

Company: Lamont Doherty

Well: IODP EXP 306 Site 642 E

Field: Voring Plateau

Country: Norway

Ocean: Atlantic Ocean

Country: Norway  
 Field: Voring Plateau  
 Location: Rig- Joides Resolution  
 Well: IODP EXP 306 Site 642 E  
 Company: Lamont Doherty

## APS/HLDS Porosity

|                         |                 |                                 |  |
|-------------------------|-----------------|---------------------------------|--|
| LOCATION                |                 | Elev.:                          | K.B. 11.3 m<br>G.L. -1289 m<br>D.F. 11 m |
| Rig- Joides Resolution  |                 |                                 |  |
|                         |                 | Elev.:                          | 0 m                                      |
| Permanent Datum:        | GROUND LEVEL    | Elev.: 11.3 m above Perm. Datum |  |
| Log Measured From:      | DES             |                                 |  |
| Drilling Measured From: | DES             |                                 |  |
| API Serial No.          | Max. Hole Devi. | Longitude<br>E 2 56.2398        | Latitude<br>N 67 12.7458                 |
| Logging Date            | 4/20/05         |                                 |  |

|                             |                   |  |  |
|-----------------------------|-------------------|--|--|
| Run Number                  | 1                 |  |  |
| Depth Driller               | 2518.4 m          |  |  |
| Schlumberger Depth          | 1870 m            |  |  |
| Bottom Log Interval         | 1868 m            |  |  |
| Top Log Interval            | 1641 m            |  |  |
| Casing Driller Size @ Depth | 0.000 in @ 1660 m |  |  |
| Casing Schlumberger         | 1660.5 m          |  |  |
| Bit Size                    | 9.875 in          |  |  |

|                            |                       |     |     |
|----------------------------|-----------------------|-----|-----|
| Type Fluid In Hole         |                       |     |     |
| Density                    | Viscosity             |     |     |
| Fluid Loss                 | PH                    |     |     |
| Source Of Sample           |                       |     |     |
| RM @ Measured Temperature  | 0.322 ohm.m @ 23 degC |     |     |
| RMF @ Measured Temperature | @ @                   |     |     |
| RMC @ Measured Temperature | @ @                   |     |     |
| Source RMF RMC             |                       |     |     |
| RM @ MRT                   | RMF @ MRT             | @ @ | @ @ |

|                               |                 |         |         |
|-------------------------------|-----------------|---------|---------|
| Maximum Recorded Temperatures | 18 degC         | @ 18    |         |
| Circulation Stopped           | n/a             |         | n/a     |
| Logger On Bottom              | 4/20/05         |         | See Log |
| Unit Number                   | 99              | Houston |         |
| Recorded By                   | Steve Kittredge |         |         |
| Witnessed By                  | Sean Higgins    |         |         |

| Logging Date | Run Number | Run 1 | Run 2 | Run |
|--------------|------------|-------|-------|-----|
|              |            |       |       |     |
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|                               |                       |         |         |
|-------------------------------|-----------------------|---------|---------|
| Logging Date                  | 4/20/05               |         |         |
| Run Number                    | 1                     |         |         |
| Depth Driller                 | 2518.4 m              |         |         |
| Schlumberger Depth            | 1870 m                |         |         |
| Bottom Log Interval           | 1868 m                |         |         |
| Top Log Interval              | 1641 m                |         |         |
| Casing Driller Size @ Depth   | 0.000 in @ 1660 m     |         |         |
| Casing Schlumberger           | 1660.5 m              |         |         |
| Bit Size                      | 9.875 in              |         |         |
| Type Fluid In Hole            |                       |         |         |
| Density                       | Viscosity             |         |         |
| Fluid Loss                    | PH                    |         |         |
| Source Of Sample              |                       |         |         |
| RM @ Measured Temperature     | 0.322 ohm.m @ 23 degC |         |         |
| RMF @ Measured Temperature    | @ @                   |         |         |
| RMC @ Measured Temperature    | @ @                   |         |         |
| Source RMF RMC                |                       |         |         |
| RM @ MRT                      | RMF @ MRT             | @ @     | @ @     |
| Maximum Recorded Temperatures | 18 degC               | @ 18    |         |
| Circulation Stopped           | n/a                   |         | n/a     |
| Logger On Bottom              | 4/20/05               |         | See Log |
| Unit Number                   | 99                    | Houston |         |
| Recorded By                   | Steve Kittredge       |         |         |
| Witnessed By                  | Sean Higgins          |         |         |

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**OTHER SERVICES1**  
 OS1: MESTB/DSI  
 OS2:  
 OS3:  
 OS4:  
 OS5:

**OTHER SERVICES2**  
 OS1:  
 OS2:  
 OS3:  
 OS4:  
 OS5:

**REMARKS: RUN NUMBER 1**  
 Hole Cored with RCB in 1985.  
 All depths in Meters Below Rig Floor (MBRF).  
 Hole flushed with Sepiolite  
 Sea Floor Driller- 1289 MBRF.  
 Total Depth Driller- 2518.4 MBRF.  
 Total Depth Logger- 1870 MBRF.  
 Casing Bottom Driller- 1660.5 MBRF.  
 Casing Bottom Logger- 1660.5 MBRF.  
 HLDS Caliper failed and was not presented.  
 Could not get to total depth.

**REMARKS: RUN NUMBER 2**

**RUN 1**

SERVICE ORDER #:  
 PROGRAM VERSION: 12C0-301  
 FLUID LEVEL:

**RUN 2**

SERVICE ORDER #:  
 PROGRAM VERSION:  
 FLUID LEVEL:

| LOGGED INTERVAL | START | STOP |
|-----------------|-------|------|
|                 |       |      |
|                 |       |      |
|                 |       |      |
|                 |       |      |

| LOGGED INTERVAL | START | STOP |
|-----------------|-------|------|
|                 |       |      |
|                 |       |      |
|                 |       |      |
|                 |       |      |

## EQUIPMENT DESCRIPTION





**RUN 1**

**SURFACE EQUIPMENT**

SFT-281 6250  
 SFT-178 6250  
 GSR-U 135  
 WITM (DTS)-A

**RUN 2**

**DOWNHOLE EQUIPMENT**

LEH-QT  29.91  
 LEH-QT  
 DTC-H CTEM  28.74 29.02  
 ECH-KC 984 TelStatus  28.11  
 ToolStatu  
 HNGS-BA Upper\_1  27.41 28.11  
 HNGS-BA 77 Lower\_2  27.19

HNSH-BA 79

ILE-D  
ILE-D 25

APS-C  
APH-AC 104  
APS-C 202  
MNTR-F 5124

NPLC-B  
NPLC-B 79  
NPH-B 82

HLDS  
GSR-Z 2326  
HLDV-D 35  
HLDS-D 35  
HEH-H  
HLDP-C 35

DTA-A  
ECH-KE 8455  
DTA-A

GPIT-A/B  
GPIC-A 719  
GPIH-A

DIT-E  
DIC-EB 438  
MIH-ZA 417  
DIS-HB 442

SP  
Deep Ind  
Aux Meas SFL  
Med Ind  
HV DF  
Status GPIT  
Tension

Status  
Minitron  
Near TD  
Near Arr  
Near  
Far Arr  
Far  
Far TD

Status

Caliper  
SS LS Status

20.73  
20.65  
20.52  
20.42

18.00

12.73

3.15  
2.90  
1.98  
1.83

0.00

25.61

23.17

19.23

16.78

11.96

10.74

9.52

TOOL ZERO

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

## Input DLIS Files

DEFAULT      PI\_LDL\_APS\_NGS\_017LUP      FN:16    PRODUCER    20-Apr-2005 19:54    1869.9 M    1636.1 M

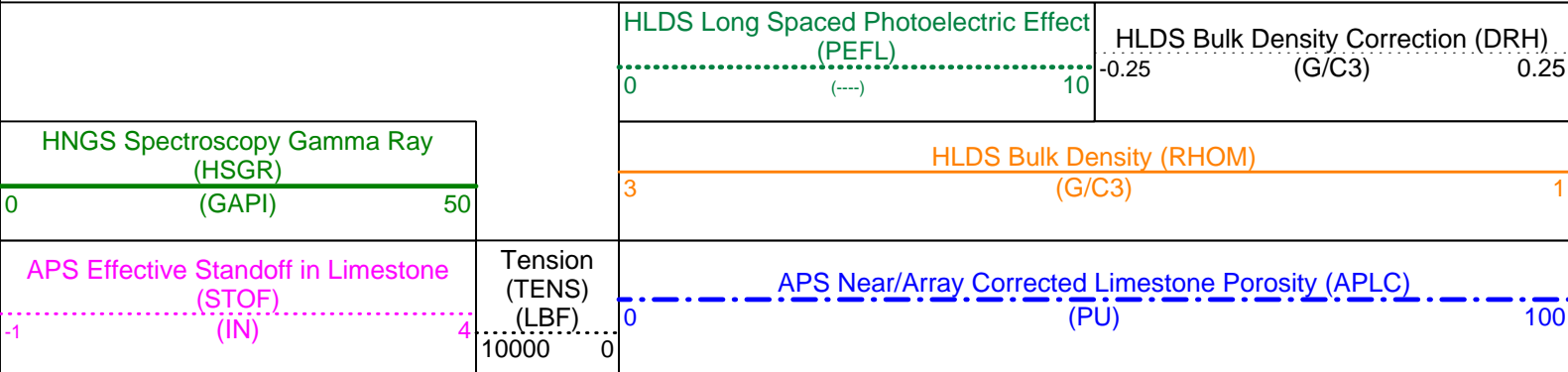
OP System Version: 12C0-301  
MCM

MAIN UP LOG

|         |          |          |          |
|---------|----------|----------|----------|
| 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



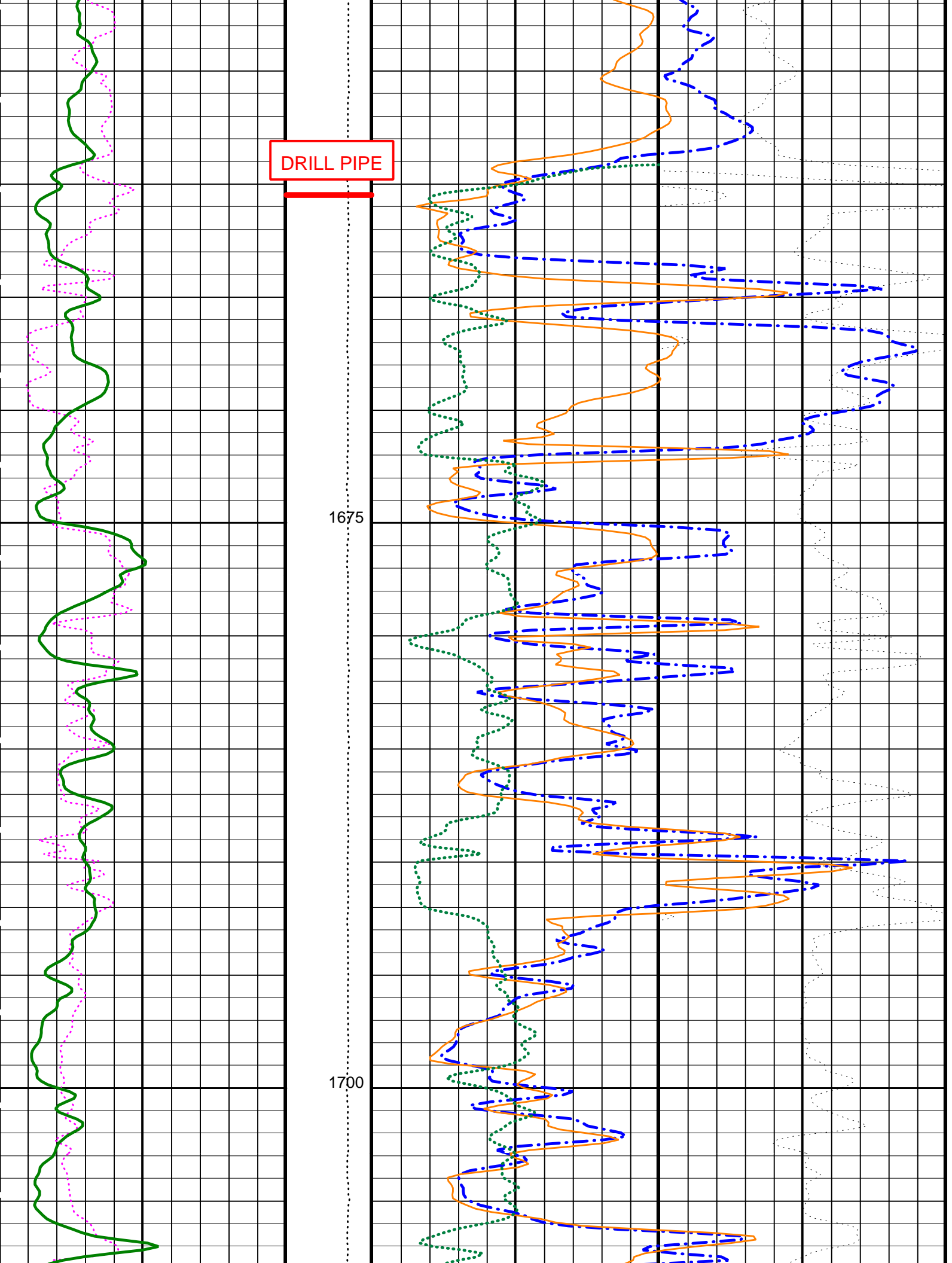
Last Reading

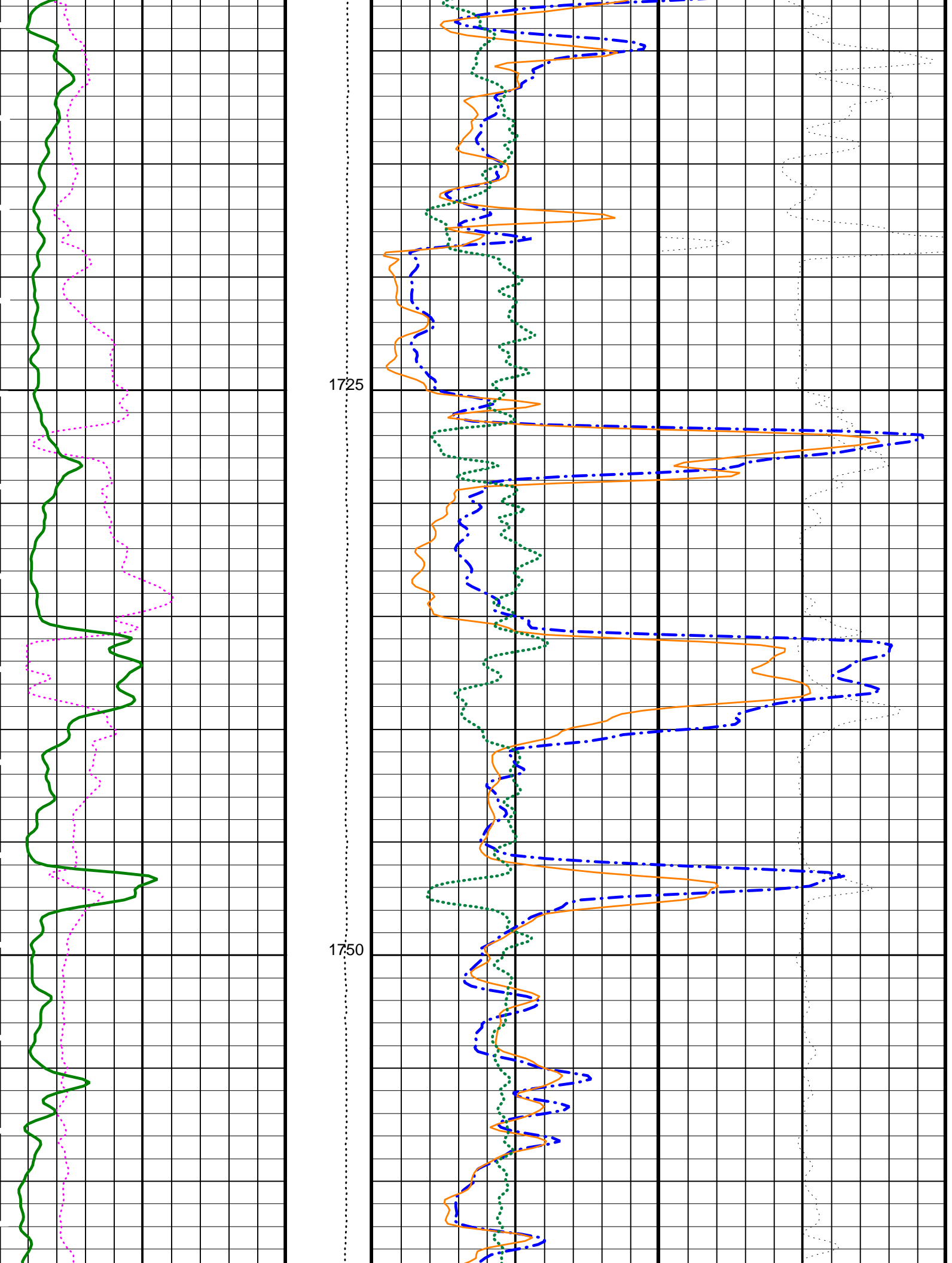
1650

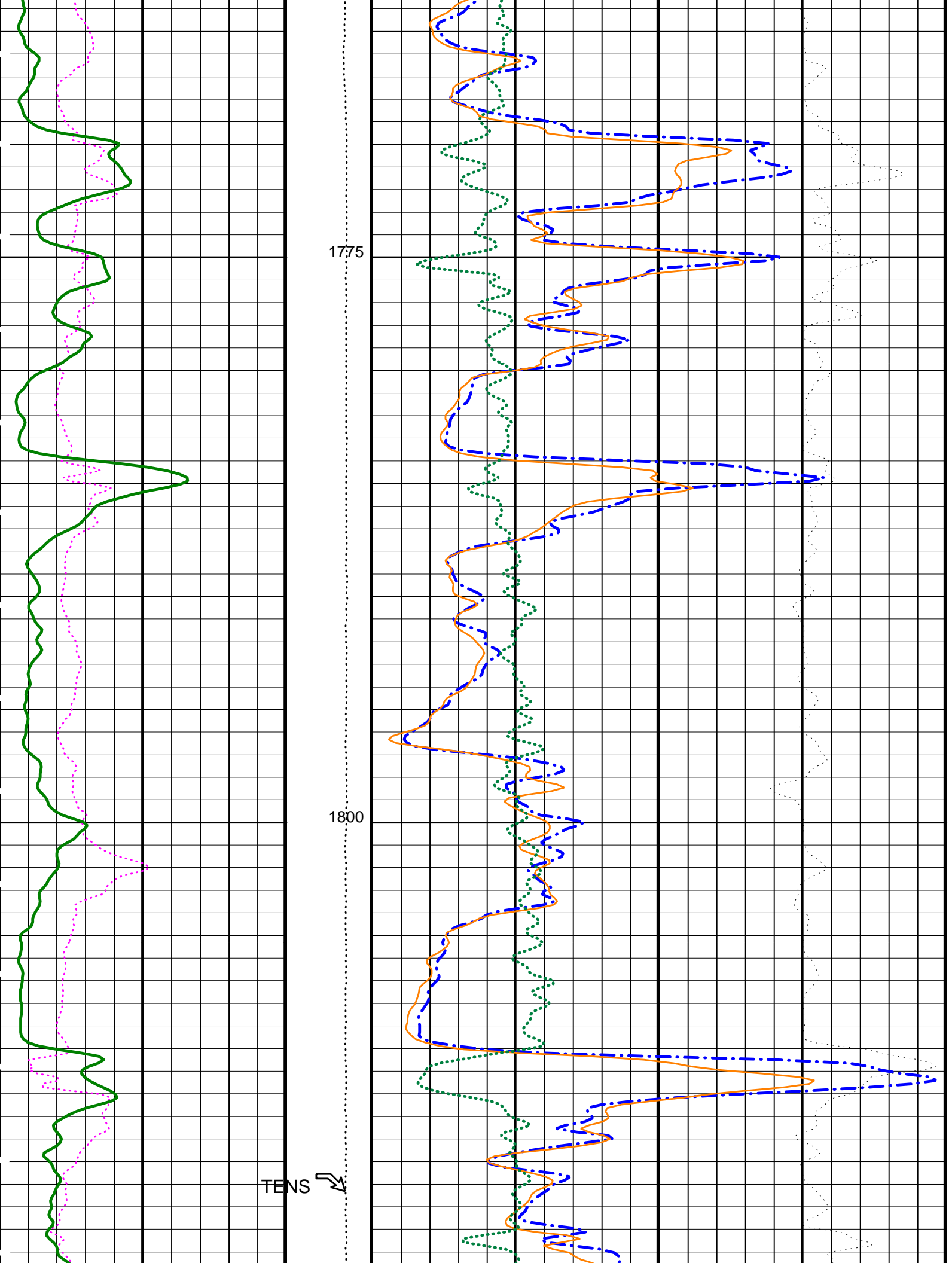
DRILL PIPE

1675

1700



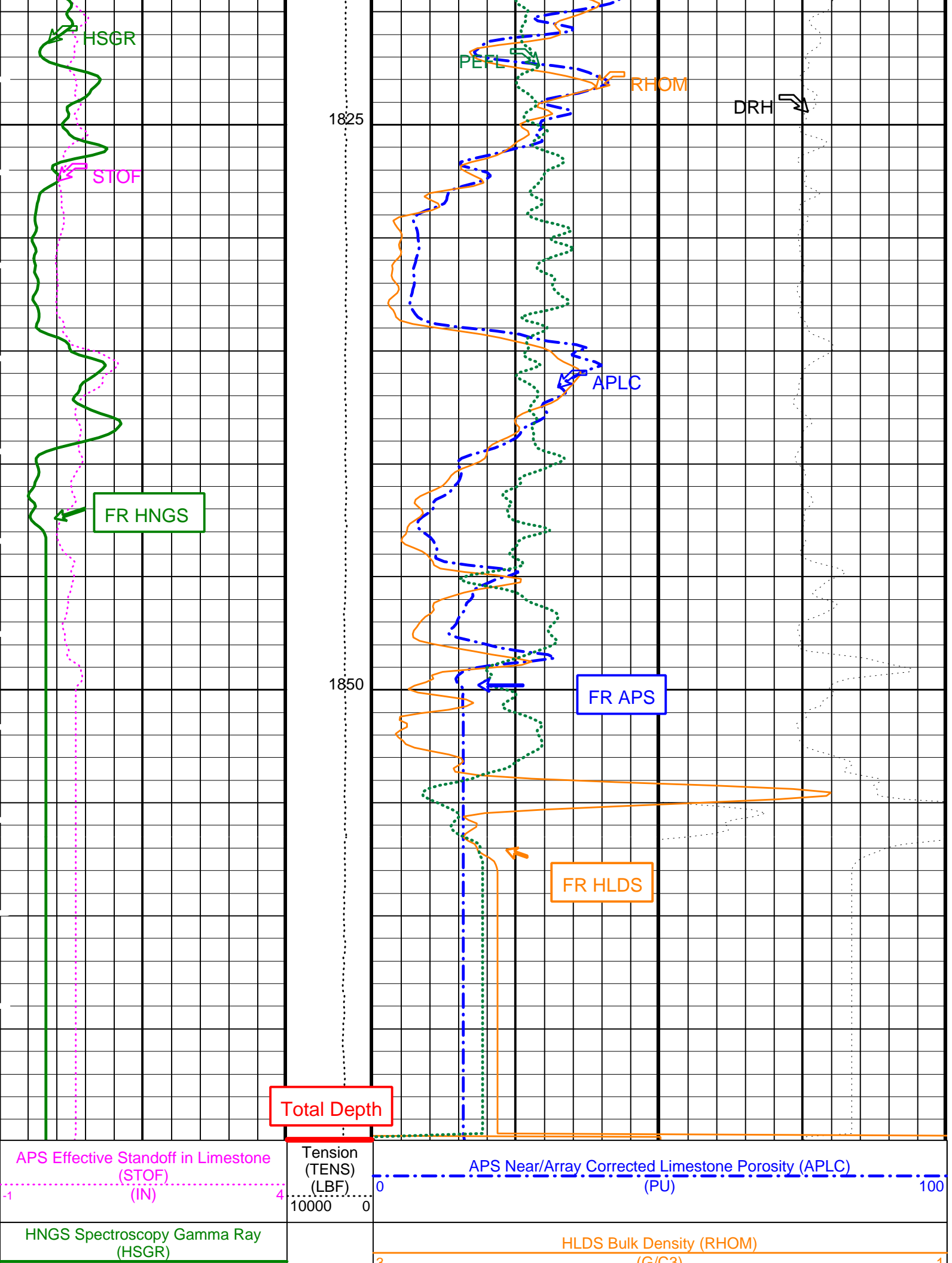




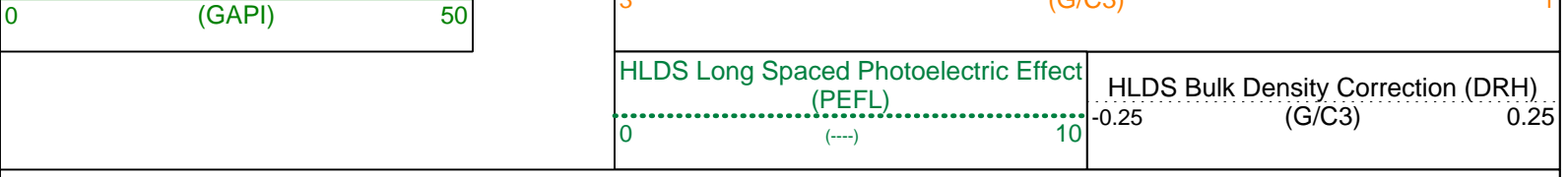
1775

1800

TENS ↘







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)         | 12              | DEGC |
| GCSE                                     | Generalized Caliper Selection                          | BS              |      |
| GDEV                                     | Average Angular Deviation of Borehole from Normal      | 0               | DEG  |
| GGRD                                     | Geothermal Gradient                                    | 0.018227        | DC/M |
| GTSE                                     | Generalized Temperature Selection                      | LINEAR_ESTIMATE |      |
| SHT                                      | Surface Hole Temperature                               | 20              | DEGC |
| HLDS: Hostile Litho-Density Sonde        |  |                 |      |
| DHC                                      | Density Hole Correction                                | BS              |      |
| DPPM                                     | Density Porosity Processing Mode                       | HIRS            |      |
| FD                                       | Fluid Density  | 1.07            | G/C3 |
| LATC                                     | HLDS Activation Correction                             | ON              |      |
| MDEN                                     | Matrix Density   | 2.71            | G/C3 |
| APS-C: Accelerator-Porosity Tool         |  |                 |      |
|  | APS Software Version                                   | 5               |      |
| AASD                                     | APS Thermal and Array Detectors High Voltage Setting   | 1972.6          | V    |
| ADSO                                     | APS Array Detectors Data Source Switch                 | Both            |      |
| AFSD                                     | APS Far Detector High Voltage Setting                  | 2081.84         | 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                 | 1741.14         | V    |
| ASOS                                     | APS Standoff Correction Switch                         | ON              |      |
| ATSS                                     | APS Temperature-Pressure-Salinity Correction Switch    | OFF             |      |
| BHS                                      | Borehole Status  | OPEN            |      |
| BHT                                      | Bottom Hole Temperature (used in calculations)         | 12              | DEGC |
| DPPM                                     | Density Porosity Processing Mode                       | HIRS            |      |
| FSAL                                     | Formation Salinity                                     | 35000           | PPM  |
| GCSE                                     | Generalized Caliper Selection                          | BS              |      |
| GDEV                                     | Average Angular Deviation of Borehole from Normal      | 0               | DEG  |
| GGRD                                     | Geothermal Gradient                                    | 0.018227        | DC/M |
| GTSE                                     | Generalized Temperature Selection                      | LINEAR_ESTIMATE |      |
| NARC                                     | APS Near/Array Calibration Ratio                       | 0.991434        |      |
| NFRC                                     | APS Near/Far Calibration Ratio                         | 0.962525        |      |
| 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)         | 12              | 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                          | BS              |      |
| GDEV                                     | Average Angular Deviation of Borehole from Normal      | 0               | DEG  |
| GGRD                                     | Geothermal Gradient                                    | 0.018227        | DC/M |
| 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                | -0.0017651      |      |
| HALF                                     | HNGS Alpha Filter Length                               | 60              | IN   |
| HCRB                                     | HNGS Apply Borehole Potassium Correction               | NONE            |      |
| HMWM                                     | Mud Weighting Material                                 | NATU            |      |
| HNPE                                     | HNGS Processing Enable                                 | YES             |      |
| 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 | 1.01394         |      |
| VBA2                                     | HNGS Detector 2 Variable Barite Factor Running Average | 0.960107        |      |
| HOLEV: Integrated Hole/Cement Volume     |  |                 |      |
| BHS                                      | Borehole Status  | OPEN            |      |
| BHT                                      | Bottom Hole Temperature (used in calculations)         | 12              | DEGC |
| GCSE                                     | Generalized Caliper Selection                          | BS              |      |

|                          |   |                 |      |
|--------------------------|---|-----------------|------|
| GDEV                     | Average Angular Deviation of Borehole from Normal | 0               | DEG  |
| GGRD                     | Geothermal Gradient                               | 0.018227        | DC/M |
| GTSE                     | Generalized Temperature Selection                 | LINEAR_ESTIMATE |      |
| SHT                      | Surface Hole Temperature                          | 20              | DEGC |
| System and Miscellaneous |   |                 |      |
| BS                       | Bit Size  | 9.875           | IN   |
| BSAL                     | Borehole Salinity                                 | 35000.00        | PPM  |
| CSIZ                     | Current Casing Size                               | 0.000           | IN   |
| CWEI                     | Casing Weight                                     | 0.00            | LB/F |
| DFD                      | Drilling Fluid Density                            | 1.07            | G/C3 |
| DO                       | Depth Offset for Playback                         | 0.0             | M    |
| PP                       | Playback Processing                               | RECOMPUTE       |      |
| TD                       | Total Depth                                       | 2500            | M    |

Format: APSLiquidPorosity\_1      Vertical Scale: 1:200      Graphics File Created: 22-Apr-2005 22:37

## 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_017LUP | FN:16 | PRODUCER | 20-Apr-2005 19:54 | 1869.9 M | 1636.1 M |
|---------|-----------------------|-------|----------|-------------------|----------|----------|

Company: Lamont Doherty

**Schlumberger**

Well: IODP EXP 306 Site 642 E

Field: Voring Plateau

Country: Norway

Ocean: Atlantic Ocean

APS/HLDS Porosity