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## GEOSTEERING LOG

### WellSight Systems

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

Well Name: Cather #513053  
Location: Rosemount 7.5' Quad, Flemington District, Taylor County, WV  
License Number: 47-091-01215  
Spud Date: 30 May 2011  
Surface Coordinates: Latitude: 39.29195  
Longitude: 80.15304  
Bottom Hole Coordinates: 2,744.94' South and 1,483.10 East of surface location  
Ground Elevation (ft): 1183  
Logged Interval (ft): 6790 To: 10520  
Formation: Sonyea - Marcellus  
Type of Drilling Fluid: Water based mud  
K.B. Elevation (ft): 1205  
Total Depth (ft): 10520  
Region: Appalachian Basin  
Drilling Completed: 14 May 2011  
Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com




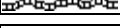
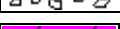

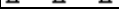
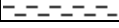








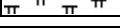

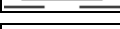
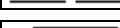
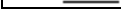



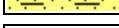

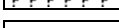
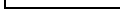
## OPERATOR

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








































































## GEOLOGISTS

**Name:** Grigory Burton, Phillip Broache, Josh Brewer  
**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: Ken Baun  
TOOLPUSHER: Michael Case, Kermit Aultman Jr.  
RIG: Patterson-UTI 622

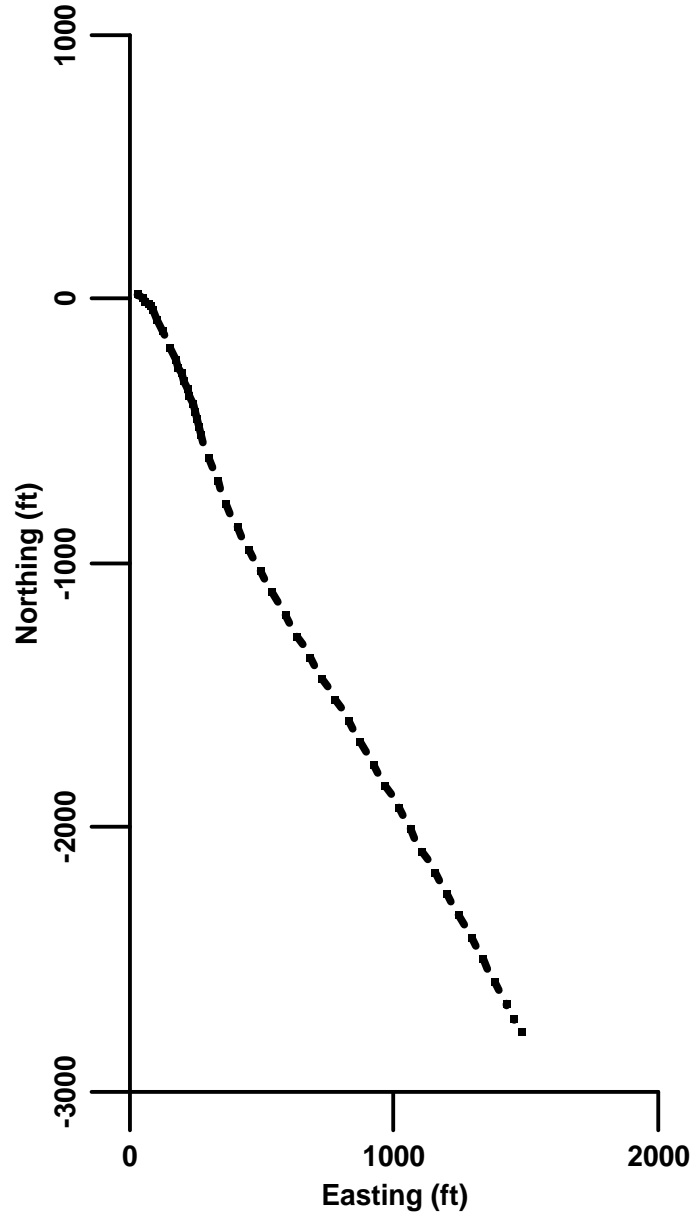
WV FILE #: 7377P513053R2 (329-47)

SURFACE CASING: 13 3/8", 54.5#, 23 JOINTS, SET @ 942'  
INTERMEDIATE CASING: 9 5/8". 40.0#, 62 JOINTS, SET @ 2,488'

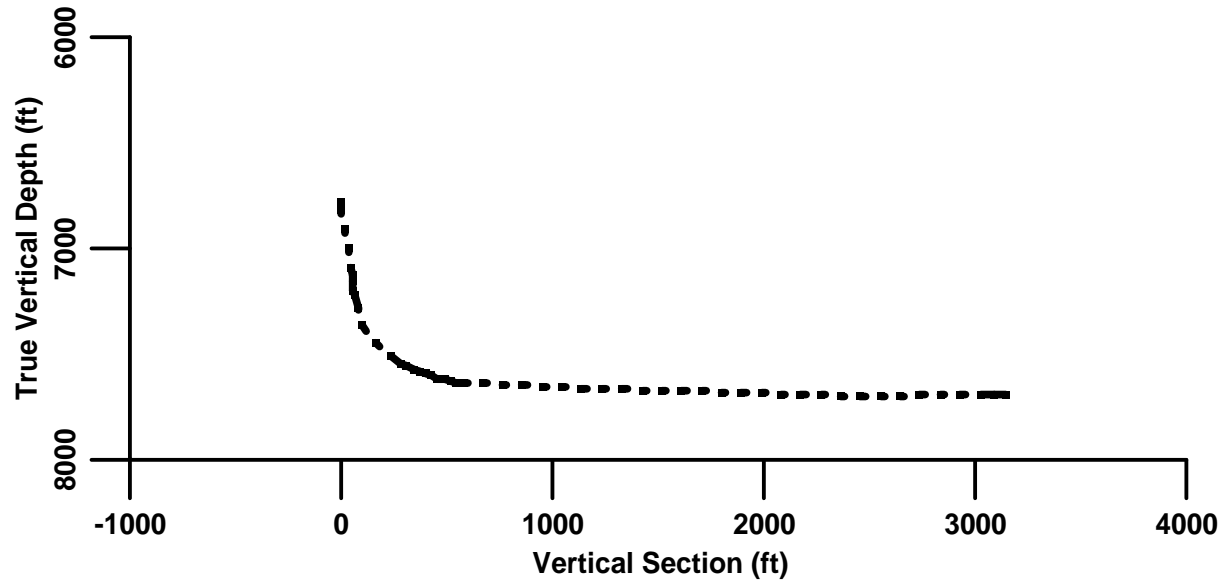
KOP: 6,838'

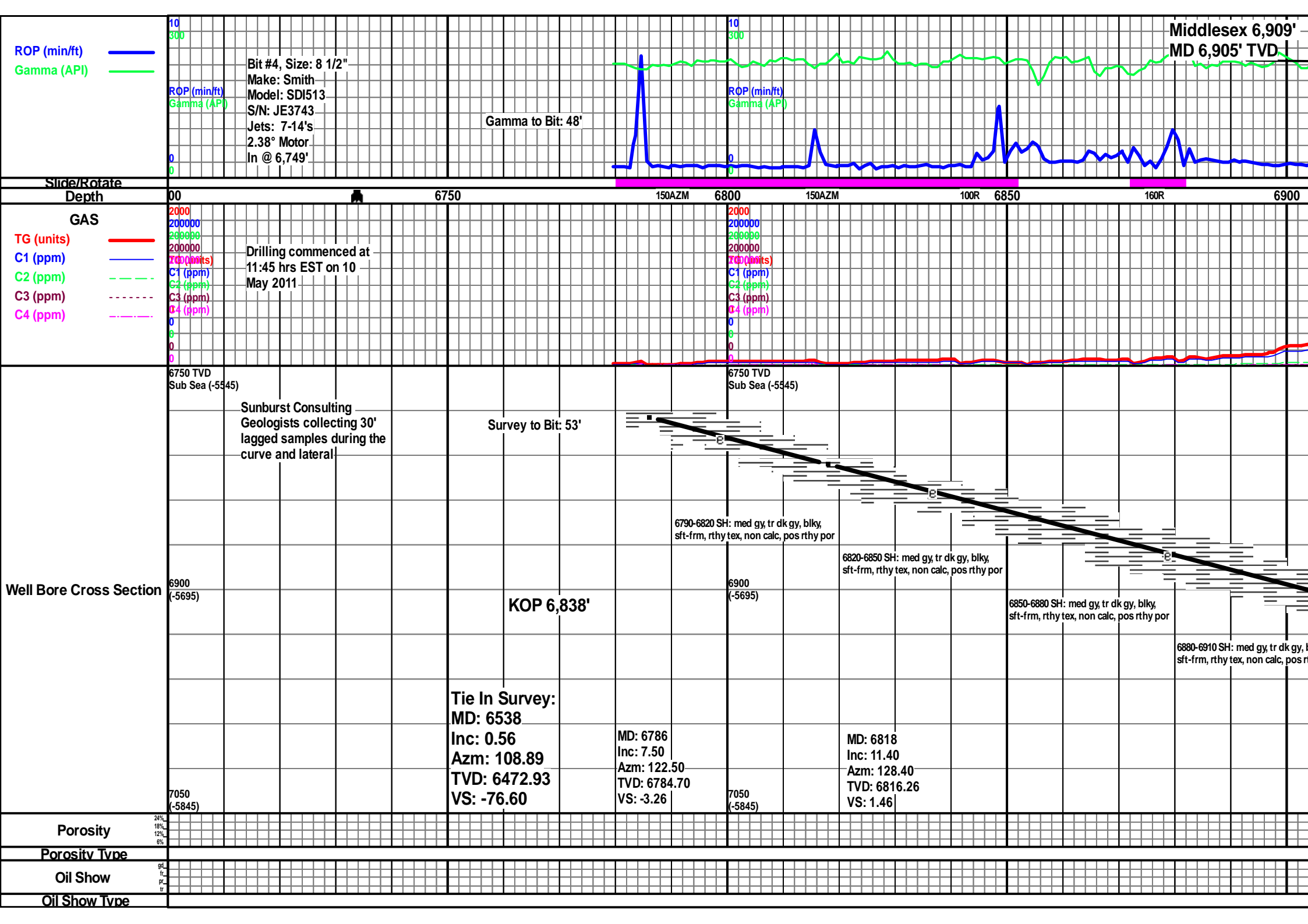
CLOSURE DIRECTION: 118.39 Degrees  
CLOSURE DISTANCE: 3,119.98'

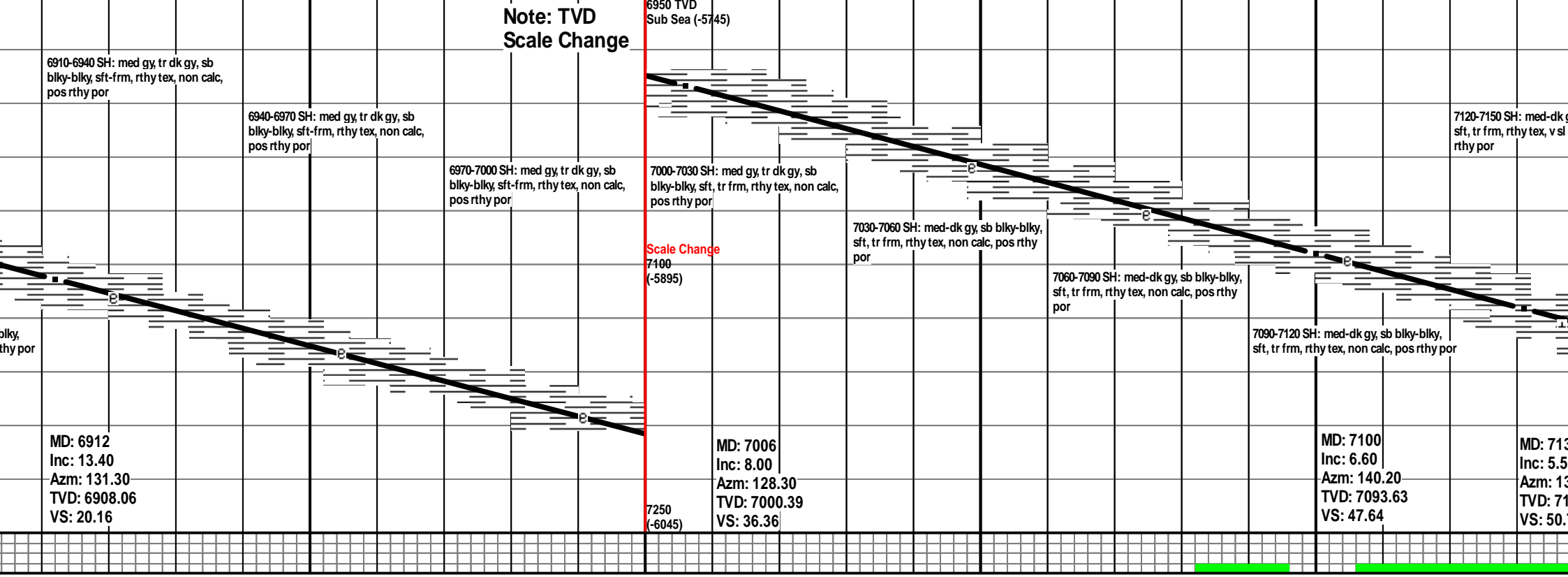
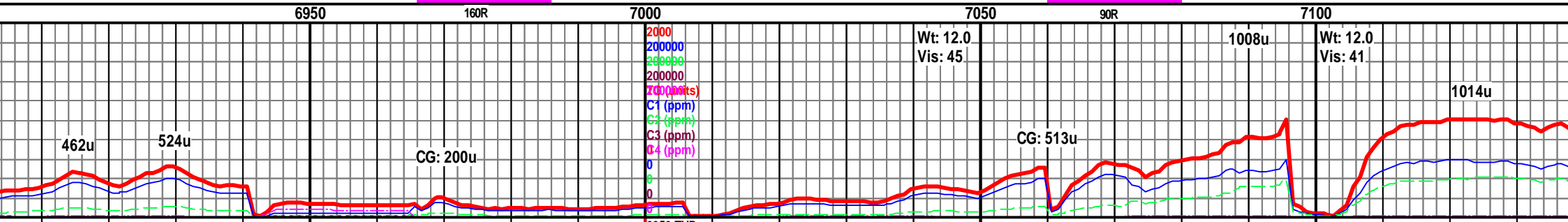
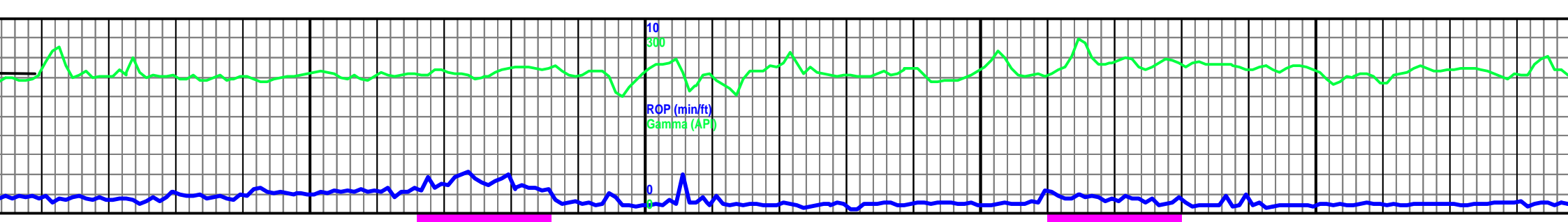
# Plan

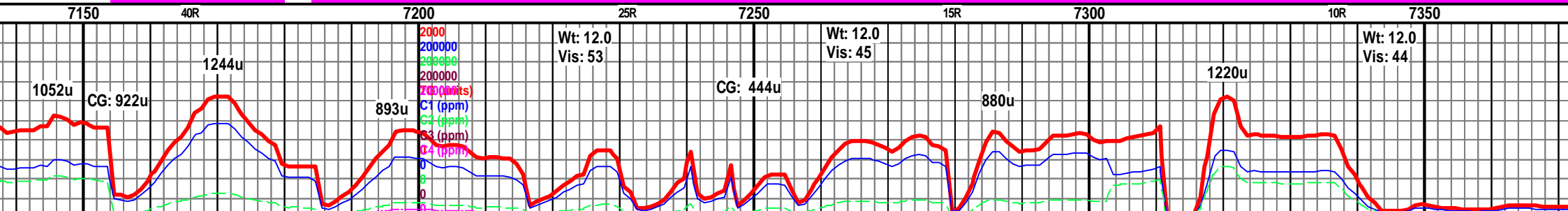
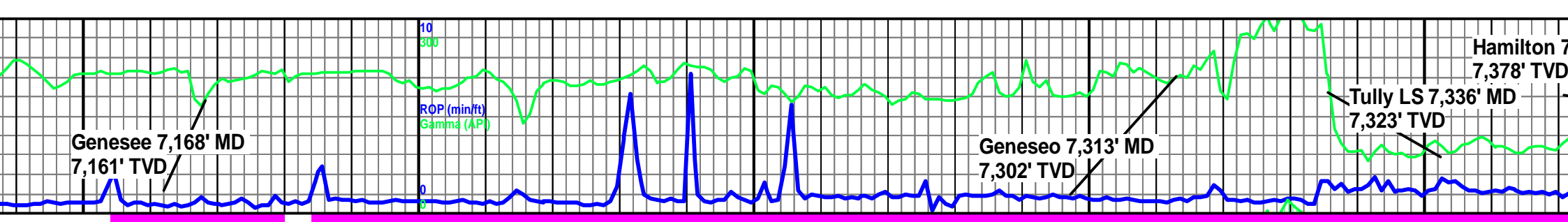


# Elevation

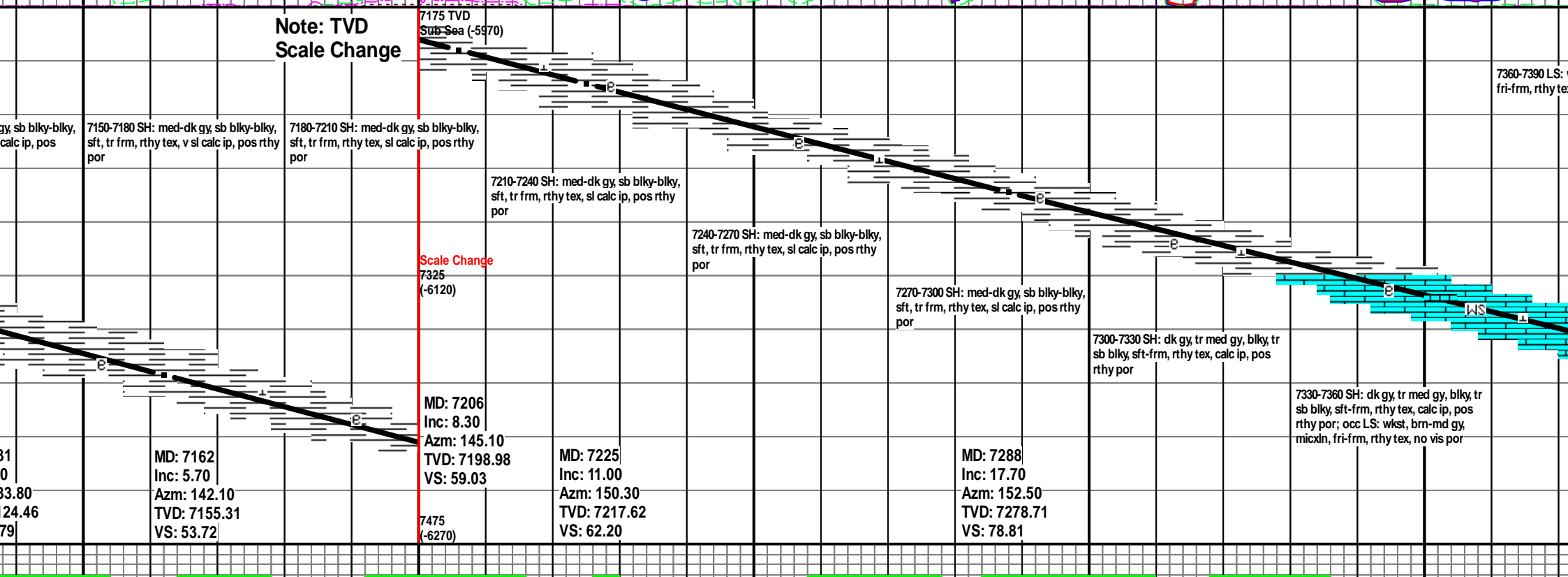








Note: TVD Scale Change





7,397' MD

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

Marcellus 7,582' MD  
7,516' TVD

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

10R 7400 10R 7450 15R 7500 7550 7600

Wt: 12.0  
Vis: 46

Wt: 12.0  
Vis: 41

Wt: 12.0  
Vis: 42

2000  
20000  
200000  
200000  
200000  
ROP (min/ft)  
C1 (ppm)  
C2 (ppm)  
C3 (ppm)  
O4 (ppm)

2000  
20000  
200000  
200000  
200000  
ROP (min/ft)  
C1 (ppm)  
C2 (ppm)  
C3 (ppm)  
O4 (ppm)

CG: 515u

833u

932u

CG: 603u

Note: TVD  
Scale Change

7350 TVD  
Sub Sea (-6145)

7350 TVD  
Sub Sea (-6145)

wkst, brn-md gy, micdn,  
x, no vis por

7390-7420 LS: wkst, brn-md gy, micdn,  
fri frm, rthy tex, no vis por; occ SH: dk  
gy, tr med gy, sb blkly-blky, sft frm, rthy  
tex, calc ip, pos rthy por

7420-7450 SH: dk gy, tr med gy, sb  
blkly-blky, sft frm, rthy tex, calc ip, pos  
rthy por

7450-7480 SH: dk gy, tr med gy, sb  
blkly-blky, sft frm, rthy tex, calc ip, pos  
rthy por

7480-7510 SH: dk gy, tr med gy, sb  
blkly-blky, sft frm, rthy tex, calc ip, pos  
rthy por

7510-7540 SH: dk gy, tr med gy, sb  
blkly-blky, sft frm, rthy tex, calc ip, pos  
rthy por

7540-7570 SH: dk gy, tr med gy, sb  
blkly-blky, sft frm, rthy tex, calc ip, pos  
rthy por

7570-7600 SH: dk gy, tr med gy, sb  
blkly-blky, sft frm, rthy tex, calc ip, pos  
rthy por

7600-7630  
sft frm

Scale Change  
7500  
(-6295)

7500  
(-6295)

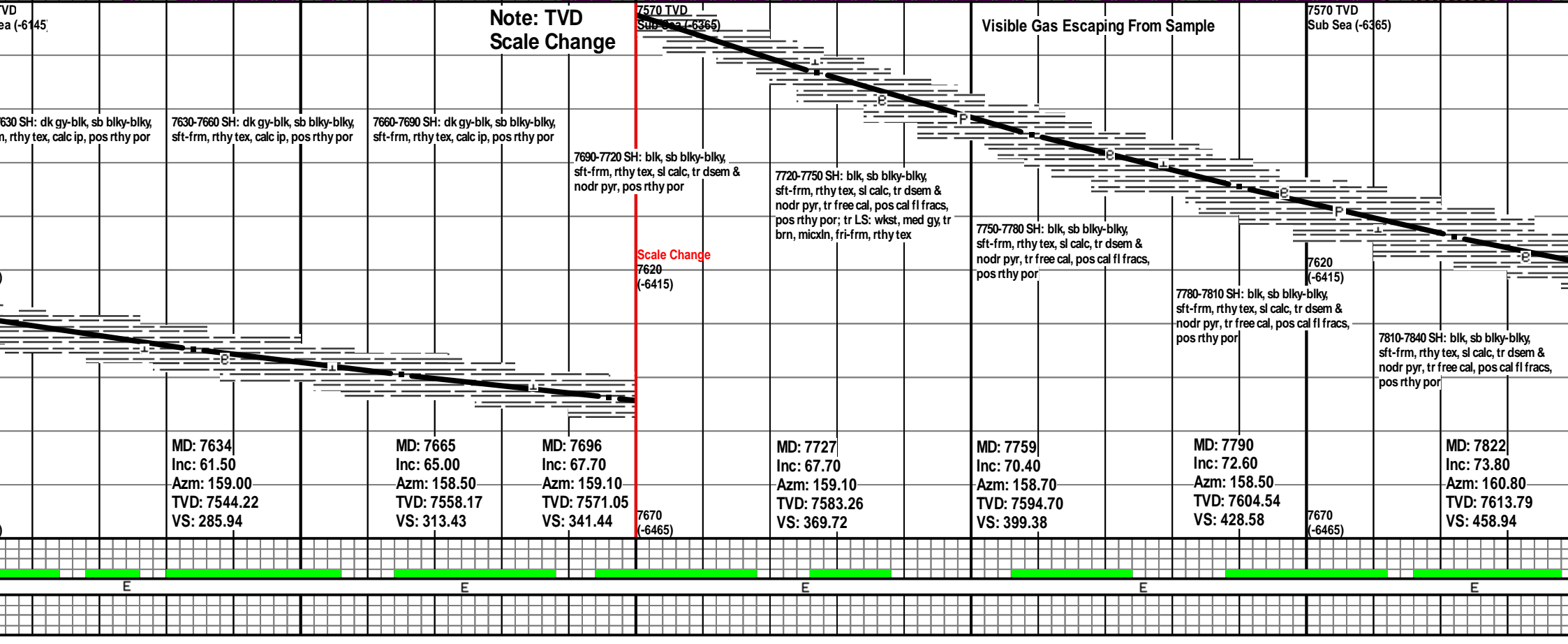
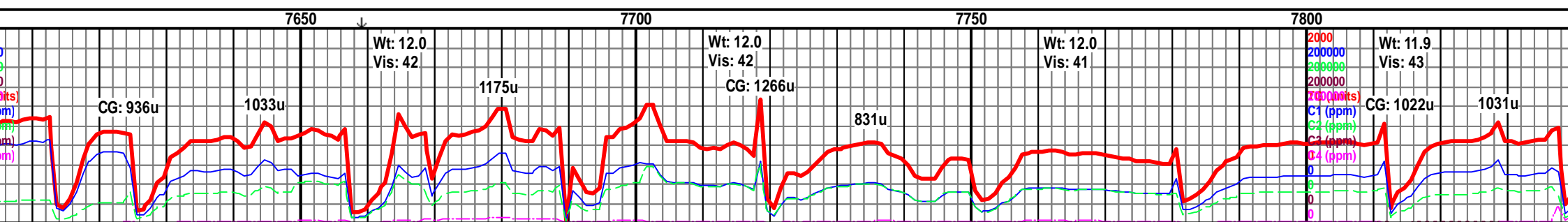
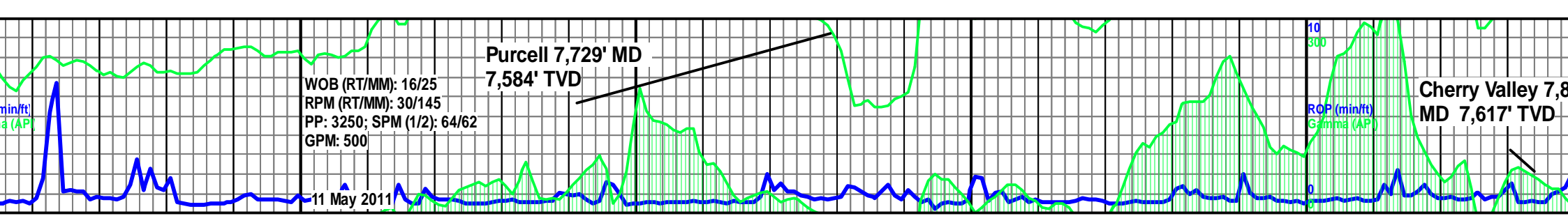
MD: 7382  
Inc: 28.00  
Azm: 152.30  
TVD: 7365.22  
VS: 102.62

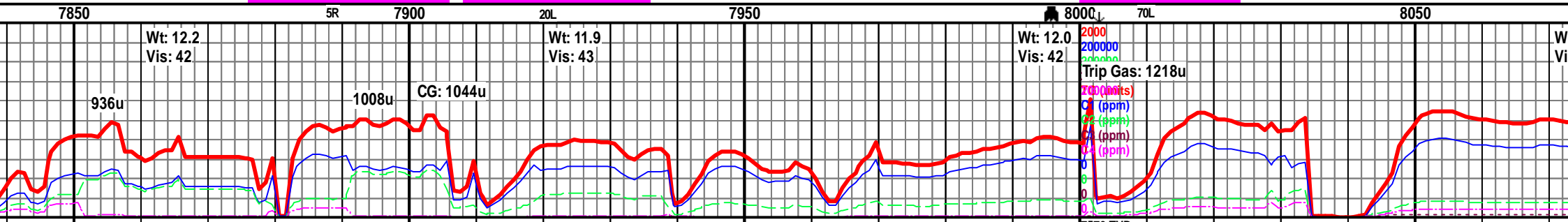
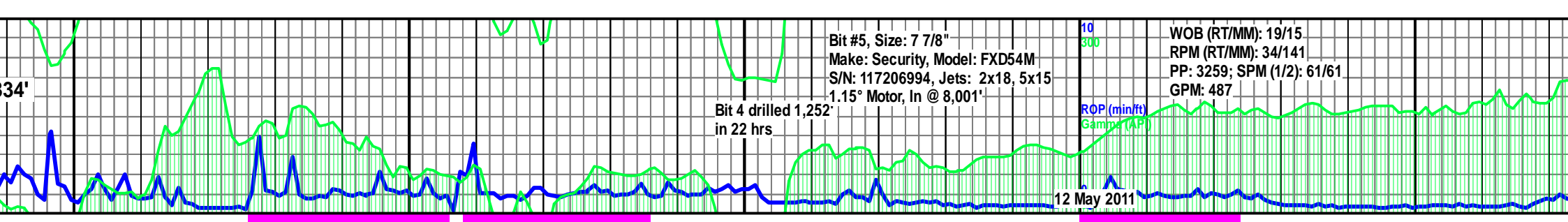
7650  
(-6445)

MD: 7476  
Inc: 38.70  
Azm: 154.10  
TVD: 7443.63  
VS: 165.84

MD: 7571  
Inc: 52.50  
Azm: 156.20  
TVD: 7509.94  
VS: 233.43

7650  
(-6445)



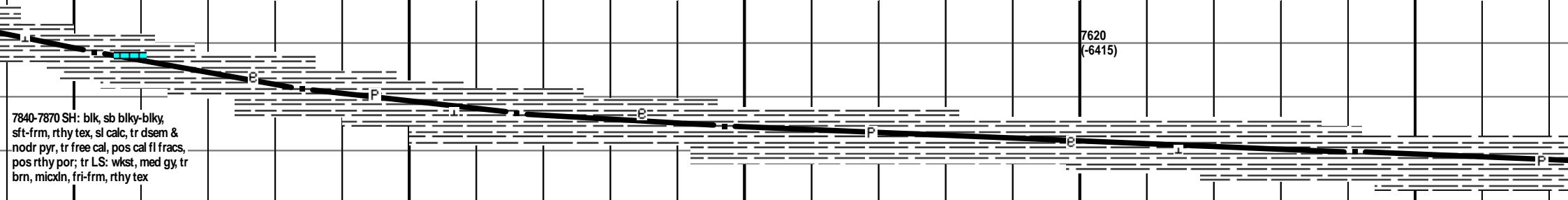


Visible Gas Escaping From Sample

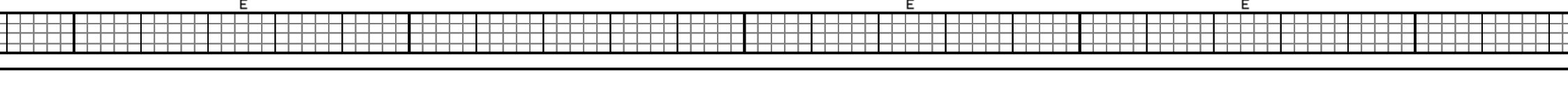
Curve landed at 8,001' MD and 7,635' TVD at ~14:15hrs EST on 11 May 2011

Visible Gas Escaping From Sample

7870-7900 SH: blk, sb blkly-bkly, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	7900-7930 SH: blk, sb blkly-bkly, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	7930-7960 SH: blk, sb blkly-bkly, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	7960-7990 SH: blk, sb blkly-bkly, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	7990-8020 SH: blk, sb blkly-bkly, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8020-8050 SH: blk, sb blkly-sb plty, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8050-8080 SH: blk, sb blkly-sb plty, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por
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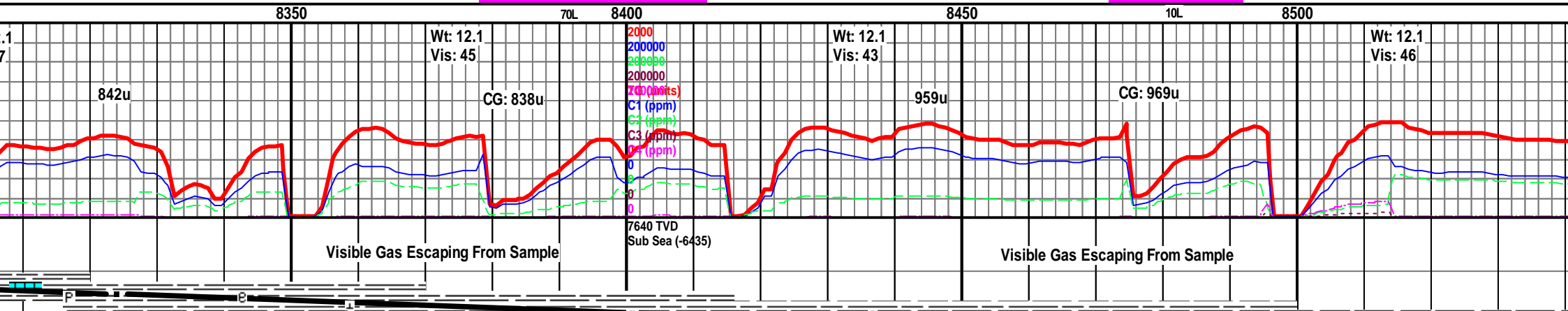
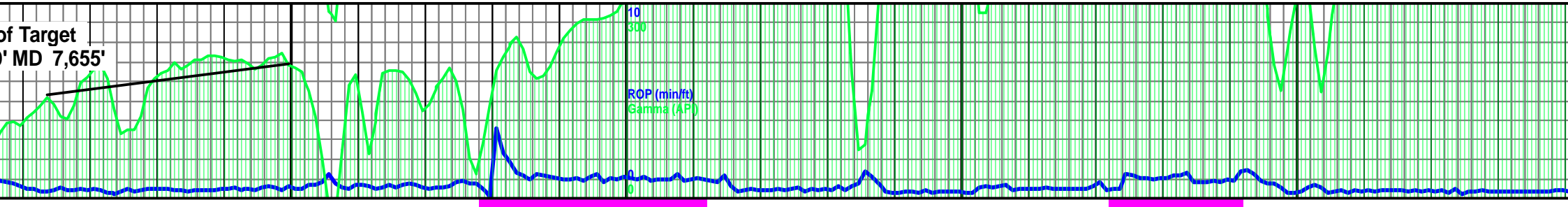


MD: 7853 Inc: 76.00 Azm: 163.90 TVD: 7621.86 VS: 488.37	MD: 7884 Inc: 79.30 Azm: 165.30 TVD: 7628.49 VS: 517.92	MD: 7916 Inc: 84.40 Azm: 164.50 TVD: 7633.03 VS: 548.78	MD: 7947 Inc: 86.90 Azm: 163.60 TVD: 7635.38 VS: 579.00	MD: 8041 Inc: 87.30 Azm: 161.10 TVD: 7640.14 VS: 671.34
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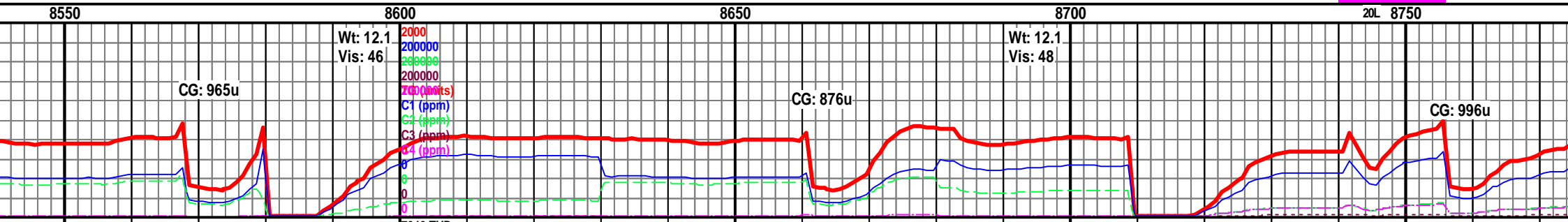
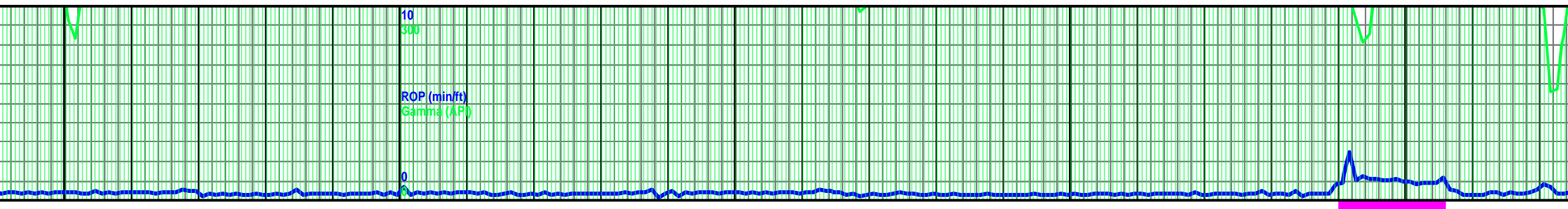




of Target  
' MD 7,655'



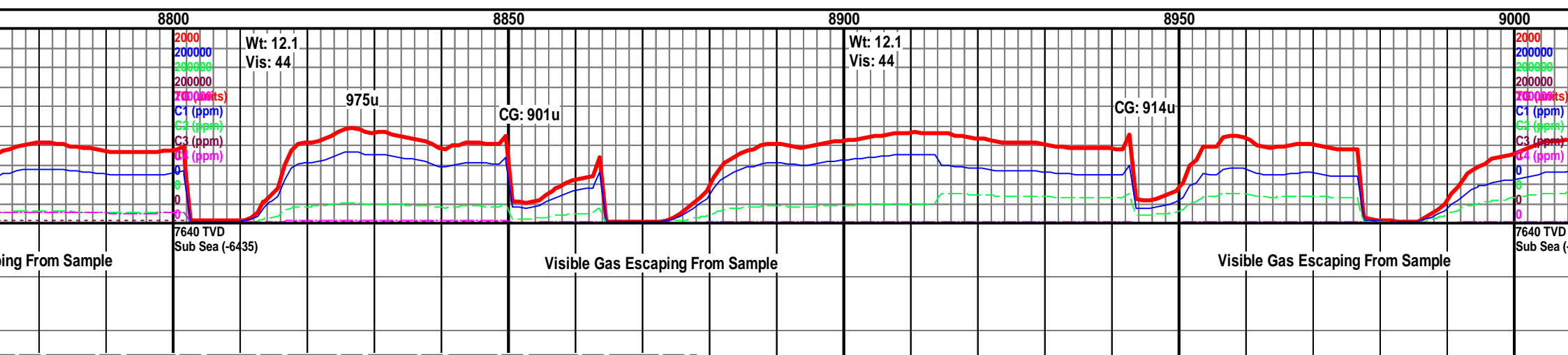
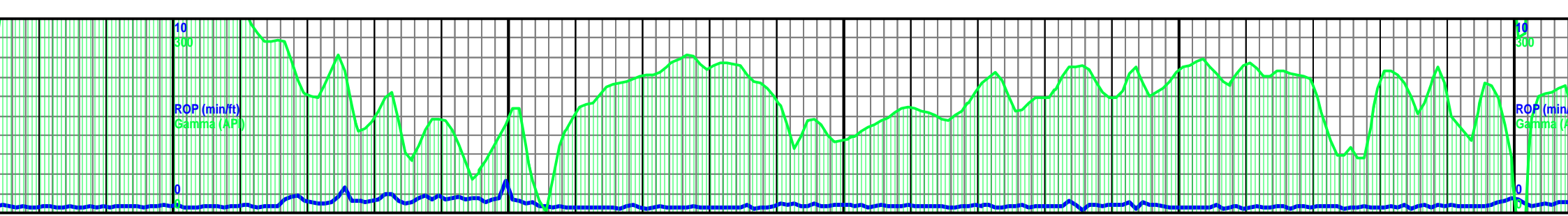
blkly-sb pilty, sb sl calc, tr dsem, pos cal fl fracs, ndst, lt gy-wht, no vis por	8320-8350 SH: blk, sb blkly-sb pilty, sb spl, sft frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8350-8380 SH: blk, sb blkly-sb pilty, sb spl, sft frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8380-8410 SH: blk, sb blkly-sb pilty, sb spl, sft frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8410-8440 SH: blk, sb blkly-sb pilty, sb spl, sft frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8440-8470 SH: blk, sb blkly-sb pilty, sb spl, sft frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8470-8500 SH: blk, sb blkly-sb pilty, sb spl, sft frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8500-8530 SH: blk, sb blkly-sb pilty, sb spl, sft frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8530-8560 SH: blk, sb blkly-sb pilty, sb spl, sft frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por		
				7690 (-6485)						
				7740 (-6535)						
	MD: 8324 Inc: 87.50 Azm: 154.90 TVD: 7654.13 VS: 952.33				MD: 8418 Inc: 87.10 Azm: 151.00 TVD: 7658.56 VS: 1046.20					MD: 8512 Inc: 89.00 Azm: 150.40 TVD: 7661.73 VS: 1140.11



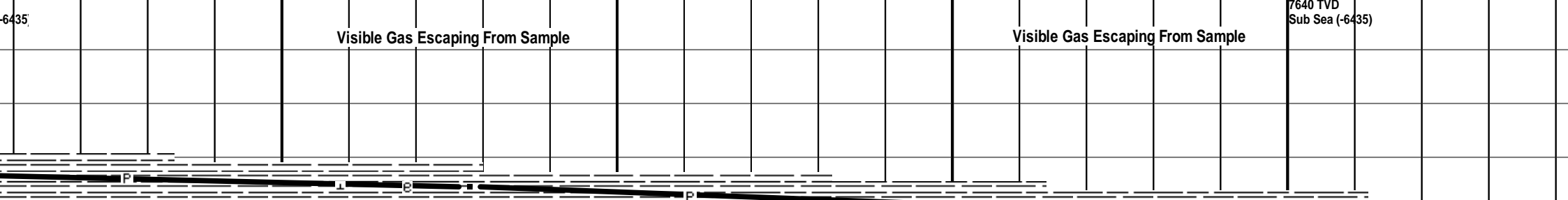
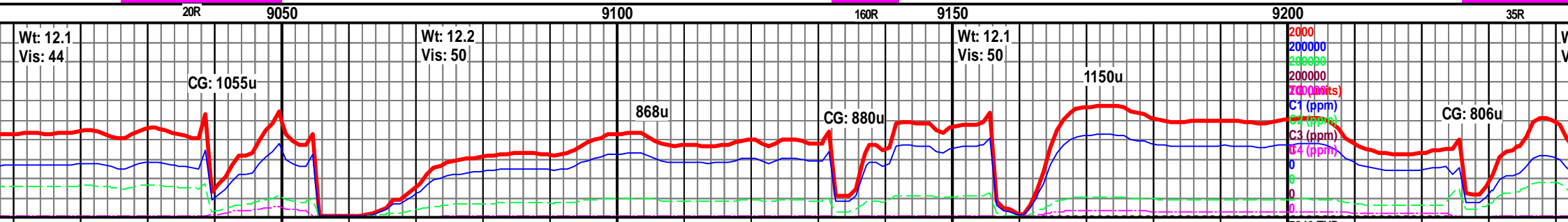
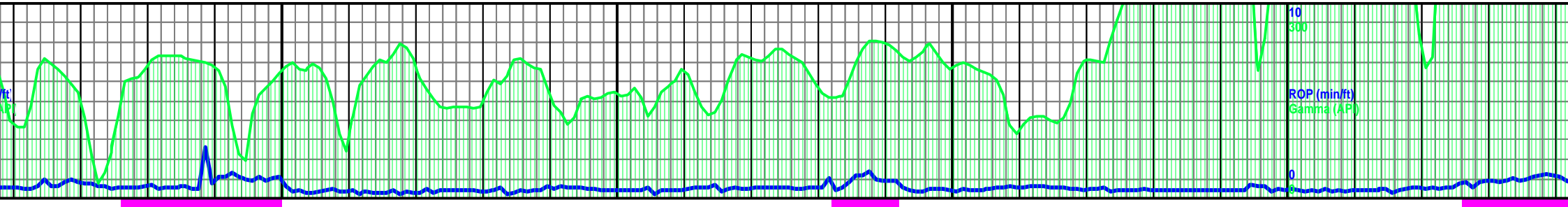
Visible Gas Escaping From Sample

7640 TVD  
Sub Sea (-6435)

: blk, sb blk-y-sb pty, sb rthy tex, sl calc, tr dsem & free cal, pos cal fl fracs,	8560-8590 SH: blk, sb blk-y-sb pty, sb spl, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8590-8620 SH: blk, sb blk-y-sb pty, sb spl, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8620-8650 SH: blk, sb blk-y-sb pty, sb spl, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8650-8680 SH: blk, sb blk-y-sb pty, sb spl, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8680-8710 SH: blk, sb blk-y-sb pty, sb spl, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8710-8740 SH: blk, sb blk-y-sb pty, sb spl, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8740-8770 SH: blk, sb blk-y-sb pty, sb spl, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8770-8800 SH: blk, sb blk-y-sb pty, sb spl, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por
	7690 (-6485)							
	MD: 8607 Inc: 88.50 Azm: 150.20 TVD: 7663.83 VS: 1235.05  7740 (-6535)					MD: 8701 Inc: 88.30 Azm: 150.70 TVD: 7666.45 VS: 1328.98		

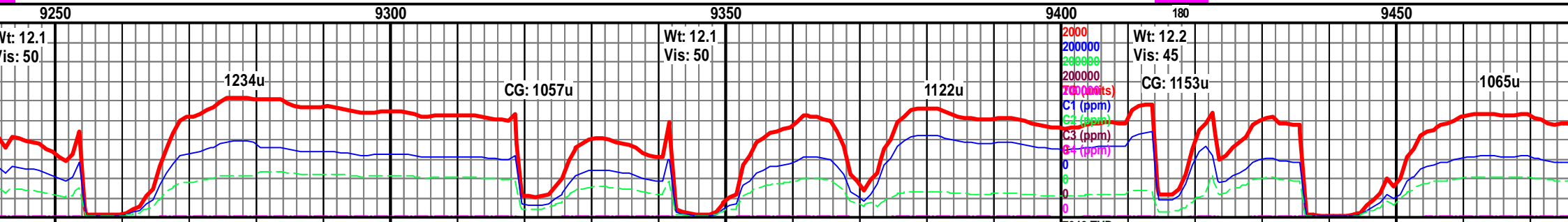
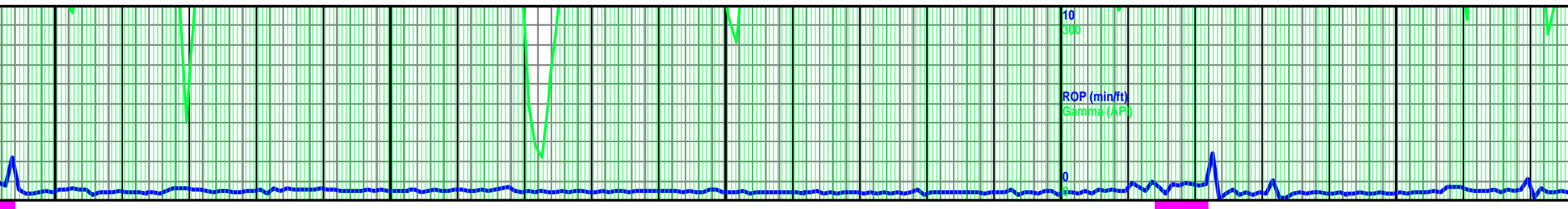


	7690 (-6485)	8830-8860 SH: blk, sb blk-y-sb plty, sb spl, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8860-8890 SH: blk, sb blk-y-sb plty, sb spl, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8890-8920 SH: blk, sb blk-y-sb plty, sb spl, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8920-8950 SH: blk, sb blk-y-sb plty, sb spl, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8950-8980 SH: blk, sb blk-y-sb plty, sb spl, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	8980-9010 SH: blk, sb blk-y-sb plty, sb spl, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr, tr free cal, pos cal fl fracs, pos rthy por	7690 (-6485)
<p>MD: 8795 Inc: 89.20 Azm: 149.90 TVD: 7668.50 VS: 1422.92</p>	7740 (-6535)			<p>MD: 8889 Inc: 88.9 Azm: 149.6 TVD: 7670.06 VS: 1516.83</p>			<p>MD: 8983 Inc: 87.70 Azm: 149.10 TVD: 7672.85 VS: 1610.69</p>	7740 (-6535)

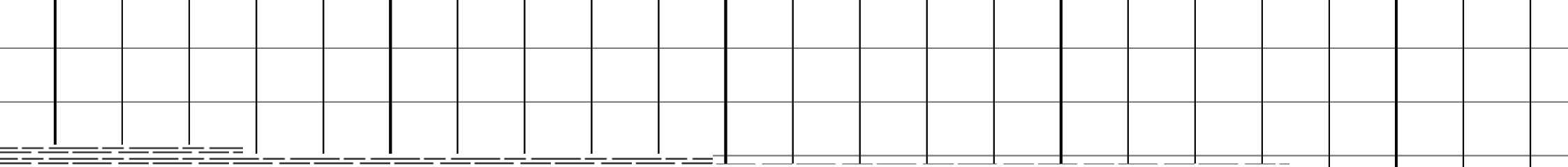


<p>Wt: 12.1 Vis: 44</p>	<p>20R 9050</p>	<p>Wt: 12.2 Vis: 50</p>	<p>9100</p>	<p>160R 9150</p>	<p>Wt: 12.1 Vis: 50</p>	<p>9200</p>	<p>35R</p>								
<p>CG: 1055u</p>		<p>868u</p>		<p>CG: 880u</p>		<p>1150u</p>		<p>CG: 806u</p>							
<p>Visible Gas Escaping From Sample</p>		<p>Visible Gas Escaping From Sample</p>		<p>Visible Gas Escaping From Sample</p>		<p>Visible Gas Escaping From Sample</p>		<p>Visible Gas Escaping From Sample</p>							
<p>9010-9040 SH: blk, sb blk-y-sb plty, sb spl, sft-frm, rthy tex, sl calc, tr dsem &amp; nodr pyr, tr free cal, pos cal fl fracs, pos rthy por</p>		<p>9040-9070 SH: blk, sb blk-y-sb plty, sb spl, sft-frm, rthy tex, sl calc, tr dsem &amp; nodr pyr, tr free cal, pos cal fl fracs, pos rthy por</p>		<p>9070-9100 SH: blk, sb blk-y-sb plty, sb spl, sft-frm, rthy tex, sl calc, tr dsem &amp; nodr pyr, tr free cal, pos cal fl fracs, pos rthy por</p>		<p>9100-9130 SH: blk, sb blk-y-sb plty, sb spl, sft-frm, rthy tex, sl calc, tr dsem &amp; nodr pyr, tr free cal, pos cal fl fracs, pos rthy por</p>		<p>9130-9160 SH: blk, tr dk gy, sb blk-y-bkly, frm, rthy tex, v calc ip, tr dsem pyr, pos rthy por</p>		<p>9160-9190 SH: blk, tr dk gy, sb blk-y-bkly, frm, rthy tex, v calc ip, tr dsem pyr, pos rthy por</p>		<p>9190-9220 SH: blk, tr dk gy, sb blk-y-bkly, frm, rthy tex, v calc ip, tr dsem pyr, pos rthy por</p>		<p>9220-9250 SH: blk, tr dk gy, sb blk-y-bkly, frm, rthy tex, v calc ip, tr dsem pyr, pos rthy por</p>	
		<p>MD: 9078 Inc: 89.00 Azm: 149.20 TVD: 7675.59 VS: 1705.53</p>				<p>MD: 9172 Inc: 86.00 Azm: 149.10 TVD: 7679.69 VS: 1799.32</p>				<p>7690 (-6485)</p>		<p>7740 (-6535)</p>			

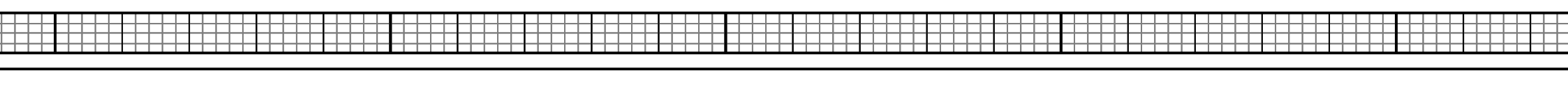


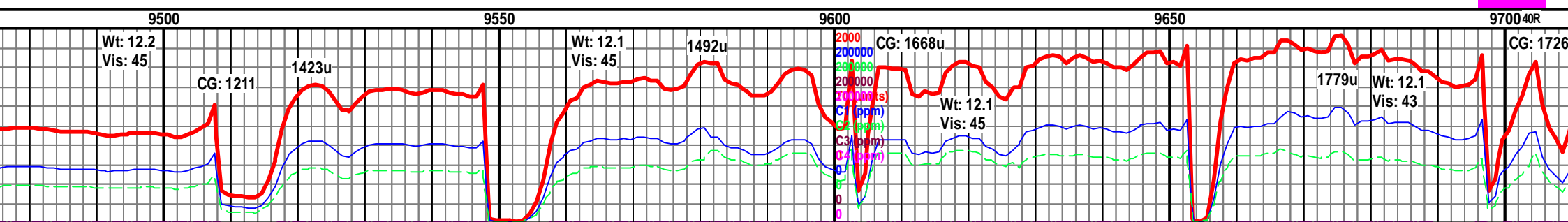
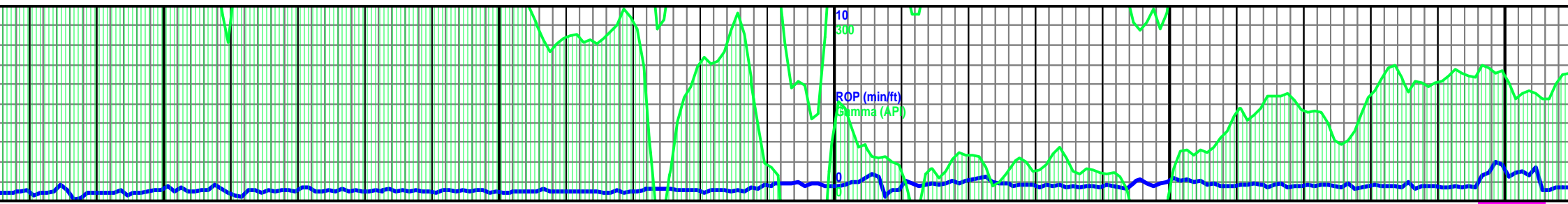


Visible Gas Escaping From Sample



<p>9250-9280 SH: blk, tr dk gy, sb blkly-blky, frm, rthy tex, v calc ip, tr dsem pyr, pos rthy por</p>	<p>9280-9310 SH: blk, tr dk gy, sb blkly-blky, frm, rthy tex, v calc ip, tr dsem pyr, pos rthy por</p>	<p>9310-9340 SH: blk, tr dk gy, sb blkly-blky, frm, rthy tex, v calc ip, tr dsem pyr, pos rthy por</p>	<p>9340-9370 SH: blk, tr dk gy, sb blkly-blky, frm, rthy tex, v calc ip, tr dsem pyr, pos rthy por</p>	<p>9370-9400 SH: blk, tr dk gy, sb blkly-blky, frm, rthy tex, v calc ip, tr dsem pyr, pos rthy por</p>	<p>9400-9430 SH: blk, tr dk gy, sb blkly-blky, sft-frm, rthy tex, sl calc, tr dsem &amp; nodr pyr, pos rthy por</p>	<p>9430-9460 SH: blk, tr dk gy, sb blkly-blky, sft-frm, rthy tex, sl calc, tr dsem &amp; nodr pyr, pos rthy por</p>	<p>9460-9490 SH: blk, tr dk gy, sb blkly-blky, sft-frm, rthy tex, sl calc, tr dsem &amp; nodr pyr, pos rthy por</p>
<p>MD: 9266 Inc: 88.60 Azm: 149.60 TVD: 7684.11 VS: 1893.11</p>			<p>MD: 9360 Inc: 89.50 Azm: 150.30 TVD: 7685.67 VS: 1987.04</p>		<p>7740 (-6535)</p>		<p>MD: 9455 Inc: 88.30 Azm: 150.10 TVD: 7687.50 VS: 2081.97</p>





ng From Sample

Visible Gas Escaping From Sample

7640 TVD  
Sub Sea (-6435)

Visible Gas Escaping From Sample

9490-9520 SH: blk, tr dk gy, sb blk-ylky, sft frm, rthy tex, sl calc, tr dsem & nodr pyr, pos rthy por

9520-9550 SH: blk, tr dk gy, sb blk-ylky, sft frm, rthy tex, sl calc, tr dsem & nodr pyr, pos rthy por

9550-9580 SH: blk, tr dk gy, sb blk-ylky, sft frm, rthy tex, sl calc, tr dsem & nodr pyr, pos rthy por

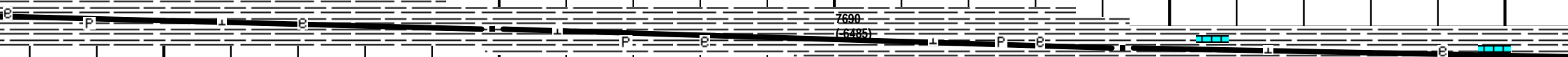
9580-9610 SH: dk gy-blk, sb blk-ylky, frm, tr sft, rthy tex, v calc ip, tr dsem & nodr pyr, pos rthy por

9610-9640 SH: dk gy-blk, sb blk-ylky, frm, tr sft, rthy tex, v calc ip, tr dsem & nodr pyr, pos rthy por

9640-9670 SH: dk gy-blk, sb blk-ylky, frm, tr sft, rthy tex, v calc ip, tr dsem & nodr pyr, pos rthy por; tr LS: mdst, lt gy-wh, mlky, sb blk, rthy tex, no vis por

9670-9700 SH: dk gy-blk, sb blk-ylky, frm, tr sft, rthy tex, v calc ip, tr dsem & nodr pyr, pos rthy por; tr LS: mdst, lt gy-wh, mlky, sb blk, rthy tex, no vis por

9700-9730 SH: dk gy-blk, sb blk-ylky, frm, tr sft, rthy tex, v calc ip, tr dsem & nodr pyr, pos rthy por; tr LS: mdst, lt gy-wh, mlky, sb blk, rthy tex, no vis por



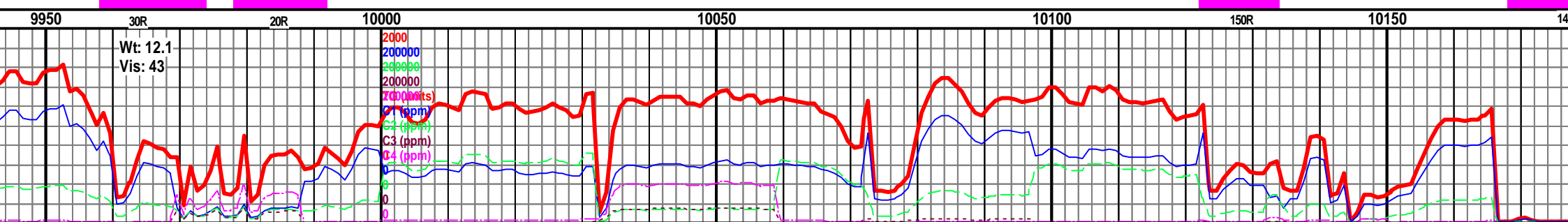
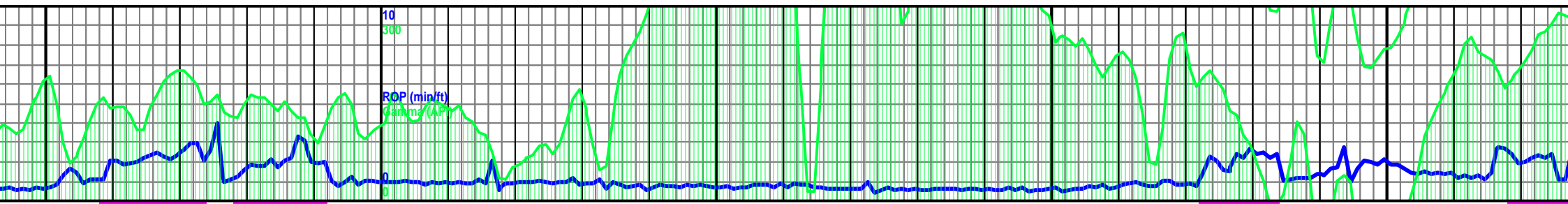
tr dk gy, sb blk-ylky, calc, tr dsem & nodr

MD: 9549  
Inc: 87.90  
Azm: 150.50  
TVD: 7690.61  
VS: 2175.88

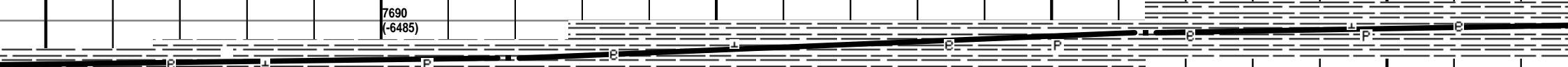
7740  
(-6535)

MD: 9643  
Inc: 88.00  
Azm: 150.60  
TVD: 7693.98  
VS: 2269.79



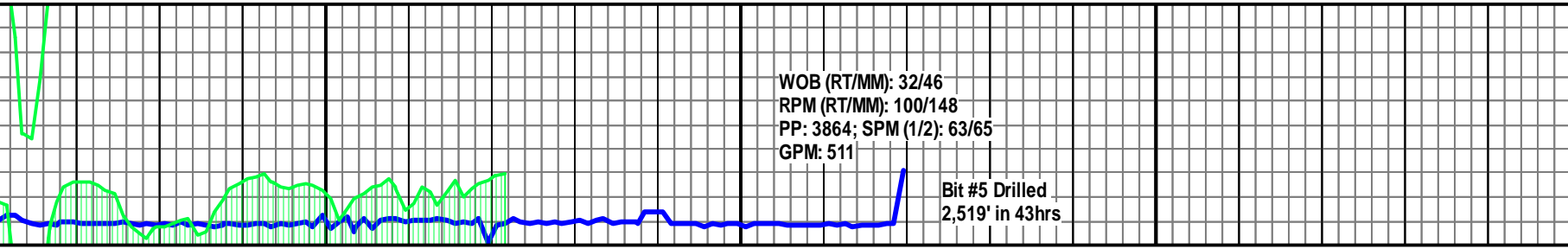


9950	30R	20R	10000	10050	10100	150R	10150	14	
Wt: 12.1 Vis: 43			2000 200000 200000 200000 760 (mils) C1 (ppm) C2 (ppm) C3 (ppm) H2S (ppm)	Visible Gas Escaping From Sample		Visible Gas Escaping From Sample		Visible Gas Escap	
10-9970 SH: blk, sb blk, frm, tr sft, rthy tex, v calc ip, tr dsem & nodr pyr, pos rthy por			9970-10000 SH: blk, sb blk, frm, tr sft, rthy tex, v calc ip, tr dsem & nodr pyr, pos rthy por	10000-10030 SH: blk, sb blk, frm, tr sft, rthy tex, v calc ip, tr dsem & nodr pyr, pos rthy por	10030-10060 SH: blk, sb blk, frm, tr sft, rthy tex, v calc ip, tr dsem & nodr pyr, pos rthy por	10060-10090 SH: blk, sb blk, frm, tr sft, rthy tex, v calc ip, tr dsem & nodr pyr, pos rthy por	10090-10120 SH: blk, sb blk, frm, tr sft, rthy tex, v calc ip, tr dsem & nodr pyr, pos rthy por	10120-10150 SH: dk gy-blk, sb blk, frm, tr sft, rthy tex, calc ip, tr dsem pyr, pos rthy por	10150-10180 SH: dk gy-blk, sb blk, frm, tr sft, rthy tex, calc ip, tr dsem pyr, pos rthy por

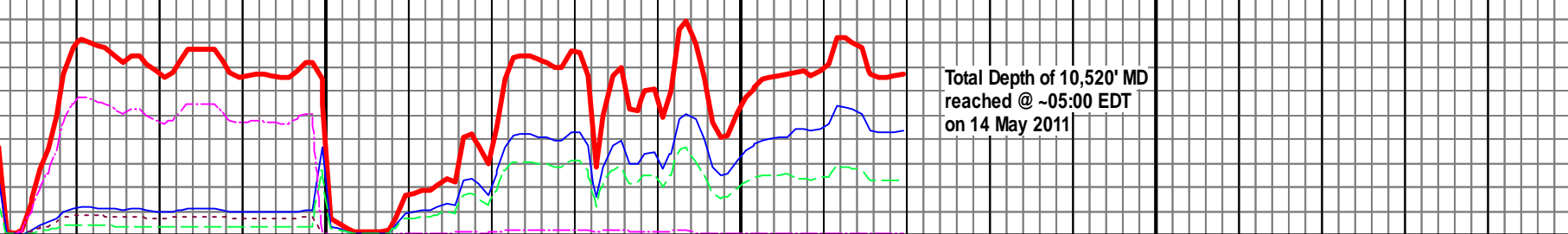


7640 TVD Sub Sea (-6435)	7690 (-6485)	MD: 10019 Inc: 92.60 Azm: 151.20 TVD: 7696.93 VS: 2645.12	MD: 10114 Inc: 93.00 Azm: 151.40 TVD: 7692.29 VS: 2740.44
7740 (-6535)			





10450 10500 10550 10



Visible Gas Escaping From Sample

sb blk, frm, am pyr, pos	10420-10450 SH: dk gy-blk, sb blk, frm, tr sft, rthy tex, calc ip, tr dsem pyr, pos rthy por	10450-10480 SH: blk, tr dk gy, sb blk-blk, sft-frm, rthy tex, v calc ip, tr dsem & nodr pyr, pos rthy por	10480-10510 SH: blk, tr dk gy, sb blk-blk, sft-frm, rthy tex, v calc ip, tr dsem & nodr pyr, pos rthy por	10510-10520 SH: blk, tr dk gy, sb blk-blk, sft-frm, rthy tex, v calc ip, tr dsem & nodr pyr, pos rthy por
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**Bottom Hole Location:  
 2,744.94' South and 1,483.10'  
 East of surface location**



MD: 10466  
 Inc: 90.40  
 Azm: 152.40  
 TVD: 7690.37  
 VS: 3092.40

**Projection to Bit:  
 MD: 10520  
 Inc: 90.40  
 Azm: 152.40  
 TVD: 7689.99  
 VS: 3146.40**