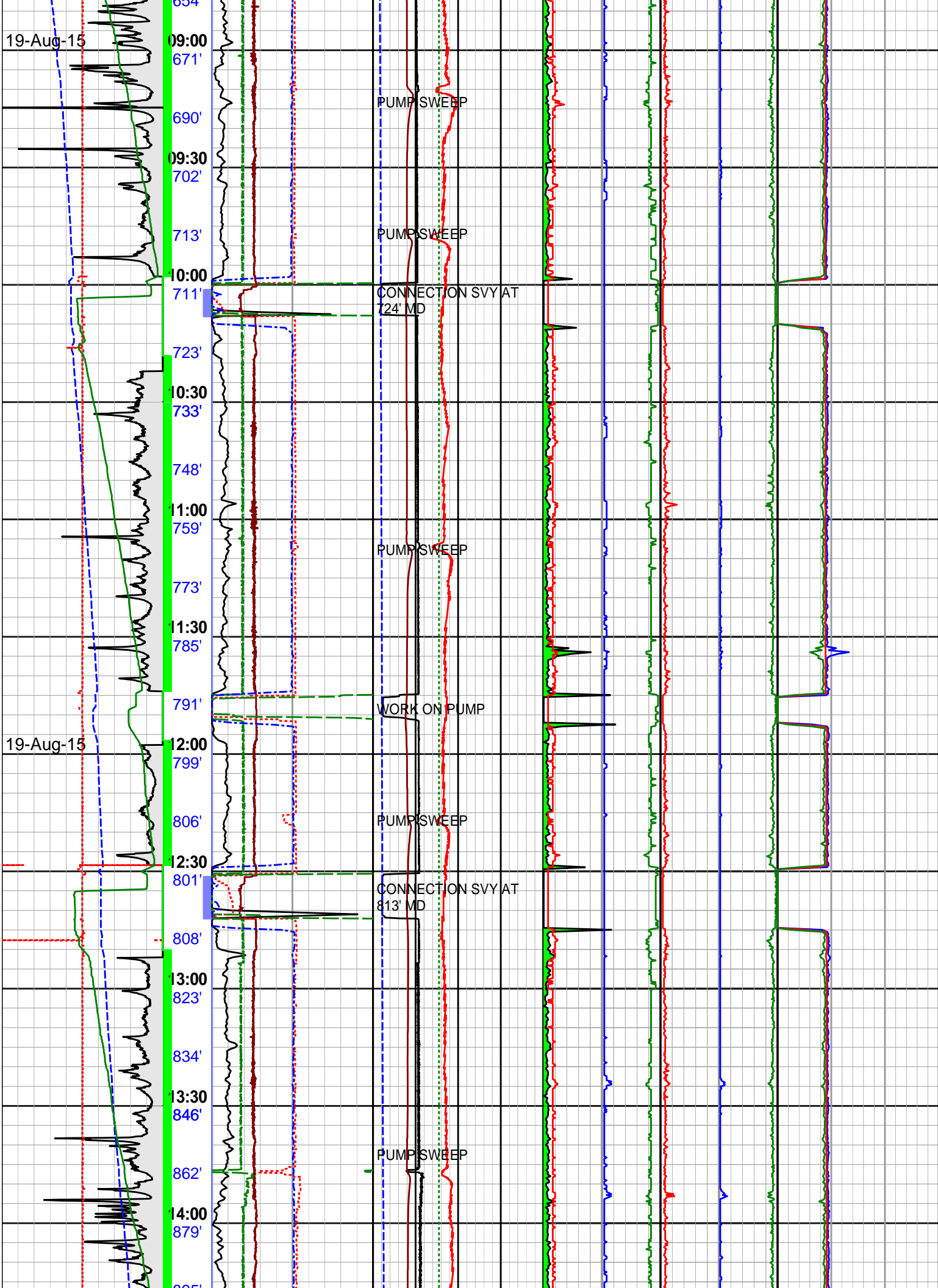
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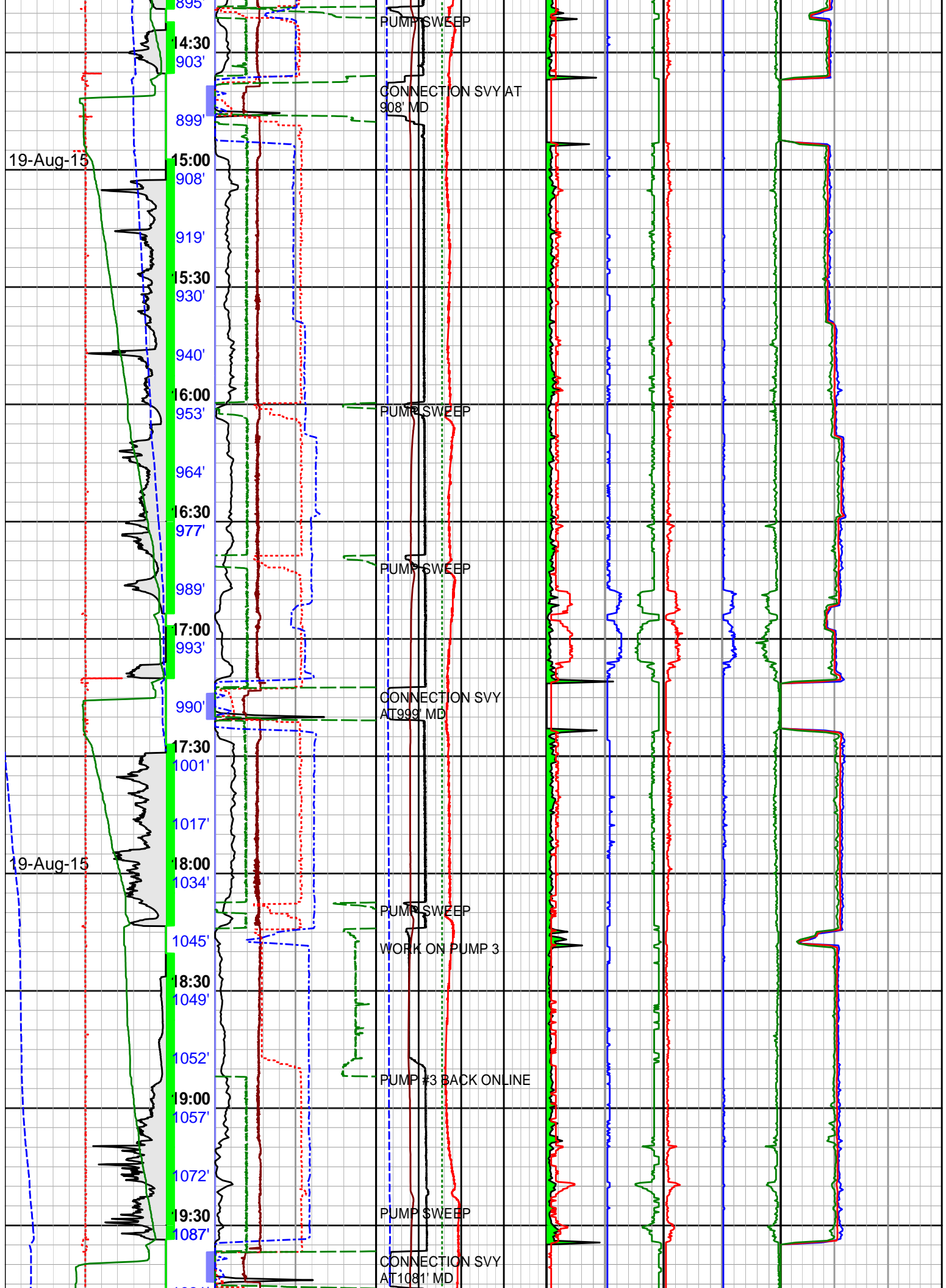
WORK ON PUMP

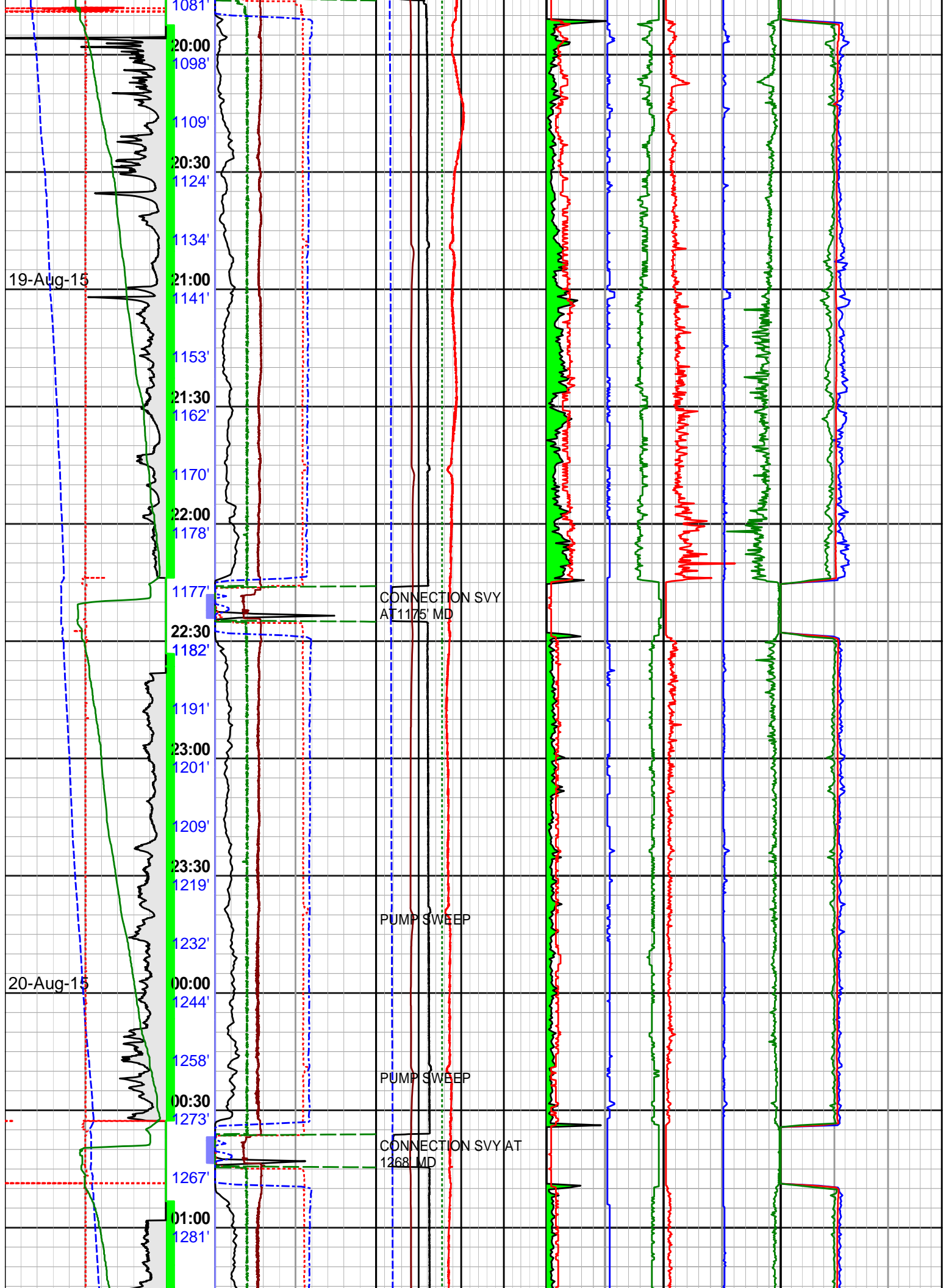
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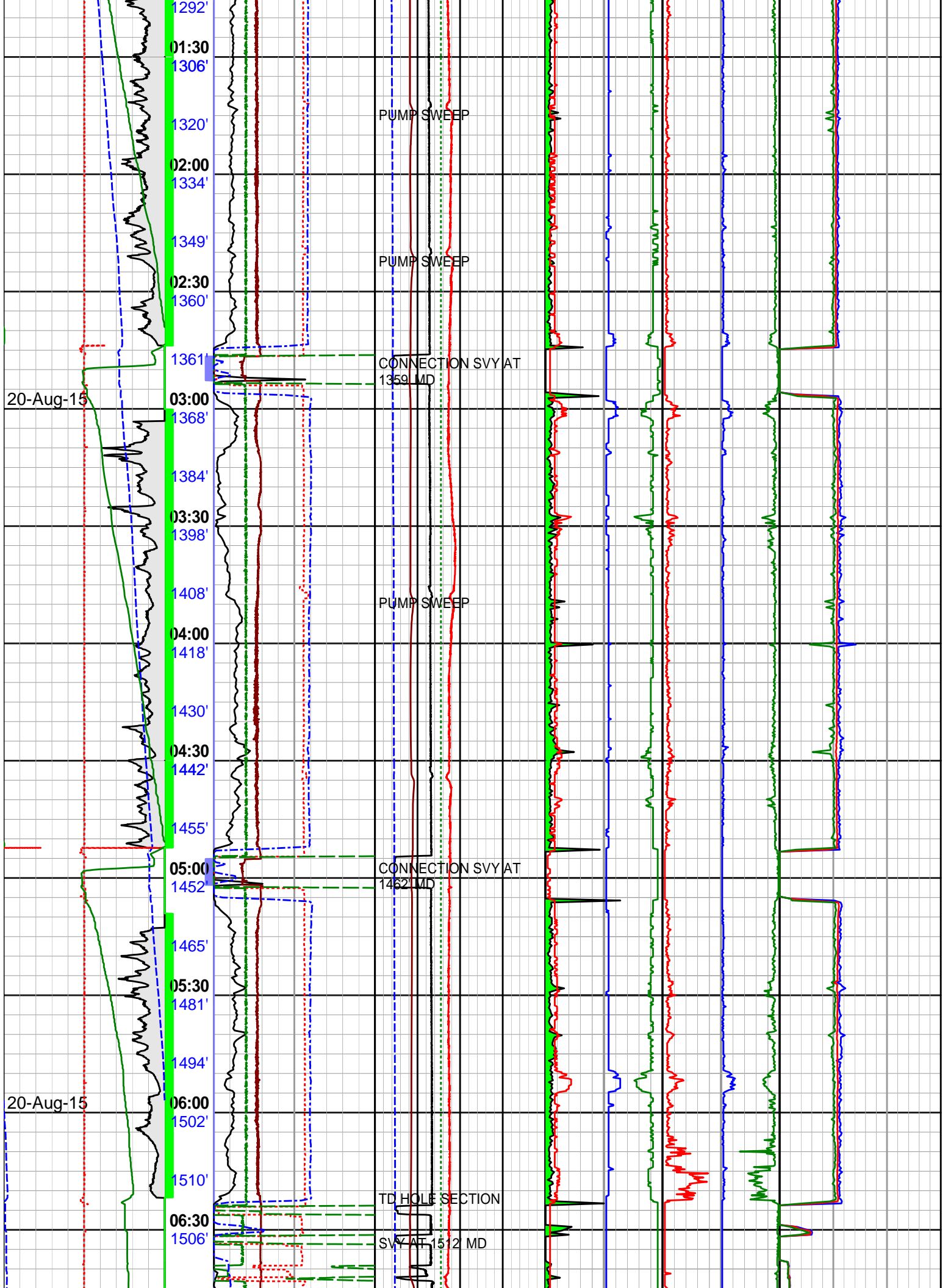
CONNECTION SVY AT
813' MD

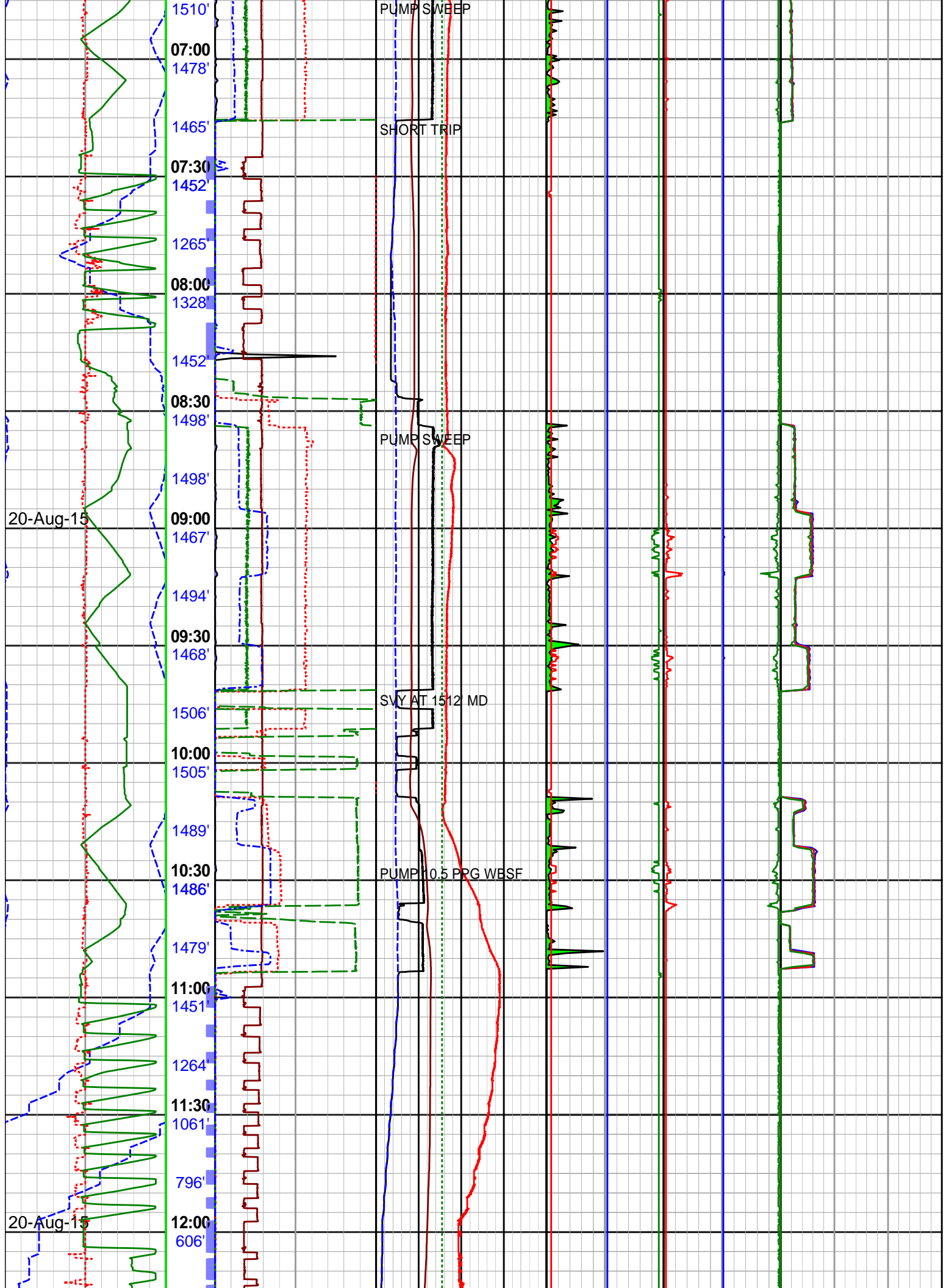
PUMP SWEEP

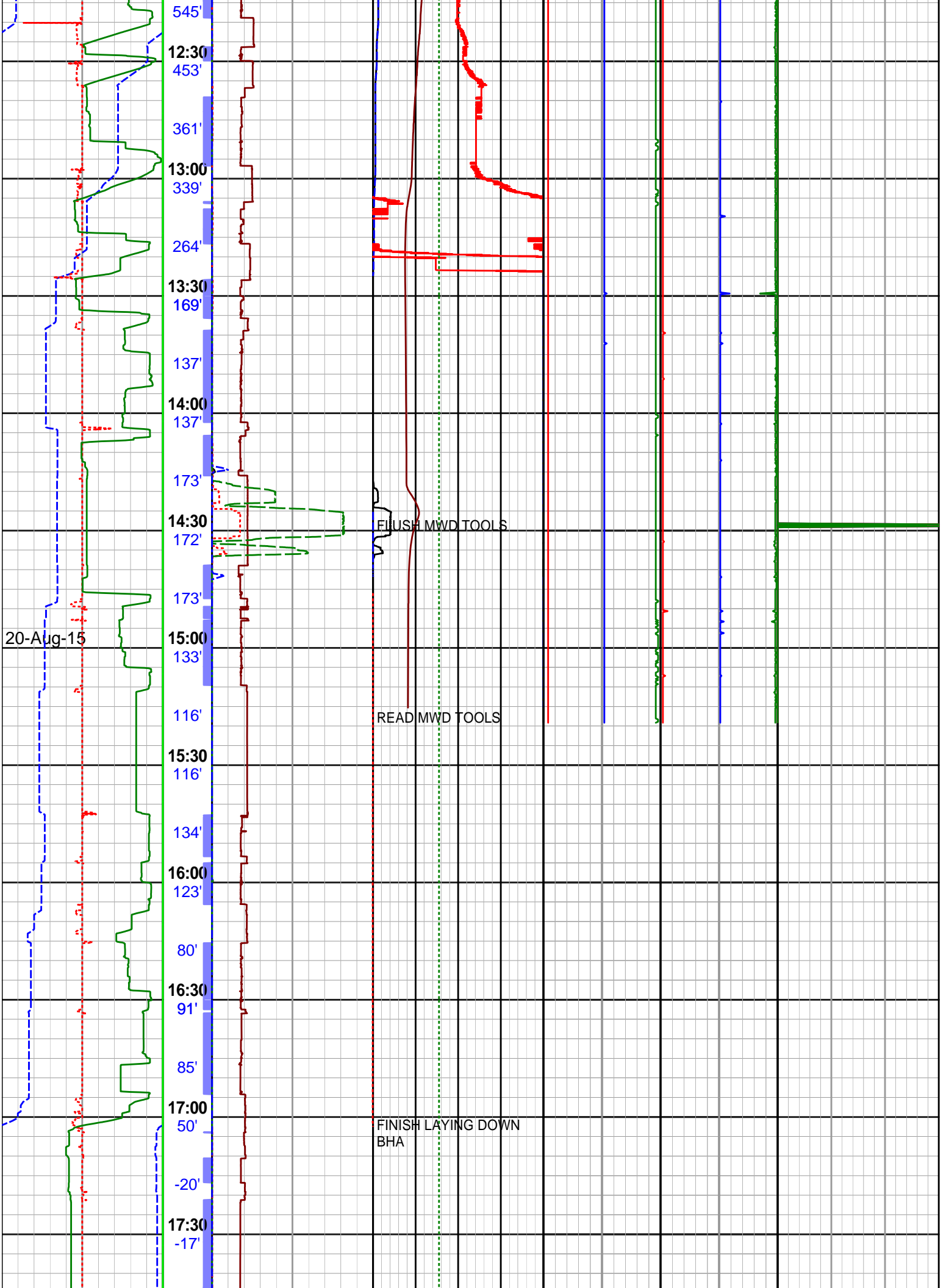












| | | | | | | | | | | | | | | | | |
|----------------------------------|--|---------------------------|------------------------------------|------------|---|--|---|--|-------------------------------------|--|---------------------------------------|--|--|--|--|--|
| 20-Aug-15 | | 18:00 | | | | | | | | | | | | | | |
| Running Speed -250 250 | | On Btm In Slips Status | SPP Avg 0 5K 7 8 9 10 11 | | PWD Annular EMW 0 5 10 | | DDSr Avg X 0 50 100 | | DDSr Peak X 0 100 200 300 | | DDSr RPM Mean 0 100 200 300 | | | | | |
| feet per min | | | lbs / in2 gauge | | lbs per gal | | g | | g | | rev per min | | | | | |
| Block Position 205 -5 | | On Btm In Slips Status | Flow In 0 1K 7 8 9 10 11 | | Dens Mud In 10 5 0 | | DDSr Avg Y 100 50 0 | | DDSr Peak Y 0 100 200 300 | | DDSr RPM Min 0 100 200 300 | | | | | |
| feet | | | gallon per min | | lbs per gal | | g | | g | | rev per min | | | | | |
| Bit Depth 0 500 | | On Btm | RPM Surface Avg 0 200 | | PWD Annular Pressure 0 1.25K 2.5K 3.75K 5K | | DDSr Avg Z -5 0 5 | | DDSr Peak Z -50 0 50 | | DDSr RPM Max 0 100 200 300 | | | | | |
| feet | | | rev per min | | lbs / in2 gauge | | g | | g | | rev per min | | | | | |
| ROP Avg 400 0 | | | Torque Abs 0 25K | | PWD Internal Pressure 0 1.25K 2.5K 3.75K 5K | | DDSr Stick Slip 0 100 200 300 400 | | | | | | | | | |
| feet per hr | | | foot-pound | | lbs / in2 gauge | | | | | | | | | | | |
| | | | Hookload Avg 0 400 | | PWD Ann Gauge Temp 0 50 100 150 200 | | 100- 150- < 100% 150% 200% > 200% | | Low Med High Full Stall | | | | | | | |
| | | kilo pounds | | fahrenheit | | | | | | | | | | | | |

HALLIBURTON

DIRECTIONAL SURVEY REPORT

Shell Gulf of Mexico Inc.
OCS-Y-2321 BJ001 ST00BP00
Posey 6912
Alaska
USA
AK-XX-0901604700
Final Survey is projected to well TD

| Measured Depth (feet) | Inclination (degrees) | Direction (degrees) | Vertical Depth (feet) | Latitude (feet) | Departure (feet) | Vertical Section (feet) | Dogleg (deg/100ft) |
|-----------------------|-----------------------|---------------------|-----------------------|-----------------|------------------|-------------------------|--------------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 N | 0.00 E | 0.00 | TIE-IN |
| 220.00 | 0.00 | 0.00 | 220.00 | 0.00 N | 0.00 E | 0.00 | 0.00 |
| 320.88 | 0.51 | 129.60 | 320.88 | 0.29 S | 0.35 E | -0.29 | 0.50 |
| 406.77 | 0.31 | 89.93 | 406.76 | 0.53 S | 0.88 E | -0.53 | 0.39 |
| 495.25 | 0.99 | 122.22 | 495.24 | 0.93 S | 1.76 E | -0.93 | 0.84 |
| 590.43 | 0.31 | 82.72 | 590.41 | 1.34 S | 2.71 E | -1.34 | 0.81 |
| 684.05 | 0.64 | 327.24 | 684.03 | 0.87 S | 2.68 E | -0.87 | 0.88 |
| 866.10 | 0.28 | 101.20 | 866.08 | 0.09 S | 2.55 E | -0.09 | 0.47 |
| 957.99 | 0.00 | 269.46 | 957.97 | 0.13 S | 2.77 E | -0.13 | 0.30 |
| 1051.65 | 0.14 | 176.72 | 1051.63 | 0.24 S | 2.78 E | -0.24 | 0.15 |
| 1144.54 | 0.26 | 120.65 | 1144.52 | 0.46 S | 2.97 E | -0.46 | 0.23 |
| 1235.66 | 0.41 | 134.11 | 1235.63 | 0.80 S | 3.38 E | -0.80 | 0.19 |
| 1328.60 | 0.51 | 59.75 | 1328.58 | 0.83 S | 3.98 E | -0.83 | 0.61 |
| 1378.50 | 0.25 | 111.62 | 1378.48 | 0.76 S | 4.27 E | -0.76 | 0.81 |
| 1540.18 | 0.12 | 50.83 | 1540.15 | 0.78 S | 4.74 E | -0.78 | 0.14 |
| 1723.74 | 0.39 | 34.99 | 1723.71 | 0.14 S | 5.26 E | -0.14 | 0.15 |
| 1818.58 | 0.58 | 50.01 | 1818.55 | 0.43 N | 5.81 E | 0.43 | 0.24 |
| 2003.18 | 1.06 | 39.81 | 2003.12 | 2.35 N | 7.62 E | 2.35 | 0.27 |
| 2095.93 | 0.87 | 35.51 | 2095.87 | 3.57 N | 8.57 E | 3.57 | 0.22 |
| 2186.15 | 0.69 | 72.12 | 2186.07 | 4.30 N | 9.49 E | 4.30 | 0.57 |
| 2373.34 | 0.75 | 76.36 | 2373.25 | 4.93 N | 11.76 E | 4.93 | 0.04 |
| 2463.93 | 0.78 | 75.65 | 2463.83 | 5.23 N | 12.93 E | 5.23 | 0.03 |
| 2555.30 | 0.79 | 70.25 | 2555.19 | 5.59 N | 14.13 E | 5.59 | 0.08 |
| 2646.22 | 0.79 | 76.51 | 2646.11 | 5.95 N | 15.33 E | 5.95 | 0.10 |
| 2743.03 | 0.70 | 74.08 | 2742.91 | 6.27 N | 16.55 E | 6.27 | 0.10 |
| 2837.42 | 0.74 | 67.59 | 2837.29 | 6.66 N | 17.68 E | 6.66 | 0.10 |
| 2875.38 | 0.64 | 69.95 | 2875.25 | 6.83 N | 18.10 E | 6.83 | 0.27 |
| 2978.31 | 0.74 | 64.69 | 2978.17 | 7.31 N | 19.25 E | 7.31 | 0.11 |
| 3074.55 | 0.58 | 52.33 | 3074.40 | 7.88 N | 20.20 E | 7.88 | 0.22 |
| 3169.04 | 0.67 | 47.05 | 3168.89 | 8.55 N | 20.99 E | 8.55 | 0.11 |
| 3258.93 | 0.77 | 27.36 | 3258.77 | 9.44 N | 21.65 E | 9.44 | 0.30 |
| 3351.80 | 0.94 | 33.05 | 3351.63 | 10.64 N | 22.35 E | 10.64 | 0.21 |
| 3445.40 | 0.89 | 33.34 | 3445.22 | 11.90 N | 23.18 E | 11.90 | 0.06 |

| | | | | | | | |
|---------|------|-------|---------|----------|----------|--------|------|
| 3537.90 | 0.88 | 39.68 | 3537.71 | 13.05 N | 24.03 E | 13.05 | 0.11 |
| 3630.29 | 0.86 | 29.57 | 3630.09 | 14.20 N | 24.82 E | 14.20 | 0.17 |
| 3724.13 | 1.05 | 46.97 | 3723.91 | 15.40 N | 25.80 E | 15.40 | 0.37 |
| 3815.47 | 1.16 | 37.46 | 3815.23 | 16.71 N | 26.98 E | 16.71 | 0.24 |
| 3909.95 | 1.11 | 27.77 | 3909.70 | 18.28 N | 27.99 E | 18.28 | 0.21 |
| 4001.96 | 1.54 | 18.87 | 4001.69 | 20.24 N | 28.80 E | 20.24 | 0.52 |
| 4095.18 | 1.55 | 21.22 | 4094.87 | 22.60 N | 29.67 E | 22.60 | 0.07 |
| 4189.17 | 1.52 | 19.27 | 4188.83 | 24.97 N | 30.54 E | 24.97 | 0.06 |
| 4280.67 | 1.73 | 13.84 | 4280.29 | 27.46 N | 31.27 E | 27.46 | 0.28 |
| 4373.26 | 2.11 | 22.24 | 4372.83 | 30.39 N | 32.25 E | 30.39 | 0.51 |
| 4465.71 | 1.69 | 19.56 | 4465.23 | 33.26 N | 33.35 E | 33.26 | 0.46 |
| 4559.04 | 2.02 | 19.56 | 4558.51 | 36.11 N | 34.37 E | 36.11 | 0.35 |
| 4651.17 | 2.19 | 23.91 | 4650.58 | 39.24 N | 35.62 E | 39.24 | 0.25 |
| 4743.27 | 2.64 | 25.07 | 4742.59 | 42.77 N | 37.23 E | 42.77 | 0.49 |
| 4836.87 | 3.09 | 32.03 | 4836.08 | 46.87 N | 39.49 E | 46.87 | 0.61 |
| 4929.20 | 3.15 | 34.87 | 4928.26 | 51.06 N | 42.26 E | 51.06 | 0.18 |
| 5021.52 | 3.28 | 37.85 | 5020.45 | 55.22 N | 45.33 E | 55.22 | 0.23 |
| 5113.59 | 3.34 | 39.69 | 5112.36 | 59.37 N | 48.66 E | 59.37 | 0.13 |
| 5206.14 | 3.59 | 47.76 | 5204.74 | 63.39 N | 52.52 E | 63.39 | 0.59 |
| 5299.05 | 3.70 | 48.27 | 5297.46 | 67.34 N | 56.92 E | 67.34 | 0.12 |
| 5364.19 | 3.45 | 52.11 | 5362.48 | 69.95 N | 60.04 E | 69.95 | 0.54 |
| 5429.81 | 3.65 | 46.91 | 5427.97 | 72.59 N | 63.12 E | 72.59 | 0.58 |
| 5518.31 | 3.73 | 45.18 | 5516.29 | 76.55 N | 67.22 E | 76.55 | 0.15 |
| 5612.70 | 3.58 | 42.26 | 5610.48 | 80.90 N | 71.39 E | 80.90 | 0.25 |
| 5704.09 | 3.56 | 42.97 | 5701.70 | 85.09 N | 75.24 E | 85.09 | 0.06 |
| 5795.19 | 3.47 | 41.51 | 5792.62 | 89.22 N | 79.00 E | 89.22 | 0.13 |
| 5889.32 | 3.48 | 42.48 | 5886.58 | 93.46 N | 82.82 E | 93.46 | 0.06 |
| 5980.70 | 3.42 | 42.67 | 5977.80 | 97.52 N | 86.54 E | 97.52 | 0.07 |
| 6075.07 | 3.43 | 41.69 | 6072.00 | 101.69 N | 90.33 E | 101.69 | 0.06 |
| 6167.81 | 3.55 | 39.12 | 6164.57 | 105.99 N | 93.98 E | 105.99 | 0.21 |
| 6259.59 | 3.53 | 39.52 | 6256.17 | 110.37 N | 97.57 E | 110.37 | 0.03 |
| 6346.61 | 3.75 | 37.26 | 6343.02 | 114.70 N | 100.99 E | 114.70 | 0.30 |
| 6445.34 | 3.99 | 34.54 | 6441.52 | 120.10 N | 104.89 E | 120.10 | 0.31 |
| 6536.48 | 3.96 | 35.37 | 6532.44 | 125.27 N | 108.51 E | 125.27 | 0.07 |
| 6628.63 | 3.92 | 37.01 | 6624.37 | 130.38 N | 112.25 E | 130.38 | 0.13 |
| 6721.62 | 3.89 | 35.41 | 6717.15 | 135.49 N | 115.99 E | 135.49 | 0.12 |
| 6745.05 | 3.99 | 35.86 | 6740.52 | 136.80 N | 116.93 E | 136.80 | 0.46 |
| 6800.00 | 3.99 | 35.86 | 6795.34 | 139.90 N | 119.17 E | 139.90 | 0.00 |

CALCULATION BASED ON MINIMUM CURVATURE METHOD

**SURVEY COORDINATES RELATIVE TO WELL SYSTEM REFERENCE POINT
TVD VALUES GIVEN RELATIVE TO DRILLING MEASUREMENT POINT**

**VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION IS COMPUTED ALONG A DIRECTION OF 0.00 DEGREES (GRID)
A TOTAL CORRECTION OF 10.95 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED**

**HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.
HORIZONTAL DISPLACEMENT(CLOSURE) AT 6800.00 FEET
IS 183.78 FEET ALONG 40.42 DEGREES (GRID)**

**Map System: NAD 83 UTM Zones
Geo Datum: North American Datum of 1983
Map Zone: Universal Transverse Mercator Zone 03N**