

**Company:** Lamont Doherty Earth Observatory

**Well:** 1305 C

**Field:**

**Rig:** Joides Resolution Expedition: 303

## Hostile Litho-Density Accelerator Porosity Gamma Ray

|  |  |                        |                  |
|--|--|------------------------|------------------|
| <b>Rig:</b> Joides Resolution                    |  |                        |                  |
| <b>Field:</b>                                    |  | N 57 28.5068           |                  |
| <b>Location:</b>                                 |  | 1305 C                 |                  |
| <b>Well:</b> 1305 C                              |  |                        |                  |
| <b>Company:</b> Lamont Doherty Earth Observatory |  |                        |                  |
| <b>LOCATION</b>                                  |  |                        |                  |
| N 57 28.5068                                     |  | Elev.: K.B. 11 m       |                  |
| W 48 31.783                                      |  | G.L. -3469.7 m         |                  |
|  |  | D.F. 10 m              |                  |
| <b>Permanent Datum:</b>                          |  | Measn Sea Level _____  |                  |
| <b>Log Measured From:</b>                        |  | Drill Floor _____      |                  |
| <b>Drilling Measured From:</b>                   |  | Drill Floor _____      |                  |
| <b>API Serial No.</b>                            |  | <b>Max. Hole Devi.</b> | <b>Longitude</b> |
| 21-Oct-2004                                      |  |                        | <b>Latitude</b>  |

|                                      |                      |                   |       |
|--------------------------------------|----------------------|-------------------|-------|
| <b>Logging Date</b>                  | 21-Oct-2004          |                   |       |
| <b>Run Number</b>                    | One                  |                   |       |
| <b>Depth Driller</b>                 | 3756.8 m             |                   |       |
| <b>Schlumberger Depth</b>            | 3729 m               |                   |       |
| <b>Bottom Log Interval</b>           | 3723 m               |                   |       |
| <b>Top Log Interval</b>              | 3471 m               |                   |       |
| <b>Casing Driller Size @ Depth</b>   | 0.000 in @ 3565.5 m  |                   |       |
| <b>Casing Schlumberger</b>           | 3565.5 m             |                   |       |
| <b>Bit Size</b>                      | 11.438 in            |                   |       |
| <b>Type Fluid In Hole</b>            |                      |                   |       |
| <b>Density</b>                       | Viscosity            |                   |       |
| <b>Fluid Loss</b>                    | PH                   |                   |       |
| <b>Source Of Sample</b>              | 0.322 ohm.m @ 5 degC |                   |       |
| <b>RM @ Measured Temperature</b>     | @ @                  |                   |       |
| <b>RMF @ Measured Temperature</b>    | @ @                  |                   |       |
| <b>RMC @ Measured Temperature</b>    | @ @                  |                   |       |
| <b>Source RMF</b>                    | RMC                  |                   |       |
| <b>RM @ MRT</b>                      | RMF @ MRT            | @ @               | @ @   |
| <b>Maximum Recorded Temperatures</b> |                      |                   |       |
| <b>Circulation Stopped</b>           | Time                 |                   |       |
| <b>Logger On Bottom</b>              | Time                 |                   |       |
| <b>Unit Number</b>                   | Location             |                   |       |
| <b>Recorded By</b>                   | 2022                 | Joides Resolution | 19:55 |
| <b>Witnessed By</b>                  | Javier Espinosa      |                   |       |
|                                      | Stuart Robinson      |                   |       |

|                                      | Run 1     | Run 2 | Run |
|--------------------------------------|-----------|-------|-----|
| <b>Logging Date</b>                  |           |       |     |
| <b>Run Number</b>                    |           |       |     |
| <b>Depth Driller</b>                 |           |       |     |
| <b>Schlumberger Depth</b>            |           |       |     |
| <b>Bottom Log Interval</b>           |           |       |     |
| <b>Top Log Interval</b>              |           |       |     |
| <b>Casing Driller Size @ Depth</b>   | @         |       |     |
| <b>Casing Schlumberger</b>           |           |       |     |
| <b>Bit Size</b>                      |           |       |     |
| <b>Type Fluid In Hole</b>            |           |       |     |
| <b>Density</b>                       | Viscosity |       |     |
| <b>Fluid Loss</b>                    | PH        |       |     |
| <b>Source Of Sample</b>              |           |       |     |
| <b>RM @ Measured Temperature</b>     | @         |       |     |
| <b>RMF @ Measured Temperature</b>    | @         |       |     |
| <b>RMC @ Measured Temperature</b>    | @         |       |     |
| <b>Source RMF</b>                    | RMC       |       |     |
| <b>RM @ MRT</b>                      | RMF @ MRT | @     | @   |
| <b>Maximum Recorded Temperatures</b> |           |       |     |
| <b>Circulation Stopped</b>           | Time      |       |     |
| <b>Logger On Bottom</b>              | Time      |       |     |
| <b>Unit Number</b>                   | Location  |       |     |
| <b>Recorded By</b>                   |           |       |     |
| <b>Witnessed By</b>                  |           |       |     |

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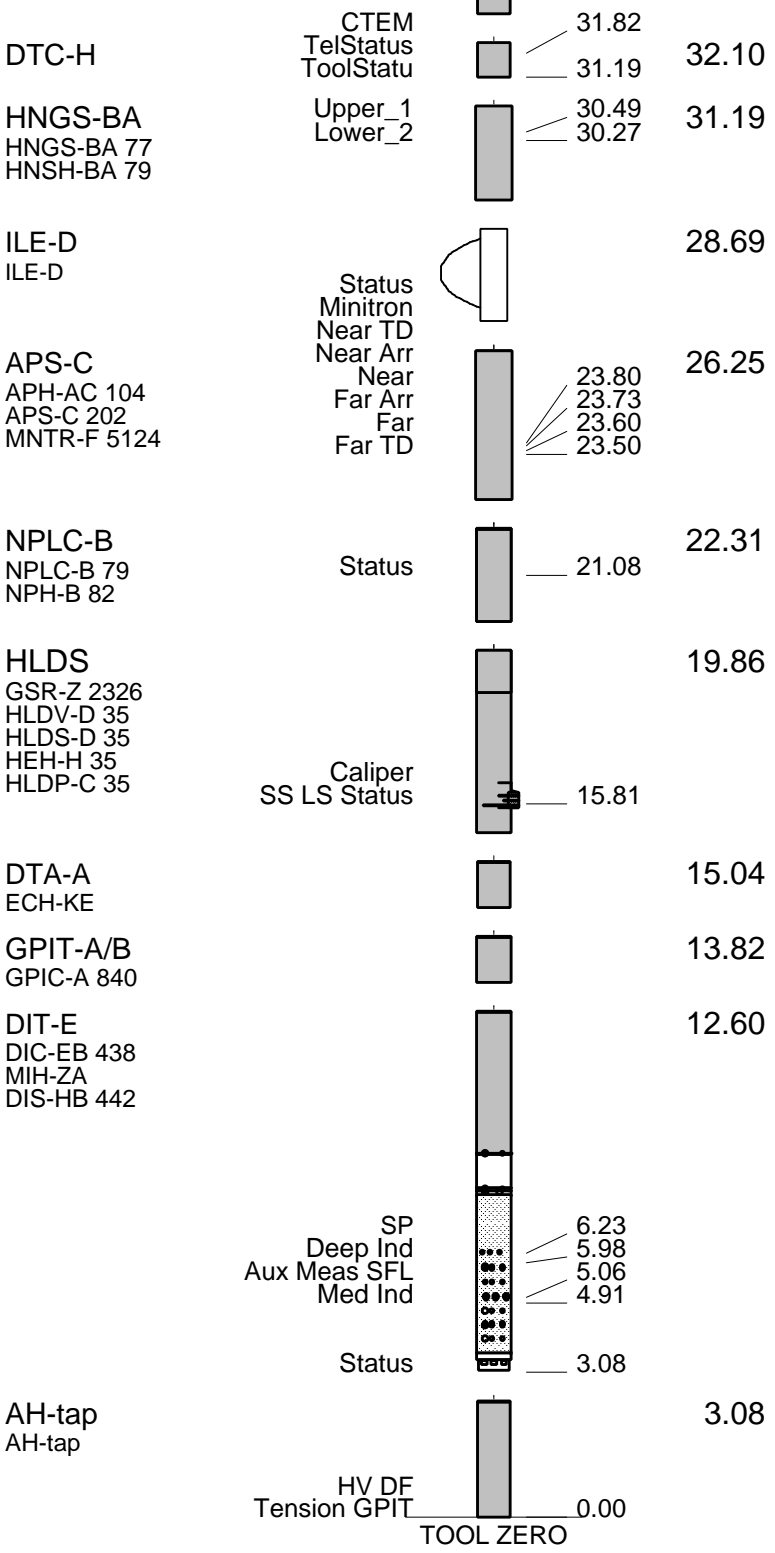
|  |  |
|--|--|
| <b>OTHER SERVICES1</b><br>OS1: DITE<br>OS2: HNGS<br>OS3:<br>OS4:<br>OS5: | <b>OTHER SERVICES2</b><br>OS1:<br>OS2:<br>OS3:<br>OS4:<br>OS5: |
|--|--|

|  |                       |
|--|-----------------------|
| REMARKS: RUN NUMBER 1                                    | REMARKS: RUN NUMBER 2 |
| Parameters and presentations as per IODP standards       |                       |
| Tool ran as per tool scketch below.                      |                       |
| TD not reached due to hole conditions.                   |                       |
| Repeat pass incomplete due to cable stuck in drill pipe. |                       |
|  |                       |
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|                           |       |      |                  |       |      |
|---------------------------|-------|------|------------------|-------|------|
| RUN 1                     |       |      | RUN 2            |       |      |
| SERVICE ORDER #:          |       |      | SERVICE ORDER #: |       |      |
| PROGRAM VERSION: 12C0-301 |       |      | PROGRAM VERSION: |       |      |
| FLUID LEVEL:              |       |      | FLUID LEVEL:     |       |      |
| LOGGED INTERVAL           | START | STOP | LOGGED INTERVAL  | START | STOP |
|                           |       |      |                  |       |      |
|                           |       |      |                  |       |      |
|                           |       |      |                  |       |      |
|                           |       |      |                  |       |      |

**EQUIPMENT DESCRIPTION**

|   |       |
|---|-------|
| RUN 1   | RUN 2 |
| <b>SURFACE EQUIPMENT</b>                                  |       |
| SFT-281 6250<br>SFT-178 6250<br>GSR-U 135<br>WITM (DTS)-A |       |
| <b>DOWNHOLE EQUIPMENT</b>                                 |       |
| LEH-QT  | 38.60 |
| AH-mgt<br>AH-mgt  | 37.72 |



TOOL ZERO  
 MAXIMUM STRING DIAMETER 3.88 IN  
 MEASUREMENTS RELATIVE TO TOOL ZERO  
 ALL LENGTHS IN METERS

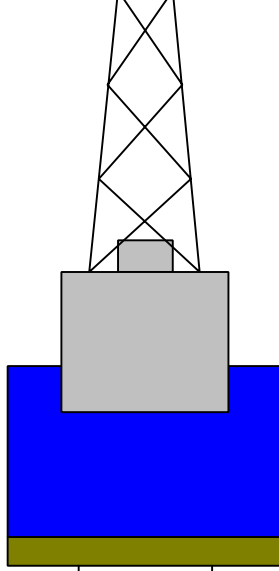
| Production String | (in) | (m) | Well Schematic | (m) | (in) | Casing String |
|-------------------|------|-----|----------------|-----|------|---------------|
|                   | OD   | ID  |                | MD  | OD   |               |
|                   |      |     |                |     |      |               |

Kelly Bushing Elevation  
Derrick Floor Elevation

11.0  
11.0

Mean Sea Level

0.0



0.0 5.500

Casing String



3565.5 5.500  
3565.5 11.438

Casing Shoe  
Borehole Segment

**Schlumberger**

MAIN PASS

MAXIS Field Log

Input DLIS Files

|         |                       |       |          |                   |          |          |
|---------|-----------------------|-------|----------|-------------------|----------|----------|
| DEFAULT | PI_LDL_APS_NGS_039PUP | FN:60 | PRODUCER | 23-Oct-2004 12:26 | 3735.6 M | 3424.6 M |
|---------|-----------------------|-------|----------|-------------------|----------|----------|

Output DLIS Files

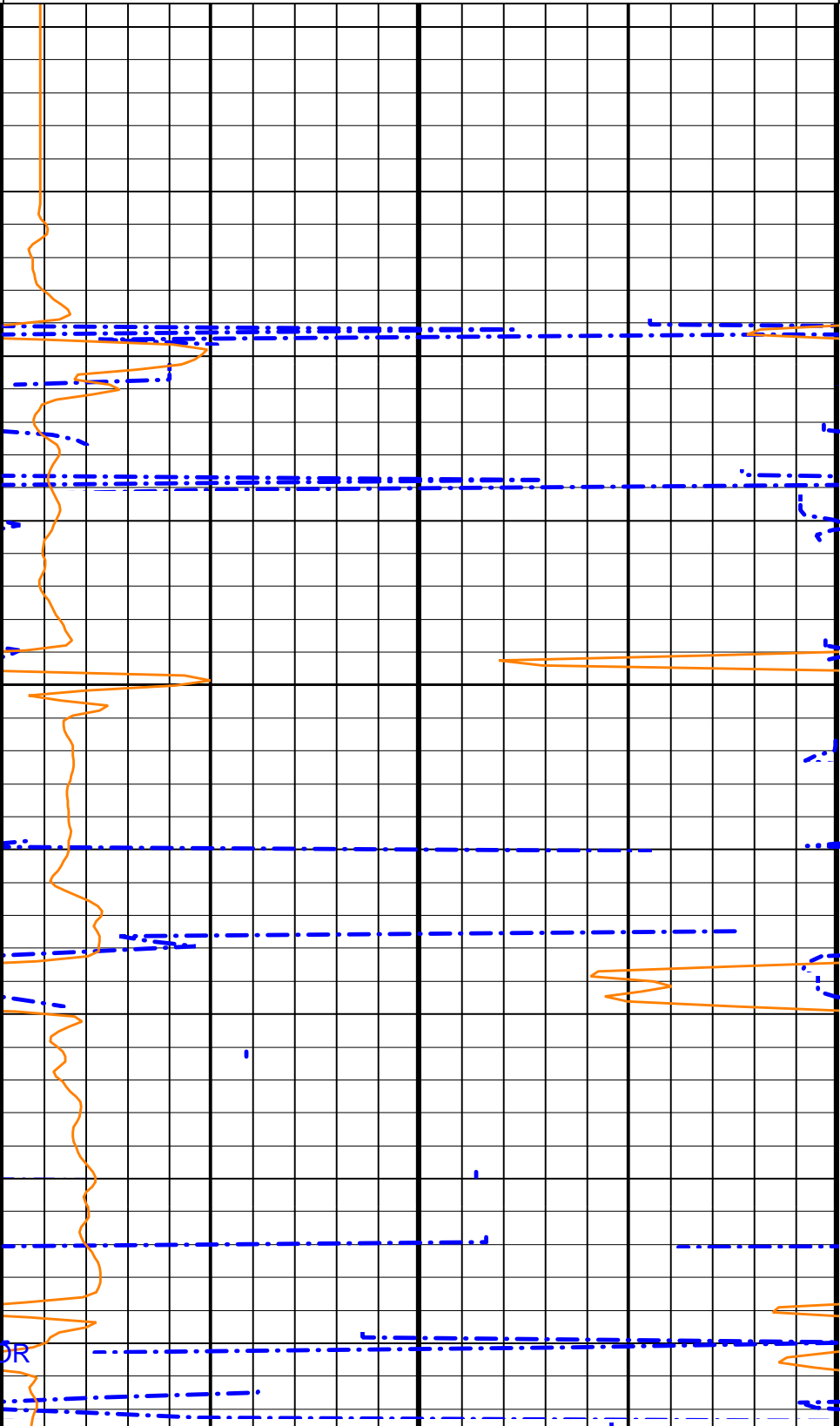
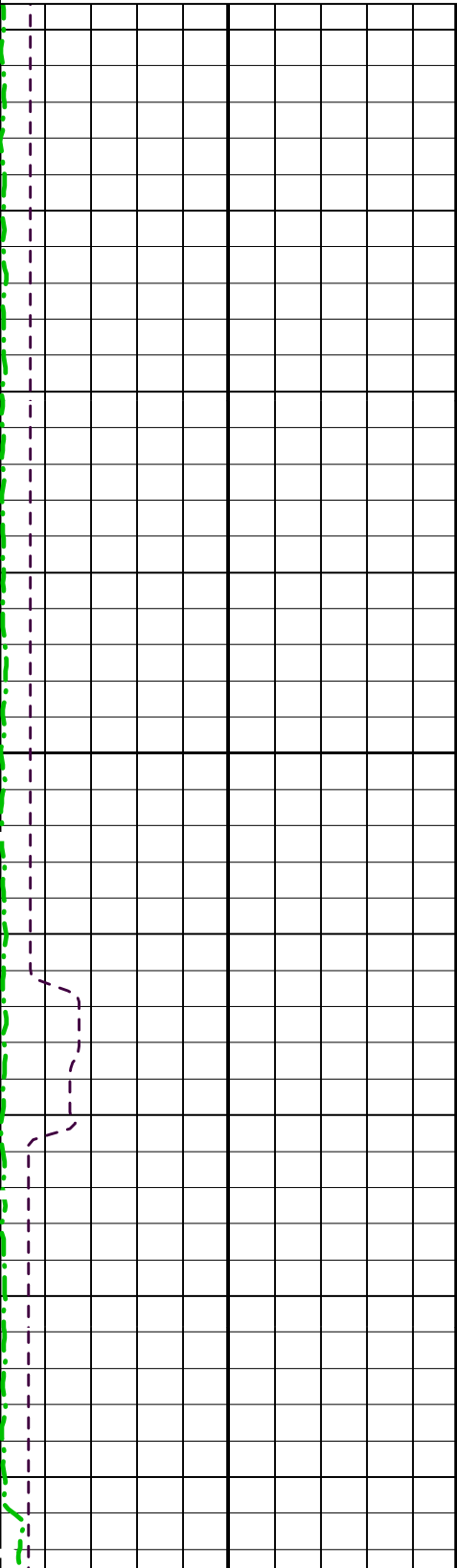
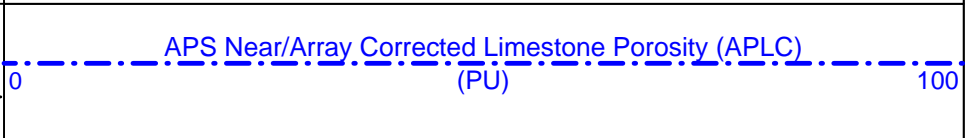
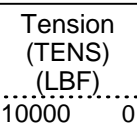
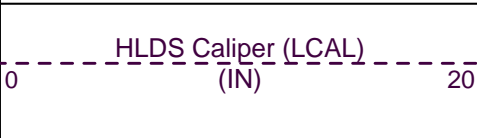
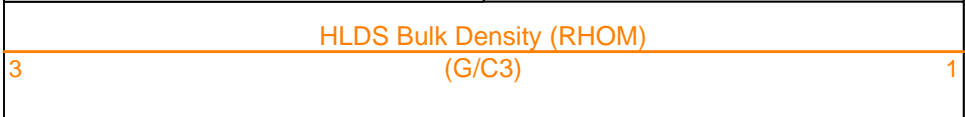
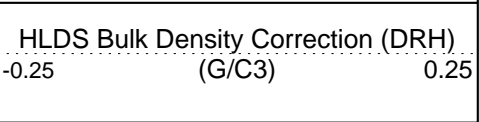
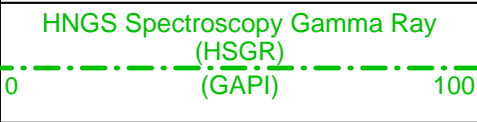
|              |                       |       |          |                   |          |          |
|--------------|-----------------------|-------|----------|-------------------|----------|----------|
| DEFAULT      | PI_LDL_APS_NGS_042PUP | FN:67 | PRODUCER | 23-Oct-2004 12:30 | 3735.6 M | 3429.3 M |
| ACCELERATION | PI_LDL_APS_NGS_042PUP | FN:68 | PRODUCER | 23-Oct-2004 12:30 | 3735.6 M | 3429.3 M |
| REDUCED      | PI_LDL_APS_NGS_042PUP | FN:69 | PRODUCER | 23-Oct-2004 12:30 | 3735.6 M | 3429.3 M |

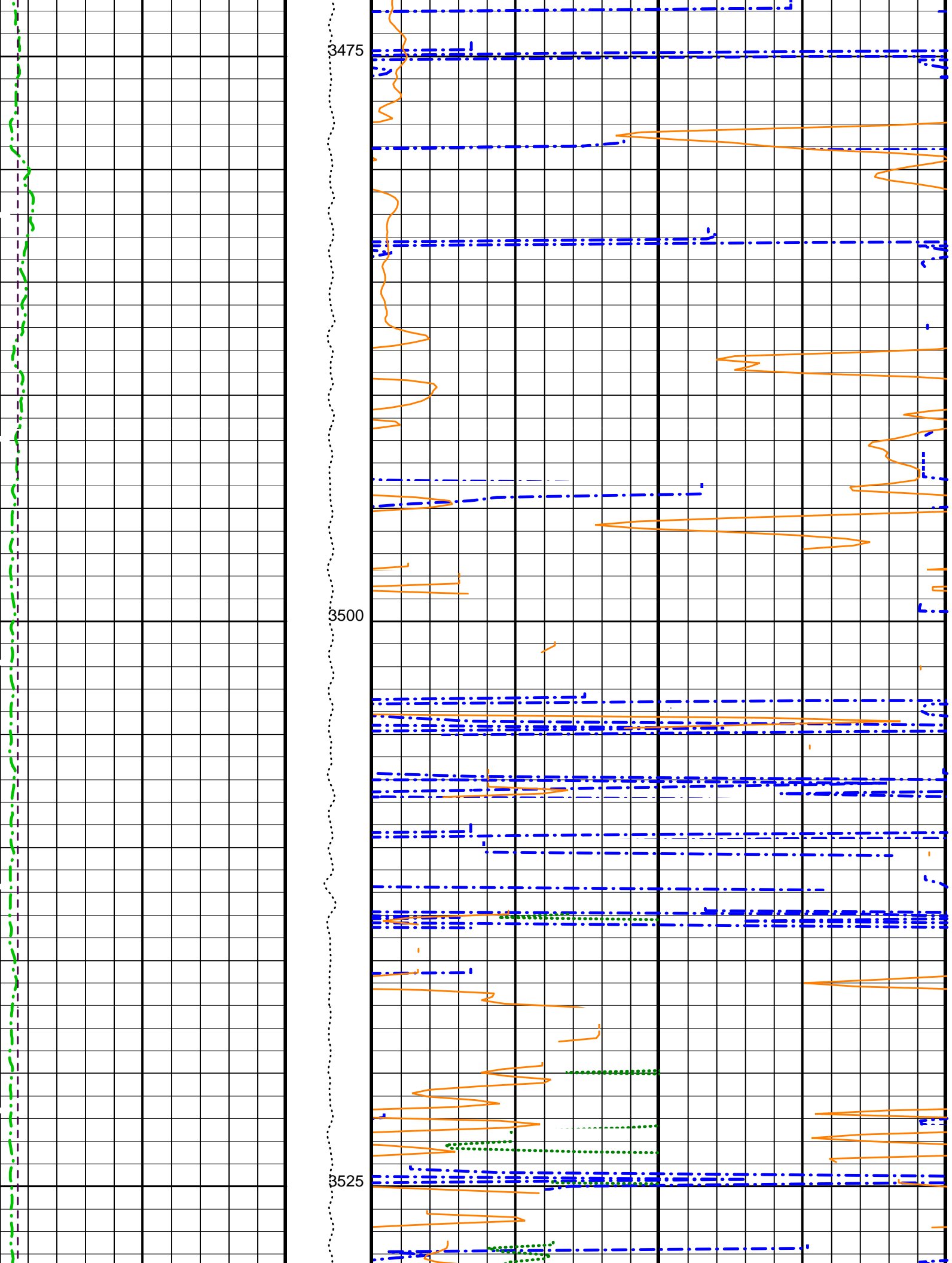
OP System Version: 12C0-301  
MCM

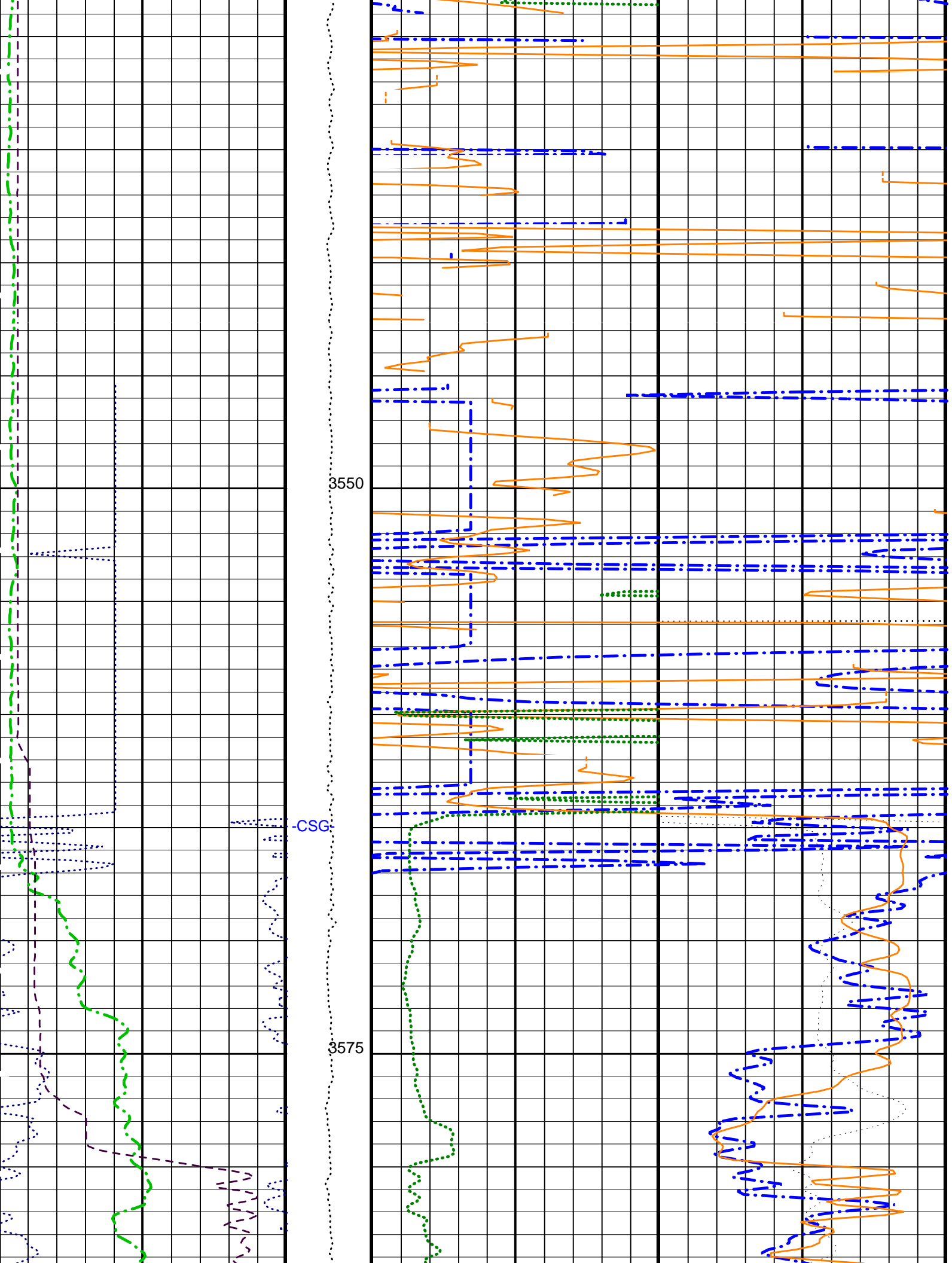
|         |          |          |          |
|---------|----------|----------|----------|
| DIT-E   | 12C0-301 | GPIT-A/B | 12C0-301 |
| DTA-A   | 12C0-301 | HLDS     | 12C0-301 |
| NPLC-B  | 12C0-301 | APS-C    | 12C0-301 |
| HNGS-BA | 12C0-301 | DTC-H    | 12C0-301 |

PIP SUMMARY

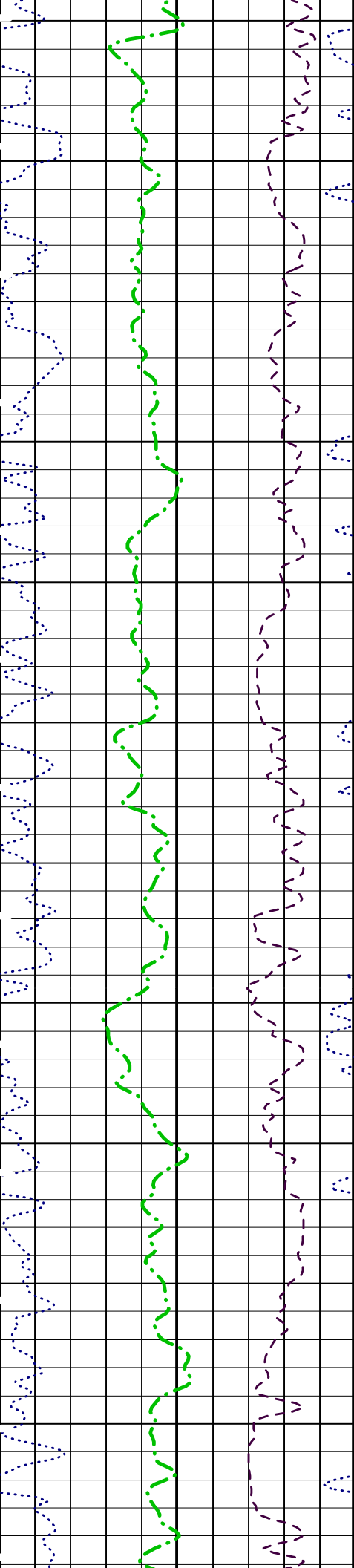
Time Mark Every 60 S





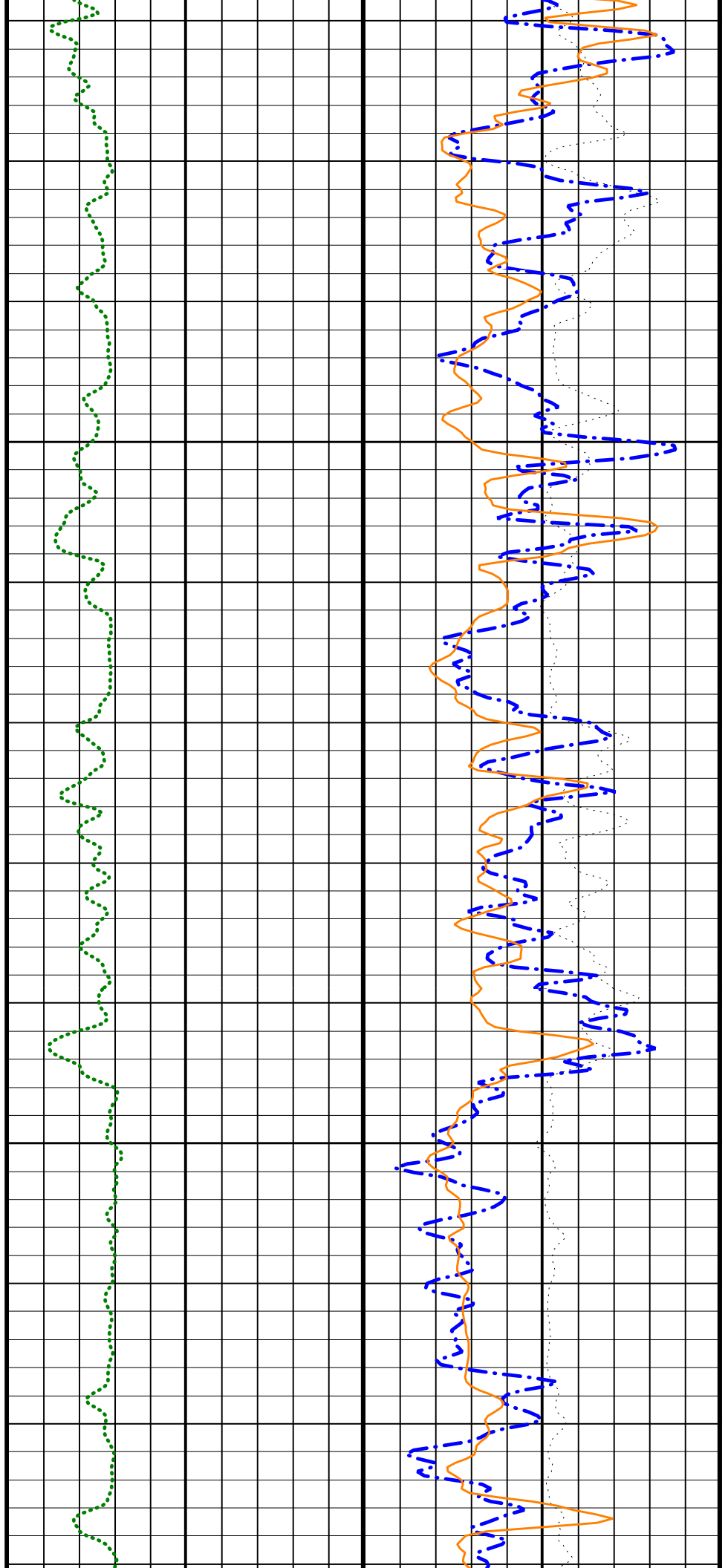


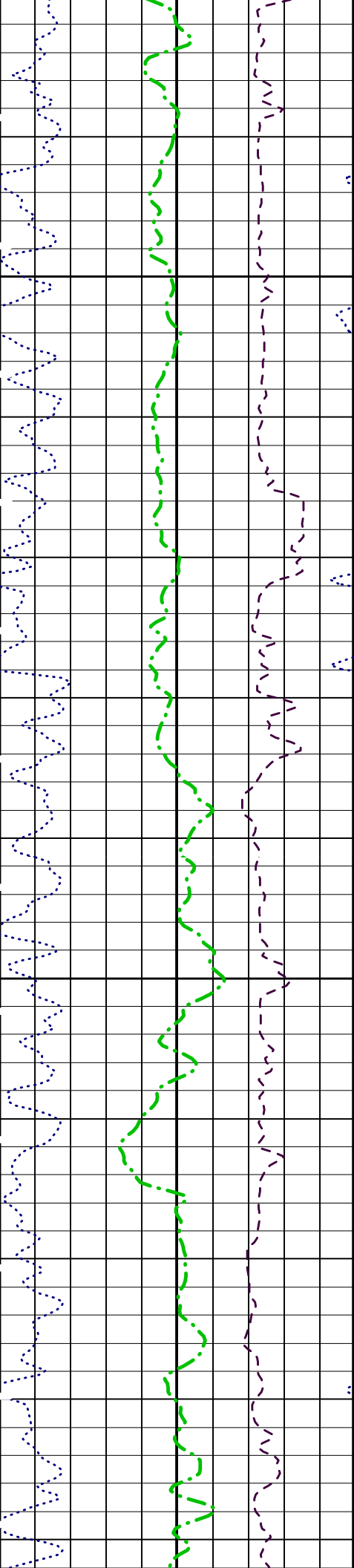




3600

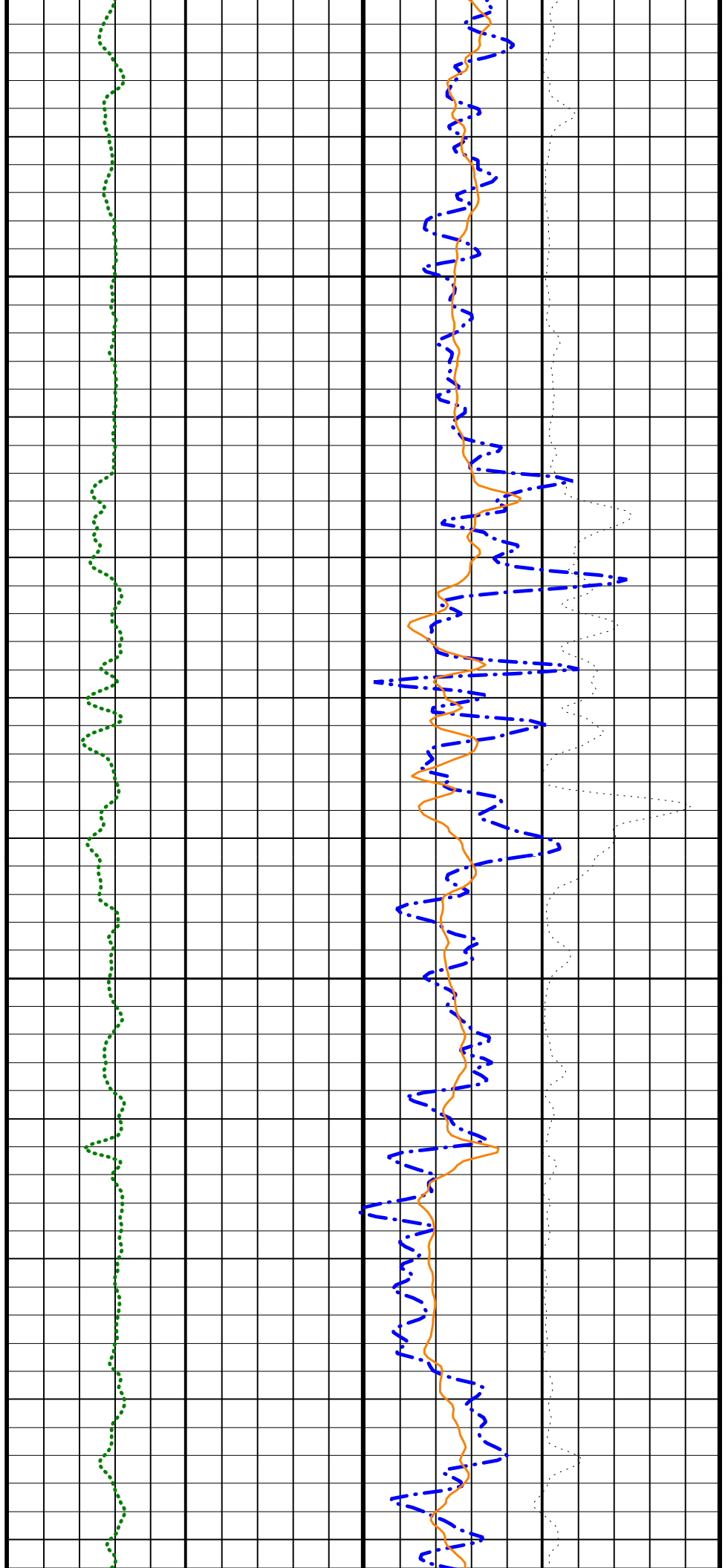
3625

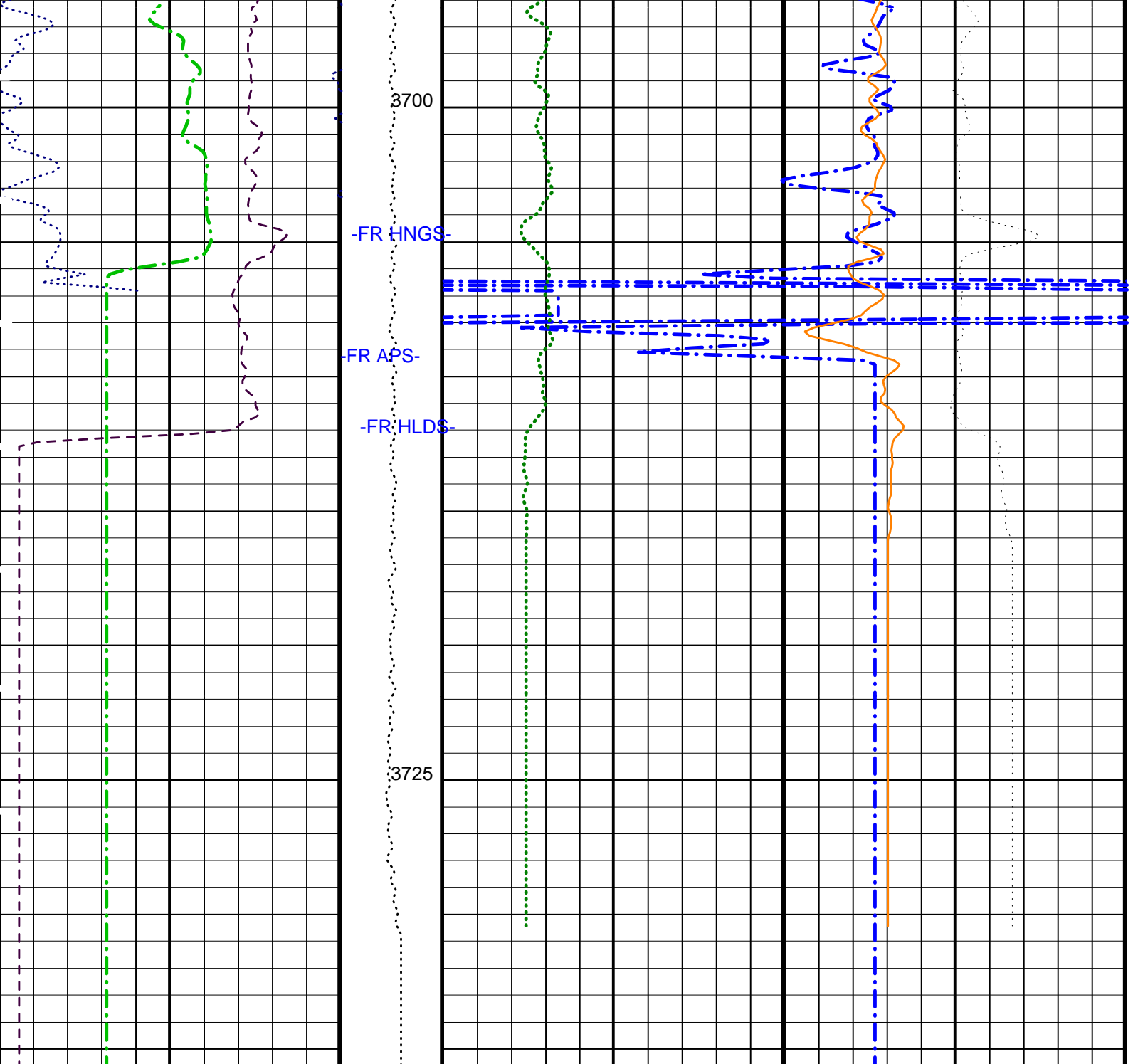




3650

3675





|  |   |  |
|--|---|--|
| HLDS Caliper (LCAL)<br>(IN)                        | Tension (TENS)<br>(LBF)                               | APS Near/Array Corrected Limestone Porosity (APLC)<br>(PU) |
| 0 20   | 10000 0   | 0 100  |
| APS Effective Standoff in Limestone (STOF)<br>(IN) | HLDS Bulk Density (RHOM)<br>(G/C3)                    | HLDS Bulk Density Correction (DRH)<br>(G/C3)               |
| 0 5  | 3 1   | -0.25 0.25   |
| HNGS Spectroscopy Gamma Ray (HSGR)<br>(GAPI)       | HLDS Long Spaced Photoelectric Effect (PEFL)<br>(---) |  |
| 0 100  | 0 10  |  |

PIP SUMMARY

Time Mark Every 60 S

### Parameters

| DLIS Name | Description | Value |
|-----------|-------------|-------|
|-----------|-------------|-------|

DIT-E: Dual Induction - E

|  |  |                     |      |
|--|--|---------------------|------|
| BHS  | Borehole Status                                      | OPEN                |      |
| BHT  | Bottom Hole Temperature (used in calculations)       | 3                   | DEGC |
| DGF2   | Deep 20 kHz Gain Factor                              | 1.02064             |      |
| DPH2   | Deep 20 kHz Phase Shift                              | -0.243728           | DEG  |
| DRE2   | Deep Real 20 kHz Sonde Error Correction              | 16.6208             | MM/M |
| DSR2   | Deep Sigma Reference (20 kHz)                        | 1843                | MM/M |
| DXE2   | Deep Quad 20 kHz Sonde Error Correction              | 64.8082             | MM/M |
| GCSE   | Generalized Caliper Selection                        | LCAL                |      |
| GDEV   | Average Angular Deviation of Borehole from Normal    | 0                   | DEG  |
| GGRD   | Geothermal Gradient                                  | 0.018227            | DC/M |
| GRSE   | Generalized Mud Resistivity Selection                | CHART_GEN_9         |      |
| GTSE   | Generalized Temperature Selection                    | LINEAR_ESTIMATE     |      |
| IFRS   | DIT-E Induction Frequency Selector                   | 20                  |      |
| IPHA   | DIT-E Phasor Processing Mode                         | ALL                 |      |
| IPRO   | DIT-E Induction Processing Selector                  | PHASOR              |      |
| ITEN   | DIT-E Temperature Enable                             | ENABLE              |      |
| MATR   | Rock Matrix for Neutron Porosity Corrections         | LIMESTONE           |      |
| MGF2   | Medium 20 kHz Gain Factor                            | 1                   |      |
| MPH2   | Medium 20 kHz Phase Shift                            | 0                   | DEG  |
| MRE2   | Medium Real 20 kHz Sonde Error Correction            | -2.31932            | MM/M |
| MSR2   | Medium Sigma Reference (20 kHz)                      | 3250                | MM/M |
| MXE2   | Medium Quad 20 kHz Sonde Error Correction            | -31.8992            | MM/M |
| SBR  | Shoulder Bed Resistivity Factor                      | 1                   | OHMM |
| SFCR   | SFL Channel Ratio                                    | 1000                |      |
| SFLE   | SFL Enable   | ENABLE              |      |
| SHT  | Surface Hole Temperature                             | 20                  | DEGC |
| SPAE   | DIT-E SPARC Processing Enable                        | ENABLE              |      |
| SPNV   | SP Next Value  | 0                   | MV   |
| GPIT-A/B: General Purpose Inclinometer           |  |                     |      |
| ACPP   | Accelerometer PROM Presence                          | PRESENT             |      |
| AFMO   | Accelerometer Filtering Mode                         | MOVING_AVERAGE      |      |
| ART  | Accelerometer Reference Temperature                  | 20                  | DEGC |
| GLM  | GPIT Logging Mode                                    | DIPM                |      |
| ICMO   | Inclinometry Computation Mode                        | AUTOMATIC_SELECTION |      |
| MAPP   | Magnetometer PROM Presence                           | PRESENT             |      |
| MDEC   | Magnetic Field Declination                           | -25.7269            | DEG  |
| MRTE   | Magneto Reference Temperature                        | 25                  | DEGC |
| TEMS   | GPIT Temperature Sensor Used                         | BOTH                |      |
| HLDS: Hostile Litho-Density Sonde                |  |                     |      |
| CLCL   | HLDS LS Control Loop Controller Mode                 | AUTO_DEFAULT        |      |
| CLCS   | HLDS SS Control Loop Controller Mode                 | AUTO_DEFAULT        |      |
| CLLS   | HLDS Mode Loop Long Spacing                          | AUTO                |      |
| CLSS   | HLDS Mode Loop Short Spacing                         | AUTO                |      |
| DHC  | Density Hole Correction                              | BS                  |      |
| DPPM   | Density Porosity Processing Mode                     | HIRS                |      |
| FD   | Fluid Density  | 1                   | G/C3 |
| LATC   | HLDS Activation Correction                           | ON                  |      |
| LLDL   | HLDS LS Low Level Discriminator DAC                  | 14000               |      |
| LLDS   | HLDS SS Low Level Discriminator DAC                  | 14000               |      |
| LLML   | HLDS LS Low Level Discriminator Mode                 | AUTO                |      |
| LLMS   | HLDS SS Low Level Discriminator Mode                 | AUTO                |      |
| MDEN   | Matrix Density                                       | 2.71                | G/C3 |
| PHVL   | HLDS Long Spacing High Voltage Setting               | 1000                | V    |
| PHVS   | HLDS Short Spacing High Voltage Setting              | 1000                | V    |
| PSDL   | HLDS LS Pulse Shape Compensation DAC                 | 16000               |      |
| PSDS   | HLDS SS Pulse Shape Compensation DAC                 | 16000               |      |
| PSML   | HLDS LS Pulse Shape Compensation Mode                | AUTO                |      |
| PSMS   | HLDS SS Pulse Shape Compensation Mode                | AUTO                |      |
| NPLC-B: Nuclear Porosity Lithology Cartridge - B |  |                     |      |
| NOTS   | NPLC Old Temperature Sensor                          | NO                  |      |
| APS-C: Accelerator-Porosity Tool                 |  |                     |      |
| AASD   | APS Software Version                                 | 5                   |      |
| ADSO   | APS Thermal and Array Detectors High Voltage Setting | 1971.68             | V    |
| AFSD   | APS Array Detectors Data Source Switch               | Both                |      |
| AHCS   | APS Far Detector High Voltage Setting                | 2078.39             | V    |
| AHCS   | APS Holesize Correction Source                       | BS                  |      |
| AHSS   | APS Holesize Correction Switch                       | ON                  |      |
| AMTY   | APS Environmental Corrections Mud Type               | WaterBaseBarite     |      |
| ANSD   | APS Near Detector High Voltage Setting               | 1740.46             | V    |
| ASOS   | APS Standoff Correction Switch                       | ON                  |      |
| ATSS   | APS Temperature-Pressure-Salinity Correction Switch  | ON                  |      |
| BHS  | Borehole Status                                      | OPEN                |      |
| BHT  | Bottom Hole Temperature (used in calculations)       | 3                   | DEGC |
| DPPM   | Density Porosity Processing Mode                     | HIRS                |      |
| FSAL   | Formation Salinity                                   | -50000              | PPM  |
| GCSE   | Generalized Caliper Selection                        | LCAL                |      |
| GDEV   | Average Angular Deviation of Borehole from Normal    | 0                   | DEG  |
| GGRD   | Geothermal Gradient                                  | 0.018227            | DC/M |
| GRSE   | Generalized Mud Resistivity Selection                | CHART_GEN_9         |      |
| GTSE   | Generalized Temperature Selection                    | LINEAR_ESTIMATE     |      |
| MATR   | Rock Matrix for Neutron Porosity Corrections         | LIMESTONE           |      |
| NARC   | APS Near/Array Calibration Ratio                     | 0.991528            |      |
| NFRC   | APS Near/Far Calibration Ratio                       | 0.963658            |      |
| SHT  | Surface Hole Temperature                             | 20                  | DEGC |
| HNCS-PA: Hostile Natural Gamma Ray Sonde         |  |                     |      |

|      |  |                 |      |
|------|--|-----------------|------|
| BAR1 | HNGS Detector 1 Barite Constant                        | 1               |      |
| BAR2 | HNGS Detector 2 Barite Constant                        | 1               |      |
| BHK  | HNGS Borehole Potassium Correction Concentration       | 0               |      |
| BHS  | Borehole Status  | OPEN            |      |
| BHT  | Bottom Hole Temperature (used in calculations)         | 3               | DEGC |
| CSD1 | Inner Casing Outer Diameter                            | 0               | IN   |
| CSD2 | Outer Casing Outer Diameter                            | 0               | IN   |
| CSW1 | Inner Casing Weight                                    | 0               | LB/F |
| CSW2 | Outer Casing Weight                                    | 0               | LB/F |
| DBCC | HNGS Barite Constant Correction Flag                   | NONE            |      |
| GCSE | Generalized Caliper Selection                          | LCAL            |      |
| GDEV | Average Angular Deviation of Borehole from Normal      | 0               | DEG  |
| GGRD | Geothermal Gradient                                    | 0.018227        | DC/M |
| GRSE | Generalized Mud Resistivity Selection                  | CHART_GEN_9     |      |
| GTSE | Generalized Temperature Selection                      | LINEAR_ESTIMATE |      |
| H1P  | HNGS Detector 1 Allow/Disallow In Processing           | ALLOW           |      |
| H2P  | HNGS Detector 2 Allow/Disallow In Processing           | ALLOW           |      |
| HABK | HNGS Borehole Potassium Running Average                | -0.00206142     |      |
| HALF | HNGS Alpha Filter Length                               | 60              | IN   |
| HCRB | HNGS Apply Borehole Potassium Correction               | NONE            |      |
| HMWM | Mud Weighting Material                                 | NATU            |      |
| HNPE | HNGS Processing Enable                                 | YES             |      |
| MATR | Rock Matrix for Neutron Porosity Corrections           | LIMESTONE       |      |
| S1BI | HNGS Detector 1 Calibration Bismuth Count Rate         | 1.3             | CPS  |
| S2BI | HNGS Detector 2 Calibration Bismuth Count Rate         | 1.3             | CPS  |
| SGRC | HNGS Standard Gamma-Ray Correction Flag                | YES             |      |
| SHT  | Surface Hole Temperature                               | 20              | DEGC |
| TPOS | Tool Position  | ECCE            |      |
| VBA1 | HNGS Detector 1 Variable Barite Factor Running Average | 2.19159         |      |
| VBA2 | HNGS Detector 2 Variable Barite Factor Running Average | 0.935656        |      |

System and Miscellaneous

|          |  |                     |      |
|----------|--|---------------------|------|
| ALTDCHAN | Name of alternate depth channel          | SpeedCorrectedDepth |      |
| BS       | Bit Size                                 | 11.438              | IN   |
| BSAL     | Borehole Salinity                        | -50000.00           | PPM  |
| CSIZ     | Current Casing Size                      | 0.000               | IN   |
| CWEI     | Casing Weight                            | 0.00                | LB/F |
| DFD      | Drilling Fluid Density                   | 1.10                | G/C3 |
| DO       | Depth Offset for Playback                | 0.0                 | M    |
| MST      | Mud Sample Temperature                   | 5.00                | DEGC |
| PBVADP   | Use alternate depth channel for playback | NO                  |      |
| PP       | Playback Processing                      | NORMAL              |      |
| RMFS     | Resistivity of Mud Filtrate Sample       | -50000.0000         | OHMM |
| RW       | Resistivity of Connate Water             | 1.0000              | OHMM |
| TD       | Total Depth                              | 3756.8              | M    |
| TDD      | Total Depth - Driller                    | 3756.80             | M    |
| TDL      | Total Depth - Logger                     | -50000.00           | M    |
| TWS      | Temperature of Connate Water Sample      | 37.78               | DEGC |

Format: APS\_HLDS\_PORO      Vertical Scale: 1:200      Graphics File Created: 23-Oct-2004 12:30

OP System Version: 12C0-301  
MCM

|         |          |          |          |
|---------|----------|----------|----------|
| DIT-E   | 12C0-301 | GPIT-A/B | 12C0-301 |
| DTA-A   | 12C0-301 | HLDS     | 12C0-301 |
| NPLC-B  | 12C0-301 | APS-C    | 12C0-301 |
| HNGS-BA | 12C0-301 | DTC-H    | 12C0-301 |

Input DLIS Files

|         |                       |       |          |                   |          |          |
|---------|-----------------------|-------|----------|-------------------|----------|----------|
| DEFAULT | PI_LDL_APS_NGS_039PUP | FN:60 | PRODUCER | 23-Oct-2004 12:26 | 3735.6 M | 3424.6 M |
|---------|-----------------------|-------|----------|-------------------|----------|----------|

Output DLIS Files

|              |                       |       |          |                   |
|--------------|-----------------------|-------|----------|-------------------|
| DEFAULT      | PI_LDL_APS_NGS_042PUP | FN:67 | PRODUCER | 23-Oct-2004 12:30 |
| ACCELERATION | PI_LDL_APS_NGS_042PUP | FN:68 | PRODUCER | 23-Oct-2004 12:30 |
| REDUCED      | PI_LDL_APS_NGS_042PUP | FN:69 | PRODUCER | 23-Oct-2004 12:30 |



REPEAT PASS

### Input DLIS Files

|         |                       |       |          |                   |          |          |
|---------|-----------------------|-------|----------|-------------------|----------|----------|
| DEFAULT | PI_LDL_APS_NGS_040PUP | FN:62 | PRODUCER | 23-Oct-2004 12:27 | 3673.9 M | 3575.5 M |
|---------|-----------------------|-------|----------|-------------------|----------|----------|

### Output DLIS Files

|              |                       |       |          |                   |          |          |
|--------------|-----------------------|-------|----------|-------------------|----------|----------|
| DEFAULT      | PI_LDL_APS_NGS_043PUP | FN:70 | PRODUCER | 23-Oct-2004 12:31 | 3673.9 M | 3580.2 M |
| ACCELERATION | PI_LDL_APS_NGS_043PUP | FN:71 | PRODUCER | 23-Oct-2004 12:31 | 3673.9 M | 3580.2 M |
| REDUCED      | PI_LDL_APS_NGS_043PUP | FN:72 | PRODUCER | 23-Oct-2004 12:31 | 3673.9 M | 3580.2 M |

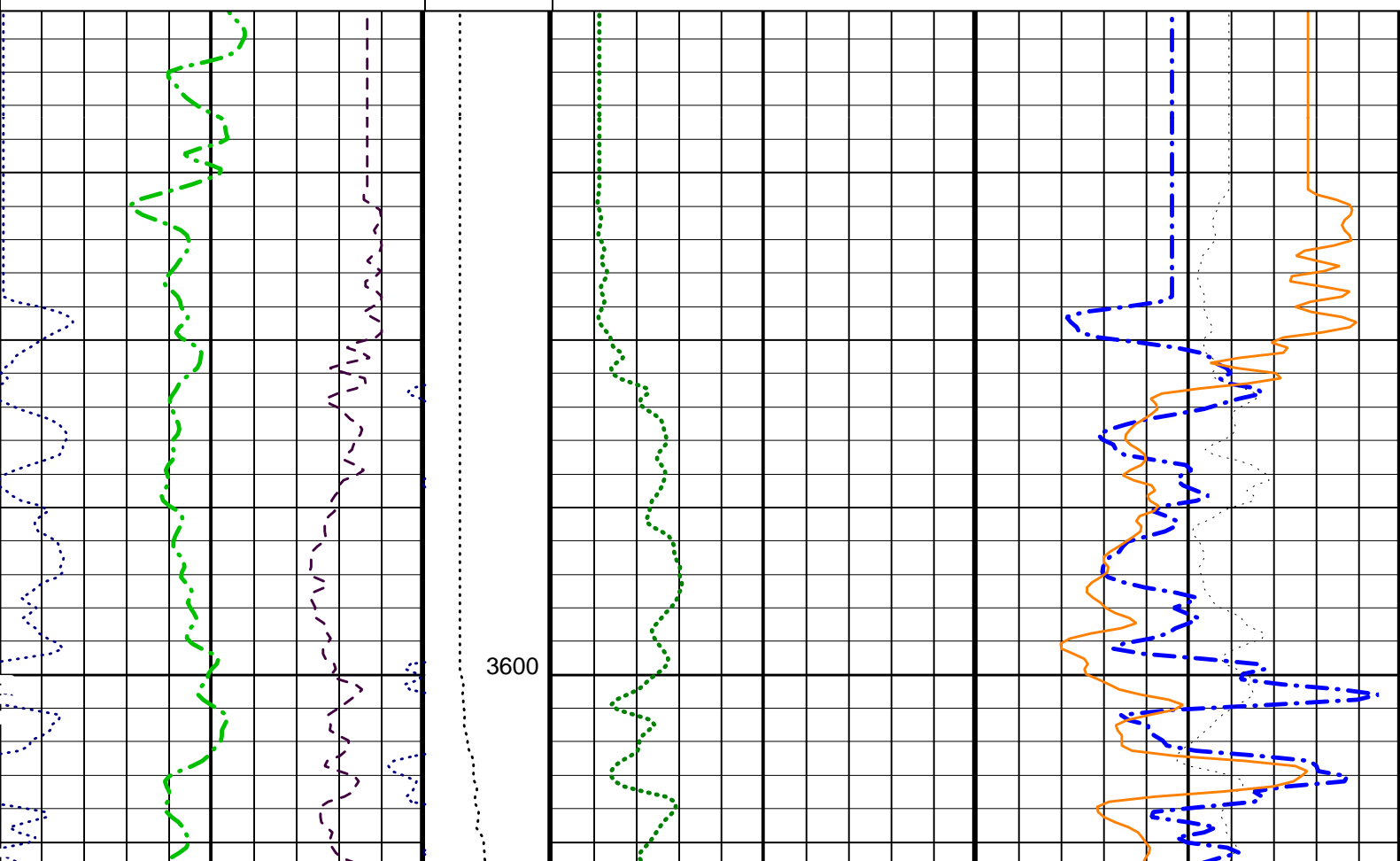
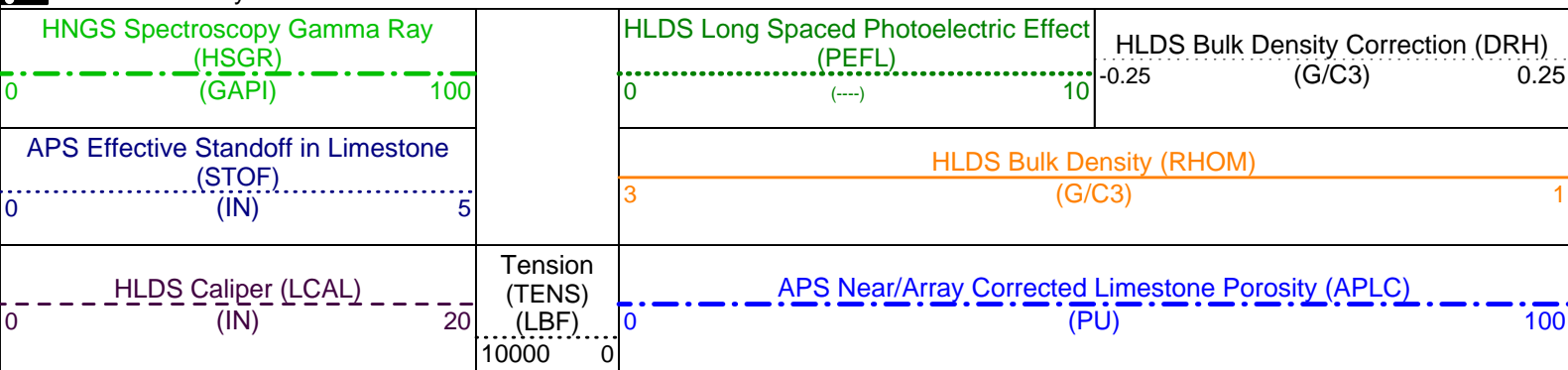
### OP System Version: 12C0-301

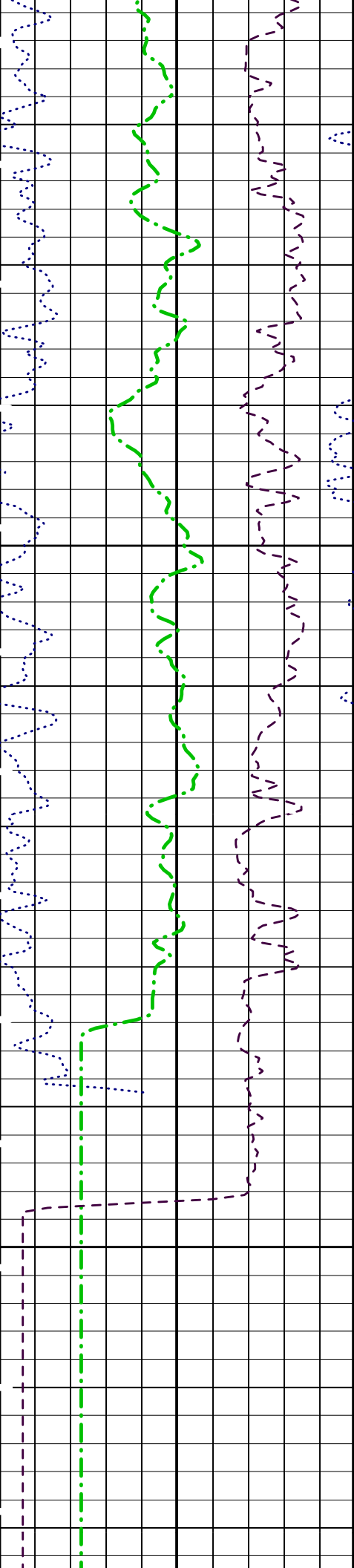
MCM

|         |          |          |          |
|---------|----------|----------|----------|
| DIT-E   | 12C0-301 | GPIT-A/B | 12C0-301 |
| DTA-A   | 12C0-301 | HLDS     | 12C0-301 |
| NPLC-B  | 12C0-301 | APS-C    | 12C0-301 |
| HNGS-BA | 12C0-301 | DTC-H    | 12C0-301 |

### PIP SUMMARY

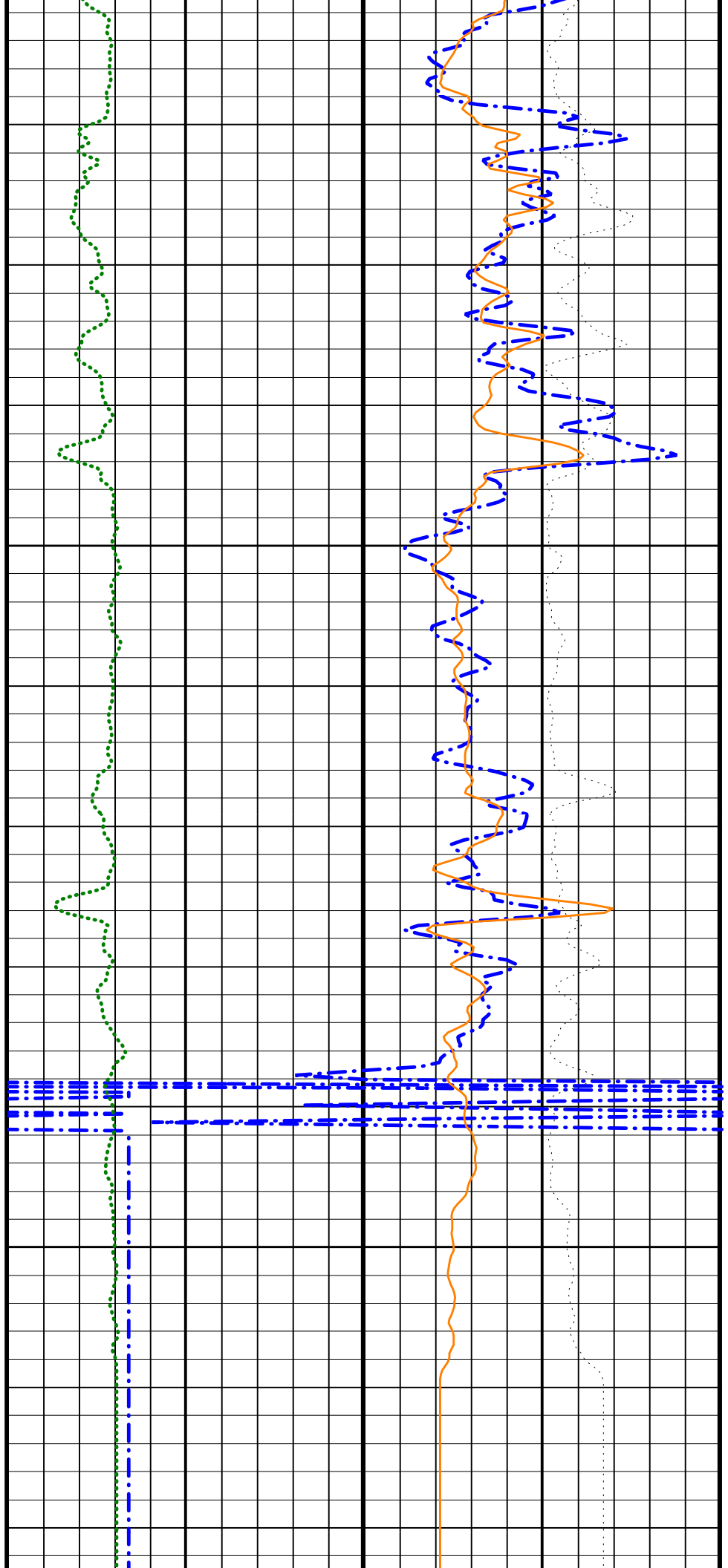
Time Mark Every 60 S

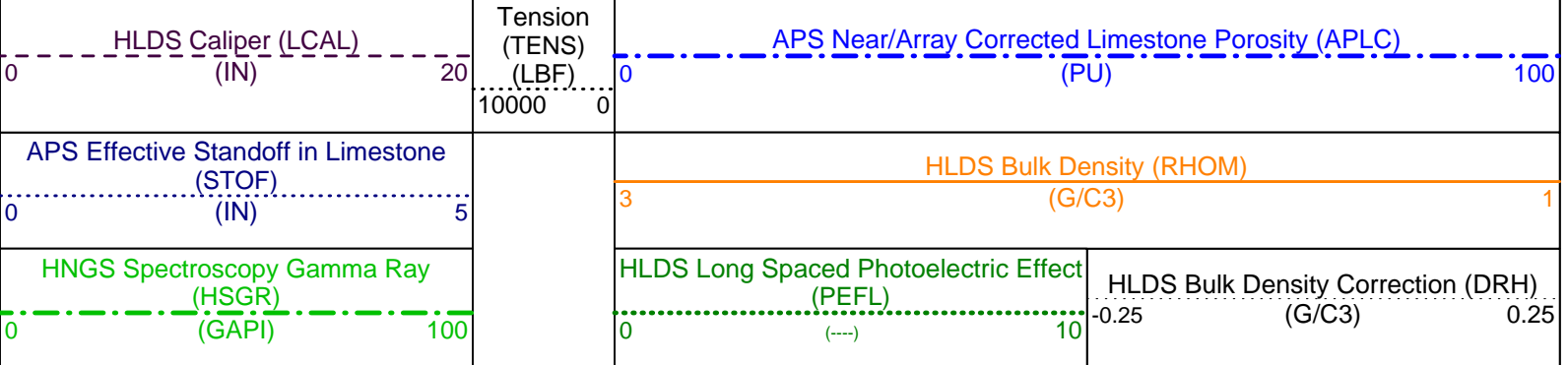
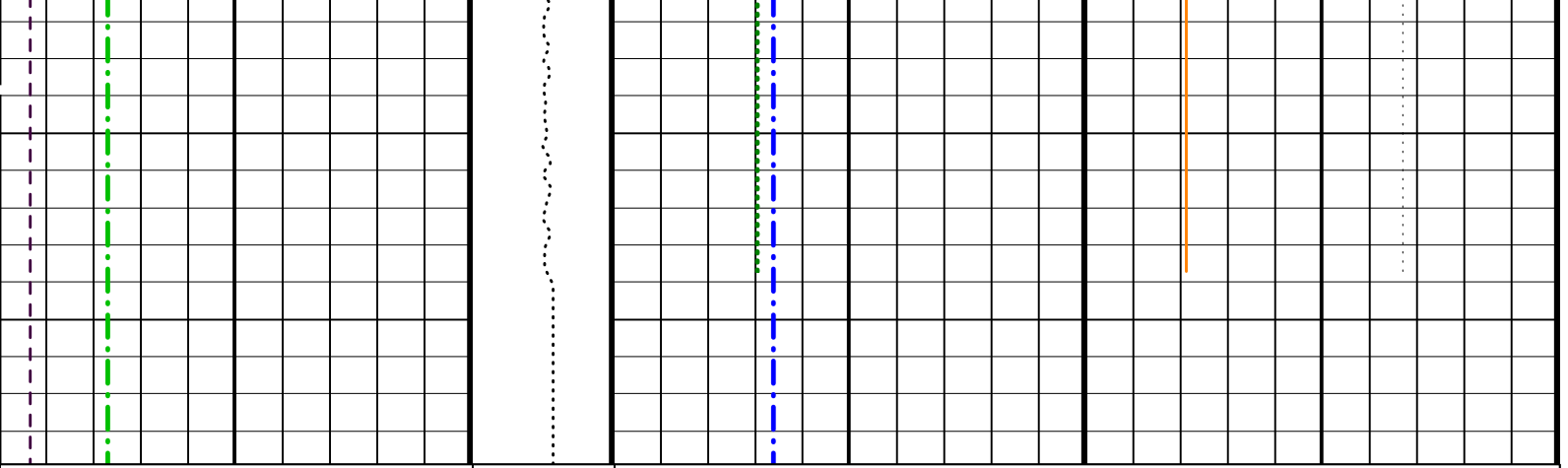




3625

3650





PIP SUMMARY

Time Mark Every 60 S

### Parameters

| DLIS Name                              | Description                                       | Value               |
|--|---|---------------------|
| DIT-E: Dual Induction - E              |   |                     |
| BHS                                    | Borehole Status                                   | OPEN                |
| BHT                                    | Bottom Hole Temperature (used in calculations)    | 3 DEGC              |
| DGF2                                   | Deep 20 kHz Gain Factor                           | 1.02064             |
| DPH2                                   | Deep 20 kHz Phase Shift                           | -0.243728 DEG       |
| DRE2                                   | Deep Real 20 kHz Sonde Error Correction           | 16.6208 MM/M        |
| DSR2                                   | Deep Sigma Reference (20 kHz)                     | 1843 MM/M           |
| DXE2                                   | Deep Quad 20 kHz Sonde Error Correction           | 64.8082 MM/M        |
| GCSE                                   | Generalized Caliper Selection                     | LCAL                |
| GDEV                                   | Average Angular Deviation of Borehole from Normal | 0 DEG               |
| GGRD                                   | Geothermal Gradient                               | 0.018227 DC/M       |
| GRSE                                   | Generalized Mud Resistivity Selection             | CHART_GEN_9         |
| GTSE                                   | Generalized Temperature Selection                 | LINEAR_ESTIMATE     |
| IFRS                                   | DIT-E Induction Frequency Selector                | 20                  |
| IPHA                                   | DIT-E Phasor Processing Mode                      | ALL                 |
| IPRO                                   | DIT-E Induction Processing Selector               | PHASOR              |
| ITEN                                   | DIT-E Temperature Enable                          | ENABLE              |
| MATR                                   | Rock Matrix for Neutron Porosity Corrections      | LIMESTONE           |
| MGF2                                   | Medium 20 kHz Gain Factor                         | 1                   |
| MPH2                                   | Medium 20 kHz Phase Shift                         | 0 DEG               |
| MRE2                                   | Medium Real 20 kHz Sonde Error Correction         | -2.31932 MM/M       |
| MSR2                                   | Medium Sigma Reference (20 kHz)                   | 3250 MM/M           |
| MXE2                                   | Medium Quad 20 kHz Sonde Error Correction         | -31.8992 MM/M       |
| SBR                                    | Shoulder Bed Resistivity Factor                   | 1 OHMM              |
| SFCR                                   | SFL Channel Ratio                                 | 1000                |
| SFLE                                   | SFL Enable  | ENABLE              |
| SHT                                    | Surface Hole Temperature                          | 20 DEGC             |
| SPAE                                   | DIT-E SPARC Processing Enable                     | ENABLE              |
| SPNV                                   | SP Next Value                                     | 0 MV                |
| GPIT-A/B: General Purpose Inclinometer |   |                     |
| ACPP                                   | Accelerometer PROM Presence                       | PRESENT             |
| AFMO                                   | Accelerometer Filtering Mode                      | MOVING_AVERAGE      |
| ART                                    | Accelerometer Reference Temperature               | 20 DEGC             |
| GLM                                    | GPIT Logging Mode                                 | DIPM                |
| ICMO                                   | Inclinometry Computation Mode                     | AUTOMATIC_SELECTION |
| MAPP                                   | Magnetometer PROM Presence                        | PRESENT             |
| MDEC                                   | Magnetic Field Declination                        | -25.7269 DEG        |
| MRTE                                   | Magneto Reference Temperature                     | 25 DEGC             |
| TEMS                                   | GPIT Temperature Sensor Used                      | BOTH                |
| HLDS: Hostile Litho-Density Sonde      |   |                     |
| CLCL                                   | HLDS LS Control Loop Controller Mode              | AUTO_DEFAULT        |
| CLCS                                   | HLDS SS Control Loop Controller Mode              | AUTO_DEFAULT        |



|          |  |                     |      |
|----------|--|---------------------|------|
| CLLS     | HLDS Mode Loop Long Spacing                            | AUTO                |      |
| CLSS     | HLDS Mode Loop Short Spacing                           | AUTO                |      |
| DHC      | Density Hole Correction                                | BS                  |      |
| DPPM     | Density Porosity Processing Mode                       | HIRS                |      |
| FD       | Fluid Density  | 1                   | G/C3 |
| LATC     | HLDS Activation Correction                             | ON                  |      |
| LLDL     | HLDS LS Low Level Discriminator DAC                    | 14000               |      |
| LLDS     | HLDS SS Low Level Discriminator DAC                    | 14000               |      |
| LLML     | HLDS LS Low Level Discriminator Mode                   | AUTO                |      |
| LLMS     | HLDS SS Low Level Discriminator Mode                   | AUTO                |      |
| MDEN     | Matrix Density   | 2.71                | G/C3 |
| PHVL     | HLDS Long Spacing High Voltage Setting                 | 1000                | V    |
| PHVS     | HLDS Short Spacing High Voltage Setting                | 1000                | V    |
| PSDL     | HLDS LS Pulse Shape Compensation DAC                   | 16000               |      |
| PSDS     | HLDS SS Pulse Shape Compensation DAC                   | 16000               |      |
| PSML     | HLDS LS Pulse Shape Compensation Mode                  | AUTO                |      |
| PSMS     | HLDS SS Pulse Shape Compensation Mode                  | AUTO                |      |
|          | NPLC-B: Nuclear Porosity Lithology Cartridge - B       |                     |      |
| NOTS     | NPLC Old Temperature Sensor                            | NO                  |      |
|          | APS-C: Accelerator-Porosity Tool                       |                     |      |
|          | APS Software Version                                   | 5                   |      |
| AASD     | APS Thermal and Array Detectors High Voltage Setting   | 1971.68             | V    |
| ADSO     | APS Array Detectors Data Source Switch                 | Both                |      |
| AFSD     | APS Far Detector High Voltage Setting                  | 2078.39             | V    |
| AHCS     | APS Holesize Correction Source                         | BS                  |      |
| AHSS     | APS Holesize Correction Switch                         | ON                  |      |
| AMTY     | APS Environmental Corrections Mud Type                 | WaterBaseBarite     |      |
| ANSD     | APS Near Detector High Voltage Setting                 | 1740.46             | V    |
| ASOS     | APS Standoff Correction Switch                         | ON                  |      |
| ATSS     | APS Temperature-Pressure-Salinity Correction Switch    | ON                  |      |
| BHS      | Borehole Status  | OPEN                |      |
| BHT      | Bottom Hole Temperature (used in calculations)         | 3                   | DEGC |
| DPPM     | Density Porosity Processing Mode                       | HIRS                |      |
| FSAL     | Formation Salinity                                     | -50000              | PPM  |
| GCSE     | Generalized Caliper Selection                          | LCAL                |      |
| GDEV     | Average Angular Deviation of Borehole from Normal      | 0                   | DEG  |
| GGRD     | Geothermal Gradient                                    | 0.018227            | DC/M |
| GRSE     | Generalized Mud Resistivity Selection                  | CHART_GEN_9         |      |
| GTSE     | Generalized Temperature Selection                      | LINEAR_ESTIMATE     |      |
| MATR     | Rock Matrix for Neutron Porosity Corrections           | LIMESTONE           |      |
| NARC     | APS Near/Array Calibration Ratio                       | 0.991528            |      |
| NFRC     | APS Near/Far Calibration Ratio                         | 0.963658            |      |
| SHT      | Surface Hole Temperature                               | 20                  | DEGC |
|          | HNGS-BA: Hostile Natural Gamma Ray Sonde               |                     |      |
| BAR1     | HNGS Detector 1 Barite Constant                        | 1                   |      |
| BAR2     | HNGS Detector 2 Barite Constant                        | 1                   |      |
| BHK      | HNGS Borehole Potassium Correction Concentration       | 0                   |      |
| BHS      | Borehole Status  | OPEN                |      |
| BHT      | Bottom Hole Temperature (used in calculations)         | 3                   | DEGC |
| CSD1     | Inner Casing Outer Diameter                            | 0                   | IN   |
| CSD2     | Outer Casing Outer Diameter                            | 0                   | IN   |
| CSW1     | Inner Casing Weight                                    | 0                   | LB/F |
| CSW2     | Outer Casing Weight                                    | 0                   | LB/F |
| DBCC     | HNGS Barite Constant Correction Flag                   | NONE                |      |
| GCSE     | Generalized Caliper Selection                          | LCAL                |      |
| GDEV     | Average Angular Deviation of Borehole from Normal      | 0                   | DEG  |
| GGRD     | Geothermal Gradient                                    | 0.018227            | DC/M |
| GRSE     | Generalized Mud Resistivity Selection                  | CHART_GEN_9         |      |
| GTSE     | Generalized Temperature Selection                      | LINEAR_ESTIMATE     |      |
| H1P      | HNGS Detector 1 Allow/Disallow In Processing           | ALLOW               |      |
| H2P      | HNGS Detector 2 Allow/Disallow In Processing           | ALLOW               |      |
| HABK     | HNGS Borehole Potassium Running Average                | -0.00206142         |      |
| HALF     | HNGS Alpha Filter Length                               | 60                  | IN   |
| HCRB     | HNGS Apply Borehole Potassium Correction               | NONE                |      |
| HMWM     | Mud Weighting Material                                 | NATU                |      |
| HNPE     | HNGS Processing Enable                                 | YES                 |      |
| MATR     | Rock Matrix for Neutron Porosity Corrections           | LIMESTONE           |      |
| S1BI     | HNGS Detector 1 Calibration Bismuth Count Rate         | 1.3                 | CPS  |
| S2BI     | HNGS Detector 2 Calibration Bismuth Count Rate         | 1.3                 | CPS  |
| SGRC     | HNGS Standard Gamma-Ray Correction Flag                | YES                 |      |
| SHT      | Surface Hole Temperature                               | 20                  | DEGC |
| TPOS     | Tool Position  | ECCE                |      |
| VBA1     | HNGS Detector 1 Variable Barite Factor Running Average | 2.19159             |      |
| VBA2     | HNGS Detector 2 Variable Barite Factor Running Average | 0.935656            |      |
|          | System and Miscellaneous                               |                     |      |
| ALTDCHAN | Name of alternate depth channel                        | SpeedCorrectedDepth |      |
| BS       | Bit Size   | 11.438              | IN   |
| BSAL     | Borehole Salinity                                      | -50000.00           | PPM  |
| CSIZ     | Current Casing Size                                    | 0.000               | IN   |
| CWEI     | Casing Weight  | 0.00                | LB/F |
| DFD      | Drilling Fluid Density                                 | 1.10                | G/C3 |
| DO       | Depth Offset for Playback                              | 0.0                 | M    |
| MST      | Mud Sample Temperature                                 | 5.00                | DEGC |
| PBVSADP  | Use alternate depth channel for playback               | NO                  |      |
| PP       | Playback Processing                                    | NORMAL              |      |

|      |                                     |             |      |
|------|-------------------------------------|-------------|------|
| RMFS | Playback Processing                 | NORMAL      |      |
| RW   | Resistivity of Mud Filtrate Sample  | -50000.0000 | OHMM |
| TD   | Resistivity of Connate Water        | 1.0000      | OHMM |
| TDD  | Total Depth                         | 3756.8      | M    |
| TDL  | Total Depth - Driller               | 3756.80     | M    |
| TWS  | Total Depth - Logger                | -50000.00   | M    |
|      | Temperature of Connate Water Sample | 37.78       | DEGC |

Format: APS\_HLDS\_PORO      Vertical Scale: 1:200      Graphics File Created: 23-Oct-2004 12:31

**OP System Version: 12C0-301**  
MCM

|         |          |          |          |
|---------|----------|----------|----------|
| DIT-E   | 12C0-301 | GPIT-A/B | 12C0-301 |
| DTA-A   | 12C0-301 | HLDS     | 12C0-301 |
| NPLC-B  | 12C0-301 | APS-C    | 12C0-301 |
| HNGS-BA | 12C0-301 | DTC-H    | 12C0-301 |

**Input DLIS Files**

|         |                       |       |          |                   |          |          |
|---------|-----------------------|-------|----------|-------------------|----------|----------|
| DEFAULT | PI_LDL_APS_NGS_040PUP | FN:62 | PRODUCER | 23-Oct-2004 12:27 | 3673.9 M | 3575.5 M |
|---------|-----------------------|-------|----------|-------------------|----------|----------|

**Output DLIS Files**

|              |                       |       |          |                   |
|--------------|-----------------------|-------|----------|-------------------|
| DEFAULT      | PI_LDL_APS_NGS_043PUP | FN:70 | PRODUCER | 23-Oct-2004 12:31 |
| ACCELERATION | PI_LDL_APS_NGS_043PUP | FN:71 | PRODUCER | 23-Oct-2004 12:31 |
| REDUCED      | PI_LDL_APS_NGS_043PUP | FN:72 | PRODUCER | 23-Oct-2004 12:31 |

**Company:** Lamont Doherty Earth Observatory

**Schlumberger**

**Well:** 1305 C

**Field:**

**Rig:** Joides Resolution

**Expedition:** 303

Hostile Litho-Density  
Accelerator Porosity  
Gamma Ray