ADVANCED LOGIC TECHNOLOGY

WellCAD

Log Name:	BHTV - Image log
API Well Number:	36-017-900042
Well Name:	Newberry 55-29
Service Company:	
Operator:	Nicholas C. Davatzes and Steve Hickman
Field:	Newberry KGRA (Cascade Range)
County / Parish:	Deschutes
State / Province:	Oregon
Country:	USA

Elevations:

Kelly bushings:	31 ft
Drilling floor:	
Ground / sea floor:	
Permanent datum is:	GL
Permanent datum elevation:	5815 ft
Log is measured from:	4 ft above GL
Height above log datum:	
Drilling measured from:	KB
Height above drilling datum:	

Location Description:

- According to the casing shoe comparison, there is a -23 ft MD difference between the BHTV and Mud Log MD
  - BHTV Casing Shoe: 6439 ft MD
  - Mud Log Casing Shoe: 6462 MD (KB)

Other Services:

Long: 121.1856
Lat: 433.333

Sect: 29
Township: 21S
Range: 12E

Log interval is from: 6435 Log interval to: 8864.3 Depth unit: ft MD

Print type is: Scale ratio: 1 :

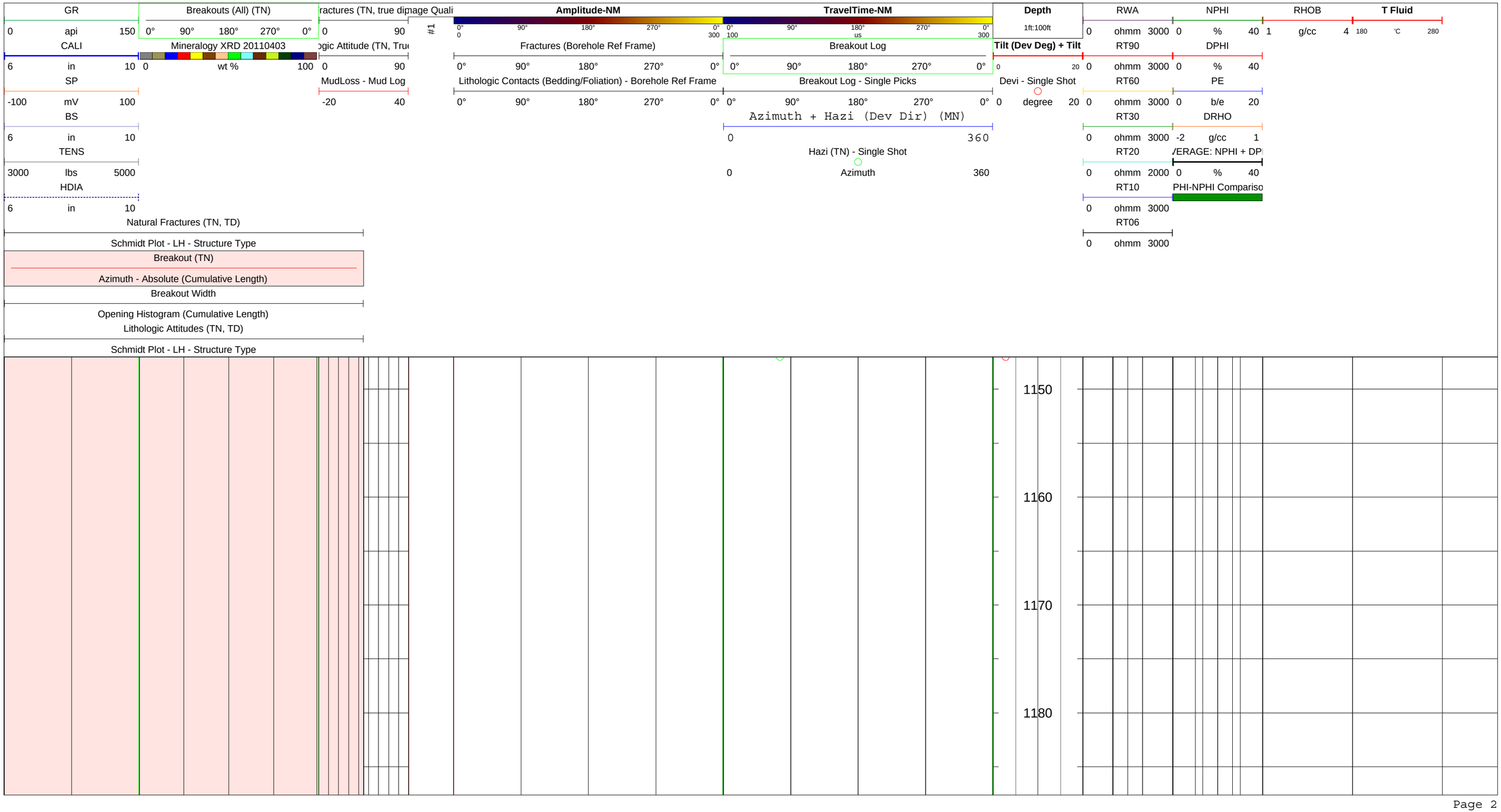
Acquisition dates from: (month/day/year) 10/22/2010 Acquisition dates to: (month/day/year) 10/23/2010 Scaled depth is:

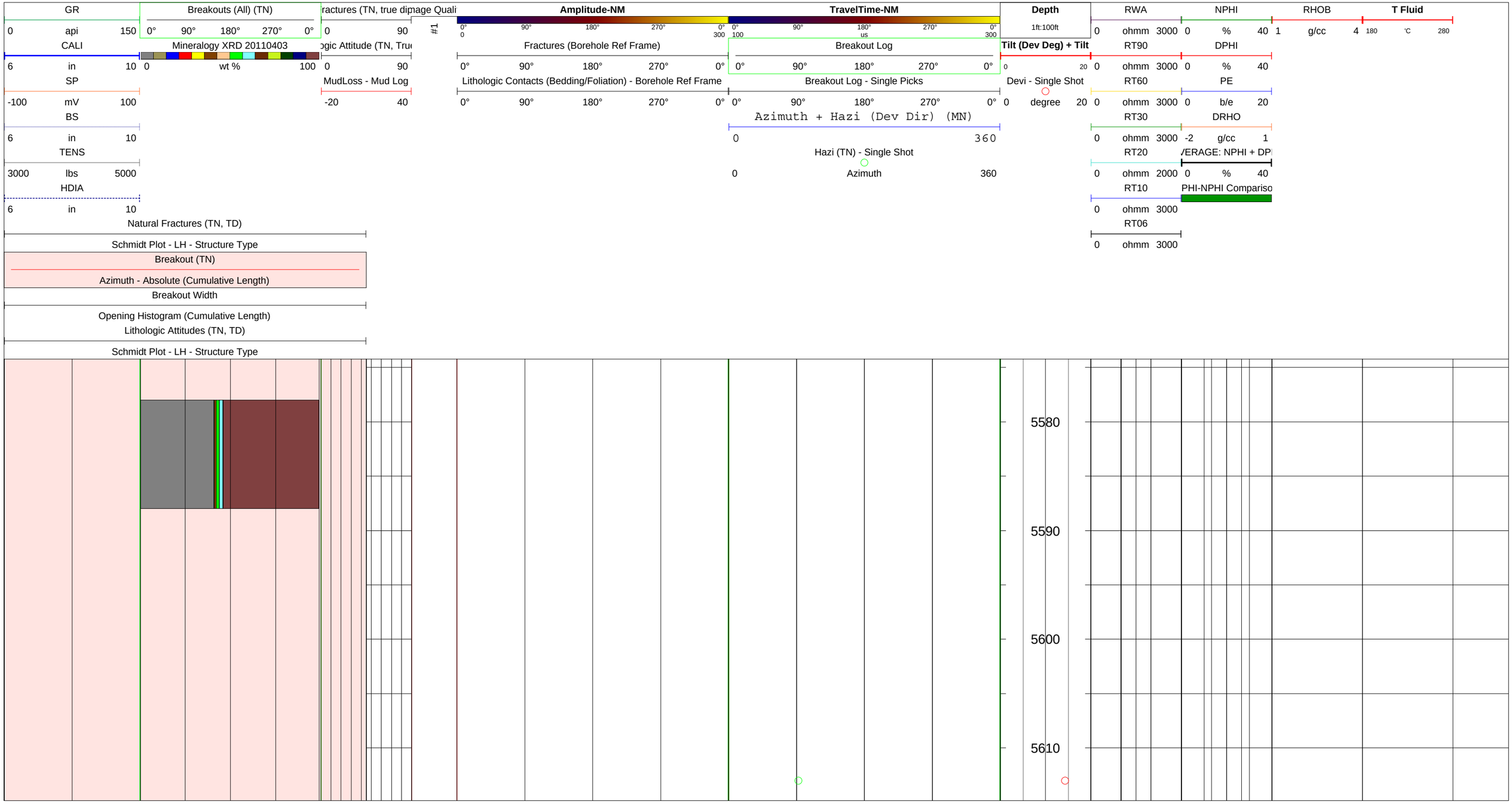
Feldspar Series
Quartz/Silica
Calcite
Hematite
Pyrite
SiO2
Chalcopyrite
Zeolilte/Analcime
Smectite Series
Kaolinite
Chlorite Series
Illite/Muscovite
Biotite
Epidote
Magnetite
Olivine Series
Plagioclase Series
Pyroxenes

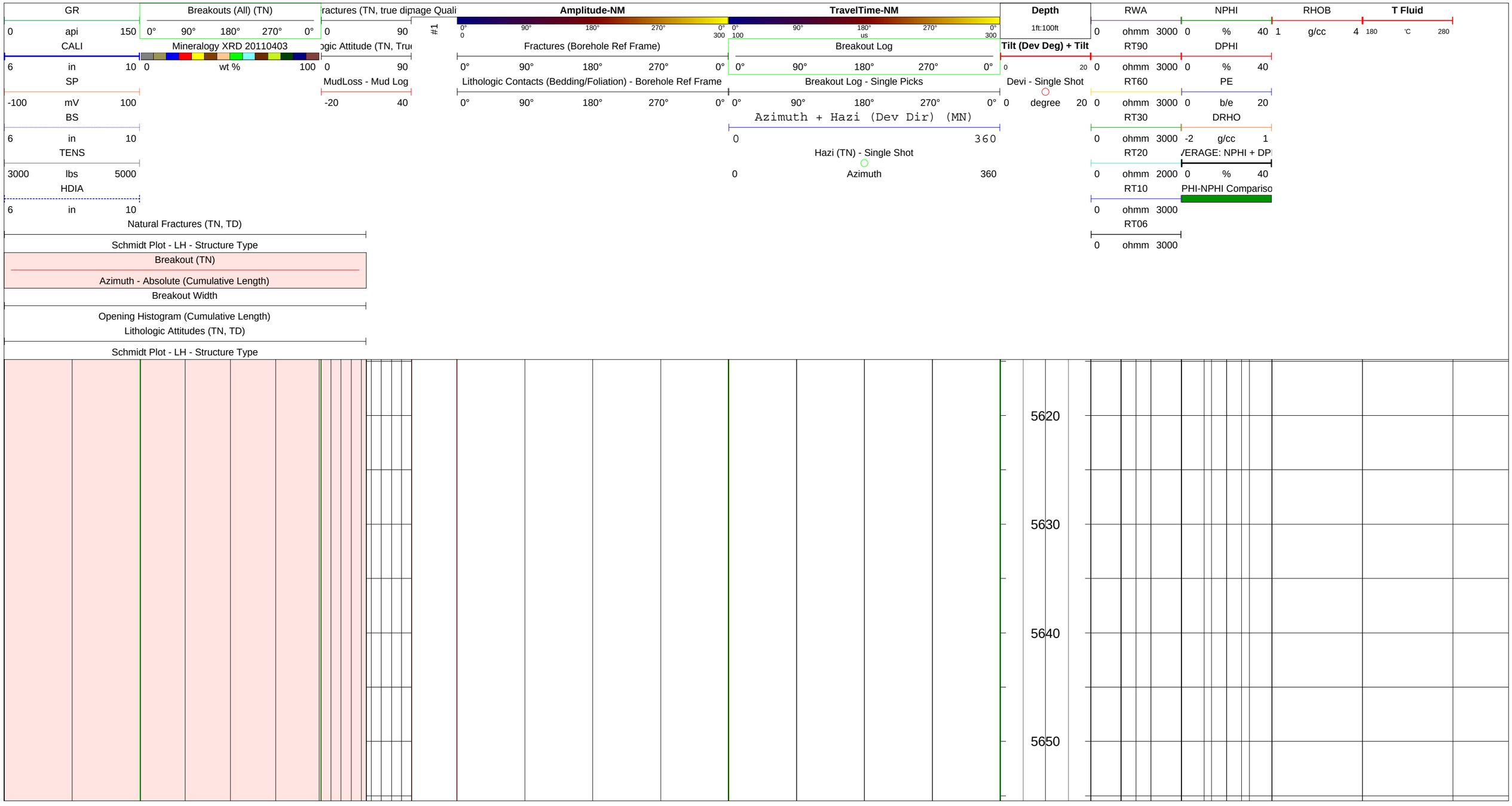
Undifferentiated
Major Joint / Fracture: Amp + TT
Minor Joint / Fracture: Amp + TT
Broken/Rubble/Breccia
Fracture / Joint: Amp
Bedding / Banding / Foliation
Lithologic Contact
Igneous Dike

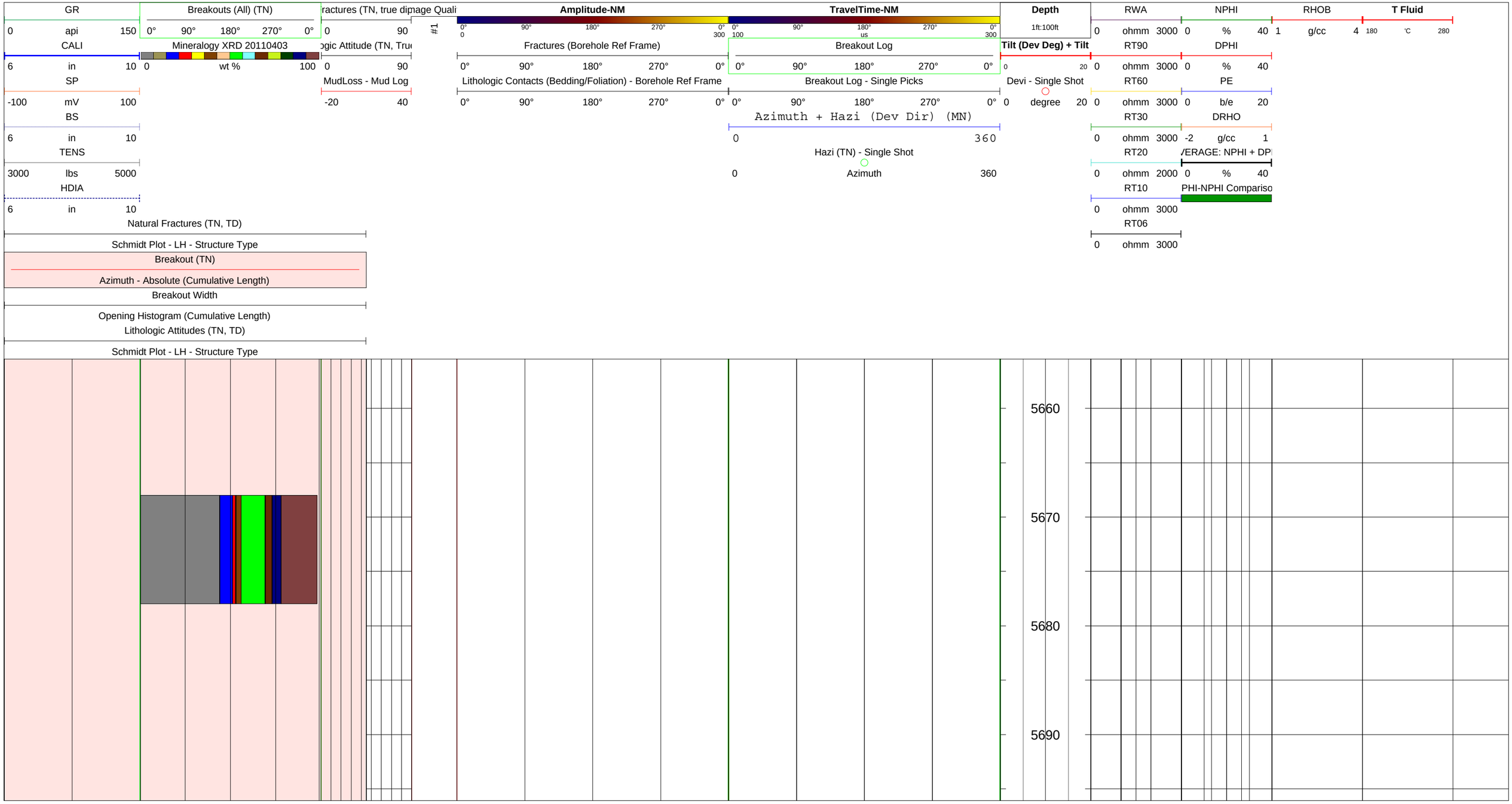
Breakout - Pair
Breakout - Single
Tensile Fracture
Petal-Centerline Fracture

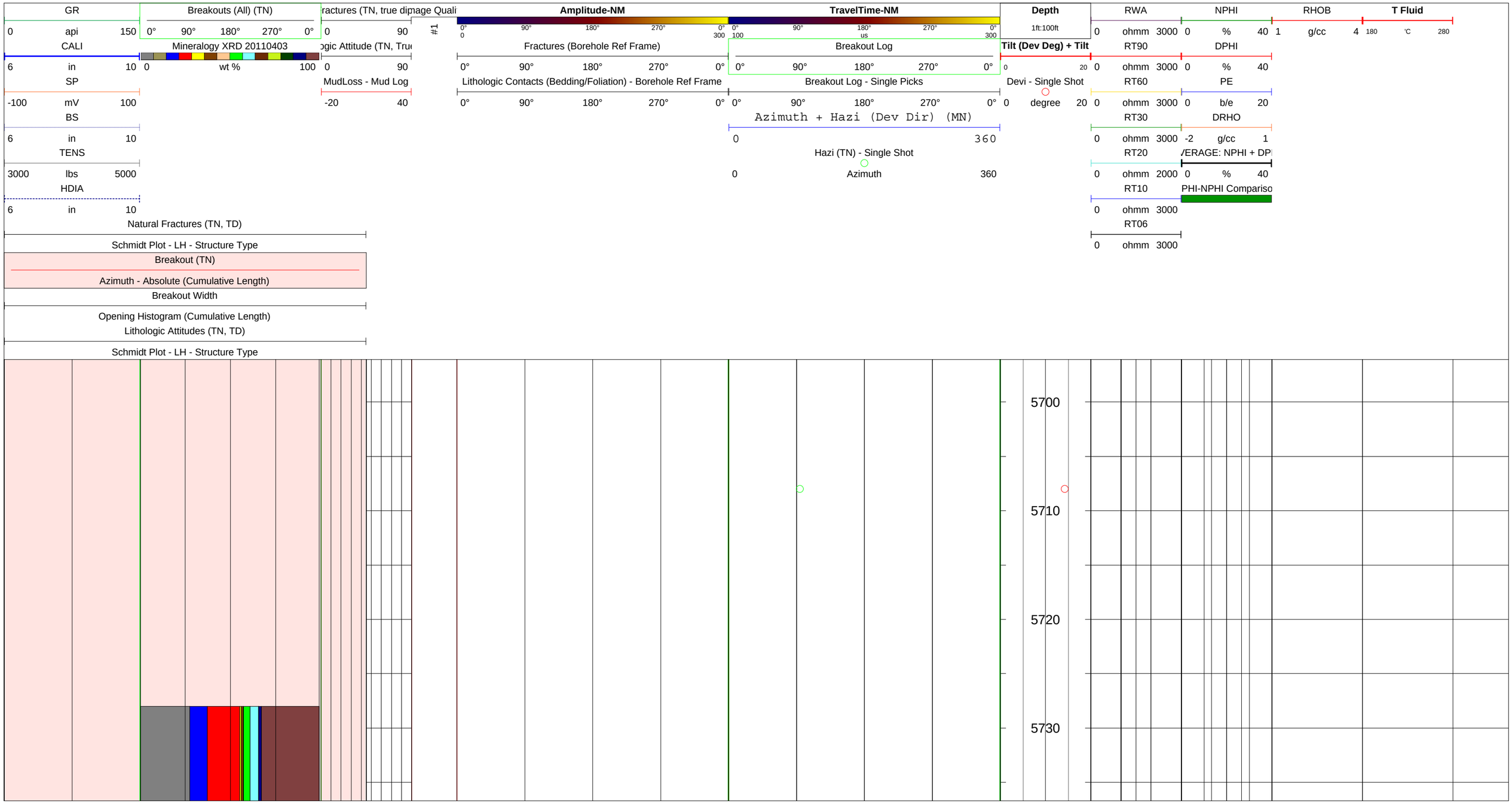
High - High Quality
Med - Medium Quality
Low - Low Quality
X - Unusable

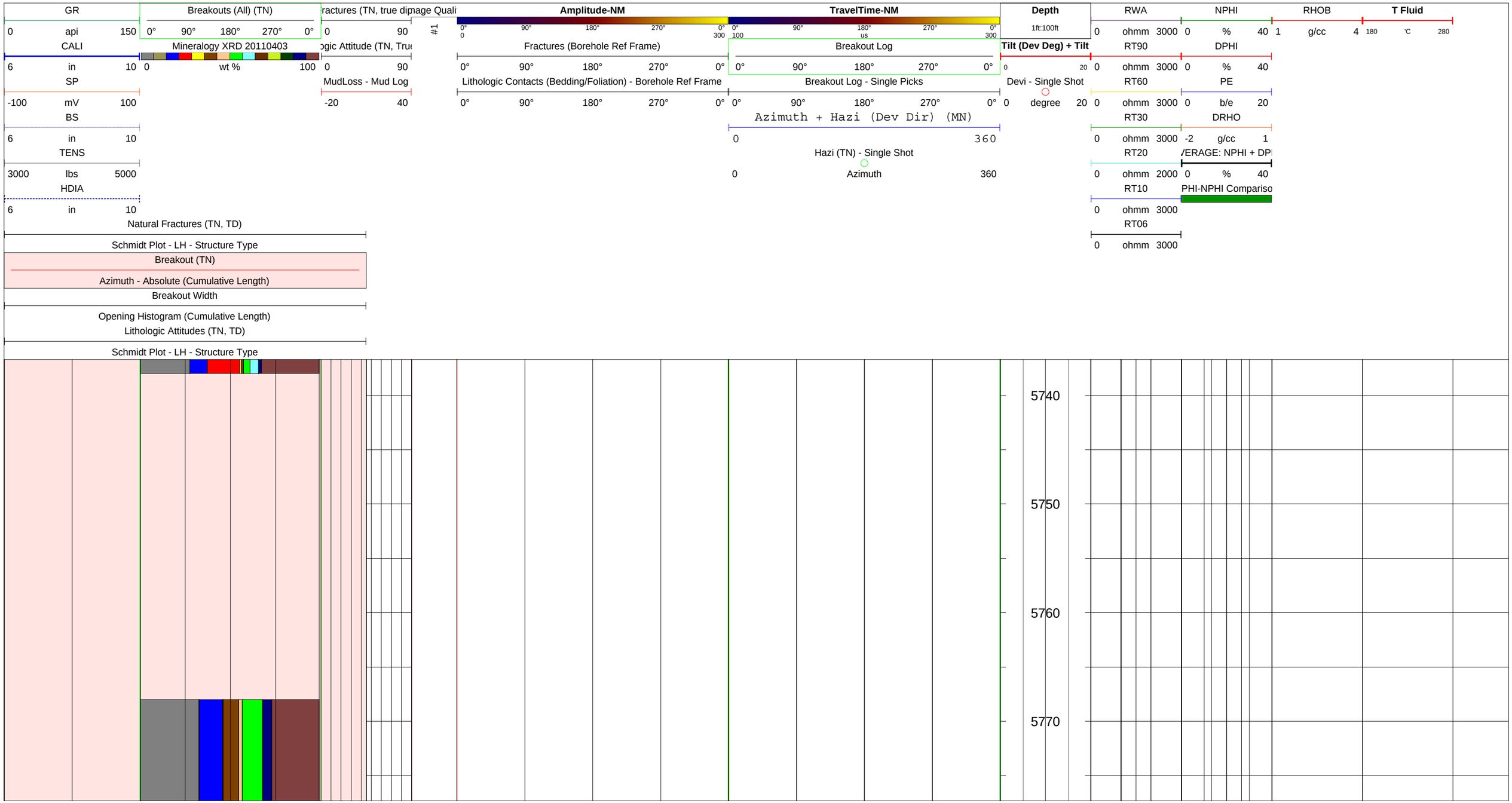

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
Azimuth
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
Devi - Single Shot
degree
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
1150
1160
1170
1180

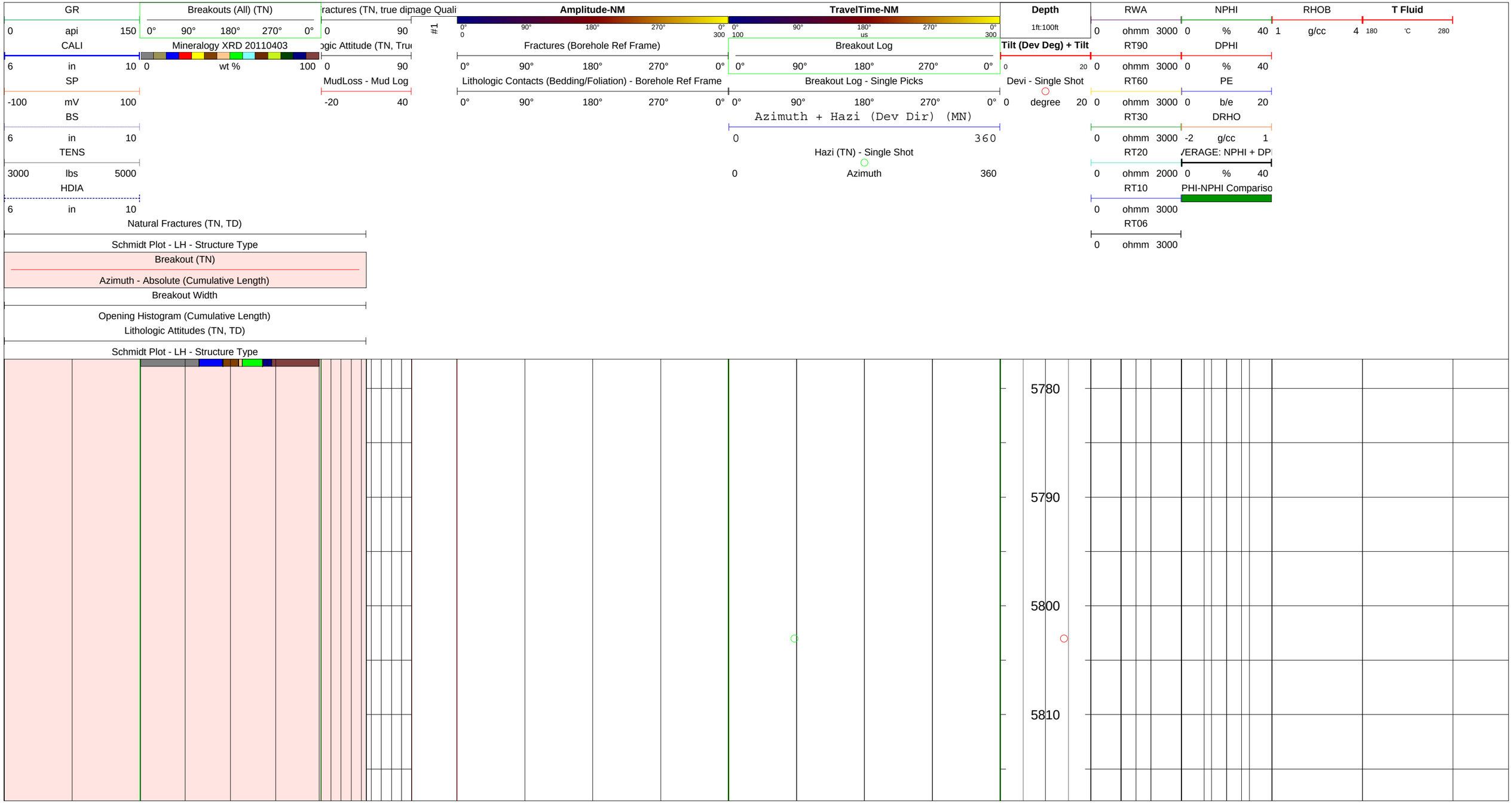

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
5580
5590
5600
5610

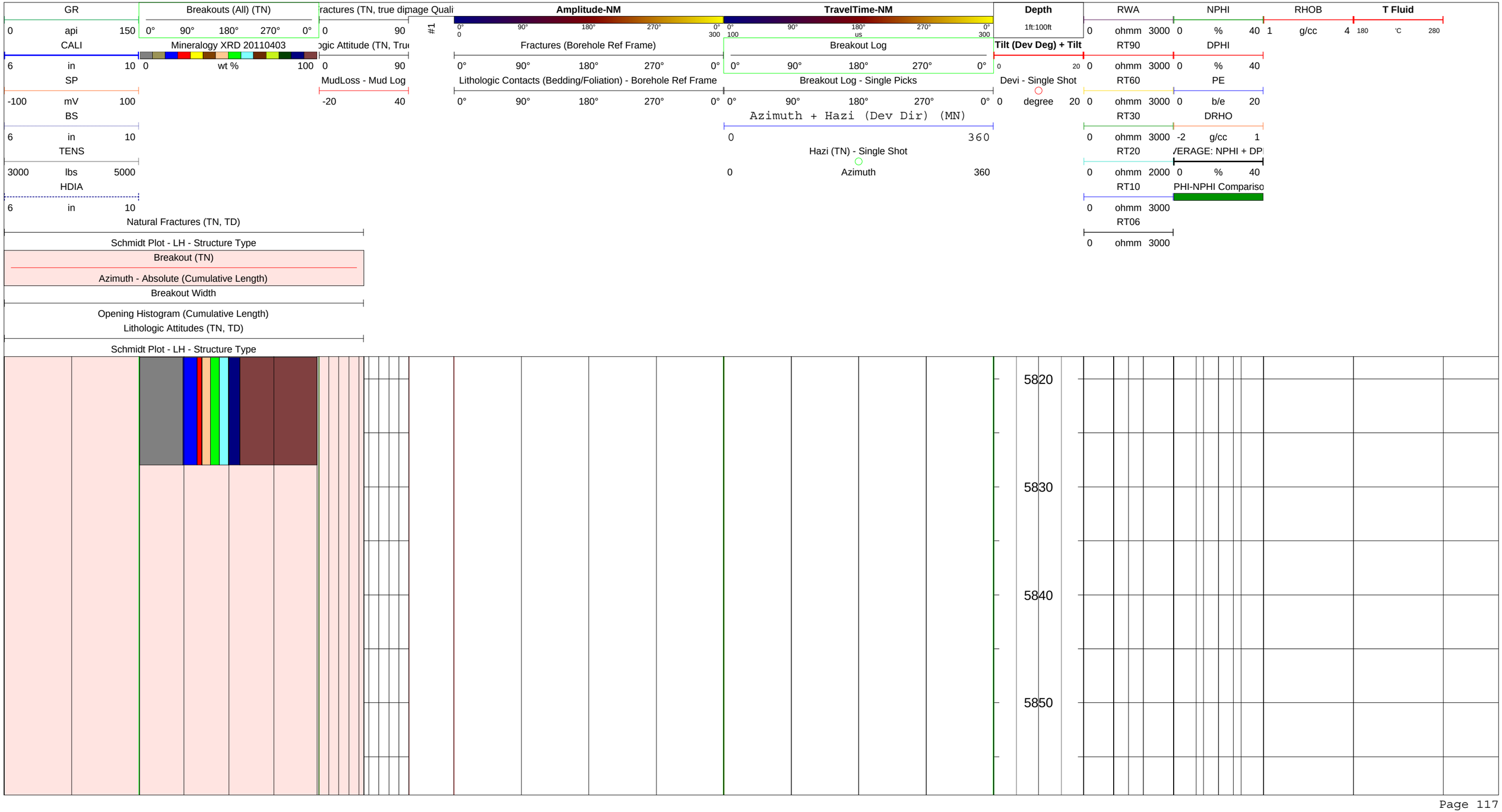

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
5620
5630
5640
5650

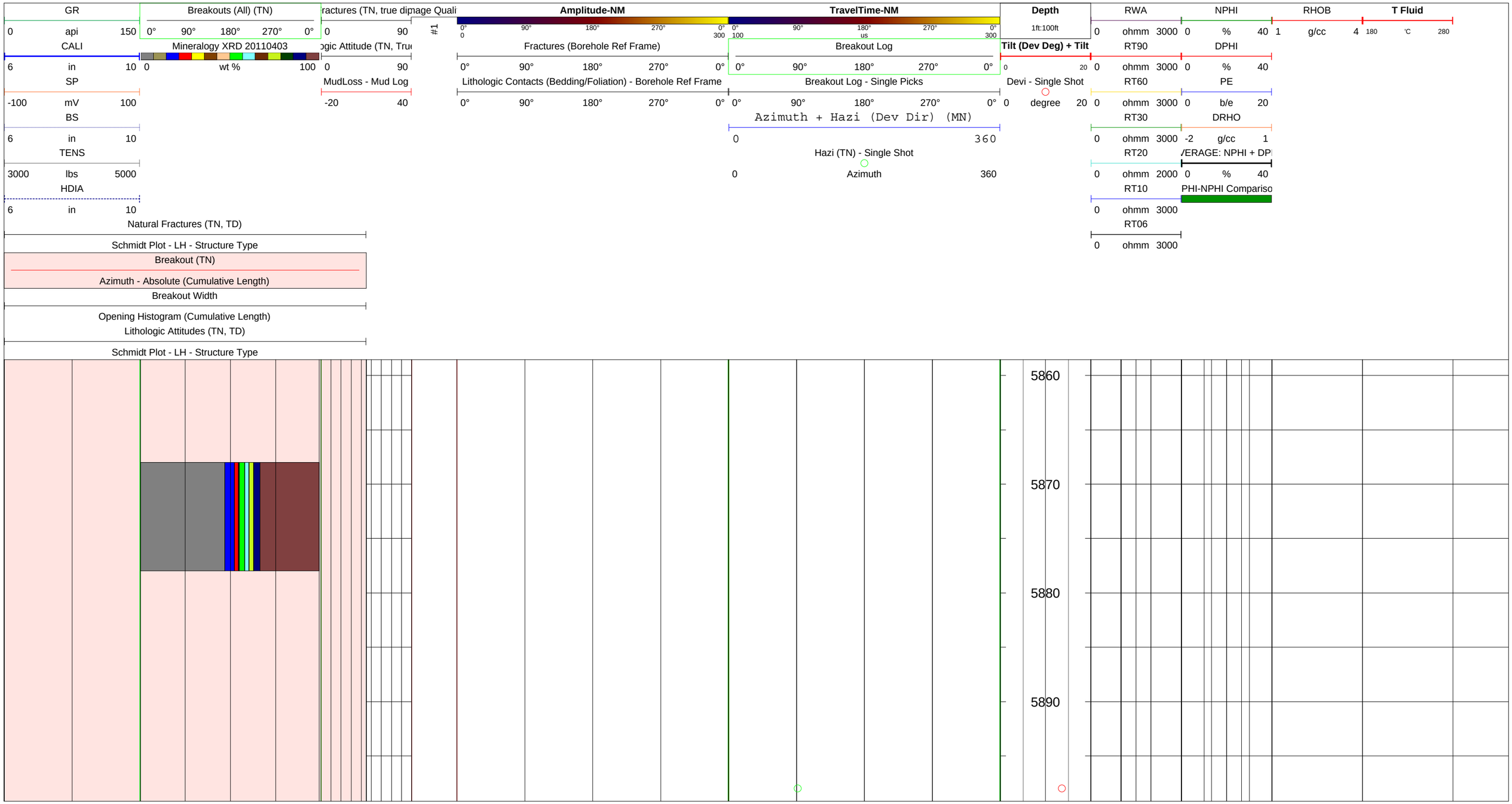

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
5660
5670
5680
5690

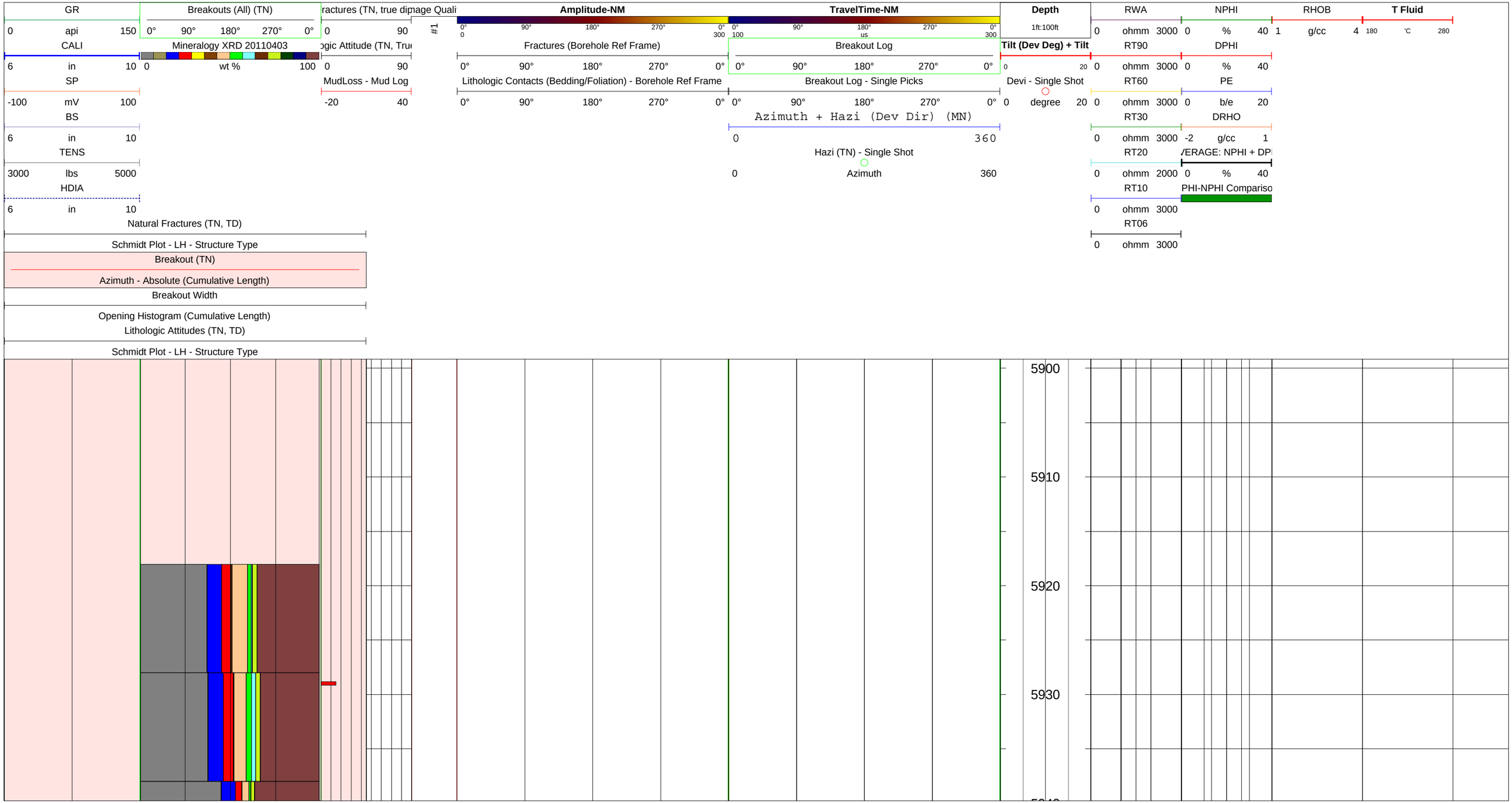

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
5700
5710
5720
5730

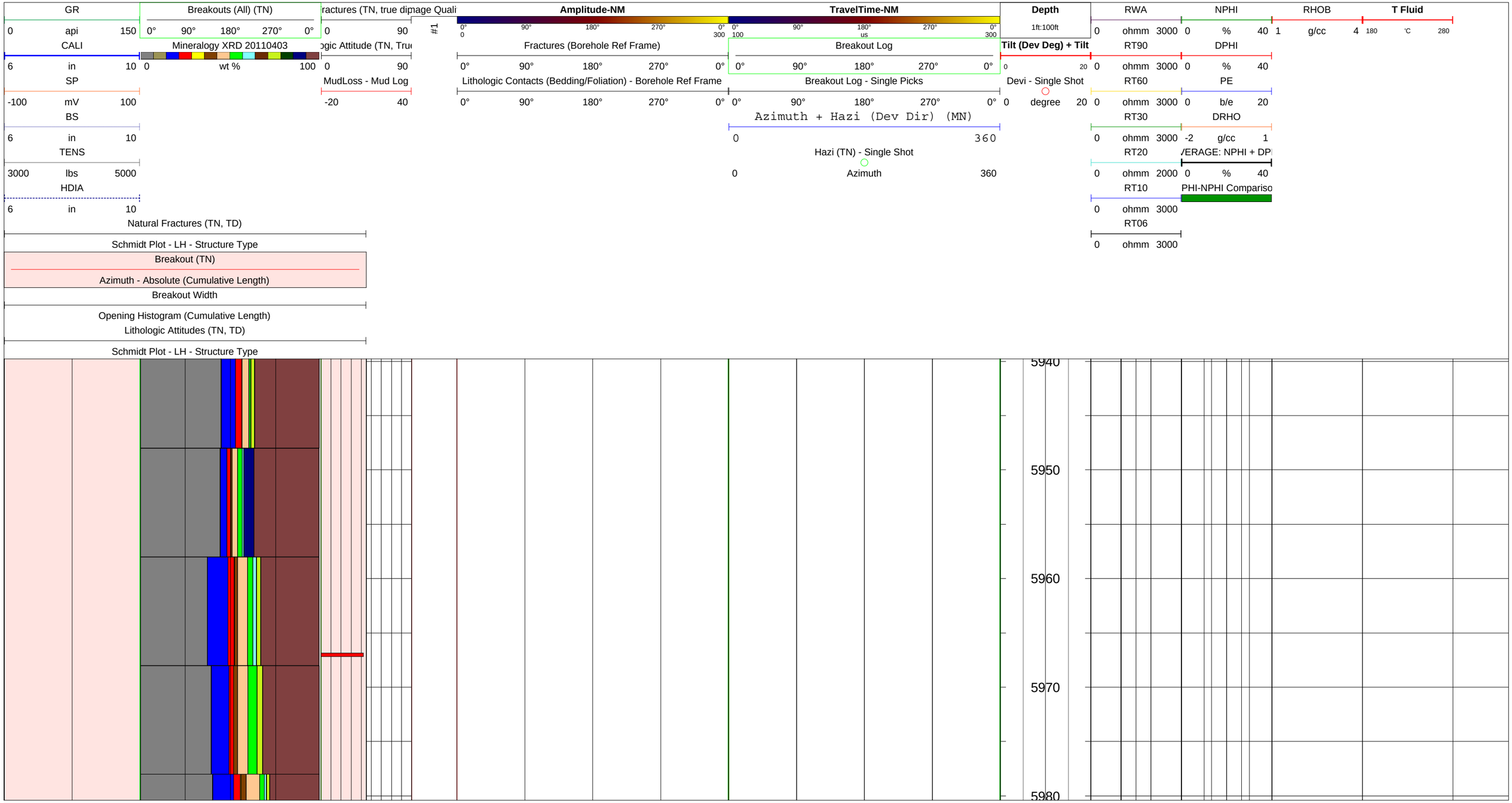

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
5740
5750
5760
5770

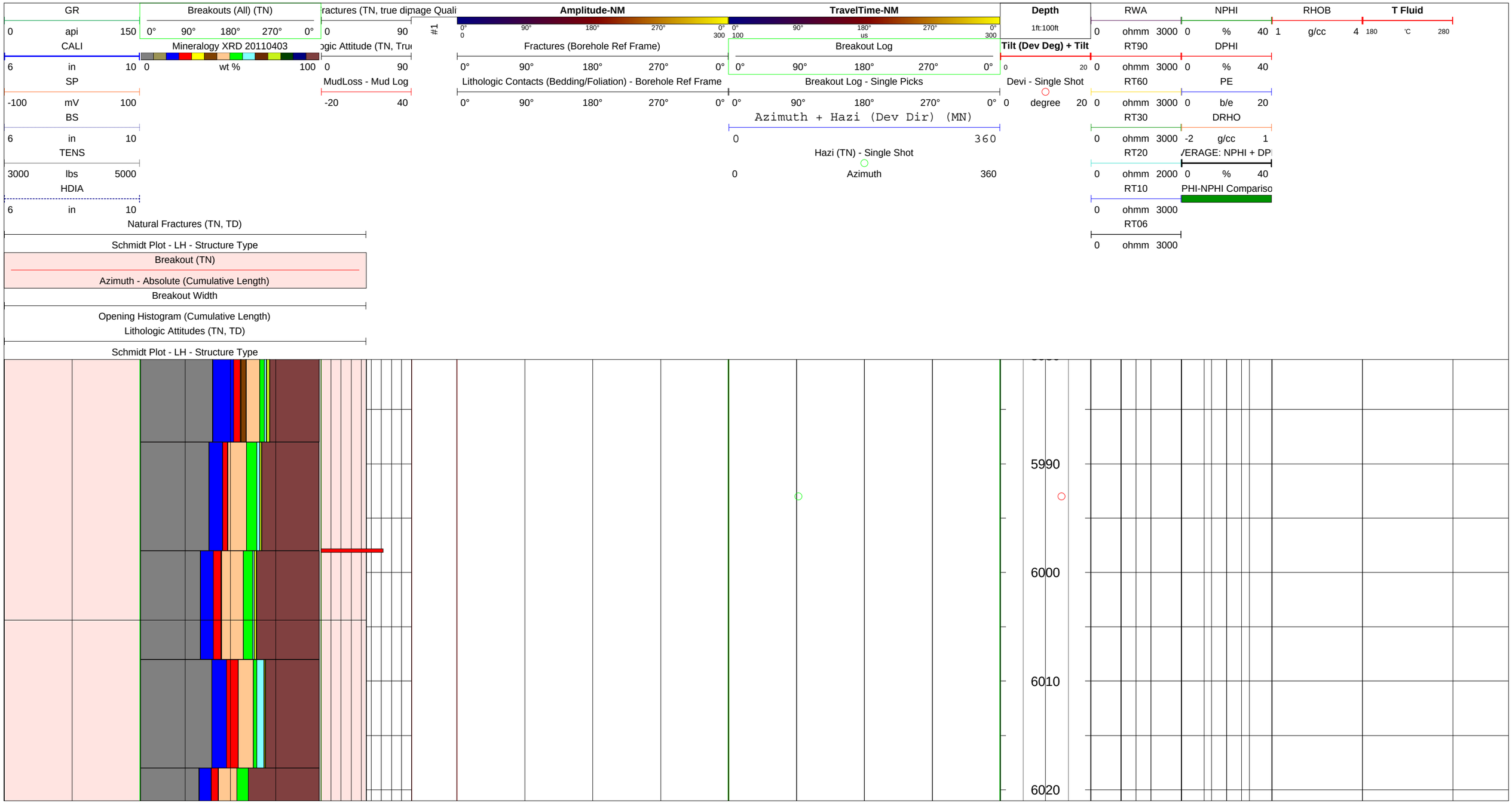

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
5780
5790
5800
5810

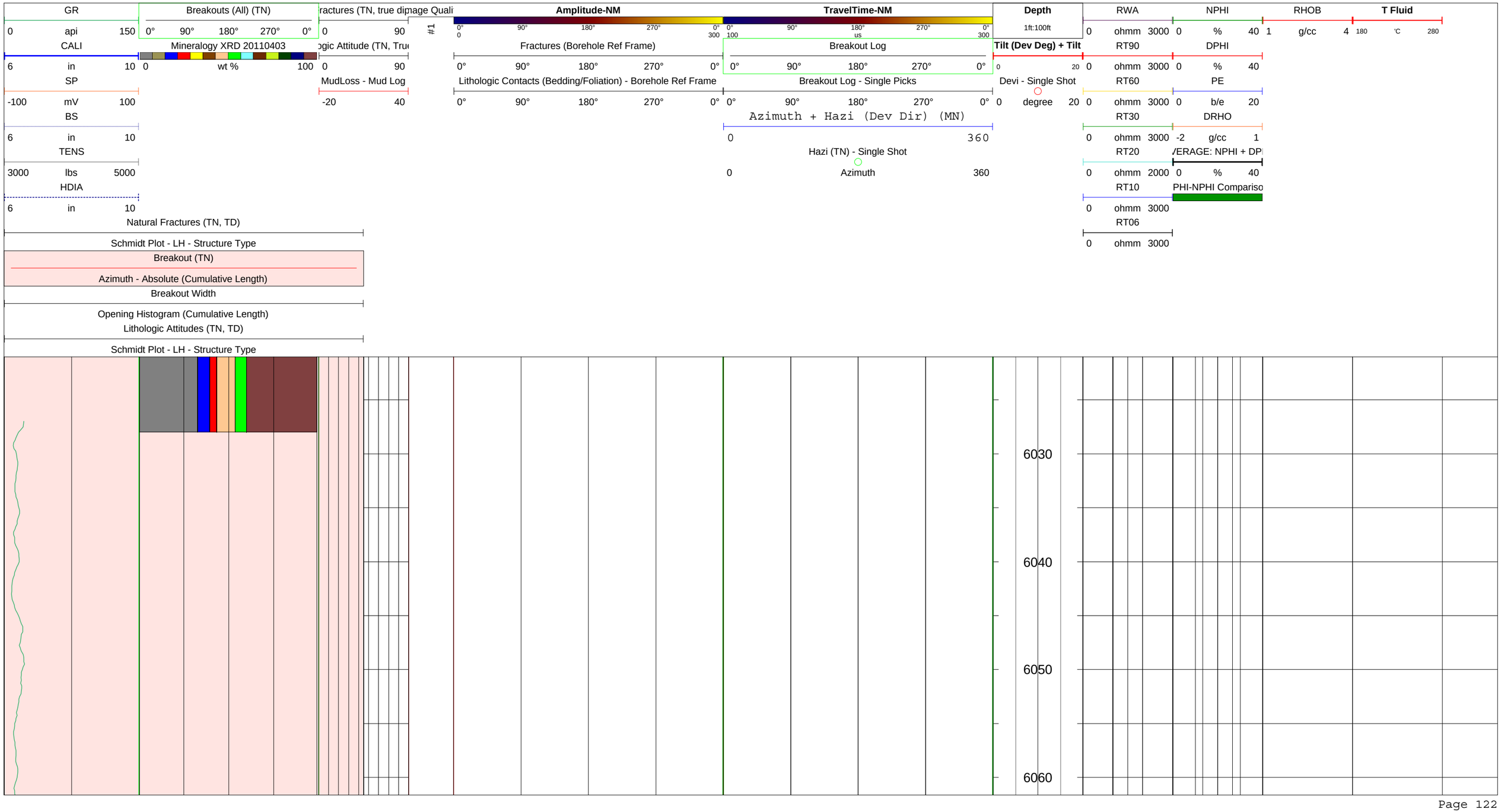

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
5820
5830
5840
5850

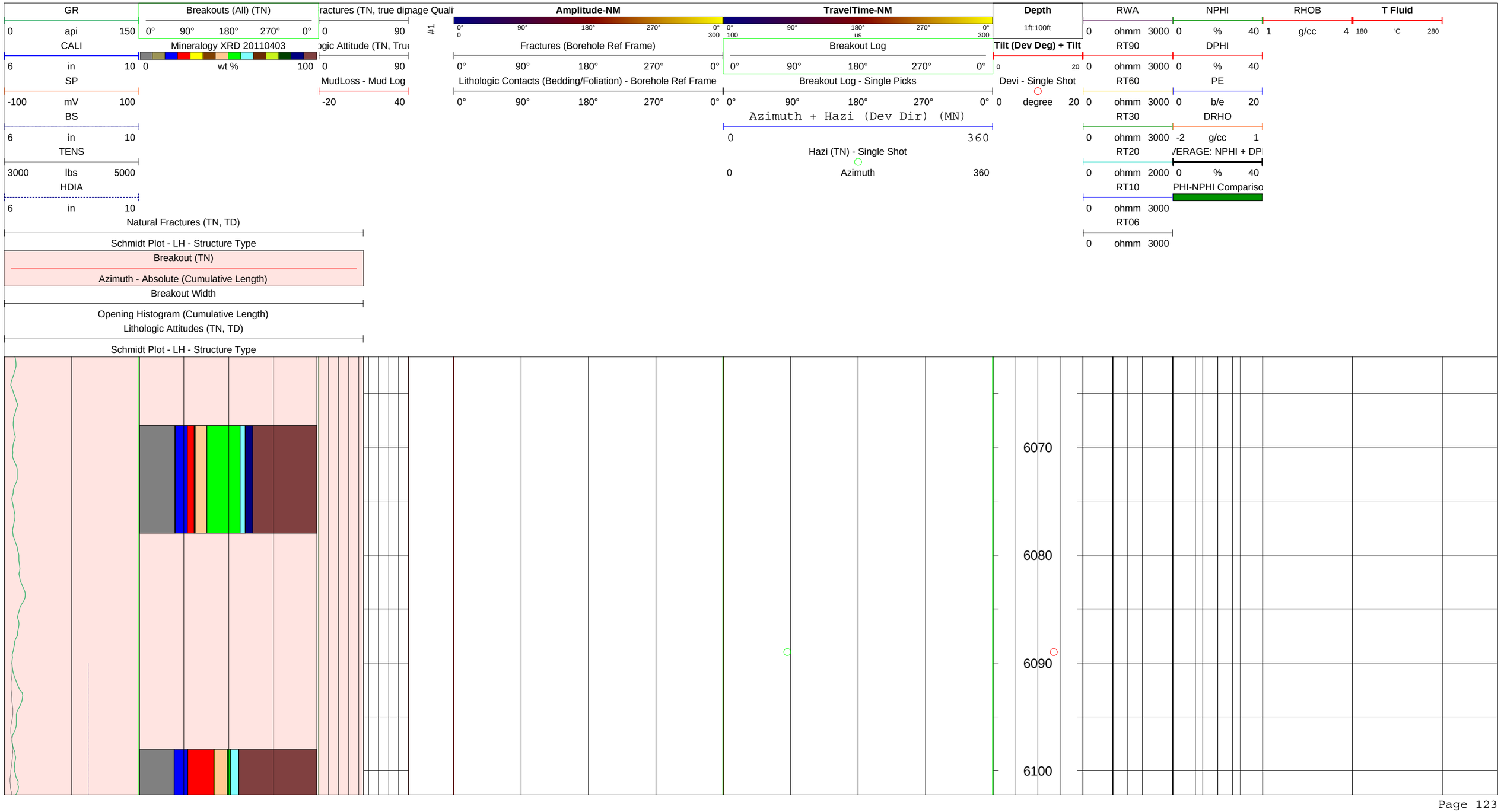

GR
0 api 150
Breakouts (All) (TN)
0° 90° 180° 270° 0°
fractures (TN, true dip
0 90
#1
Amplitude-NM
0° 90° 180° 270° 0°
0 300
TravelTime-NM
0° 90° 180° 270° 0°
100 us 300
Depth
1ft:100ft
RWA
0 ohmm 3000
NPHI
0 % 40
RHOB
1 g/cc 4
T Fluid
180 °C 280
CALI
6 in 10
Mineralogy XRD 20110403
0 wt % 100
ogic Attitude (TN, Tru
0 90
Fractures (Borehole Ref Frame)
0° 90° 180° 270° 0°
Breakout Log
0° 90° 180° 270° 0°
Tilt (Dev Deg) + Tilt
0 20
RT90
0 ohmm 3000
DPHI
0 % 40
SP
-100 mV 100
MudLoss - Mud Log
-20 40
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
0° 90° 180° 270° 0°
Breakout Log - Single Picks
0° 90° 180° 270° 0°
Devi - Single Shot
0 degree 20
RT60
0 ohmm 3000
PE
0 b/e 20
BS
6 in 10
Azimuth + Hazi (Dev Dir) (MN)
0 360
RT30
0 ohmm 3000
DRHO
-2 g/cc 1
TENS
3000 lbs 5000
Hazi (TN) - Single Shot
0 Azimuth 360
RT20
0 ohmm 2000
VERAGE: NPHI + DP
0 % 40
HDIA
6 in 10
RT10
0 ohmm 3000
PHI-NPHI Compariso
Natural Fractures (TN, TD)
RT06
0 ohmm 3000
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
5860
5870
5880
5890

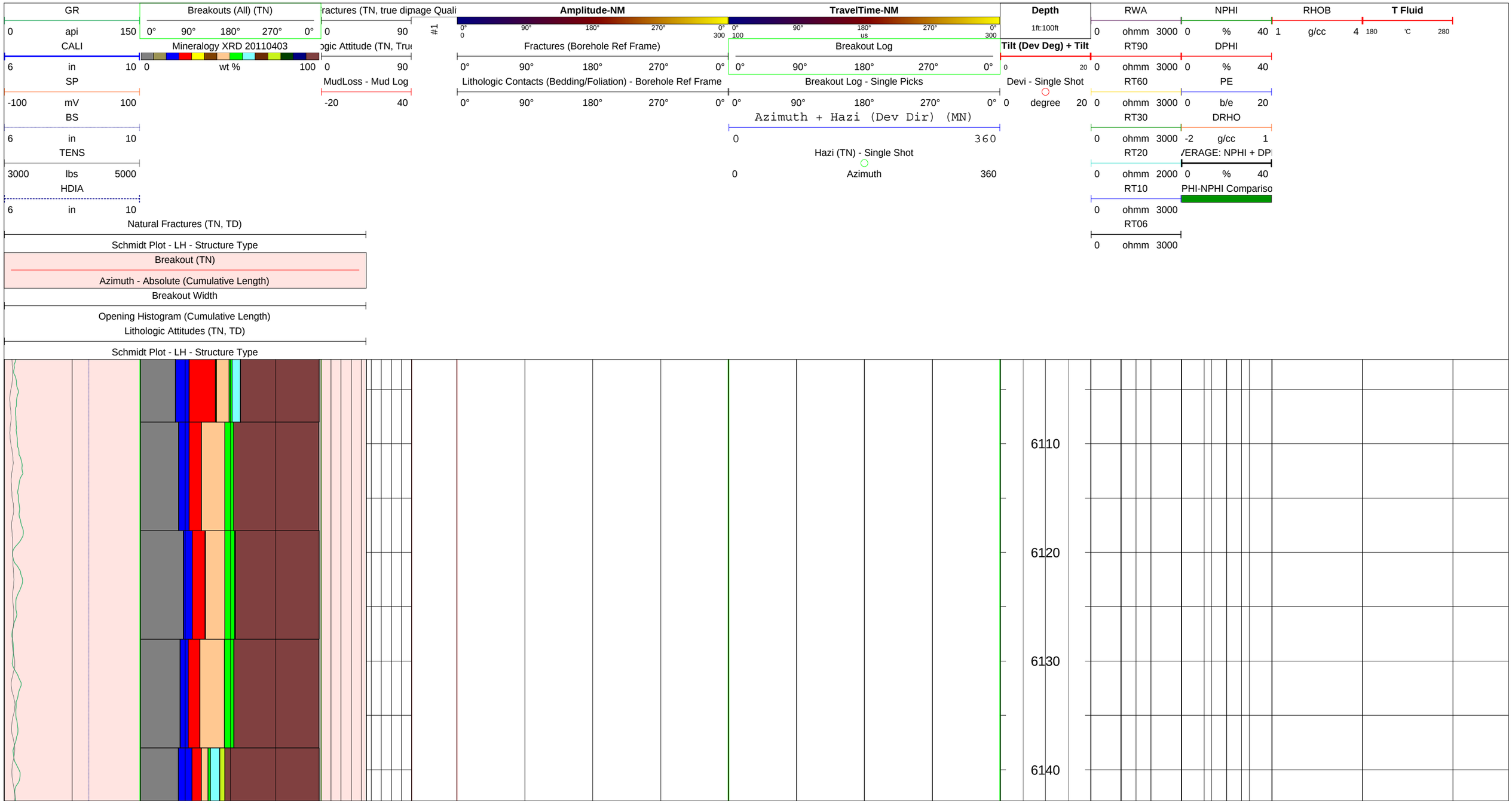

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
5900
5910
5920
5930

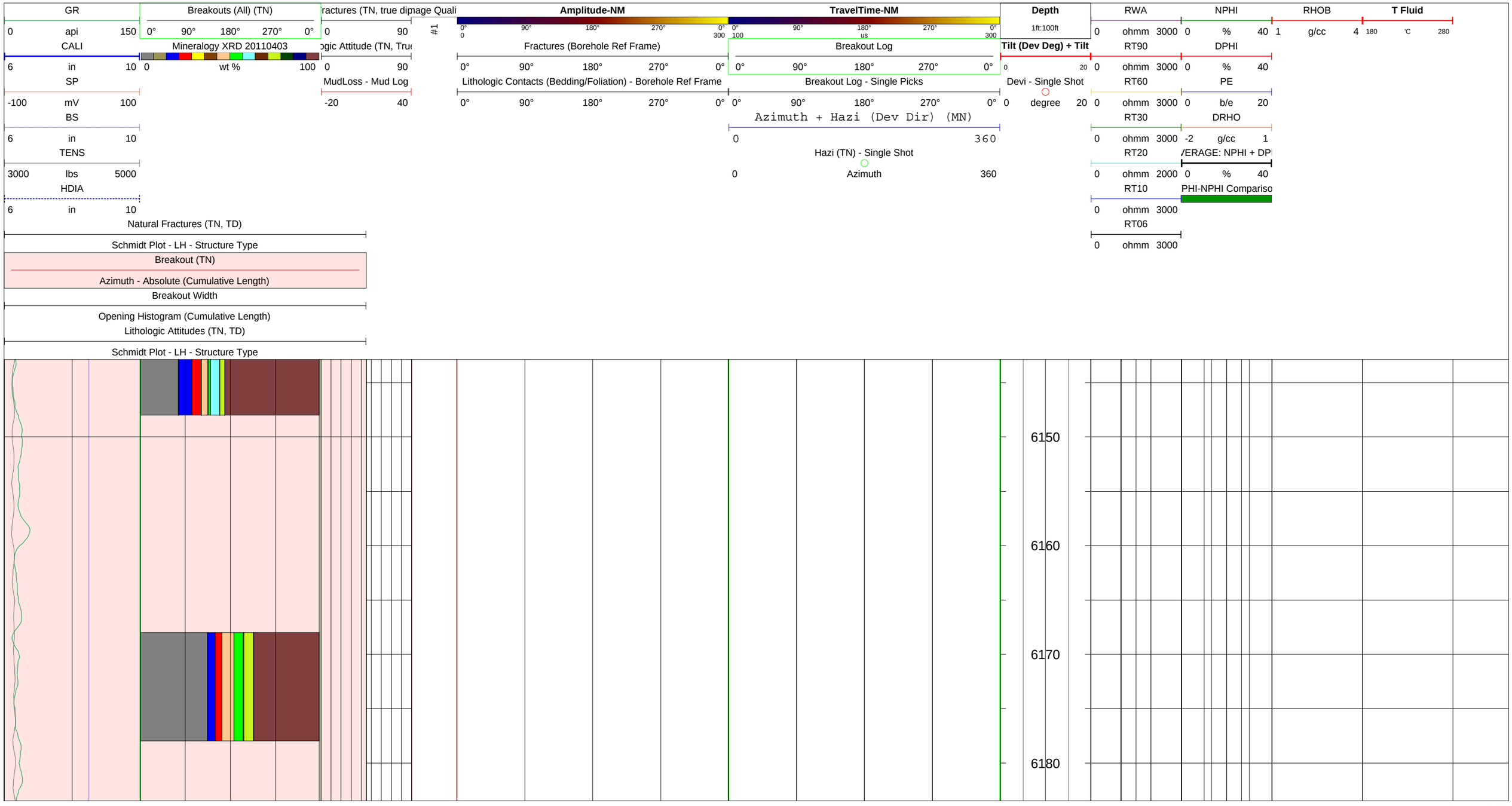

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
5940
5950
5960
5970
5980

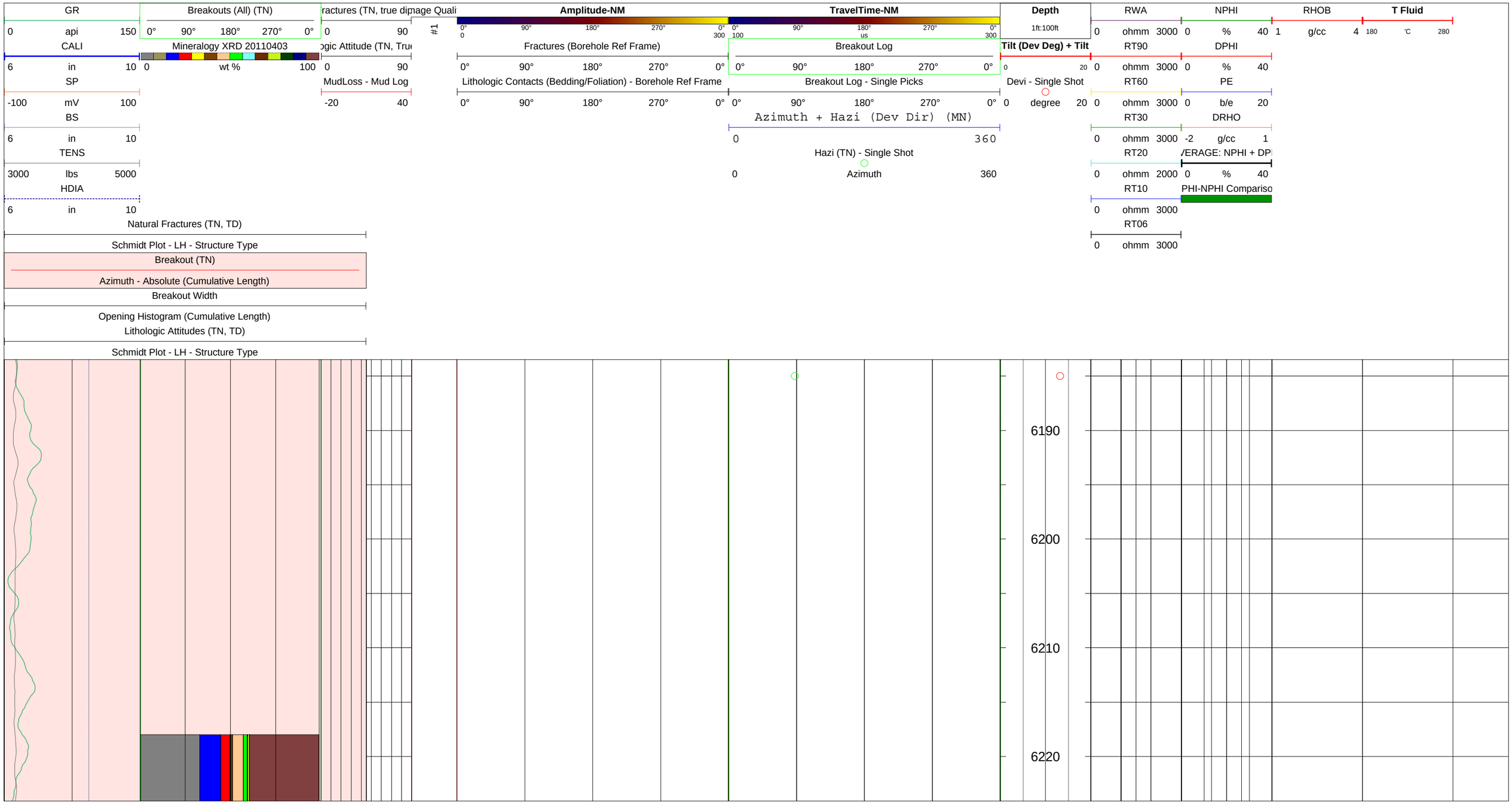

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
5990
6000
6010
6020

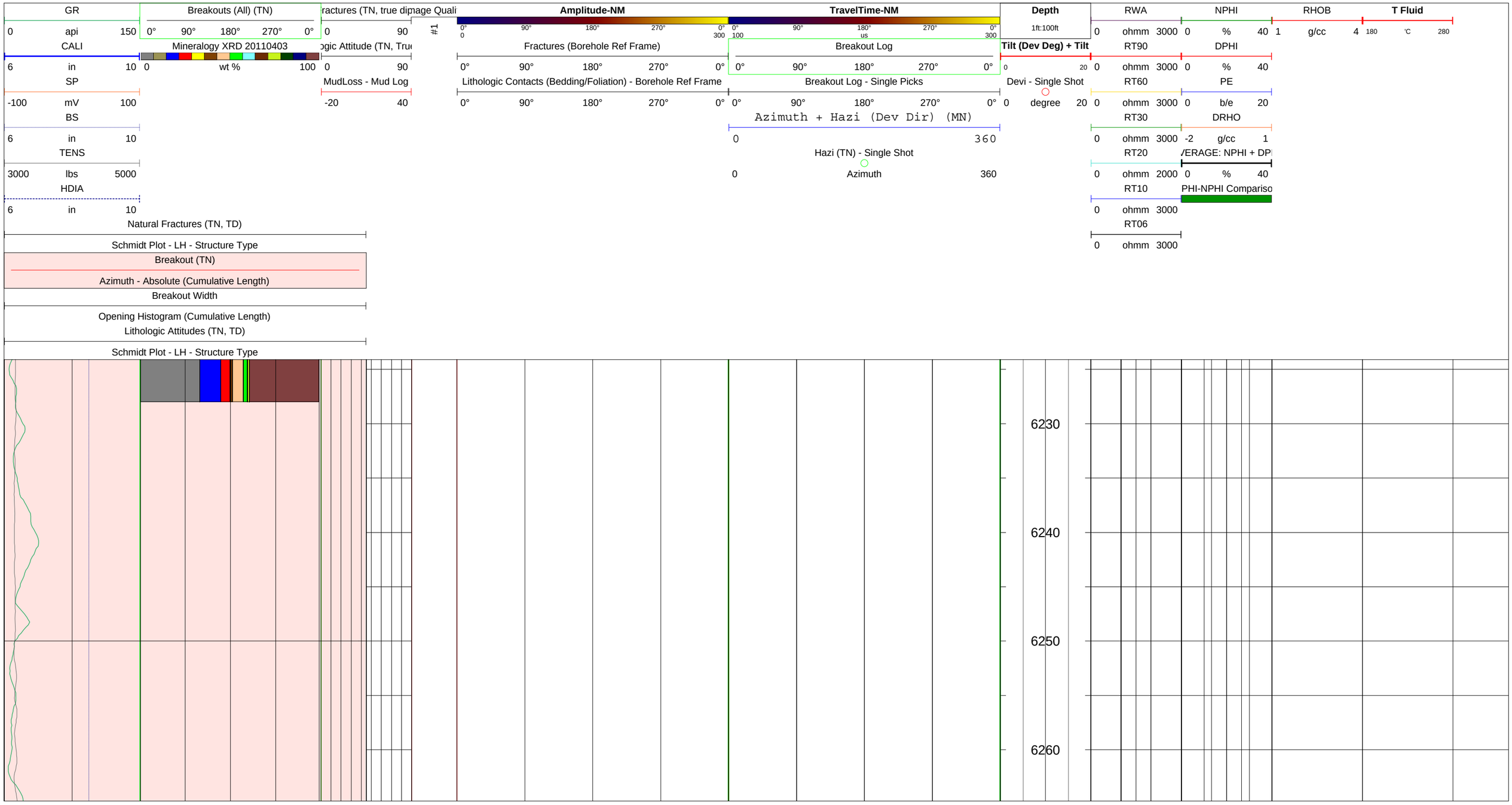

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
6030
6040
6050
6060

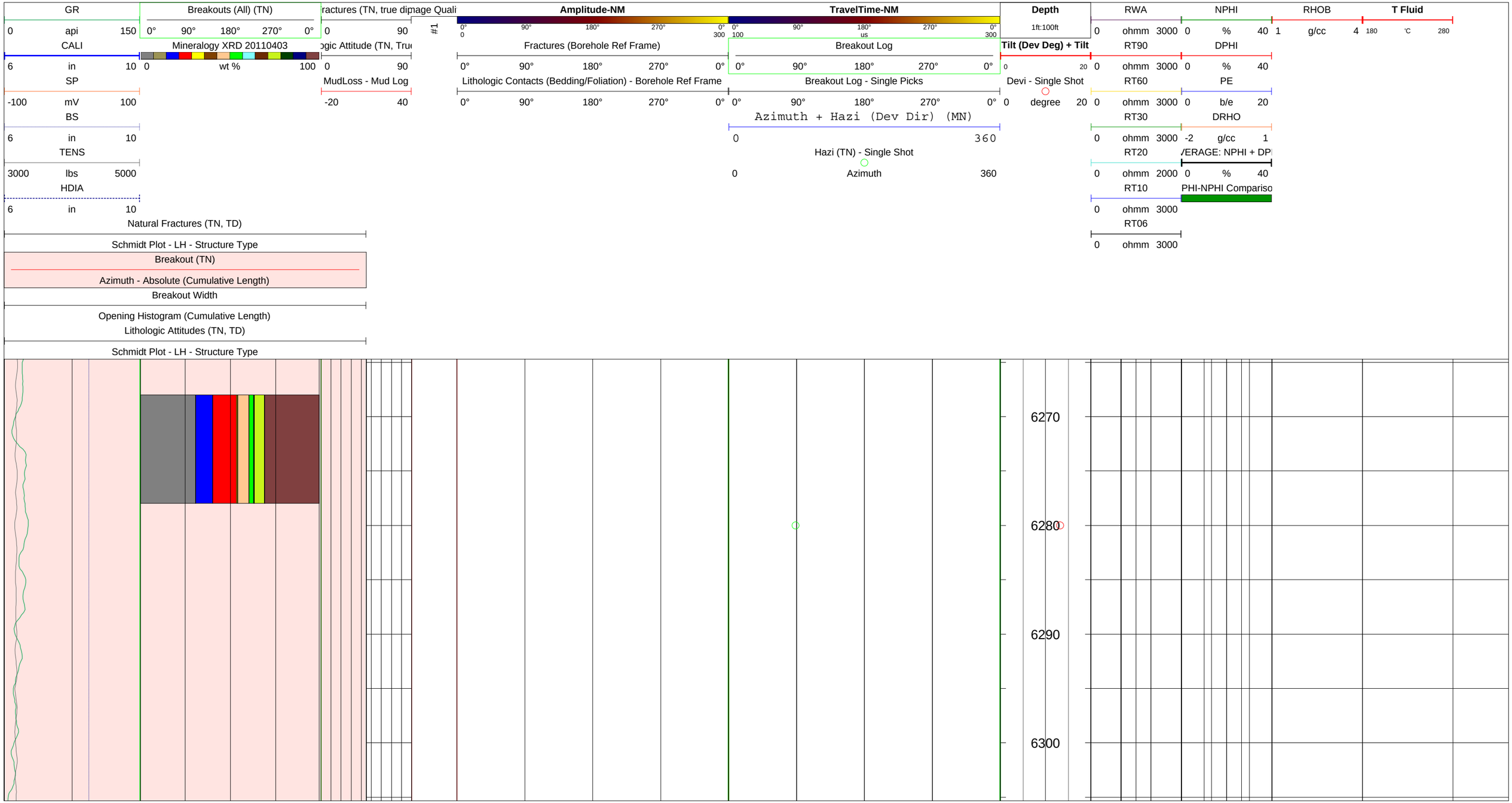

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
Azimuth
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
Devi - Single Shot
degree
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
6070
6080
6090
6100

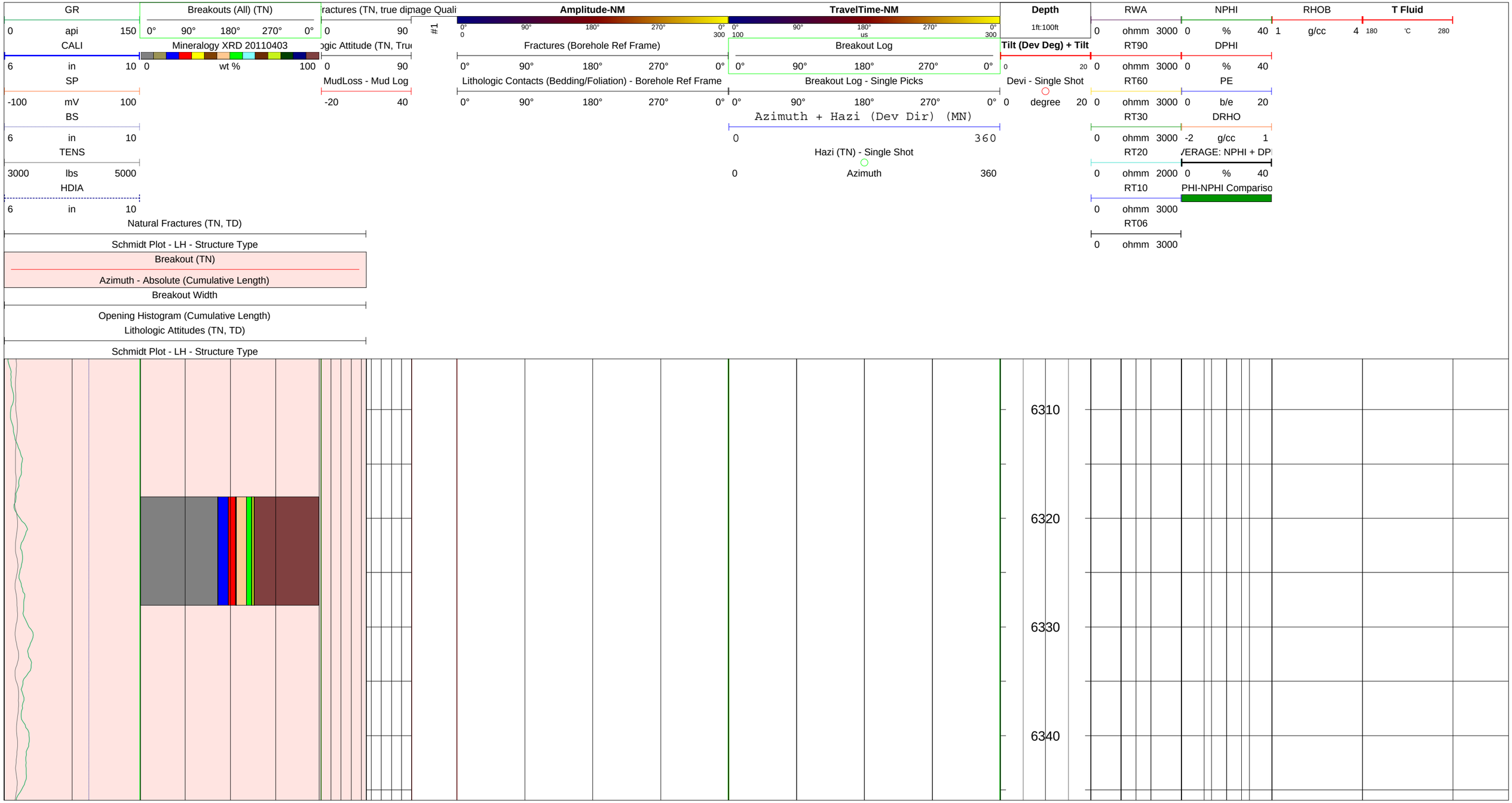

GR
0 api 150
Breakouts (All) (TN)
0° 90° 180° 270° 0°
fractures (TN, true dip
0 90
#1
Amplitude-NM
0° 90° 180° 270° 0°
0 300
TravelTime-NM
0° 90° 180° 270° 0°
100 us 300
Depth
1ft:100ft
RWA
0 ohmm 3000
NPHI
0 % 40
RHOB
1 g/cc 4
T Fluid
180 °C 280
CALI
6 in 10
Mineralogy XRD 20110403
0 wt % 100
ogic Attitude (TN, Tru
0 90
Fractures (Borehole Ref Frame)
0° 90° 180° 270° 0°
Breakout Log
0° 90° 180° 270° 0°
Tilt (Dev Deg) + Tilt
0 20
RT90
0 ohmm 3000
DPHI
0 % 40
SP
-100 mV 100
MudLoss - Mud Log
-20 40
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
0° 90° 180° 270° 0°
Breakout Log - Single Picks
0° 90° 180° 270° 0°
Devi - Single Shot
0 degree 20
RT60
0 ohmm 3000
PE
0 b/e 20
BS
6 in 10
Azimuth + Hazi (Dev Dir) (MN)
0 360
RT30
0 ohmm 3000
DRHO
-2 g/cc 1
TENS
3000 lbs 5000
Hazi (TN) - Single Shot
0 Azimuth 360
RT20
0 ohmm 2000
VERAGE: NPHI + DP
0 % 40
HDIA
6 in 10
RT10
0 ohmm 3000
PHI-NPHI Compariso
Natural Fractures (TN, TD)
RT06
0 ohmm 3000
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
6110
6120
6130
6140

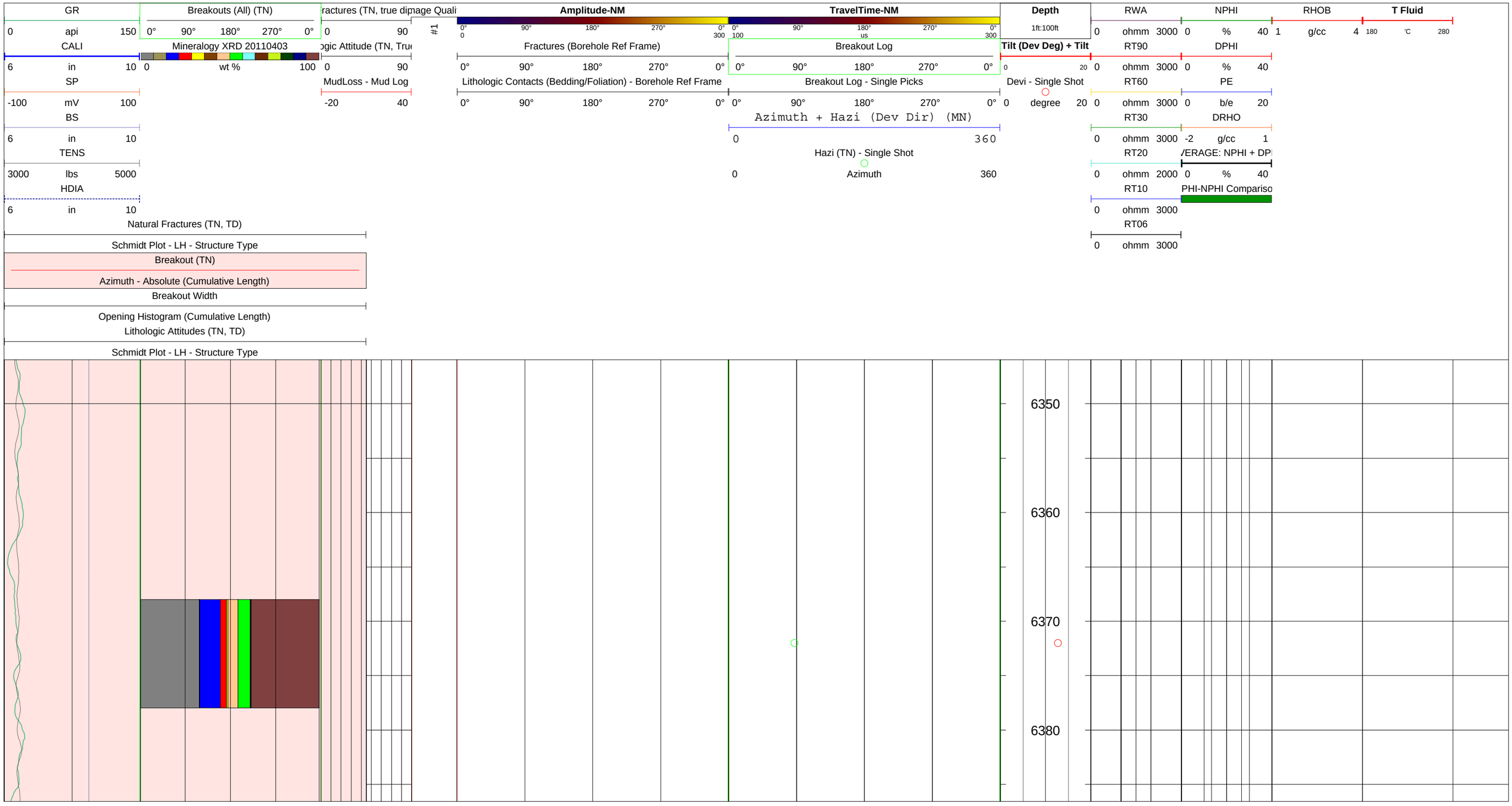

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
6150
6160
6170
6180

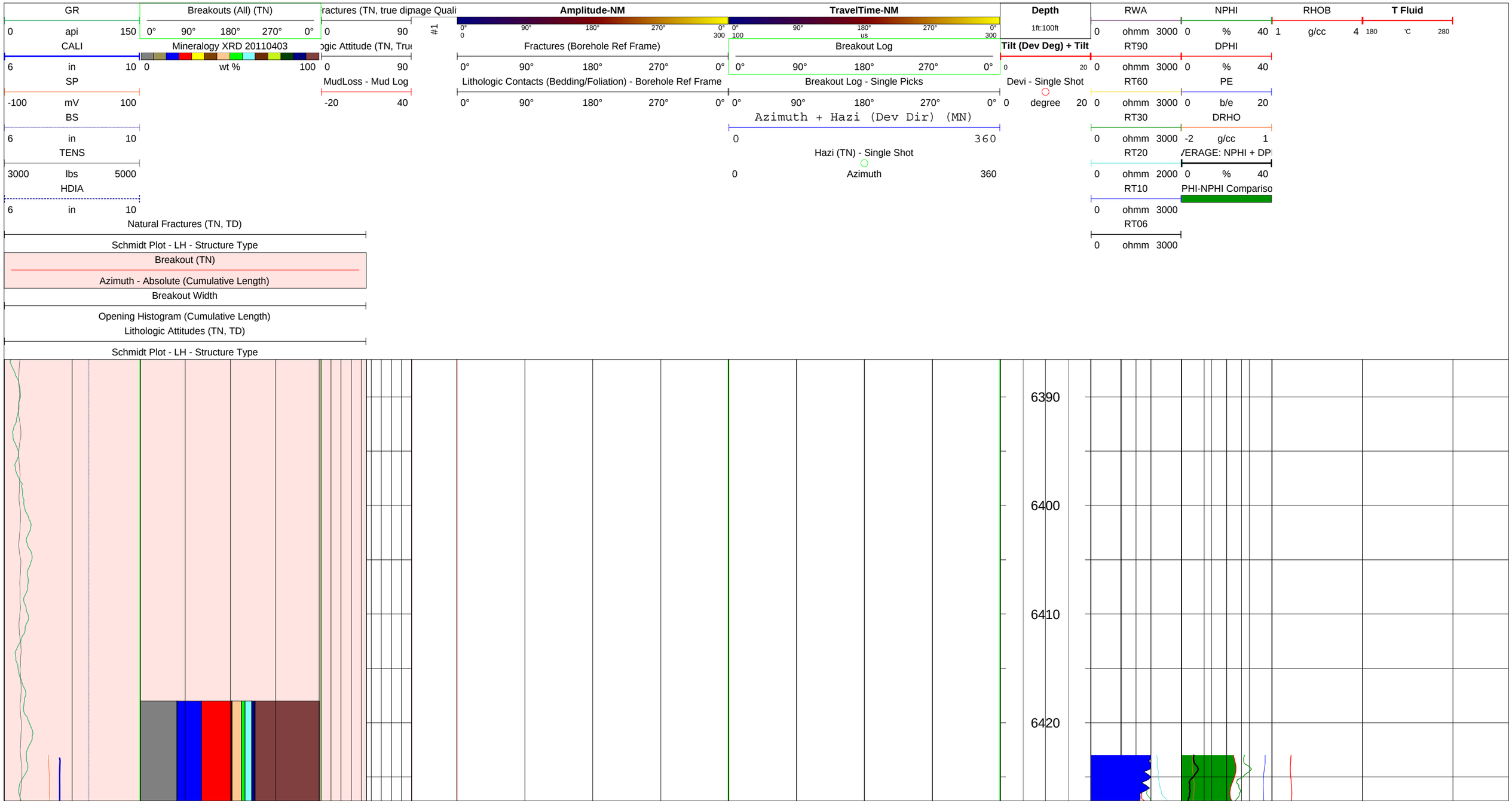

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
6190
6200
6210
6220

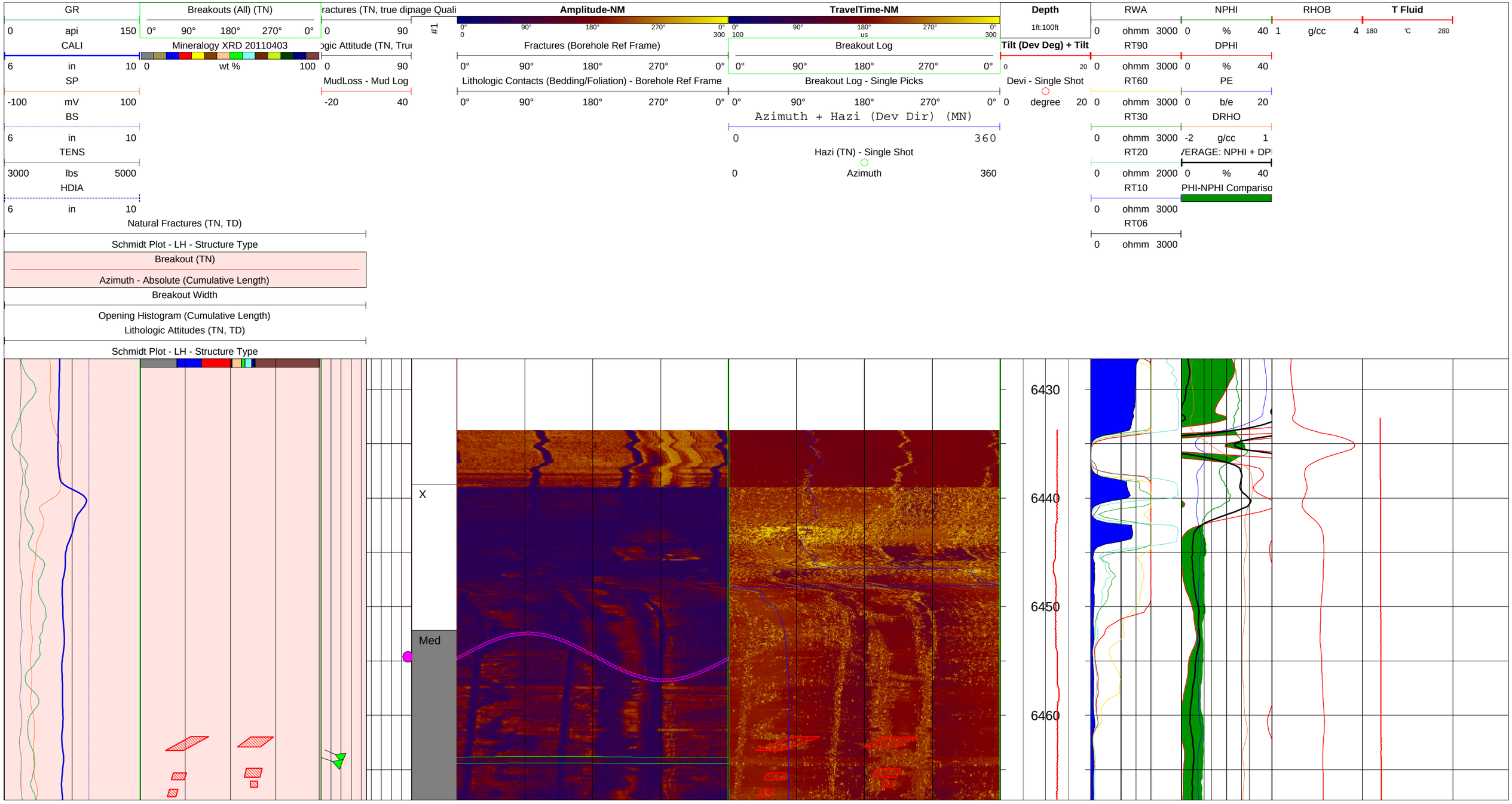

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
6230
6240
6250
6260

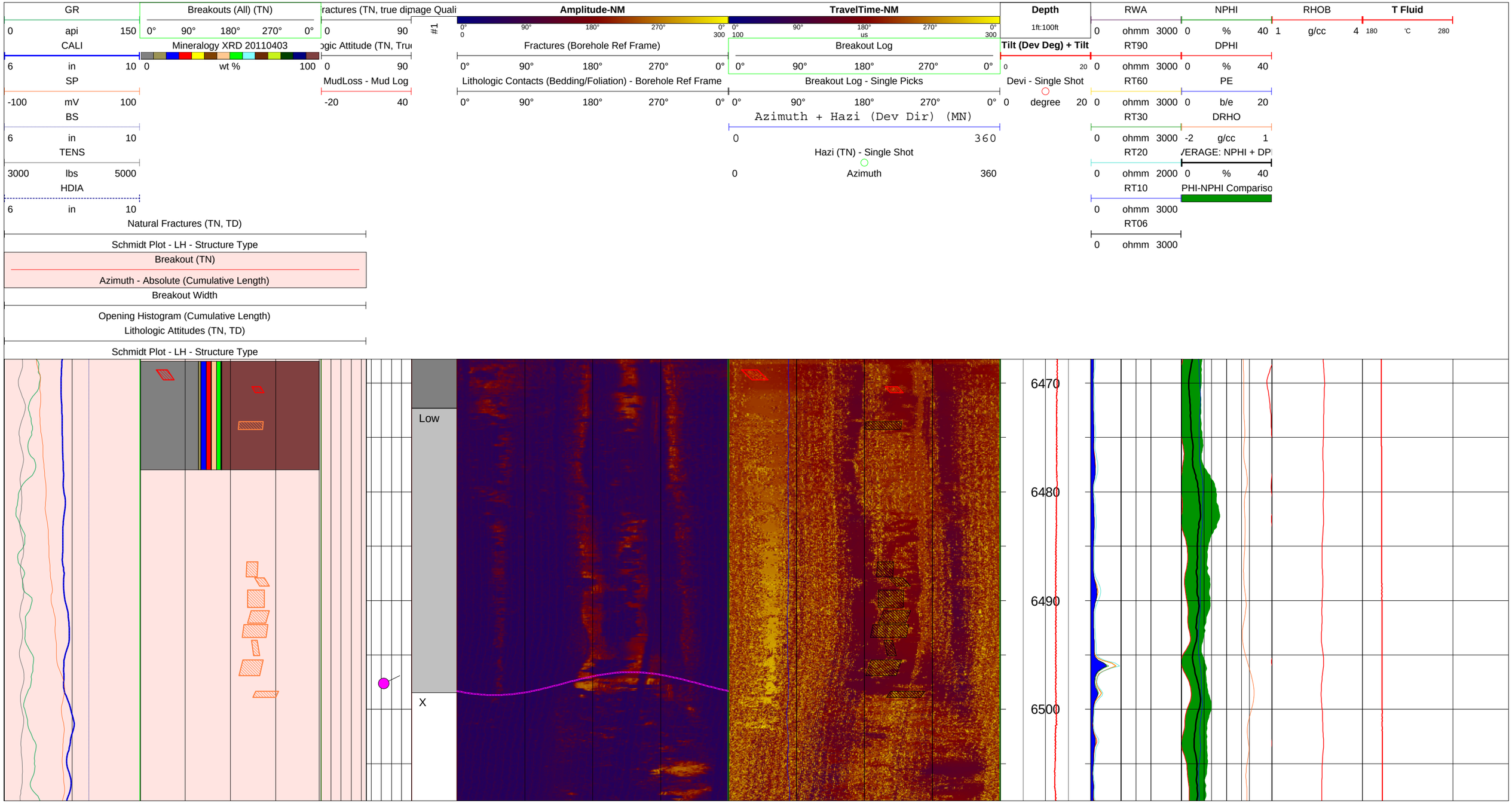

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
Azimuth
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
Devi - Single Shot
degree
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
6270
6280
6290
6300

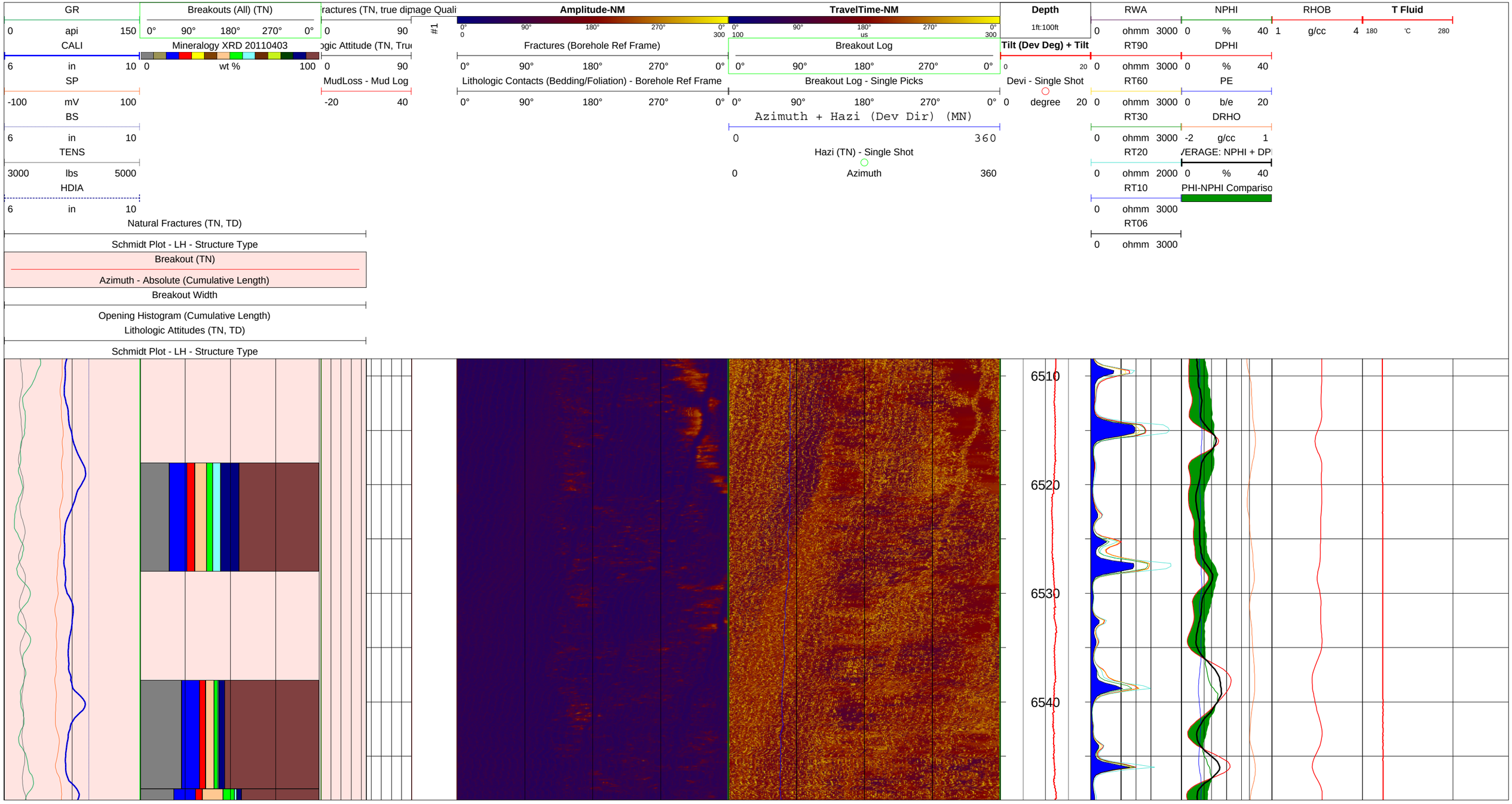

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
6310
6320
6330
6340

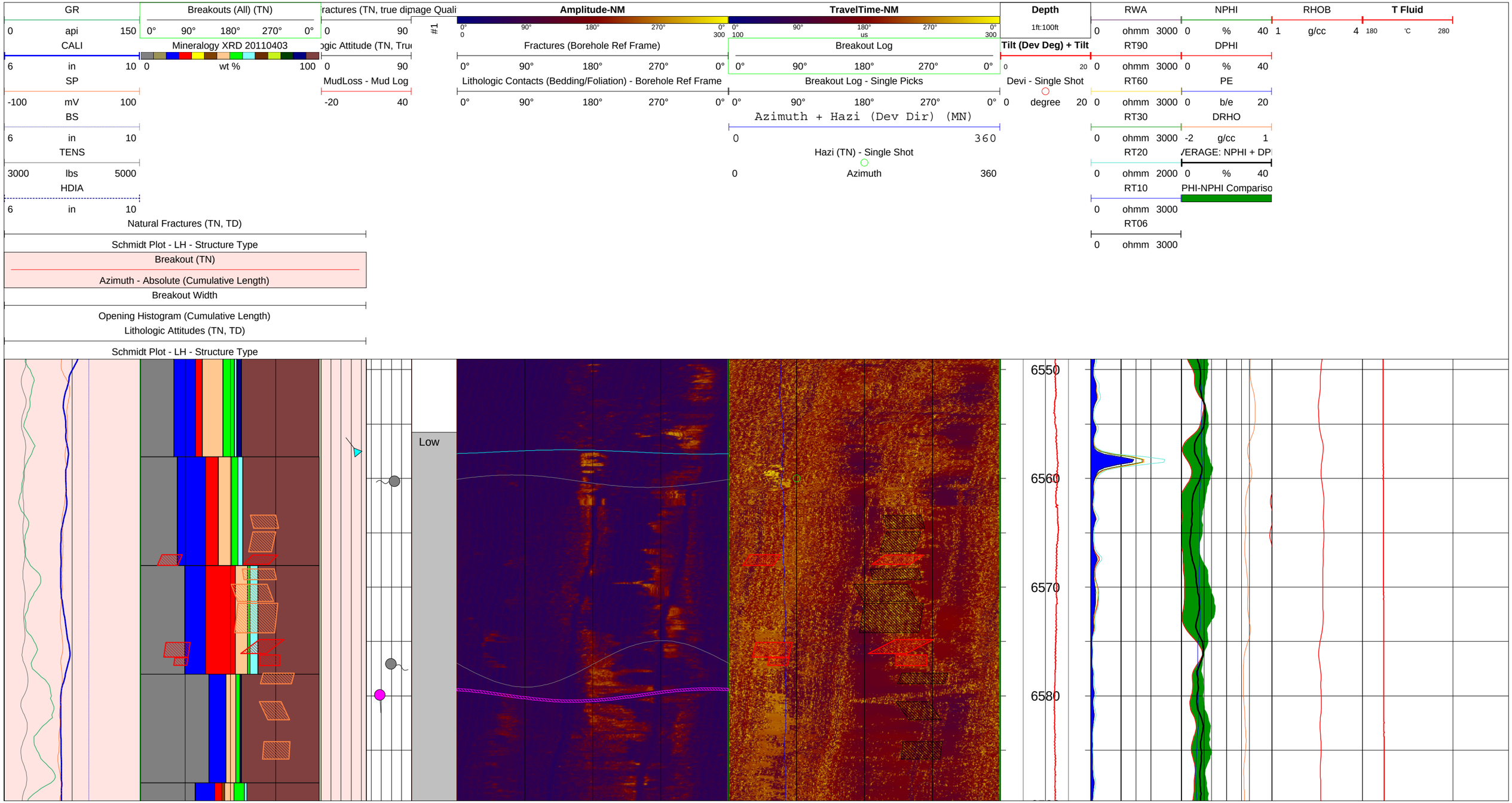

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
Azimuth
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
Devi - Single Shot
degree
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
6350
6360
6370
6380

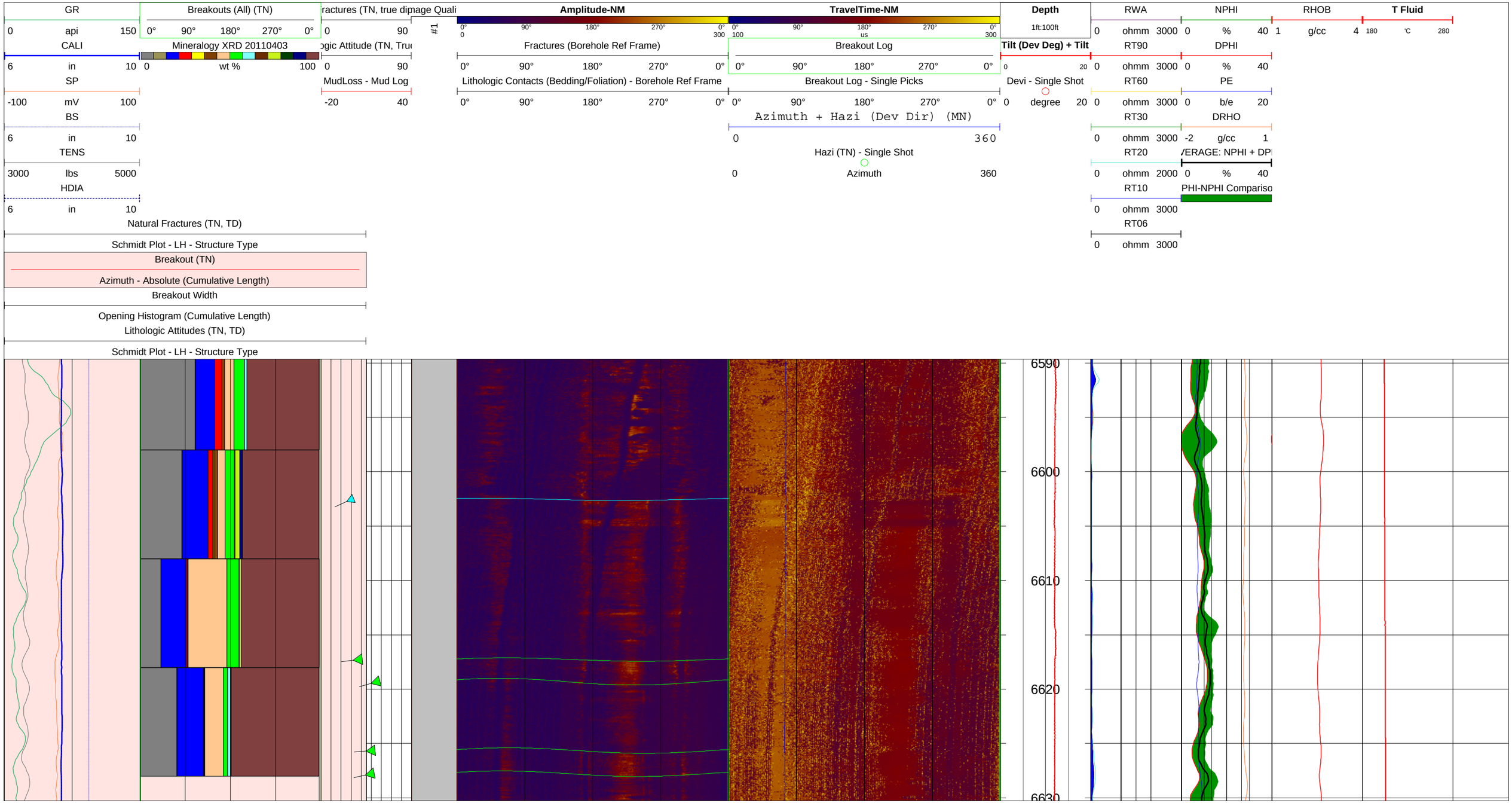

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
6390
6400
6410
6420

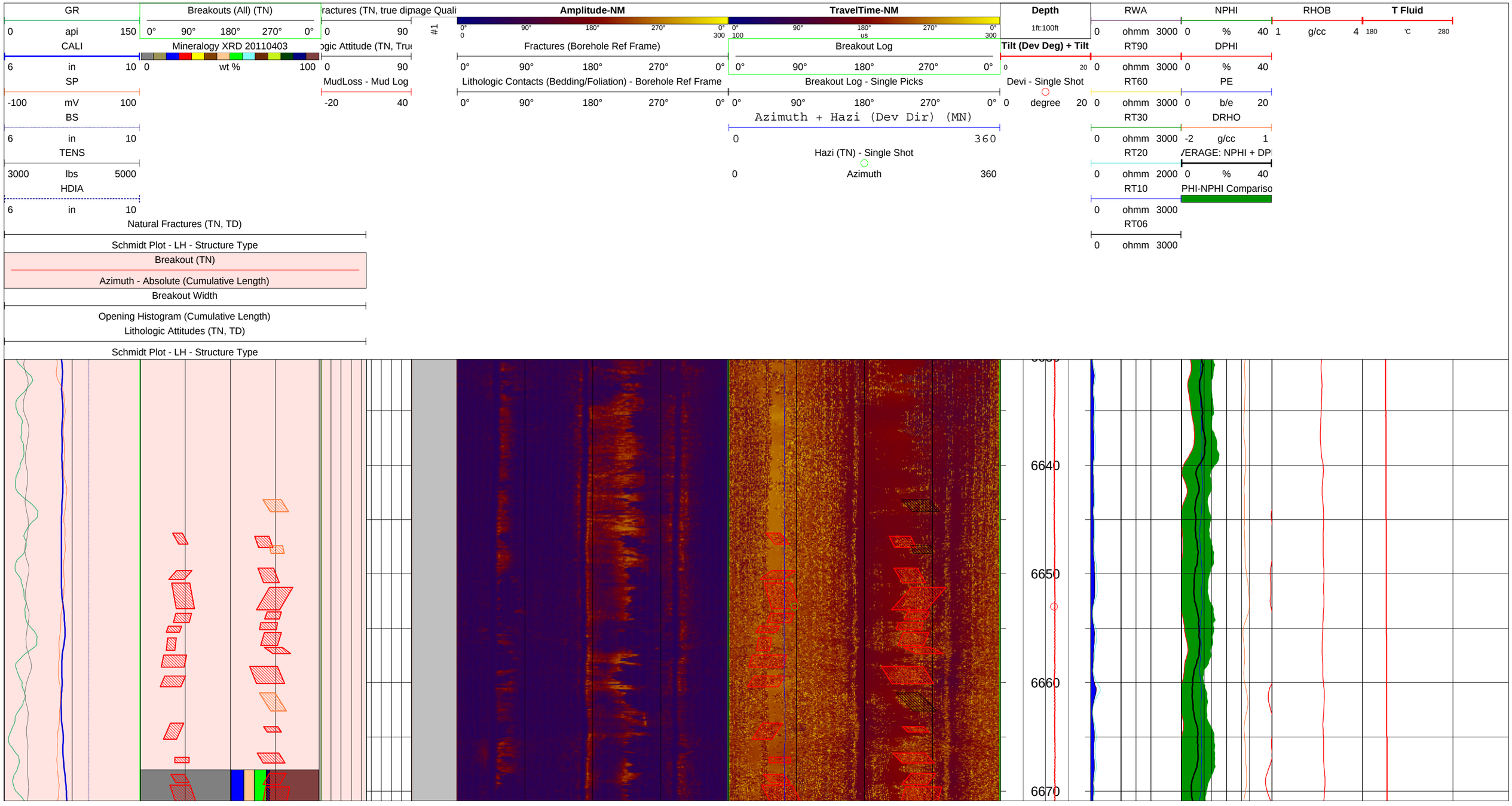

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
ractures (TN, true dip
0 90
ogic Attitude (TN, Tru
0 90
MudLoss - Mud Log
-20 40
#1
X
Med
Amplitude-NM
0° 90° 180° 270° 0°
0 300
Fractures (Borehole Ref Frame)
0° 90° 180° 270° 0°
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
0° 90° 180° 270° 0°
TravelTime-NM
0° 90° 180° 270° 0°
0 100 us 300
Breakout Log
0° 90° 180° 270° 0°
Breakout Log - Single Picks
0° 90° 180° 270° 0°
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
VERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
6430
6440
6450
6460

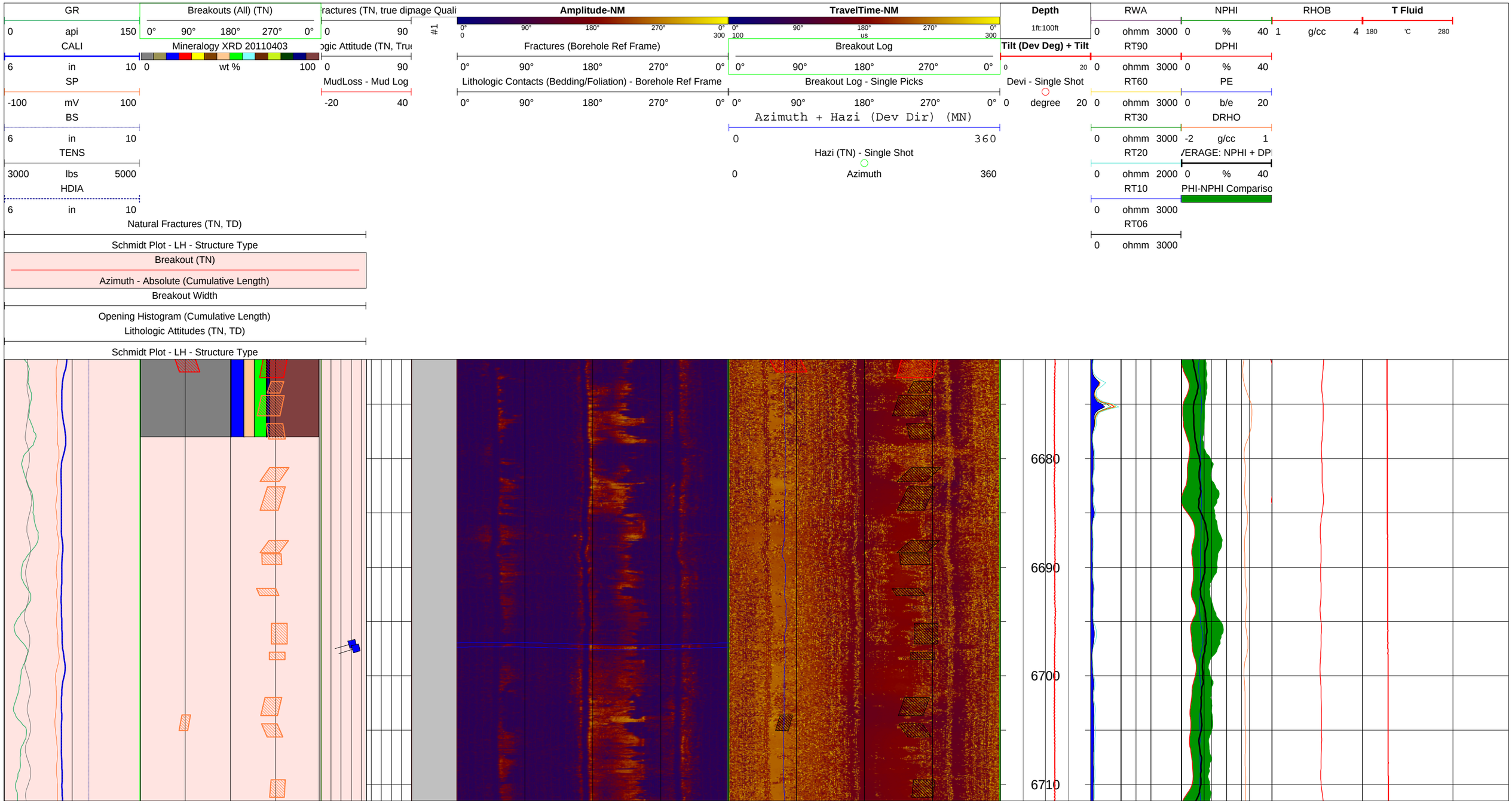

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Low
X
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
Azimuth
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
Devi - Single Shot
degree
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
6470
6480
6490
6500

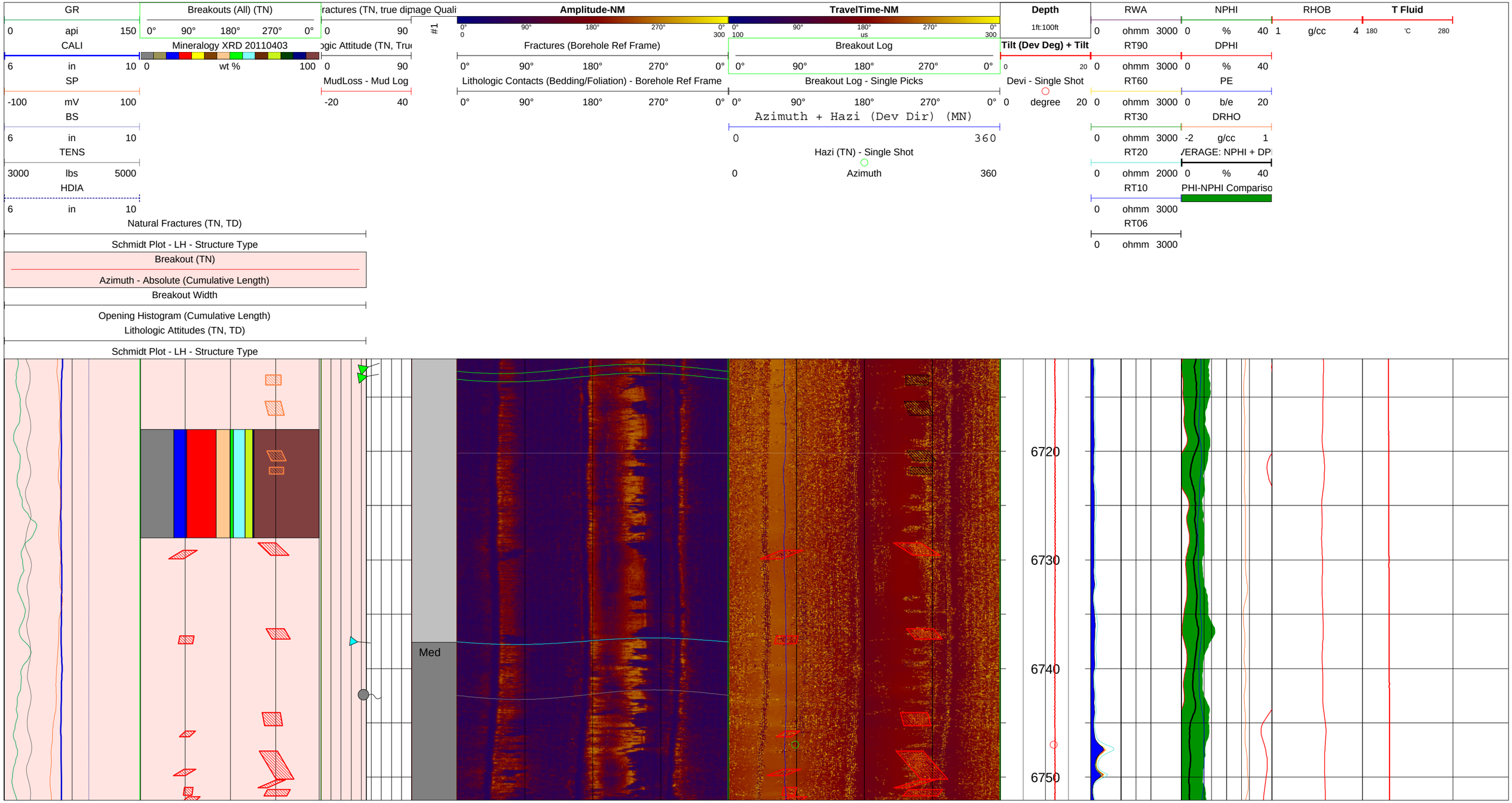

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
MudLoss - Mud Log
-20 40
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
6510
6520
6530
6540

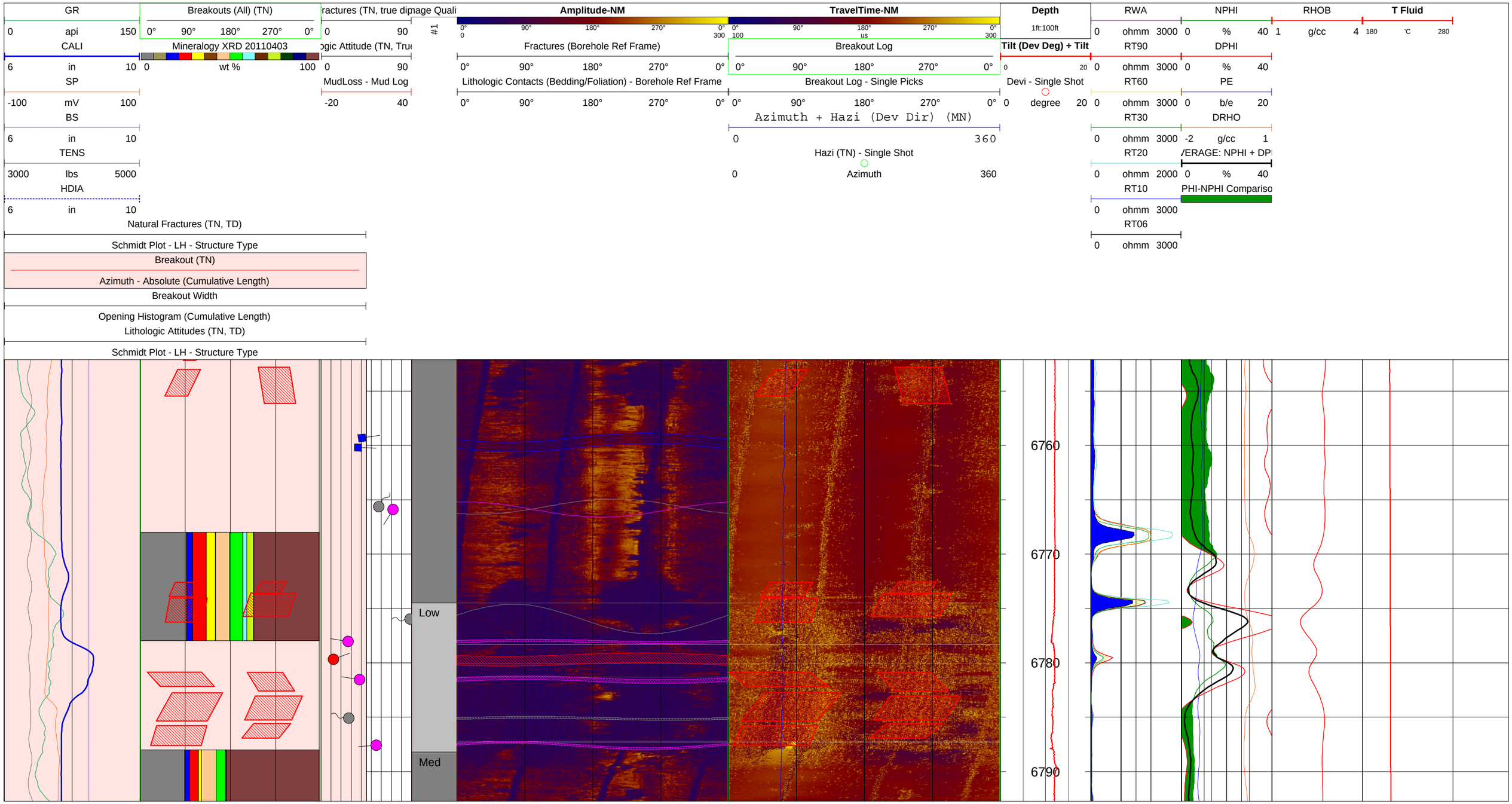

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Low
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
0 % 40
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
6550
6560
6570
6580

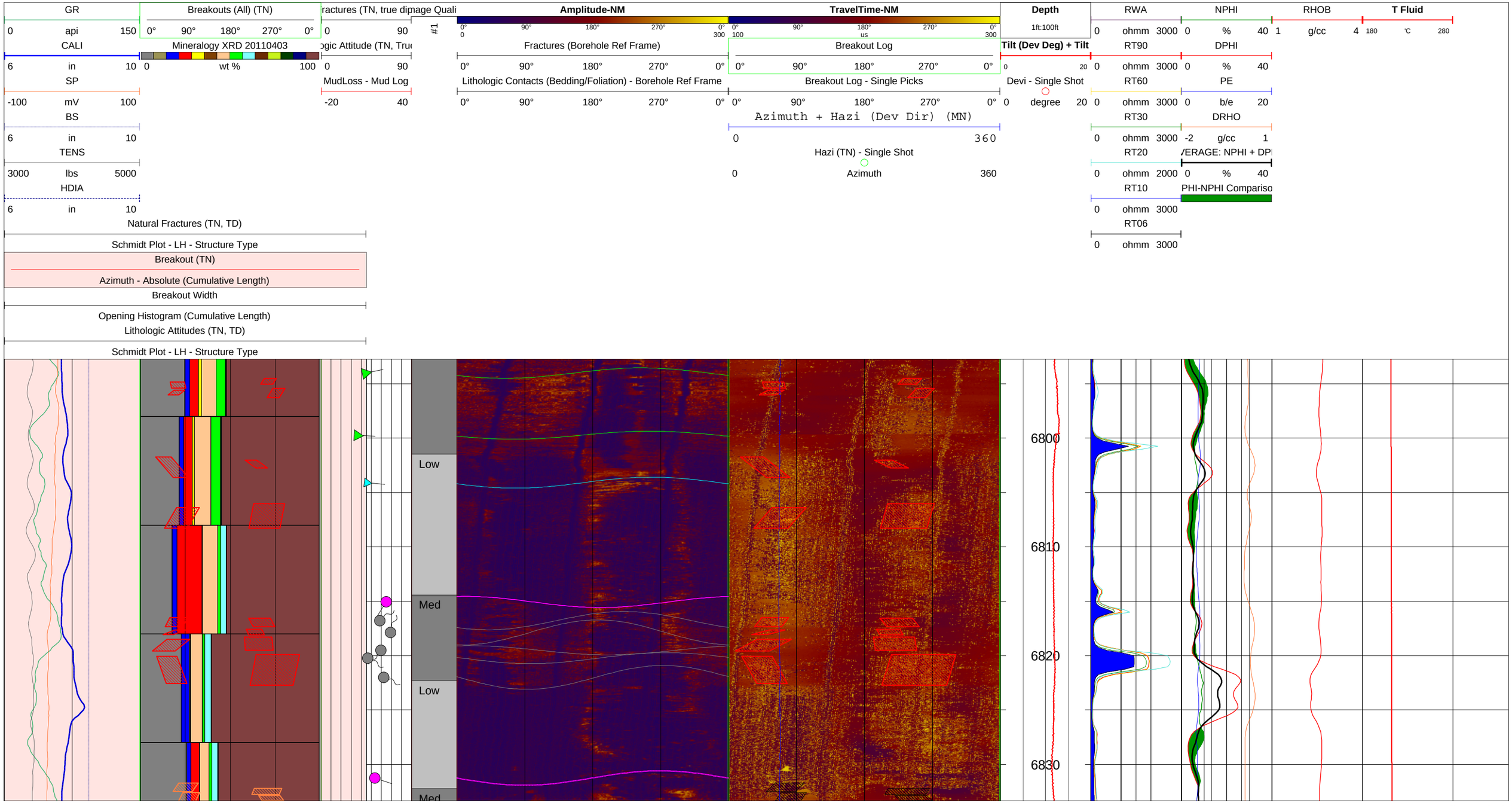

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Breakout Log
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
VERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
6590
6600
6610
6620
6630

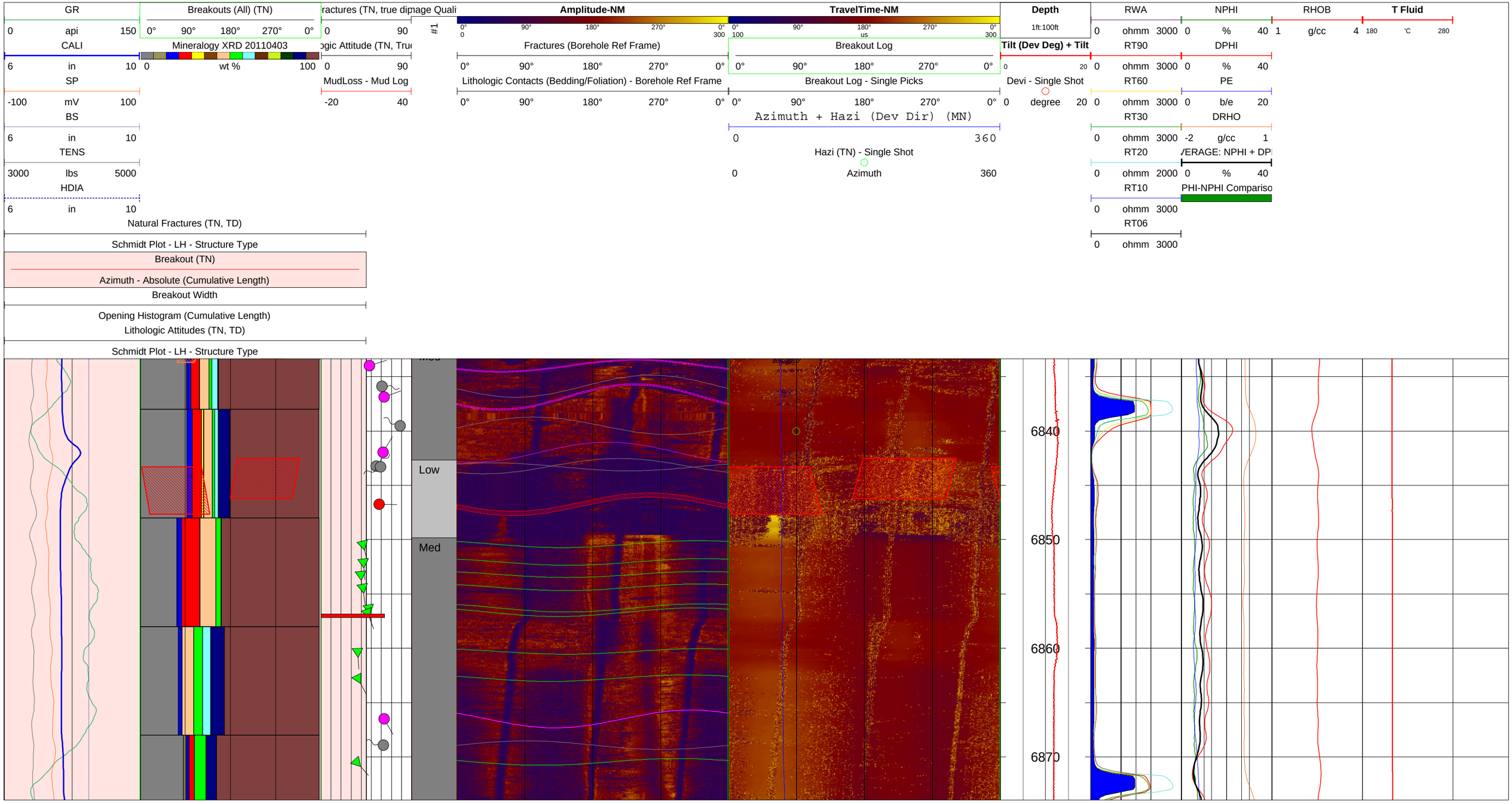

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
6640
6650
6660
6670

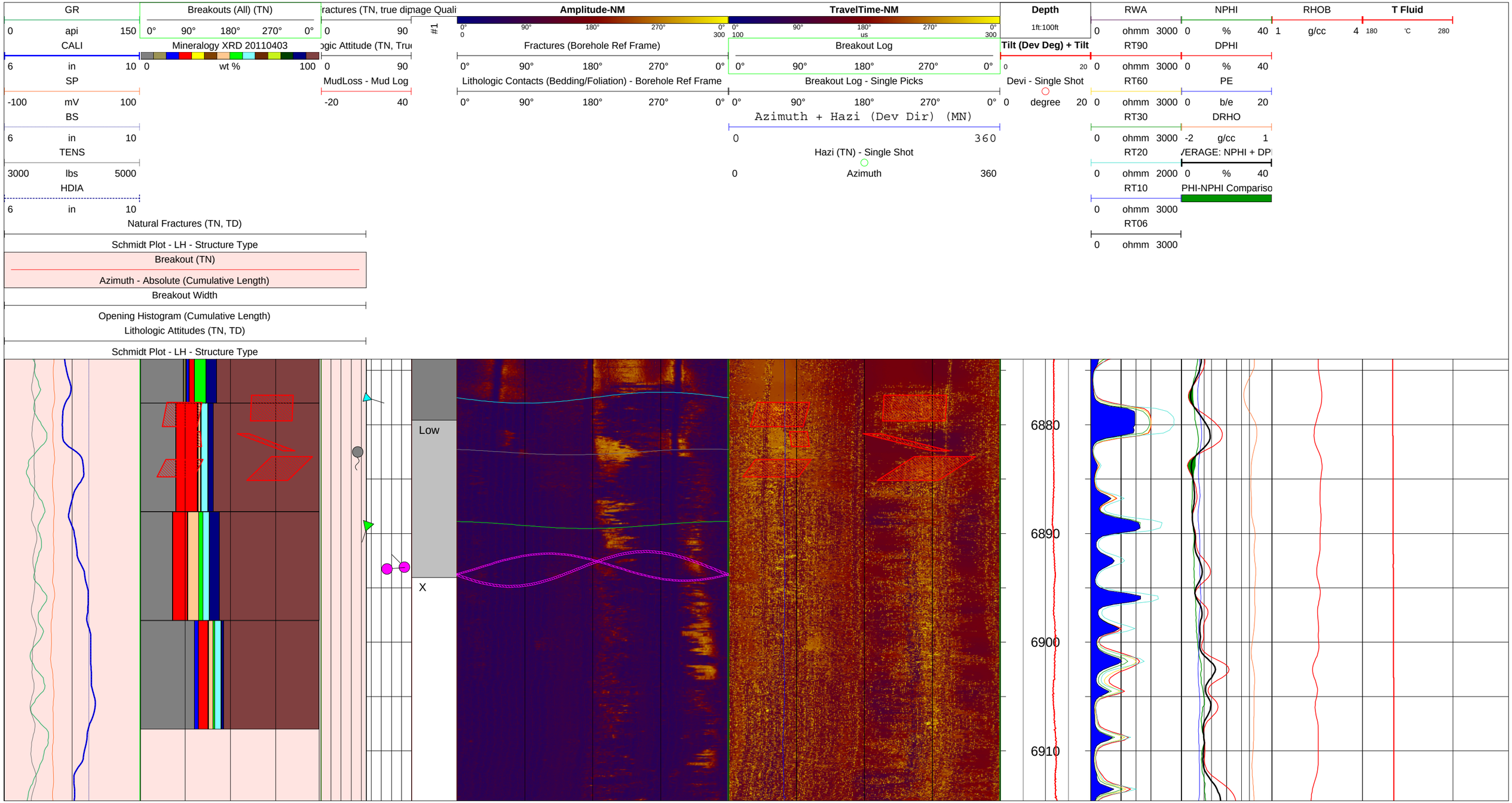

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
6680
6690
6700
6710

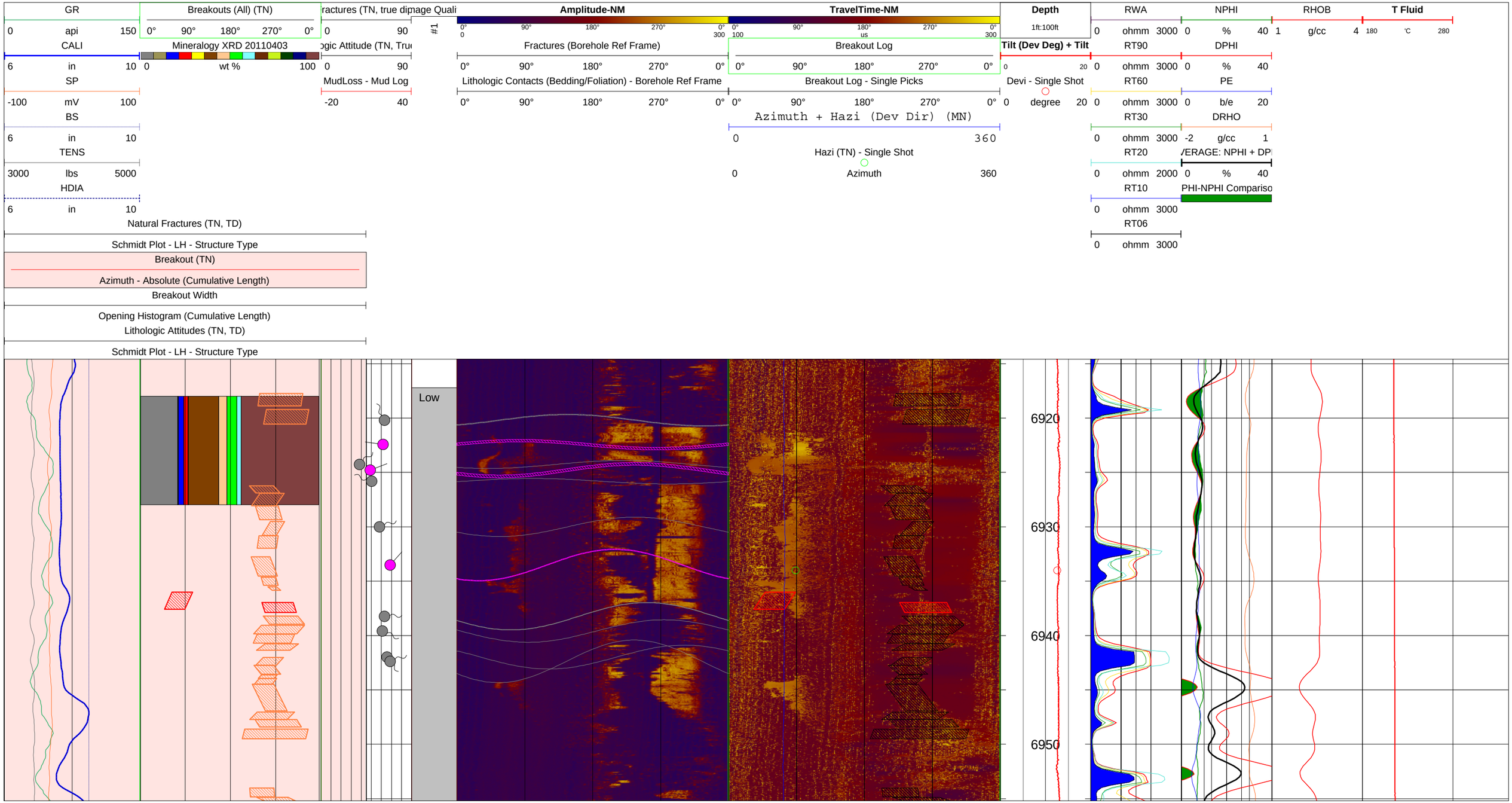

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
Azimuth
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
Devi - Single Shot
degree
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
Med
6720
6730
6740
6750

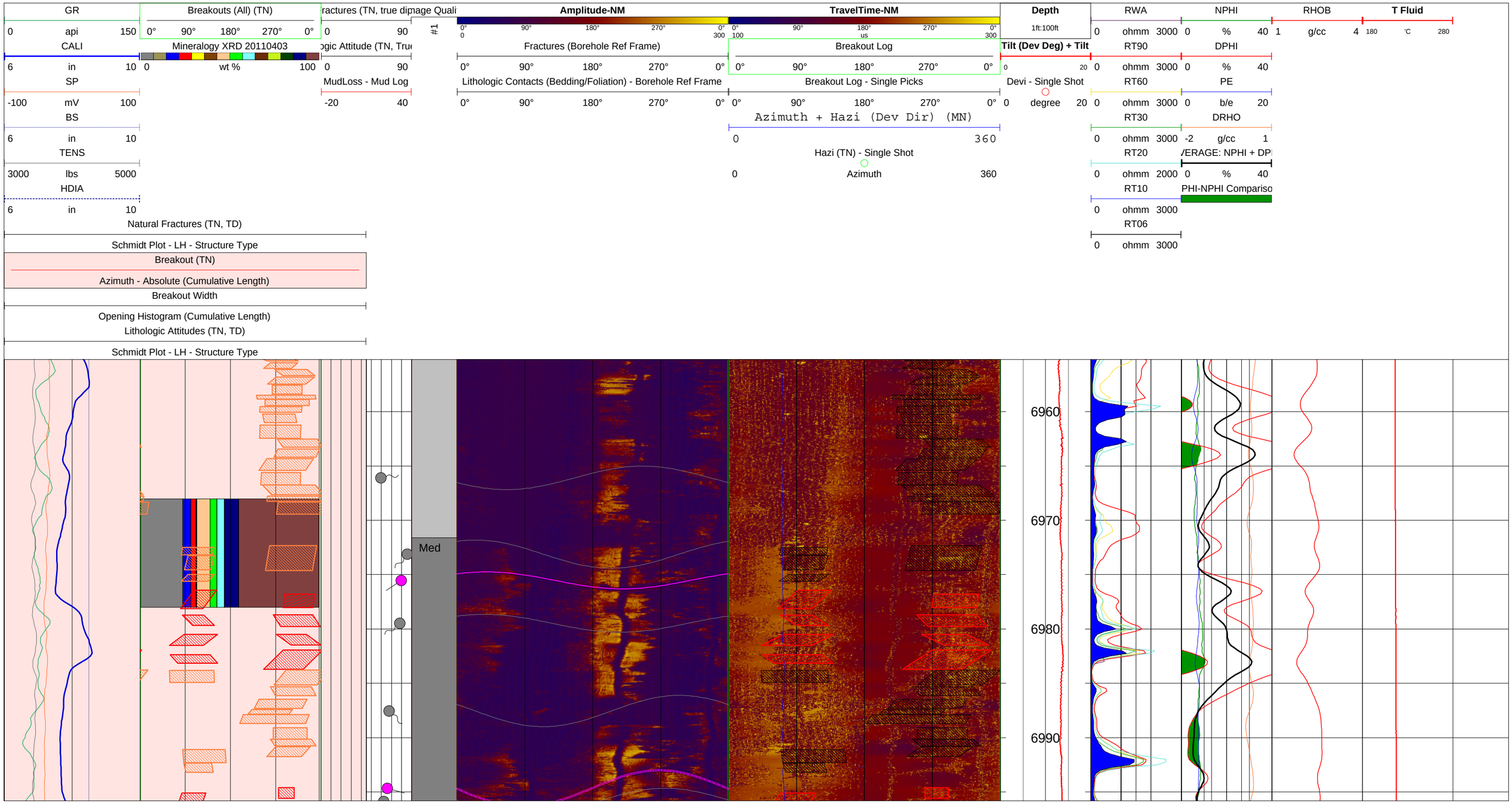

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Low
Med
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
0 % 40
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
6760
6770
6780
6790

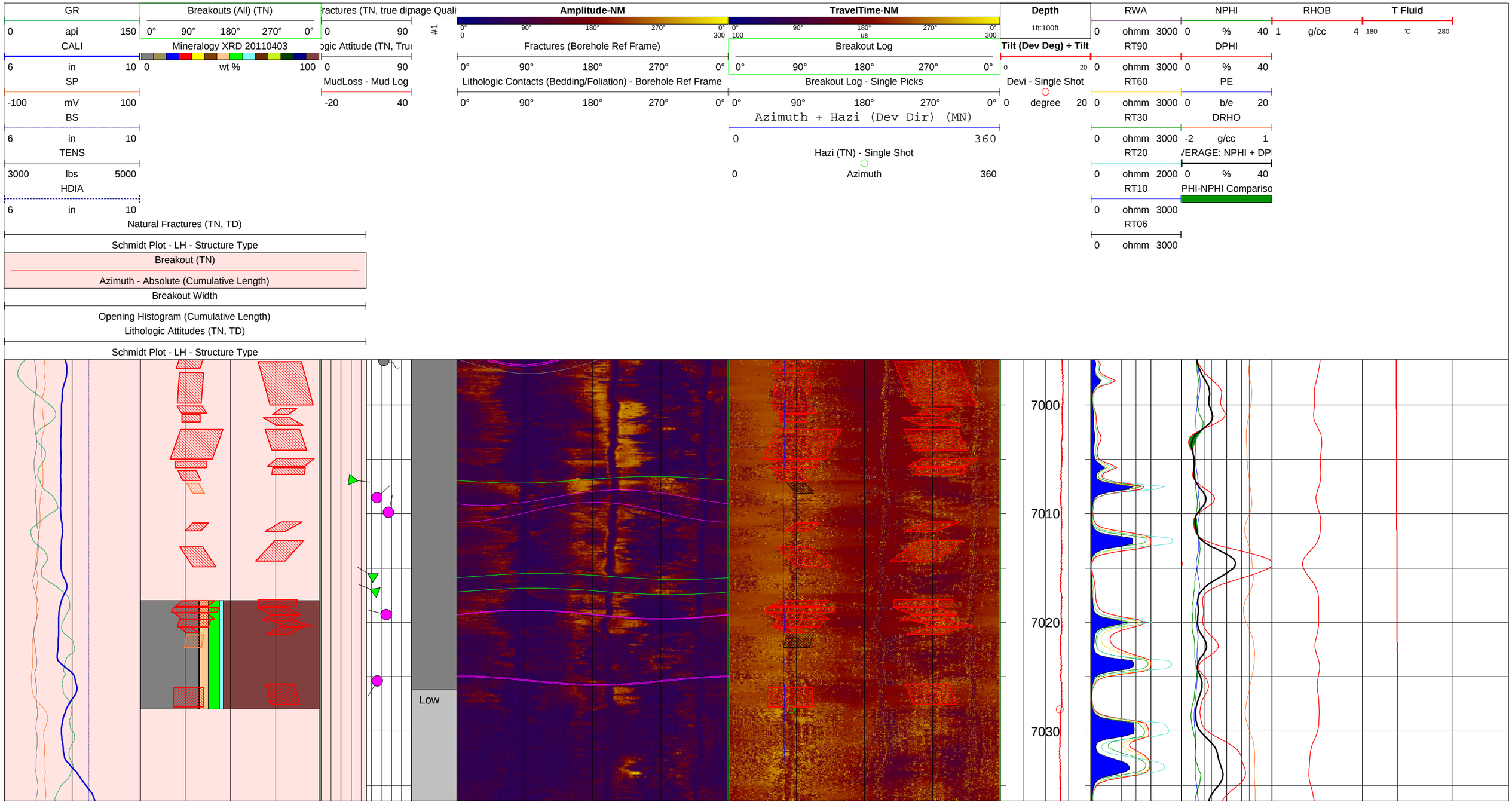

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
Low
Med
Low
Med
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
6800
6810
6820
6830
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280

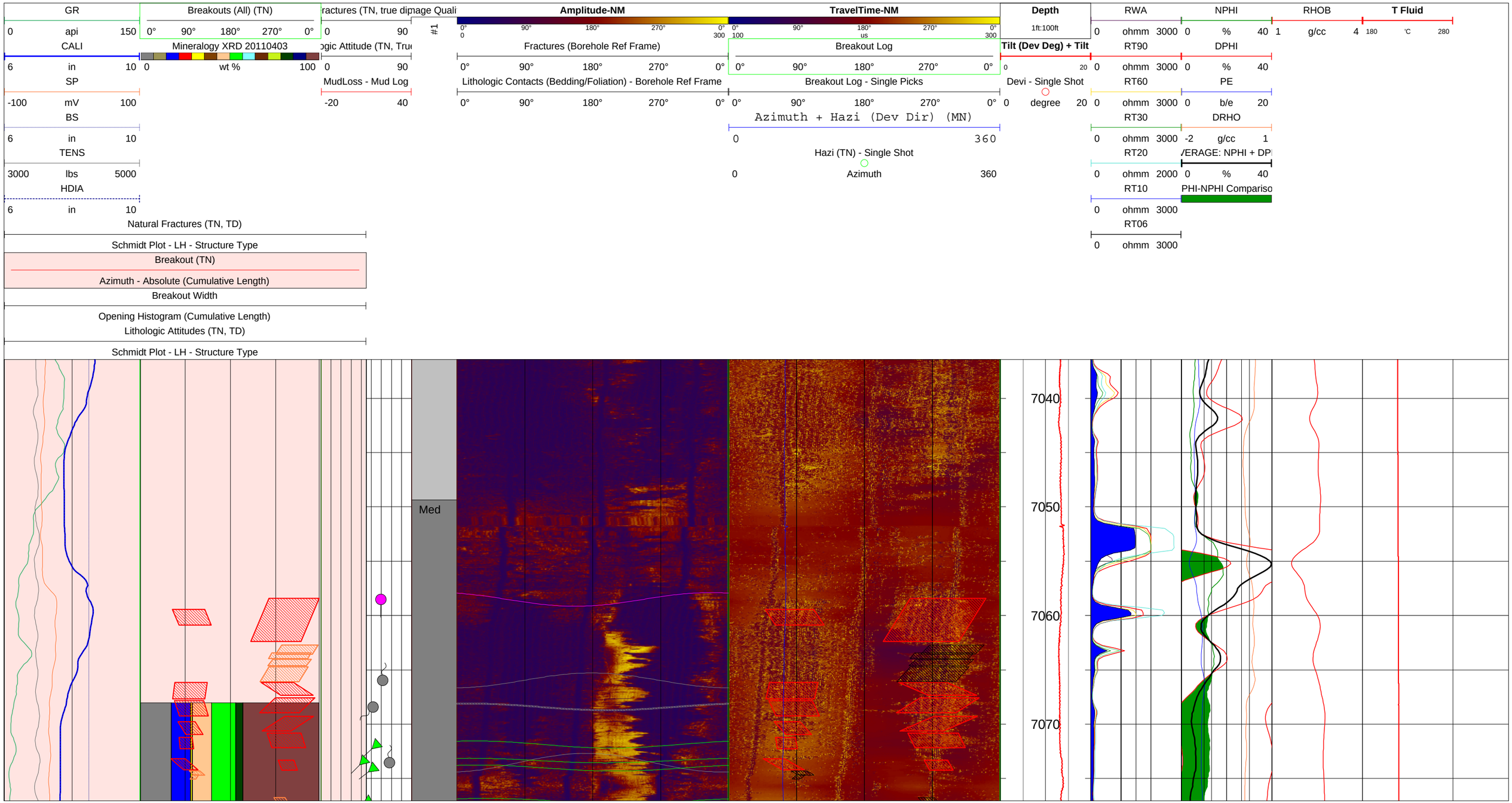

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Low
Med
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
6840
6850
6860
6870

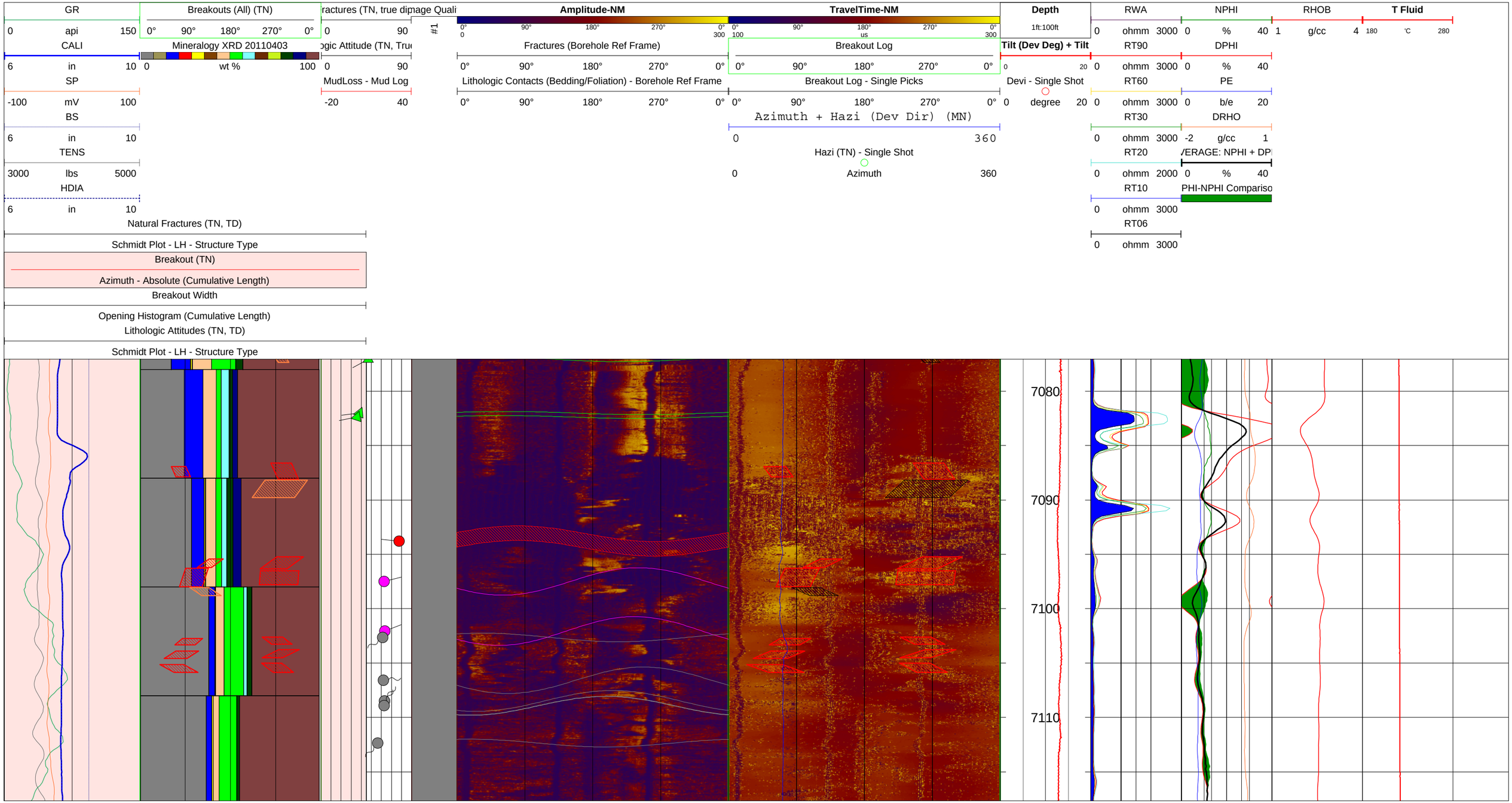

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Low
X
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
6880
6890
6900
6910
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280

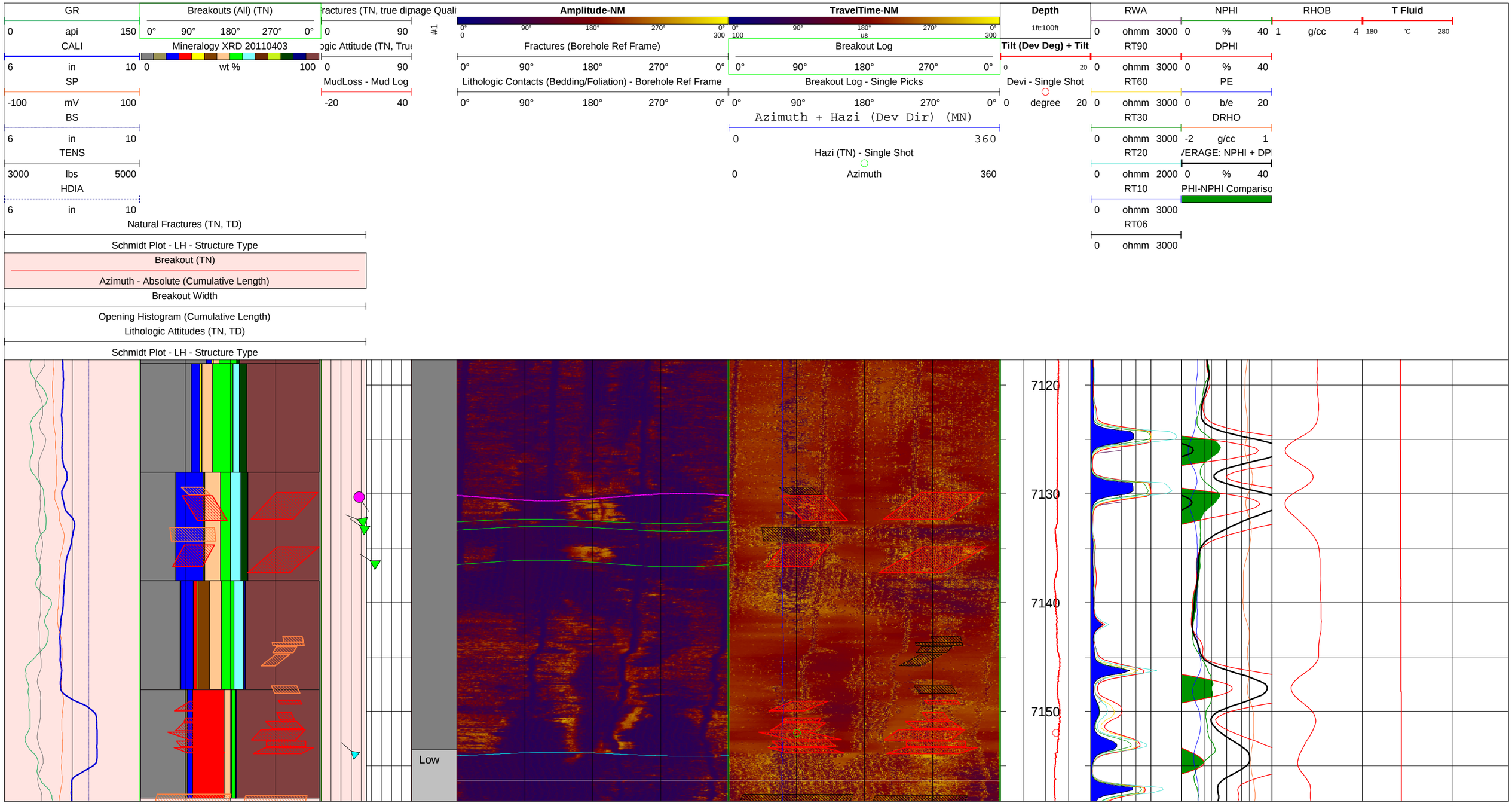

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
Low
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
6920
6930
6940
6950
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280

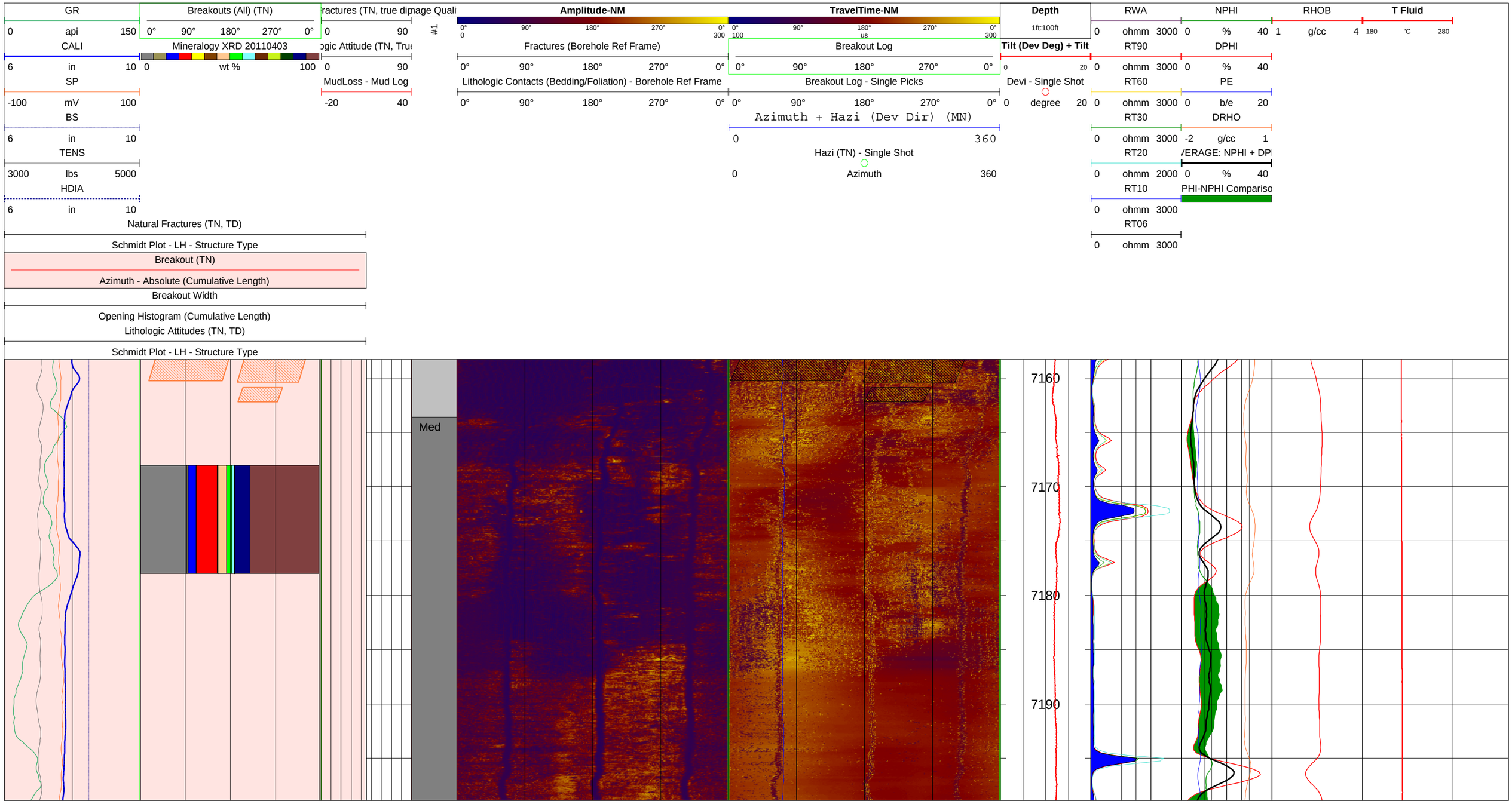

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Med
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
6960
6970
6980
6990
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280

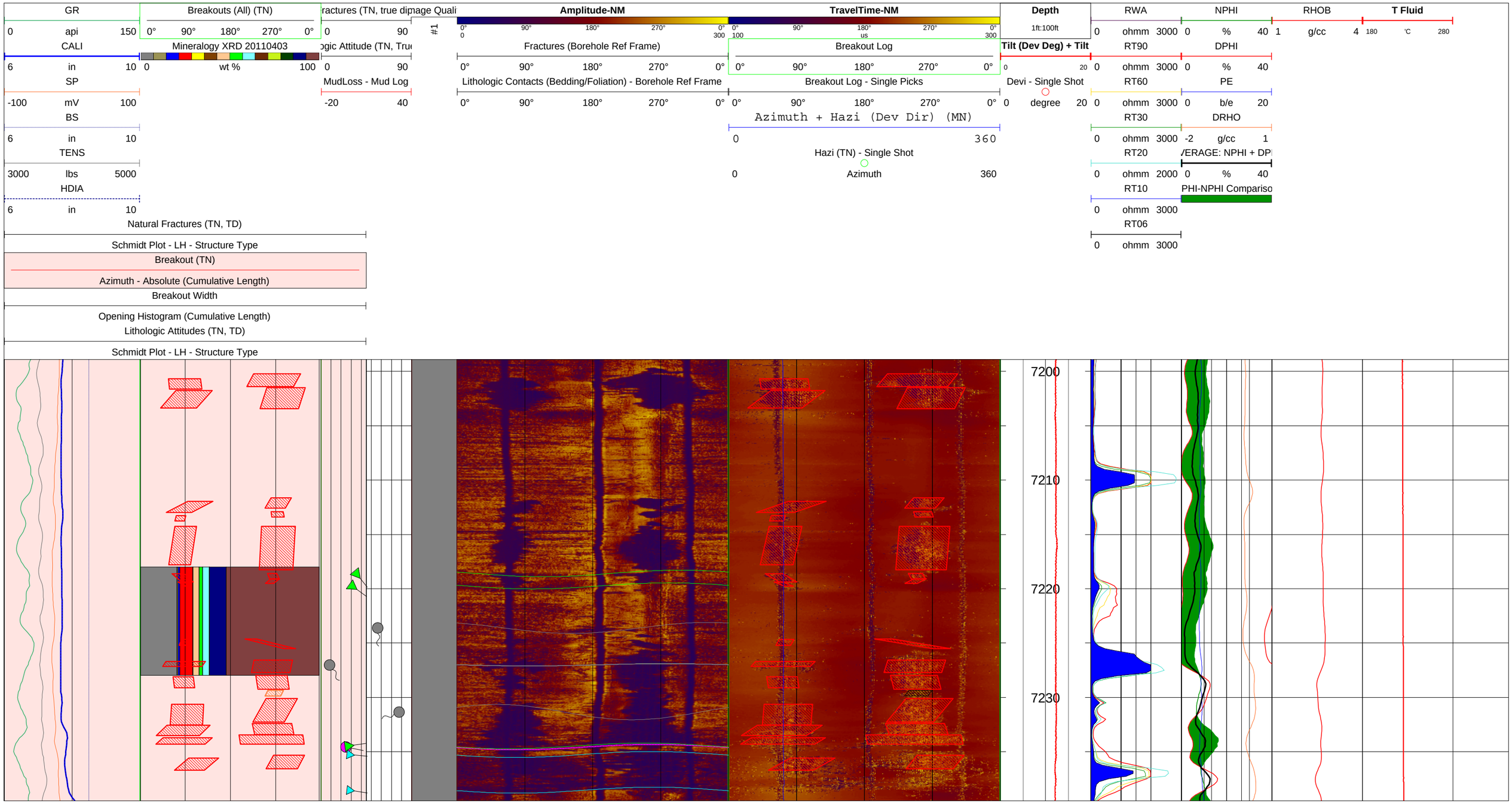

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Low
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
0 % 40
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
7000
7010
7020
7030

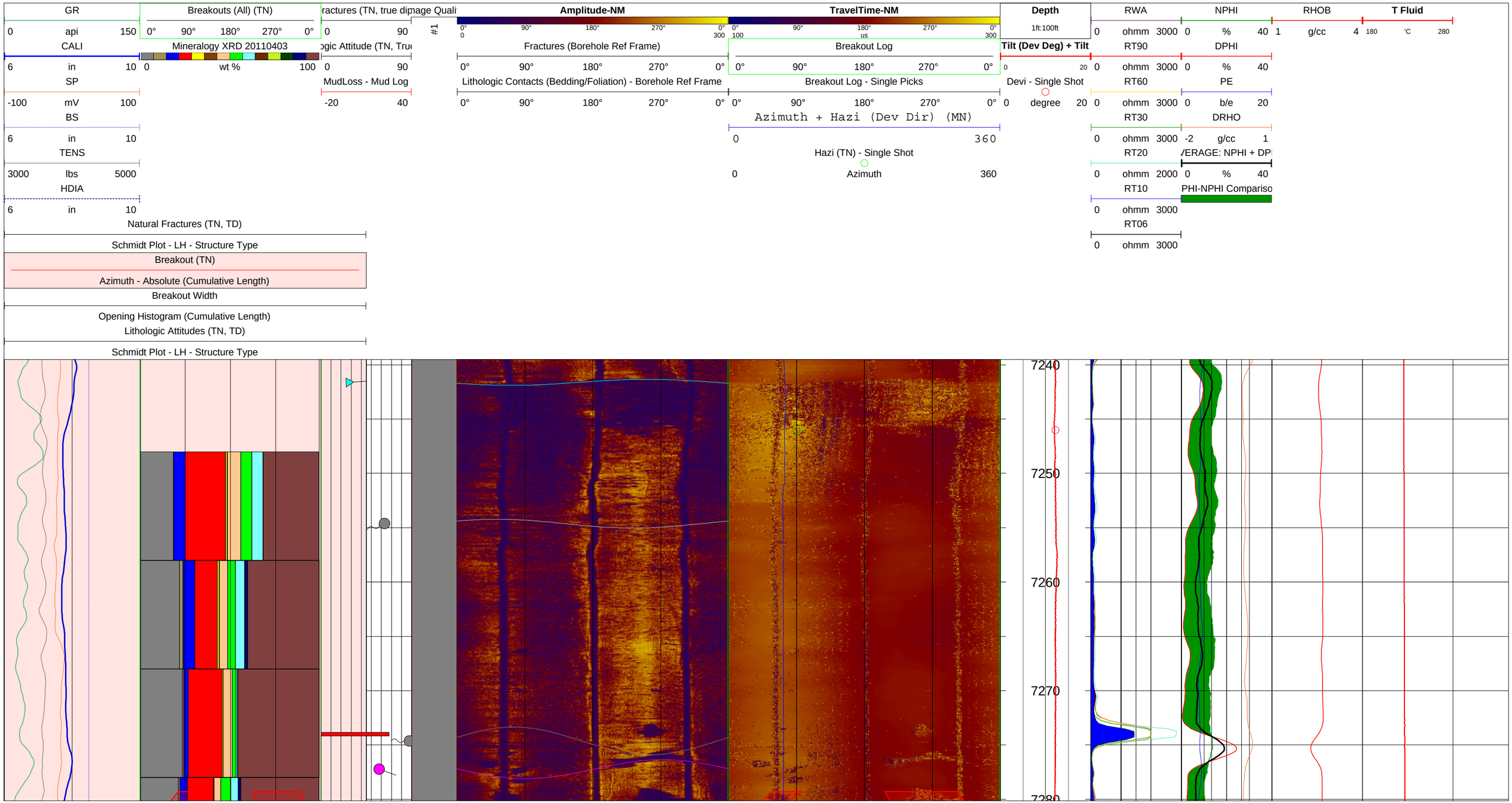

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Med
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
7040
7050
7060
7070

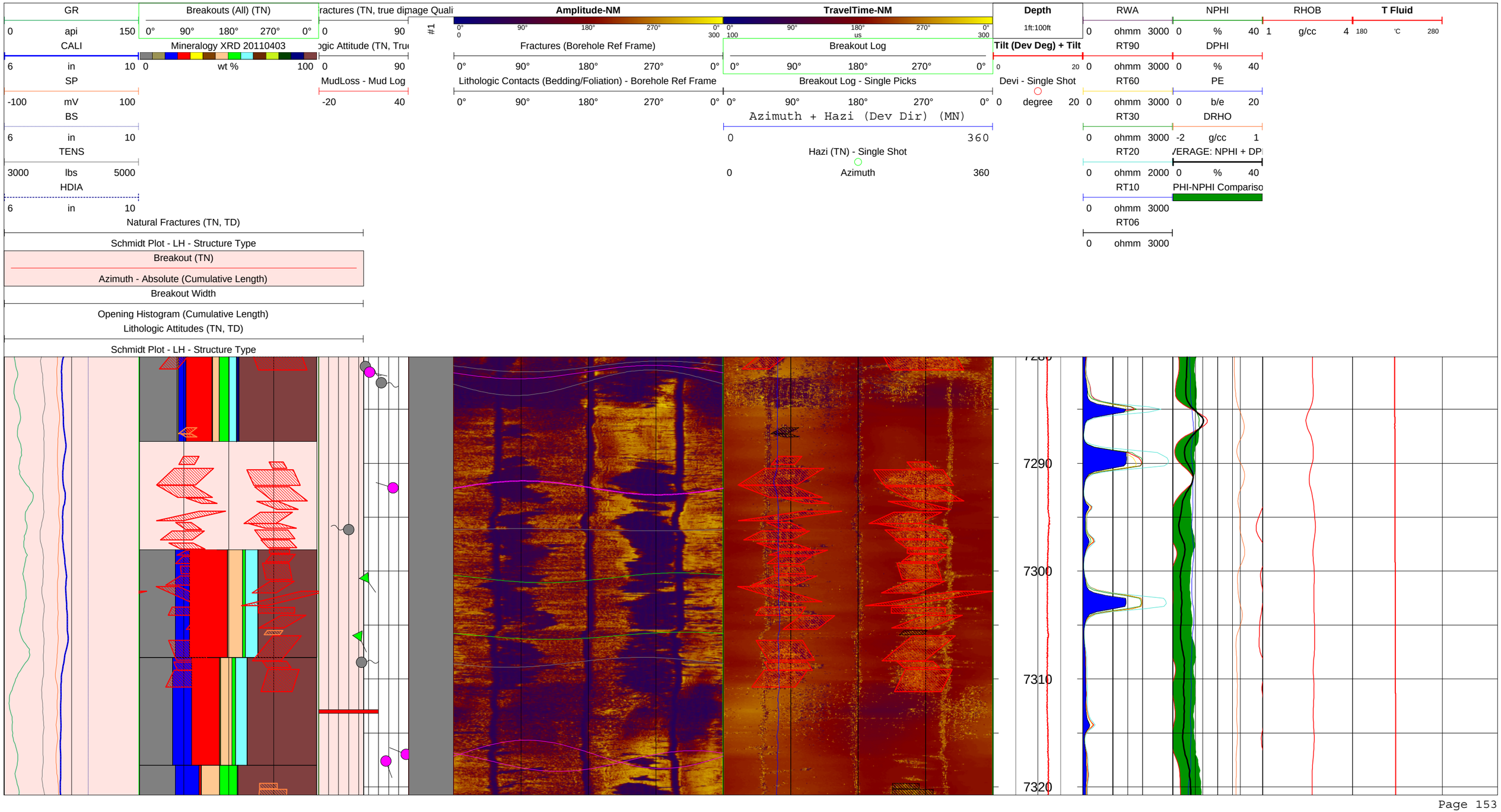

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
Azimuth
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
Devi - Single Shot
degree
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
7080
7090
7100
7110

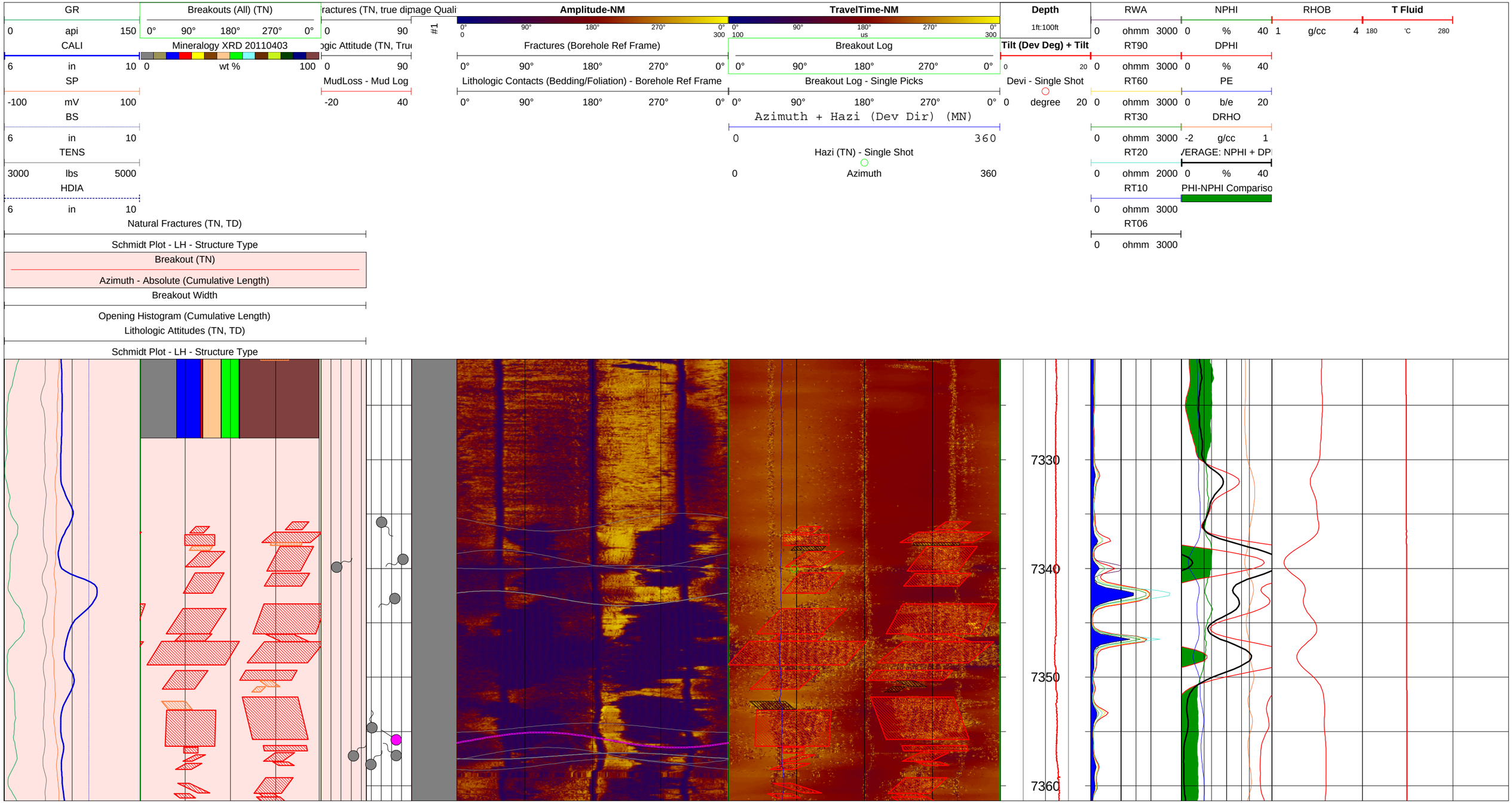

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Low
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
7120
7130
7140
7150
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280

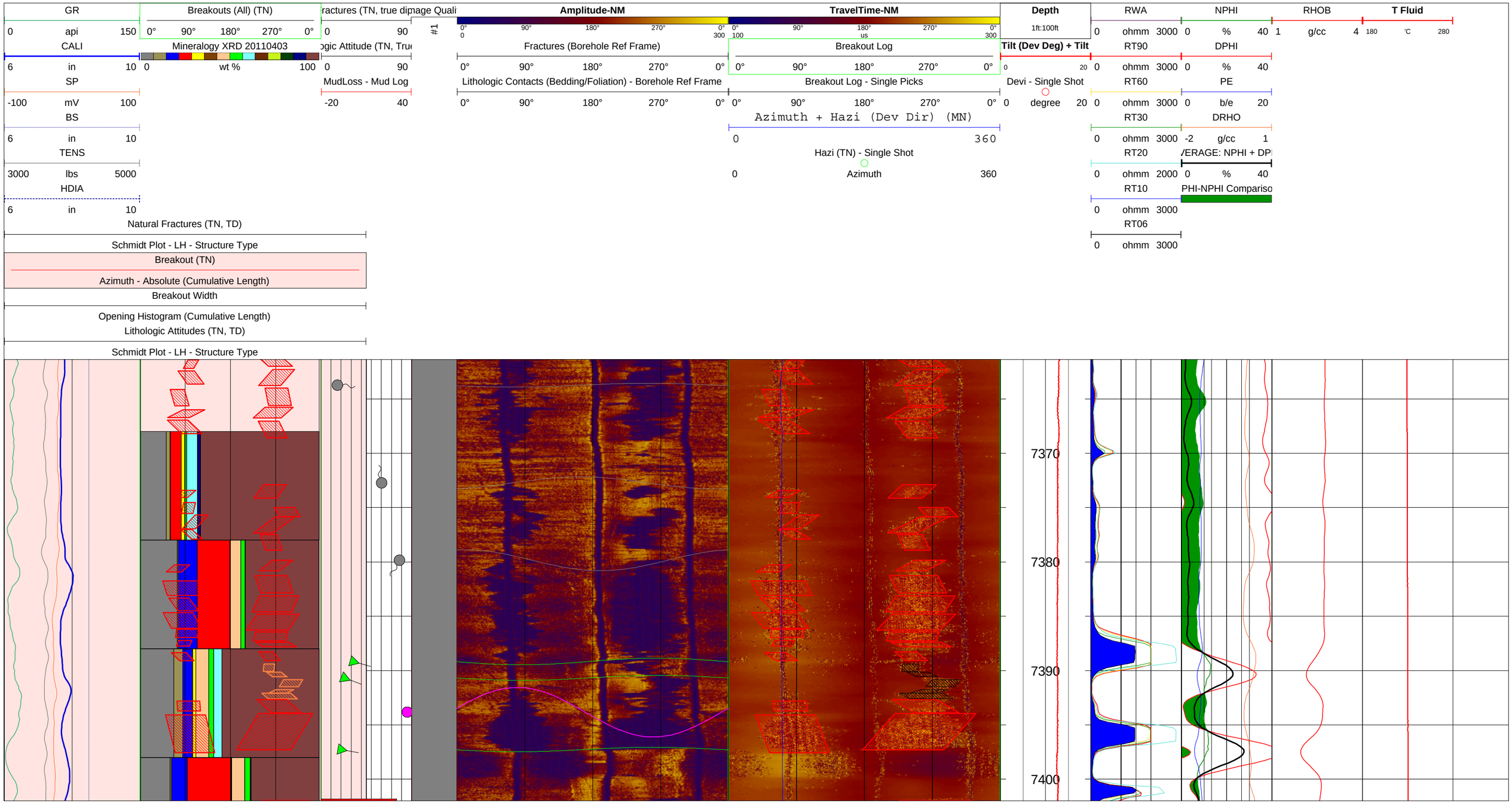

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
Med
7160
7170
7180
7190

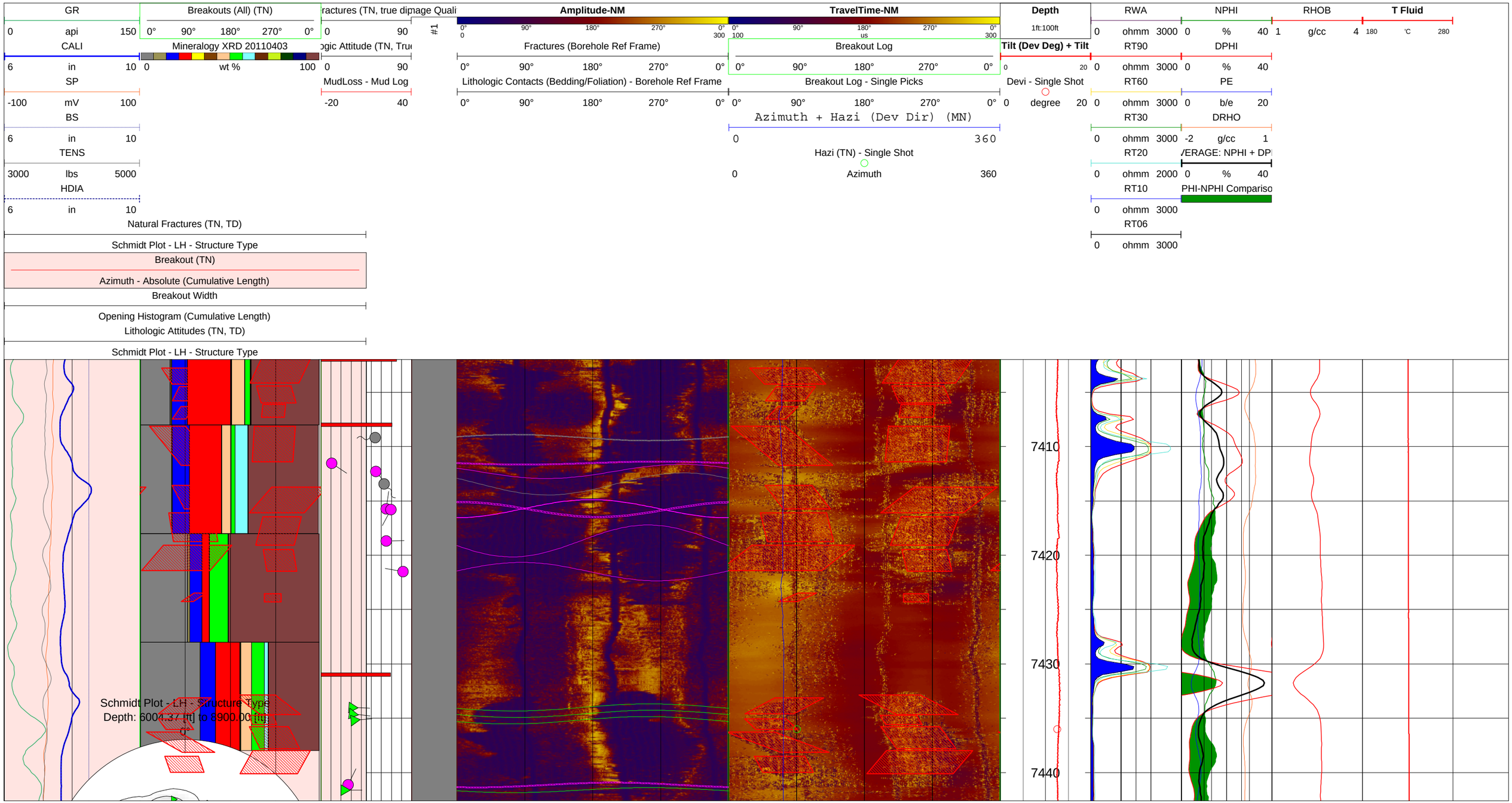

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
7200
7210
7220
7230

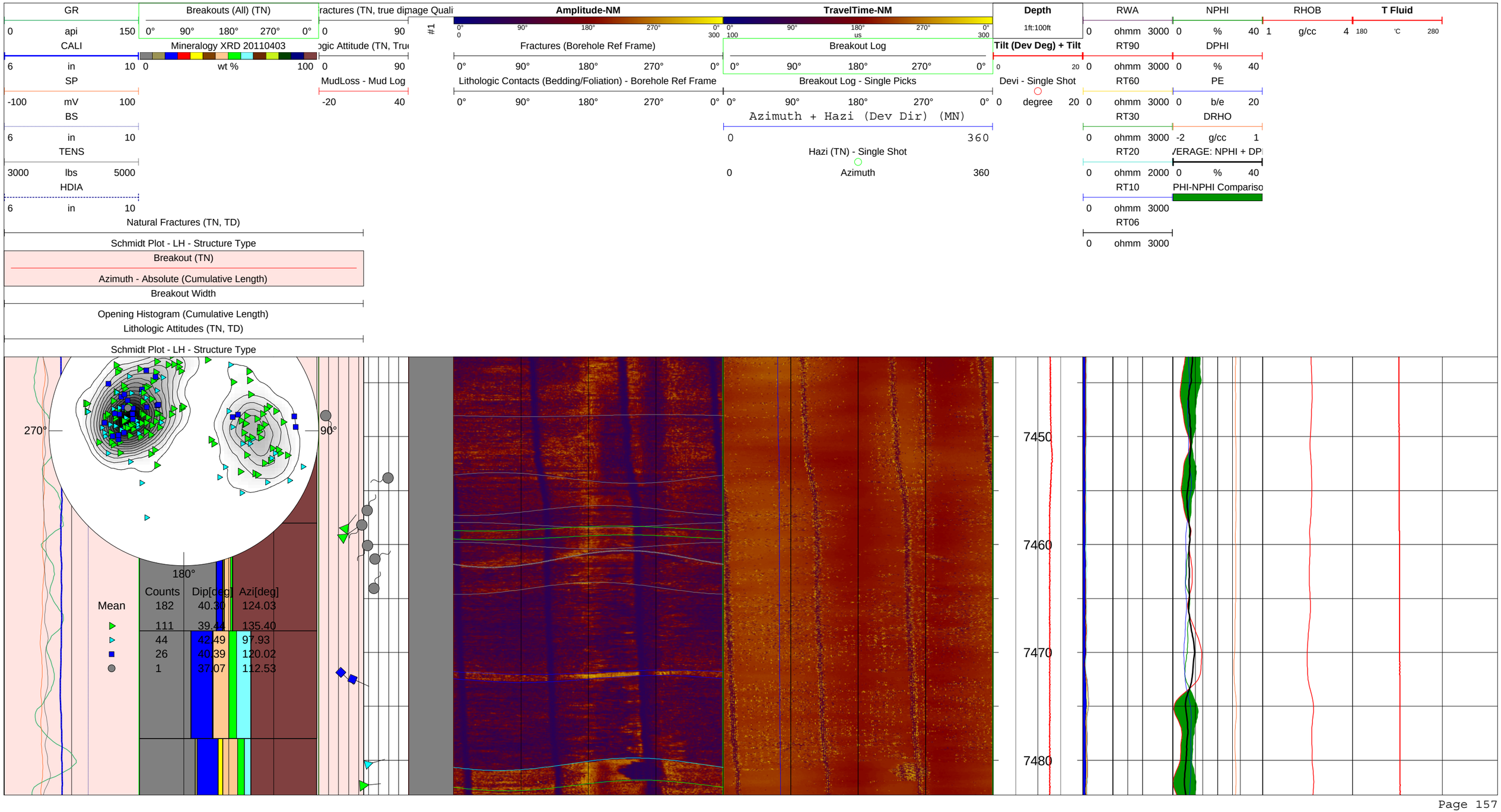

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
7240
7250
7260
7270
7280

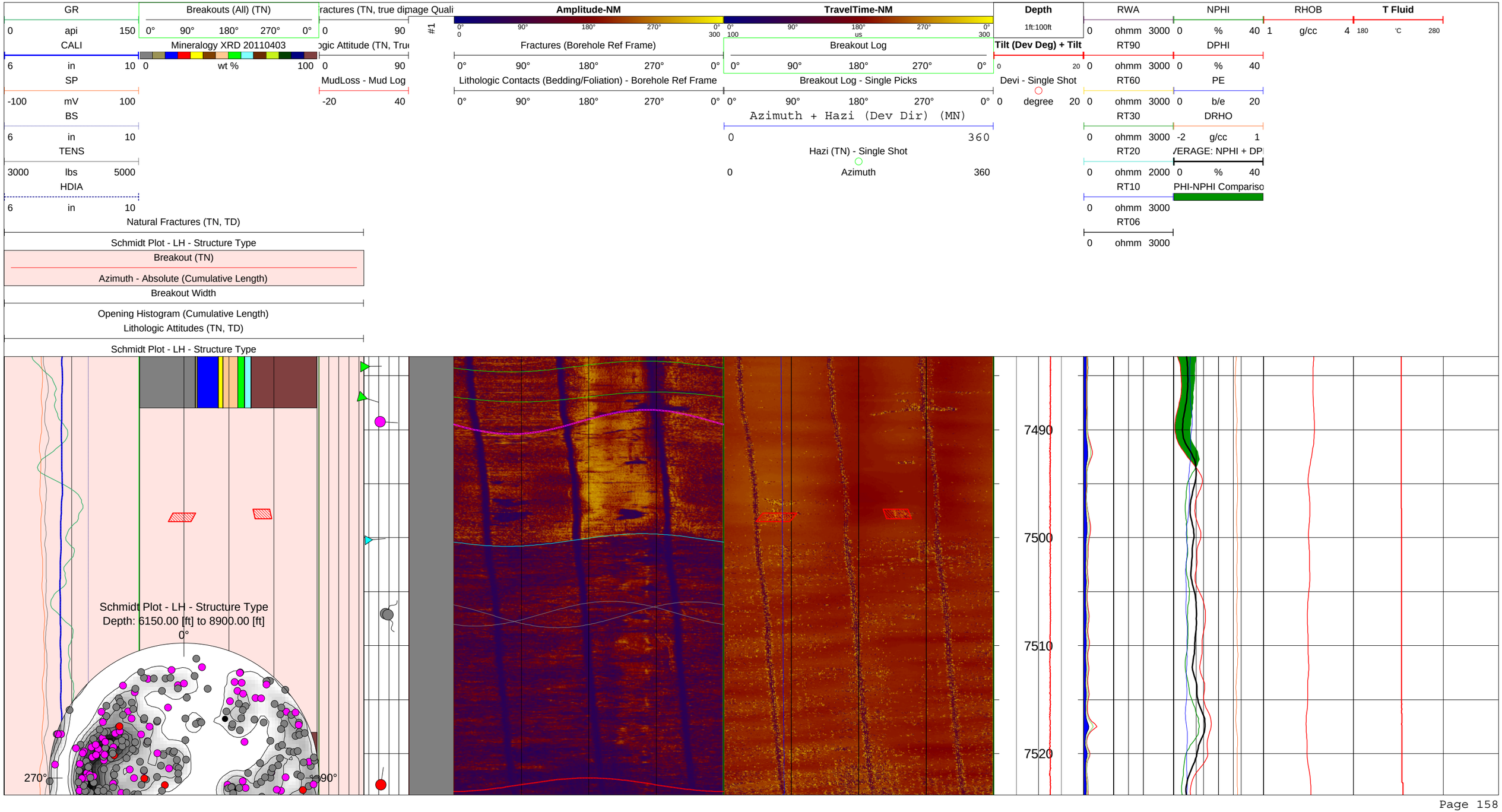

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
0 % 40
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
7290
7300
7310
7320

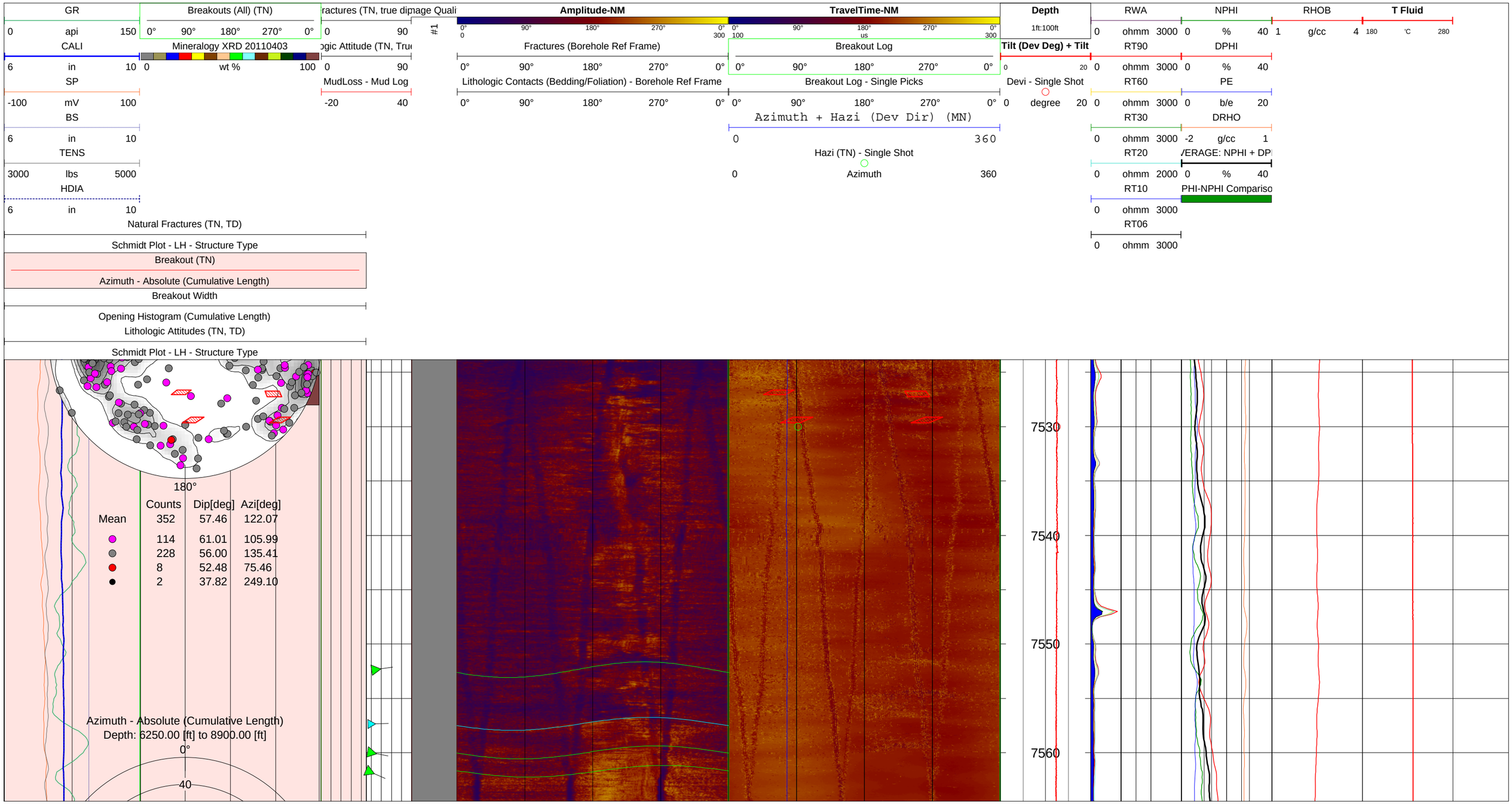

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
7330
7340
7350
7360

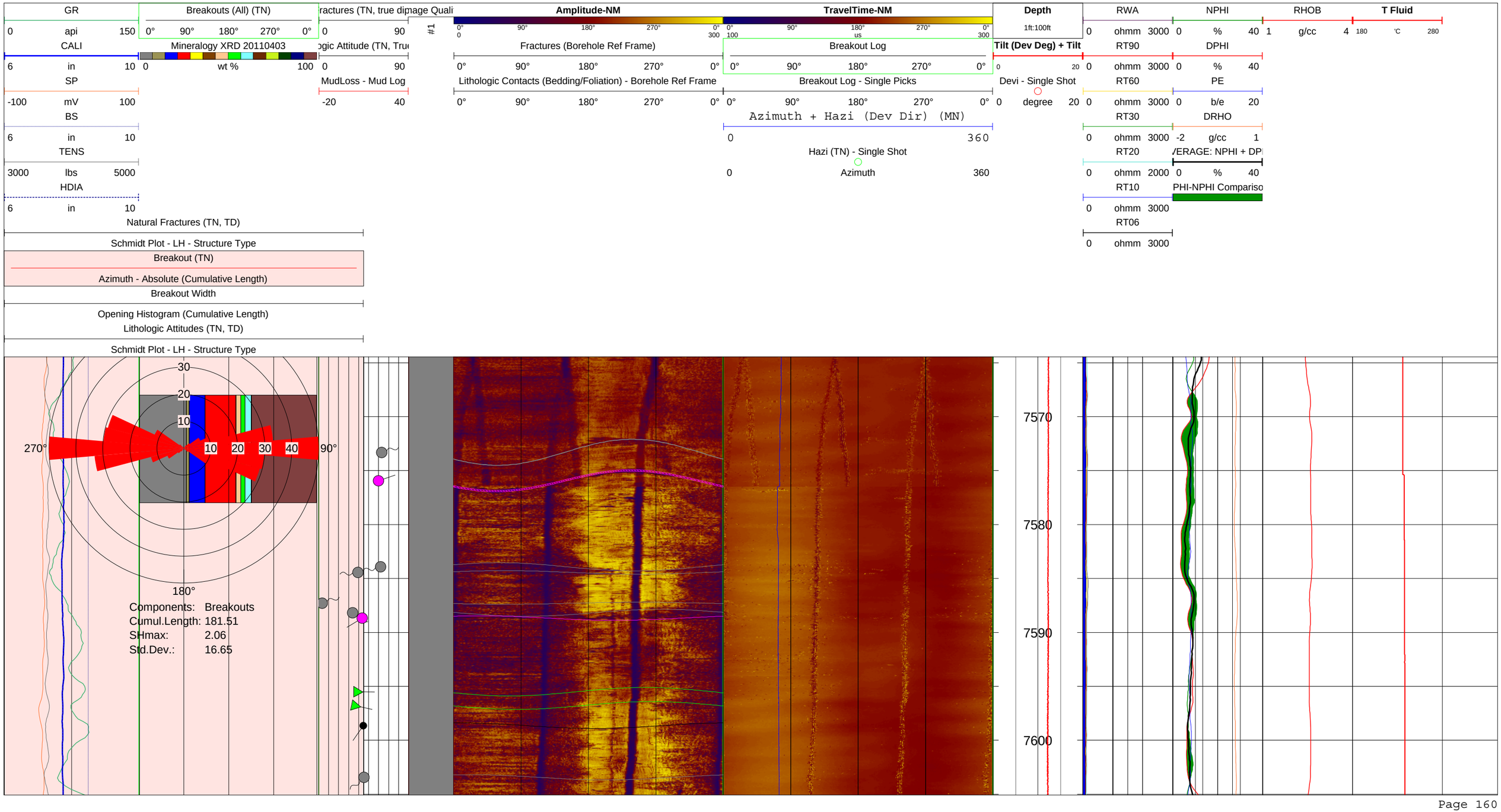

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Breakout Log
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
Azimuth
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
Devi - Single Shot
degree
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
7370
7380
7390
7400

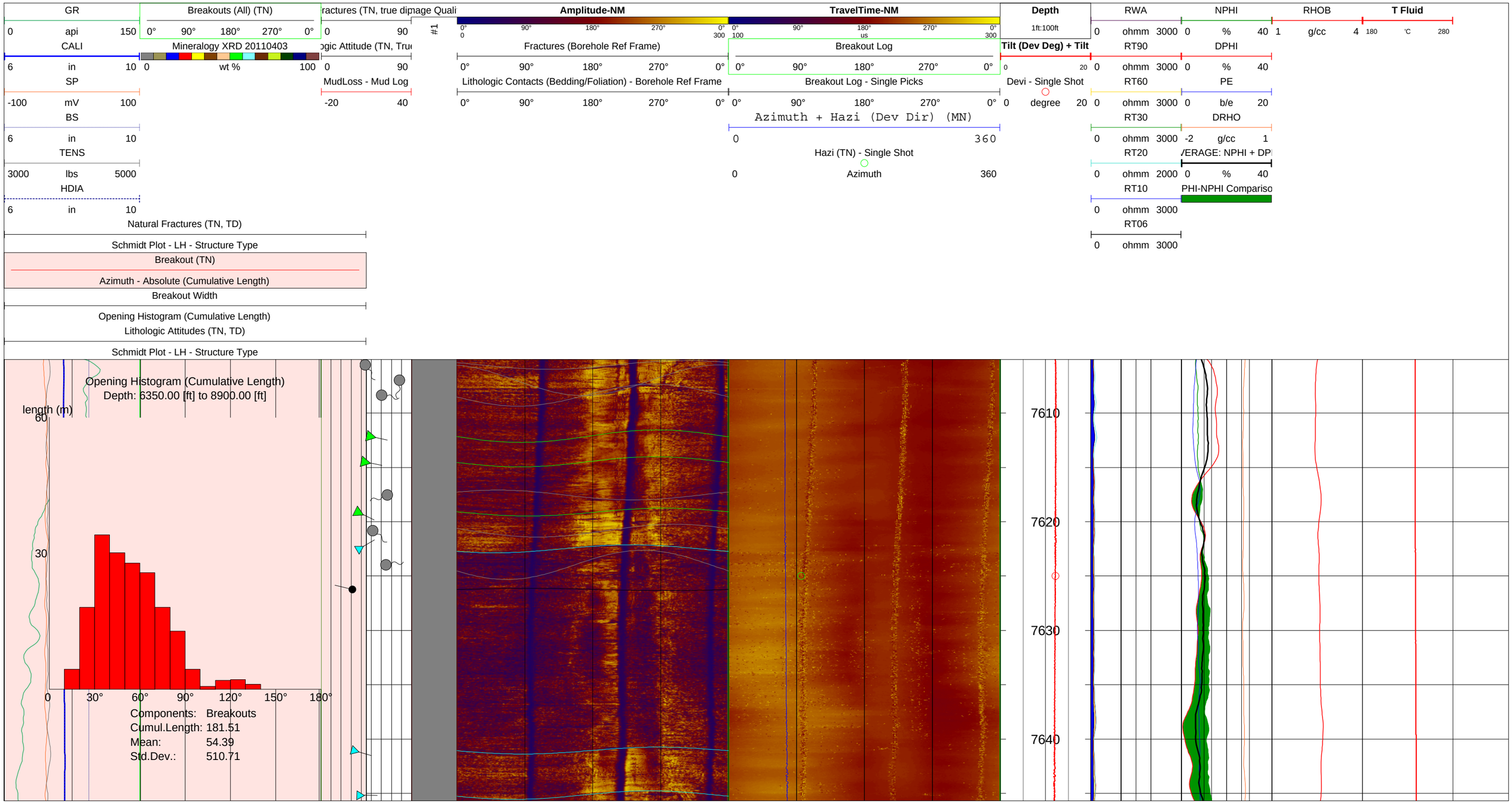

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
7410
7420
7430
7440
Schmidt Plot - LH - Structure Type
Depth: 6004.37 ft to 8900.00 ft

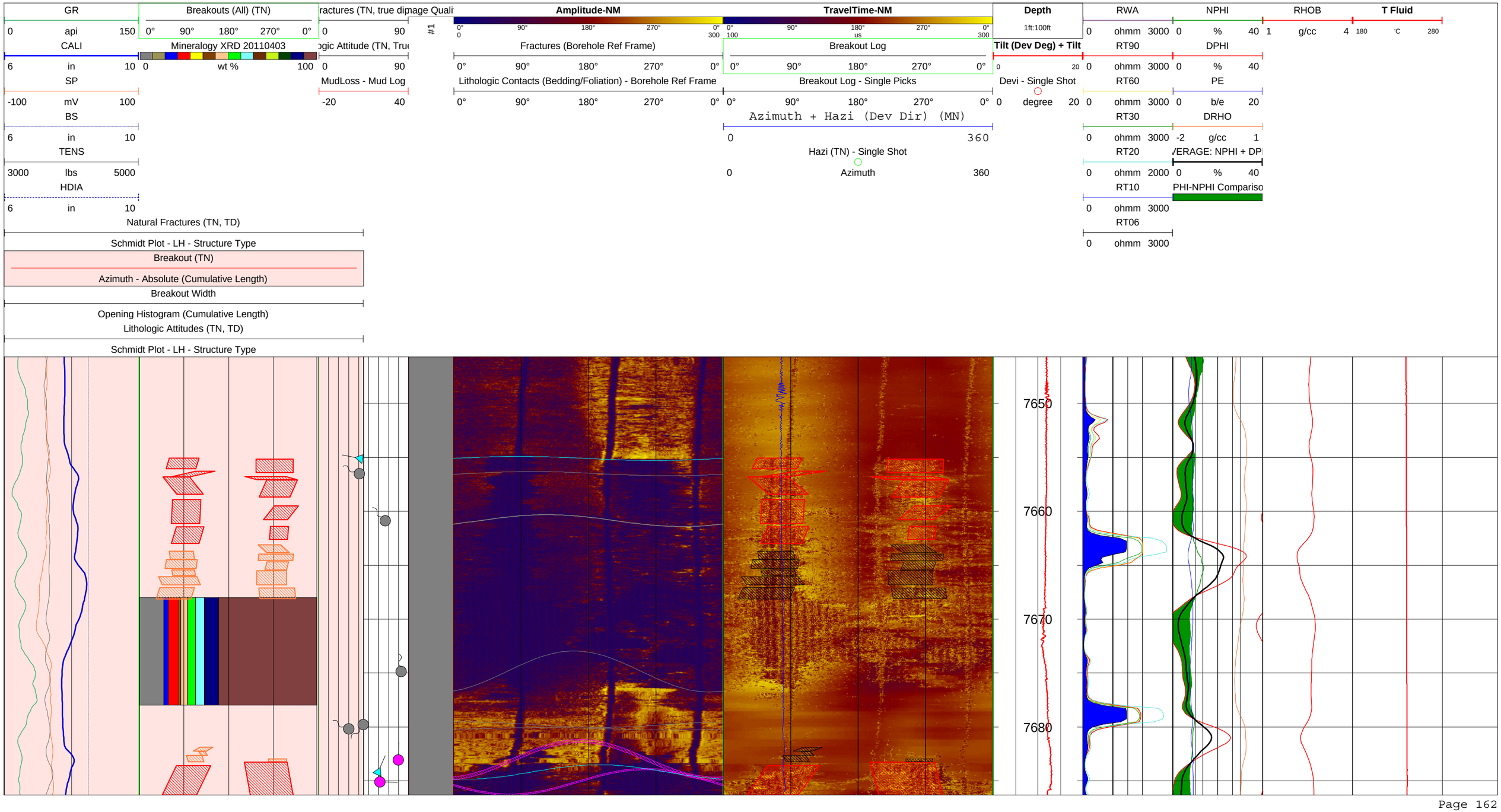

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
Counts Dip[deg] Azi[deg]
Mean 182 40.30 124.03
111 39.44 135.40
44 42.49 97.93
26 40.39 120.02
1 37.07 112.53
270°
90°
180°
fractures (TN, true dip
0 90
ogic Attitude (TN, Tru
0 90
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
0° 90° 180° 270° 0°
0 300
Fractures (Borehole Ref Frame)
0° 90° 180° 270° 0°
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
0° 90° 180° 270° 0°
TravelTime-NM
0° 90° 180° 270° 0°
100 us 300
Breakout Log
0° 90° 180° 270° 0°
Breakout Log - Single Picks
0° 90° 180° 270° 0°
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
7450
7460
7470
7480

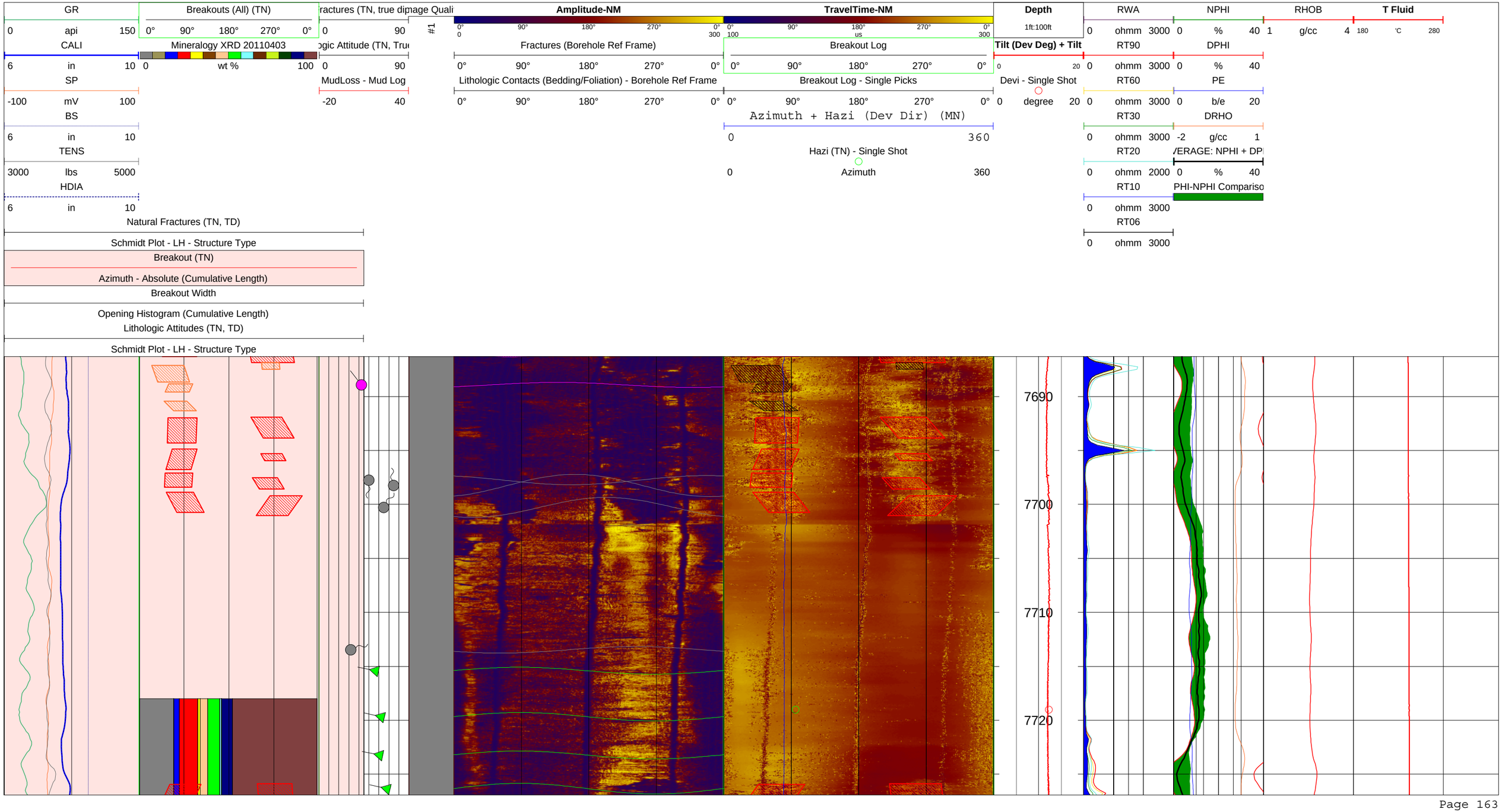

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
0 % 40
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
7490
7500
7510
7520
Schmidt Plot - LH - Structure Type
Depth: 6150.00 [ft] to 8900.00 [ft]
0°
270°
90°

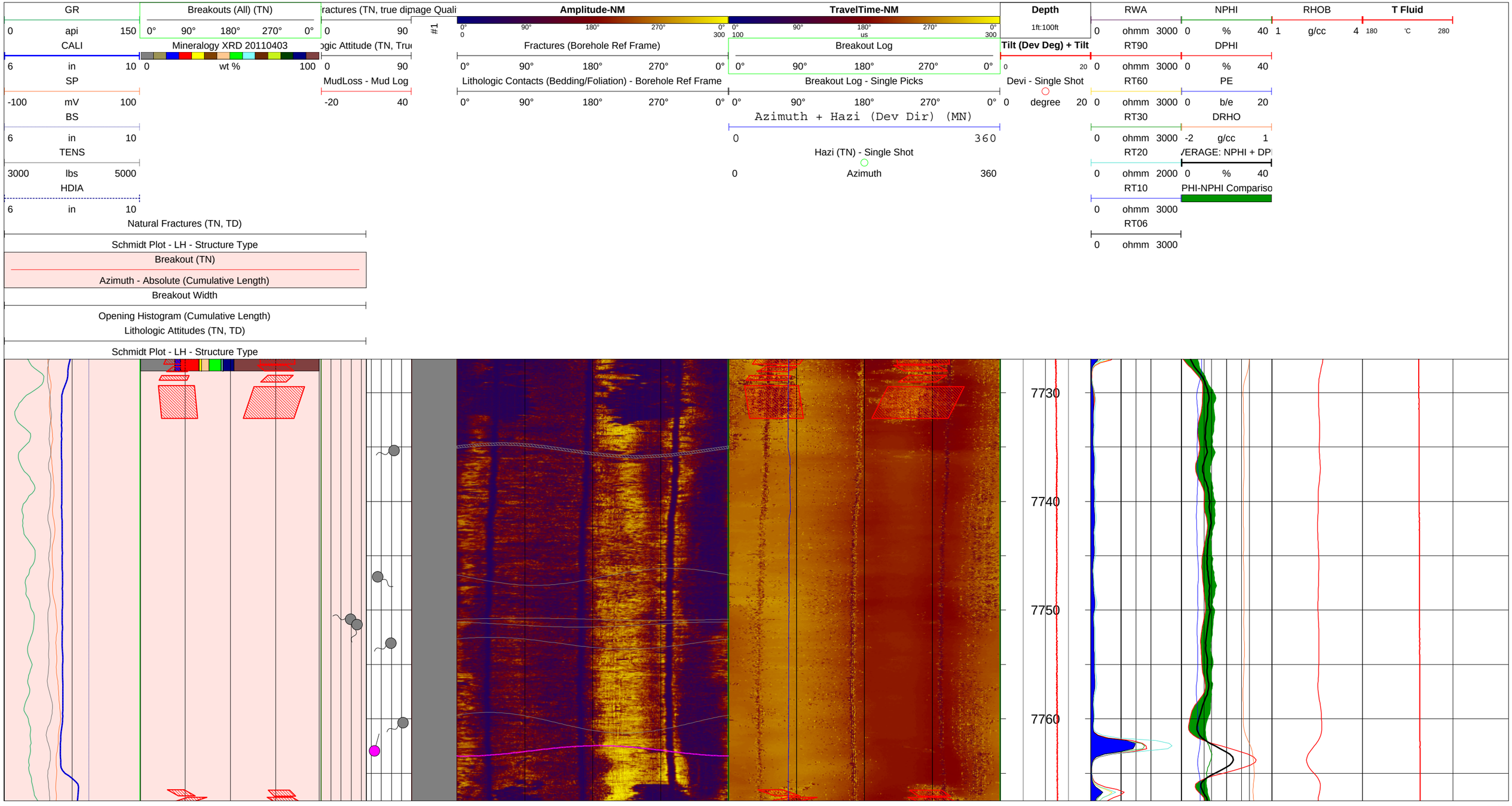

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
0 % 40
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
7530
7540
7550
7560
180°
Counts Dip[deg] Azi[deg]
Mean 352 57.46 122.07
114 61.01 105.99
228 56.00 135.41
8 52.48 75.46
2 37.82 249.10
Azimuth - Absolute (Cumulative Length)
Depth: 6250.00 [ft] to 8900.00 [ft]
0°
40

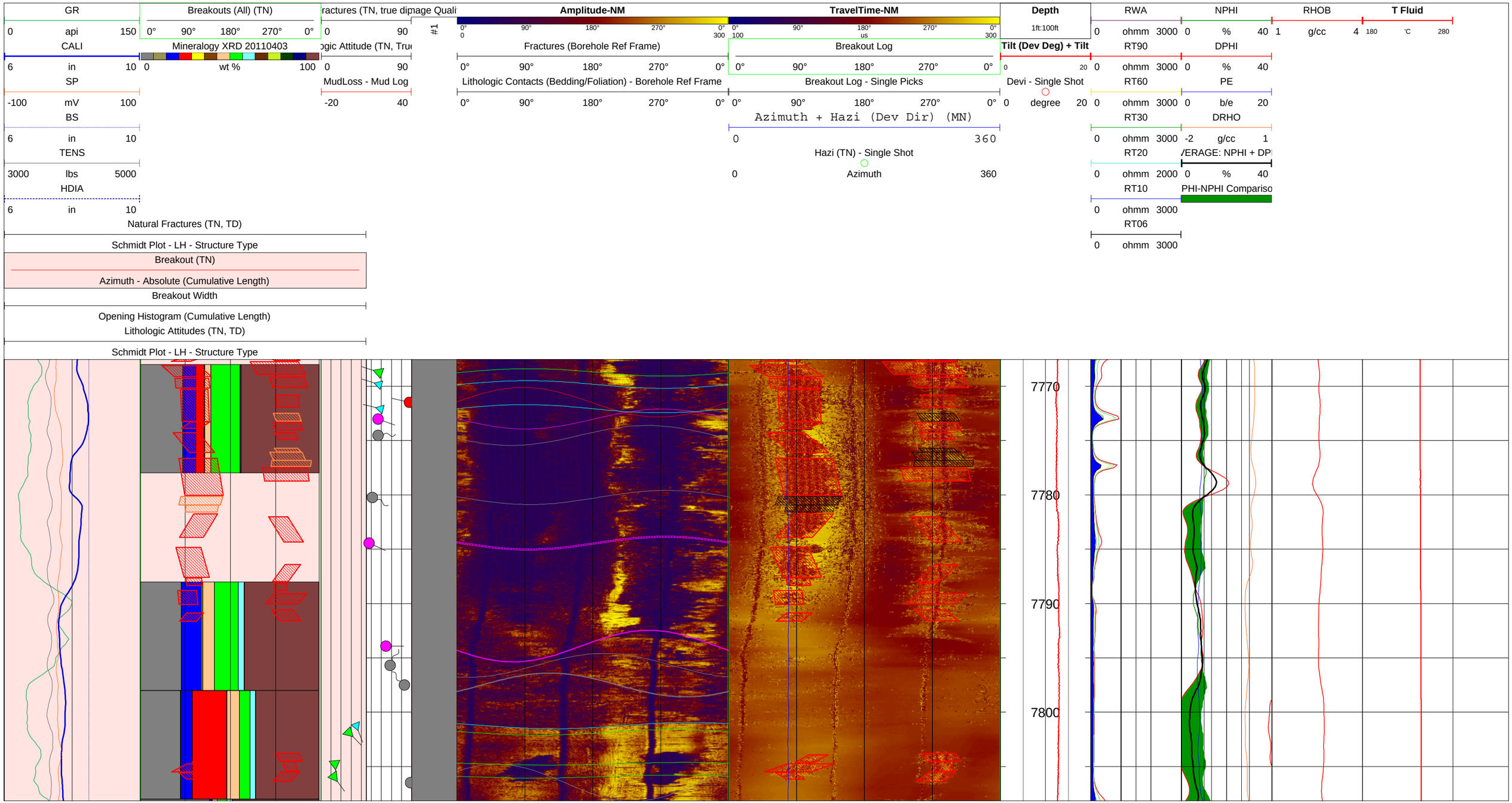

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Breakout Log
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log - Single Picks
MudLoss - Mud Log
-20 40
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
0 % 40
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
7570
7580
7590
7600
Components: Breakouts
Cumul.Length: 181.51
SHmax: 2.06
Std.Dev.: 16.65

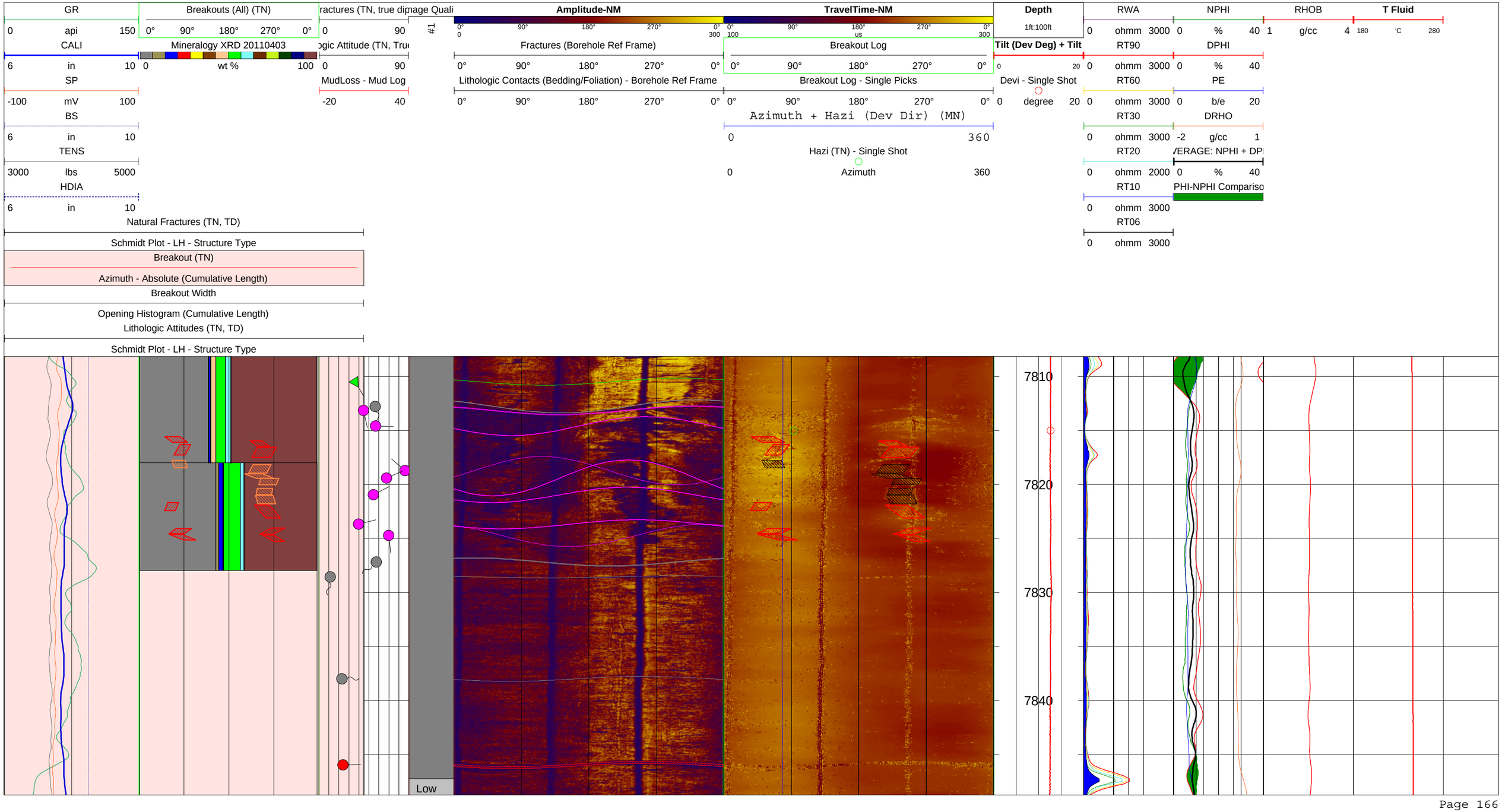

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
Opening Histogram (Cumulative Length)
Depth: 6350.00 [ft] to 8900.00 [ft]
length (m)
60
30
0 30° 60° 90° 120° 150° 180°
Components: Breakouts
Cumul.Length: 181.51
Mean: 54.39
Std.Dev.: 510.71
7610
7620
7630
7640

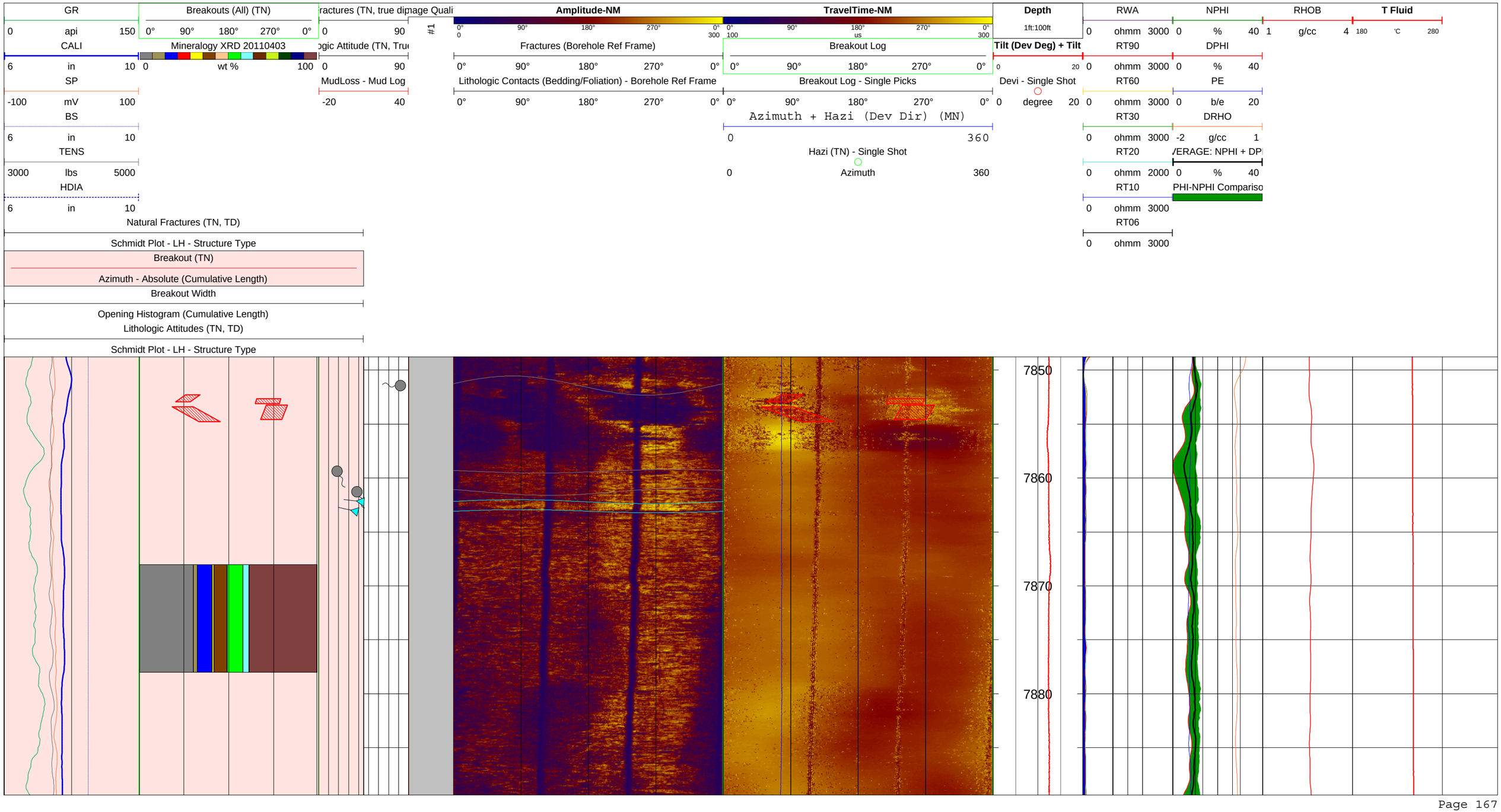

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
0 % 40
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
7650
7660
7670
7680

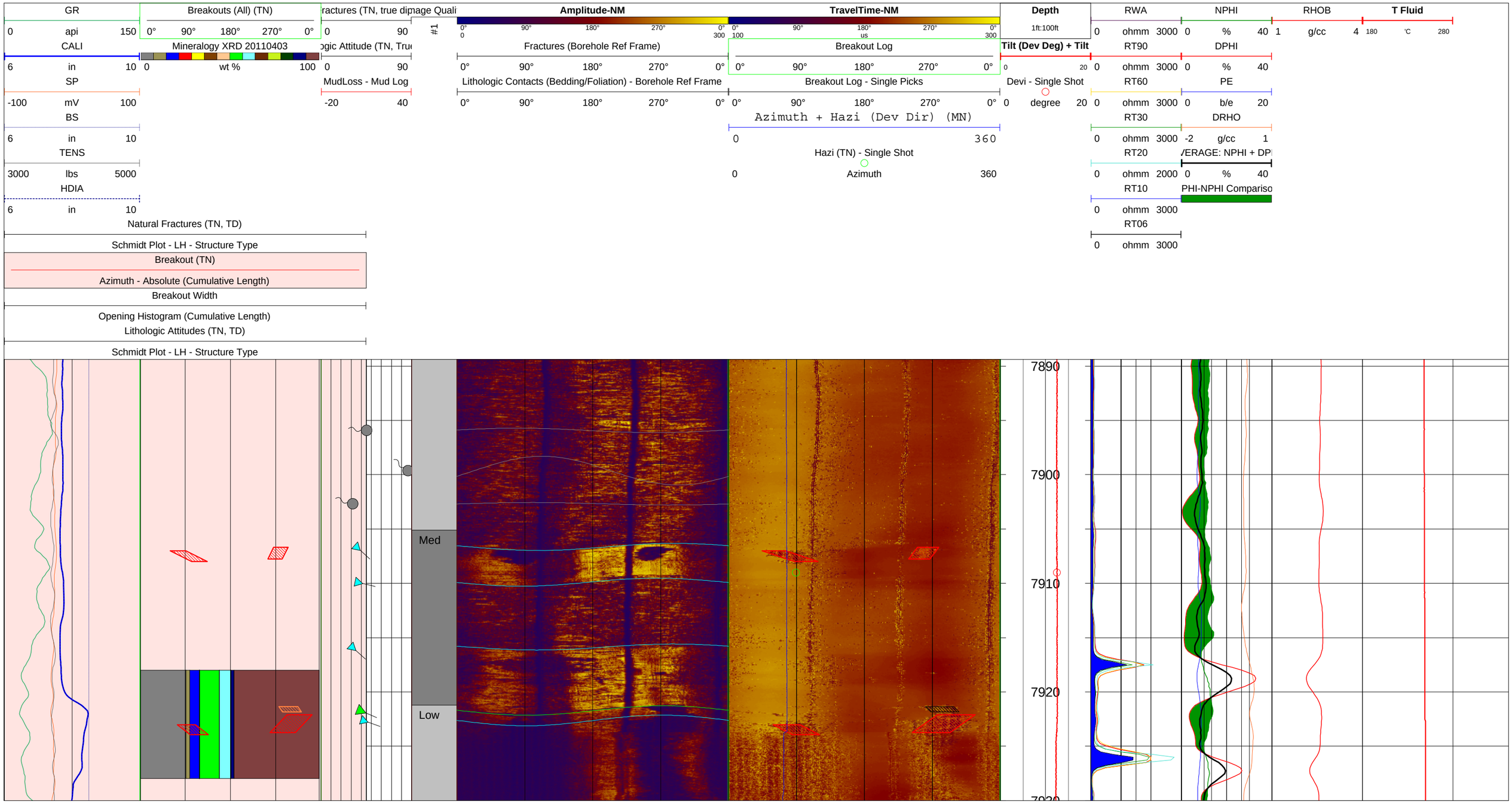

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
Azimuth
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
Devi - Single Shot
degree
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
7690
7700
7710
7720

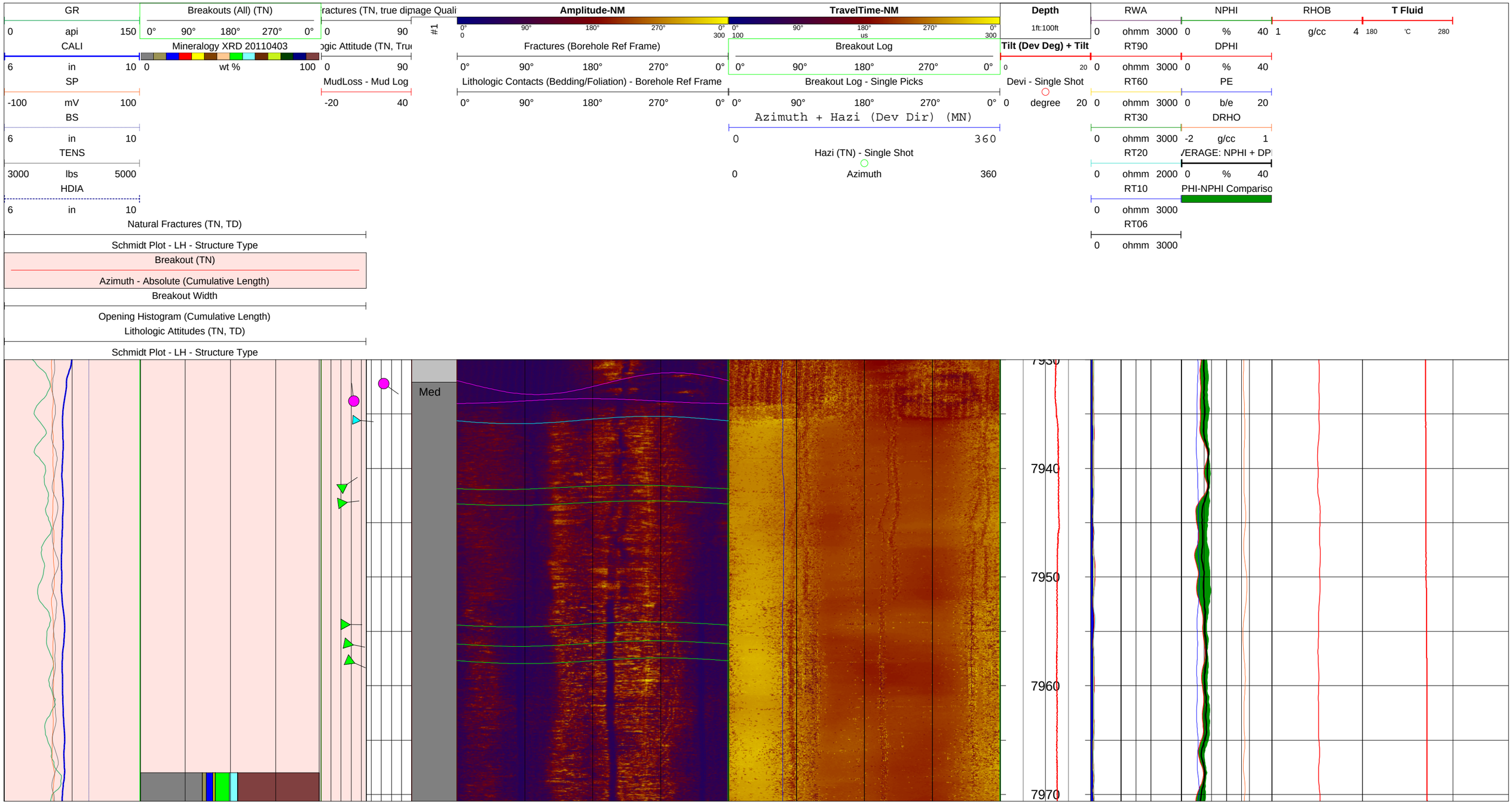

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
7730
7740
7750
7760

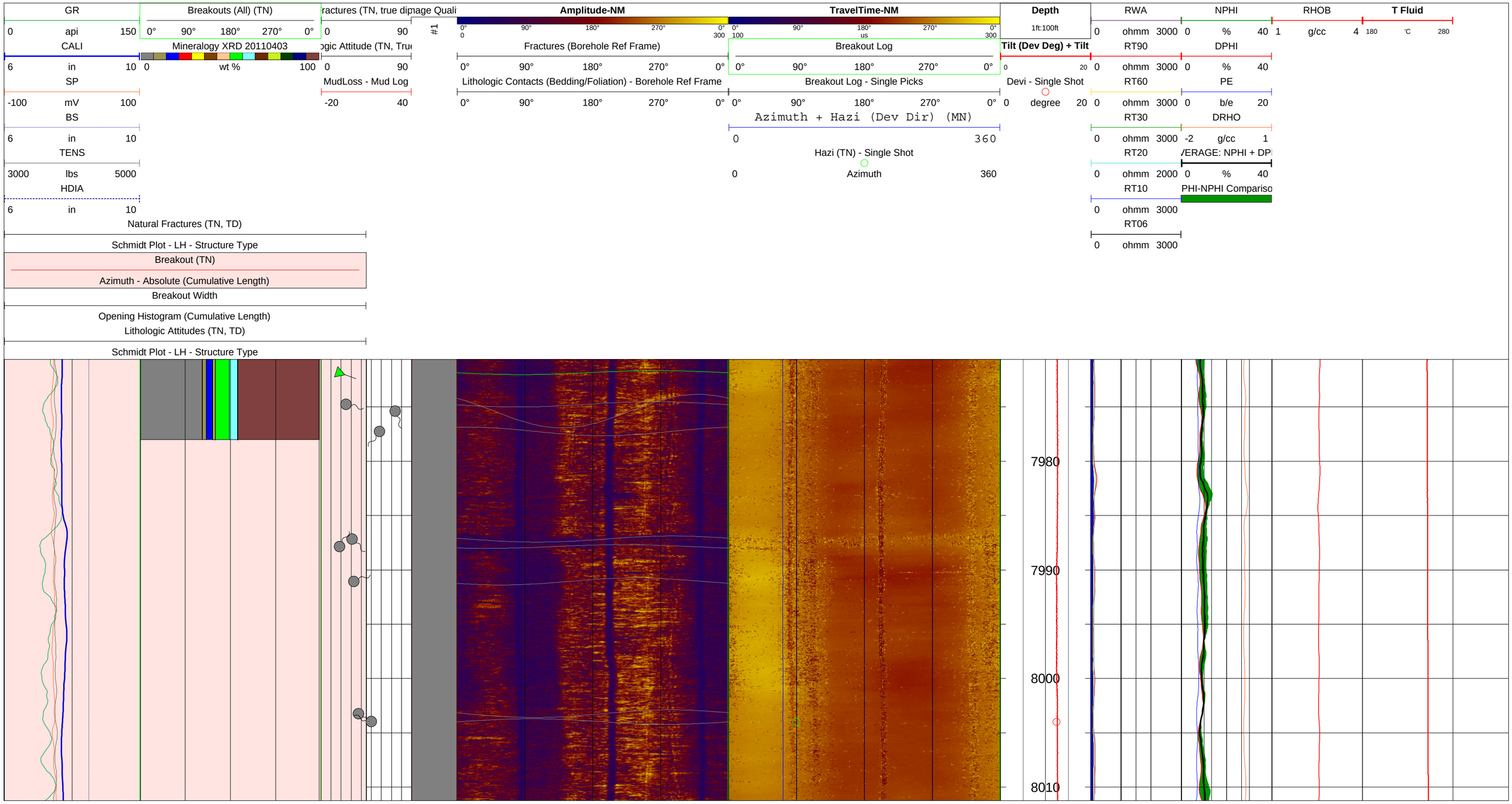

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Breakout Log
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
7770
7780
7790
7800

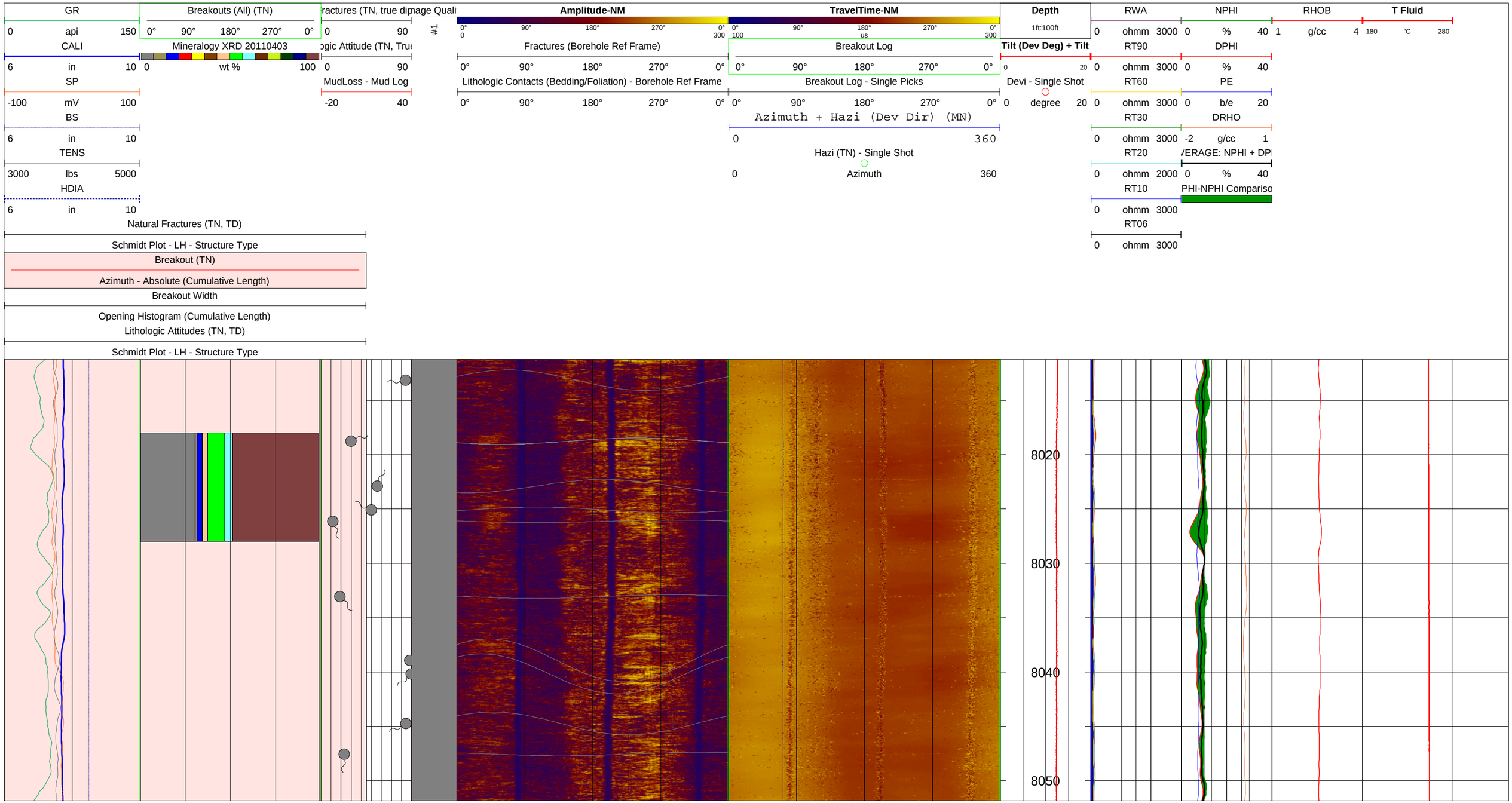

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Low
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
7810
7820
7830
7840
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280

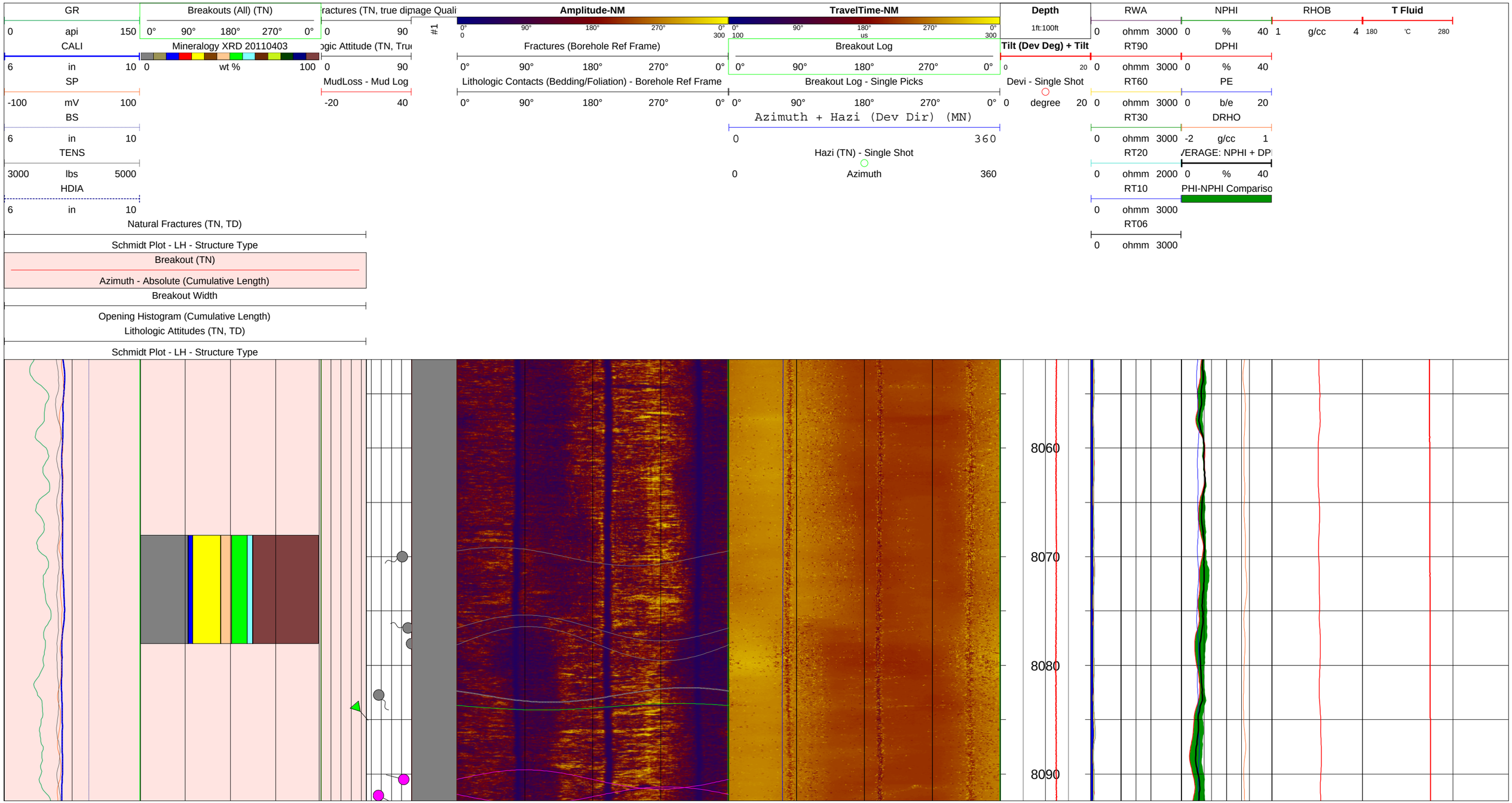

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
7850
7860
7870
7880

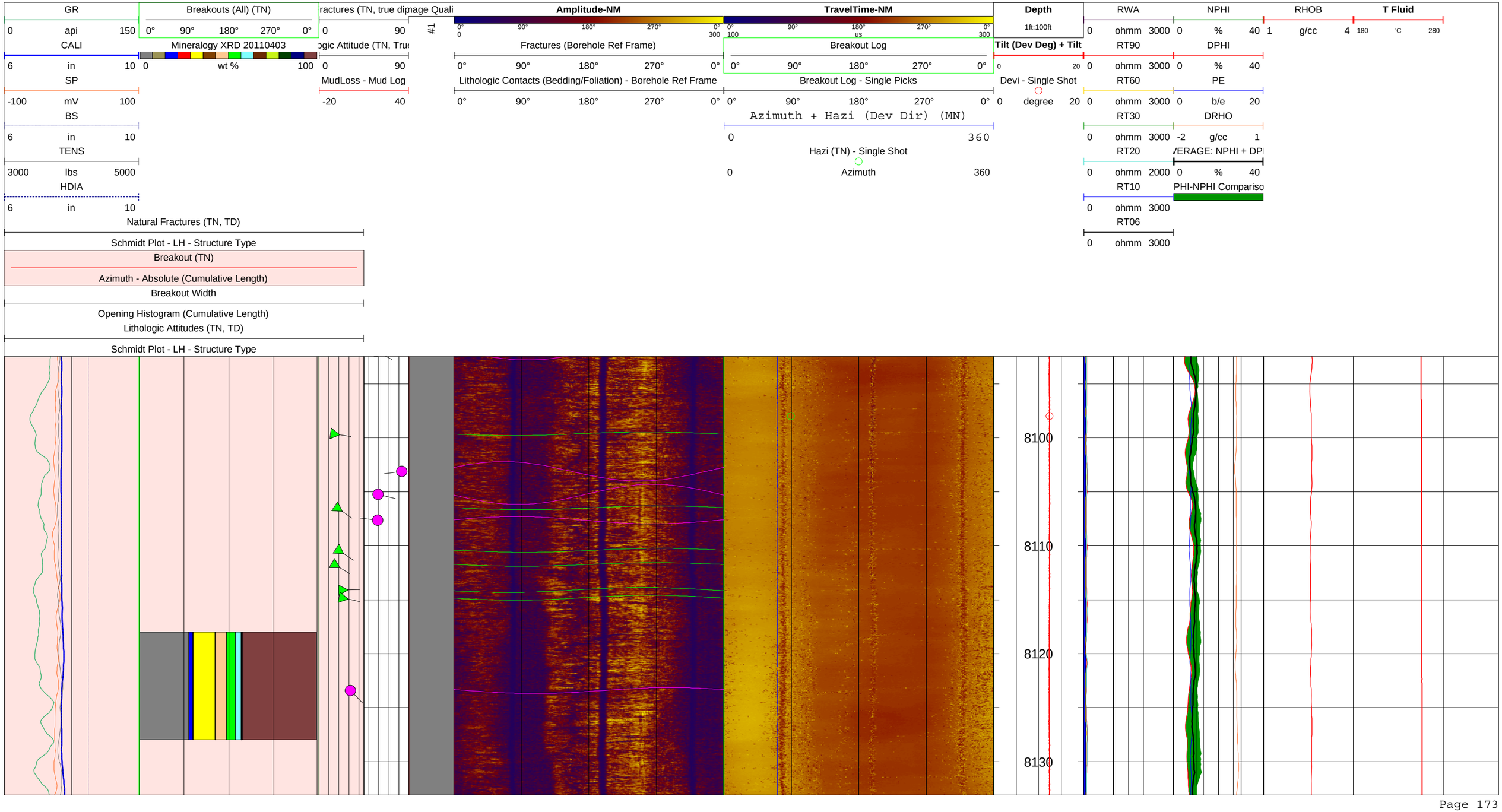

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
#1
Med
Low
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
7890
7900
7910
7920

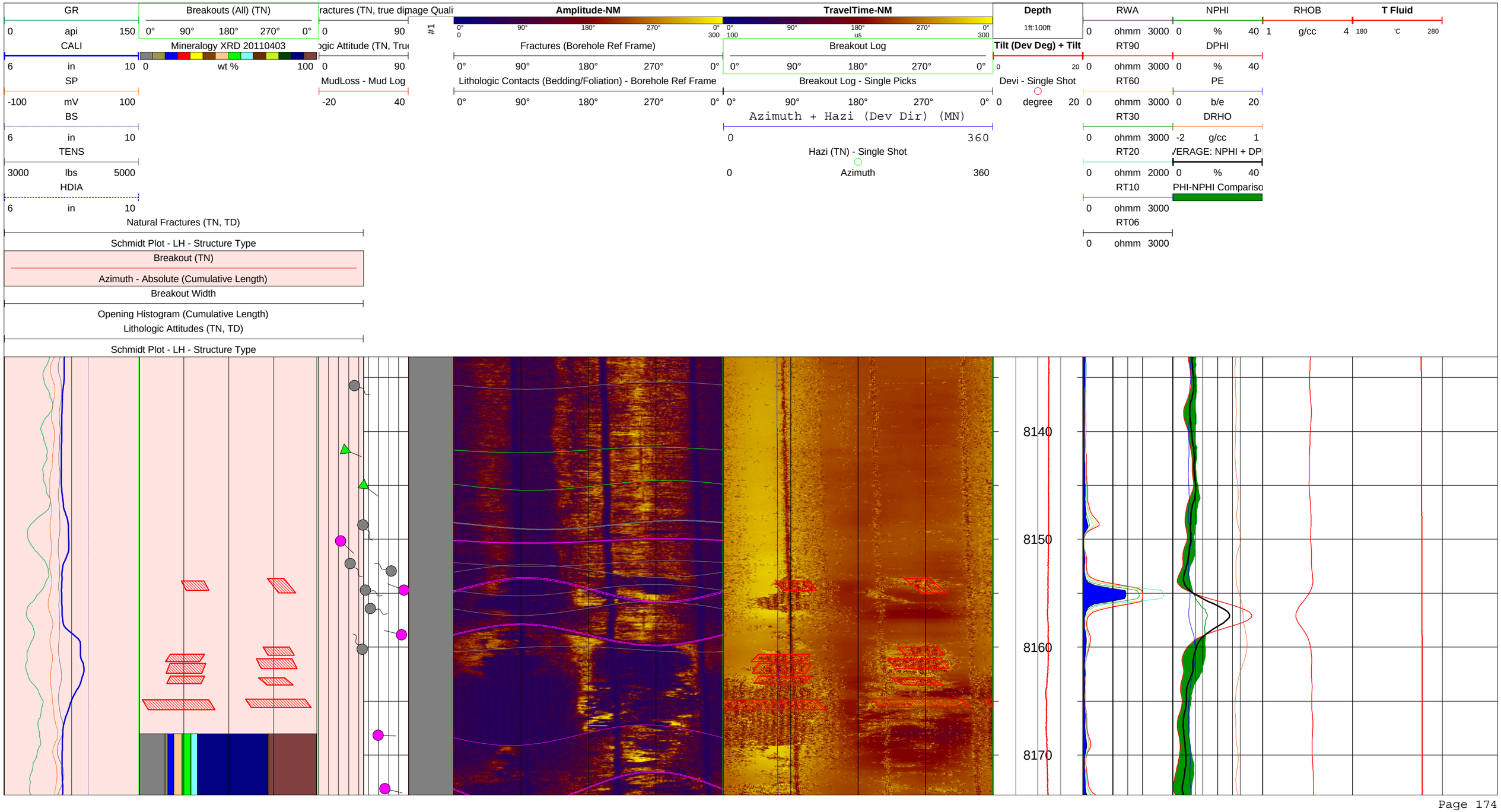

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
Azimuth
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
Devi - Single Shot
degree
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
Med
7930
7940
7950
7960
7970

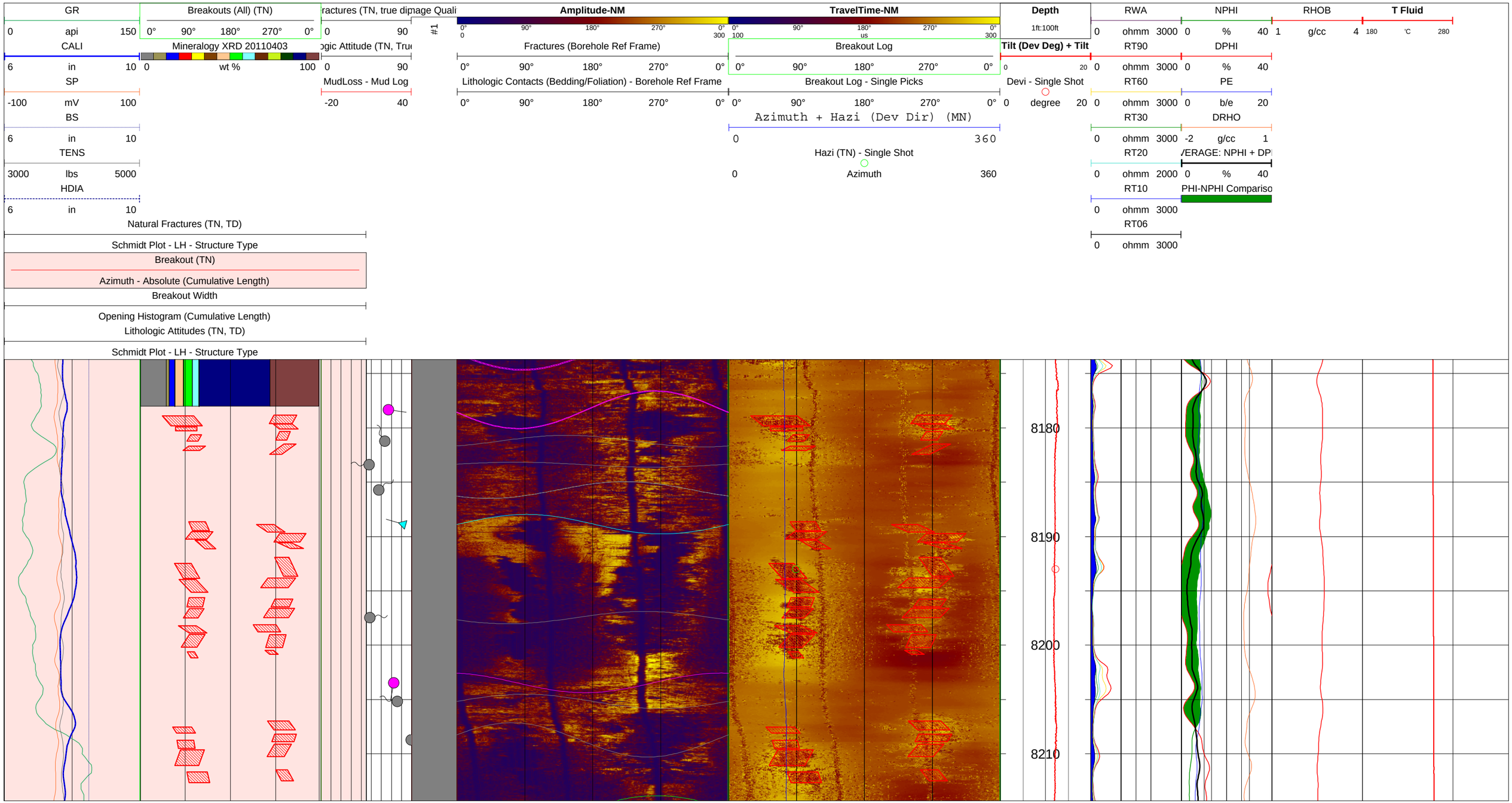

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
7980
7990
8000
8010

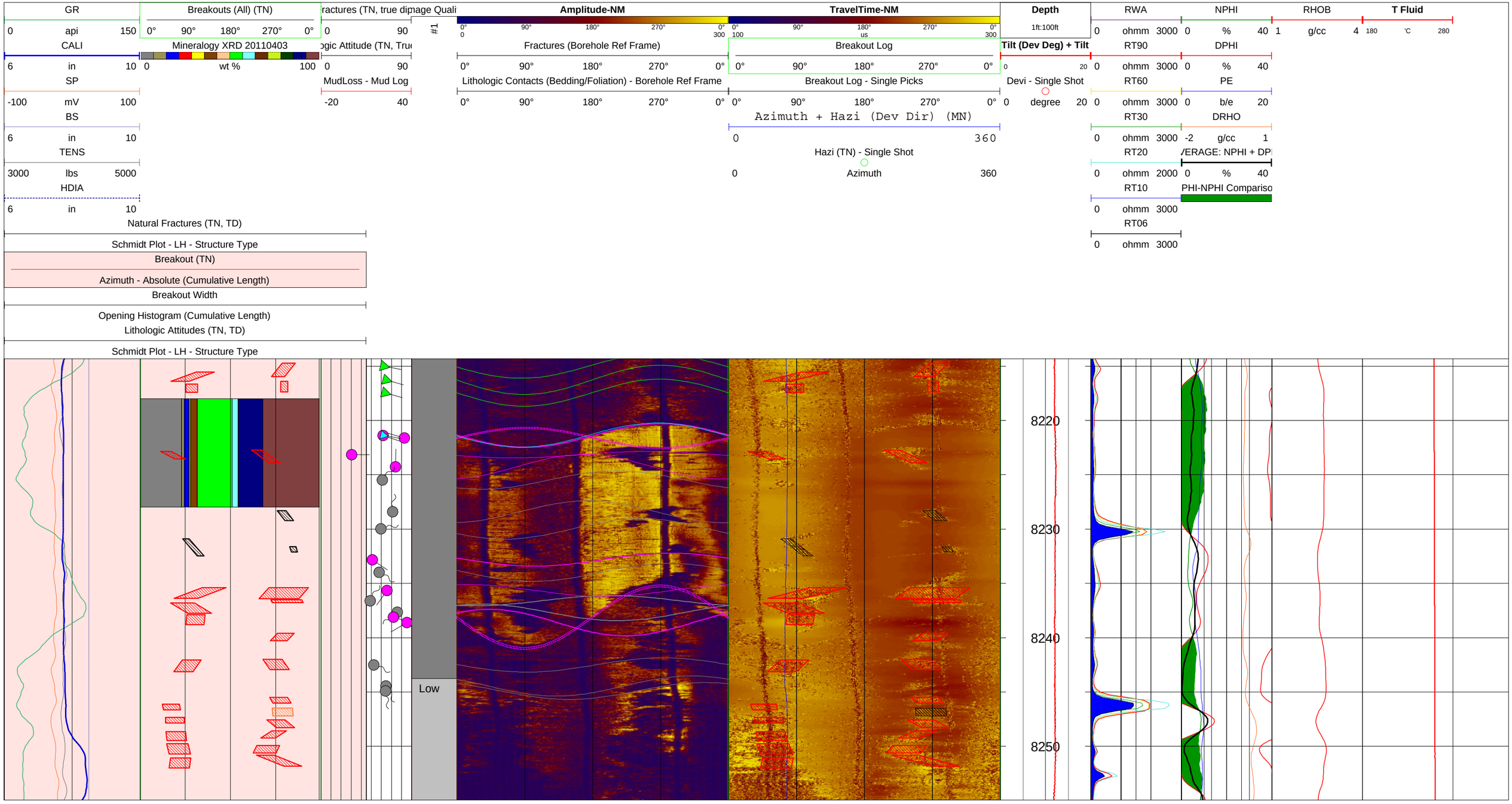

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
8020
8030
8040
8050

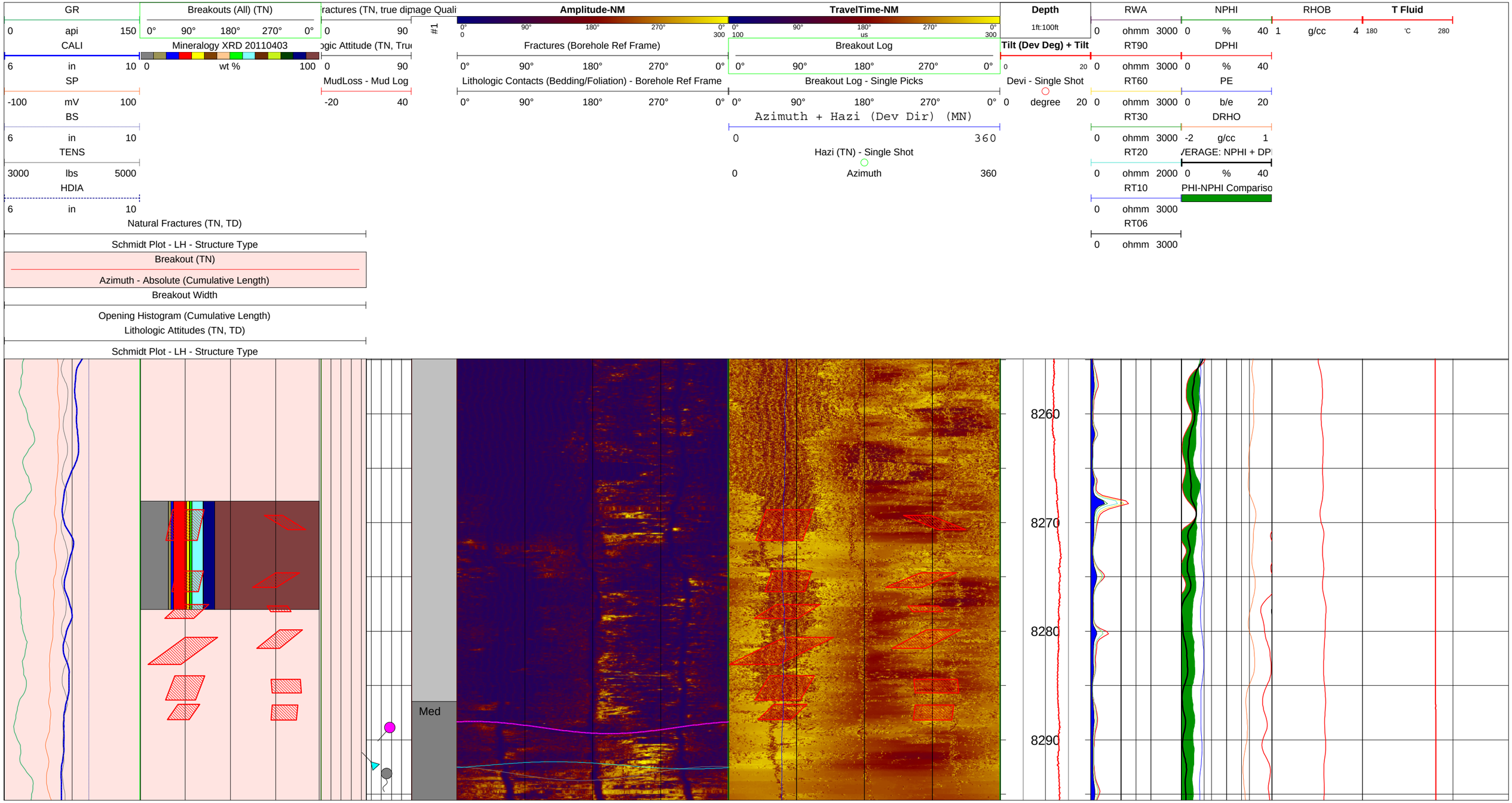

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
0 % 40
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
8060
8070
8080
8090

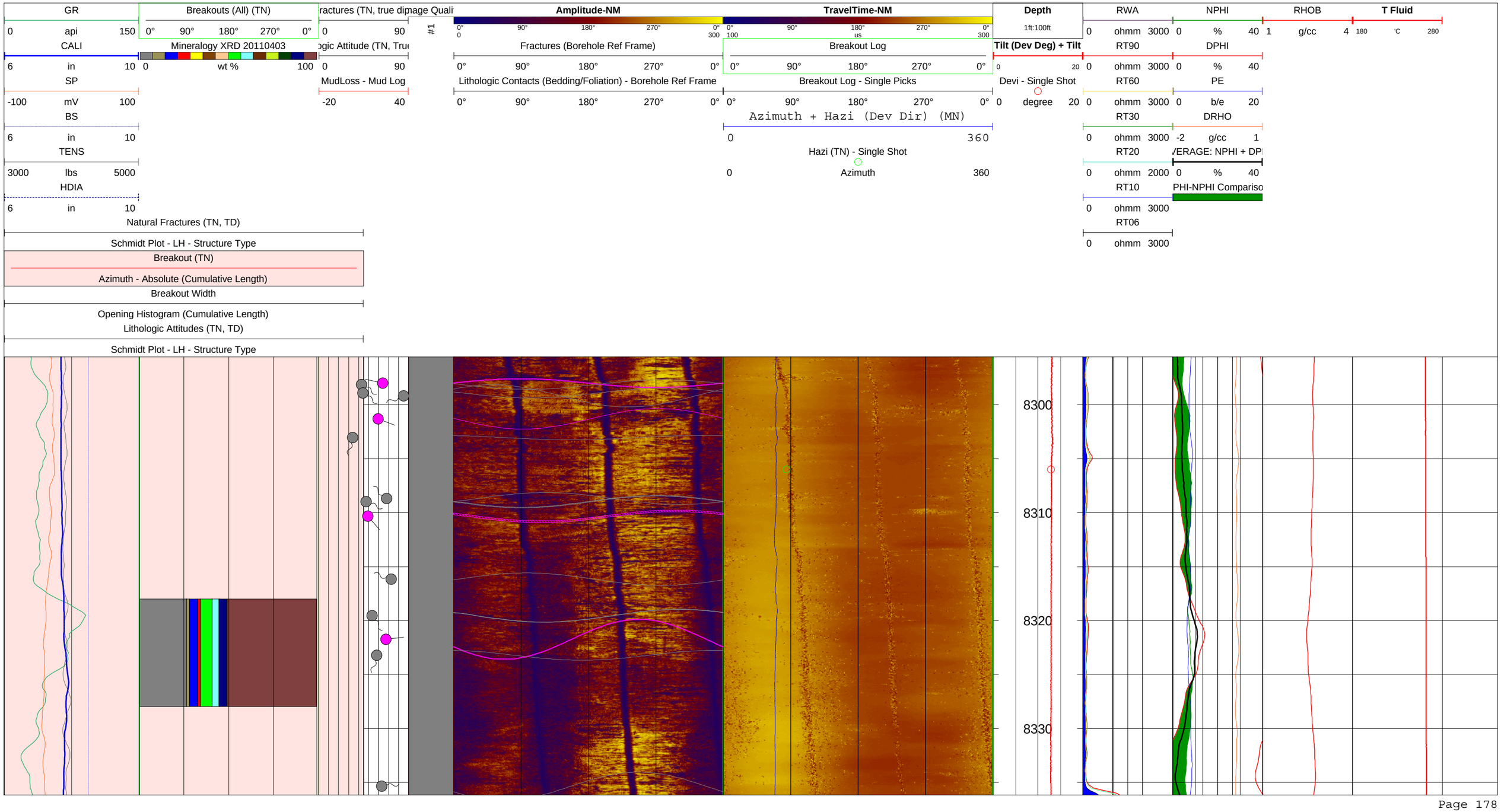

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
8100
8110
8120
8130

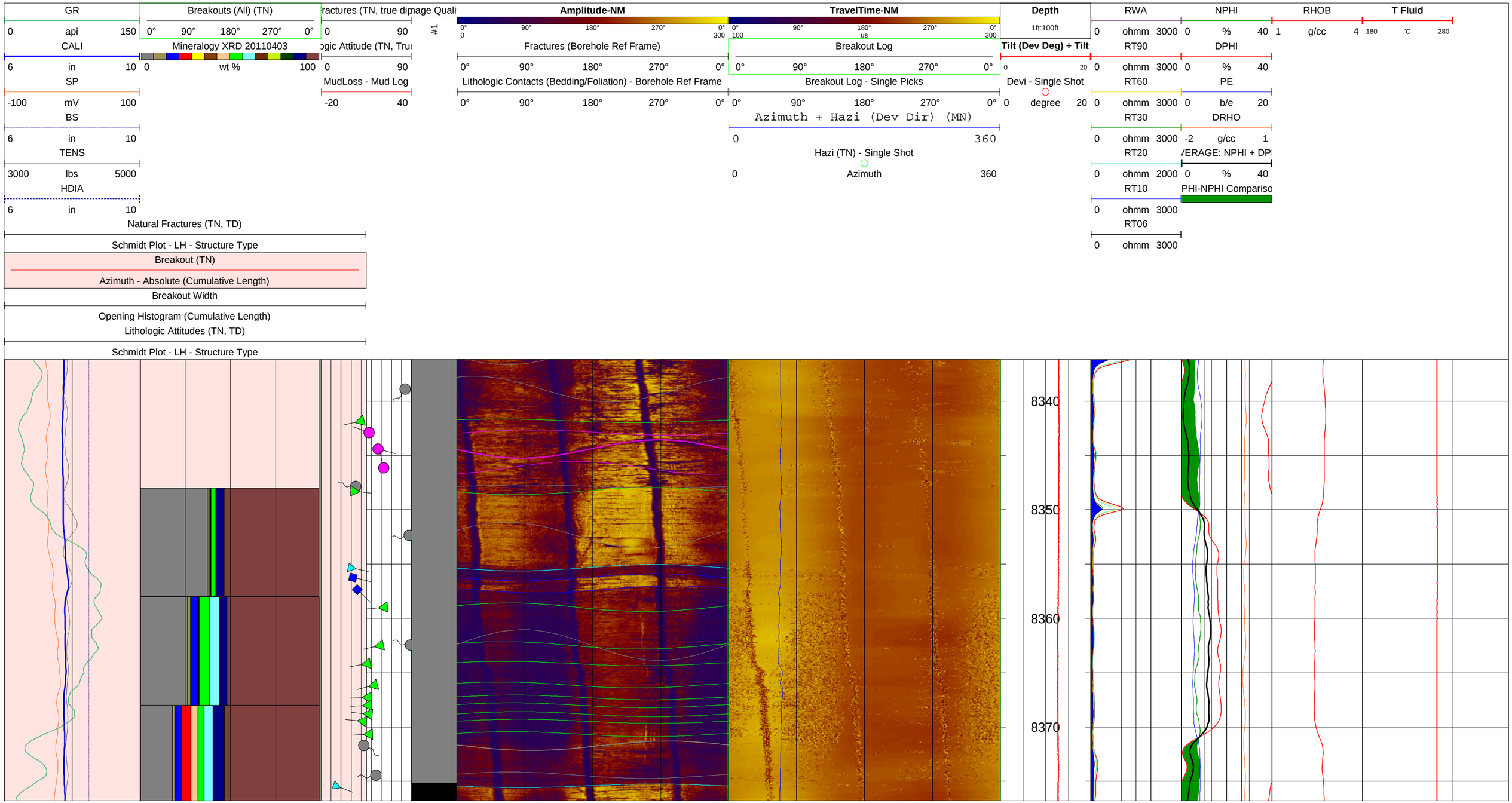

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
8140
8150
8160
8170

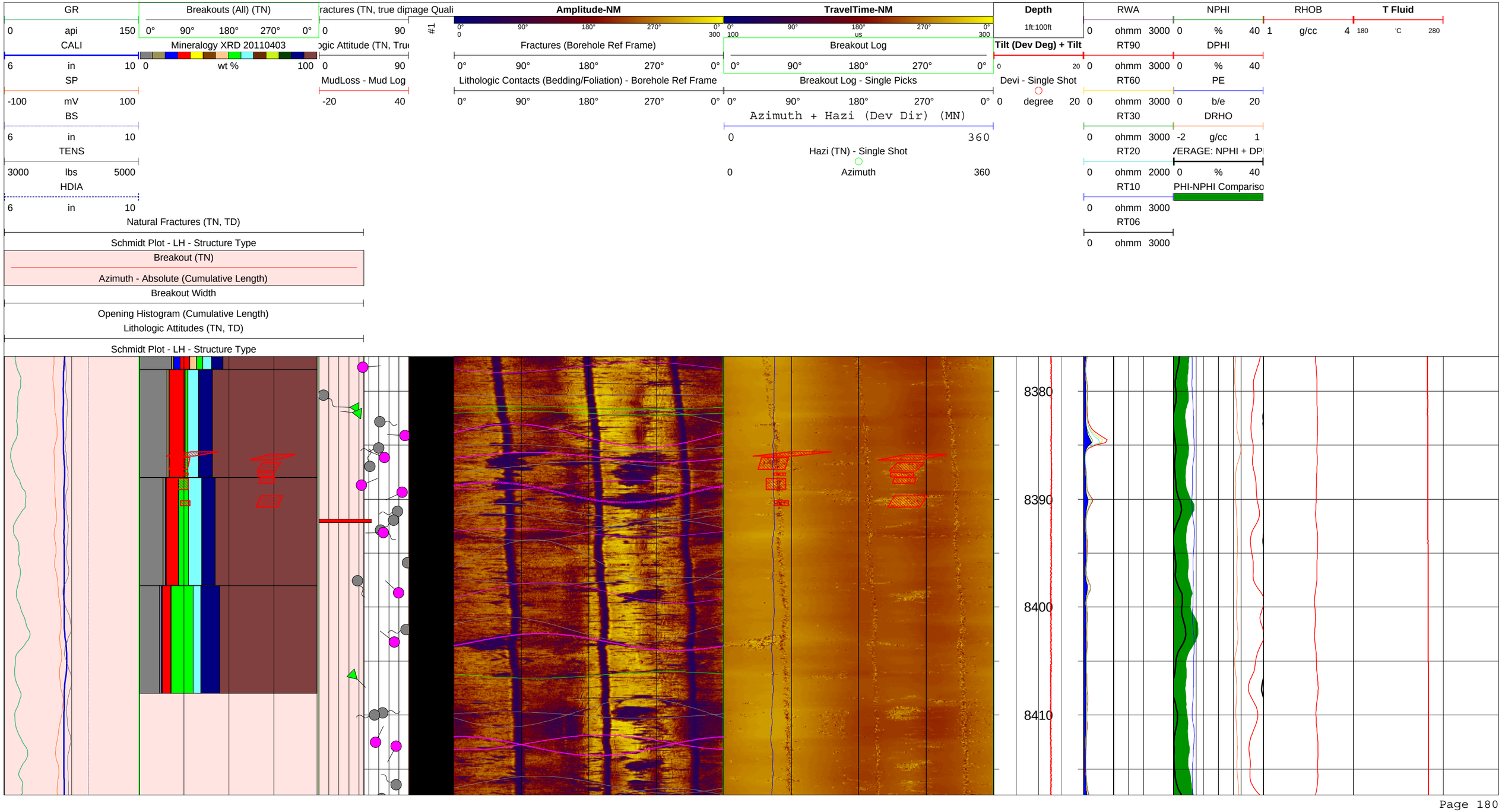

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
8180
8190
8200
8210

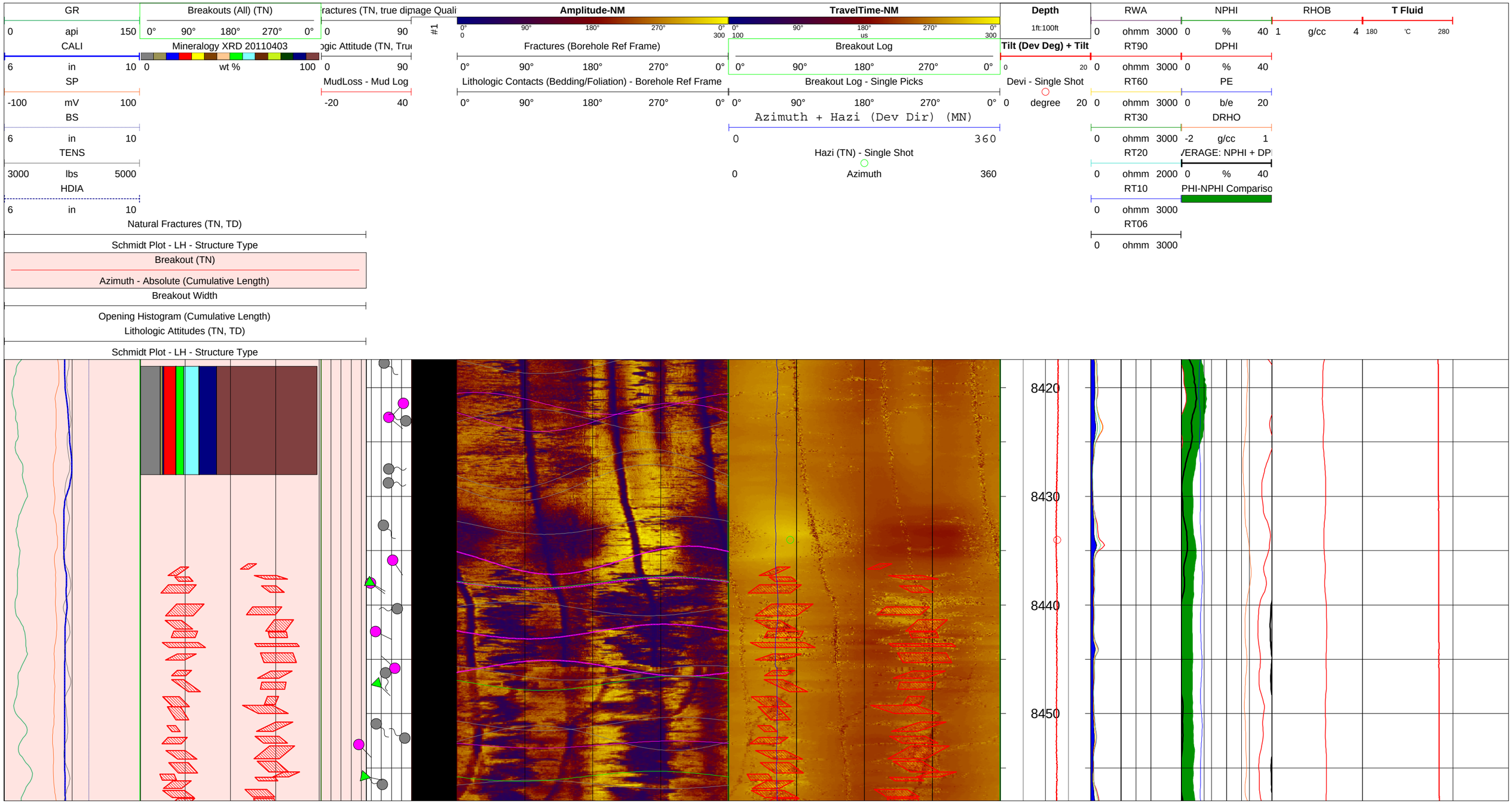

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Low
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
8220
8230
8240
8250
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280

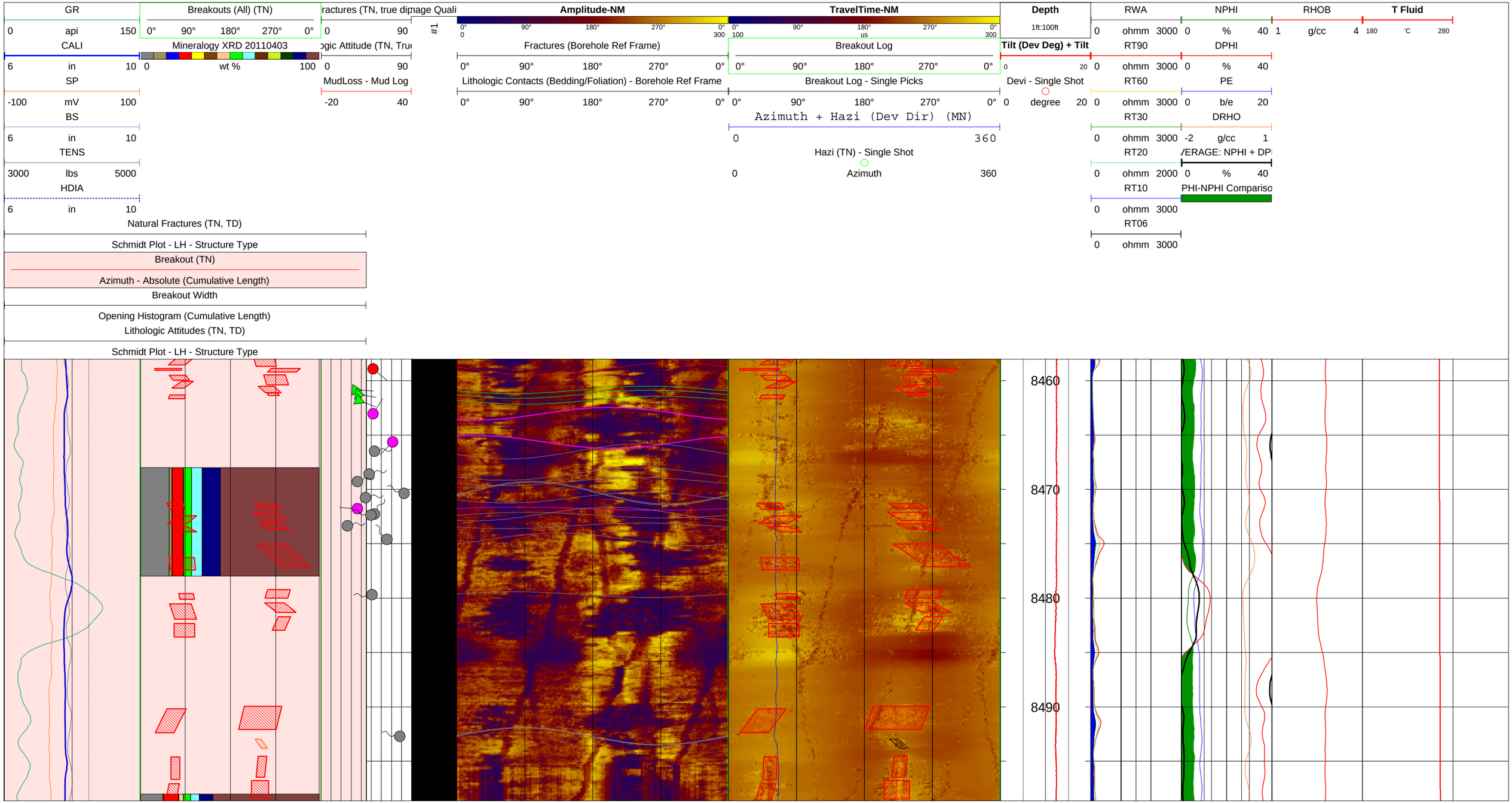

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
Med
8260
8270
8280
8290

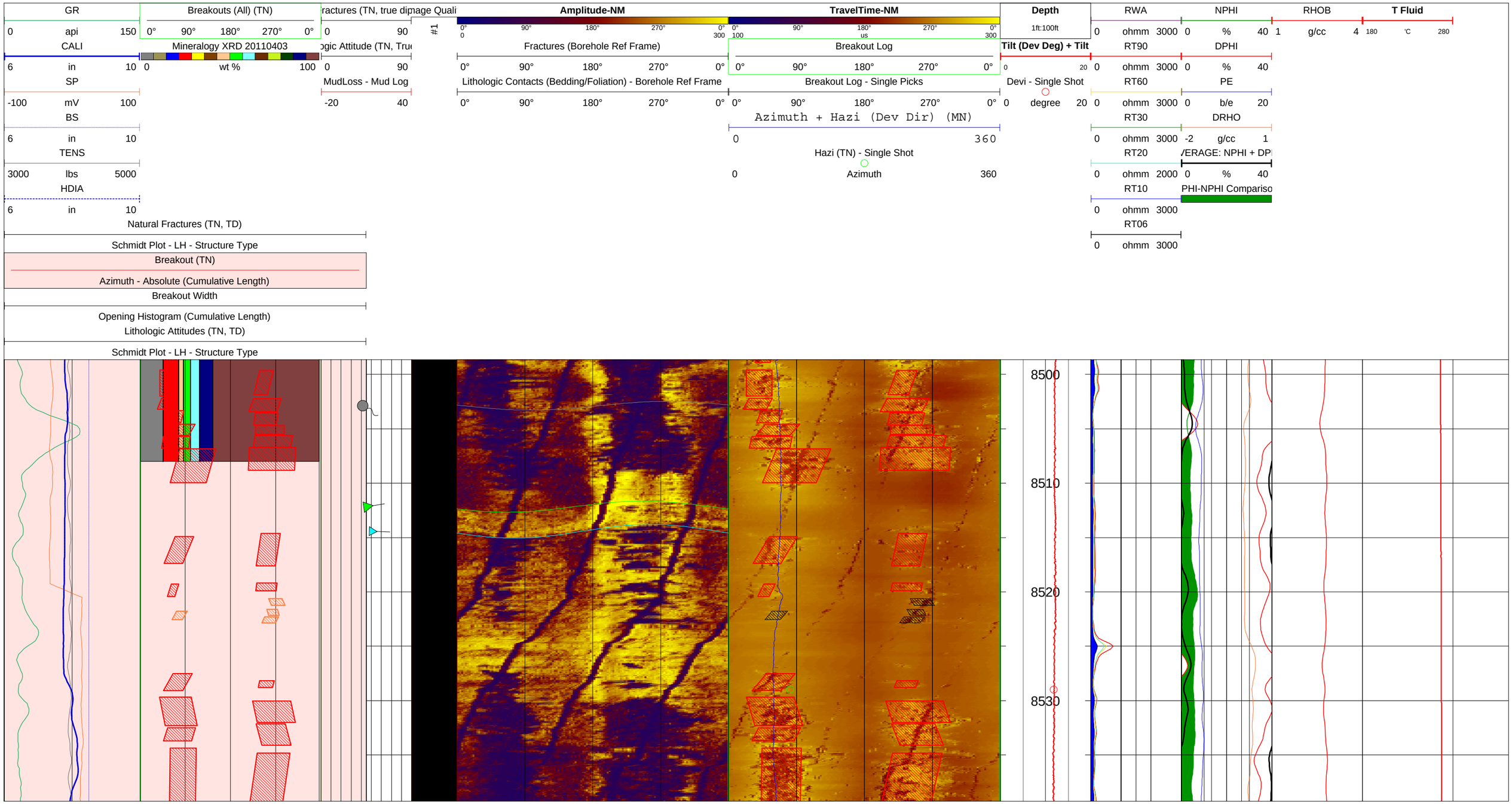

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
8300
8310
8320
8330

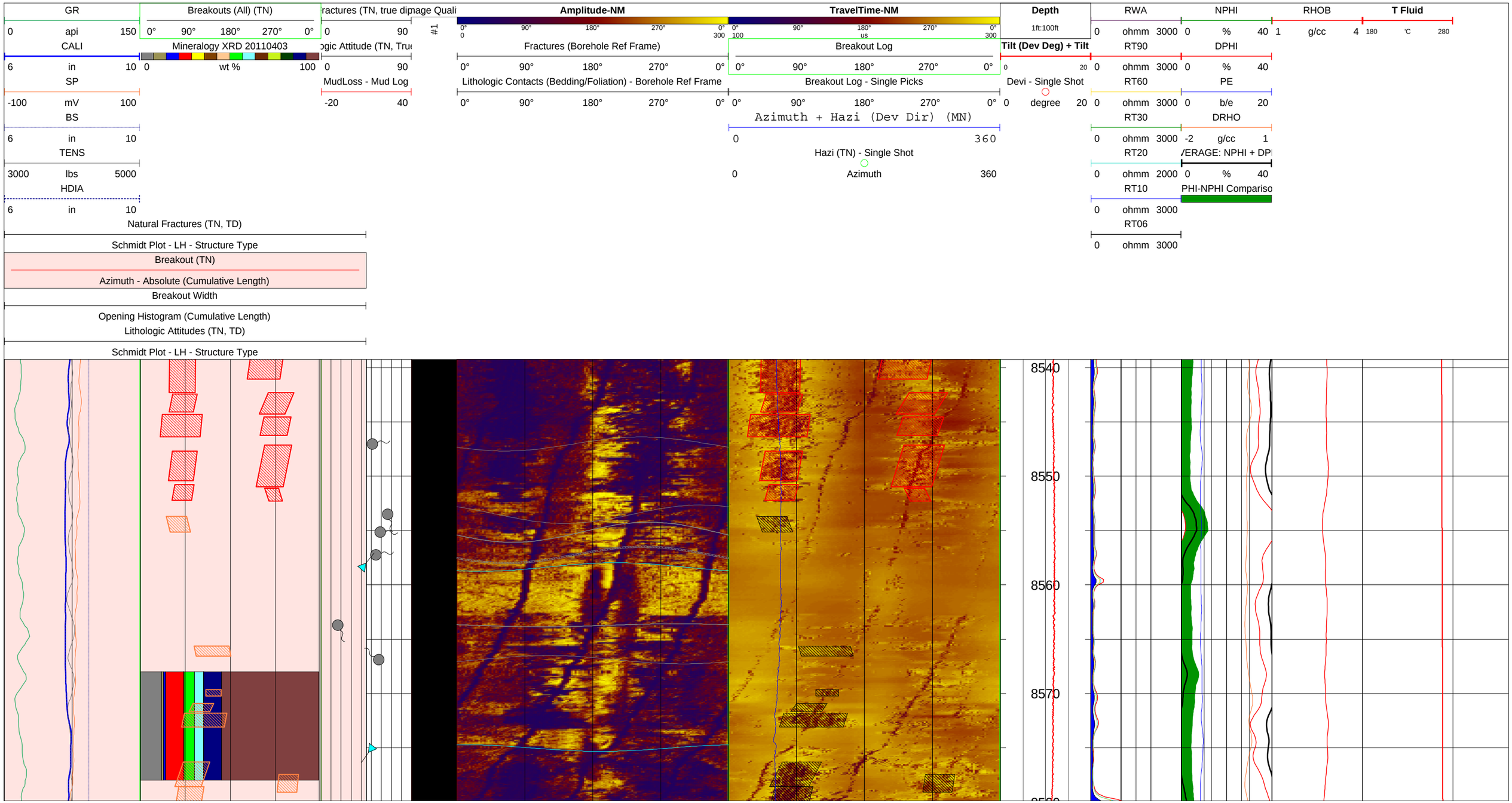

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
8340
8350
8360
8370

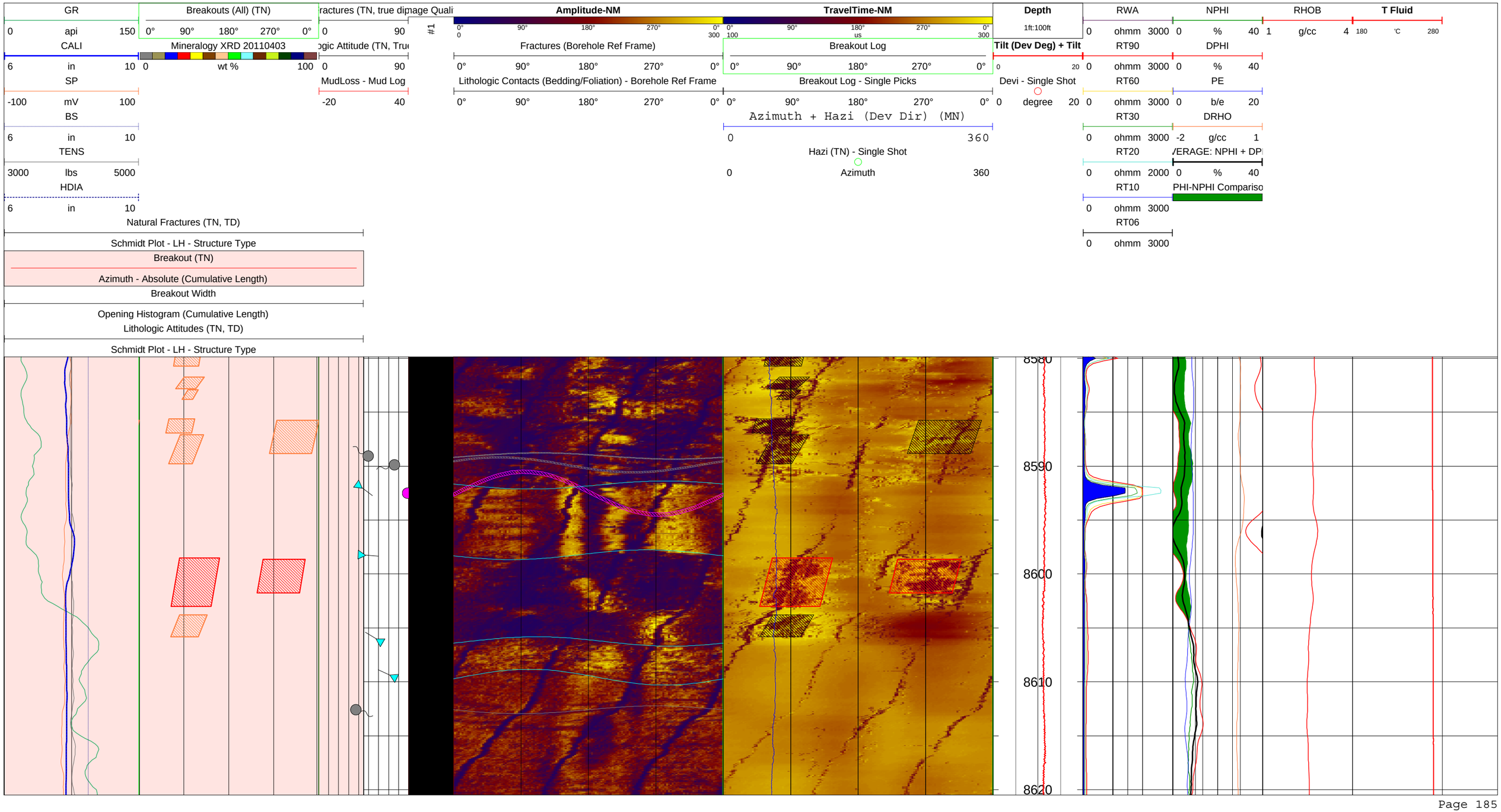

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
8380
8390
8400
8410

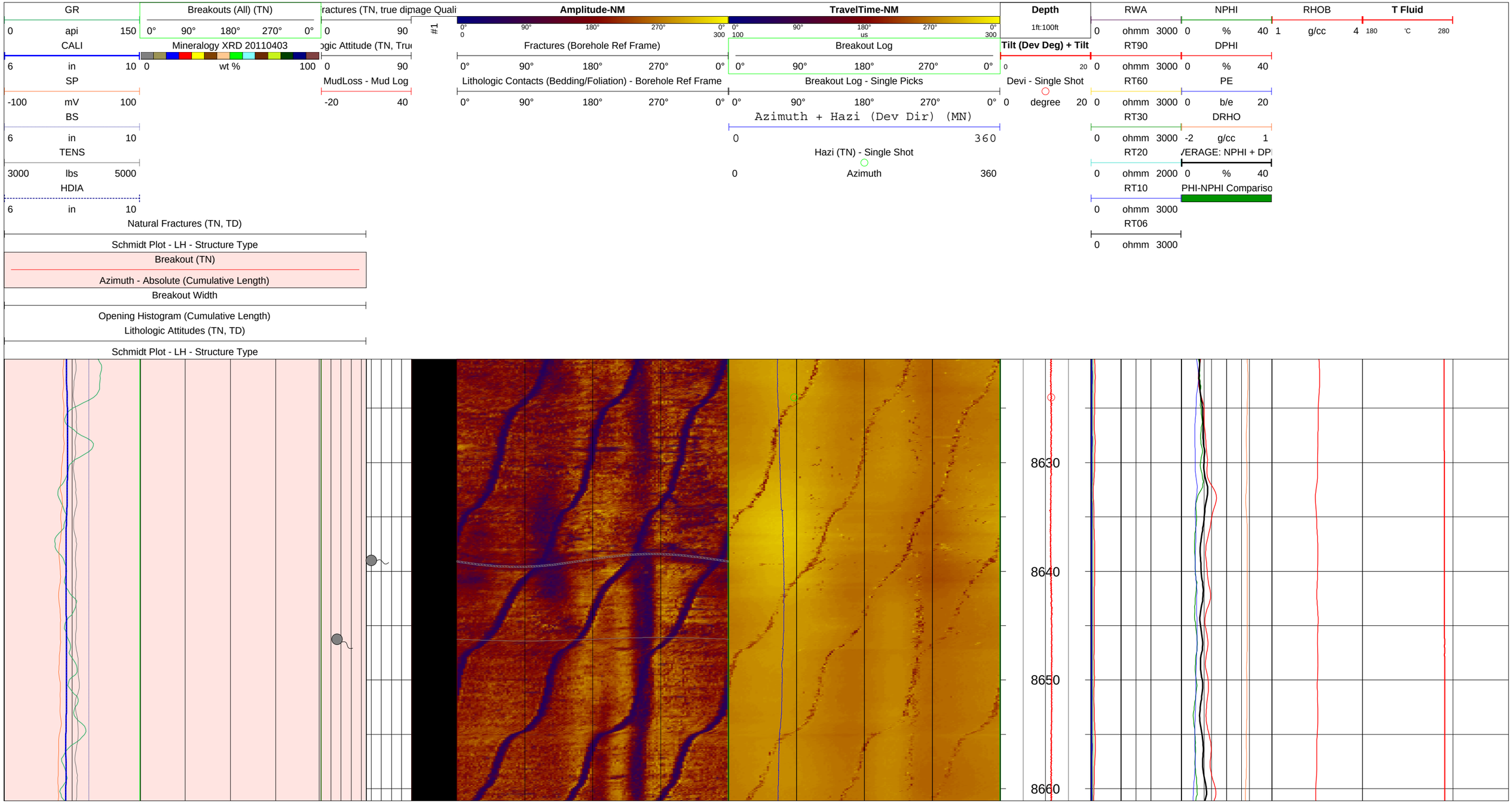

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
0 % 40
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
8420
8430
8440
8450

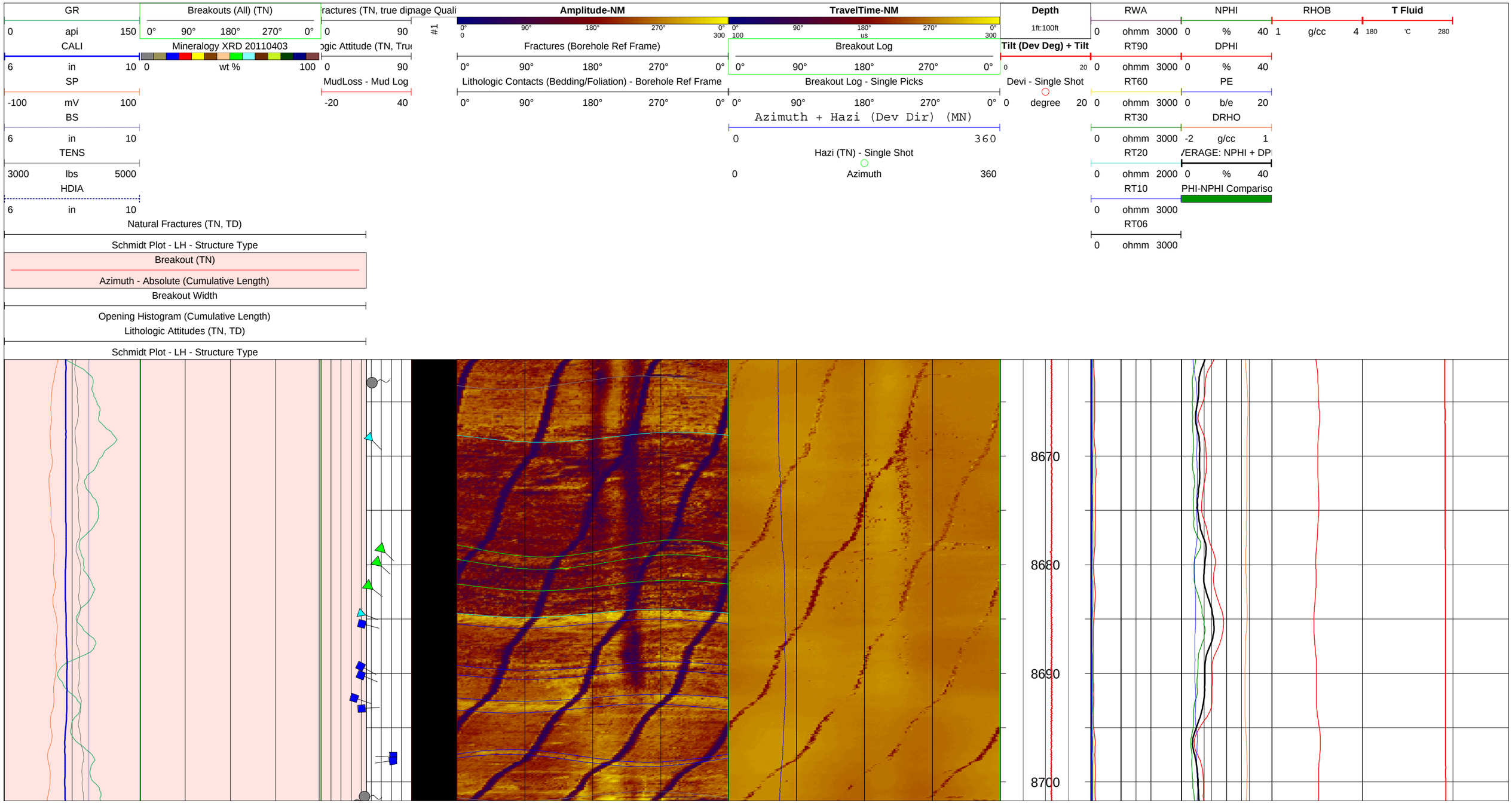

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
Azimuth
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
degree
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
8460
8470
8480
8490

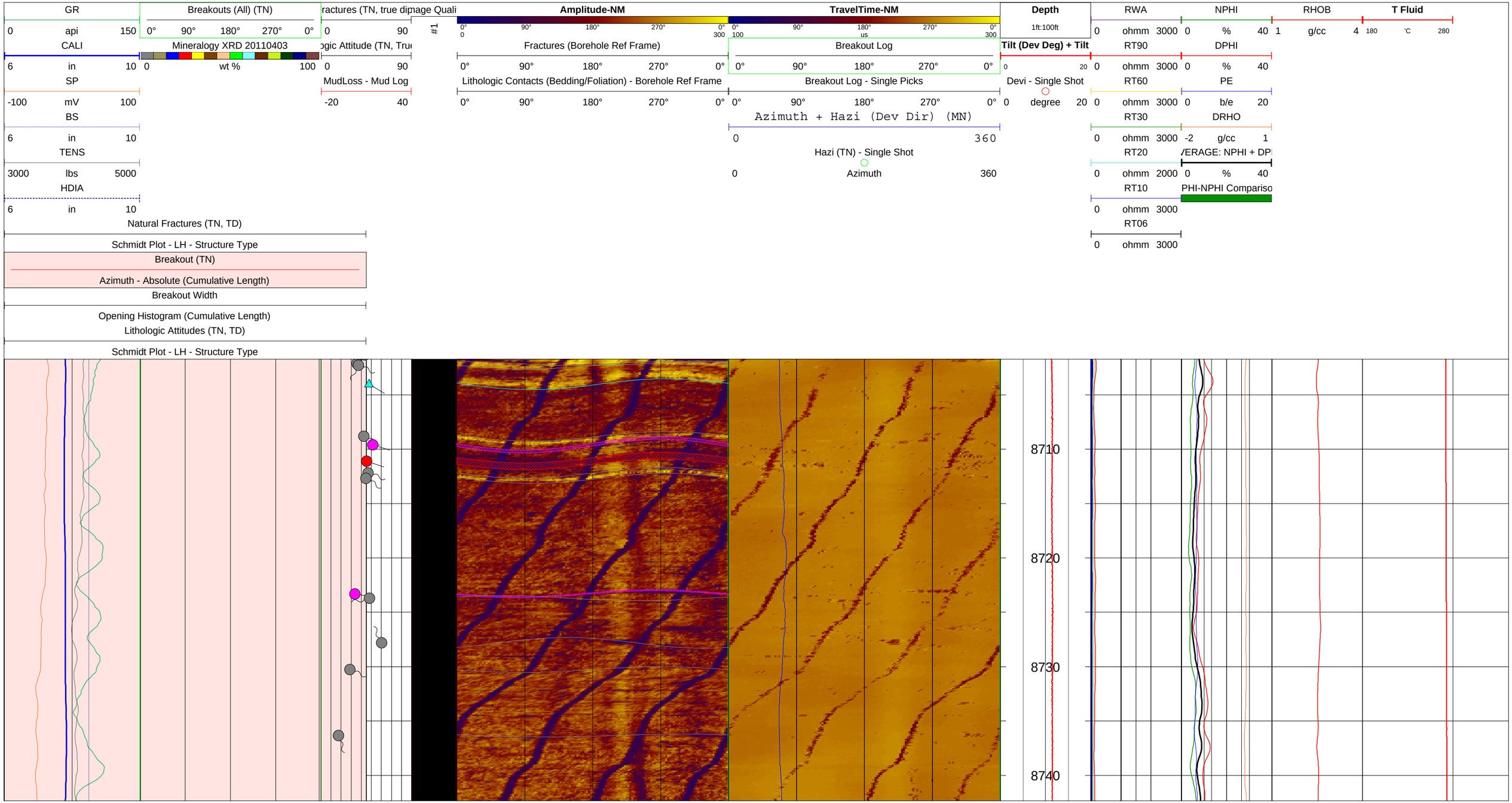

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
8500
8510
8520
8530

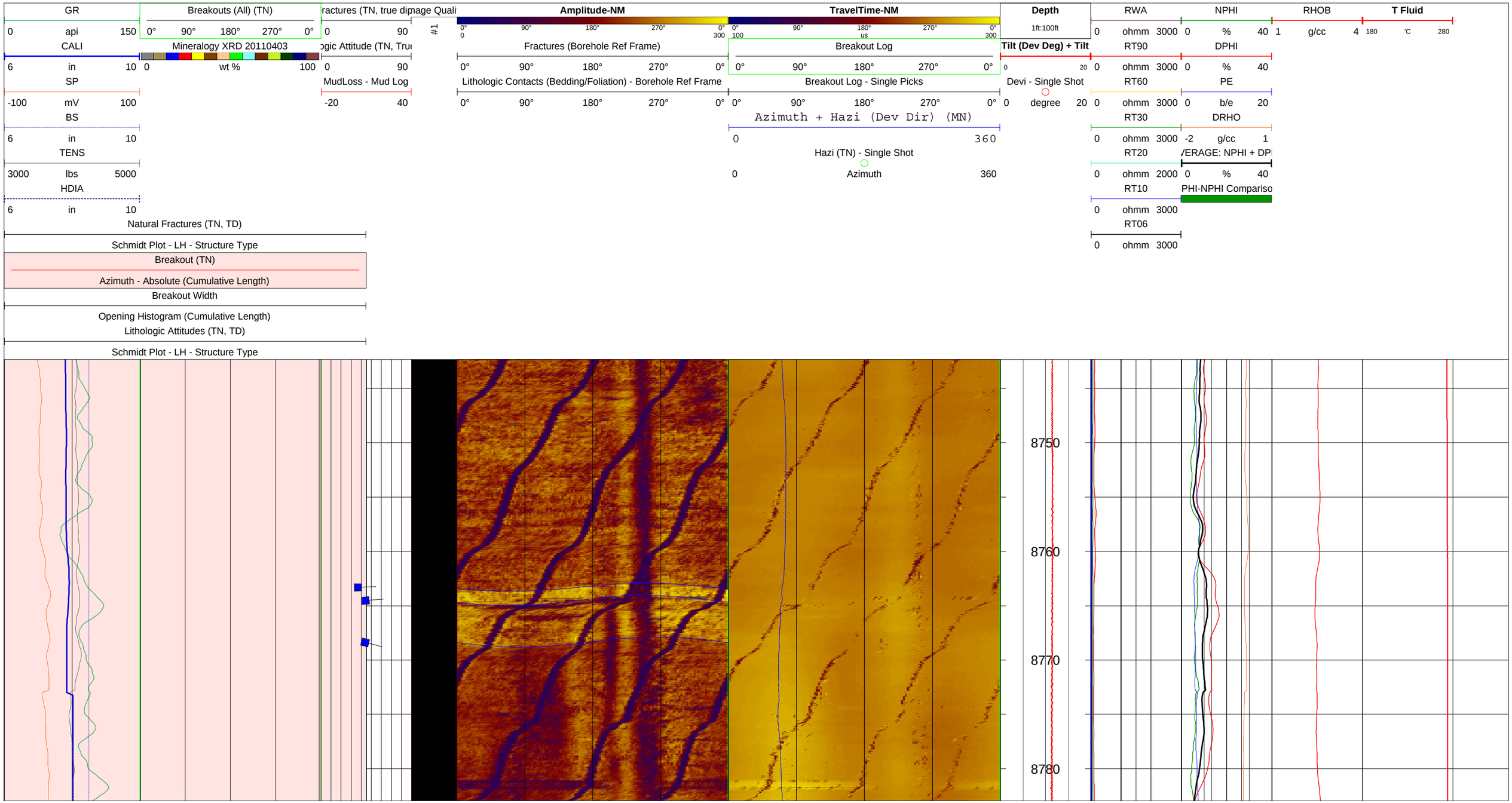

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
8540
8550
8560
8570

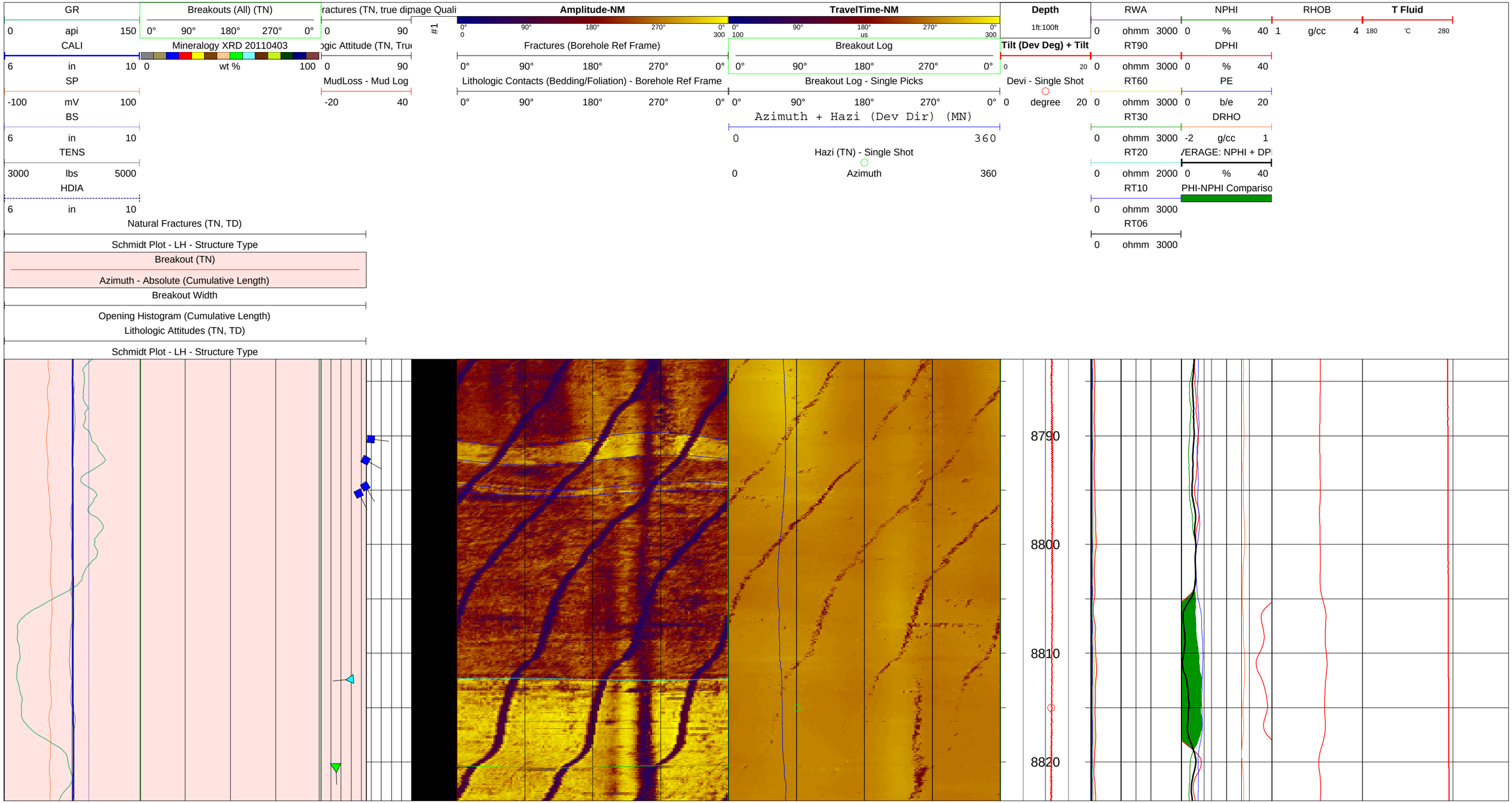

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
8580
8590
8600
8610
8620

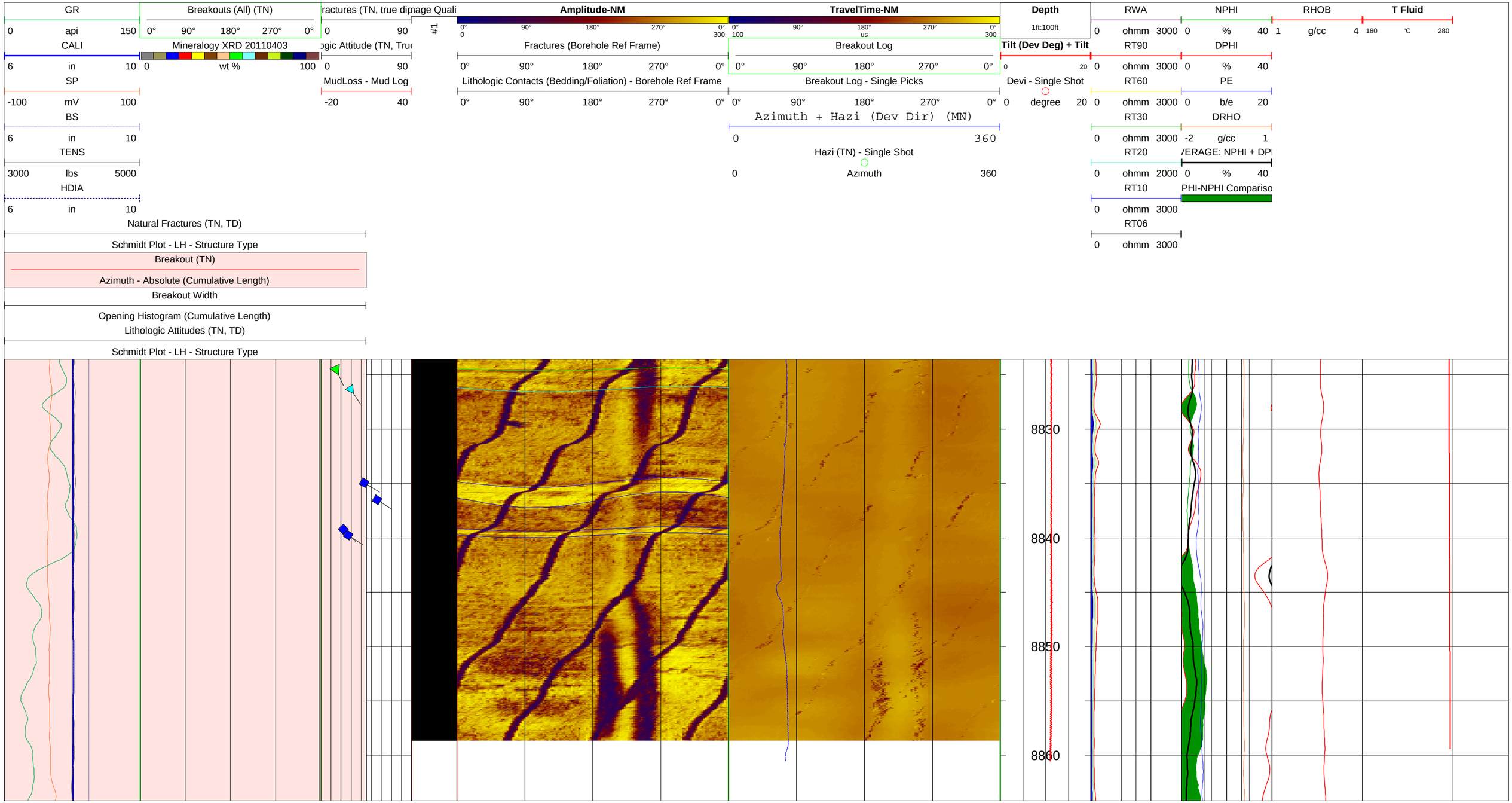

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
8630
8640
8650
8660

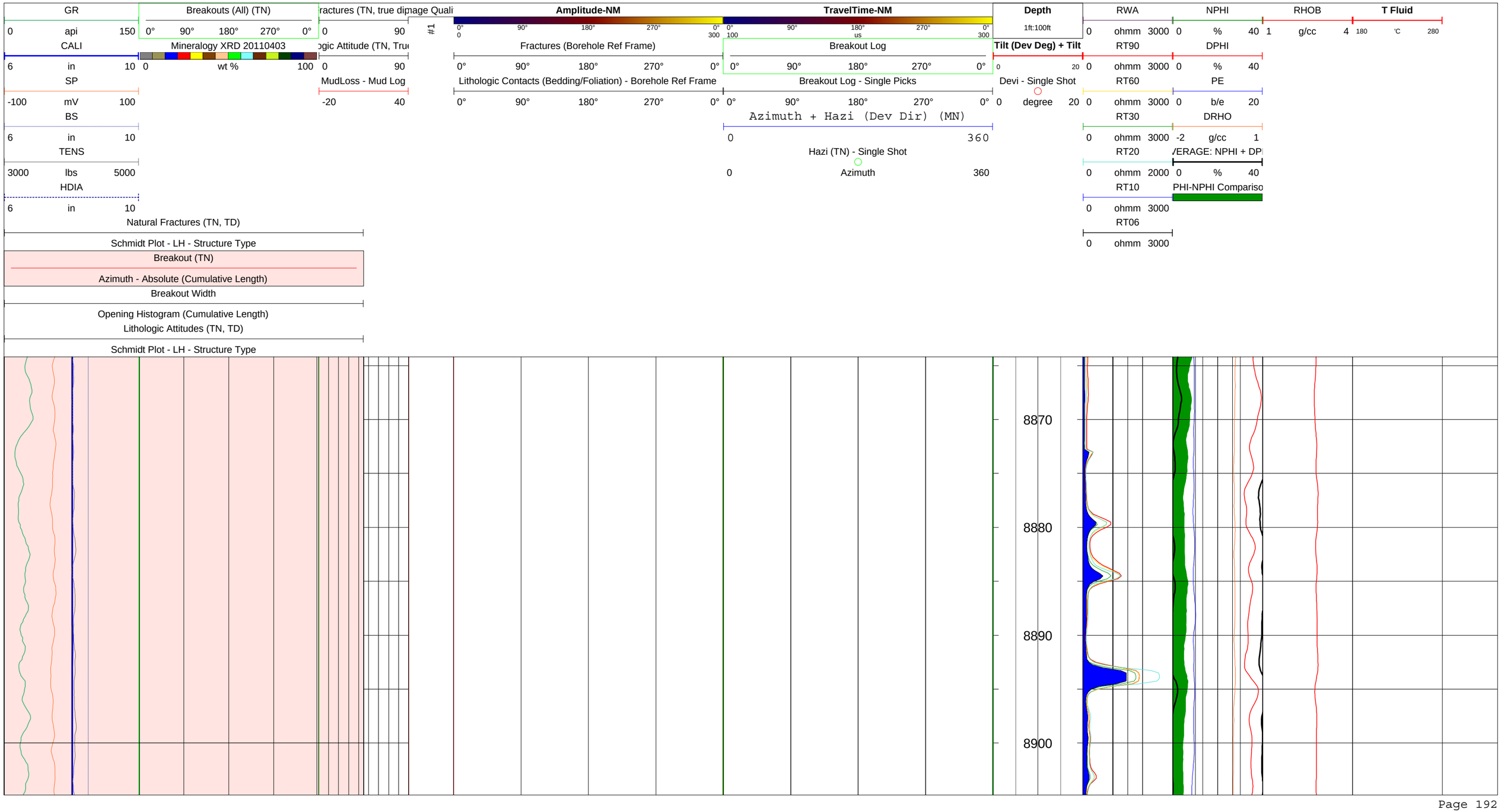

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
8670
8680
8690
8700

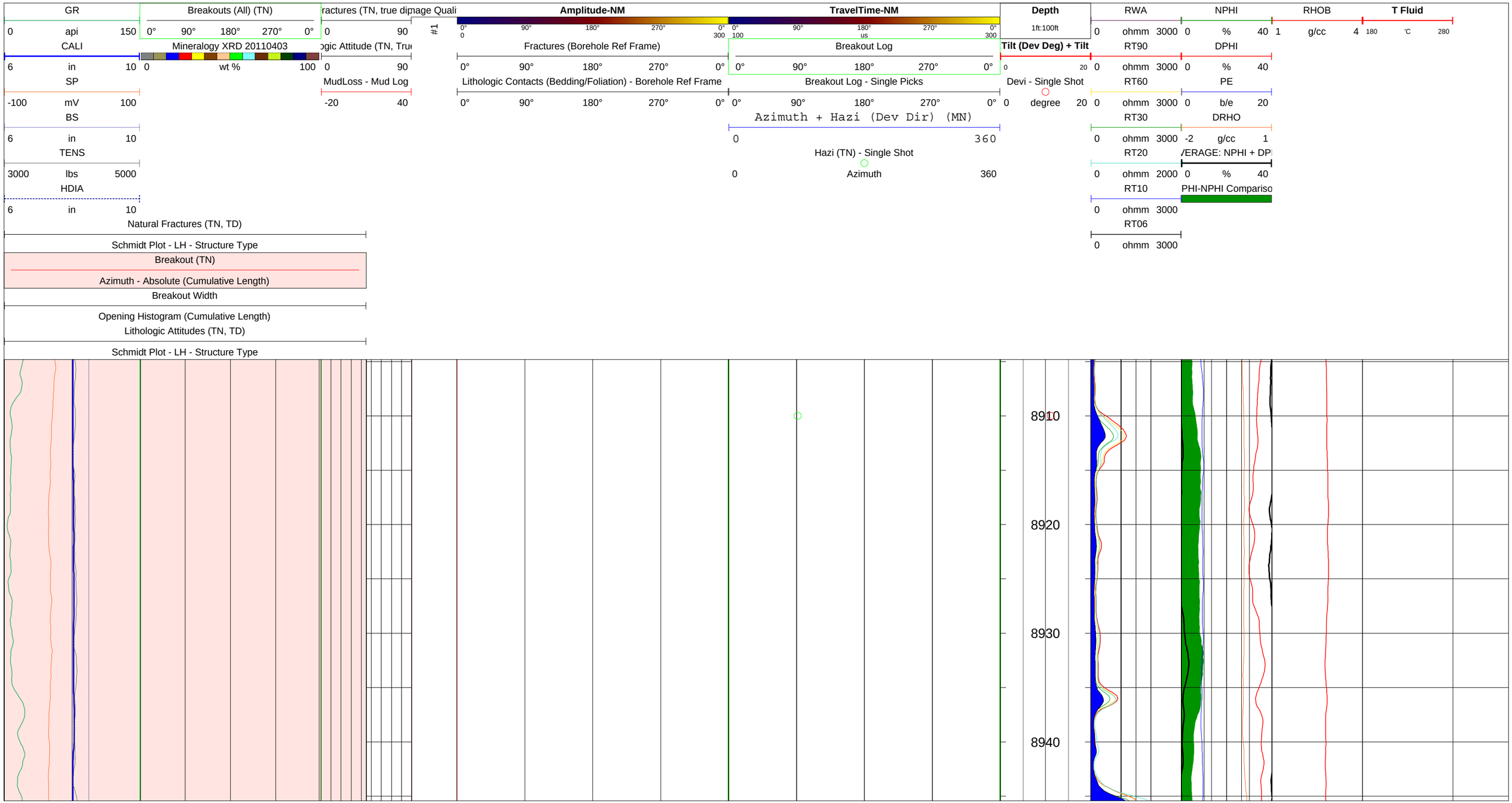

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
8710
8720
8730
8740

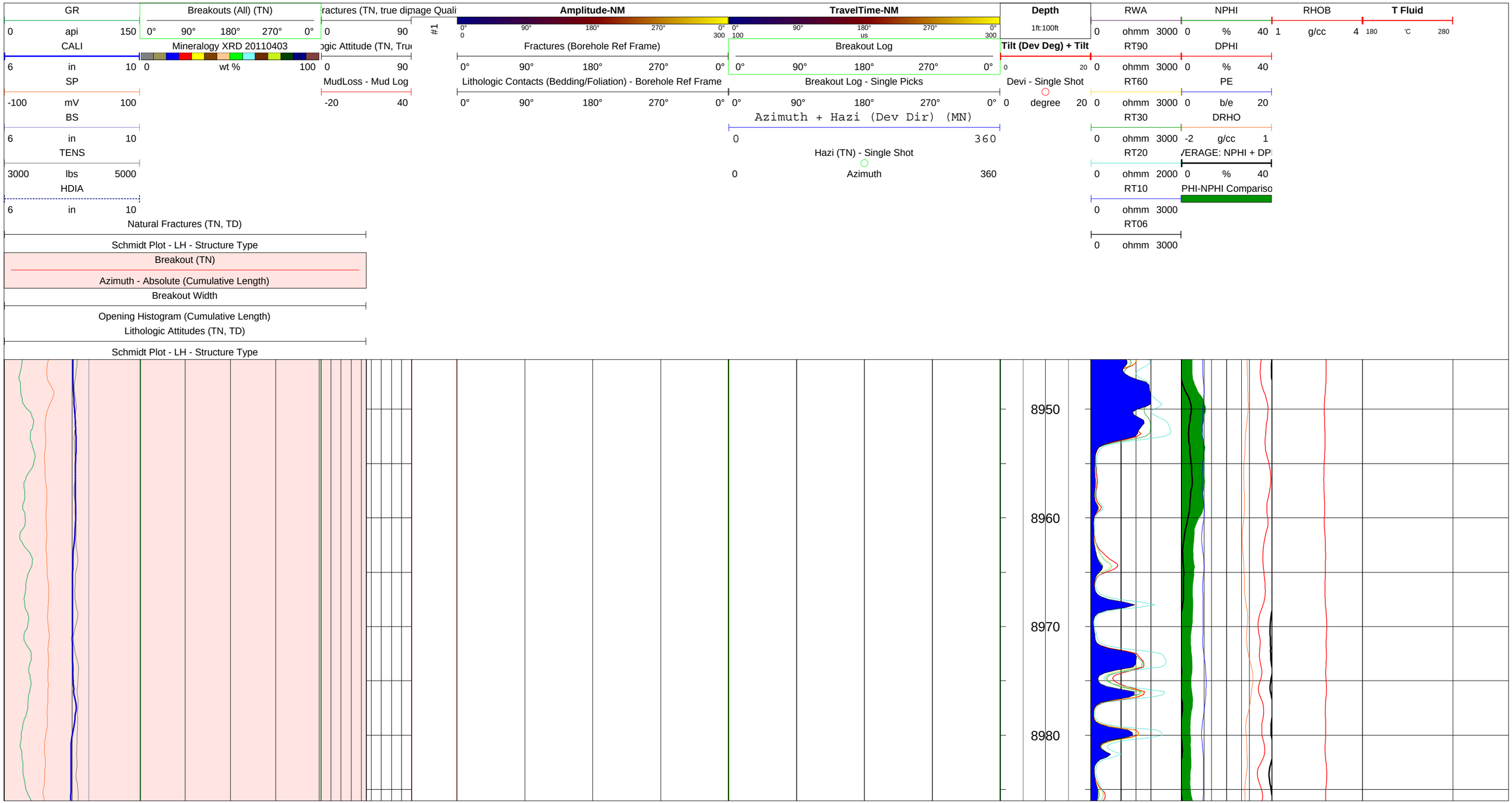

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
8750
8760
8770
8780

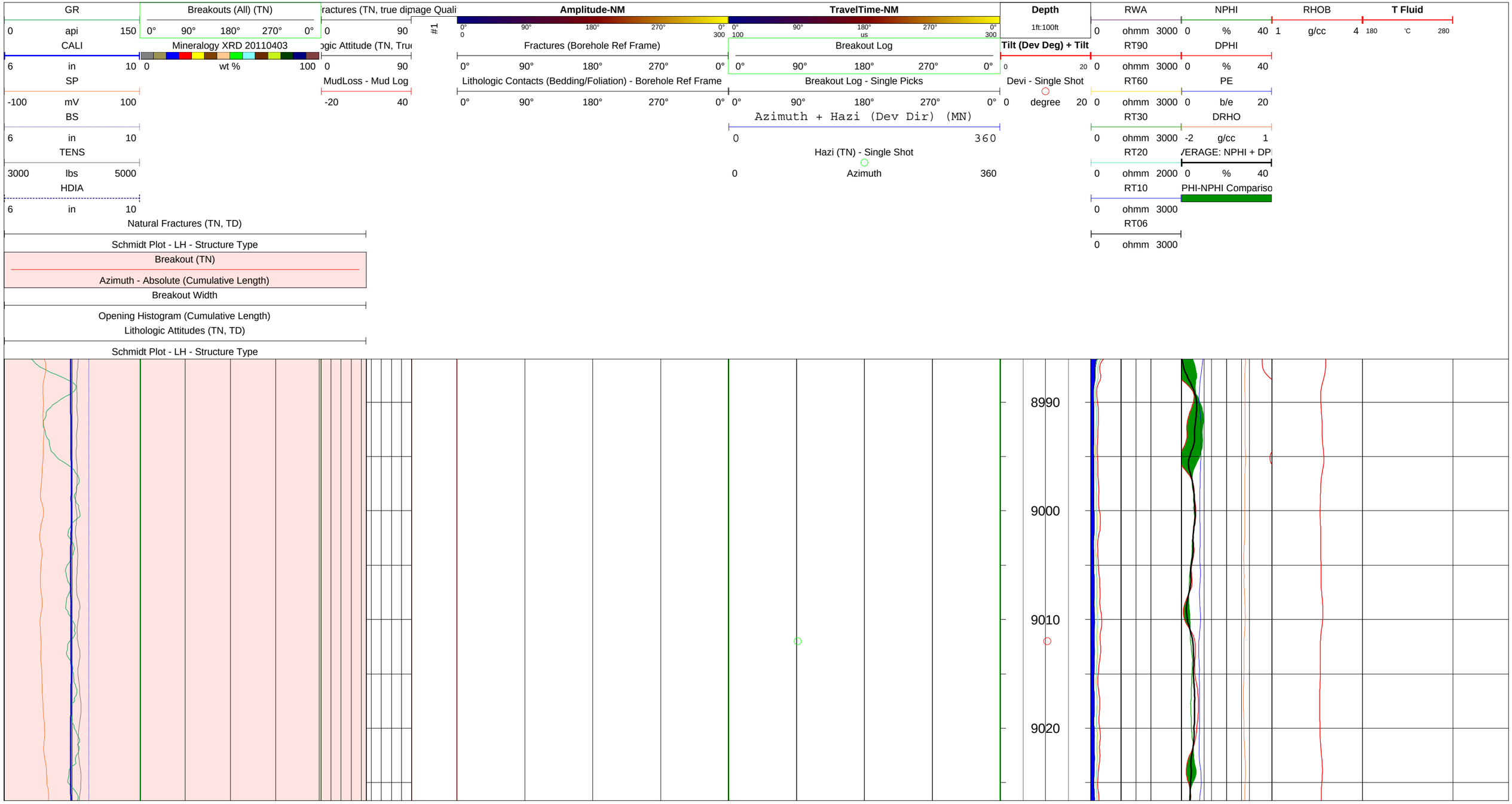

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
8790
8800
8810
8820

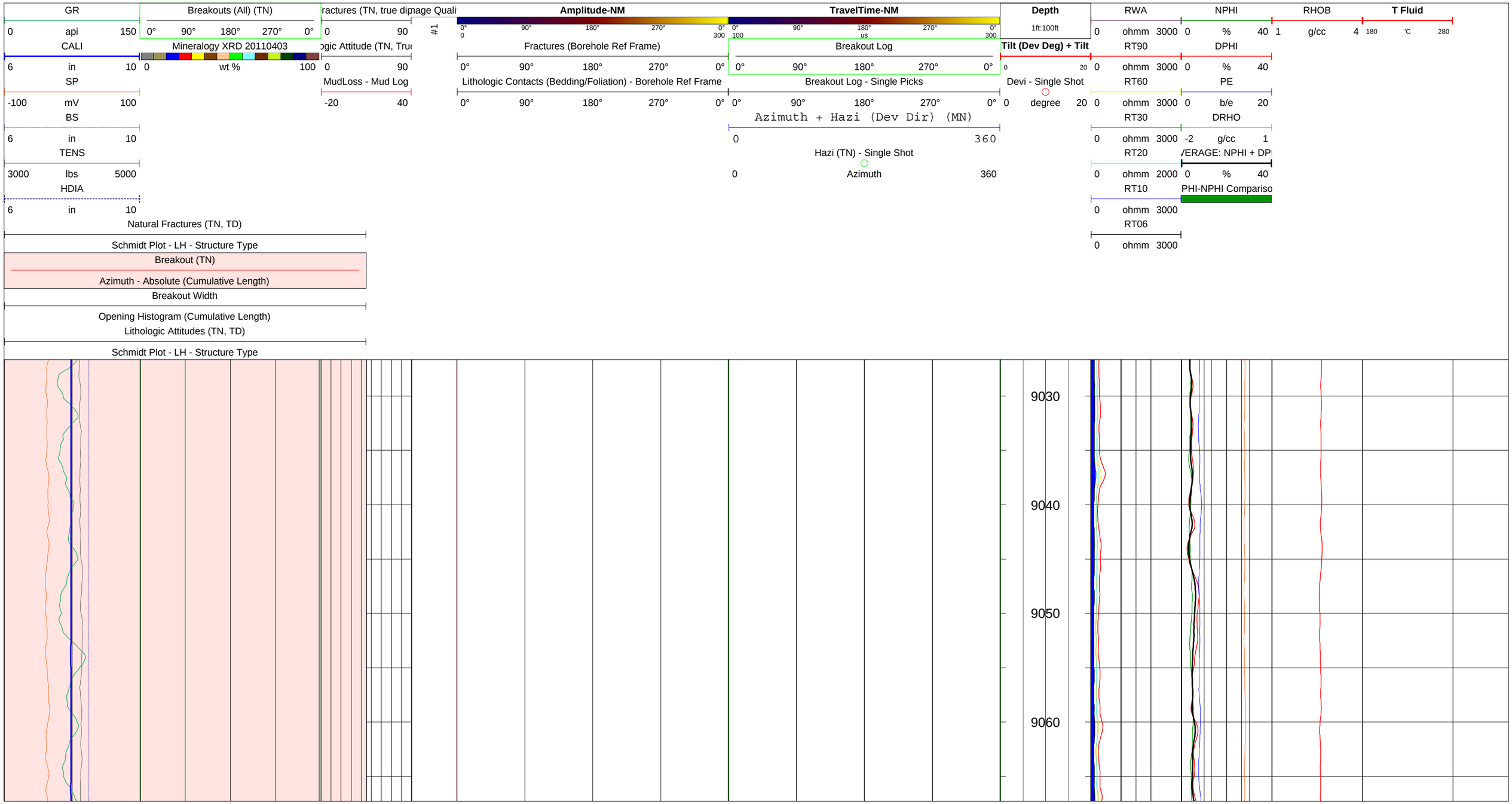

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
8830
8840
8850
8860

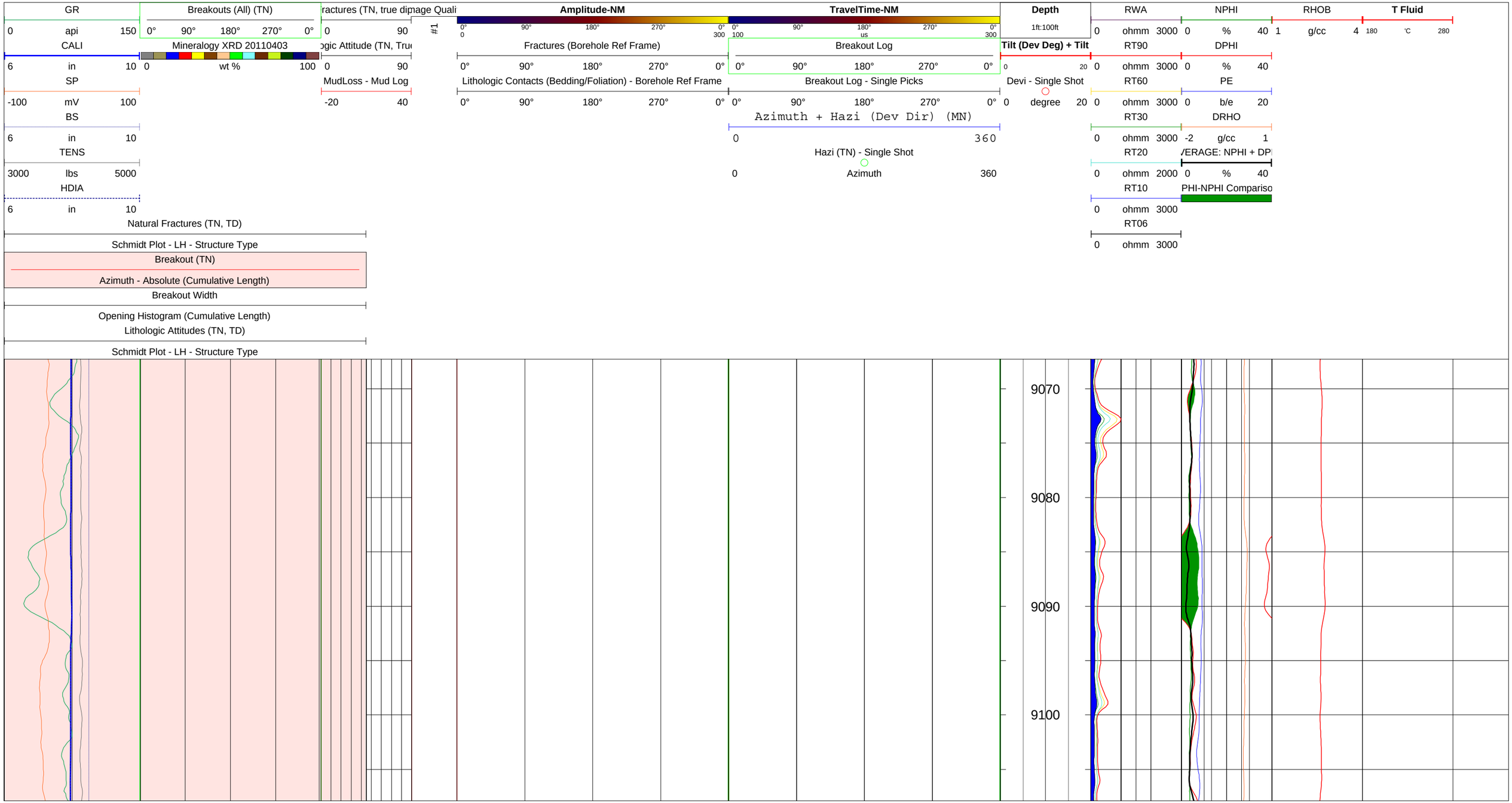

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Breakout Log
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
8870
8880
8890
8900

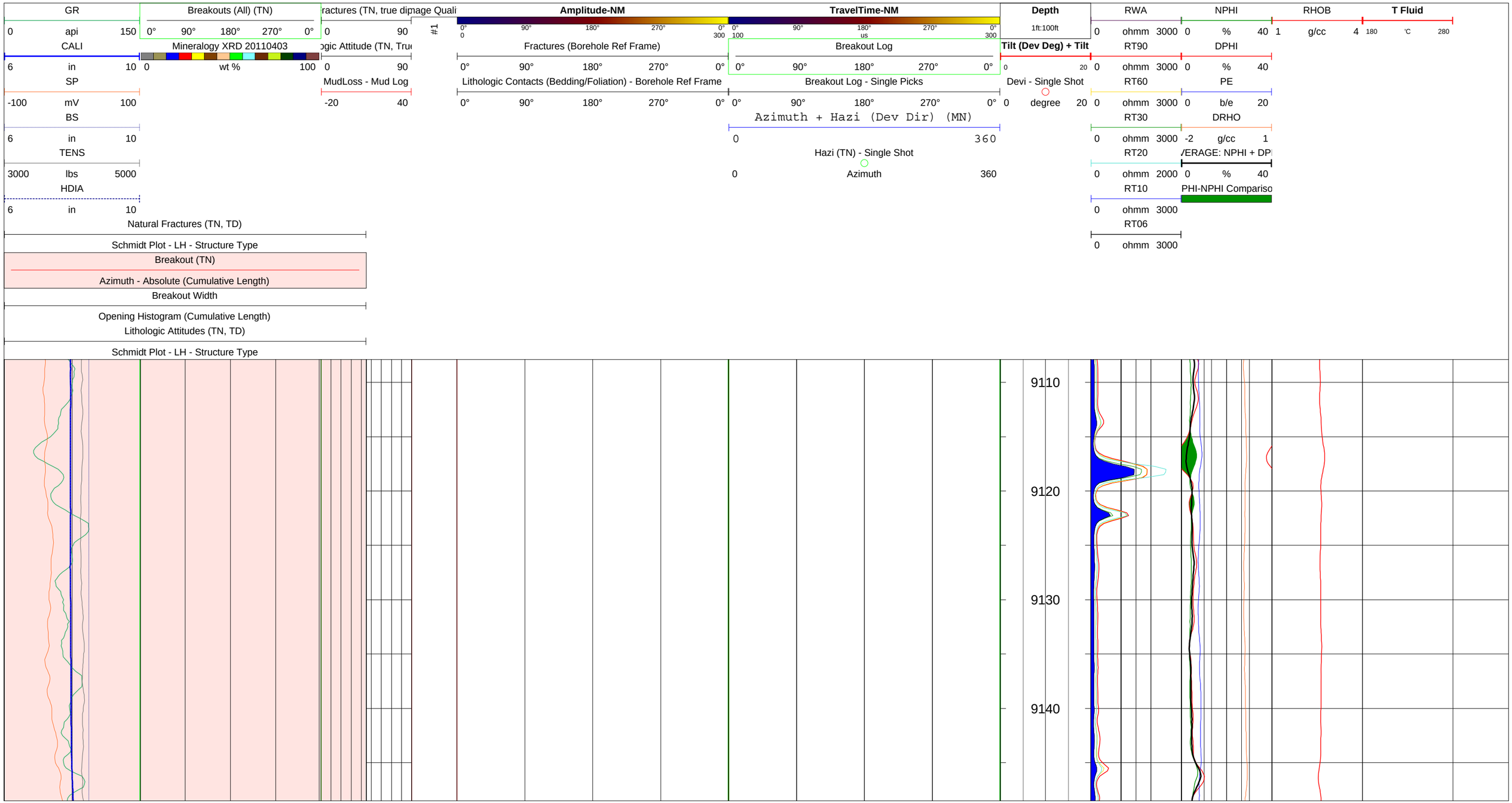

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
8910
8920
8930
8940

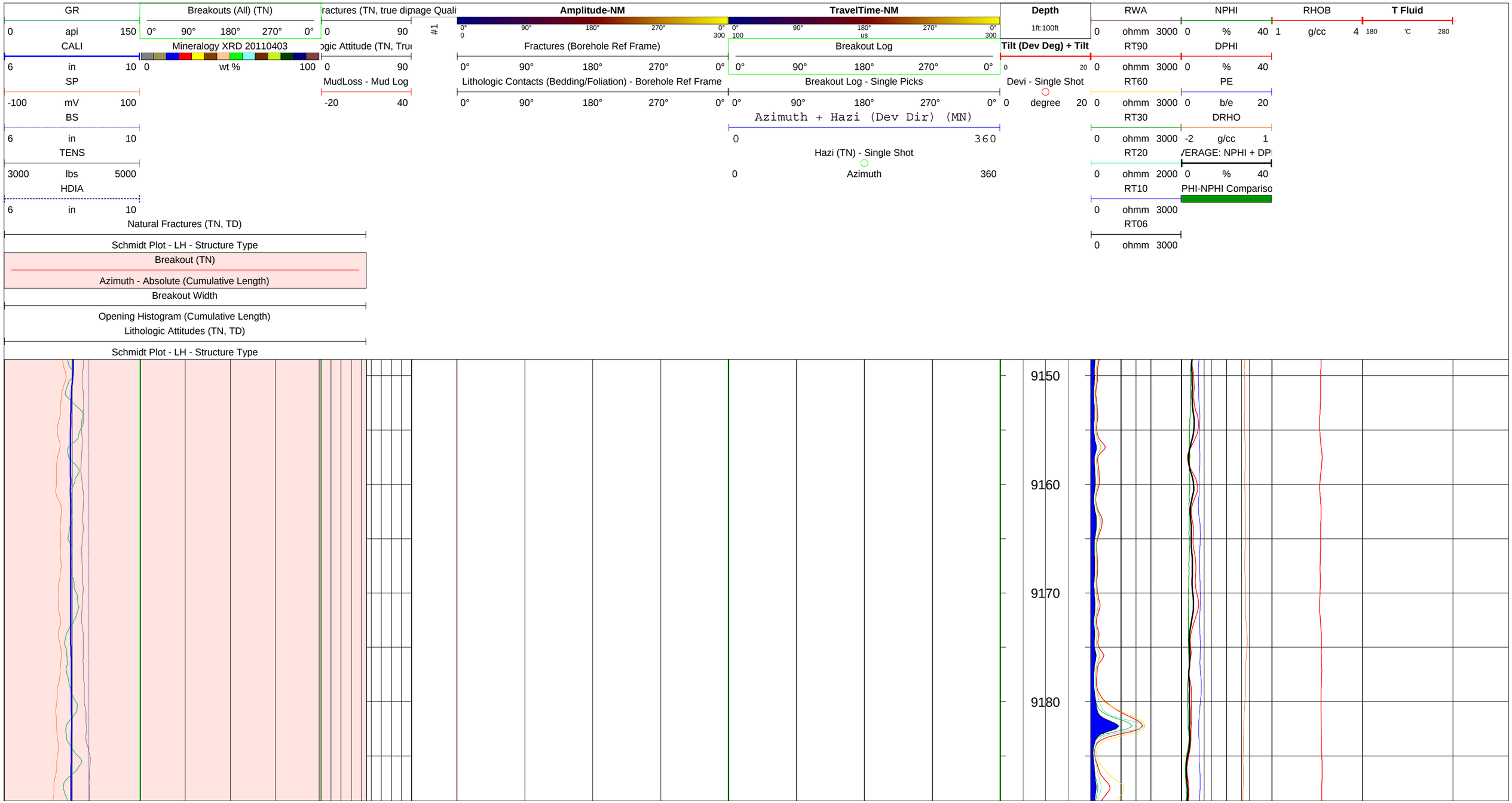

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
0 % 40
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
8950
8960
8970
8980

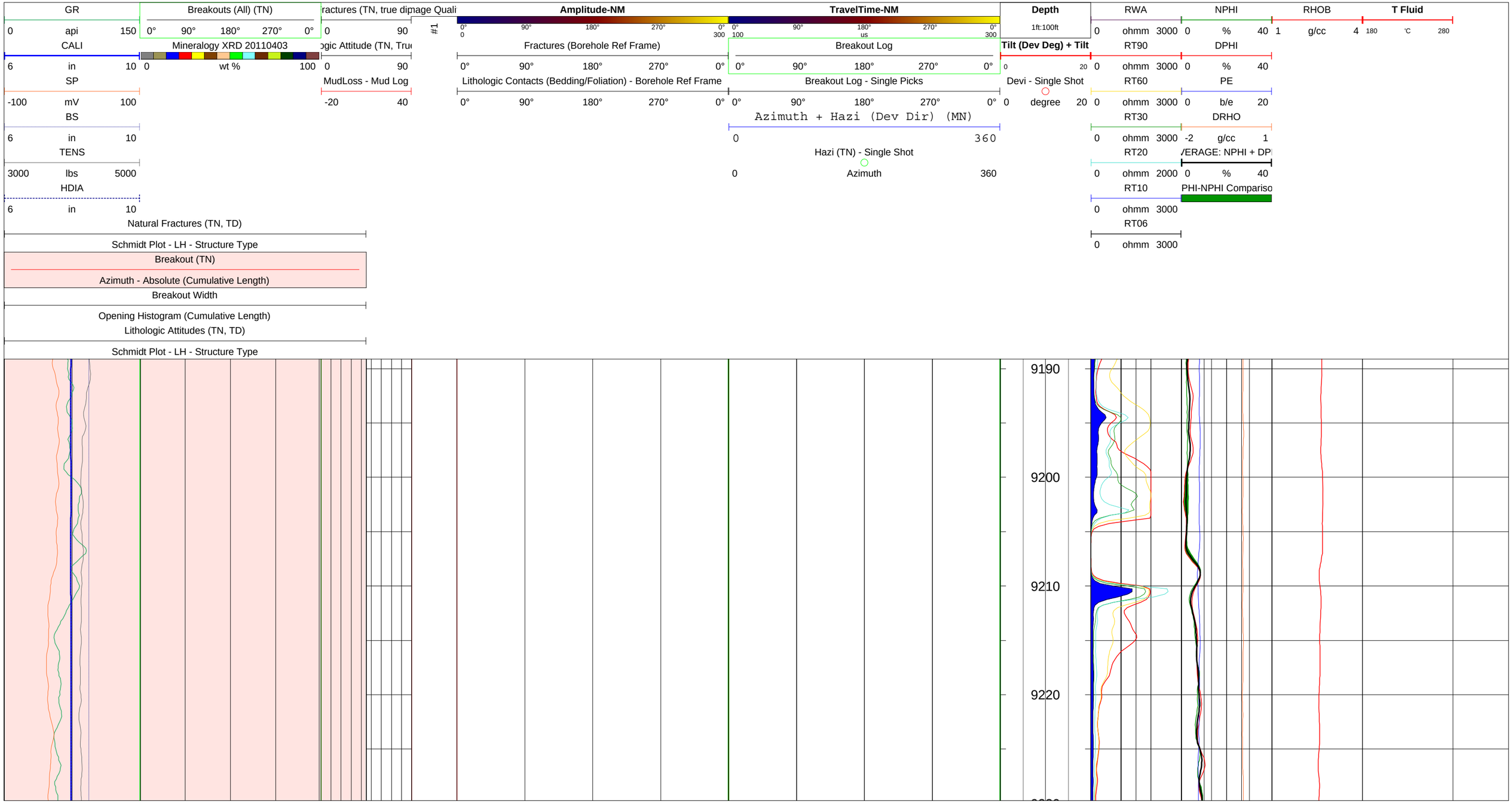

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
8990
9000
9010
9020

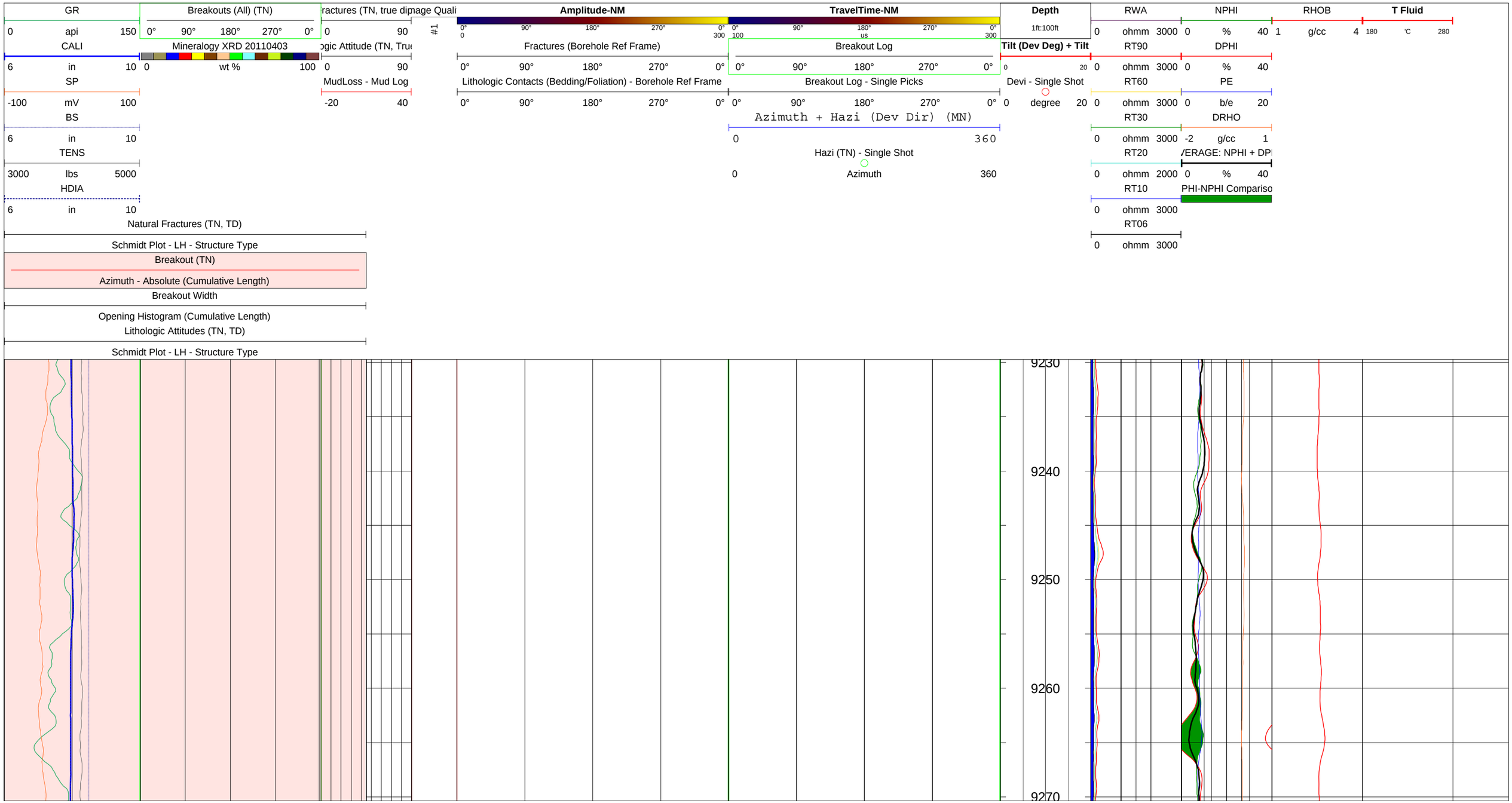

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
9030
9040
9050
9060

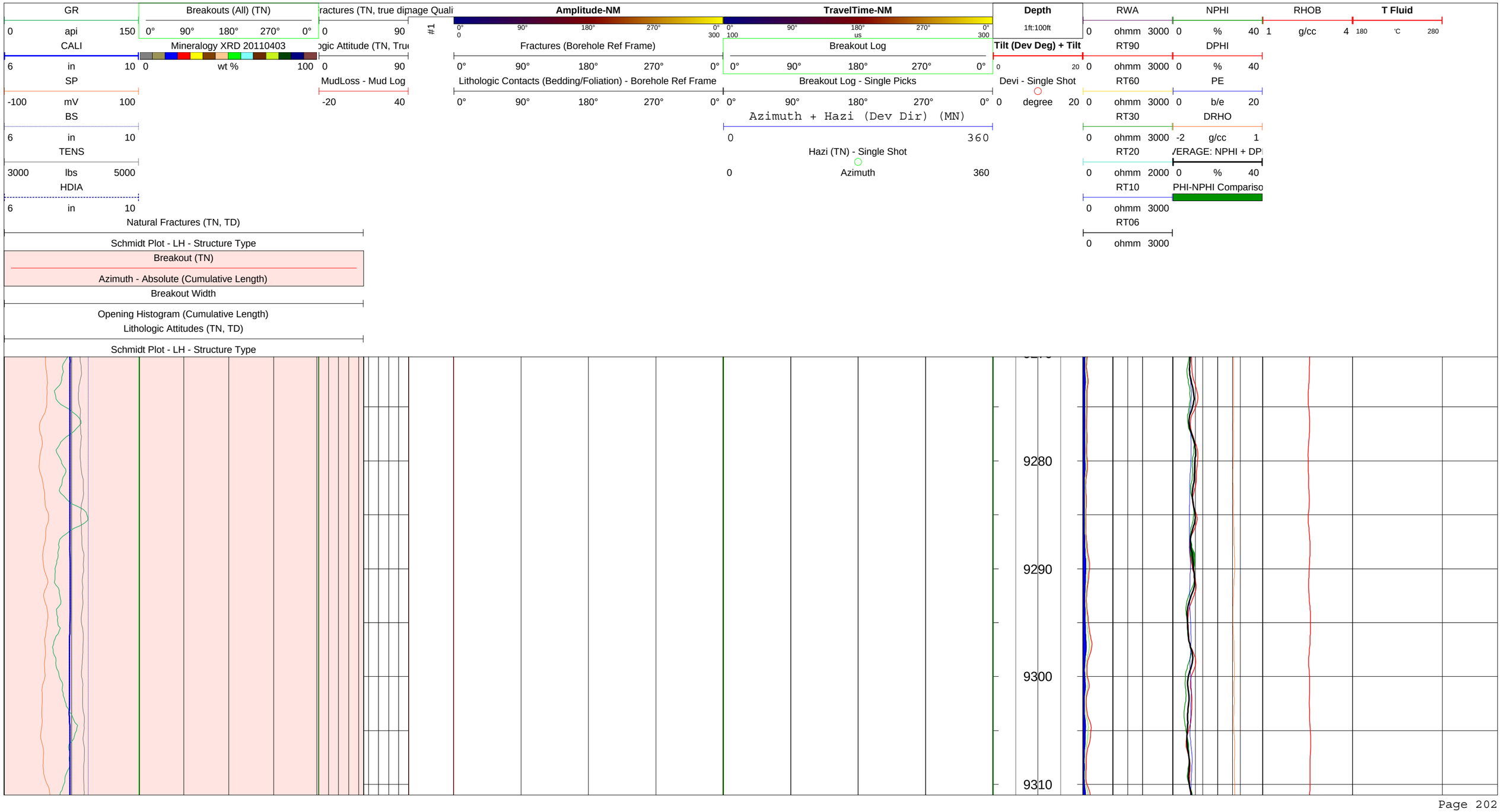

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
9070
9080
9090
9100

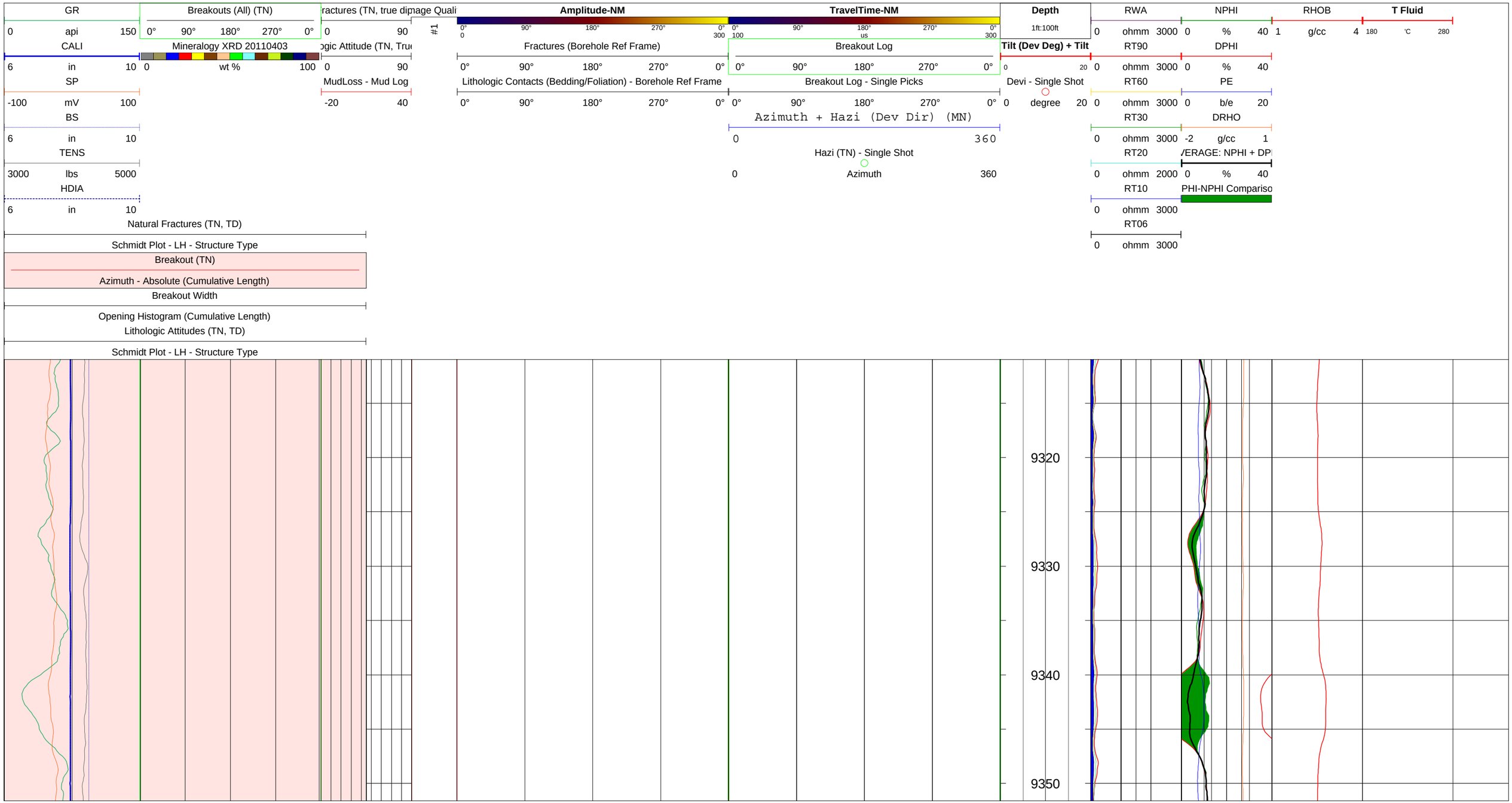

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
9110
9120
9130
9140

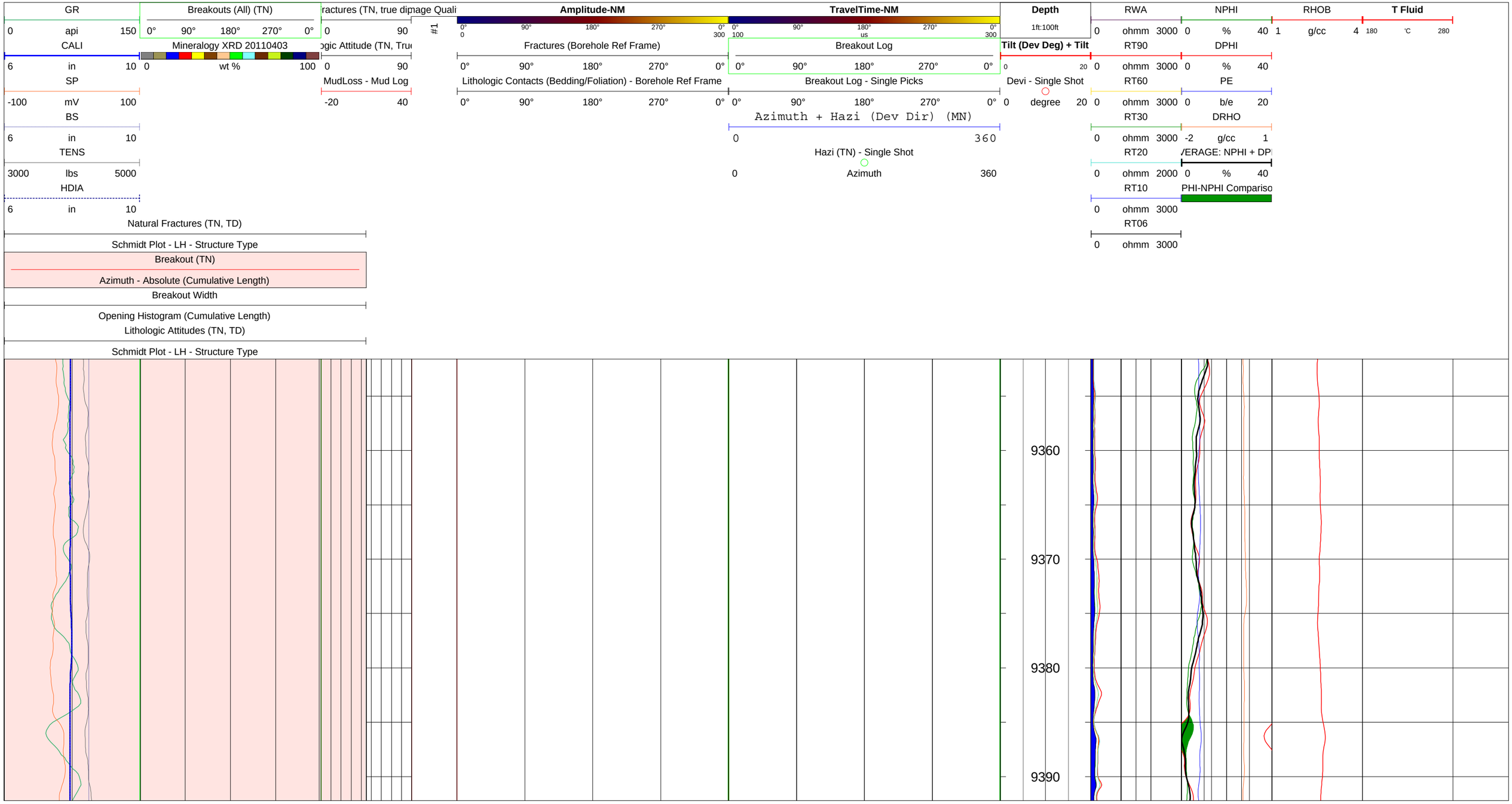

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
Azimuth
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
Devi - Single Shot
degree
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
9150
9160
9170
9180

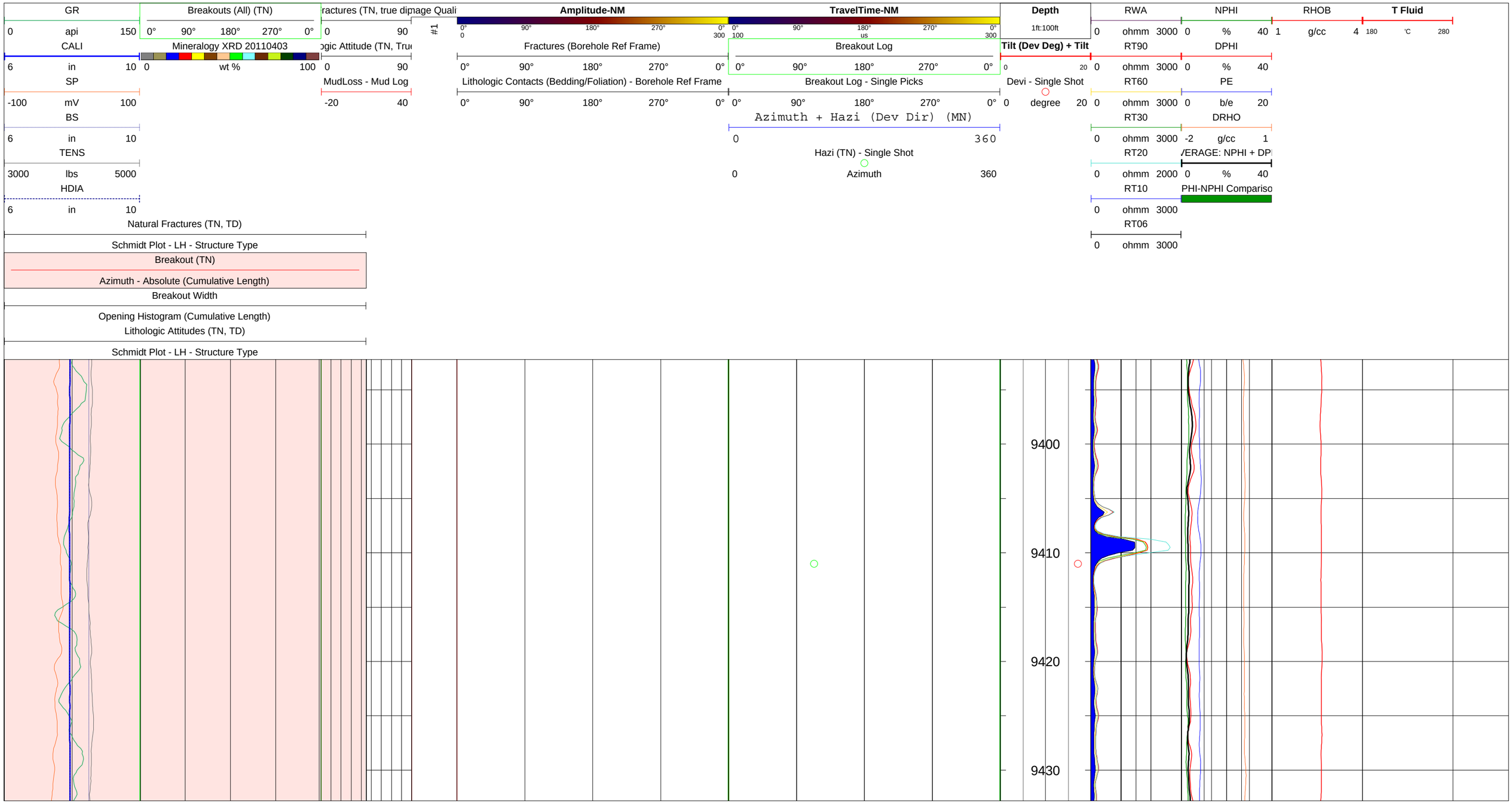

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
Azimuth
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
Devi - Single Shot
degree
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
9190
9200
9210
9220

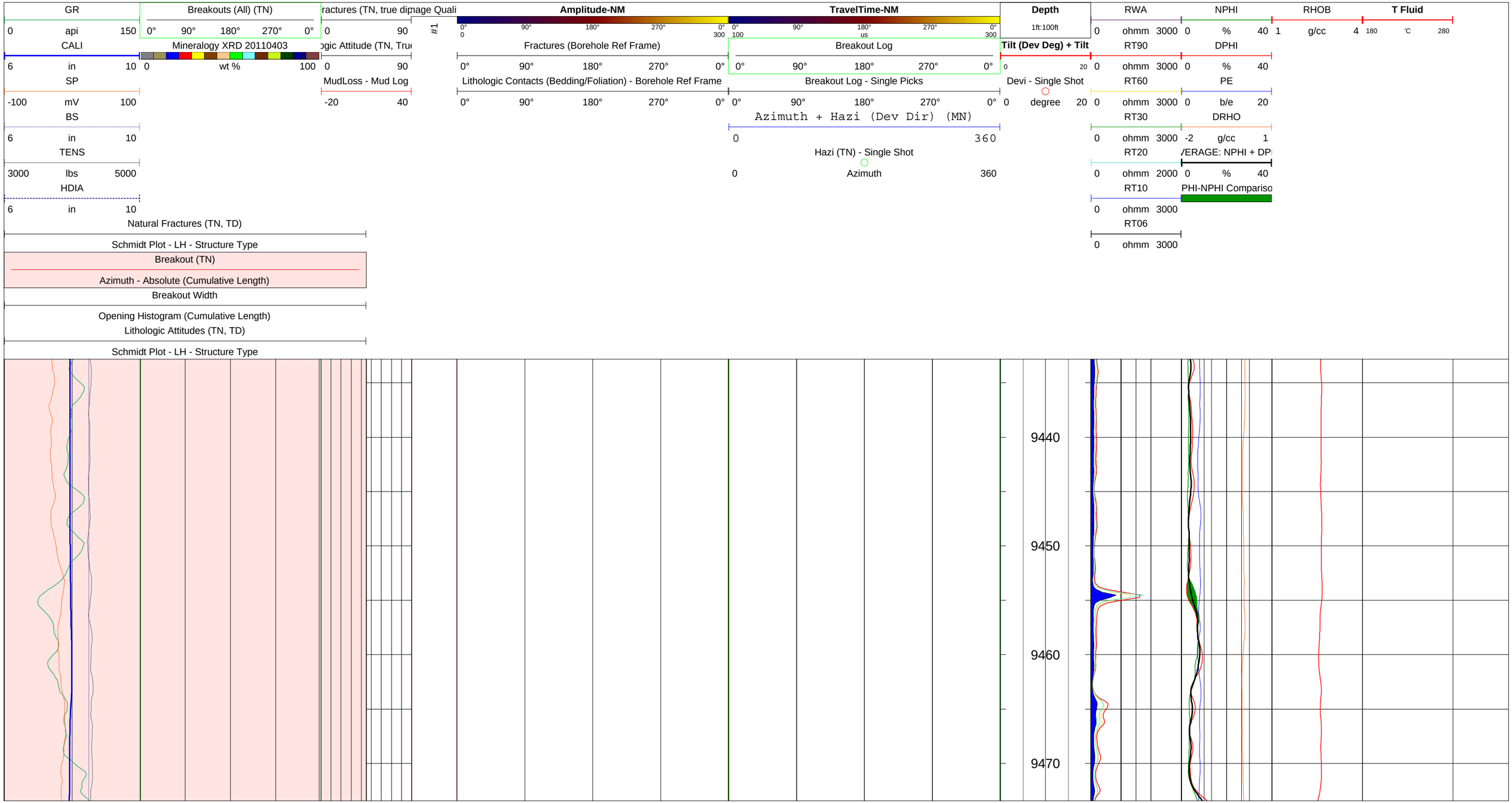

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
9230
9240
9250
9260
9270

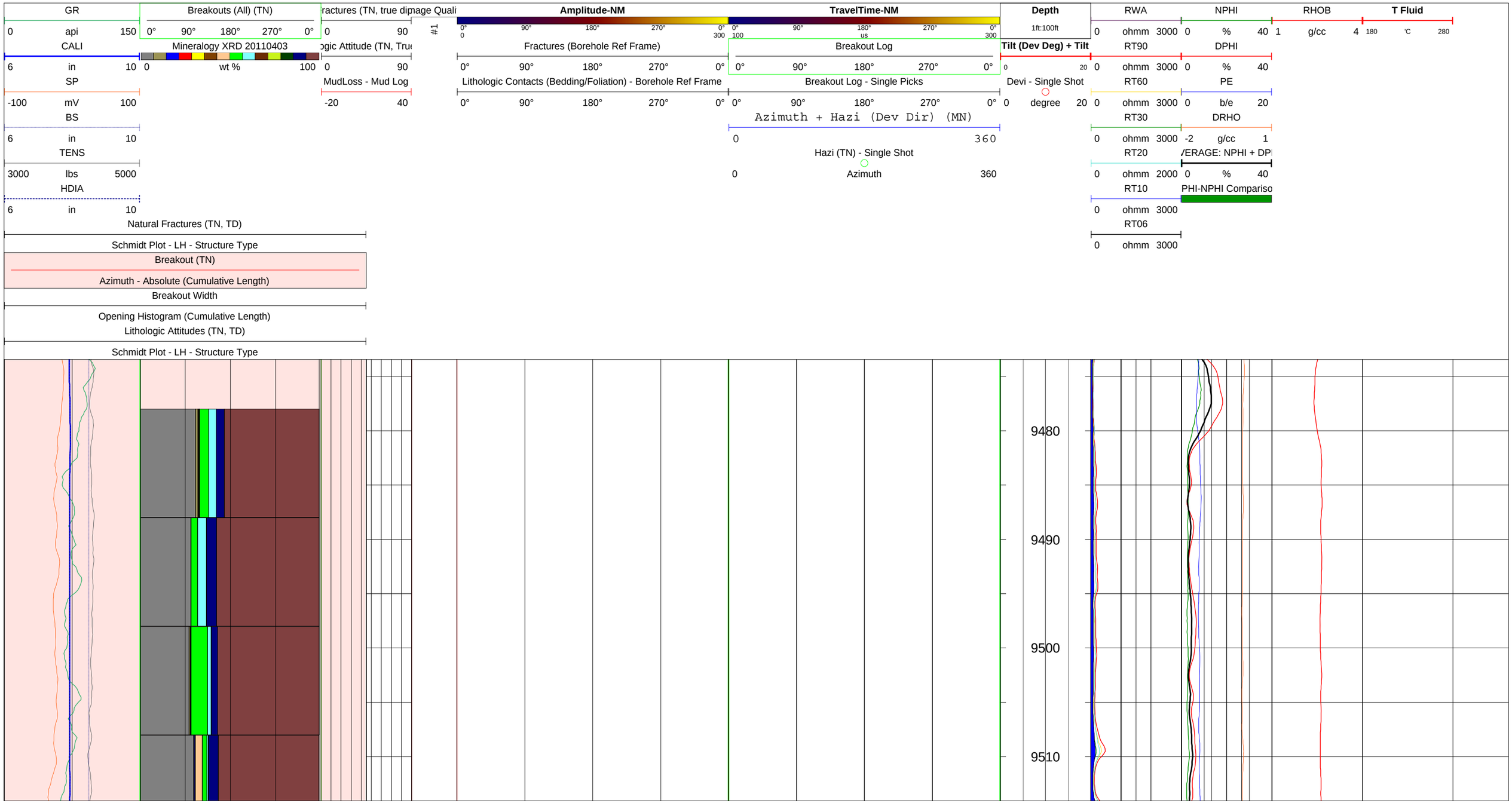

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
9280
9290
9300
9310

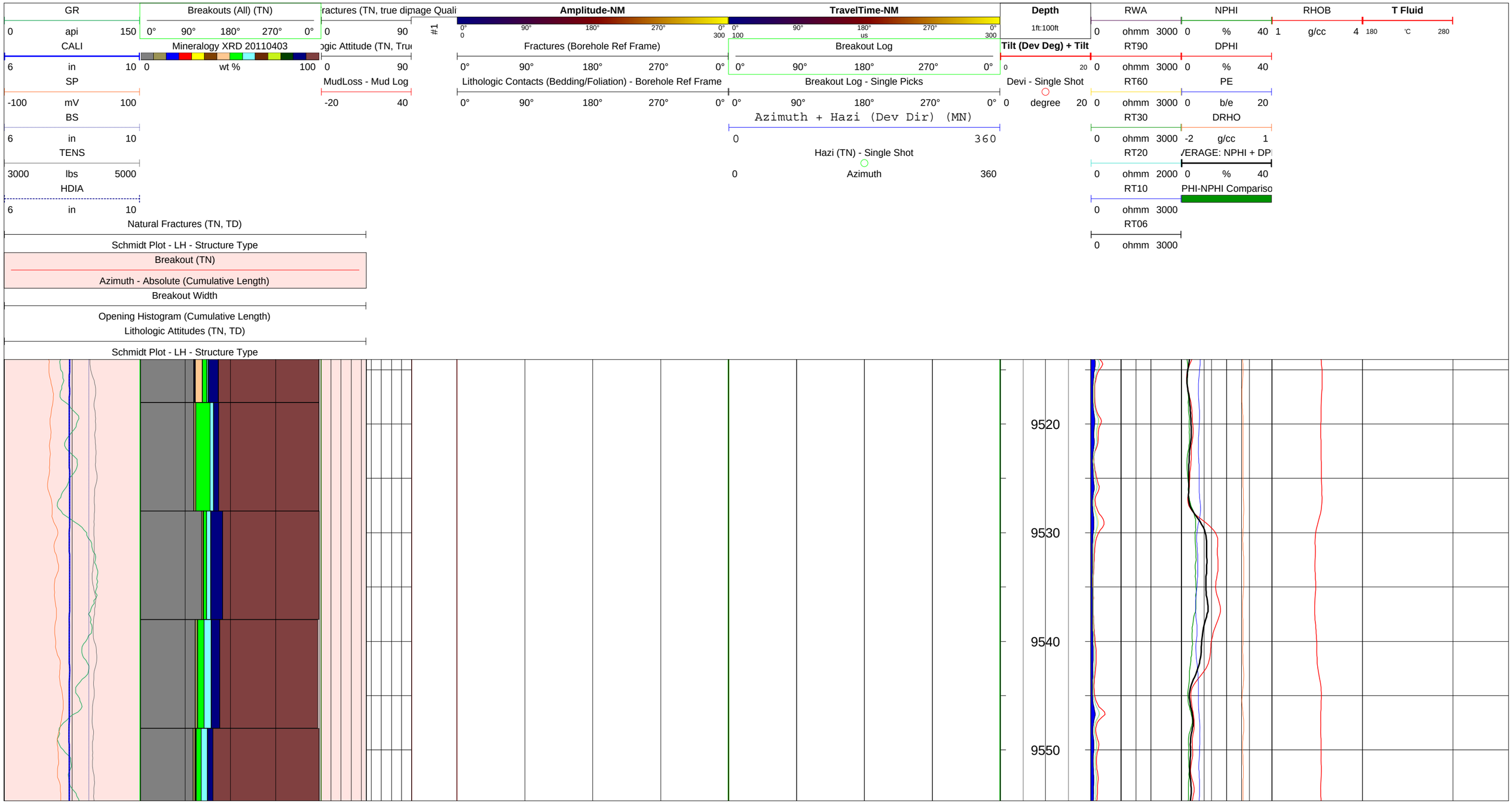

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Breakout Log
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
Azimuth
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
Devi - Single Shot
degree
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
9320
9330
9340
9350

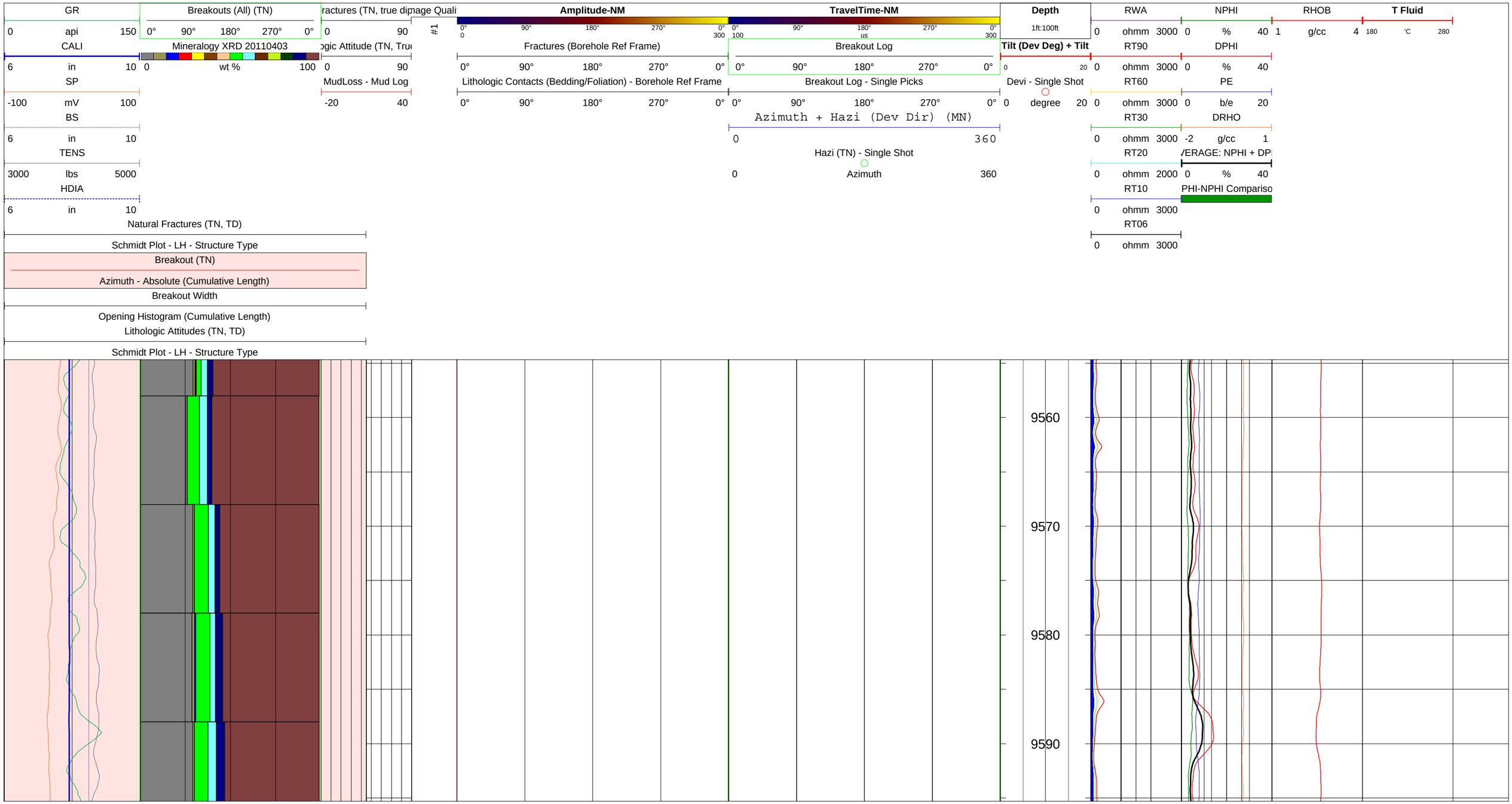

GR
0 api 150
Breakouts (All) (TN)
0° 90° 180° 270° 0°
fractures (TN, true dip
0 90
#1
Amplitude-NM
0° 90° 180° 270° 0°
0 300
TravelTime-NM
0° 90° 180° 270° 0°
100 us 300
Depth
1ft:100ft
RWA
0 ohmm 3000
NPHI
0 % 40
RHOB
1 g/cc 4
T Fluid
180 °C 280
CALI
6 in 10
Mineralogy XRD 20110403
0 wt % 100
ogic Attitude (TN, Tru
0 90
Fractures (Borehole Ref Frame)
0° 90° 180° 270° 0°
Breakout Log
0° 90° 180° 270° 0°
Tilt (Dev Deg) + Tilt
0 20
RT90
0 ohmm 3000
DPHI
0 % 40
SP
-100 mV 100
MudLoss - Mud Log
-20 40
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
0° 90° 180° 270° 0°
Breakout Log - Single Picks
0° 90° 180° 270° 0°
Devi - Single Shot
0 degree 20
RT60
0 ohmm 3000
PE
0 b/e 20
BS
6 in 10
Azimuth + Hazi (Dev Dir) (MN)
0 360
RT30
0 ohmm 3000
DRHO
-2 g/cc 1
TENS
3000 lbs 5000
Hazi (TN) - Single Shot
0 Azimuth 360
RT20
0 ohmm 2000
VERAGE: NPHI + DP
0 % 40
HDIA
6 in 10
RT10
0 ohmm 3000
PHI-NPHI Compariso
Natural Fractures (TN, TD)
RT06
0 ohmm 3000
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
9360
9370
9380
9390

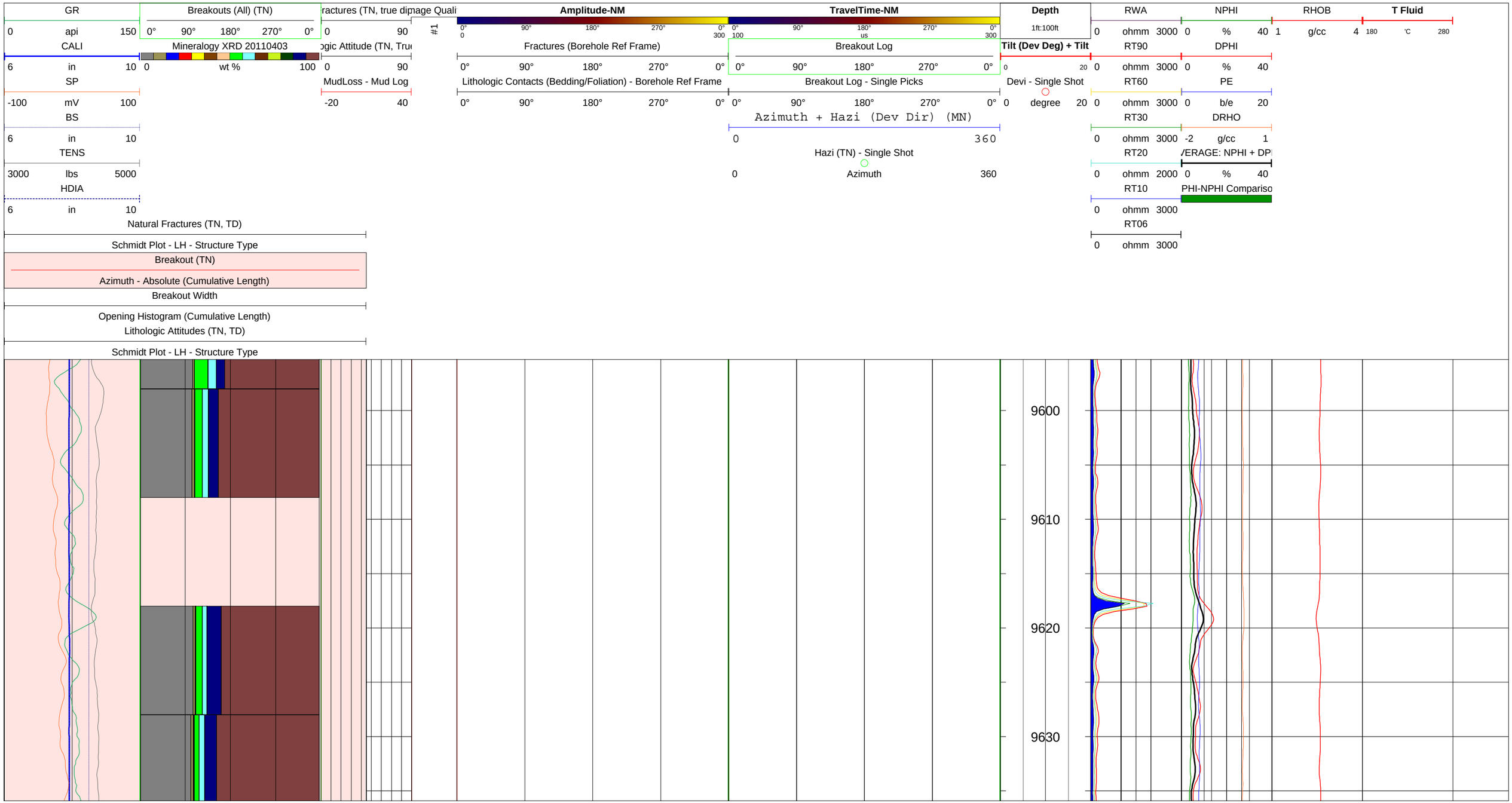

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
9400
9410
9420
9430

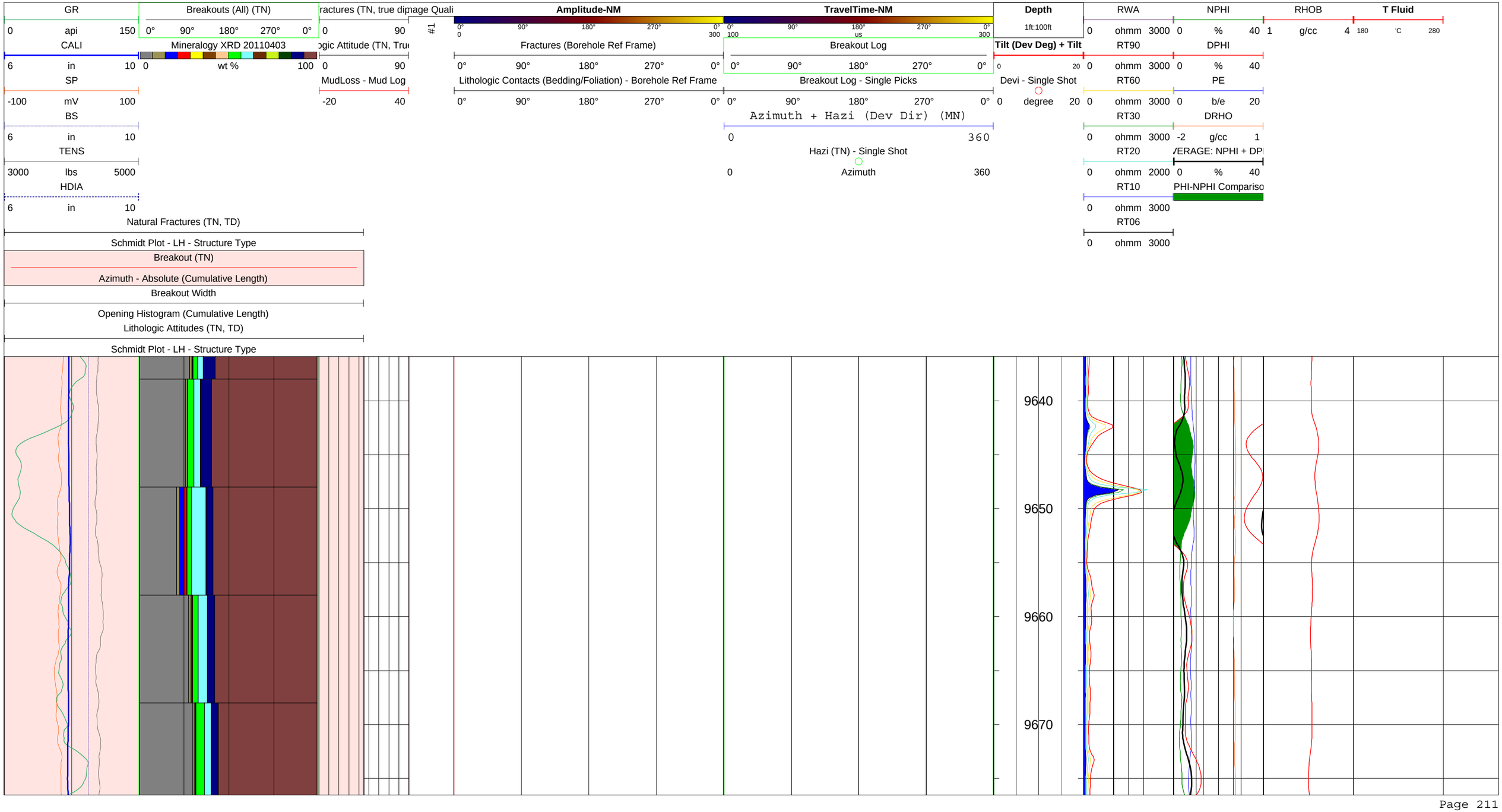

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
9440
9450
9460
9470

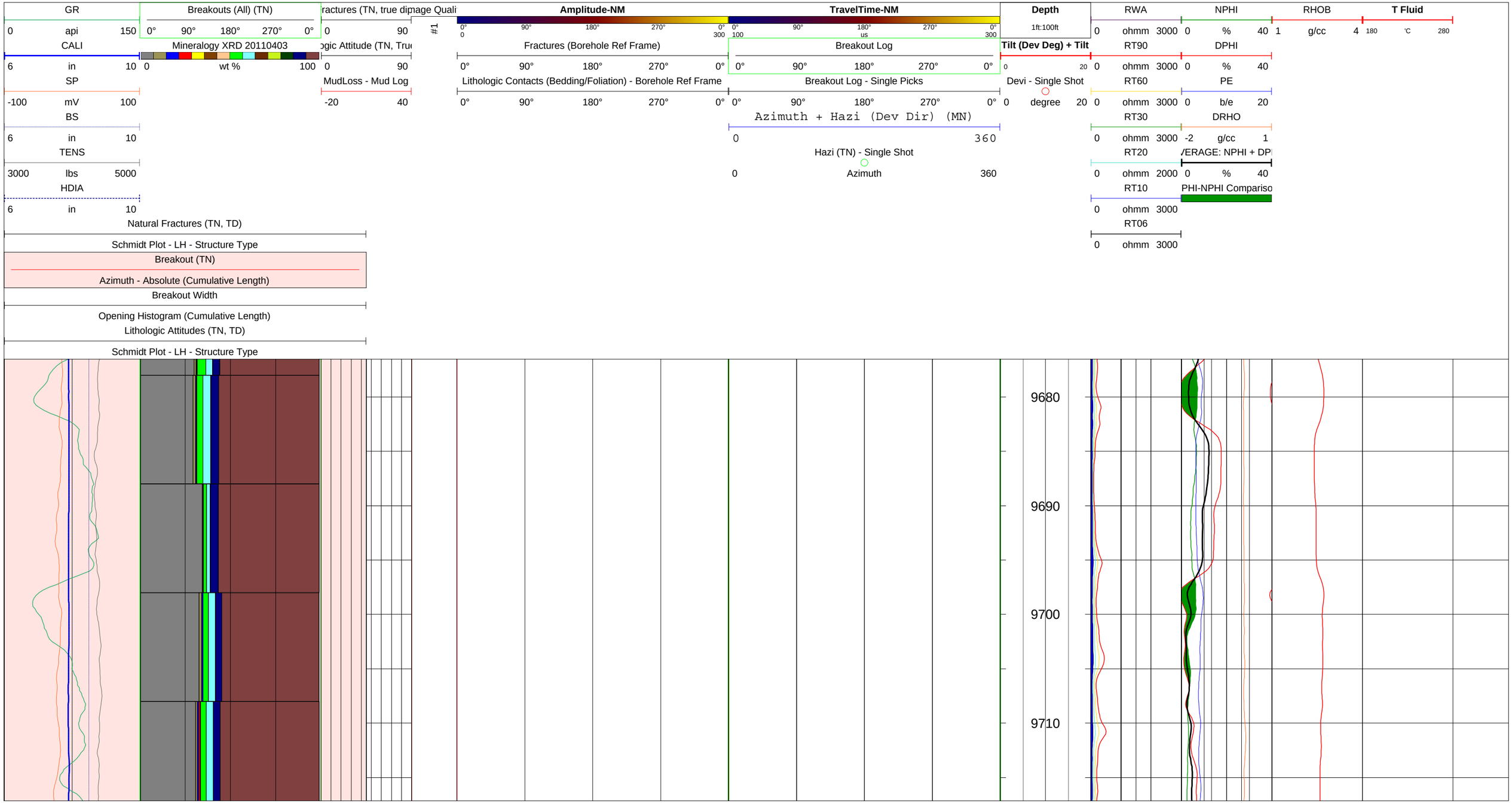

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
9480
9490
9500
9510

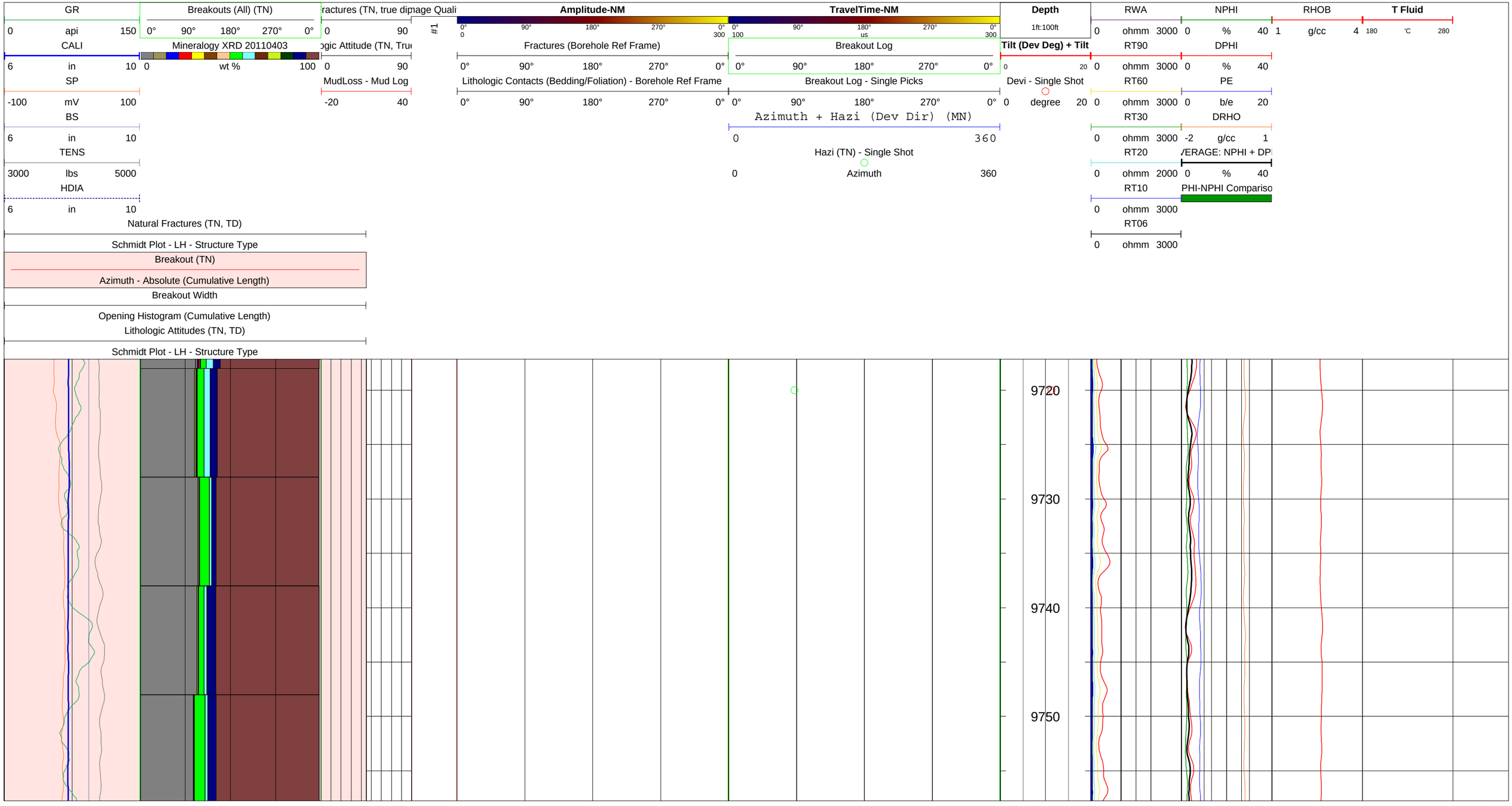

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
9520
9530
9540
9550

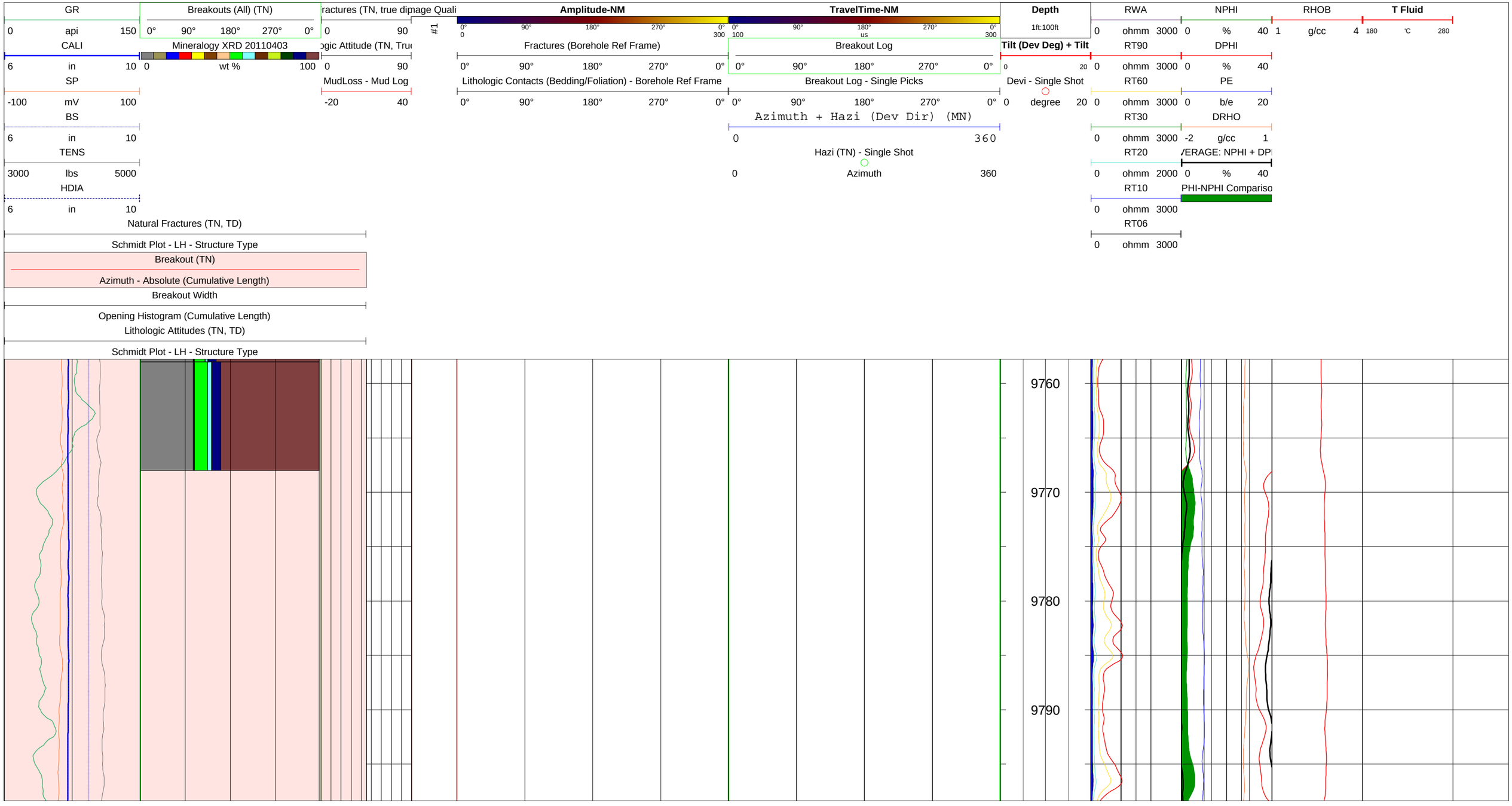

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Breakout Log
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
9560
9570
9580
9590

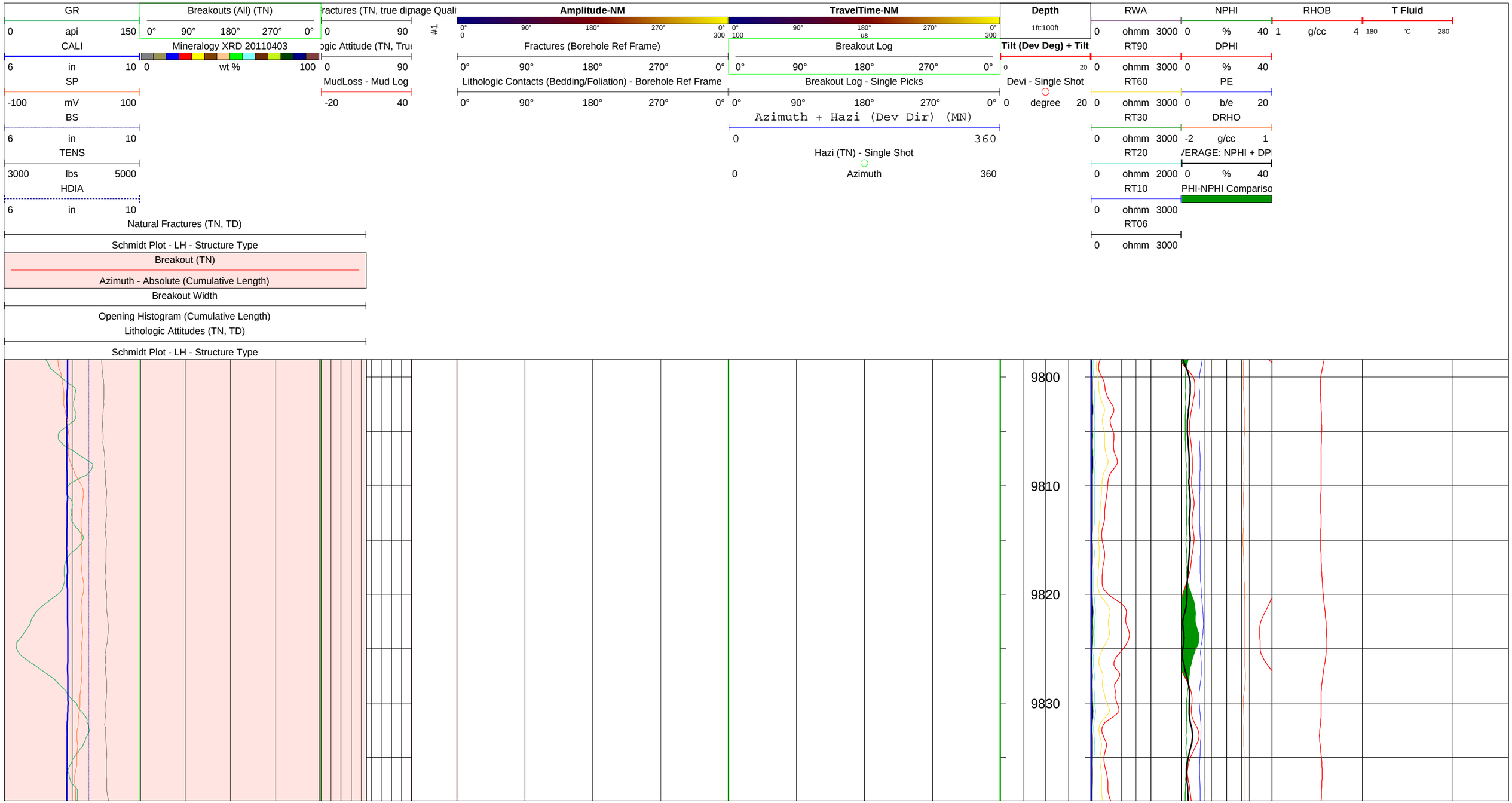

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
Azimuth
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
Devi - Single Shot
degree
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
9600
9610
9620
9630

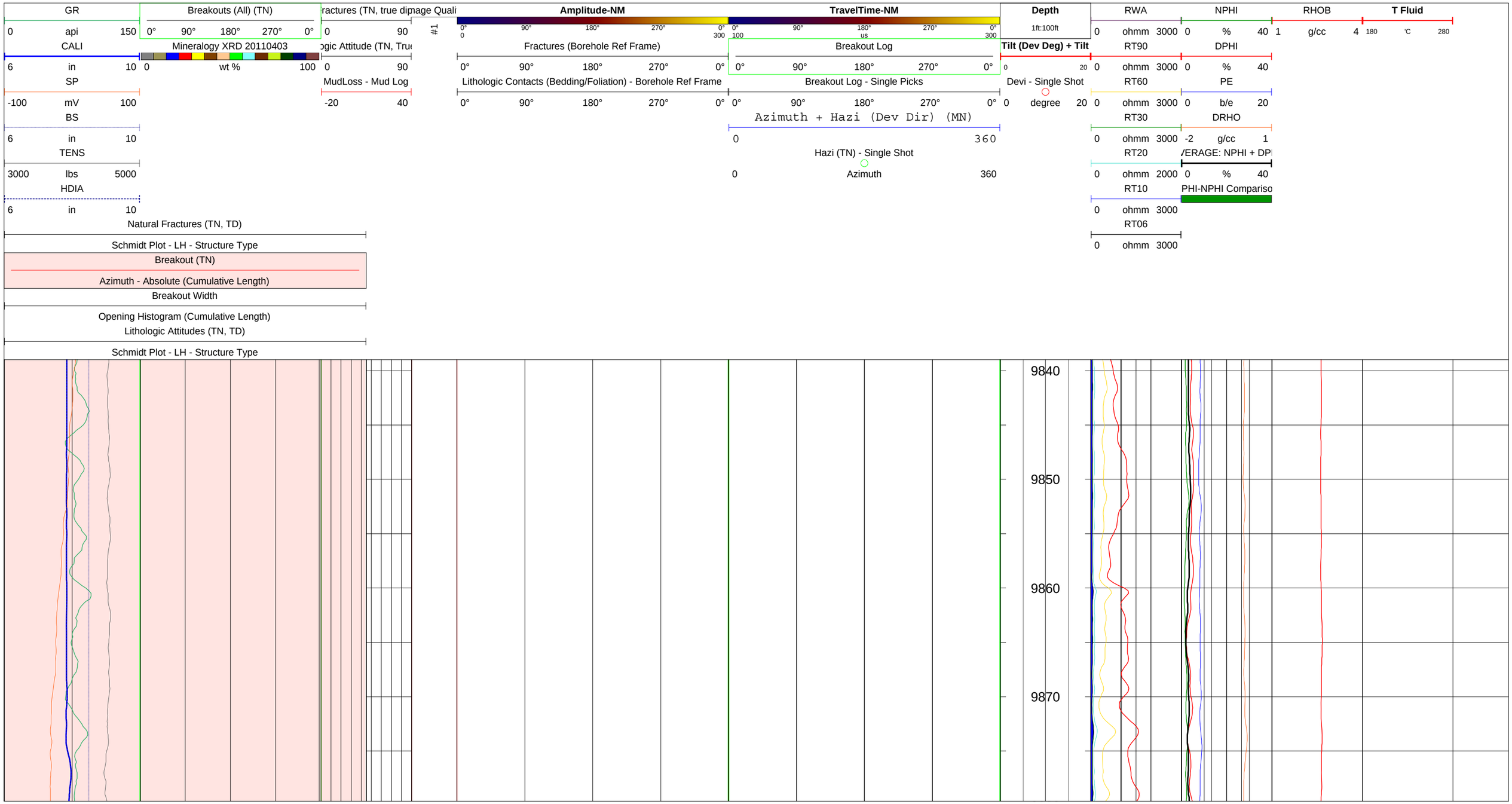

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
9640
9650
9660
9670

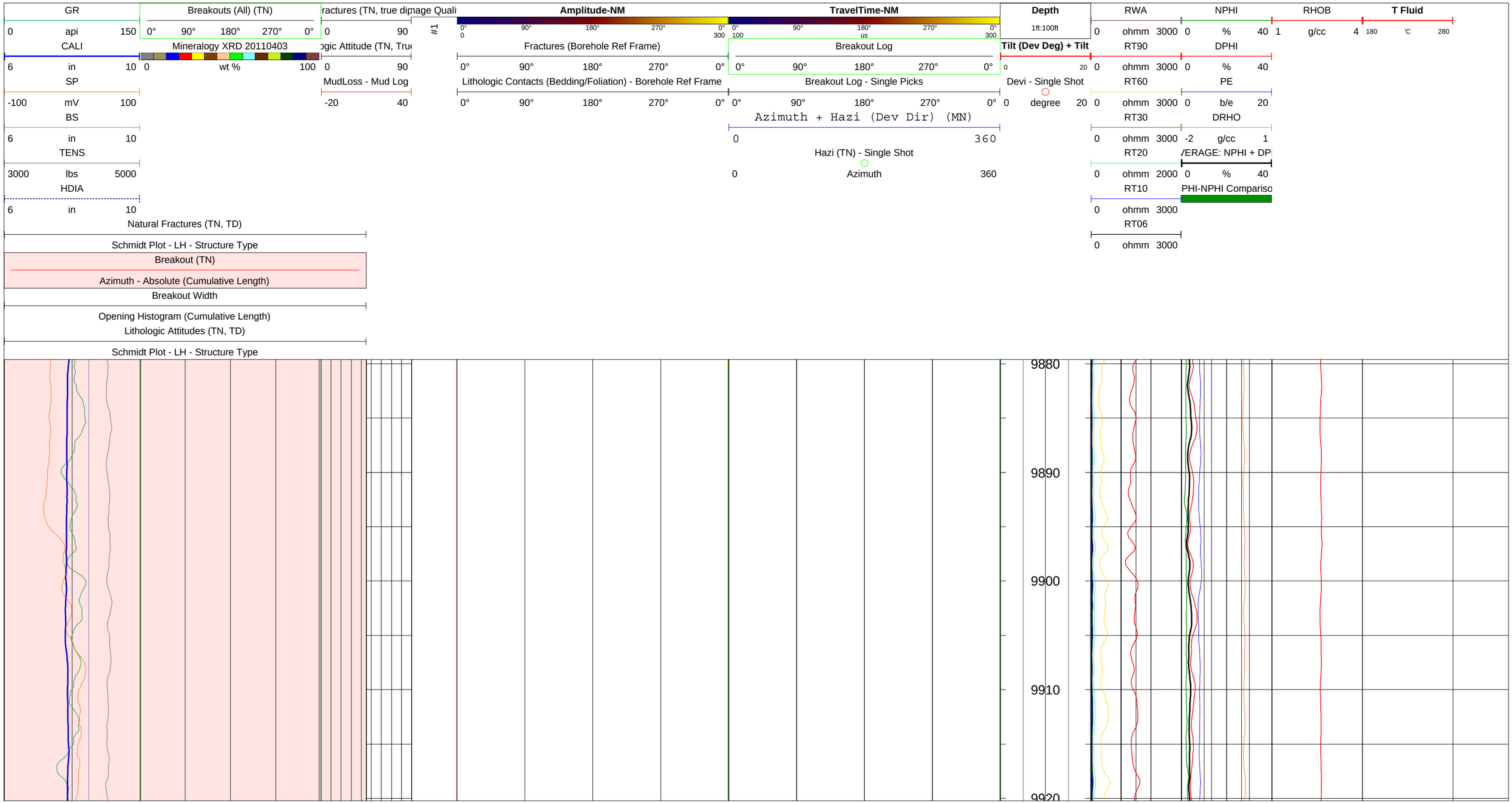

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
0 % 40
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
9680
9690
9700
9710

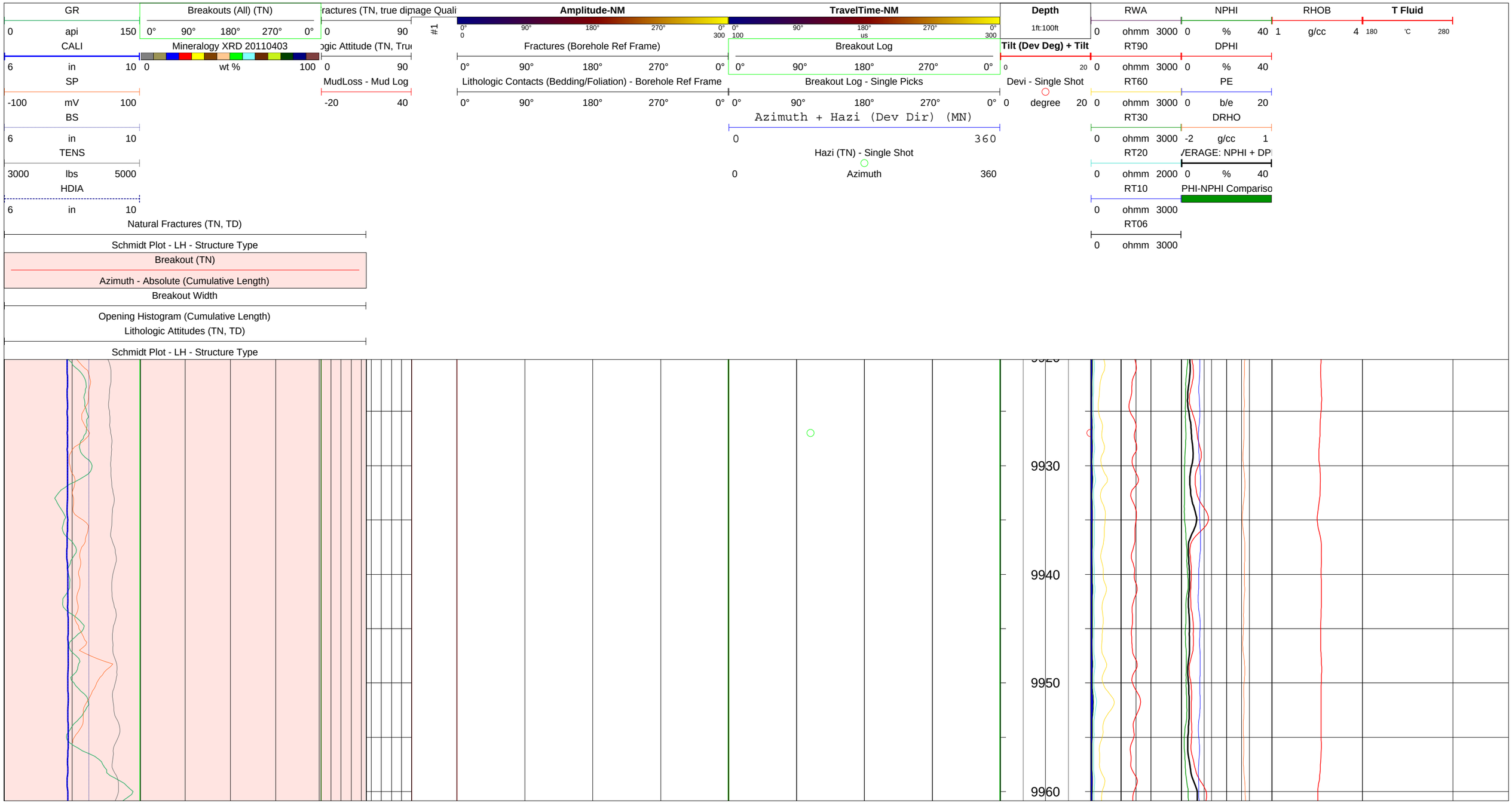

GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Breakout Log
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
Azimuth
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
Devi - Single Shot
degree
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
9720
9730
9740
9750

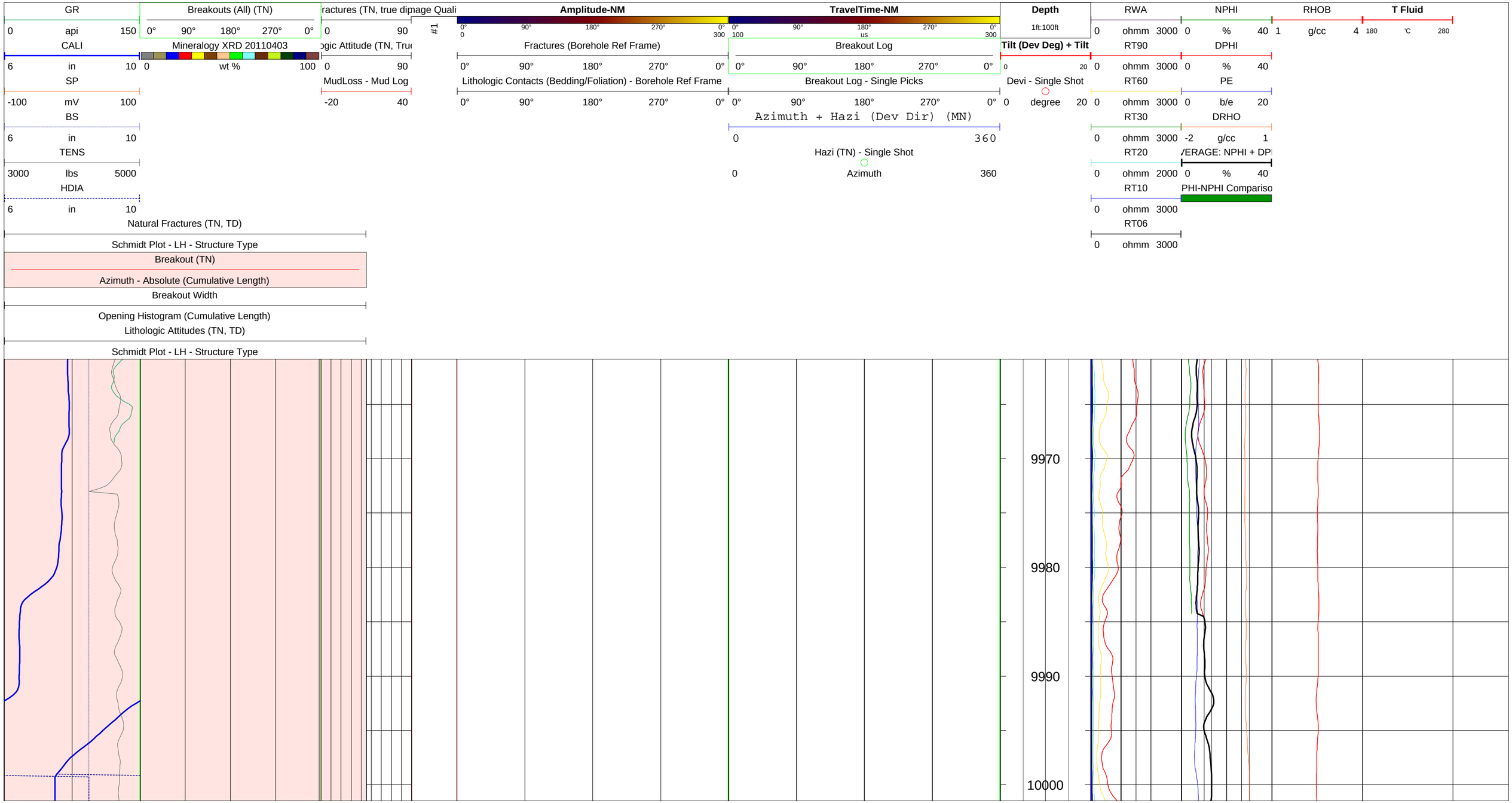

GR
0 api 150
Breakouts (All) (TN)
0° 90° 180° 270° 0°
ractures (TN, true dip
0 90
#1
Amplitude-NM
0° 90° 180° 270° 0°
0 300
TravelTime-NM
0° 90° 180° us 270° 0°
100 300
Depth
1ft:100ft
RWA
0 ohmm 3000
NPHI
0 % 40
RHOB
1 g/cc 4
T Fluid
180 °C 280
CALI
6 in 10
Mineralogy XRD 20110403
0 wt % 100
gic Attitude (TN, Tru
0 90
Fractures (Borehole Ref Frame)
0° 90° 180° 270° 0°
Breakout Log
0° 90° 180° 270° 0°
Tilt (Dev Deg) + Tilt
0 20
RT90
0 ohmm 3000
DPHI
0 % 40
SP
-100 mV 100
MudLoss - Mud Log
-20 40
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
0° 90° 180° 270° 0°
Breakout Log - Single Picks
0° 90° 180° 270° 0°
Devi - Single Shot
0 degree 20
RT60
0 ohmm 3000
PE
0 b/e 20
BS
6 in 10
Azimuth + Hazi (Dev Dir) (MN)
0 360
RT30
0 ohmm 3000
DRHO
-2 g/cc 1
TENS
3000 lbs 5000
Hazi (TN) - Single Shot
0 Azimuth 360
RT20
0 ohmm 2000
VERAGE: NPHI + DP
0 % 40
HDIA
6 in 10
RT10
0 ohmm 3000
PHI-NPHI Compariso
Natural Fractures (TN, TD)
RT06
0 ohmm 3000
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
9760
9770
9780
9790

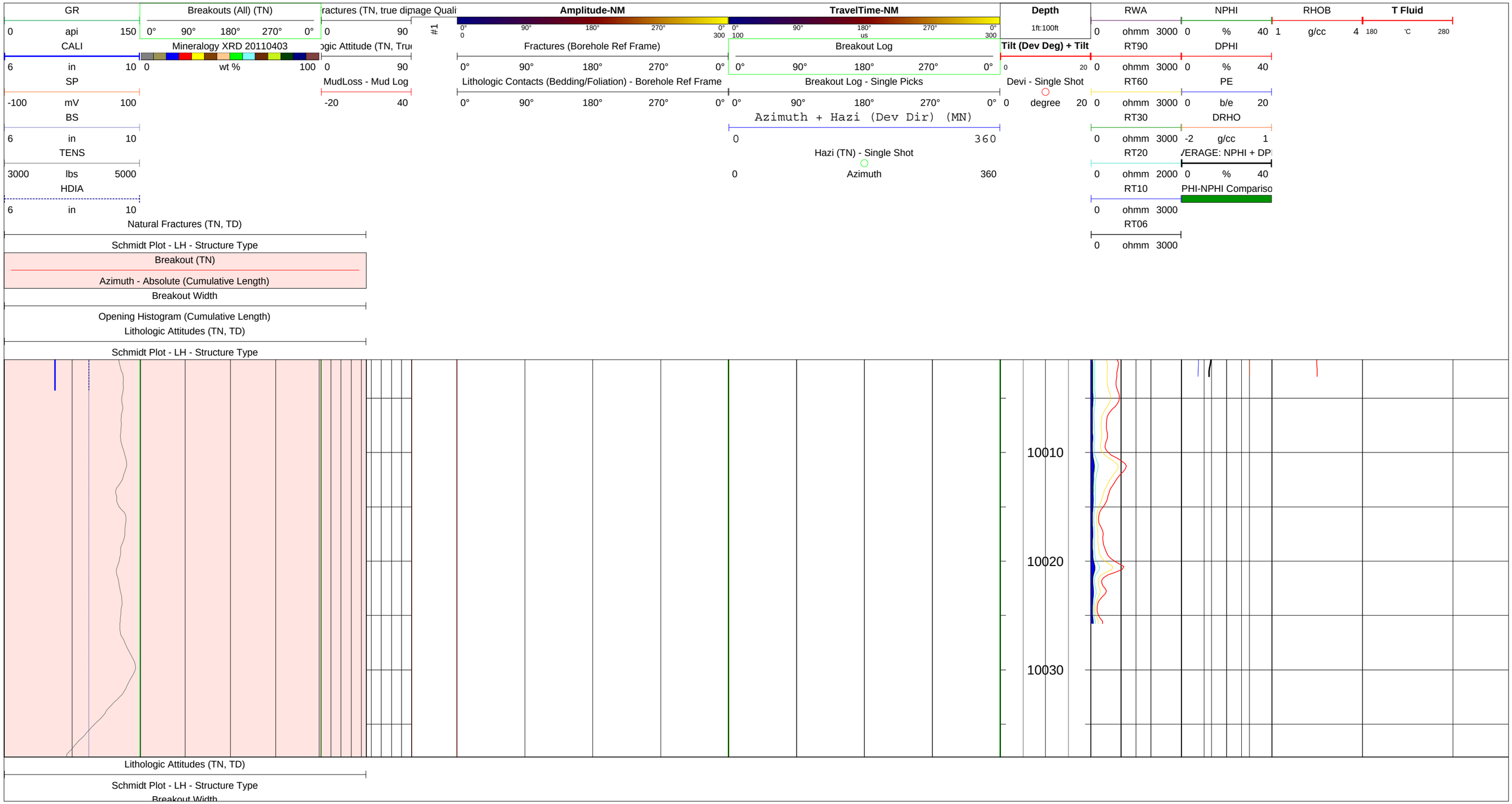

GR
0 api 150
Breakouts (All) (TN)
0° 90° 180° 270° 0°
fractures (TN, true dip
0 90
#1
Amplitude-NM
0° 90° 180° 270° 0°
0 300
TravelTime-NM
0° 90° 180° us 270° 0°
100 300
Depth
1ft:100ft
RWA
0 ohmm 3000
NPHI
0 % 40
RHOB
1 g/cc 4
T Fluid
180 °C 280
CALI
6 in 10
Mineralogy XRD 20110403
0 wt % 100
ogic Attitude (TN, Tru
0 90
Fractures (Borehole Ref Frame)
0° 90° 180° 270° 0°
Breakout Log
0° 90° 180° 270° 0°
Tilt (Dev Deg) + Tilt
0 20
RT90
0 ohmm 3000
DPHI
0 % 40
SP
-100 mV 100
MudLoss - Mud Log
-20 40
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
0° 90° 180° 270° 0°
Breakout Log - Single Picks
0° 90° 180° 270° 0°
Devi - Single Shot
0 degree 20
RT60
0 ohmm 3000
PE
0 b/e 20
BS
6 in 10
Azimuth + Hazi (Dev Dir) (MN)
0 360
RT30
0 ohmm 3000
DRHO
-2 g/cc 1
TENS
3000 lbs 5000
Hazi (TN) - Single Shot
0 Azimuth 360
RT20
0 ohmm 2000
VERAGE: NPHI + DP
0 % 40
HDIA
6 in 10
RT10
0 ohmm 3000
PHI-NPHI Compariso
Natural Fractures (TN, TD)
RT06
0 ohmm 3000
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
9800
9810
9820
9830


GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DP
PHI-NPHI Compariso
RHOB
1 g/cc 4
T Fluid
180 °C 280
9840
9850
9860
9870


GR
0 api 150
Breakouts (All) (TN)
0° 90° 180° 270° 0°
fractures (TN, true dip
0 90
#1
Amplitude-NM
0° 90° 180° 270° 0°
0 300
TravelTime-NM
0° 90° 180° 270° 0°
100 us 300
Depth
1ft:100ft
RWA
0 ohmm 3000
NPHI
0 % 40
RHOB
1 g/cc 4
T Fluid
180 °C 280
CALI
6 in 10
Mineralogy XRD 20110403
0 wt % 100
ogic Attitude (TN, Tru
0 90
Fractures (Borehole Ref Frame)
0° 90° 180° 270° 0°
Breakout Log
0° 90° 180° 270° 0°
Tilt (Dev Deg) + Tilt
0 20
RT90
0 ohmm 3000
DPHI
0 % 40
SP
-100 mV 100
MudLoss - Mud Log
-20 40
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
0° 90° 180° 270° 0°
Breakout Log - Single Picks
0° 90° 180° 270° 0°
Devi - Single Shot
0 degree 20
RT60
0 ohmm 3000
PE
0 b/e 20
BS
6 in 10
Azimuth + Hazi (Dev Dir) (MN)
0 360
RT30
0 ohmm 3000
DRHO
-2 g/cc 1
TENS
3000 lbs 5000
Hazi (TN) - Single Shot
0 Azimuth 360
RT20
0 ohmm 2000
VERAGE: NPHI + DP
0 % 40
HDIA
6 in 10
RT10
0 ohmm 3000
PHI-NPHI Compariso
Natural Fractures (TN, TD)
RT06
0 ohmm 3000
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
9880
9890
9900
9910
9920


GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
Azimuth
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
Devi - Single Shot
degree
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
9930
9940
9950
9960


GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
TravelTime-NM
us
Fractures (Borehole Ref Frame)
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
Breakout Log
Breakout Log - Single Picks
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
Azimuth
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
Devi - Single Shot
degree
RWA
0 ohmm 3000
RT90
RT60
RT30
RT20
RT10
RT06
NPHI
0 % 40
DPHI
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
9970
9980
9990
10000


GR
0 api 150
CALI
6 in 10
SP
-100 mV 100
BS
6 in 10
TENS
3000 lbs 5000
HDIA
6 in 10
Natural Fractures (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout (TN)
Azimuth - Absolute (Cumulative Length)
Breakout Width
Opening Histogram (Cumulative Length)
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakouts (All) (TN)
0° 90° 180° 270° 0°
Mineralogy XRD 20110403
0 wt % 100
Lithologic Attitudes (TN, TD)
Schmidt Plot - LH - Structure Type
Breakout Width
Fractures (TN, true dip
0 90
Attitude (TN, True
0 90
MudLoss - Mud Log
-20 40
#1
Amplitude-NM
0° 90° 180° 270° 0°
0 300
Fractures (Borehole Ref Frame)
0° 90° 180° 270° 0°
Lithologic Contacts (Bedding/Foliation) - Borehole Ref Frame
0° 90° 180° 270° 0°
TravelTime-NM
0° 90° 180° 270° 0°
100 us 300
Breakout Log
0° 90° 180° 270° 0°
Breakout Log - Single Picks
0° 90° 180° 270° 0°
Azimuth + Hazi (Dev Dir) (MN)
0 360
Hazi (TN) - Single Shot
0 Azimuth 360
Depth
1ft:100ft
Tilt (Dev Deg) + Tilt
0 20
Devi - Single Shot
0 degree 20
RWA
0 ohmm 3000
RT90
0 ohmm 3000
RT60
0 ohmm 3000
RT30
0 ohmm 3000
RT20
0 ohmm 2000
RT10
0 ohmm 3000
RT06
0 ohmm 3000
NPHI
0 % 40
DPHI
0 % 40
PE
0 b/e 20
DRHO
-2 g/cc 1
AVERAGE: NPHI + DPHI
0 % 40
PHI-NPHI Comparison
RHOB
1 g/cc 4
T Fluid
180 °C 280
10010
10020
10030