

# SUNBURST CONSULTING

A G E O L O G Y S E R V I C E



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2150 Harnish Blvd, Billings, MT 59101  
(406)259-4124  
(406)252-4252 fax  
geology@sunburstconsulting.com  
www.sunburstconsulting.com

## GEOSTEERING LOG

### WellSight Systems

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

Well Name: James Taylor #511506  
Location: Rosemont 7.5' Quad; Flemington District; Taylor County, WV  
License Number: API#: 47-091-01224  
Spud Date: 07 June 2011  
Surface Coordinates: Latitude: 39.294472  
Longitude: 80.192531  
Bottom Hole Coordinates: 3,750.48' North and 1,768.84' West of surface location  
Ground Elevation (ft): 1470  
Logged Interval (ft): 6,620' To: 11,457'  
Formation: Sonyea thru Marcellus  
Type of Drilling Fluid: Water Based Mud

Region: Appalachian Basin  
Drilling Completed: 22 June 2011

K.B. Elevation (ft): 1485

Total Depth (ft): 11,457'

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.co




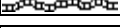
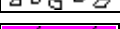

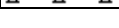
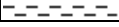








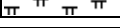

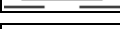
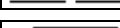
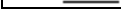



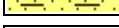

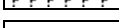
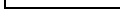
## OPERATOR

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

## GEOLOGISTS




















**Name:** Isaah Land, Josh Brewer, Andrew Reeder  
**Company:** Sunburst Consulting, Inc.  
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 2150 Harnish Blvd, Billings, MT 59101  
 (406) 259-4124; geology@sunburstconsulting.com

## ROCK TYPES

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

## ACCESSORIES

### FOSSIL

















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



Plant  
Strom



### MINERAL



|   |          |
|---|----------|
|    | Anhy     |
|    | Arggrn   |
|    | Arg      |
|    | Bent     |
|    | Bit      |
|   | Brecfrag |
|  | Calc     |
|  | Carb     |
|  | Chtdk    |
|  | Chtlt    |
|  | Dol      |
|  | Feldspar |
|  | Ferrpel  |
|  | Ferr     |
|  | Glau     |
|  | Gyp      |



Hvymmin  
Kaol  
Marl  
Minxl  
Nodule  
Phos  
Pyr  
Salt  
Sandy  
Silt  
Sil  
Sulphur  
Tuff



### STRINGER












|   |      |
|---|------|
|  | Anhy |
|  | Arg  |
|  | Bent |
|  | Coal |
|  | Dol  |



Gyp  
Ls  
Mrst  
Sltstrg  
Ssstrg



### TEXTURE

|   |          |
|---|----------|
|    | Boundst  |
|    | Chalky   |
|   | Cryxln   |
|  | Earthy   |
|  | Finexln  |
|  | Grainst  |
|  | Lithogr  |
|  | Microxln |
|  | Mudst    |
|  | Packst   |
|  | Wackest  |

### 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

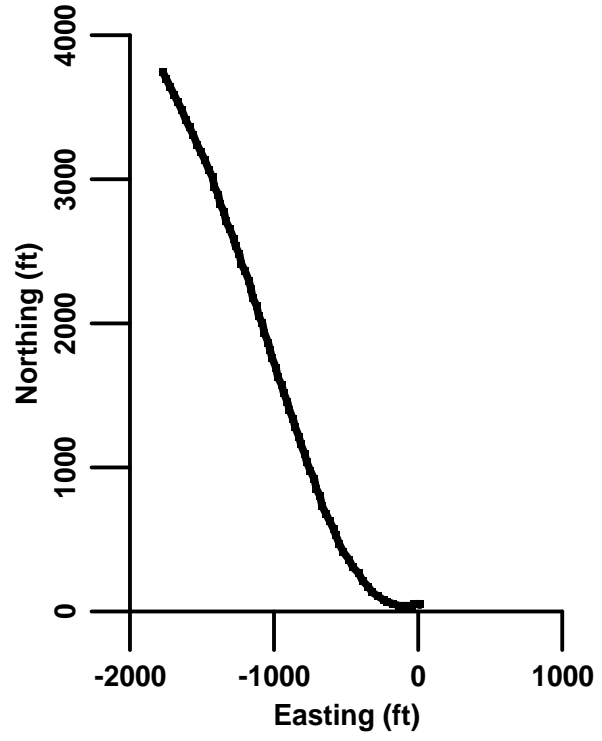
**COMPANY MAN:** Jeff Lofton, Bill Teel  
**TOOLPUSHER:** Bruce Lambert, Ernie Langridge  
**RIG:** Savanna 640E

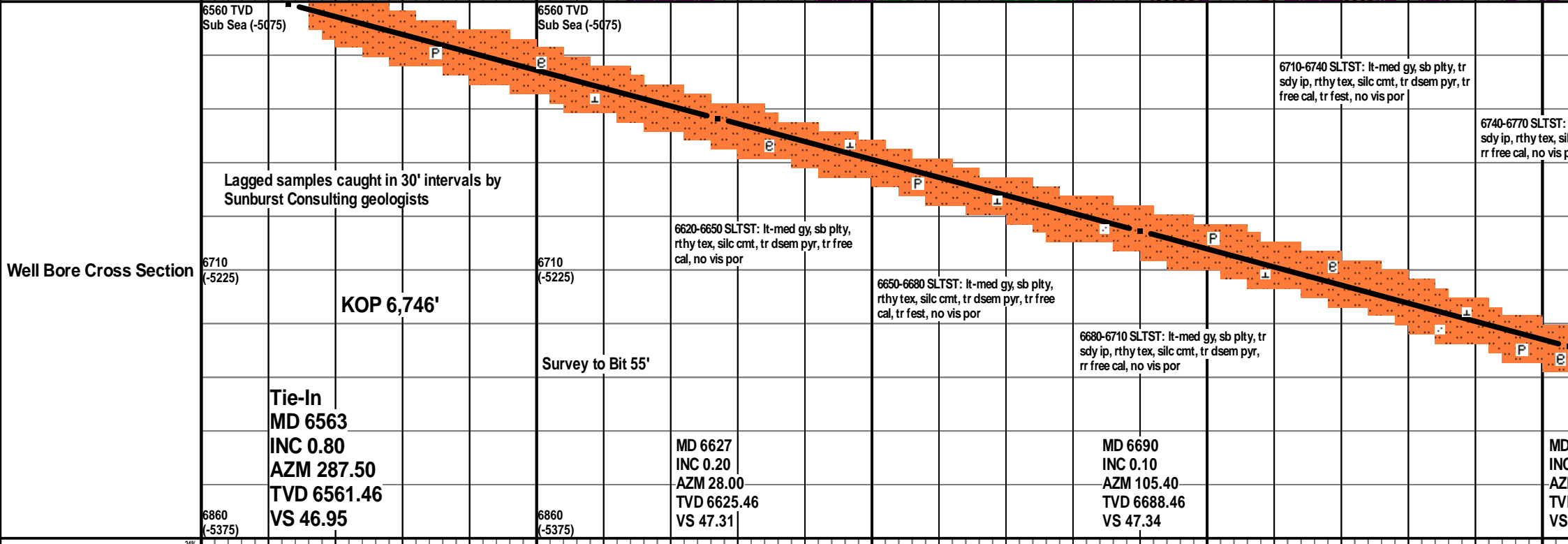
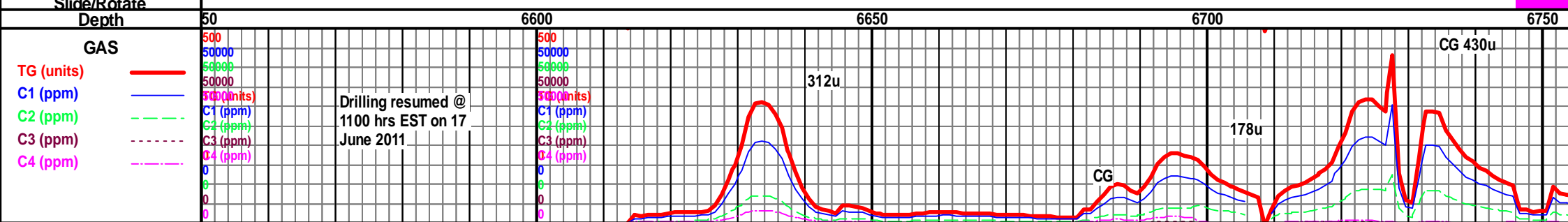
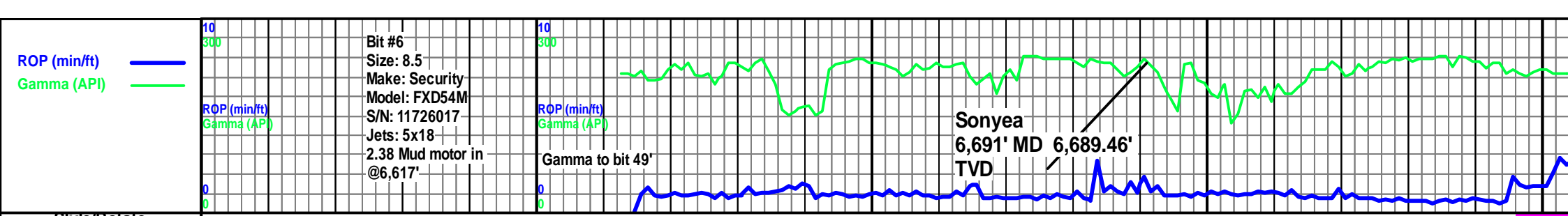
**WV FILE #:** 7265P511506R (285-21 & 285-46)

**SURFACE CASING:** 13 3/8", 54.5# MC-50, STC @ 940'  
**INTERMEDIATE CASING:** 9 5/8" 40# MC-50, LTC @ 2,699'

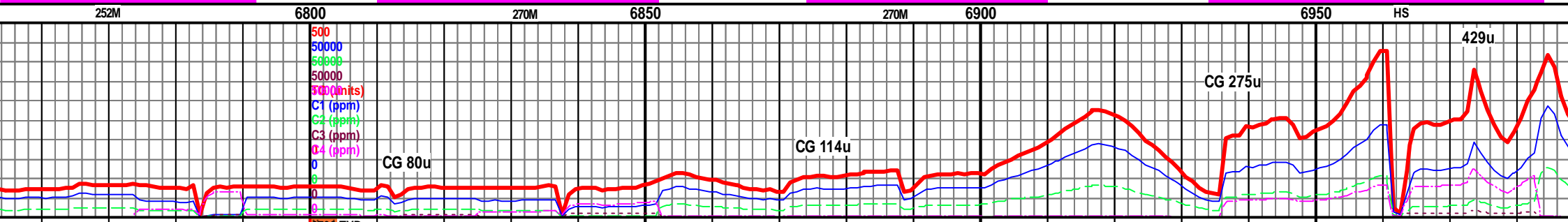
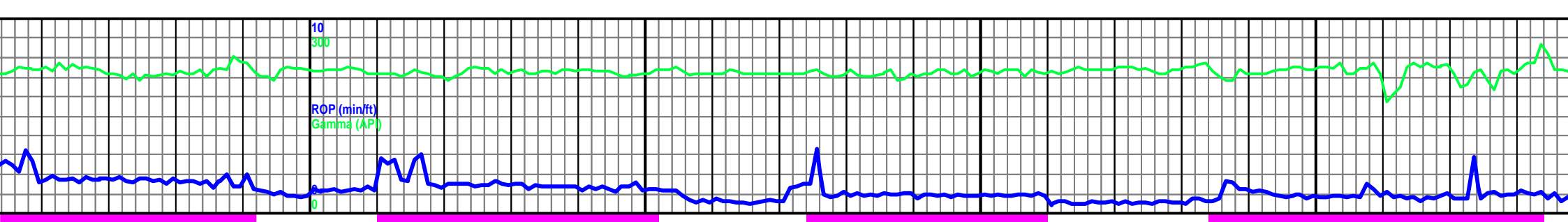
**KOP:** 6,746'  
**CLOSURE DIRECTION:** 334.75°  
**CLOSURE DISTANCE:** 4,146.67'

# Plan





|               |                         |
|---------------|-------------------------|
| Porosity      | 24%<br>18%<br>12%<br>6% |
| Porosity Type |                         |
| Oil Show      | gd<br>fr<br>pc<br>tr    |
| Oil Show Type |                         |



Note: TVD Scale Change

6790 TVD  
Sub Sea (-5305)

lt-med gy, sb plty, tr  
lc cmt, tr dsem pyr,  
por

6770-6800 SLTST: lt-med gy, sb  
plty-sb blk, tr sdy & calc ip, rthy tex,  
silc cmt, tr dsem pyr, rr free cal, tr frc  
fl cal, no vis por

6800-6830 SLTST: lt-med gy, sb plty-sb  
blk, rr sdy & calc ip, rthy tex, silc cmt,  
tr dsem pyr, tr free cal, no vis por

Scale Change  
6940  
(-5455)

6830-6860 SLTST: lt-med gy, sb plty-sb  
blk, rr sdy & calc ip, rthy tex, silc cmt,  
tr dsem pyr, tr free cal, no vis por

6860-6890 SLTST: lt-med gy, sb plty-sb  
blk, rr sdy & calc ip, rthy tex, silc cmt,  
tr dsem pyr, tr free cal, no vis por

6890-6920 SLTST: lt-med gy, sb plty-sb  
blk, rr sdy & calc ip, rthy tex, silc cmt,  
tr fest, tr dsem pyr, tr free cal, no vis  
por

6920-6950 SLTST: lt-med gy, sb plty-sb  
blk, rr sdy & calc ip, rthy tex, silc cmt,  
tr dsem pyr, tr free cal, no vis por

6950-6980 SLTST: lt-med gy, sb  
plty-sb blk, rr sdy & calc ip, rthy tex,  
silc cmt, tr dsem pyr, tr free cal, no vis  
por

6980-7010  
blk, tr sdy & calc ip, rthy tex,  
silc cmt, tr dsem pyr, tr free cal, no vis  
por

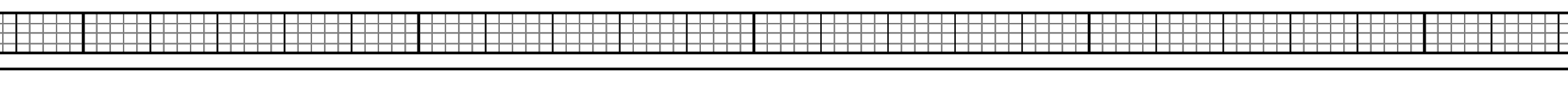
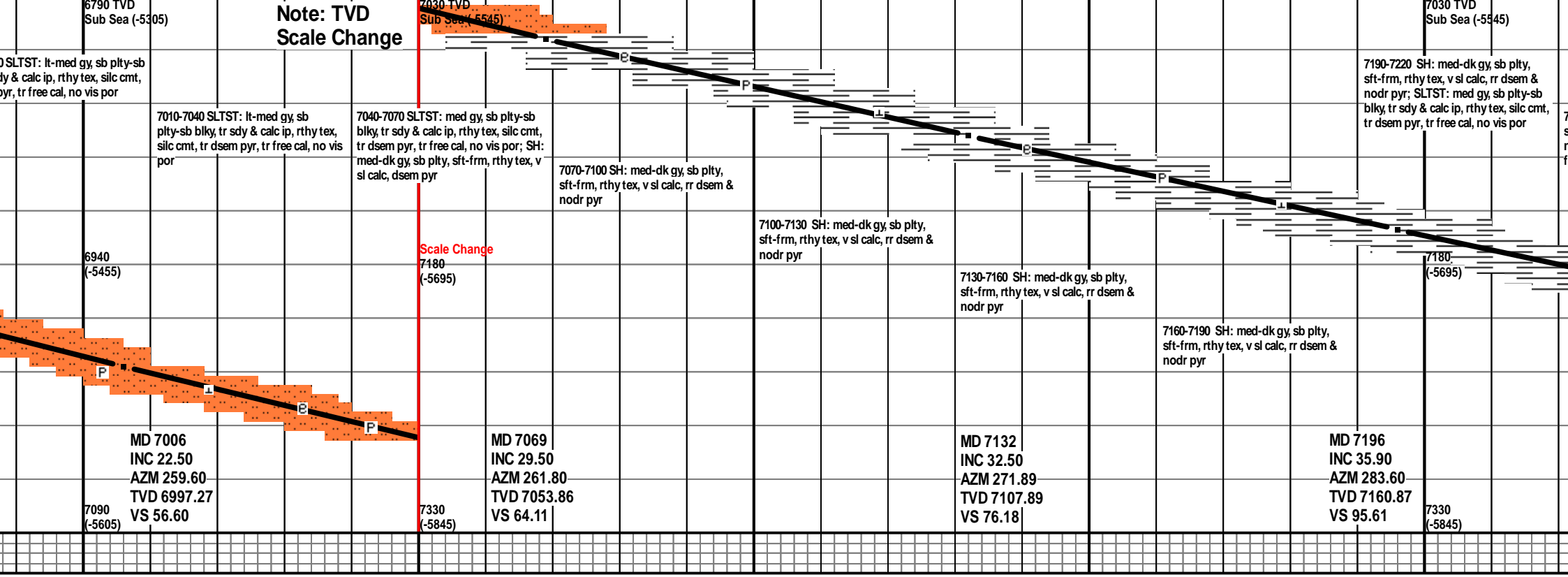
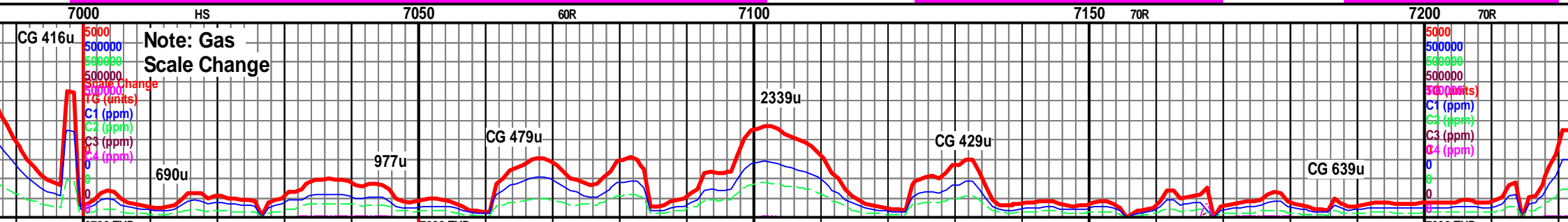
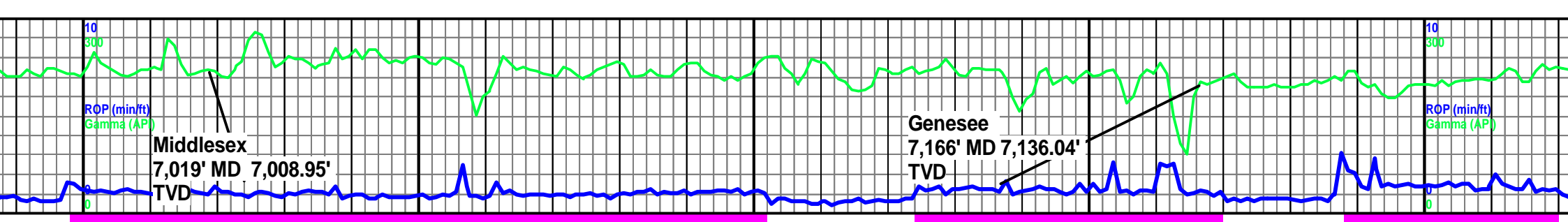
MD 6754  
INC 2.20  
AZM 227.60  
TVD 6752.44  
VS 46.94

MD 6817  
INC 8.70  
AZM 243.70  
TVD 6815.13  
VS 46.46

7090  
(-5605)

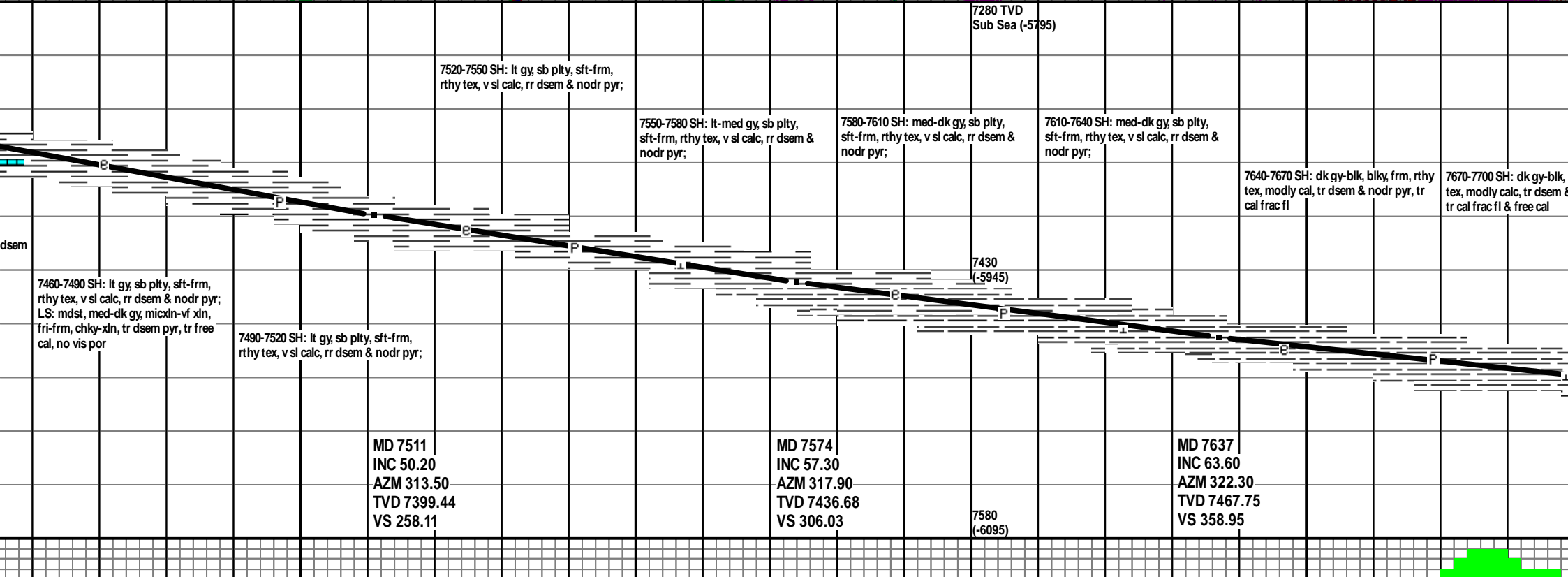
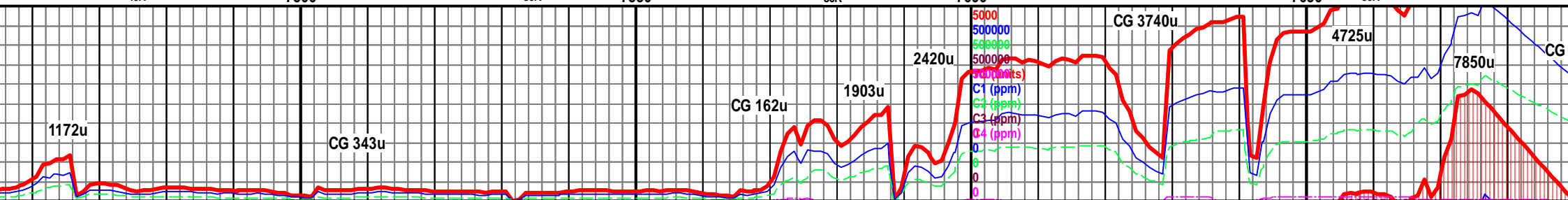
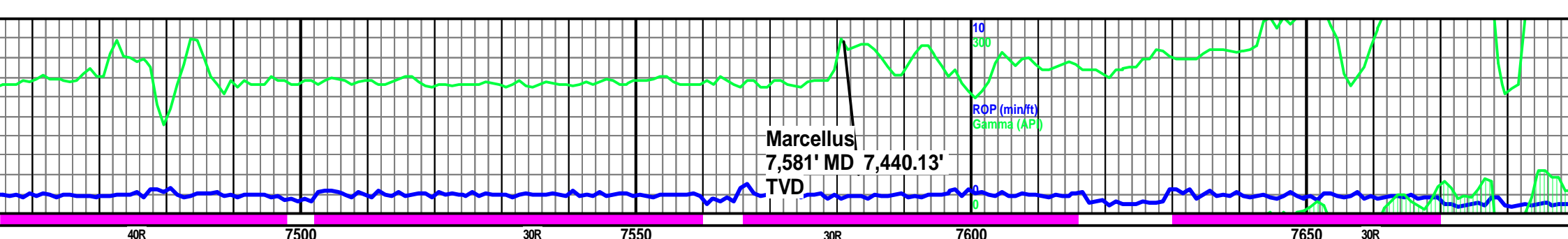
MD 6880  
INC 13.40  
AZM 256.10  
TVD 6876.95  
VS 47.75

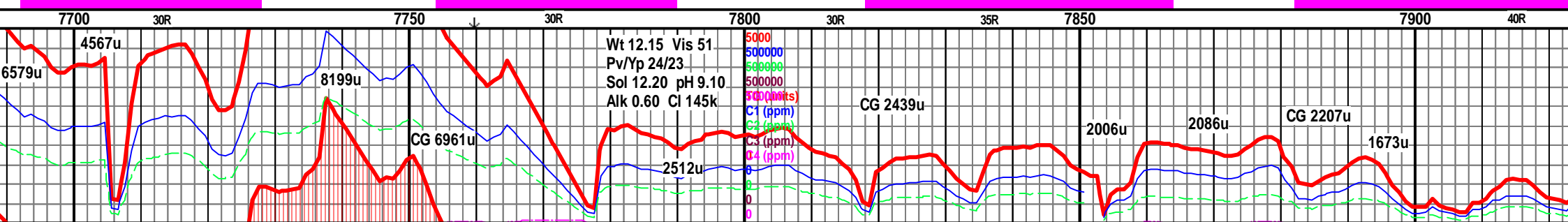
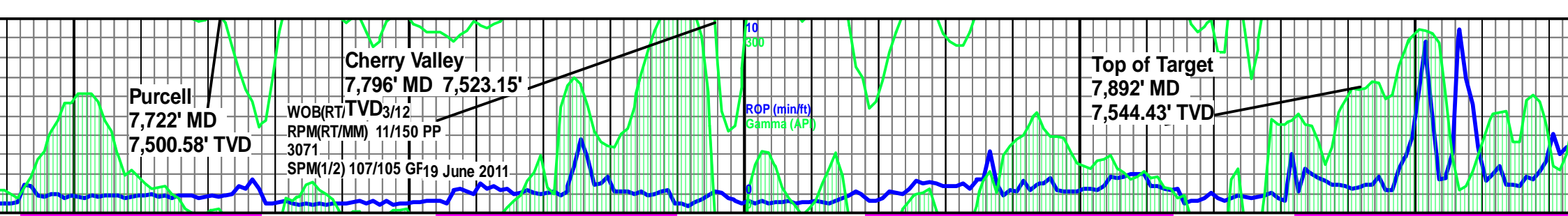
MD 6943  
INC 16.20  
AZM 259.60  
TVD 6937.85  
VS 51.36











**Note: TVD Scale Change**

7730-7760 SH: dk gy-blk, blk, frm, rthy tex, modly calc, tr dsem & rr nodr pyr, tr cal frac fl & free cal

7760-7790 SH: dk gy-blk, sb blk, frm, rthy tex, calc, tr dsem & nodr pyr, tr cal frac fl

7790-7820 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl & free cal; tr LS: wkst, lt-dk gy mot, micxn, sb blk, sft-frm, rthy tex, no vis por

7820-7850 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl; tr LS: wkst, lt-dk gy mot, micxn, sb blk, sft-frm, rthy tex, no vis por

7850-7880 SH: dk gy-blk, blk, sft-frm, rthy tex, sl calc, tr dsem & nodr pyr; tr LS: mdst, lt-med gy mot, tr dk gy, micxn, blk, sft, rthy tex, no vis por

7880-7910 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & rr nodr pyr, tr cal frac fl

7910-7940 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & rr nodr pyr, tr cal frac fl

blk, frm, rthy & rr nodr pyr, free cal

MD 7700  
INC 68.60  
AZM 325.30  
TVD 7493.27  
VS 415.42

MD 7763  
INC 72.60  
AZM 327.40  
TVD 7514.20  
VS 474.15

MD 7827  
INC 75.90  
AZM 327.60  
TVD 7531.56  
VS 535.20

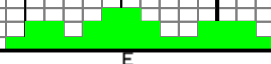
MD 7889  
INC 80.70  
AZM 330.60  
TVD 7544.14  
VS 595.56

Scale Change  
7530  
(-6045)

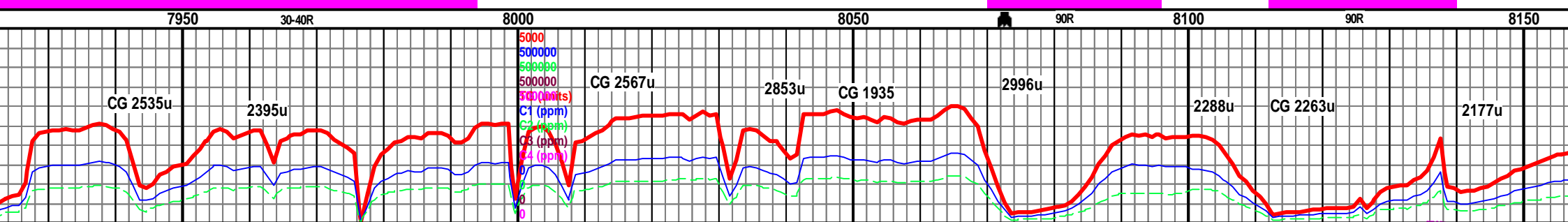
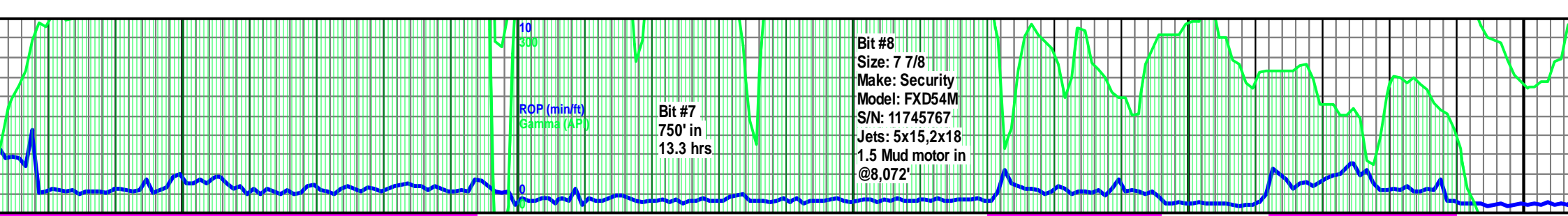
7580  
(-6095)

7530  
(-6045)

7580  
(-6095)



E

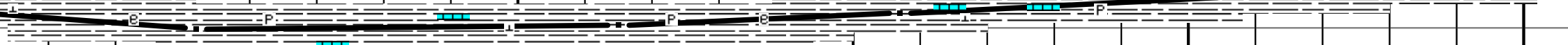


Visible gas escaping from sample

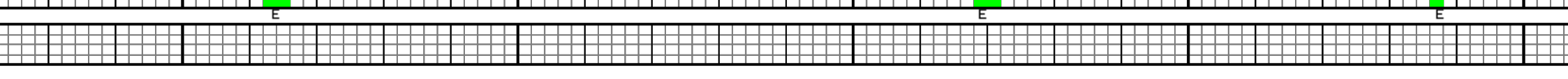
7480 TVD Sub Sea (-5995)

Visible gas escaping from sample

|  |  |  |  |  |   |   |   |
|--|--|--|--|--|---|---|---|
| 7940-7970 SH: blk, blkly-sb plty, frm, rthy tex, sl calc, tr dsem & occ nodr pyr | 7970-8000 SH: blk, blkly-sb plty, frm, rthy tex, sl calc, tr dsem & occ nodr pyr; LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por | 8000-8030 SH: blk, blkly-sb plty, frm, rthy tex, sl calc, tr dsem & occ nodr pyr | 8030-8060 SH: blk, sb blkly-plty, frm, rthy tex, sl calc, tr dsem & occ nodr pyr | 8060-8090 SH: dk gy-blk, sb blkly, frm, rthy tex, modly calc, tr dsem & nodr pyr, tr free cal; tr LS: mdst, lt-med gy mot, micxn, blk, sft, rthy tex, tr intxl por | 8090-8120 SH: dk gy-blk, sb blkly, frm, rthy tex, modly calc, tr dsem & nodr pyr, tr free cal | 8120-8150 SH: dk gy-blk, sb blkly, frm, rthy tex, modly calc, tr dsem & nodr pyr, tr free cal | 8150-8180 SH: dk gy-blk, sb blkly, frm, rthy tex, modly calc, tr dsem & nodr pyr, tr free cal |
|--|--|--|--|--|---|---|---|

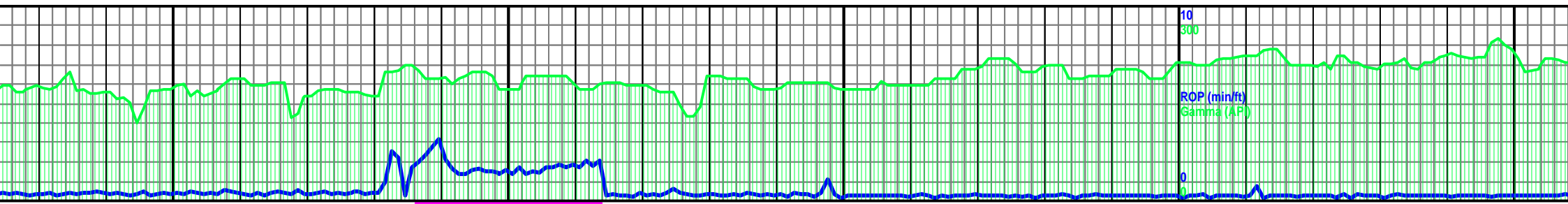


|  |  |  |  |
|--|--|--|--|
| MD 7952<br>INC 88.10<br>AZM 333.60<br>TVD 7550.28<br>VS 658.13 | MD 8015<br>INC 93.10<br>AZM 335.20<br>TVD 7549.62<br>VS 721.10 | MD 8057<br>INC 93.40<br>AZM 335.40<br>TVD 7547.24<br>VS 763.03 | MD 8118<br>INC 93.80<br>AZM 336.50<br>TVD 7543.41<br>VS 823.90 |
|--|--|--|--|

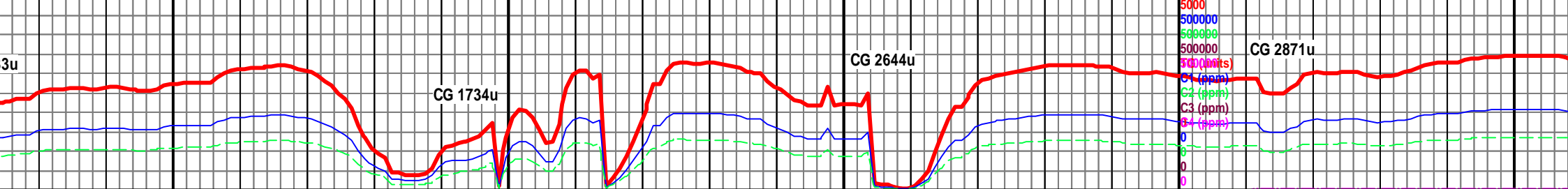








8650 8700 15R 8750 8800 8850



Visible gas escaping from sample Visible gas escaping from sample 7480 TVD Sub Sea (-5995)

8630-8660 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, tr cal frac fl & free cal; LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por

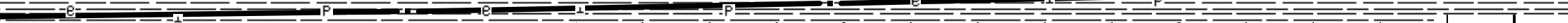
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8690-8720 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, tr cal frac fl & free cal

8720-8750 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, tr cal frac fl & free cal

8750- 8780 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, tr cal frac fl & free cal

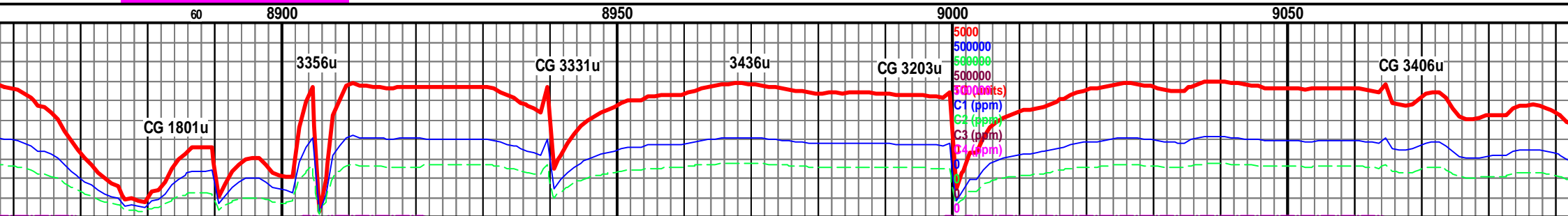
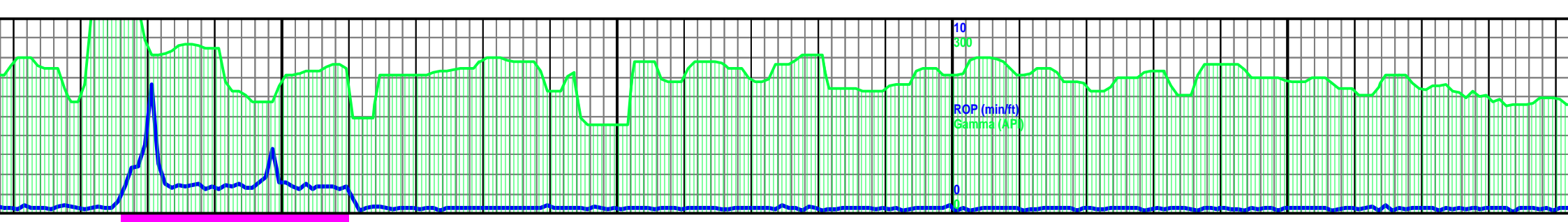
8780-8810 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, tr cal frac fl & free cal



8810-8840 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, tr cal frac fl & free cal; LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por

8840-8870 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, tr cal frac fl & free cal; LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por

|   |   |   |                 |  |  |
|---|---|---|-----------------|--|--|
| 8621<br>91.00<br>M 341.20<br>D 7522.07<br>1324.44 | MD 8685<br>INC 91.00<br>AZM 341.00<br>TVD 7520.96<br>VS 1388.08 | MD 8748<br>INC 91.70<br>AZM 340.50<br>TVD 7519.47<br>VS 1450.75 | 7530<br>(-6045) | 8810-8840 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, tr cal frac fl & free cal; LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por | 8840-8870 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, tr cal frac fl & free cal; LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por |
|   |   |   | 7580<br>(-6095) | MD 8812<br>INC 91.30<br>AZM 339.8<br>TVD 7517.80<br>VS 1514.47   |  |

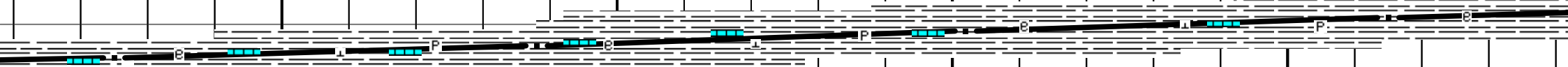


Visible gas escaping from sample

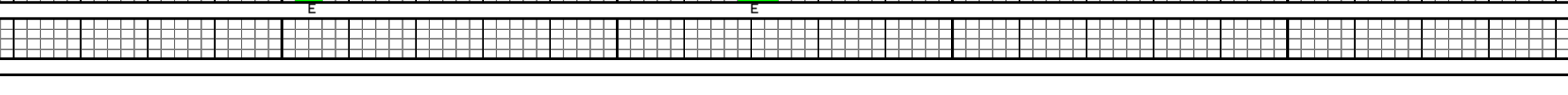
Visible gas escaping from sample

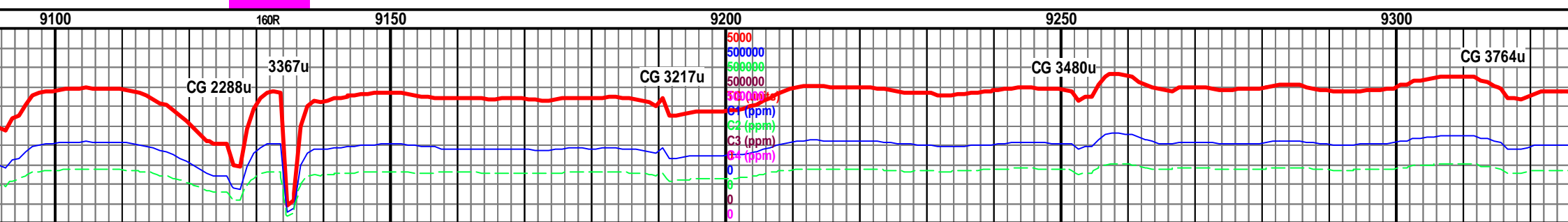
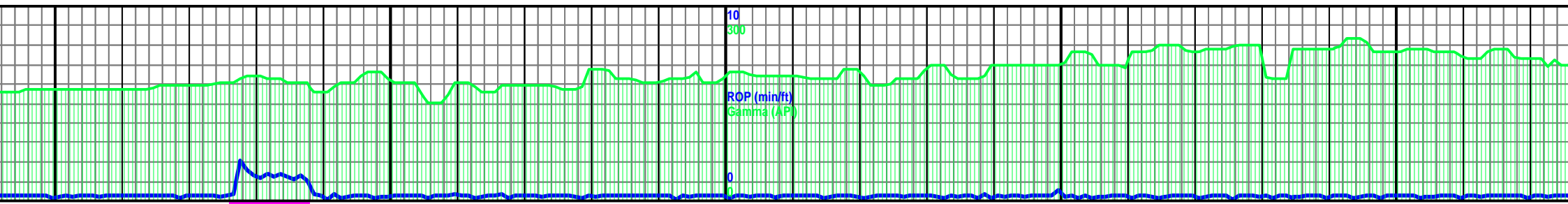
7480 TVD  
Sub Sea (-5995)

Visible gas escaping from sample



|  |   |   |   |   |   |   |  |  |
|--|---|---|---|---|---|---|--|--|
| dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, rr cal frac fl & free cal; LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por | 8870- 8900 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, rr cal frac fl & free cal; LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por | 8900- 8930 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, rr cal frac fl & free cal; LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por | 8930-8960 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, rr cal frac fl & free cal; rr LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por | 8960-8990 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, rr cal frac fl & free cal; rr LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por | 8990-9020 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, rr cal frac fl & free cal; rr LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por | 9020-9050 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, rr cal frac fl & free cal; tr LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por | 9050-9080 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, rr cal frac fl & free cal | 9080-9110 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, rr cal frac fl & free cal |
| MD 8875<br>INC 91.40<br>AZM 340.70<br>TVD 7516.31<br>VS 1577.20  |   |   | MD 8938<br>INC 92.70<br>AZM 342.00<br>TVD 7514.06<br>VS 1639.77   |   | MD 9002<br>INC 92.40<br>AZM 342.10<br>TVD 7511.21<br>VS 1703.23   |   | MD 9065<br>INC 92.30<br>AZM 341.50<br>TVD 7508.63<br>VS 1765.74  |  |

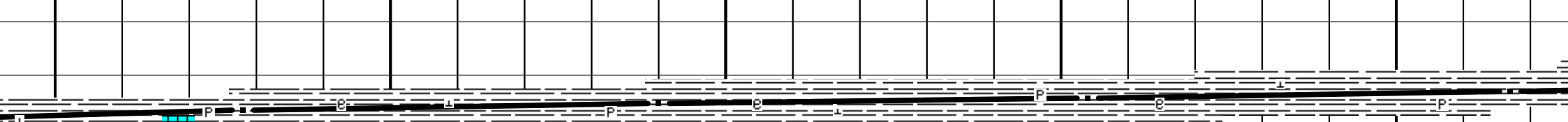




Visible gas escaping from sample

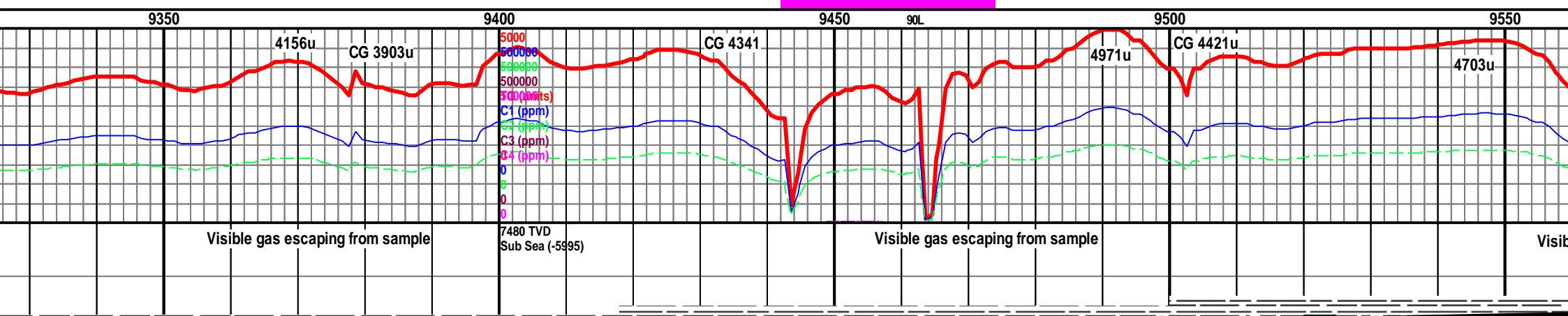
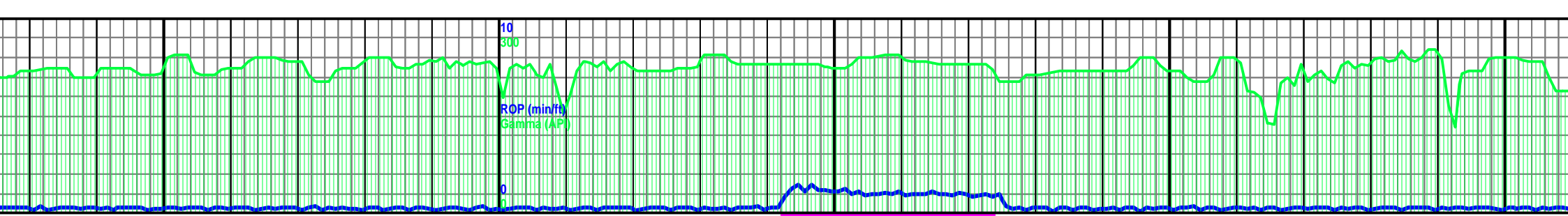
7480 TVD  
Sub Sea (-5995)

Visible gas escaping from sample

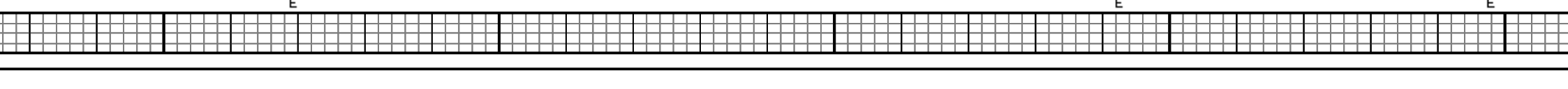


|   |  |   |   |   |   |   |  |  |
|---|--|---|---|---|---|---|--|--|
| dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, r cal frac fl & free cal | 9110-9140 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, r cal frac fl & free cal; tr LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por | 9140-9170 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, r cal frac fl & free cal | 9170-9200 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, r cal frac fl & free cal | 7530 (-6045)<br>9200-9230 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, r cal frac fl & free cal | 9230-9260 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, r cal frac fl & free cal | 9260-9290 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, r cal frac fl & free cal | 9290-9320 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, r cal frac fl & free cal; tr LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por | 9320-9350 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, r cal frac fl & free cal; tr LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por |
|   | MD 9128<br>INC 91.40<br>AZM 341.60<br>TVD 7506.59<br>VS 1828.30  |   | MD 9190<br>INC 91.00<br>AZM 341.80<br>TVD 7505.30<br>VS 1889.87                                       | 7580 (-6095)  |   | MD 9254<br>INC 90.90<br>AZM 341.20<br>TVD 7504.23<br>VS 1953.46                                       |  | MD 9317<br>INC 91.40<br>AZM 342.60<br>TVD 7502.97<br>VS 2016.00  |

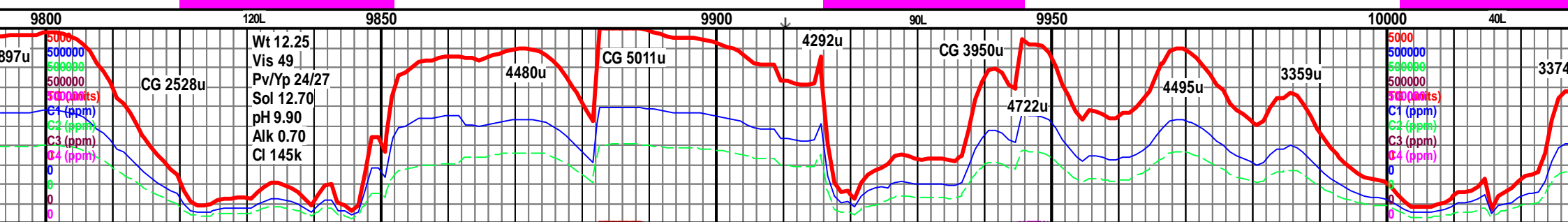
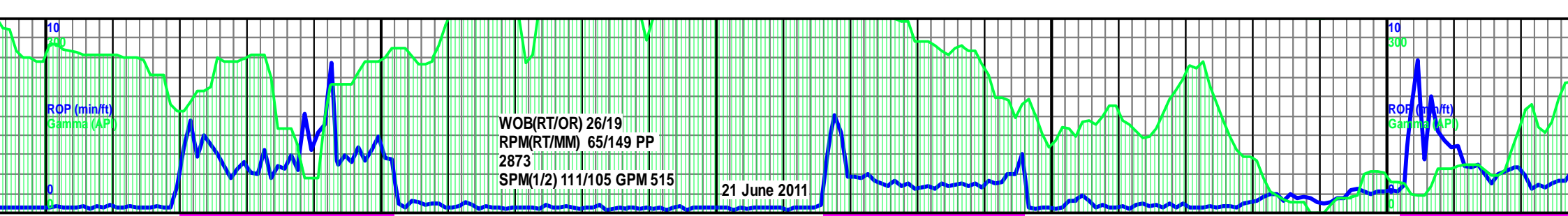




|  |  |   |   |   |  |  |  |
|--|--|---|---|---|--|--|--|
| <p>9350 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem &amp; nodr pyr, rr cal frac fl &amp; free cal; rr LS: mdst, med-dk gy mot, micxn, blk, sft, rthy no vis por</p> | <p>9350-9380 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem &amp; nodr pyr, rr cal frac fl &amp; free cal; tr LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por</p> | <p>9380-9410 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem &amp; nodr pyr, rr cal frac fl &amp; free cal</p> | <p>9410-9440 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem &amp; nodr pyr, rr cal frac fl &amp; free cal</p> | <p>9440-9470 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem &amp; nodr pyr, rr cal frac fl &amp; free cal</p> | <p>9470-9500 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem &amp; nodr pyr, rr cal frac fl &amp; free cal; tr LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por</p> | <p>9500-9530 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem &amp; nodr pyr, rr cal frac fl &amp; free cal; tr LS: mdst, med-dk gy mot, micxn, blk, sft, rthy tex, no vis por</p> | <p>9530-9560 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem &amp; nodr pyr, rr cal frac fl &amp; free cal,</p> |
|  |  | <p>MD 9380<br/>INC 91.70<br/>AZM 343.90<br/>TVD 7501.27<br/>VS 2078.33</p>  |   | <p>MD 9442<br/>INC 91.20<br/>AZM 343.00<br/>TVD 7499.70<br/>VS 2139.64</p>  |  | <p>MD 9505<br/>INC 91.20<br/>AZM 343.80<br/>TVD 7498.38<br/>VS 2201.96</p>   |  |



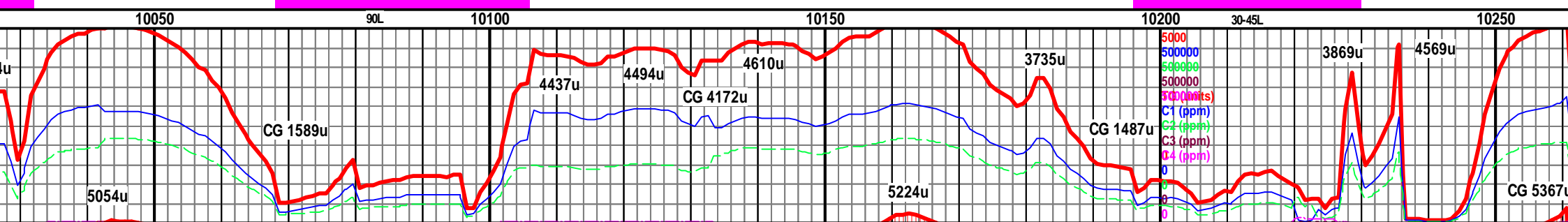
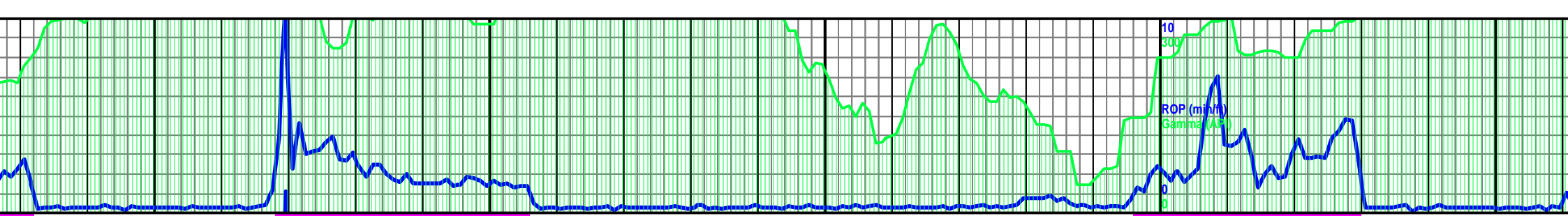




|  |  |   |   |   |  |  |  |  |  |  |  |  |                             |
|--|--|---|---|---|--|--|--|--|--|--|--|--|-----------------------------|
| 7420 TVD<br>Sub Sea (-5935)  | Visible gas escaping from sample   |   |   |   |  |  | Visible gas escaping from sample   |  |  |  |  |  | 7420 TVD<br>Sub Sea (-5935) |
| 9800-9830 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, rr cal frac fl & free cal | 9830-9860 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, rr dsem & nodr pyr, rr cal frac fl & free cal | 9860-9890 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl | 9890-9920 SH: dk gy-blk, sb blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl | 9920-9950 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl & free cal | 9950-9980 SH: dk gy-blk, blk, frm, rthy tex, calc, tr dsem & nodr pyr, tr cal frac fl; tr LS: wkst, lt-med gy mot, tr dk gy, micxn, blk, sft, rthy tex, no vis por | 9980-10010 SH: dk gy-blk, blk, frm, rthy tex, calc, tr dsem & nodr pyr, tr cal frac fl; com LS: wkst, lt-med gy mot, tr dk gy, micxn, blk, sft, rthy tex, no vis por | 10010-10040 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr pyr, tr cal frac fl; occ L gy mot, micxn, blk, sft, vis por |  |  |  |  |  | 7470 (-5985)                |

|              |   |   |   |  |              |
|--------------|---|---|---|--|--------------|
| 7520 (-6035) | MD 9820<br>INC 92.00<br>AZM 342.10<br>TVD 7489.15<br>VS 2514.15 | MD 9884<br>INC 90.40<br>AZM 340.90<br>TVD 7487.81<br>VS 2577.73 | MD 9947<br>INC 90.30<br>AZM 340.10<br>TVD 7487.42<br>VS 2640.45 | MD 10011<br>INC 92.30<br>AZM 341.20<br>TVD 7485.97<br>VS 2704.12 | 7520 (-6035) |
|--------------|---|---|---|--|--------------|





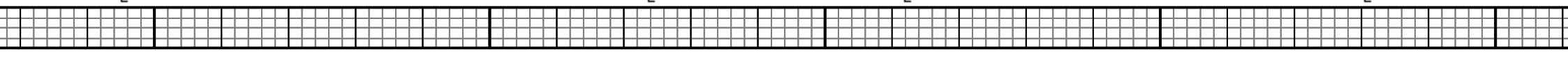
Visible gas escaping from sample

7420 TVD Sub Sea (-5935)

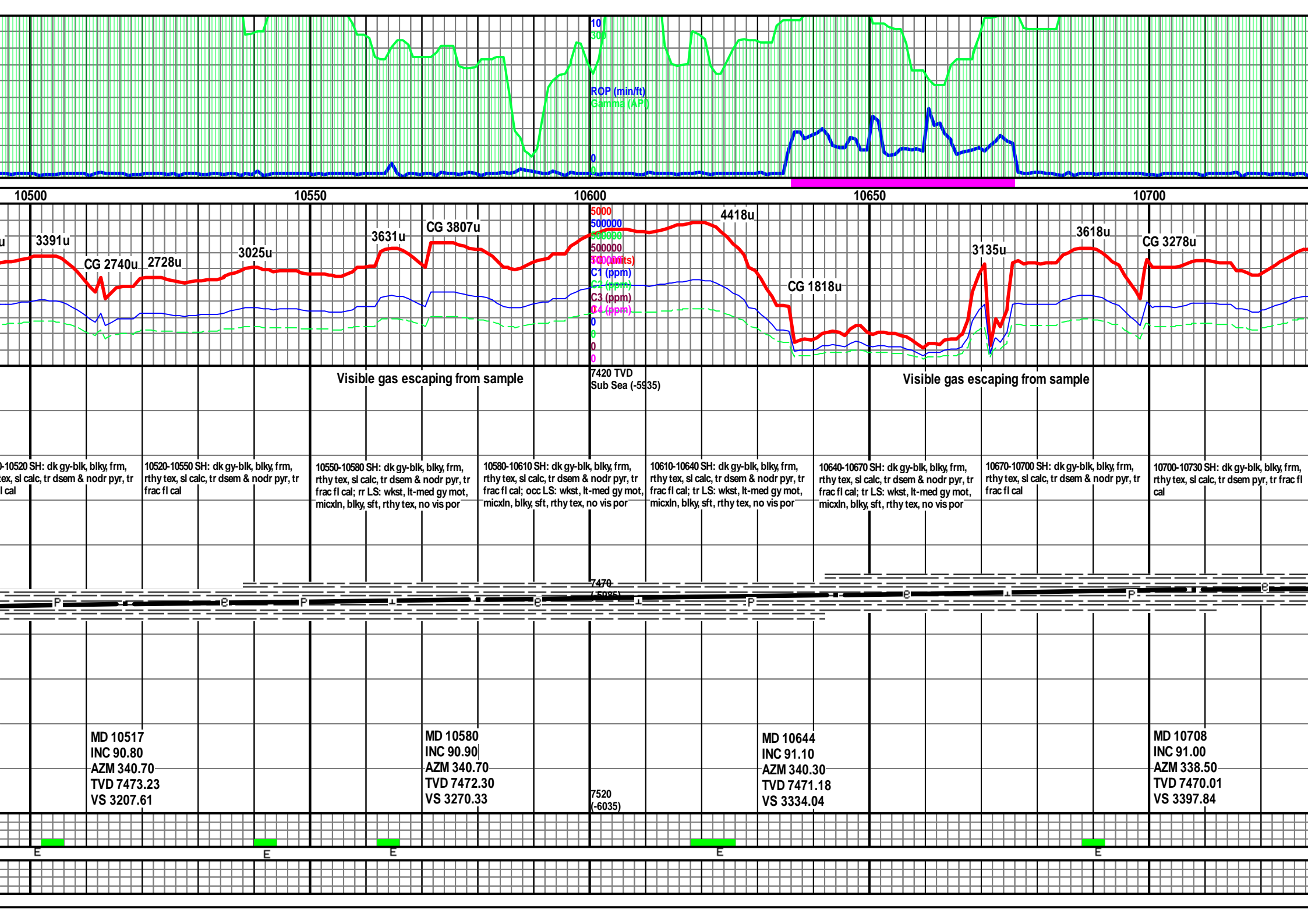
|   |   |   |   |   |   |  |  |  |
|---|---|---|---|---|---|--|--|--|
| 1000-1004 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl; tr LS: wkst, lt-med gy mot, micxn, blk, sft, rthy tex, no vis por | 1004-1007 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl; tr LS: wkst, lt-med gy mot, micxn, blk, sft, rthy tex, no vis por | 1007-1010 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl; tr LS: wkst, lt-med gy mot, micxn, blk, sft, rthy tex, no vis por | 1010-1013 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl; tr LS: wkst, lt-med gy mot, micxn, blk, sft, rthy tex, no vis por | 1013-1016 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl; tr LS: wkst, lt-med gy mot, micxn, blk, sft, rthy tex, no vis por | 1016-1019 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl; tr LS: wkst, lt-med gy mot, micxn, blk, sft, rthy tex, no vis por | 1019-1022 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl; occ LS: wkst, lt-med gy mot, micxn, blk, sft, rthy tex, no vis por | 1022-1025 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl | 1025-1028 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl |
|---|---|---|---|---|---|--|--|--|

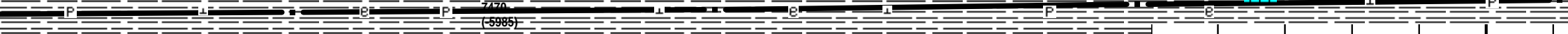
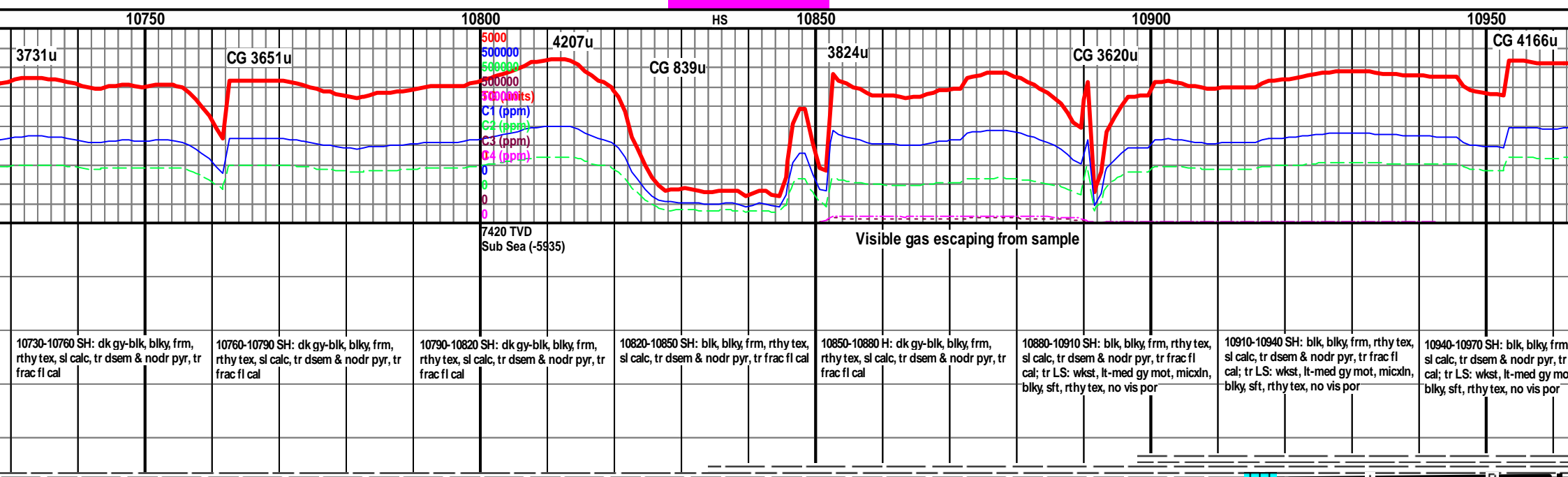
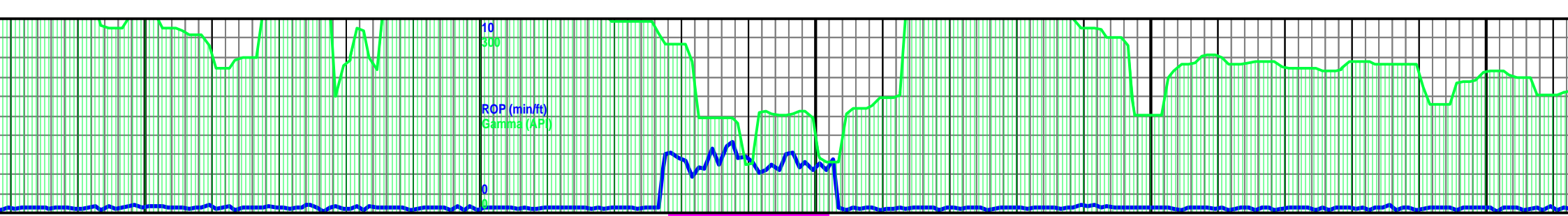


|  |  |  |              |
|--|--|--|--------------|
| MD 10074<br>INC 91.50<br>AZM 341.20<br>TVD 7483.88<br>VS 2766.75 | MD 10137<br>INC 90.30<br>AZM 340.20<br>TVD 7482.89<br>VS 2829.46 | MD 10201<br>INC 91.30<br>AZM 340.80<br>TVD 7482.00<br>VS 2893.17 | 7520 (-6035) |
|--|--|--|--------------|

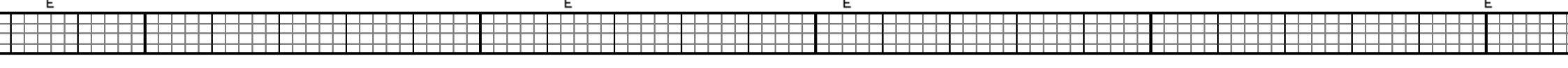


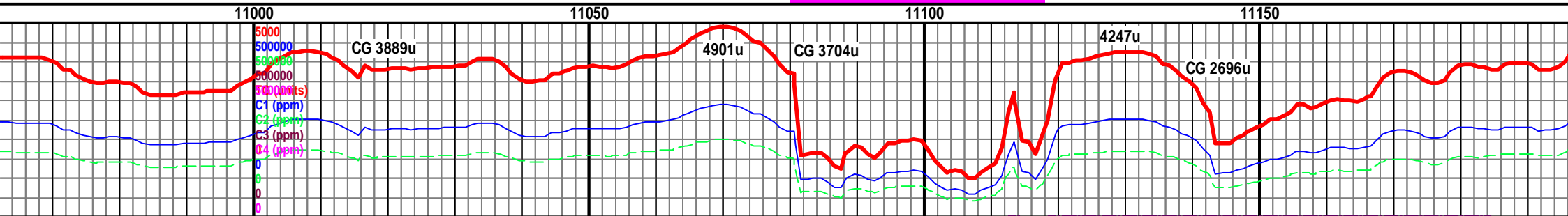
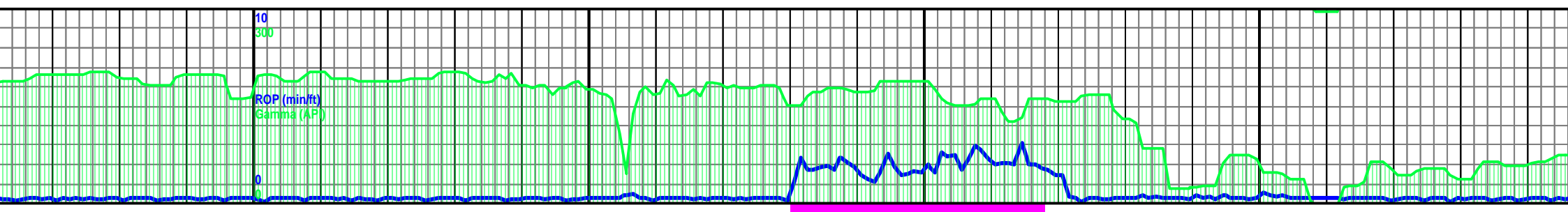






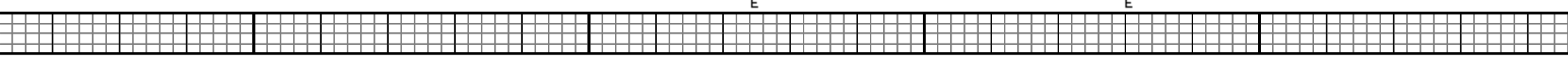
|   |   |   |   |  |  |  |  |
|---|---|---|---|--|--|--|--|
| <p>10730-10760 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem &amp; nodr pyr, tr frac fl cal</p> | <p>10760-10790 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem &amp; nodr pyr, tr frac fl cal</p> | <p>10790-10820 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem &amp; nodr pyr, tr frac fl cal</p> | <p>10820-10850 SH: blk, blk, frm, rthy tex, sl calc, tr dsem &amp; nodr pyr, tr frac fl cal</p> | <p>10850-10880 H: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem &amp; nodr pyr, tr frac fl cal</p> | <p>10880-10910 SH: blk, blk, frm, rthy tex, sl calc, tr dsem &amp; nodr pyr, tr frac fl cal; tr LS: wkst, lt-med gy mot, micln, blk, sft, rthy tex, no vis por</p> | <p>10910-10940 SH: blk, blk, frm, rthy tex, sl calc, tr dsem &amp; nodr pyr, tr frac fl cal; tr LS: wkst, lt-med gy mot, micln, blk, sft, rthy tex, no vis por</p> | <p>10940-10970 SH: blk, blk, frm, rthy tex, sl calc, tr dsem &amp; nodr pyr, tr frac fl cal; tr LS: wkst, lt-med gy mot, micln, blk, sft, rthy tex, no vis por</p> |
|   | <p>MD 10772<br/>INC 90.00<br/>AZM 337.10<br/>TVD 7469.45<br/>VS 3461.76</p>                           | <p>7520<br/>(-6035)</p>   | <p>MD 10835<br/>INC 90.90<br/>AZM 336.90<br/>TVD 7468.96<br/>VS 3524.72</p>                     |  | <p>MD 10898<br/>INC 90.90<br/>AZM 336.30<br/>TVD 7467.97<br/>VS 3587.69</p>  |  |  |



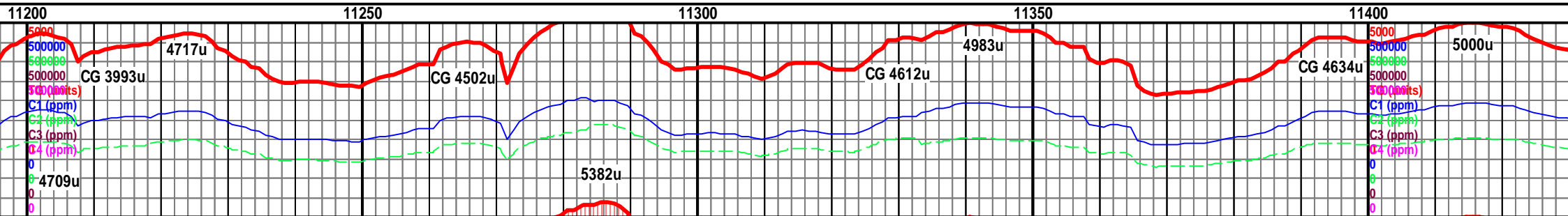
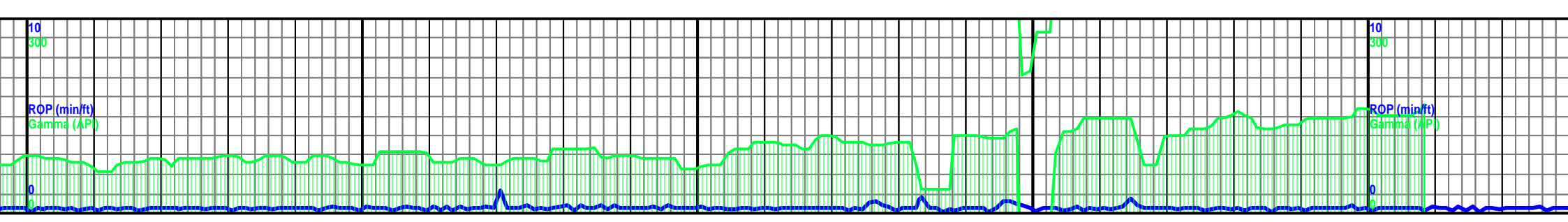


|  |  |  |  |  |   |  |  |  |
|--|--|--|--|--|---|--|--|--|
| 7420 TVD<br>Sub Sea (-5935)  | Visible gas escaping from sample   |  |  |  |   |  |  |  |
| 10970-11000 SH: blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr frac fl cal | 11000-11030 SH: blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr frac fl cal | 11030-11060 SH: blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr frac fl cal | 11060-11090 SH: blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr frac fl cal | 11090-11120 SH: blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr frac fl cal | 11120-11150 SH: blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr frac fl cal; tr LS: wkst, lt-med gy mot, micxn, blk, sft, rthy tex, no vis por | 11150-11180 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr frac fl cal | 11180-11210 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr frac fl cal |  |

|  |                 |  |  |  |
|--|-----------------|--|--|--|
| MD 10961<br>INC 90.60<br>AZM 335.70<br>TVD 7467.14<br>VS 3650.67 | 7520<br>(-6035) | MD 11025<br>INC 90.00<br>AZM 334.80<br>TVD 7466.81<br>VS 3714.67 | MD 11088<br>INC 90.60<br>AZM 334.60<br>TVD 7466.48<br>VS 3777.67 | MD 11152<br>INC 91.00<br>AZM 334.20<br>TVD 7465.58<br>VS 3841.66 |
|--|-----------------|--|--|--|







7420 TVD Sub Sea (-5935)      Visible gas escaping from sample      Visible gas escaping from sample      7420 TVD Sub Sea (-5935)

11210-11240 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl & free cal

11240-11270 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl

11270-11300 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl

11300-11330 SH: dk gy-blk, blk, frm, rthy tex, calc, tr dsem & nodr pyr, tr cal frac fl

11330-11360 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & rr nodr pyr, rr cal frac fl

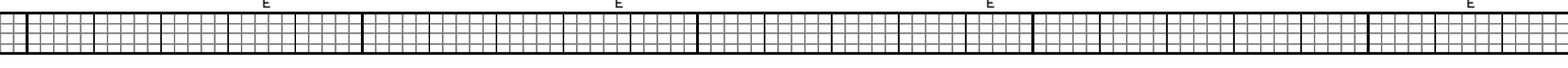
11360-11390 SH: dk gy-blk, blk, frm, rthy tex, calc, tr dsem & rr nodr pyr, rr cal frac fl & free xln cal

11390-11420 SH: dk gy-blk, blk, frm, rthy tex, sl calc, tr dsem & nodr pyr, tr cal frac fl



7470 (-5985)

|              |  |  |  |  |
|--------------|--|--|--|--|
| 7520 (-6035) | MD 11214<br>INC 90.40<br>AZM 333.70<br>TVD 7464.83<br>VS 3903.64 | MD 11277<br>INC 90.20<br>AZM 334.20<br>TVD 7464.50<br>VS 3966.63 | MD 11340<br>INC 89.90<br>AZM 334.50<br>TVD 7464.44<br>VS 4029.63 | MD 11401<br>INC 89.80<br>AZM 334.40<br>TVD 7464.60<br>VS 4090.62 |
|--------------|--|--|--|--|



Bit #8  
3,386' in  
34.5 hrs

11450

11450

4906u

Total Depth of  
11,457' reached @  
~0730 hrs EST on 22  
June 2011

Bottom Hole Location  
3,750.48' North and 1,768.84'  
West of surface location

SH: dk gy-blk, blk, frm, rthy tex, sl calc,  
odr pyr, tr cal frac fl

Projection to Bit  
MD 11457  
INC 89.80  
AZM 334.40  
TVD 7464.80  
VS 4146.62

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