



RESERVOIR GROUP

Scale: 5" / 100'
Measured Depth Log

Well Name 70 Ranch 10-13-2L

Location 104°25'44.904"W , 40°20'05.172"N

State Colorado

Country USA

API Number 05-123-47591

County Weld

Rig Number Ensign 140

AFE # 101033

Geographic Region DJ Basin

Field Wattenburg

Spud Date 5/20/2019

Drilling Completed 6/15/2019

Surface Coordinates 104°25'44.904"W
40°20'05.172"N

Bottom Hole Coordinates 104°25'34.320"W
40°19'58.404"N

Ground Elevation 4,599'

K.B. Elevation 4,619.5'

Logged Interval 6,000' To 16,451'

Total Depth 16,451'

Formation NIO B

Type of Drilling Fluid OIL BASED MUD

Operator

Company CONFLUENCE DJ LLC

Address 621 17th St. STE. 1401
DENVER, CO. 80293



Geologist

Name Robin Swank

Company CONFLUENCE DJ LLC

Address 621 17th St. STE. 1401
DENVER, CO. 80293



Other

Service Type Two-Man Logging + ASW
Logger(s) Robert Kelley / Micah Morgan
Equipment ML-570
Start Date 6/11/2019
Release Date 6/17/2019
Address Reservoir Group
6360 W Sam Houston Pkwy N
Houston, TX 77041
Job Number 2254RK1906

Accesso

- Fossils**

 - F FOSSIL
 - GASTROPOD
 - ALGAE
 - AMPHIPODA
 - BELEMNITE
 - BIOCLASTIC
 - BRACHIOPOD
 - BRYOZOA
 - CEPHALOPOD
 - CORAL
 - CRINOID
 - ECHINOID
 - FISH
 - FORAMINIFERA
- Minerals**

 - ARGILLACEOUS
 - ARGILLITE GRAIN
 - BENTONITE
 - BITUMENOUS SUBSTANCES
 - BRECCIA FRAGMENTS
 - CALCAREOUS
 - CARBONACEOUS FLAKE
 - CHTDK
 - CHLT
 - COAL - THIN BEDS
 - SCAPHOPOD
 - STROMATOPOROID
 - DOLOMITIC
 - FELDSPAR
 - FERRUGINOUS PELLET
 - FERRUGINOUS

Color Coding

- Oil
 - Note
 - Error
- Condensate
 - Core
 - Water
- Gas
 - Pressure
 - Seal

Rock Types

- UNKNOWN
 - ANHYDRITE
 - GYP SUM
 - SALT
 - CHALK
 - LIMESTONE
- DOLomite
 - CHERT
 - COAL
 - MARLSTONE
 - CLAYSTONE
 - SHALE
- SHALE GRAY
 - SHALE COLORED
 - SILTSTONE
 - SANDSTONE
 - CONGLOMERATE
 - BRECCIA
 - TILL
 - BENTONITE
 - TUFF
 - IGNEOUS
 - METAMORPHIC
 - CEMENT

Other Syn


























- Oil Show**

 - ORGANIC
 - PINPOINT
 - DEAD
 - EVEN
 - QUESTIONABLE
 - SPOTTED STAINING
- Engineering**

 - BIT
 - CASING
 - REVERSE FLOW
 - SIDEWALL CORE
 - SIDEWALL CONNECTION
 - CONNECTION GAS
 - SLIDE
 - SURVEY
 - TIP GAS
 - WIREFRAME
 - WIREFRAME TIE
- Porosity**

 - E EARTH
 - F FRACTURE
 - INTERCRYSTALLINE
 - INTEROOLITIC
 - MOLDIC
 - FAULT

ries

	GLAUCONITE		
	GYPSEFEROUS		
	HEAVY MINERAL		ANHYDRITE STRINGER
	KAOLIN		BENTONITE STRINGER
	MARLSTONE		COAL STRINGER
	MINERAL CRYSTALS		DOLOMITE STRINGER
	NODULES		GYPSEUM STRINGER
	PHOSPHATE PELLETS		LIMESTONE STRINGER
	PYRITE		MARLSTONE (CALC) STRG
	SALT CAST		MARLSTONE (DOL) STRG
	SANDY		SANDSTONE STRINGER
	SILICEOUS		SHALE STRINGER
	SILTY		SILTSTONE STRINGER
	TUFFACEOUS		

Stringer

mbols

ATION TOP		L LITHOGRAPHIC
		MX MICROXIN
DEPTH	A ANGULAR	MS MUDSTONE
ULT	R ROUNDED	PS PACKSTONE
	B SUBANG	WS WACKESTONE
ED STRATA	R SUBRND	
ULT		
ORE (LEFT)		M MODERATE
ORE (RIGHT)	B BOUNDSTONE	P POOR
	C CHALKY	W WELL
	CX CRYPTOXIN	
	E EARTHY	
ESTED - LEFT	FX FINELYXIN	
ESTED - RT	GS GRAINSTONE	

Rounding

Sorting

Textures

CONFLUENCE DJ LLC.

70 Ranch West 10-13-2L

Weld Co. CO.

- ROP
- ROP
 - GAMMA
 - WOBX
 - TORQX

All Depths Correspond to Driller's Pipe Tally

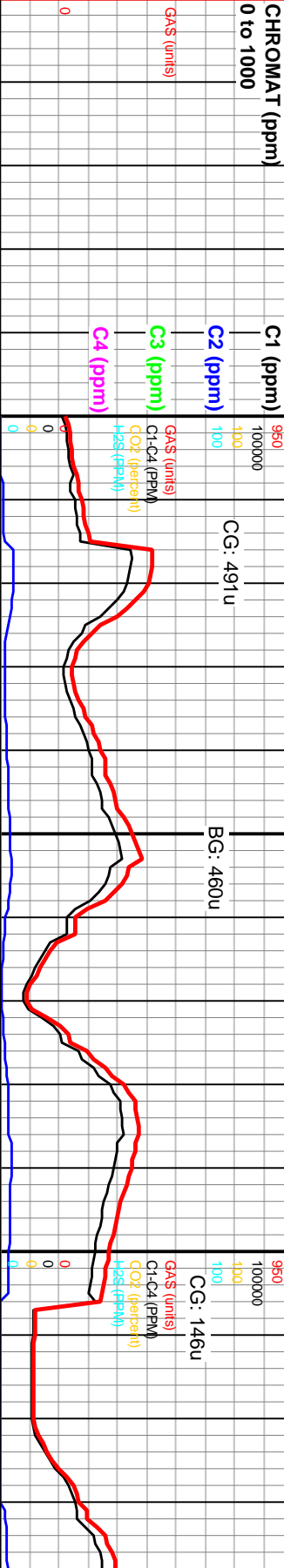
SYSTEM CALIBRATED
1% Methane = 100 units
100% Methane = 10000 units

WT I/O
9.7+/44
9.5-/43

Depth Labels



- Total Gas & Chromatograph
- GAS
 - C1
 - C2
 - C3
 - C4
 - CO2
 - H2S



% Lith



Reservoir Group 6360
W San Houston Pkwy N
Ste. 100 Houston, TX
77040 (713)
466-7400Ofc. (713)
466-7595 Fax
www.reservoirgroup.com

MD: 5,995'
Inclination: 11.95°
Azimuth: 106.56°
TVD: 5,917.43'
VS: 234.81'

MD: 6,084'
Inclination: 16.59°
Azimuth: 143.96°
TVD: 6,003.84'
VS: 249.1'

Well Bore

Bit #: 2
Type: HCC
Size: 8 1/2
Depth In: 1,545'
Jets: 5 X 15's
S/N: 5292878

TPSSH: GY TO DK GY, SM TO SL GRITTY
TEX, DL TO RTHY LSTR, FRM, SB
BLKY TO BLKY, AMOR, SB FISS TO
FISS, SLTY IP, SL CALC, SL H2O SENS
IP

SH: GY TO DK GY, SM TO SL GRITTY TEX,
DL TO RTHY LSTR, FRM, SB BLKY TO
BLKY, AMOR, SB FISS TO FISS, SLTY IP,
SL CALC, SL H2O SENS IP

SH: GY TO DK GY, SM TO SL G
TEX, DL TO RTHY LSTR, FRM, ;
TO BLKY, AMOR, SB FISS TO F
IP, SL CALC IP

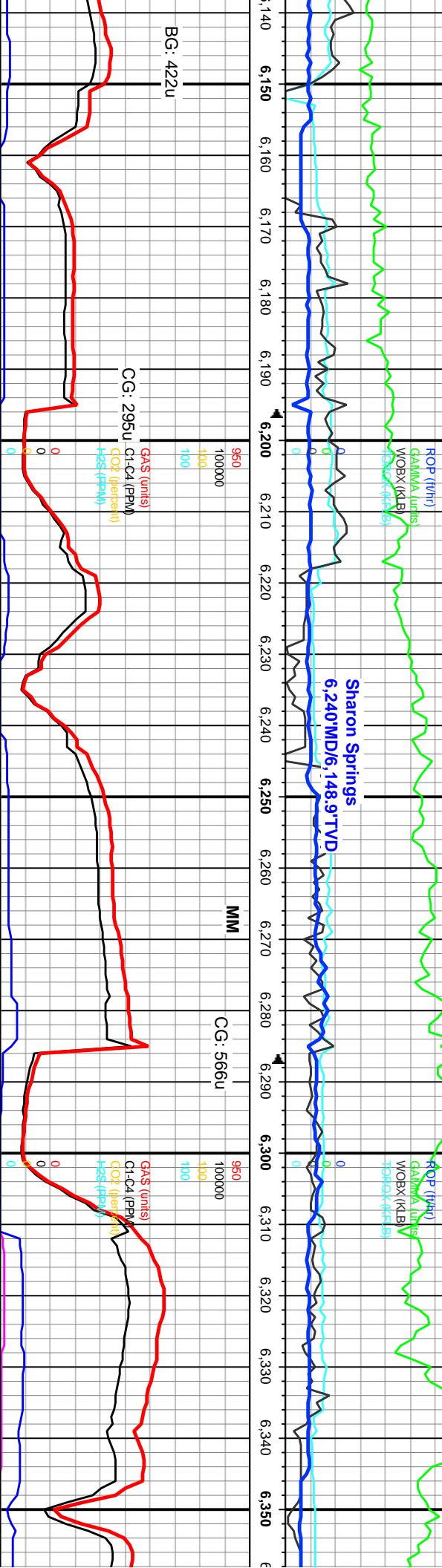
Spud date: 05/20/2019. Two man service
@6,000' MD on 6/12/2019.
9 5/8" casing set at 1,536' MD



WOB: 14
RPM: 100
SPM: 202
PP: 2.486

WT I/O
9.7/43
9.6-/41

WOB: 14
RPM: 100
SPM: 202
PP: 2.486



MD: 6,174'
Inclination: 22.22°
Azimuth: 171.83°
TVD: 6,088.87'
VS: 277.17'

MD: 6,264'
Inclination: 32.11°
Azimuth: 181.25°
TVD: 6,168.88'
VS: 318.06'

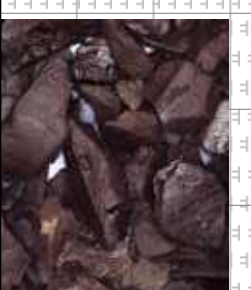
MD: 6,352'
Inclination: 42.0°
Azimuth: 186.1°
TVD: 6,239.02'
VS: 370.36'

SH: GY TO DK GY, SM TO SL GRITTY TEX.
DL TO RTHY LSTR, FRM, SB BLKY TO
BLKY, AMOR, SB FISS TO FISS, SLTY IP,
SL CALC IP, SL H2O SENS IP

SH: DK GY, SM TO SL GRITTY TEX, DL
TO RTHY LSTR, SB WXY IP, FRM, HD
IP, SB BLKY TO BLKY, AMOR, SB FISS
TO FISS, SLTY IP, SL CALC IP, SL H2O
SENS IP

SH: DK GY, BLK IP, SL SM TEX, SB
WXY TO RTHY LSTR, FRM TO SL
HRD, SB BLKY TO BLKY, AMOR, SB
FIS TO FIS, SL SLTY IP, SL CALC IP,
SL H2O SENS IP

SH: DK GY TOBLK, SL SM TEX, SL
GRITTY IP, SB WXY TO RTHY LSTR,
FRM TO SL HRD, SB BLKY TO BLKY,
AMOR, SB FIS, SL SLTY IP, SL CALC
IP, SL H2O SENS



MRL
TEX,
FRM
ARG

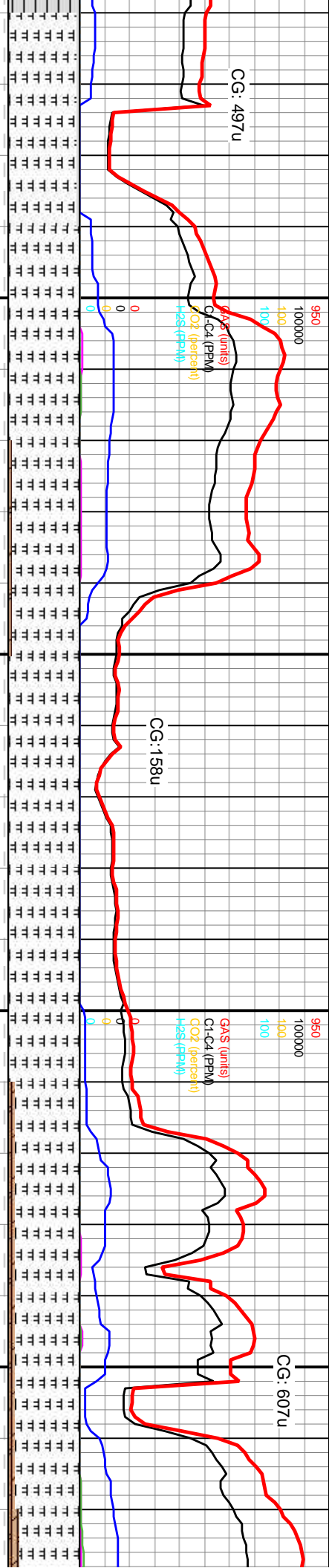
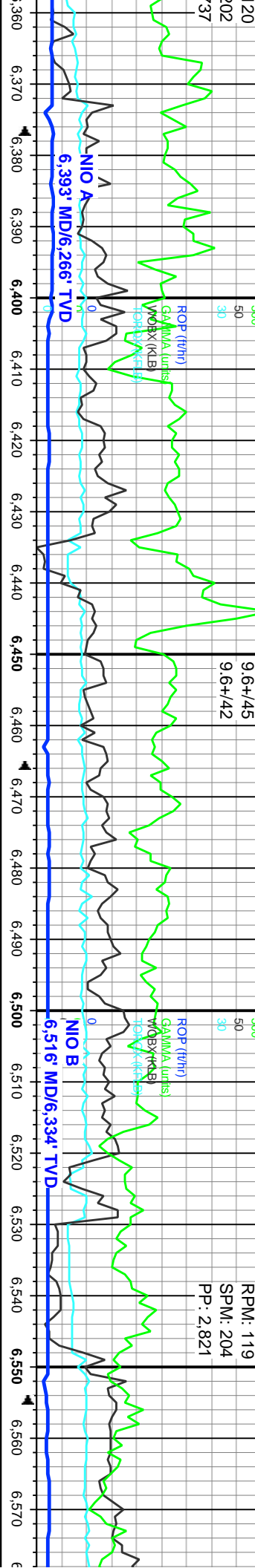
5
20
102
37

1600
300
50
30

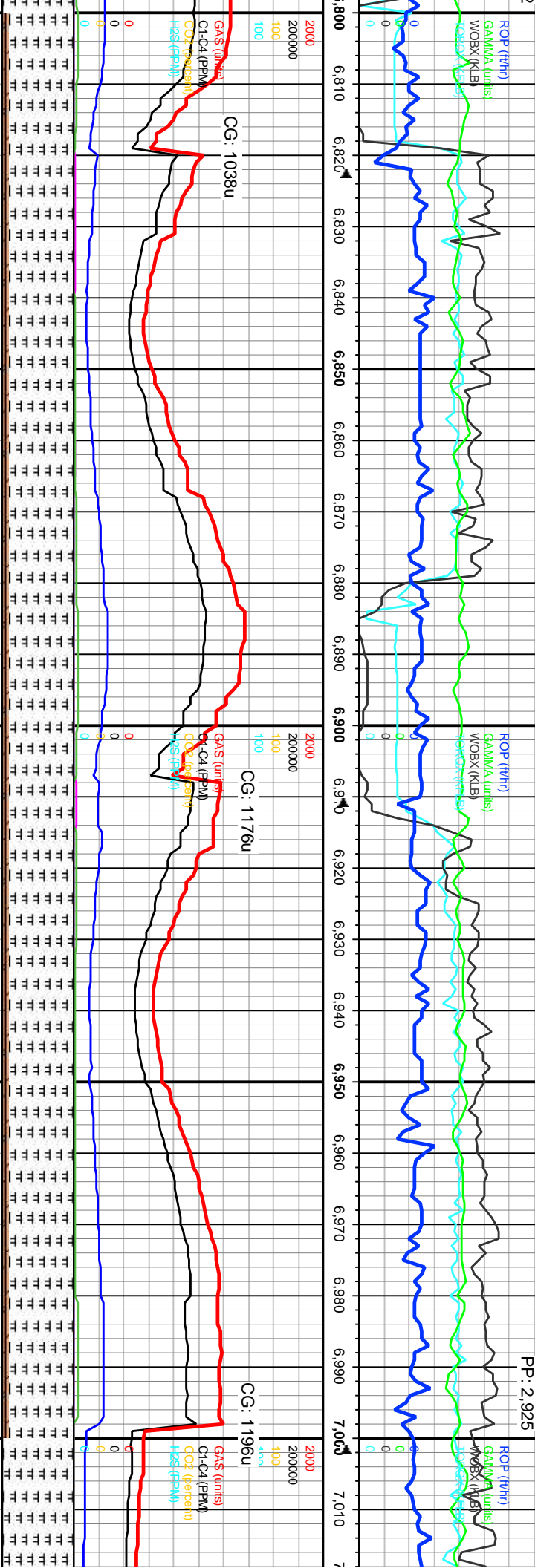
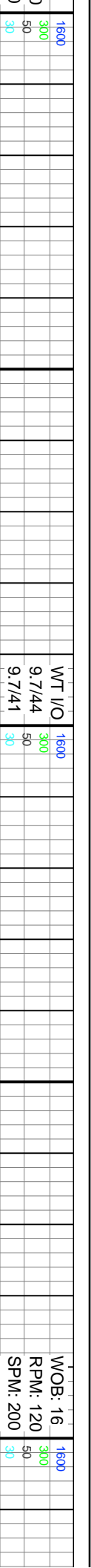
ROP (ft/h)
GAMMA (units)
MOBX (KLB)
TOX (KLB)

WT I/O
9.6+/45
9.6+/42

WOB: 13
RPM: 119
SPM: 204
PP: 2.821



MRLST: MDSTN, DK GY TO BLK, SL GRITTY TO GRITTY TEX, RTHY LSTR, SFT TO FRM, SB BLKY TO BLKY, AMOR, FIS, ARG, V CALC; TR CHK		90% MRLST: MDSTN, DK GY TO BLK, SL GRITTY TO GRITTY TEX, RTHY LSTR, SFT TO FRM, SB BLKY TO BLKY, AMOR, SB FIS ARG, V CALC 10% CHK, MED GY, SB BLKY-BLKY, TR INTBDD MRLST, V CALC;	
MRLST: MDSTN, DK GY TO BLK, GRITTY SL SM IP, RTHY LSTR, SFT TO SB BLKY TO BLKY, AMOR, FIS, TR SH		85% MRLST: MDSTN, DK IP, GRITTY TEX, RTHY L TO BLKY, AMOR, SB FIS 15% CHK, MED GY, FRM TR INTBDD MRLST, V C.	



90% MRLST: MDSTN, DK GY TO BLK, GRITTY TEX, RTHY LSTR, FRM TO SL HRD SB BLKY TO BLKY, AMOR, SB FIS, ARG, V CALC, SL SLTY IP 10% CHK, LT TO MED GY, SFT TO FRM, SB BLKY-BLKY, V CALC;

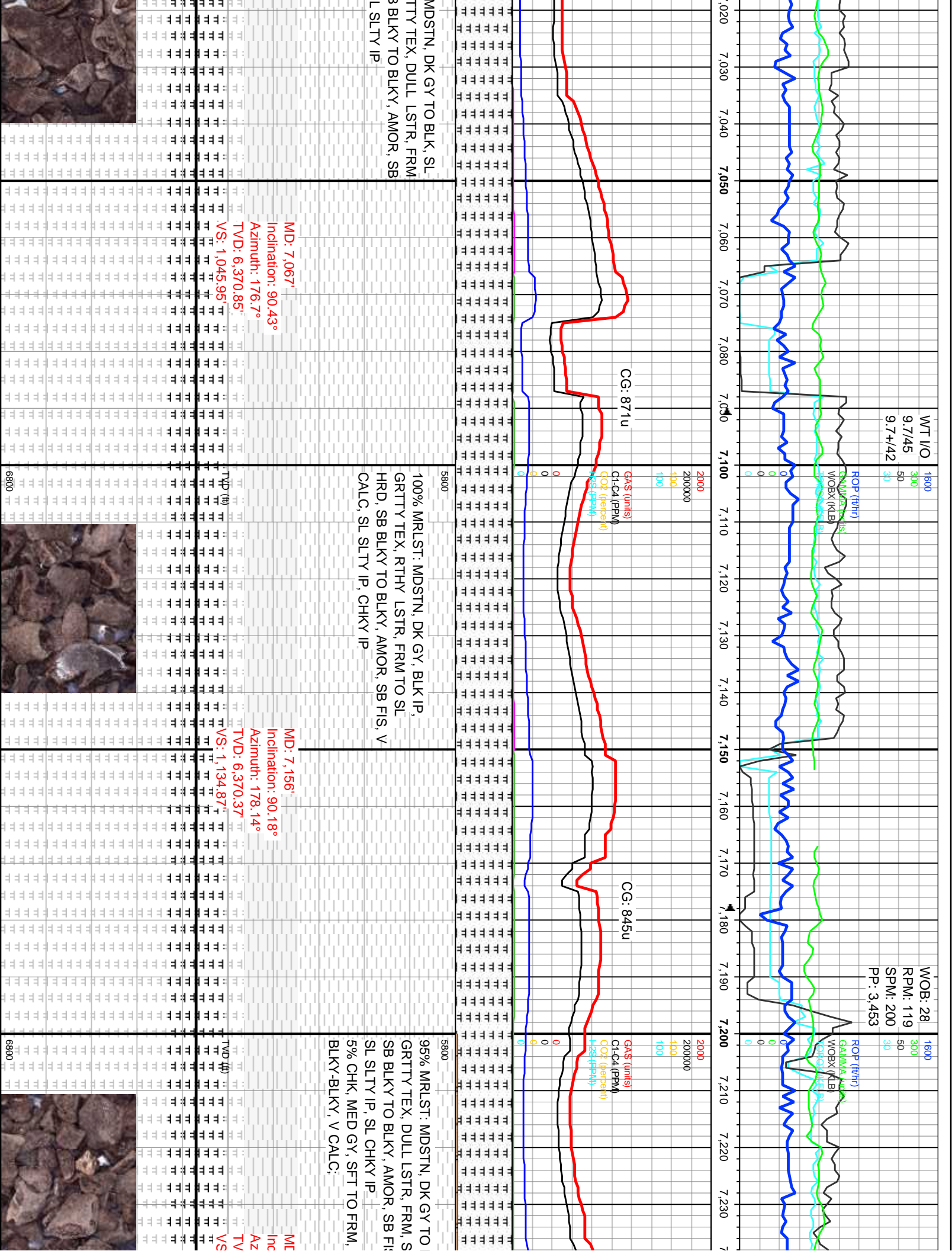
90% MRLST: MDSTN, DK GY TO BLK, SL GRITTY TO GRITTY TEX, DULL TO RTHY LSTR, FRM, SL HRD IP, SB BLKY TO BLKY, AMOR, SB FIS, V CALC, SL SLTY IP 10% CHK, MED GY, SFT TO FRM, SB BLKY-BLKY, V CALC;

100% MRLST: GRITTY TO GR TO SL HRD, SB FIS, V CALC, S

MD: 6.888' Inclination: 90.28° Azimuth: 176.31° TVD: 6.371,64'

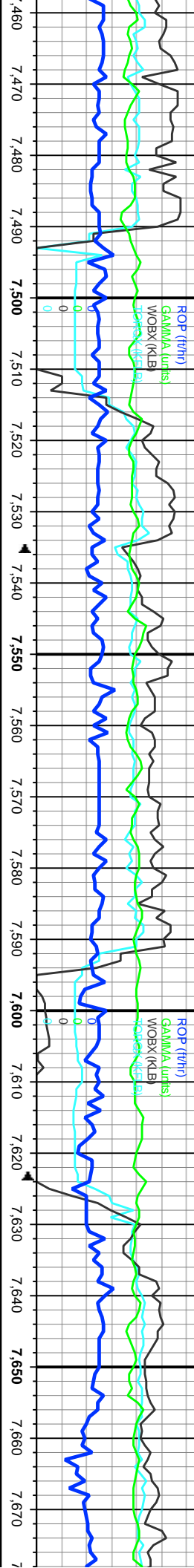
MD: 6.977' Inclination: 90.15° Azimuth: 175.43° TVD: 6.371,3'





WT I/O
9.7/45
9.7 +/-43

WOB: 14
RPM: 100
SPM: 202
PP: 3.225



RK

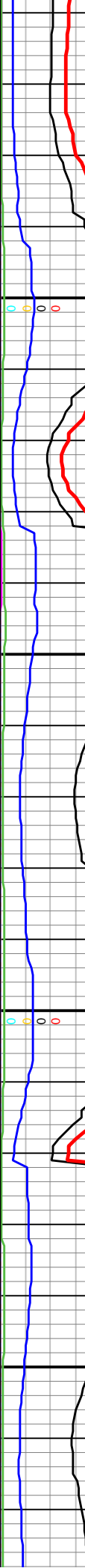
2000
200000

CG: 1412u

2000
200000

CG: 1,161u

GAS (unit)
G1 C4 (ppm)
G2 C2 (ppm)
H2S (ppm)



5800
95% MRLST: MDSTN, DK GY, TN TO LT
BRN IP, GRITTY TEX, DL TO RTHY LSTR,
FRM, SB BLKY TO BLKY, AMOR, SB FISS, V
CALC, SL SLTY IP, SL CHKY IP
5% CHK, GY, MOT IP, SFT TO FRM, SB
BLKY-BLKY, V CALC

5800
95% MRLST: MDSTN, DK GY, TN TO LT
BRN IP, GRITTY TEX, DL TO RTHY LSTR,
FRM, SB BLKY TO BLKY, AMOR, SB FISS,
V CALC, SL SLTY IP, SL CHKY IP
5% CHK, GY, MOT IP, SFT TO FRM, SB
BLKY-BLKY, V CALC

MD: 7.513
Inclination: 90.31°
Azimuth: 181.36°
TVD: 6,368.79'

MD: 7.603
Inclination: 90.37°
Azimuth: 180.35°
TVD: 6,368.26'

VS: 1,490.01'

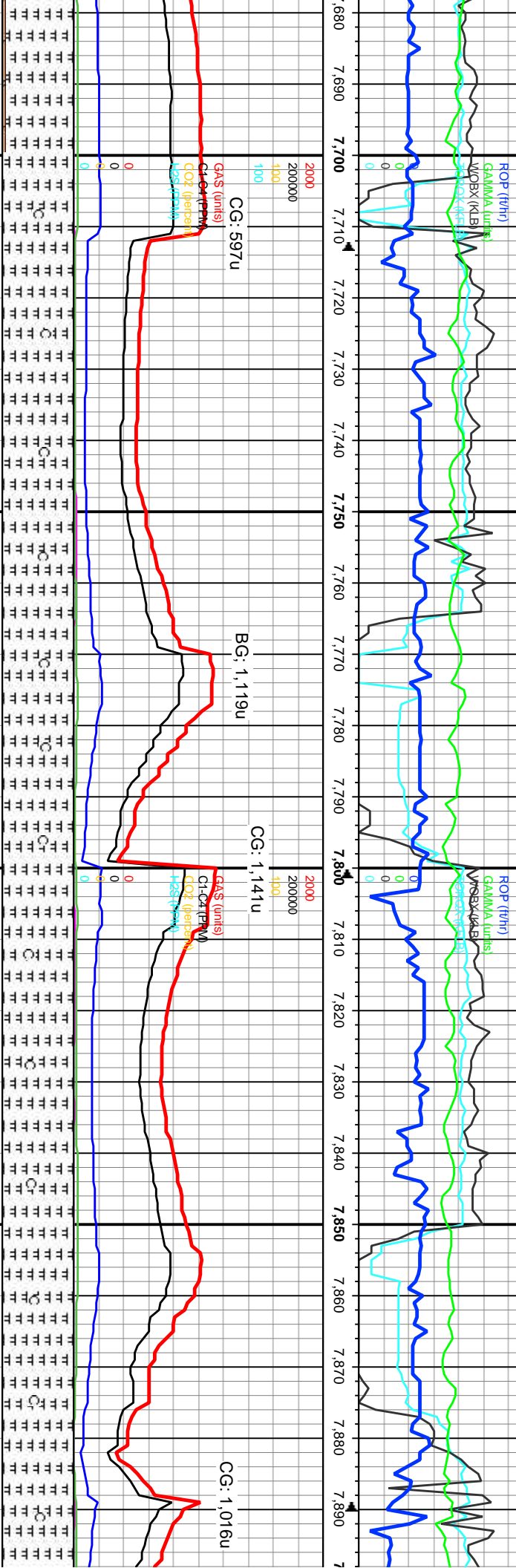
VS: 1,579.55'



WT I/O
9.7+/45
9.8/44

WOB: 18
RPM: 99
SPM: 204
PP: 3.294

WT I/C
9.7/44
9.7+/4:



95% MRLST: MDSTN, DK GY, TN TO LT
BRN IP, GRITTY TEX, DL TO RTHY LSTR,
FRM, SB BLKY TO BLKY, AMOR, SB FISS,
V CALC, SL SLTY IP, SL CHKY IP
5% CHK, GY, MOT IP, SFT TO FRM, SB
BLKY-BLKY, V CALC

100% MRLST: MDSTN, DK GY, TN TO LT
BRN IP, GRITTY TEX, DL TO RTHY LSTR,
FRM, SB BLKY TO BLKY, AMOR, SB FISS
TO FISS, SLTY IP, CALC, SL CHKY IP

MD: 7.692'
Inclination: 90.18°
Azimuth: 179.74°
TVD: 6.367.83'
VS: 1.668.21'

MD: 7.781'
Inclination: 90.25°
Azimuth: 179.43°
TVD: 6.367.5'

MD: 7.870'
Inclination: 90.28°
Azimuth: 178.86°
TVD: 6.367.09'
VS: 1.845.71'



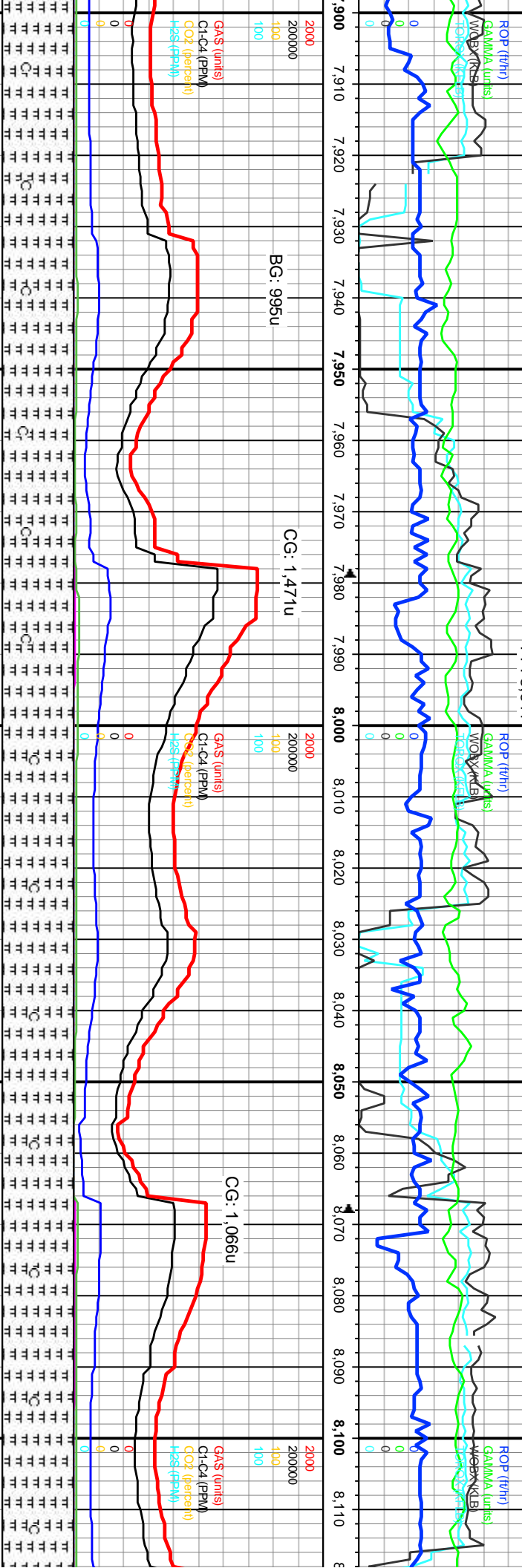
1600
300
50
30

WOB: 22
RPM: 100
SPM: 202
PP: 3.641

1600
300
50
30

WT I/O
9.6+/45
9.7/42

1600
300
50
30



100% MRLST: MDSTN, DK GY, TN TO LT
BRN IP, GRITTY TEX, DL TO RTHY LSTR,
FRM, SB BLKY TO BLKY, AMOR, SB FISS
TO FISS, SLTY IP, CALC, SL CHKY IP

MD: 7,960'
Inclination: 90.09°
Azimuth: 178.41°

TVD: 6,366.8
VS: 1,935.54'



100% MRLST: MDSTN, DK GY, TN TO LT
BRN IP, GRITTY TEX, DL TO RTHY LSTR,
FRM, SB BLKY TO BLKY, AMOR, SB FISS
TO FISS, SLTY IP, CALC, TR CHLK

MD: 8,049'
Inclination: 90.09°
Azimuth: 177.88°

TVD: 6,366.66
VS: 2,024.41'

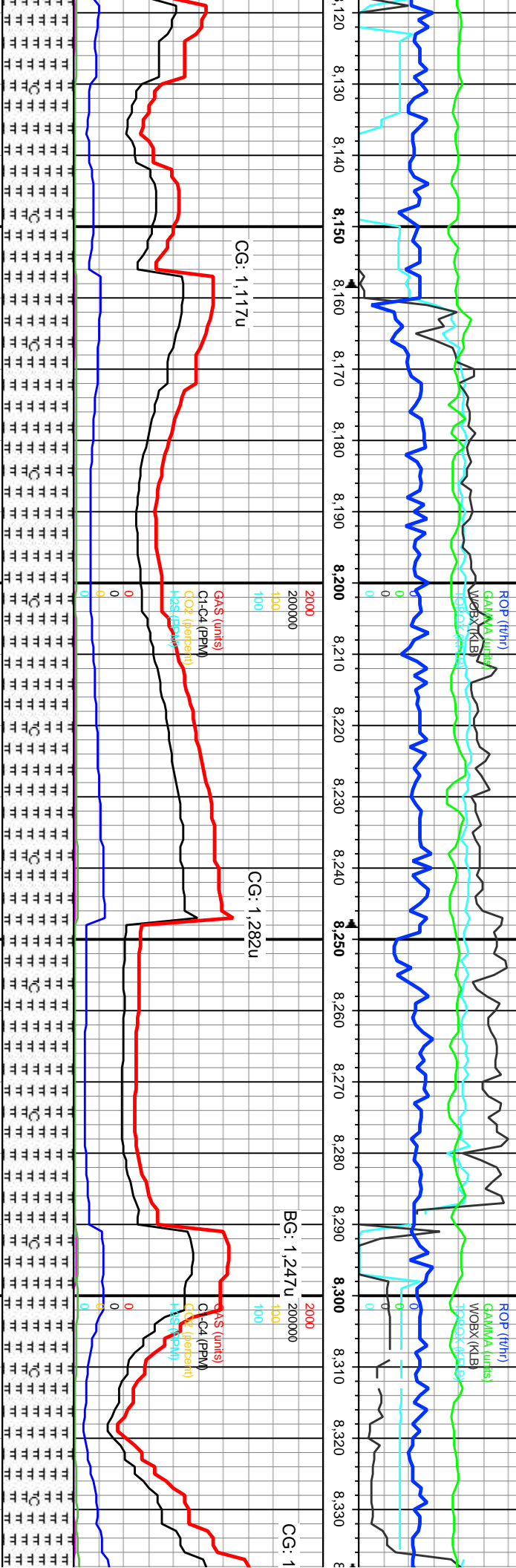


100% MRLST:
TN TO LT BRN
RTHY LSTR, F
AMOR, SB FIS
TR CHLK



WOB: 26
RPM: 99
SPM: 202
PP: 3.608

WT I/O
9.6+/45
9.7/42



MDSTN, DK GY TO BLK IP,
IP, GRITTY TEX, DL TO
RM, SB BLKY TO BLKY,
S TO FISS, SLTY IP, CALC,

100% MRLST: MDSTN, DK GY TO BLK IP,
TN TO LT BRN IP, GRITTY TEX, DL TO RTHY
LSTR, FRM, SB BLKY TO BLKY, AMOR, SB
FISS TO FISS, SLTY IP, CALC, TR CHLK

100% MRLST: MDSTN, DK GY T
IP, TN TO LT BRN IP, GRITTY TE
RTHY LSTR, FRM, SB BLKY TO
AMOR, SB FISS TO FISS, SLTY
TR CHLK

MD: 8,138'
Inclination: 90.15°
Azimuth: 177.91°

MD: 8,228'
Inclination: 90.22°
Azimuth: 175.53°

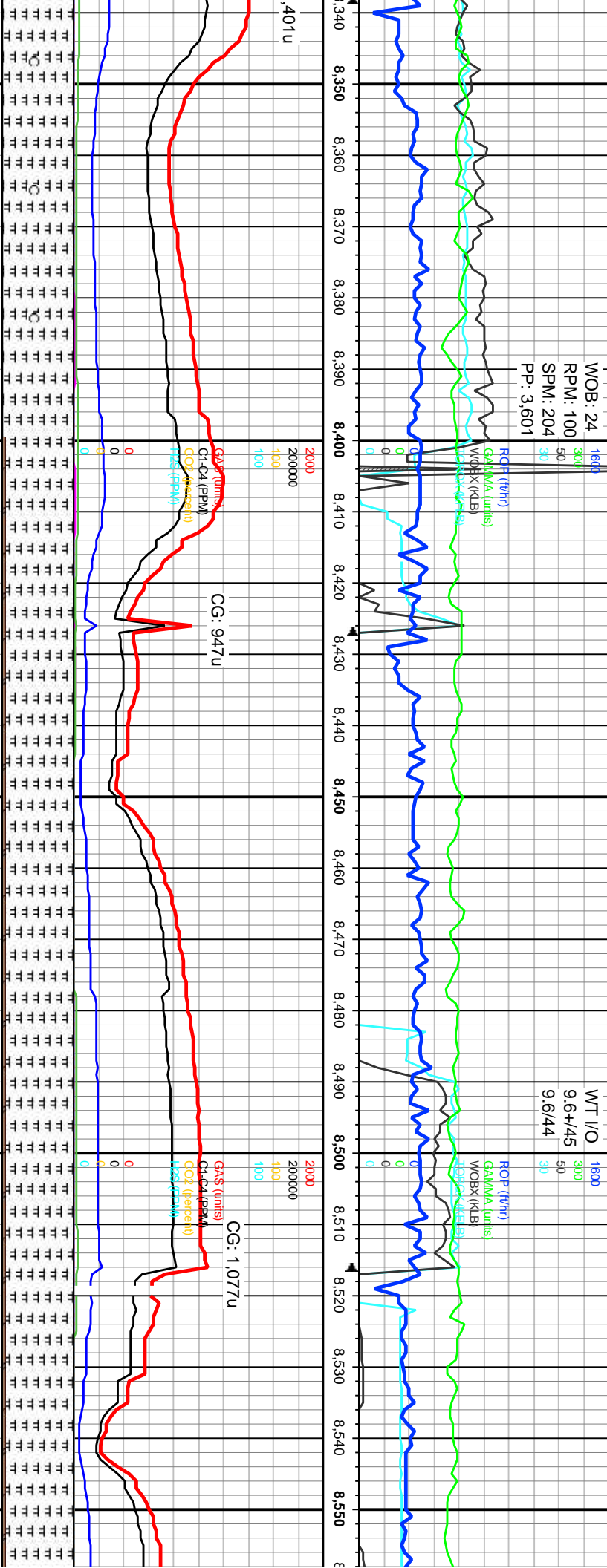
MD: 8,317'
Inclination: 90.18°
Azimuth: 176.13°

TVD: 6,366.47'	VS: 2,113.31'	TVD: 6,366.18'	VS: 2,203.26'	TVD: 6,365.87'	VS: 2,292.26'
8,120	8,130	8,140	8,150	8,160	8,170
8,180	8,190	8,200	8,210	8,220	8,230
8,240	8,250	8,260	8,270	8,280	8,290
8,300	8,310	8,320	8,330	8,340	8,350
8,360	8,370	8,380	8,390	8,400	8,410
8,420	8,430	8,440	8,450	8,460	8,470
8,480	8,490	8,500	8,510	8,520	8,530
8,540	8,550	8,560	8,570	8,580	8,590
8,600	8,610	8,620	8,630	8,640	8,650
8,660	8,670	8,680	8,690	8,700	8,710
8,720	8,730	8,740	8,750	8,760	8,770
8,780	8,790	8,800	8,810	8,820	8,830
8,840	8,850	8,860	8,870	8,880	8,890
8,900	8,910	8,920	8,930	8,940	8,950
8,960	8,970	8,980	8,990	9,000	9,010
9,020	9,030	9,040	9,050	9,060	9,070
9,080	9,090	9,100	9,110	9,120	9,130
9,140	9,150	9,160	9,170	9,180	9,190
9,200	9,210	9,220	9,230	9,240	9,250
9,260	9,270	9,280	9,290	9,300	9,310
9,320	9,330	9,340	9,350	9,360	9,370
9,380	9,390	9,400	9,410	9,420	9,430
9,440	9,450	9,460	9,470	9,480	9,490
9,500	9,510	9,520	9,530	9,540	9,550
9,560	9,570	9,580	9,590	9,600	9,610
9,620	9,630	9,640	9,650	9,660	9,670
9,680	9,690	9,700	9,710	9,720	9,730
9,740	9,750	9,760	9,770	9,780	9,790
9,800	9,810	9,820	9,830	9,840	9,850
9,860	9,870	9,880	9,890	9,900	9,910
9,920	9,930	9,940	9,950	9,960	9,970
9,980	9,990	10,000	10,010	10,020	10,030



WOB: 24
RPM: 100
SPM: 204
PP: 3.601

WT I/O
9.6+/45
9.6/44



O BLK
X, DL TO
BLKY,
IP, CALC,

100% MRLST: MDSTN, DK GY TO BLK IP,
TN TO LT BRN IP, SM TO SL GRITTY TEX,
DL TO RTHY LSTR, FRM, SB BLKY TO
BLKY, AMOR, SB FISS TO FISS, SLTY IP,
CALC, TR CHLK

95% MRLST: MDSTN, DK GY TO BLK, TN
TO LT BRN IP, SM TO SL GRITTY TEX, DL
TO RTHY LSTR, FRM, SB BLKY TO BLKY,
AMOR, SB FISS TO FISS IP, CALC, SL
SLTY IP, SL CHKY IP
5% CHK, GY TO DK GY, MOT IP, SFT TO
FRM, SB BLKY-BLKY, CALC

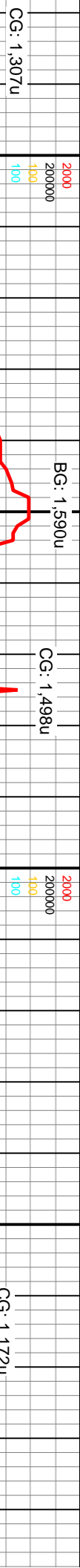
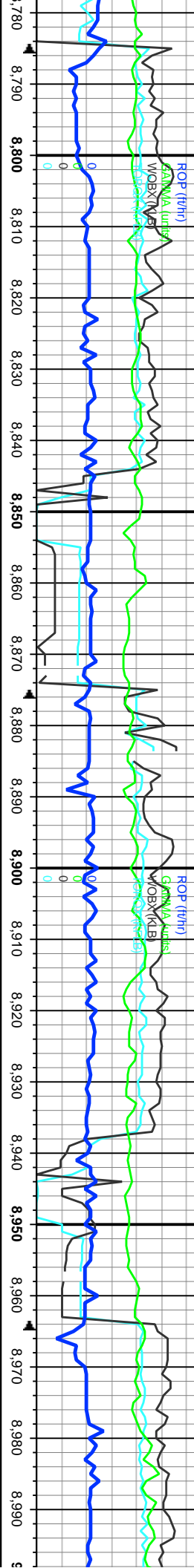
MD: 8,407'
Inclination: 90.12°
Azimuth: 176.25°
TVD: 6,365.63'
VS: 2,382.24'

MD: 8,496'
Inclination: 90.12°
Azimuth: 176.82°
TVD: 6,365.45'
VS: 2,471.21'



WOB: 22
RPM: 100
SPM: 202
PP: 3.634

WOB: 24
RPM: 10
SPM: 20
PP: 3.60



CG: 1,307u

BG: 1,590u

CG: 1,498u

CG: 1,172u

95% MRLST: MDSTN, DK GY TO BLK, TN TO LT BRN IP, SM TO SL GRITTY TEX, DL TO RTHY LSTR, FRM, SB BLKY TO BLKY, AMOR, SB FISS TO FISS IP, CALC, SL SLTY IP, SL CHKY IP
5% CHK, GY TO DK GY, MOT IP, SFT TO FRM, SB BLKY-BLKY, CALC

95% MRLST: MDSTN, DK GY TO BLK, TN TO LT BRN IP, SM TO SL GRITTY TEX, DL TO RTHY LSTR, FRM, SB BLKY TO BLKY, AMOR, SB FISS TO FISS IP, CALC, SL SLTY IP, SL CHKY IP
5% CHK, GY TO DK GY, MOT IP, SFT TO FRM, SB BLKY-BLKY, CALC

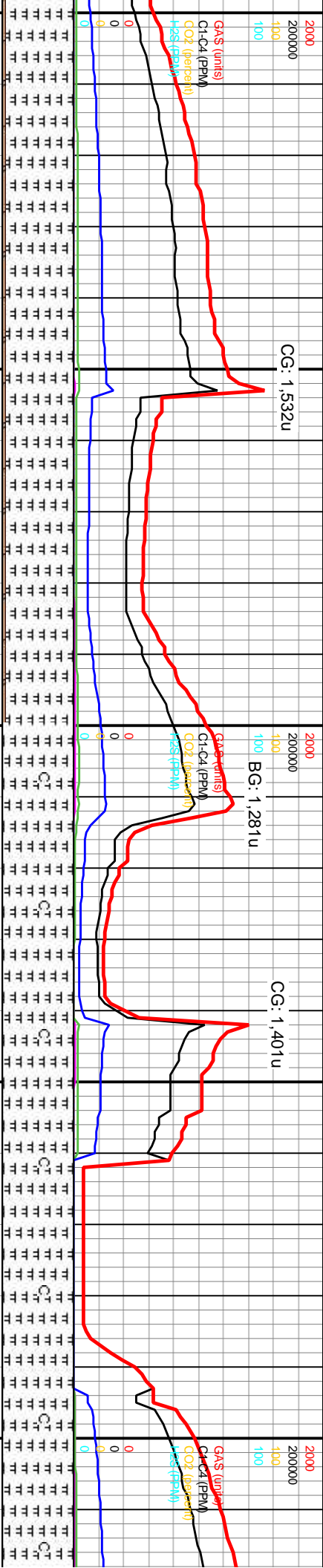
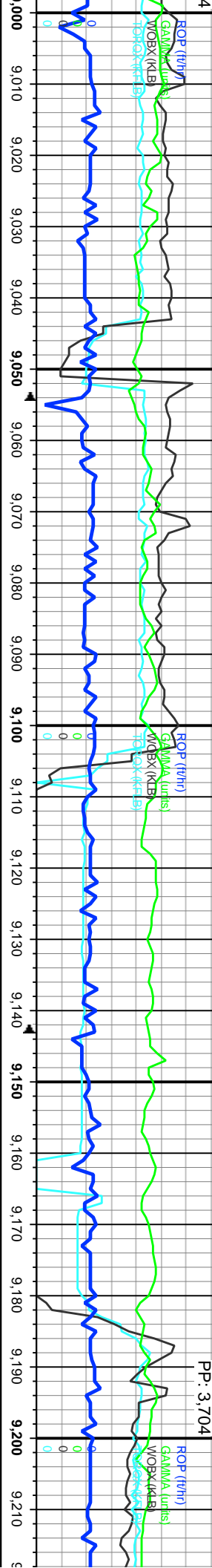
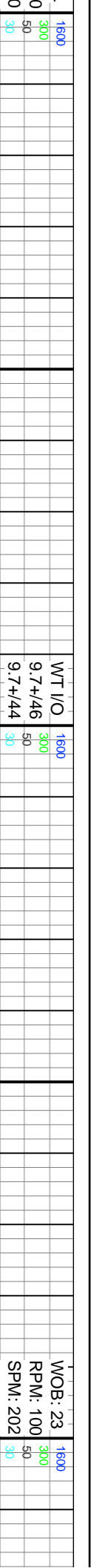
MD: 8,854'
Inclination: 90.18°
Azimuth: 179.23°

MD: 8,943'
Inclination: 90.03°
Azimuth: 181.94°

TVD: 6,364.79
VS: 2,828.37'

TVD: 6,364.63'
VS: 2,916.95'





95% MRLST: MDSTN, DK GY TO BLK, TN
TO LT BRN IP, SM TO SL GRITTY TEX, DL
TO RTHY LSTR, FRM, SB BLKY TO BLKY,
AMOR, SB FISS TO FISS IP, CALC, SL
SLTY IP, SL CHKY IP
5% CHK, GY TO DK GY, MOT IP, SFT TO
FRM, SB BLKY-BLKY, AMOR, CALC

MD: 9.033'
Inclination: 90.06°
Azimuth: 183.5°

TVD: 6,364.56'

VS: 3,006.15'



95% MRLST: MDSTN, DK GY TO BLK, LT
TN TO LT BRN IP, SM TO SL GRITTY TEX,
DL TO RTHY LSTR, FRM, SB BLKY TO
BLKY, AMOR, SB FISS TO FISS IP, CALC,
SL SLTY IP, SL CHKY IP
5% CHK, GY TO DK GY, LT GY IP, MOT IP,
FRM, SB BLKY-BLKY, AMOR, CALC

MD: 9.122'
Inclination: 90.37°
Azimuth: 181.73°

TVD: 6,364.22'

VS: 3,094.38'



100% MRLST: 1
TN TO LT BRN
DL TO RTHY L
BLKY, AMOR, S
SL SLTY IP, TR

MD: 9.212'
Inclination: 90.
Azimuth: 180.7

TVD: 6,363.79'

VS: 3,183.86'

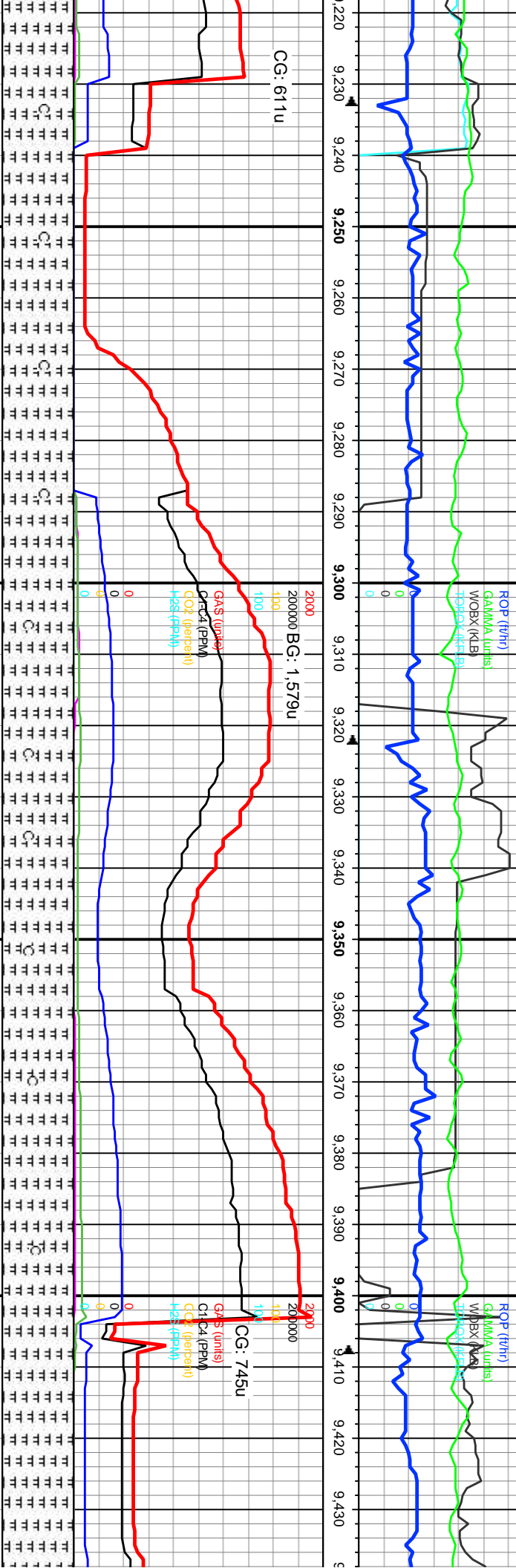


TORQUE TRACK OFFLINE

WT I/O
9.7/46
9.7+/45

WOB: 25
RPM: 100
SPM: 202
PP: 3.654

TORQUE TRACK OFFLINE



MDSTN, DK GY TO BLK, LT
IP, SM TO SL GRITTY TEX,
STR, FRM, SB BLKY TO
SB FISS TO FISS IP, CALC,
CHLK IP

100% MRLST: MDSTN, DK GY TO BLK, LT
TN TO LT BRN IP, SM TO SL GRITTY TEX,
DL TO RTHY LSTR, SB WXY IP, FRM, SB
BLKY TO BLKY, AMOR, SB FISS TO FISS IP,
CALC, SL SLTY IP, TR CHLK IP

100% MRLST: MDSTN, DK GY TO
TN TO LT BRN IP, SM TO SL GRIT
DL TO RTHY LSTR, SB WXY IP, F
BLKY TO BLKY, AMOR, SB FISS
CALC, SL SLTY IP, TR CHLK IP

18°

MD: 9,301'
Inclination: 90.34°
Azimuth: 180.4°

MD: 9,390'
Inclination: 90.15°
Azimuth: 178.02°

TVD: 6,363.39'
VS: 3,272.45'

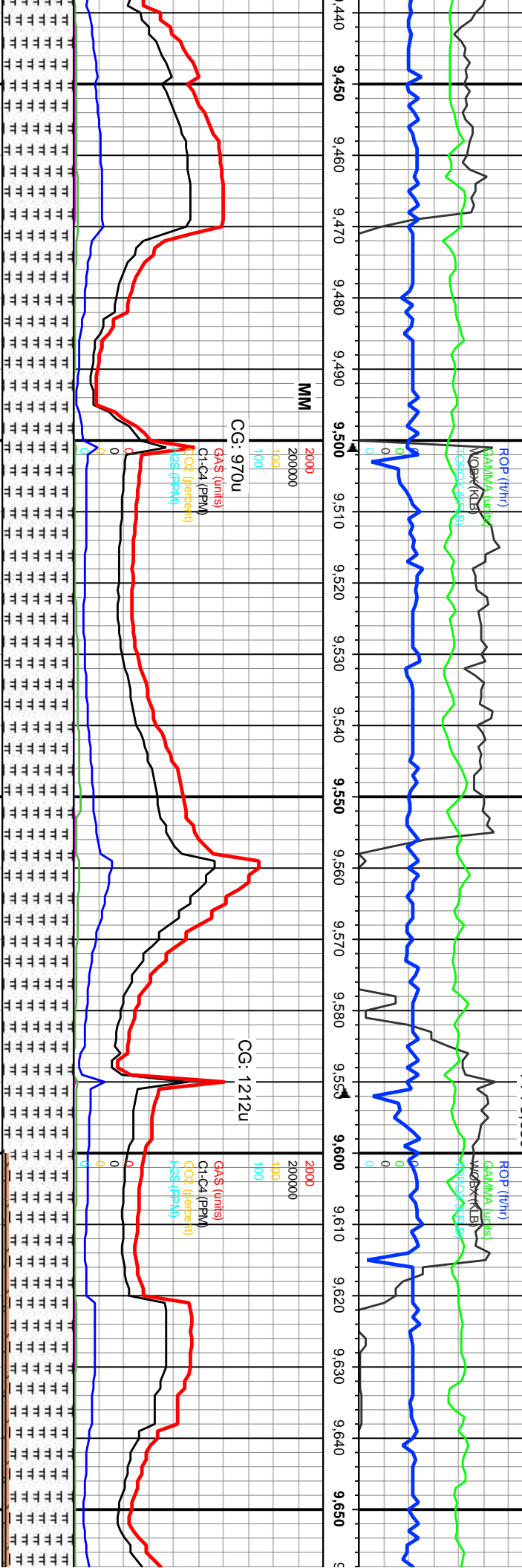
TVD: 6,363.01'
VS: 3,361.22'



WT I/O
9.7/45
9.6+/43

WOB: 24
RPM: 100
SPM: 202
PP: 3.680

TORQUE TRACK OFFLINE



BLK, LT
TY TEX,
RM, SB
O FISS IP

100% MRLST: MDSTN, DK GY TO BLK, SL
SM TO SL GRITTY TEX, RTHY LSTR, FRM,
SB BLKY TO BLKY, AMOR, SB FISS, CALC,
SL SLTY IP, TR CHLK IP, TR F PYR NOD IP

90% MRLST: MDSTN, MED TO DK GY, SL
GRITTY TEX, DL TO RTHY LSTR, FRM, SB
BLKY TO BLKY, AMOR, SB FISS TO FISS
IP, CALC, SL SLTY IP, SL CHKY IP
10% CHK, GY TO DK GY, MOT IP, SFT TO
FRM, SB BLKY, CALC

MD: 9,479'
Inclination: 90.09°
Azimuth: 176.98°
TVD: 6,362.82'
VS: 3,450.14'

MD: 9,569'
Inclination: 90.06°
Azimuth: 179.3°
TVD: 6,362.7'
VS: 3,540'

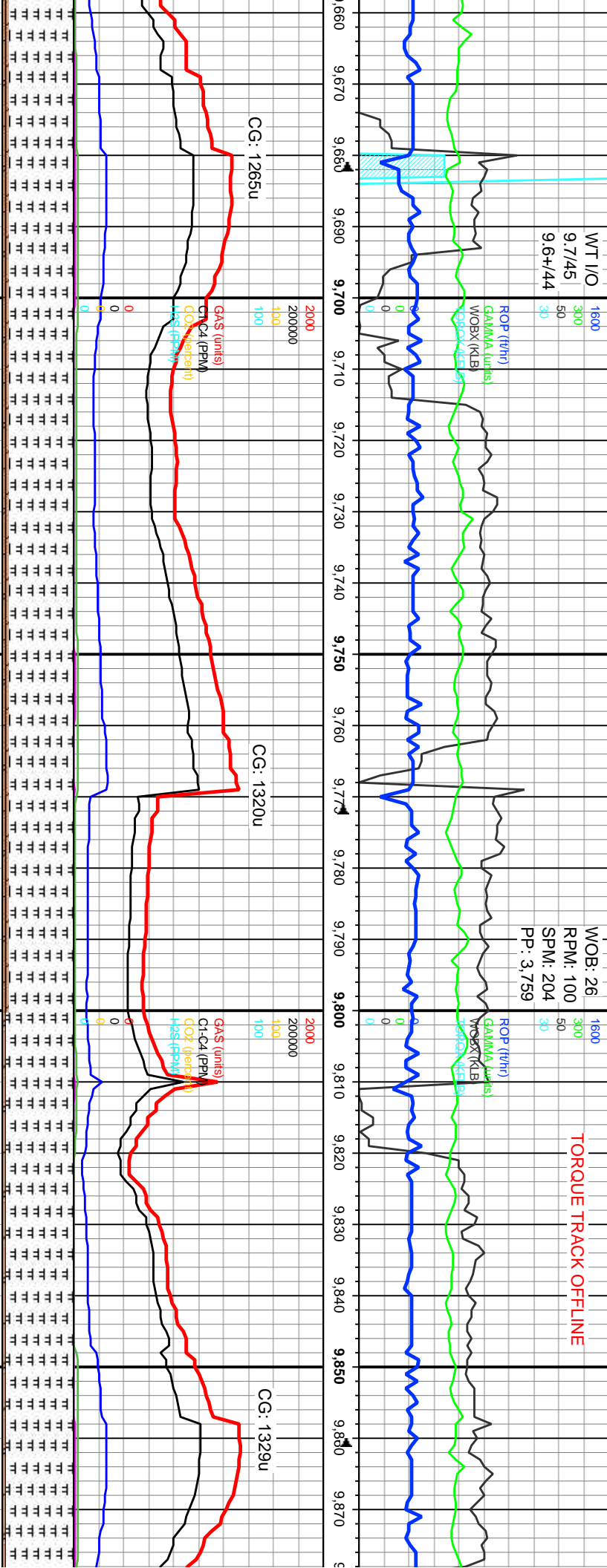
MD: 9,665'
Inclination: 90.06°
Azimuth: 179.3°
TVD: 6,362'
VS: 3,622'



WT I/O
9.7/45
9.6+/44

WOB: 26
RPM: 100
SPM: 204
PP: 3.759

TORQUE TRACK OFFLINE



5800
90% MRLST: MDSTN, MED TO DK GY, SL
GRITTY TEX, GRITTY IP, RTHY LSTR, FRM,
SB BLKY TO BLKY, AMOR, SB FISS TO
FISS IP, CALC, SL SLTY IP, SL CHKY IP
10% CHK, GY TO DK GY, MOT IP, SFT TO
FRM, SB BLKY, BLKY IP, CALC

5800
95% MRLST: MDSTN, DK GY TO BLK, SL
GRITTY TO GRITTY TEX, DULL LSTR, FRM,
SB BLKY TO BLKY, AMOR, SB FISS,
CALC, SL SLTY IP, SL CHKY IP
5% CHK, GY TO DK GY, MOT IP, SFT TO
FRM, SB BLKY, BLKY IP, CALC

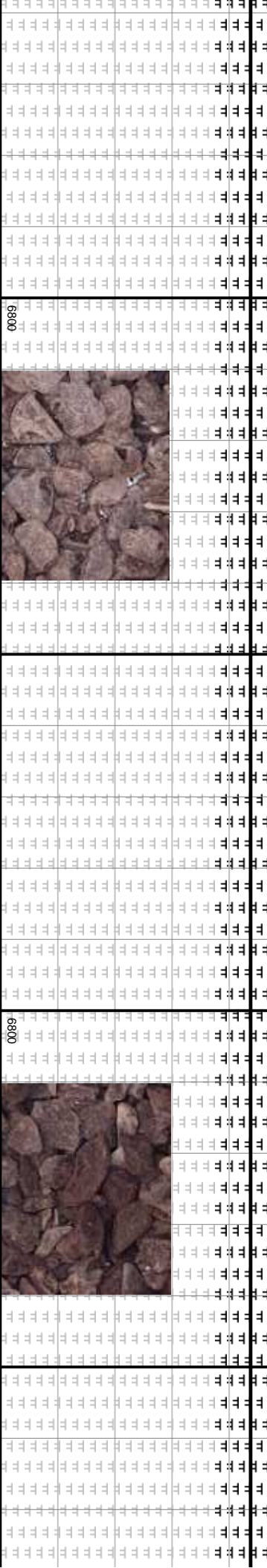
8'
n: 90°
180.92°

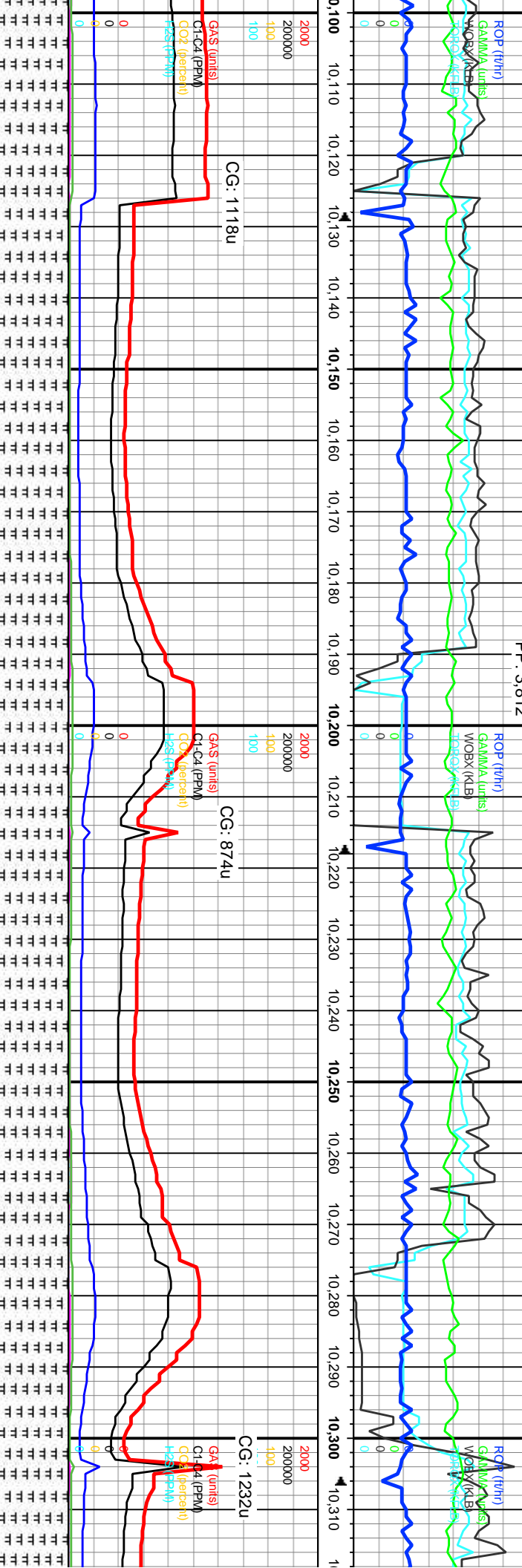
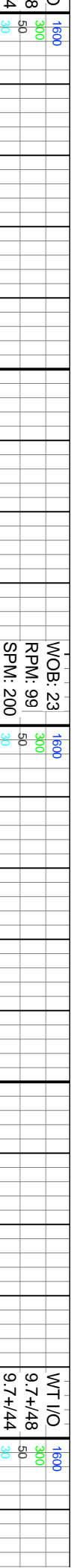
MD: 9.748'
Inclination: 90.15°
Azimuth: 183.23°

TVD: 6,362.54'
VS: 3,717.99'

MD: 9.837'
Inclination: 90.28°
Azimuth: 183.77°

TVD: 6,362.2'
VS: 3,806.03'





100% MR LST: MDSTN, DK GY, GR TTY
TEX, RTHY LSTR, FRM TO SL HRD IP, SB
BLKY TO BLKY, AMOR, SB FIS, V CALC, SL
SLTY IP, TR INTBDD CHK IP

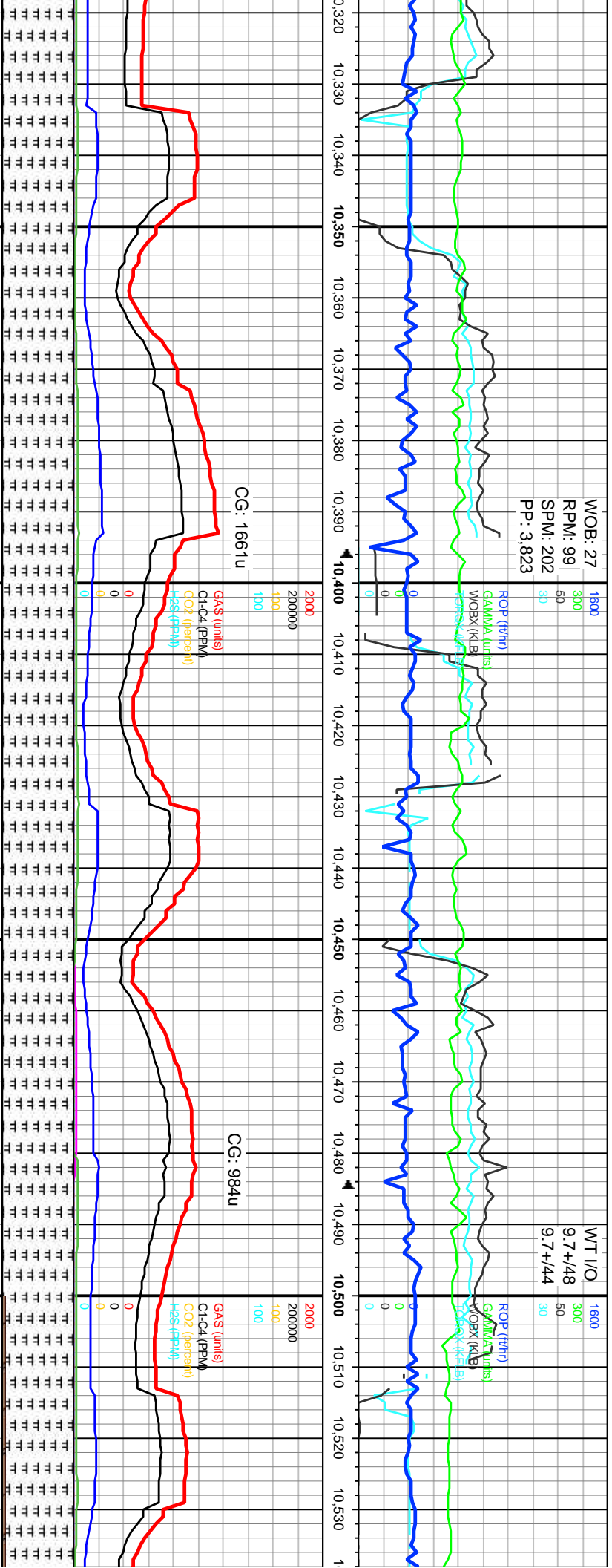
100% MRLST : MDSTN, DK GY, SL GRITTY
TO GRITTY TEX, DULL LSTR, FRM TO SL
HRD, SB BLKY TO BLKY, AMOR, SB FIS, V
CALC, SL SLTY IP, CHKY IP, TR F DISSM
PYR IP

100% MRLST: I
GRTTY TEX, D
TO SL HRD, SE
FIS, V CALC, S

declination: 10,105'
 azimuth: 181.79°

MD: 10,194'
Inclination: 90.18°
Azimuth: 179.36°

MD: 10,283'
Inclination: 90.28°
Azimuth: 178.39°



MDSTN, MED TO DK GY, SL
DULL TO RTHY LSTR, FRM
BLKY TO BLKY, AMOR, SB
L SLTY IP, CHKY IP

MD: 10.373
Inclination: 90.09°
Azimuth: 178.33°
TVD: 6.359.86'
VS: 4.338.86'

100% MRLST: MDSTN, DK GY, SL GRTTY
TEX, DULL LSTR, FRM TO SL HRD, SB
BLKY TO BLKY, AMOR, SB FIS, FIS IP, V
CALC, SL SLTY IP, CHKY IP

MD: 10.462
Inclination: 90.12°
Azimuth: 177.82°
TVD: 6.359.69'
VS: 4.427.74'

95% MRLST: MDSTN, DK GY TO
MOT IP, GRTTY TEX, DULL LSTR
SB BLKY TO BLKY, AMOR, SB F
CALC, SL SLTY IP, SL CHKY IP
5% CHK, MED TO DK GY, SFT T
SB BLKY TO BLKY, CALC

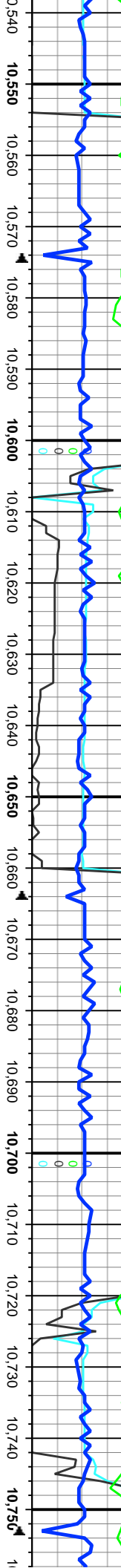


WOB: 26
RPM: 100
SPM: 202
PP: 3.921

WT I/O
9.7+/46
9.8/44

ROP (ft/h)
SAMMA (units)
WOBX (KLB)
H2S (KRB)

ROP (ft/h)
SAMMA (units)
WOBX (KLB)
H2S (KRB)



CG: 1014u

CG: 1605u

CG: 1448u

GAS (units)
C1-C4 (PPM)
CO2 (lb/MMBtu)
H2S (KRB)

GAS (units)
C1-C4 (PPM)
CO2 (lb/MMBtu)
H2S (KRB)



BLK,
R, FRM,
S TO FIS,
O FRM,

100% MRLST: MDSTN, DK GY, GRITTY
TEX, DULL TO RTHY LSTR, FRM TO SL
HRD IP, SB BLKY TO BLKY, AMOR, SB FIS,
FIS IP, V CALC, SL SLTY IP, CHKY IP

95% MRLST: MDSTN, DK GY, GRITTY TEX,
DULL LSTR, FRM, SB BLKY TO BLKY,
AMOR, SB FIS TO FIS, CALC, SL SLTY IP,
SL CHKY IP, TR CAL FRAC FL IP,
5% CHK, MED TO DK GY, SFT TO FRM,
SB BLKY TO BLKY, CALC

MD: 10.551'
Inclination: 90.12°
Azimuth: 177.84°
TVI: 6.359.51'
VS: 4.516.64'

MD: 10.641'
Inclination: 90.12°
Azimuth: 178.64°
TVI: 6.359.32'
VS: 4.606.5'

MD: 10.730'
Inclination: 90.22°
Azimuth: 177.07°
TVI: 6.359.05'
VS: 4.695.4'



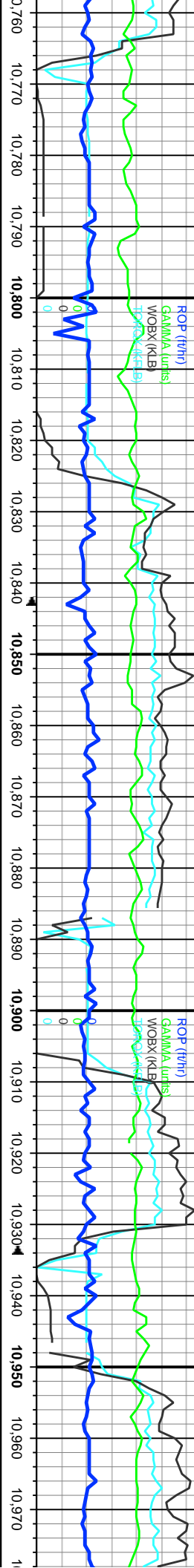
WOB: 30
RPM: 100
SPM: 200
PP: 4.004

6/14/2019
@ 10,858' MD

WT I/O
9.7+/46
9.8/44

ROP (ft/h)
GAMMA (units)
WOBX (KLB)
TDRX (KFSB)

ROP (ft/h)
GAMMA (units)
WOBX (KLB)
TDRX (KFSB)



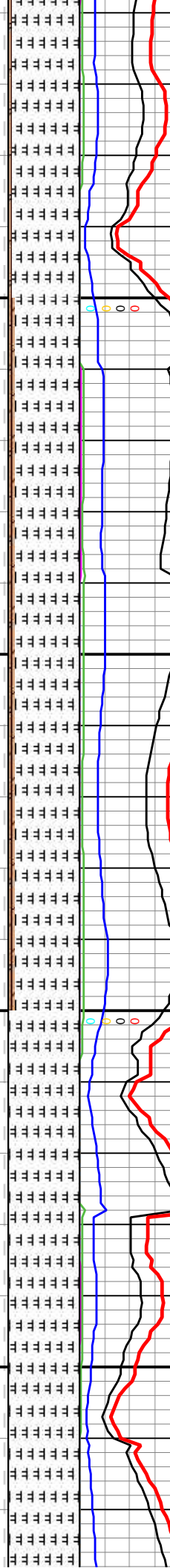
2000
1000
100

CG: 1009u

GAS (units)
C1-C4 (PPM)
C1-C4 (PPM)
C2-C4 (PPM)
C2-C4 (PPM)

GAS (units)
C1-C4 (PPM)
C1-C4 (PPM)
C2-C4 (PPM)
C2-C4 (PPM)

CG: 1081u



5800

5800

90% MRLST: MDSTN, DK GY, SME BLK
SL GRITTY TEX. DULL TO RTHY LSTR,
FRM, SB BLKY TO BLKY, AMOR, SB FIS
TO FIS, CALC, SL SLTY IP, SL CHKY IP;
10% CHK, DK GY, SFT TO FRM, SB BLKY
TO BLKY, CALC

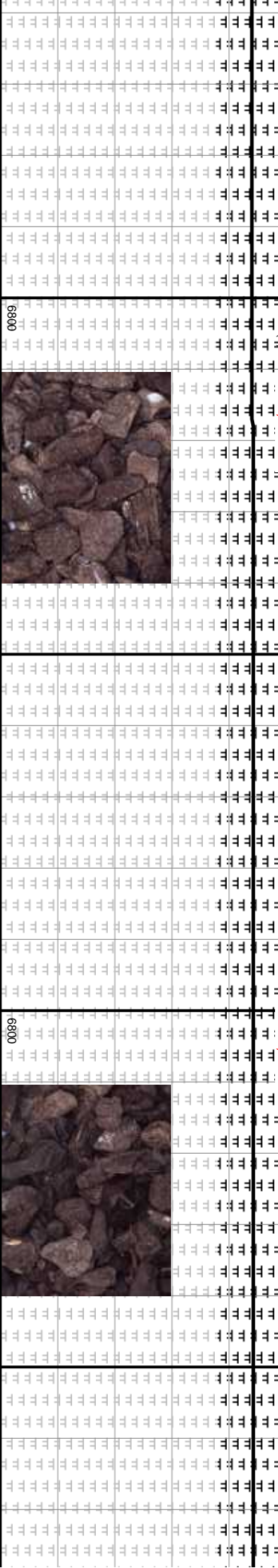
100% MRLST: MDSTN, DK GY TO BLK, SL
GRITTY TEX, RTHY LSTR, FRM TO SL HRD
IP, SB BLKY TO BLKY, AMOR, SB FIS TO
FIS, CALC, SL SLTY IP, SL CHKY IP

MD: 10,820'
Inclination: 90.18°
Azimuth: 178.09°
TVD: 6,358.74'

VS: 4,785.31'

MD: 10,909'
Inclination: 90.43°
Azimuth: 180.45°
TVD: 6,358.27'

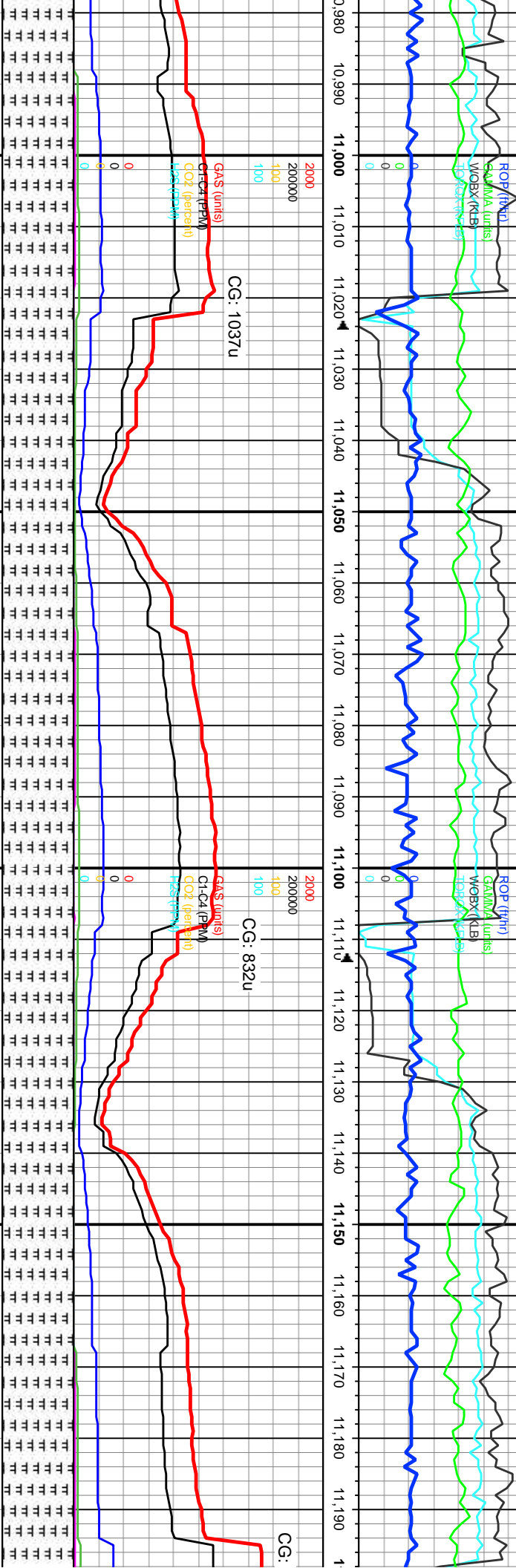
VS: 4,874.06'



WOB: 26
RPM: 100
SPM: 201
PP: 3.946

WT I/O
9.7+/46
9.8/44

WOB: 22
RPM: 100
SPM: 200
PP: 3.793



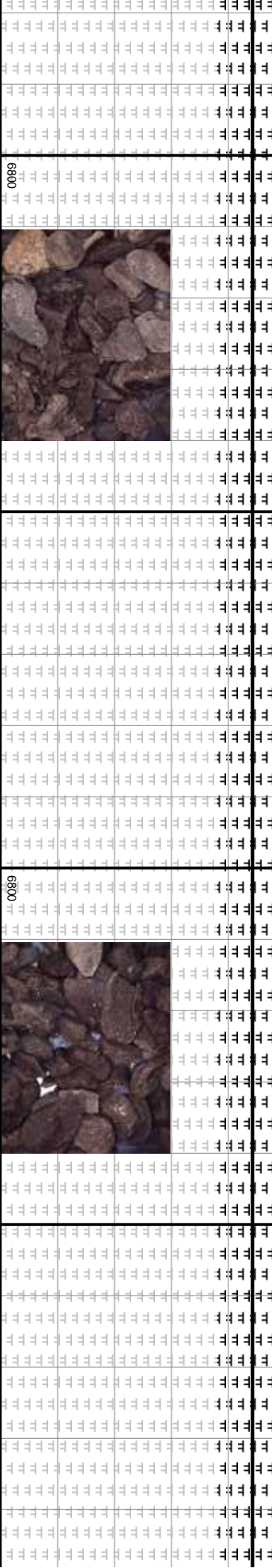
100% MRLST: MDSTN, DK GY, GRITTY
TEX, DULL LSTR, FRM TO SL HRD, SB
BLKY, BLKY IP, AMOR, SB FIS TO FIS,
CALC, SL SLTY IP, SL CHKY IP

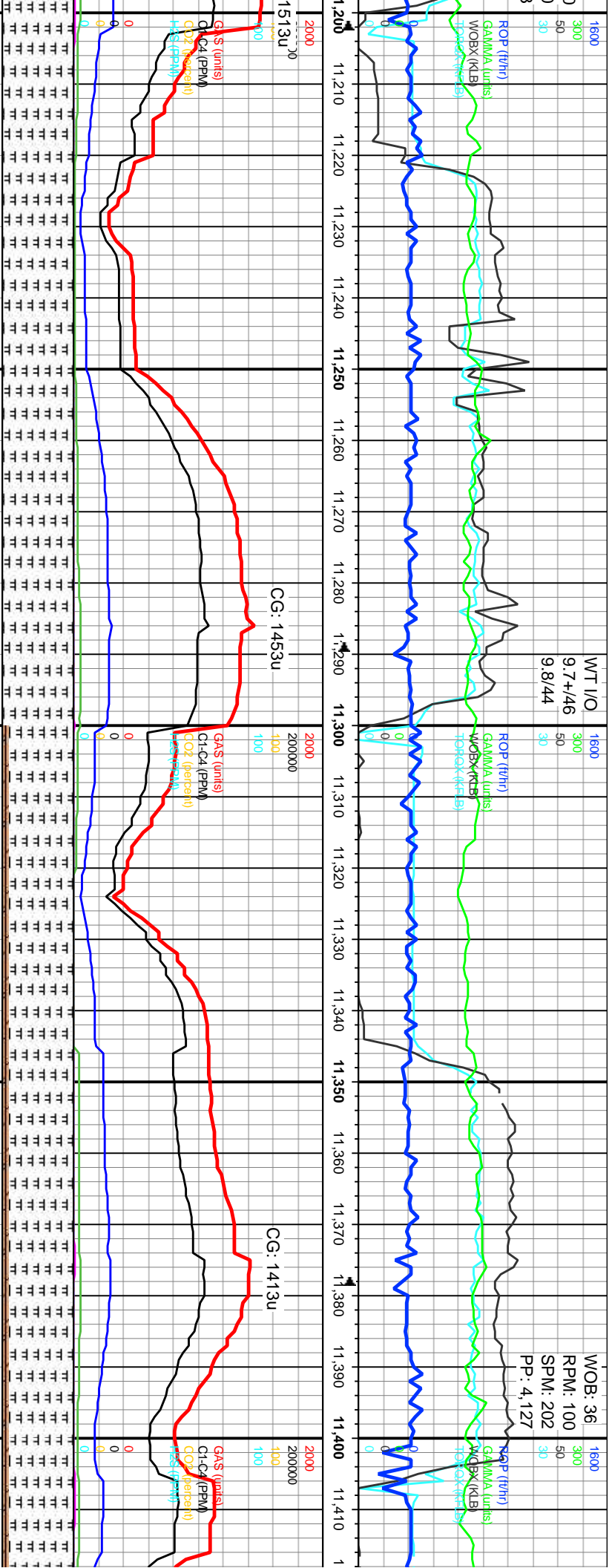
100% MRLST: MDSTN, MED TO DK GY, SL
GRITTY TEX, DULL TO RTHY LSTR, FRM
TO SL HRD, SB BLKY TO BLKY, AMOR, SB
FIS, V CALC, SL SLTY IP, CHKY IP

MD: 10.999'
Inclination: 90.25°
Azimuth: 180.62°
TVD: 6.357.73
VS: 4.963.66b

MD: 11.089'
Inclination: 90.34°
Azimuth: 180.66°
TVD: 6.357.27
VS: 5.053.23

MD: 11.178'
Inclination: 90.22°
Azimuth: 180.42°
TVD: 6.356.83
VS: 5.141.83





100% MRLST: MDSTN, MED TO DK GY, SL GRITTY TEX, RTHY LSTR, FRM TO SL HRD, SB BLKY TO BLKY, AMOR, SB FIS, V CALC, SL SLTY IP, CHKY IP, TR CAL FRAC FL IP.

MD: 11.267
Inclination: 90.28°
Azimuth: 179.54°
TVD: 6.356.45
VS: 5.230.5



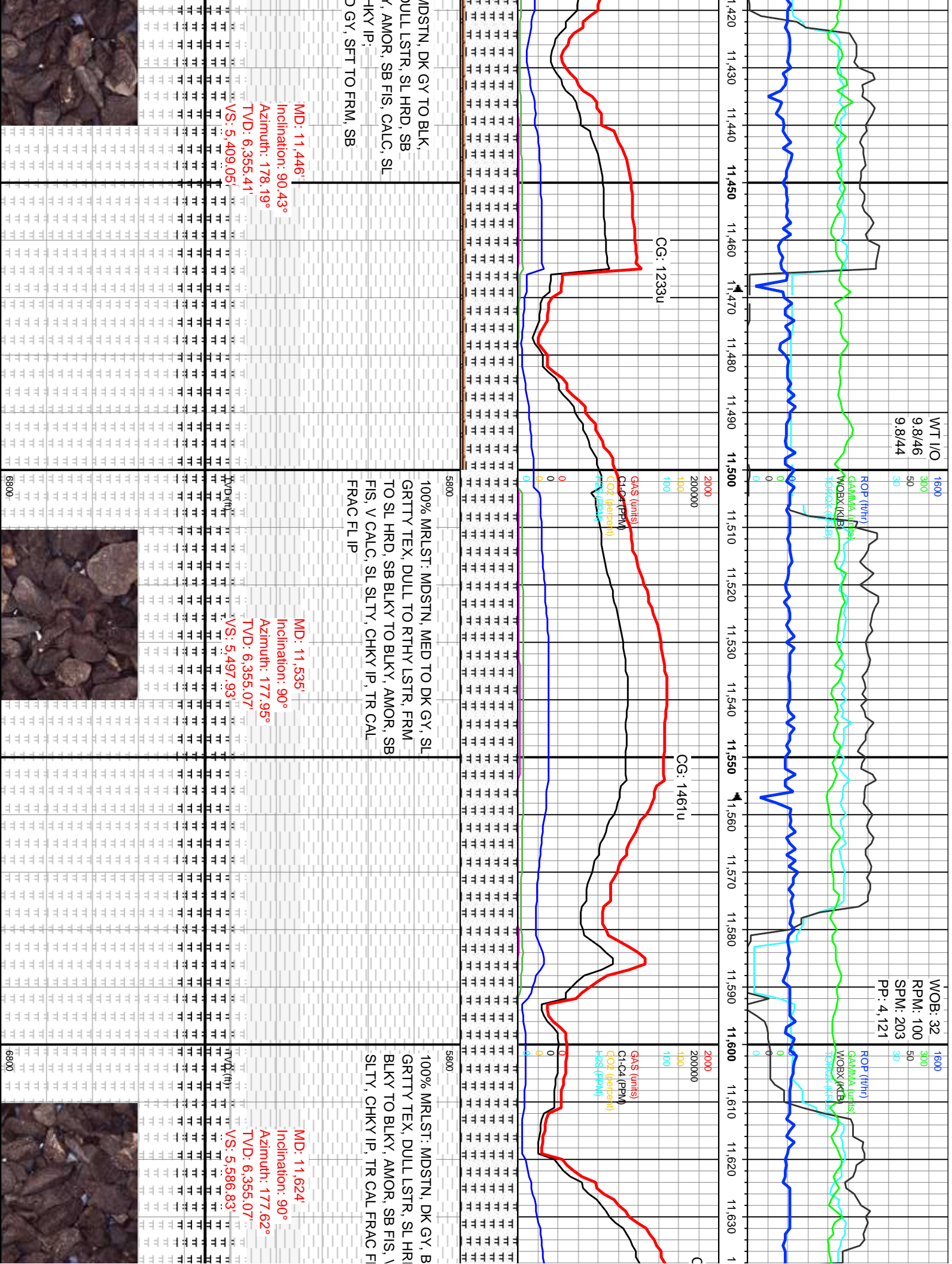
90% MRLST: MDSTN, DK GY TO BLK, SL GRITTY TEX, RTHY LSTR, FRM, SL HRD IP, SB BLKY TO BLKY, AMOR, SB FIS TO FIS, CALC, SL SLTY IP, SL CHKY IP; 10% CHK, MED GY, SFT TO FRM, SB BLKY TO BLKY, CALC

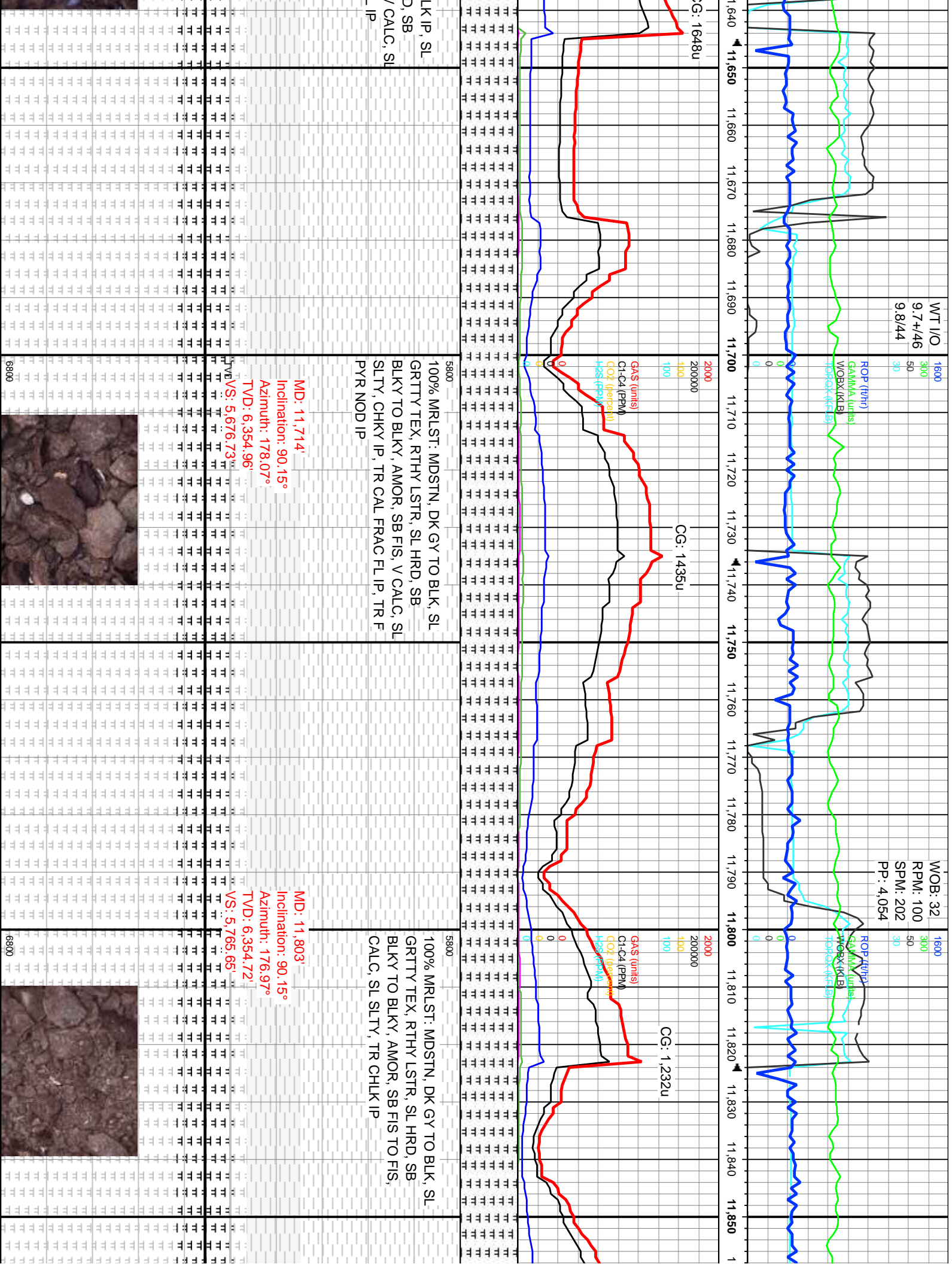
MD: 11.357
Inclination: 90.31°
Azimuth: 179.38°
TVD: 6.355.98
VS: 5.320.24



90% MRLST: MDSTN, DK GY TO BLK, SL GRITTY TEX, RTHY LSTR, FRM, SL HRD IP, SB BLKY TO BLKY, AMOR, SB FIS TO FIS, CALC, SL SLTY IP, SL CHKY IP; 10% CHK, MED GY, SFT TO FRM, SB BLKY TO BLKY, CALC







WT I/O
9.7+/46
9.8/44

1600
300
50
30

RQP (t/h)
GAMA (units)
WOBX (KB)
TDRX (K/F)

0
0
0

RK

2000
200000

100
100

CG: 833u

GA\$ (units)
C1-C4 (PPM)
I/O2 (percent)
H2S (PPM)

0
0
0

5800

100% MRLST: MDSTN, DK GY TO BLK, SL
GRITTY TEX, RTHY LSTR, SL HRD, SB BLKY
TO BLKY, AMOR, SB FIS TO FIS, CALC, SL
SLTY, TR CHLK IP

MD: 11.893'

Inclination: 90.06°

Azimuth: 178.51°

TVD: 6,354.56'

VS: 5.855.55'

VS: 5.855.55'

WOB: 31
RPM: 100
SPM: 202
PP: 4.085

1600
300
50
30

RQP (t/h)
GAMA (units)
WOBX (KB)
TDRX (K/F)

0
0
0

RK

2000
200000

100
100

CG: 2,543u

GA\$ (units)
C1-C4 (PPM)
I/O2 (percent)
H2S (PPM)

0
0
0

5800

100% MRLST: MDSTN, DK GY TO BLK,
SL GRITTY TEX, RTHY LSTR, SL HRD, SB
BLKY TO BLKY, AMOR, SB FIS TO FIS,
CALC, SL SLTY, TR CHLK IP

MD: 11.982'

Inclination: 90.25°

Azimuth: 180.65°

TVD: 6,354.32'

VS: 5.944.27'

VS: 5.944.27'

MD: 12.071'

Inclination: 90.2

Azimuth: 181.47

TVD: 6,353.95'

VS: 6.032.79'

VS: 6.032.79'

MD: 12.071'

Inclination: 90.2

Azimuth: 181.47

TVD: 6,353.95'

VS: 6.032.79'

VS: 6.032.79'

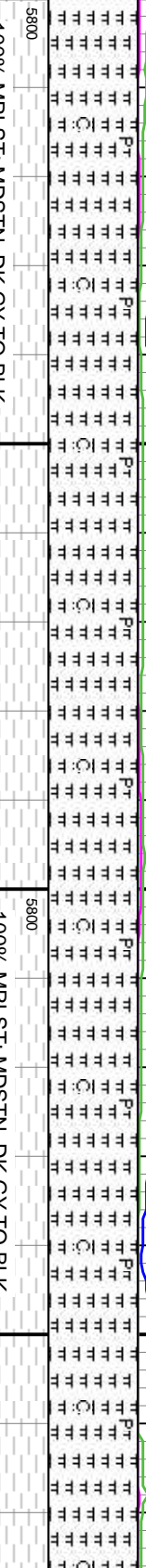
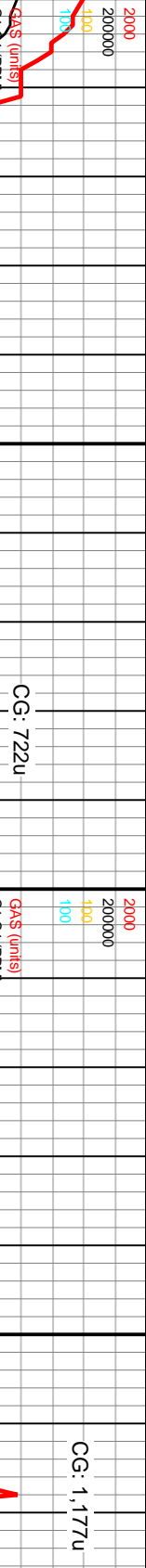
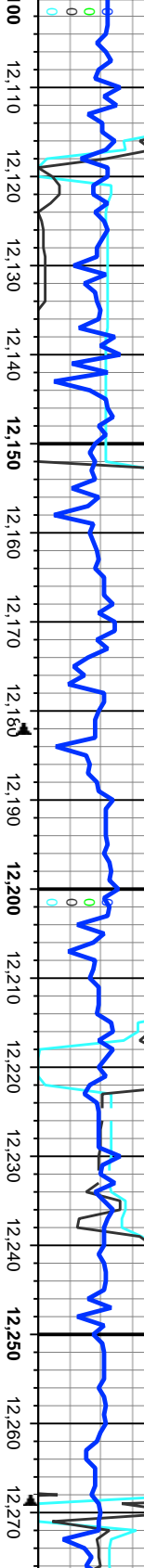
WT I/O
9.7+/45
9.7/44

WOB: 29
RPM: 100
SPM: 202
PP: 4.205

WT I/C
9.8+/4
9.8/44

GC: 722u

GC: 1,177u

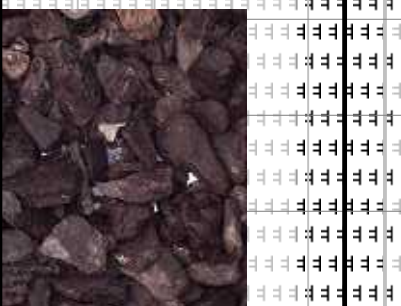
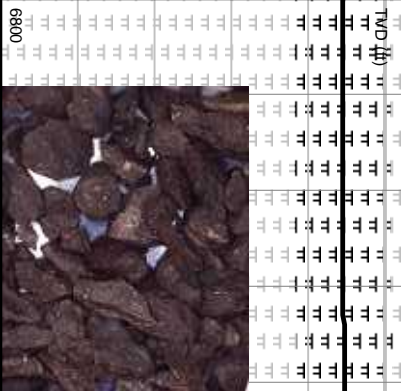


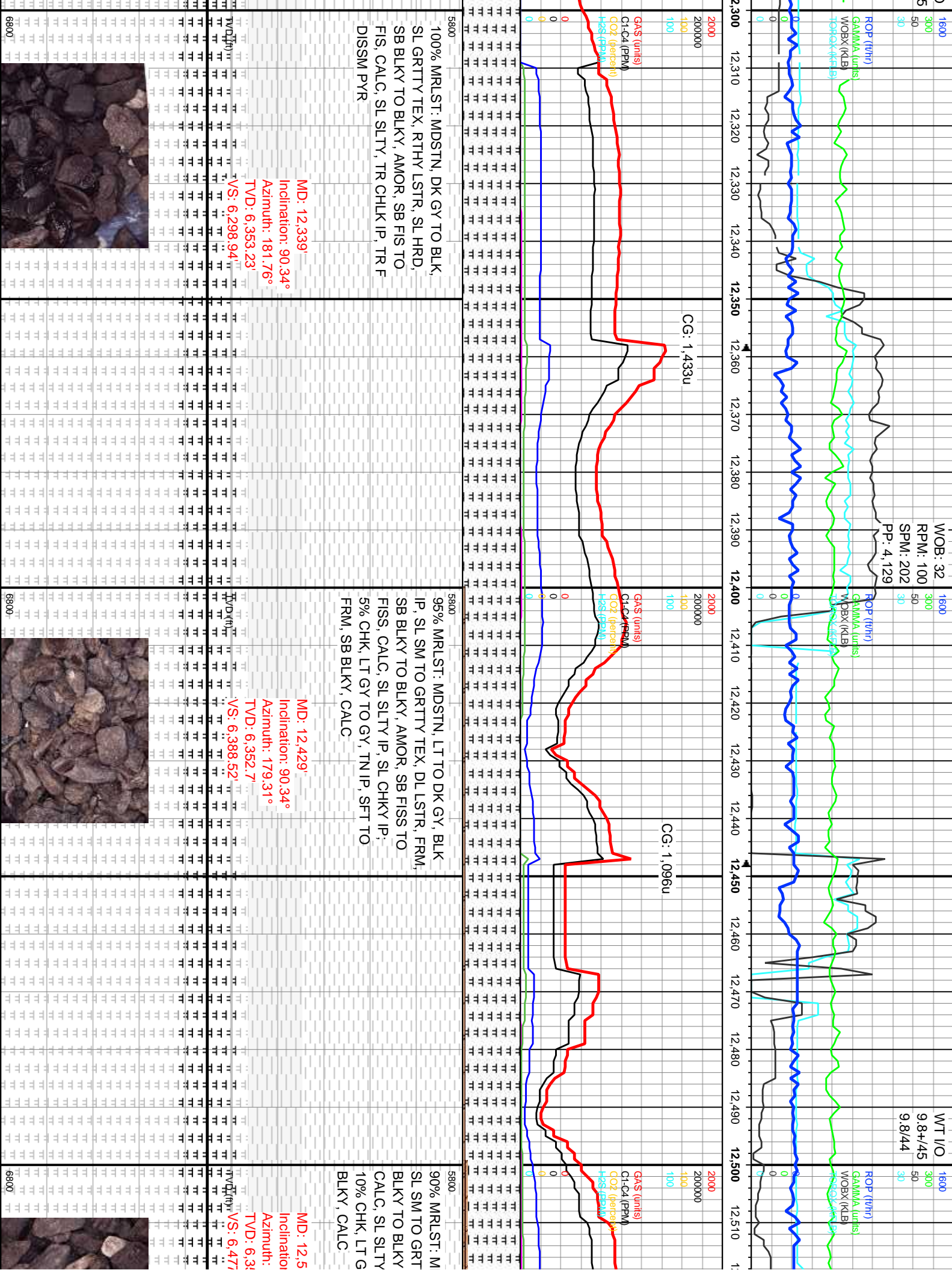
100% MRLST: MDSTN, DK GY TO BLK,
SL GRITTY TEX, RTHY LSTR, SL HRD,
SB BLKY TO BLKY, AMOR, SB FIS TO
FIS, CALC, SL SLTY, TR CHLK IP, TR F
DISSM PYR

100% MRLST: MDSTN, DK GY TO BLK,
SL GRITTY TEX, RTHY LSTR, SL HRD, SB
BLKY TO BLKY, AMOR, SB FIS TO FIS,
CALC, SL SLTY, TR CHLK IP, TR F
DISSM PYR

MD: 12,161'
Inclination: 90.15°
Azimuth: 181.48°
TVD: 6,353.66'

MD: 12,250'
Inclination: 90.03°
Azimuth: 182.36°
TVD: 6,353.52'





WOB: 24
RPM: 100
SPM: 202
PP: 3.955

ROP (ft/h)
GAMMA (units)
WOB (KLB)
ROP (ft/h)

WT I/O
9.8+/46
9.8+/44

ROP (ft/h)
GAMMA (units)
WOB (KLB)
ROP (ft/h)

CG: 1,162u

GAS (units)
C1-C4 (PPM)
H2S (PPM)

CG: 1,333u

CG: 889u

GAS (units)
C1-C4 (PPM)
CO2 (PPM)
H2S (PPM)

MDSTN, LT TO DK GY, BLK IP
TY TEX, DL LSTR, FRM, SB
AMOR, SB FISS TO FISS,
IP, SL CHKY IP,
Y TO GY, SFT TO FRM, SB

70% MRLST: MDSTN, LT TO DK GY, BLK
IP, SL SM TO GRITTY TEX, DL LSTR, FRM,
SB BLKY TO BLKY, AMOR, SB FISS TO
FISS, CALC, SL SLTY IP, SL CHKY IP,
30% CHK, LT GY TO GY, SFT TO FRM, SB
BLKY, CALC, TR F DISSM PYR

80% MRLST: MDSTN, LT TO DK C
SL SM TO GRITTY TEX, DL LSTR,
BLKY TO BLKY, AMOR, SB FISS
CALC, SL SLTY IP, SL CHKY IP,
20% CHK, LT GY TO GY, SFT TO
BLKY, CALC, TR F DISSM PYR

18'
i: 90.18°
182.6°

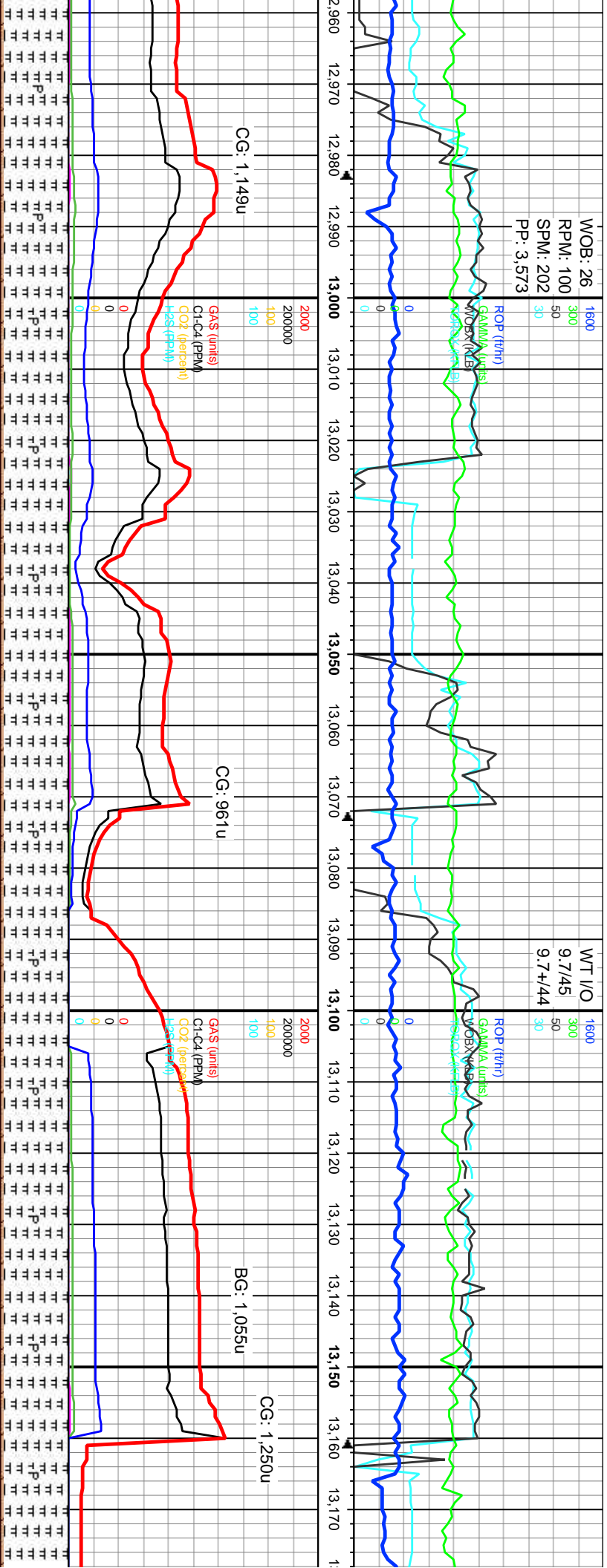
MD: 12,608'
Inclination: 89.97°
Azimuth: 185.67°
TVD: 6,352.18'

MD: 12,697'
Inclination: 90.37°
Azimuth: 181.89°
TVD: 6,351.91'



WOB: 26
RPM: 100
SPM: 202
PP: 3.573

WT I/O
9.7/45
9.7+/44



5800
90% MRLST: MDSTN, LT TO DK GY, BLK IP, SL SM TO GRITTY TEX, DL LSTR, FRM, SB BLKY TO BLKY, AMOR, SB FISS TO FISS, CALC, SL SLTY IP, SL CHKY IP, 10% CHK, LT GY TO GY, SFT TO FRM, SB BLKY, CALC, TR F DISSM PYR

5800
90% MRLST: MDSTN, LT TO DK GY, BLK IP SL SM TO GRITTY TEX, DL LSTR, FRM, SB BLKY TO BLKY, AMOR, SB FISS TO FISS, CALC, SL SLTY IP, SL CHKY IP, 10% CHK, LT GY TO GY, SFT TO FRM, SB BLKY, CALC, TR F DISSM PYR

MD: 12,965'
Inclination: 90.09°
Azimuth: 175.6°
D: 6,351.02'

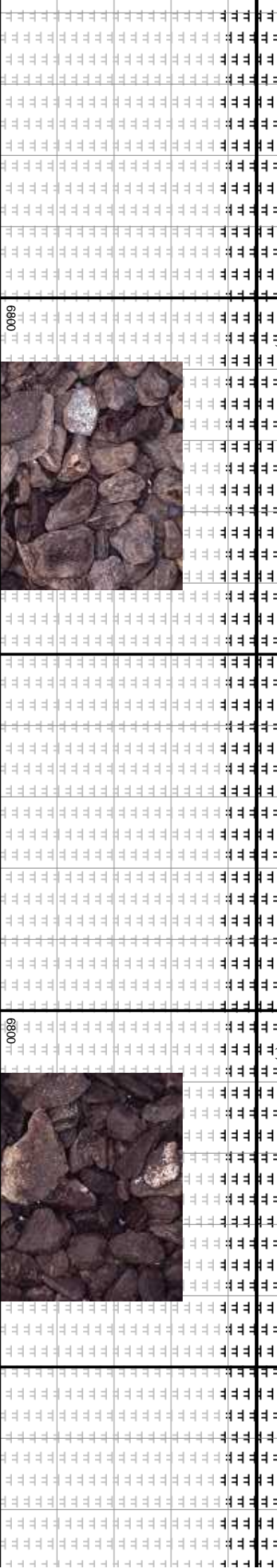
MD: 13,054'
Inclination: 90.22°
Azimuth: 174.42°
TVD: 6,350.78'

MD: 13,143'
Inclination: 90.31°
Azimuth: 176.73°
TVD: 6,350.37'

VS: 6,921.51'

VS: 7,010.51'

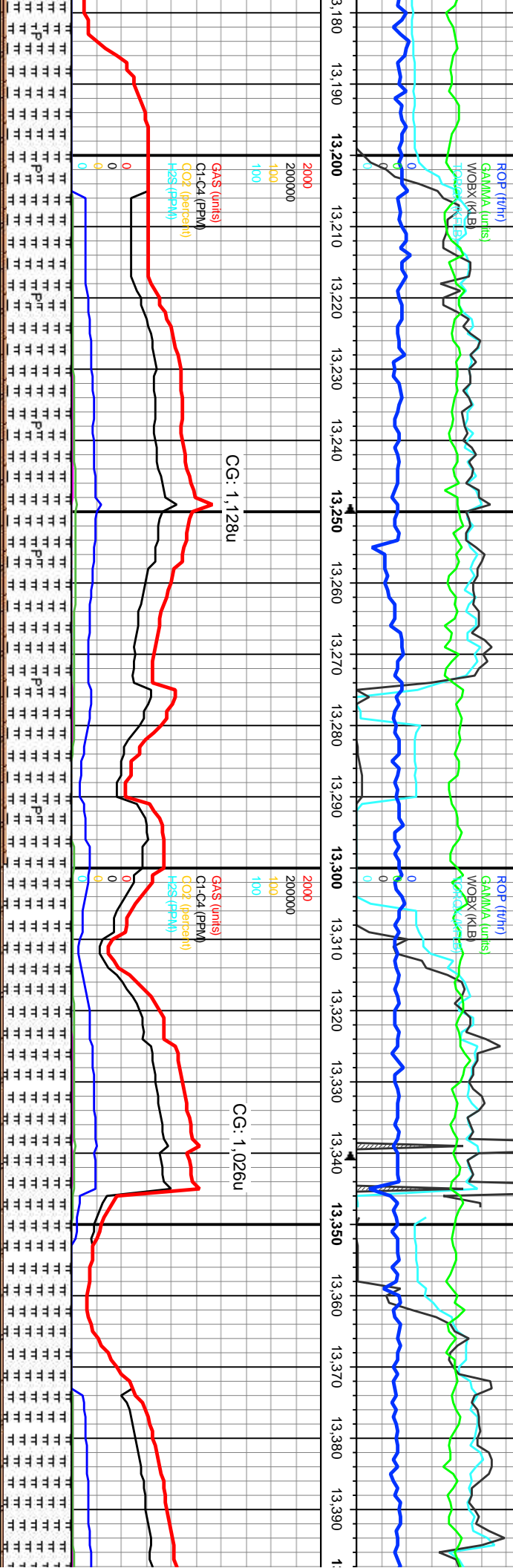
VS: 7,099.51'



WOB: 23
RPM: 100
SPM: 170
PP: 3.528

WT I/O
9.7/45
9.7+/44

WOB: 23
RPM: 10
SPM: 17
PP: 3.56



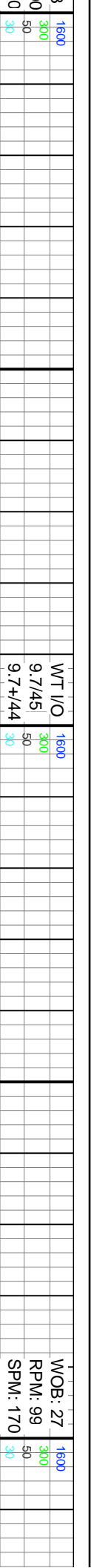
5800
90% MRLST: MDSTN, LT TO DK GY, BLK
IP, SL SM TO GRITTY TEX, DL LSTR, FRM,
SB BLKY TO BLKY, AMOR, SB FISS TO
FISS, CALC, SL SLTY IP, SL CHKY IP,
10% CHK, LT GY TO GY, SFT TO FRM, SB
BLKY, CALC, TR F DISSM PYR

5800
90% MRLST: MDSTN, LT TO DK GY, BLK
IP, SL SM TO GRITTY TEX, DL LSTR, FRM,
SB BLKY TO BLKY, AMOR, SB FISS TO
FISS, CALC, SL SLTY IP, SL CHKY IP,
10% CHK, LT GY TO GY, SFT TO FRM, SB
BLKY, CALC, TR F DISSM PYR

MD: 13.233°
Inclination: 90.31°
Azimuth: 176.88°
TVD: 6,349.89'

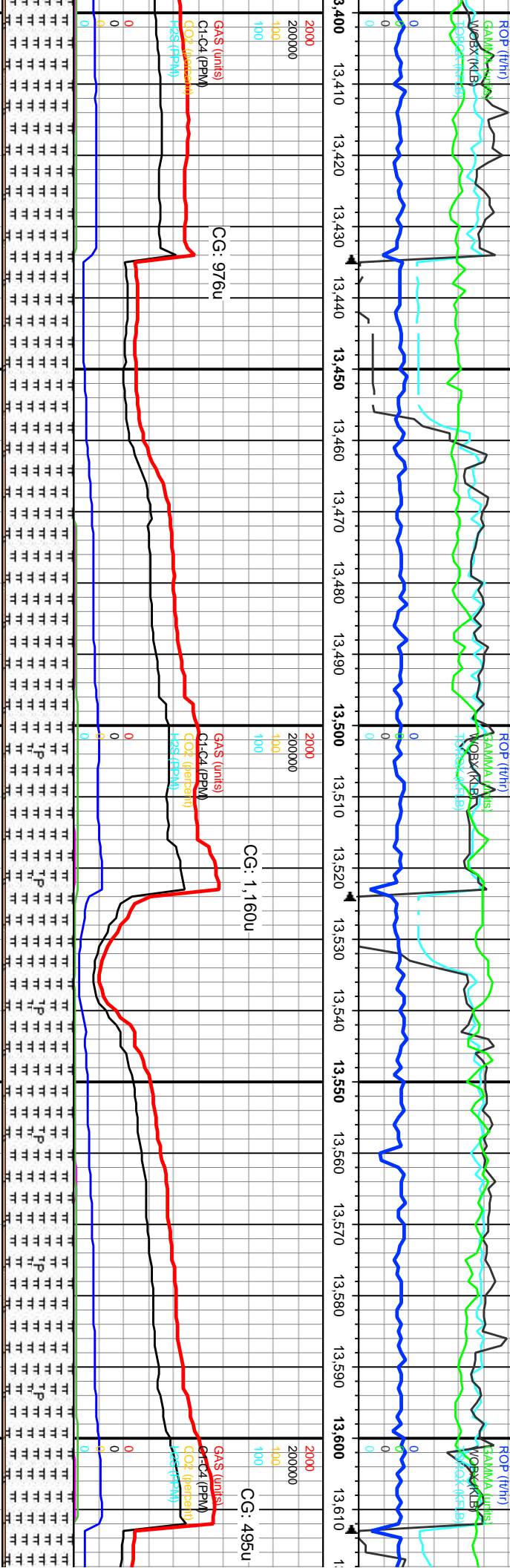
MD: 13.322°
Inclination: 90.25°
Azimuth: 176.75°
TVD: 6,349.45'





WT I/O
9.7/45
9.7+/44

WOB: 27
RPM: 99
SPM: 170
PP: 3.670



CG: 976u

CG: 1,160u

CG: 495u

95% MRLST: MDSTN, LT TO DK GY, BLK IP, SL SM TO GRITTY TEX, DL LSTR, FRM, SB BLKY TO BLKY, AMOR, SB FISS TO FISS, CALC, SL SLTY IP, SL CHKY IP; 5% CHK, LT GY TO GY, SFT TO FRM, SB BLKY, CALC

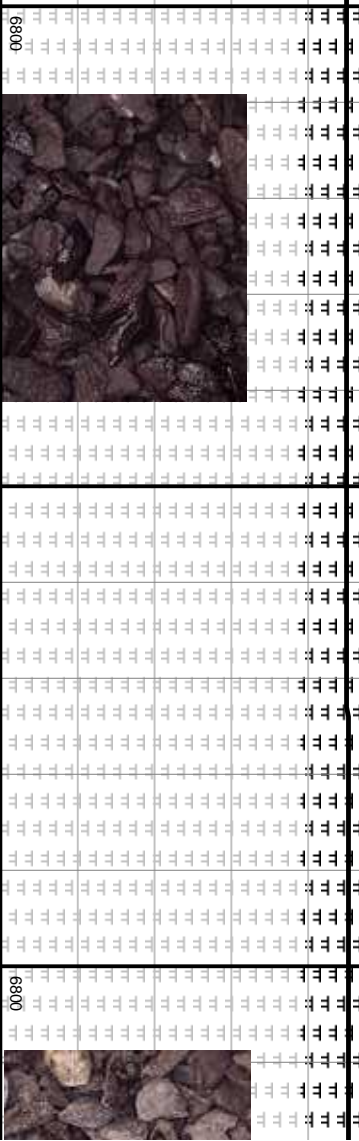
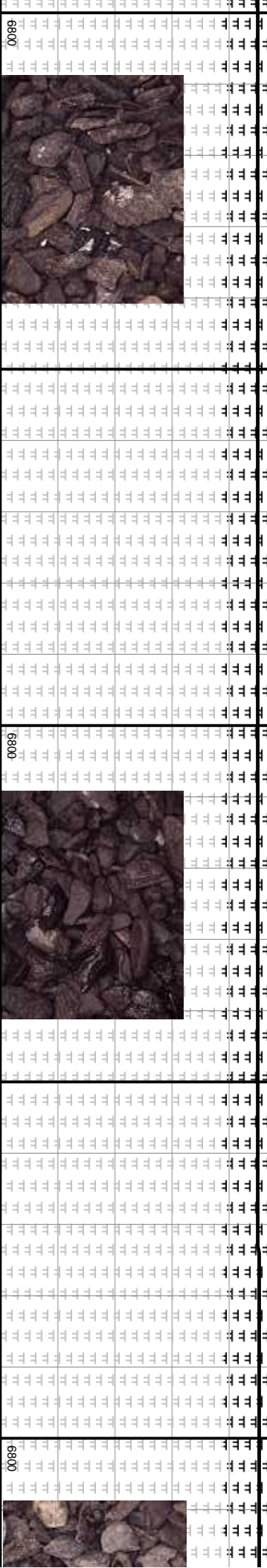
95% MRLST: MDSTN, LT TO DK GY, BLK IP, SL SM TO GRITTY TEX, DL LSTR, FRM, SB BLKY TO BLKY, AMOR, SB FISS TO FISS, CALC, SL SLTY IP, SL CHKY IP; 5% CHK, LT GY TO GY, SFT TO FRM, SB BLKY, CALC

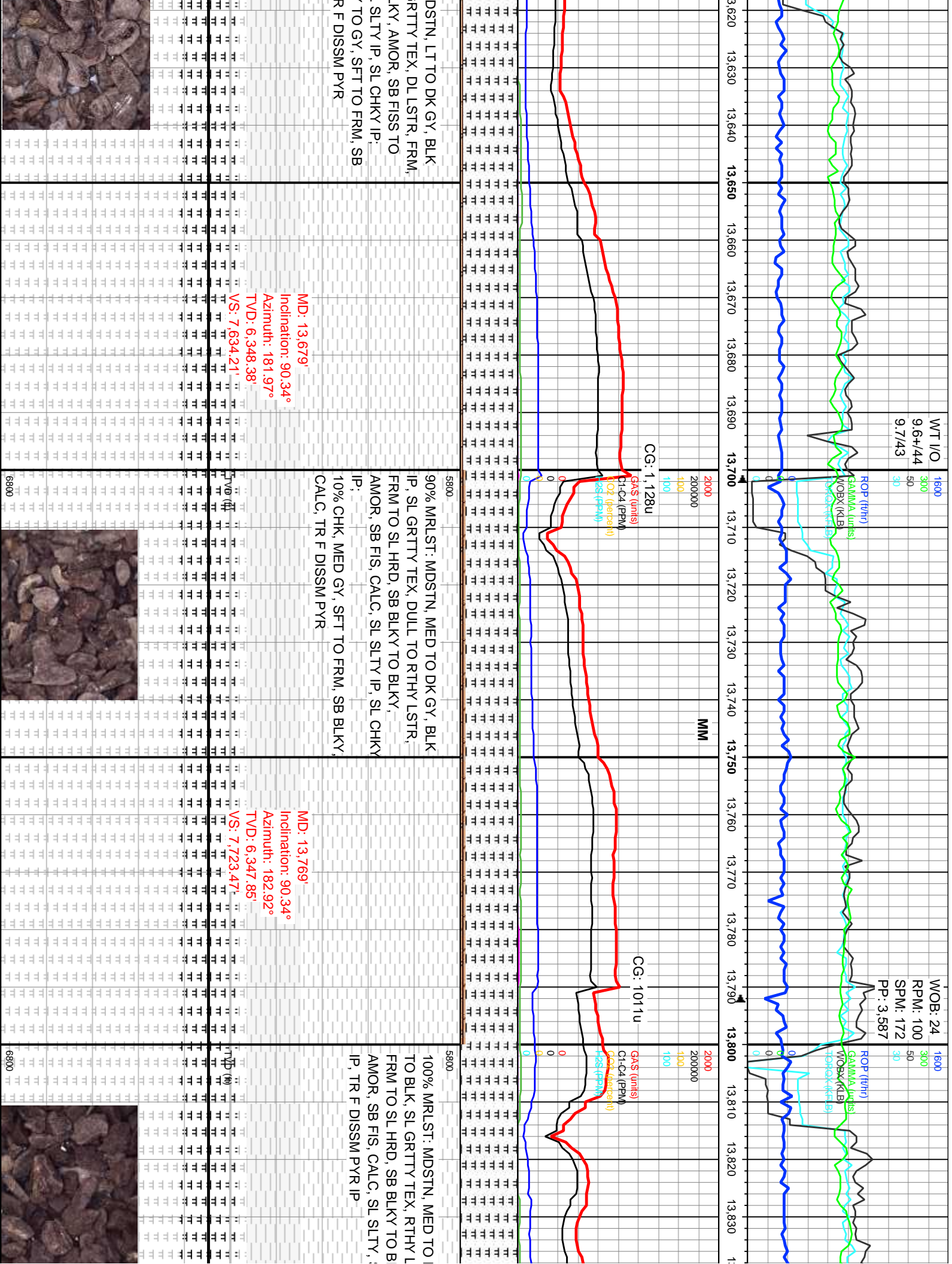
95% MRLST: MDSTN, LT TO DK GY, BLK IP, SL SM TO GRITTY TEX, DL LSTR, FRM, SB BLKY TO BLKY, AMOR, SB FISS TO FISS, CALC, SL SLTY IP, SL CHKY IP; 5% CHK, LT GY TO GY, SFT TO FRM, SB BLKY, CALC, T

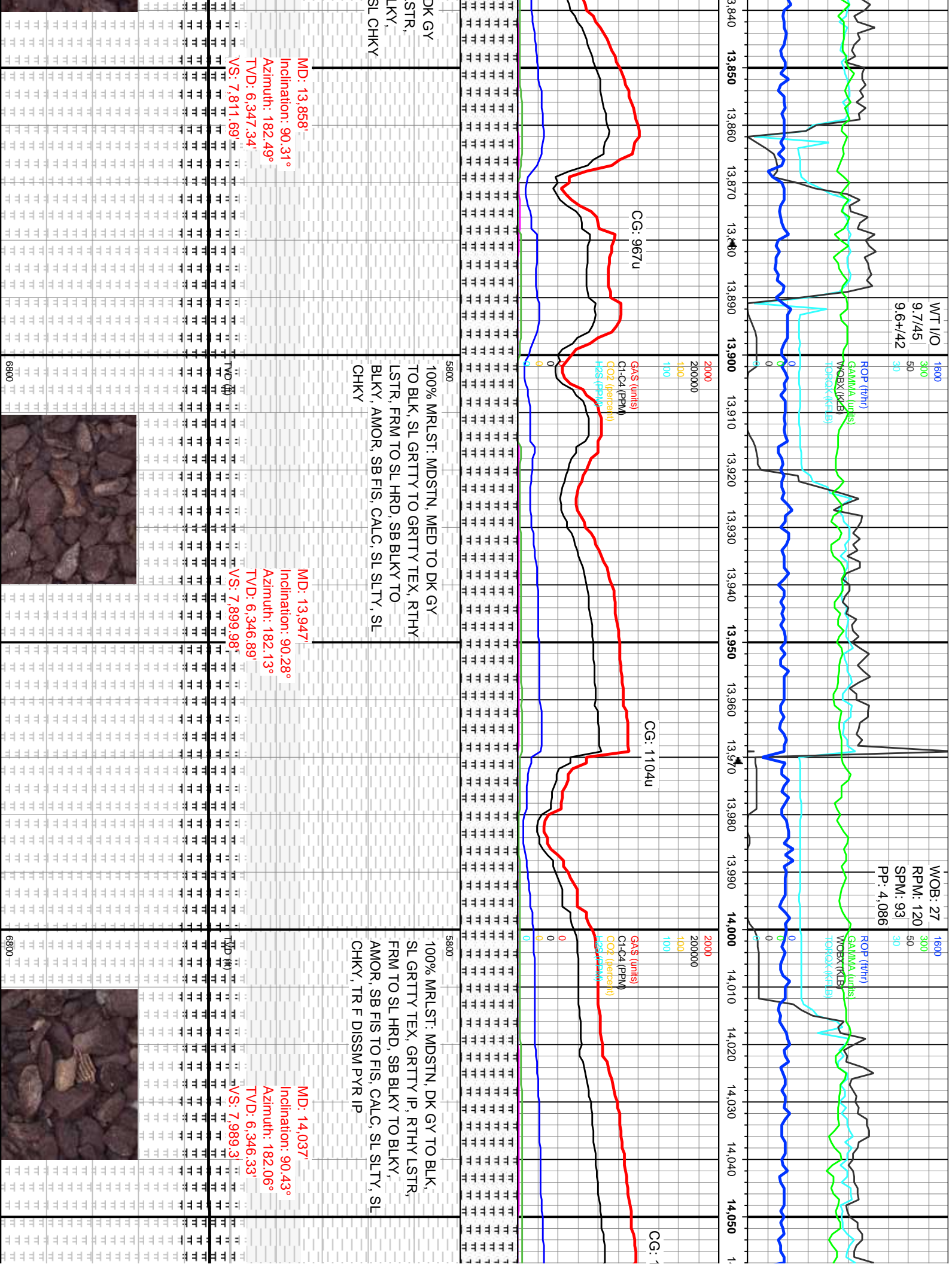
MD: 13.412'
Inclination: 90.18°
Azimuth: 178.32°
TVD: 6,349.11'
VS: 7.368.33'

MD: 13.501'
Inclination: 90.12°
Azimuth: 179.13°
TVD: 6,348.88'
VS: 7.457.15'

MD: 13.590'
Inclination: 90.09°
Azimuth: 181.26°
TVD: 6,348.72'
VS: 7.545.79'



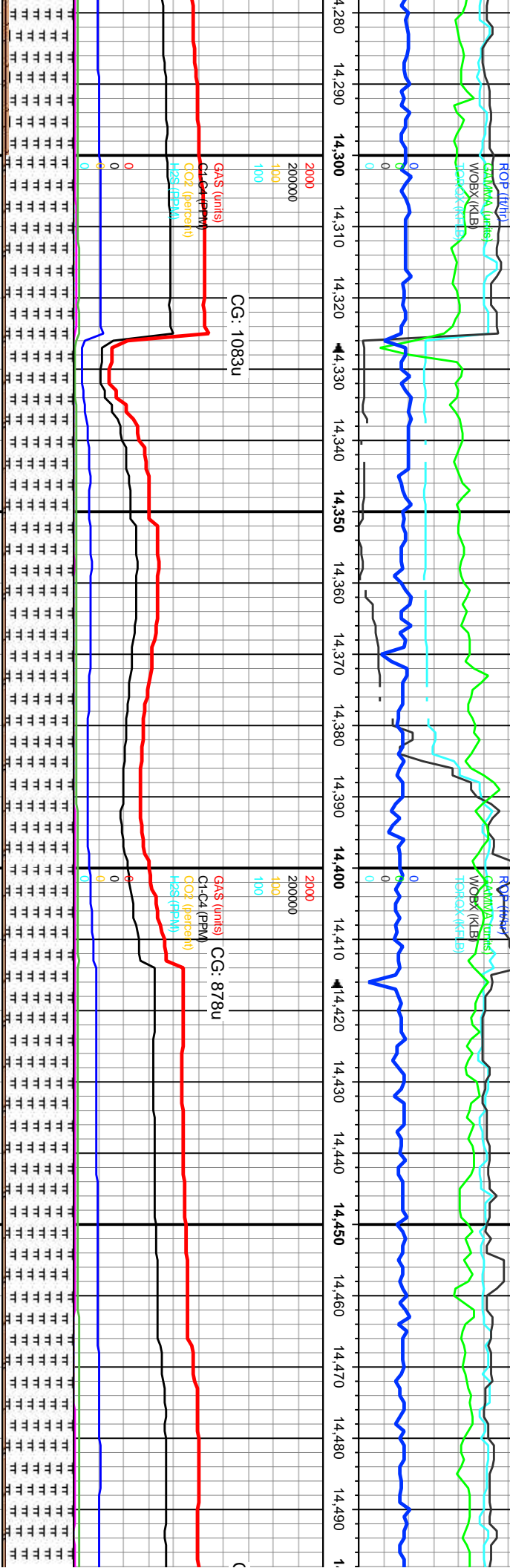




WT I/O
9.8+/-47
9.8+/-44

WT I/O
9.8+/-47
9.8+/-44

WOB: 29
RPM: 119
SPM: 93
PP: 4.204



95% MRLST: MDSTN, MED TO DK GY, SL
GRITTY TEX, DULL LSTR, FRM TO SL HRD
IP, SB BLKY, AMOR, SB FIS TO FIS, CALC,
SL SLTY IP, SL CHKY;
5% CHK, MED GY, SFT TO FRM, SB BLKY
TO BLKY, CALC

MD: 14,305'
Inclination: 90.03°
Azimuth: 177.9°
TVD: 6,345.05'
VS: 8,256.38'



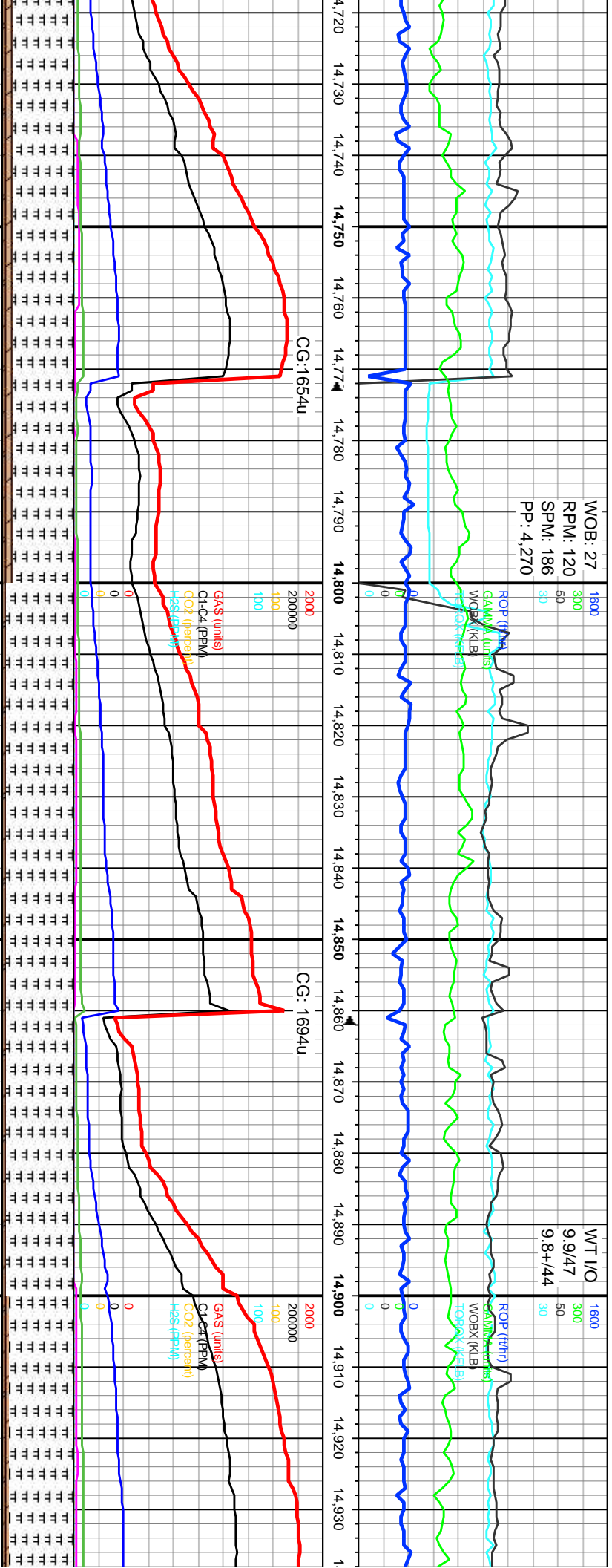
95% MRLST: MDSTN, MED TO DRK GY, SL
GRITTY TEX, RTHY LSTR, FRM, SB BLKY,
AMOR, SB FIS TO FIS, CALC, SL SLTY IP,
SL CHKY;
5% CHK, LT TO MED GY, SFT TO FRM, SB
BLKY, V CALC

MD: 14,394'
Inclination: 90.06°
Azimuth: 178.82°
TVD: 6,344.98'
VS: 8,345.23'



MD: 14,484'
Inclination: 89.97°
Azimuth: 177.86°
TVD: 6,344.96'
VS: 8,435.09'





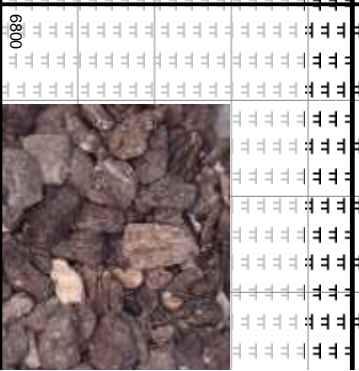
DRK GY TO BLK, SL
DULL TO RTHY LSTR, FRM,
CHKY;
GY, FRM, SB BLKY TO

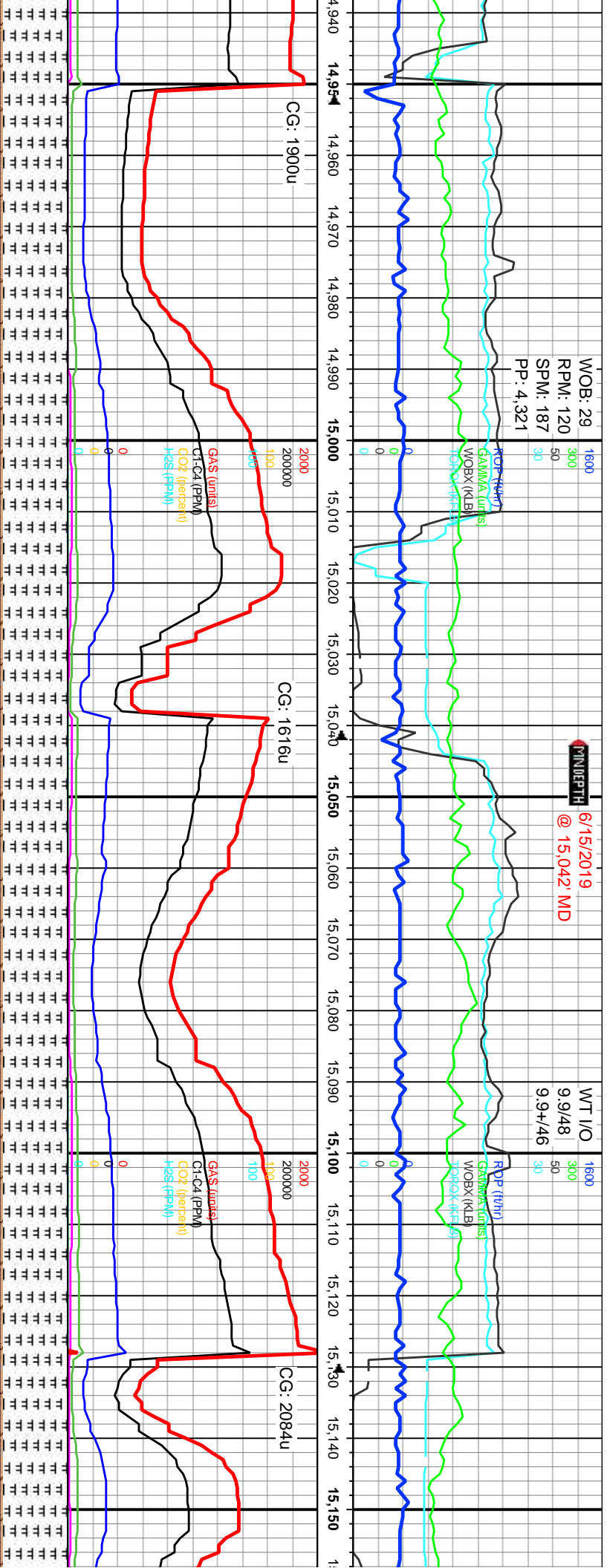
MD: 14,751'
Inclination: 90.4°
Azimuth: 177.6°
TVD: 6,344.05'
VS: 8,701.93'



90% MRLST: MDSTN, MED TO DI
GRITY TO GRITY TEX, DULL TC
LSTR, FRM TO SL HRD, SB BLKY
AMOR, SB FIS, CALC, SL SLTY IP
CHKY;
10% CHK, MED GY, SFT TO FRM
TO BLKY, CALC

MD: 14,930'
Inclination: 90.22°
Azimuth: 178.1°
TVD: 6,343.17'
VS: 8,880.56'





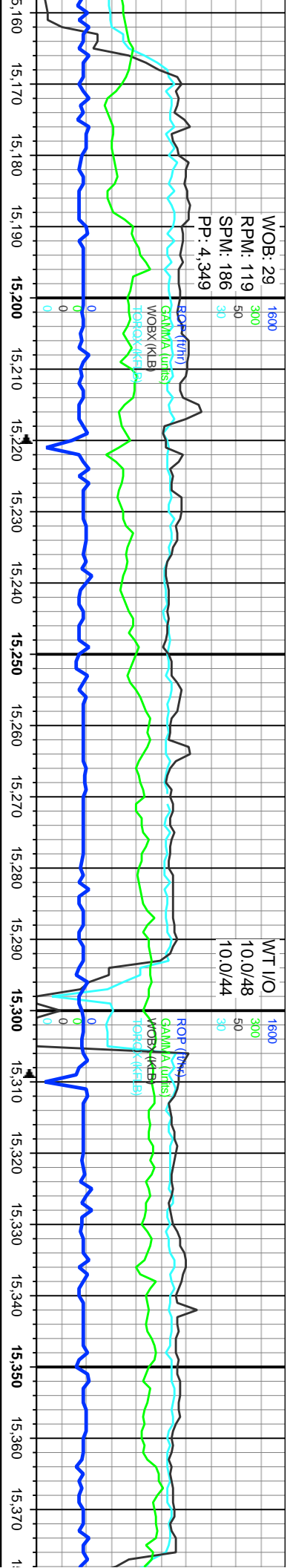
90% MRLST: MDSTN, DK GY, GRITTY TEX,
RTHY LSTR, FRM TO SL HRD, SB BLKY TO
BLKY, AMOR, SB FIS, CALC, SL SLTY IP, SL
CHKY;
10% CHK, MED GY, SFT TO FRM, SB BLKY
TO BLKY, CALC

90% MRLST: MDSTN, DK GY, BLK IP,
GRITTY TEX, DULL LSTR, FRM, SL HRD IP,
SB BLKY TO BLKY, AMOR, SB FIS, CALC,
SL SLTY IP, SL CHKY;
10% CHK, MED GY, SFT TO FRM, SB BLKY
CALC

MD: 15.020°
Inclination: 90.28°
Azimuth: 178.31°
TVD: 6.342.78°
VS: 8.970.43°

MD: 15.109°
Inclination: 90.4°
Azimuth: 178.68°
TVD: 6.342.25°
VS: 9.069.27°





90% MRLST, MDSTN, DK GY, GRITTY TEX,
DULL TO RTHY LSTR, FRM TO SL HRD,
SB BLKY TO BLKY, AMOR, SB FIS, FIS IP,
CALC, SL SLTY IP, SL CHKY,
10% CHK, MED GY, SFT TO FRM, SB BLKY
TO BLKY, CALC

100% MRLST; MDSTN, DK GY TO BLK,
SL GRTRY TEX, DULL TO RTHY LSTR,
FRM TO SL HRD, SB BLKY TO BLKY,
AMOR, SB FIS TO FIS, CALC, SL SLTY, SL
CHKY

MD: 15,198'
Inclination: 90.15°
Azimuth: 178.81°
TVD: 6,341.82'

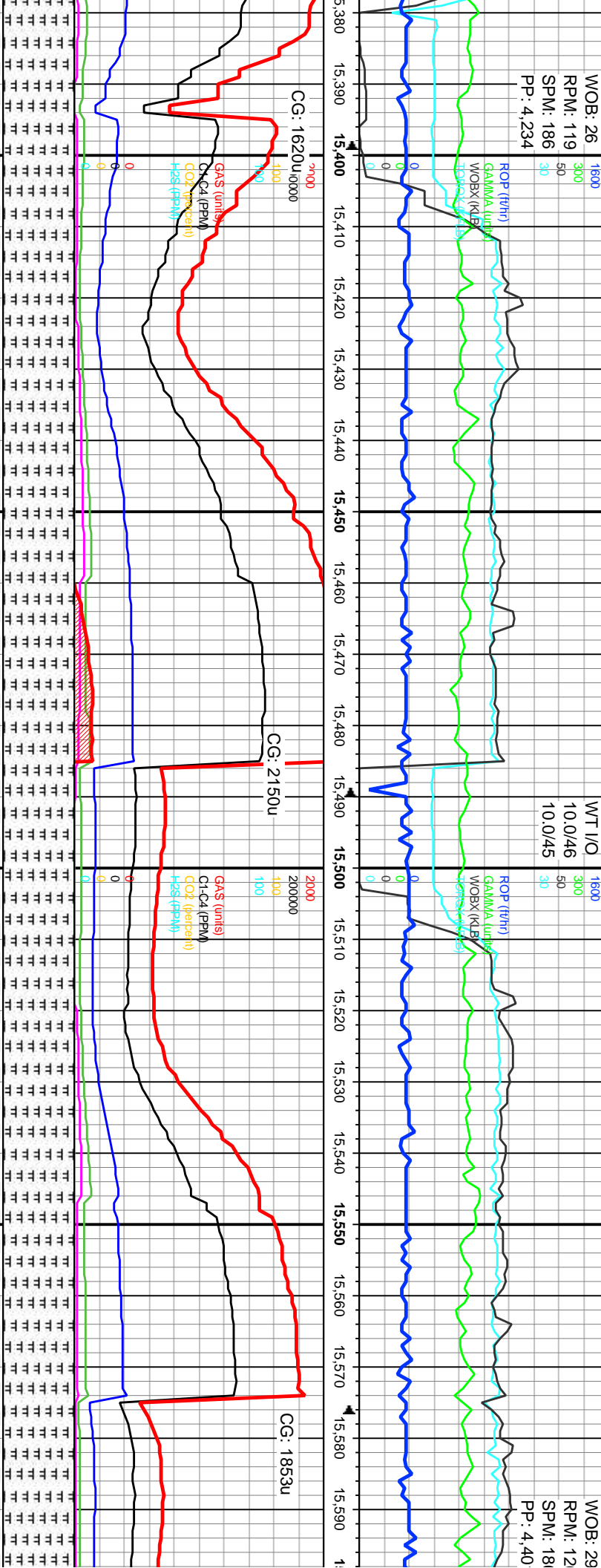
MD: 15,287'
Inclination: 90.28°
Azimuth: 178.46°
TVD: 6,341.49'

MD: 15,37
Inclination
Azimuth: 1
TVD: 6,34
VS: 9,326.

WOB: 26
RPM: 119
SPM: 186
PP: 4.234

WT I/O
10.0/46
10.0/45

WOB: 29
RPM: 12
SPM: 181
PP: 4.40



100% MRLST: MDSTN, DK GY TO BLK,
SL GRITTY TO GRITTY TEX, RTHY LSTR,
FRM TO SL HRD, SB BLKY TO BLKY,
AMOR, SB FIS TO FIS, CALC, SL SLTY, SL
CHKY, TR F DISSM PYR IP

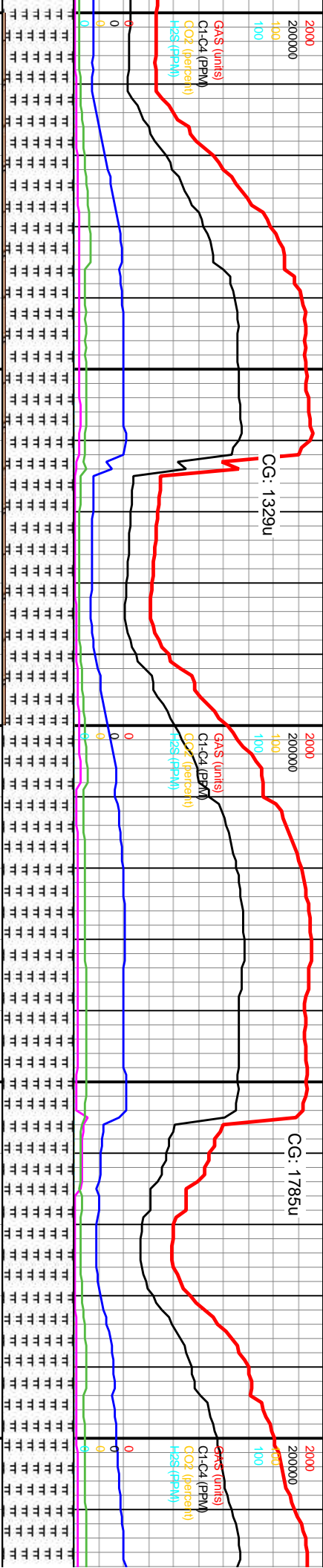
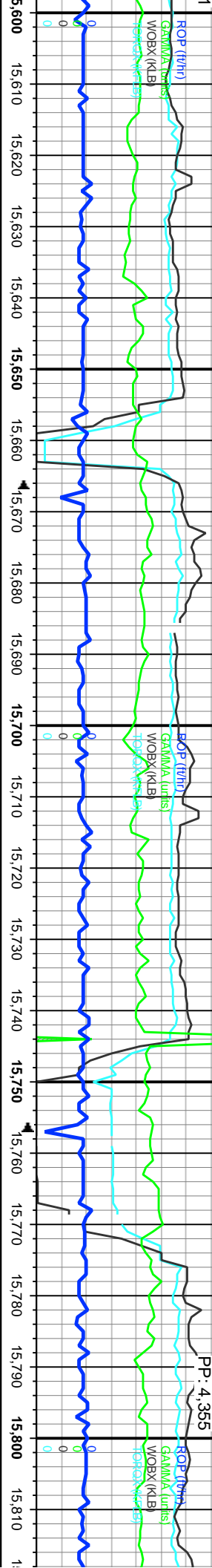
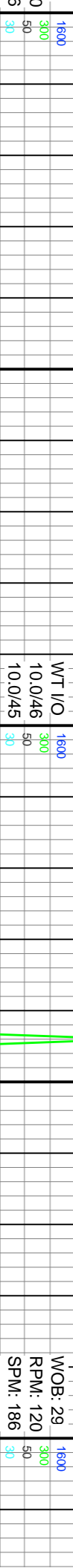
100% MRLST: MDSTN, DK GY TO BLK, SL
MOT IP, SL GRITTY TEX, RTHY LSTR, FRM
TO SL HRD, SB BLKY TO BLKY, AMOR,
SB FIS TO FIS, CALC, SL SLTY, SL CHKY,

MD: 15.466'
Inclination: 90.03°
Azimuth: 181.16°
TVD: 6.341.2'

MD: 15.555'
Inclination: 90.12°
Azimuth: 182.91°
TVD: 6.341.08'

VS: 9.415.33'

VS: 9.503.67'



95% MRLST: MDSTN, MED TO DK GY, SL GRITTY TEX, RTHY LSTR, FRM TO SL HRD, SB BLKY, AMOR, SB FIS TO FIS, CALC, SL SLTY IP, SL CHKY, 5% CHK, MED GY, SFT TO FRM, SB BLKY TO BLKY, CALC

100% MRLST: MDSTN, MED TO DK GY, SWE BLK, SL GRITTY TO GRITTY TEX, DULL LSTR, FRM TO SL HRD, SB BLKY, AMOR, SB FIS TO FIS, CALC, SL SLTY IP, SL CHKY, TR CAL FRAC FL IP

100% MRLST: SL GRITTY TEX FRM TO SL HRD BLKY, AMOR, SLTY IP, SL CH

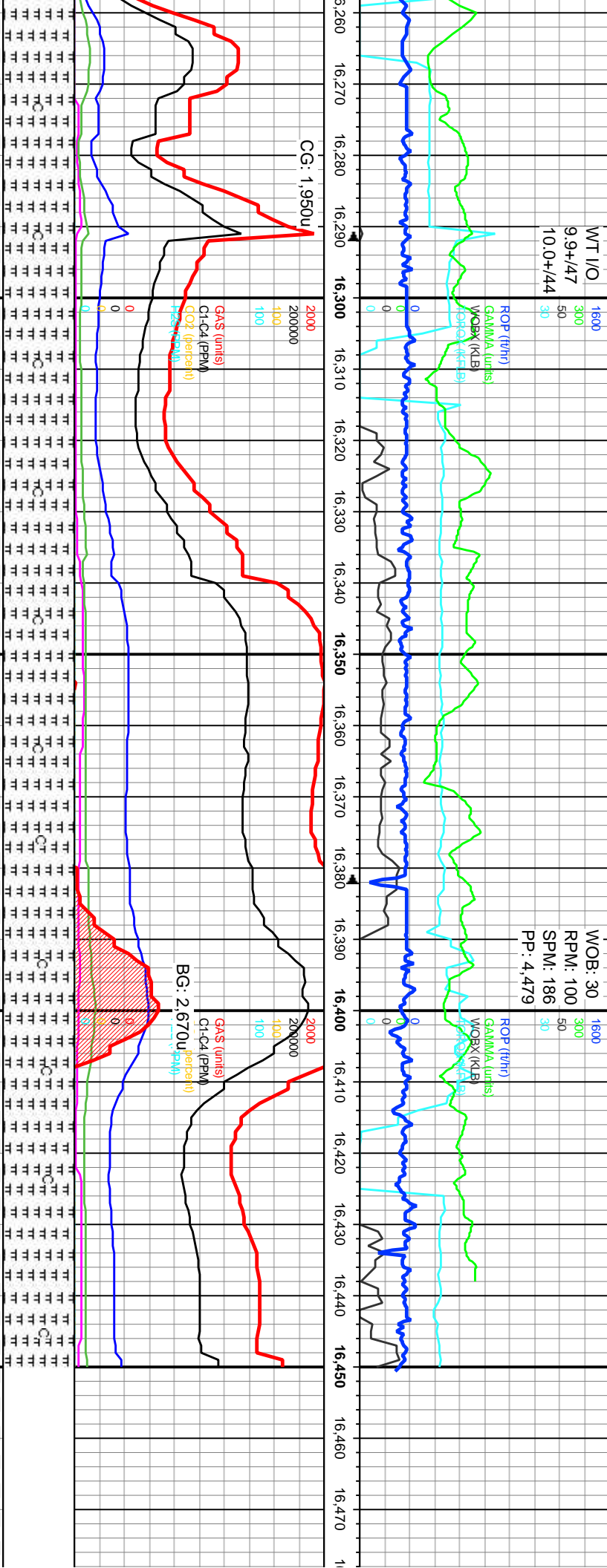
MD: 15.645'
Inclination: 90.34°
Azimuth: 183.42°
TVD: 6,340.72'
VS: 9,592.78'

MD: 15.734'
Inclination: 90.22°
Azimuth: 181.48°
TVD: 6,340.29'
VS: 9,681.04'



WT I/O
9.9+/-47
10.0+/-44

WOB: 30
RPM: 100
SPM: 186
PP: 4.479



100% MRLST: MDSTN, DK GY TO BLK IP,
SM TO SL GRITTY TEX. DL TO RTHY LSTR,
FRM, SB BLKY TO BLKY, AMOR, SB FIS TO
FIS, CALC, SL SLTY IP, TR CHLK

100% MRLST: MDSTN, DK GY TO BLK IP,
SM TO SL GRITTY TEX. DL TO RTHY LSTR,
FRM, SB BLKY TO BLKY, AMOR, SB FIS TO
FIS, CALC, SL SLTY IP, TR CHLK

TD WELL
MD ON 6

MD: 16,269'
Inclination: 90.03°
Azimuth: 178.1°
TVD: 6,337.99'
VS: 10,214.8''

MD: 16,359'
Inclination: 89.94°
Azimuth: 178.86°
TVD: 6,338.01'
VS: 10,304.64''

MD: 16,427'
Inclination: 89.94°
Azimuth: 180.84°
TVD: 6,338.08'
VS: 10,372.4''

MD: 16,451'
Inclination: 89.94°
Azimuth: 180.84°
TVD: 6,338.11'
VS: 10,396.28''

