HORIZONTAL LITHOLOGY STRIP LOG

WellSight Systems

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name:	Hager 5-64-15-16-1BHZ		
API:	SEC 15 T5S R64W		
Location:	ARAPAHOE COUNTY, COLORADO, USA		
License Number:	05-005-07268	Region:	DJ BASIN
Spud Date:	July 4, 2018	Drilling Completed:	July 9, 2018
Surface Coordinates:	1650' FNL 3272' FEL 239.94 987.06		
Bottom Hole Coordinates:	EASTING NORTHING -9980.40-1237.58		
Ground Elevation (ft):	5934'	K.B. Elevation (ft):	5961'
Logged Interval (ft):	4800' To: TD	Total Depth (ft):	17967'
Formation:	NIOBRARA B CHALK		
Type of Drilling Fluid:	OBM		

Printed by HorizontalLog from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: TRUE OIL, LLC.
Address: TRUE OIL, LLC.
P.O. DRAWER 2360
CASPER, WY. 82602

GEOLOGIST

Name: Tyler Murphree & Kelley Reynolds
Company: Intermountain Wellsight Geologists
Address: P.O. BOX 4007
CASPER, WY. 82609

Cores

DSTs

Comments

ROCK TYPES

- Chlk
- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Congl
- Dol
- Gyp
- Igne
- Lmst
- Meta
- Mrlst
- Salt
- Shale
- Shcol
- Shgy
- Sltst
- Ss
- Till

ACCESSORIES

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg

TEXTURE

- BS Boundst
- C Chalky
- CX Cryxln
- E Earthy
- FX Finexln
- GS Grainst
- L Lithogr
- MX Microxln
- MS Mudst
- PS Packst
- WS Wackest

OTHER SYMBOLS

POROSITY

- E Earthy
- Fenest
- F Fracture
- X Inter
- Moldic
- O Organic
- P Pinpoint
- V Vuggy

SORTING

- W Well
- M Moderate
- P Poor

ROUNDING

- R Rounded
- r Subrnd
- a Subang
- A Angular

OIL SHOW

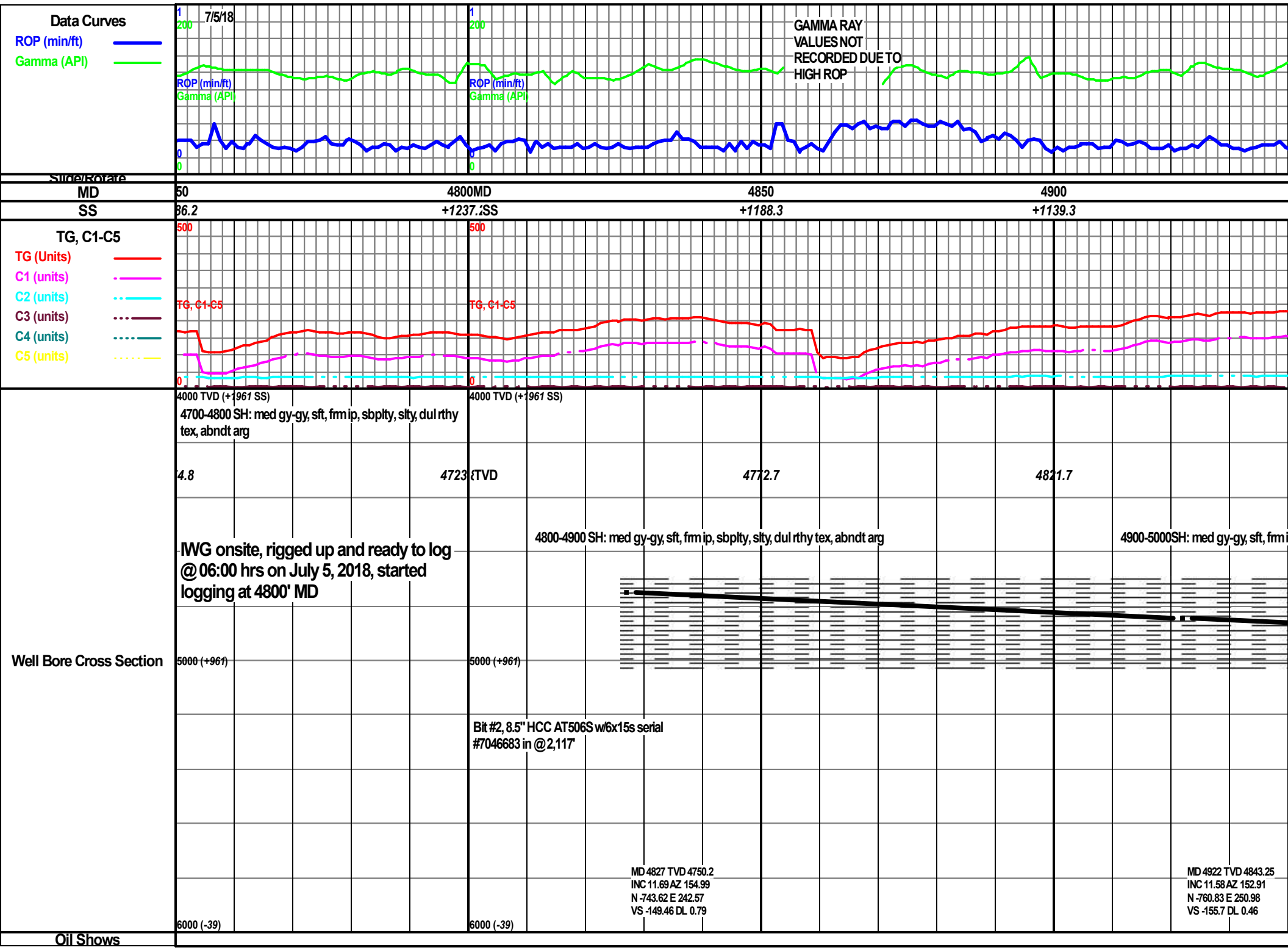
- Even
- Spotted
- Ques
- D Dead

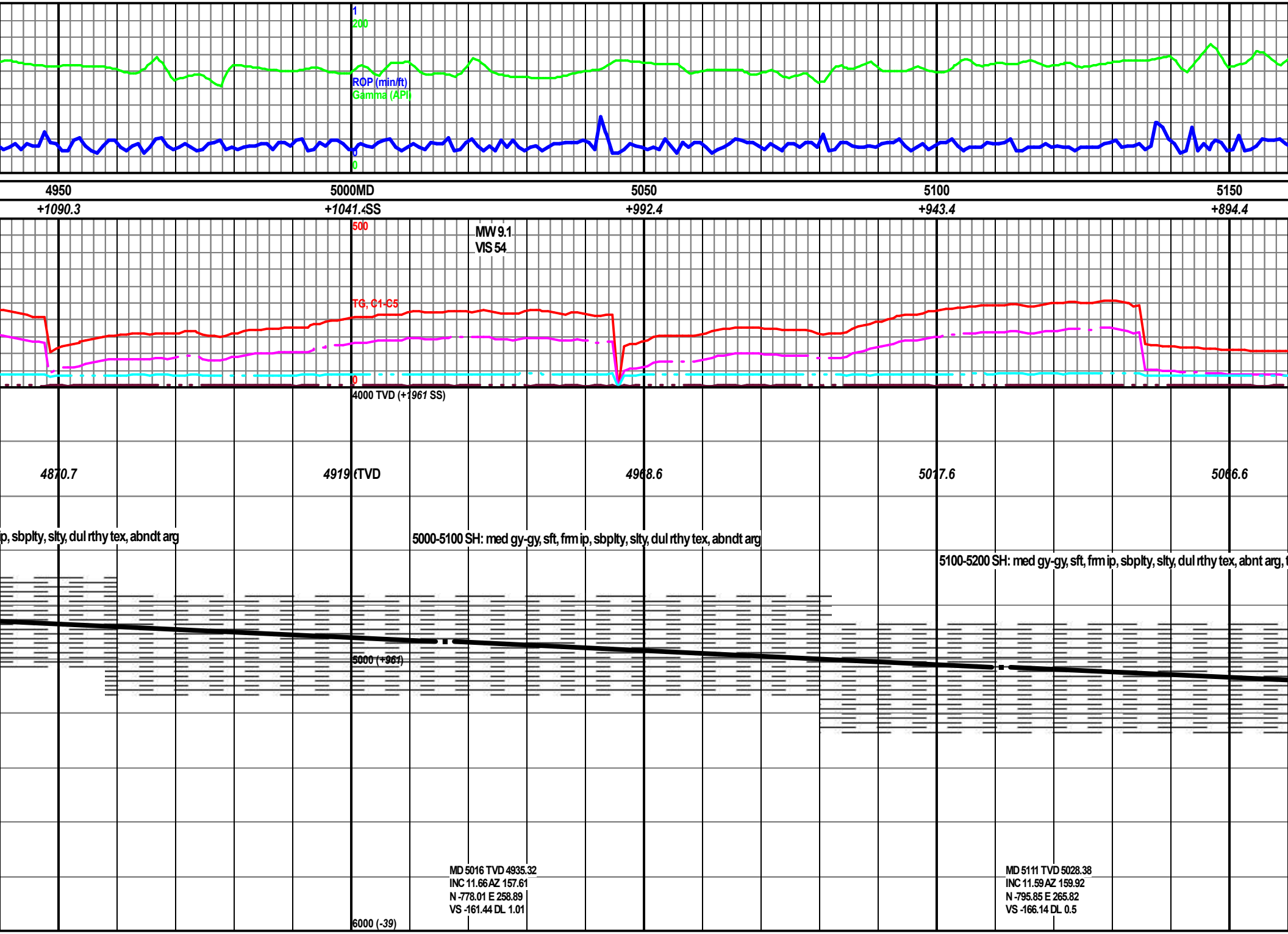
INTERVAL

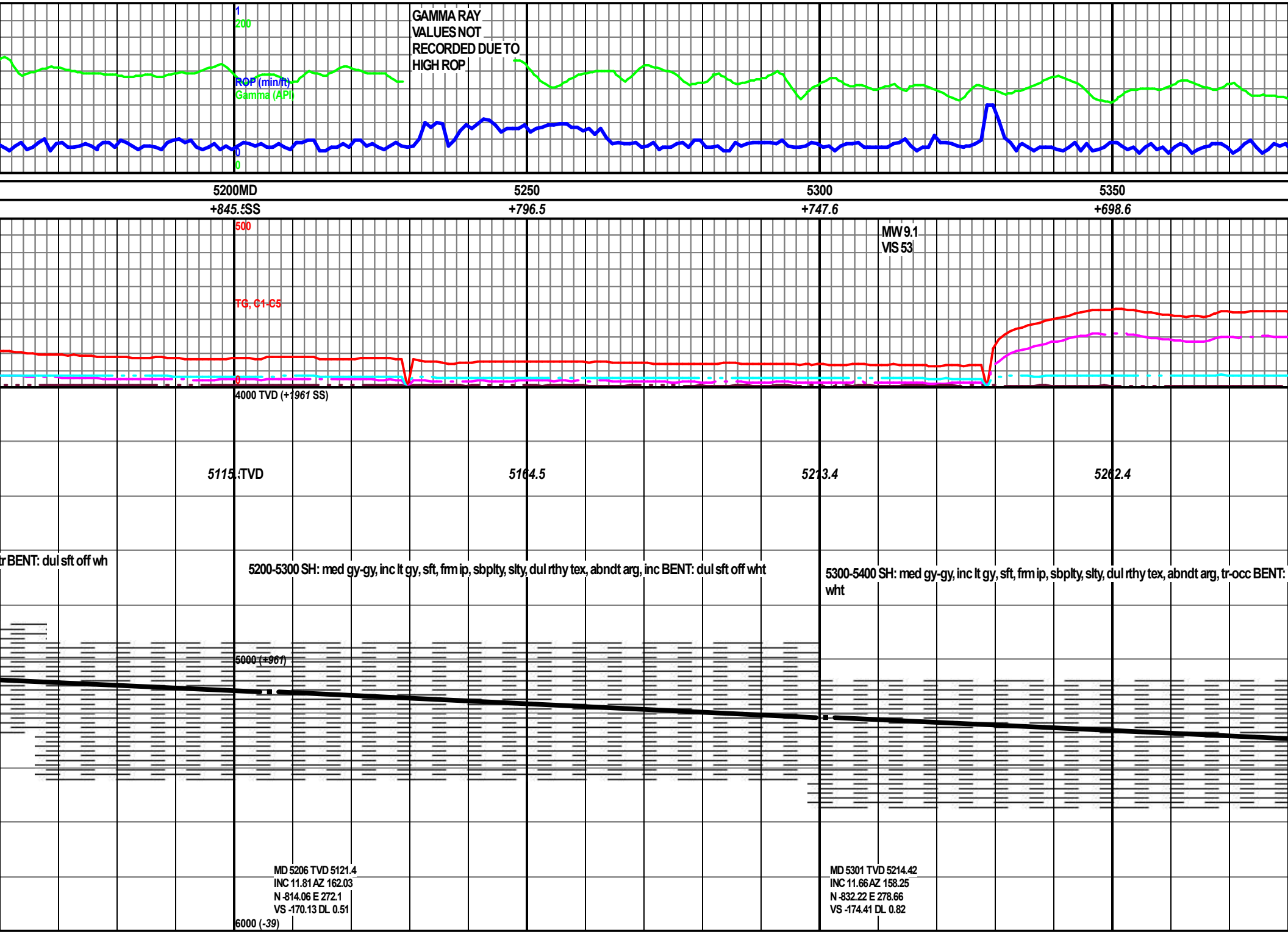
- Core
- Dst

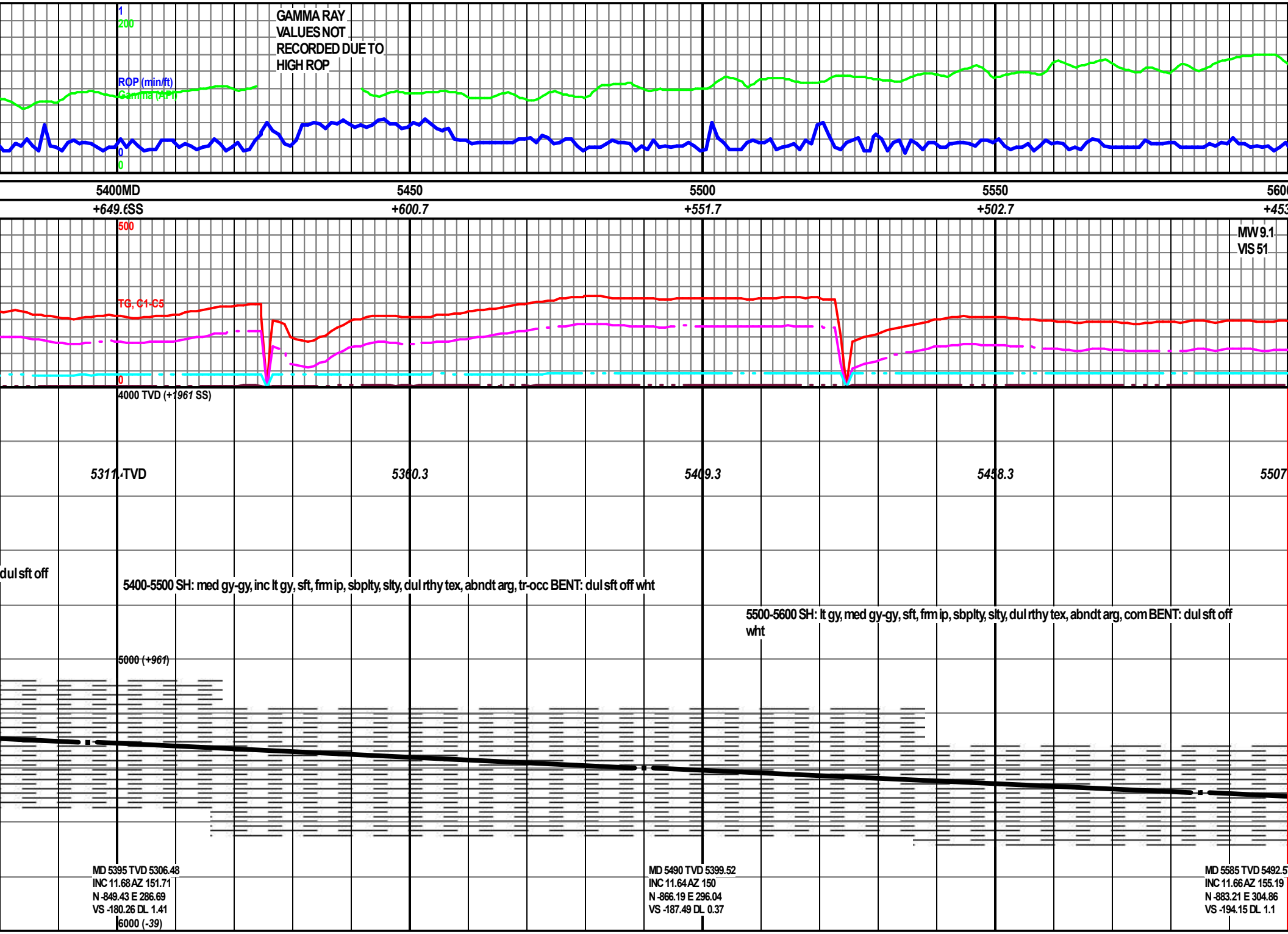
EVENT

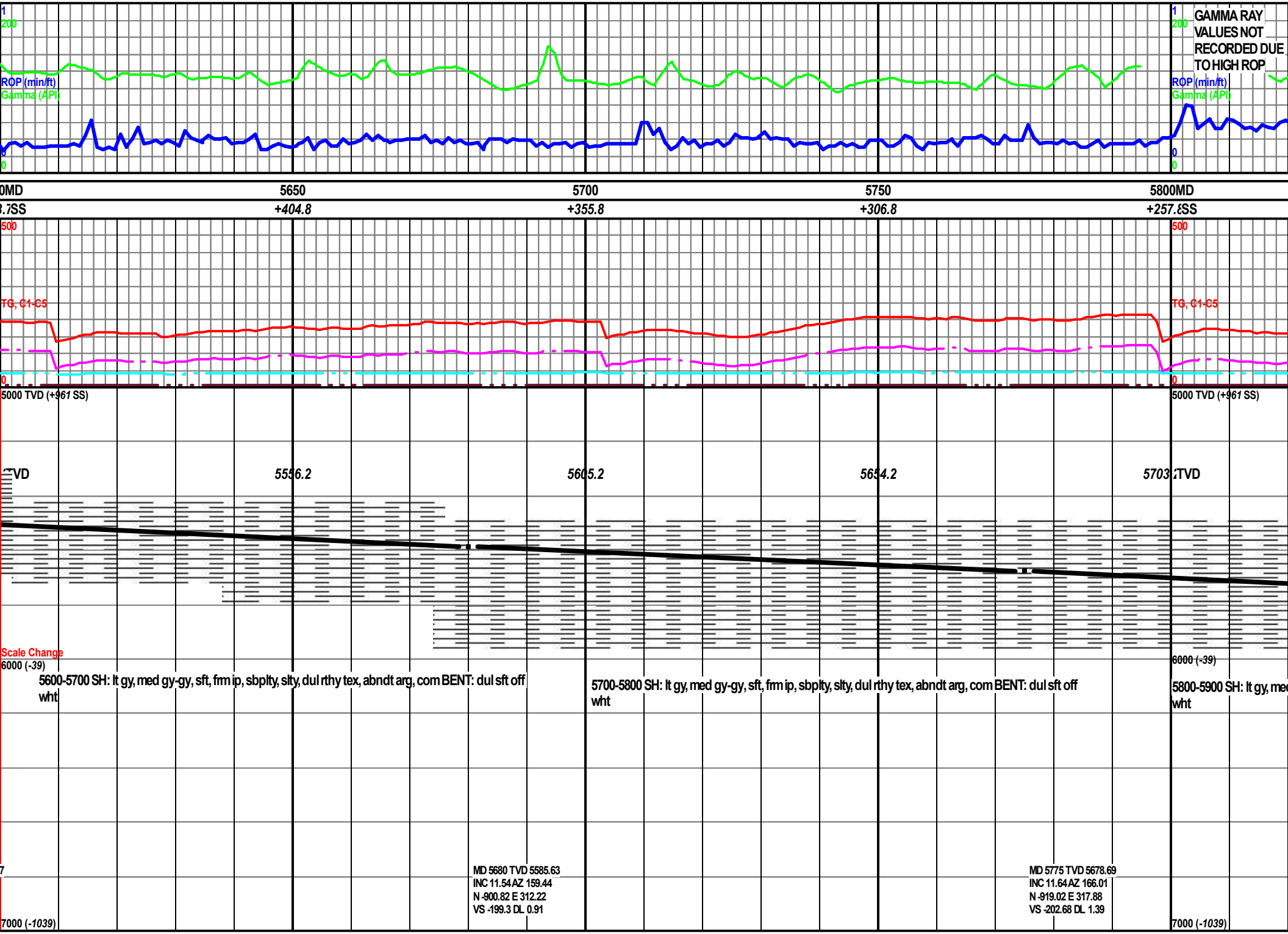
- Rft
- Sidewall

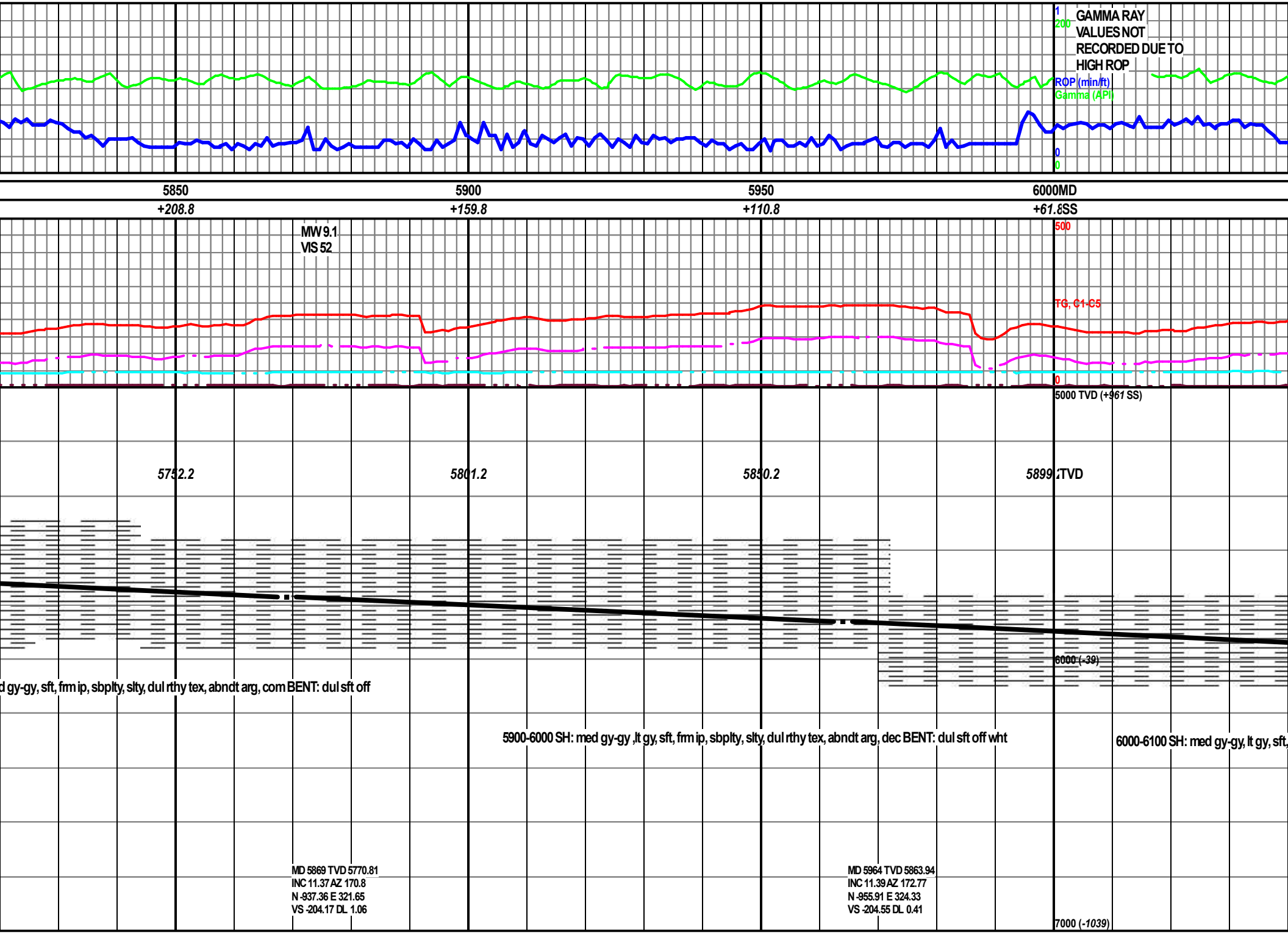

Data Curves
ROP (min/ft)
Gamma (API)
7/5/18
GAMMA RAY VALUES NOT RECORDED DUE TO HIGH ROP
Slide/Rotate
MD
50
4800MD
4850
4900
SS
86.2
+1237.2SS
+1188.3
+1139.3
TG, C1-C5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
C5 (units)
4000 TVD (+1961 SS)
4700-4800 SH: med gy-gy, sft, frm ip, sbplty, slty, dul rthy tex, abndt arg
4723.8
4772.7
4821.7
IWG onsite, rigged up and ready to log @ 06:00 hrs on July 5, 2018, started logging at 4800' MD
4800-4900 SH: med gy-gy, sft, frm ip, sbplty, slty, dul rthy tex, abndt arg
4900-5000SH: med gy-gy, sft, frm i
Well Bore Cross Section
5000 (+961)
Bit #2, 8.5" HCC AT506S w/6x15s serial #7046683 in @ 2,117'
MD 4827 TVD 4750.2
INC 11.69 AZ 154.99
N -743.62 E 242.57
VS -149.46 DL 0.79
MD 4922 TVD 4843.25
INC 11.58 AZ 152.91
N -760.83 E 250.98
VS -155.7 DL 0.46
6000 (-39)
Oil Shows

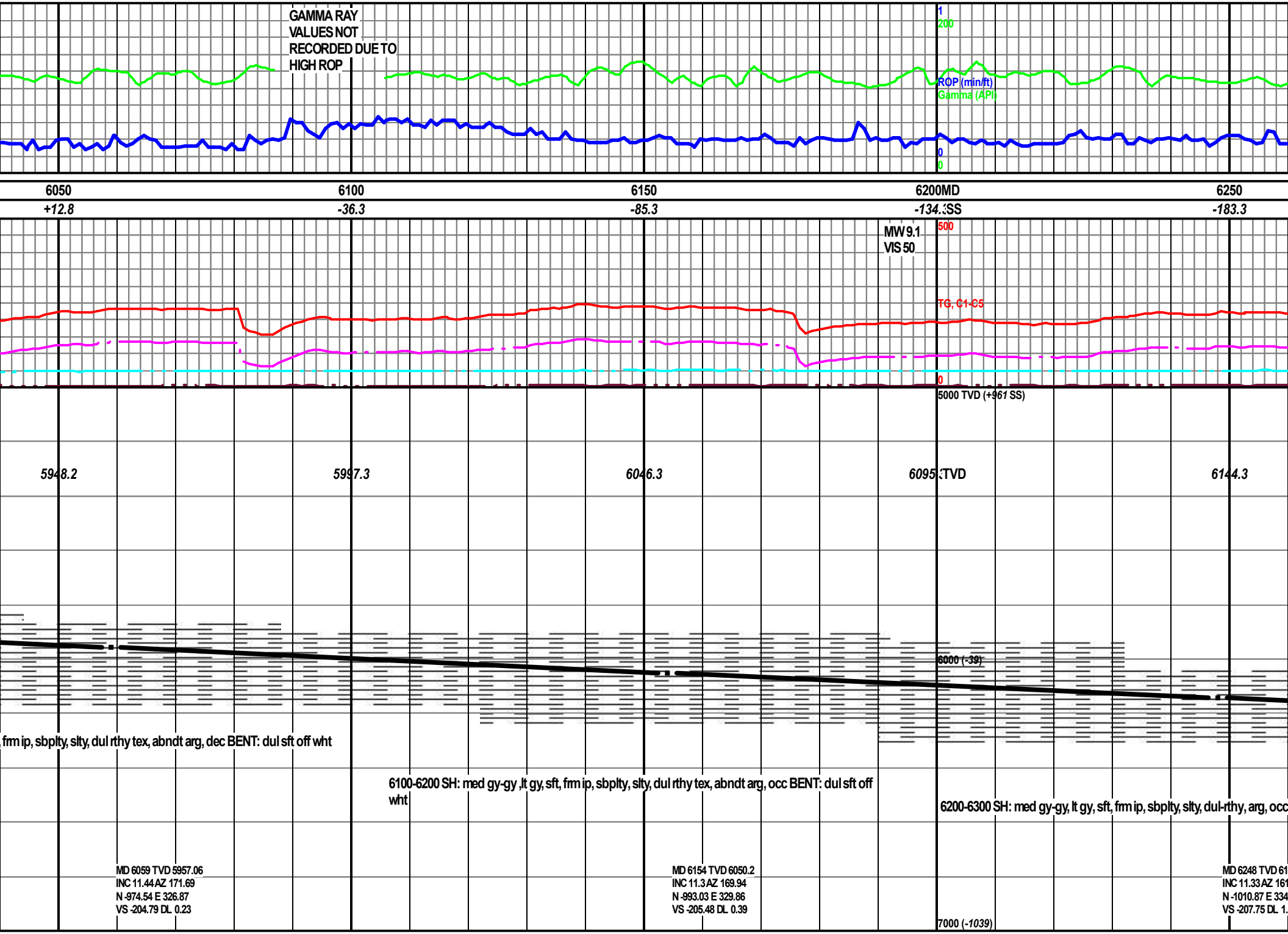

1
200
ROP (min/ft)
Gamma (API)
0
0
4950
5000MD
5050
5100
5150
+1090.3
+1041.4SS
+992.4
+943.4
+894.4
500
MW 9.1
VIS 54
TG, C1-C5
0
4000 TVD (+1961 SS)
4870.7
4919.4TVD
4968.6
5017.6
5066.6
ip, sbplty, slty, dul rthy tex, abndt arg
5000-5100 SH: med gy-gy, sft, frm ip, sbplty, slty, dul rthy tex, abndt arg
5100-5200 SH: med gy-gy, sft, frm ip, sbplty, slty, dul rthy tex, abnt arg, t
5000 (+961)
MD 5016 TVD 4935.32
INC 11.66 AZ 157.61
N -778.01 E 258.89
VS -161.44 DL 1.01
MD 5111 TVD 5028.38
INC 11.59 AZ 159.92
N -795.85 E 265.82
VS -166.14 DL 0.5
6000 (-39)

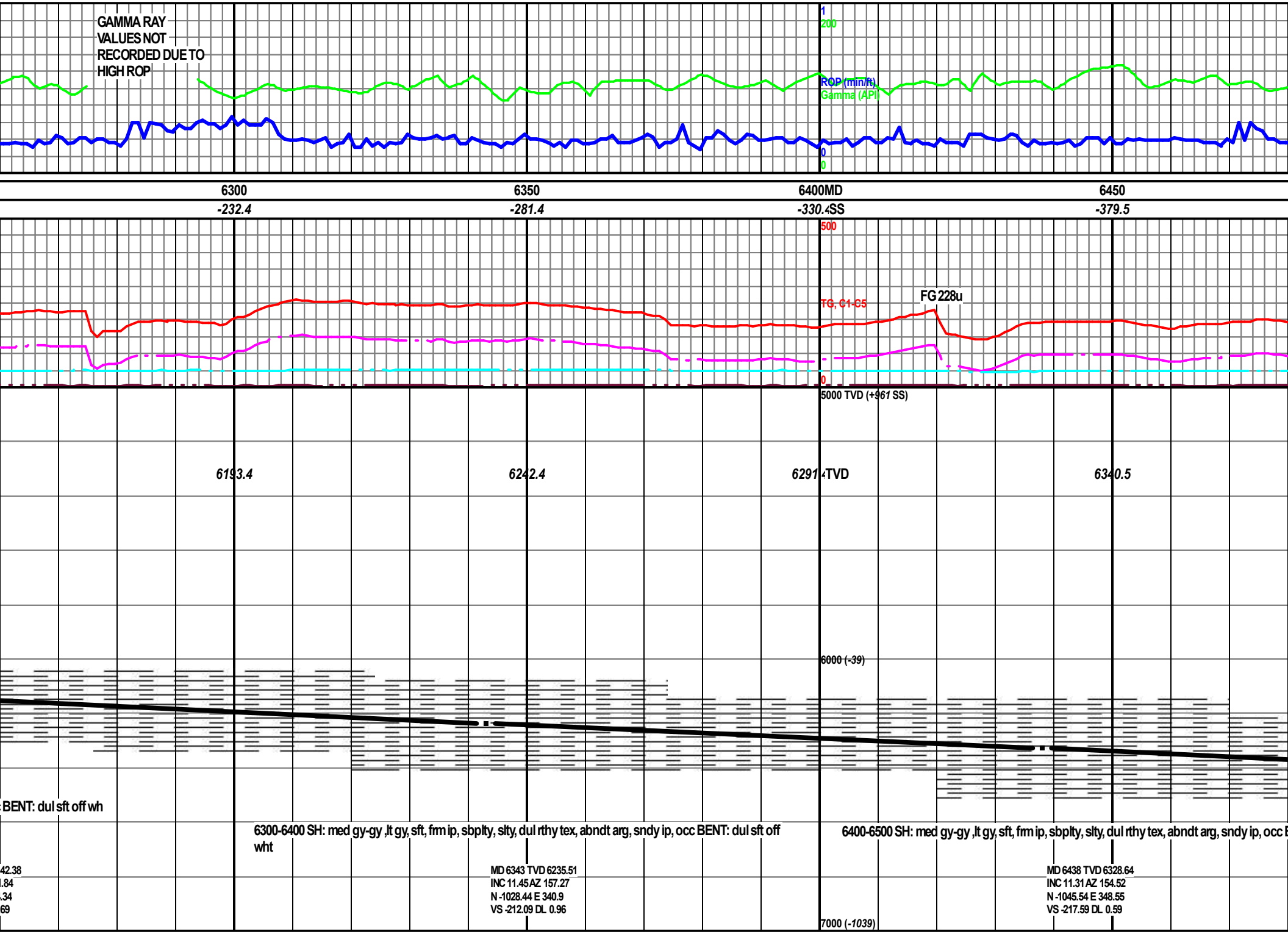

GAMMA RAY VALUES NOT RECORDED DUE TO HIGH ROP
1
200
ROP (min/ft)
Gamma (API)
0
0
5200MD
5250
5300
5350
+845.5SS
+796.5
+747.6
+698.6
500
TG, C1-C5
0
MW 9.1
VIS 53
4000 TVD (+1961 SS)
5115.5TVD
5164.5
5213.4
5262.4
tr BENT: dul sft off wh
5200-5300 SH: med gy-gy, inc lt gy, sft, frm ip, sbplty, slty, dul rthy tex, abndt arg, inc BENT: dul sft off wht
5300-5400 SH: med gy-gy, inc lt gy, sft, frm ip, sbplty, slty, dul rthy tex, abndt arg, tr-occ BENT: wht
5000 (+961)
MD 5206 TVD 5121.4
INC 11.81 AZ 162.03
N -814.06 E 272.1
VS -170.13 DL 0.51
6000 (-39)
MD 5301 TVD 5214.42
INC 11.66 AZ 158.25
N -832.22 E 278.66
VS -174.41 DL 0.82

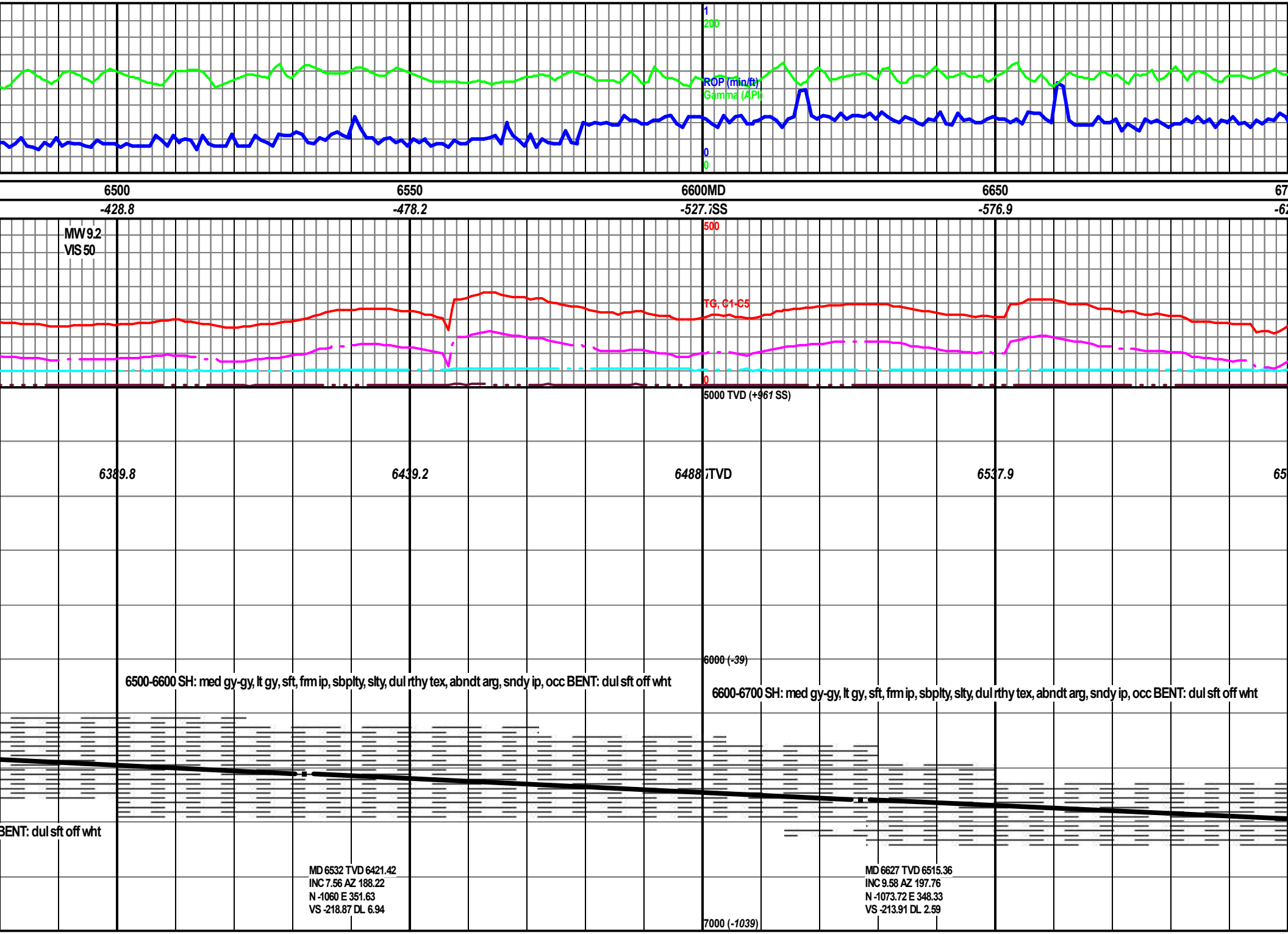

GAMMA RAY VALUES NOT RECORDED DUE TO HIGH ROP
1
200
ROP (min/ft)
Gamma (API)
0
0
5400MD
5450
5500
5550
+649.6SS
+600.7
+551.7
+502.7
500
MW 9.1
VIS 51
TG, C1-C5
0
4000 TVD (+1961 SS)
5311.4TVD
5360.3
5409.3
5458.3
dul sft off
5400-5500 SH: med gy-gy, inc lt gy, sft, frm ip, sbplty, slty, dul rthy tex, abndt arg, tr-occ BENT: dul sft off wht
5500-5600 SH: lt gy, med gy-gy, sft, frm ip, sbplty, slty, dul rthy tex, abndt arg, com BENT: dul sft off wht
5000 (+961)
MD 5395 TVD 5306.48
INC 11.68 AZ 151.71
N -849.43 E 286.69
VS -180.26 DL 1.41
6000 (-39)
MD 5490 TVD 5399.52
INC 11.64 AZ 150
N -866.19 E 296.04
VS -187.49 DL 0.37
MD 5585 TVD 5492.5
INC 11.66 AZ 155.19
N -883.21 E 304.86
VS -194.15 DL 1.1

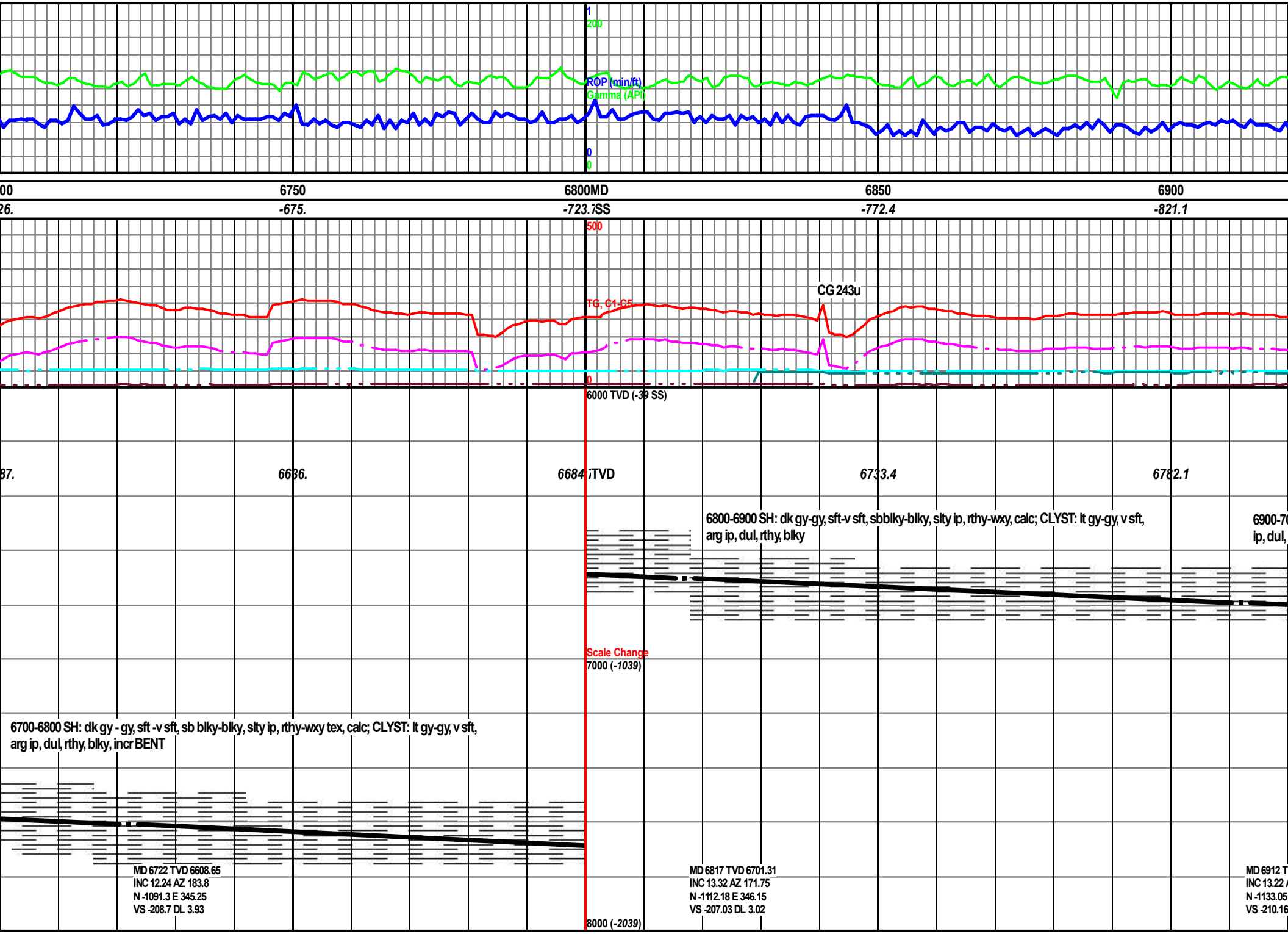

GAMMA RAY VALUES NOT RECORDED DUE TO HIGH ROP
ROP (min/ft)
Gamma (API)
0MD
5650
5700
5750
5800MD
+404.8
+355.8
+306.8
+257.6SS
TG, C1-C5
5000 TVD (+961 SS)
5556.2
5605.2
5654.2
Scale Change
6000 (-39)
5600-5700 SH: lt gy, med gy-gy, sft, frm ip, sbplty, slty, dul rthy tex, abndt arg, com BENT: dul sft off wht
5700-5800 SH: lt gy, med gy-gy, sft, frm ip, sbplty, slty, dul rthy tex, abndt arg, com BENT: dul sft off wht
5800-5900 SH: lt gy, med
MD 5680 TVD 5585.63
INC 11.54 AZ 159.44
N -900.82 E 312.22
VS -199.3 DL 0.91
MD 5775 TVD 5678.69
INC 11.64 AZ 166.01
N -919.02 E 317.88
VS -202.68 DL 1.39
7000 (-1039)

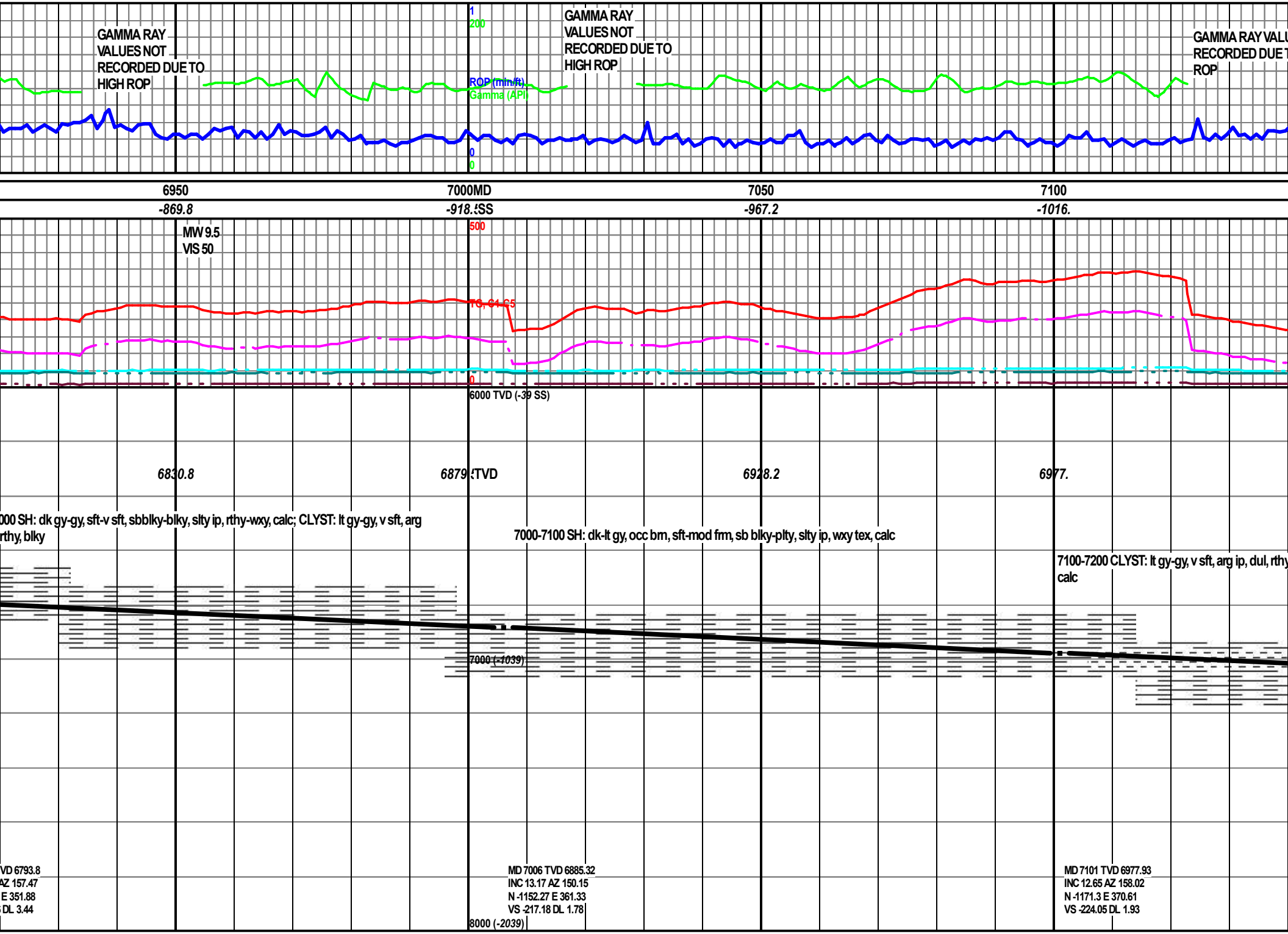

GAMMA RAY
VALUES NOT
RECORDED DUE TO
HIGH ROP
1
200
ROP (min/ft)
Gamma (API)
0
0
5850
5900
5950
6000MD
+208.8
+159.8
+110.8
+61.8SS
MW 9.1
VIS 52
500
TG, C1-C5
0
5000 TVD (+961 SS)
5752.2
5801.2
5850.2
5899.2TVD
6000 (-39)
d gy-gy, sft, frm ip, sbplty, slty, dul rthy tex, abndt arg, com BENT: dul sft off
5900-6000 SH: med gy-gy ,lt gy, sft, frm ip, sbplty, slty, dul rthy tex, abndt arg, dec BENT: dul sft off wht
6000-6100 SH: med gy-gy, lt gy, sft,
MD 5869 TVD 5770.81
INC 11.37 AZ 170.8
N -937.36 E 321.65
VS -204.17 DL 1.06
MD 5964 TVD 5863.94
INC 11.39 AZ 172.77
N -955.91 E 324.33
VS -204.55 DL 0.41
7000 (-1039)

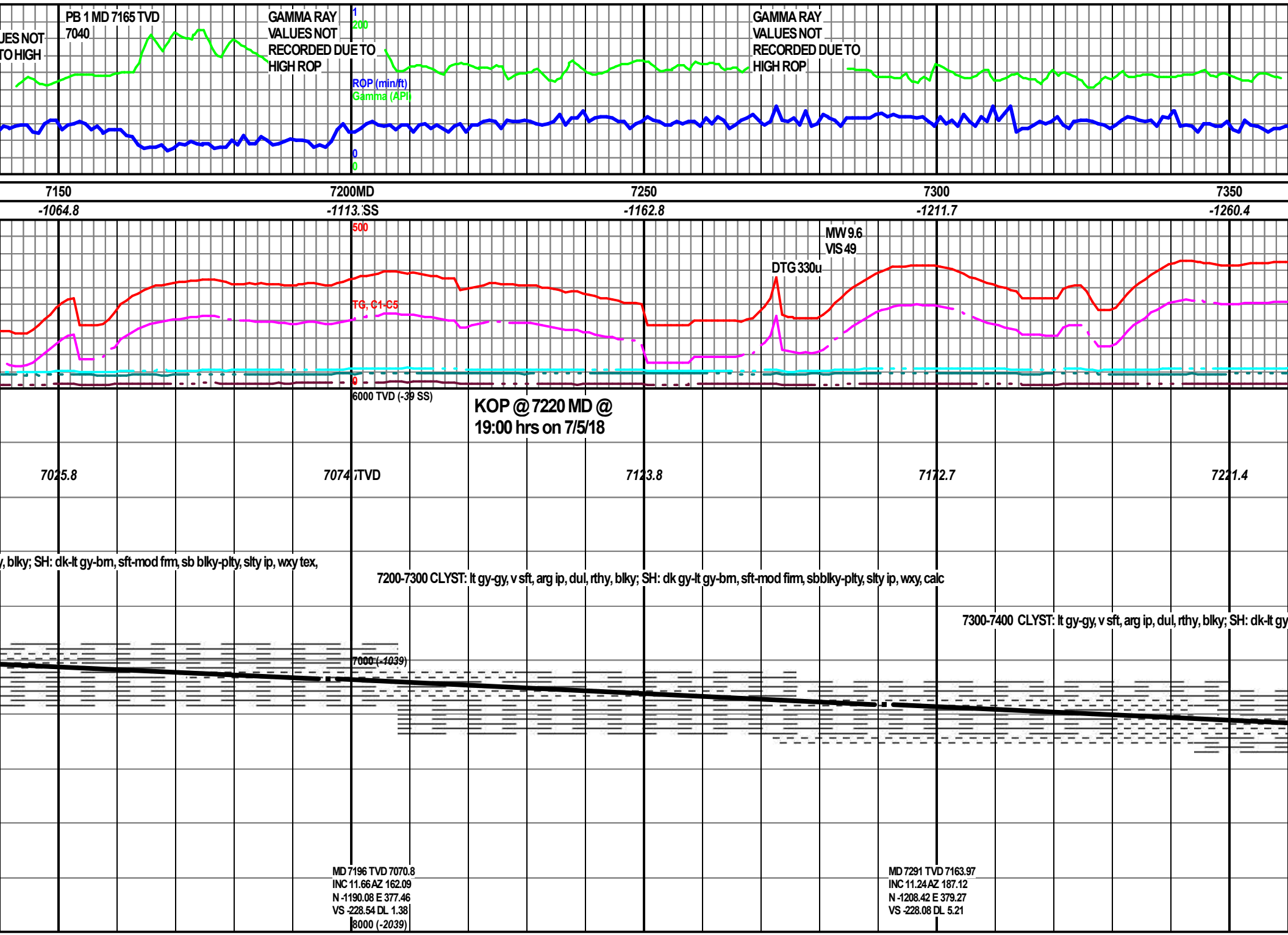

GAMMA RAY
VALUES NOT
RECORDED DUE TO
HIGH ROP
1
200
ROP (min/ft)
Gamma (API)
0
0
6050
6100
6150
6200MD
6250
+12.8
-36.3
-85.3
-134.3SS
-183.3
MW 9.1
VIS 50
500
TG, C1-C5
0
5000 TVD (+961 SS)
5948.2
5997.3
6046.3
6095.3TVD
6144.3
6000 (-39)
frm ip, sbplty, slty, dul rthy tex, abndt arg, dec BENT: dul sft off wht
6100-6200 SH: med gy-gy ,lt gy, sft, frm ip, sbplty, slty, dul rthy tex, abndt arg, occ BENT: dul sft off wht
6200-6300 SH: med gy-gy, lt gy, sft, frm ip, sbplty, slty, dul-rthy, arg, occ
MD 6059 TVD 5957.06
INC 11.44 AZ 171.69
N -974.54 E 326.87
VS -204.79 DL 0.23
MD 6154 TVD 6050.2
INC 11.3 AZ 169.94
N -993.03 E 329.86
VS -205.48 DL 0.39
MD 6248 TVD 61
INC 11.33 AZ 161
N -1010.87 E 334
VS -207.75 DL 1.
7000 (-1039)

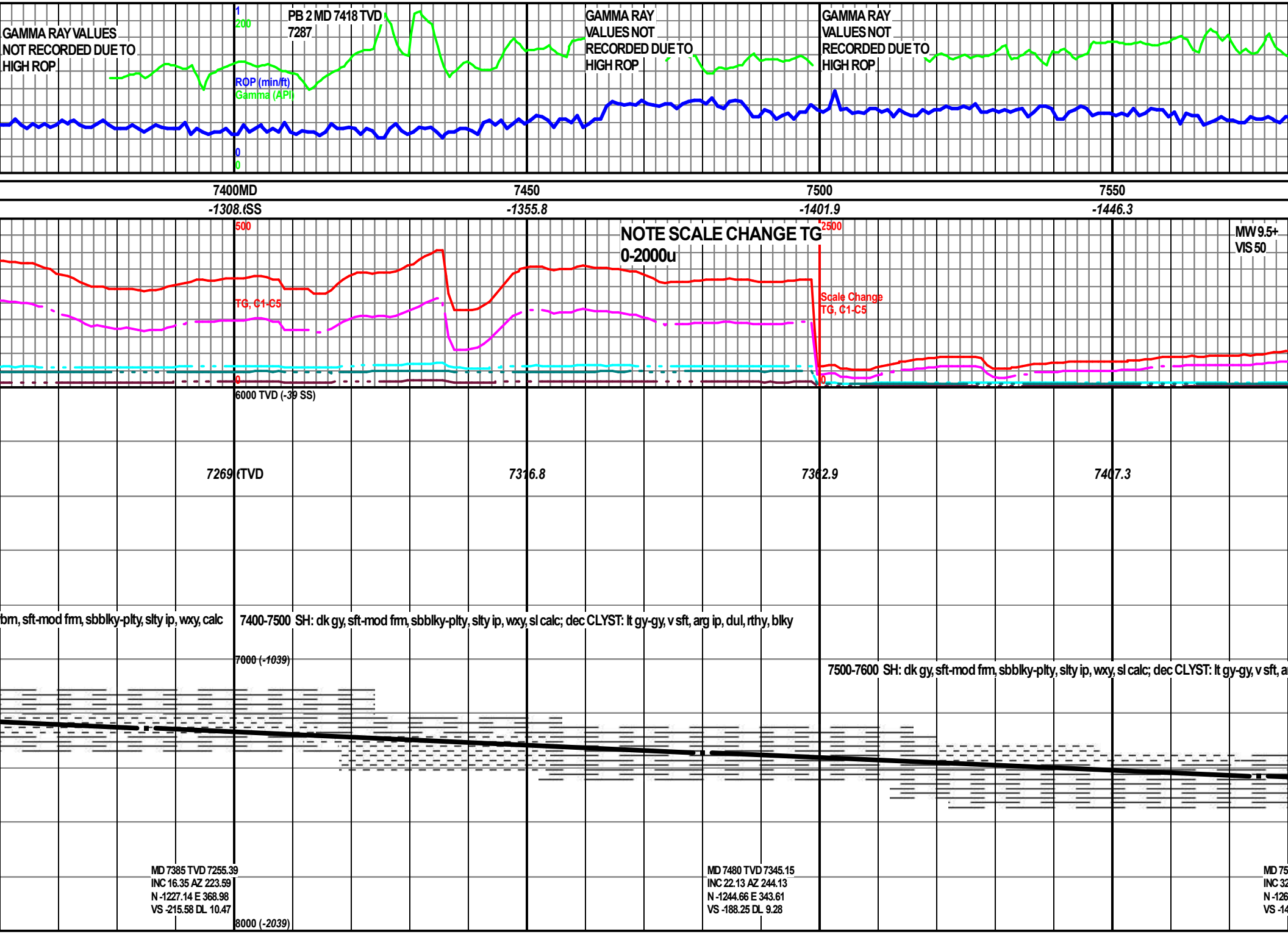

GAMMA RAY VALUES NOT RECORDED DUE TO HIGH ROP
1
200
ROP (min/ft)
Gamma (API)
0
0
6300
6350
6400MD
6450
-232.4
-281.4
-330.4SS
-379.5
500
TG, C1-C5
FG 228u
0
5000 TVD (+961 SS)
6193.4
6242.4
6291.4TVD
6340.5
6000 (-39)
BENT: dul sft off wh
6300-6400 SH: med gy-gy ,lt gy, sft, frm ip, sbplty, slty, dul rthy tex, abndt arg, sndy ip, occ BENT: dul sft off wht
6400-6500 SH: med gy-gy ,lt gy, sft, frm ip, sbplty, slty, dul rthy tex, abndt arg, sndy ip, occ B
42.38
.84
.34
69
MD 6343 TVD 6235.51
INC 11.45 AZ 157.27
N -1028.44 E 340.9
VS -212.09 DL 0.96
MD 6438 TVD 6328.64
INC 11.31 AZ 154.52
N -1045.54 E 348.55
VS -217.59 DL 0.59
7000 (-1039)

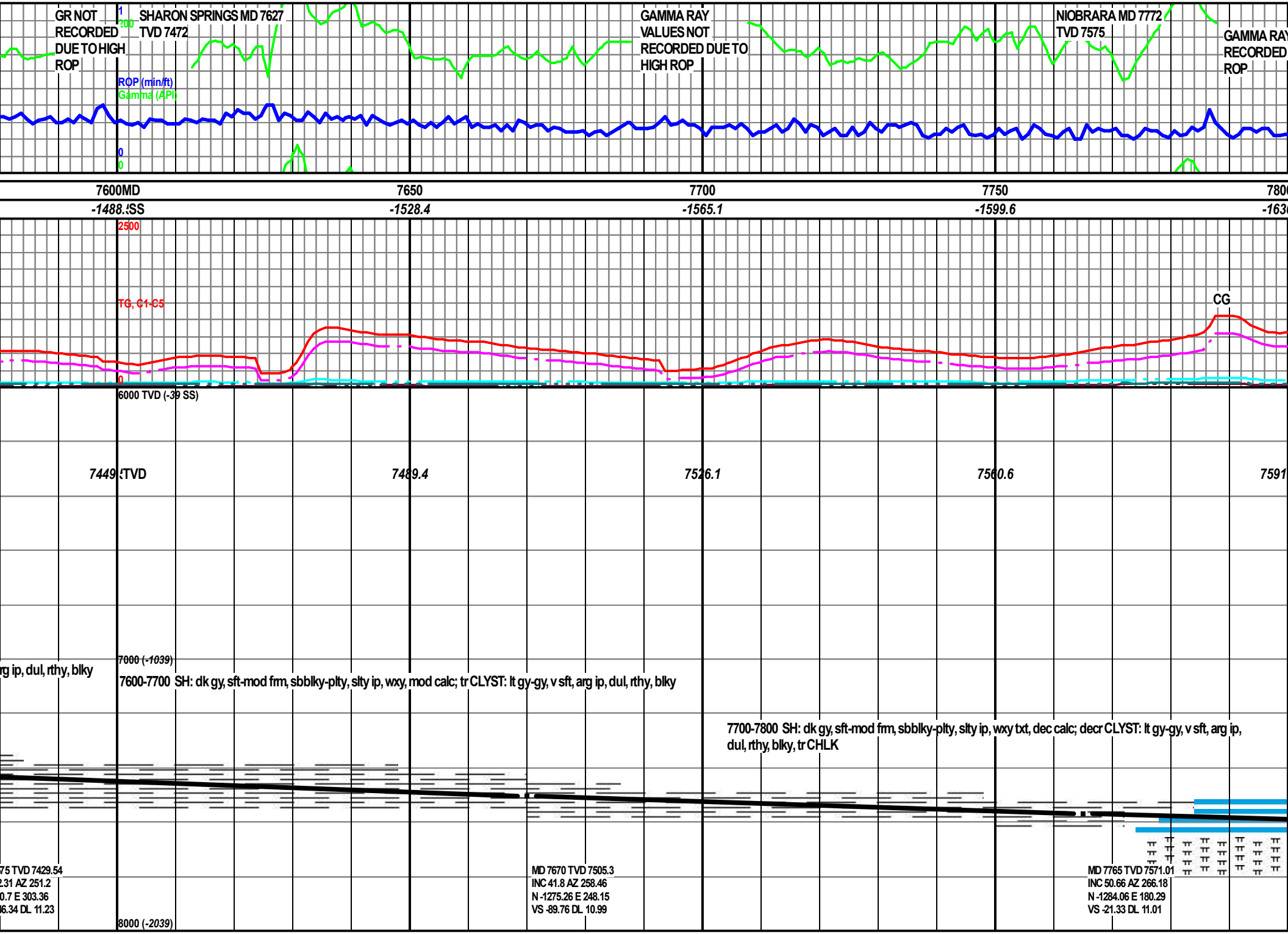

1
200
ROP (min/ft)
Gamma (API)
0
0
6500
6550
6600MD
6650
-428.8
-478.2
-527.7SS
-576.9
MW 9.2
VIS 50
500
TG, C1-C5
0
5000 TVD (+961 SS)
6389.8
6439.2
6488.7TVD
6537.9
6000 (-39)
6500-6600 SH: med gy-gy, lt gy, sft, frm ip, sbplty, slty, dul rthy tex, abndt arg, sndy ip, occ BENT: dul sft off wht
6600-6700 SH: med gy-gy, lt gy, sft, frm ip, sbplty, slty, dul rthy tex, abndt arg, sndy ip, occ BENT: dul sft off wht
BENT: dul sft off wht
MD 6532 TVD 6421.42
INC 7.56 AZ 188.22
N -1060 E 351.63
VS -218.87 DL 6.94
MD 6627 TVD 6515.36
INC 9.58 AZ 197.76
N -1073.72 E 348.33
VS -213.91 DL 2.59
7000 (-1039)

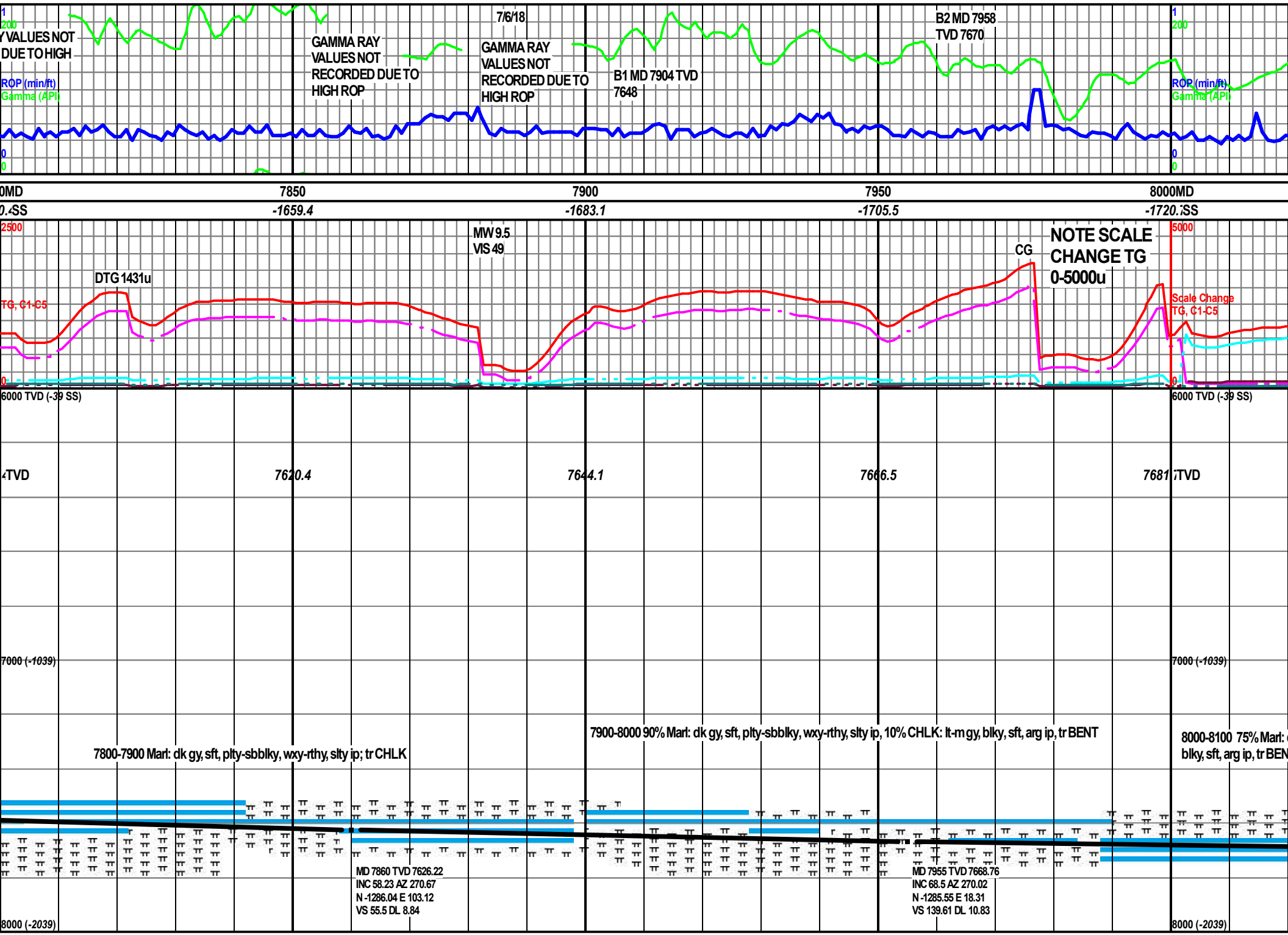

1
200
ROP (min/ft)
Gamma (API)
0
0
00
6750
6800MD
6850
6900
26.
-675.
-723.7SS
-772.4
-821.1
500
TG, C1-C5
CG 243u
0
6000 TVD (-39 SS)
87.
6636.
6684.7TVD
6733.4
6782.1
6800-6900 SH: dk gy-gy, sft-v sft, sbblky-blky, slty ip, rthy-wxy, calc; CLYST: lt gy-gy, v sft, arg ip, dul, rthy, blky
6900-7
ip, dul,
Scale Change
7000 (-1039)
6700-6800 SH: dk gy - gy, sft -v sft, sb blky-blky, slty ip, rthy-wxy tex, calc; CLYST: lt gy-gy, v sft, arg ip, dul, rthy, blky, incr BENT
MD 6722 TVD 6608.65
INC 12.24 AZ 183.8
N -1091.3 E 345.25
VS -208.7 DL 3.93
MD 6817 TVD 6701.31
INC 13.32 AZ 171.75
N -1112.18 E 346.15
VS -207.03 DL 3.02
MD 6912 T
INC 13.22 A
N -1133.05
VS -210.16
8000 (-2039)

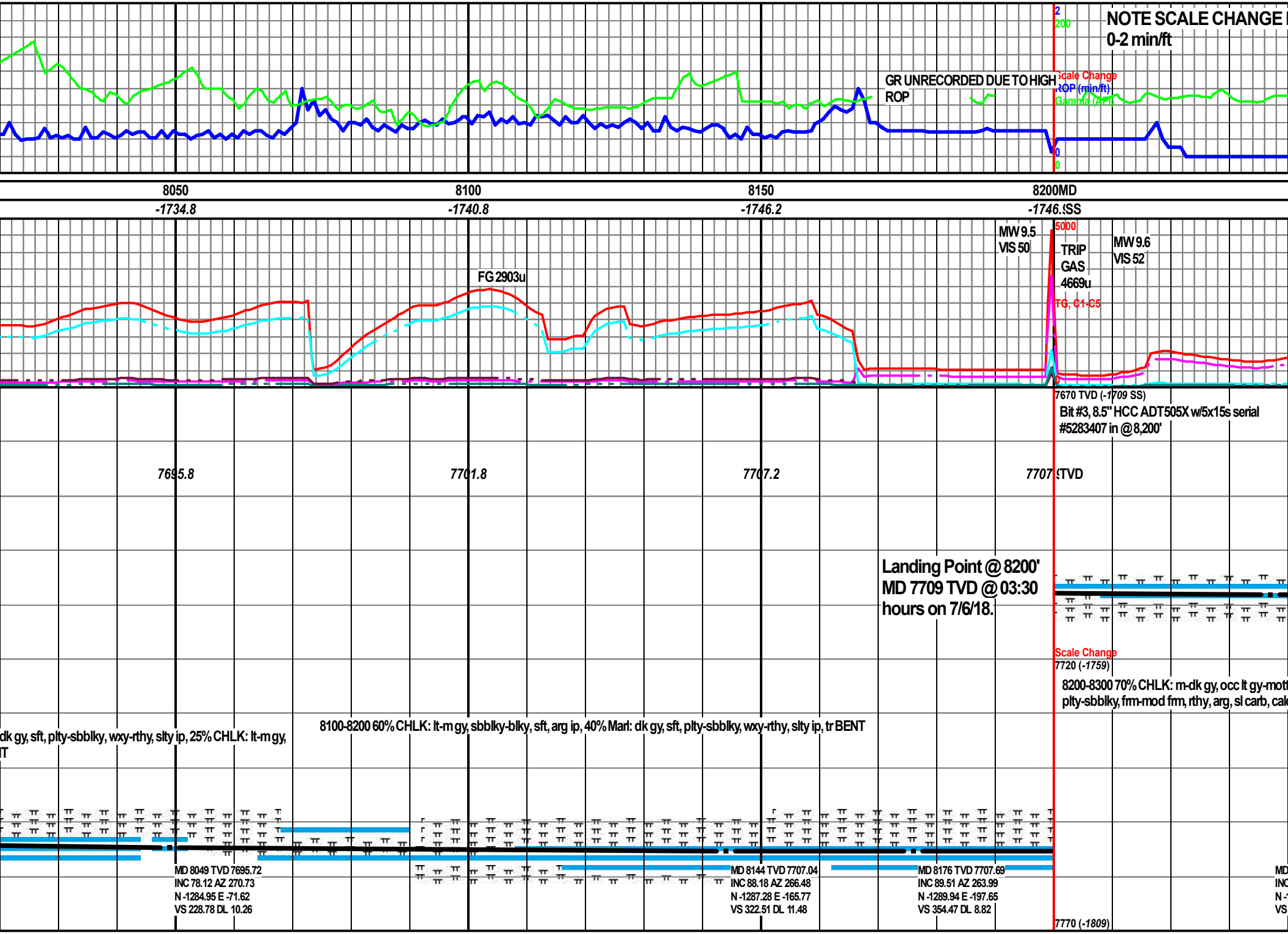

GAMMA RAY VALUES NOT RECORDED DUE TO HIGH ROP
1
200
ROP (min/ft)
Gamma (API)
0
0
GAMMA RAY VALUES NOT RECORDED DUE TO HIGH ROP
GAMMA RAY VALU
RECORDED DUE T
ROP
6950
7000MD
7050
7100
-869.8
-918.
SS
-967.2
-1016.
MW 9.5
VIS 50
500
TG, C1-C5
0
6000 TVD (-39 SS)
6830.8
6879.
TVD
6928.2
6977.
000 SH: dk gy-gy, sft-v sft, sbblky-blky, slty ip, rthy-wxy, calc; CLYST: lt gy-gy, v sft, arg
rthy, blky
7000-7100 SH: dk-lt gy, occ brn, sft-mod frm, sb blky-plty, slty ip, wxy tex, calc
7100-7200 CLYST: lt gy-gy, v sft, arg ip, dul, rthy
calc
7000 (-1039)
VD 6793.8
AZ 157.47
E 351.88
DL 3.44
MD 7006 TVD 6885.32
INC 13.17 AZ 150.15
N -1152.27 E 361.33
VS -217.18 DL 1.78
8000 (-2039)
MD 7101 TVD 6977.93
INC 12.65 AZ 158.02
N -1171.3 E 370.61
VS -224.05 DL 1.93

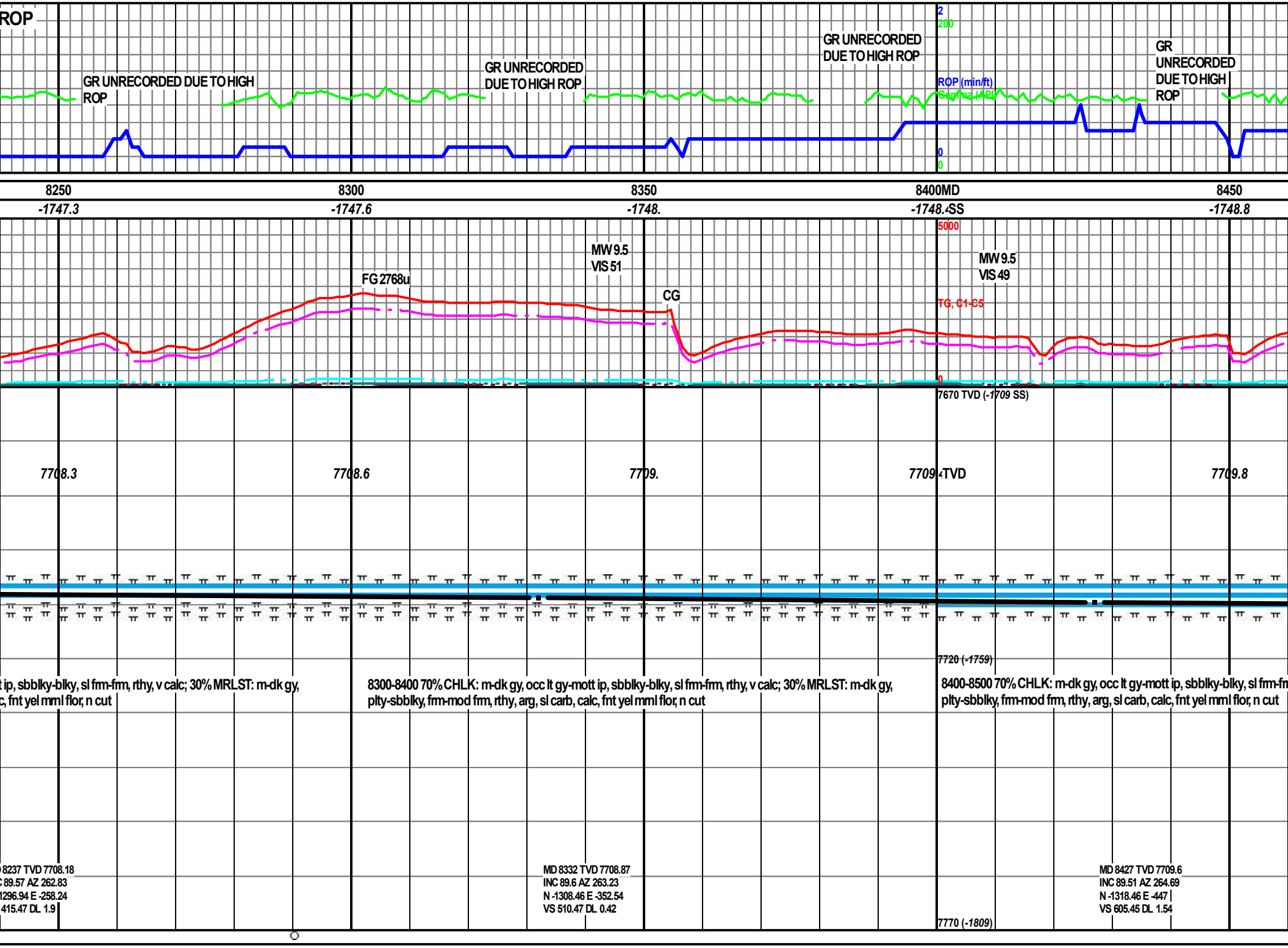

PB 1 MD 7165 TVD 7040
UES NOT TO HIGH
GAMMA RAY VALUES NOT RECORDED DUE TO HIGH ROP
1
200
ROP (min/ft)
Gamma (API)
0
0
GAMMA RAY VALUES NOT RECORDED DUE TO HIGH ROP
7150
7200MD
7250
7300
7350
-1064.8
-1113.7SS
-1162.8
-1211.7
-1260.4
500
TG, C1-C5
0
MW 9.6
VIS 49
DTG 330u
6000 TVD (-39 SS)
KOP @ 7220 MD @
19:00 hrs on 7/5/18
7025.8
7074.7TVD
7123.8
7172.7
7221.4
y, blky; SH: dk-lt gy-brn, sft-mod frm, sb blky-plty, slty ip, wxy tex,
7200-7300 CLYST: lt gy-gy, v sft, arg ip, dul, rthy, blky; SH: dk gy-lt gy-brn, sft-mod firm, sbblky-plty, slty ip, wxy, calc
7300-7400 CLYST: lt gy-gy, v sft, arg ip, dul, rthy, blky; SH: dk-lt gy
7000 (-1039)
MD 7196 TVD 7070.8
INC 11.66 AZ 162.09
N -1190.08 E 377.46
VS -228.54 DL 1.38
8000 (-2039)
MD 7291 TVD 7163.97
INC 11.24 AZ 187.12
N -1208.42 E 379.27
VS -228.08 DL 5.21

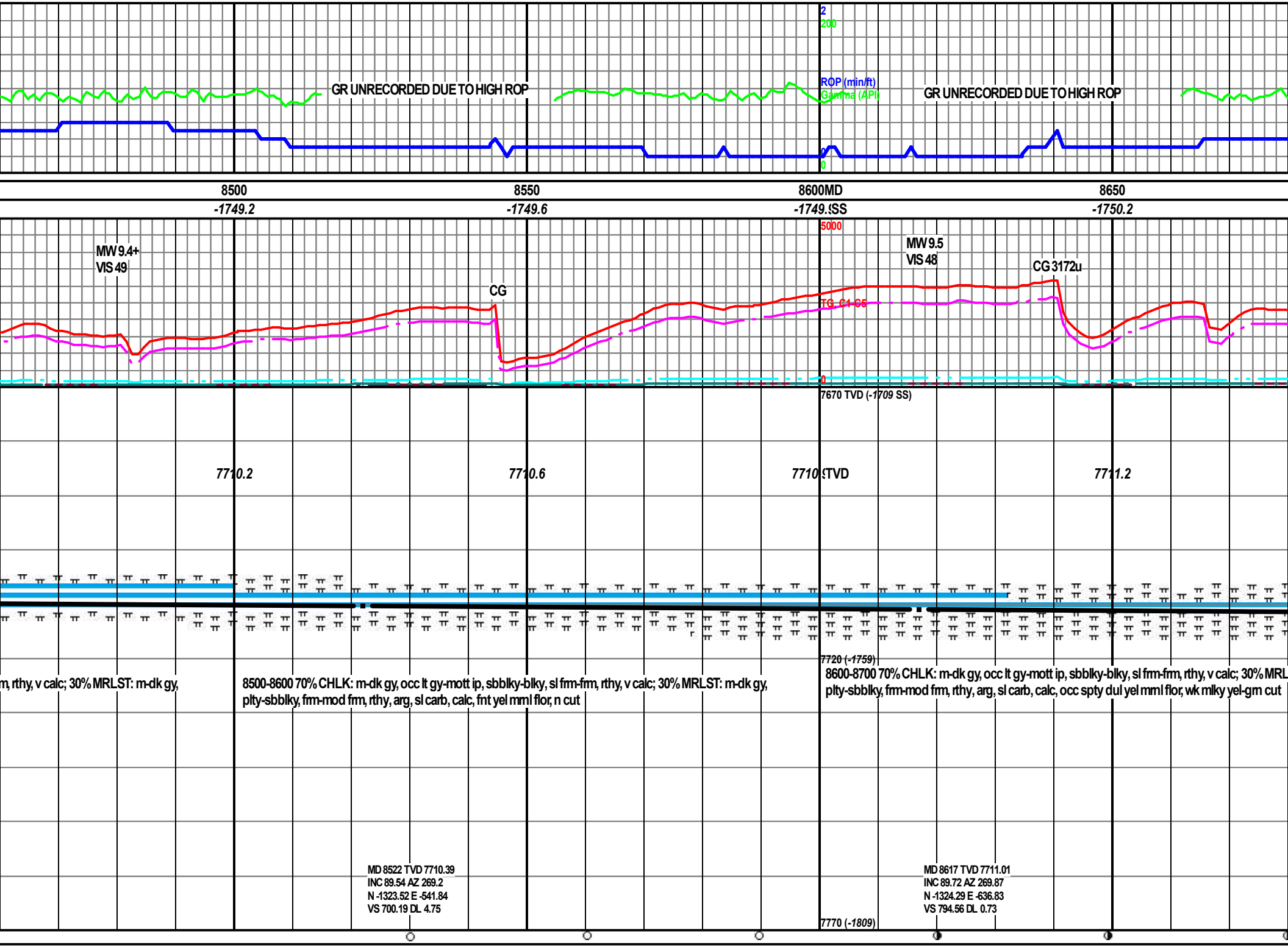

GAMMA RAY VALUES NOT RECORDED DUE TO HIGH ROP
PB 2 MD 7418 TVD 7287
1
200
ROP (min/ft)
Gamma (API)
0
0
GAMMA RAY VALUES NOT RECORDED DUE TO HIGH ROP
GAMMA RAY VALUES NOT RECORDED DUE TO HIGH ROP
7400MD
7450
7500
7550
-1308.(SS
-1355.8
-1401.9
-1446.3
500
NOTE SCALE CHANGE TG
0-2000u
2500
MW 9.5+
VIS 50
TG, C1-C5
Scale Change
TG, C1-C5
0
0
6000 TVD (-39 SS)
7269 (TVD
7316.8
7362.9
7407.3
brn, sft-mod frm, sbblky-plty, slty ip, wxy, calc
7400-7500 SH: dk gy, sft-mod frm, sbblky-plty, slty ip, wxy, sl calc; dec CLYST: lt gy-gy, v sft, arg ip, dul, rthy, blky
7000 (-1039)
7500-7600 SH: dk gy, sft-mod frm, sbblky-plty, slty ip, wxy, sl calc; dec CLYST: lt gy-gy, v sft, a
MD 7385 TVD 7255.39
INC 16.35 AZ 223.59
N -1227.14 E 368.98
VS -215.58 DL 10.47
8000 (-2039)
MD 7480 TVD 7345.15
INC 22.13 AZ 244.13
N -1244.66 E 343.61
VS -188.25 DL 9.28
MD 75
INC 32
N -126
VS -14

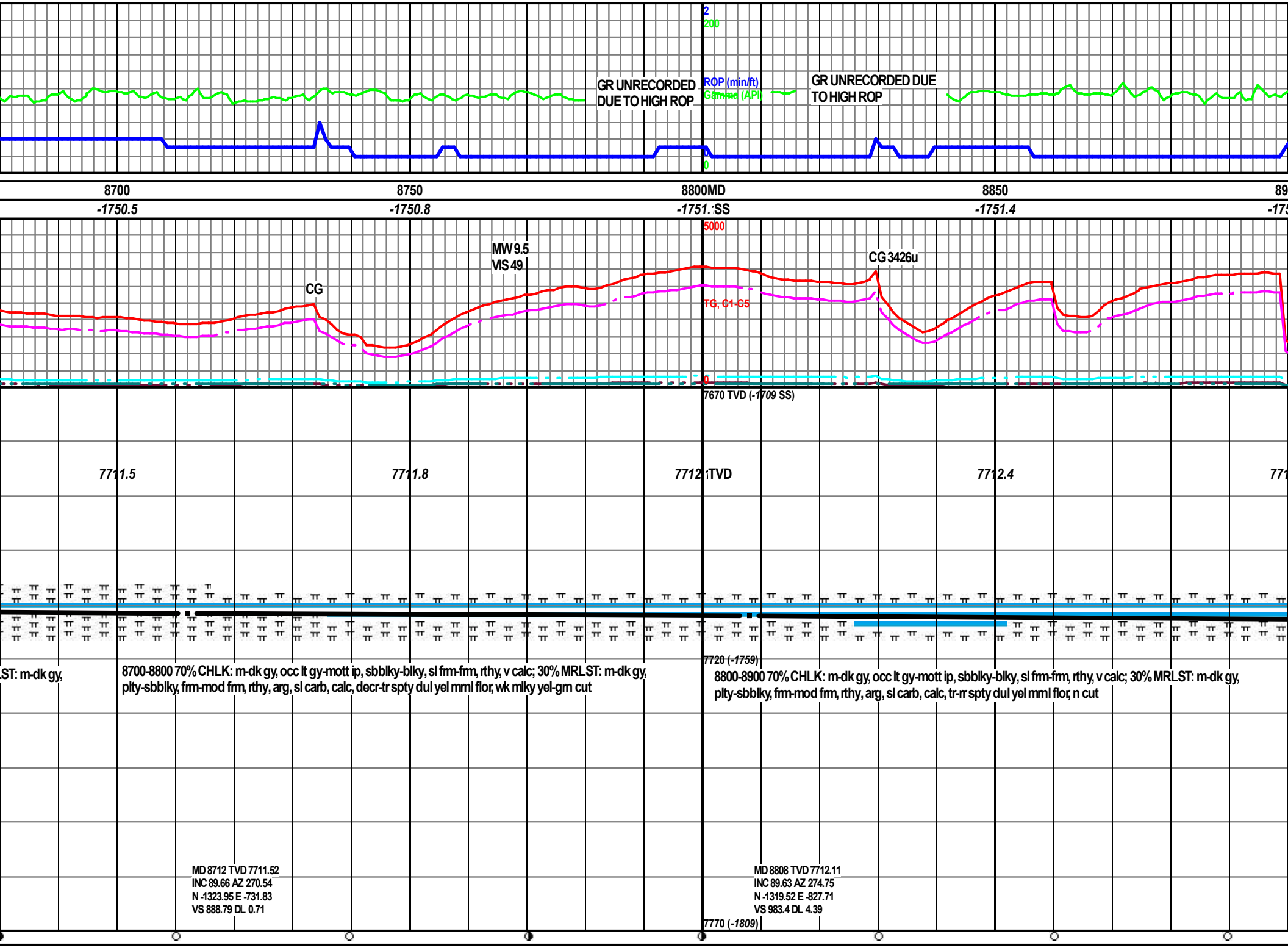

GR NOT RECORDED DUE TO HIGH ROP
SHARON SPRINGS MD 7627 TVD 7472
GAMMA RAY VALUES NOT RECORDED DUE TO HIGH ROP
NIOBRARA MD 7772 TVD 7575
GAMMA RAY RECORDED ROP
ROP (min/ft)
Gamma (API)
7600MD
7650
7700
7750
-1488.4SS
-1528.4
-1565.1
-1599.6
TG, C1-C5
CG
6000 TVD (-39 SS)
7449.4TVD
7489.4
7526.1
7560.6
7000 (-1039)
7600-7700 SH: dk gy, sft-mod frm, sbblky-plty, slty ip, wxy, mod calc; tr CLYST: lt gy-gy, v sft, arg ip, dul, rthy, blky
7700-7800 SH: dk gy, sft-mod frm, sbblky-plty, slty ip, wxy txt, dec calc; decr CLYST: lt gy-gy, v sft, arg ip, dul, rthy, blky, tr CHLK
MD 7670 TVD 7505.3
INC 41.8 AZ 258.46
N -1275.26 E 248.15
VS -89.76 DL 10.99
MD 7765 TVD 7571.01
INC 50.66 AZ 266.18
N -1284.06 E 180.29
VS -21.33 DL 11.01
8000 (-2039)

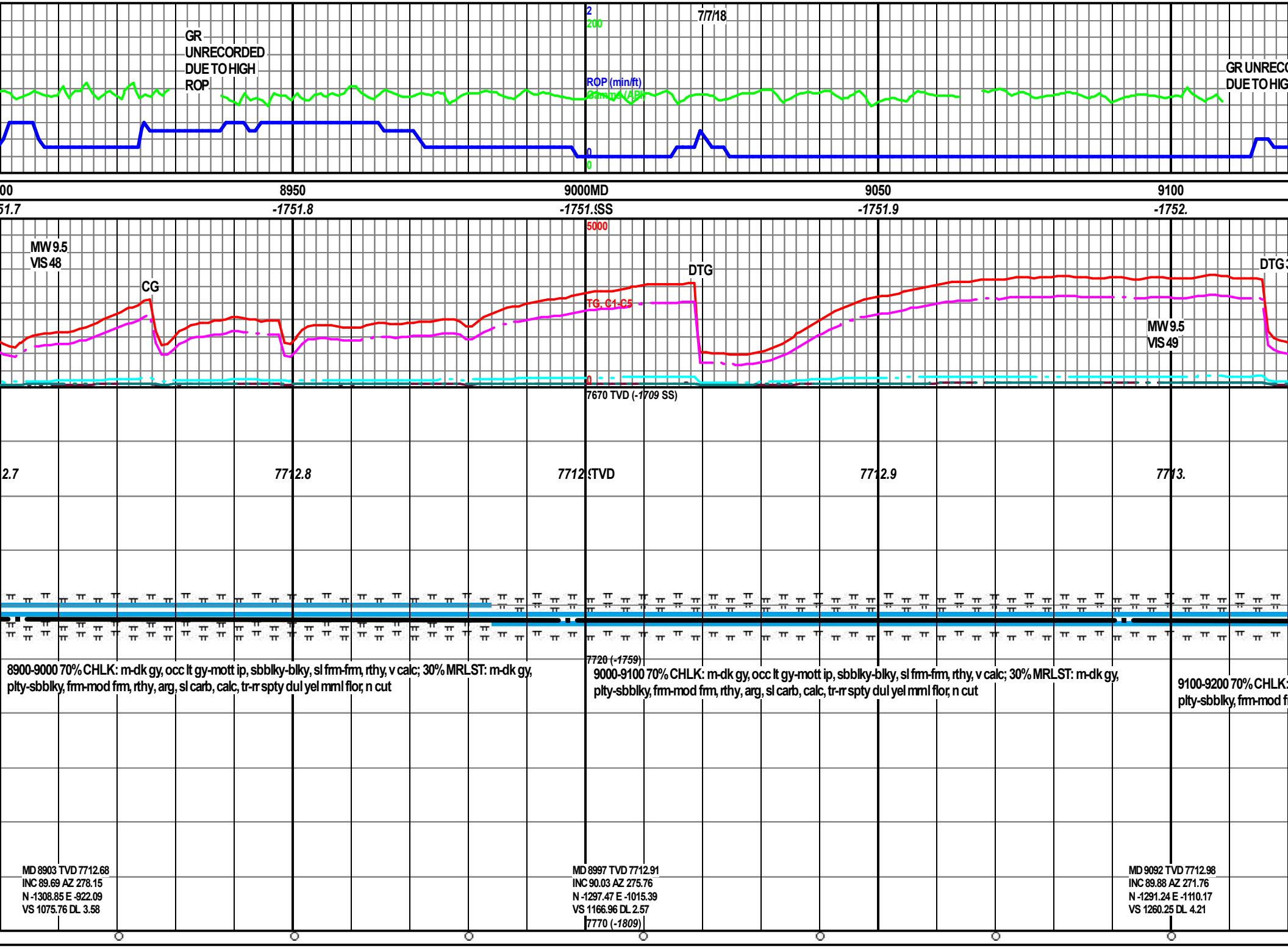

7/6/18
Y VALUES NOT
DUE TO HIGH
GAMMA RAY
VALUES NOT
RECORDED DUE TO
HIGH ROP
GAMMA RAY
VALUES NOT
RECORDED DUE TO
HIGH ROP
B1 MD 7904 TVD
7648
B2 MD 7958
TVD 7670
ROP (min/ft)
Gamma (API)
0MD
7850
7900
7950
8000MD
0.4SS
-1659.4
-1683.1
-1705.5
-1720.3SS
MW 9.5
VIS 49
DTG 1431u
CG
NOTE SCALE
CHANGE TG
0-5000u
TG, C1-C5
Scale Change
TG, C1-C5
6000 TVD (-39 SS)
4TVD
7620.4
7644.1
7666.5
7681.7TVD
7000 (-1039)
7900-8000 90% Marl: dk gy, sft, plty-sbblky, wxy-rthy, slty ip, 10% CHLK: lt-m gy, blky, sft, arg ip, tr BENT
8000-8100 75% Marl:
blky, sft, arg ip, tr BEN
7800-7900 Marl: dk gy, sft, plty-sbblky, wxy-rthy, slty ip; tr CHLK
MD 7860 TVD 7626.22
INC 58.23 AZ 270.67
N -1286.04 E 103.12
VS 55.5 DL 8.84
MD 7955 TVD 7668.76
INC 68.5 AZ 270.02
N -1285.55 E 18.31
VS 139.61 DL 10.83
8000 (-2039)

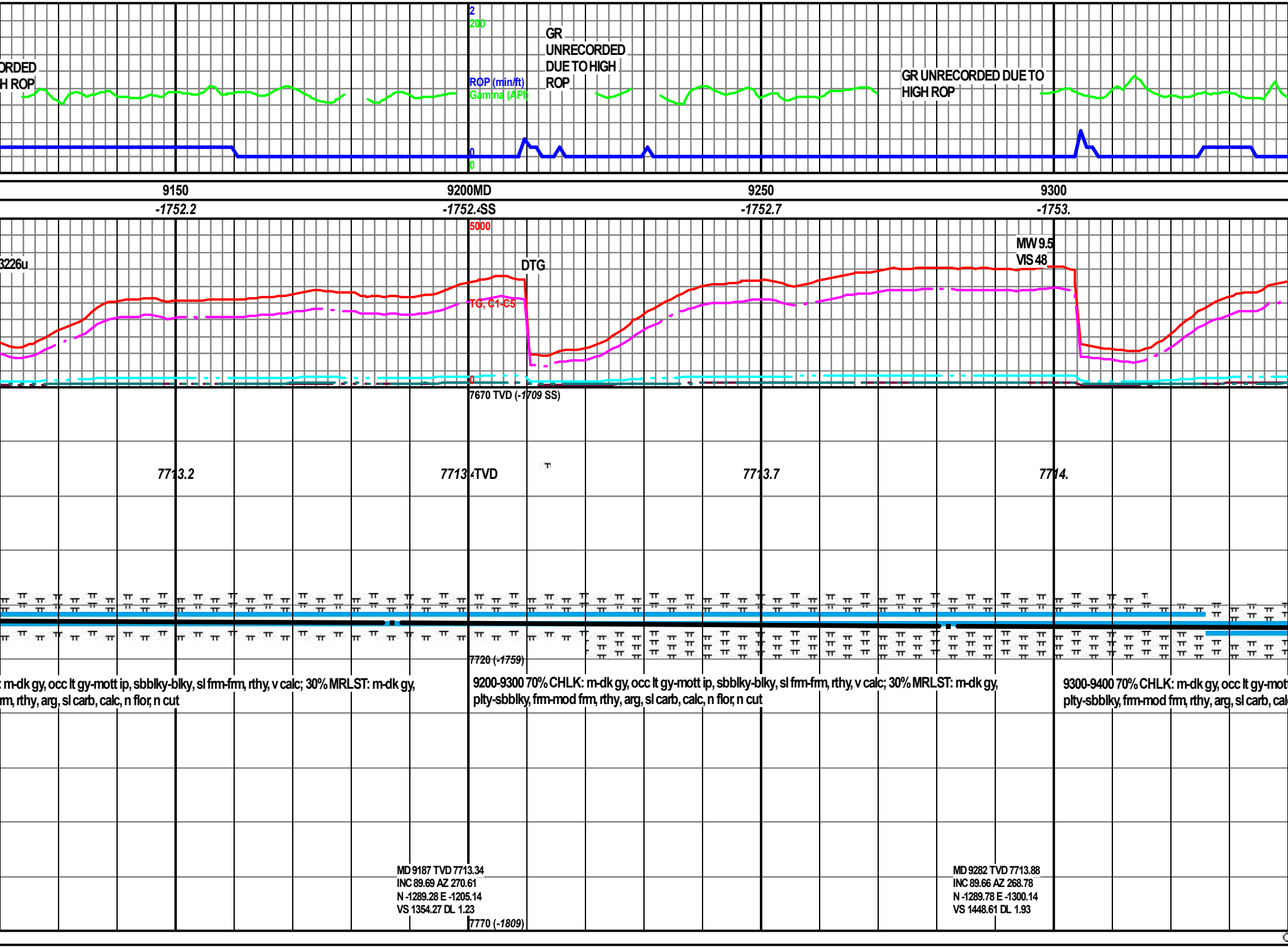

NOTE SCALE CHANGE
0-2 min/ft
GR UNRECORDED DUE TO HIGH ROP
Scale Change
ROP (min/ft)
Gamma (API)
2
200
0
0
8050
8100
8150
8200MD
-1734.8
-1740.8
-1746.2
-1746.8SS
MW 9.5
VIS 50
TRIP
GAS
4669u
TG, C1-C5
MW 9.6
VIS 52
5000
FG 2903u
7670 TVD (-1709 SS)
Bit #3, 8.5" HCC ADT505X w/5x15s serial #5283407 in @8,200'
7695.8
7701.8
7707.2
7707.8TVD
Landing Point @ 8200' MD 7709 TVD @ 03:30 hours on 7/6/18.
Scale Change
7720 (-1759)
8200-8300 70% CHLK: m-dk gy, occ lt gy-mott
plty-sbblky, frm-mod frm, rthy, arg, sl carb, cal
8100-8200 60% CHLK: lt-m gy, sbblky-blky, sft, arg ip, 40% Marl: dk gy, sft, plty-sbblky, wxy-rthy, slty ip, tr BENT
dk gy, sft, plty-sbblky, wxy-rthy, slty ip, 25% CHLK: lt-m gy,
T
MD 8049 TVD 7695.72
INC 78.12 AZ 270.73
N -1284.95 E -71.62
VS 228.78 DL 10.26
MD 8144 TVD 7707.04
INC 88.18 AZ 266.48
N -1287.28 E -165.77
VS 322.51 DL 11.48
MD 8176 TVD 7707.69
INC 89.51 AZ 263.99
N -1289.94 E -197.65
VS 354.47 DL 8.82
7770 (-1809)

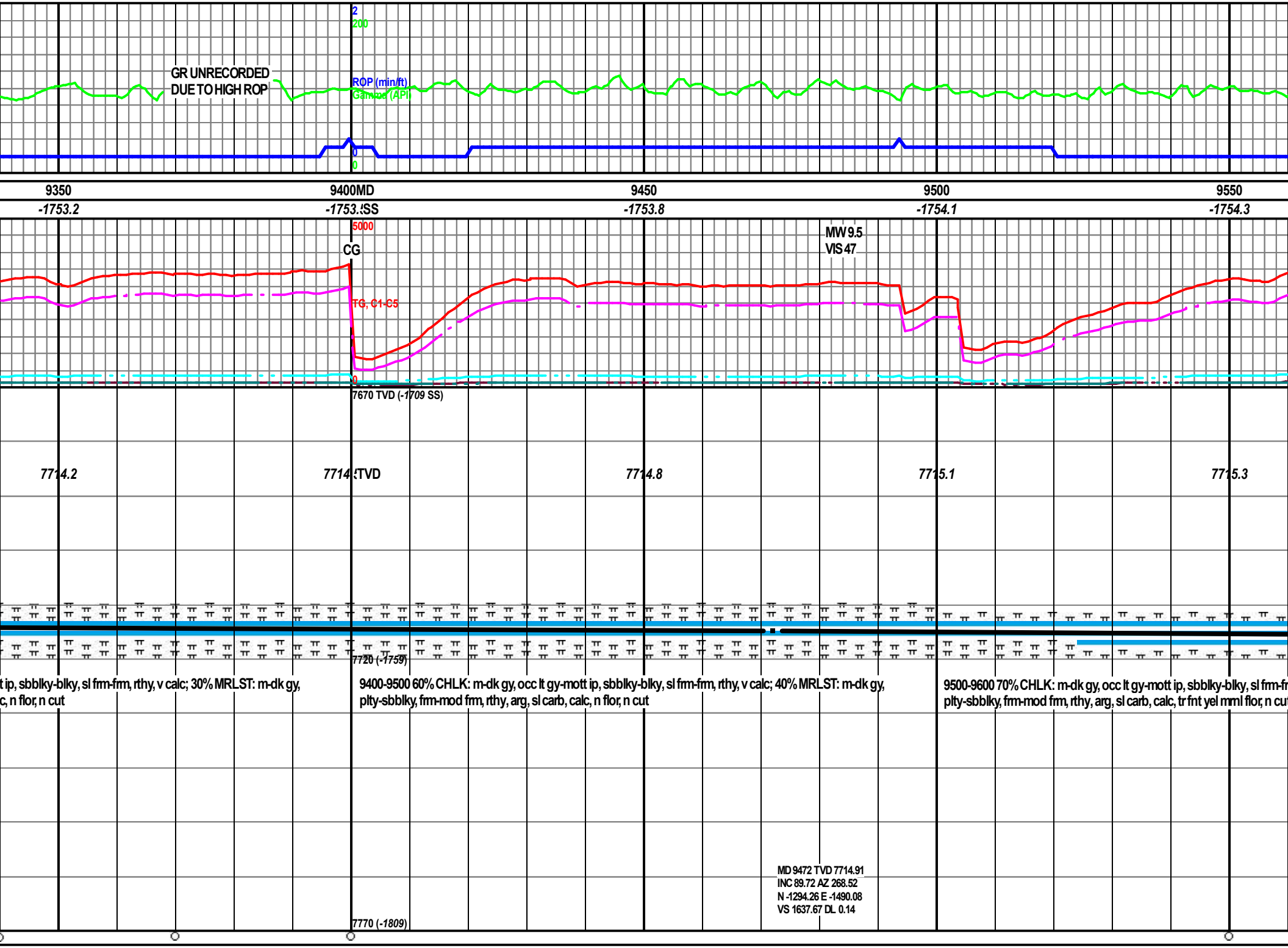

ROP
GR UNRECORDED DUE TO HIGH ROP
GR UNRECORDED DUE TO HIGH ROP
GR UNRECORDED DUE TO HIGH ROP
GR UNRECORDED DUE TO HIGH ROP
2
200
ROP (min/ft)
Gamma (API)
0
0
8250
8300
8350
8400MD
8450
-1747.3
-1747.6
-1748.
-1748.4SS
-1748.8
5000
MW 9.5
VIS 51
MW 9.5
VIS 49
FG 2768u
CG
TG, C1-C5
0
7670 TVD (-1709 SS)
7708.3
7708.6
7709.
7709.4TVD
7709.8
7720 (-1759)
t ip, sbblky-blky, sl frm-frm, rthy, v calc; 30% MRLST: m-dk gy,
c, fnt yel mml flor, n cut
8300-8400 70% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 30% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, fnt yel mml flor, n cut
8400-8500 70% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-fm
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, fnt yel mml flor, n cut
8237 TVD 7708.18
C 89.57 AZ 262.83
1296.94 E -258.24
415.47 DL 1.9
MD 8332 TVD 7708.87
INC 89.6 AZ 263.23
N -1308.46 E -352.54
VS 510.47 DL 0.42
MD 8427 TVD 7709.6
INC 89.51 AZ 264.69
N -1318.46 E -447
VS 605.45 DL 1.54
7770 (-1809)

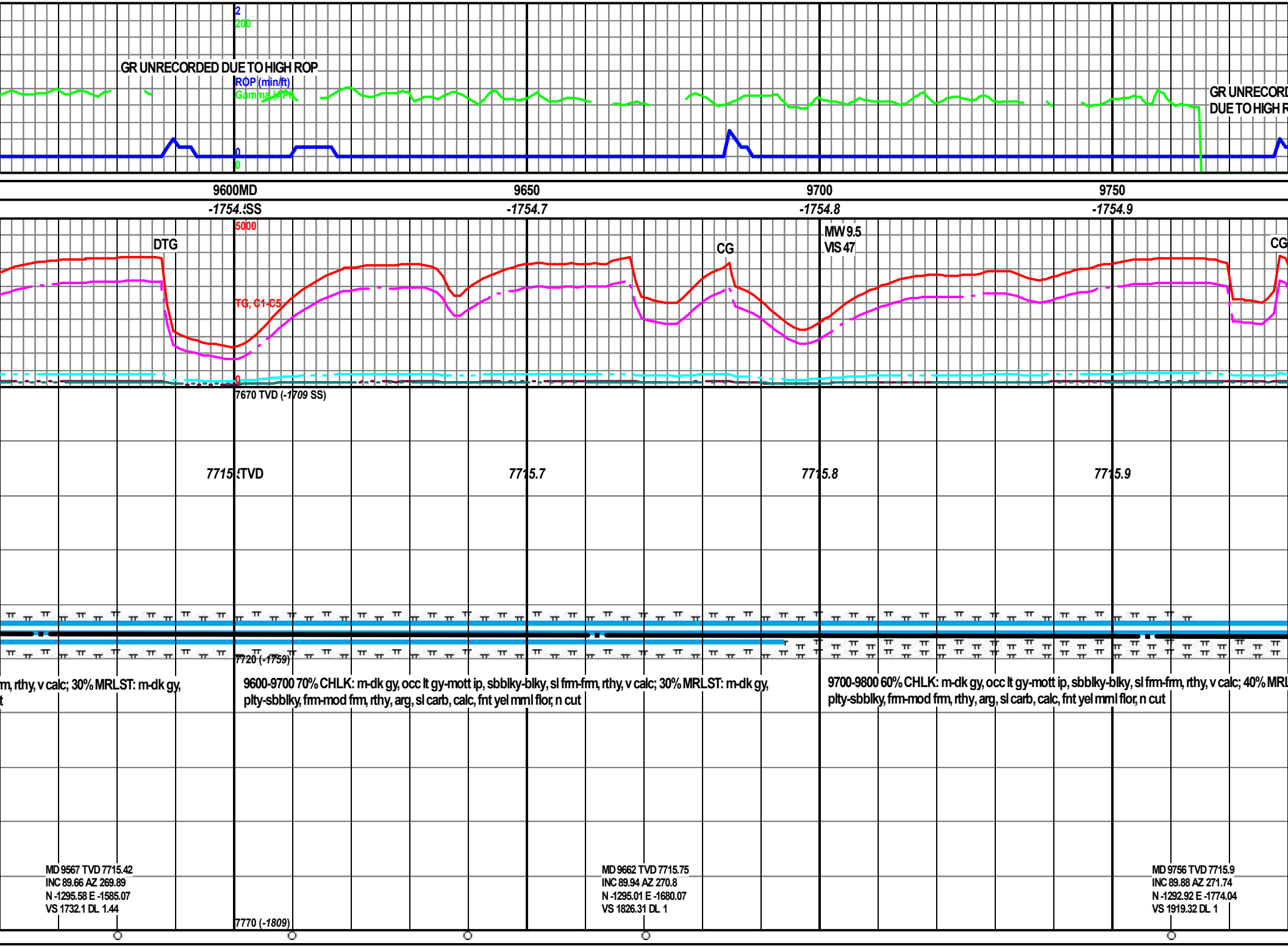

2
200
ROP (min/ft)
Gamma (API)
0
0
GR UNRECORDED DUE TO HIGH ROP
GR UNRECORDED DUE TO HIGH ROP
8500
8550
8600MD
8650
-1749.2
-1749.6
-1749.8SS
-1750.2
5000
MW 9.4+
VIS 49
CG
MW 9.5
VIS 48
CG 3172u
TG C1-C5
0
7670 TVD (-1709 SS)
7710.2
7710.6
7710.8TVD
7711.2
7720 (-1759)
m, rthy, v calc; 30% MRLST: m-dk gy,
8500-8600 70% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 30% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, fnt yel mml flor, n cut
8600-8700 70% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 30% MRL
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, occ spty dul yel mml flor, wk mlky yel-grn cut
MD 8522 TVD 7710.39
INC 89.54 AZ 269.2
N -1323.52 E -541.84
VS 700.19 DL 4.75
MD 8617 TVD 7711.01
INC 89.72 AZ 269.87
N -1324.29 E -636.83
VS 794.56 DL 0.73
7770 (-1809)

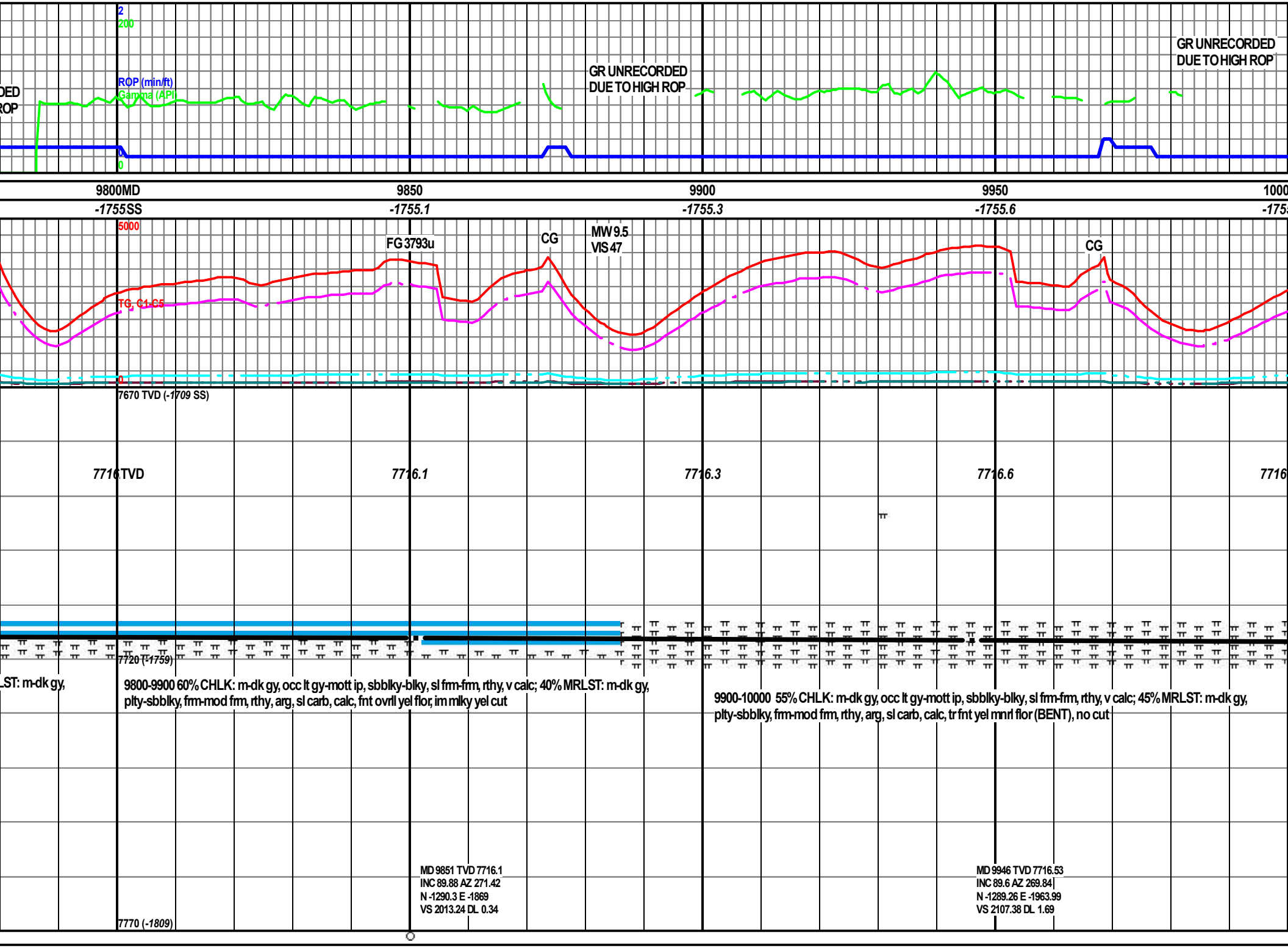

2
200
GR UNRECORDED DUE TO HIGH ROP
ROP (min/ft)
Gamma (API)
GR UNRECORDED DUE TO HIGH ROP
0
8700
8750
8800MD
8850
-1750.5
-1750.8
-1751.1SS
-1751.4
5000
MW 9.5
VIS 49
CG
CG 3426u
TG, C1-C5
0
7670 TVD (-1709 SS)
7711.5
7711.8
7712.1TVD
7712.4
7720 (-1759)
ST: m-dk gy,
8700-8800 70% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 30% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, decr-tr spty dul yel mml flor, wk mlky yel-gm cut
8800-8900 70% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 30% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr-rr spty dul yel mml flor, n cut
MD 8712 TVD 7711.52
INC 89.66 AZ 270.54
N -1323.95 E -731.83
VS 888.79 DL 0.71
MD 8808 TVD 7712.11
INC 89.63 AZ 274.75
N -1319.52 E -827.71
VS 983.4 DL 4.39
7770 (-1809)

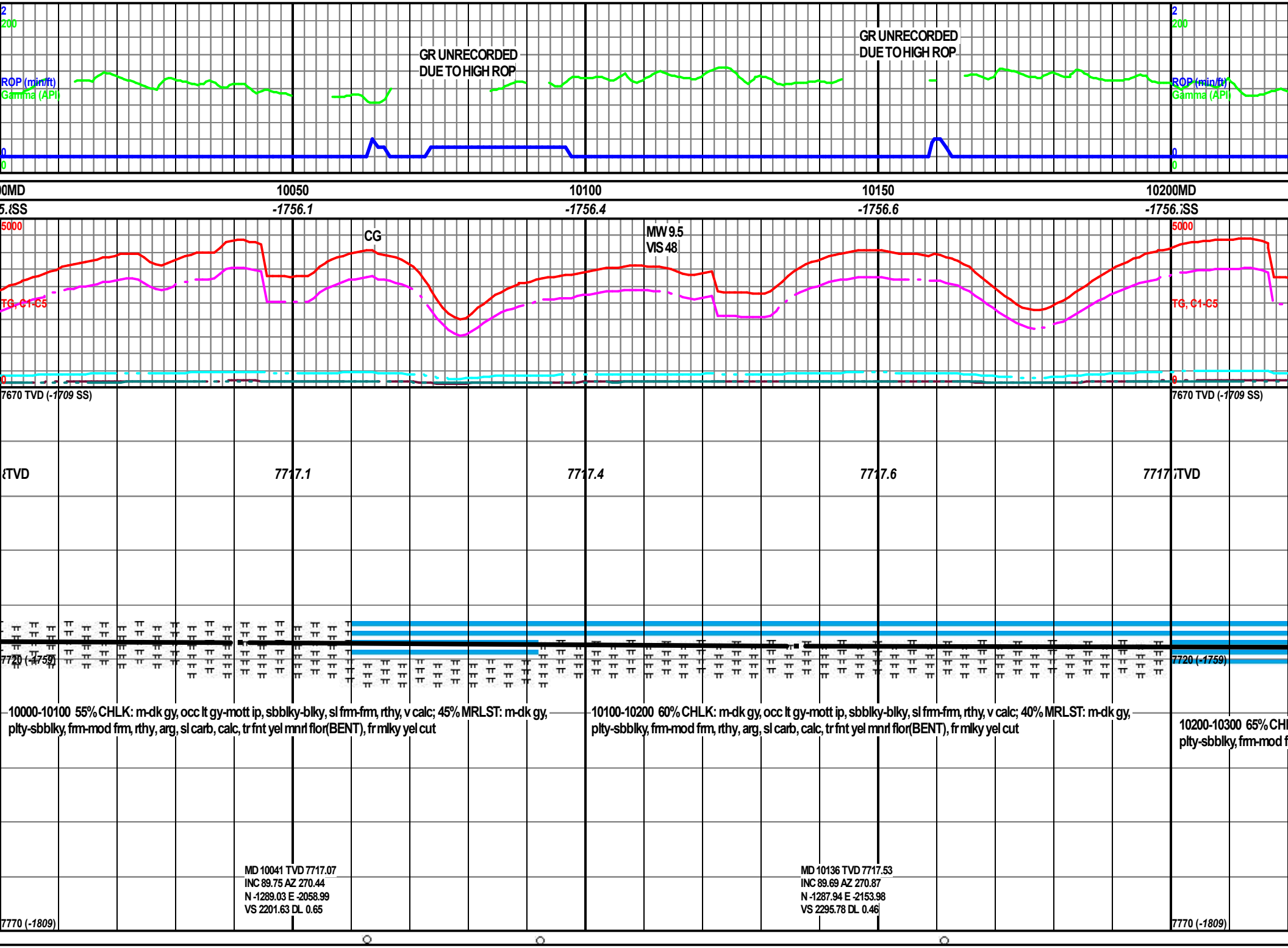

GR
UNRECORDED
DUE TO HIGH
ROP
2
200
7/7/18
ROP (min/ft)
Gamma (API)
0
0
GR UNREC
DUE TO HIG
00
8950
9000MD
9050
9100
51.7
-1751.8
-1751.9
-1752.
5000
MW 9.5
VIS 48
CG
DTG
TG, C1-C5
MW 9.5
VIS 49
DTG
0
7670 TVD (-1709 SS)
2.7
7712.8
7712.9
7713.
TVD
7720 (-1759)
8900-9000 70% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 30% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr-rr spty dul yel mml flor, n cut
9000-9100 70% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 30% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr-rr spty dul yel mml flor, n cut
9100-9200 70% CHLK:
plty-sbblky, frm-mod f
MD 8903 TVD 7712.68
INC 89.69 AZ 278.15
N -1308.85 E -922.09
VS 1075.76 DL 3.58
MD 8997 TVD 7712.91
INC 90.03 AZ 275.76
N -1297.47 E -1015.39
VS 1166.96 DL 2.57
7770 (-1809)
MD 9092 TVD 7712.98
INC 89.88 AZ 271.76
N -1291.24 E -1110.17
VS 1260.25 DL 4.21

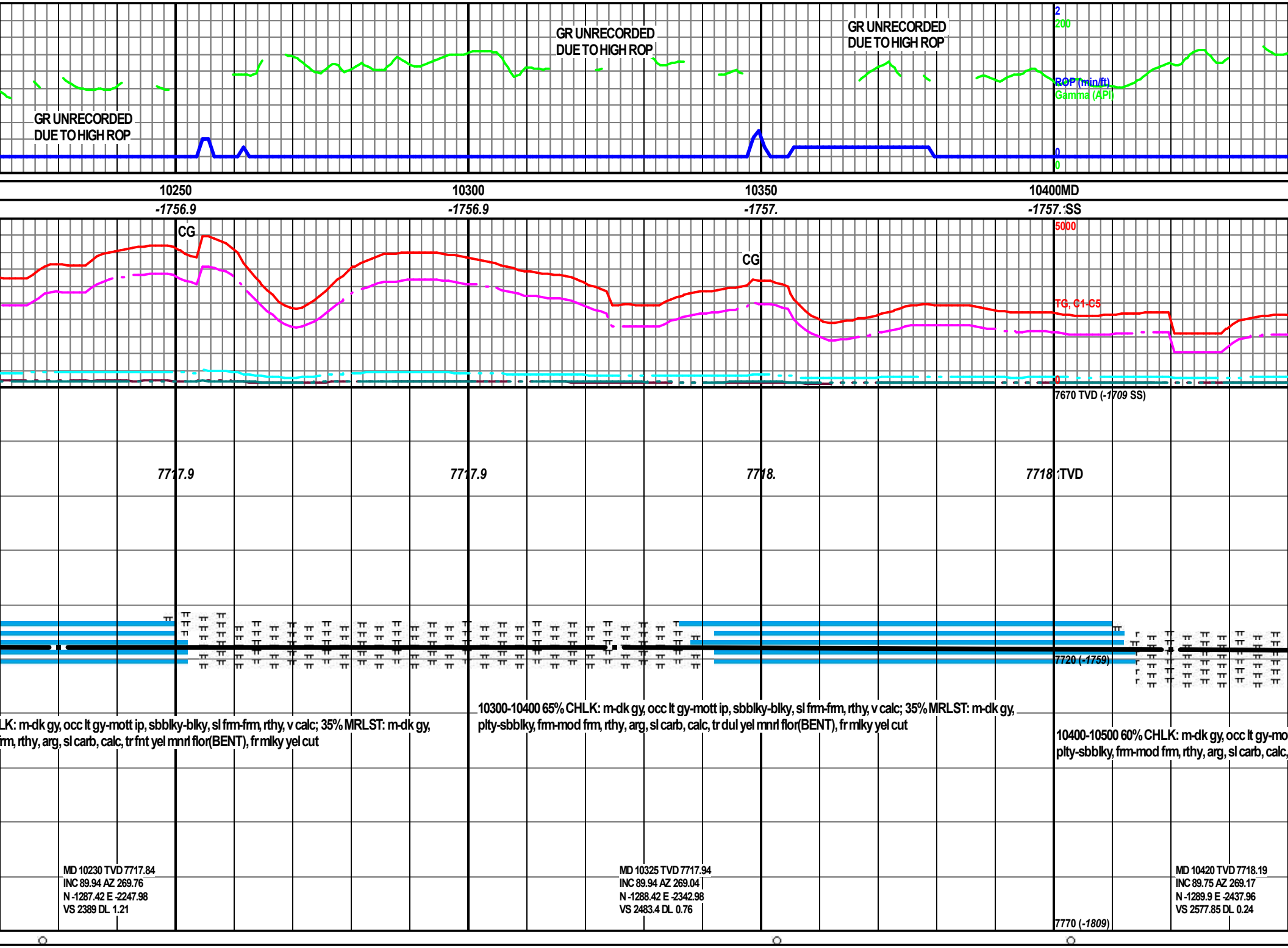

ORDED
H ROP
2
200
ROP (min/ft)
Gamma (API)
0
0
GR
UNRECORDED
DUE TO HIGH
ROP
GR UNRECORDED DUE TO
HIGH ROP
9150
9200MD
9250
9300
-1752.2
-1752.4SS
-1752.7
-1753.
5000
3226u
DTG
MW 9.5
VIS 48
TG, C1-C5
0
7670 TVD (-1709 SS)
7713.2
7713.4TVD
7713.7
7714.
7720 (-1759)
: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 30% MRLST: m-dk gy,
rm, rthy, arg, sl carb, calc, n flor, n cut
9200-9300 70% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 30% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, n flor, n cut
9300-9400 70% CHLK: m-dk gy, occ lt gy-mott
plty-sbblky, frm-mod frm, rthy, arg, sl carb, cal
MD 9187 TVD 7713.34
INC 89.69 AZ 270.61
N -1289.28 E -1205.14
VS 1354.27 DL 1.23
7770 (-1809)
MD 9282 TVD 7713.88
INC 89.66 AZ 268.78
N -1289.78 E -1300.14
VS 1448.61 DL 1.93

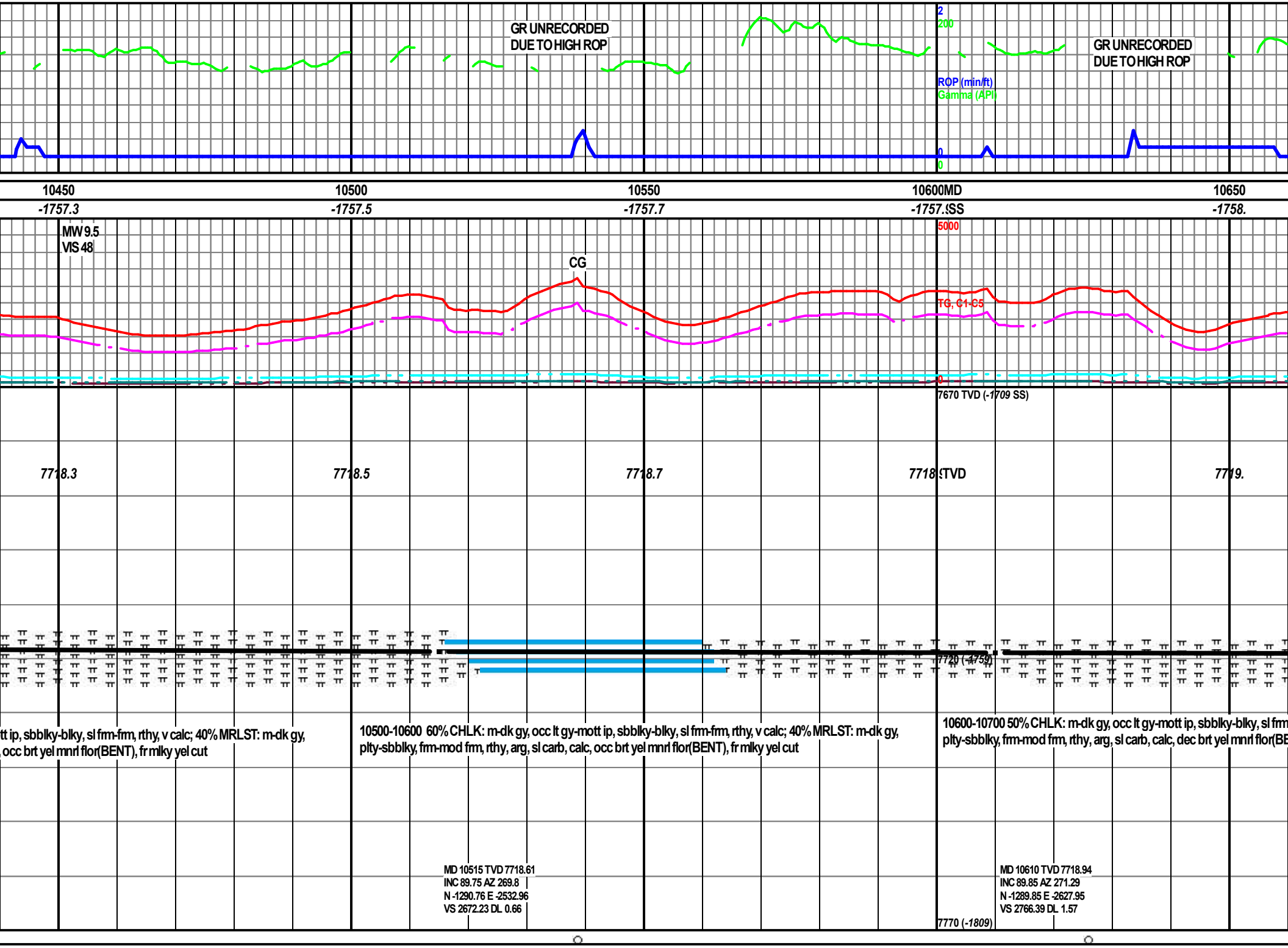

GR UNRECORDED
DUE TO HIGH ROP
2
200
ROP (min/ft)
Gamma (API)
0
0
9350
9400MD
9450
9500
9550
-1753.2
-1753.5SS
-1753.8
-1754.1
-1754.3
5000
CG
MW 9.5
VIS 47
TG, C1-C5
0
7670 TVD (-1709 SS)
7714.2
7714.5TVD
7714.8
7715.1
7715.3
7720 (-1759)
t ip, sbblky-blky, sl frm-frm, rthy, v calc; 30% MRLST: m-dk gy,
c, n flor, n cut
9400-9500 60% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, n flor, n cut
9500-9600 70% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-fr
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr fnt yel mml flor, n cu
MD 9472 TVD 7714.91
INC 89.72 AZ 268.52
N -1294.26 E -1490.08
VS 1637.67 DL 0.14
7770 (-1809)


2
200
GR UNRECORDED DUE TO HIGH ROP
ROP (min/ft)
Gamma (API)
0
0
GR UNRECORD
DUE TO HIGH R
9600MD
9650
9700
9750
-1754.8SS
-1754.7
-1754.8
-1754.9
5000
DTG
CG
MW 9.5
VIS 47
CG
TG, C1-C5
0
7670 TVD (-1709 SS)
7715.8TVD
7715.7
7715.8
7715.9
7720 (-1759)
m, rthy, v calc; 30% MRLST: m-dk gy,
t
9600-9700 70% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 30% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, fnt yel mml flor, n cut
9700-9800 60% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRL
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, fnt yel mml flor, n cut
MD 9567 TVD 7715.42
INC 89.66 AZ 269.89
N -1295.58 E -1585.07
VS 1732.1 DL 1.44
7770 (-1809)
MD 9662 TVD 7715.75
INC 89.94 AZ 270.8
N -1295.01 E -1680.07
VS 1826.31 DL 1
MD 9756 TVD 7715.9
INC 89.88 AZ 271.74
N -1292.92 E -1774.04
VS 1919.32 DL 1


2
200
ROP (min/ft)
Gamma (API)
0
GR UNRECORDED
DUE TO HIGH ROP
GR UNRECORDED
DUE TO HIGH ROP
9800MD
9850
9900
9950
-1755SS
-1755.1
-1755.3
-1755.6
5000
FG 3793u
CG
MW 9.5
VIS 47
CG
TG, C1-C5
0
7670 TVD (-1709 SS)
7716TVD
7716.1
7716.3
7716.6
7720 (-1759)
9800-9900 60% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, fnt ovrll yel flor, im mlky yel cut
9900-10000 55% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 45% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr fnt yel mnrl flor (BENT), no cut
MD 9851 TVD 7716.1
INC 89.88 AZ 271.42
N -1290.3 E -1869
VS 2013.24 DL 0.34
MD 9946 TVD 7716.53
INC 89.6 AZ 269.84
N -1289.26 E -1963.99
VS 2107.38 DL 1.69
7770 (-1809)


GR UNRECORDED
DUE TO HIGH ROP
GR UNRECORDED
DUE TO HIGH ROP
ROP (min/ft)
Gamma (API)
10050
10100
10150
10200MD
-1756.1
-1756.4
-1756.6
CG
MW 9.5
VIS 48
TG, C1-C5
7670 TVD (-1709 SS)
7717.1
7717.4
7717.6
7720 (-1759)
10000-10100 55% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 45% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr fnt yel mnrl flor(BENT), fr mlky yel cut
10100-10200 60% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr fnt yel mnrl flor(BENT), fr mlky yel cut
10200-10300 65% CHI
plty-sbblky, frm-mod f
MD 10041 TVD 7717.07
INC 89.75 AZ 270.44
N -1289.03 E -2058.99
VS 2201.63 DL 0.65
MD 10136 TVD 7717.53
INC 89.69 AZ 270.87
N -1287.94 E -2153.98
VS 2295.78 DL 0.46
7770 (-1809)


GR UNRECORDED
DUE TO HIGH ROP
GR UNRECORDED
DUE TO HIGH ROP
GR UNRECORDED
DUE TO HIGH ROP
2
200
ROP (min/ft)
Gamma (API)
0
0
10250
10300
10350
10400MD
-1756.9
-1756.9
-1757.
-1757.1SS
CG
CG
5000
TG, C1-C5
0
7670 TVD (-1709 SS)
7717.9
7717.9
7718.
7718.1TVD
7720 (-1759)
LK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 35% MRLST: m-dk gy,
frm, rthy, arg, sl carb, calc, tr fnt yel mnrl flor(BENT), fr mlky yel cut
10300-10400 65% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 35% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr dul yel mnrl flor(BENT), fr mlky yel cut
10400-10500 60% CHLK: m-dk gy, occ lt gy-mo
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc,
MD 10230 TVD 7717.84
INC 89.94 AZ 269.76
N -1287.42 E -2247.98
VS 2389 DL 1.21
MD 10325 TVD 7717.94
INC 89.94 AZ 269.04
N -1288.42 E -2342.98
VS 2483.4 DL 0.76
MD 10420 TVD 7718.19
INC 89.75 AZ 269.17
N -1289.9 E -2437.96
VS 2577.85 DL 0.24
7770 (-1809)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ROP (min/ft)
Gamma (API)
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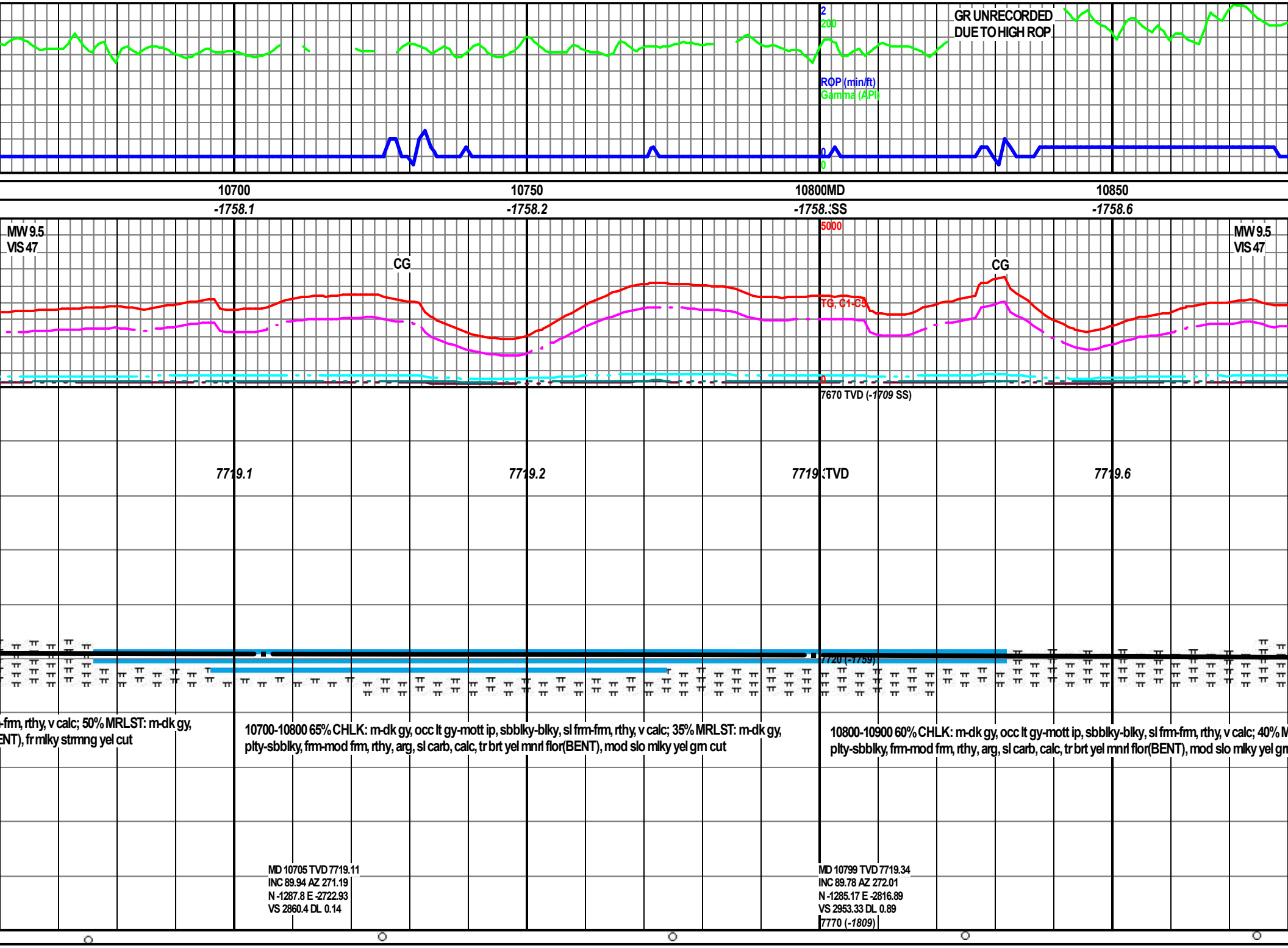
10450
10500
10550
10600MD
10650
-1757.3
-1757.5
-1757.7
-1757.9SS
-1758.
MW 9.5
VIS 48
CG
5000
TG, C1-C5
0
7670 TVD (-1709 SS)
7718.3
7718.5
7718.7
7718.9TVD
7719.
7720 (-1759)
tt ip, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy,
occ brt yel mnrl flor(BENT), fr mlky yel cut
10500-10600 60% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, occ brt yel mnrl flor(BENT), fr mlky yel cut
10600-10700 50% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, dec brt yel mnrl flor(BE
MD 10515 TVD 7718.61
INC 89.75 AZ 269.8
N -1290.76 E -2532.96
VS 2672.23 DL 0.66
MD 10610 TVD 7718.94
INC 89.85 AZ 271.29
N -1289.85 E -2627.95
VS 2766.39 DL 1.57
7770 (-1809)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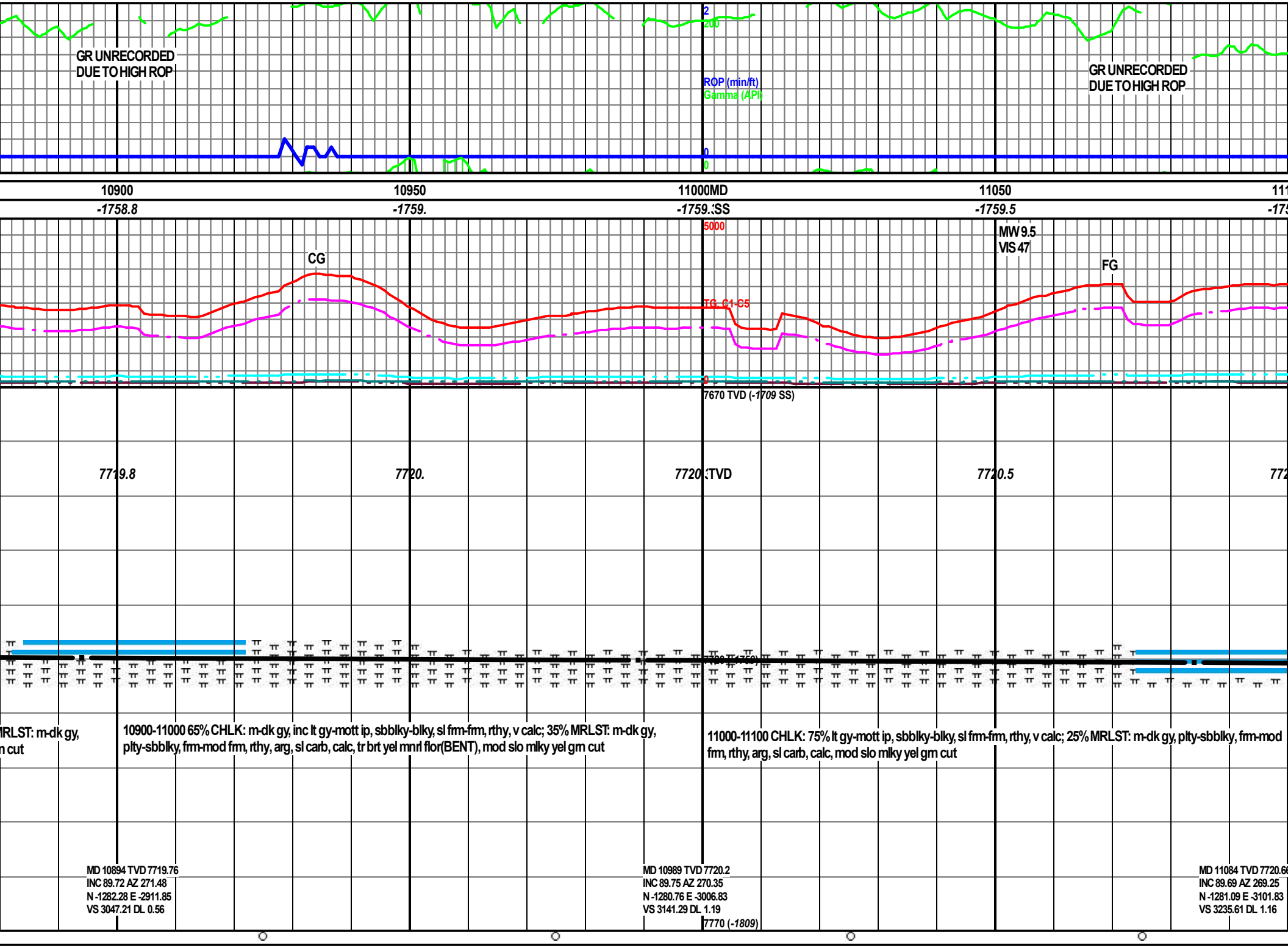
2
200
ROP (min/ft)
Gamma (API)
0
0
10700
10750
10800MD
10850
-1758.1
-1758.2
-1758.3SS
-1758.6
MW 9.5
VIS 47
CG
CG
5000
TG, C1-C5
0
MW 9.5
VIS 47
7670 TVD (-1709 SS)
7719.1
7719.2
7719.3TVD
7719.6
7720 (-1759)
-frm, rthy, v calc; 50% MRLST: m-dk gy,
ENT), fr mlky stmng yel cut
10700-10800 65% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 35% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr brt yel mnrl flor(BENT), mod slo mlky yel gm cut
10800-10900 60% CHLK: m-dk gy, occ lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 40% M
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr brt yel mnrl flor(BENT), mod slo mlky yel gm
MD 10705 TVD 7719.11
INC 89.94 AZ 271.19
N -1287.8 E -2722.93
VS 2860.4 DL 0.14
MD 10799 TVD 7719.34
INC 89.78 AZ 272.01
N -1285.17 E -2816.89
VS 2953.33 DL 0.89
7770 (-1809)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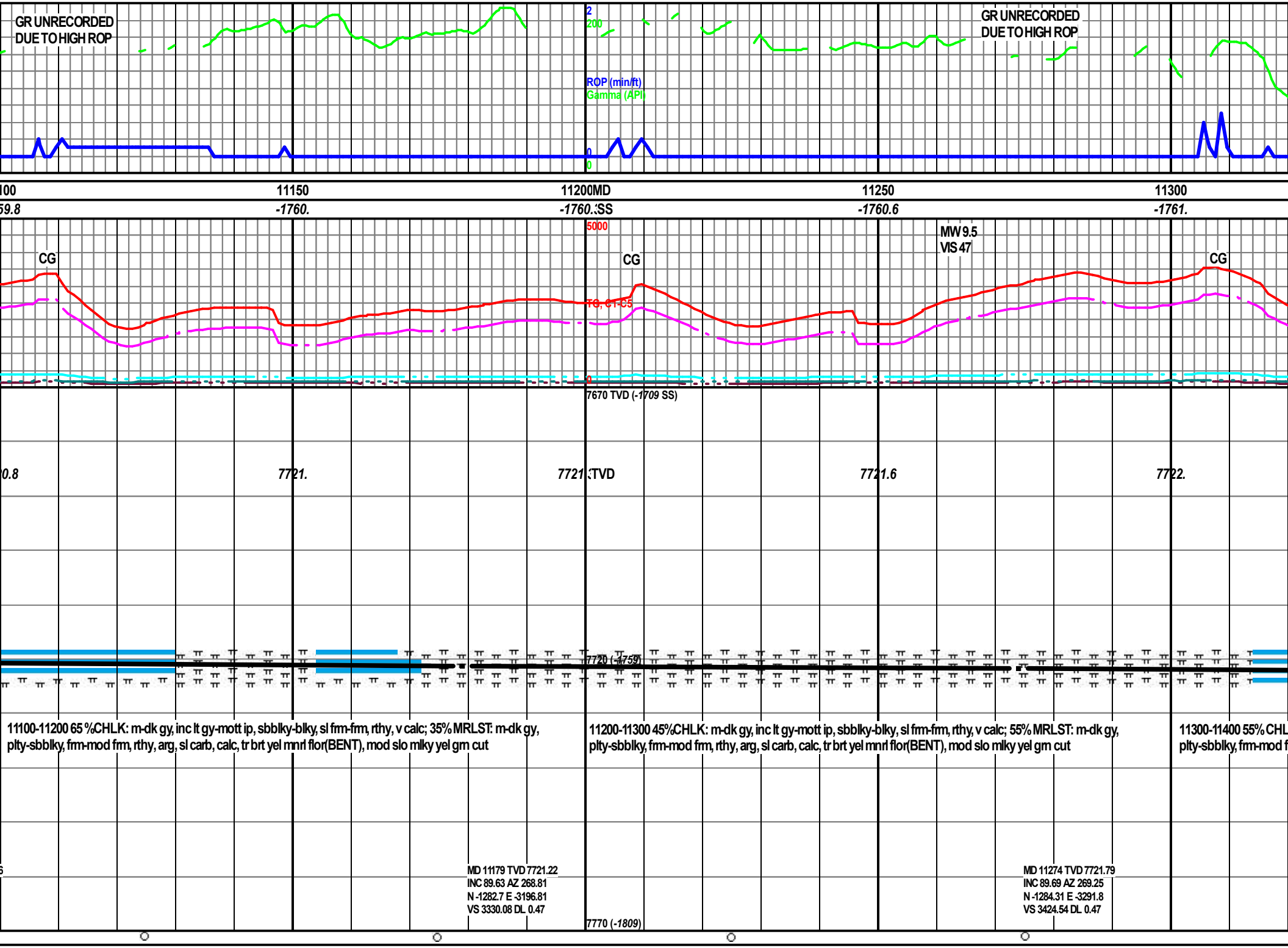
ROP (min/ft)
Gamma (API)
GR UNRECORDED
DUE TO HIGH ROP
10900
10950
11000MD
11050
-1758.8
-1759.
-1759.5
CG
MW 9.5
VIS 47
FG
TG, C1-C5
7670 TVD (-1709 SS)
7719.8
7720.
7720.5
MRLST: m-dk gy,
n cut
10900-11000 65% CHLK: m-dk gy, inc lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 35% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr brt yel mnrl flor(BENT), mod slo mlky yel gm cut
11000-11100 CHLK: 75% lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 25% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, mod slo mlky yel gm cut
MD 10894 TVD 7719.76
INC 89.72 AZ 271.48
N -1282.28 E -2911.85
VS 3047.21 DL 0.56
MD 10989 TVD 7720.2
INC 89.75 AZ 270.35
N -1280.76 E -3006.83
VS 3141.29 DL 1.19
7770 (-1809)
MD 11084 TVD 7720.66
INC 89.69 AZ 269.25
N -1281.09 E -3101.83
VS 3235.61 DL 1.16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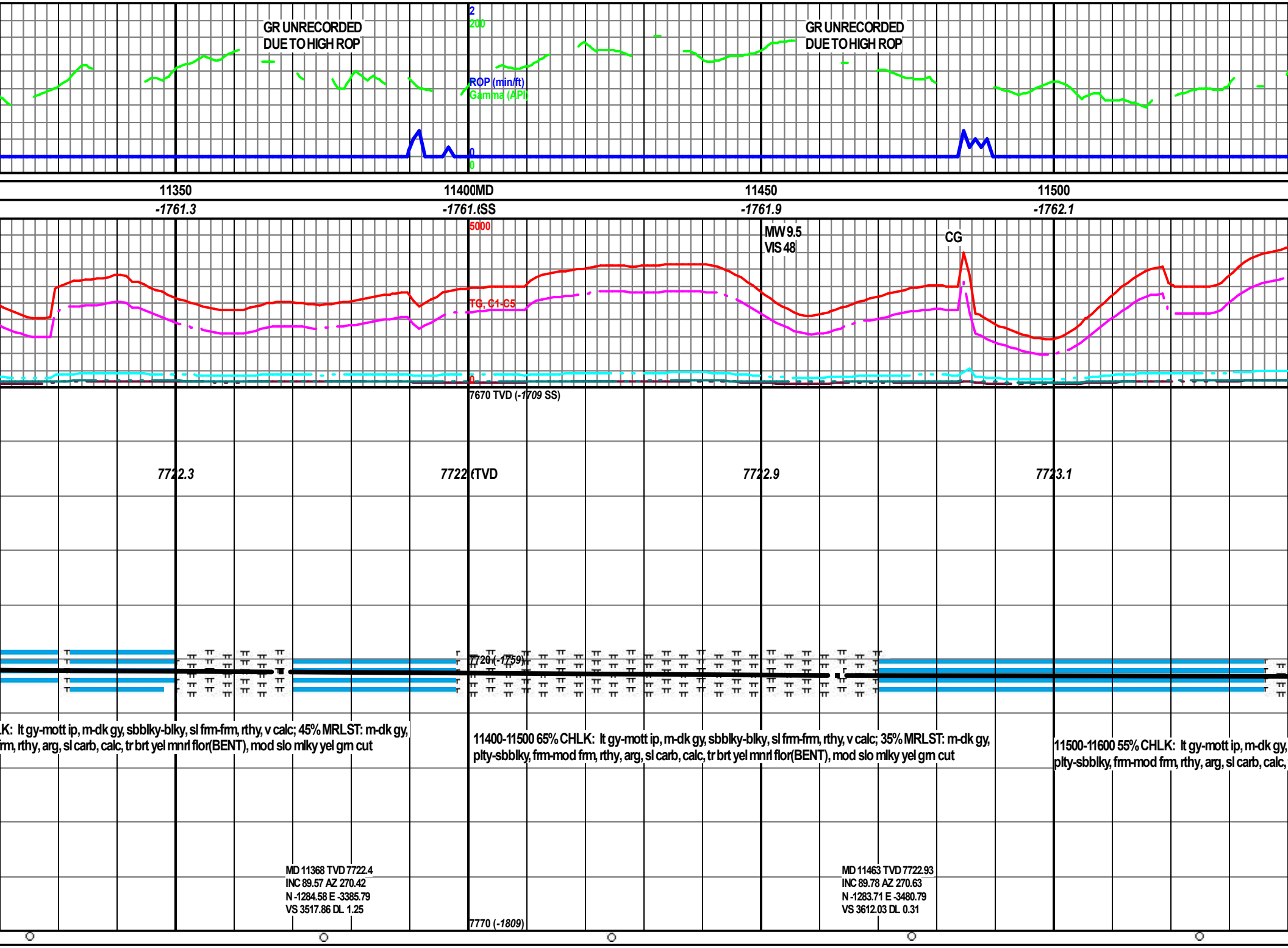
2
200
ROP (min/ft)
Gamma (API)
0
0
GR UNRECORDED
DUE TO HIGH ROP
100
11150
11200MD
11250
11300
59.8
-1760.
-1760.:SS
-1760.6
-1761.
5000
CG
CG
MW 9.5
VIS 47
CG
TG, C1-C5
0
7670 TVD (-1709 SS)
0.8
7721.
7721.:TVD
7721.6
7722.
7720 (-1759)
11100-11200 65 %CHLK: m-dk gy, inc lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 35% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr brt yel mnrl flor(BENT), mod slo mlky yel grn cut
11200-11300 45%CHLK: m-dk gy, inc lt gy-mott ip, sbblky-blky, sl frm-frm, rthy, v calc; 55% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr brt yel mnrl flor(BENT), mod slo mlky yel grn cut
11300-11400 55% CHL
plty-sbblky, frm-mod f
MD 11179 TVD 7721.22
INC 89.63 AZ 268.81
N -1282.7 E -3196.81
VS 3330.08 DL 0.47
MD 11274 TVD 7721.79
INC 89.69 AZ 269.25
N -1284.31 E -3291.8
VS 3424.54 DL 0.47
7770 (-1809)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DUE TO HIGH ROP
2
200
ROP (min/ft)
Gamma (API)
0
0
11350
11400MD
11450
11500
-1761.3
-1761.(SS
-1761.9
-1762.1
5000
MW 9.5
VIS 48
CG
TG, C1-C5
0
7670 TVD (-1709 SS)
7722.3
7722 (TVD
7722.9
7723.1
7720 (-1759)
K: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 45% MRLST: m-dk gy,
frm, rthy, arg, sl carb, calc, tr brt yel mnrl flor(BENT), mod slo mlky yel grn cut
11400-11500 65% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 35% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr brt yel mnrl flor(BENT), mod slo mlky yel grn cut
11500-11600 55% CHLK: lt gy-mott ip, m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc,
MD 11368 TVD 7722.4
INC 89.57 AZ 270.42
N -1284.58 E -3385.79
VS 3517.86 DL 1.25
MD 11463 TVD 7722.93
INC 89.78 AZ 270.63
N -1283.71 E -3480.79
VS 3612.03 DL 0.31
7770 (-1809)

GR UNRECORDED
DUE TO HIGH ROP

2
200
ROP (min/ft)
Gamma (API)
0
0

GR UNRECORDED DUE TO HIGH ROP

11550 | 11600MD | 11650 | 11700 | 11750

-1762.2 | -1762.4SS | -1762.7 | -1762.8 | -1763.

5000
CG
MW 9.5
VIS 47
TG, C1-C5
0

CG

7670 TVD (-1709 SS)

7723.2 | 7723.4TVD | 7723.7 | 7723.8 | 7724.

11700-11800 75% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-fm
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, inc brt yel mnrl flor(BE

7720 (-1759)

sbblky-blky, sl frm-frm, rthy, v calc; 45% MRLST: m-dk gy,
tr brt yel mnrl flor(BENT), mod slo mlky yel gm cut

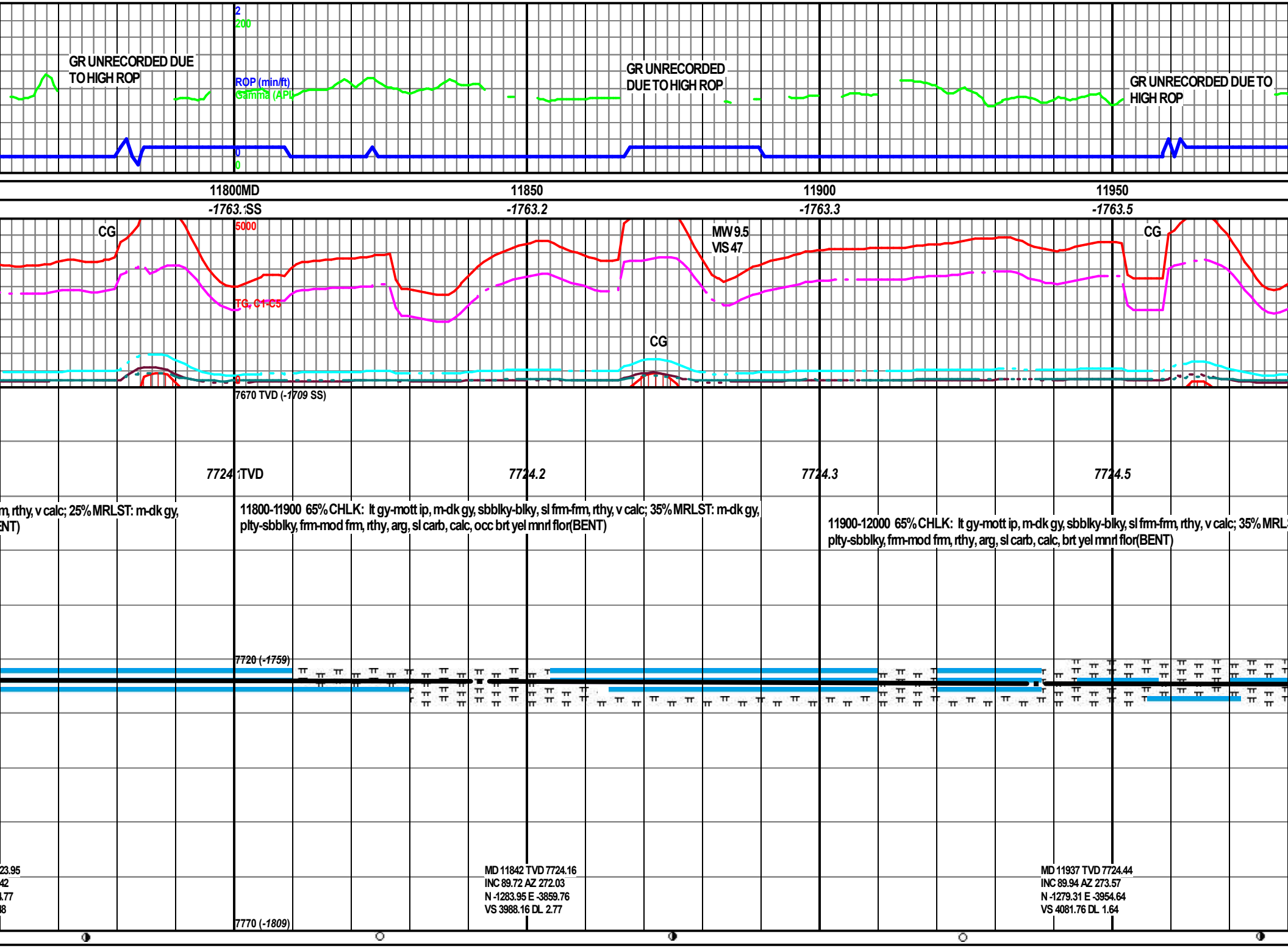
11600-11700 55% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 45% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr dsem & nod pyr, tr brt yel mnrl flor(BENT), mod slo mlky yel gm
cut

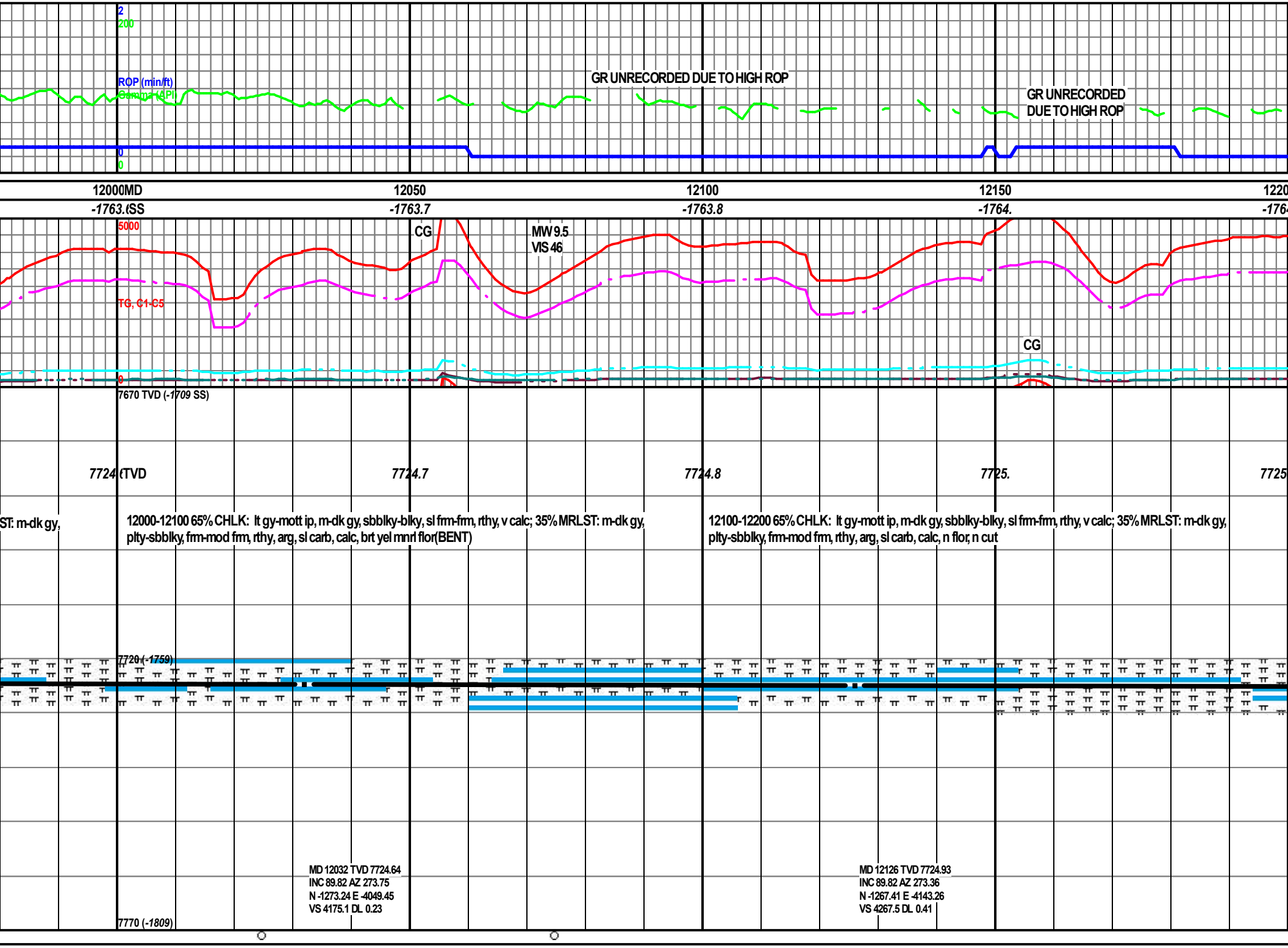
MD 11558 TVD 7723.24
INC 89.85 AZ 269.88
N -1283.29 E -3575.78
VS 3706.25 DL 0.79

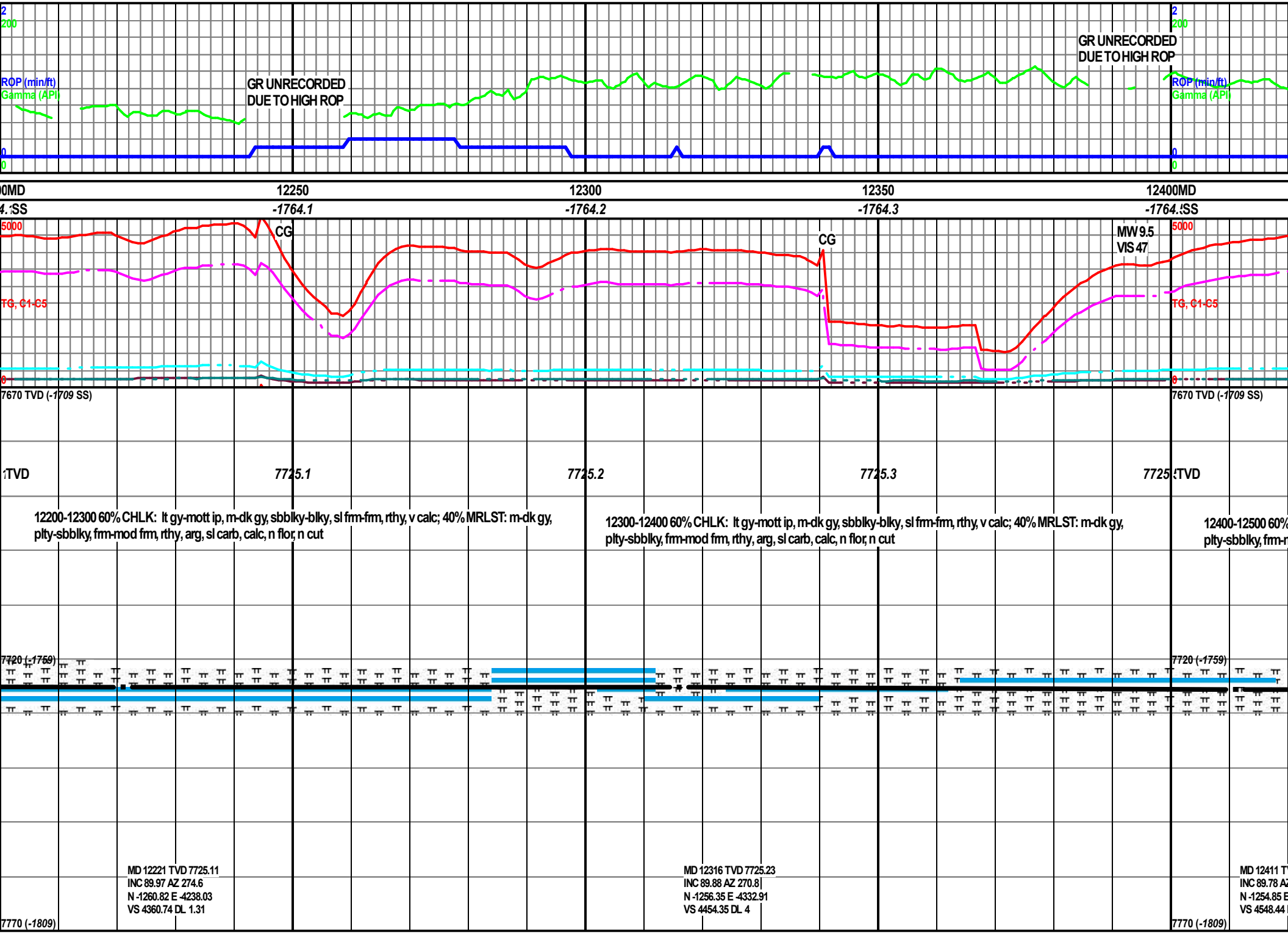
MD 11653 TVD 7723.67
INC 89.63 AZ 269.22
N -1284.03 E -3670.78
VS 3800.62 DL 0.73

MD 11747 TVD 77
INC 90.03 AZ 269.
N -1285.15 E -3764
VS 3894.04 DL 0.4

7770 (-1809)


GR UNRECORDED DUE TO HIGH ROP
2
200
ROP (min/ft)
Gamma (API)
0
0
GR UNRECORDED DUE TO HIGH ROP
GR UNRECORDED DUE TO HIGH ROP
11800MD
11850
11900
11950
-1763.1SS
-1763.2
-1763.3
-1763.5
CG
5000
TG, C1-C5
0
MW 9.5
VIS 47
CG
CG
7670 TVD (-1709 SS)
7724.1TVD
7724.2
7724.3
7724.5
m, rthy, v calc; 25% MRLST: m-dk gy,
ENT)
11800-11900 65% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 35% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, occ brt yel mnrl flor(BENT)
11900-12000 65% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 35% MRL
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, brt yel mnrl flor(BENT)
7720 (-1759)
23.95
42
.77
8
MD 11842 TVD 7724.16
INC 89.72 AZ 272.03
N -1283.95 E -3859.76
VS 3988.16 DL 2.77
MD 11937 TVD 7724.44
INC 89.94 AZ 273.57
N -1279.31 E -3954.64
VS 4081.76 DL 1.64
7770 (-1809)


2
200
ROP (min/ft)
Gamma (API)
0
0
GR UNRECORDED DUE TO HIGH ROP
GR UNRECORDED
DUE TO HIGH ROP
12000MD
12050
12100
12150
1220
-1763.(SS
-1763.7
-1763.8
-1764.
-1764
5000
CG
MW 9.5
VIS 46
TG, C1-C5
CG
0
7670 TVD (-1709 SS)
7724.(TVD
7724.7
7724.8
7725.
7725
ST: m-dk gy,
12000-12100 65% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 35% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, brt yel mnrl flor(BENT)
12100-12200 65% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 35% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, n flor, n cut
7720 (-1759)
MD 12032 TVD 7724.64
INC 89.82 AZ 273.75
N -1273.24 E -4049.45
VS 4175.1 DL 0.23
MD 12126 TVD 7724.93
INC 89.82 AZ 273.36
N -1267.41 E -4143.26
VS 4267.5 DL 0.41
7770 (-1809)


2
200
ROP (min/ft)
Gamma (API)
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0
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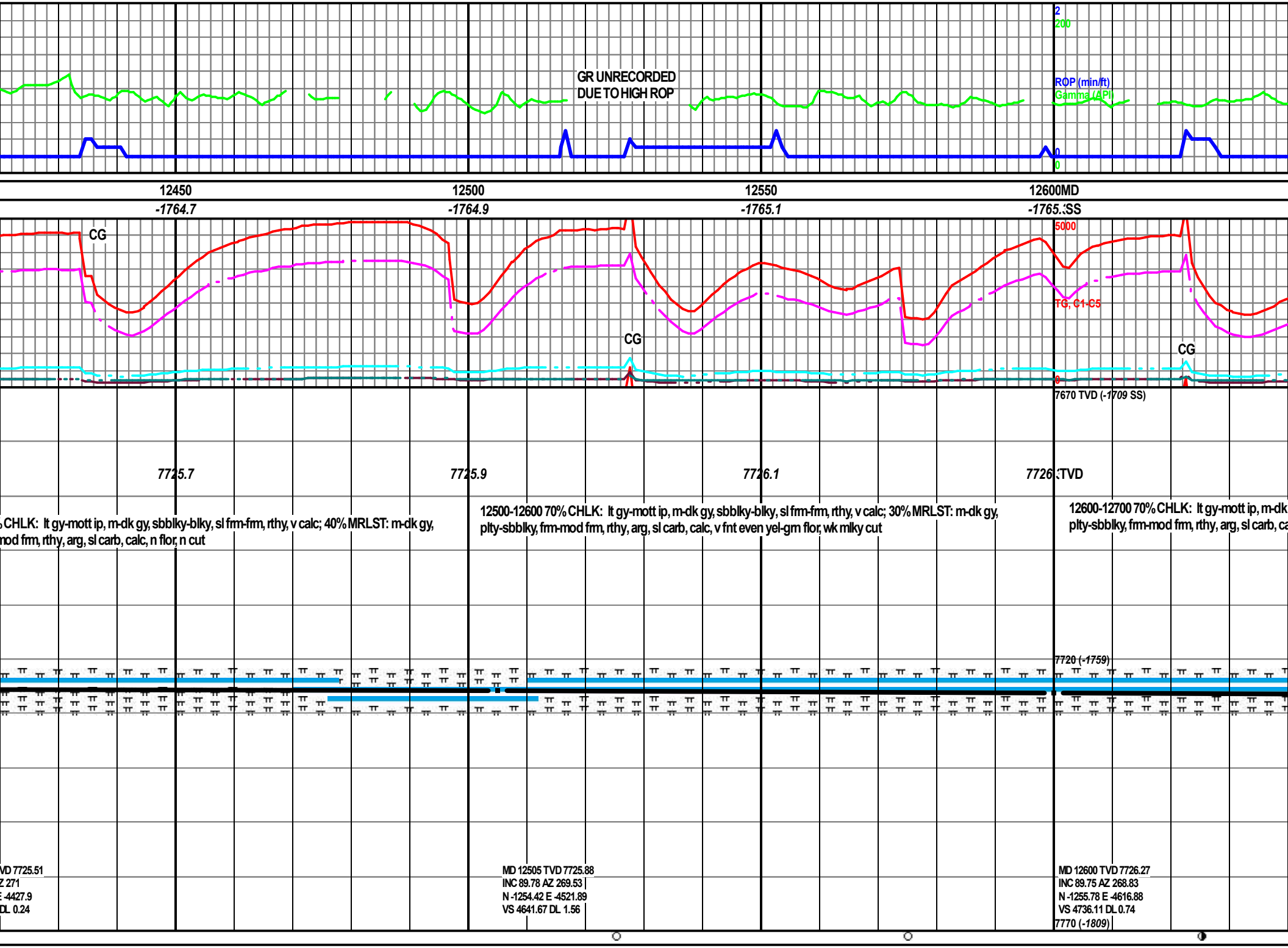
DUE TO HIGH ROP
GR UNRECORDED
DUE TO HIGH ROP
0MD
12250
12300
12350
12400MD
4.:SS
-1764.1
-1764.2
-1764.3
-1764.:SS
5000
TG, C1-C5
0
CG
CG
MW 9.5
VIS 47
7670 TVD (-1709 SS)
:TVD
7725.1
7725.2
7725.3
7725 :TVD
12200-12300 60% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, n flor, n cut
12300-12400 60% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, n flor, n cut
12400-12500 60%
plty-sbblky, frm-r
7720 (-1759)
MD 12221 TVD 7725.11
INC 89.97 AZ 274.6
N -1260.82 E -4238.03
VS 4360.74 DL 1.31
MD 12316 TVD 7725.23
INC 89.88 AZ 270.8
N -1256.35 E -4332.91
VS 4454.35 DL 4
MD 12411 T
INC 89.78 A
N -1254.85 E
VS 4548.44
7770 (-1809)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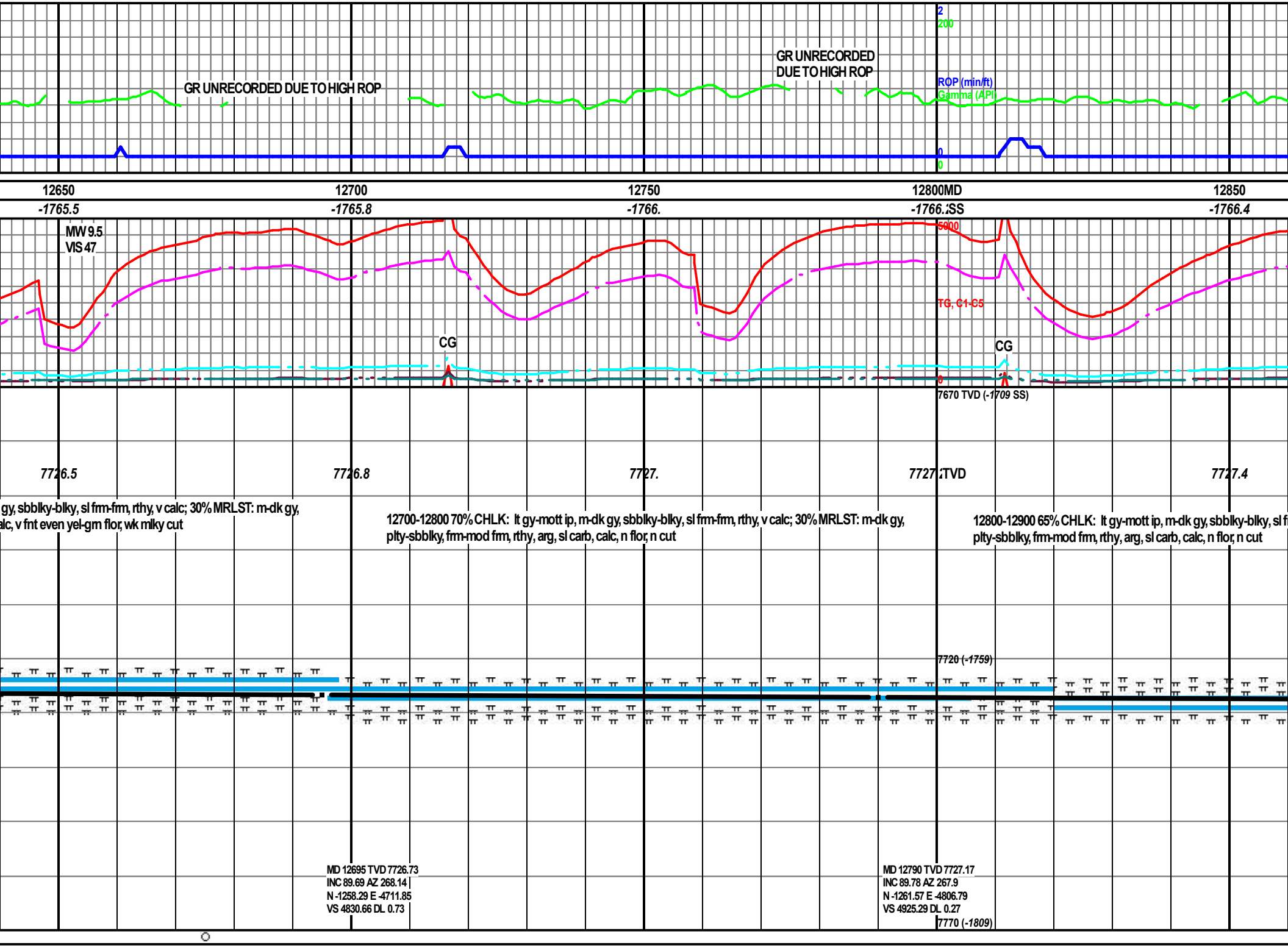
2
200
ROP (min/ft)
Gamma (API)
0
0
12450
12500
12550
12600MD
-1764.7
-1764.9
-1765.1
-1765.3SS
CG
CG
CG
5000
TG, C1-C5
0
7670 TVD (-1709 SS)
7725.7
7725.9
7726.1
7726.3TVD
CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy,
mod frm, rthy, arg, sl carb, calc, n flor, n cut
12500-12600 70% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 30% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, v fnt even yel-grn flor, wk mlky cut
12600-12700 70% CHLK: lt gy-mott ip, m-dk
plty-sbblky, frm-mod frm, rthy, arg, sl carb, ca
7720 (-1759)
VD 7725.51
Z 271
E -4427.9
DL 0.24
MD 12505 TVD 7725.88
INC 89.78 AZ 269.53
N -1254.42 E -4521.89
VS 4641.67 DL 1.56
MD 12600 TVD 7726.27
INC 89.75 AZ 268.83
N -1255.78 E -4616.88
VS 4736.11 DL 0.74
7770 (-1809)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GR UNRECORDED DUE TO HIGH ROP
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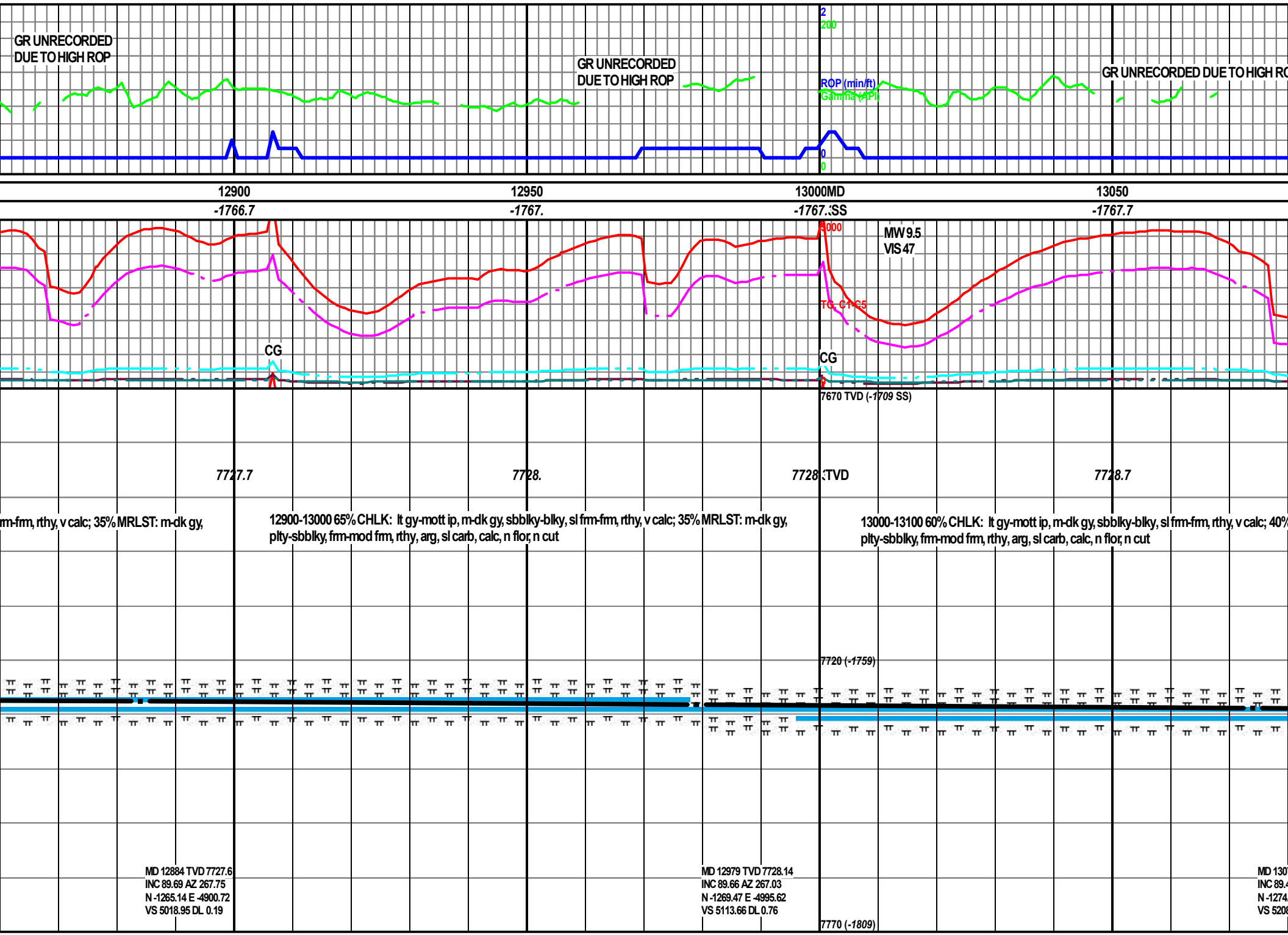
200
ROP (min/ft)
Gamma (API)
0
0
12650
12700
12750
12800MD
12850
-1765.5
-1765.8
-1766.
-1766.1SS
-1766.4
MW 9.5
VIS 47
5000
TG, C1-C5
CG
CG
0
7670 TVD (-1709 SS)
7726.5
7726.8
7727.
7727.1TVD
7727.4
gy, sbblky-blky, sl frm-frm, rthy, v calc; 30% MRLST: m-dk gy,
alc, v fnt even yel-grn flor, wk mlky cut
12700-12800 70% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 30% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, n flor, n cut
12800-12900 65% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl f
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, n flor, n cut
7720 (-1759)
MD 12695 TVD 7726.73
INC 89.69 AZ 268.14
N -1258.29 E -4711.85
VS 4830.66 DL 0.73
MD 12790 TVD 7727.17
INC 89.78 AZ 267.9
N -1261.57 E -4806.79
VS 4925.29 DL 0.27
7770 (-1809)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GR UNRECORDED
DUE TO HIGH ROP
GR UNRECORDED DUE TO HIGH RO
2
200
ROP (min/ft)
Gamma (API)
0
0
12900
12950
13000MD
13050
-1766.7
-1767.
-1767.:SS
-1767.7
3000
MW 9.5
VIS 47
TG, C1-C5
CG
CG
7670 TVD (-1709 SS)
7727.7
7728.
7728.:TVD
7728.7
m-frm, rthy, v calc; 35% MRLST: m-dk gy,
12900-13000 65% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 35% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, n flor, n cut
13000-13100 60% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 40%
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, n flor, n cut
7720 (-1759)
MD 12884 TVD 7727.6
INC 89.69 AZ 267.75
N -1265.14 E -4900.72
VS 5018.95 DL 0.19
MD 12979 TVD 7728.14
INC 89.66 AZ 267.03
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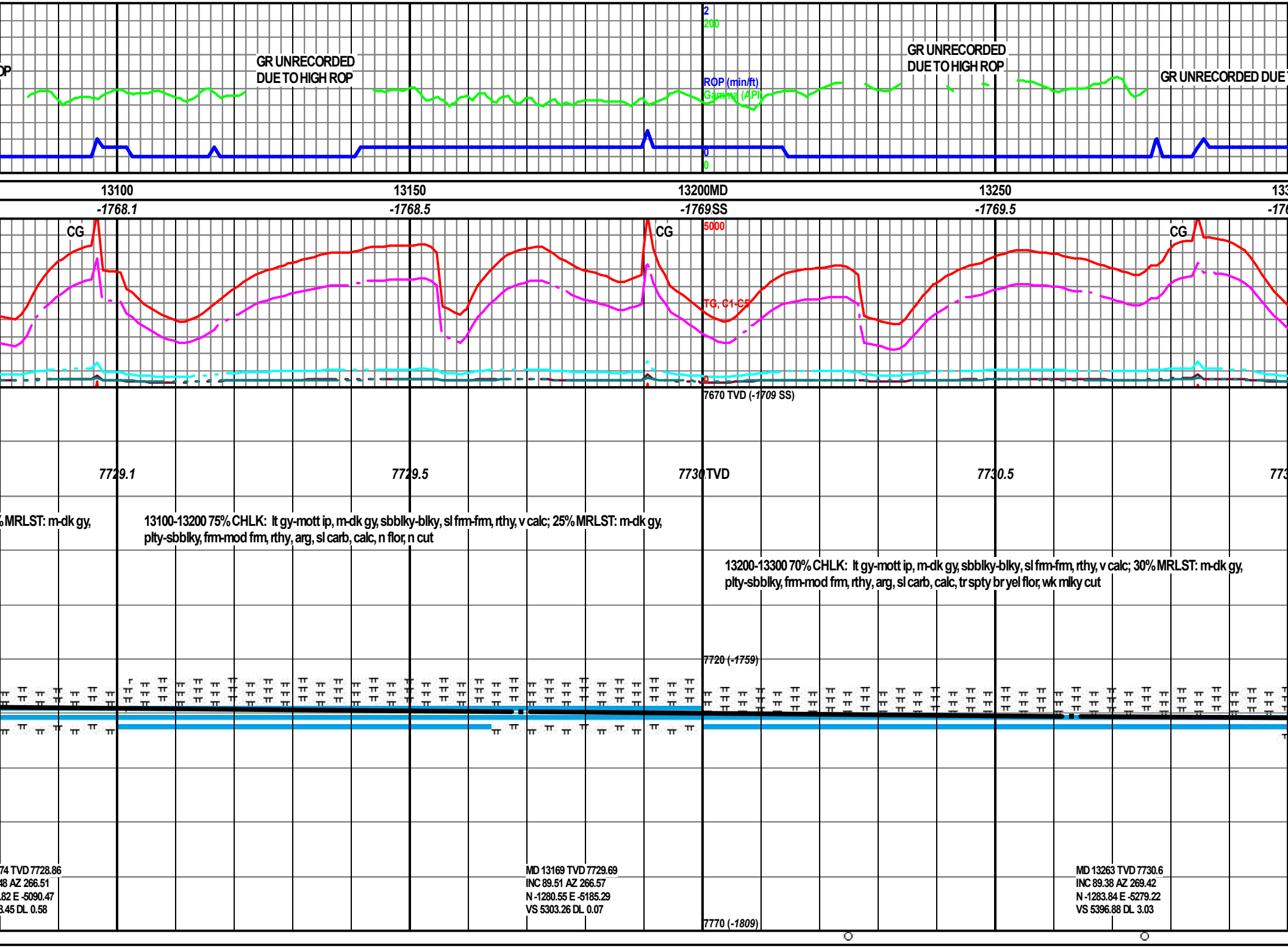
VS 5113.66 DL 0.76
7770 (-1809)
MD 130
INC 89.
N -1274.
VS 5208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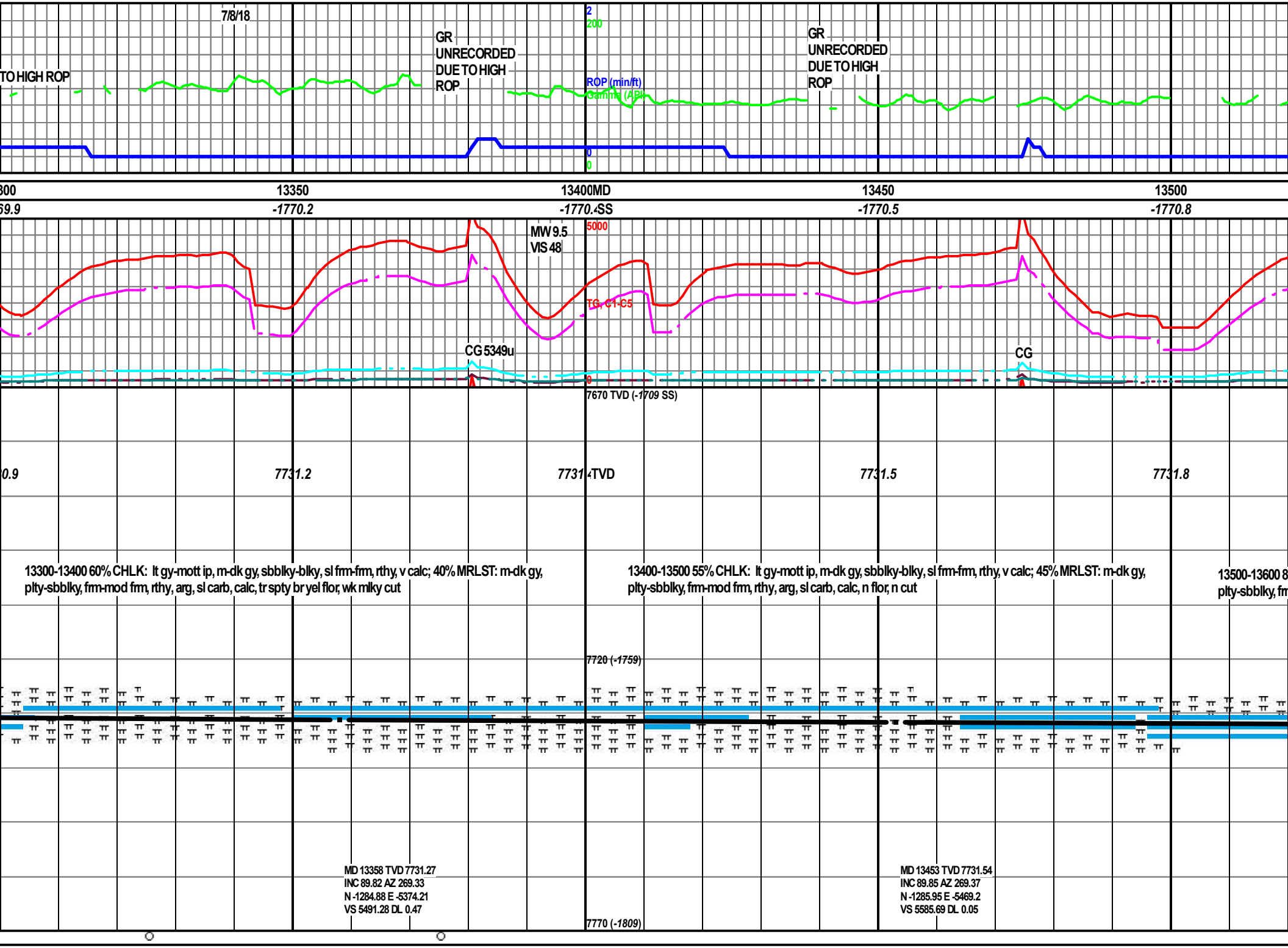
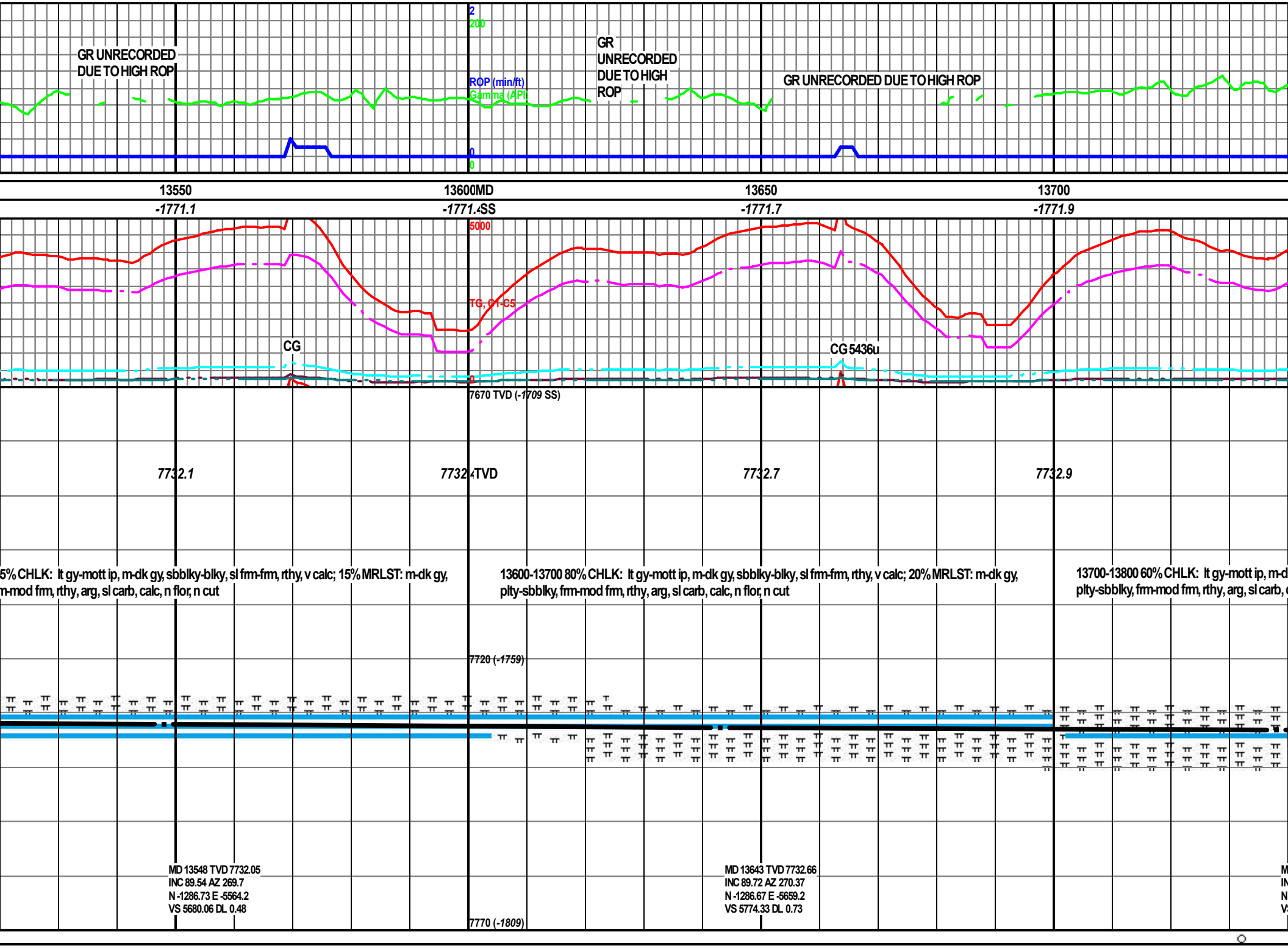
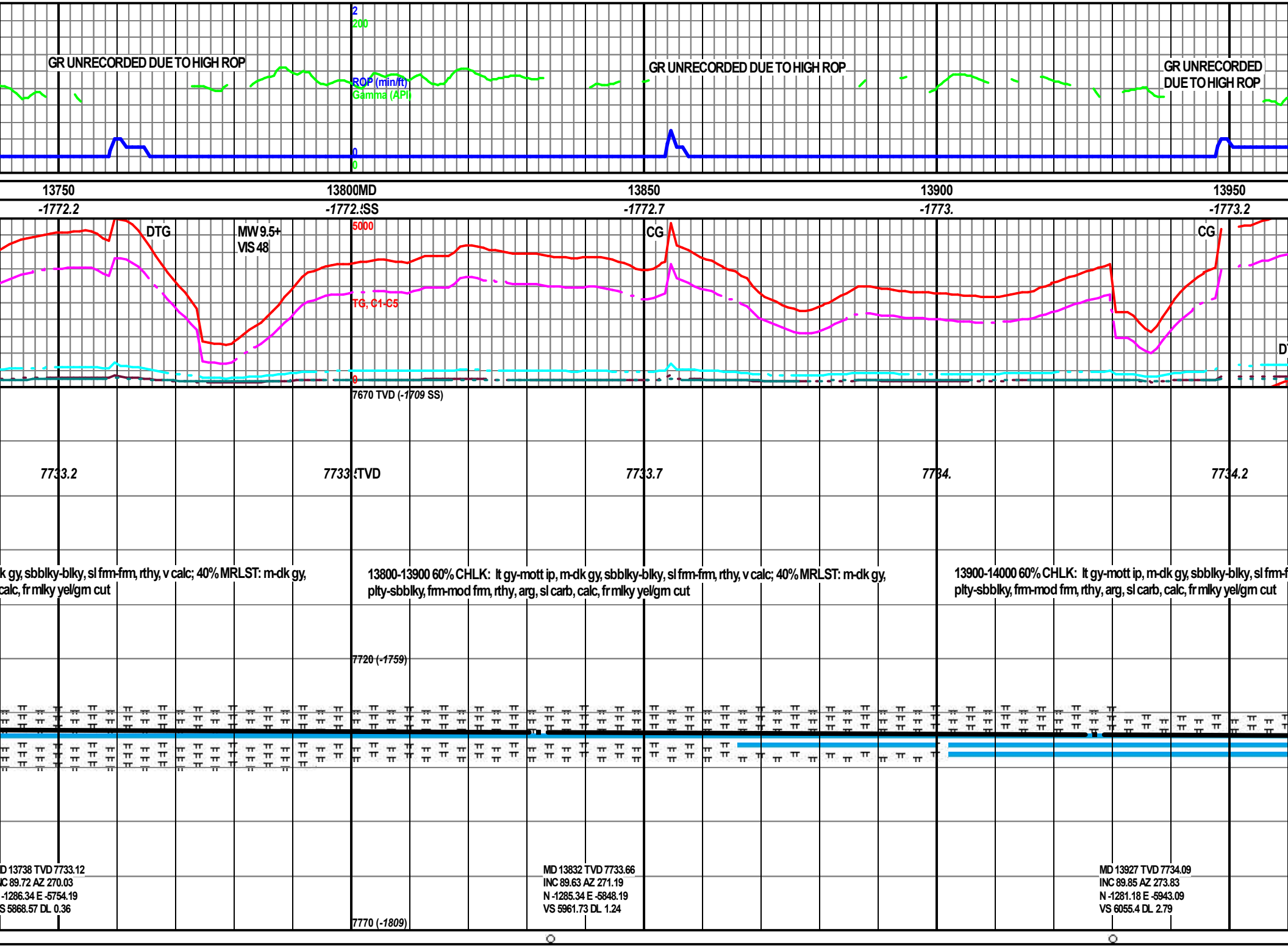
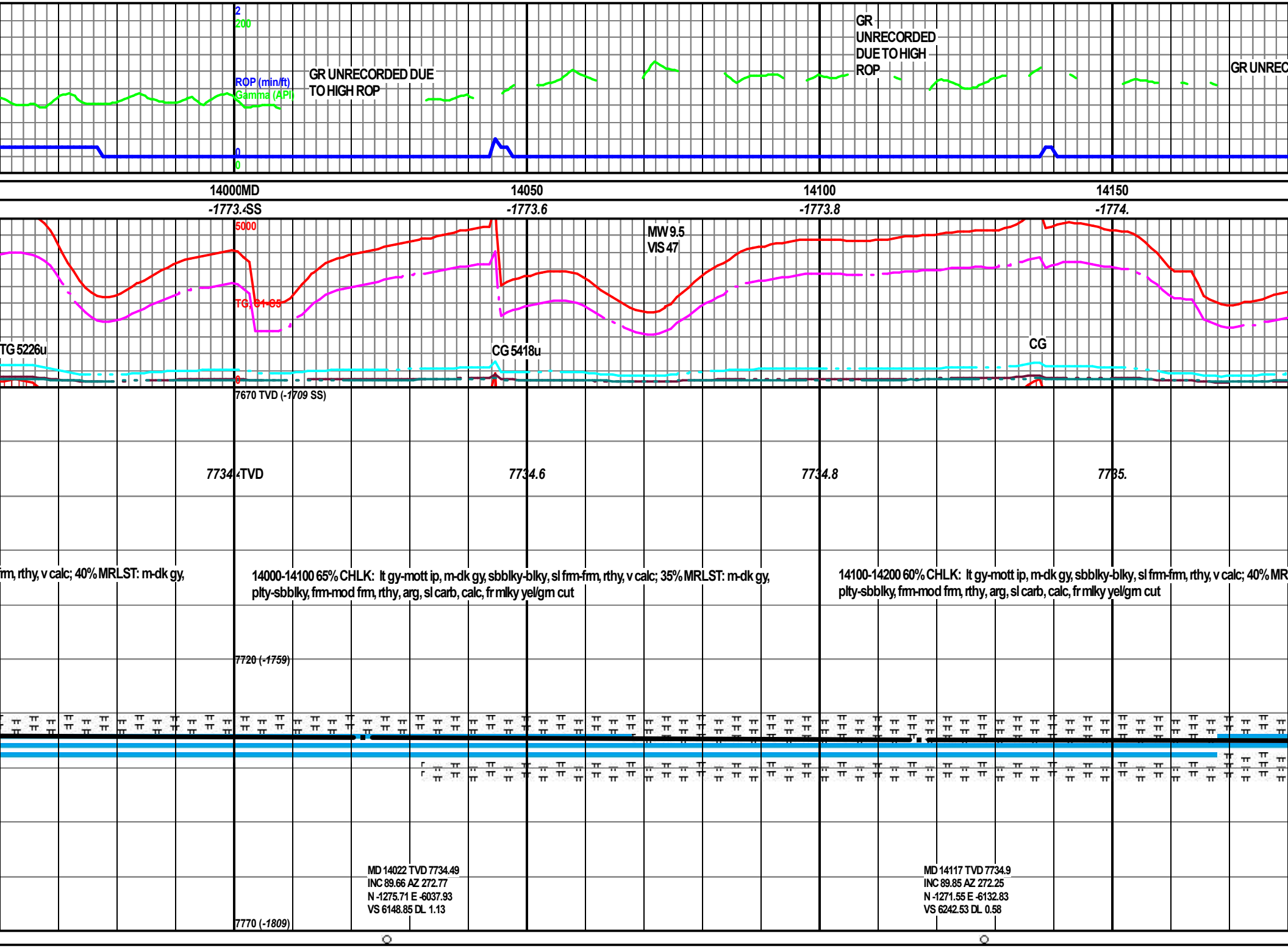
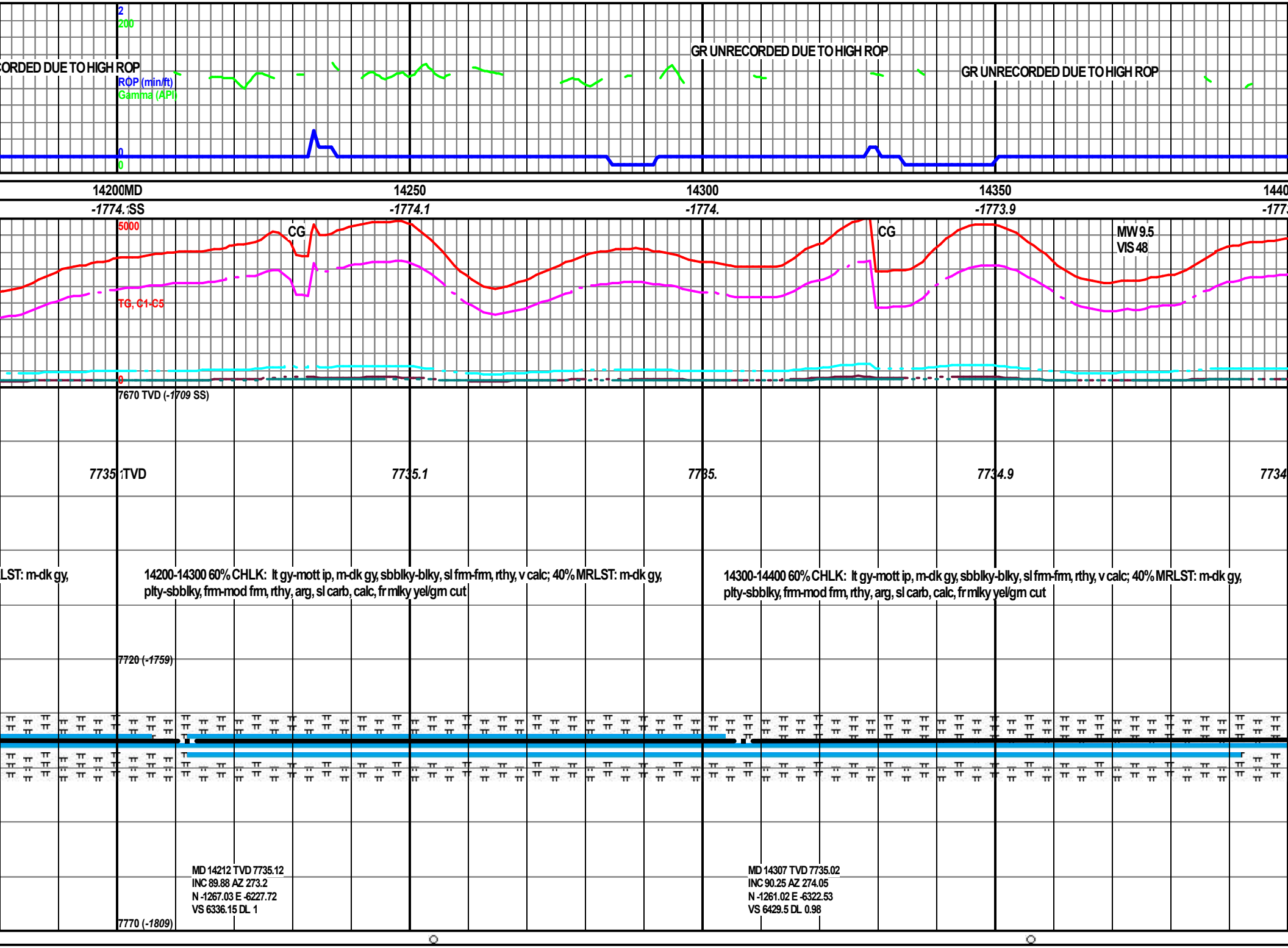
DUE TO HIGH ROP
GR UNRECORDED
DUE TO HIGH ROP
GR UNRECORDED DUE
2
200
ROP (min/ft)
Gamma (API)
0
0
13100
13150
13200MD
13250
-1768.1
-1768.5
-1769SS
-1769.5
CG
CG
CG
5000
TG, C1-C5
0
7670 TVD (-1709 SS)
7729.1
7729.5
7730TVD
7730.5
% MRLST: m-dk gy,
13100-13200 75% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 25% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, n flor, n cut
13200-13300 70% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 30% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr spty br yel flor, wk mlky cut
7720 (-1759)
74 TVD 7728.86
48 AZ 266.51
.82 E -5090.47
3.45 DL 0.58
MD 13169 TVD 7729.69
INC 89.51 AZ 266.57
N -1280.55 E -5185.29
VS 5303.26 DL 0.07
MD 13263 TVD 7730.6
INC 89.38 AZ 269.42
N -1283.84 E -5279.22
VS 5396.88 DL 3.03
7770 (-1809)

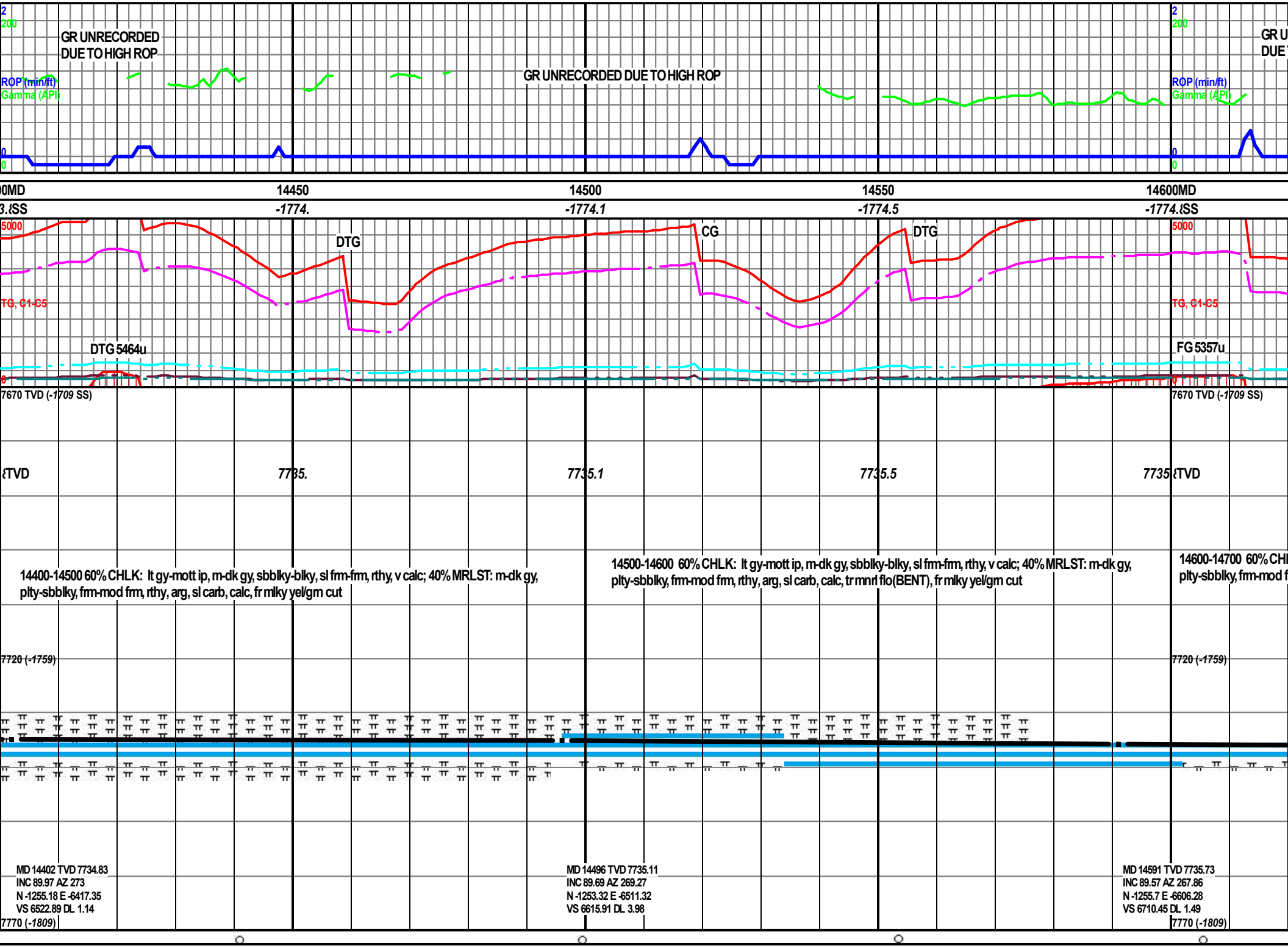

7/8/18
TO HIGH ROP
GR
UNRECORDED
DUE TO HIGH
ROP
GR
UNRECORDED
DUE TO HIGH
ROP
2
200
ROP (min/ft)
Gamma (API)
0
0
300
13350
13400MD
13450
13500
69.9
-1770.2
-1770.4SS
-1770.5
-1770.8
MW 9.5
VIS 48
5000
TG, C1-C5
CG 5349u
CG
0
7670 TVD (-1709 SS)
0.9
7731.2
7731.4TVD
7731.5
7731.8
13300-13400 60% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr spty br yel flor, wk mlky cut
13400-13500 55% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 45% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, n flor, n cut
13500-13600 8
plty-sbblky, fr
7720 (-1759)
MD 13358 TVD 7731.27
INC 89.82 AZ 269.33
N -1284.88 E -5374.21
VS 5491.28 DL 0.47
MD 13453 TVD 7731.54
INC 89.85 AZ 269.37
N -1285.95 E -5469.2
VS 5585.69 DL 0.05
7770 (-1809)

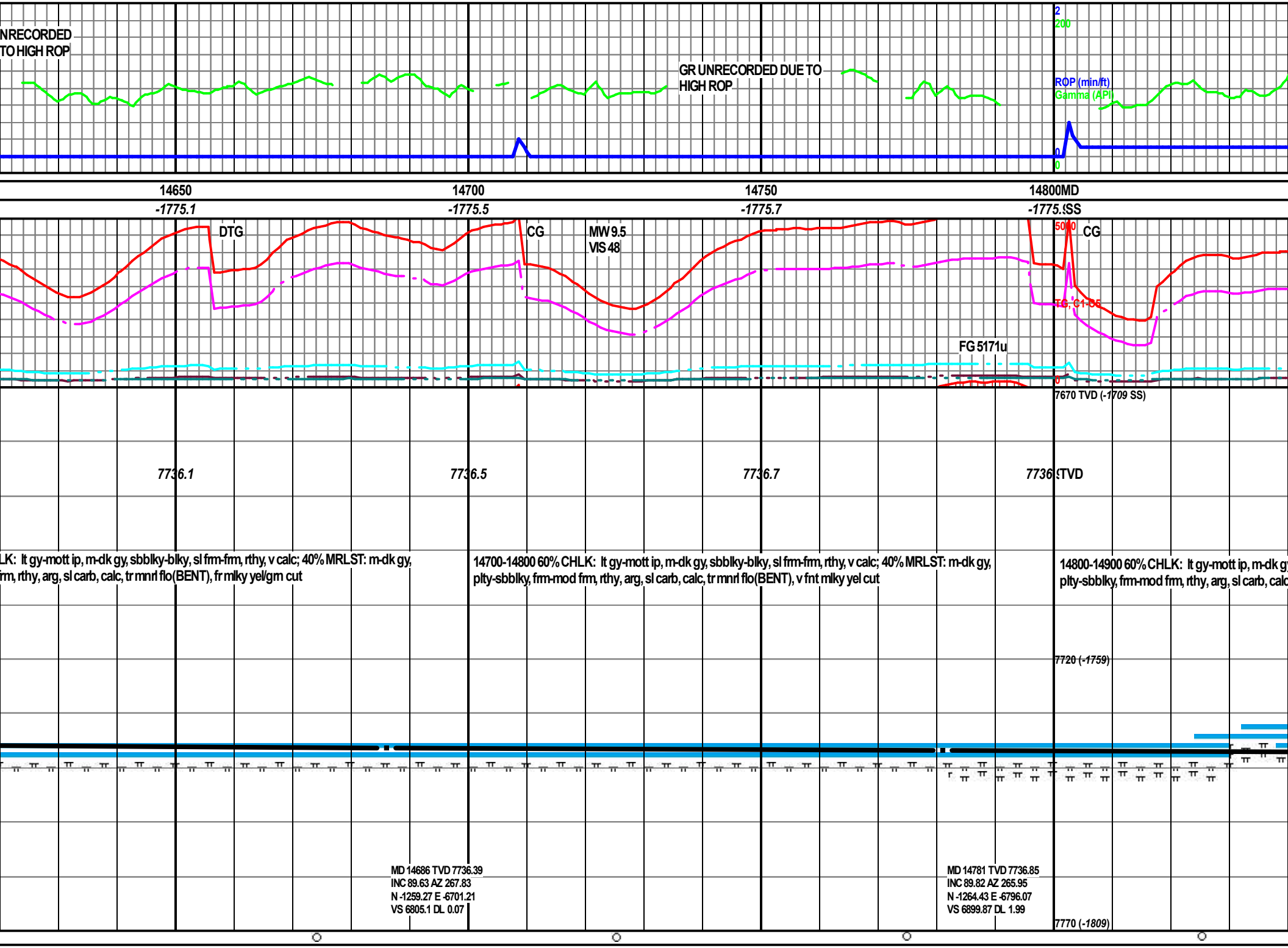

GR UNRECORDED DUE TO HIGH ROP
2
200
ROP (min/ft)
Gamma (API)
0
0
GR UNRECORDED DUE TO HIGH ROP
GR UNRECORDED DUE TO HIGH ROP
13550
13600MD
13650
13700
-1771.1
-1771.4SS
-1771.7
-1771.9
5000
TG, C1-C5
CG
CG 5436u
0
7670 TVD (-1709 SS)
7732.1
7732.4TVD
7732.7
7732.9
5% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 15% MRLST: m-dk gy,
m-mod frm, rthy, arg, sl carb, calc, n flor, n cut
13600-13700 80% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 20% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, n flor, n cut
13700-13800 60% CHLK: lt gy-mott ip, m-d
plty-sbblky, frm-mod frm, rthy, arg, sl carb,
7720 (-1759)
MD 13548 TVD 7732.05
INC 89.54 AZ 269.7
N -1286.73 E -5564.2
VS 5680.06 DL 0.48
MD 13643 TVD 7732.66
INC 89.72 AZ 270.37
N -1286.67 E -5659.2
VS 5774.33 DL 0.73
7770 (-1809)

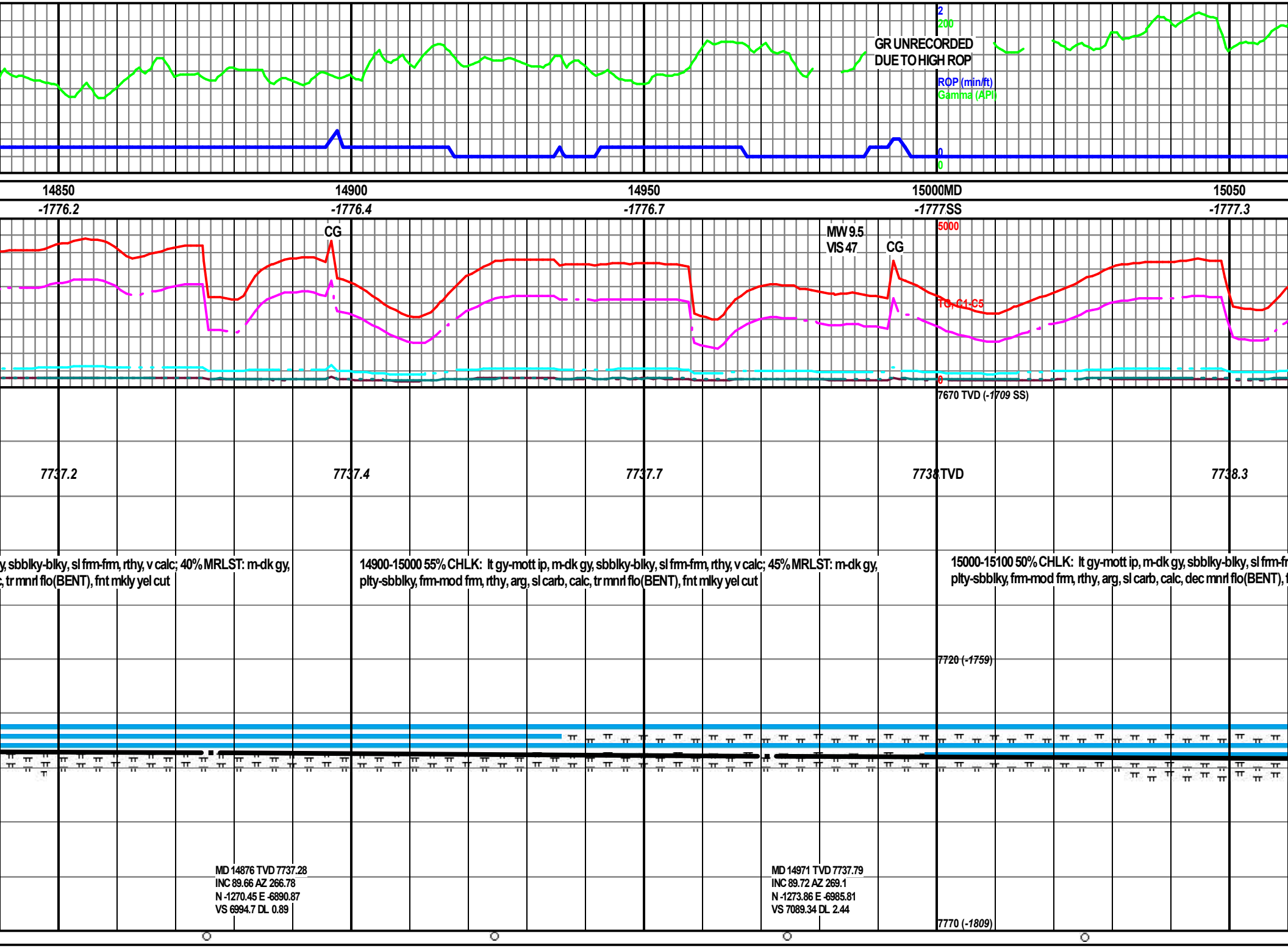

GR UNRECORDED DUE TO HIGH ROP
ROP (min/ft)
Gamma (API)
2
200
0
0
GR UNRECORDED DUE TO HIGH ROP
GR UNRECORDED DUE TO HIGH ROP
13750
13800MD
13850
13900
13950
-1772.2
-1772.SS
-1772.7
-1773.
-1773.2
DTG
MW 9.5+
VIS 48
5000
TG, C1-C5
0
CG
CG
7670 TVD (-1709 SS)
7733.2
7733.TVD
7733.7
7734.
7734.2
k gy, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy,
calc, fr mlky yel/gm cut
13800-13900 60% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, fr mlky yel/gm cut
13900-14000 60% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-f
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, fr mlky yel/gm cut
7720 (-1759)
D 13738 TVD 7733.12
C 89.72 AZ 270.03
-1286.34 E -5754.19
S 5868.57 DL 0.36
MD 13832 TVD 7733.66
INC 89.63 AZ 271.19
N -1285.34 E -5848.19
VS 5961.73 DL 1.24
MD 13927 TVD 7734.09
INC 89.85 AZ 273.83
N -1281.18 E -5943.09
VS 6055.4 DL 2.79
7770 (-1809)

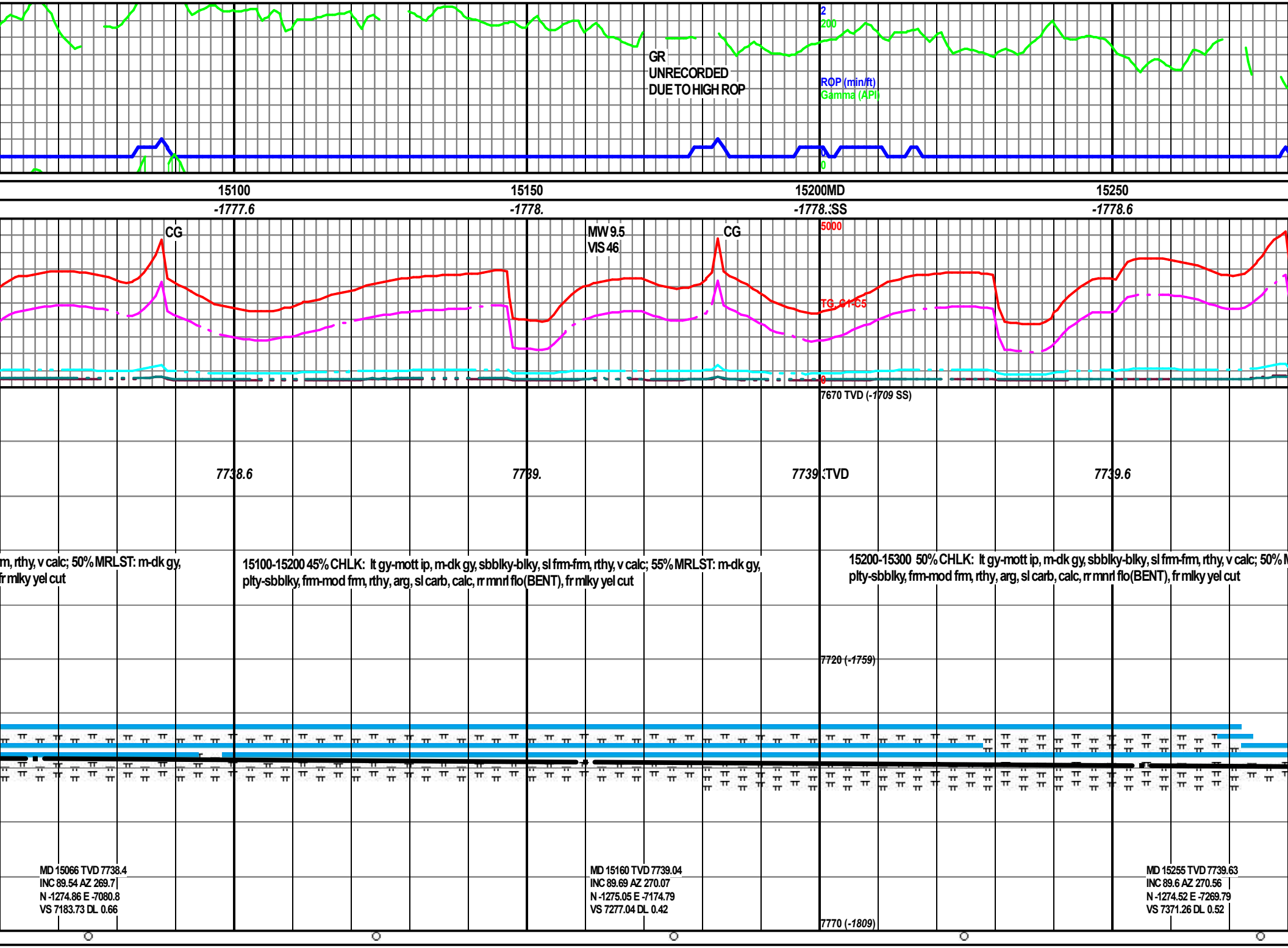

2
200
ROP (min/ft)
Gamma (API)
0
0
GR UNRECORDED DUE TO HIGH ROP
GR UNRECORDED DUE TO HIGH ROP
GR UNREC
14000MD
14050
14100
14150
-1773.4SS
-1773.6
-1773.8
-1774.
5000
MW 9.5
VIS 47
TG 5226u
CG 5418u
CG
0
7670 TVD (-1709 SS)
7734.4TVD
7734.6
7734.8
7735.
14000-14100 65% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 35% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, fr mlky yel/gm cut
14100-14200 60% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 40% MR plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, fr mlky yel/gm cut
7720 (-1759)
MD 14022 TVD 7734.49
INC 89.66 AZ 272.77
N -1275.71 E -6037.93
VS 6148.85 DL 1.13
MD 14117 TVD 7734.9
INC 89.85 AZ 272.25
N -1271.55 E -6132.83
VS 6242.53 DL 0.58
7770 (-1809)

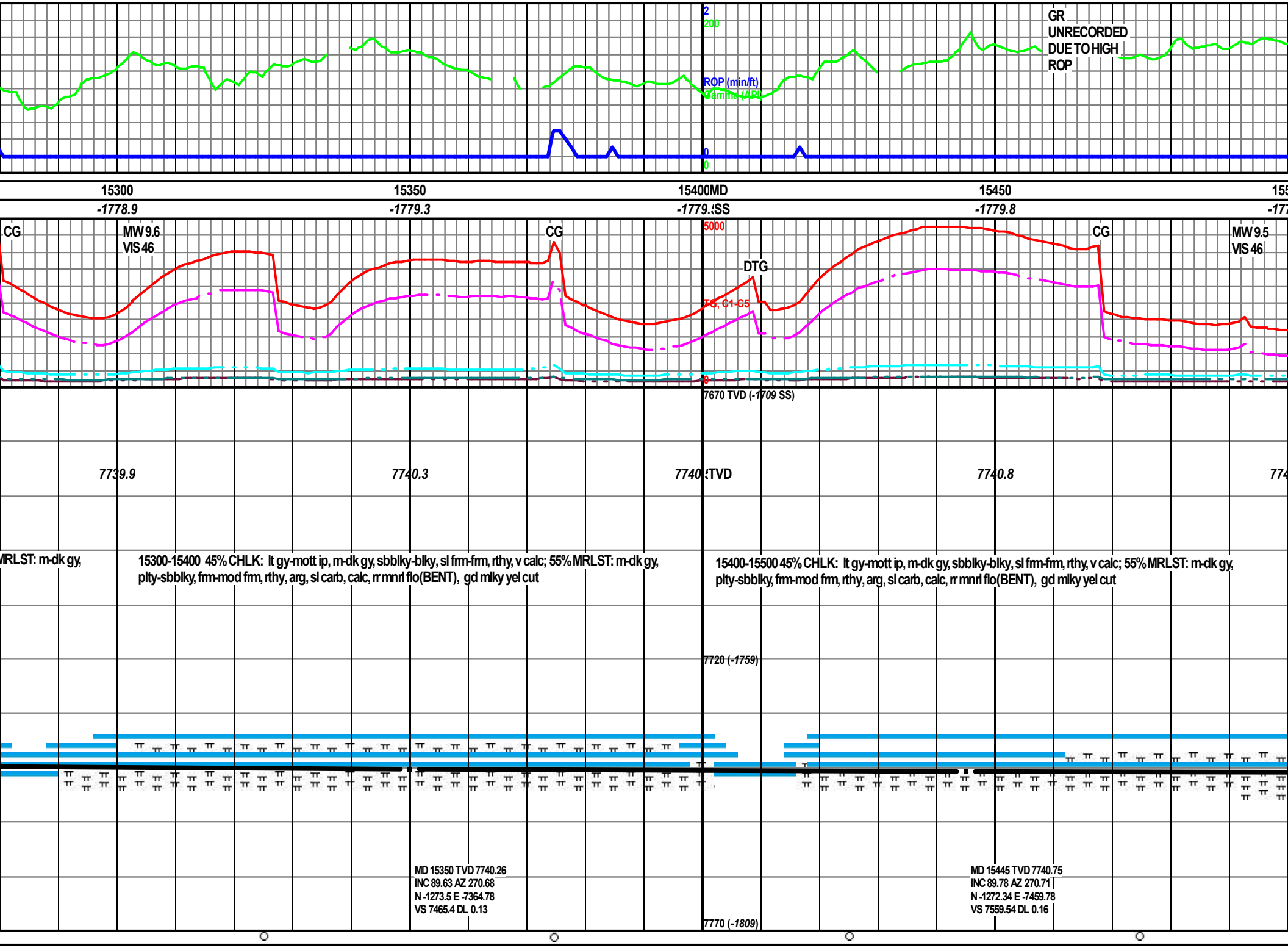

2
200
ORDED DUE TO HIGH ROP
ROP (min/ft)
Gamma (API)
0
0
GR UNRECORDED DUE TO HIGH ROP
GR UNRECORDED DUE TO HIGH ROP
14200MD
14250
14300
14350
1440
-1774.1SS
-1774.1
-1774.
-1773.9
-177
5000
CG
CG
MW 9.5
VIS 48
TG, C1-C5
0
7670 TVD (-1709 SS)
7735.1TVD
7735.1
7735.
7734.9
7734
LST: m-dk gy,
14200-14300 60% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, fr mlky yel/gm cut
14300-14400 60% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, fr mlky yel/gm cut
7720 (-1759)
MD 14212 TVD 7735.12
INC 89.88 AZ 273.2
N -1267.03 E -6227.72
VS 6336.15 DL 1
MD 14307 TVD 7735.02
INC 90.25 AZ 274.05
N -1261.02 E -6322.53
VS 6429.5 DL 0.98
7770 (-1809)

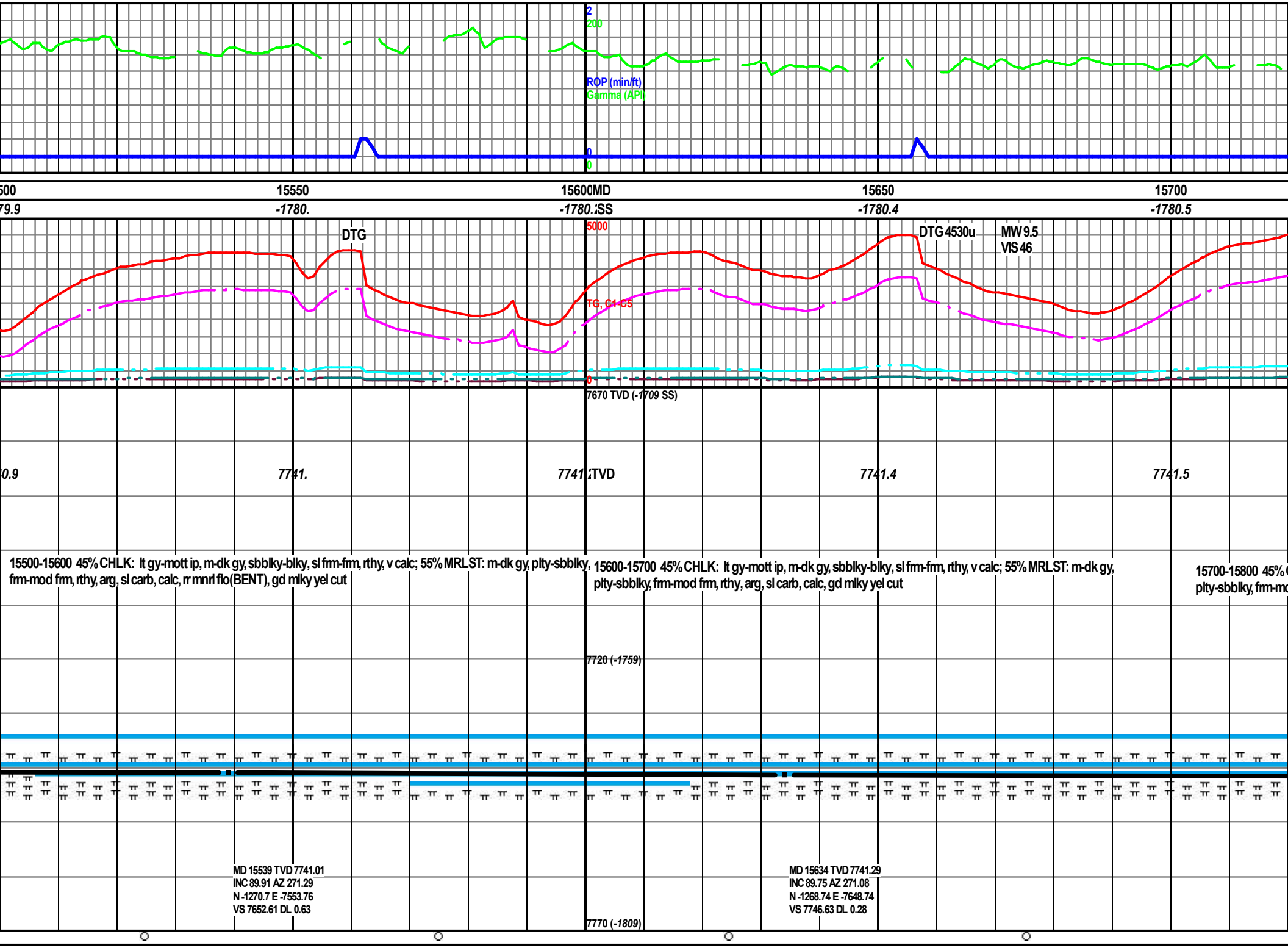

GR UNRECORDED DUE TO HIGH ROP
GR UNRECORDED DUE TO HIGH ROP
ROP (min/ft)
Gamma (API)
14450
14500
14550
14600MD
-1774.
-1774.1
-1774.5
DTG
CG
DTG
TG, C1-C5
DTG 5464u
FG 5357u
7670 TVD (-1709 SS)
7735.
7735.1
7735.5
14400-14500 60% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, fr mlky yel/gm cut
14500-14600 60% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr mnrl flo(BENT), fr mlky yel/gm cut
7720 (-1759)
MD 14402 TVD 7734.83
INC 89.97 AZ 273
N -1255.18 E -6417.35
VS 6522.89 DL 1.14
7770 (-1809)
MD 14496 TVD 7735.11
INC 89.69 AZ 269.27
N -1253.32 E -6511.32
VS 6615.91 DL 3.98
MD 14591 TVD 7735.73
INC 89.57 AZ 267.86
N -1255.7 E -6606.28
VS 6710.45 DL 1.49

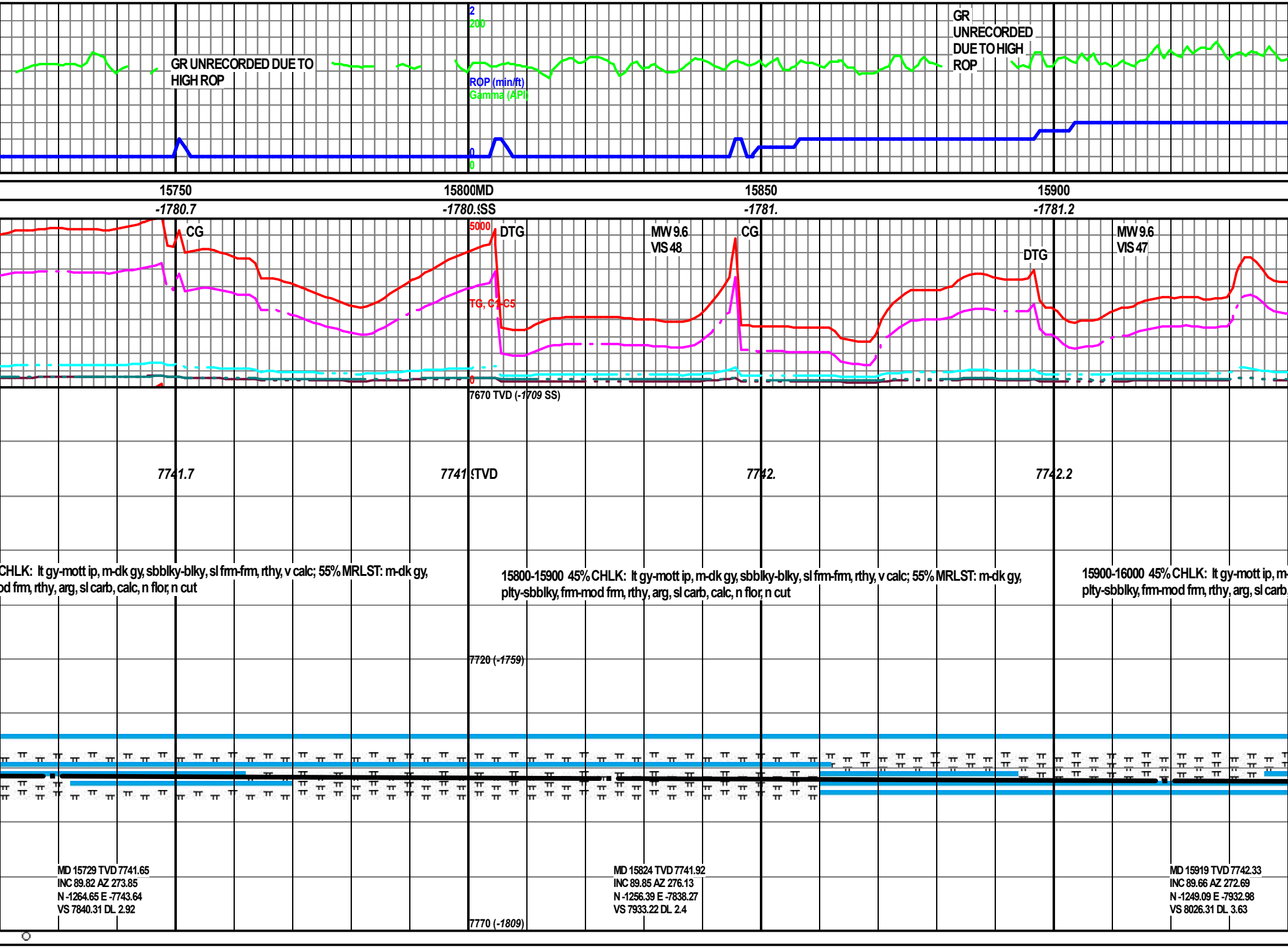

NRECORDED
TO HIGH ROP
GR UNRECORDED DUE TO
HIGH ROP
2
200
ROP (min/ft)
Gamma (API)
0
0
14650
14700
14750
14800MD
-1775.1
-1775.5
-1775.7
-1775.SS
DTG
CG
MW 9.5
VIS 48
CG
FG 5171u
7670 TVD (-1709 SS)
7736.1
7736.5
7736.7
7736 STVD
LK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy,
frm, rthy, arg, sl carb, calc, tr mnrl flo(BENT), fr mlky yel/gm cut
14700-14800 60% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr mnrl flo(BENT), v fnt mlky yel cut
14800-14900 60% CHLK: lt gy-mott ip, m-dk g
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc
7720 (-1759)
MD 14686 TVD 7736.39
INC 89.63 AZ 267.83
N -1259.27 E -6701.21
VS 6805.1 DL 0.07
MD 14781 TVD 7736.85
INC 89.82 AZ 265.95
N -1264.43 E -6796.07
VS 6899.87 DL 1.99
7770 (-1809)

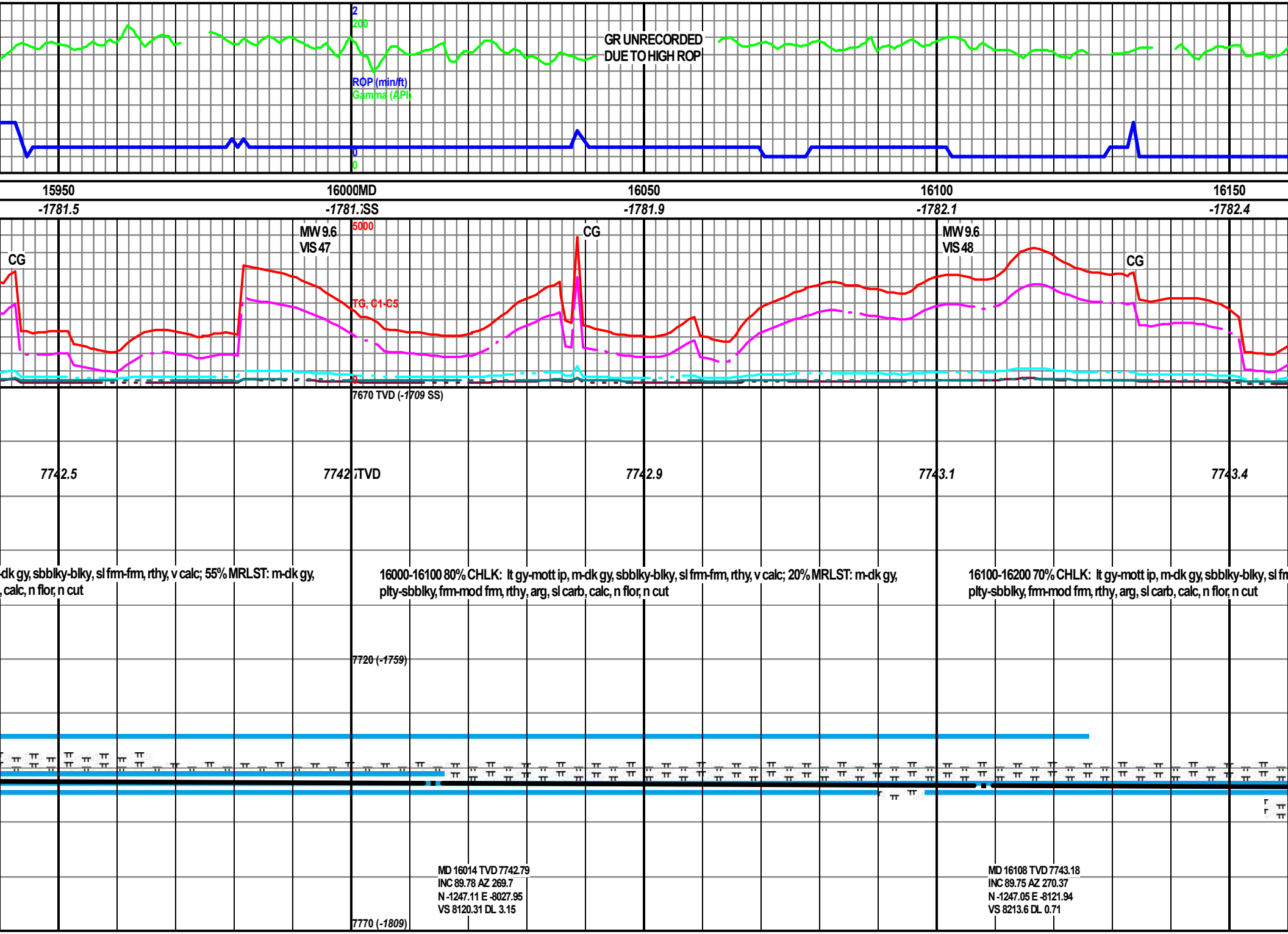

GR UNRECORDED
DUE TO HIGH ROP
ROP (min/ft)
Gamma (API)
2
200
0
0
14850
14900
14950
15000MD
15050
-1776.2
-1776.4
-1776.7
-1777SS
-1777.3
CG
MW 9.5
VIS 47
CG
5000
TG, C1-C5
0
7670 TVD (-1709 SS)
7737.2
7737.4
7737.7
7738TVD
7738.3
y, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy,
, tr mnrl flo(BENT), fnt mkly yel cut
14900-15000 55% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 45% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, tr mnrl flo(BENT), fnt mlky yel cut
15000-15100 50% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-fr
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, dec mnrl flo(BENT),
7720 (-1759)
MD 14876 TVD 7737.28
INC 89.66 AZ 266.78
N -1270.45 E -6890.87
VS 6994.7 DL 0.89
MD 14971 TVD 7737.79
INC 89.72 AZ 269.1
N -1273.86 E -6985.81
VS 7089.34 DL 2.44
7770 (-1809)

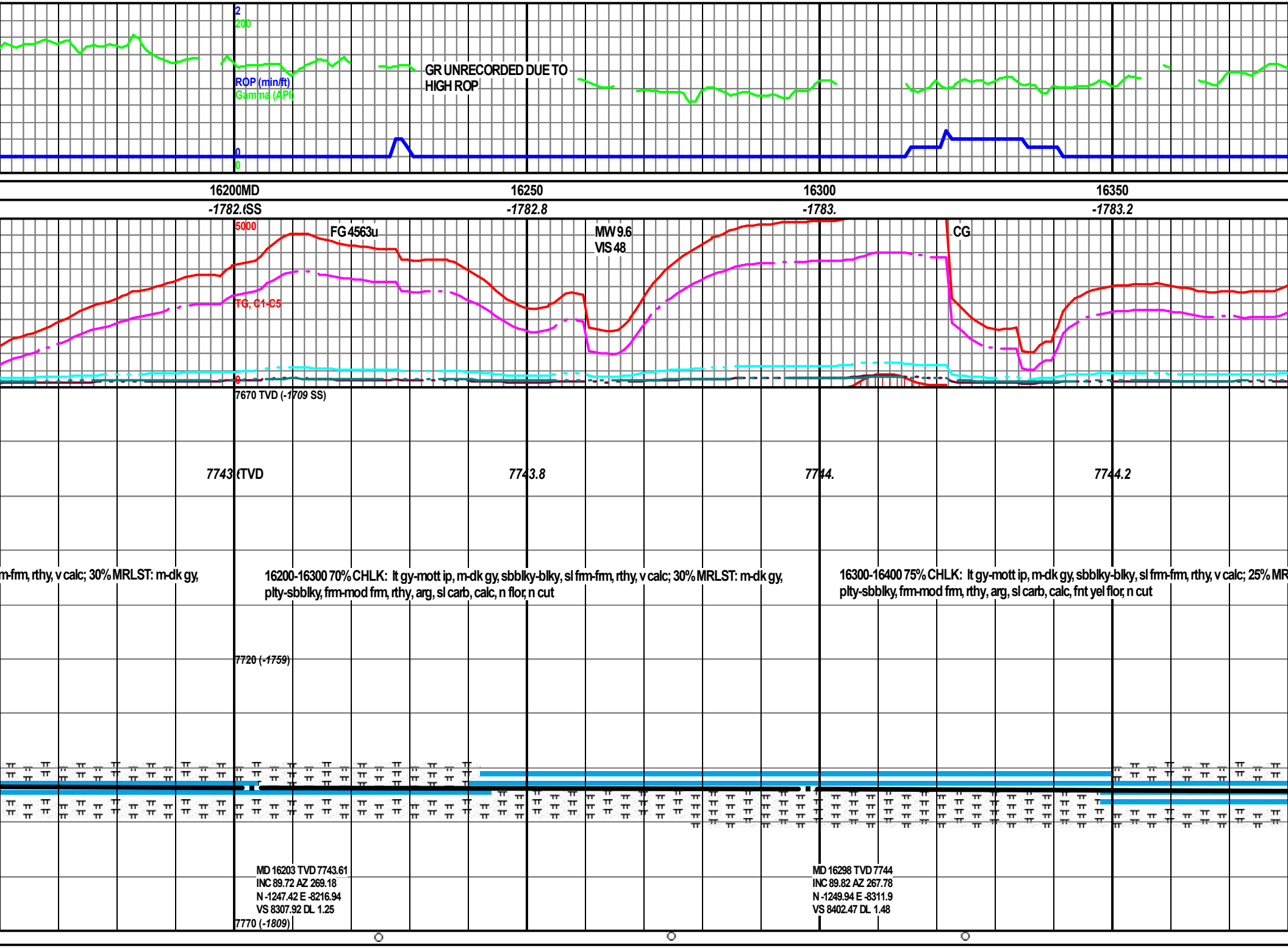

GR
UNRECORDED
DUE TO HIGH ROP
2
200
ROP (min/ft)
Gamma (API)
0
15100
15150
15200MD
15250
-1777.6
-1778.
-1778.:SS
-1778.6
CG
MW 9.5
VIS 46
CG
5000
TG, C1-C5
0
7670 TVD (-1709 SS)
7738.6
7739.
7739.:TVD
7739.6
m, rthy, v calc; 50% MRLST: m-dk gy,
fr mlky yel cut
15100-15200 45% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 55% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, rr mnrl flo(BENT), fr mlky yel cut
15200-15300 50% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 50% M
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, rr mnrl flo(BENT), fr mlky yel cut
7720 (-1759)
MD 15066 TVD 7738.4
INC 89.54 AZ 269.7
N -1274.86 E -7080.8
VS 7183.73 DL 0.66
MD 15160 TVD 7739.04
INC 89.69 AZ 270.07
N -1275.05 E -7174.79
VS 7277.04 DL 0.42
MD 15255 TVD 7739.63
INC 89.6 AZ 270.56
N -1274.52 E -7269.79
VS 7371.26 DL 0.52
7770 (-1809)

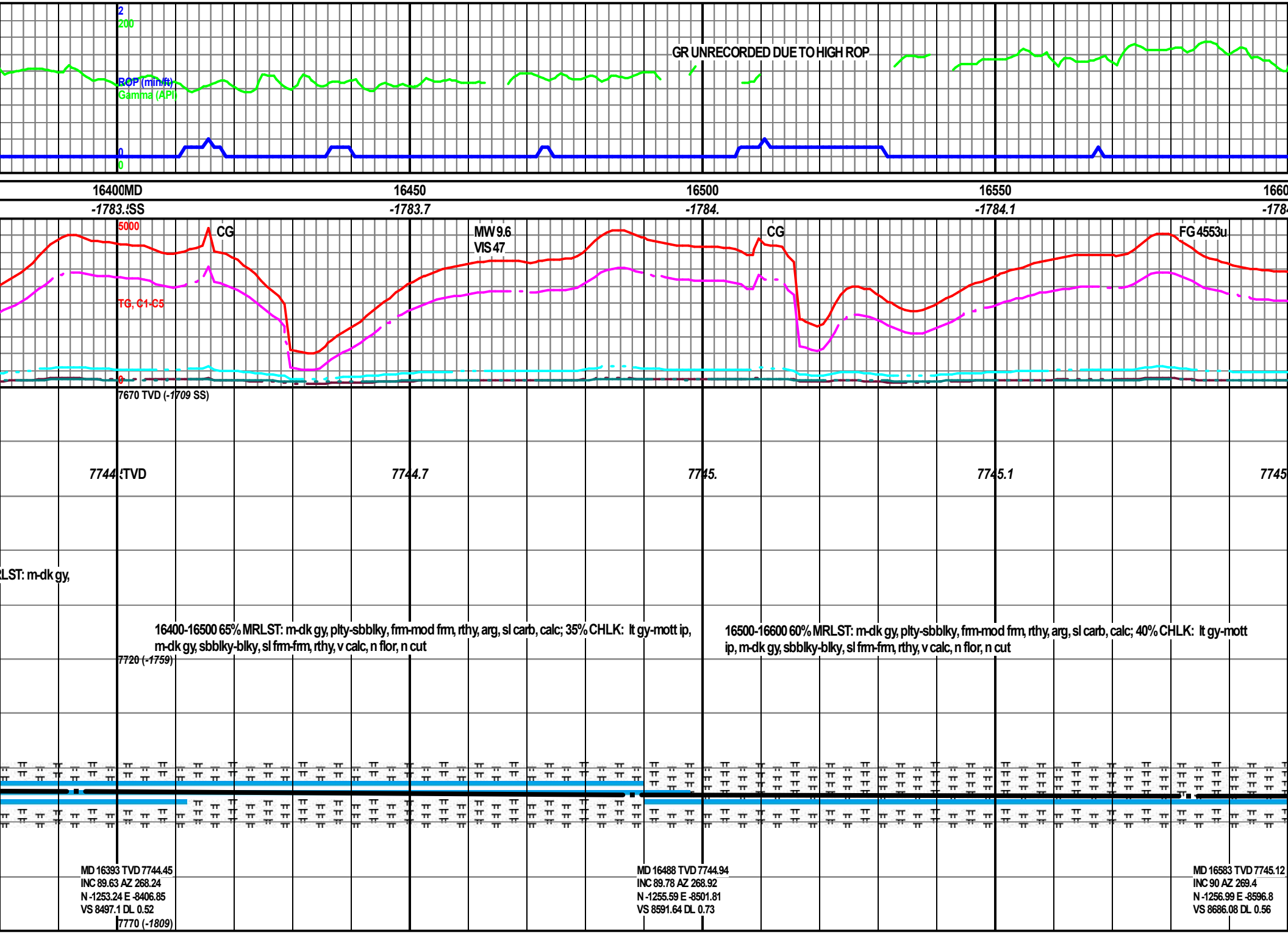

GR
UNRECORDED
DUE TO HIGH
ROP
2
200
ROP (min/ft)
Gamma (API)
0
0
15300
15350
15400MD
15450
-1778.9
-1779.3
-1779.8
CG
MW 9.6
VIS 46
CG
DTG
CG
MW 9.5
VIS 46
5000
TG, C1-C5
0
7670 TVD (-1709 SS)
7739.9
7740.3
7740.8
TVD
MRLST: m-dk gy,
15300-15400 45% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 55% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, rr mnrl flo(BENT), gd mlky yel cut
15400-15500 45% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 55% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, rr mnrl flo(BENT), gd mlky yel cut
7720 (-1759)
MD 15350 TVD 7740.26
INC 89.63 AZ 270.68
N -1273.5 E -7364.78
VS 7465.4 DL 0.13
MD 15445 TVD 7740.75
INC 89.78 AZ 270.71
N -1272.34 E -7459.78
VS 7559.54 DL 0.16
7770 (-1809)

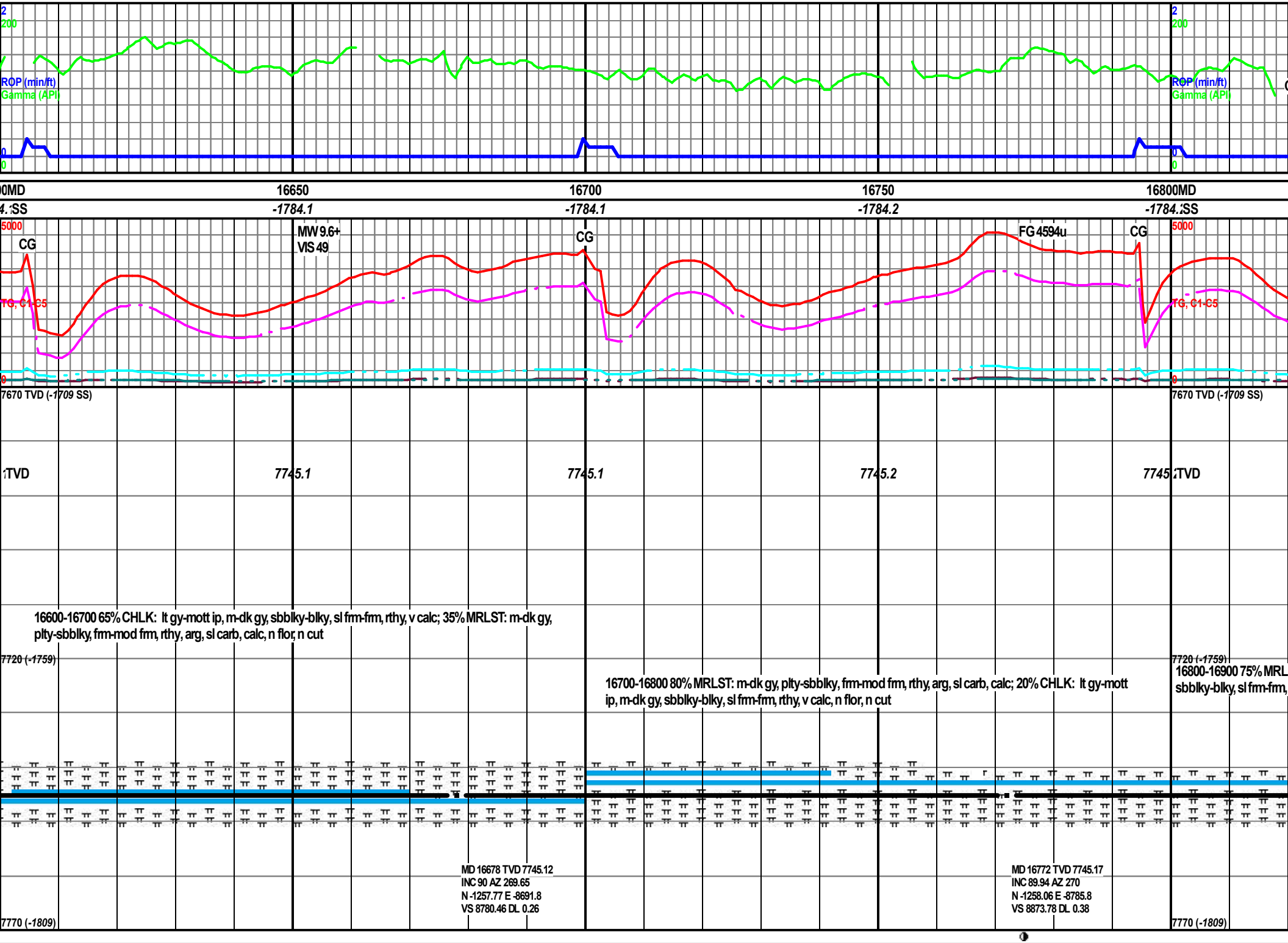

2
200
ROP (min/ft)
Gamma (API)
0
0
500
15550
15600MD
15650
15700
79.9
-1780.
-1780.2SS
-1780.4
-1780.5
DTG
5000
DTG 4530u
MW 9.5
VIS 46
TG, C1-C5
0
7670 TVD (-1709 SS)
0.9
7741.
7741.2TVD
7741.4
7741.5
15500-15600 45% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 55% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, rr mnrl flo(BENT), gd mlky yel cut
15600-15700 45% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 55% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, gd mlky yel cut
15700-15800 45%
plty-sbblky, frm-mo
7720 (-1759)
MD 15539 TVD 7741.01
INC 89.91 AZ 271.29
N -1270.7 E -7553.76
VS 7652.61 DL 0.63
MD 15634 TVD 7741.29
INC 89.75 AZ 271.08
N -1268.74 E -7648.74
VS 7746.63 DL 0.28
7770 (-1809)

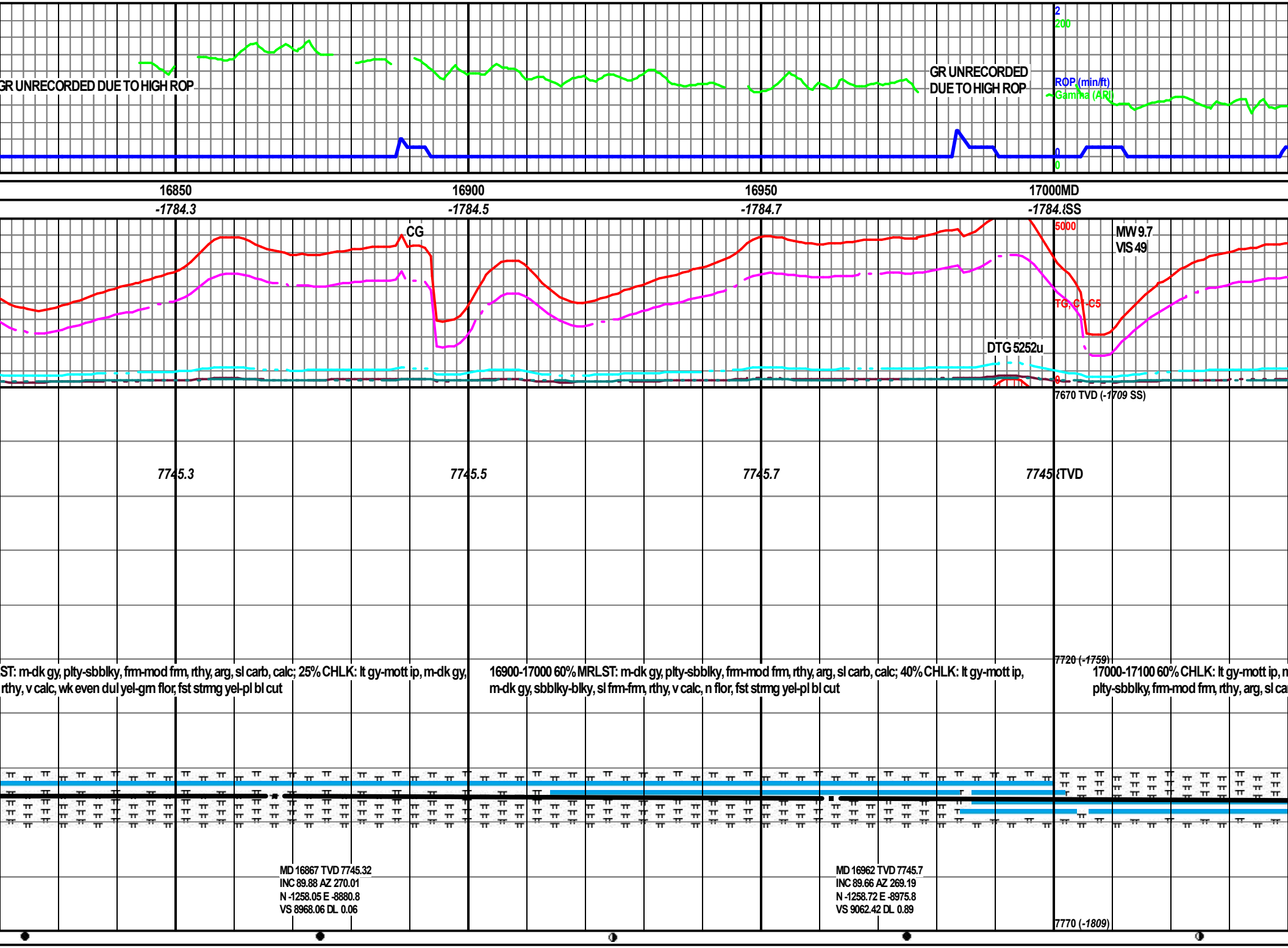

GR UNRECORDED DUE TO HIGH ROP
2
200
ROP (min/ft)
Gamma (API)
0
0
GR UNRECORDED DUE TO HIGH ROP
15750
15800MD
15850
15900
-1780.7
-1780.SS
-1781.
-1781.2
CG
5000
DTG
MW 9.6
VIS 48
CG
DTG
MW 9.6
VIS 47
TG, C1-C5
0
7670 TVD (-1709 SS)
7741.7
7741.TVD
7742.
7742.2
CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 55% MRLST: m-dk gy,
od frm, rthy, arg, sl carb, calc, n flor, n cut
15800-15900 45% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 55% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, n flor, n cut
15900-16000 45% CHLK: lt gy-mott ip, m-
plty-sbblky, frm-mod frm, rthy, arg, sl carb
7720 (-1759)
MD 15729 TVD 7741.65
INC 89.82 AZ 273.85
N -1264.65 E -7743.64
VS 7840.31 DL 2.92
MD 15824 TVD 7741.92
INC 89.85 AZ 276.13
N -1256.39 E -7838.27
VS 7933.22 DL 2.4
MD 15919 TVD 7742.33
INC 89.66 AZ 272.69
N -1249.09 E -7932.98
VS 8026.31 DL 3.63
7770 (-1809)

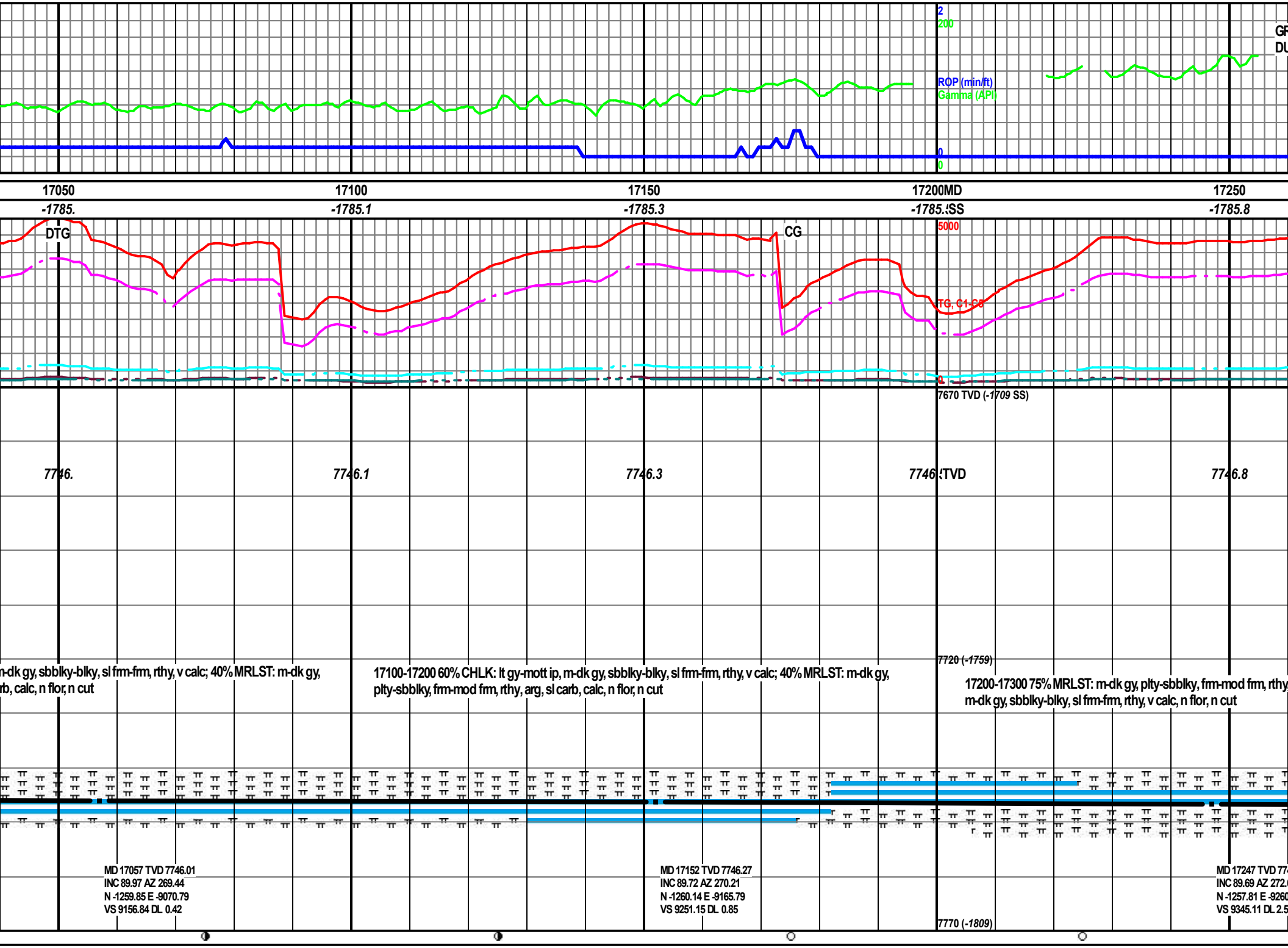

2
200
GR UNRECORDED
DUE TO HIGH ROP
ROP (min/ft)
Gamma (API)
0
0
15950
16000MD
16050
16100
16150
-1781.5
-1781.1SS
-1781.9
-1782.1
-1782.4
MW 9.6
VIS 47
5000
CG
CG
MW 9.6
VIS 48
CG
TG, C1-C5
0
7670 TVD (-1709 SS)
7742.5
7742.1TVD
7742.9
7743.1
7743.4
-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 55% MRLST: m-dk gy,
, calc, n flor, n cut
16000-16100 80% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 20% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, n flor, n cut
16100-16200 70% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl fm
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, n flor, n cut
7720 (-1759)
MD 16014 TVD 7742.79
INC 89.78 AZ 269.7
N -1247.11 E -8027.95
VS 8120.31 DL 3.15
MD 16108 TVD 7743.18
INC 89.75 AZ 270.37
N -1247.05 E -8121.94
VS 8213.6 DL 0.71
7770 (-1809)

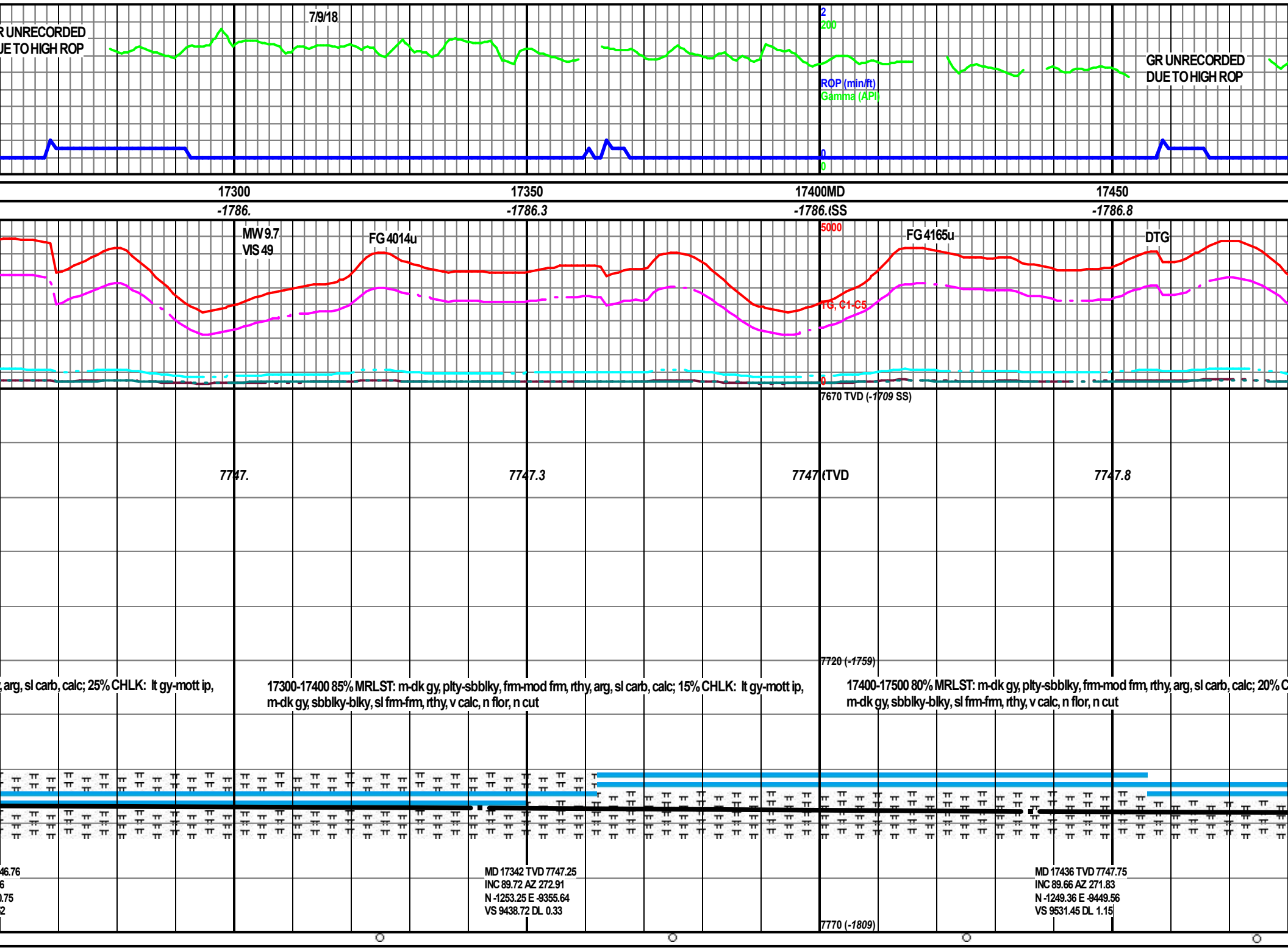

2
200
ROP (min/ft)
Gamma (API)
0
0
GR UNRECORDED DUE TO
HIGH ROP
16200MD
16250
16300
16350
-1782.(SS
-1782.8
-1783.
-1783.2
5000
FG 4563u
MW 9.6
VIS 48
CG
TG, C1-C5
0
7670 TVD (-1709 SS)
7743.(TVD
7743.8
7744.
7744.2
m-frm, rthy, v calc; 30% MRLST: m-dk gy,
16200-16300 70% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 30% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, n flor, n cut
16300-16400 75% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 25% MR
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, fnt yel flor, n cut
7720 (-1759)
MD 16203 TVD 7743.61
INC 89.72 AZ 269.18
N -1247.42 E -8216.94
VS 8307.92 DL 1.25
7770 (-1809)
MD 16298 TVD 7744
INC 89.82 AZ 267.78
N -1249.94 E -8311.9
VS 8402.47 DL 1.48

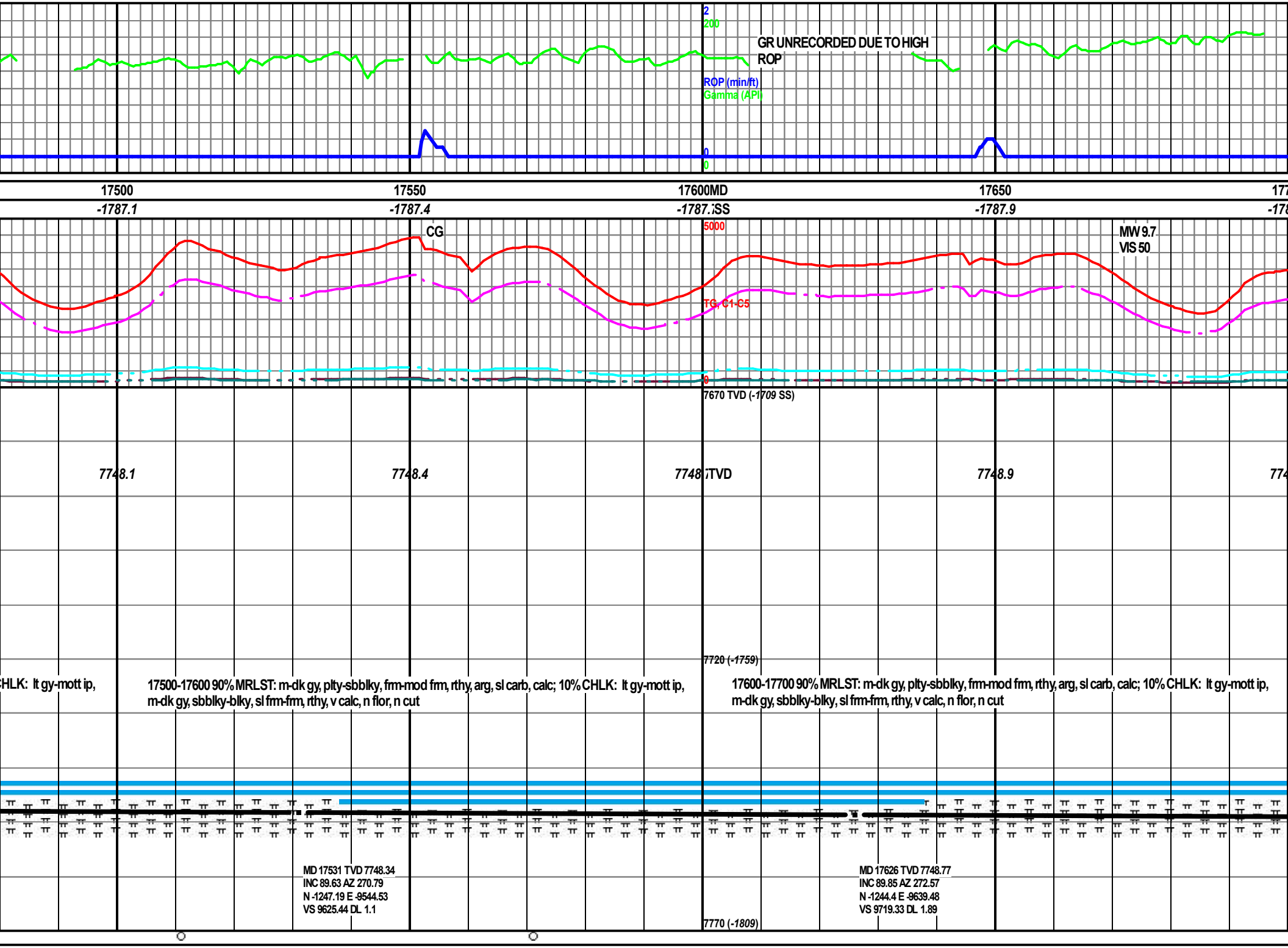

2
200
ROP (min/ft)
Gamma (API)
0
0
GR UNRECORDED DUE TO HIGH ROP
16400MD
16450
16500
16550
-1783.
-1783.7
-1784.
-1784.1
5000
CG
MW 9.6
VIS 47
CG
FG 4553u
TG, C1-C5
0
7670 TVD (-1709 SS)
7744.7
7745.
7745.1
LST: m-dk gy,
16400-16500 65% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc; 35% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc, n flor, n cut
16500-16600 60% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc; 40% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc, n flor, n cut
7720 (-1759)
MD 16393 TVD 7744.45
INC 89.63 AZ 268.24
N -1253.24 E -8406.85
VS 8497.1 DL 0.52
7770 (-1809)
MD 16488 TVD 7744.94
INC 89.78 AZ 268.92
N -1255.59 E -8501.81
VS 8591.64 DL 0.73
MD 16583 TVD 7745.12
INC 90 AZ 269.4
N -1256.99 E -8596.8
VS 8686.08 DL 0.56

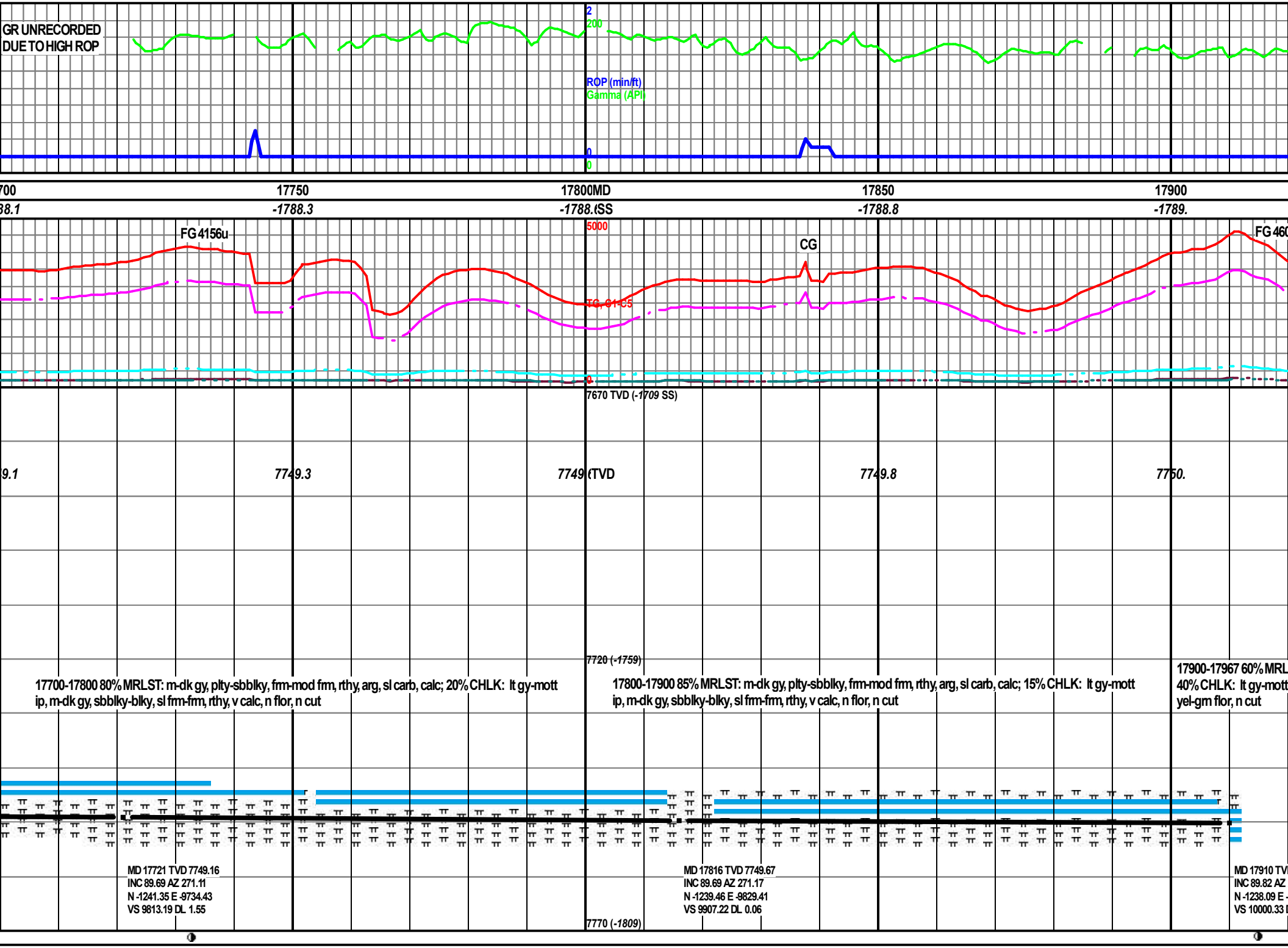

ROP (min/ft)
Gamma (API)
16650
16700
16750
16800MD
-1784.1
-1784.1
-1784.2
MW 9.6+
VIS 49
CG
CG
FG 4594u
CG
TG, C1-C5
7670 TVD (-1709 SS)
7745.1
7745.1
7745.2
16600-16700 65% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 35% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, n flor, n cut
7720 (-1759)
16700-16800 80% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc; 20% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc, n flor, n cut
16800-16900 75% MRL
sbblky-blky, sl frm-frm,
MD 16678 TVD 7745.12
INC 90 AZ 269.65
N -1257.77 E -8691.8
VS 8780.46 DL 0.26
MD 16772 TVD 7745.17
INC 89.94 AZ 270
N -1258.06 E -8785.8
VS 8873.78 DL 0.38
7770 (-1809)

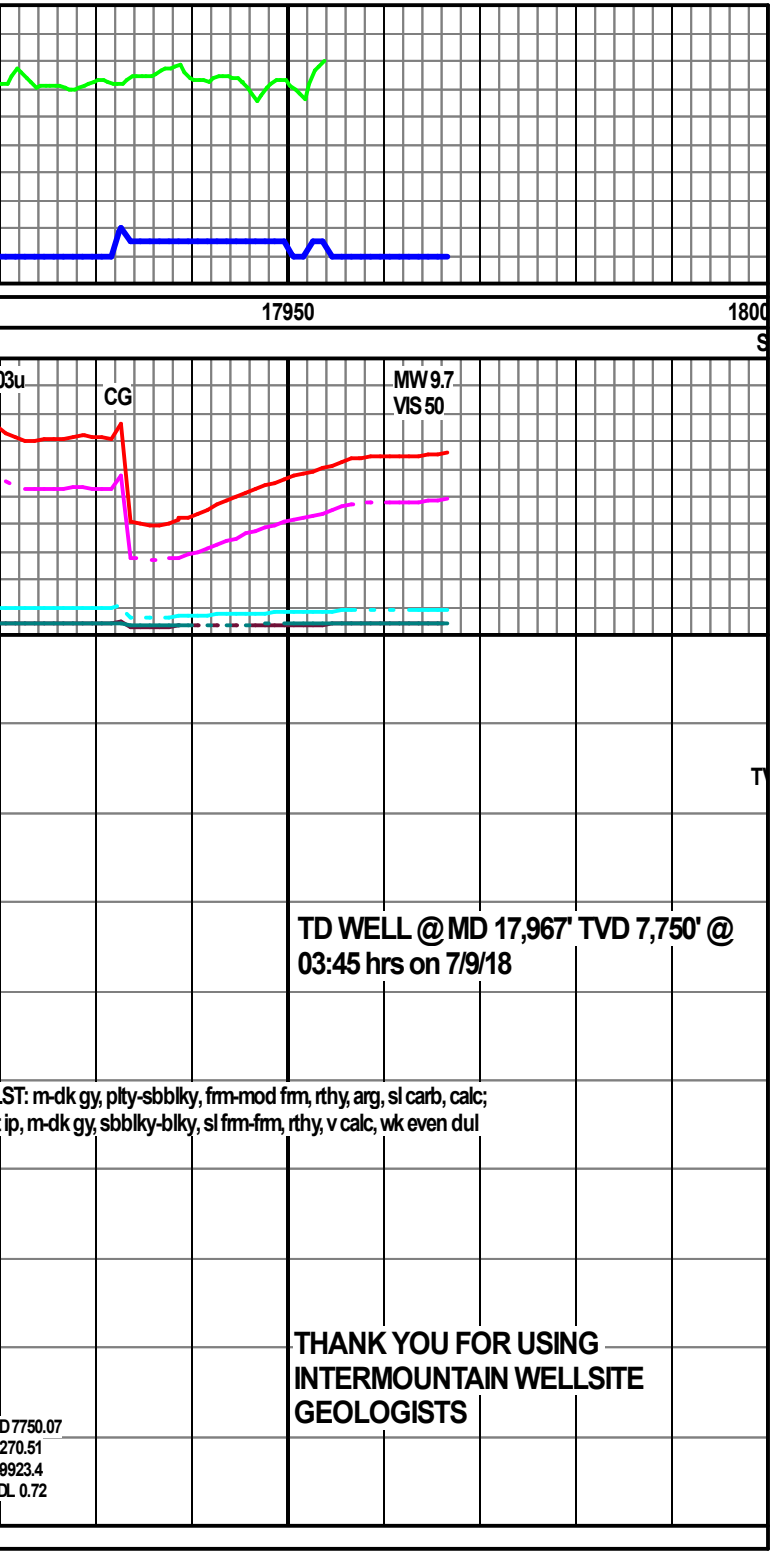

GR UNRECORDED DUE TO HIGH ROP
GR UNRECORDED DUE TO HIGH ROP
2
200
ROP (min/ft)
Gamma (API)
0
0
16850
16900
16950
17000MD
-1784.3
-1784.5
-1784.7
-1784.8SS
CG
5000
MW 9.7
VIS 49
TG, C1-C5
DTG 5252u
0
7670 TVD (-1709 SS)
7745.3
7745.5
7745.7
7745.8TVD
7720 (-1759)
ST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc; 25% CHLK: lt gy-mott ip, m-dk gy, rthy, v calc, wk even dul yel-grn flor, fst strmg yel-pl bl cut
16900-17000 60% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc; 40% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc, n flor, fst strmg yel-pl bl cut
17000-17100 60% CHLK: lt gy-mott ip, n plty-sbblky, frm-mod frm, rthy, arg, sl ca
MD 16867 TVD 7745.32
INC 89.88 AZ 270.01
N -1258.05 E -8880.8
VS 8968.06 DL 0.06
MD 16962 TVD 7745.7
INC 89.66 AZ 269.19
N -1258.72 E -8975.8
VS 9062.42 DL 0.89
7770 (-1809)


2
200
ROP (min/ft)
Gamma (API)
0
0
17050
17100
17150
17200MD
17250
-1785.
-1785.1
-1785.3
-1785.5SS
-1785.8
DTG
CG
5000
DTG, C1-C5
0
7670 TVD (-1709 SS)
7746.
7746.1
7746.3
7746.5TVD
7746.8
7720 (-1759)
m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy,
rb, calc, n flor, n cut
17100-17200 60% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc; 40% MRLST: m-dk gy,
plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc, n flor, n cut
17200-17300 75% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy
m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc, n flor, n cut
MD 17057 TVD 7746.01
INC 89.97 AZ 269.44
N -1259.85 E -9070.79
VS 9156.84 DL 0.42
MD 17152 TVD 7746.27
INC 89.72 AZ 270.21
N -1260.14 E -9165.79
VS 9251.15 DL 0.85
MD 17247 TVD 774
INC 89.69 AZ 272.
N -1257.81 E -9260
VS 9345.11 DL 2.5
7770 (-1809)


R UNRECORDED
JE TO HIGH ROP
7/9/18
2
200
ROP (min/ft)
Gamma (API)
0
0
GR UNRECORDED
DUE TO HIGH ROP
17300
17350
17400MD
17450
-1786.
-1786.3
-1786.(SS
-1786.8
MW 9.7
VIS 49
FG 4014u
5000
FG 4165u
DTG
TG, C1-C5
0
7670 TVD (-1709 SS)
7747.
7747.3
7747 (TVD
7747.8
7720 (-1759)
, arg, sl carb, calc; 25% CHLK: lt gy-mott ip,
17300-17400 85% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc; 15% CHLK: lt gy-mott ip,
m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc, n flor, n cut
17400-17500 80% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc; 20% C
m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc, n flor, n cut
46.76
6
0.75
2
MD 17342 TVD 7747.25
INC 89.72 AZ 272.91
N -1253.25 E -9355.64
VS 9438.72 DL 0.33
MD 17436 TVD 7747.75
INC 89.66 AZ 271.83
N -1249.36 E -9449.56
VS 9531.45 DL 1.15
7770 (-1809)


2
200
GR UNRECORDED DUE TO HIGH ROP
ROP (min/ft)
Gamma (API)
0
0
17500
17550
17600MD
17650
-1787.1
-1787.4
-1787.7SS
-1787.9
CG
5000
MW 9.7
VIS 50
TG, C1-C5
0
7670 TVD (-1709 SS)
7748.1
7748.4
7748.7TVD
7748.9
7720 (-1759)
HLK: lt gy-mott ip,
17500-17600 90% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc; 10% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc, n flor, n cut
17600-17700 90% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc; 10% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc, n flor, n cut
MD 17531 TVD 7748.34
INC 89.63 AZ 270.79
N -1247.19 E -9544.53
VS 9625.44 DL 1.1
MD 17626 TVD 7748.77
INC 89.85 AZ 272.57
N -1244.4 E -9639.48
VS 9719.33 DL 1.89
7770 (-1809)


GR UNRECORDED
DUE TO HIGH ROP
2
200
ROP (min/ft)
Gamma (API)
0
0
700
17750
17800MD
17850
17900
38.1
-1788.3
-1788.(SS
-1788.8
-1789.
FG 4156u
5000
CG
FG 460
TG, C1-C5
0
7670 TVD (-1709 SS)
9.1
7749.3
7749 (TVD
7749.8
7750.
7720 (-1759)
17700-17800 80% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc; 20% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc, n flor, n cut
17800-17900 85% MRLST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc; 15% CHLK: lt gy-mott ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc, n flor, n cut
17900-17967 60% MRL
40% CHLK: lt gy-mott
yel-gm flor, n cut
MD 17721 TVD 7749.16
INC 89.69 AZ 271.11
N -1241.35 E -9734.43
VS 9813.19 DL 1.55
MD 17816 TVD 7749.67
INC 89.69 AZ 271.17
N -1239.46 E -9829.41
VS 9907.22 DL 0.06
MD 17910 TV
INC 89.82 AZ
N -1238.09 E
VS 10000.33
7770 (-1809)


17950
1800
S
03u
CG
MW 9.7
VIS 50
TV
TD WELL @ MD 17,967' TVD 7,750' @
03:45 hrs on 7/9/18
LST: m-dk gy, plty-sbblky, frm-mod frm, rthy, arg, sl carb, calc;
ip, m-dk gy, sbblky-blky, sl frm-frm, rthy, v calc, wk even dul
THANK YOU FOR USING
INTERMOUNTAIN WELLSITE
GEOLOGISTS
D 7750.07
270.51
9923.4
DL 0.72