



# GEOSEARCH LOGGING INC.

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

Well Name: Zogol 2213H  
Location: Marion Co., West Virginia  
License Number: 47-049-02084  
Spud Date: 3/5/2011  
Surface Coordinates: Lat: 39.48549  
Long: -80.34958  
Bottom Hole Coordinates: Lat: 39.486607  
Long: -80.37395  
Ground Elevation (ft): 1,233'  
Logged Interval (ft): 3,000' To: 10,462'  
Formation: Marcellus  
Type of Drilling Fluid: Mineral Oil Based (Carbo-Drill)

Region: APPALACHIA  
Drilling Completed: 3/23/2011

K.B. Elevation (ft): 1,248'  
Total Depth (ft): 10,462'

Printed by HORIZONTAL.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

## OPERATOR

Company: XTO ENERGY  
Address: 600 E. Exchange Ave  
Fort Worth, TX 76164

## GEOLOGIST

Name: Kelley Hartley & Daniel Blake  
Company: Geosearch Logging, Inc.  
Address: P.O. Box 6005  
Edmond, OK 73083-6005  
(405) 340-5545

## Comments

2 Manned Logging Service  
Start Logging Date: 3/10/2011  
OBM: 3/15/2011  
Released Logging Date: 3/23/2011  
Drilling Contractor: UDI#209  
PC194,I-BALL: 0096, HASP: V15A, H32

### ROCK TYPES

	Anhy
	Bent
	Brec
	Cht
	Clyst
	Coal

	Congl
	Dol
	Gyp
	Igne
	Lmst
	Meta

	Mrlst
	Salt
	Shale
	Shcol
	Shgy
	Sltst

	Ss
	Till
	Sandstn
	Siltstn
	Granwash
	Dolowash

	Granite
	Cement
	Hotshale

### 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

	Sltstrg
	Ssstrg

**STRINGER**

	Anhy
	Arg
	Bent
	Coal
	Dol
	Gyp
	Ls
	Mrst

**TEXTURE**

	Boundst
	Chalky
	Cryxln
	Earthy
	Finexln
	Grainst
	Lithogr
	Microxln
	Mudst
	Packst
	Wackst

### OTHER SYMBOLS

**POROSITY TYPE**

	Earthy
	Fenest
	Fracture
	Inter
	Moldic
	Organic
	Pinpoint

	Vuggy
--	-------

**SORTING**

	Well
	Moderate
	Poor

**ROUNDING**

	Rounded
	Subrnd
	Subang
	Angular

**OIL SHOWS**

	Even
--	------

	Spotted
	Ques
	Dead
	poor
	fair
	good
	excelent

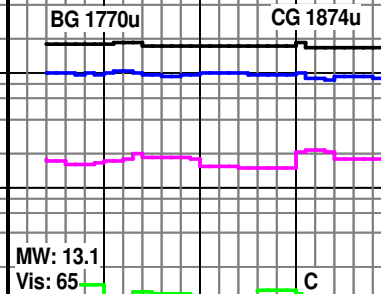
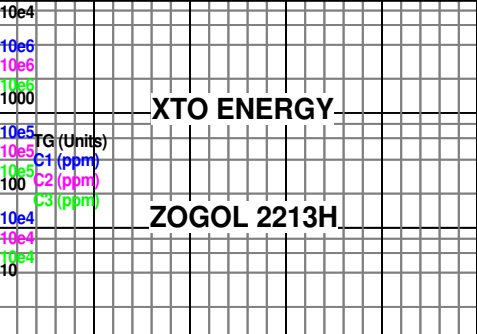
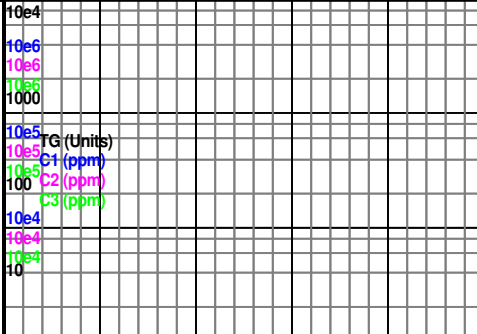
**INTERVALS**

	Core
	Dst

**EVENTS**

	Rft
	Sidewall

**Data Curves**  
 TG (Units) ———  
 C1 (ppm) ———  
 C2 (ppm) ———  
 C3 (ppm) ———



XTO ENERGY

ZOGOL 2213H

Side/Rotate  
Depth

50 7000 7050 7100

ALL DEPTHS CORRESPOND WITH THE DRILLER'S PIPE TALLY

NB# 5. Ulterra-PDC @6,970'. Serial# 6687. Type: 513. Jets: 5x20s & 2x18s. MM#2. Fixed @2.12°

SH: gy-md gy, lt gy ip, tr dk gy, frm-sl hd, tr sft/vry hd, f-m tex, blk-orph, pty ip, n calc, lam ip, bcm v sft, amorph w/wtr

9 5/8" Intermediate casing set @ 2,888'

KOP @7,104'MD

Collecting 30' spot samples to the Burkett Shale, then 10' spot samples to TD

Directional Drillers & MWD: Multishot

MD: 7,071'  
TVD: 6,890'  
INC: 14.2°  
AZM: 35.3°

MD: 7,103'  
TVD: 6,921'  
INC: 14.2°  
AZM: 36.5°

MD: 7,103'  
TVD: 6,921'  
INC: 16.5°  
AZM: 40.1°

Drilling 8 3/4" Hole with Mineral Oil Based drilling fluid (Carbo-Drill)

See Zogol 2213H Vertical log

Oil Shows

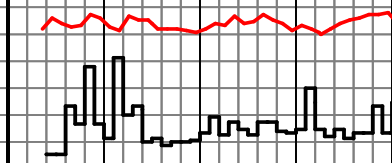
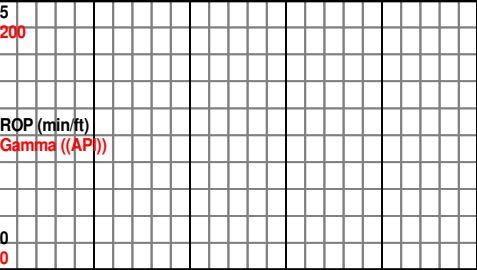
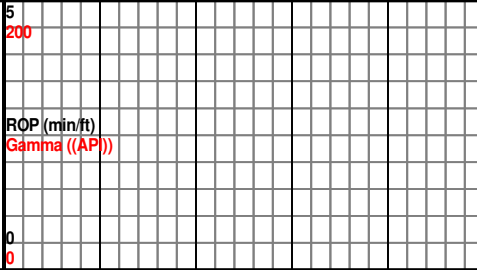
Porosity

24%  
18%  
12%  
6%

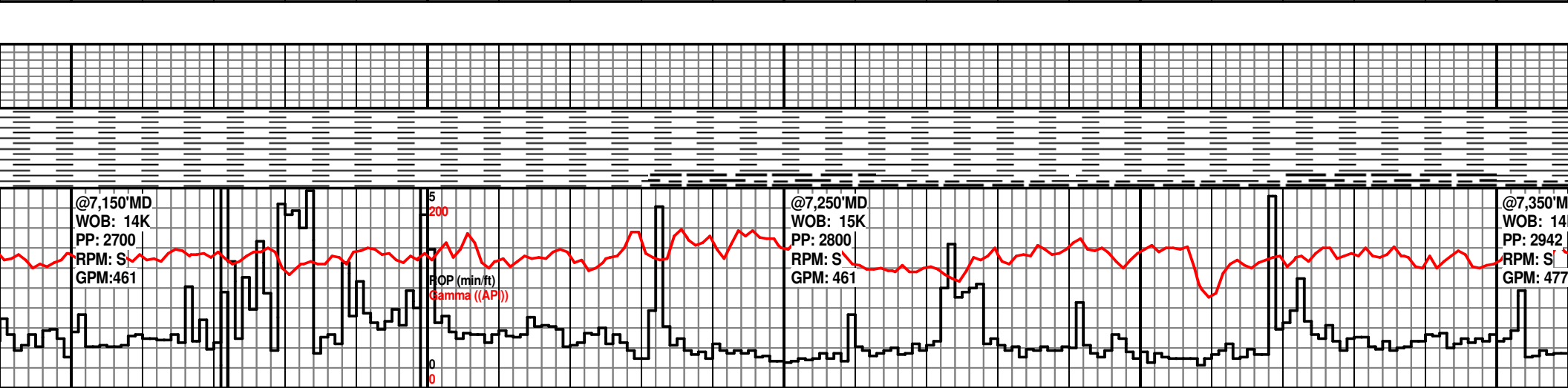
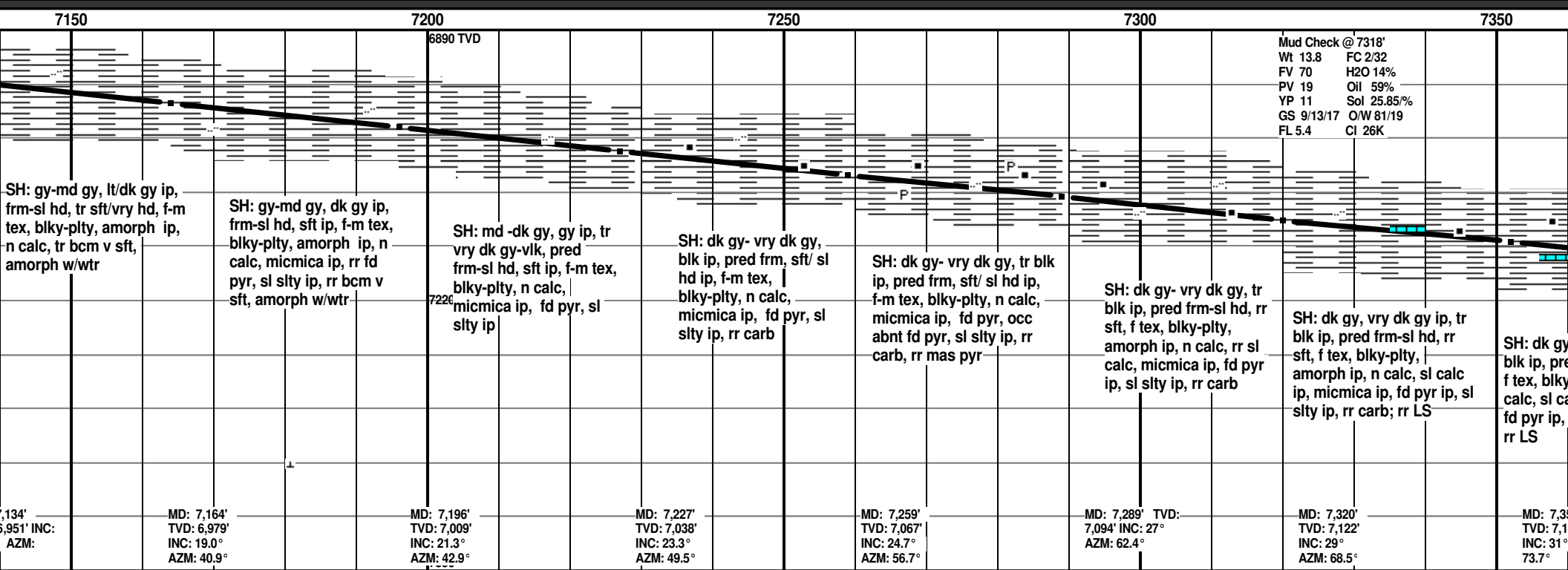
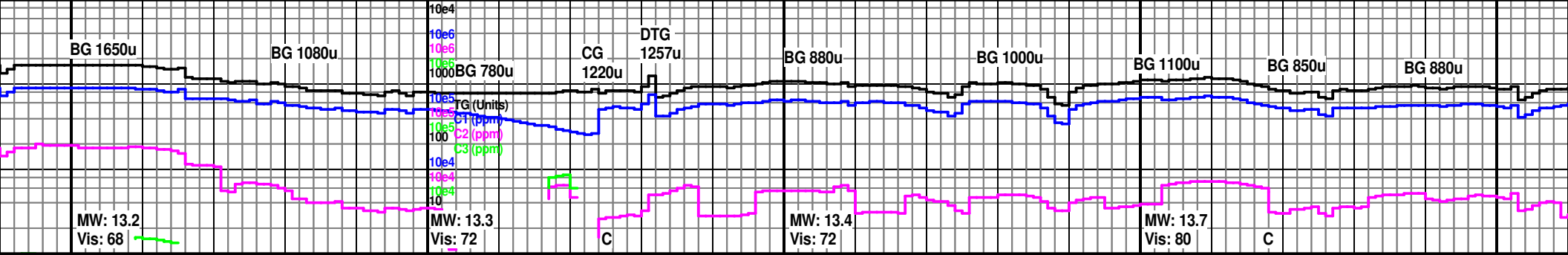
% Lithology

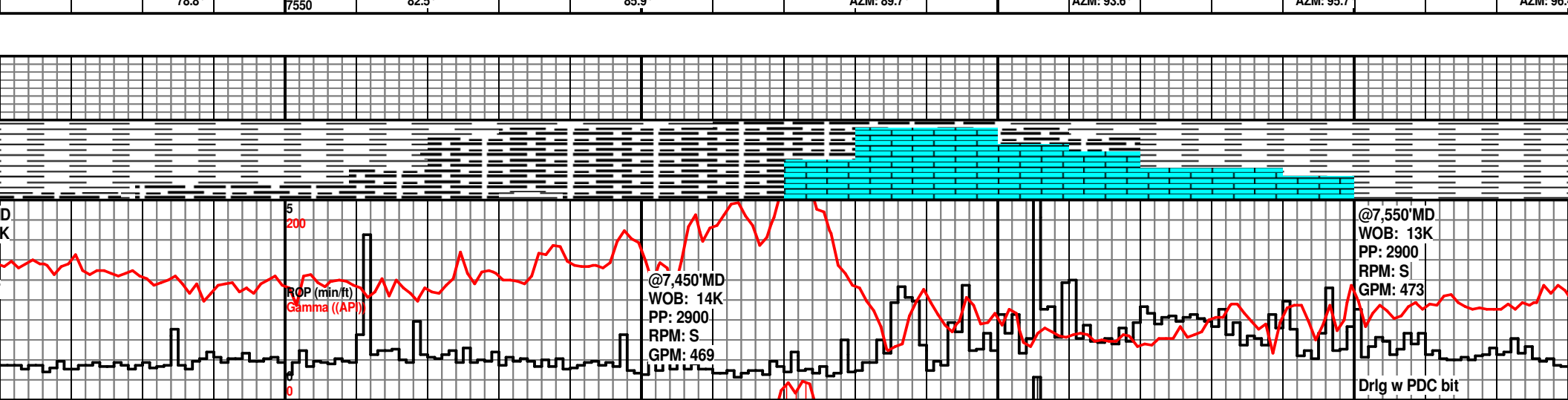
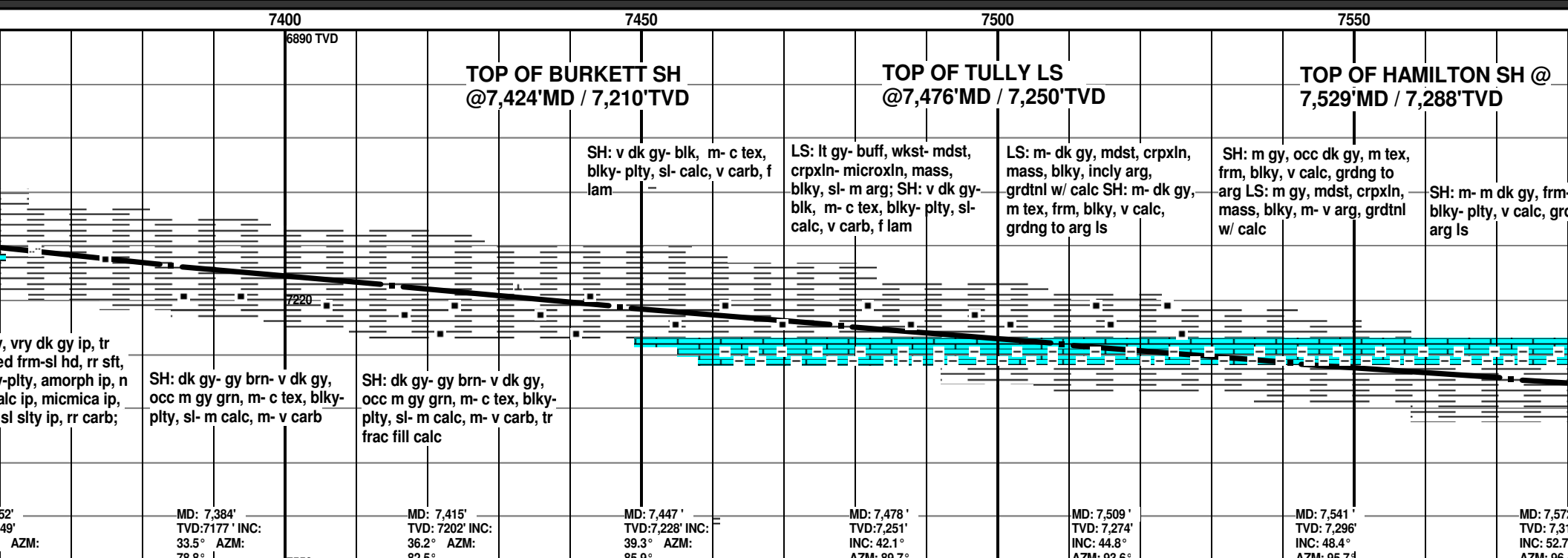
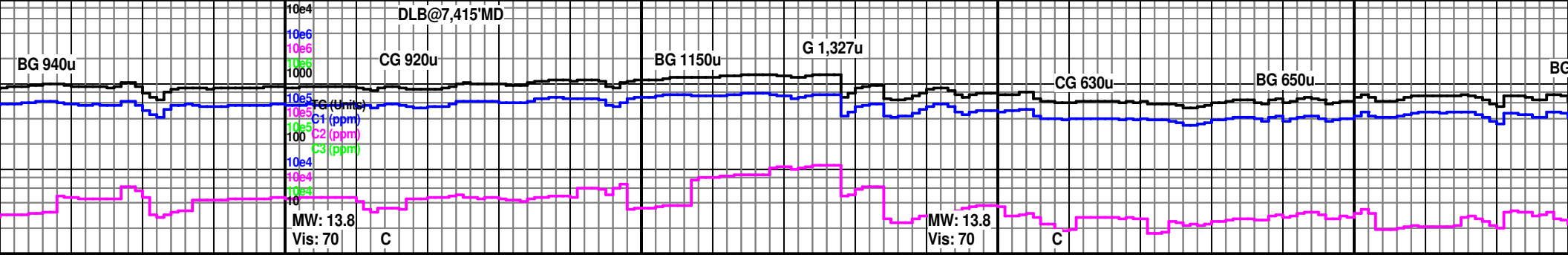
TG, C1-C5

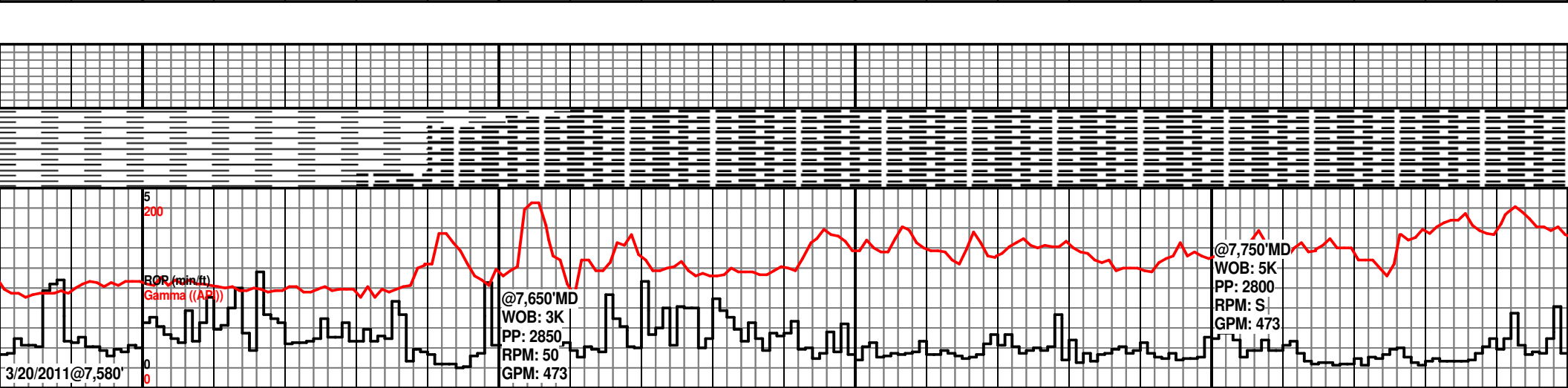
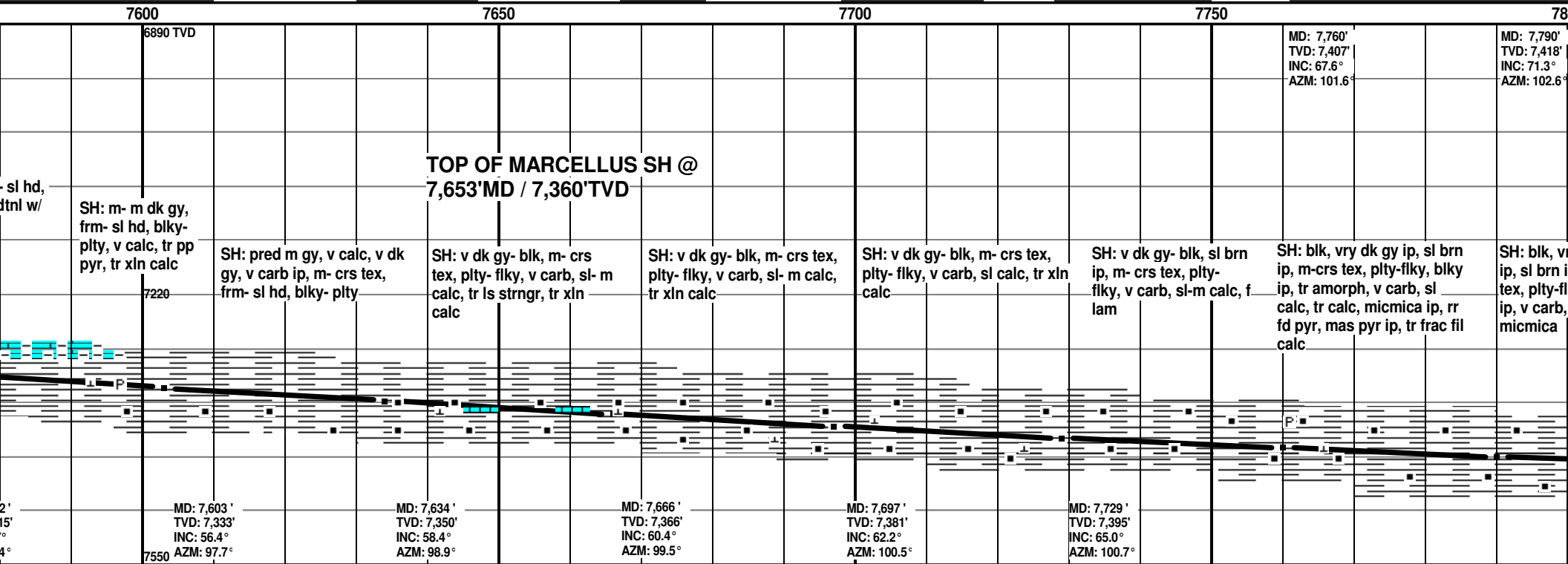
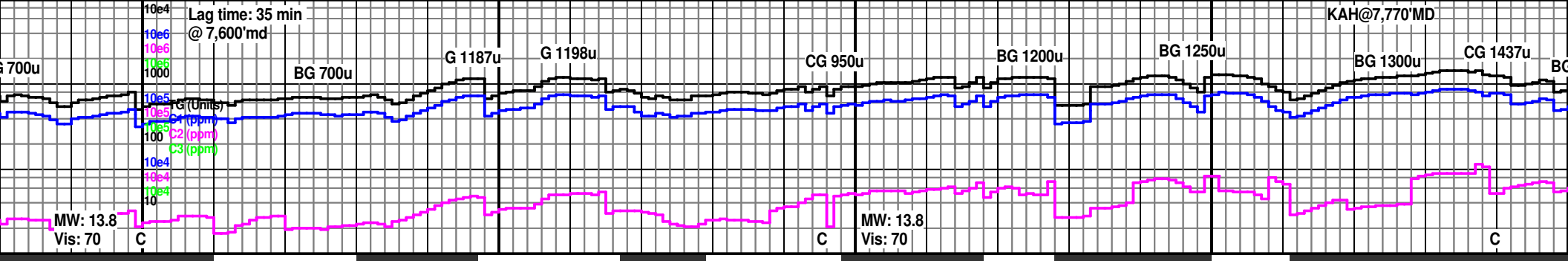
ROP (min/ft) ———  
Gamma ((API)) ———

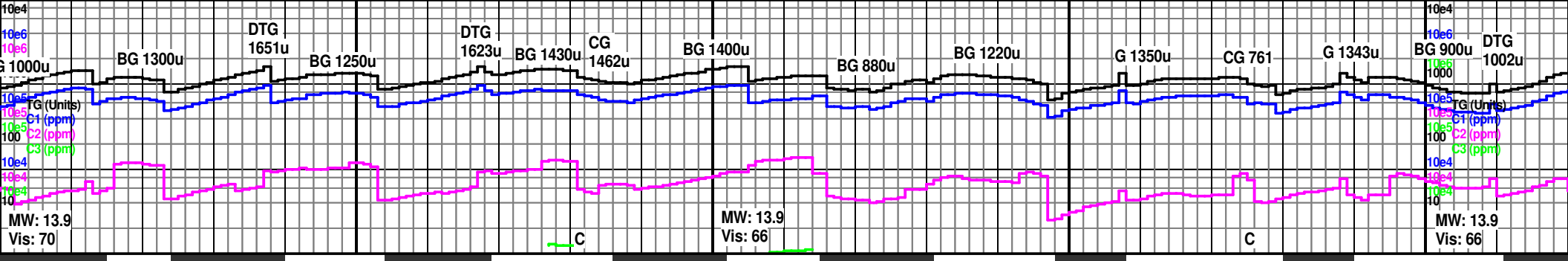


Drlg w PDC bit









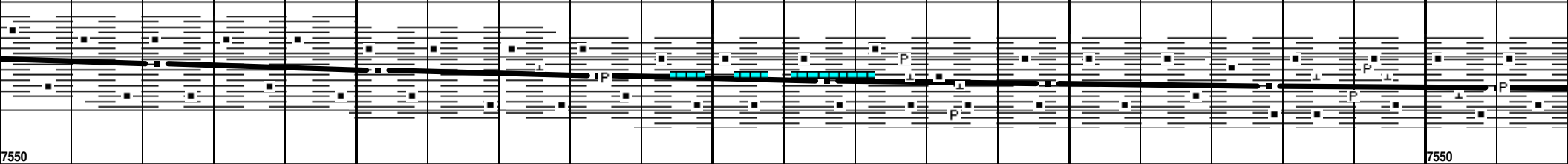
00 7850 7900 7950 8000

6890 TVD	MD: 7,822' TVD: 7,427' INC: 74.6° AZM: 102.6°	MD: 7,853' TVD: 7,435' INC: 77.1° AZM: 102.5°	MD: 7,884' TVD: 7,441' INC: 79.4° AZM: 102.1°	MD: 7,916' TVD: 7,447' INC: 81.6° AZM: 101.8°	MD: 7,947' TVD: 7,451' INC: 83.3° AZM: 102°	MD: 7,978' TVD: 7,454' INC: 85.0° AZM: 102.1°	6890 TVD	MD: 8,010' TVD: 7,456' INC: 86.9° AZM: 102.1°
----------	--	--	--	--	--	--	----------	--

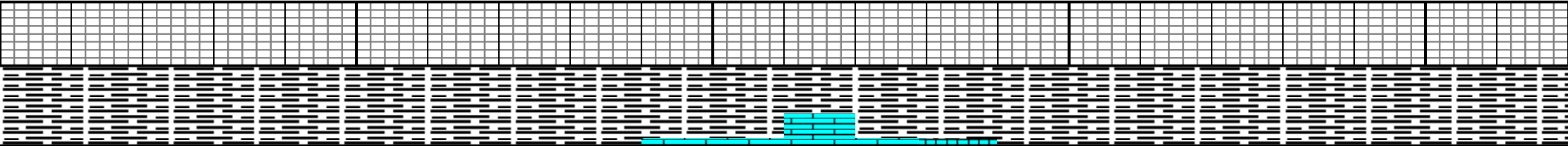
Mud Check @ 7,921'  
 Wt 13.8 FC 2/32  
 FV 66 H2O 15%  
 PV 24 Oil 58%  
 YP 10 Sol 25.90%  
 GS 8/20/23 O/W 79/21  
 FL 5.2 CI 25K

**TOP OF PURCELL LS @  
7,906'MD / 7,445'TVD**

ry dk gy p, m-crs ky, blk n calc, tr	SH: blk, vry dk gy ip, sl brn ip, m-crs tex, plty-flky, blk ip, v carb, sl calc, tr calc, tr micmica	SH: blk-vry dk gy, sl brn ip, m-crs tex, plty-flky, blk ip, v carb, sl calc, tr calc, tr fd pyr, rr frac fil calc	SH: blk-brn, m-crs tex, calc-calc, fd pyr, frac fil calc, mas pyr	SH: blk-brn, m-crs tex, plty-blky, v carb, sl calc, calc ip, fd pyr, frac fil calc/ mas pyr ip; LS: m brn-tn, tr off wht, md-wk st, crp-mico xln, pred mass, chky ip, arg, tr fd pyr	SH: blk-brn, m-crs tex, plty-blky, v carb, sl calc-calc, fd pyr, abt fd/mold/dru pyr ip, rr nod pyr, frac fil calc; tr LS: m brn-tn, tr off wht, md-wk st, crp-mico xln, pred mass, chky ip, arg, tr fd pyr	SH: blk-brn, m-crs tex, plty-blky, sft-frm, tr sl hd ip, v carb, n-sl calc, rr calc, fd pyr, abt fd/mold/dru pyr ip, rr nod pyr, frac fil calc	SH: blk-brn, m-crs tex, plty- blky, sft-frm, v carb, n-sl calc, rr calc, fd pyr, abt fd/mold/dru pyr ip, rr nod pyr, frac fil calc	SH: blk-brn, m-crs tex, plty-blky, sft-frm v carb, n-sl calc, rr calc, fd pyr, mold pyr ip, sme frac fil calc
---	---	---	---	---	---	--	--	---



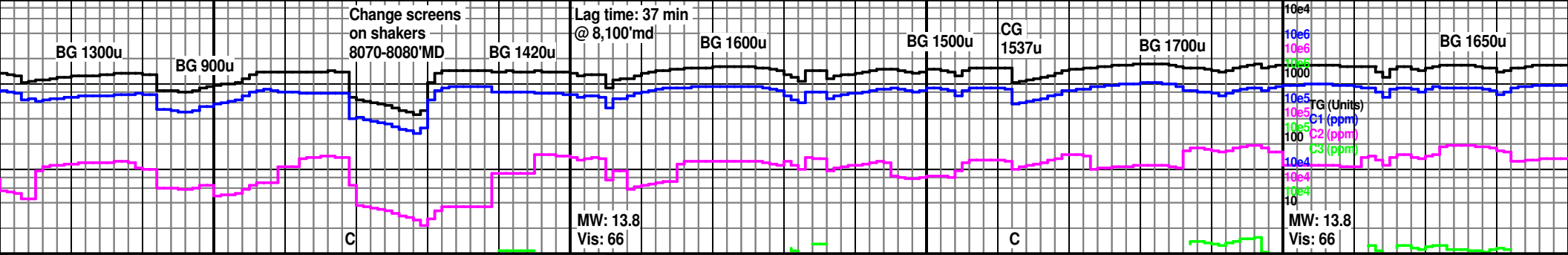
7550 7550



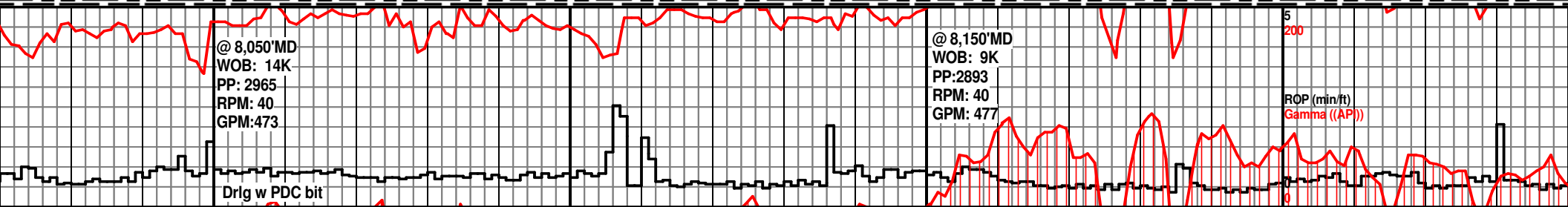
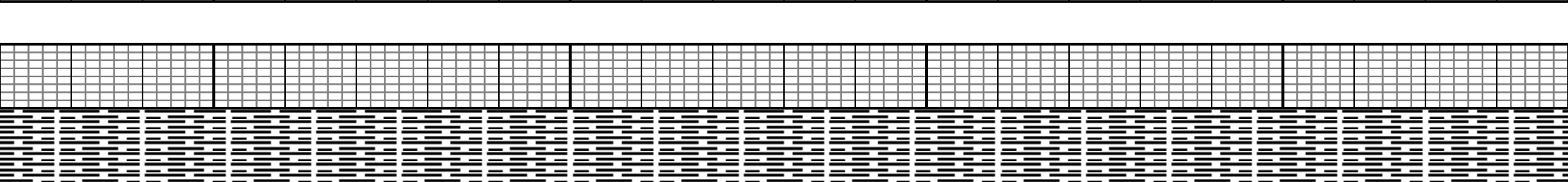
@7,850'MD  
 WOB: 8K  
 PP: 2600  
 RPM: 50  
 GPM: 448

@7,950'MD  
 WOB: 10K  
 PP: 2584  
 RPM: S  
 GPM: 448

ROP (min/ft)  
Gamma ((AP))

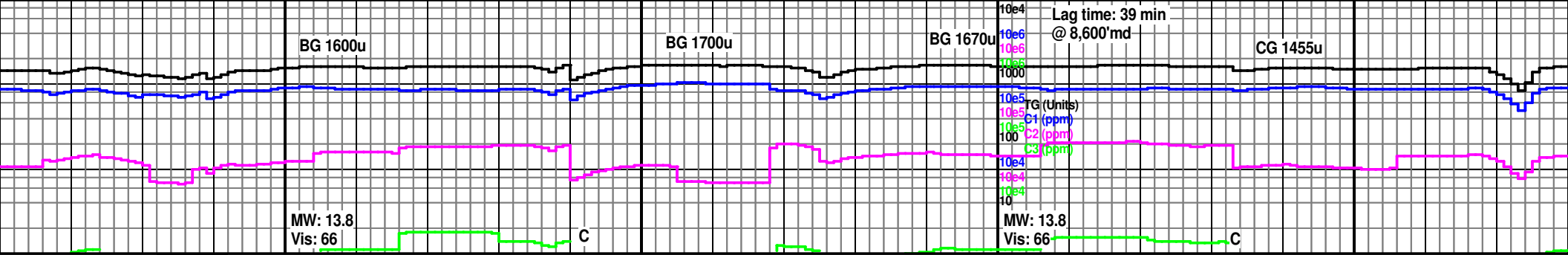


8050		8100		8150		8200		
MD: 8,041'	MD: 8,073'	MD: 8,103'	MD: 8,135'	MD: 8,167'	MD: 8,198'			
TVD: 7,457'	TVD: 7,458'	TVD: 7,459'	TVD: 7,459'	TVD: 7,459'	TVD: 7,460'			
INC: 88.1°	INC: 88.6°	INC: 89.3°	INC: 89.5°	INC: 89.6°	INC: 89.8°			
AZM: 101.9°	AZM: 102.1°	AZM: 102°	AZM: 102.1°	AZM: 102.1°	AZM: 102.3°			
SH: blk-brn, m-crs tex, pty-blky, sft-frm, sl hd ip, v carb, sl calc-calc, fd pyr, sme frac fil calc	SH: blk-brn, m-crs tex, pty-blky, sft-frm, v carb, sl calc-calc, fd pyr, sme frac fil calc	SH: blk-brn, m-crs tex, pty-blky, flky ip, tr amorph, sft-frm, rr sl hd, v carb, sl calc-calc, n calc ip, fd pyr ip	SH: blk-brn, m-crs tex, pty-blky, flky ip, tr amorph, sft-frm, v carb, n-sl calc, calc, fd pyr ip, frc fil calc	SH: blk-brn, m-crs tex, pty-blky, flky ip, tr amorph, sft-frm, tr sl hd, v carb, n-sl calc, abnt fd/dru pyr tr f lam, abnt frac fil calc	SH: blk-brn, m-crs tex, pty-blky, flky ip, sft-frm, tr sl hd, v carb, n-sl calc, fd/dru pyr, tr f lam, frac fil calc	SH: blk-brn, m-crs tex, pty-blky, flky ip, sft, frm ip, v carb, n-sl calc, fd pyr, tr frac fil calc	SH: blk, m-crs tex, ea lstr, pty-blky, frm, v carb, n-sl calc, tr fd pyr	SH: blk, m-crs tex, pty-blky, flky ip, sft, frm ip, v carb, n-sl calc, fd pyr, tr frac fil calc

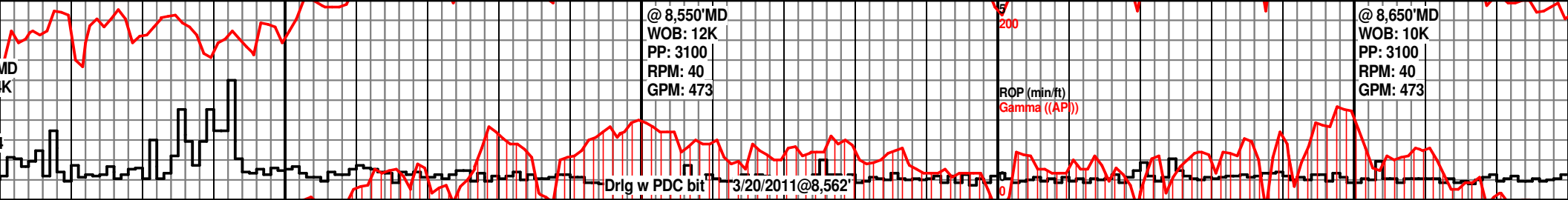
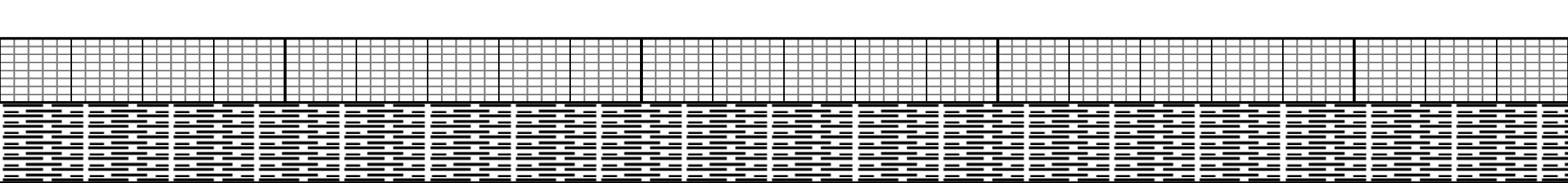


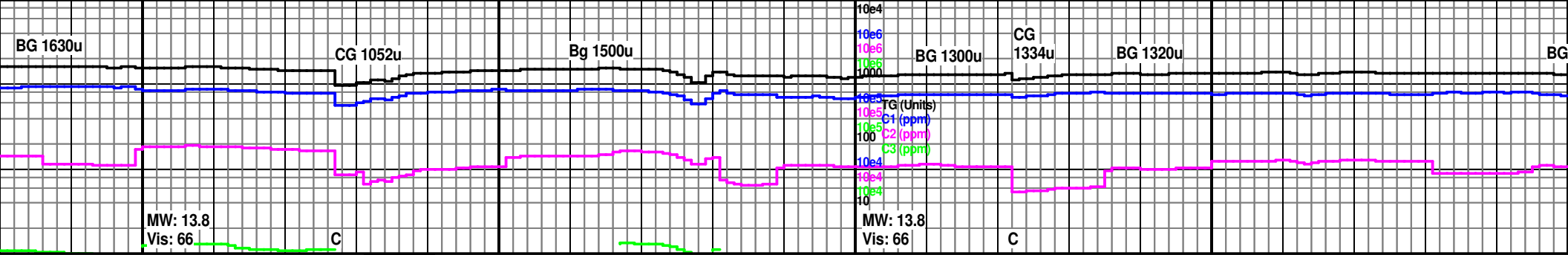






8500		8550		8600		8650	
MD: 8,480' TVD: 7,460' INC: 91.4° AZM: 104.5°				MD: 8,573' TVD: 7,457' INC: 92.7° AZM: 104.3°		6890 TVD	
<b>PURCELL LS REPEAT @ 8,440'MD / 7,461'TVD</b>							
ip, m- crs y, frm- sl c, tr pyr	SH: blk, v dk gy brn ip, tr lt gy grn w/ subconch frac, m- crs tex, ea lstr, pty- blk, frm- sl hd, v carb, sl calc, fiss	SH: blk, v dk gy brn ip, tr lt gy grn w/ subconch frac, m- crs tex, ea lstr, pty- blk, frm- sl hd, v carb, sl calc, fiss	SH: blk, v dk gy brn ip, m- crs tex, ea lstr, pty- blk, frm- sl hd, v carb, n calc, fiss	SH: blk, v dk gy brn ip, tr lt gy grn, m- crs tex, ea lstr, pty- blk, frm- sl hd, v carb, sl calc, tr frac fill calc, tr pyr nod, fiss	SH: blk, v dk gy brn ip, tr lt gy grn, m- crs tex, ea lstr, pty- blk, frm- sl hd, v carb, sl- m calc, tr frac fill calc, tr pyr nods	SH: blk, v dk gy brn ip, m- crs tex, ea lstr, pty- blk, frm- sl hd, v carb, sl calc, occ frac fill calc	SH: blk, v dk gy brn ip, m- crs tex, ea lstr, pty- blk, frm- sl hd, v carb, sl calc, occ frac fill calc
7550							

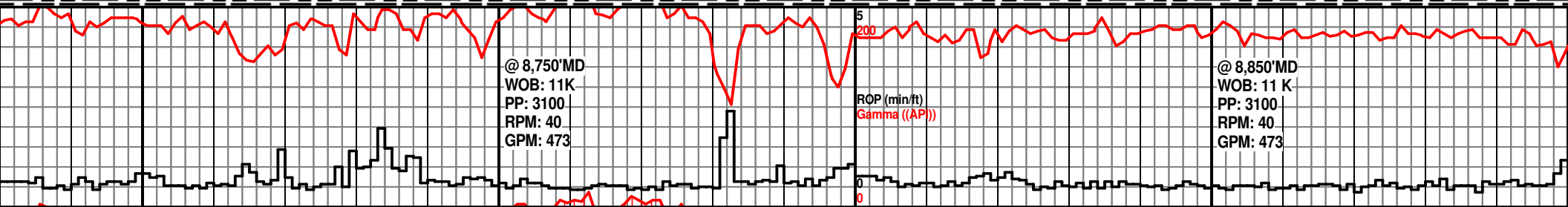
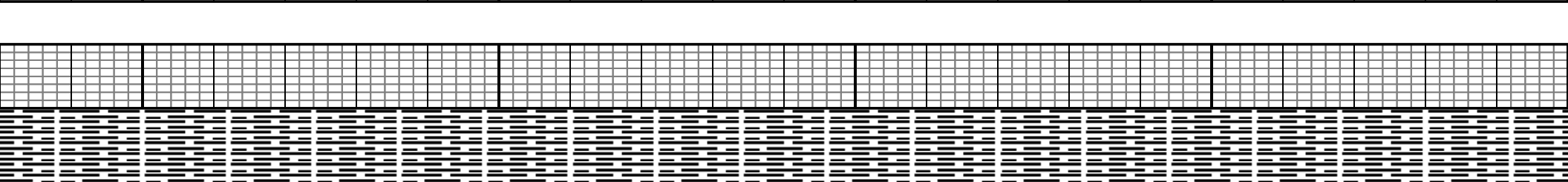
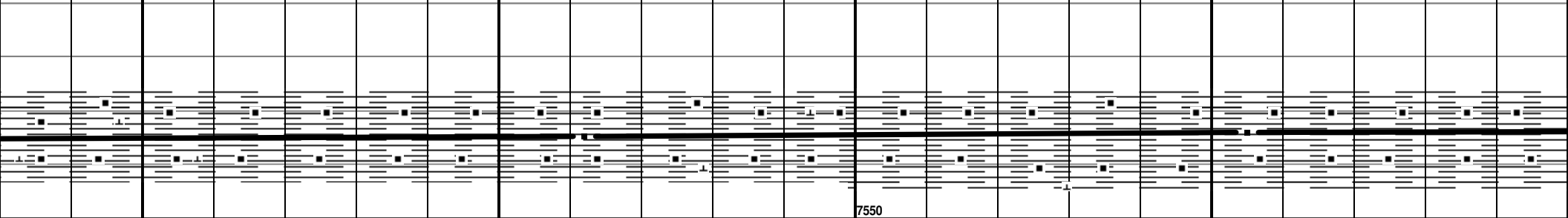


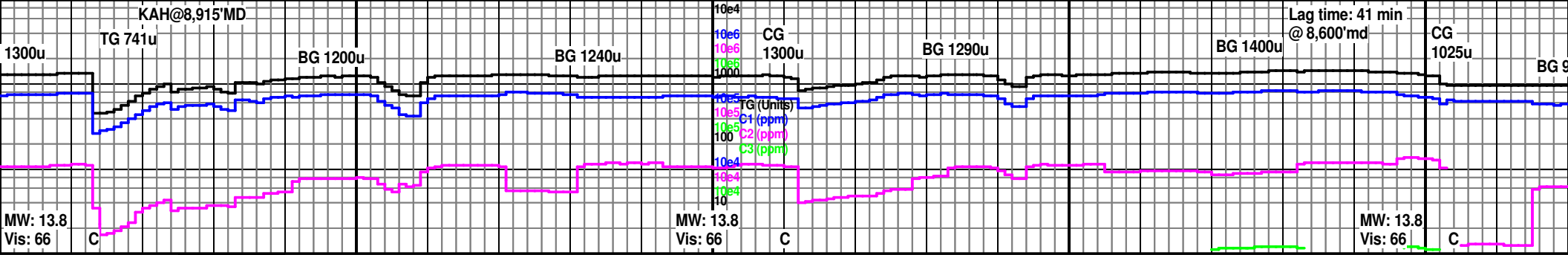


8700      8750      8800      8850      8900

MD: 8,762' TVD: 7,449' INC: 92.4° AZM: 103.8°					6890 TVD					MD: 8,855' TVD: 7,445' INC: 92.2° AZM: 103.8°				
--	--	--	--	--	----------	--	--	--	--	--	--	--	--	--

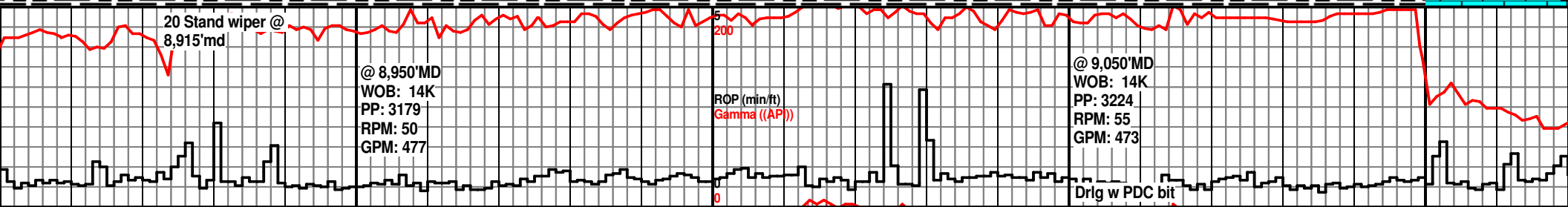
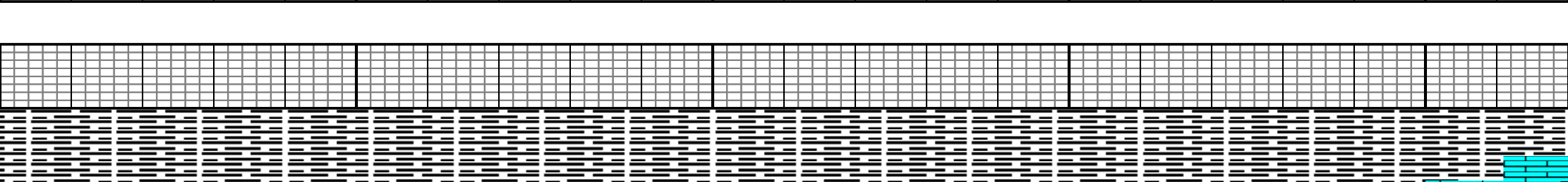
SH: blk, v dk gy brn ip, m-crs tex, ea lstr, plty- blk, frm- sl hd, v carb, sl calc, occ frac fill calc  
 SH: blk, v dk gy brn ip, tr lt gy grn, m- crs tex, ea lstr, plty- blk, frm- sl hd, v carb, sl calc, occ frac fill calc  
 SH: blk, v dk gy brn ip, tr lt gy grn, m- crs tex, ea lstr, plty- blk, frm- sl hd, v carb, sl calc  
 SH: blk, v dk gy brn ip, m-crs tex, ea lstr, plty- blk, frm- sl hd, v carb, sl calc, occ frac fill calc  
 SH: blk, v dk gy brn ip, m-crs tex, ea lstr, plty- blk, frm- sl hd, v carb, n- sl calc  
 SH: blk, v dk gy brn ip, m-crs tex, ea lstr, plty- blk, frm- sl hd, v carb, n calc  
 SH: blk, v dk gy brn ip, m- crs tex, ea lstr, plty- blk, frm- sl hd, v carb, n- sl calc  
 SH: blk, v dk gy brn ip, m- crs tex, ea lstr, plty- blk, frm- sl hd, v carb, n calc  
 SH: blk, v dk gy brn ip, m- crs tex, ea lstr, plty- blk, frm- sl hd, v carb, n calc

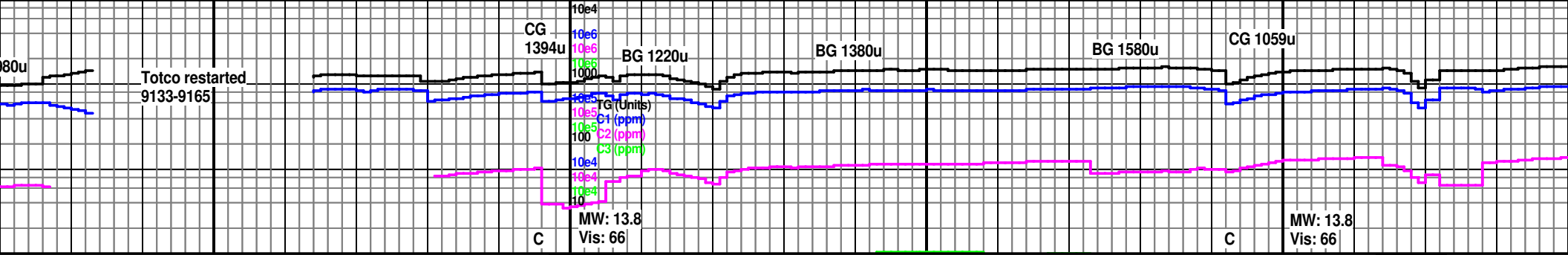




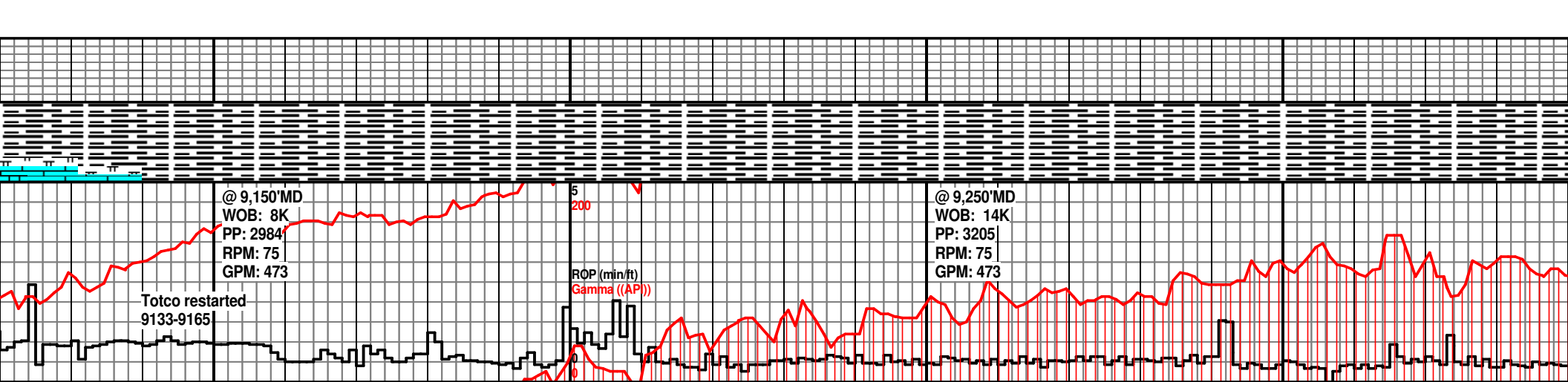
00 8950 9000 9050 9100

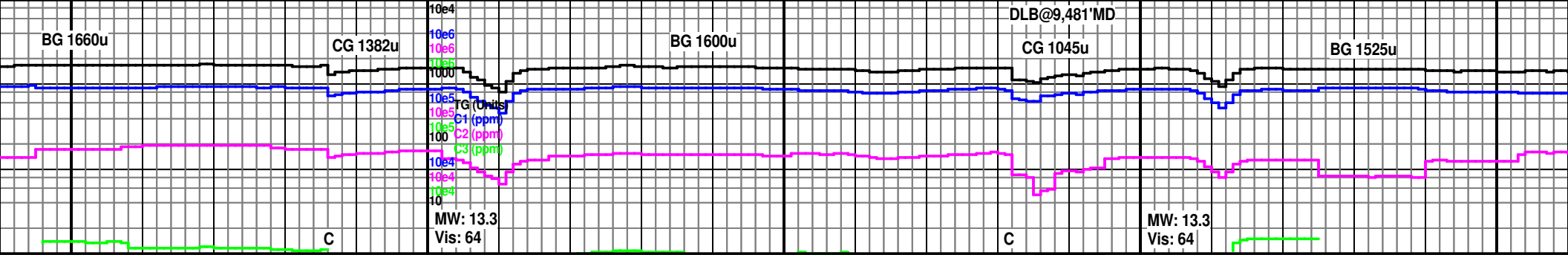
<p>ST/Wiper @8,915'md</p> <p>MD: 8,948' TVD: 7,442' INC: 91.4° AZM: 102.1°</p> <p>dk gy brn ip, x, ea lstr, fr- sl hd, v calc</p> <p>SH: blk, vry dk gy/ brn ip, f-m crs, sft, frm, rr sl hd, plty-blky, tr flky/amorph, n- sl calc, calc ip, carb, fd pyr ip, rr micmica, tr frac fil calc</p>	<p>MD: 8,948' TVD: 7,442' INC: 91.4° AZM: 102.1°</p> <p>SH: blk, vry dk gy/ brn ip, f-m crs, sft, frm, rr sl hd, plty-blky, tr flky, n- sl calc, cal ip, carb, fd pyr ip, rr micmica, tr frac fil calc</p>	<p>6890 TVD</p> <p>SH: blk, vry dk gy/ brn ip, f-m crs, sft, frm, plty-blky, tr flky, n- sl calc, calc ip, v carb, fd pyr ip, rr micmica</p>	<p>SH: blk, vry dk gy/ brn ip, f-m crs, sft, frm, pred blky, plty ip, tr amorph, n- sl calc, carb, fd pyr ip, rr micmica</p>	<p>MD: 9,042' TVD: 7,438' INC: 93.0° AZM: 100.6°</p> <p>SH: blk, vry dk gy/ brn ip, f-m crs, sft, frm, pred blky, plty ip, tr amorph, n- sl calc, v carb, fd pyr</p>	<p>SH: blk, vry dk gy/ brn ip, f-m crs, sft, frm, pred blky, plty ip, tr amorph, n- sl calc, carb, fd pyr</p>	<p><b>BOTTOM OF @9,100'MD /</b></p> <p>SH: vry dk gy-blk, frm, pred blky, plty amorph, sl calc-carb, nod pyr ip, fra LS: m brn-tn, tr off st, crp-mico xln, p chky ip, arg, tr fd</p>
---	--	--	--	--	---	---



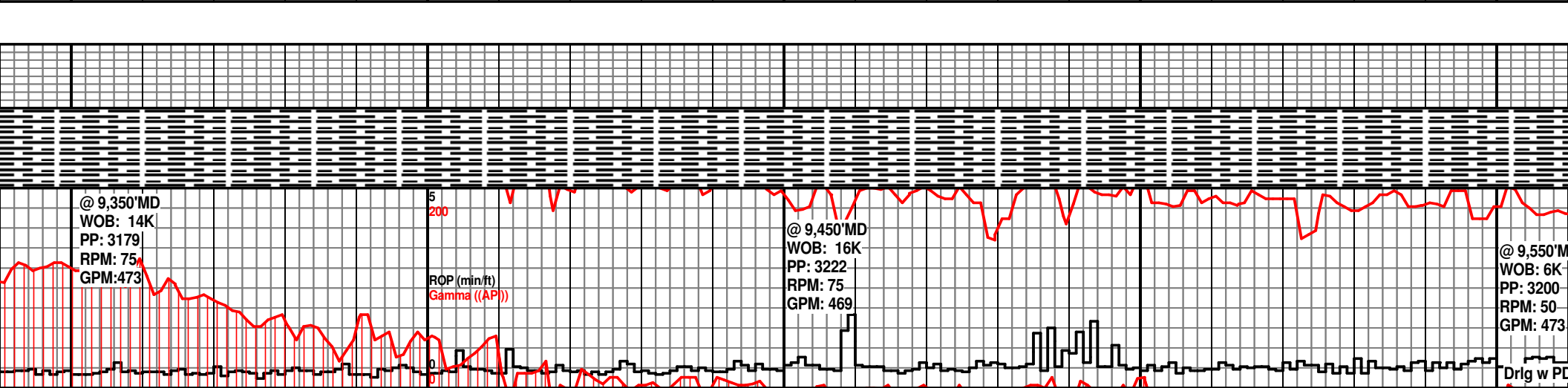


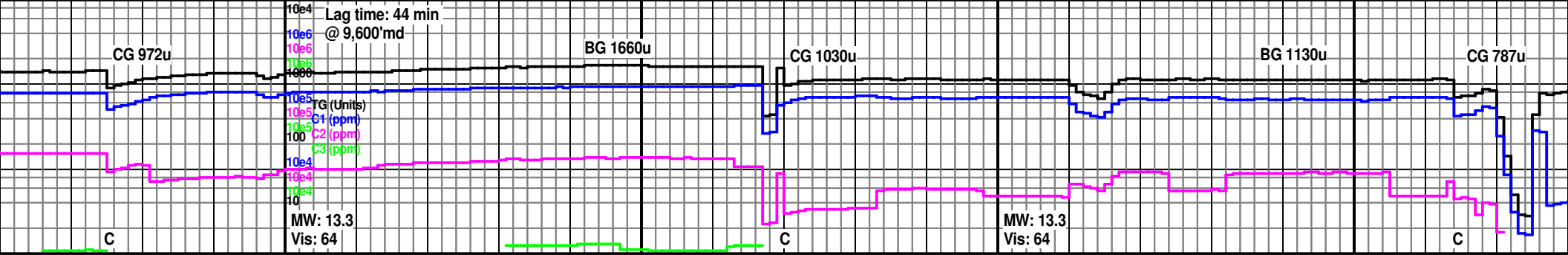
9150		9200			9250			9300		
MD: 9,136' TVD: 7,433' INC: 92.9° AZM: 100.5°		6890 TVD			MD: 9,230' TVD: 7,429' INC: 91.7° AZM: 99.5°			MD: 9,325' TVD: 7,428' INC: 90.8° AZM: 99.2°		
<b>F PURCELL LS</b> 7,434'TVD										
f-m crs, sft, y ip, tr calc, carb, fd ac fil calc ip; i wht, md-wk red mass, pyr	SH: vry dk gy-blk brn ip, f-m crs, sft, frm, pred blk, plty ip, tr amorph, calc-mrly, carb,, fd pyr	SH: vry dk gy-blk, brn ip, f-m crs, sft, frm, pred blk, plty ip, tr amorph, sl calc-calc, carb, fd pyr	SH: blk-brn, f-m crs, sft, frm, blk-ply, tr amorph, sl calc-calc, v carb, fd pyr	SH: blk-brn, f-m crs, sft, frm, blk-ply, tr amorph, sl calc-calc, v carb, fd pyr ip, tr nod pyr	SH: blk-brn, f-m crs, sft, frm, blk-ply, tr amorph, sl calc-calc, v carb, fd pyr	SH: blk-brn, f-m crs, sft, frm, blk-ply, tr amorph, sl calc-calc, v carb, fd pyr	SH: blk-brn, f-m crs, pred sft, frm ip, blk-ply, tr amorph, n-sl calc, v carb, fd pyr			
7550										



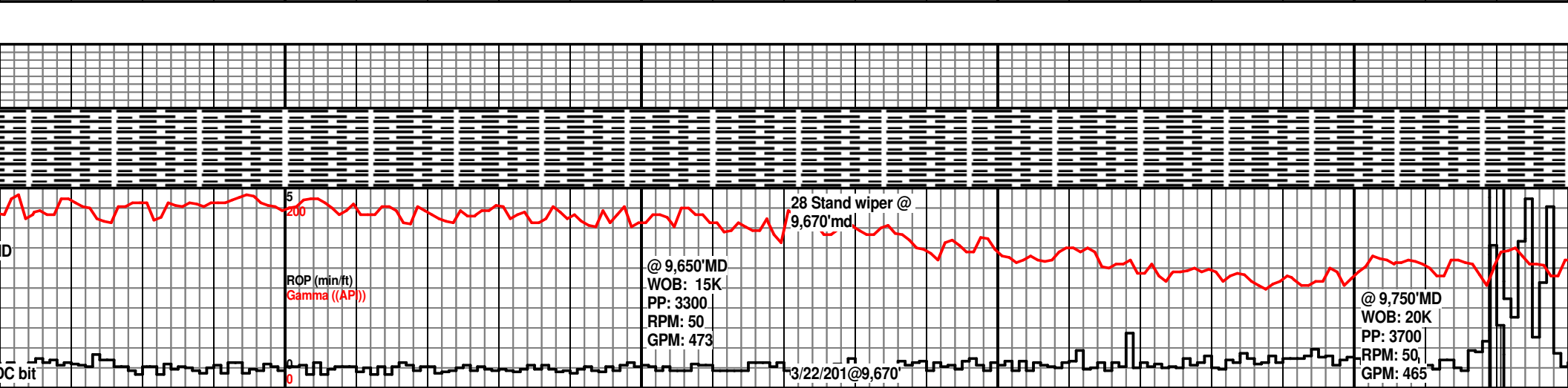


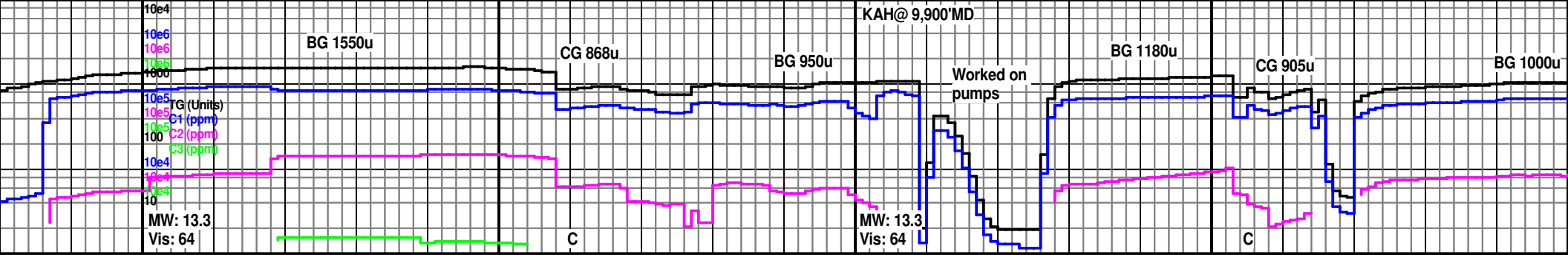
9350		9400		9450		9500		9550	
Mud Check @ 9,345'		6890 TVD		MD: 9,420'				MD: 9,514'	
Wt 13.3 FC 2/32				TVD: 7,426'				TVD: 7,425'	
FV 64 H2O 15%				INC: 91.1°				INC: 90.5°	
PV 28 Oil 58%				AZM: 98.5°				AZM: 98.5°	
YP 12 Sol 25.80/%									
GS 10/26/31 O/W 79/21									
FL 5.2 CI 25K									
SH: blk-brn, f-m crs, pred sft, frm ip, blk-pty, tr amorph, n-sl calc, v carb, fd pyr	SH: blk, v dk gy brn ip, m tex, ea lstr, frm, blk-pty, sl calc, v carb, fiss	SH: blk, v dk gy brn ip, m tex, ea lstr, frm, blk-pty, sl calc, v carb, fiss	SH: blk, v dk gy brn ip, m tex, ea lstr, frm, blk-pty, sl calc, v carb, fiss, tr frac fill calc	SH: blk, v dk gy brn ip, m tex, ea lstr, frm, blk-pty, sl calc, v carb, fiss	SH: v dk gy brn-blk, m tex, ea lstr, frm, blk-pty, sl calc, v carb, fiss, tr frac fill calc	SH: v dk gy brn-blk, m tex, ea lstr, frm, blk-pty, sl calc, v carb, fiss	SH: v dk gy brn-blk, m tex, ea lstr, frm, blk-pty, sl calc, v carb, fiss	SH: v dk gy brn-blk, m tex, ea lstr, frm, blk-pty, sl calc, v carb, fiss	SH: v dk gy brn-blk, m tex, ea lstr, frm, blk-pty, sl calc, v carb, fiss
7550									



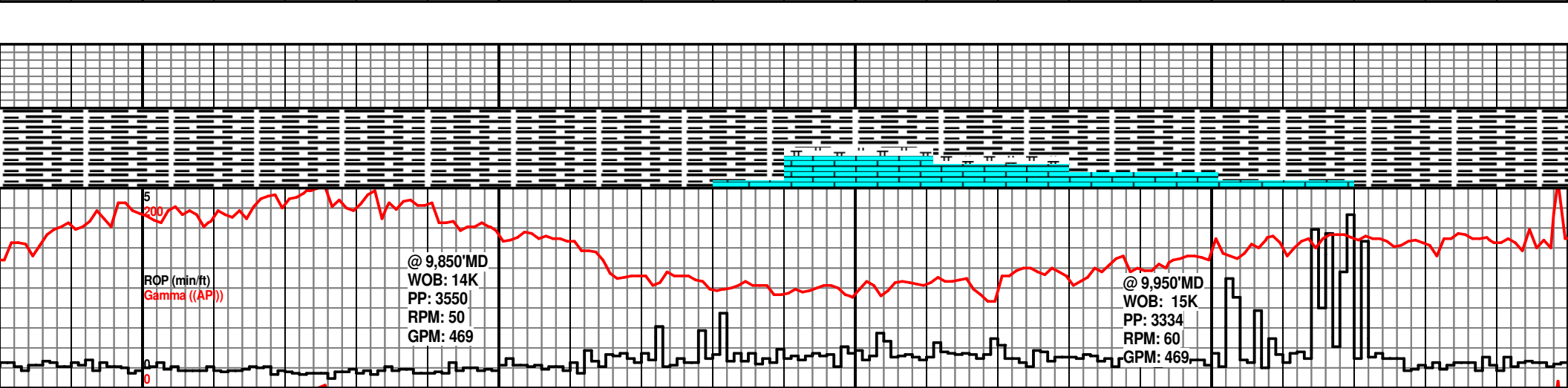


9600		9650		9700		9750	
6890 TVD	MD: 9,609' TVD: 7,424' INC: 90.5° AZM: 98.2°			ST/Wiper @9,670' md	MD: 9,703' TVD: 7,424' INC: 89.7° AZM: 97.4°		
dk gy brn- blk, m lstr, frm, blk- sl calc, v carb,	SH: v dk gy brn- blk, m tex, ea lstr, frm- sl hd, blk- pty, sl calc, v carb, fiss	SH: v dk gy brn- blk, m tex, ea lstr, frm- sl hd, blk- pty, v sl calc, v carb, fiss	SH: v dk gy brn- blk, m tex, ea lstr, frm- sl hd, blk- pty, sl calc, v carb, fiss	SH: v dk gy brn, m tex, ea lstr, frm- sl hd, blk- pty, sl- m calc, v carb, fiss	SH: v dk gy brn, m tex, ea lstr, frm- sl hd, blk- pty, sl- m calc, v carb, fiss, tr frac fill calc	SH: v dk gy brn, m tex, ea lstr, frm- sl hd, blk- pty, sl- m calc, v carb, fiss, tr frac fill calc	SH: v dk gy brn- blk, m tex, ea lstr, frm- sl hd, blk- pty, sl calc, v carb, fiss, tr frac fill calc
7550							

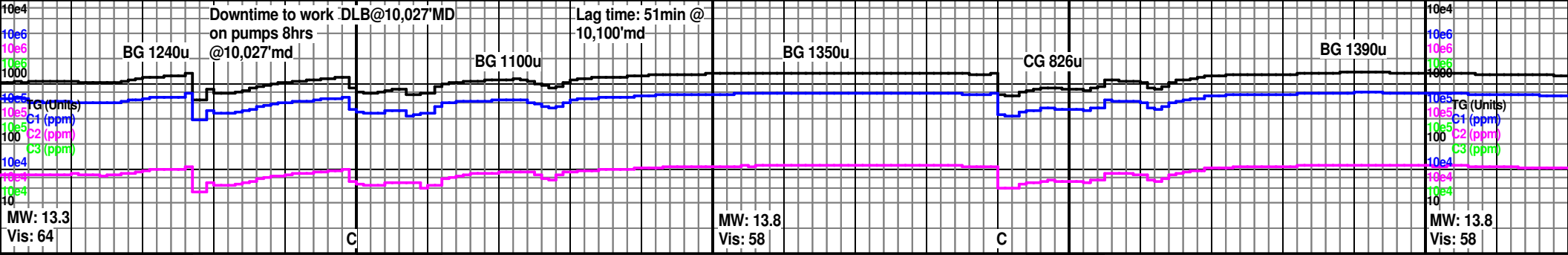




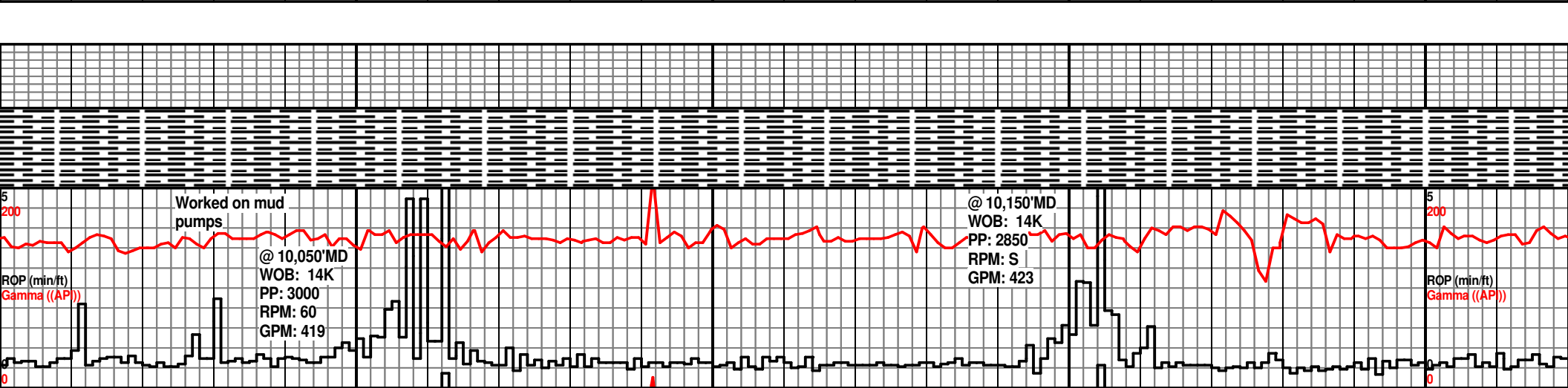
9800	9850	9900	9950	10000
MD: 9,797' TVD: 7,424' INC: 90.6° AZM: 99.5°		MD: 9,891' TVD: 7,423' INC: 90.2° AZM: 97.8°		MD: 9,985' TVD: 7,423' INC: 90.5° AZM: 99.2°
k, m tex, blk, fiss, tr	SH: v dk gy brn- blk, m tex, ea lstr, frm- sl hd, blk- ply, sl calc, v carb, fiss	SH: v dk gy, blk, m tex, frm- sl hd, blk- ply, m- v calc, tr marly, carb, fiss; LS: m brn-tn, tr off wht, md-wk st, crp-mico xln, pred mass, chky ip, arg, fd pyr, tr foss	SH: v dk gy, blk, m tex, frm- sl hd, blk- ply, m- v calc, carb, fiss, tr frac fil calc; LS: lt brn-tn, tr off wht, md-wk st, crp-mico xln, pred mass, chky ip, arg, fd pyr, tr foss	SH: v dk gy brn- blk, m tex, ea lstr, frm- sl hd, blk- ply, v sl calc, v carb, fiss, tr frac fill calc, tr LS: m- dk gy, crpxln- microxln, mass, m- v arg
7550				

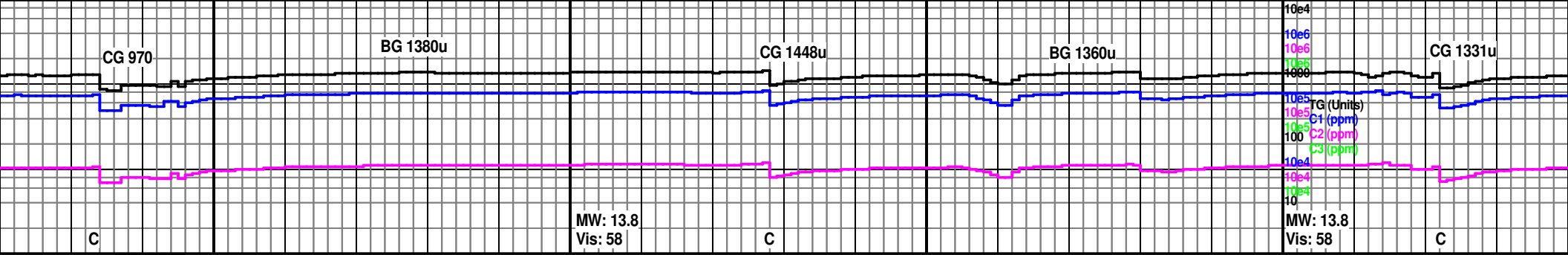




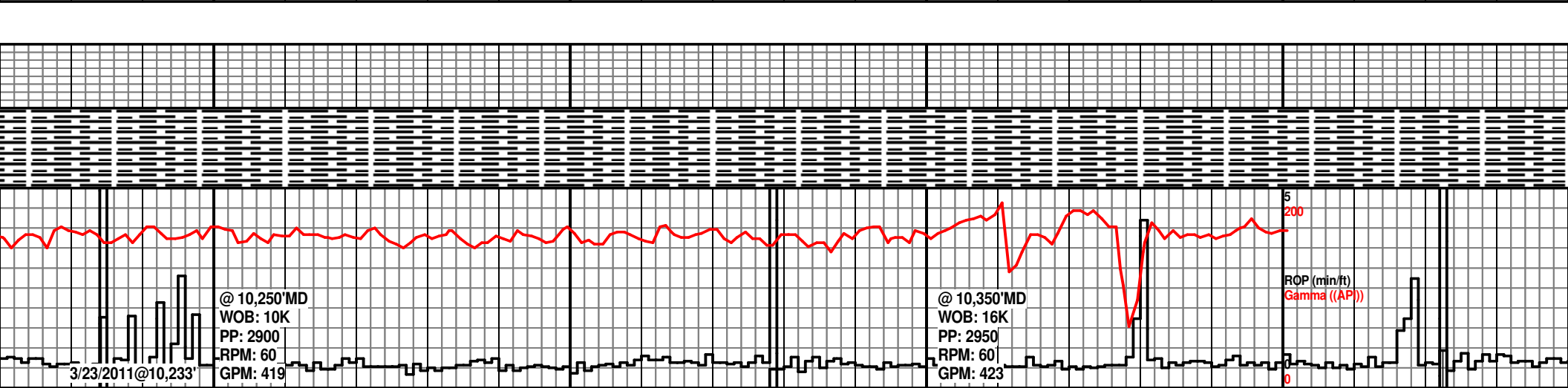


000	10050	10100	10150	10200
6890 TVD				6890 TVD
	Mud Check @ 10,027' Wt 13.8 FC 2/32 FV 58 H2O 14% PV 27 Oil 59% YP 12 Sol 25.70% GS 9/24/27 O/W 81/19 FL 5.2 CI 25K			
		MD: 10,079' TVD: 7,422' INC: 89.8° AZM: 100.0°		MD: 10,172' TVD: 7,423' INC: 89.8° AZM: 101.1°
SH: v dk gy brn- blk, m tex, ea lstr, frm- sl hd, blk- pty, n calc, v carb, fiss, tr frac fill calc, occ LS: m- dk gy, crpxln- microxln, mass, m- v arg	SH: v dk gy brn- blk, m tex, ea lstr, frm- sl hd, blk- pty, sl calc, v carb, fiss	SH: v dk gy brn- blk, m tex, ea lstr, frm- sl hd, blk- pty, sl calc, v carb, fiss, tr frac fill calc	SH: v dk gy brn- blk, m tex, ea lstr, frm- sl hd, blk- pty, n calc, v carb, fiss	SH: v dk gy brn- blk, m tex, ea lstr, frm- sl hd, blk- pty, pred v sl calc, m calc ip, v carb, fiss, tr frac fill calc, tr LS: m- dk gy, crpxln- microxln, mass, m- v arg
724				
7550				7550





10250				10300				10350				10400			
MD: 10,267' TVD: 7,425' INC: 88.7° AZM: 101.2°								MD: 10,361' TVD: 7,427' INC: 88.4° AZM: 101.1°				MD: 10,398' TVD: 7,428' INC: 88.0° AZM: 100.8°			
gy brn- blk, m tex, m- sl hd, blk- calc, v carb, fiss	SH: v dk gy brn- blk, m tex, ea lstr, frm- sl hd, blk- ply, sl calc, v carb, fiss	SH: v dk gy brn- blk, m tex, ea lstr, pred frm- sl hd, sl calc, occ sl hd- hd, m calc, blk- ply, v carb, fiss	SH: v dk gy brn- blk, pred frm- sl hd, sl calc, occ sl hd- hd, m calc, m tex, ea lstr, blk- ply, v carb, fiss	SH: pred blk- vdk gy brn, frm- sl hd, sl calc, occ dk- v dk gy brn, m calc, sl hd- hd, m tex, ea lstr, blk- ply, v carb, fiss	SH: pred blk- vdk gy brn, frm- sl hd, sl calc, occ dk- v dk gy brn, m calc, sl hd- hd, m tex, ea lstr, blk- ply, v carb, fiss, tr mica, tr frac fill calc	SH: pred blk- vdk gy brn, frm- sl hd, sl calc, occ dk- v dk gy brn, m calc, sl hd- hd, m tex, ea lstr, blk- ply, v carb, fiss	SH: pred blk- vdk gy brn, calc, occ dk- v dk hd, m tex, ea lstr, blk- ply, v carb, fiss	SH: pred blk- vdk gy brn, calc, occ dk- v dk hd, m tex, ea lstr, blk- ply, v carb, fiss	SH: pred blk- vdk gy brn, calc, occ dk- v dk hd, m tex, ea lstr, blk- ply, v carb, fiss	SH: pred blk- vdk gy brn, calc, occ dk- v dk hd, m tex, ea lstr, blk- ply, v carb, fiss	SH: pred blk- vdk gy brn, calc, occ dk- v dk hd, m tex, ea lstr, blk- ply, v carb, fiss	SH: pred blk- vdk gy brn, calc, occ dk- v dk hd, m tex, ea lstr, blk- ply, v carb, fiss	SH: pred blk- vdk gy brn, calc, occ dk- v dk hd, m tex, ea lstr, blk- ply, v carb, fiss	SH: pred blk- vdk gy brn, calc, occ dk- v dk hd, m tex, ea lstr, blk- ply, v carb, fiss	
												7550			



Lag time: 53 min  
@ 10,462' md  
BG 1300u

BU gas 1555u

TD @ 10,462' md  
on 3/23/2011

10450 10500 105

MD: 10,462'  
TVD: 7,430'  
INC: 88.0°  
AZM: 100.8°

TD Zogol 2213H @10,462' md  
on 3/23/2011 @ 03:30am

gy brn, frm- sl hd, sl  
gy brn, m calc, sl hd-  
blky- plty, v carb, fiss

Loggers released from duty @  
10:30am on 3/23/2011



37 Stand wiper @  
10,462' md

@ 10,450' MD  
WOB: 16K  
PP: 2900  
RPM: 60  
GPM: 423

