

DEPTH SUMMARY LISTING

Date Created: 16-JAN-2010 14:09:07

Depth System Equipment

| Depth Measuring Device | Tension Device | Logging Cable |
|--|--|---|
| Type: IDW-B Serial Number: 799 Calibration Date: 1-Oct-2009 Calibrator Serial Number: 33 Calibration Cable Type: 7-46P Wheel Correction 1: -4 Wheel Correction 2: -5 | Type: CMTD-B/A Serial Number: 1223 Calibration Date: 9-Jan-10 Calibrator Serial Number: 100513 Number of Calibration Points: 0 | Type: 7-39P LXS Serial Number: 708273 Length: 12560 FT Conveyance Method: Wireline Rig Type: LAND |

Depth Control Parameters

| | |
|-----------------------------|-----------------------|
| Log Sequence: | First Log In the Well |
| Rig Up Length At Surface: | 0.00 FT |
| Rig Up Length At Bottom: | 0.00 FT |
| Rig Up Length Correction: | 0.00 FT |
| Stretch Correction: | 7.50 FT |
| Tool Zero Check At Surface: | 0.00 FT |

Depth Control Remarks

| |
|---|
| 1. All Schlumberger depth policy procedures applied |
| 2. This is the primary depth reference |
| 3. |
| 4. |
| 5. |
| 6. |

DISCLAIMER

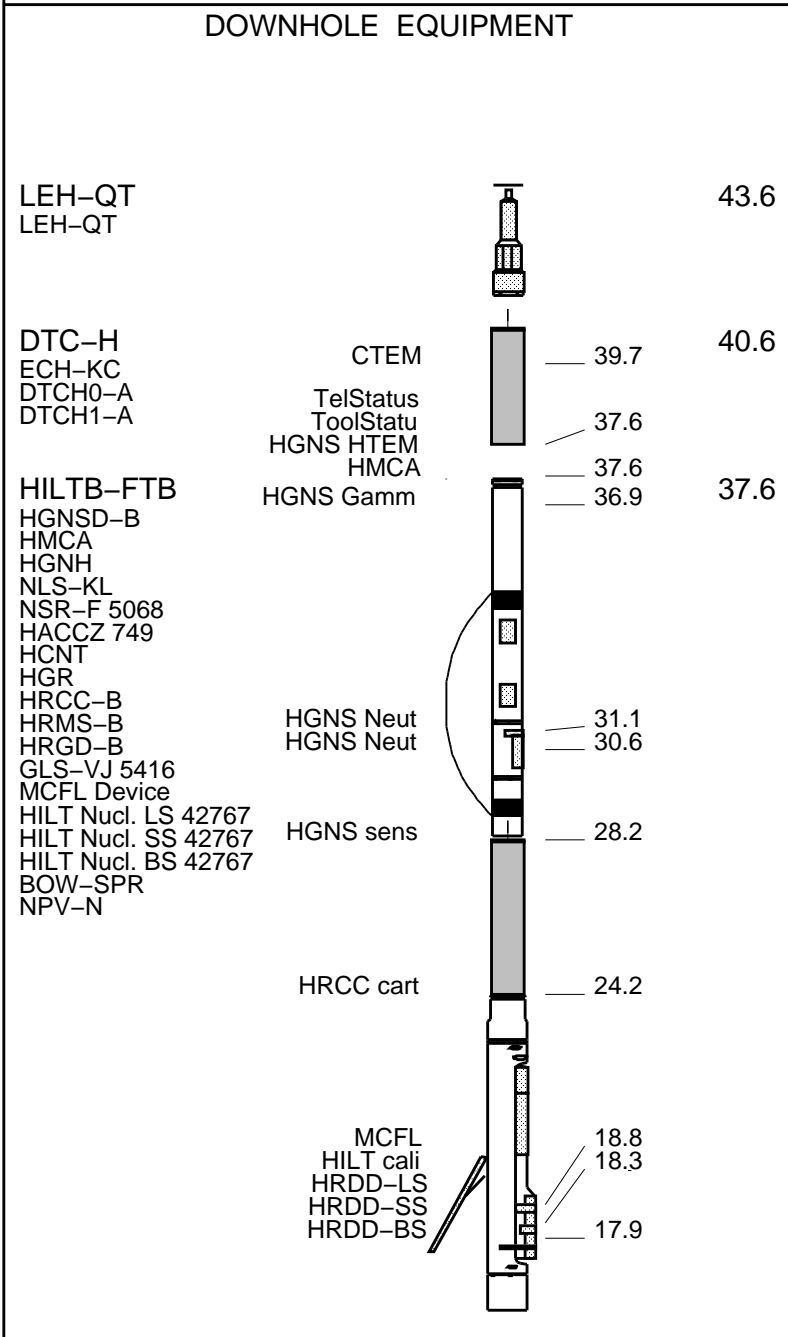
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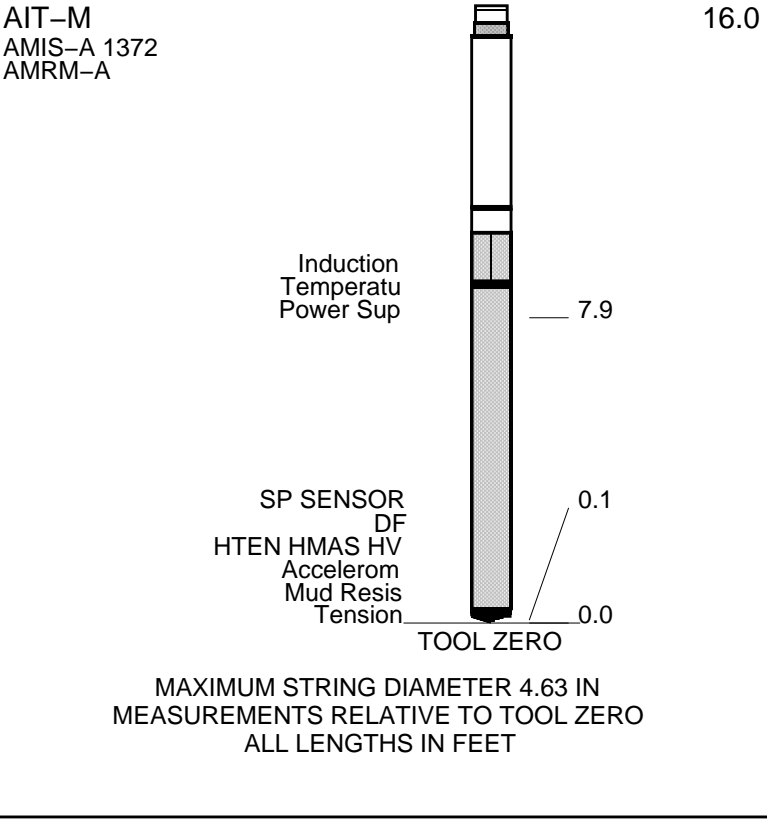
| OTHER SERVICES1 | OTHER SERVICES2 |
|---|-----------------------|
| OS1: None | OS1: |
| OS2: | OS2: |
| OS3: | OS3: |
| OS4: | OS4: |
| OS5: | OS5: |
| REMARKS: RUN NUMBER 1 | REMARKS: RUN NUMBER 2 |
| 1. This is the first run in hole. | |
| 2. Tool run as per tool sketch. | |
| 3. Matrix Changes are as noted on porosity logs. | |
| 4. Tool run with minimum jewelry. | |
| 5. IND data is from the downlog, as the AIT failed upon hitting TD. | |
| | |
| | |
| | |
| | |

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|----------------------------------|-------|------------|------------------|-------|------|
| | | | | | |
| | | | | | |
| Rig: E 12 | | | | | |
| | | | | | |
| | | | | | |
| Crew: Tim Ludgate & Jay Musgrave | | | | | |
| | | | | | |
| | | | | | |
| RUN 1 | | | RUN 2 | | |
| SERVICE ORDER #: | | AXB6-00083 | SERVICE ORDER #: | | |
| PROGRAM VERSION: | | 17C0-154 | PROGRAM VERSION: | | |
| FLUID LEVEL: | | | FLUID LEVEL: | | |
| LOGGED INTERVAL | START | STOP | LOGGED INTERVAL | START | STOP |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| | | | | | |
|-----------------------|--|--|-------|--|--|
| EQUIPMENT DESCRIPTION | | | | | |
| RUN 1 | | | RUN 2 | | |

SURFACE EQUIPMENT
WITM (DTS)-A
GSR-U/Y
NCT-B
CNB-AB
NCS-VB



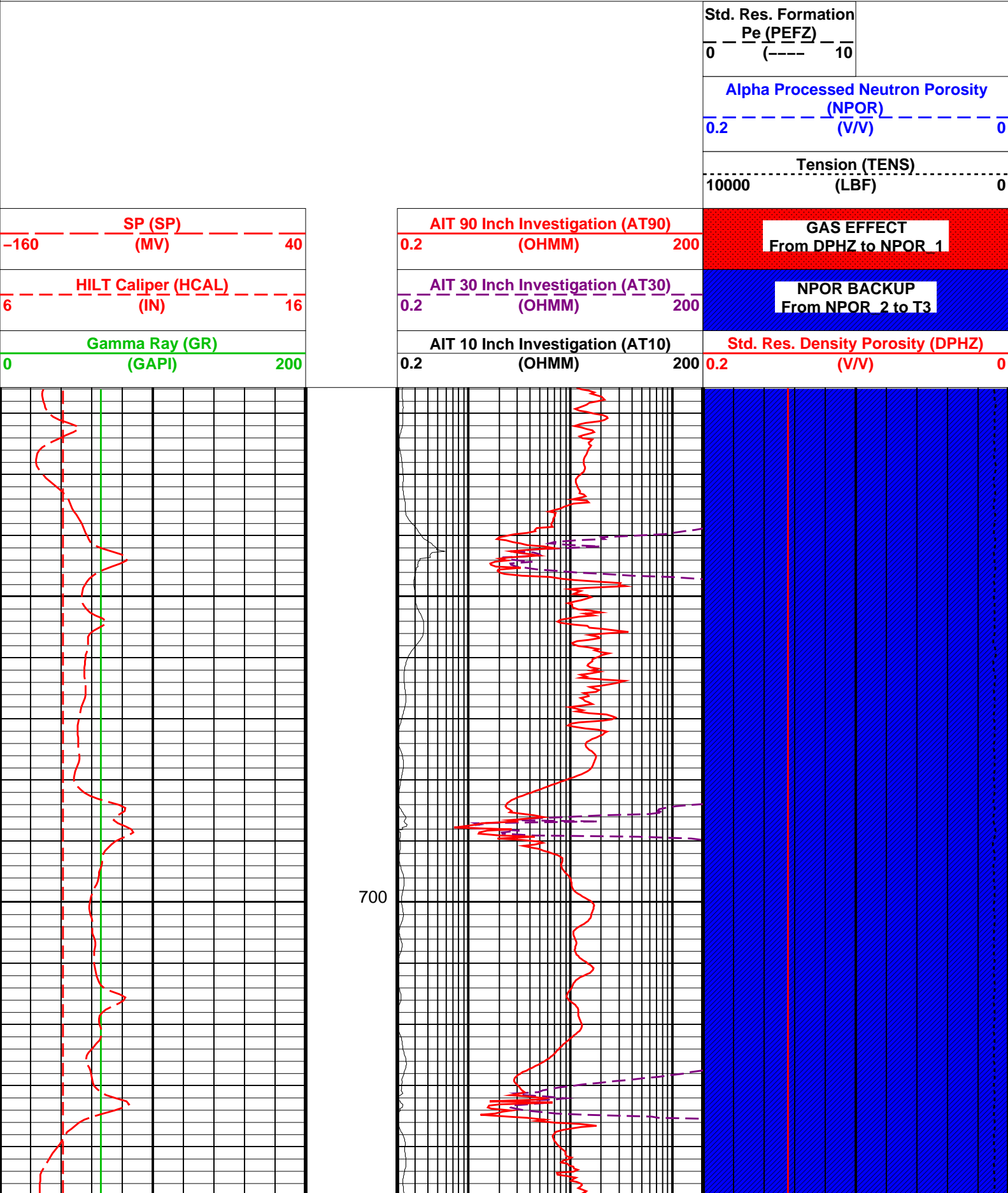


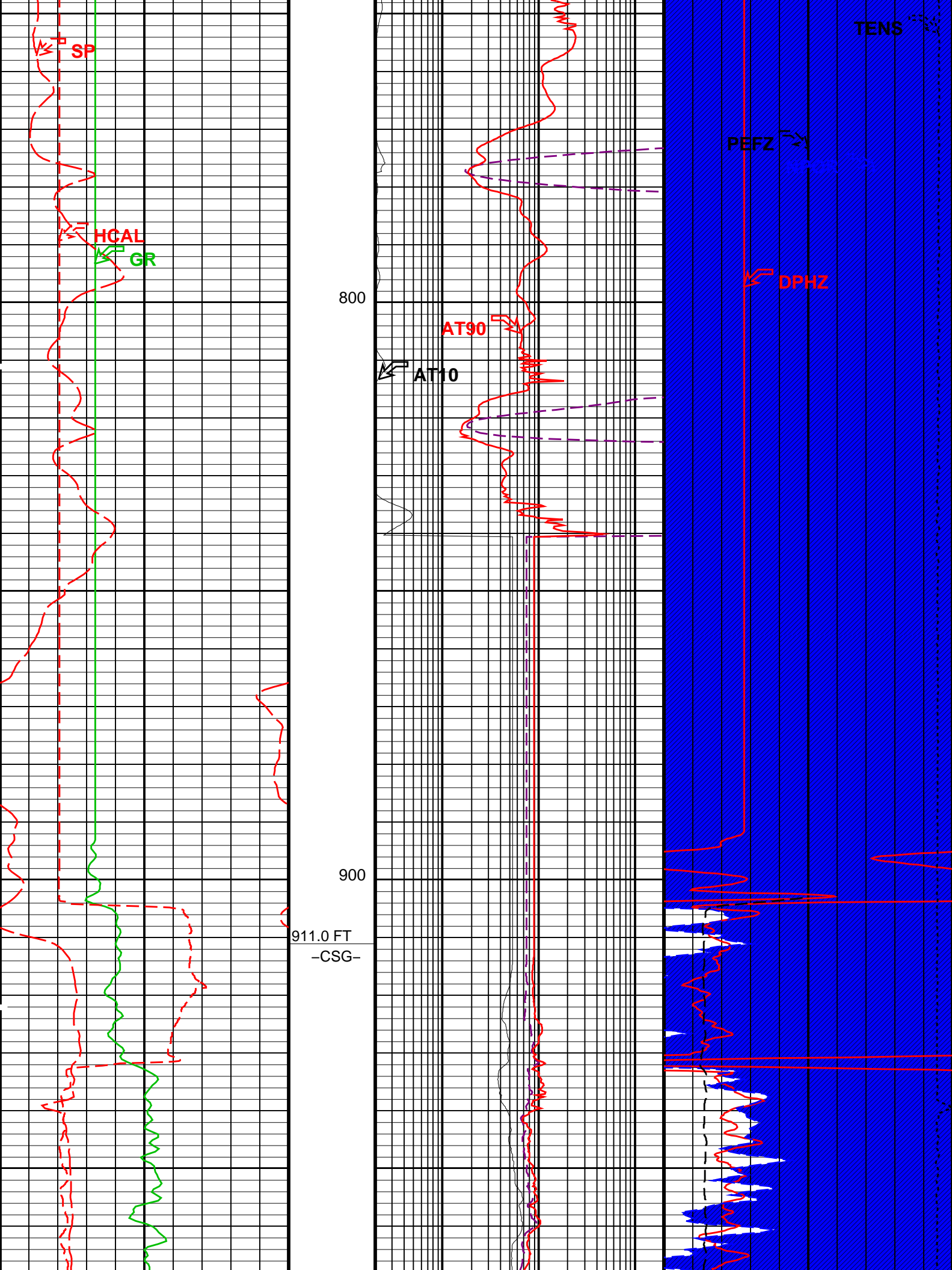
| Production String | (in) | | | (ft) | Well Schematic | | | (in) | | | (ft) | Casing String | | |
|-------------------|------|----|----|------|----------------|--|--|-------|-------|----|------|------------------|--|--|
| | OD | ID | MD | | | | | MD | OD | ID | | | | |
| | | | | | | | | 0.0 | 8.625 | | | Casing String | | |
| | | | | | | | | 909.0 | 8.625 | | | Casing Shoe | | |
| | | | | | | | | 909.0 | 7.875 | | | Borehole Segment | | |

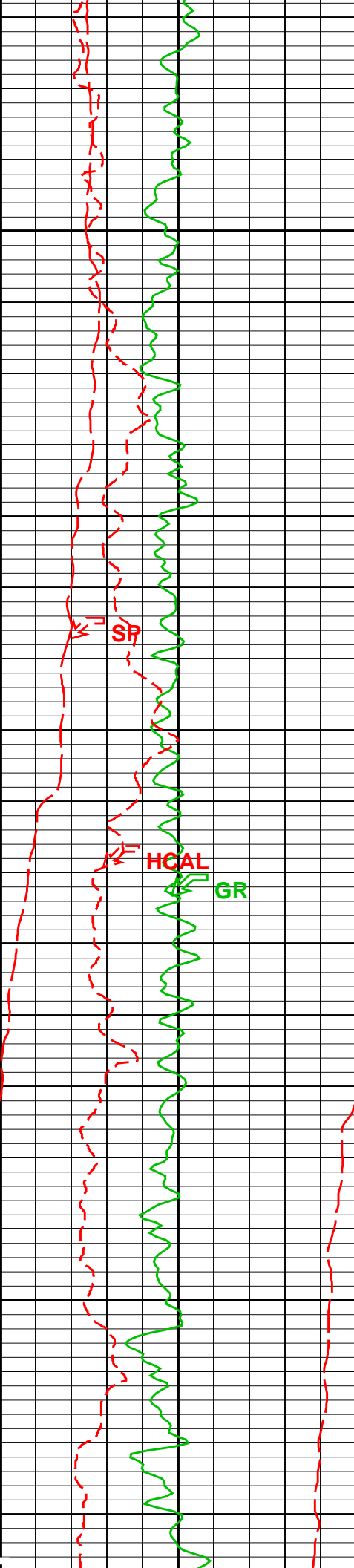
| | | | | | |
|------|-----------|------|-----------|------|-----------------|
| MATR | SANDSTONE | | SANDSTONE | | 8026.5 16:01:14 |
| | SANDSTONE | | SANDSTONE | | 7839.0 16:01:20 |
| | LIMESTONE | | SANDSTONE | | 7412.0 16:01:35 |
| MDEN | 2.65 | G/C3 | 2.68 | G/C3 | 8026.5 16:01:14 |
| | 2.68 | G/C3 | 2.65 | G/C3 | 7839.0 16:01:20 |
| | 2.71 | G/C3 | 2.68 | G/C3 | 7412.0 16:01:35 |

PIP SUMMARY

Time Mark Every 60 S



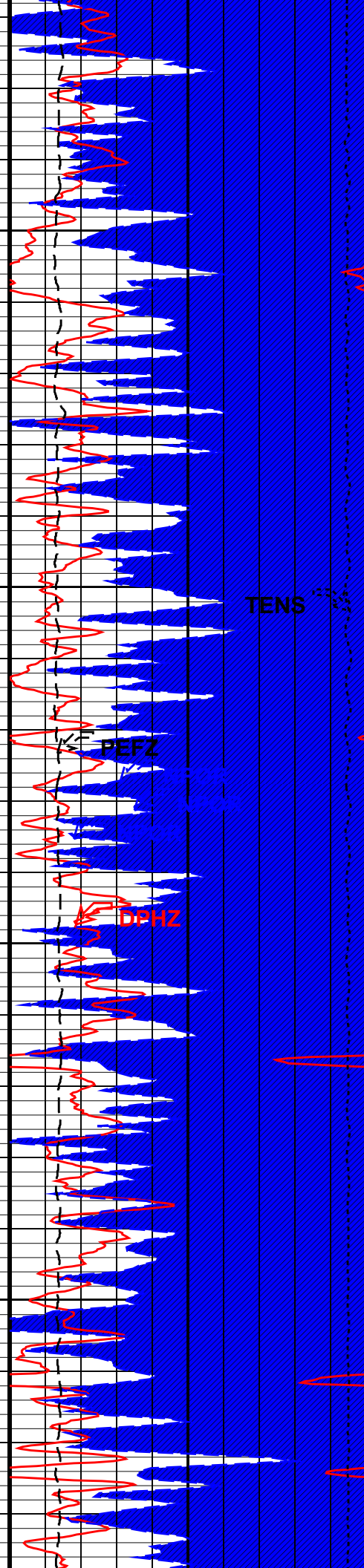


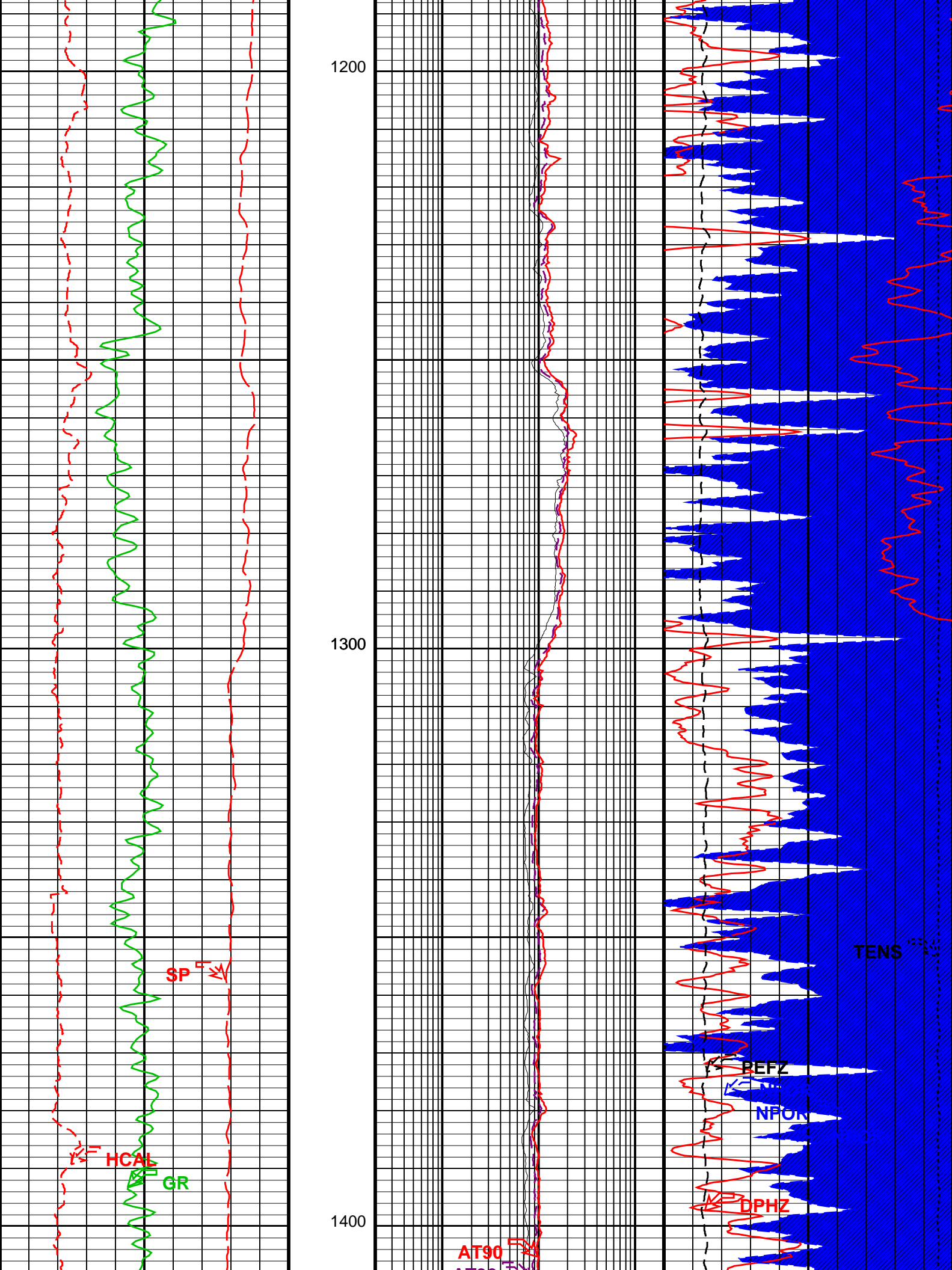


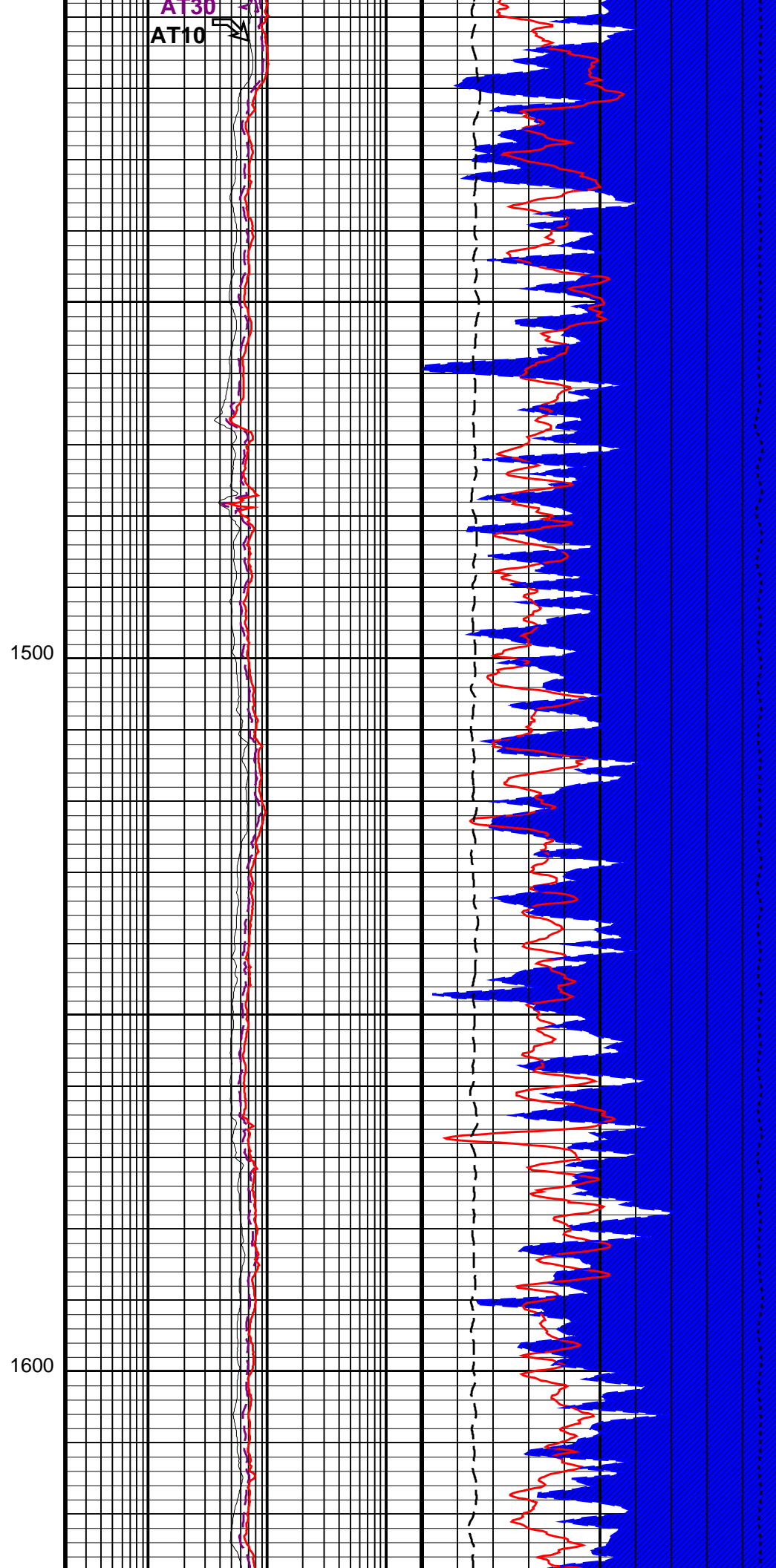
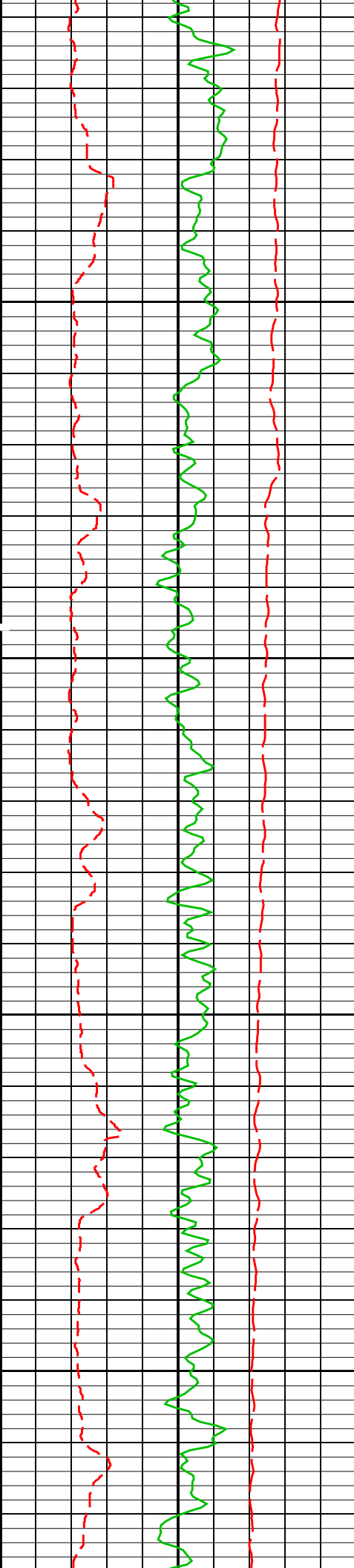
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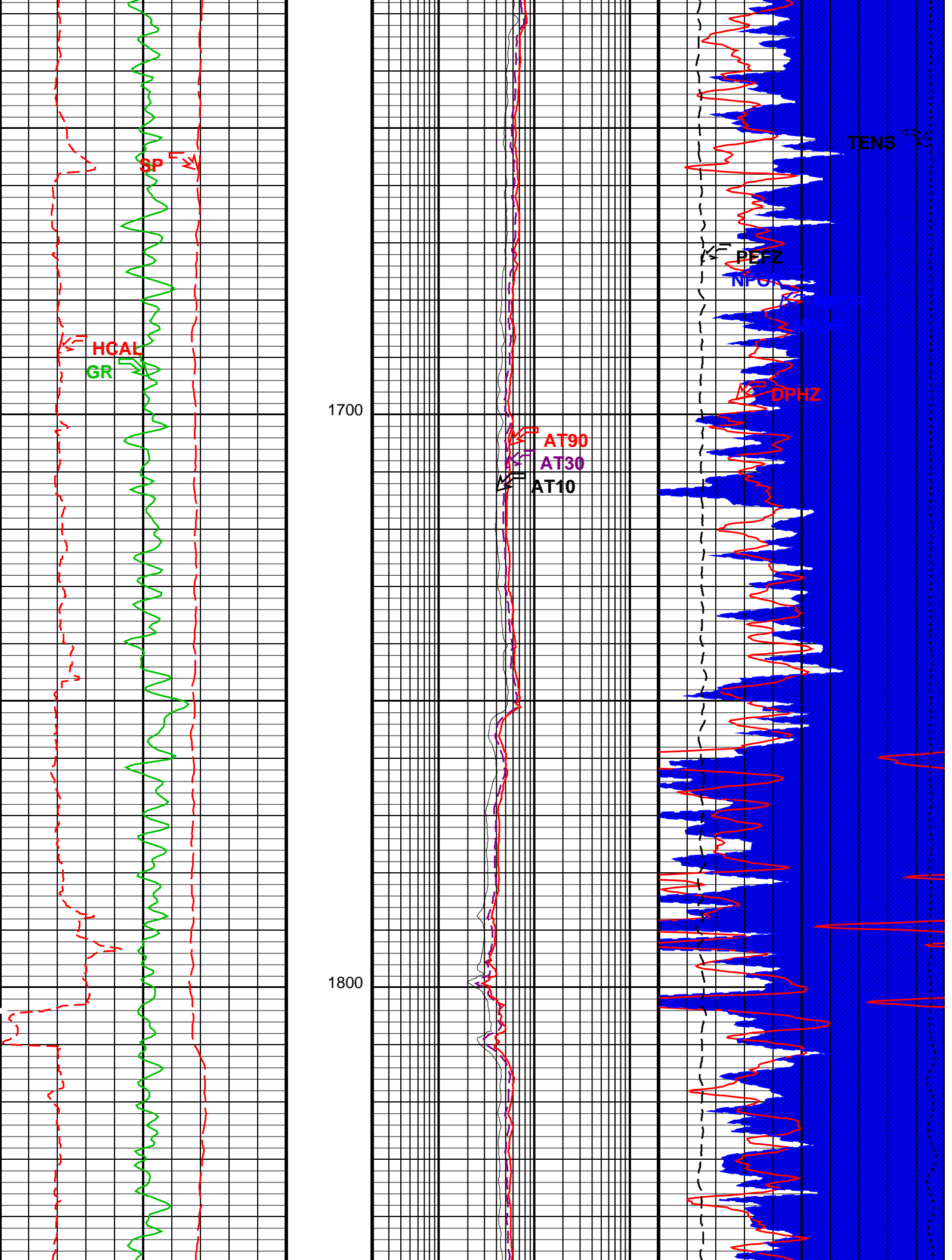
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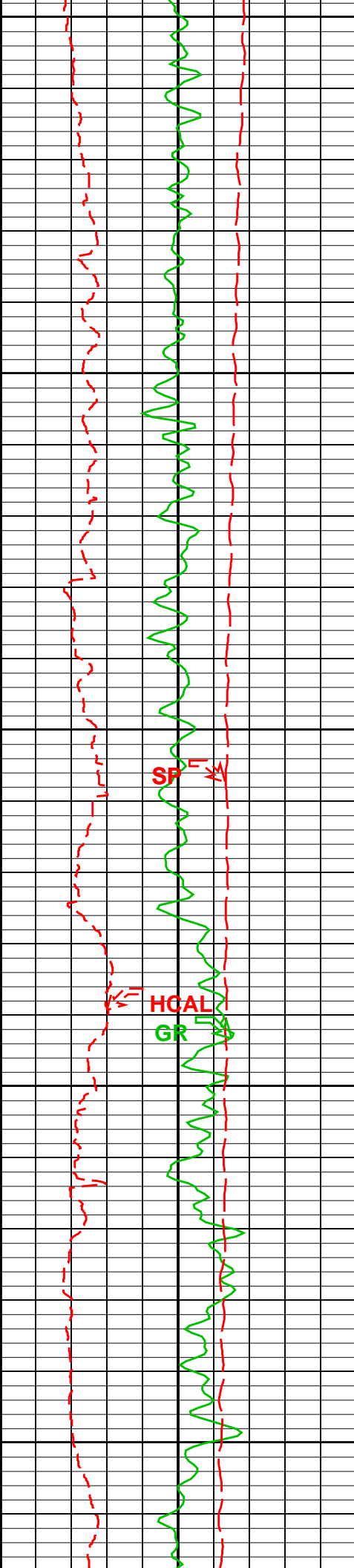
AT90
AT30
AT10





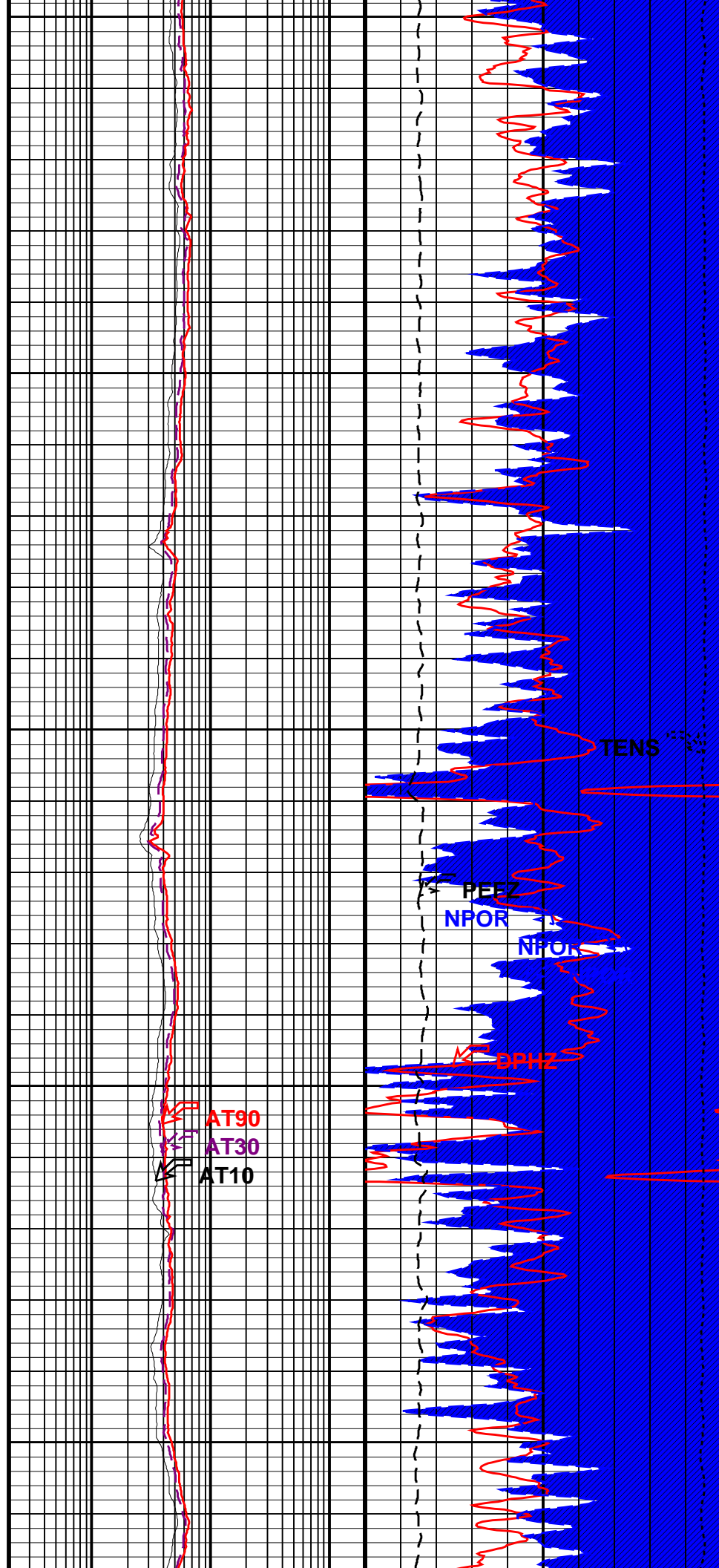


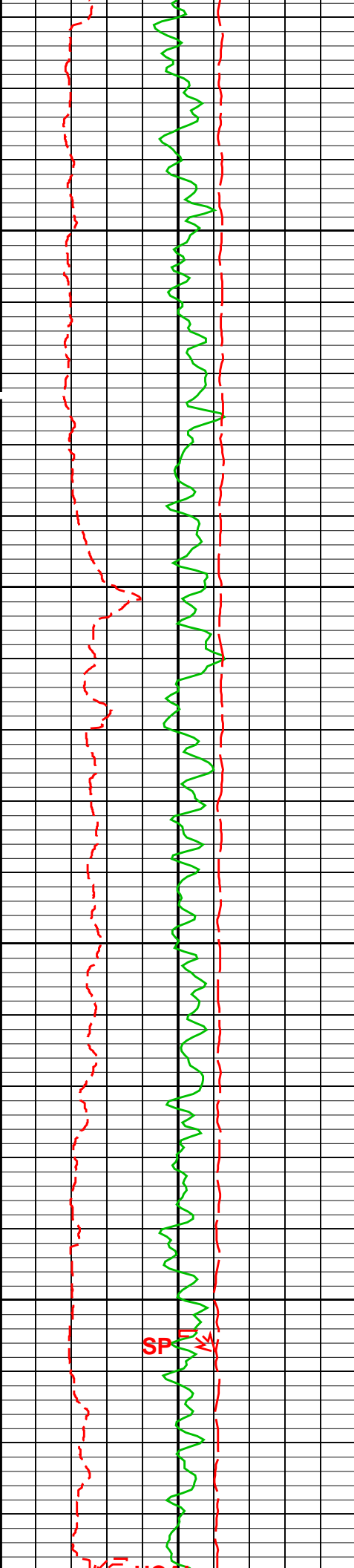




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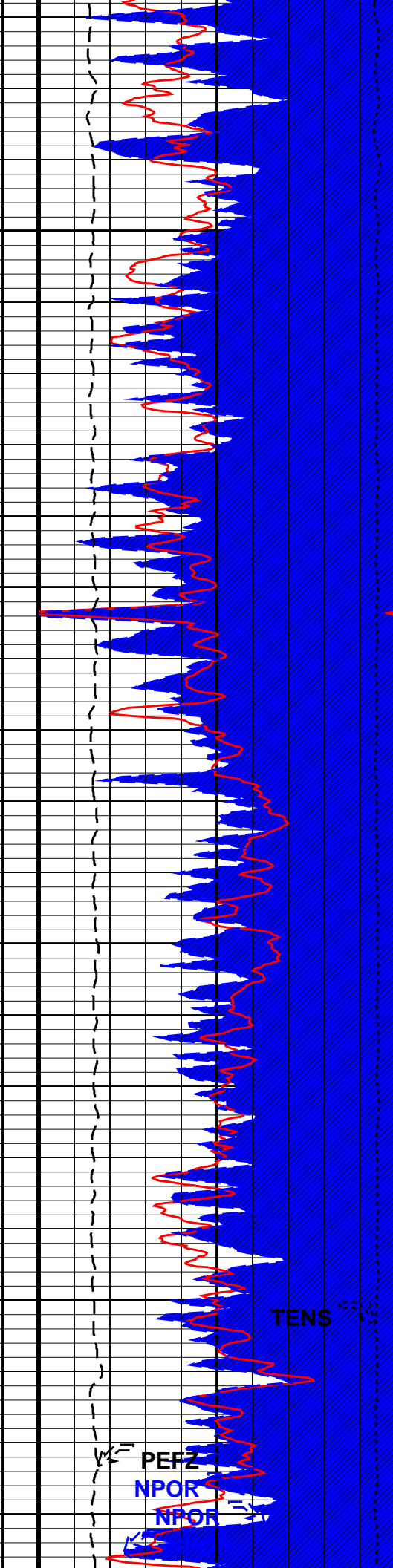
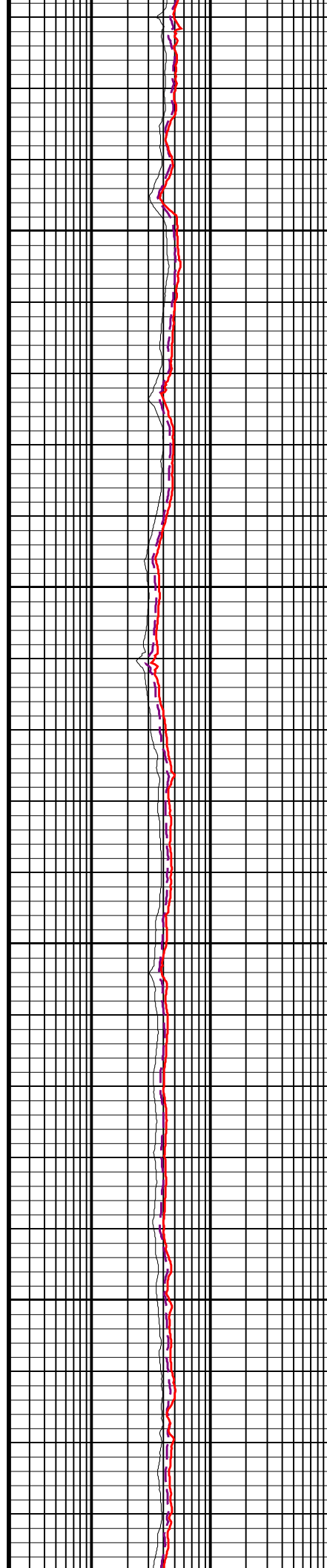
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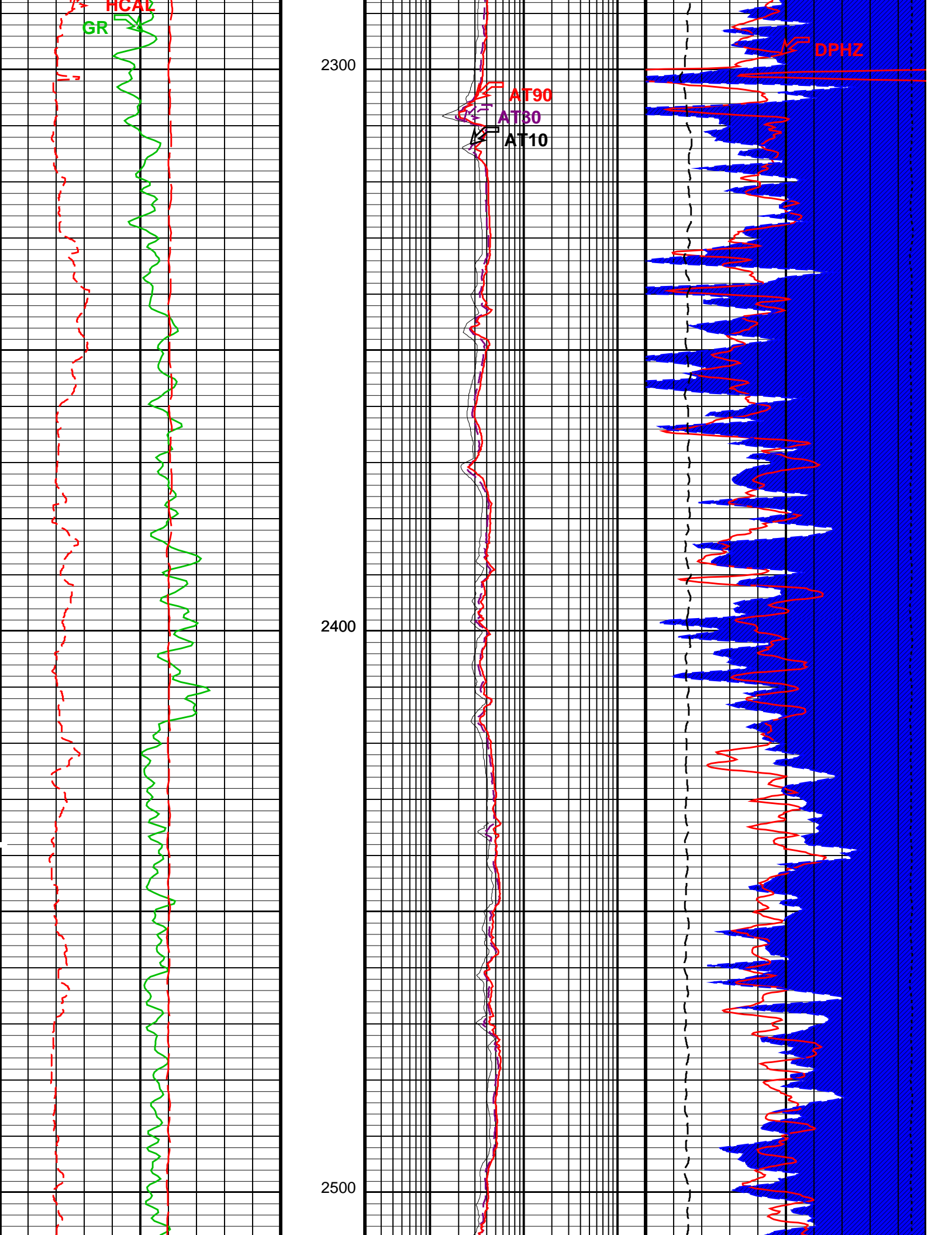


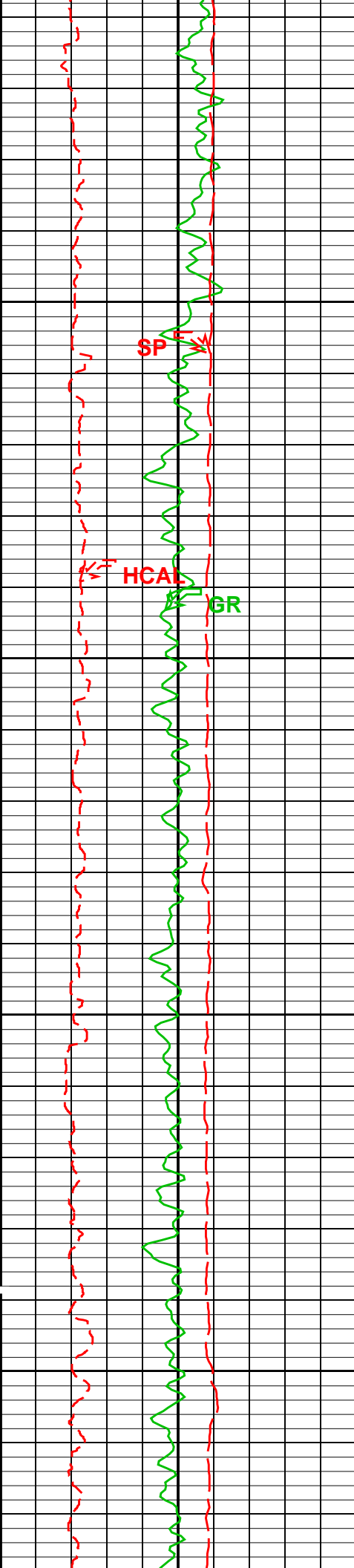


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2200

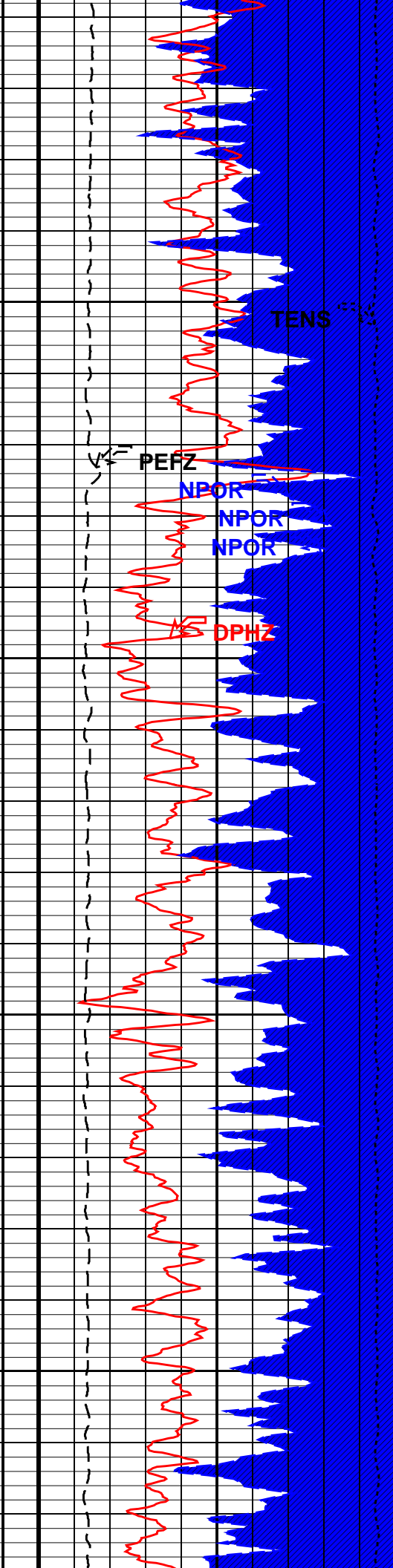
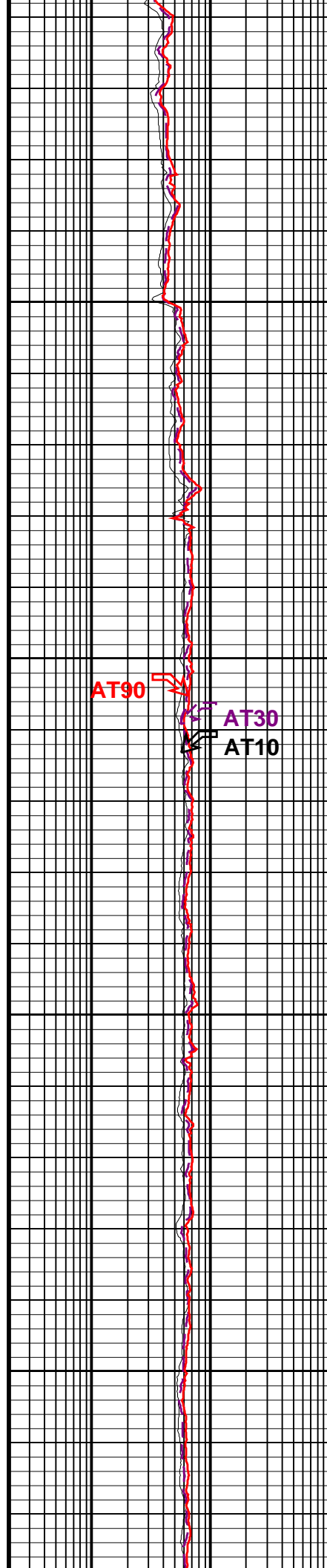


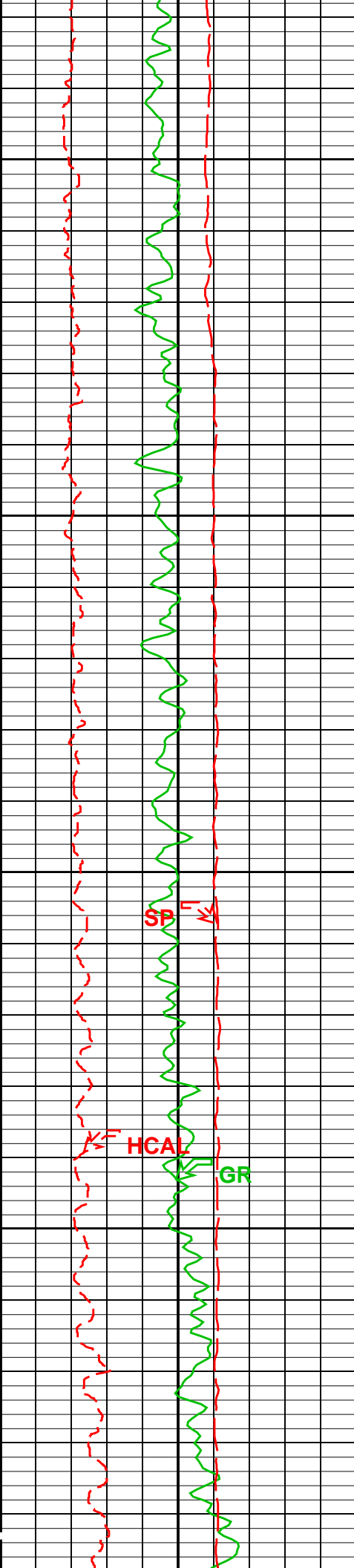




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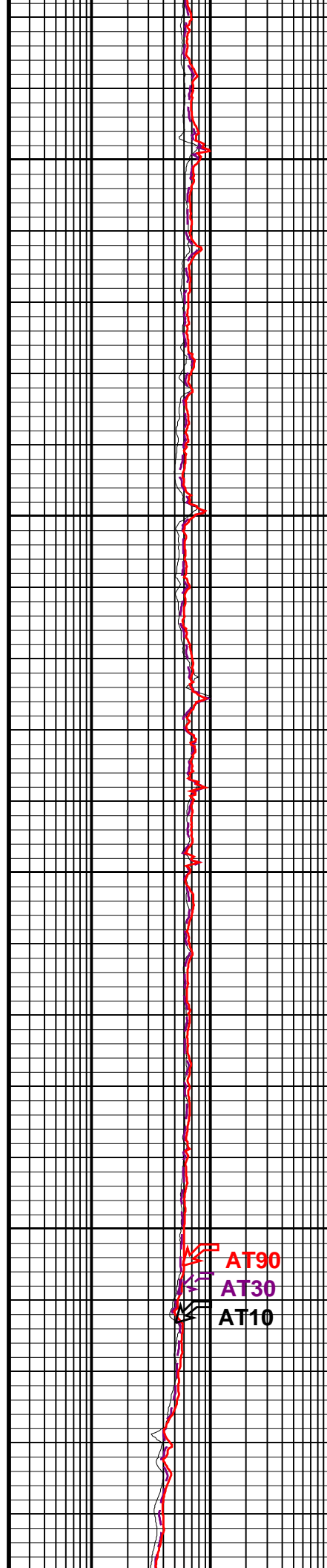
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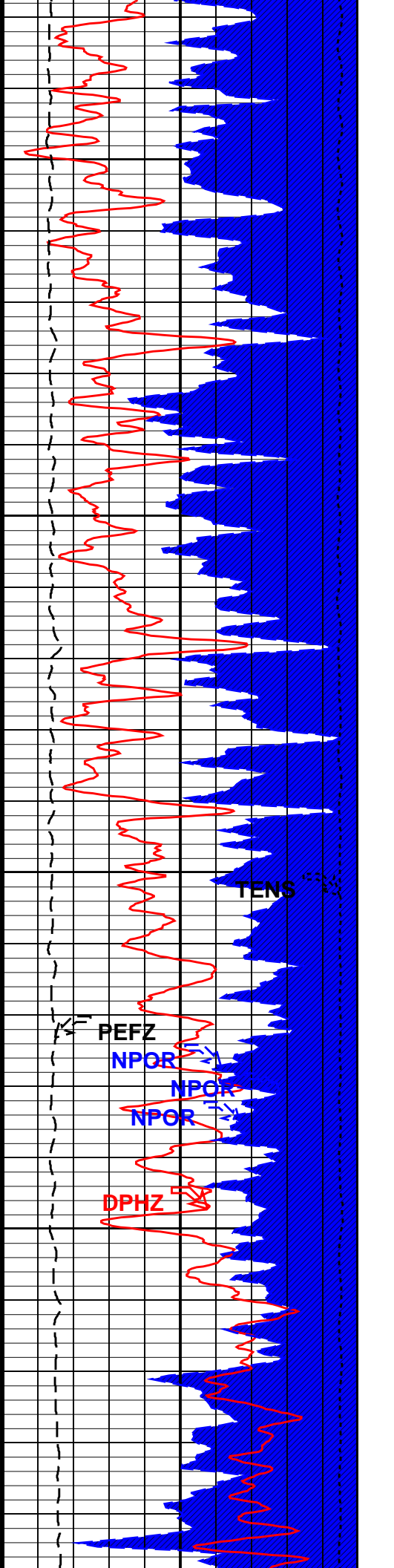
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AT90

AT30

AT10



PEFZ

NPOR

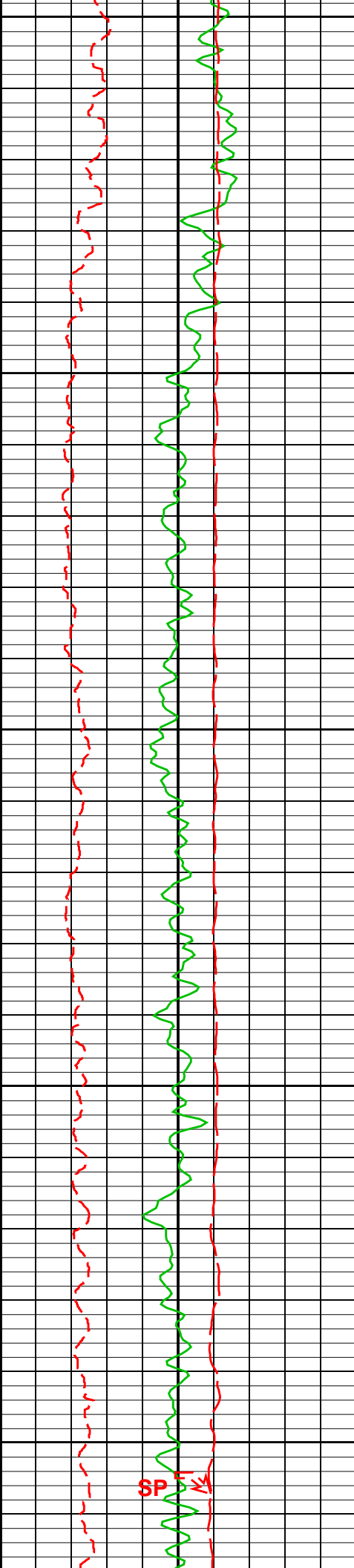
NPOR

NPOR

NPOR

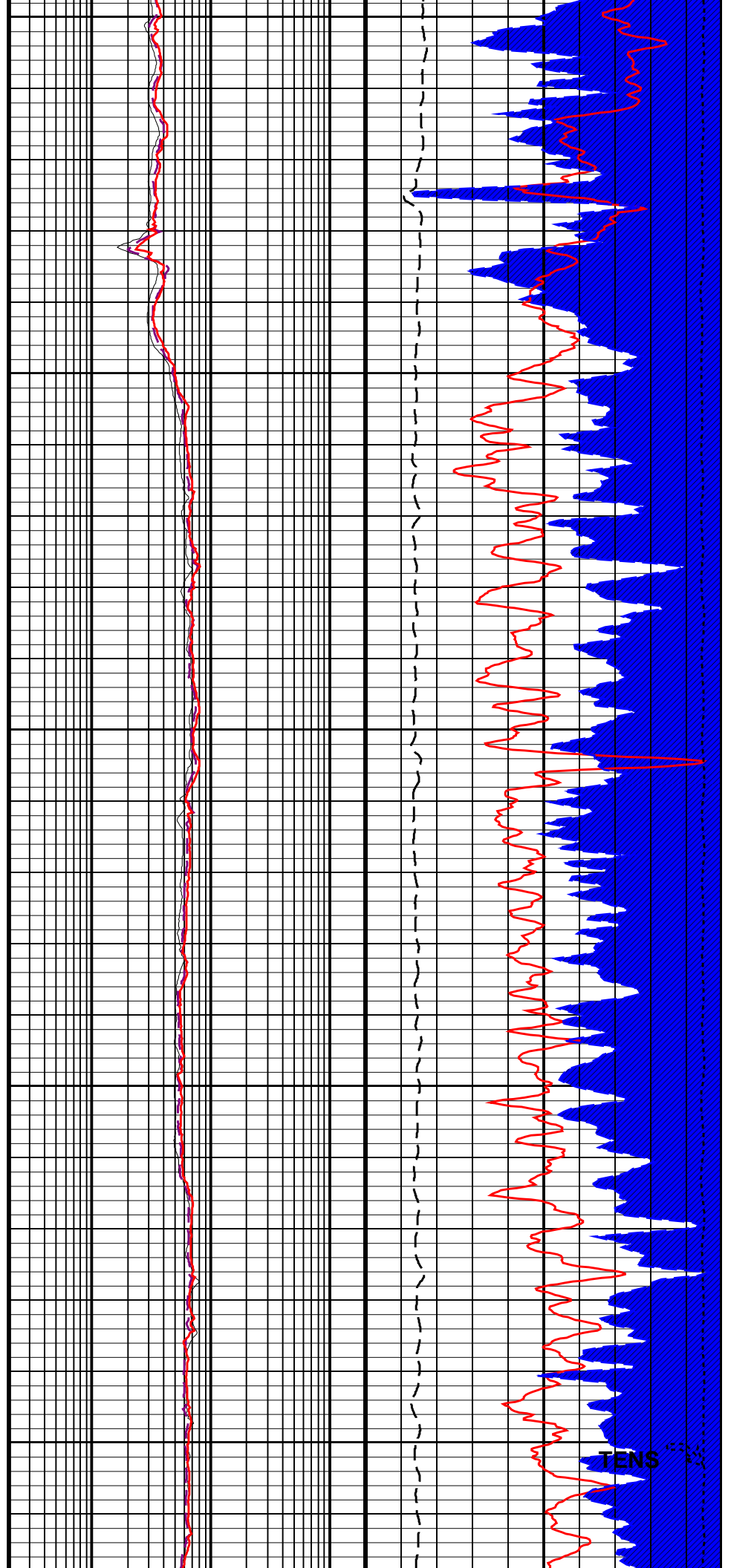
DPHZ

TENS

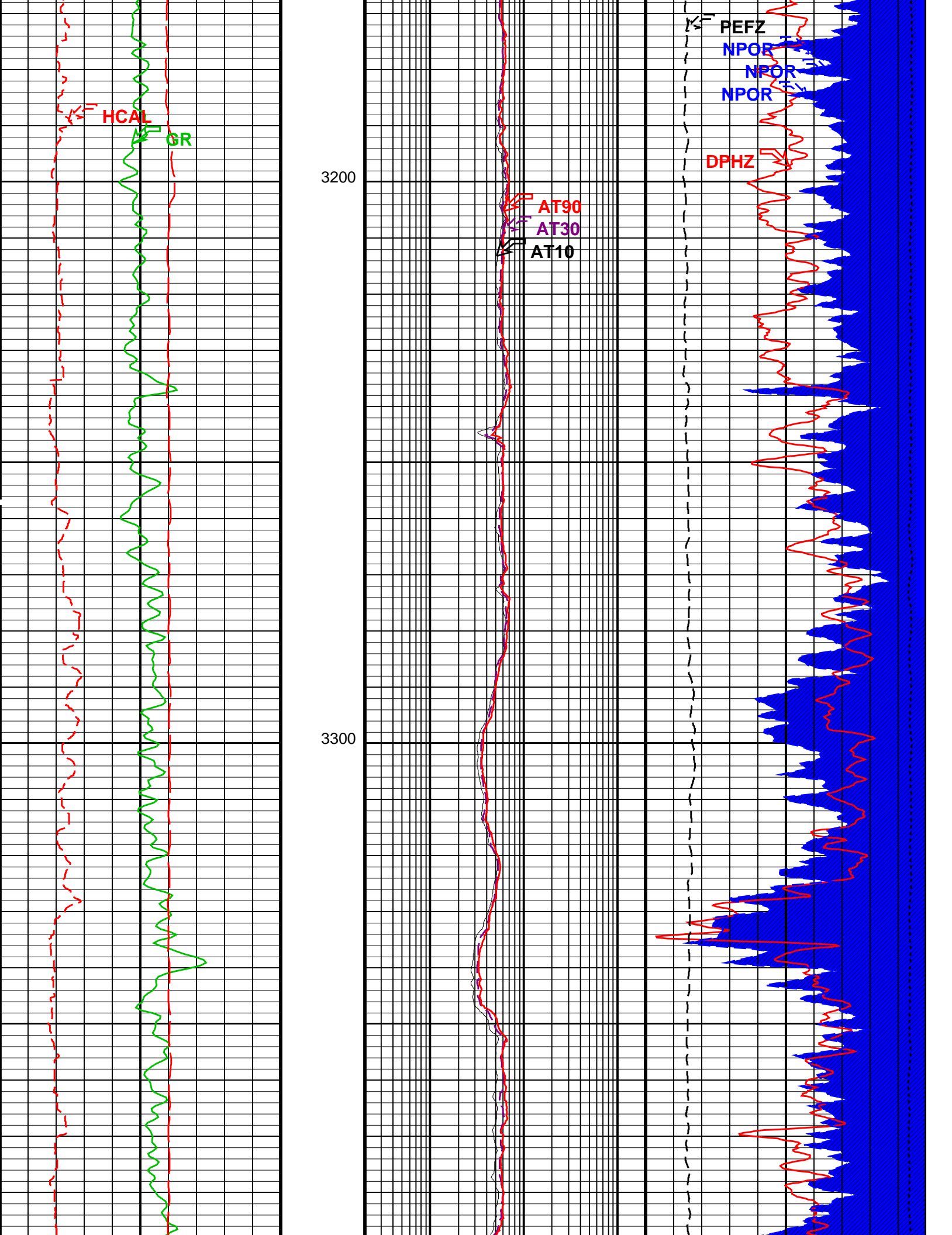


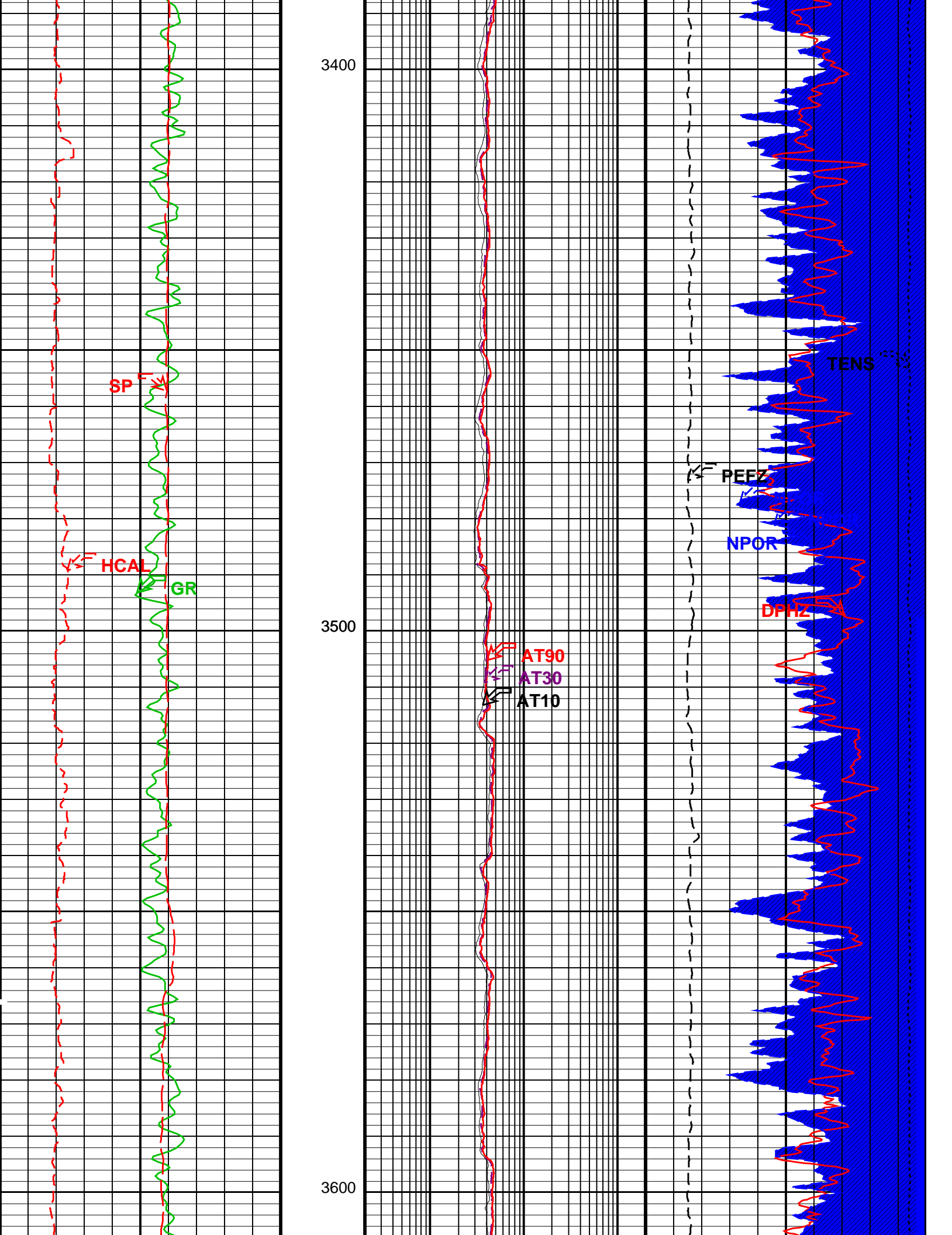
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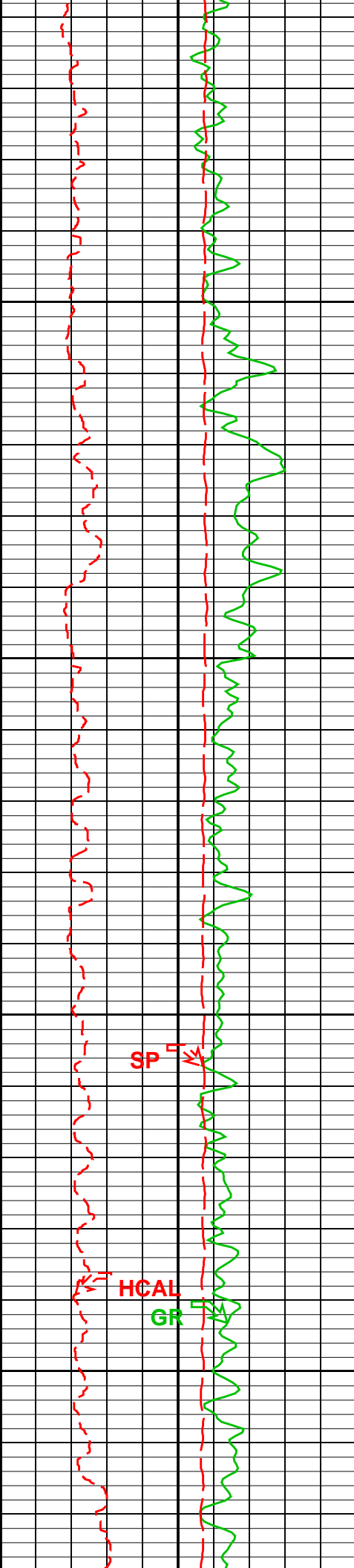
3100



TENS

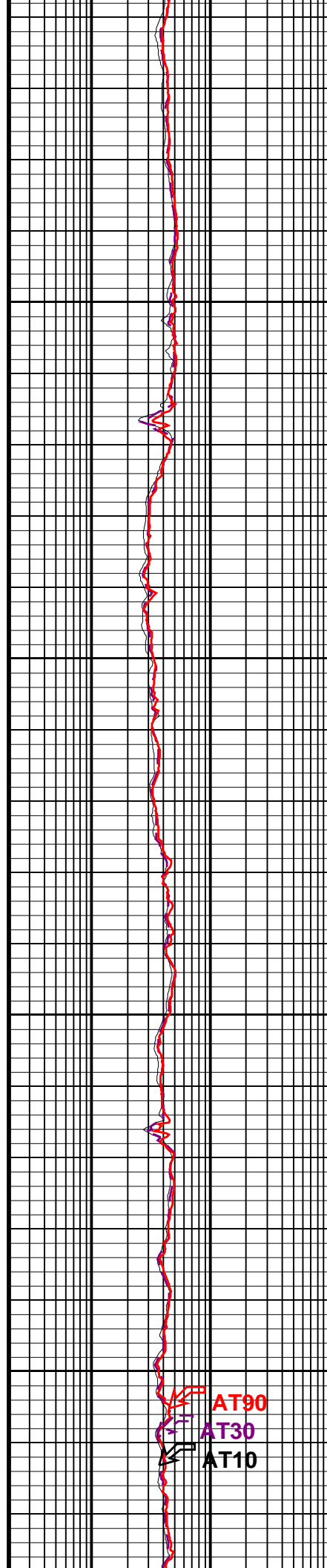






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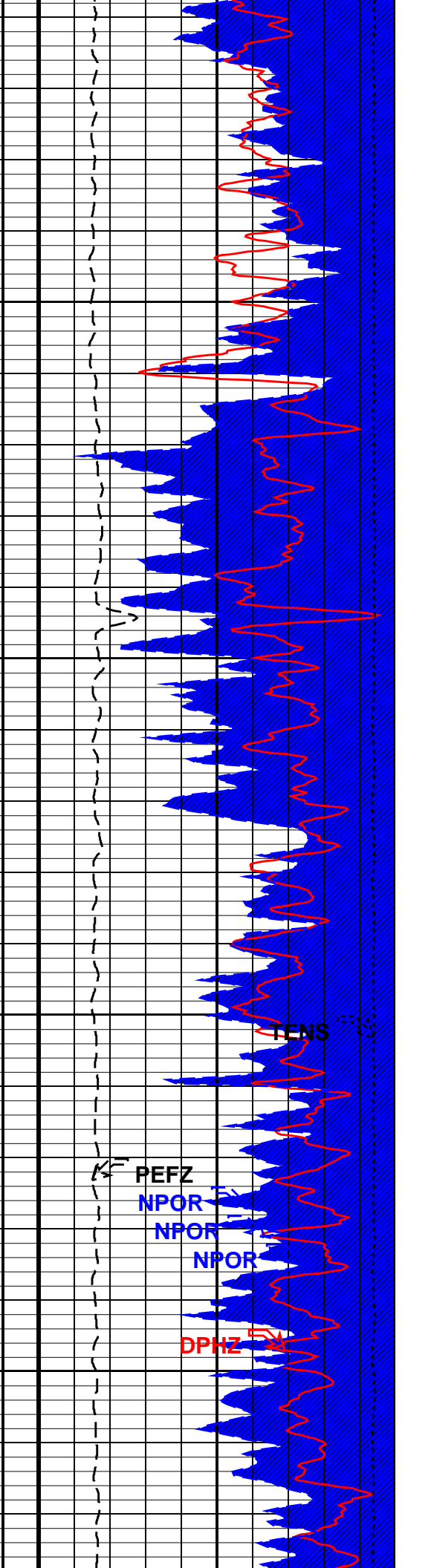
3800



AT90

AT30

AT10



PEFZ

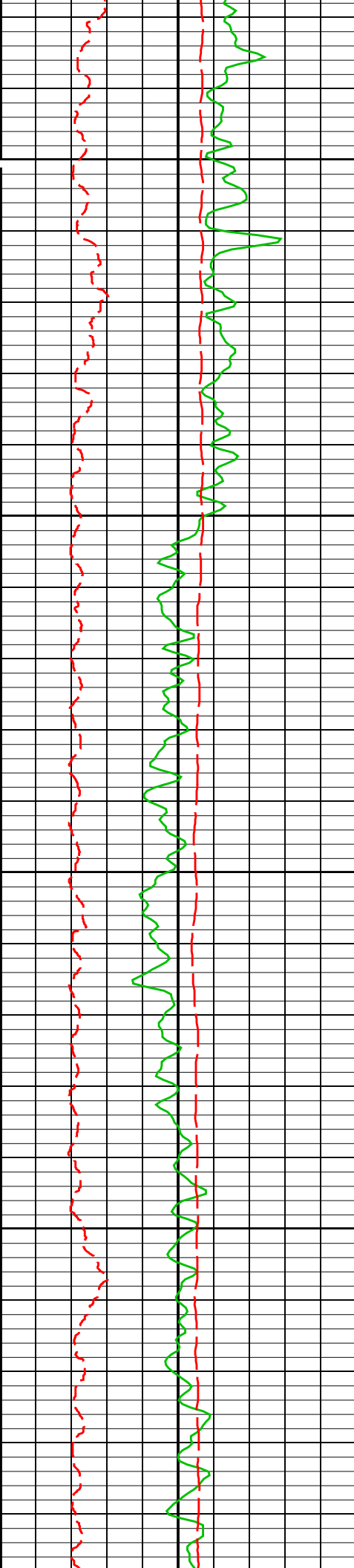
NPOR

NPOR

NPOR

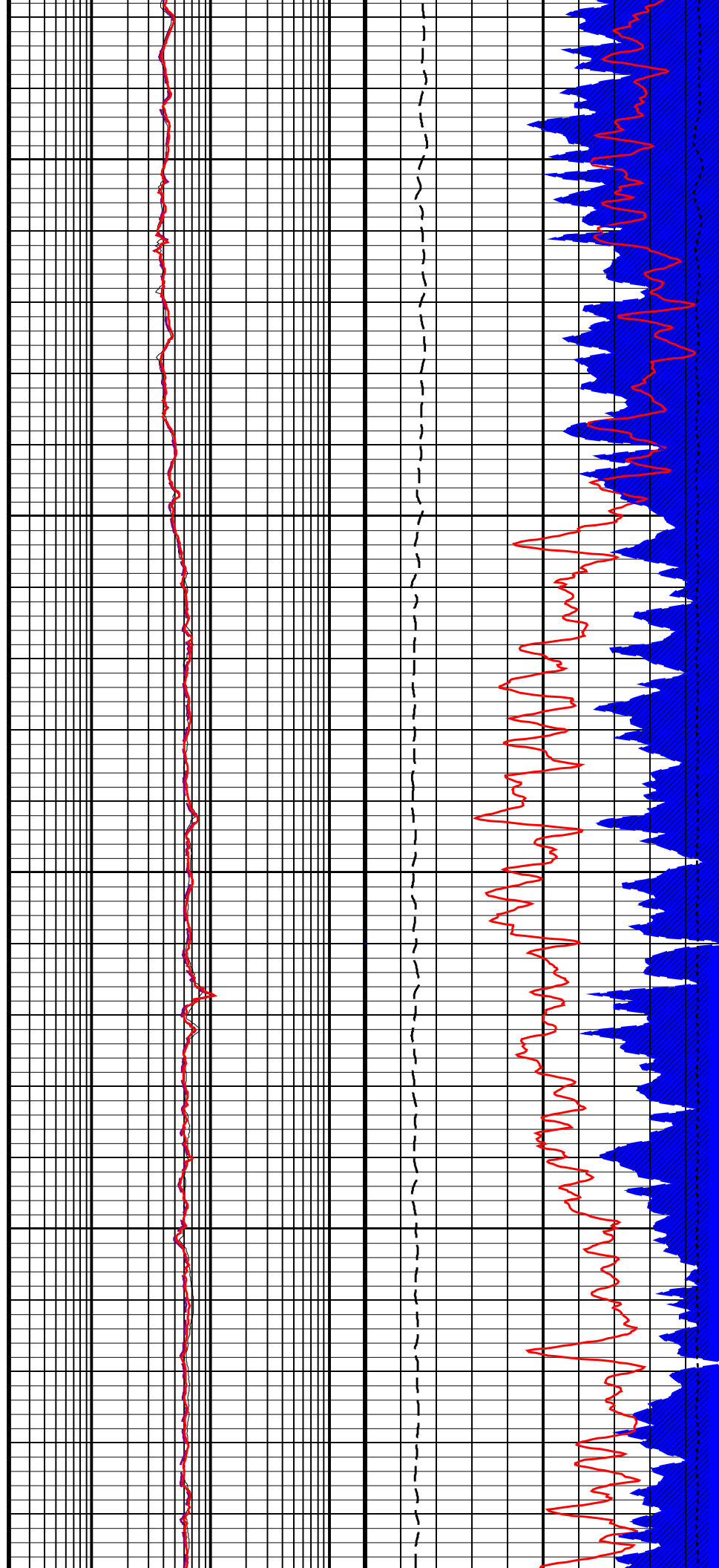
DPHZ

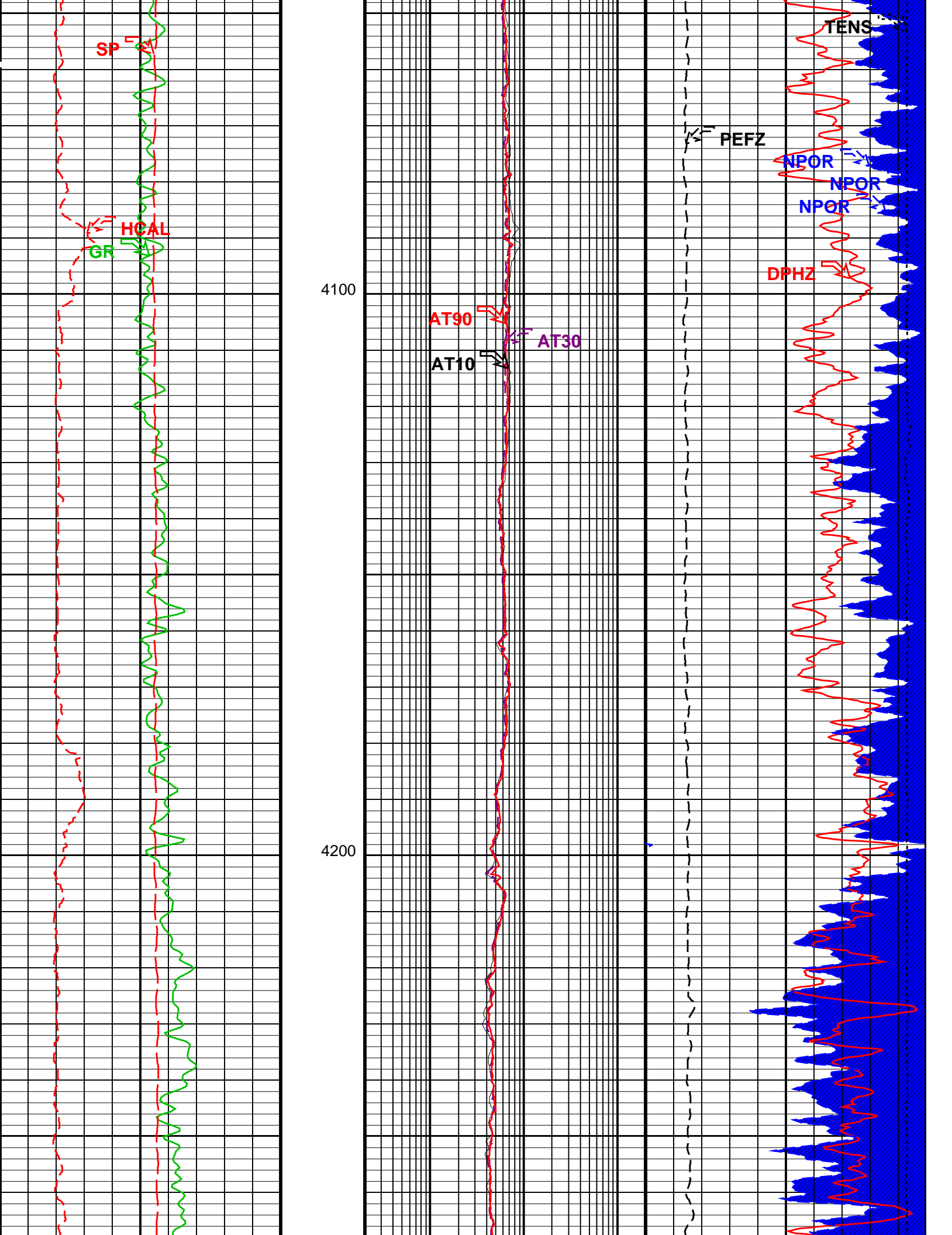
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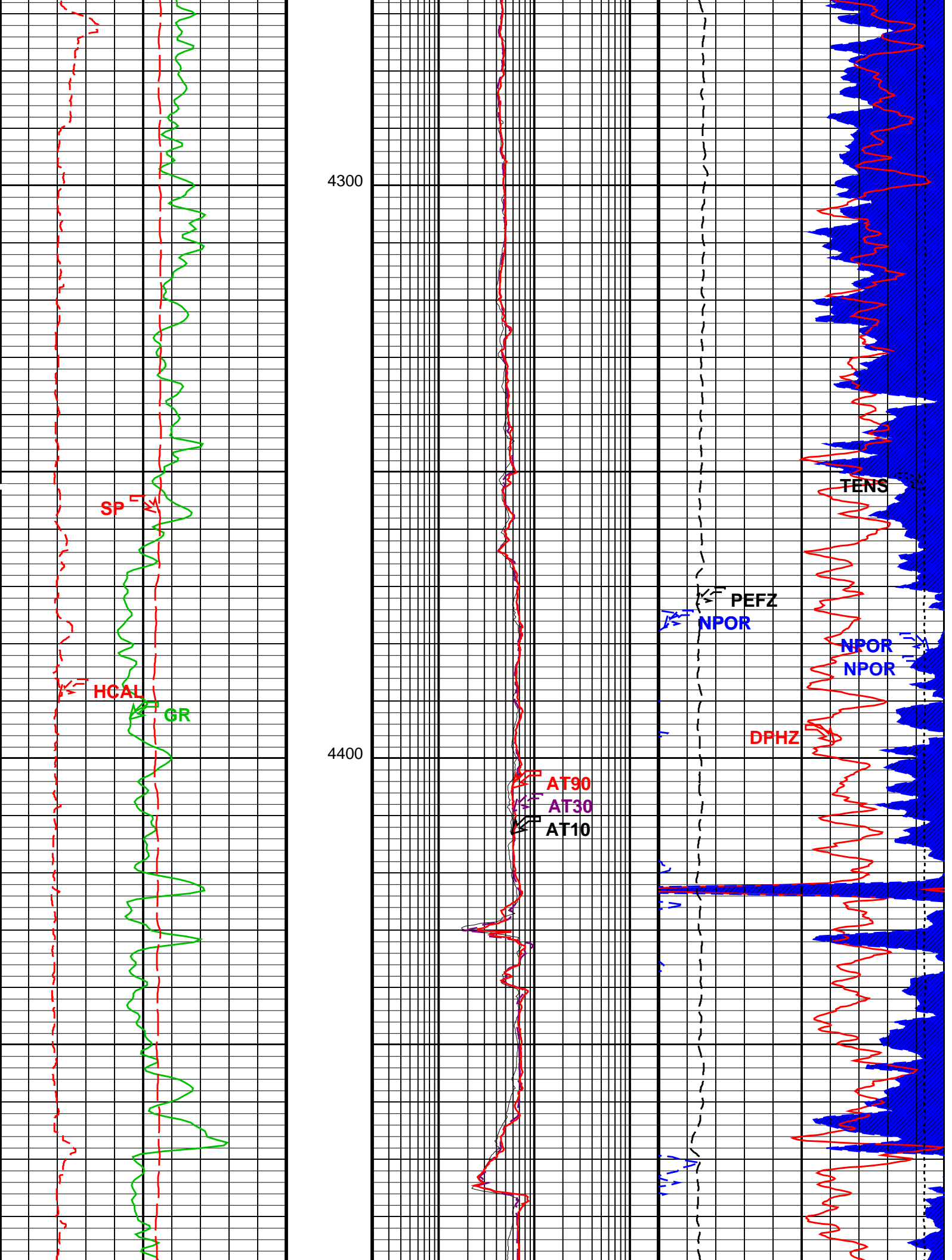


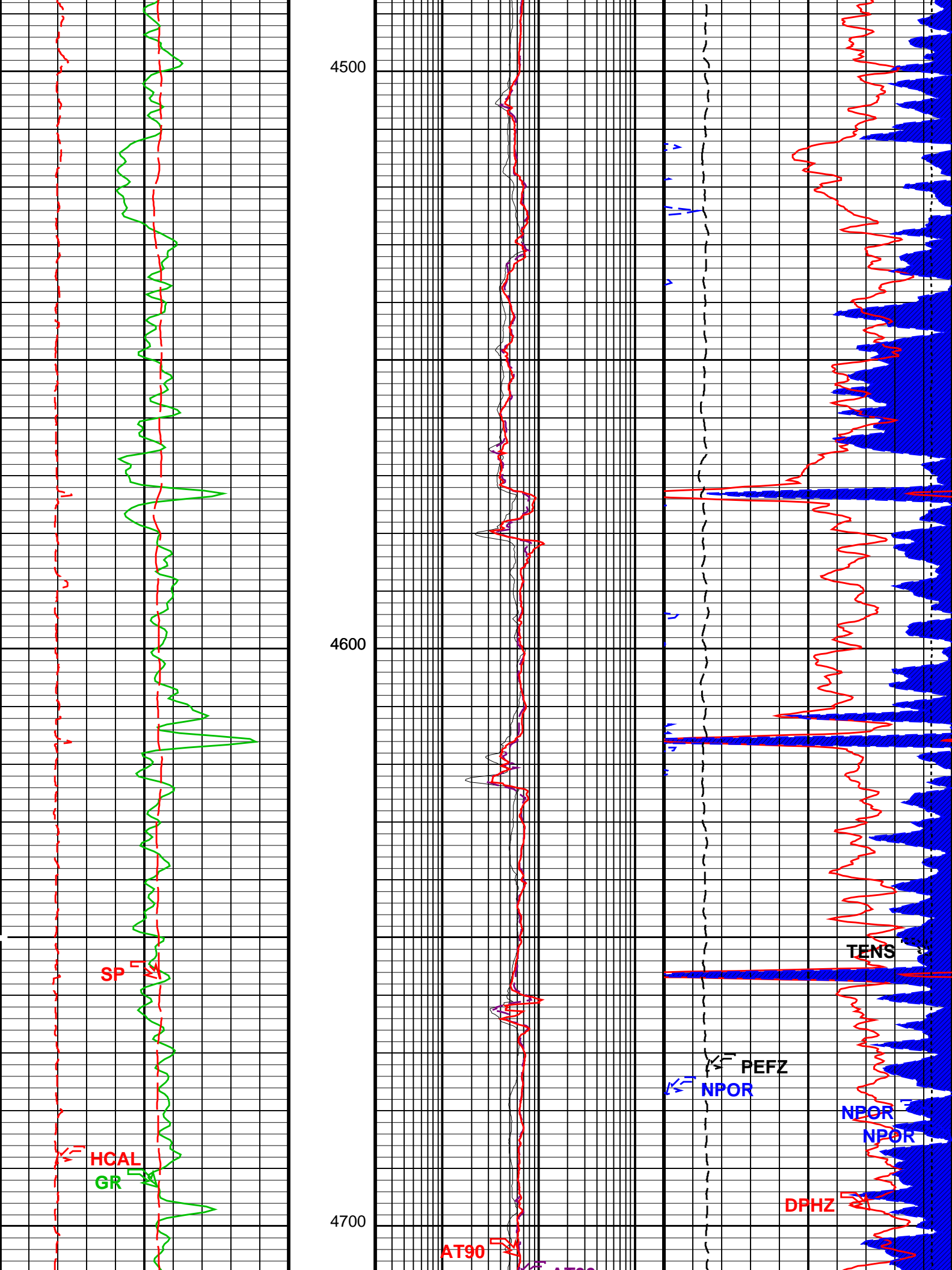
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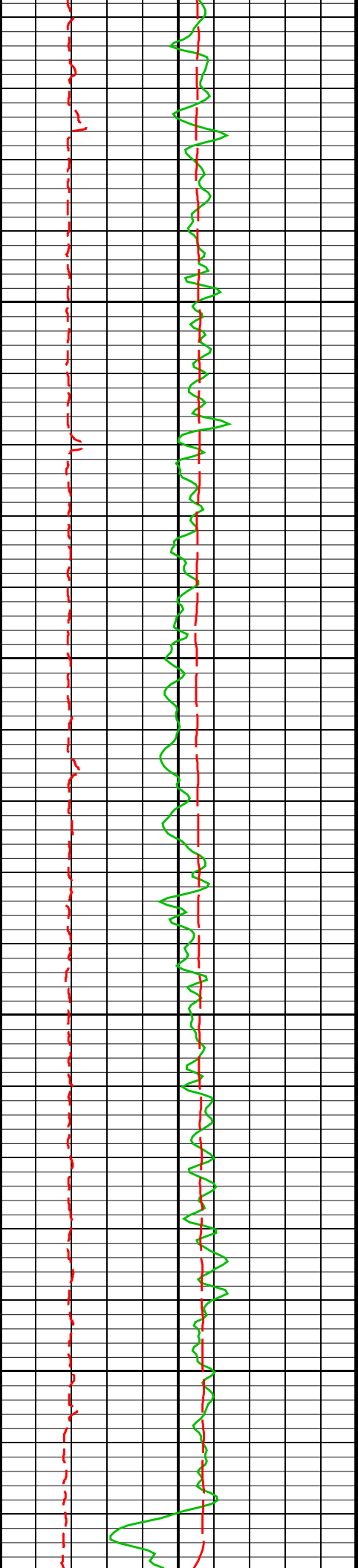
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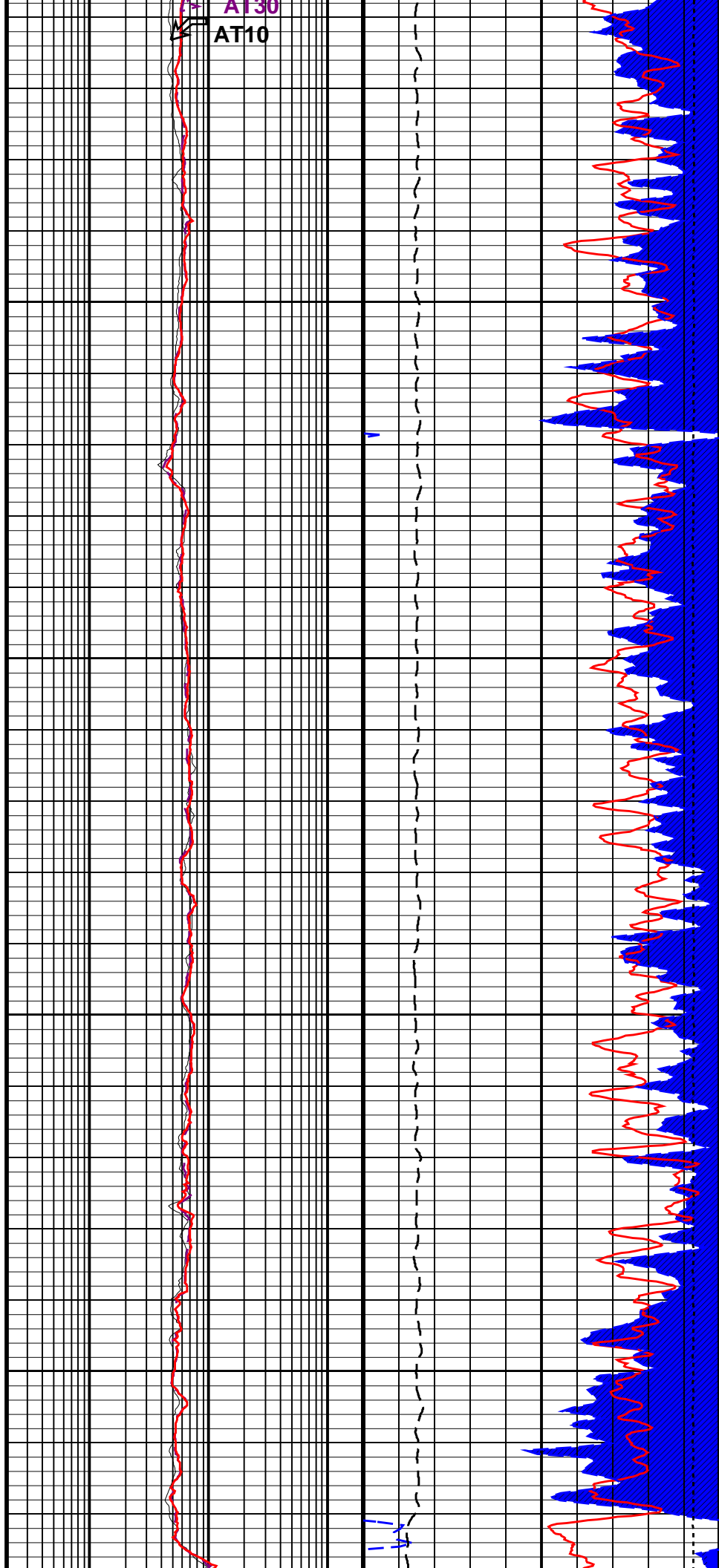


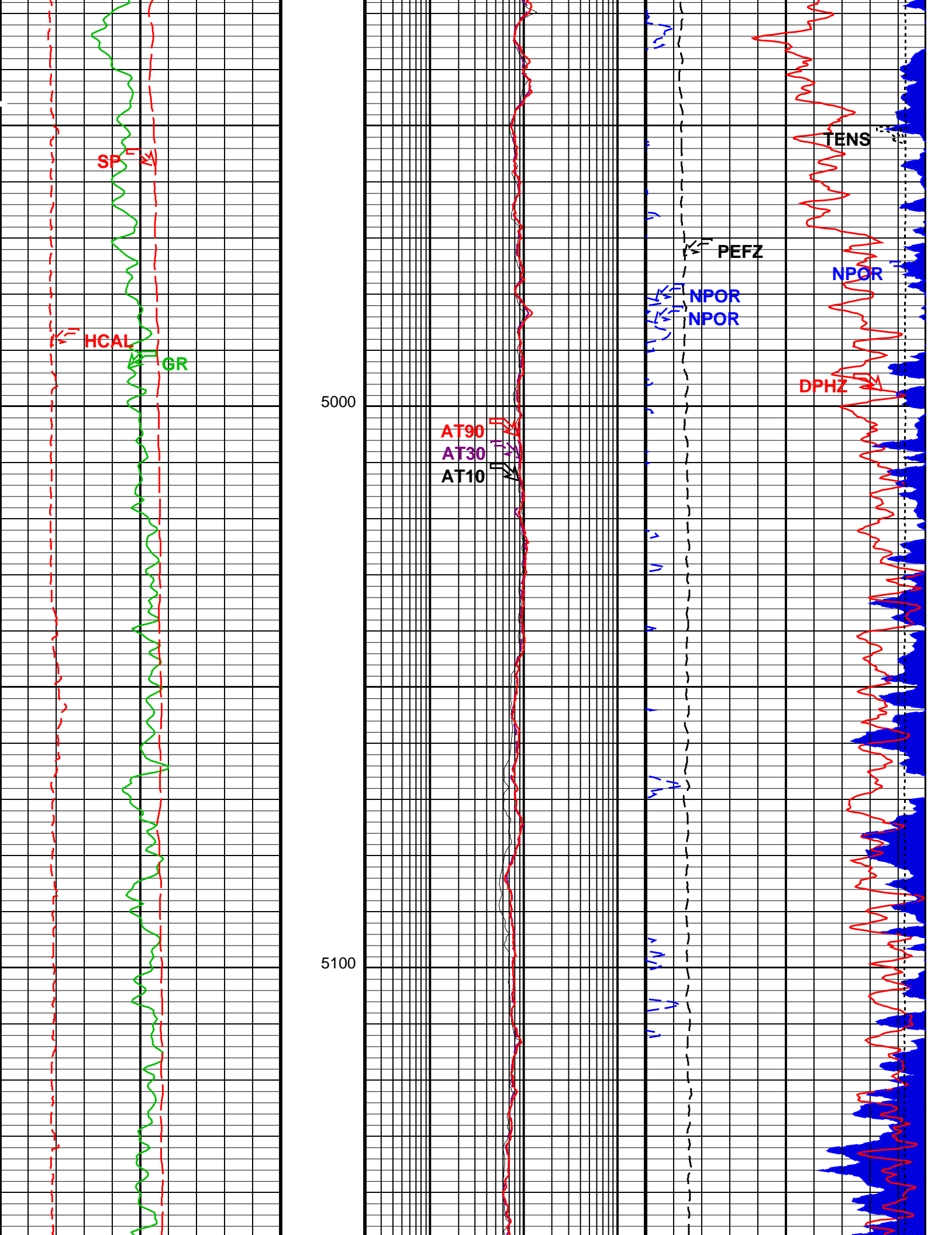


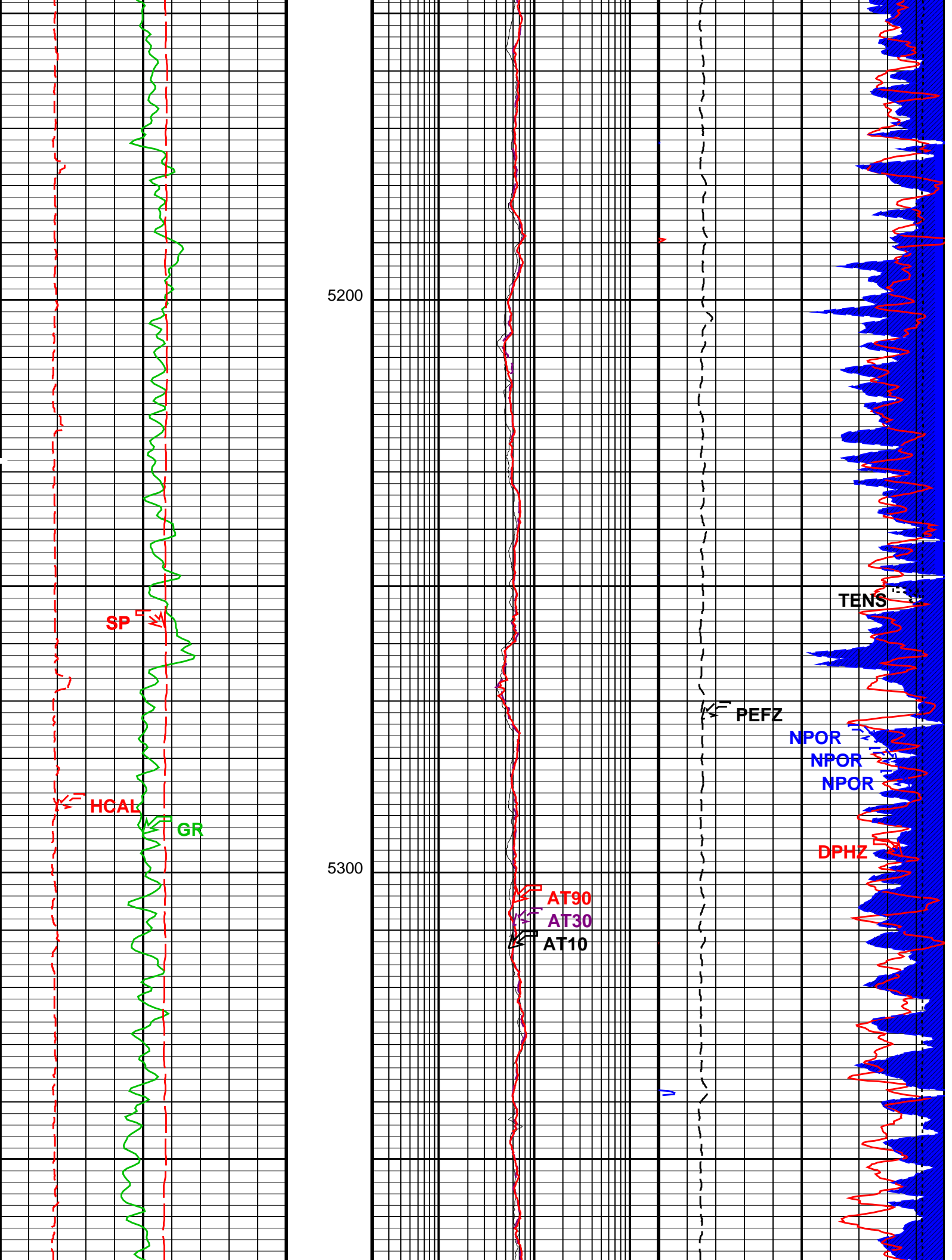


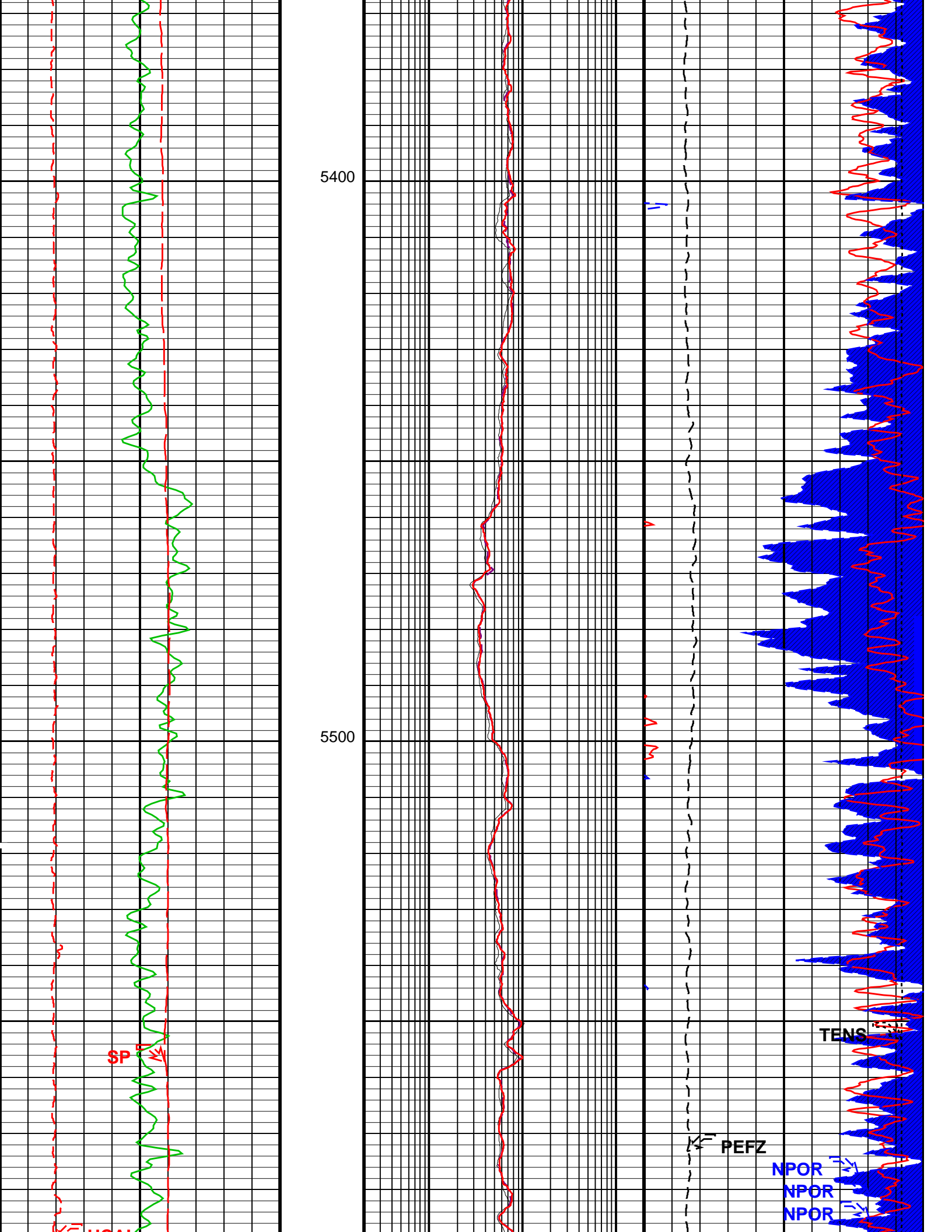
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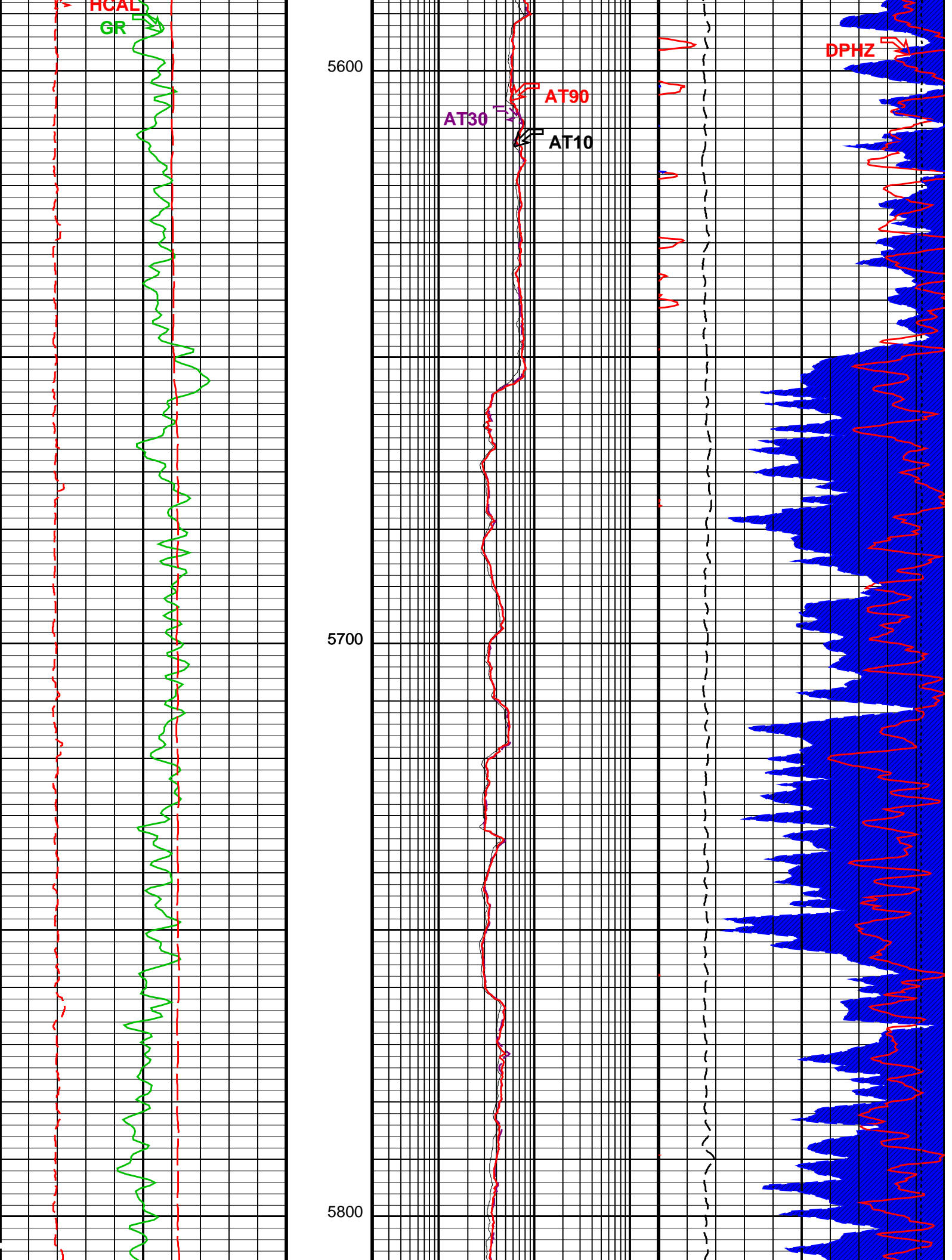
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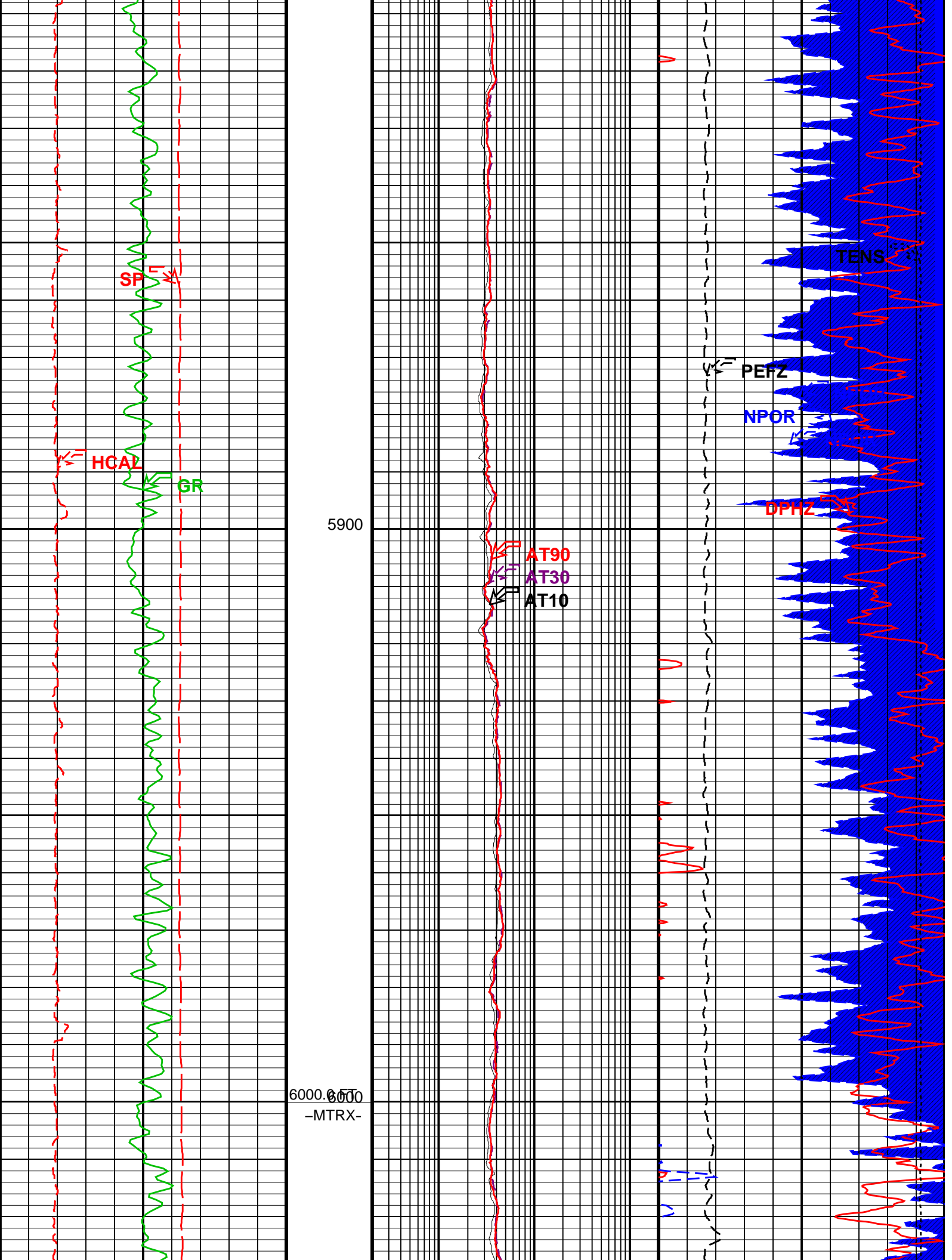


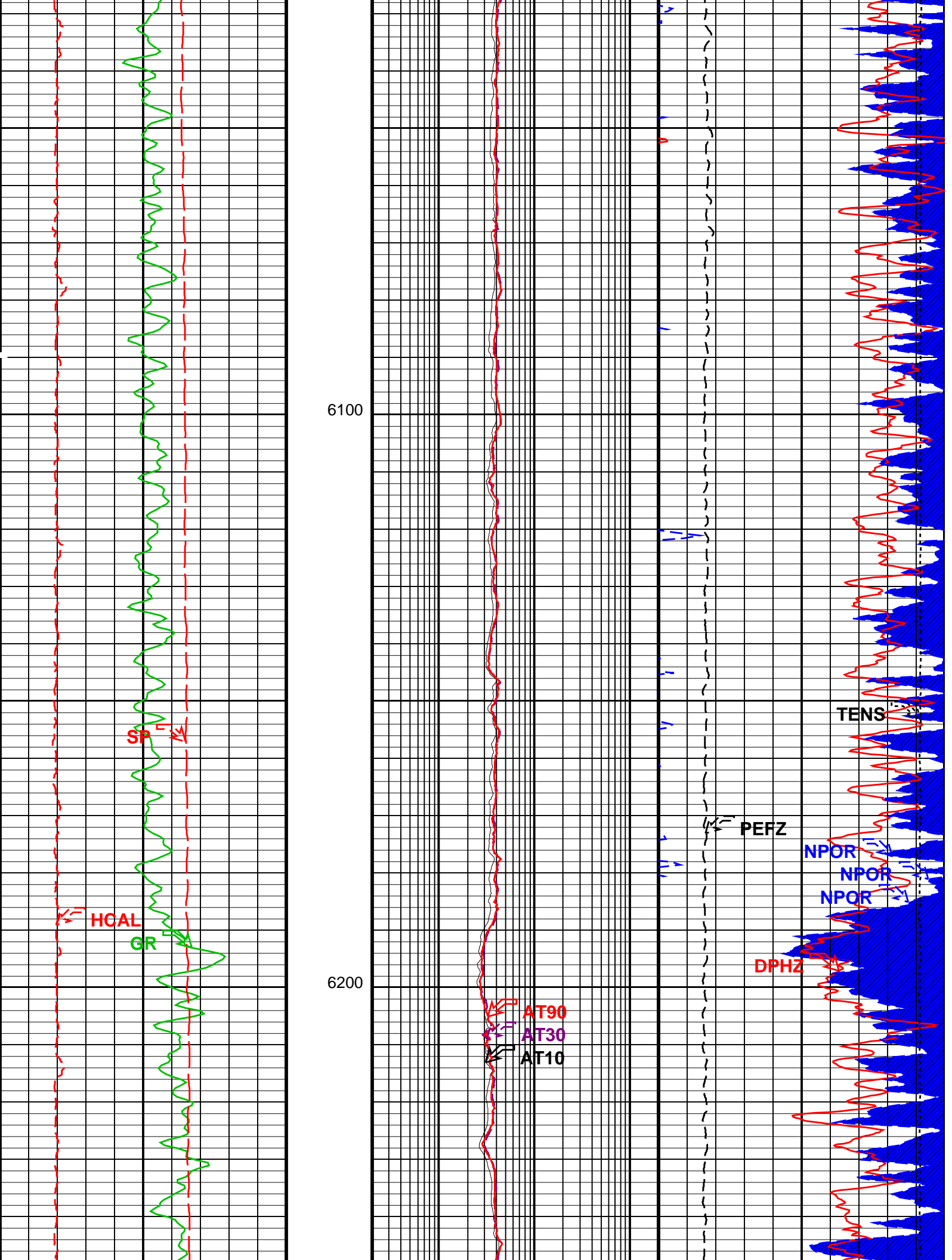


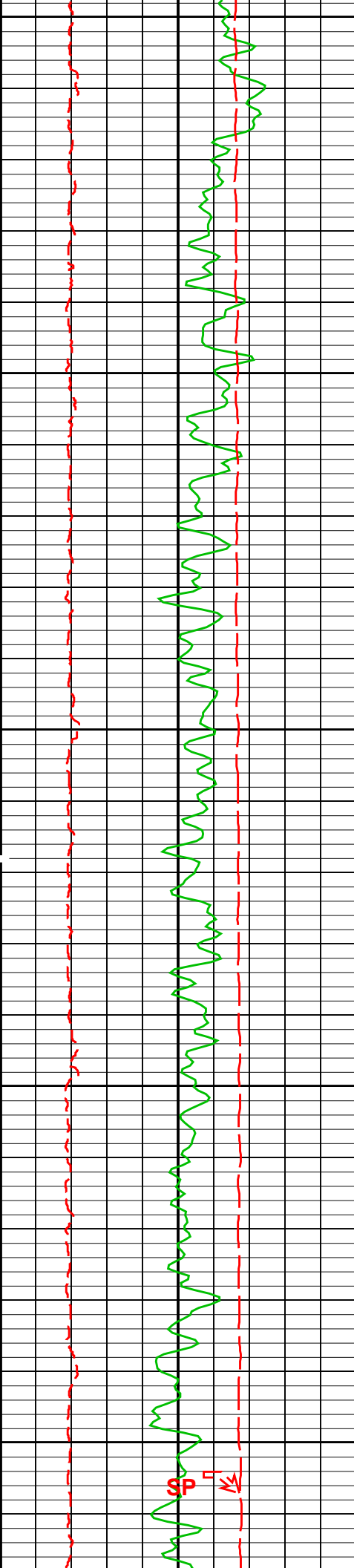






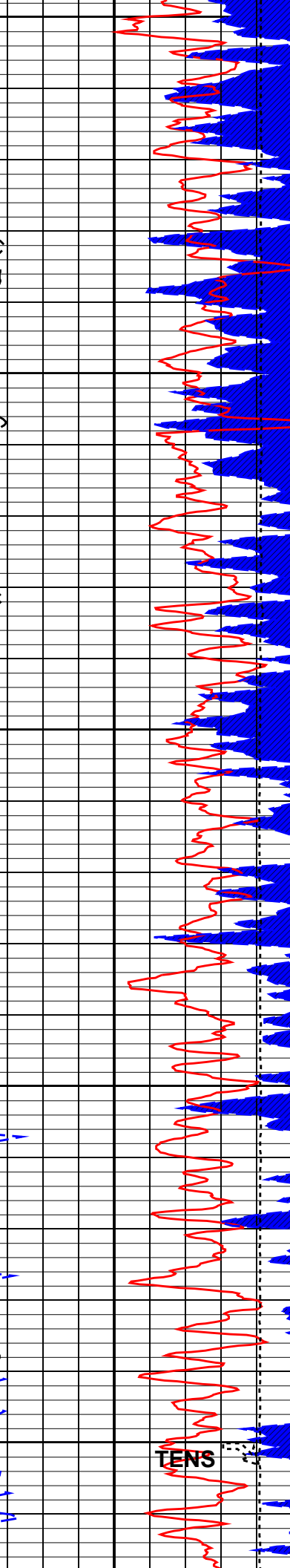
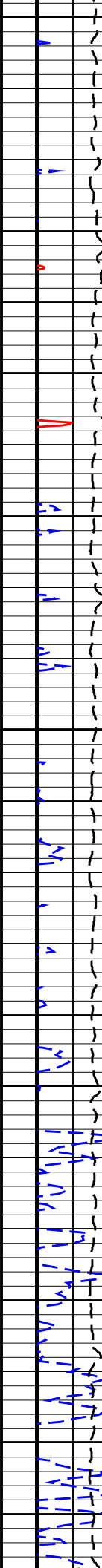
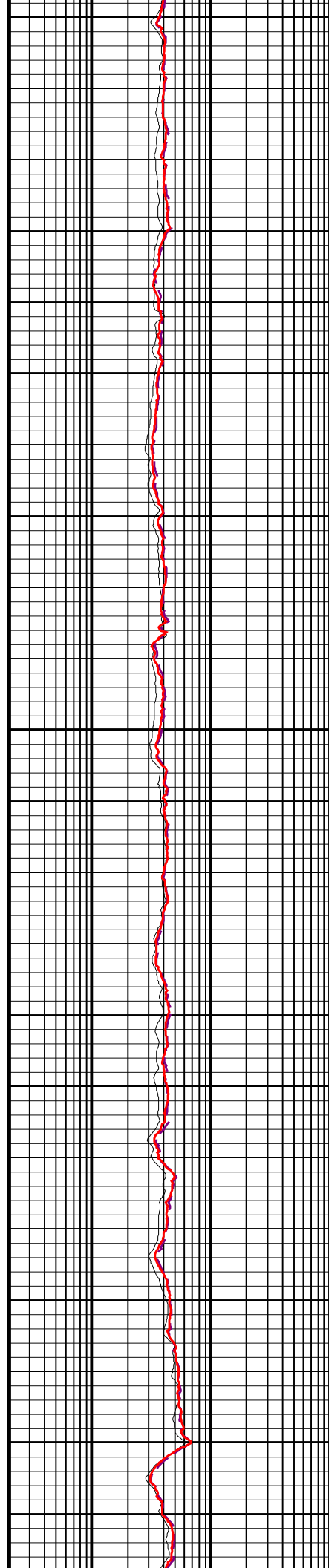




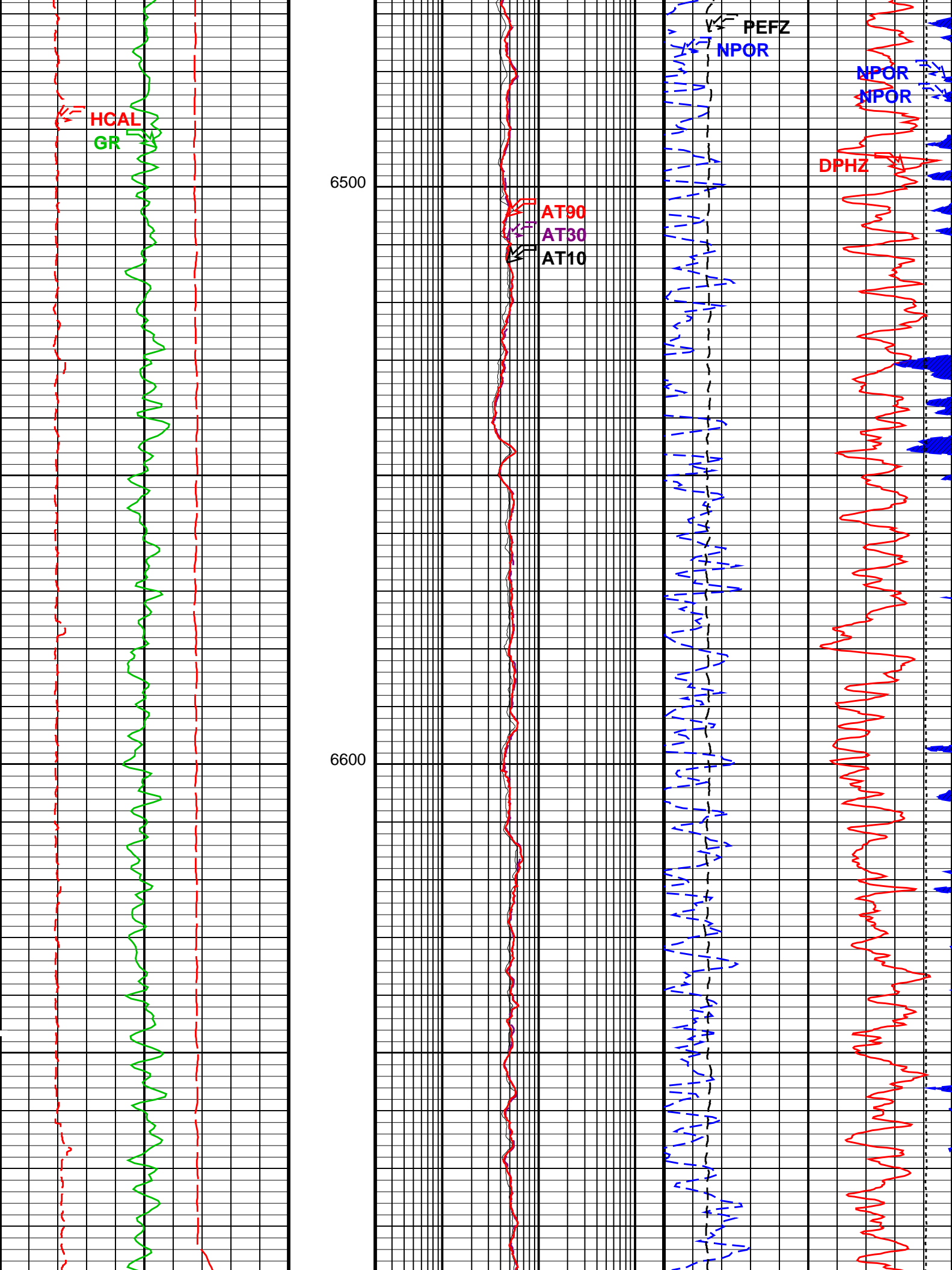


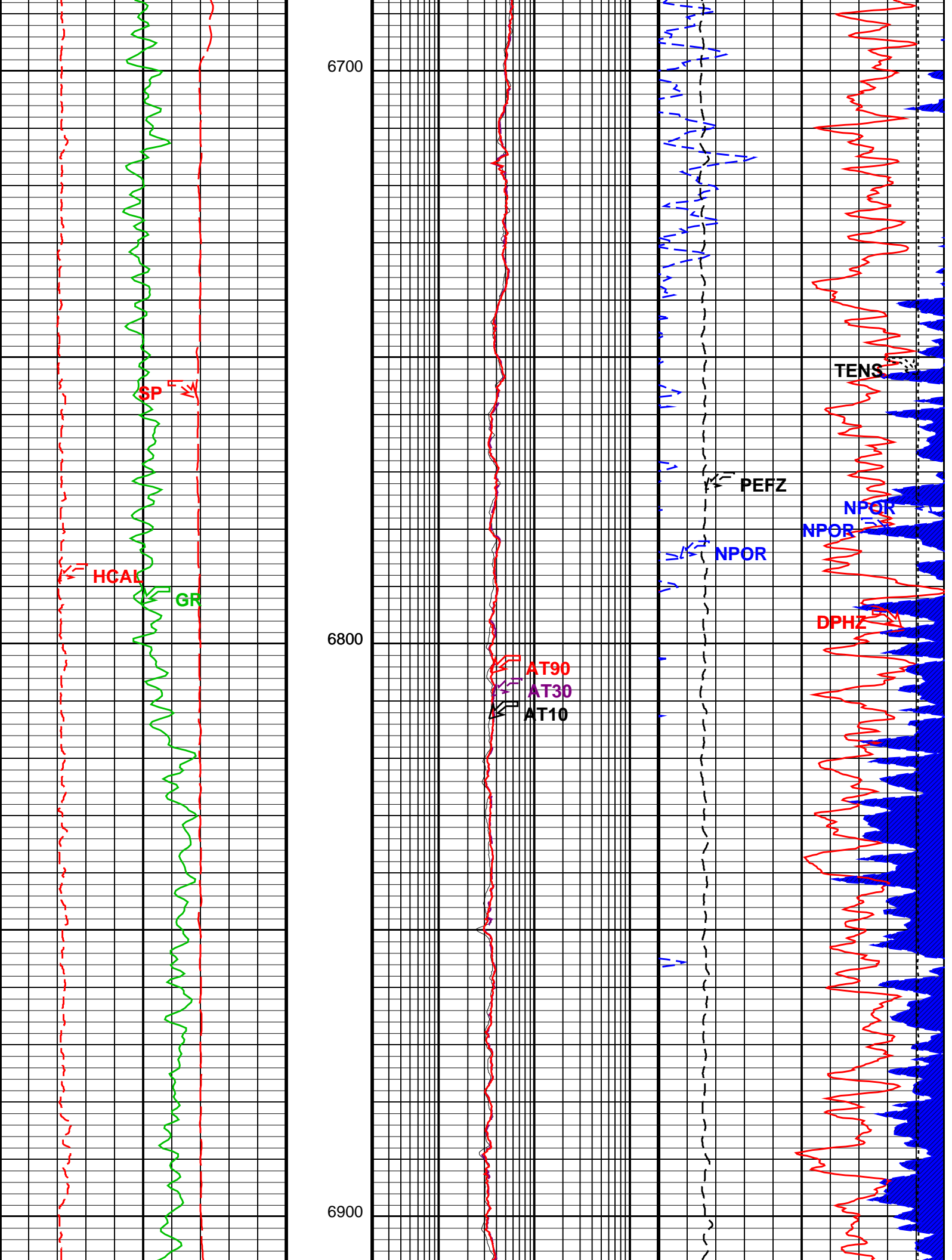
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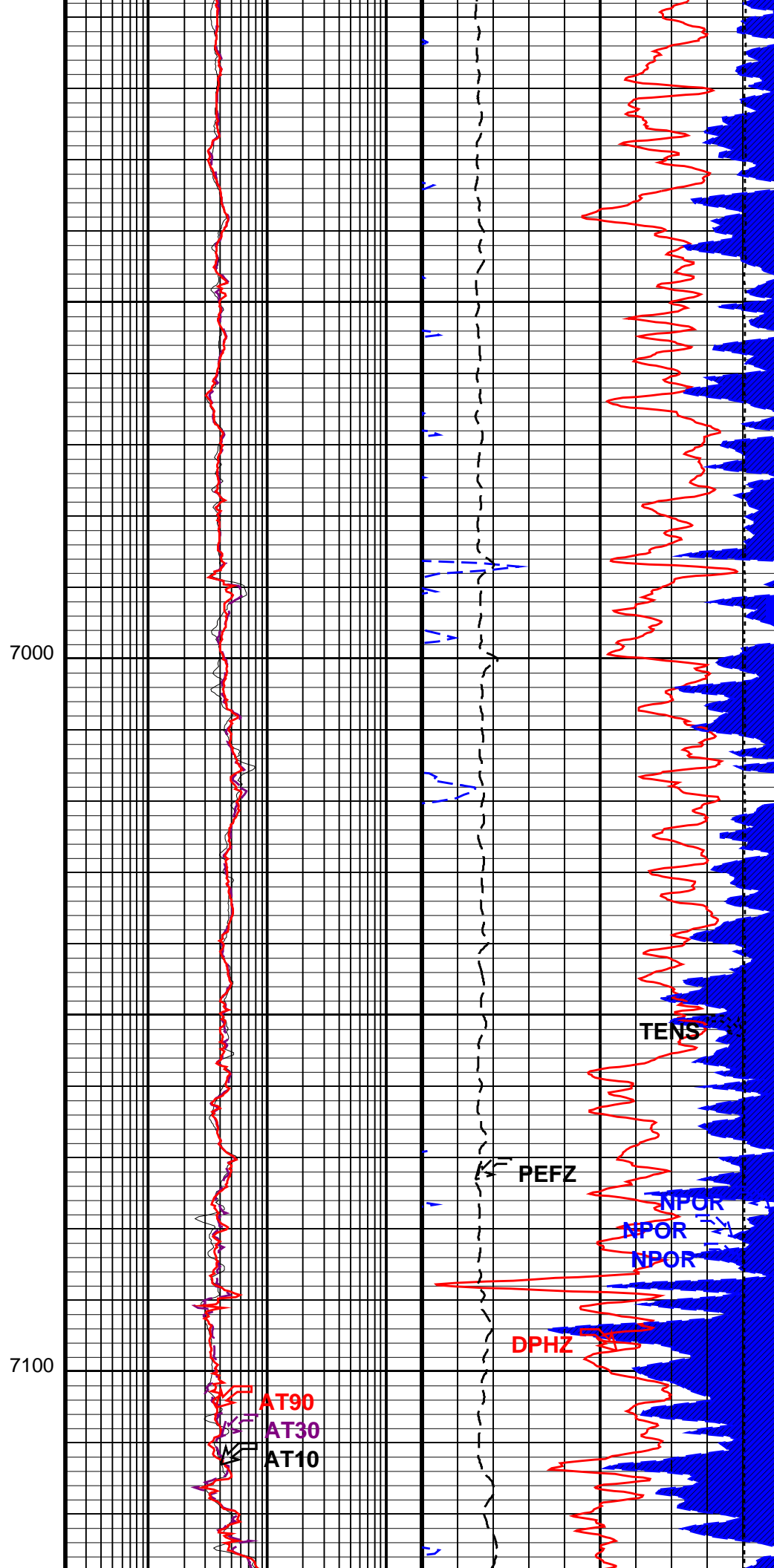
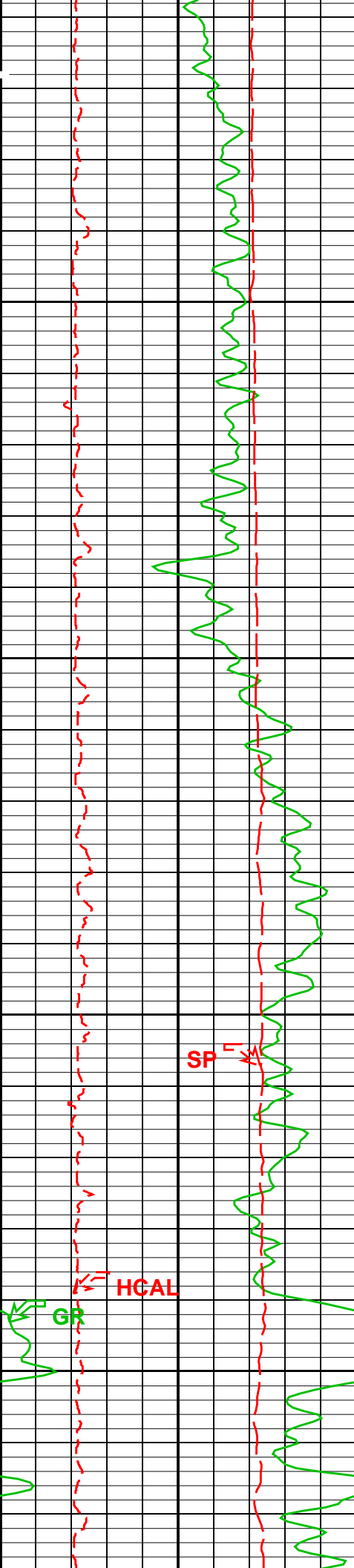
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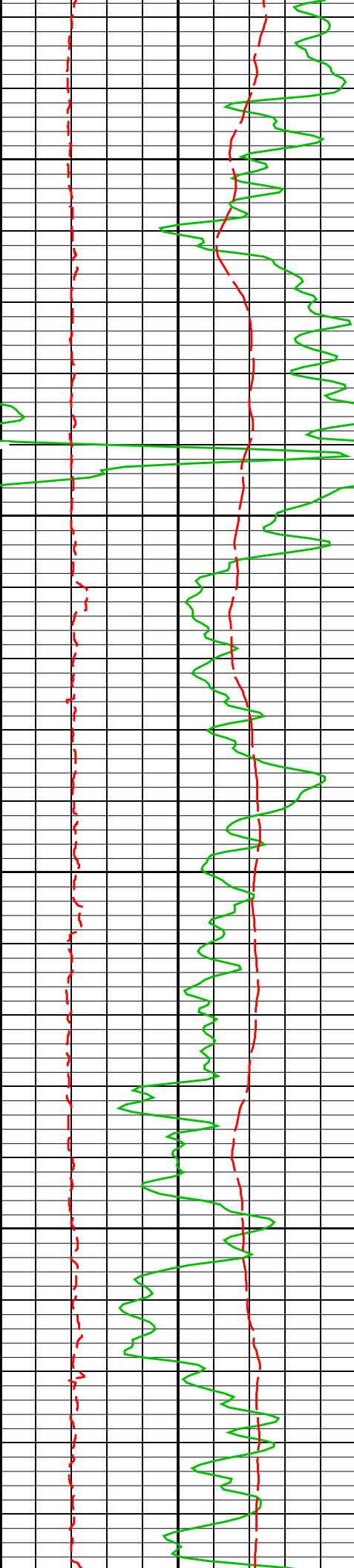


TENS



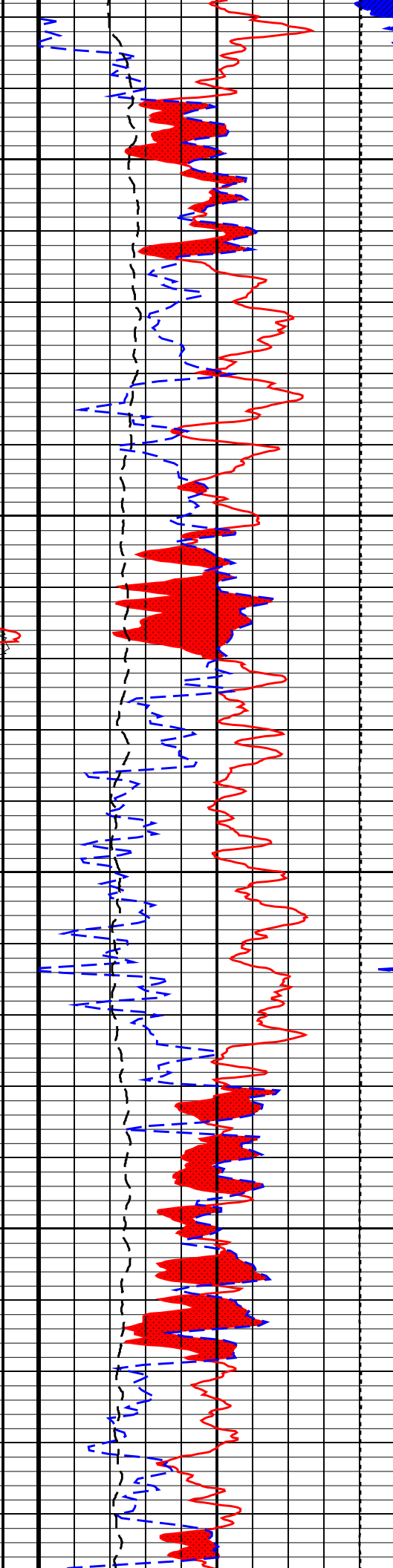
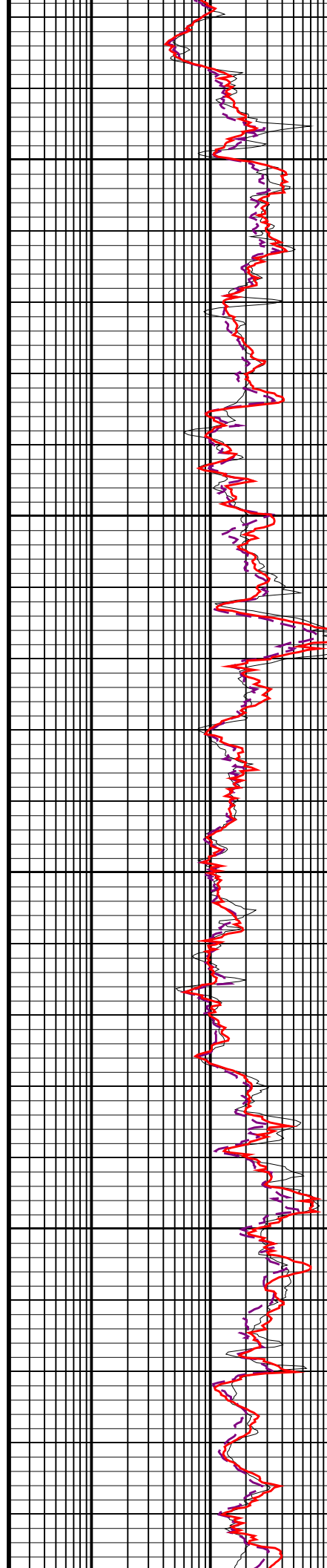


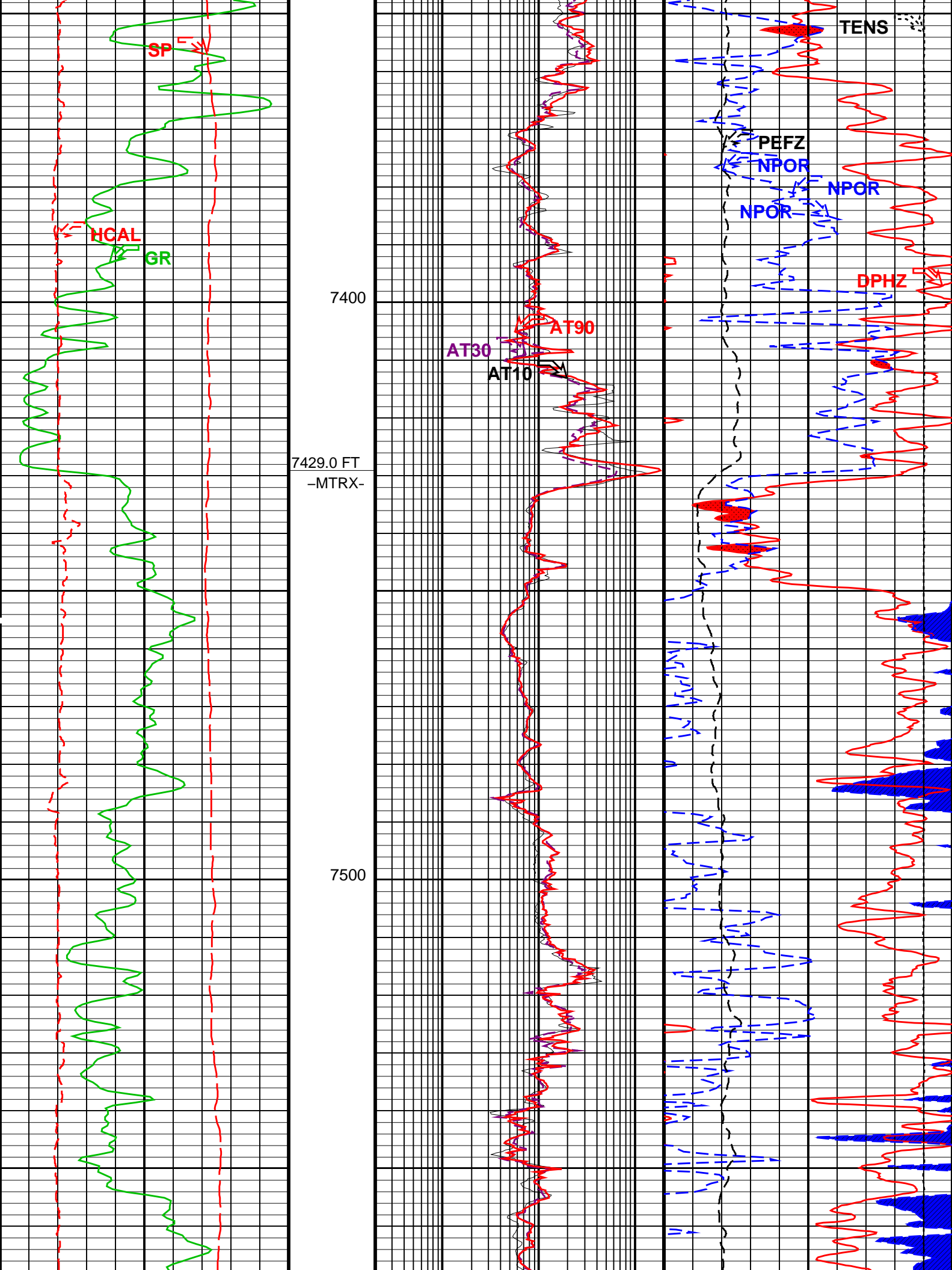


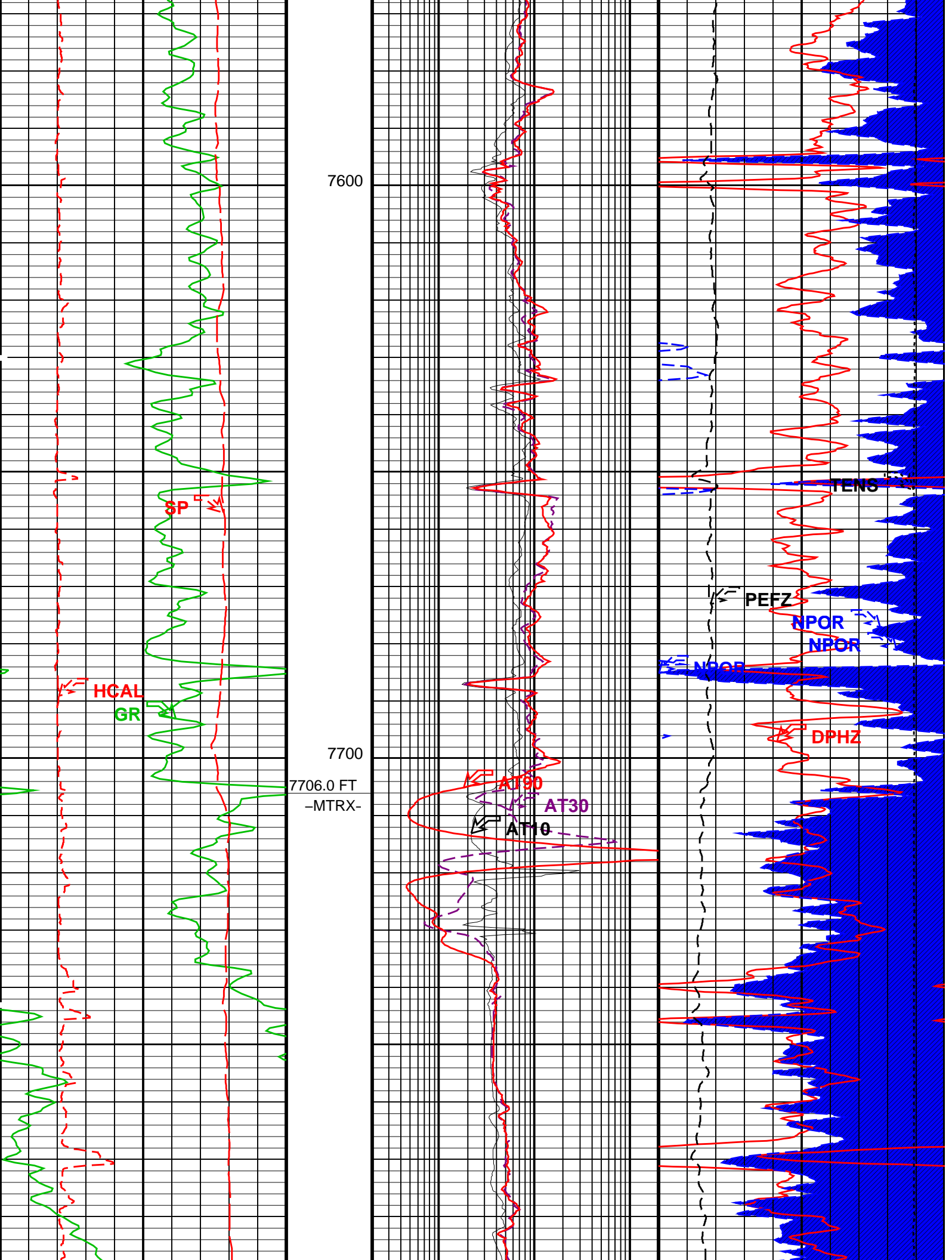


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7300





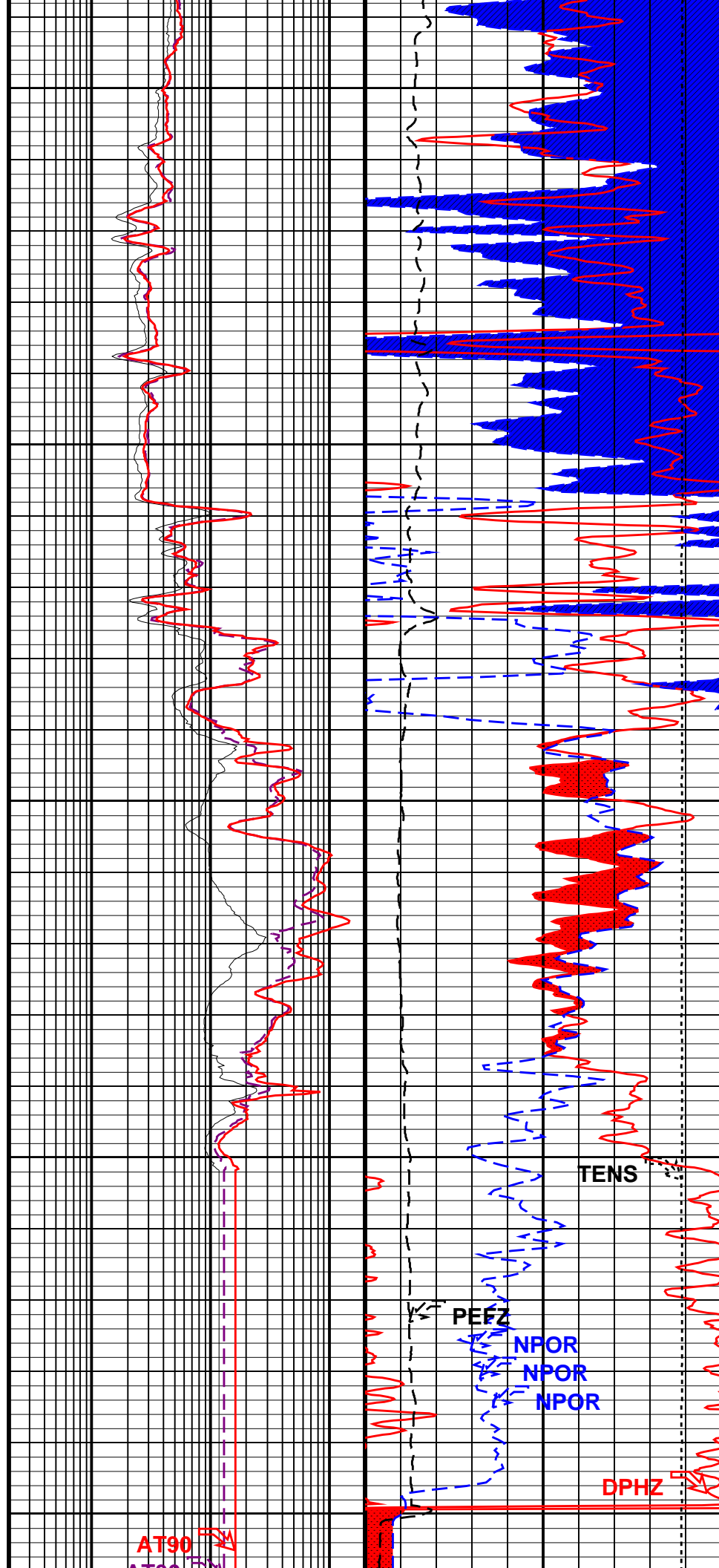




7800

7900

8000



AT90

TENS

PEFZ

NPOR

NPOR

NPOR

DPHZ

| | | | | | | | | | |
|---------------------|--------|-----|----------------------------------|--------|-----|-----------------------------------|-----------|----|--|
| | | | 8013.0 FT | AIT10 | | | | | |
| | | | -TD- | | | | | | |
| Gamma Ray (GR) | | | AIT 10 Inch Investigation (AT10) | | | Std. Res. Density Porosity (DPHZ) | | | |
| 0 | (GAPI) | 200 | 0.2 | (OHMM) | 200 | 0.2 | (V/V) | 0 | |
| HILT Caliper (HCAL) | | | AIT 30 Inch Investigation (AT30) | | | NPOR BACKUP | | | |
| 6 | (IN) | 16 | 0.2 | (OHMM) | 200 | From NPOR_2 to T3 | | | |
| SP (SP) | | | AIT 90 Inch Investigation (AT90) | | | GAS EFFECT | | | |
| -160 | (MV) | 40 | 0.2 | (OHMM) | 200 | From DPHZ to NPOR_1 | | | |
| | | | | | | Tension (TENS) | | | |
| | | | | | | 10000 | (LBF) | 0 | |
| | | | | | | Alpha Processed Neutron Porosity | | | |
| | | | | | | 0.2 | (NPOR) | 0 | |
| | | | | | | (V/V) | | | |
| | | | | | | Std. Res. Formation | | | |
| | | | | | | 0 | Pe (PEFZ) | 10 | |
| | | | | | | (-----) | | | |

PIP SUMMARY

Time Mark Every 60 S

Parameters

| DLIS Name | Description | Value | |
|--|---|--------------------|------|
| AIT-M: Array Induction Tool - M | | | |
| ABHM | Array Induction Borehole Correction Mode | 2_ComputeStandoff | |
| ABHV | Array Induction Borehole Correction Code Version Number | 900 | |
| ABLM | Array Induction Basic Logs Mode | 6_One_Two_and_Four | |
| ABLV | Array Induction Basic Logs Code Version Number | 223 | |
| ACDE | Array Induction Casing Detection Enable | Yes | |
| ACEN | Array Induction Tool Centering Flag (in Borehole) | Eccentered | |
| ACSED | Array Induction Casing Shoe Estimated Depth | -50000 | FT |
| AETP | Array Induction Enable Sonde Error Temp&Pres Corr | Yes | |
| AFRSV | Array Induction Response Set Version for Four ft Resolution | 41.70.24.20 | |
| AIGS | Array Induction Select Akima Interpolation Gating | On | |
| AMRF | Array Induction Mud Resistivity Factor | 1 | |
| AORSV | Array Induction Response Set Version for One ft Resolution | 41.70.24.20 | |
| ARFV | Array Induction Radial Profiling Code Version Number | 701 | |
| ARPV | Array Induction Radial Parametrization Code Version Number | 232 | |
| ASTA | Array Induction Tool Standoff | 0.25 | IN |
| ATRSV | Array Induction Response Set Version for Two ft Resolution | 41.70.24.20 | |
| ATSE | Array Induction Temperature Selection(Sonde Error Correction) | Internal | |
| AULV | Array Induction User Level Control | Normal | |
| AZRSV | Array Induction Response Set Version for Z Resolution | 00.10.25.00 | |
| BHS | Borehole Status | OPEN | |
| BHT | Bottom Hole Temperature (used in calculations) | 217 | DEGF |
| FEXP | Form Factor Exponent | 2 | |
| FNUM | Form Factor Numerator | 1 | |
| GCSE | Generalized Caliper Selection | HCAL | |
| GDEV | Average Angular Deviation of Borehole from Normal | 0 | DEG |
| GGRD | Geothermal Gradient | 0.01 | DF/F |
| GRSE | Generalized Mud Resistivity Selection | AITM_RESIST | |
| GTSE | Generalized Temperature Selection | LINEAR_ESTIMATE | |
| MATR | Rock Matrix for Neutron Porosity Corrections | SANDSTONE | |
| SHT | Surface Hole Temperature | 68 | DEGF |
| SPNV | SP Next Value | 0 | MV |
| HILTB-FTB: High resolution Integrated Logging Tool-DTS | | | |
| BHFL | Borehole Fluid Type | WATER | |
| BHFL_TLD | HILT Nuclear Mud Base | WATER | |
| BHS | Borehole Status | OPEN | |
| BHT | Bottom Hole Temperature (used in calculations) | 217 | DEGF |
| BSCO | Borehole Salinity Correction Option | NO | |
| CCCO | Casing & Cement Thickness Correction Option | NO | |
| DHC | Density Hole Correction | BS | |
| FD | Fluid Density | 1 | G/C3 |
| FEXP | Form Factor Exponent | 2 | |
| FNUM | Form Factor Numerator | 1 | |
| FSAL | Formation Salinity | -50000 | PPM |

| | | | |
|--|---|-----------------|------|
| FSCO | Formation Salinity Correction Option | NO | |
| GCLF | Germany Coal-like Formation Option | NO | |
| GCSE | Generalized Caliper Selection | HCAL | |
| GDEV | Average Angular Deviation of Borehole from Normal | 0 | DEG |
| GGRD | Geothermal Gradient | 0.01 | DF/F |
| GRSE | Generalized Mud Resistivity Selection | AITM_RESIST | |
| GTSE | Generalized Temperature Selection | LINEAR_ESTIMATE | |
| HSCO | Hole Size Correction Option | YES | |
| MATR | Rock Matrix for Neutron Porosity Corrections | SANDSTONE | |
| MCCO | Mud Cake Correction Option | NO | |
| MCOR | Mud Correction | NATU | |
| MDEN | Matrix Density | 2.68 | G/C3 |
| MWCO | Mud Weight Correction Option | NO | |
| NAAC | HRDD APS Activation Correction | OFF | |
| NMT | HILT Nuclear Mud Type | NOBARITE | |
| NPRM | HRDD Processing Mode | StdRes | |
| NSAR | HRDD Depth Sampling Rate | 1 | IN |
| PTCO | Pressure/Temperature Correction Option | NO | |
| SDAT | Standoff Data Source | SOCN | |
| SHT | Surface Hole Temperature | 68 | DEGF |
| SOCN | Standoff Distance | 0.125 | IN |
| SOCO | Standoff Correction Option | YES | |
| FEQL: Formation Evaluation Quick Look | | | |
| FEXP | Form Factor Exponent | 2 | |
| FNUM | Form Factor Numerator | 1 | |
| HOLEV: Integrated Hole/Cement Volume | | | |
| BHS | Borehole Status | OPEN | |
| BHT | Bottom Hole Temperature (used in calculations) | 217 | DEGF |
| GCSE | Generalized Caliper Selection | HCAL | |
| GDEV | Average Angular Deviation of Borehole from Normal | 0 | DEG |
| GGRD | Geothermal Gradient | 0.01 | DF/F |
| GRSE | Generalized Mud Resistivity Selection | AITM_RESIST | |
| GTSE | Generalized Temperature Selection | LINEAR_ESTIMATE | |
| MATR | Rock Matrix for Neutron Porosity Corrections | SANDSTONE | |
| SHT | Surface Hole Temperature | 68 | DEGF |
| PERT: Preliminary Evaluation – Real Time | | | |
| BHS | Borehole Status | OPEN | |
| BHT | Bottom Hole Temperature (used in calculations) | 217 | DEGF |
| FEXP | Form Factor Exponent | 2 | |
| FNUM | Form Factor Numerator | 1 | |
| GCSE | Generalized Caliper Selection | HCAL | |
| GDEV | Average Angular Deviation of Borehole from Normal | 0 | DEG |
| GGRD | Geothermal Gradient | 0.01 | DF/F |
| GRSE | Generalized Mud Resistivity Selection | AITM_RESIST | |
| GTSE | Generalized Temperature Selection | LINEAR_ESTIMATE | |
| MATR | Rock Matrix for Neutron Porosity Corrections | SANDSTONE | |
| SHT | Surface Hole Temperature | 68 | DEGF |
| STI: Stuck Tool Indicator | | | |
| TDL | Total Depth – Logger | 8013.00 | FT |
| System and Miscellaneous | | | |
| BS | Bit Size | 7.875 | IN |
| BSAL | Borehole Salinity | -50000.00 | PPM |
| CSIZ | Current Casing Size | 8.625 | IN |
| CWEI | Casing Weight | 24.00 | LB/F |
| DFD | Drilling Fluid Density | 8.40 | LB/G |
| DO | Depth Offset for Playback | 0.0 | FT |
| FLEV | Fluid Level | -50000.00 | FT |
| MST | Mud Sample Temperature | 81.40 | DEGF |
| PP | Playback Processing | NORMAL | |
| RMFS | Resistivity of Mud Filtrate Sample | 0.5775 | OHMM |
| TD | Total Depth | 8013 | FT |

Format: COMBO Vertical Scale: 5" per 100' Graphics File Created: 16-Jan-2010 16:01

OP System Version: 17C0-154

| | | | |
|-------|----------|-----------|----------|
| AIT-M | 17C0-154 | HILTB-FTB | 17C0-154 |
| DTC-H | 17C0-154 | | |

Input DLIS Files

| | | | | | | |
|---------|---------------|------|----------|-------------------|-----------|----------|
| DEFAULT | MERGE_AIT_027 | FN:1 | PRODUCER | 16-Jan-2010 15:57 | 8026.5 FT | 615.0 FT |
|---------|---------------|------|----------|-------------------|-----------|----------|

Output DLIS Files

| | | | | |
|---------|-------------------------|-------|----------|-------------------|
| DEFAULT | AIT_TLD_MCFL_CNL_028PUP | FN:22 | PRODUCER | 16-Jan-2010 16:01 |
|---------|-------------------------|-------|----------|-------------------|

Well: **P Ville Federal 5-7**
Field: **Wattenberg**
County: **Weld**
State: **Colorado**

Platform Express
Triple Combo