

Company: Lamont Doherty

Well: Leg 208, Site 1265A

Field: Walvis Ridge

Country: Africa

Ocean: Atlantic

Phasor Induction Natural Gamma Ray

Country: Africa
Field: Walvis Ridge
Location: Joides Resolution
Well: Leg 208, Site 1265A
Company: Lamont Doherty

| LOCATION | | Elev.: | K.B. | 11.3 m |
|-------------------------|-----------------|-----------|----------|-------------------|
| Permanent Datum: | MSL | Elev.: | 0 m | |
| Log Measured From: | DF | | 11.3 m | above Perm. Datum |
| Drilling Measured From: | DF | | D.F. | 11 m |
| API Serial No. | Max. Hole Devi. | Longitude | Latitude | |
| | | 2.0397 | 28.8350 | |

| | | | | |
|-------------------------------|-----------------------|--------------|------|---|
| Logging Date | | | | |
| Run Number | 1 | | | |
| Depth Driller | 3392 m | | | |
| Schlumberger Depth | 3397 m | | | |
| Bottom Log Interval | 3395 m | | | |
| Top Log Interval | 3054.1 m | | | |
| Casing Driller Size @ Depth | 0.000 in @ 3140 m | | | |
| Casing Schlumberger | 3145 m | | | |
| Bit Size | 11.438 in | | | |
| Type Fluid In Hole | | | | |
| Density | 1.1 g/cm3 | | | |
| 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 | 0.362 @ 18 | @ 18 | @ |
| Maximum Recorded Temperatures | 18 degC | | | |
| Circulation Stopped | Time | | | |
| Logger On Bottom | Time | | | |
| Unit Number | 99 | Houston, ODP | | |
| Recorded By | Steve Kittredge | | | |
| Witnessed By | Philippe Galliot | | | |

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

DISCLAIMER

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| | |
|---|---|
| OTHER SERVICES1 OS1: MESTB/DSI/SGTN OS2: WST3 OS3: OS4: OS5: | OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5: |
|---|---|

| | |
|--|-----------------------|
| REMARKS: RUN NUMBER 1 Hole Cored with APC/XCB All Depths in Meters Below Rig Floor (MBRF) Hole flushed with Sepiolite Sea Floor Driller 3071 MBRF Total Depth Driller 3342 MBRF Total Depth Logger- 3397 MBRF. Casing Bottom Driller- 3140 MBRF Casing Bottom Logger- 3145 MBRF. APS Output erratic in larger section of hole. APS curve not displayed in larger section of hole. Unable to pick sea floor off log. | REMARKS: RUN NUMBER 2 |
|--|-----------------------|

| | | | | | |
|---|-------|------|--|-------|------|
| RUN 1 | | | RUN 2 | | |
| SERVICE ORDER #: PROGRAM VERSION: 10C0-306 FLUID LEVEL: | | | SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL: | | |
| LOGGED INTERVAL | START | STOP | LOGGED INTERVAL | START | STOP |
| | | | | | |
| | | | | | |

EQUIPMENT DESCRIPTION

| | | | |
|---|--|-------|--|
| RUN 1 | | RUN 2 | |
| SURFACE EQUIPMENT | | | |
| SFT-281 24 SFT-178 4722 GSR-U 135 WITM (DTS)-A | | | |

| | | | |
|---------------------------|---|-------|-------|
| DOWNHOLE EQUIPMENT | | | |
| LEH-QT |  | 28.69 | |
| LEH-QT | | | |
| DTC-H | CTEM | 27.52 | 27.80 |
| ECH-KC 9343 | TelStatus ToolStatu | 26.89 | |
| HNGS-BA | Upper_1 | 26.19 | 26.89 |
| HNGS BA 77 | Lower_2 | 25.98 | |

INGS-BA 77

HNSH-BA 79

Lower_2

25.90

ILE-D

ILE-D

24.39

APS-BA

APS-BA 22

APH-AC 22

MNTR-F 4185

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

21.95

19.51
19.43
19.30
19.20

NPLC-B

NPLC-B 79

NPH-B 82

Status

18.01

16.78

HLDS

GSR-Z 1846

HLDV-D 35

HLDS-D 45

HEH-H 35

HLDP-C 45

Caliper
SS LS Status

15.56

11.51

DTA-A

ECH-KE 8231

DTA-A 8231

10.74

DIT-E

DIC-EB 438

MIH-ZA 417

DIS-HB 442

9.52

SP
Deep Ind
Aux Meas SFL
Med Ind

3.15
2.90
1.98
1.83

Status HV DF
Tension

0.00

TOOL ZERO

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

Output DLIS Files

| | | | | | | |
|-------------|-----------------------|------|----------|-------------------|----------|----------|
| DEFAULT | PI_LDL_APS_NGS_028LUP | FN:5 | PRODUCER | 11-Apr-2003 05:53 | 3397.0 M | 3054.1 M |
| TCOMBO_CUST | PI_LDL_APS_NGS_028LUP | FN:6 | PRODUCER | 11-Apr-2003 05:53 | 3397.0 M | 3054.1 M |

OP System Version: 10C0-306
MCM

MAIN UP LOG

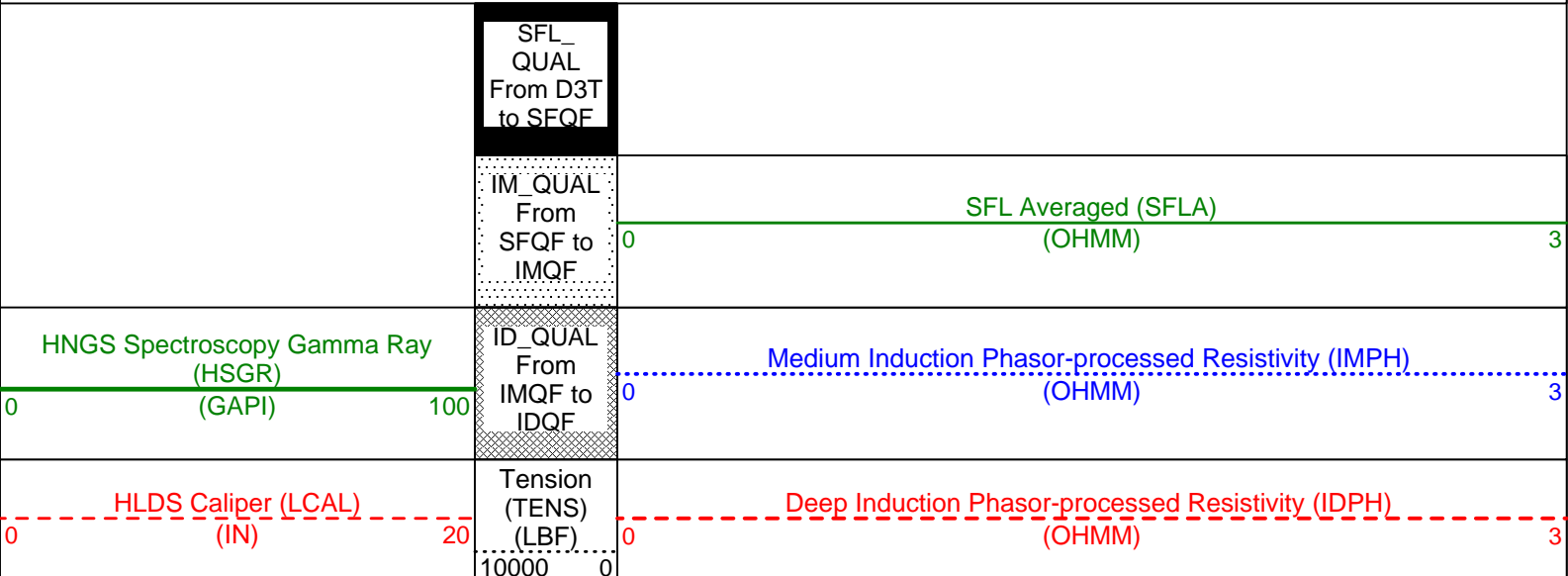
| | | | |
|--------|-----------------|---------|-----------------|
| DIT-E | 10C0-306 | DTA-A | 10C0-306 |
| HLDS | SPC-2277-NUCL_b | NPLC-B | OP10-KP1 |
| APS-BA | SPC-2277-NUCL_b | HNGS-BA | SPC-2277-NUCL_b |
| DTC-H | 10C0-306 | | |

Changed Parameter Summary

| DLIS Name | New Value | Previous Value | Depth & Time |
|-----------|-----------|----------------|-----------------|
| GCSE | BS | LCAL | 3177.2 06:49:06 |

PIP SUMMARY

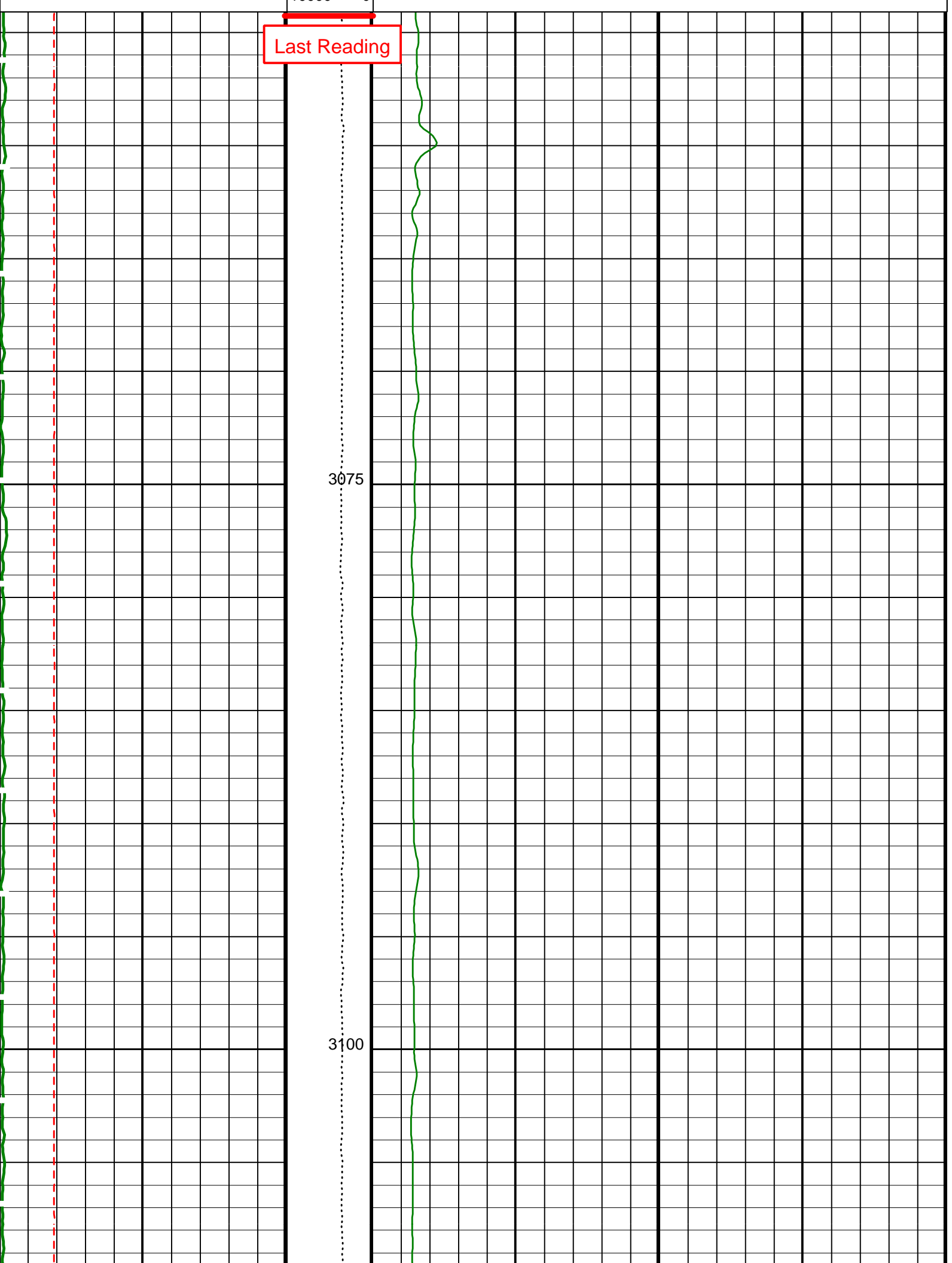
▶ Time Mark Every 60 S

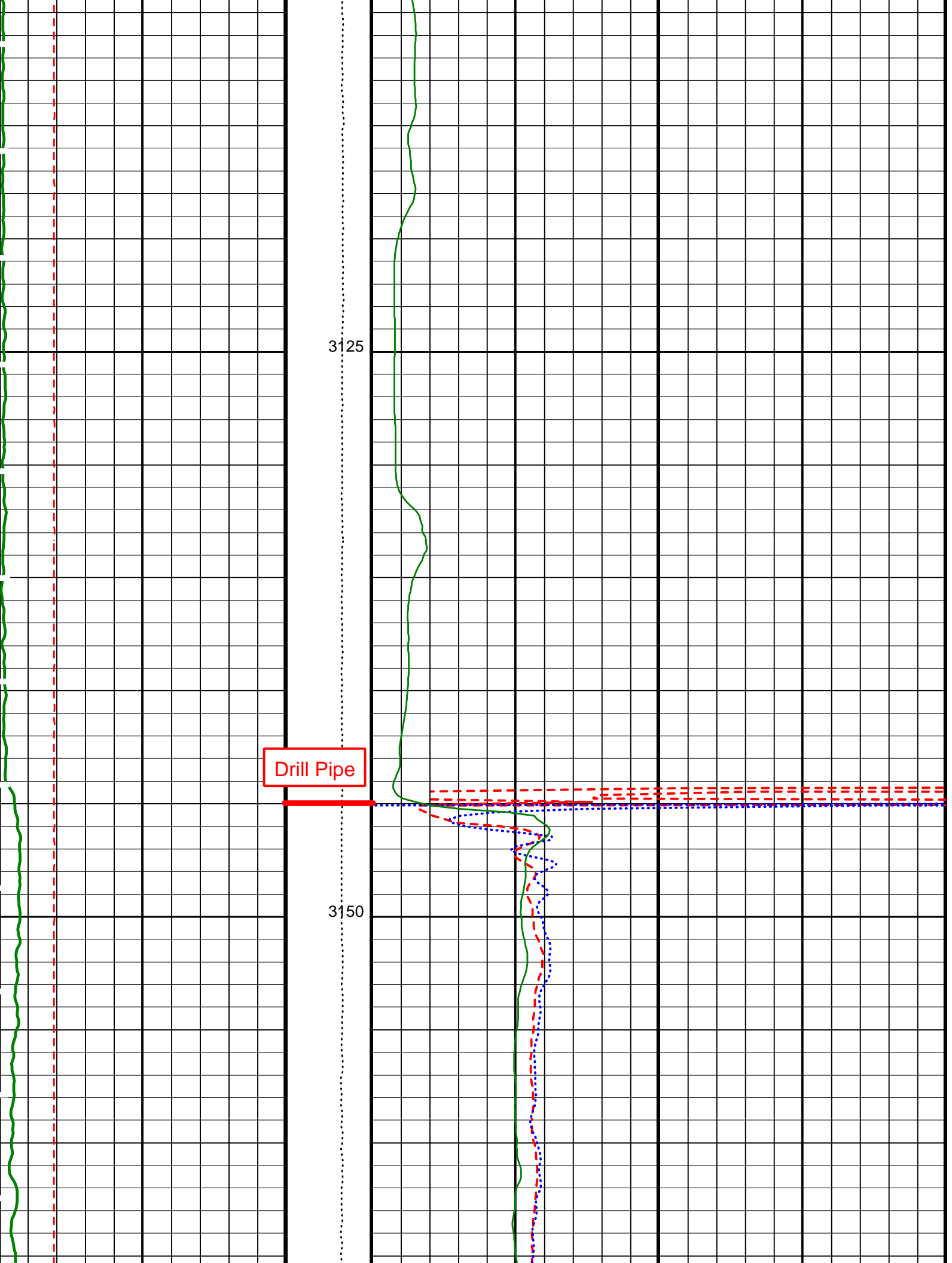


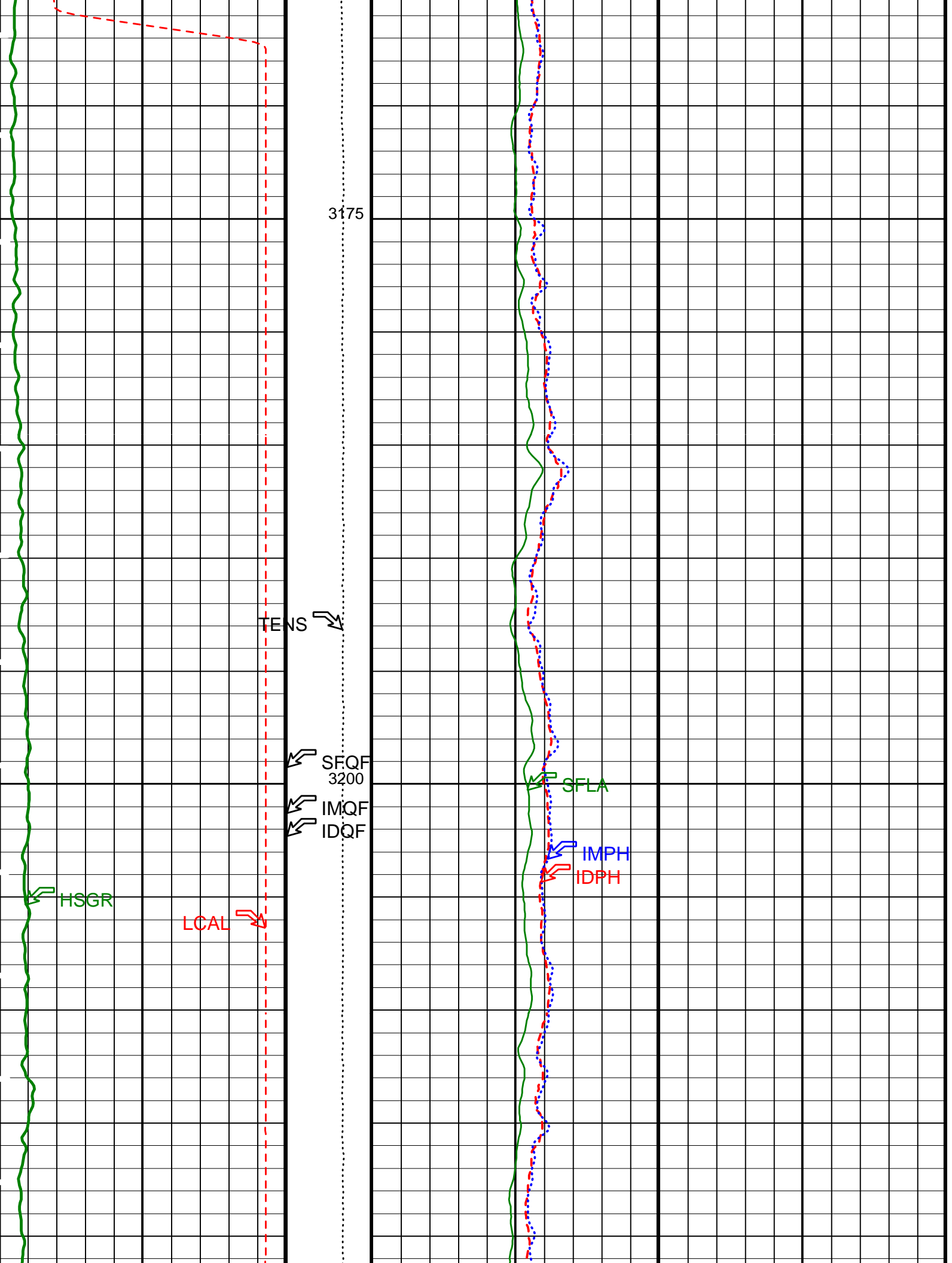
Last Reading

3075

3100







3175

TENS

SFQF
3200

IMQF
IDQF

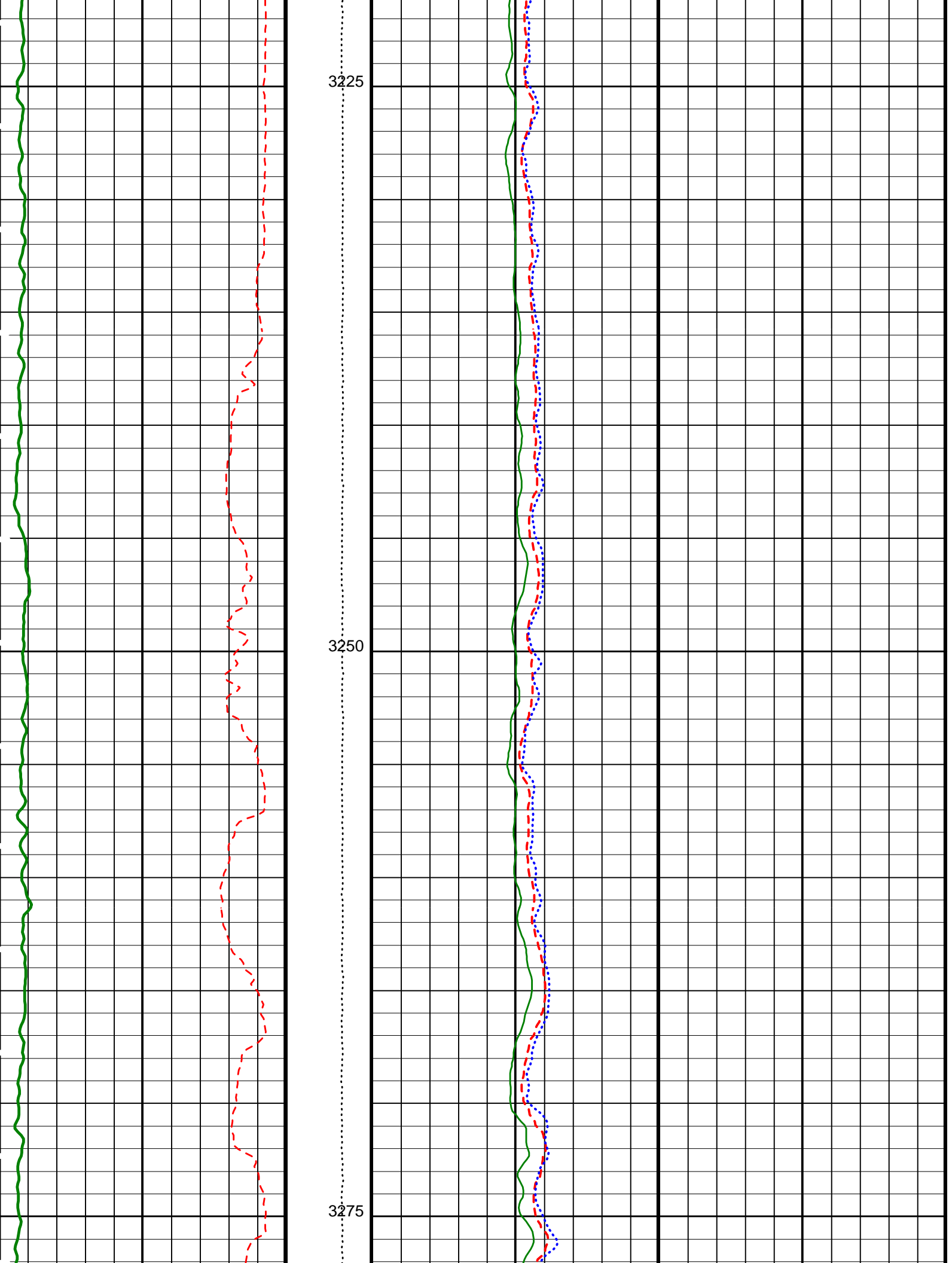
HSGR

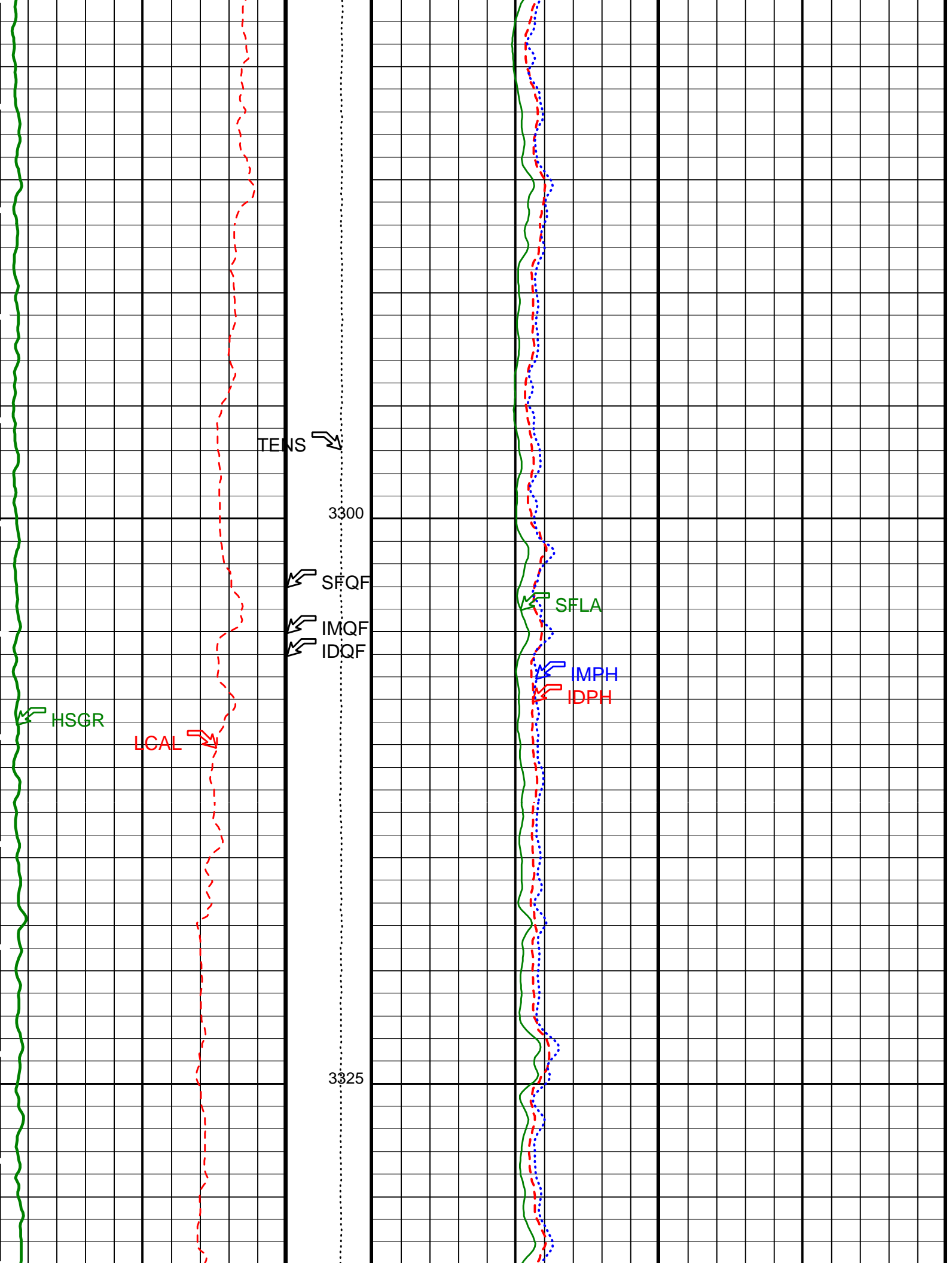
LCAL

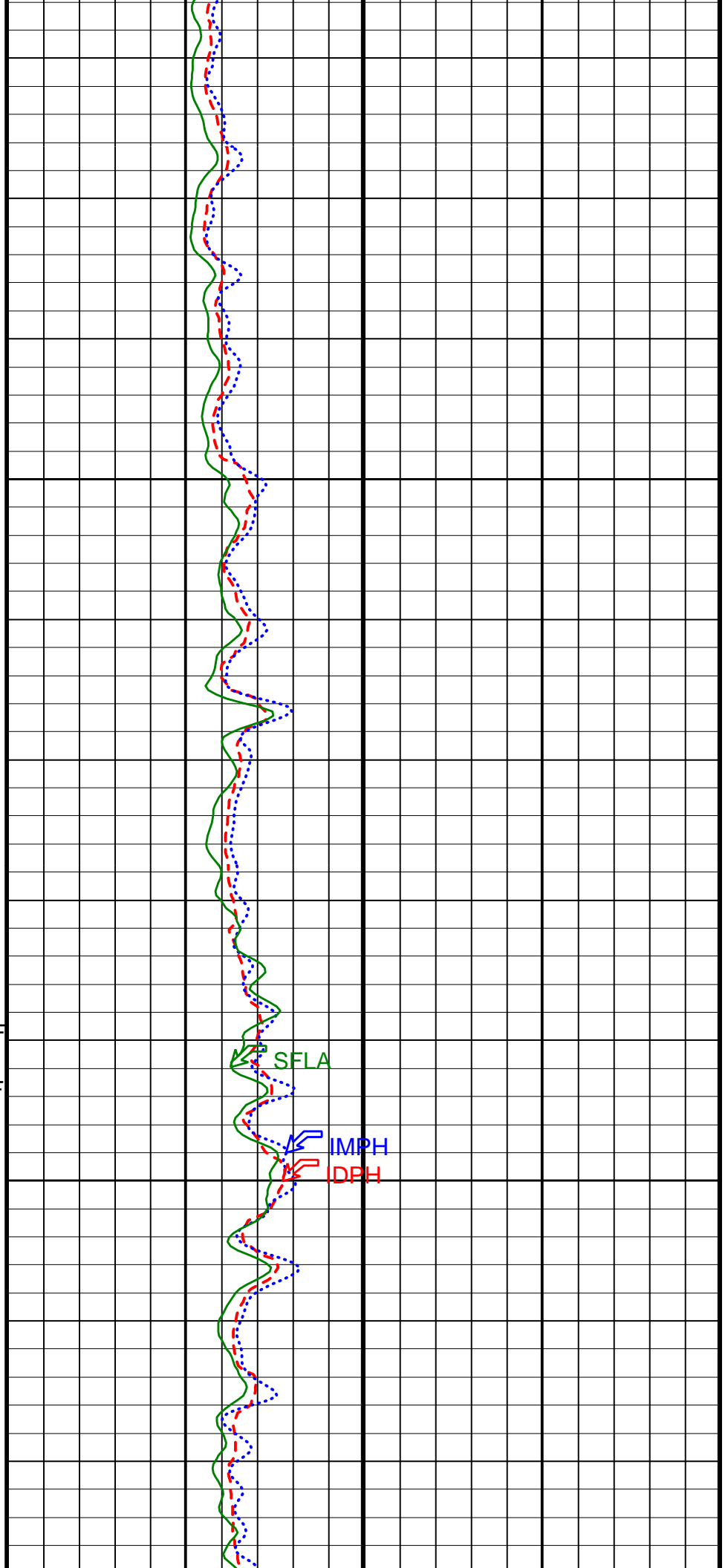
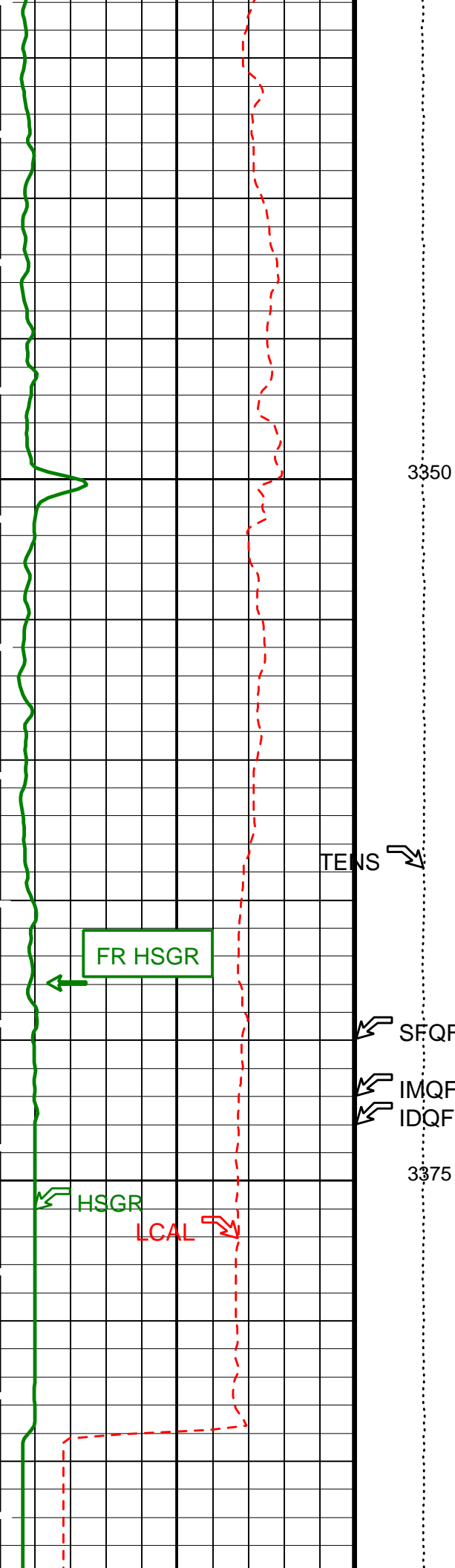
SFLA

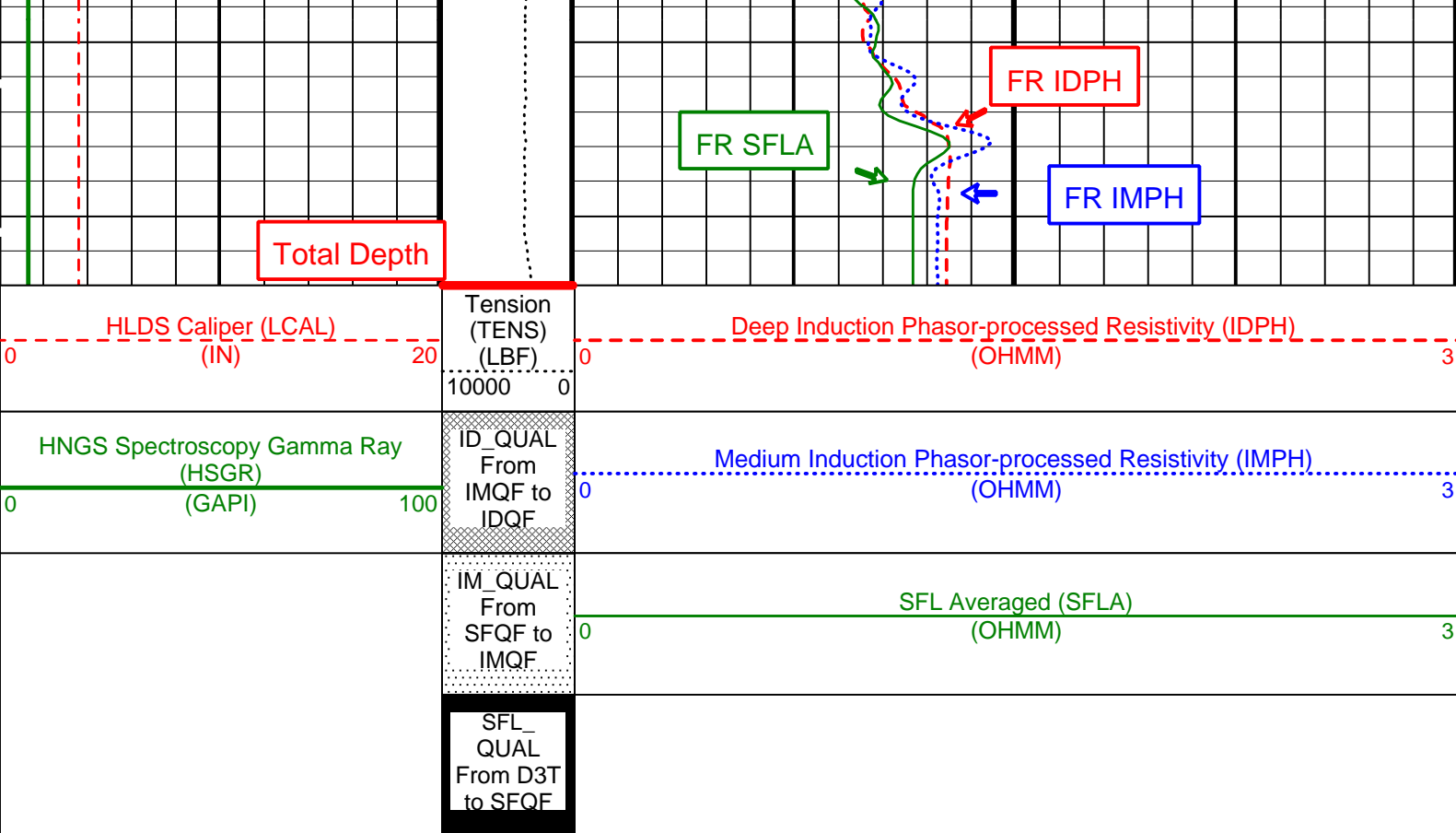
IMPH

IDPH









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) | 15 DEGC |
| DGF2 | Deep 20 kHz Gain Factor | 1.00789 |
| DPH2 | Deep 20 kHz Phase Shift | -0.152394 DEG |
| DRE2 | Deep Real 20 kHz Sonde Error Correction | 16.357 MM/M |
| DSR2 | Deep Sigma Reference (20 kHz) | 1843 MM/M |
| DXE2 | Deep Quad 20 kHz Sonde Error Correction | 64.6326 MM/M |
| GCSE | Generalized Caliper Selection | LCAL |
| GDEV | Average Angular Deviation of Borehole from Normal | 0 DEG |
| GGRD | Geothermal Gradient | 0.018227 DC/M |
| 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 |
| MGF2 | Medium 20 kHz Gain Factor | 1.02964 |
| MPH2 | Medium 20 kHz Phase Shift | -0.933067 DEG |
| MRE2 | Medium Real 20 kHz Sonde Error Correction | -1.78642 MM/M |
| MSR2 | Medium Sigma Reference (20 kHz) | 3250 MM/M |
| MXE2 | Medium Quad 20 kHz Sonde Error Correction | -34.2041 MM/M |
| SFCR | SFL Channel Ratio | 1000 |
| SHT | Surface Hole Temperature | 20 DEGC |
| APS-BA: Accelerator-Porosity Tool | | |
| BHS | Borehole Status | OPEN |
| BHT | Bottom Hole Temperature (used in calculations) | 15 DEGC |
| GCSE | Generalized Caliper Selection | LCAL |
| 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 |
| 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) | 15 DEGC |
| CSD1 | Inner Casing Outer Diameter | 0 IN |
| CSD2 | Outer Casing Outer Diameter | 0 IN |
| CSW1 | Inner Casing Weight | 0 LB/F |

| | | | |
|--------------------------|--|-----------------|------|
| 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 |
| 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 | -0.0089739 | |
| 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 | 0.833538 | |
| VBA2 | HNGS Detector 2 Variable Barite Factor Running Average | 0.846703 | |
| System and Miscellaneous | | | |
| BS | Bit Size | 11.438 | IN |
| DFD | Drilling Fluid Density | 1.10 | G/C3 |
| TD | Total Depth | 3392 | M |

Format: DITE_LinPhasor_1 Vertical Scale: 1:200 Graphics File Created: 11-Apr-2003 05:53

OP System Version: 10C0-306 MCM

| | | | |
|--------|-----------------|---------|-----------------|
| DIT-E | 10C0-306 | DTA-A | 10C0-306 |
| HLDS | SPC-2277-NUCL_b | NPLC-B | OP10-KP1 |
| APS-BA | SPC-2277-NUCL_b | HNGS-BA | SPC-2277-NUCL_b |
| DTC-H | 10C0-306 | | |

Output DLIS Files

| | | | | |
|-------------|-----------------------|------|----------|-------------------|
| DEFAULT | PI_LDL_APS_NGS_028LUP | FN:5 | PRODUCER | 11-Apr-2003 05:53 |
| TCOMBO_CUST | PI_LDL_APS_NGS_028LUP | FN:6 | PRODUCER | 11-Apr-2003 05:53 |

Output DLIS Files

| | | | | | | |
|-------------|-----------------------|------|----------|-------------------|----------|----------|
| DEFAULT | PI_LDL_APS_NGS_029LUP | FN:7 | PRODUCER | 11-Apr-2003 07:21 | 3397.0 M | 3338.8 M |
| TCOMBO_CUST | PI_LDL_APS_NGS_029LUP | FN:8 | PRODUCER | 11-Apr-2003 07:21 | 3397.0 M | 3338.8 M |

OP System Version: 10C0-306 MCM

REPEAT UP LOG

| | | | |
|--------|-----------------|---------|-----------------|
| DIT-E | 10C0-306 | DTA-A | 10C0-306 |
| HLDS | SPC-2277-NUCL_b | NPLC-B | OP10-KP1 |
| APS-BA | SPC-2277-NUCL_b | HNGS-BA | SPC-2277-NUCL_b |
| DTC-H | 10C0-306 | | |

Changed Parameter Summary

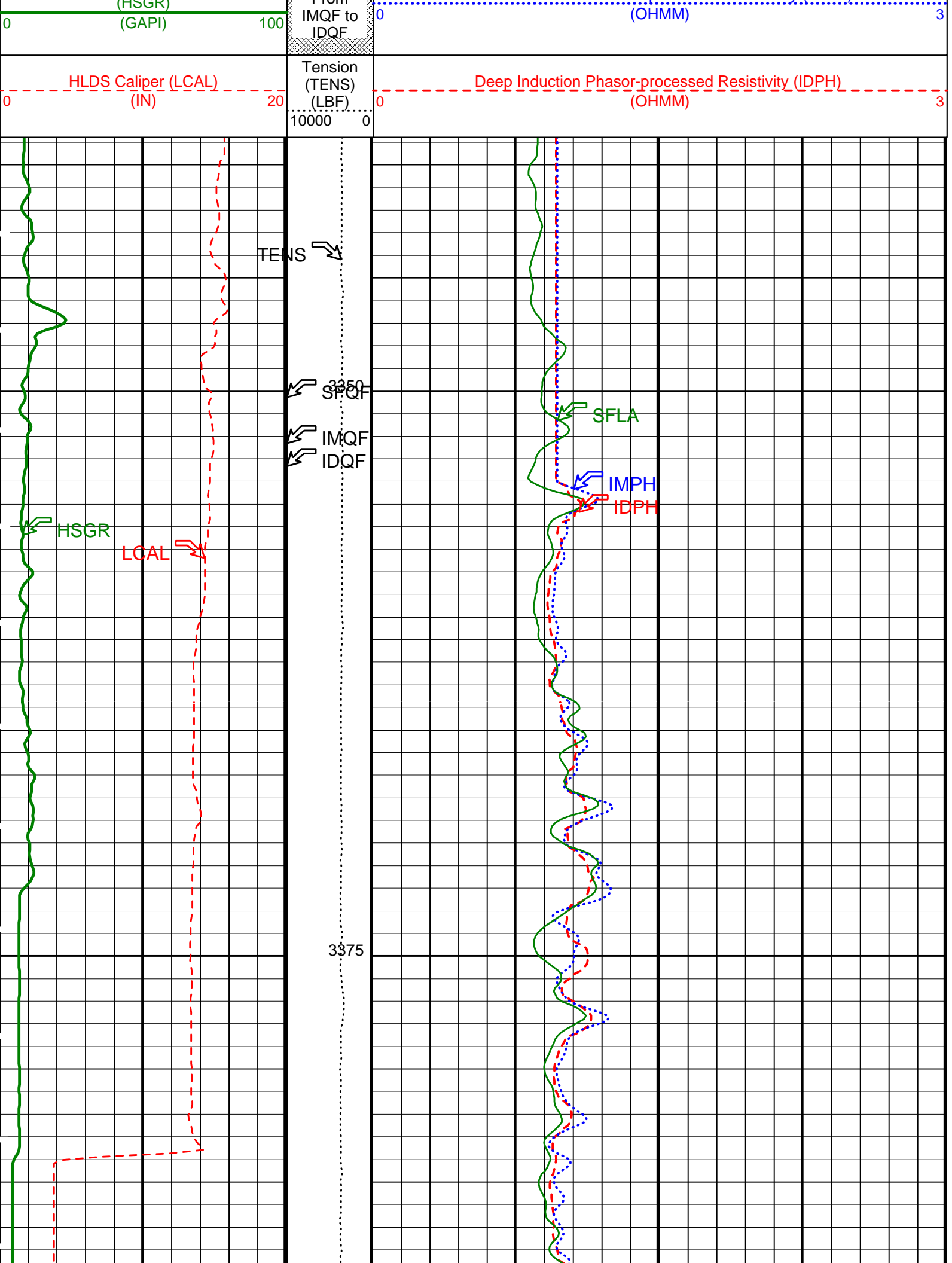
| DLIS Name | New Value | Previous Value | Depth & Time |
|-----------|-----------|----------------|-----------------|
| GCSE | LCAL | BS | 3148.9 07:23:06 |

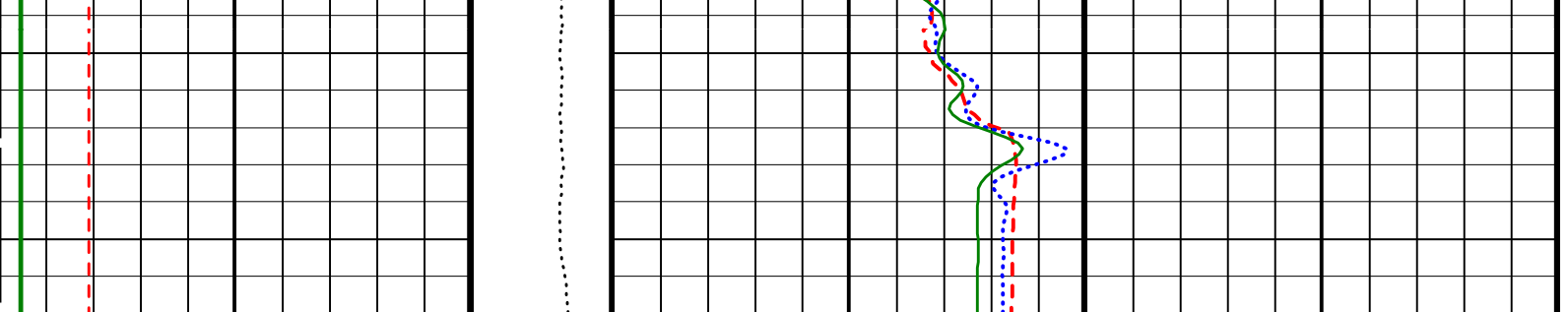
PIP SUMMARY

Time Mark Every 60 S

| | |
|---------------------------------|--|
| SFL_QUAL From D3T to SFQF | |
| IM_QUAL From SFQF to IMQF | SFL Averaged (SFLA) (OHMM) |
| ID_QUAL From | Medium Induction Phasor-processed Resistivity (IMPH) |

HNGS Spectroscopy Gamma Ray (HSGR)





| | | |
|---|--|---|
| <p>HLDS Caliper (LCAL) (IN)</p> <p>0 20</p> | <p>Tension (TENS) (LBF)</p> <p>10000 0</p> | <p>Deep Induction Phasor-processed Resistivity (IDPH) (OHMM)</p> <p>0 3</p> |
| <p>HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)</p> <p>0 100</p> | <p>ID_QUAL From IMQF to IDQF</p> | <p>Medium Induction Phasor-processed Resistivity (IMPH) (OHMM)</p> <p>0 3</p> |
| | <p>IM_QUAL From SFQF to IMQF</p> | <p>SFL Averaged (SFLA) (OHMM)</p> <p>0 3</p> |
| | <p>SFL_QUAL From D3T to SFQF</p> | |

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) | 15 DEGC |
| DGF2 | Deep 20 kHz Gain Factor | 1.00789 |
| DPH2 | Deep 20 kHz Phase Shift | -0.152394 DEG |
| DRE2 | Deep Real 20 kHz Sonde Error Correction | 16.357 MM/M |
| DSR2 | Deep Sigma Reference (20 kHz) | 1843 MM/M |
| DXE2 | Deep Quad 20 kHz Sonde Error Correction | 64.6326 MM/M |
| 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 |
| 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 |
| MGF2 | Medium 20 kHz Gain Factor | 1.02964 |
| MPH2 | Medium 20 kHz Phase Shift | -0.933067 DEG |
| MRE2 | Medium Real 20 kHz Sonde Error Correction | -1.78642 MM/M |
| MSR2 | Medium Sigma Reference (20 kHz) | 3250 MM/M |
| MXE2 | Medium Quad 20 kHz Sonde Error Correction | -34.2041 MM/M |
| SFCR | SFL Channel Ratio | 1000 |
| SHT | Surface Hole Temperature | 20 DEGC |
| APS-BA: Accelerator-Porosity Tool | | |
| BHS | Borehole Status | OPEN |
| BHT | Bottom Hole Temperature (used in calculations) | 15 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 |
| 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) | 15 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 | -0.00132207 | |
| 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 | 0.944171 | |
| VBA2 | HNGS Detector 2 Variable Barite Factor Running Average | 1.09247 | |
| System and Miscellaneous | | | |
| BS | Bit Size | 11.438 | IN |
| DFD | Drilling Fluid Density | 1.10 | G/C3 |
| TD | Total Depth | 3392 | M |

Format: DITE_LinPhasor_1 Vertical Scale: 1:200 Graphics File Created: 11-Apr-2003 07:21

OP System Version: 10C0-306

MCM

| | | | |
|--------|-----------------|---------|-----------------|
| DIT-E | 10C0-306 | DTA-A | 10C0-306 |
| HLDS | SPC-2277-NUCL_b | NPLC-B | OP10-KP1 |
| APS-BA | SPC-2277-NUCL_b | HNGS-BA | SPC-2277-NUCL_b |
| DTC-H | 10C0-306 | | |

Output DLIS Files

| | | | | |
|-------------|-----------------------|------|----------|-------------------|
| DEFAULT | PI_LDL_APS_NGS_029LUP | FN:7 | PRODUCER | 11-Apr-2003 07:21 |
| TCOMBO_CUST | PI_LDL_APS_NGS_029LUP | FN:8 | PRODUCER | 11-Apr-2003 07:21 |

Calibration and Check Summary

| Measurement | Nominal | Master | Before | After | Change | Limit | Units |
|---|---------|--------|--------|-------|-----------|-------|-------|
| Hostile Litho-Density Sonde Wellsite Calibration - Background Measurement | | | | | | | |
| Master: 28-Jan-2003 12:32 Before: 3-Apr-2003 16:44 After: 11-Apr-2003 10:50 | | | | | | | |
| SS Cs Resolution Bkg | 9.000 | 7.997 | 8.074 | 8.127 | 0.05253 | 1.800 | % |
| LS Cs Resolution Bkg | 9.000 | 8.222 | 8.192 | 8.190 | -0.002327 | 1.800 | % |
| LSW1 Background | 100.0 | 87.44 | 85.97 | 87.06 | 1.086 | 3.000 | CPS |
| LSW2 Background | 100.0 | 82.60 | 80.18 | 82.20 | 2.029 | 3.000 | CPS |
| LSW3 Background | 200.0 | 182.0 | 178.4 | 179.5 | 1.115 | 6.000 | CPS |
| LSW4 Background | 250.0 | 220.0 | 219.0 | 218.1 | -0.9896 | 7.500 | CPS |
| LSW5 Background | 600.0 | 504.6 | 502.1 | 501.1 | -1.074 | 18.00 | CPS |
| SSW1 Background | 100.0 | 97.37 | 96.86 | 96.61 | -0.2458 | 3.000 | CPS |
| SSW2 Background | 200.0 | 176.1 | 174.1 | 173.9 | -0.2379 | 6.000 | CPS |
| SSW3 Background | 500.0 | 478.1 | 471.2 | 473.6 | 2.417 | 15.00 | CPS |
| SSW4 Background | 270.0 | 244.9 | 243.7 | 243.4 | -0.3484 | 8.100 | CPS |
| SSW5 Background | 200.0 | 177.2 | 177.0 | 175.6 | -1.414 | 6.000 | CPS |
| Hostile Litho-Density Sonde Wellsite Calibration - Aluminum Measurement | | | | | | | |
| Master: 28-Jan-2003 14:04 | | | | | | | |
| LSW1 Aluminum | 600.0 | 584.9 | N/A | N/A | N/A | N/A | CPS |
| LSW2 Aluminum | 900.0 | 828.5 | N/A | N/A | N/A | N/A | CPS |
| LSW3 Aluminum | 1100 | 993.6 | N/A | N/A | N/A | N/A | CPS |
| LSW4 Aluminum | 580.0 | 504.0 | N/A | N/A | N/A | N/A | CPS |
| LSW5 Aluminum | 570.0 | 466.7 | N/A | N/A | N/A | N/A | CPS |
| SSW1 Aluminum | 2800 | 2650 | N/A | N/A | N/A | N/A | CPS |
| SSW2 Aluminum | 8000 | 7186 | N/A | N/A | N/A | N/A | CPS |
| SSW3 Aluminum | 11600 | 9950 | N/A | N/A | N/A | N/A | CPS |
| SSW4 Aluminum | 5000 | 4165 | N/A | N/A | N/A | N/A | CPS |
| SSW5 Aluminum | 660.0 | 540.9 | N/A | N/A | N/A | N/A | CPS |
| Hostile Litho-Density Sonde Wellsite Calibration - Lithology Measurement | | | | | | | |
| Master: 28-Jan-2003 13:58 | | | | | | | |
| LSW1 Iron | 400.0 | 397.9 | N/A | N/A | N/A | N/A | CPS |

| | | | | | | | |
|-----------|-------|-------|-----|-----|-----|-----|-----|
| LSW2 Iron | 730.0 | 669.8 | N/A | N/A | N/A | N/A | CPS |
| LSW3 Iron | 1000 | 887.5 | N/A | N/A | N/A | N/A | CPS |
| LSW4 Iron | 520.0 | 463.0 | N/A | N/A | N/A | N/A | CPS |
| LSW5 Iron | 470.0 | 431.7 | N/A | N/A | N/A | N/A | CPS |
| SSW1 Iron | 2100 | 1942 | N/A | N/A | N/A | N/A | CPS |
| SSW2 Iron | 6800 | 6035 | N/A | N/A | N/A | N/A | CPS |
| SSW3 Iron | 10800 | 9160 | N/A | N/A | N/A | N/A | CPS |
| SSW4 Iron | 4600 | 3849 | N/A | N/A | N/A | N/A | CPS |
| SSW5 Iron | 580.0 | 487.2 | N/A | N/A | N/A | N/A | CPS |

Hostile Litho-Density Sonde Wellsite Calibration - Caliper Calibration

Before: 3-Apr-2003 16:33

| | | | | | | | |
|-------------------------|-------|-----|-------|-----|-----|-----|----|
| HLDS Caliper Small Ring | 3.500 | N/A | 3.486 | N/A | N/A | N/A | IN |
| HLDS Caliper Large Ring | 18.50 | N/A | 20.46 | N/A | N/A | N/A | IN |

Accelerator-Porosity Tool Wellsite Calibration - Detector Background

Master: 4-Feb-2003 3:07 Before: 19-Mar-2003 7:58 After: 11-Apr-2003 10:43

| | | | | | | | |
|-----------------------------|-------|-------|-------|-------|---------|-----|-----|
| Near Det Bkg Cntrate | 30.00 | 33.33 | 32.30 | 31.89 | -0.4166 | N/A | CPS |
| Far Det Bkg Cntrate | 30.00 | 33.92 | 31.07 | 32.29 | 1.217 | N/A | CPS |
| Array-1 Det Bkg Cntrate | 30.00 | 29.51 | 28.70 | 28.78 | 0.08022 | N/A | CPS |
| Array-2 Det Bkg Cntrate | 30.00 | 29.89 | 30.55 | 29.47 | -1.074 | N/A | CPS |
| Array Therm Det Bkg Cntrate | 30.00 | 32.16 | 31.86 | 33.90 | 2.038 | N/A | CPS |

Accelerator-Porosity Tool Wellsite Calibration - Calibration Ratios

Master: 4-Feb-2003 3:07

| | | | | | | |
|------------------------------|--------|--------|-----|-----|-----|-----|
| Near/Far Calibration Ratio | 0.9250 | 0.8887 | N/A | N/A | N/A | N/A |
| Near/Array Calibration Ratio | 1.030 | 1.054 | N/A | N/A | N/A | N/A |
| Near/Array Cal Ratio Up/Down | 1.000 | 1.002 | N/A | N/A | N/A | N/A |

Accelerator-Porosity Tool Wellsite Calibration - Tank Check

Master: 4-Feb-2003 3:08

| | | | | | | | |
|---------------------------|-------|--------|-----|-----|-----|-----|----|
| Array-1 Standoff Porosity | 11.75 | 11.53 | N/A | N/A | N/A | N/A | PU |
| Array-2 Standoff Porosity | 11.75 | 11.63 | N/A | N/A | N/A | N/A | PU |
| Average Slowing Down Time | 6.000 | 5.870 | N/A | N/A | N/A | N/A | US |
| Array-1 SDT Ratio Up/Down | 1.000 | 0.9864 | N/A | N/A | N/A | N/A | |
| Array-2 SDT Ratio Up/Down | 1.000 | 1.000 | N/A | N/A | N/A | N/A | |
| Sigma Formation | 27.50 | 27.18 | N/A | N/A | N/A | N/A | CU |

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check

Master: 8-Apr-2003 0:26 Before: 8-Apr-2003 0:33 After: 11-Apr-2003 10:45

| | | | | | | | |
|------------------|-------|-------|-------|-------|----------|-------|------|
| Na 511 Peak Loc | 40.00 | 40.64 | 40.63 | 40.60 | -0.03233 | 1.000 | |
| Na 511 Peak Res | 15.50 | 16.79 | 16.69 | 16.13 | -0.5578 | 2.000 | % |
| High Voltage | 1150 | 1207 | 1207 | 1214 | 6.768 | 30.00 | V |
| Na 1785 Peak Loc | 142.6 | 145.7 | 145.2 | 145.7 | 0.4681 | 7.000 | |
| Na 1785 Peak Res | 8.500 | 8.630 | 9.496 | 8.847 | -0.6485 | 2.000 | % |
| Temperature | 15.50 | 27.08 | 27.12 | 26.16 | -0.9533 | N/A | DEGC |
| Na Count Rate | 45.00 | 41.54 | 41.75 | 42.34 | 0.5915 | 8.000 | CPS |

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check

Master: 8-Apr-2003 0:26 Before: 8-Apr-2003 0:33 After: 11-Apr-2003 10:45

| | | | | | | | |
|------------------|-------|-------|-------|-------|----------|-------|------|
| Na 511 Peak Loc | 40.00 | 40.58 | 40.51 | 40.58 | 0.06544 | 1.000 | |
| Na 511 Peak Res | 15.50 | 16.37 | 16.55 | 16.53 | -0.01357 | 2.000 | % |
| High Voltage | 1150 | 1235 | 1235 | 1242 | 7.090 | 30.00 | V |
| Na 1785 Peak Loc | 142.6 | 144.5 | 144.2 | 144.6 | 0.4250 | 7.000 | |
| Na 1785 Peak Res | 8.500 | 9.565 | 9.586 | 9.119 | -0.4670 | 2.000 | % |
| Temperature | 15.50 | 26.27 | 26.30 | 26.34 | 0.04392 | N/A | DEGC |
| Na Count Rate | 45.00 | 41.56 | 41.81 | 42.07 | 0.2646 | 8.000 | CPS |

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Ratio Of Detector 1 To Detector 2

Master: 8-Apr-2003 0:26 Before: 8-Apr-2003 0:33 After: 11-Apr-2003 10:45

| | | | | | | |
|------------------------------|-------|--------|--------|-------|----------|---------|
| Coincidence Count Rate Ratio | 1.000 | 0.9996 | 0.9991 | 1.006 | 0.006938 | 0.05000 |
|------------------------------|-------|--------|--------|-------|----------|---------|

Accelerator-Porosity Tool - Detector Plateau Settings :

| | |
|--------------------------------|--------|
| Near Detector Plateau Setting | 1728 V |
| Far Detector Plateau Setting | 2073 V |
| Array Detector Plateau Setting | 1958 V |

Dual Induction - E / Equipment Identification

Primary Equipment:

| | | |
|--------------------------|----------|-----|
| Dual Induction Sonde | DIS - HB | 442 |
| Dual Induction Cartridge | DIC - EB | 438 |

Auxiliary Equipment:

| | | |
|-----------------------|----------|-----|
| Mass Isolated Housing | MIH - ZA | 417 |
|-----------------------|----------|-----|

| Dual Induction - E Wellsite Calibration | | | | | | | | | | | | |
|---|-----------------------------|--------------------|--------------------|--------|---------------------------|---------------------|--------------------|-----------------------|---------------------|--------------------|--------------------|--|
| Induction Electronics (10 kHz) | | | | | | | | | | | | |
| Phase | ID Elect Real Offset 10 kHz | MM/M | Value | Phase | ID Elect Real Gain 10 kHz | Value | Phase | ID Elect Phase 10 kHz | DEG | Value | | |
| Before | | | 38.09 | Before | | 0.9963 | Before | | | 9.455 | | |
| | -262.8 (Minimum) | 37.15 (Nominal) | 337.2 (Maximum) | | 0.8294 (Minimum) | 0.9794 (Nominal) | 1.171 (Maximum) | | 0.6325 (Minimum) | 10.63 (Nominal) | 20.63 (Maximum) | |
| Phase | ID Elect Quad Offset 10 kHz | MM/M | Value | Phase | ID Elect Quad Gain 10 kHz | Value | Phase | IM Elect Phase 10 kHz | DEG | Value | | |
| Before | | | 22.59 | Before | | 0.9845 | Before | | | 13.00 | | |
| | -277.5 (Minimum) | 22.53 (Nominal) | 322.5 (Maximum) | | 0.8193 (Minimum) | 0.9693 (Nominal) | 1.157 (Maximum) | | 3.310 (Minimum) | 13.31 (Nominal) | 23.31 (Maximum) | |
| Phase | IM Elect Real Offset 10 kHz | MM/M | Value | Phase | IM Elect Real Gain 10 kHz | Value | | | | | | |
| Before | | | 95.79 | Before | | 0.9546 | | | | | | |
| | -453.5 (Minimum) | 96.54 (Nominal) | 646.5 (Maximum) | | 0.8074 (Minimum) | 0.9574 (Nominal) | 1.140 (Maximum) | | | | | |
| Phase | IM Elect Quad Offset 10 kHz | MM/M | Value | Phase | IM Elect Quad Gain 10 kHz | Value | | | | | | |
| Before | | | 93.60 | Before | | 0.9516 | | | | | | |
| | -454.8 (Minimum) | 95.18 (Nominal) | 645.2 (Maximum) | | 0.8055 (Minimum) | 0.9555 (Nominal) | 1.137 (Maximum) | | | | | |

Before: 1-Apr-2003 6:19

| Dual Induction - E Wellsite Calibration | | | | | | | | | | | | |
|---|-----------------------------|--------------------|--------------------|--------|---------------------------|---------------------|--------------------|-----------------------|---------------------|--------------------|--------------------|--|
| Induction Electronics (20 kHz) | | | | | | | | | | | | |
| Phase | ID Elect Real Offset 20 kHz | MM/M | Value | Phase | ID Elect Real Gain 20 kHz | Value | Phase | ID Elect Phase 20 kHz | DEG | Value | | |
| Before | | | 14.92 | Before | | 1.016 | Before | | | 7.671 | | |
| | -110.3 (Minimum) | 14.68 (Nominal) | 139.7 (Maximum) | | 0.8551 (Minimum) | 1.005 (Nominal) | 1.207 (Maximum) | | -5.718 (Minimum) | 9.282 (Nominal) | 24.28 (Maximum) | |
| Phase | ID Elect Quad Offset 20 kHz | MM/M | Value | Phase | ID Elect Quad Gain 20 kHz | Value | Phase | IM Elect Phase 20 kHz | DEG | Value | | |
| Before | | | 9.026 | Before | | 1.004 | Before | | | 11.50 | | |
| | -115.9 (Minimum) | 9.089 (Nominal) | 134.1 (Maximum) | | 0.8445 (Minimum) | 0.9945 (Nominal) | 1.192 (Maximum) | | -2.653 (Minimum) | 12.35 (Nominal) | 27.35 (Maximum) | |
| Phase | IM Elect Real Offset 20 kHz | MM/M | Value | Phase | IM Elect Real Gain 20 kHz | Value | | | | | | |
| Before | | | 39.93 | Before | | 1.014 | | | | | | |
| | -184.7 (Minimum) | 40.31 (Nominal) | 265.3 (Maximum) | | 0.8587 (Minimum) | 1.009 (Nominal) | 1.212 (Maximum) | | | | | |
| Phase | IM Elect Quad Offset 20 kHz | MM/M | Value | Phase | IM Elect Quad Gain 20 kHz | Value | | | | | | |
| Before | | | 39.12 | Before | | 1.011 | | | | | | |
| | -185.2 (Minimum) | 39.80 (Nominal) | 264.8 (Maximum) | | 0.8566 (Minimum) | 1.007 (Nominal) | 1.209 (Maximum) | | | | | |

Before: 1-Apr-2003 6:20

| Dual Induction - E Wellsite Calibration | | | | | | | | | | | | |
|---|-----------------------------|--------------------|--------------------|--------|---------------------------|---------------------|--------------------|-----------------------|--------------------|--------------------|--------------------|--|
| Induction Electronics (40 kHz) | | | | | | | | | | | | |
| Phase | ID Elect Real Offset 40 kHz | MM/M | Value | Phase | ID Elect Real Gain 40 kHz | Value | Phase | ID Elect Phase 40 kHz | DEG | Value | | |
| Before | | | 9.697 | Before | | 0.9950 | Before | | | 25.87 | | |
| | -75.43 (Minimum) | 9.570 (Nominal) | 94.57 (Maximum) | | 0.8395 (Minimum) | 0.9895 (Nominal) | 1.185 (Maximum) | | 9.068 (Minimum) | 29.07 (Nominal) | 49.07 (Maximum) | |
| Phase | ID Elect Quad Offset 40 kHz | MM/M | Value | Phase | ID Elect Quad Gain 40 kHz | Value | Phase | IM Elect Phase 40 kHz | DEG | Value | | |
| Before | | | 5.867 | Before | | 0.9817 | Before | | | 29.89 | | |
| | -79.10 (Minimum) | 5.897 (Nominal) | 90.90 (Maximum) | | 0.8281 (Minimum) | 0.9781 (Nominal) | 1.169 (Maximum) | | 12.68 (Minimum) | 32.68 (Nominal) | 52.68 (Maximum) | |
| Phase | IM Elect Real Offset 40 kHz | MM/M | Value | Phase | IM Elect Real Gain 40 kHz | Value | | | | | | |
| Before | | | 26.05 | Before | | 1.028 | | | | | | |
| | -103.8 (Minimum) | 26.19 (Nominal) | 156.2 (Maximum) | | 0.8673 (Minimum) | 1.017 (Nominal) | 1.224 (Maximum) | | | | | |
| Phase | IM Elect Quad Offset 40 kHz | MM/M | Value | Phase | IM Elect Quad Gain 40 kHz | Value | | | | | | |
| Before | | | 25.56 | Before | | 1.024 | | | | | | |
| | -104.1 (Minimum) | 25.92 (Nominal) | 155.9 (Maximum) | | 0.8649 (Minimum) | 1.015 (Nominal) | 1.221 (Maximum) | | | | | |

Before: 1-Apr-2003 6:21

| Dual Induction - E Wellsite Calibration | | | | | | |
|---|--------------------|----|-------|-------|------------------|-------|
| SFL Electronics | | | | | | |
| Phase | SFL Voltage Offset | MV | Value | Phase | SFL Voltage Gain | Value |
| | | | | | | |

| | | | | | |
|-------------------------|--|----------|--------|--|--------|
| Phase | SFL Voltage Offset MA | Value | Phase | SFL Voltage Gain | Value |
| Before | | 1.165 | Before | | 1.014 |
| | -15.00 (Minimum) 0 (Nominal) 15.00 (Maximum) | | | 0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum) | |
| Phase | SFL Current Offset MA | Value | Phase | SFL Current Gain | Value |
| Before | | 0.006788 | Before | | 0.9926 |
| | -0.6000 (Minimum) 0 (Nominal) 0.6000 (Maximum) | | | 0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum) | |
| Before: 1-Apr-2003 6:22 | | | | | |

| Dual Induction - E Wellsite Calibration | | | | | | | | | | |
|--|--|------|-------|-------|---|-----------|-------|---|------|-----------|
| Electronics Calibration Changes Files/Depth Intervals: 28: 3397.0 - 3054.1 29: 3397.0 - 3338.8 | | | | | | | | | | |
| Phase | ID (R > 27 OHM-M) | MM/M | Value | Phase | ID (R < 27 OHM-M) % | Value | Phase | SFL (R < 1 OHM-M) | OHMM | Value |
| After | | | 0 | After | | 0.0001392 | After | | | 0.0006007 |
| | 0 (Minimum) 0 (Nominal) 0.7500 (Maximum) | | | | 0 (Minimum) 0 (Nominal) 2.000 (Maximum) | | | 0 (Minimum) 0 (Nominal) 0.02000 (Maximum) | | |
| Phase | IM (R > 27 OHM-M) | MM/M | Value | Phase | IM (R < 27 OHM-M) % | Value | | | | |
| After | | | 0 | After | | 0.0001050 | | | | |
| | 0 (Minimum) 0 (Nominal) 0.7500 (Maximum) | | | | 0 (Minimum) 0 (Nominal) 2.000 (Maximum) | | | | | |
| Phase | SFL (R > 27 OHM-M) | MM/M | Value | Phase | SFL (R < 27 OHM-M) % | Value | | | | |
| After | | | 0 | After | | 0.0005059 | | | | |
| | 0 (Minimum) 0 (Nominal) 0.7500 (Maximum) | | | | 0 (Minimum) 0 (Nominal) 2.000 (Maximum) | | | | | |
| After: 11-Apr-2003 7:47 | | | | | | | | | | |

| Hostile Litho-Density Sonde / Equipment Identification | | | |
|--|----------|------|--|
| Primary Equipment: | | | |
| Hostile Litho Density Sonde | HLDS - D | 45 | |
| Hostile Litho Density High Voltage | HLDV - D | 35 | |
| Gamma Source Radioactive | GSR - Z | 1846 | |
| Auxiliary Equipment: | | | |
| Hostile Litho Density Pad | HLDP - C | 45 | |
| Hostile Litho Density High Voltage Housi | HEH - H | 35 | |

| Hostile Litho-Density Sonde Wellsite Calibration | | | | | | | | | |
|--|--|-------|--------|--|-------|--------|---|-------|--|
| Background Measurement | | | | | | | | | |
| Phase | SS Cs Resolution Bkg % | Value | Phase | LS Cs Resolution Bkg % | Value | Phase | LSW1 Background CPS | Value | |
| Master | | 7.997 | Master | | 8.222 | Master | | 87.44 | |
| Before | | 8.074 | Before | | 8.192 | Before | | 85.97 | |
| After | | 8.127 | After | | 8.190 | After | | 87.06 | |
| | 7.000 (Minimum) 9.000 (Nominal) 11.000 (Maximum) | | | 7.000 (Minimum) 9.000 (Nominal) 11.000 (Maximum) | | | 55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum) | | |
| Phase | LSW2 Background CPS | Value | Phase | LSW3 Background CPS | Value | Phase | LSW4 Background CPS | Value | |
| Master | | 82.60 | Master | | 182.0 | Master | | 220.0 | |
| Before | | 80.18 | Before | | 178.4 | Before | | 219.0 | |
| After | | 82.20 | After | | 179.5 | After | | 218.1 | |
| | 50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum) | | | 110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum) | | | 140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum) | | |
| Phase | LSW5 Background CPS | Value | Phase | SSW1 Background CPS | Value | Phase | SSW2 Background CPS | Value | |
| Master | | 504.6 | Master | | 97.37 | Master | | 176.1 | |
| Before | | 502.1 | Before | | 96.86 | Before | | 174.1 | |
| After | | 501.1 | After | | 96.61 | After | | 173.9 | |
| | 330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum) | | | 55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum) | | | 100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum) | | |
| Phase | SSW3 Background CPS | Value | Phase | SSW4 Background CPS | Value | Phase | SSW5 Background CPS | Value | |
| Master | | 478.1 | Master | | 244.9 | Master | | 177.2 | |
| Before | | 471.2 | Before | | 243.7 | Before | | 177.0 | |
| After | | 473.6 | After | | 243.4 | After | | 175.6 | |

Nuclear Porosity Lithology Cartridge - B / Equipment Identification

| | | |
|--------------------------------------|----------|----|
| Primary Equipment: NPLC Cartridge | NPLC - B | 79 |
| Auxiliary Equipment: NPLC Housing | NPH - B | 82 |

Accelerator-Porosity Tool / Equipment Identification

| | | |
|---|------------------------------------|------------------|
| Primary Equipment: Accelerator-Porosity Sonde APS Minitron | APS - BA MNTR - F | 22 4185 |
| Auxiliary Equipment: Accelerator-Porosity Housing APS Calibration Water Tank APS Aluminium Calibrator Sleeve | APH - AC SFT - 178 SFT - 281 | 22 4722 24 |

Accelerator-Porosity Tool Wellsite Calibration

Detector Background

| Phase | Near Det Bkg Cntrate CPS | Value | Phase | Far Det Bkg Cntrate CPS | Value | Phase | Array-1 Det Bkg Cntrate CPS | Value |
|---|-----------------------------|-------|---|---------------------------------|-------|---|-----------------------------|-------|
| Master | | 33.33 | Master | | 33.92 | Master | | 29.51 |
| Before | | 32.30 | Before | | 31.07 | Before | | 28.70 |
| After | | 31.89 | After | | 32.29 | After | | 28.78 |
| 1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum) | | | 1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum) | | | 1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum) | | |
| Phase | Array-2 Det Bkg Cntrate CPS | Value | Phase | Array Therm Det Bkg Cntrate CPS | Value | | | |
| Master | | 29.89 | Master | | 32.16 | | | |
| Before | | 30.55 | Before | | 31.86 | | | |
| After | | 29.47 | After | | 33.90 | | | |
| 1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum) | | | 1.000 (Minimum) 30.00 (Nominal) 50.00 (Maximum) | | | | | |

Accelerator-Porosity Tool Wellsite Calibration

Calibration Ratios

| Phase | Near/Far Calibration Ratio | Value | Phase | Near/Array Calibration Ratio | Value | Phase | Near/Array Cal Ratio Up/Down | Value |
|---|----------------------------|--------|--|------------------------------|-------|--|------------------------------|-------|
| Master | | 0.8887 | Master | | 1.054 | Master | | 1.002 |
| 0.8000 (Minimum) 0.9250 (Nominal) 1.050 (Maximum) | | | 0.9000 (Minimum) 1.030 (Nominal) 1.170 (Maximum) | | | 0.9700 (Minimum) 1.000 (Nominal) 1.030 (Maximum) | | |

Accelerator-Porosity Tool Wellsite Calibration

Tank Check

| Phase | Array-1 Standoff Porosity PU | Value | Phase | Array-2 Standoff Porosity PU | Value | Phase | Average Slowing Down Time US | Value |
|--|------------------------------|--------|--|------------------------------|-------|---|------------------------------|-------|
| Master | | 11.53 | Master | | 11.63 | Master | | 5.870 |
| 9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum) | | | 9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum) | | | 5.500 (Minimum) 6.000 (Nominal) 6.250 (Maximum) | | |
| Phase | Array-1 SDT Ratio Up/Down | Value | Phase | Array-2 SDT Ratio Up/Down | Value | Phase | Sigma Formation CU | Value |
| Master | | 0.9864 | Master | | 1.000 | Master | | 27.18 |
| 0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum) | | | 0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum) | | | 20.00 (Minimum) 27.50 (Nominal) 35.00 (Maximum) | | |

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:

| | | |
|--|----------------------|-----------|
| Primary Equipment: HNGS Sonde | HNGS - BA | 77 |
| Auxiliary Equipment: HNGS Sonde Housing Gamma Source Radioactive | HNSH - BA GSR - U | 79 135 |

| Hostile Natural Gamma Ray Sonde Wellsite Calibration | | | | | | | | |
|--|---|-------|-------------------------|---|-------|--------------------------|--|-------|
| Detector 1 Check | | | | | | | | |
| Phase | Na 511 Peak Loc | Value | Phase | Na 511 Peak Res % | Value | Phase | High Voltage V | Value |
| Master | | 40.64 | Master | | 16.79 | Master | | 1207 |
| Before | | 40.63 | Before | | 16.69 | Before | | 1207 |
| After | | 40.60 | After | | 16.13 | After | | 1214 |
| | 37.50 (Minimum) 40.00 (Nominal) 42.50 (Maximum) | | | 12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum) | | | 900.0 (Minimum) 1150 (Nominal) 1600 (Maximum) | |
| Phase | Na 1785 Peak Loc | Value | Phase | Na 1785 Peak Res % | Value | Phase | Temperature DEGC | Value |
| Master | | 145.7 | Master | | 8.630 | Master | | 27.08 |
| Before | | 145.2 | Before | | 9.496 | Before | | 27.12 |
| After | | 145.7 | After | | 8.847 | After | | 26.16 |
| | 135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum) | | | 7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum) | | | -28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum) | |
| Phase | Na Count Rate CPS | Value | | | | | | |
| Master | | 41.54 | | | | | | |
| Before | | 41.75 | | | | | | |
| After | | 42.34 | | | | | | |
| | 10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum) | | | | | | | |
| Master: 8-Apr-2003 0:26 | | | Before: 8-Apr-2003 0:33 | | | After: 11-Apr-2003 10:45 | | |

| Hostile Natural Gamma Ray Sonde Wellsite Calibration | | | | | | | | |
|--|---|-------|-------------------------|---|-------|--------------------------|--|-------|
| Detector 2 Check | | | | | | | | |
| Phase | Na 511 Peak Loc | Value | Phase | Na 511 Peak Res % | Value | Phase | High Voltage V | Value |
| Master | | 40.58 | Master | | 16.37 | Master | | 1235 |
| Before | | 40.51 | Before | | 16.55 | Before | | 1235 |
| After | | 40.58 | After | | 16.53 | After | | 1242 |
| | 37.50 (Minimum) 40.00 (Nominal) 42.50 (Maximum) | | | 12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum) | | | 900.0 (Minimum) 1150 (Nominal) 1600 (Maximum) | |
| Phase | Na 1785 Peak Loc | Value | Phase | Na 1785 Peak Res % | Value | Phase | Temperature DEGC | Value |
| Master | | 144.5 | Master | | 9.565 | Master | | 26.27 |
| Before | | 144.2 | Before | | 9.586 | Before | | 26.30 |
| After | | 144.6 | After | | 9.119 | After | | 26.34 |
| | 135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum) | | | 7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum) | | | -28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum) | |
| Phase | Na Count Rate CPS | Value | | | | | | |
| Master | | 41.56 | | | | | | |
| Before | | 41.81 | | | | | | |
| After | | 42.07 | | | | | | |
| | 10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum) | | | | | | | |
| Master: 8-Apr-2003 0:26 | | | Before: 8-Apr-2003 0:33 | | | After: 11-Apr-2003 10:45 | | |

| Hostile Natural Gamma Ray Sonde Wellsite Calibration | | |
|--|--|--------|
| Ratio Of Detector 1 To Detector 2 | | |
| Phase | Coincidence Count Rate Ratio | Value |
| Master | | 0.9996 |
| Before | | 0.9991 |
| After | | 1.006 |
| | 0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum) | |

Master: 8-Apr-2003 0:26

Before: 8-Apr-2003 0:33

After: 11-Apr-2003 10:45

Company: Lamont Doherty

Schlumberger

Well: Leg 208, Site 1265A

Field: Walvis Ridge

Country: Africa

Ocean: Atlantic

Phasor Induction

Natural Gamma Ray