



GEOSEARCH LOGGING INC.

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

Well Name: GOULD 2240H
Location: UPSHUR COUNTY, WEST VIRGINIA
License Number: 47-097-03739
Spud Date: 10/01/2010
Surface Coordinates: LATITUDE: 39.0797
LONGITUDE: -80.2801

Region: APPALACHIA
Drilling Completed: 10/19/10

Bottom Hole Coordinates:

Ground Elevation (ft): 1,200' K.B. Elevation (ft): 1,216'
Logged Interval (ft): 6,641 To: 10,742 Total Depth (ft): 4,101
Formation: MARCELLUS
Type of Drilling Fluid: OIL BASED MUD

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

OPERATOR

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

GEOLOGIST

Name: Kelley Hartley, Tim Barfield, Noah Sluiter, Michael Marshall
Company: Geosearch Logging, Inc.
Address: P.O. Box 6005
Edmond, OK 73083-6005
(405) 340-5545

Comments

2 Manned Logging Service
 Start Logging Date: 10/05/2010
 Released Logging Date: 10/19/10
 OBM Date: 10/11/2010
 Drilling Contractor: UDI@#209
 PC-149,ML-126,HASP: V- #41, H-33
 i-Ball: 0092

ROCK TYPES








	Anhy		Congl		Mrlst		Ss		Granite
	Bent		Dol		Salt		Till		Cement
	Brec		Gyp		Shale		Sandstn		Hotshale
	Cht		Igne		Shcol		Siltstn		
	Clyst		Lmst		Shgy		Granwash		
	Coal		Meta		Sltst		Dolowash		

ACCESSORIES

MINERAL		FOSSIL			
	Anhy		Algae		Ostra
	Arggrn		Amph		Pelec
	Arg		Belm		Pellet
	Bent		Bioclst		Pisolite
	Bit		Brach		Plant
	Brecfrag		Bryozoa		Strom
	Calc		Cephal		
	Carb		Coral	STRINGER	
	Chtdk		Crin		Anhy
	Chtlt		Echin		Arg
	Dol		Fish		Bent
	Feldspar		Foram		Coal
	Ferrpel		Fossil		Dol
	Ferr		Gastro		Gyp
	Glau		Oolite		Ls
					Mrst
					Sltstrg
					Ssstrg
				TEXTURE	
					Boundst
					Chalky
					Cryxln
					Earthy
					Finexln
					Grainst
					Lithogr
					Microxln
					Mudst
					Packst
					Wackest

OTHER SYMBOLS

POROSITY TYPE





-  Earthy
-  Fenest
-  Fracture
-  Inter
-  Moldic
-  Organic
-  Pinpoint

-  Vuggy

SORTING

-  Well
-  Moderate
-  Poor

ROUNDING

-  Rounded
-  Subrnd
-  Subang
-  Angular

OIL SHOWS

-  Even

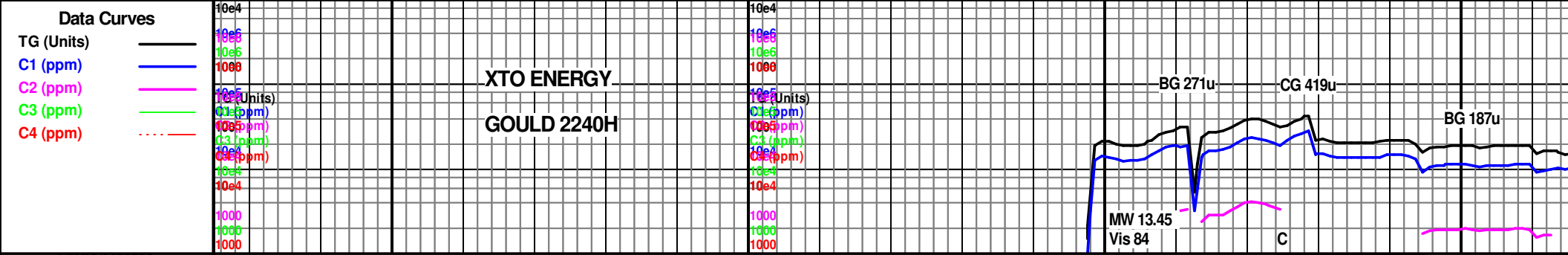
-  Spotted
-  Ques
-  Dead
-  poor
-  fair
-  good
-  excelent

INTERVALS

-  Core
-  Dst

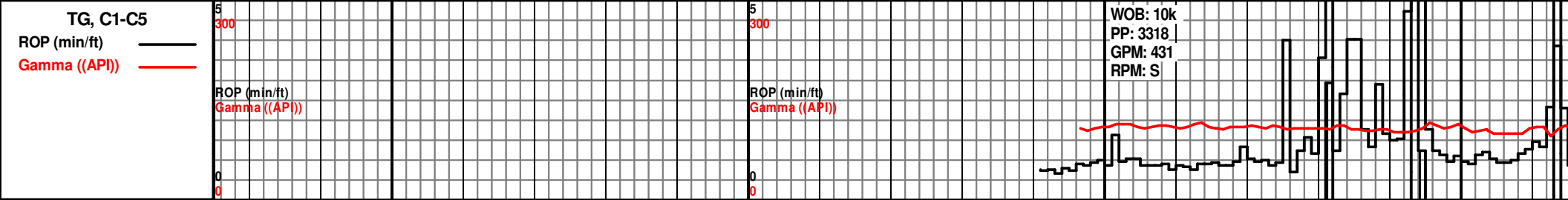
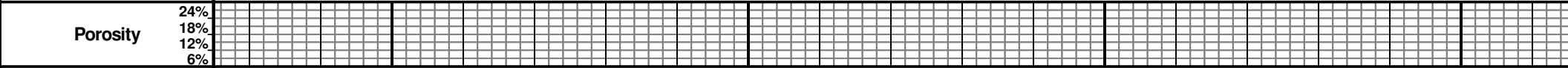
EVENTS

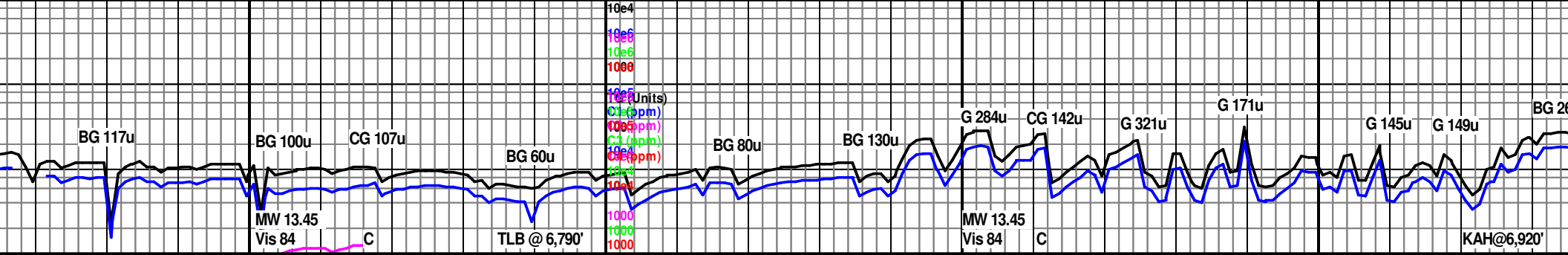
-  Rft
-  Sidewall



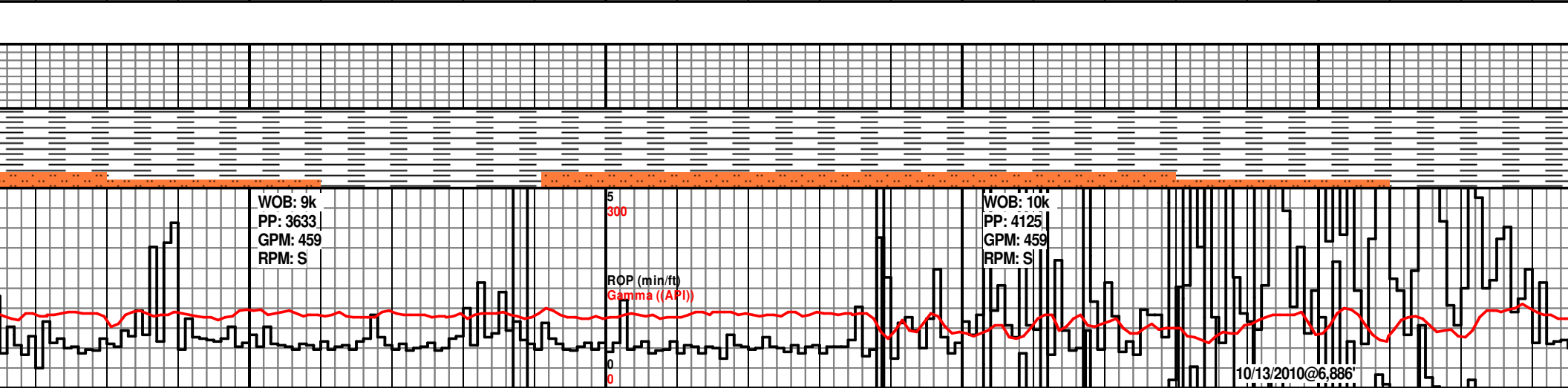
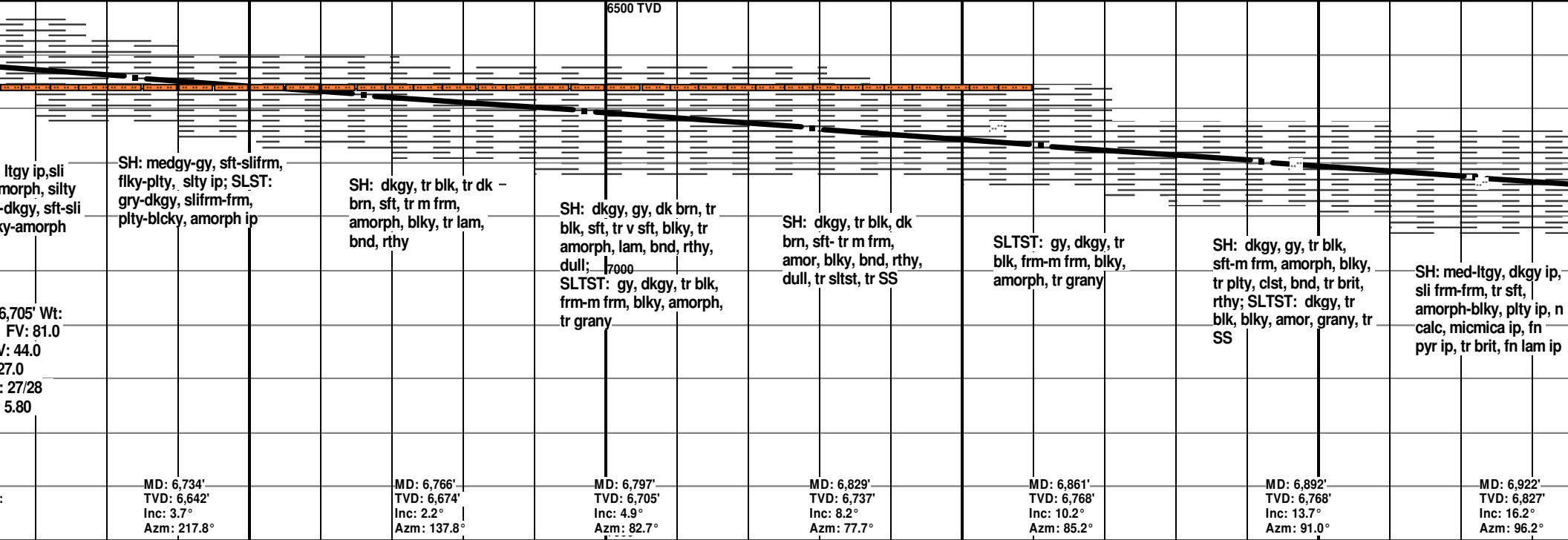
String/Bore Depth	6550	6600	6650	6700
Well Bore Cross Section	<p>6 ALL DEPTHS CORRESPOND WITH THE DRILLER'S PIPE TALLY</p> <p>2 PERSON LOGGING COMMENCED ON 10/05/2010</p> <p>9 5/8" Intermediate casing set @ 2,782'</p> <p>Drilling 8 3/4" hole with Mineral Oil based drilling fluid (CARBO-DRILL)</p> <p>Collecting 30' spot samples to the top of Burkett Shale, then 10' spot samples to TD</p> <p>OBM ON 10/11/2010</p> <p>Directional Drillers and MWD: Multishot</p> <p>KO @6,641'</p> <p>See Gould 2240H Vertical</p>			
	<p>SH: dkgy-blk, sft-slifrm, flky-blky, fiss ip, silty ip; SLST: gy-dkgy, sft-sli hd, amorph</p>			
	<p>SH: dkgy-vdkgy, sft-sli frm, plty-amorph, silty ip; SLST: gy-dkgy, sft-sli frm, frm ip, blk-amorph</p>			
	<p>SH: medgy-gy. ltgy ip, sli frm-frm, plty-amorph, silty ip; tr SLST: gy-dkgy, sft-sli frm, frm ip, blk-amorph</p>			
	<p>SH: medgy-gy. frm-frm, plty-amorph, silty ip; rr SLST: gy-dkgy, sft-sli frm, frm ip, blk-amorph</p>			
	<p>Mud Check @ 13.45 FC: 6.0 H2O: 14.0 PV OIL: 59.0 YP: 2 SOL: 26.38 GS O/W: 81:19 FL: CL: 16K</p>			
	7000	7000	7000	7000
		6500 TVD		
		MD: 6,609' TVD: 6,518' Inc: 7.6° Az: 267.2°	MD: 6,641' TVD: 6,549' Inc: 7.0° Az: 267.9°	MD: 6,672' TVD: 6,580' Inc: 6.6° Az: 260.1°
	7500	7500	7500	7500

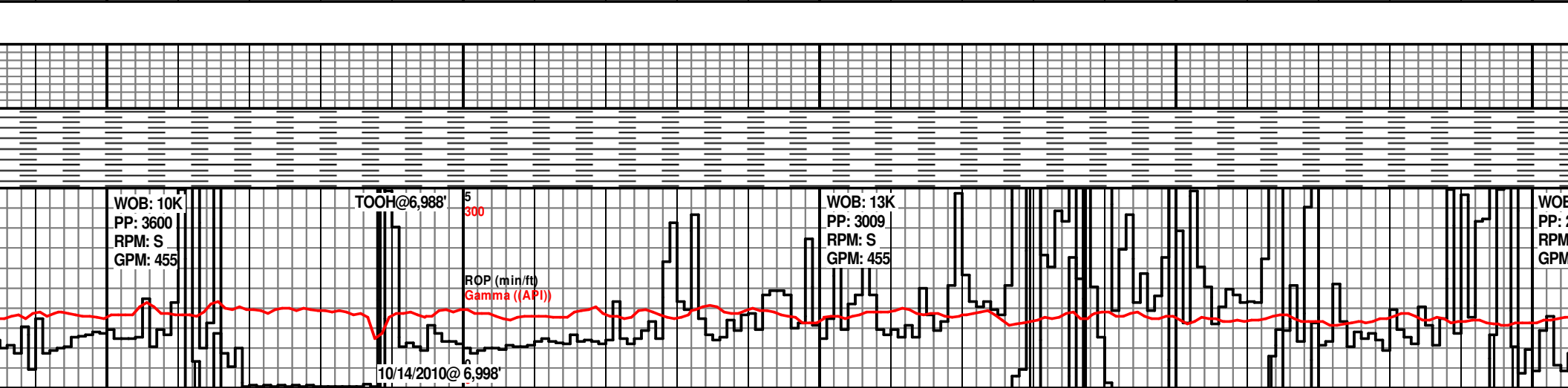
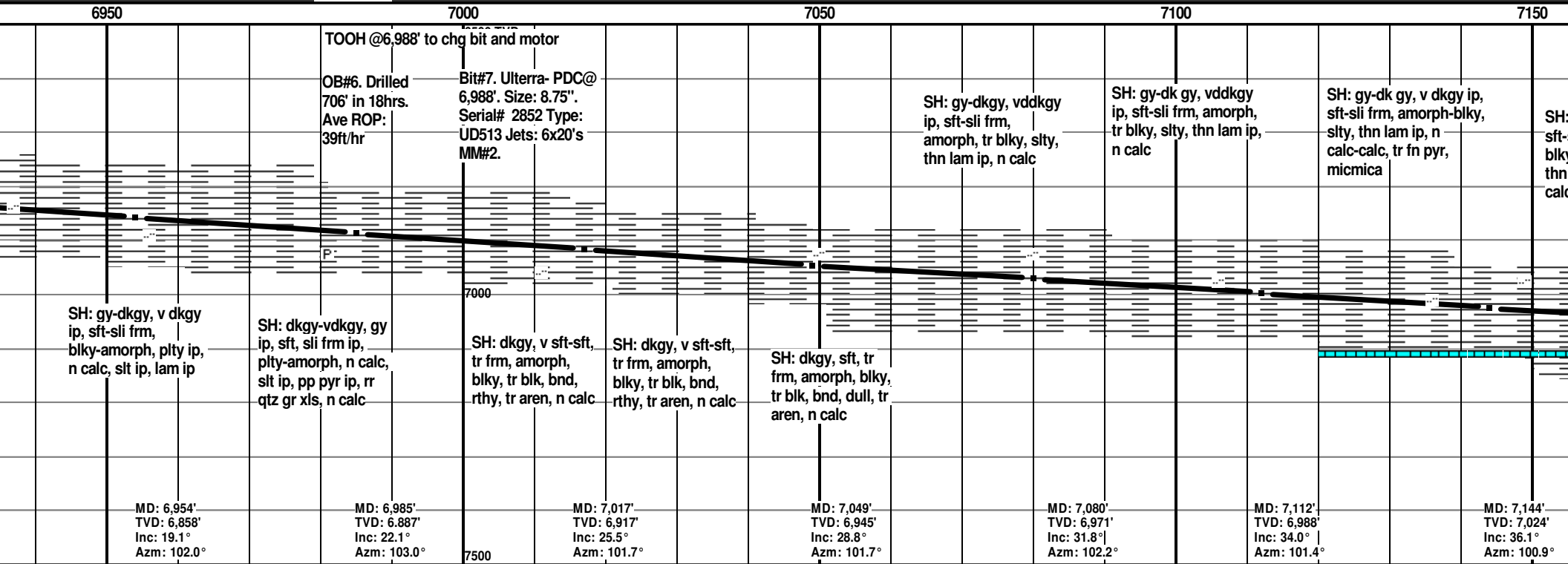
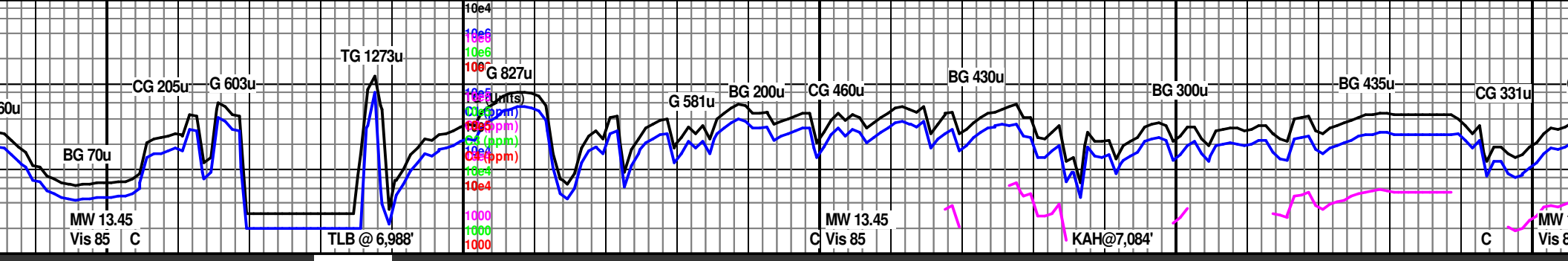
Oil Shows

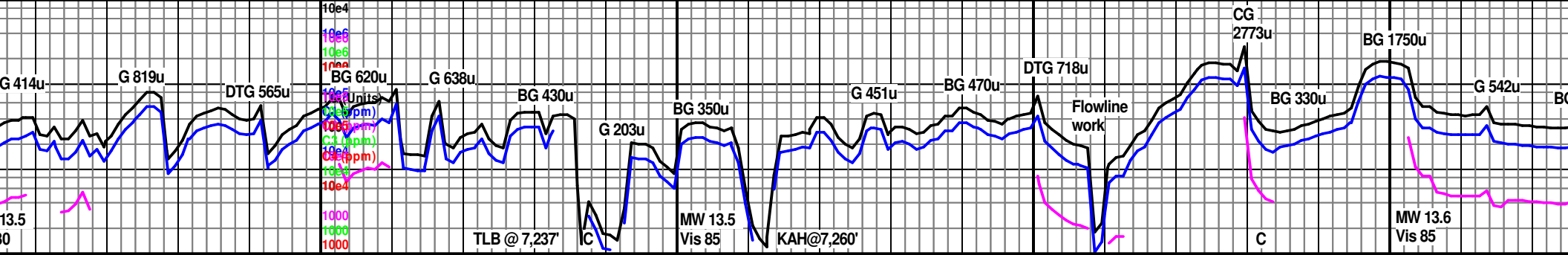




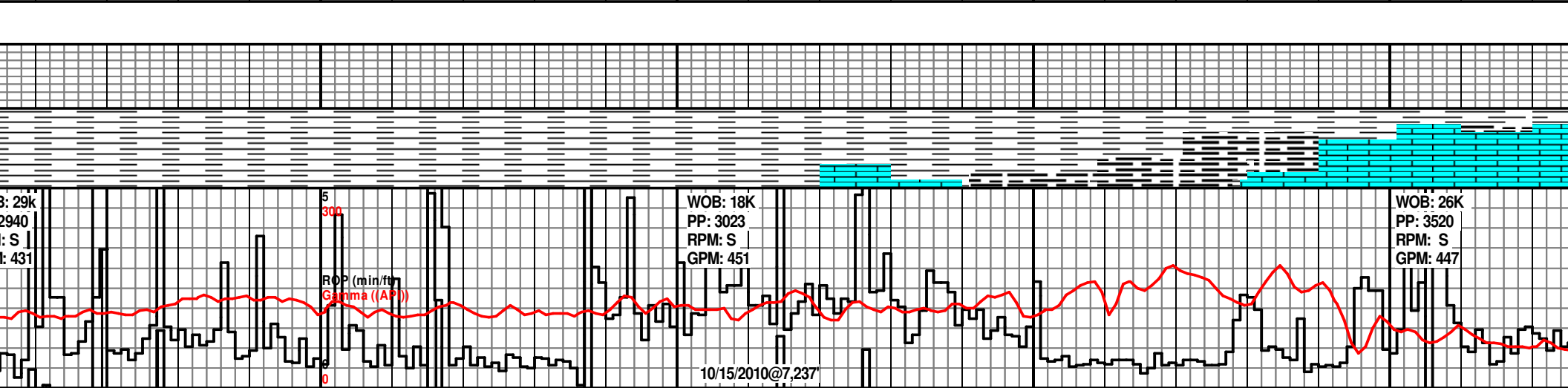
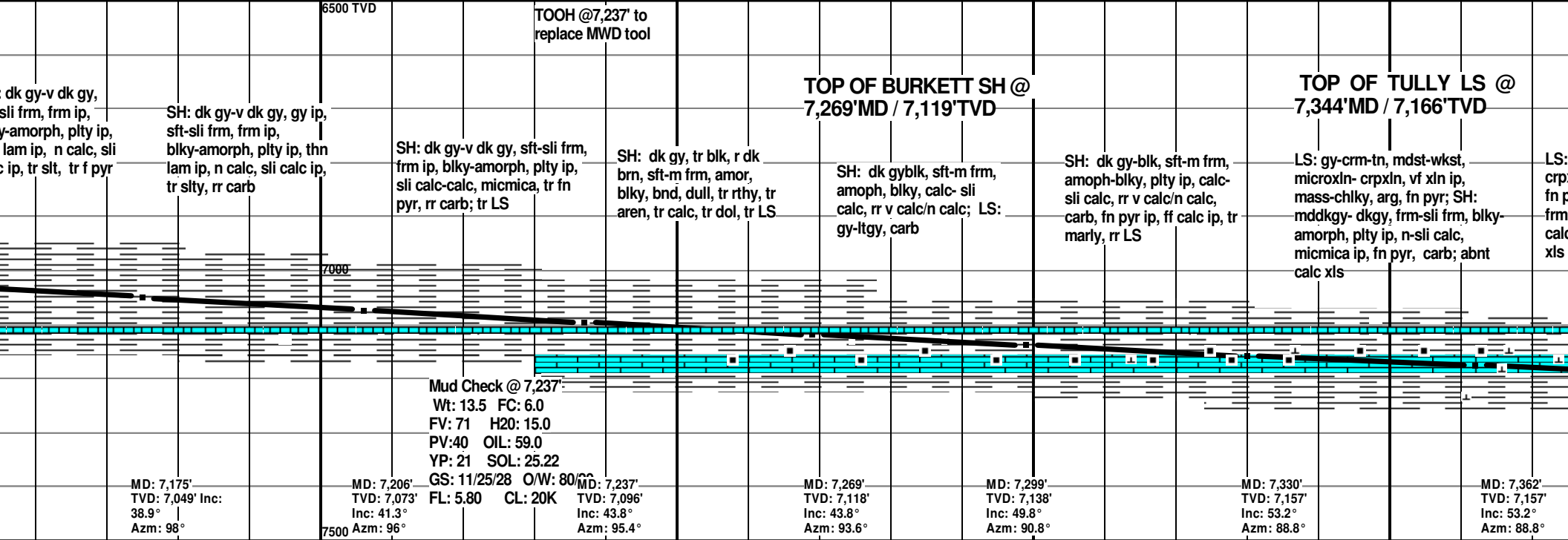
6750 6800 6850 6900

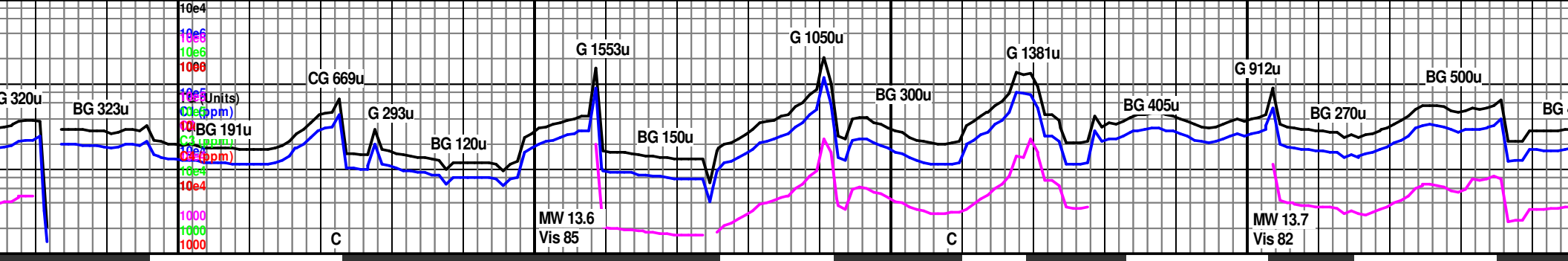






7200 7250 7300 7350

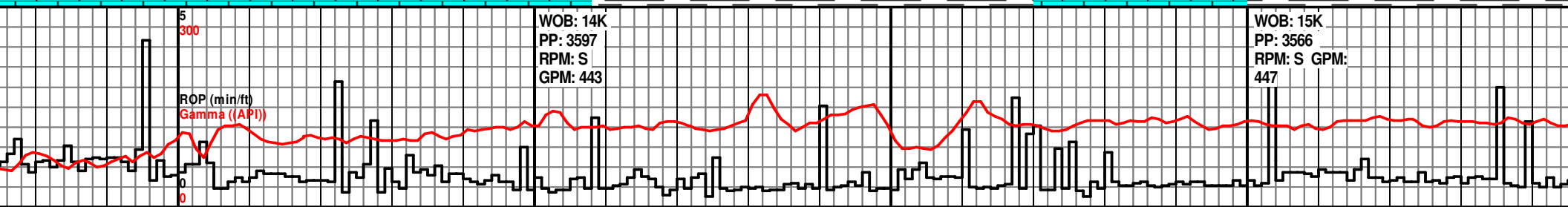
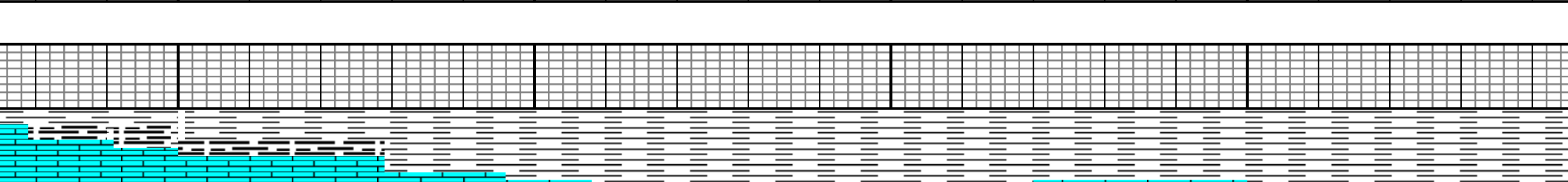




7400 7450 7500 7550

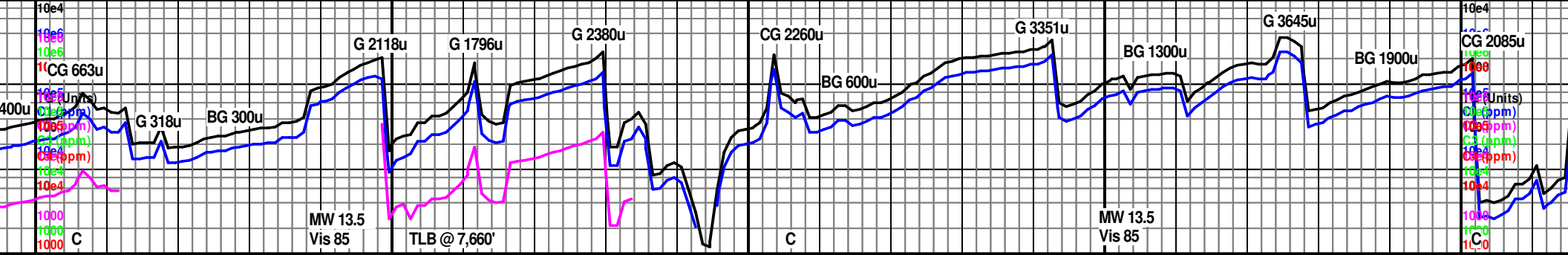
6500 TVD	MD: 7,425' TVD: 7,212' Inc: 55.4° Az: 84.7°	MD: 7,456' TVD: 7,229' Inc: 58.1° Az: 84.8°	MD: 7,487' TVD: 7,245' Inc: 60.4° Az: 83.6°	MD: 7,519' TVD: 7,260' Inc: 61.5° Az: 82.2°	MD: 7,550' TVD: 7,275' Inc: 62.1° Az: 81.5°	MD: 7,581' TVD: 7,289' Inc: 63.8° Az: 81.7°
TOP OF HAMILTON SH @ 7,394' MD / 7,195' TVD						
gy-crm, mdst-wkst, microxln- xln, vf xln ip, mass-chlky, arg, pyr; SH: mddkgy- dkgy, frm-sli ip, blk- amorph, plty ip, n-sli calc, micmica ip, fn pyr, carb; calc	SH: dkgy-blk, sft-frm, sli frm ip, blk-pty, amorph ip, micmica, tr ff calc, fn pyr; LS: gy-tn, mdst-wkst, microxln-vf xln, crpxln ip, mass, chlky, arg ip, fn pyr	SH: medgy-gy, vddkgy ip, frm, sli frm ip, blk-pty, amorph ip, sli calc-calc, micmica, fn pyr	SH: medgy-gy, vddkgy ip, frm-sft, sli frm ip, blk-pty, amorph ip, n-sli calc, micmica, fn pyr; tr calc xls	SH: medgy-gy, vddkgy ip, frm-sft, sli frm ip, blk-pty, amorph ip, calc, n-sli calc ip, micmica, fn pyr	SH: medgy-gy, vddkgy ip, frm-sft, sli frm ip, blk-pty, amorph ip, calc, n-sli calc ip, micmica, fn py; tr LS	SH: dkgy, vddkgy ip, frm-sft, sli frm ip, blk-pty, amorph ip, sli calc, vry calc ip, micmica, fn py
MD: 7,392' TVD: 7,157' Inc: 55° Az: 84.7°						
7500						

Mud Check @ 7,576'
 Wt: 13.5 FC: 6.0
 FV: 43 OIL: 15
 YP: 20 SOL: 25.13
 GS: 12/23/27 O/W: 80/20
 FL: 4.0 CL: 22K



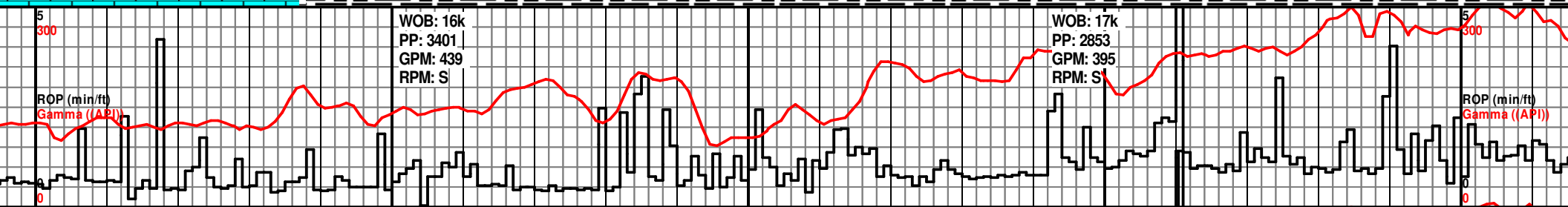
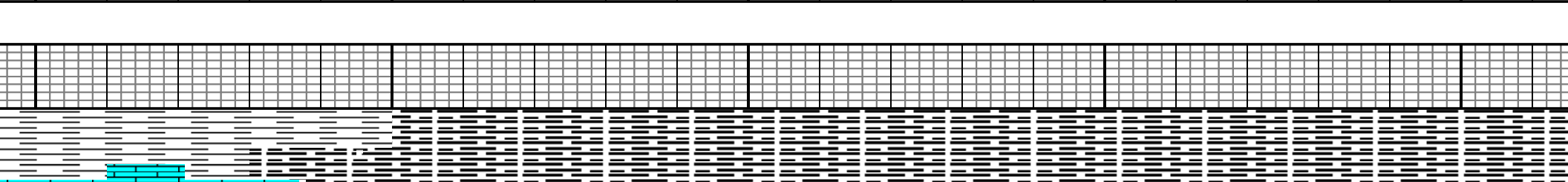
WOB: 14K
 PP: 3597
 RPM: S
 GPM: 443

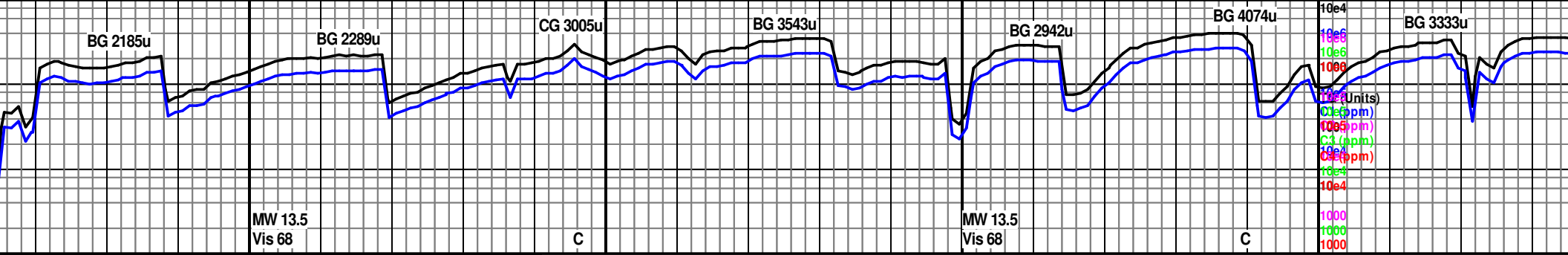
WOB: 15K
 PP: 3566
 RPM: S GPM:
 447



7600 7650 7700 7750 7800

MD: 7,613'	MD: 7,644'	MD: 7,675'	MD: 7,707'	MD: 7,739'	MD: 7,770'	MD: 7,801'
TVD: 7,303'	TVD: 7,315'	TVD: 7,327'	TVD: 7,338'	TVD: 7,348'	TVD: 7,355'	TVD: 7,362'
Inc: 66°	Inc: 67.6°	Inc: 68.1°	Inc: 70.9°	Inc: 73.7°	Inc: 76.6°	Inc: 80.1°
Azm: 81.4°	Azm: 80.6°	Azm: 79.6°	Azm: 81.3°	Azm: 83.0°	Azm: 86.4°	Azm: 86.8°
TOP OF MARCELLUS SH @ 7,634'MD / 7,311'TVD						
ip, frm-sft, y, amorph	SH: dkgy-vddkgy, blk ip, frm-sft, sli frm ip, blk-ply, amorph ip, sli calc, vry calc ip, micmica, fn py; LS: gy-tn, mdst-wkst, vf-f xln, rr crpxln, mass, chlky, arg, fn pyr	SH: dk gy, blk, tr gy, tr dk brn, sft-m frm, tr hd, amor, blk, bnd, tr brit, rthy, dull, tr calc cement	SH: dk gy, blk, tr gy, tr dk brn, sft-m frm, tr hd, amor, blk, bnd, rthy, dull, tr calc cement	SH: dk gy, blk, tr gy-lt gy, v sft -sft, tr m frm, blk, tr amor, bnd, carb, tr calc cement	SH: dk gy, blk, tr gy, sft, tr m frm, blk, tr amor, bnd, carb, tr calc cement	SH: blk, dk gy, sft, tr m frm, blk, tr amor, bnd, tr clst, rthy, dull, calc, carb
7500						7500

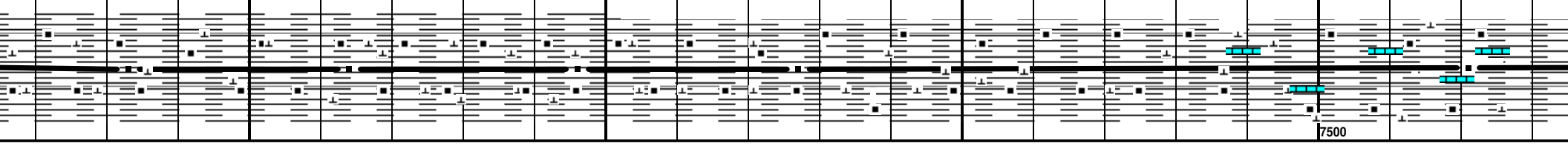




7850 7900 7950 8000

MD: 7,833' TVD: 7,366' Inc: 84.0° Azm: 87.9°	MD: 7,864' TVD: 7,368' Inc: 89.1° Azm: 88.2°	MD: 7,896' TVD: 7,368.39' Inc: 88.2° Azm: 91.3°	MD: 7,927' TVD: 7,367.61' Inc: 91.6° Azm: 87.9°	MD: 8,021' TVD: 7,362.23' Inc: 91.3° Azm: 88.5°
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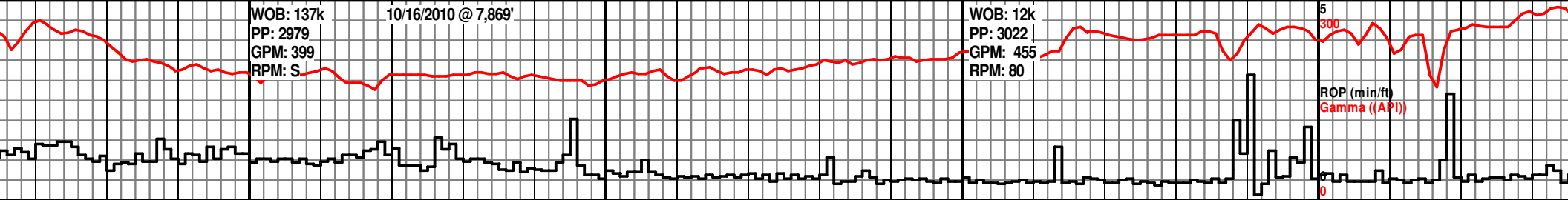
gy, v sft, tr amor, ill, calc,	SH: dk gy, blk, tr gy, v sft-sft, tr m frm, blk, tr amor, bnd, carb, tr calc	SH: blk, dk gy, v dk gy, tr dk brn, sft, blk, bnd, tr clst, rthy, dull, calc, carb, tr aren & slty	SH: blk, dk gy, v dk gy, tr dk brn, sft, blk, bnd, tr clst, rthy, dull, calc, carb	SH: blk, dk gy, v dk gy, m frm-sft, blk, bnd, tr clst, rthy, dull, calc, carb	SH: blk, dk gy, v dk gy, tr dk brn, sft, blk, bnd, tr clst, rthy, dull, calc, carb, tr slty	SH: blk, dk gy, v dk gy, tr dk brn, sft, blk, bnd, tr clst, rthy, dull, calc, carb, tr slty, tr LS	SH: blk, dk gy, v dk gy, tr dk brn, sft, blk, bnd, tr clst, rthy, dull, calc, carb, tr slty, Tr LS
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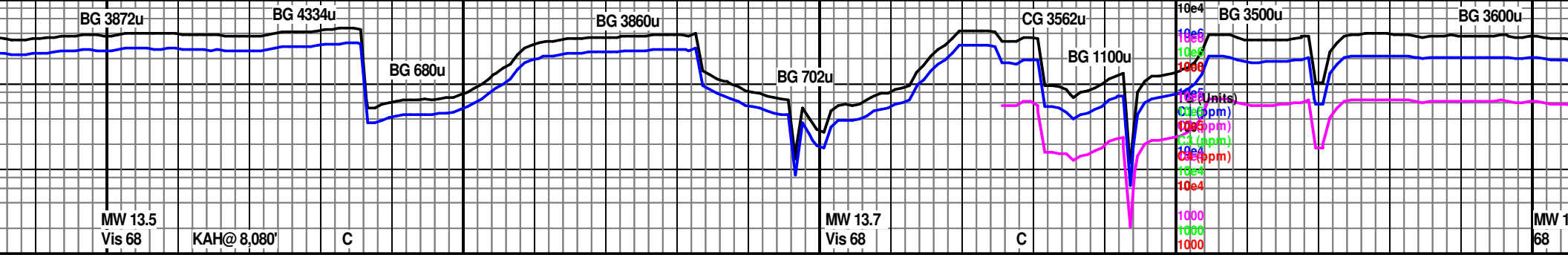


WOB: 137k
PP: 2979
GPM: 399
RPM: S

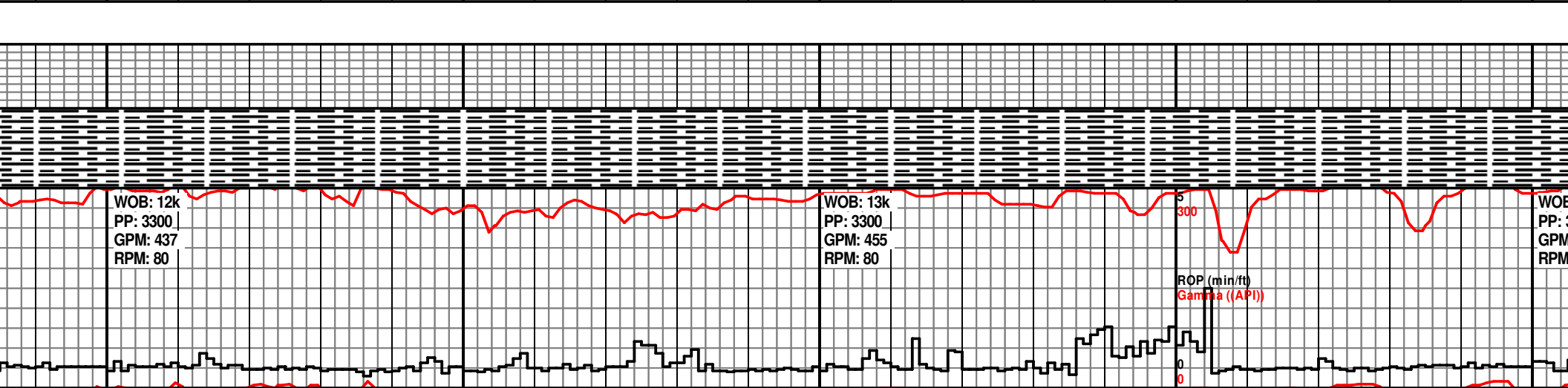
10/16/2010 @ 7,869'

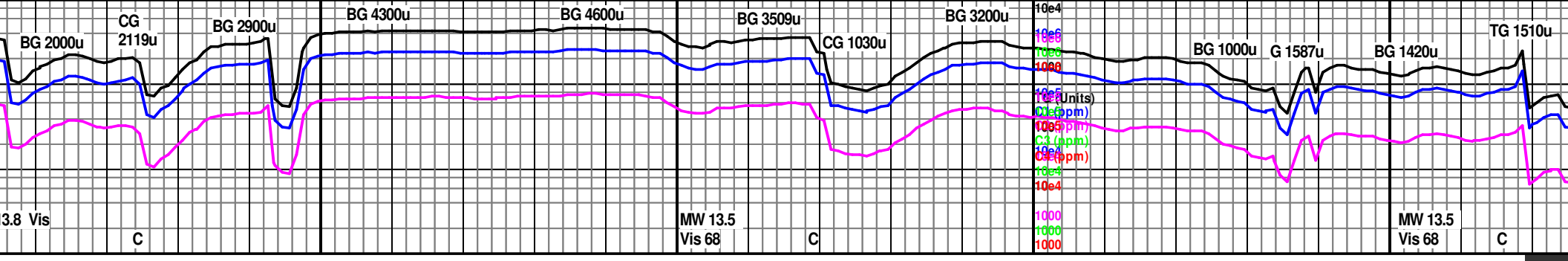
WOB: 12k
PP: 3022
GPM: 455
RPM: 80



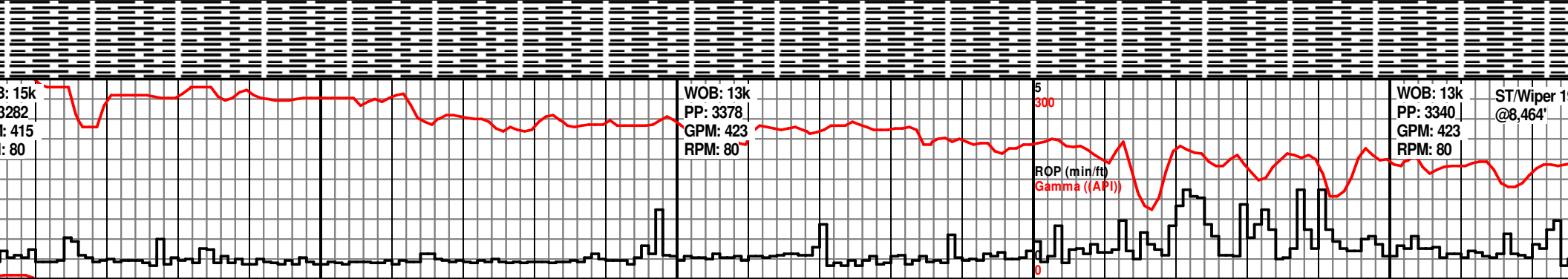


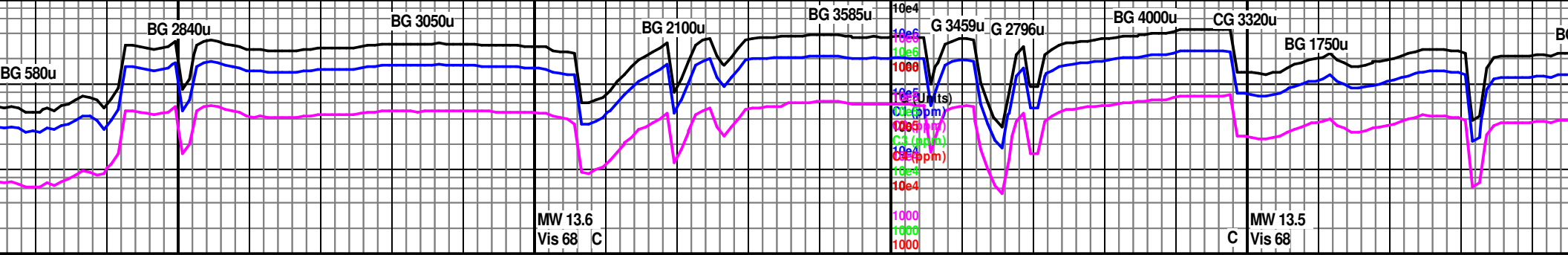
8050				8100				8150				8200				8250							
								MD: 8,116' TVD: 7,362.98' Inc: 91.4° Azm: 87.9°				7000 MD: 8,209' TVD: 7,360.4' Inc: 91.8° Azm: 84.3°											
SH: blk, vddkgy ip, frm-sft, sli frm ip, blk-ply, amorph ip, sli calc, vry calc ip, micmica, fn pyr, carb				SH: blk, vddkgy ip, frm-sft, sli frm ip, blk-ply, amorph ip, sli calc, micmica, fn pyr, carb-v carb				SH: blk, vddkgy ip, frm-sft, sli frm ip, blk-ply, amorph ip, sli calc, micmica, fn pyr, carb-v carb				SH: blk, vddkgy ip, frm-sft, sli frm ip, blk-ply, amorph ip, sli calc, micmica, fn pyr, carb-v carb; calc xls				7500 SH: blk, vddkgy ip, frm-sft, sli frm ip, blk-ply, amorph ip, sli calc, micmica, fn pyr, carb-v carb, ff calc: tr calc xls				SH: blk, vddkgy ip, frm-sft, sli frm ip, blk-ply, amorph ip, sli calc, micmica, fn pyr, carb, ff calc ip; calc xls			



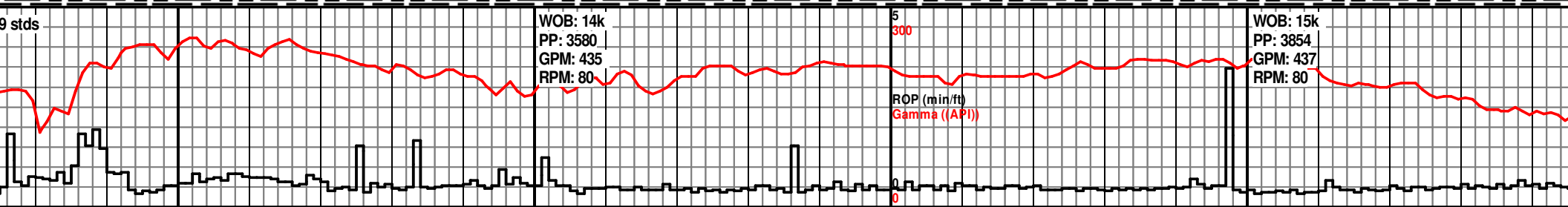
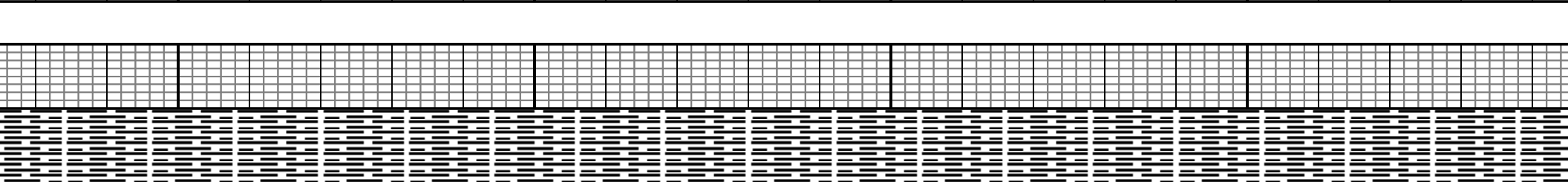


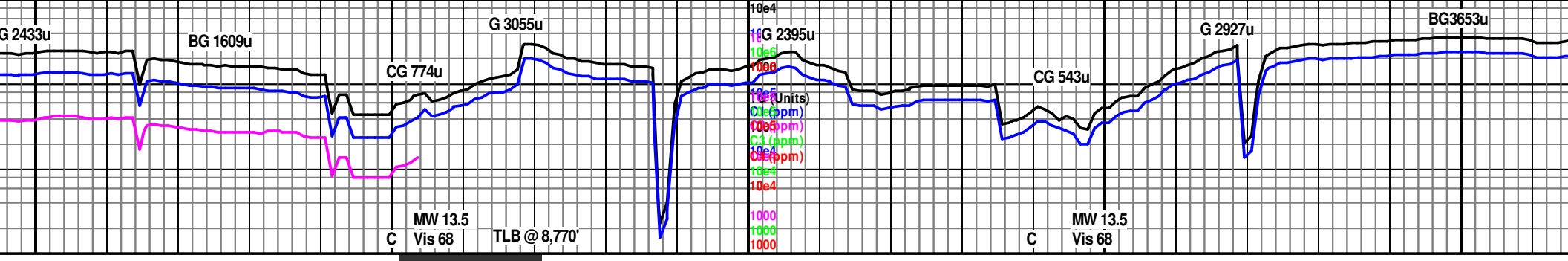
8300		8350		8400		8450		ST/WIPER @	
Mud Check @ 8,270' Wt: 13.6 FC: 3.0 FV: 68 H2O: 15 PV: 43 OIL: 58.0 YP: 43 SOL: 25.22 GS: 28/30 O/W: 79/21 FL: 4.0 CL: 20K		MD: 8,303' TVD: 7,357.9' Inc: 91.3° Azm: 84.3°				MD: 8,398' TVD: 7,356' Inc: 90.4° Azm: 84°			
SH: blk, vddkgy ip, frm-sft, sli frm ip, blk-ply, amorph ip, sli calc, micmica, fn pyr, carb- v carb		SH: blk, frm-sft, sli frm ip, blk-ply, amorph ip, n calc, micmica, fn pyr, carb- v carb		SH: blk, frm-sft, blk-ply, amorph ip, n calc, micmica, fn pyr, carb- v carb		SH: blk, sli frm-sft, frm ip, blk-ply, amorph ip, n calc, micmica, fn pyr, carb- v carb		SH: blk, sli frm-sft, blk-ply, amorph ip, n calc, micmica, fn pyr, carb- v carb	
SH: blk, sli frm-sft, blk-ply, amorph ip, n calc, micmica, fn pyr, carb- v carb		SH: blk, sli frm-sft, blk-ply, amorph ip, calc, v calc ip, micmica, fn pyr, carb		SH: blk, sli frm-sft, blk-ply, amorph ip, sli calc-calc, v calc ip, micmica, fn pyr, carb, tr ff calc					



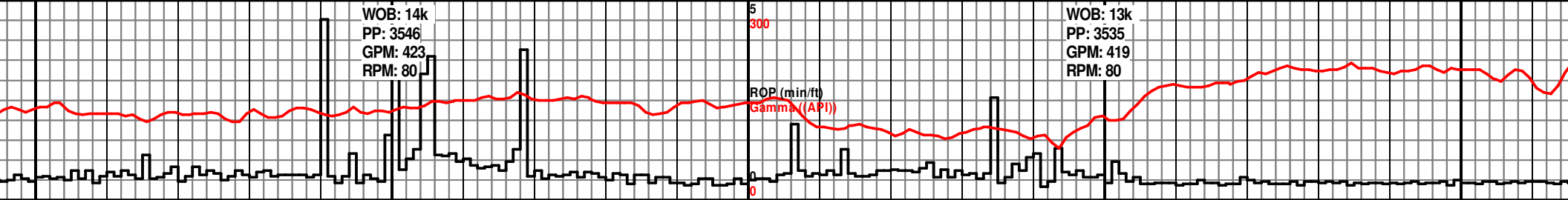
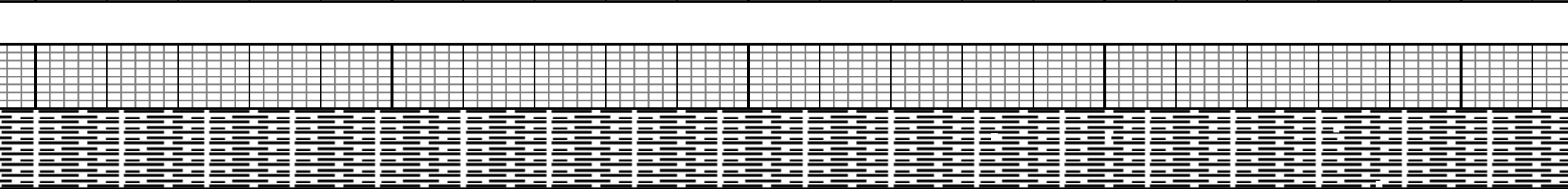
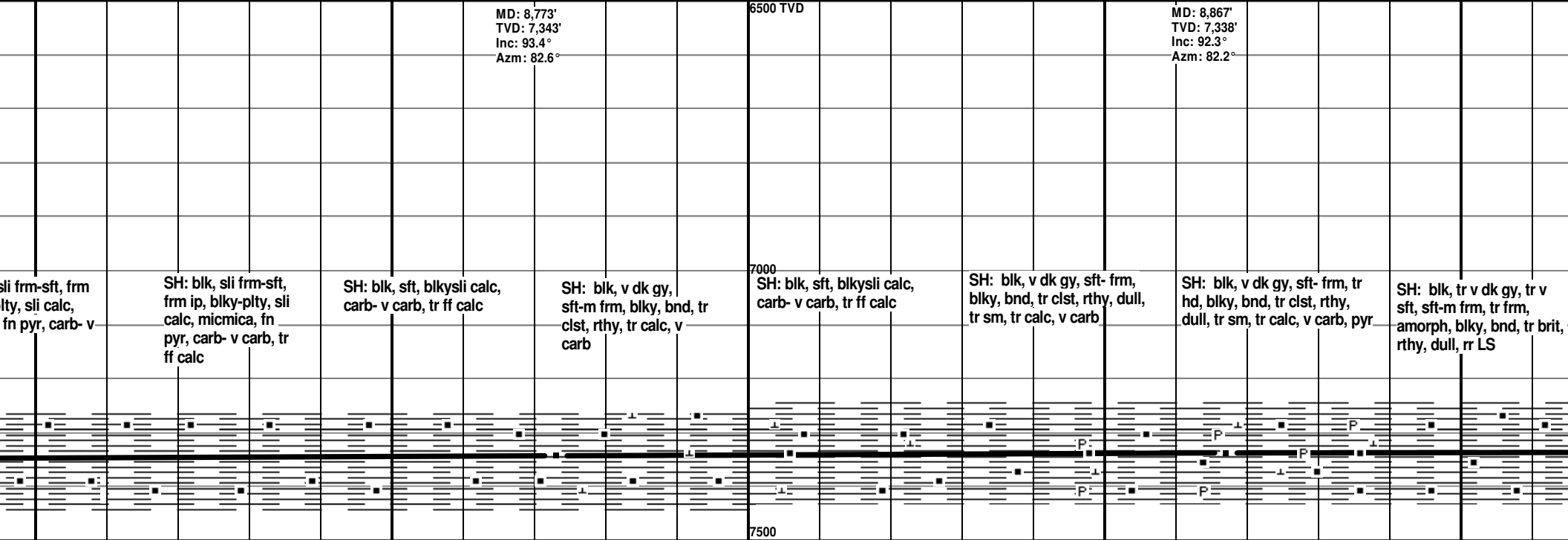


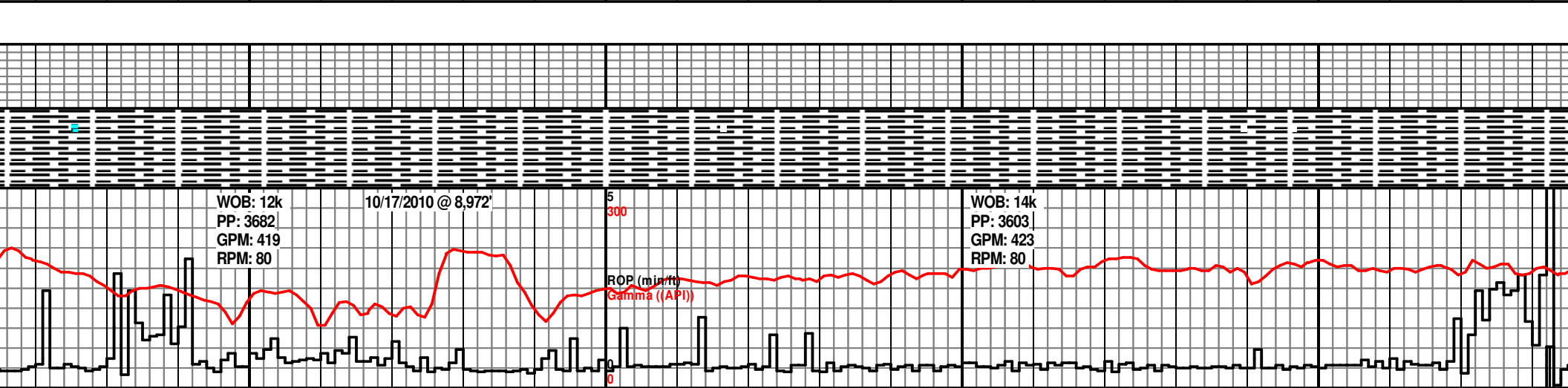
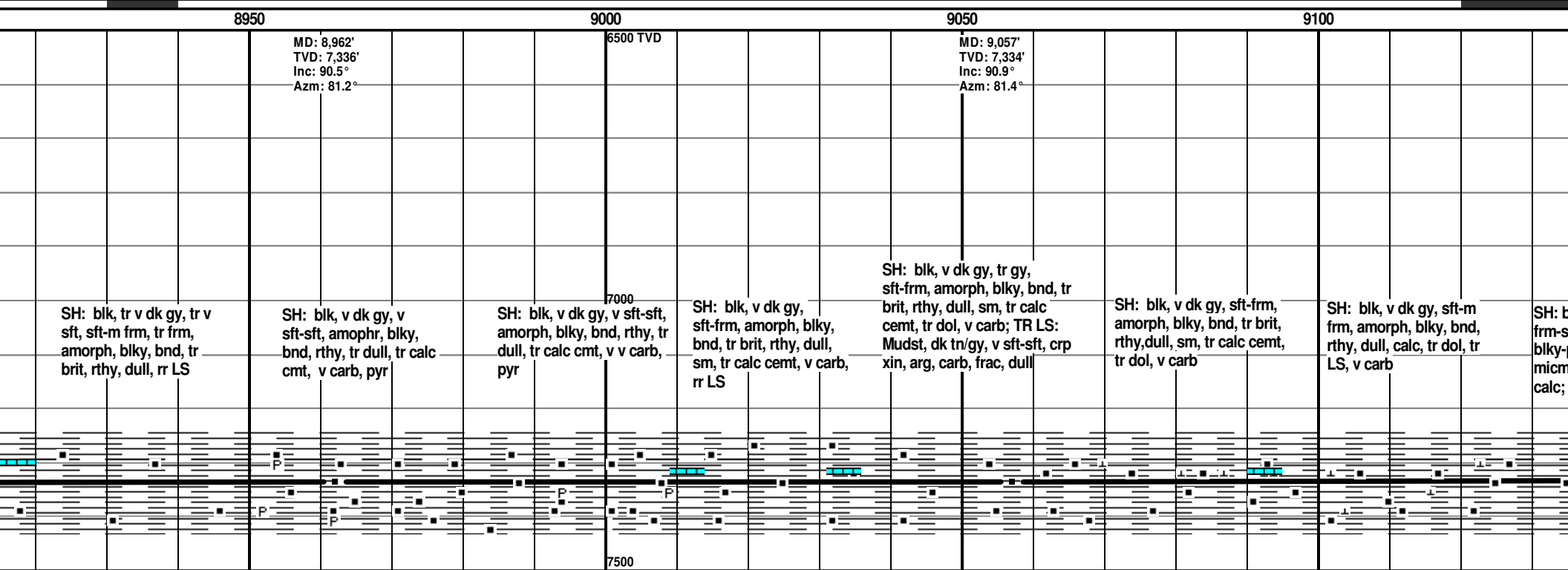
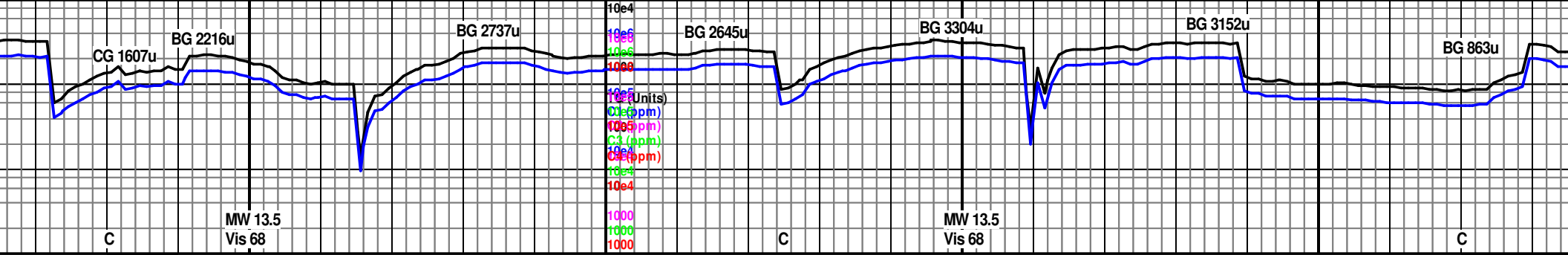
8500	8550	8600	8650
MD: 8,492' TVD: 7,354' Inc: 92.6° Azm: 83.8°		MD: 8,586' TVD: 7,350' Inc: 92.1° Azm: 83.3°	Mud Check @ 8,649' Wt: 13.8 FC: 2.0 PV: 72 H2O: 15 YP: 51 OIL: 58.0 GS: 28/30 O/W: 80/20 FL: 4.0 CL: 24K
SH: blk, sli frm-sft, blk-pty, amorph ip, calc, micmica, fn pyr, carb- v carb, tr ff calc	SH: blk, sli frm-sft, blk-pty, amorph ip, calc, micmica, fn pyr, carb- v carb; calc xls	SH: blk, sli frm-sft, blk-pty, amorph ip, sli calc-calc, micmica, fn pyr, carb- v carb, ff calc	SH: blk, sli frm-sft, blk-pty, amorph ip, sli calc-calc, micmica, fn pyr, carb- v carb, sme ff calc
			SH: blk, sli frm-sft, frm ip, blk-pty, amorph ip, sli calc-calc, micmica, fn pyr, carb- v carb
			SH: blk, sli frm-sft, frm ip, blk-pty, amorph ip, sli calc-calc, micmica, fn pyr, carb- v carb

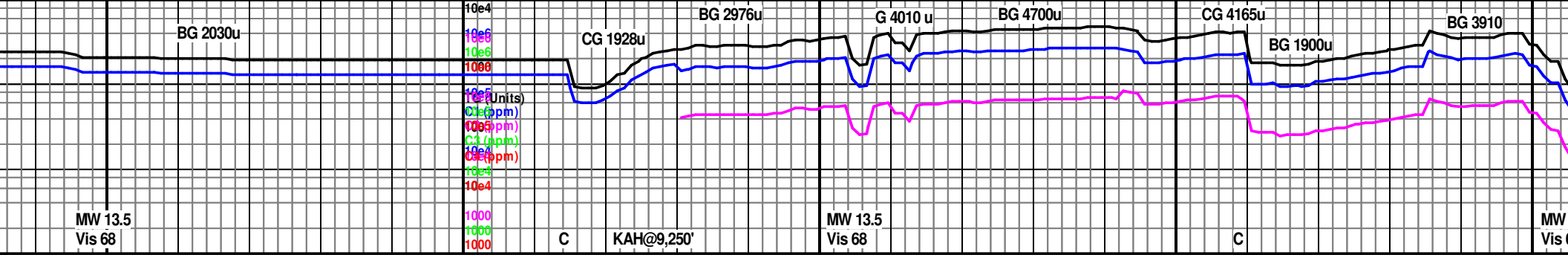




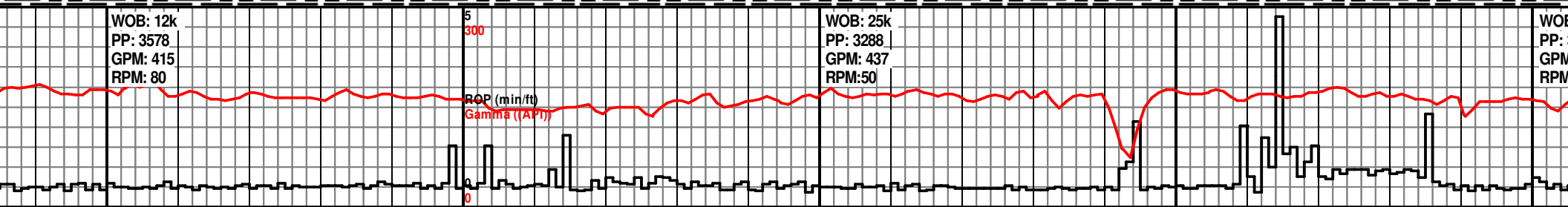
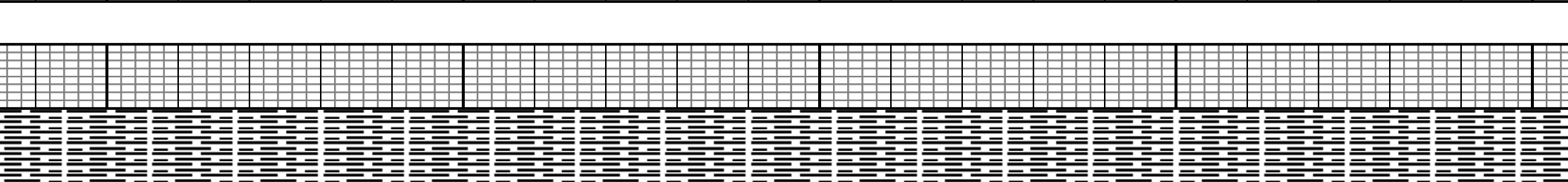
8700 8750 8800 8850 8900

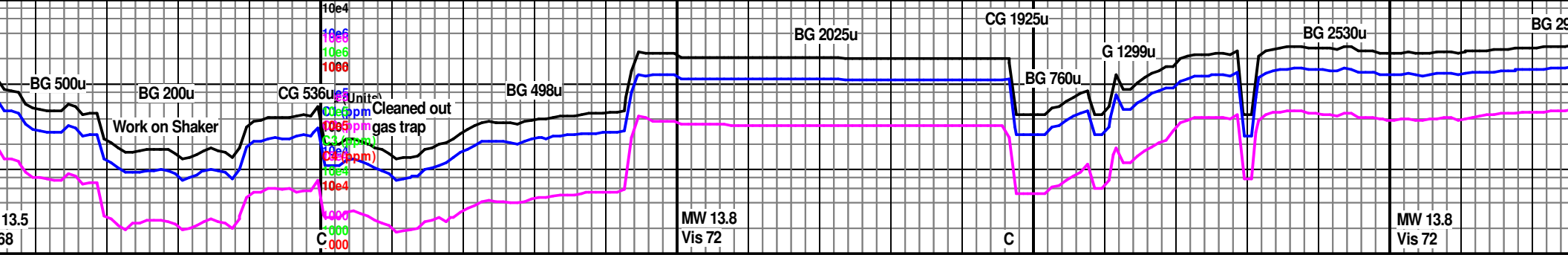




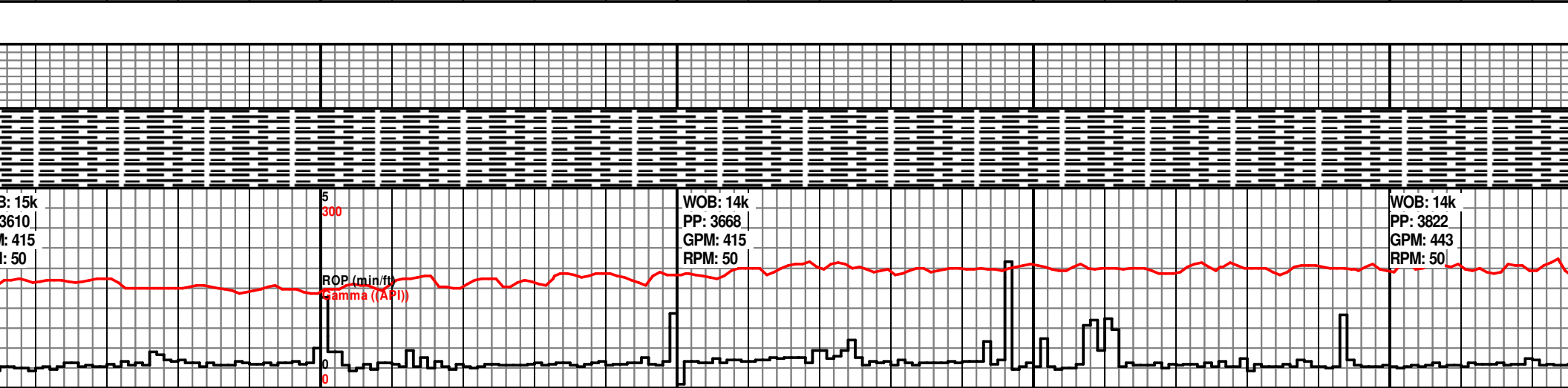


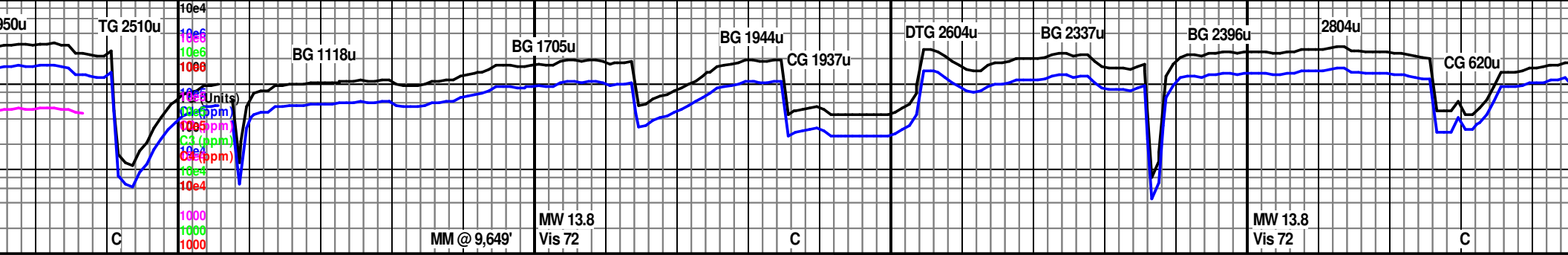
9150	9200	9250	9300	9350
MD: 9,151' TVD: 7,333' Inc: 90.2° Az: 83.2°	6500 TVD	MD: 9,246' TVD: 7,334' Inc: 89.1° Az: 82.2°		MD: 9,246' TVD: 7,334' Inc: 89.1° Az: 82.2°
SH: blk, vddkgy ip, frn-sli frn ,sft ip, blk-pty, amorph ip, micmica, fn pyr ip, calc, carb; tr calc xls	SH: blk, vddkgy ip, frn-sli frn ,sft ip, blk-pty, amorph ip, micmica, fn pyr ip, calc, carb; tr calc xls	SH: blk, vddkgy ip, frn-sli frn ,sft ip, blk-pty, amorph ip, micmica, fn pyr ip, calc, carb; tr calc xls	SH: blk, vddkgy ip, sli frn ,sft frn ,sft ip, blk-pty, amorph ip, micmica, fn pyr ip, calc, carb; tr calc xls	SH: blk, vddkgy ip, sli frn ,sft ip, rr frn, blk-pty, amorph ip, micmica, fn pyr ip, n-sli calc, carb



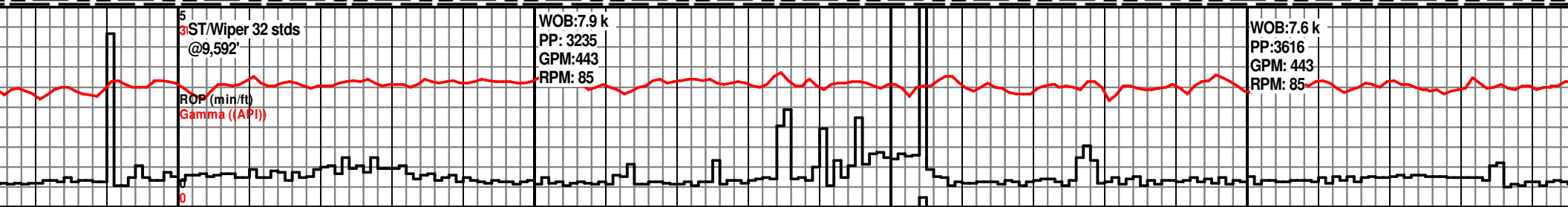
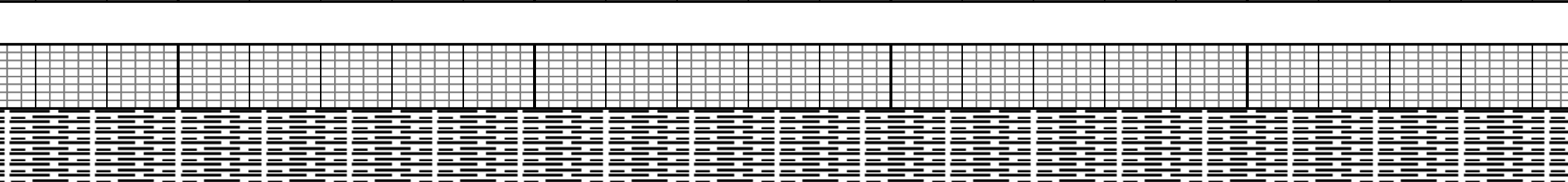


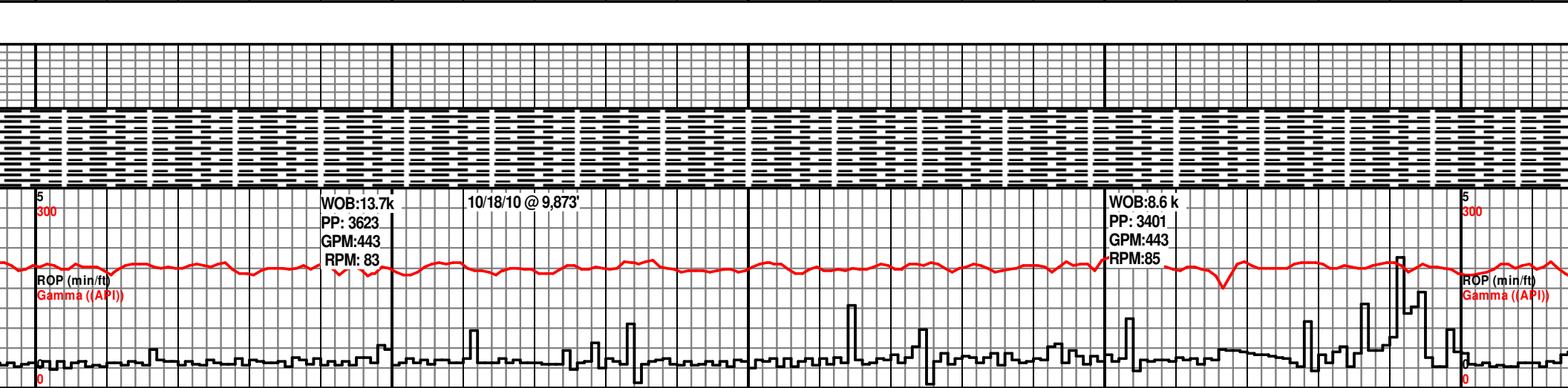
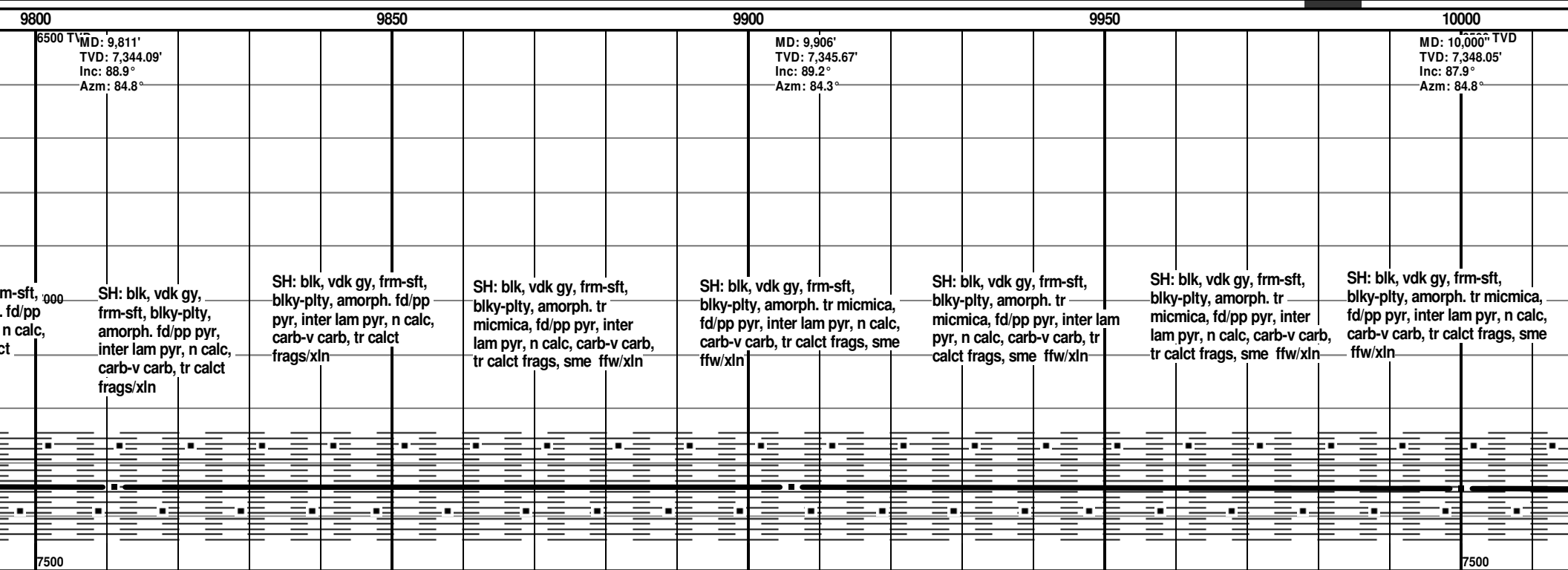
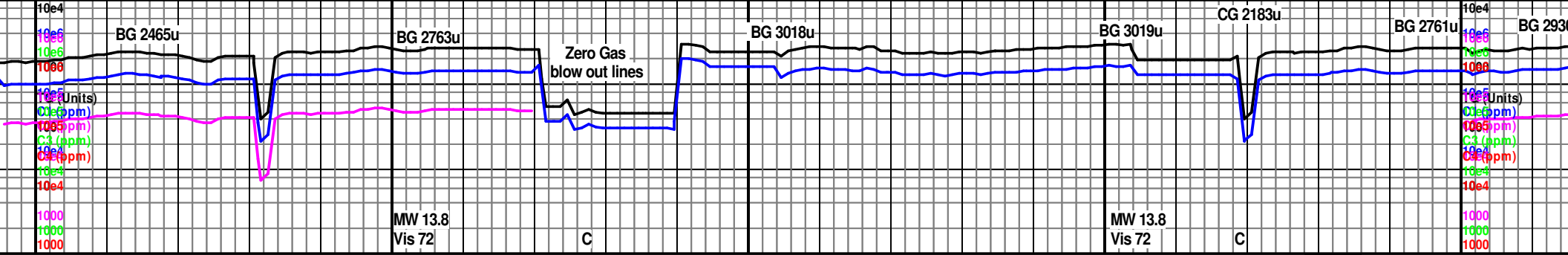
9400		9450		9500		9550	
9,350'	7,334'	MD: 9,433'	TVD: 7,335'			MD: 9,528'	TVD: 7,338'
80.4°		Inc: 88.3°				Inc: 88.8°	
85.5°		Azm: 83.6°				Azm: 83.2°	
	6500 TVD						
	7000						
SH: blk, vddkgy ip, sli frm, sft ip, rr frm, blk-ply, amorph ip, micmica, fn pyr ip, calc, v calc ip, carb	SH: blk, vddkgy ip, sli frm-sft, frm ip, blk-ply, amorph ip, micmica, fn pyr ip, calc, v calc ip, carb	SH: blk, vddkgy ip, sli frm-sft, frm ip, blk-ply, amorph ip, micmica, fn pyr ip, calc, v calc ip, carb	SH: blk, vddkgy ip, frm-sft, blk-ply, amorph ip, micmica, fn pyr ip, n-sli calc, rr v calc, carb, mas pyr ip	SH: blk, vddkgy ip, frm-sft, blk-ply, amorph ip, micmica, fn pyr ip, n calc, carb-v carb	SH: blk, vddkgy ip, frm-sft, blk-ply, amorph ip, micmica, fn pyr ip, n calc, carb-v carb; tr calc xls	SH: blk, vddkgy ip, frm-sft, blk-ply, amorph ip, micmica, fn pyr ip, n calc, carb-v carb; tr calc xls	SH: blk, vddkgy ip, frm-sft, blk-ply, amorph ip, micmica, fn pyr ip, n calc, carb-v carb; tr calc xls
	7500						

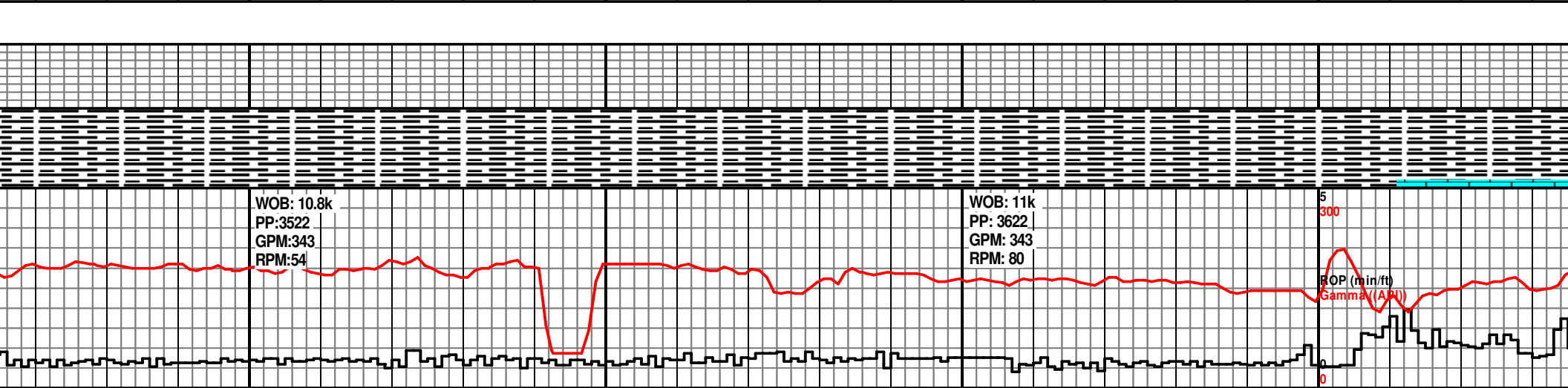
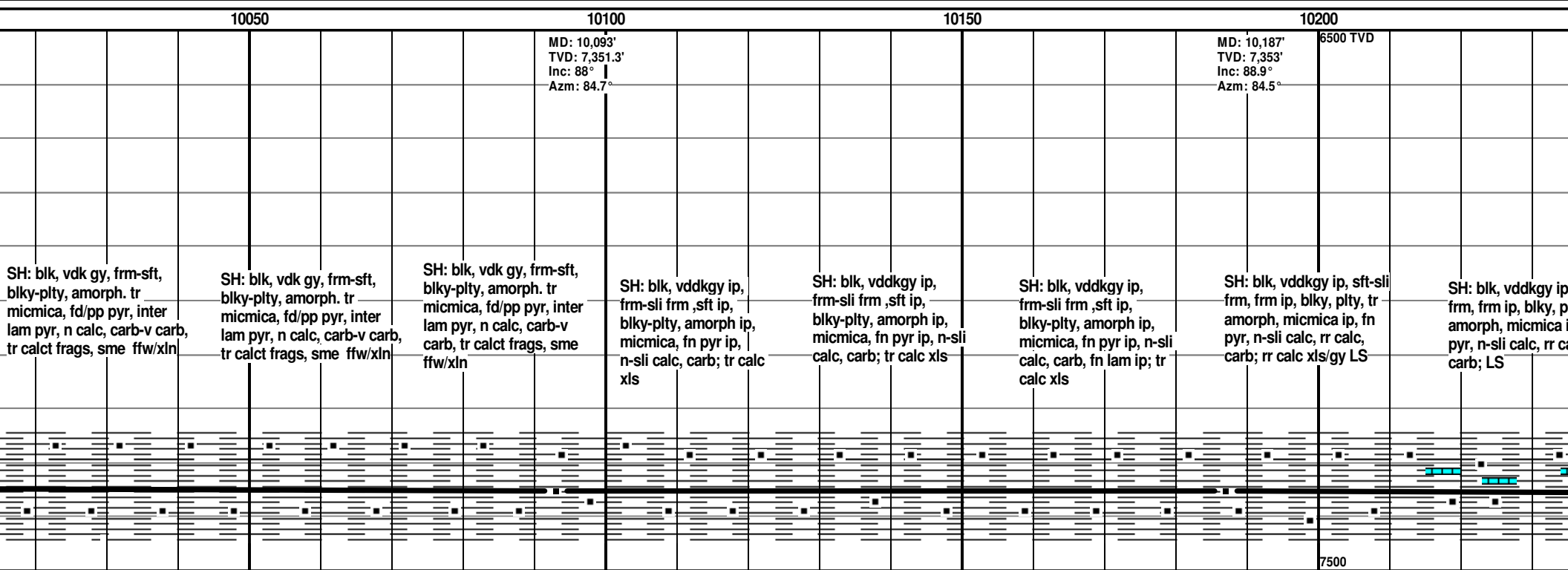
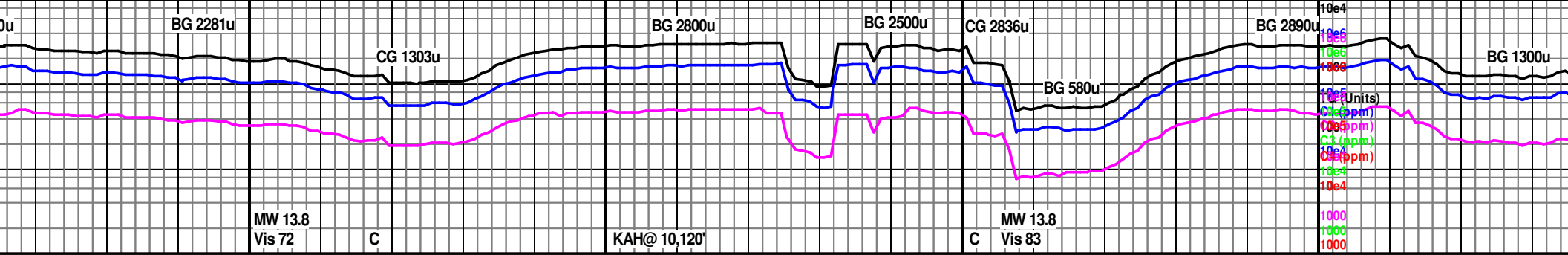


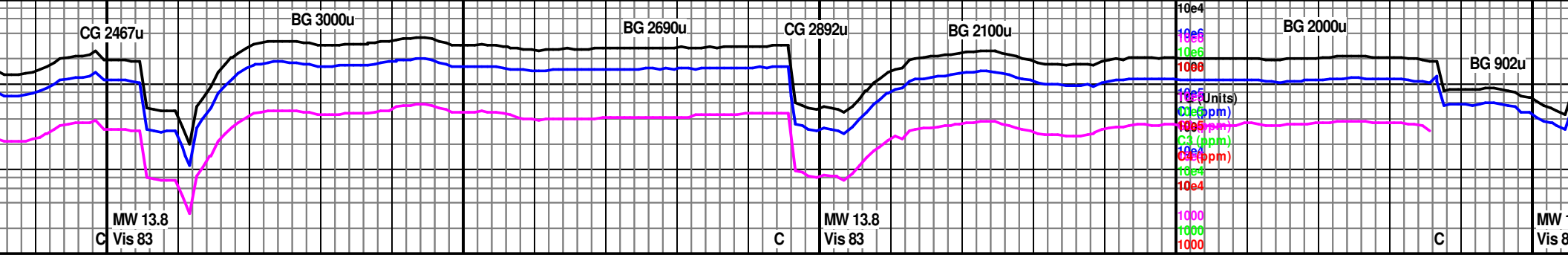


9600	9650	9700	9750
ST/WIPER @9,592'MD			
MD: 9,626' TVD: 7,340.15' Inc: 89.1° Azm: 83.2°		MD: 9,717' TVD: 7,342.04' Inc: 88.6° Azm: 84.9°	
SH: blk, vdk gy, frm-sft, blk-pty, amorph, micmica, fd/pp pyr, n calc, carb-v carb, tr calct frags/xln	SH: blk, vdk gy, frm-sft, blk-pty, amorph, micmica, fd/pp pyr, n calc, carb-v carb, tr calct frags/xln	SH: blk, vdk gy, frm-sft, blk-pty, amorph, fd/pp pyr, inter lam pyr, n calc, carb-v carb, tr calct frags/xln	SH: blk, vdk gy, frm-sft, blk-pty, amorph, fd/pp pyr, inter lam pyr, n calc, carb-v carb, tr calct frags/xln
7500			



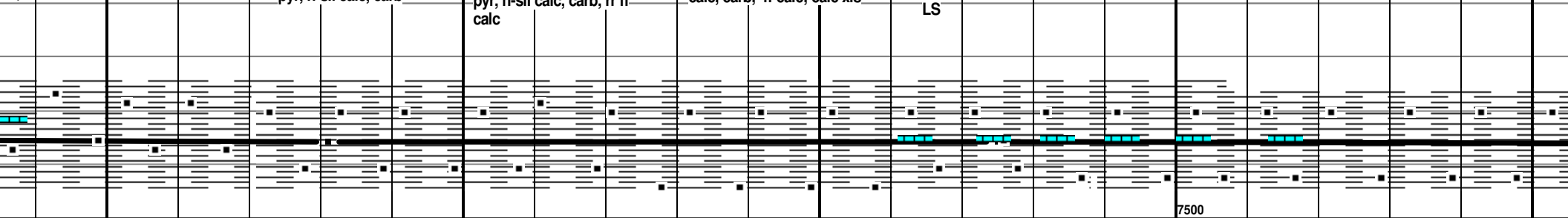




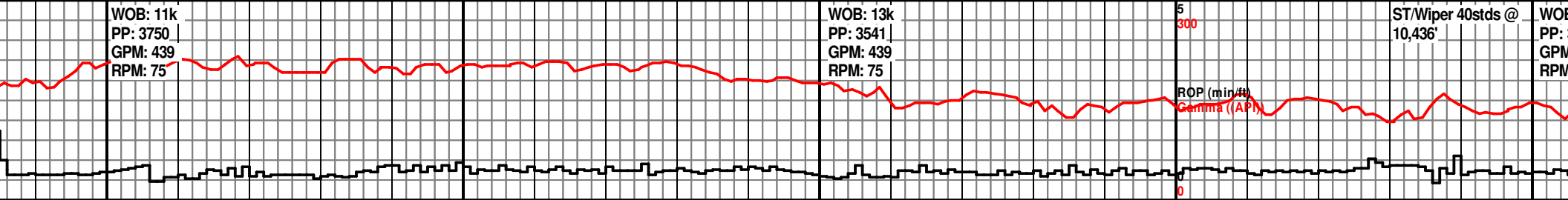
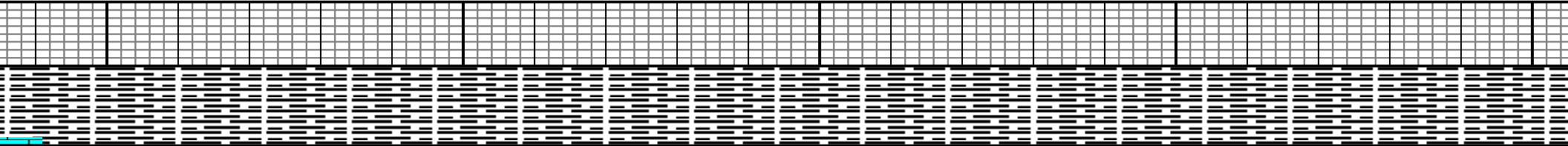


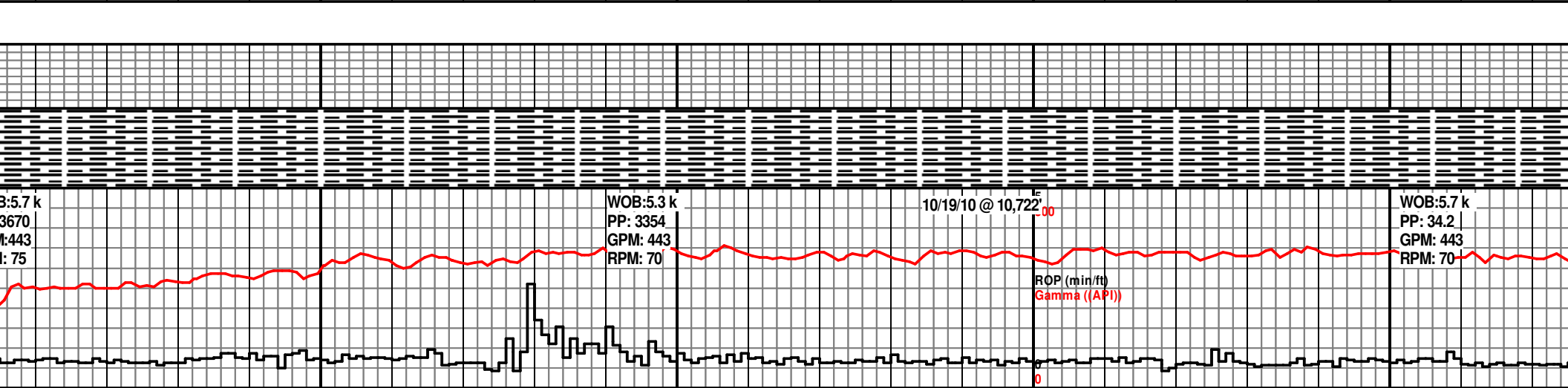
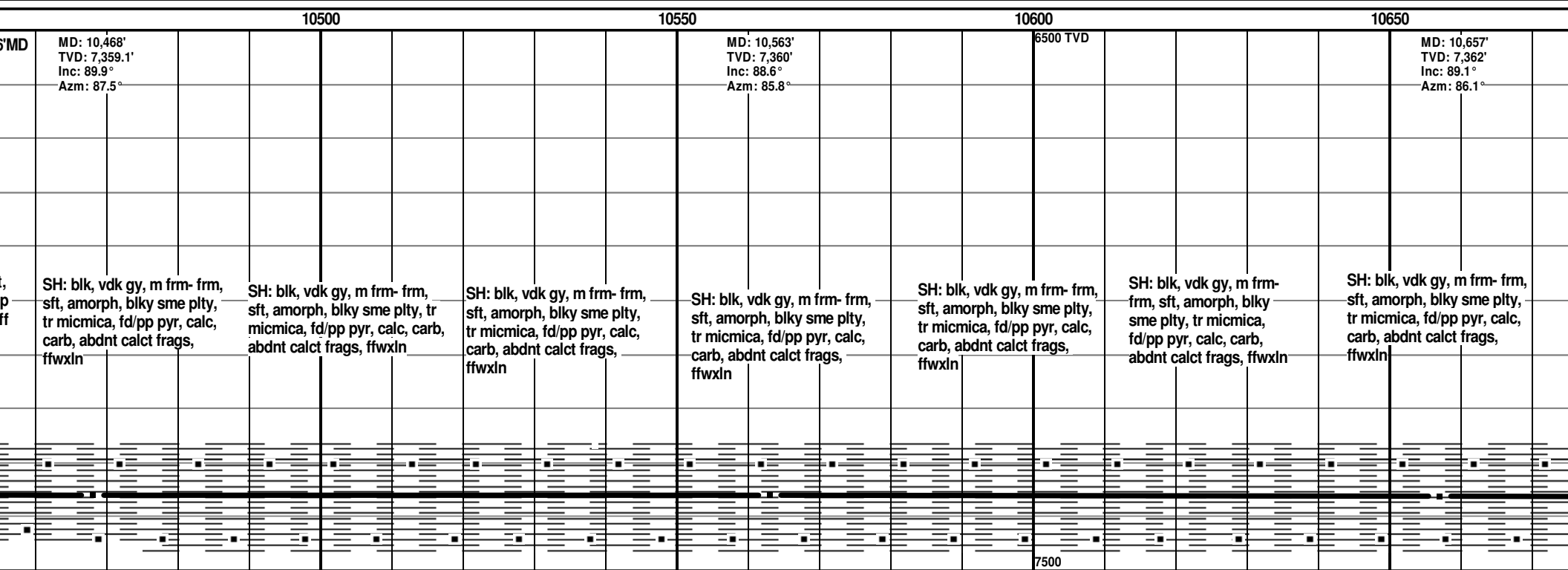
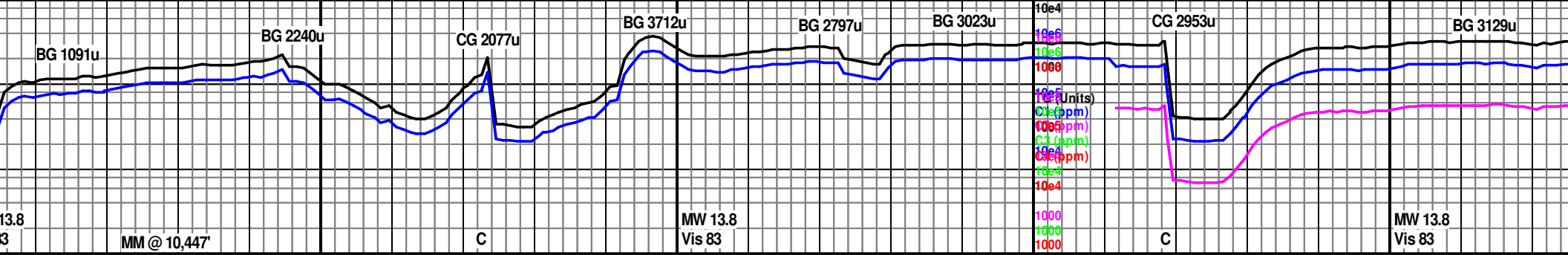
10250 10300 10350 10400 10450

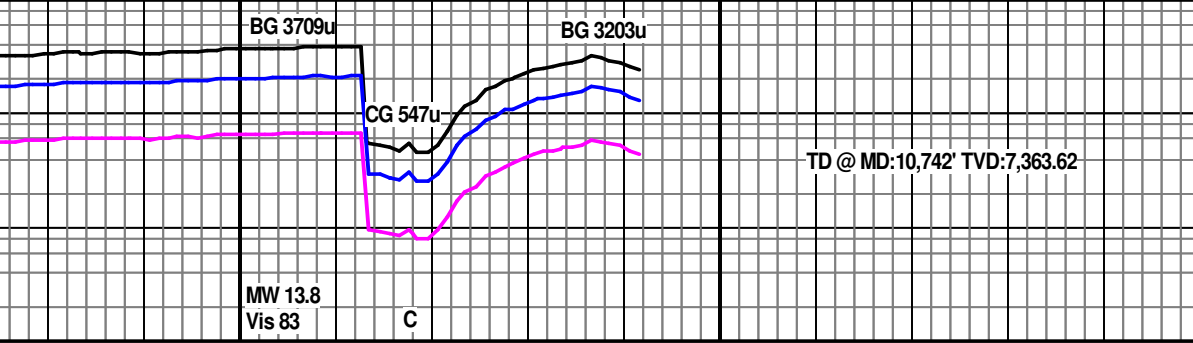
		MD: 10,281' TVD: 7,356.05' Inc: 88.5° Azm: 83.4°			MD: 10,375' TVD: 7,358' Inc: 88.9° Azm: 85°	6500 TVD		ST/WIPER @ 10,436'
sft-sli pty, tr p, fn calc,	SH: blk, vddkgy ip, sft-sli frm, frm ip, blk, pty, tr amorph, micmica ip, fn pyr, n-sli calc, carb	SH: blk, vddkgy ip, frm, sft, sli frm ip, blk, pty, tr amorph, micmica ip, fn pyr, n-sli calc, carb	SH: blk, vddkgy ip, frm, sft, blk, pty, tr amorph, micmica ip, fn pyr, n-sli calc, carb, rr ff calc	SH: blk, vddkgy ip, frm, sft, blk, pty, tr amorph, micmica ip, fn/pp pyr, calc, carb, ff calc; calc xls	SH: blk, vddkgy ip, frm, sft, blk, pty, micmica ip, fn/pp pyr, calc- vry calc, carb, ff calc; calc xls, tr LS	SH: blk, vddkgy ip, frm, sft, blk, pty, micmica ip, fn/pp pyr, calc-vry calc ip, carb, ff calc; calc xls, tr LS		SH: blk, vddkgy ip, frm, sft, blk, pty, micmica ip, fn/pp pyr, calc-vry calc ip, carb, calc; calc xls



7500







10700 10750 10800

<p>SH: blk, vdk gy, m frm-frm, sft, amorph, blk y sme plty, tr micmica, fd/pp pyr, calc, carb, abdnt calct frags, ffwxln</p>	<p>Bit #7 drilled 3,754' in 60hrs w/ an Average ROP: 63ft/hr</p> <p>SH: blk, vdk gy, m frm-frm, sft, amorph, blk y sme plty, tr micmica, fd/pp pyr, calc, carb, abdnt calct frags, ffwxln</p>	<p>MD: 10,742' TVD: 7,363' Inc: 89.1° Azm: 86.1°</p> <p>SH: blk, vdk gy, m frm-frm, sft, amorph, blk y sme plty, tr micmica, fd/pp pyr, calc, carb, abdnt calct frags, ffwxln</p>	<p>ST/WIPER @10,742'MD</p> <p>Loggers released from Duty @ 12:30pm 10/19/2010</p> <p>TD @ MD:10,742' TVD: 7,363.62'</p>
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