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## GEOSTEERING LOG

### WellSight Systems

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

Well Name: EQT John R Davies #513370  
Location: West Union Quad, West Union District, Doddridge County, WV  
License Number: 47-017-05957  
Spud Date: 01-17-2011  
Surface Coordinates: Latitude: 39.27211  
Longitude: 80.77173  
Bottom Hole Coordinates: 2,844.47' North and 624.61' West of surface location  
Ground Elevation (ft): 1180  
Logged Interval (ft): 6170 To: 9656  
Formation: Elks through Geneseo  
Type of Drilling Fluid: water based mud  
K.B. Elevation (ft): 1195  
Total Depth (ft): 9656  
Region: Appalachian Basin  
Drilling Completed: 02-03-2011  
Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com




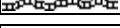
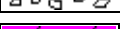

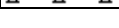
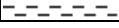








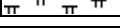

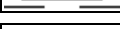
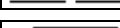
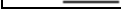



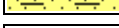

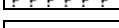
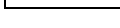
## OPERATOR

Company: EQT Production Company  
Address: EQT Plaza  
625 Liberty Ave.  
Pittsburgh, PA 15222








































































## GEOLOGISTS

**Name:** Isaah Land, Eric Parks  
**Company:** Sunburst Consulting, Inc.  
**Address:** P.O. Box 51297, 513 Hilltop Rd. Suite #5, Billings, MT 59105; (406) 259-4124;  
 geology@sunburstconsulting.com;  
 www.sunburstconsulting.com

## ROCK TYPES

 Anhy  Arg dol  Arg ls  Bent  Brec  Calc dol  Cht	 Clyst  Coal  Congl  Dol  Dol ls  Gyp  Igne	 Ls  Meta  Mrlst  Salt  Shale  Shblk  Shcol	 Shgy  Sltst  Ss  Sssilty  Tuff  Unknown  Blank
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## ACCESSORIES

<b>FOSSIL</b>  Algae  Amph  Belm  Bioclst  Brach  Bryozoa  Cephal  Coral  Crin  Echin  Fish  Foram  Fossil  Gastro  Oolite  Ostra  Pelec  Pellet  Pisolite	 Plant  Strom  <b>MINERAL</b>  Anhy  Arggrn  Arg  Bent  Bit  Brecfrag  Calc  Carb  Chtdk  Chtlt  Dol  Feldspar  Ferrpel  Ferr  Glau  Gyp	 Hvymn  Kaol  Marl  Minxl  Nodule  Phos  Pyr  Salt  Sandy  Silt  Sil  Sulphur  Tuff  <b>STRINGER</b>  Anhy  Arg  Bent  Coal  Dol	 Gyp  Ls  Mrst  Sltstrg  Ssstrg  <b>TEXTURE</b>  Boundst  Chalky  Cryxln  Earthy  Finexln  Grainst  Lithogr  Microxln  Mudst  Packst  Wackest
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### OTHER SYMBOLS

#### INTERVALS

- None
- Core
- Dst

#### EVENTS

- Rft
- Sidewall
- Bit change

#### OIL SHOWS

- Even
- Spotted
- Ques
- Dead

#### POROSITY TYPE

- Earthy
- Fenest

- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

#### ROUNDING

- Rounded

- Subrnd
- Subang
- Angular

#### SORTING

- Well
- Moderate
- Poor

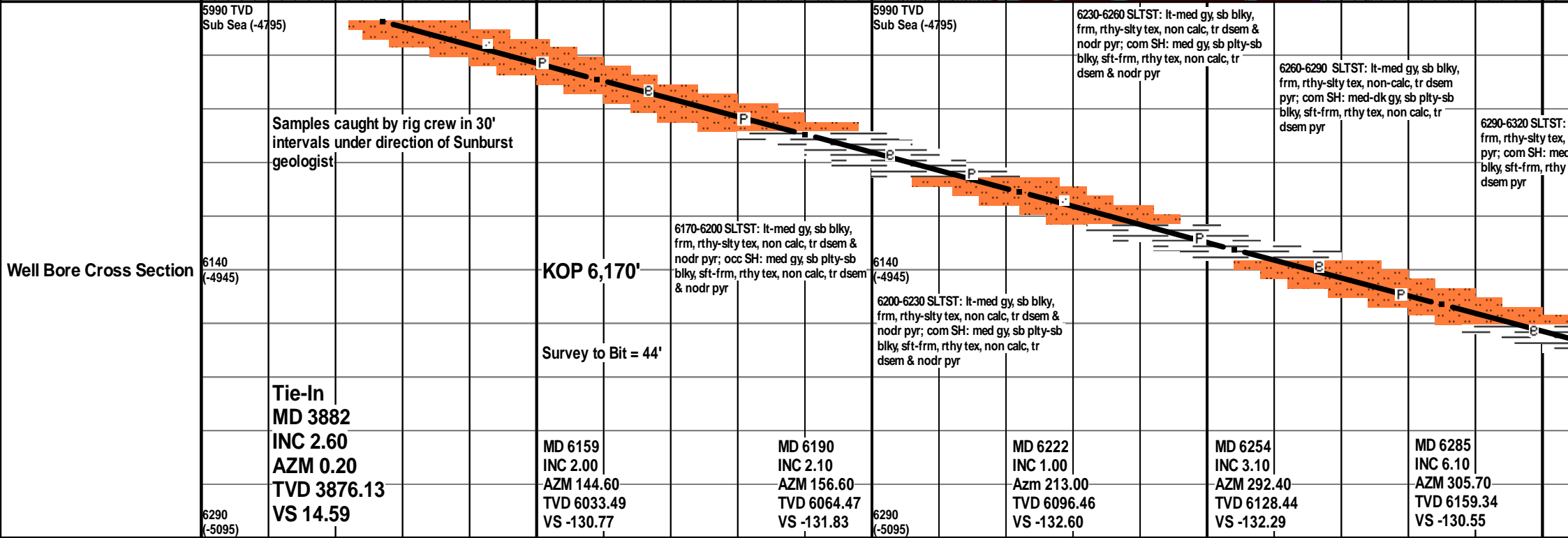
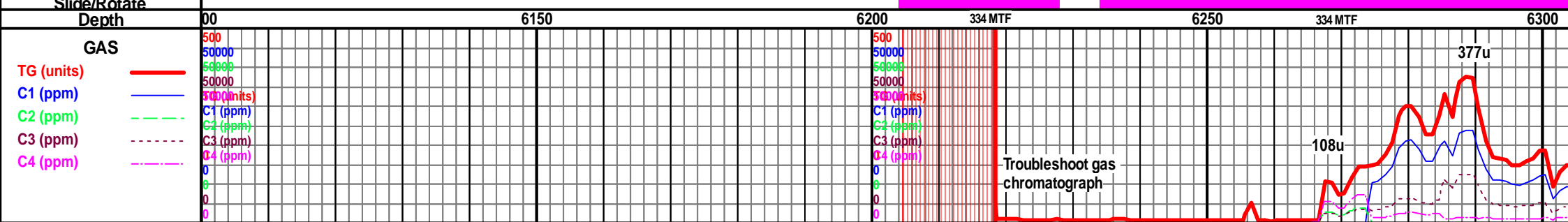
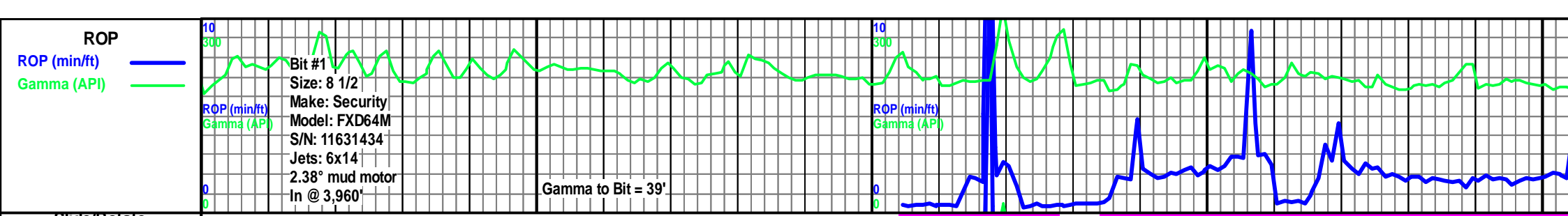
### COMMENTS

COMPANY MAN: Don Vanhouctean, Bill Teel  
TOOLPUSHER: Bruce Lambert, Ernie Langridge  
RIG: Savanna 640E

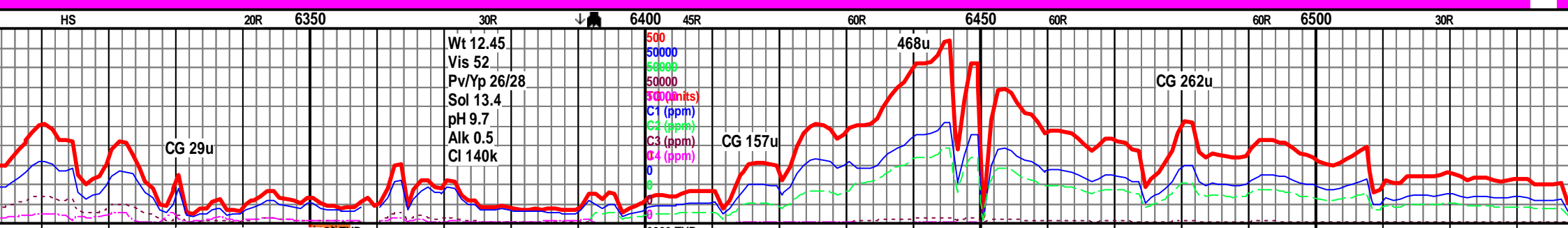
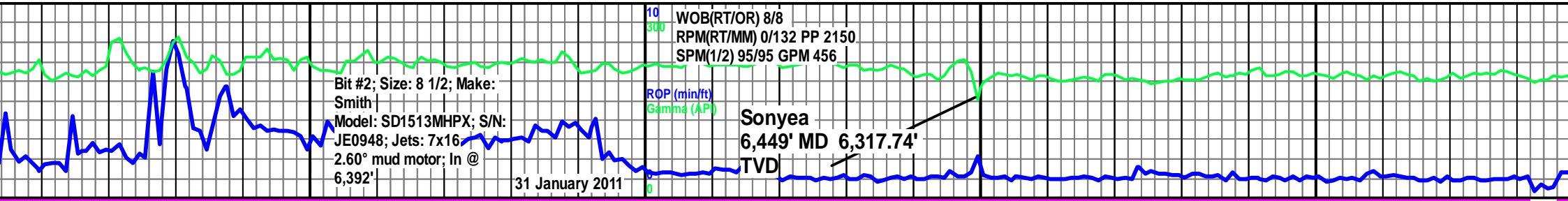
WV FILE #: 7245P513370 (280-70)

SURFACE CASING: 13 3/8" set at 1,127'  
INTERMEDIATE CASING: 9 5/8" 40# set at 3,246'

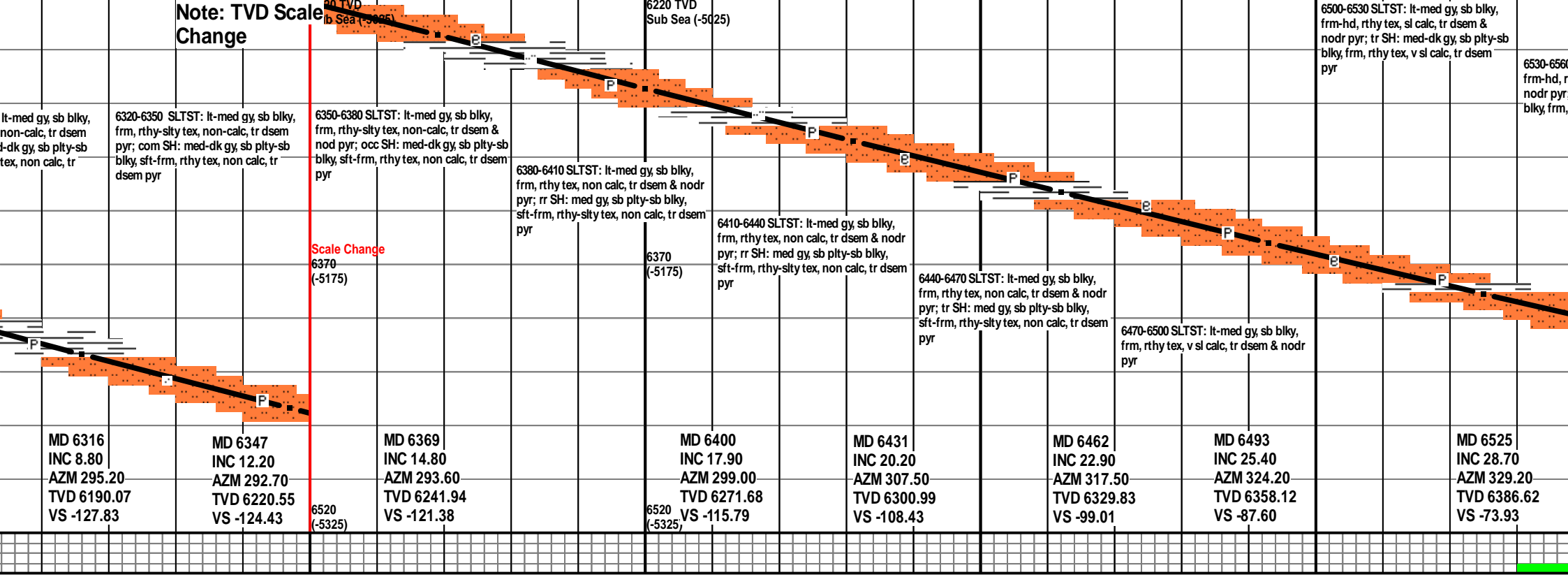
KOP: 6,170'  
CLOSURE DIRECTION: 359.78  
CLOSURE DISTANCE: 2,912.24'

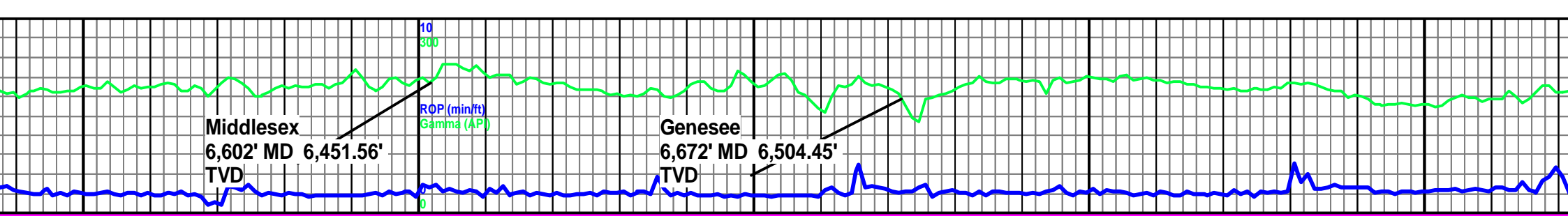


<b>Porosity</b>	24% 18% 12% 6%
<b>Porosity Type</b>	
<b>Oil Show</b>	gd fr pc tr
<b>Oil Show Type</b>	

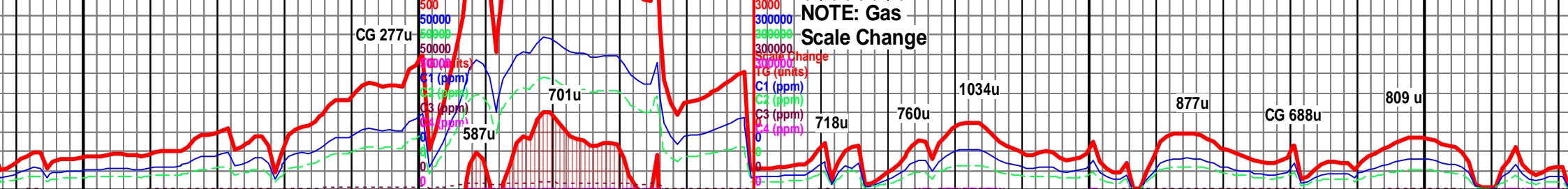


**Note: TVD Scale Change**





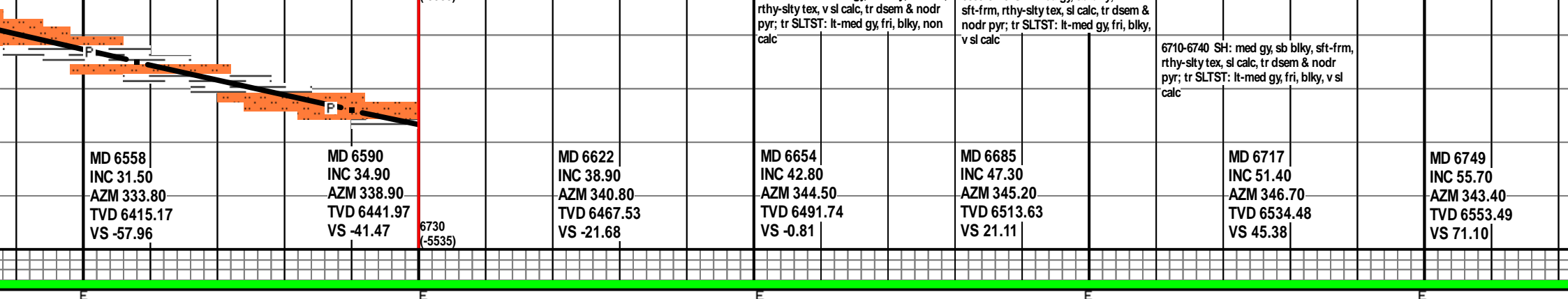
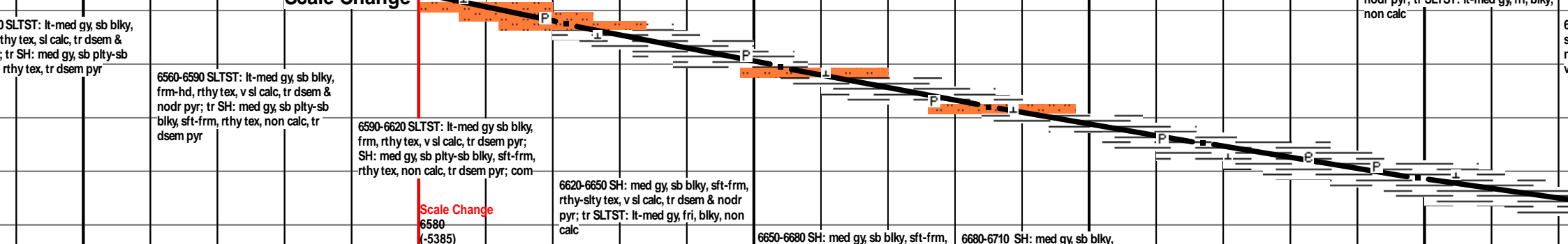
6550 60R 6600 30R 6650 30R 6700 HS 6750



Note: TVD Scale Change

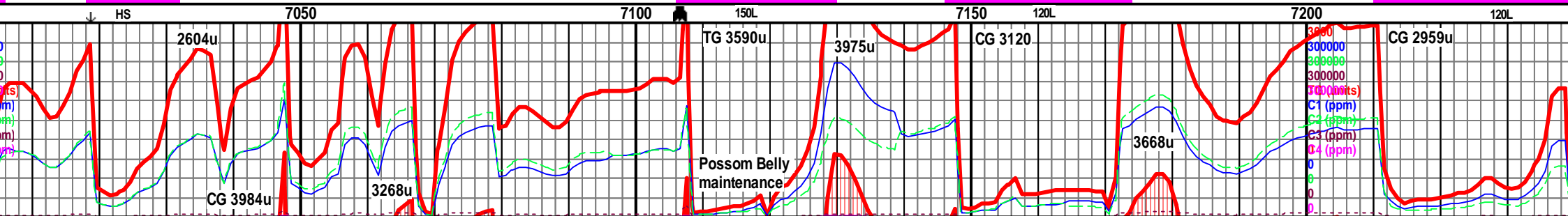
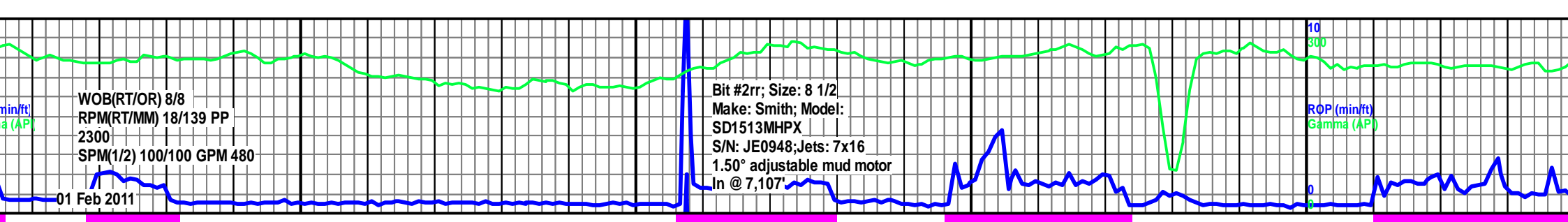
6430 TVD Sub Sea (-5235)

6740-6770 SH: med gy, sb blkly, sft frm, rthy-silty tex, sl calc, tr dsem & nodr pyr; tr SLTST: lt-med gy, fri, blkly, non calc



E E E E E





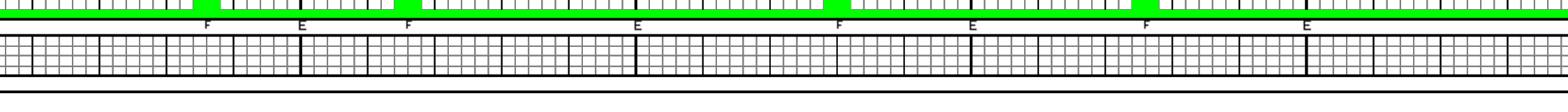
6600 TVD Sub Sea (-5405)

Note: TVD Scale Change

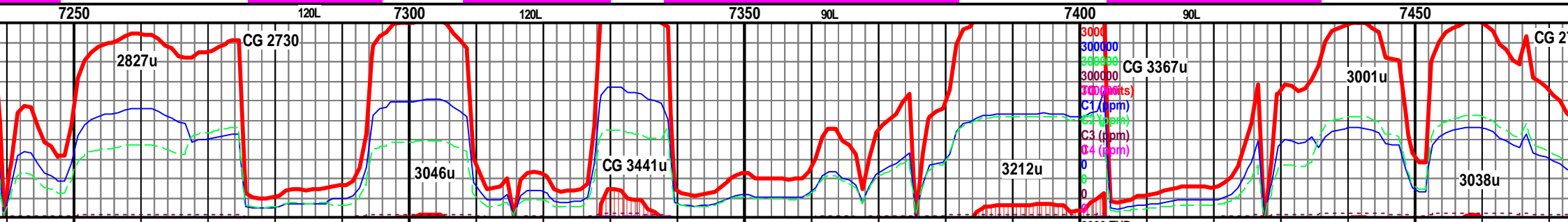
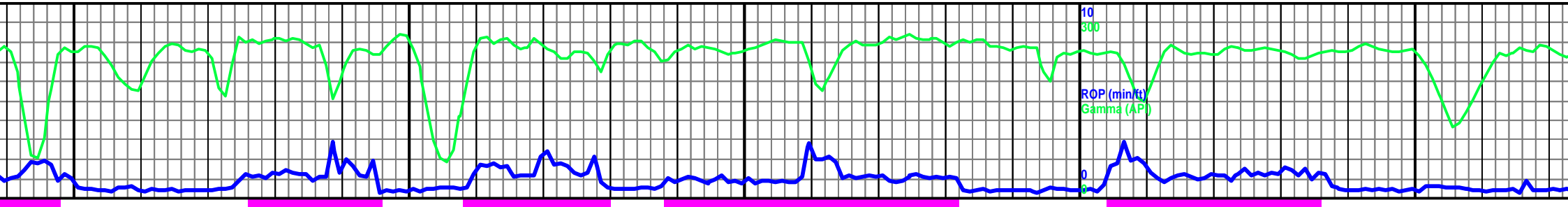
6600 TVD Sub Sea (-5405)

7010-7040 SH: dk gy, tr med gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, rr cal frac fl	7040-7070 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr	7070-7100 SH: dk gy, sft-frm, sb blk, rthy tex, sl calc, tr dsem pyr	7130-7160 SH: dk gy, frm, sb blk, rthy tex, v sl calc, tr dsem & nodr pyr	7160-7190 SH: dk gy, frm, sb blk, rthy tex, v sl calc, tr dsem & nodr pyr	7220-7250 SH: dk gy, frm, tex, v sl calc, tr dsem & nodr pyr, LS, mdst, wh-lt gy, micxl, rthy tex
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MD 7002 INC 90.40 AZM 343.60 TVD 6623.79 VS 308.66	MD 7034 INC 93.10 AZM 343.90 TVD 6622.81 VS 340.60	MD 7065 INC 93.30 AZM 344.60 TVD 6621.08 VS 371.52	MD 7104 INC 93.40 AZM 344.80 TVD 6618.80 VS 470.43	MD 7167 INC 91.40 AZM 343.20 TVD 6616.17 VS 473.30	MD 7231 INC 89.9 AZM 342 TVD 661 VS 537.
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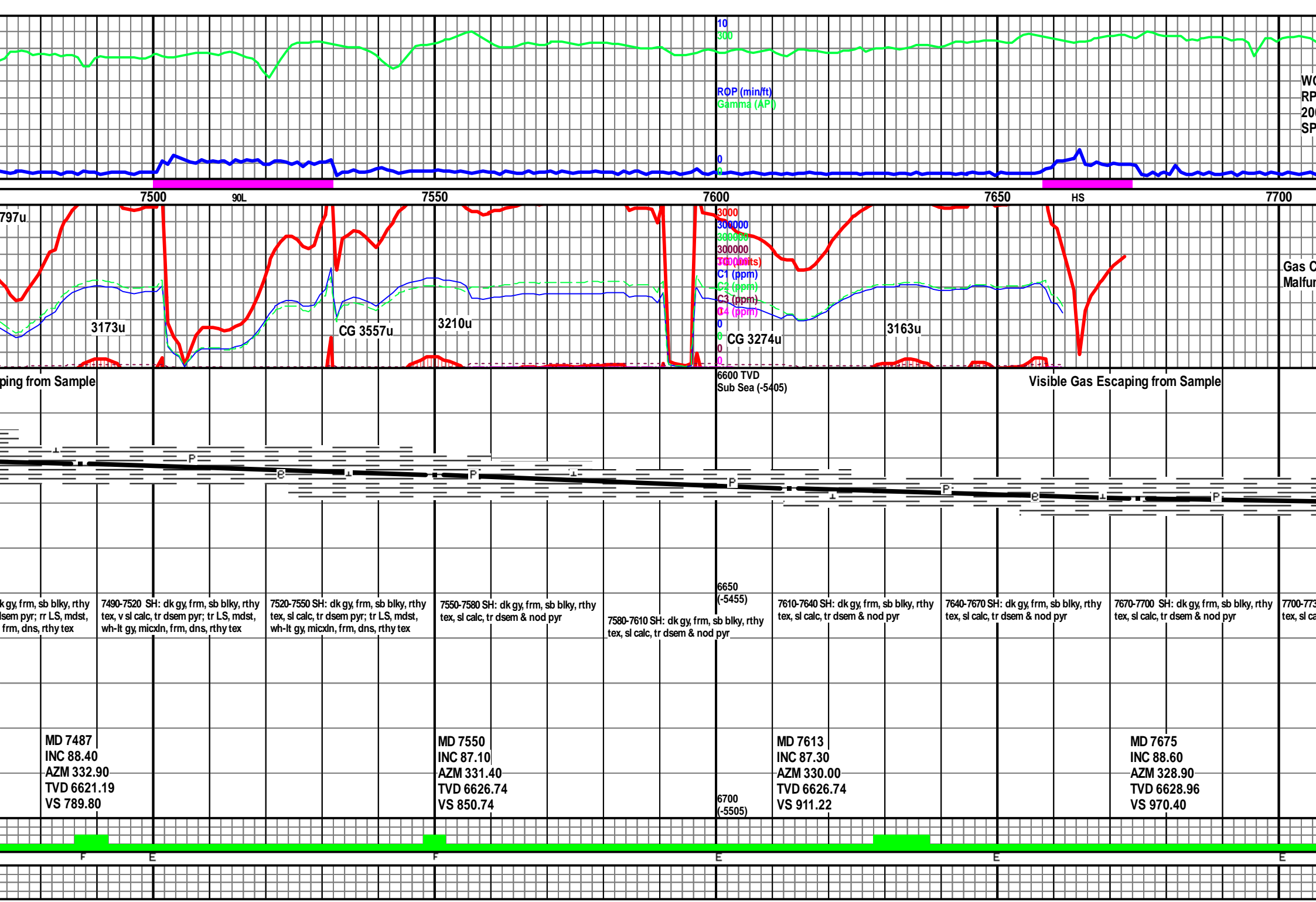
Visible Gas Escaping from Sample

6600 TVD  
Sub Sea (-5405)

Visible Gas Escap



sb blkly, rthy odr pyr, occ n, frm, dns,	7250-7280 SH: dk gy, frm, sb blkly, rthy tex, v sl calc, tr dsem pyr; occ LS, mdst, wh-lt gy, micxn, frm, dns, rthy tex	7280-7310 SH: dk gy, frm, sb blkly, rthy tex, v sl calc, tr dsem pyr; occ LS, mdst, wh-lt gy, micxn, frm, dns, rthy tex	7310-7340 SH: dk gy, frm, sb blkly, rthy tex, v sl calc, tr dsem pyr; occ LS, mdst, wh-lt gy, micxn, frm, dns, rthy tex	7340-7370 SH: dk gy, frm, sb blkly, rthy tex, v sl calc, tr dsem pyr; occ LS, mdst, wh-lt gy, micxn, frm, dns, rthy tex	7370-7400 SH: dk gy, frm, sb blkly, rthy tex, v sl calc, tr dsem pyr; rr LS, mdst, wh-lt gy, micxn, frm, dns, rthy tex	6650 (-5455) 7400-7430 SH: dk gy, frm, sb blkly, rthy tex, v sl calc, tr dsem pyr; rr LS, mdst, wh-lt gy, micxn, frm, dns, rthy tex	7430-7460 SH: dk gy, frm, sb blkly, rthy tex, v sl calc, tr dsem pyr; rr LS, mdst, wh-lt gy, micxn, frm, dns, rthy tex	7460-7490 SH: dk gy, frm, sb blkly, rthy tex, v sl calc, tr dsem pyr; rr LS, mdst, wh-lt gy, micxn, frm, dns, rthy tex
0 2.20 5.44 14		MD 7295 INC 89.30 AZM 341.20 TVD 6615.89 VS 600,89		MD 7359 INC 88.20 AZM 338.20 TVD 6617.28 VS 664.39		6700 (-5505)	MD 7423 INC 88.20 AZM 335.20 TVD 6619.29 VS 727.39	
E	F	E	F	E	F	E	F	F



DB(RT/OR) 20/21  
 M(RT/MM) 65/139 PP  
 00  
 M(1/2) 100/100 GPM 480

02 Feb 2011

10  
 300  
 ROP (min/ft)  
 Gamma (API)  
 0  
 0

Chromatograph  
 function

Wt 12.4  
 Vis 48  
 Pv/Yp 21/28  
 Sol 13.2  
 pH 10.0  
 Alk 0.5  
 Cl 150k

3000  
 300000  
 300000  
 300000  
 TQ (units)  
 C1 (ppm)  
 C2 (ppm)  
 C3 (ppm)  
 C4 (ppm)  
 0  
 0  
 0

Replace Gas  
 Chromatograph

6600 TVD  
 Sub Sea (-5405)

Visible Gas Escaping from Sample

0 SH: dk gy, frm, sb blk, rthy sl, tr dsem & nodr pyr	7730-7760 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr cal & pyr frac fl	7760-7790 dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr	7790-7820 dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr pyr frac fl	7820-7850 dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr	7850-7880 dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr	7880-7910 dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr	7910-7940 dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl
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MD 7739  
 INC 89.10  
 AZM 328.70  
 TVD 6630.25  
 VS1031.29

6650  
 (-5455)

6700  
 (-5505)

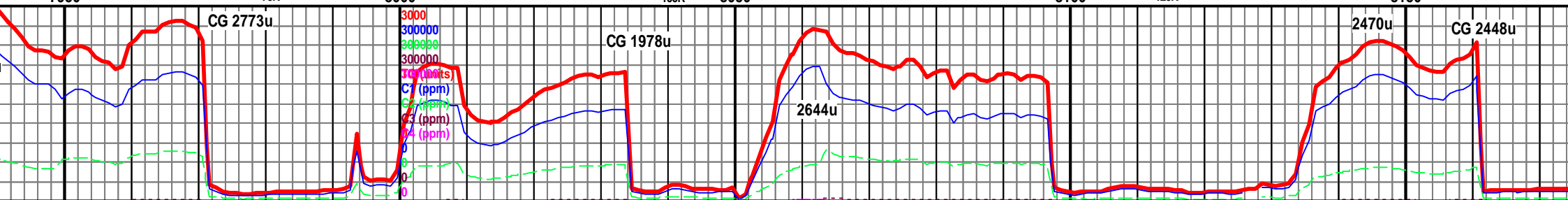
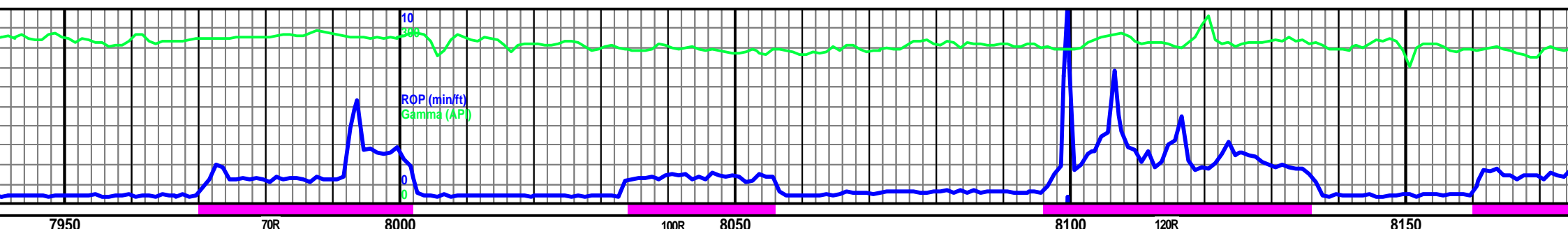
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 INC 89.20  
 AZM 330.50  
 TVD 6631.18  
 VS 1091.50

MD 7864  
 INC 89.00  
 AZM 331.60  
 TVD 6632.15  
 VS 1151.20

MD 7928  
 INC 88.90  
 AZM 331.50  
 TVD 6633.33  
 VS 1212.96

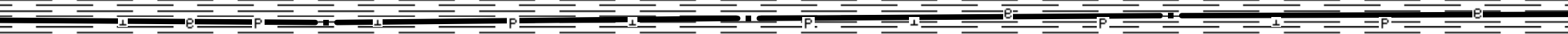
100R 7750 100R 7800 7850 110R 7900 90R

3052u



6600 TVD  
Sub Sea (-5405)

Visible Gas Escaping from Sample



7940-7970 SH: dk gy, sb blk, frm, rthy  
tex, sl calc, tr dsem & nodr pyr, tr cal  
& pyr frac fl

7970-8000 SH: dk gy, frm, sb blk, rthy  
tex, sl calc, tr dsem & nodr pyr

6650  
(-5455)  
8000-8030 SH: dk gy, frm, sb blk, rthy  
tex, sl calc, tr dsem & nodr pyr

8030-8060 SH: dk gy, frm, sb blk, rthy  
tex, sl calc, tr dsem & nodr pyr, tr cal  
frac fl

8060-8090 SH: dk gy, frm, sb blk, rthy  
tex, sl calc, tr dsem & nodr pyr, tr cal  
frac fl

8090-8120 SH: dk gy, frm, sb blk, rthy  
tex, sl calc, tr dsem & rr nodr pyr

8120-8150 SH: dk gy, frm, sb blk, rthy  
tex, sl calc, tr dsem & nodr pyr

8150-8180 SH: dk gy, frm, sb blk,  
tex, sl calc, tr dsem & nodr pyr,  
cal

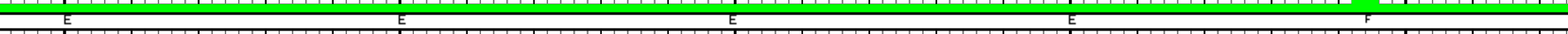
MD 7989  
INC 90.40  
AZM 332.10  
TVD 6633.70  
VS 1271.91

6700  
(-5505)

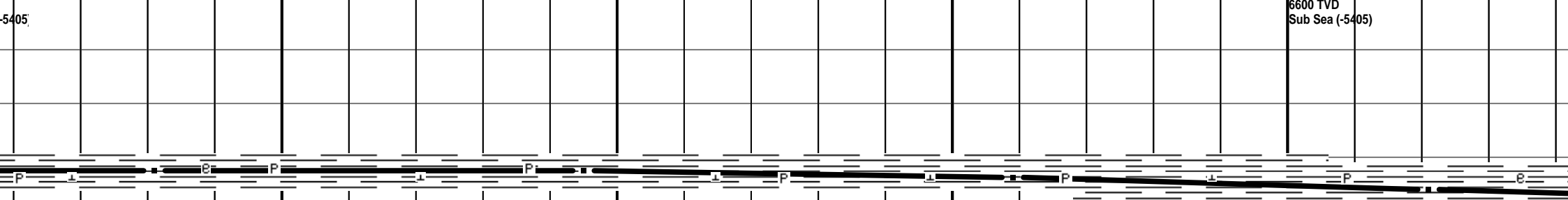
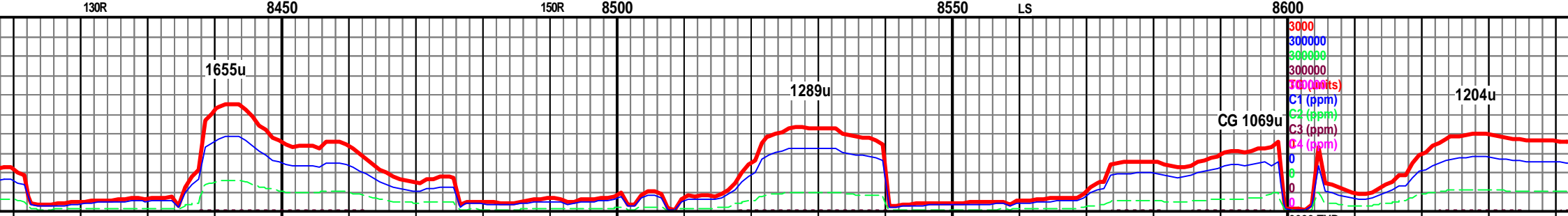
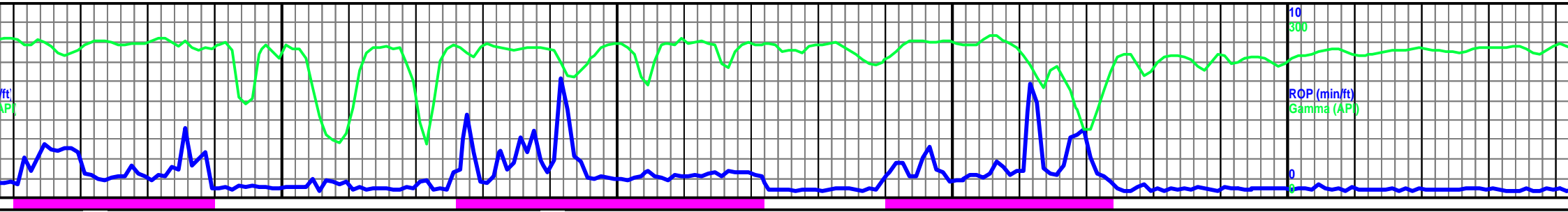
MD 8052  
INC 90.70  
AZM 333.60  
TVD 6633.09  
VS 1333.08

MD 8115  
INC 90.50  
AZM 334.50  
TVD 6632.44  
VS 1394.55

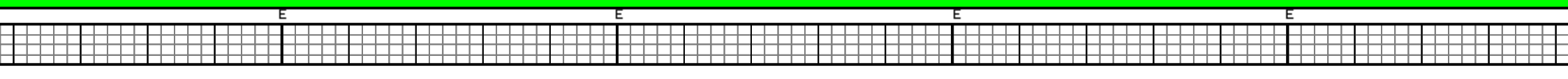
MD  
INC  
AZM  
TVD  
VS

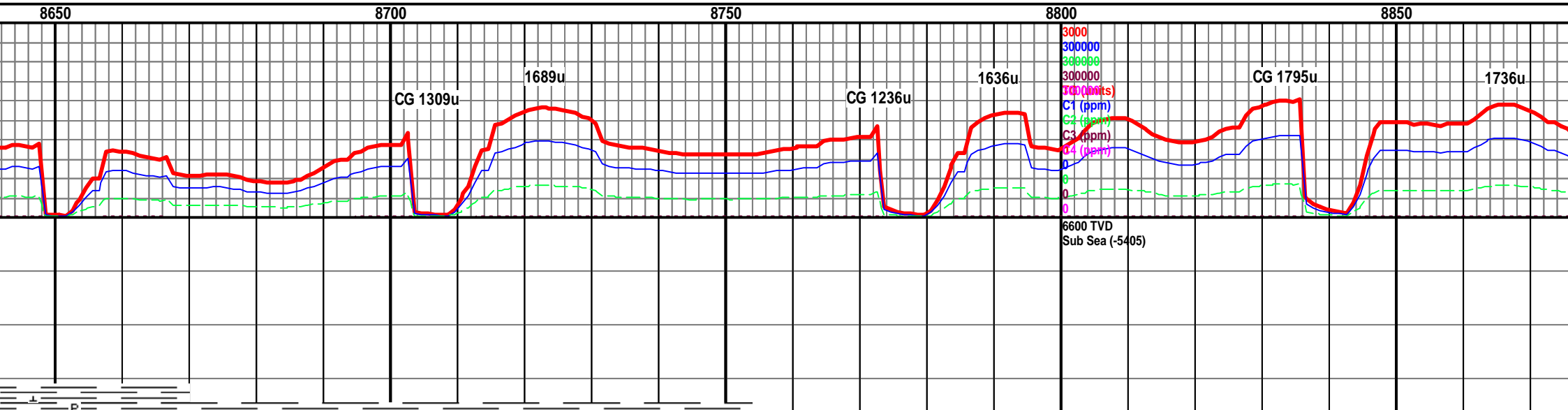
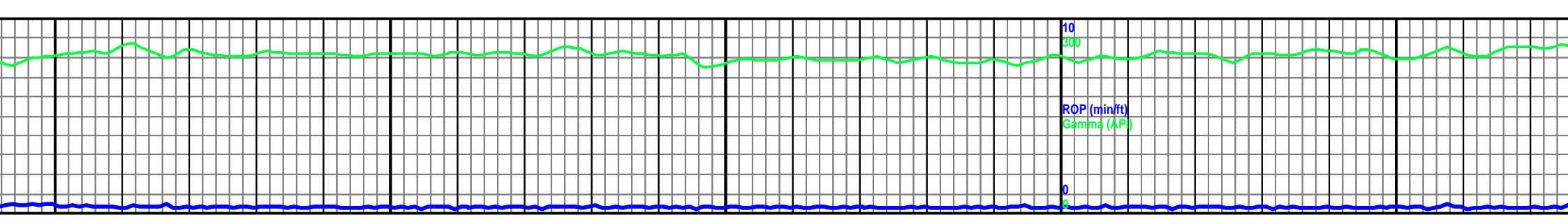




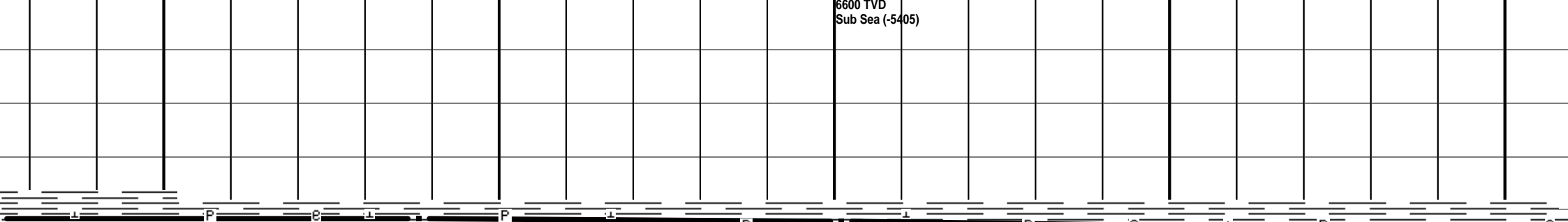
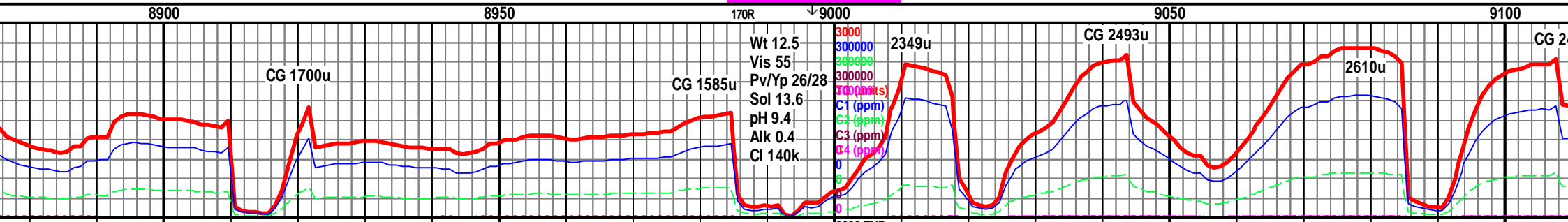
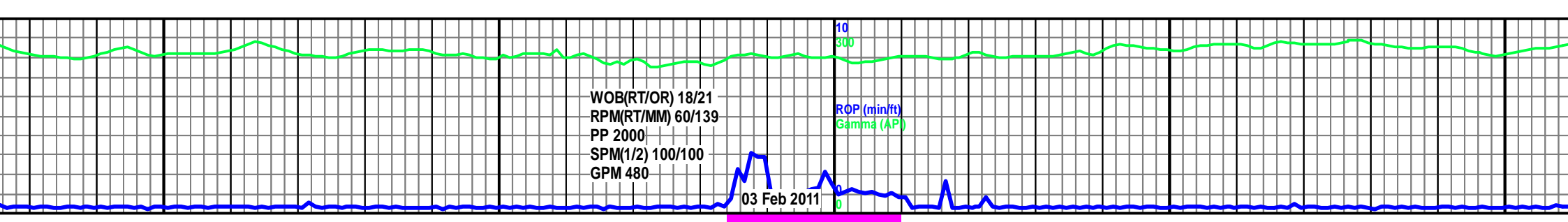


n, sb blk, rthy nodr pyr, tr free	8420-8450 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal	8450-8480 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal	8480-8510 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal	8510-8540 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal	8540-8570 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal	8570-8600 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal	8600-8630 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal	8630-8660 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal
	MD 8431 INC 89.70 AZM 336.80 TVD 6632.54 VS 1705.29		MD 8495 INC 90.20 AZM 337.50 TVD 6632.60 VS 1768.41		MD 8559 INC 87.80 AZM 338.50 TVD 6633.71 VS 1831.66		MD 8621 INC 87.80 AZM 338.30 TVD 6636.09 VS 1892.96	



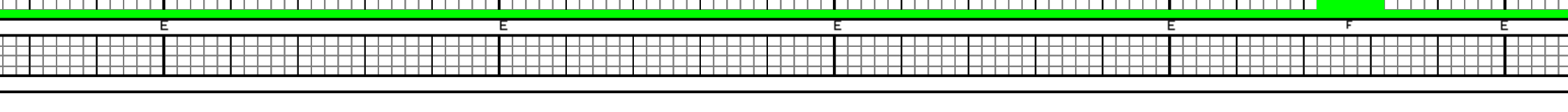


dk gy, frm, sb blk, rthy sem & nodr pyr	8660-8690 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr	8690-8720 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr	8720-8750 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr	8750-8780 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr	8780-8810 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr	8810-8840 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr	8840-8870 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr	8870-8 tex, sl
	<b>MD 8684</b> INC 88.30 AZM 3387.40 TVD 6638.30 VS 1955.18			<b>MD 8747</b> INC 88.80 AZM 337.20 TVD 6639.83 VS 2017.32		<b>MD 8811</b> INC 89.30 AZM 336.50 TVD 6640.89 VS 2080.36		
					6650 (-5455)			
					6700 (-5505)			

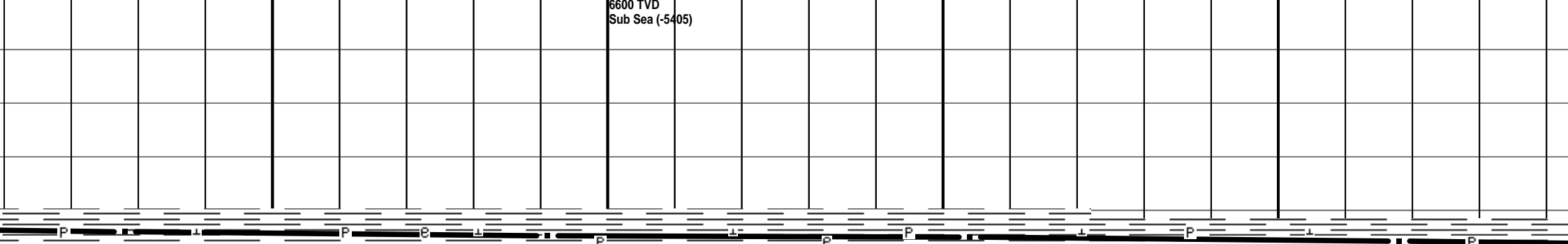
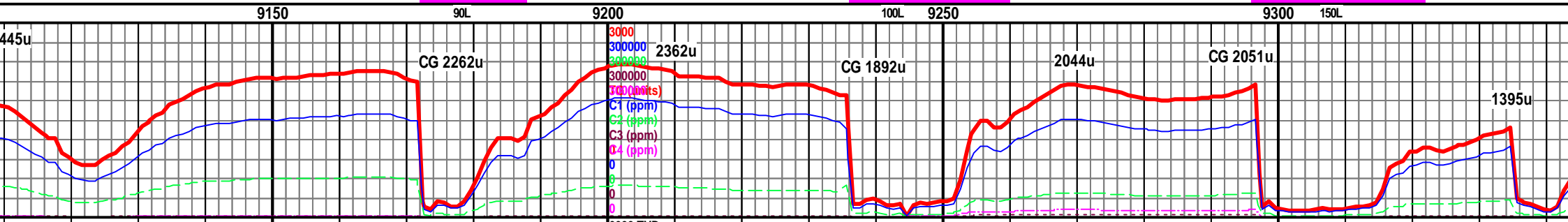
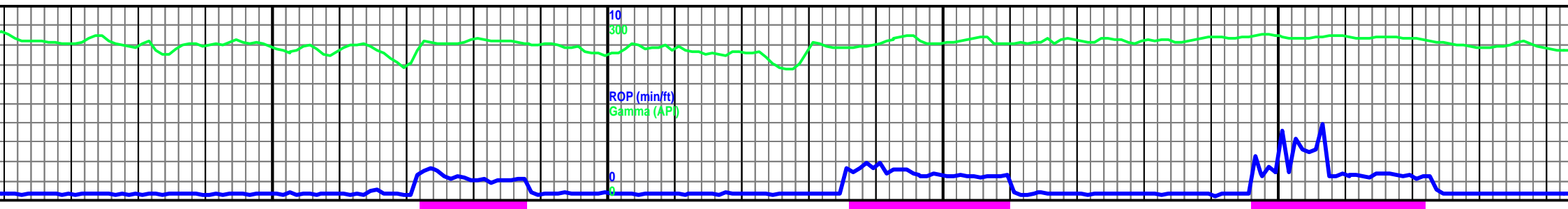


8900-8930 SH: dk gy, frm, sb blk, rthy cal, tr dsem & nodr pyr	8930-8960 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr	8960-8990 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl & free xin cal	8990-9020 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr cal & pyr frac fl	9020-9050 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl	9050-9080 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr cal & pyr frac fl	9080-9110 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal & cal frac fl
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MD 8875 INC 89.80 AZM 336.60 TVD 6641.40 VS 2143.36	MD 8938 INC 90.00 AZM 336.00 TVD 6641.51 VS 2205.33	MD 9001 INC 89.10 AZM 336.50 TVD 6642.00 VS 2267.28	MD 9065 INC 89.00 AZM 336.80 TVD 6643.06 VS 2330.29
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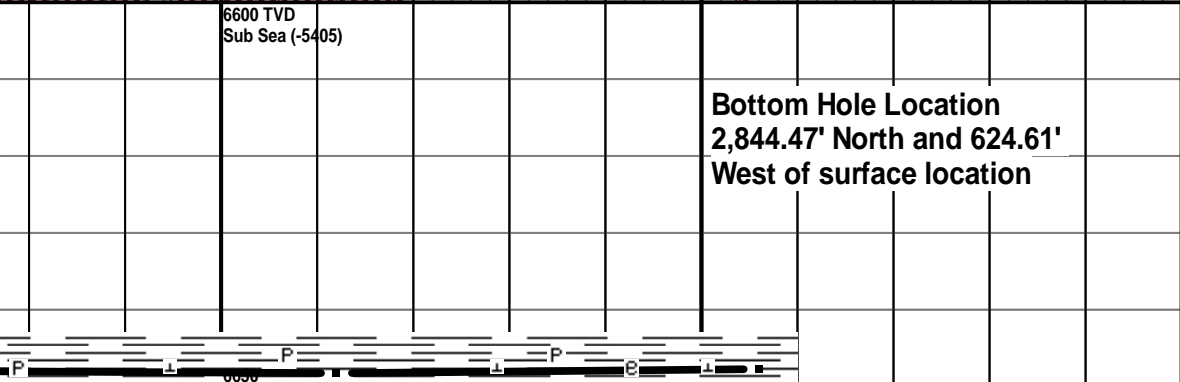
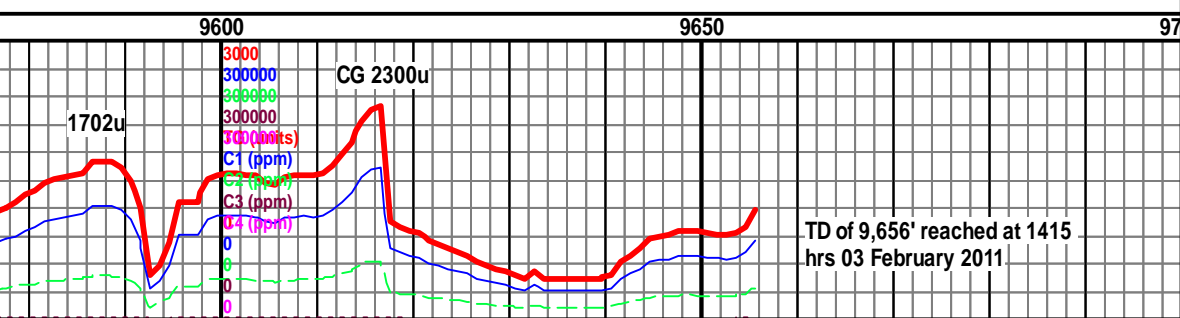
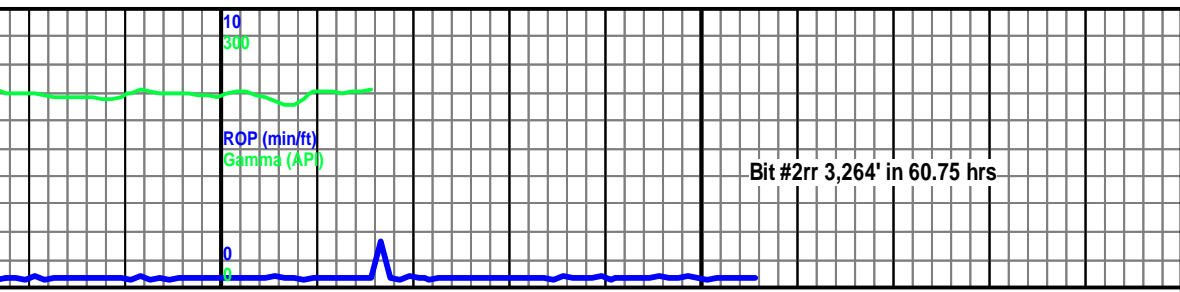






			6650 (-5455)					
9110-9140 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl	9140-9170 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & rr nodr pyr	9170-9200 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl	9200-9230 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl	9230-9260 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl	9260-9290 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & rr nodr pyr, tr cal frac fl	9290-9320 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & rr nodr pyr, tr cal & pyr frac fl	9320-9350 SH: dk gy, frm, sb blk, rthy tex, sl calc, tr dsem & rr nodr pyr, tr cal frac fl	
MD 9128 INC 89.30 AZM 336.40 TVD 6644.00 VS 2392.31		MD 9191 INC 89.40 AZM 336.80 TVD 6644.71 VS 2454.33	6700 (-5505)		MD 9254 INC 90.00 AZM 336.10 TVD 6645.04 VS 2516.33		MD 9318 INC 88.70 AZM 335.30 TVD 6645.77 VS 2579.15	
	E	F	F		E		E	





**Bottom Hole Location  
2,844.47' North and 624.61'  
West of surface location**



9590-9620 SH: dk gy, frm, sb blk, rthy  
tex, sl calc, tr dsem & nodr pyr, rr cal  
frac fl

9620-9656 SH: dk gy, frm, sb blk, rthy  
tex, sl calc, tr dsem & nodr pyr, rr cal  
frac fl

72 .10 35.80 647.98 29.08	MD 9612 INC 90.40 AZM 337.30 TVD 6648.16 VS 2868.45	6700 (-5505)	<b>Projection to Bit MD 9656 INC 90.40 AZM 337.30 TVD 6647.85 VS 2911.86</b>
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