



Scale: 5" / 100'  
Measured Depth Log

**Well Name** Sickler 27N-34HZ

**Location** SWSE: SEC 34, TWP 2N 67W 6 PM

**State** COLORADO **County** WELD

**Country** U.S.A. **Rig Number** XTREME 6

**API Number** 05123393010000 **AFE #** 2094572.DRL

**Region** D-J BASIN **Field** WATTENBERG

**Spud Date** 6/30/2014 **Drilling Completed** 7/7/2014

**Surface Coordinates** 363' FSL, 1497' FEL

**Bottom Hole Coordinates** 50' FFNLL, 1500' FFELL

**Ground Elevation** 4,949' **K.B. Elevation** 4,969'

**Logged Interval** 7,200' **To** 12,981' **Total Depth** 12,981'

**Formation** NIOBRARA

**Type of Drilling Fluid** LSND/ PHPA

## Operator

**Company** Anadarko

**Address** Granite Tower  
1099 18th St. #1800  
Denver, CO 80202  
(JG)

## Geologist

**Name** ISAAC SMITH & WEDGE HOWLAND (LATERAL)

**Company** COLUMBINE LOGGING INC.

**Address** 2385 S. Lipan Street  
Denver, CO 80223  
Phone: 303-289-7764

## Zone Color Coding

Oil  
Note  
Error


















































Condensate  
Core  
Water

G  
Pl  
S

## Rock Types

UNKNOWN	COAL	MARLSTONE	SHALY SANDSTONE
ANHYDRITE	CONGLOMERATE	METAMORPHIC	SHALY SILTSTONE
BENTONITE	DOLOMITE	NO SAMPLE	SILT SHALE
BRECCIA	DOLOMITIC LIMESTONE	SALT	SILTSTONE
CHALK	GRANITE	SANDSTONE	TILL
CEMENT	GYPSSUM	SALT-PEPPER SAND	TUFF
CHERT	IGNEOUS	SHALE	WELDED TUFF
CLAY CHOKE SAND	SIDERITE or LIMONITE	SHALE COLORED	
CLAYSTONE	LIMESTONE	SHALE GRAY	

## Accessories

Fossils	
 GASTROPOD	 ARGILLITE GRAIN
 INOCERAMUS	 B BENTONITE
 ALGAE	 BITUMENOUS SUBSTANCE
 AMPHIPORA	 BRECCIA FRAGMENTS
 BELEMNITE	 CALCAREOUS
 BIOCLASTIC	 CARBONACEOUS FLAKES
 BRACHIOPOD	 CHERT
 BRYOZOA	 CHERT
 CEPHALOPOD	 COAL - THIN BEDS
 CORAL	 DOLOMITIC
 CRINOID	 FELDSPAR
 ECHINOID	 FERRUGINOUS PELLET
 FISH	 FERRUGINOUS
 FORAMINIFERA	 GLAUCONITE
 F FOSSIL	 GYPSIFEROUS
	 TUFFACEOUS
	 HEAVY MINERAL
	 K KAOLIN
	 M MARCASITE
	 T MARLSTONE
	 U MICACEOUS
	 X MINERAL CRYSTALS
	 N NODULES
	 P PHOSPHATE PELLETS
	 P PYRITE
	 B SALT CAST
	 S SANDY
	 S SIDERITE
	 U SILICEOUS
	 S SILTY
	 S STRINGER
	 S SHALE STRINGER
	 S SILTSTONE STRINGER
	 S SILTSTONE STRINGER








## Oil Show

**P** PINPOINT






































# Engineering

- EVEN
- QUESTIONABLE
- BIT
- SPOTTED STAINING
- ▲ CONNECTION (UP)

## Porosity

	CONNECTION GAS
	CONNECTION
	TRIP GAS
	TRIP GAS LEFT
	DOWN TIME GAS
	DOWN TIME G
	CORE - RECOVER

Other Symbols

	DST INTERVAL		WIRELINE TESTED - LEFT		E EARTHY
	FAULT		WIRELINE TESTED - RT		FX FINELYXLN
	FORMATION TOP		DRILL STEM TEST		GS GRAINSTONE
	GAS SHOW		MINDEPTH MN DEPTH		L LITHOGRAPHIC
	OIL SHOW				MX MICROXLN
	MN DEPTH UP				MS MUDSTONE
Rounding					
	MN DEPTH (DOWN)		A ANGULAR		PS PACKSTONE
	S NORMAL FAULT		R ROUNDED		WS WACKSTONE
	OVERTURNED STRATA		B SUBANG		
	REVERSE FAULT		N SUBRND		
Sorting					
	CASING				M MODERATE
Textures					
	SIDEWALL CORE (LEFT)				P POOR
	SIDEWALL CORE (RIGHT)		BS BOUNDSTONE		W WELL
	SLIDE		C CHALKY		
	SURVEY		CX CRYPTOXLN		

## Slide/Rotate

BEGIN SICKLER 27N-34HZ AT 7,200' MD.  
DRILLING 8.75" HOLE. BIT #2, SMITH, SDI611.  
DEPTH IN: 6,835' MD. KOP: 6,905' MD.

ROP  
ROP  
GAMMA

ROP & GAS DATA PROVIDED BY  
PASON - GAMMA & SURVEY DATA  
PROVIDED BY BAKER HUGHES

### Total Gas & Chromatograph

GAS  
C1

C4 .....

## Depth Labels

**% Lith**

MD: 7,171  
TVD: 7,073.55  
Incl.: 28.15  
Azim.: 0.22  
VS: -817.07

THE IDEALIZED INTERPRETATION OF THE WELLBORE LITHOLOGY IS NOT TO SCALE.

SCAVENGER TANK IN OPERATION  
WITH FOUR TOTAL SHAKERS.

'BLACK FURY' NOT IN USE.

**Well Bore**  
**TV D** —

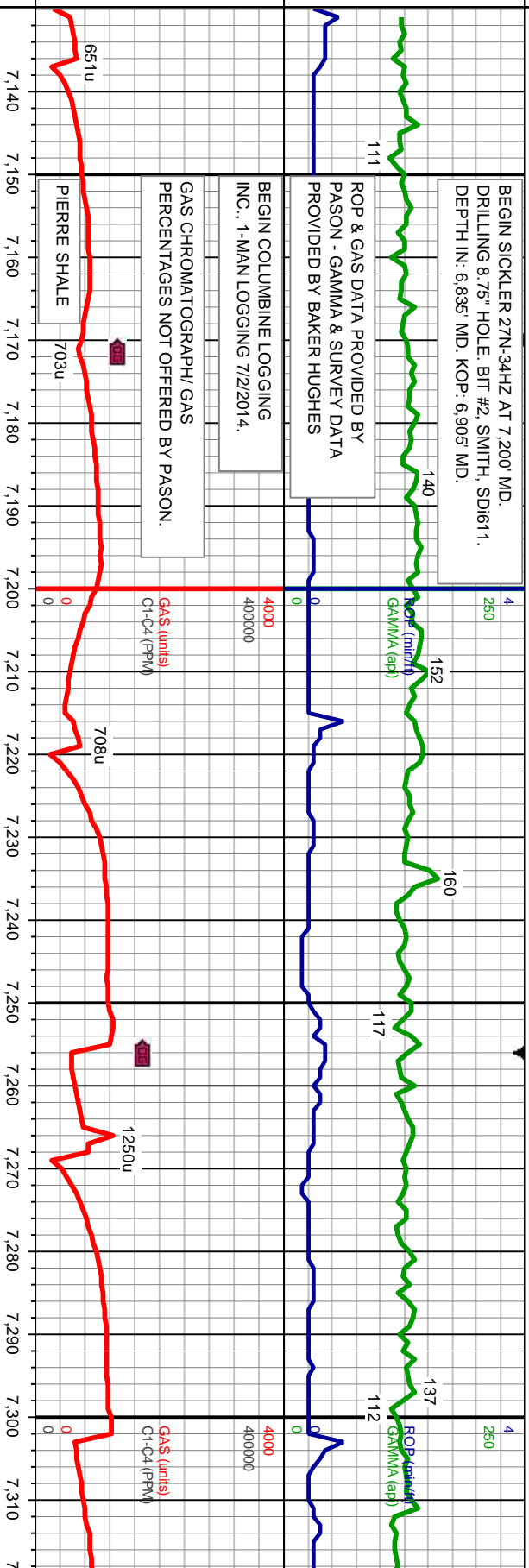
TV/D

ACETONE WAS USED AS THE CUTTING AGENT WITH THE DIMPLE FILLED TO THE RIM. THE RATINGS ARE BASED ON 7 DESCRIPTORS: NONE, SLIGHT TRACE, TRACE, FAIR, MODERATE, GOOD, AND EXCELLENT. THE DESCRIPTOR USED IS BASED ON THE LOGGERS OBSERVATIONS AND BEST JUDGMENT OF BRILLIANCE, COLOR AND LONGEVITY OF THE CUT.

## Oil Show

ପ୍ରାମାଣ୍ୟ

## Images



WT IN 10.1/OUT 10.1  
VIS IN 49/OUT 40

50' SAMPLE INTERVAL  
50' SAMPLE DESCRIPTION

WT IN 10.1/0	
VIS IN 44/0	

MD: 7,214  
TVD: 7,110.75  
Incl.: 32.04  
Azim.: 2.49  
VS: -795.51

MD: 7,256.  
TVD: 7,145.45.  
Incl.: 36.46  
Azim.: 2.56  
VS: -771.89.

MD: 7,299.  
TVD: 7,178.97  
Incl.: 41.08  
Azim.: 0.71  
VS: -744.98

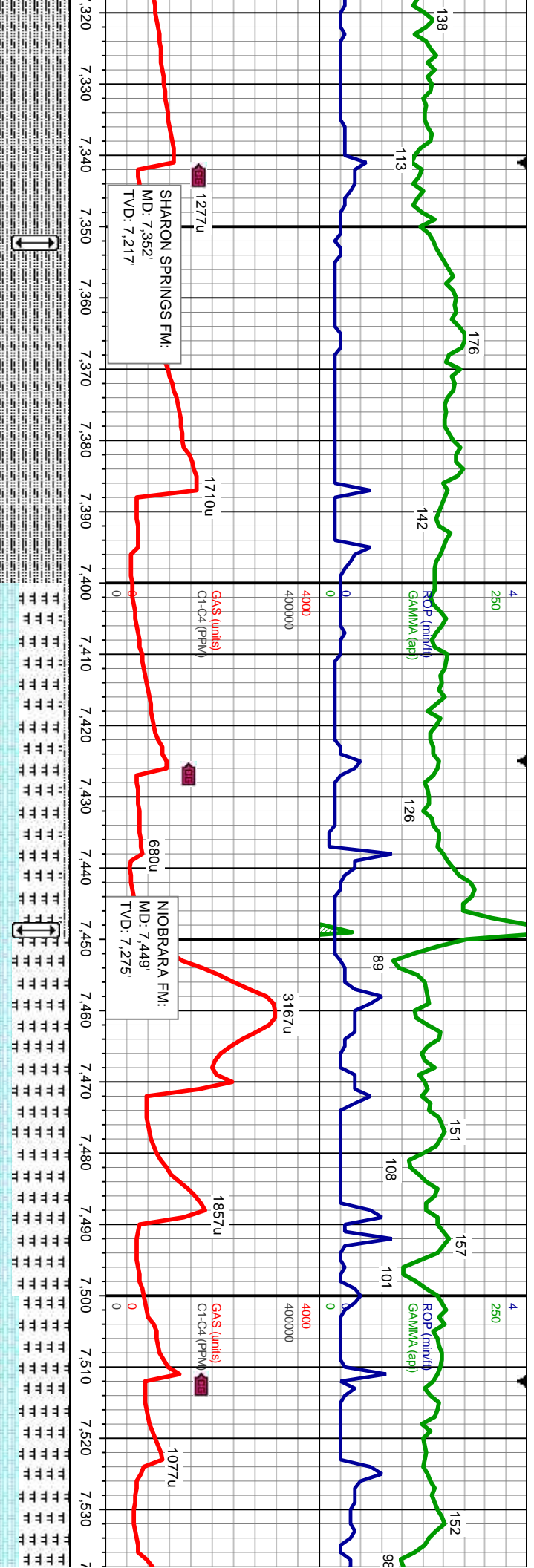
SLTY SH: med-ck gy-blk, sb blk-y-sb ply -  
ply, frm- mod frm, sl fri, slty; difse sl  
stimg dul bl-wh cut, thn dul bl resdl ring

SLTY SH: med-dk gy-blk, sb biky-sb ply -  
ply, frm-mod frm, sl fri, slty; difse sl stmg  
dul bl-wh cut, thn dul bl resdl ring

SLY SH: med-dk  
plty, frm- mod frm  
dul bl-wh cut, thn  
8000







MD: 7,342.  
TVD: 7,210.01  
Incl.: 46.47 -  
Azim.: 359.44 -  
VS: -715.25

MD: 7,384.  
TVD: 7,237.55  
Incl.: 51.55 -  
Azim.: 359.61 -  
VS: -683.56

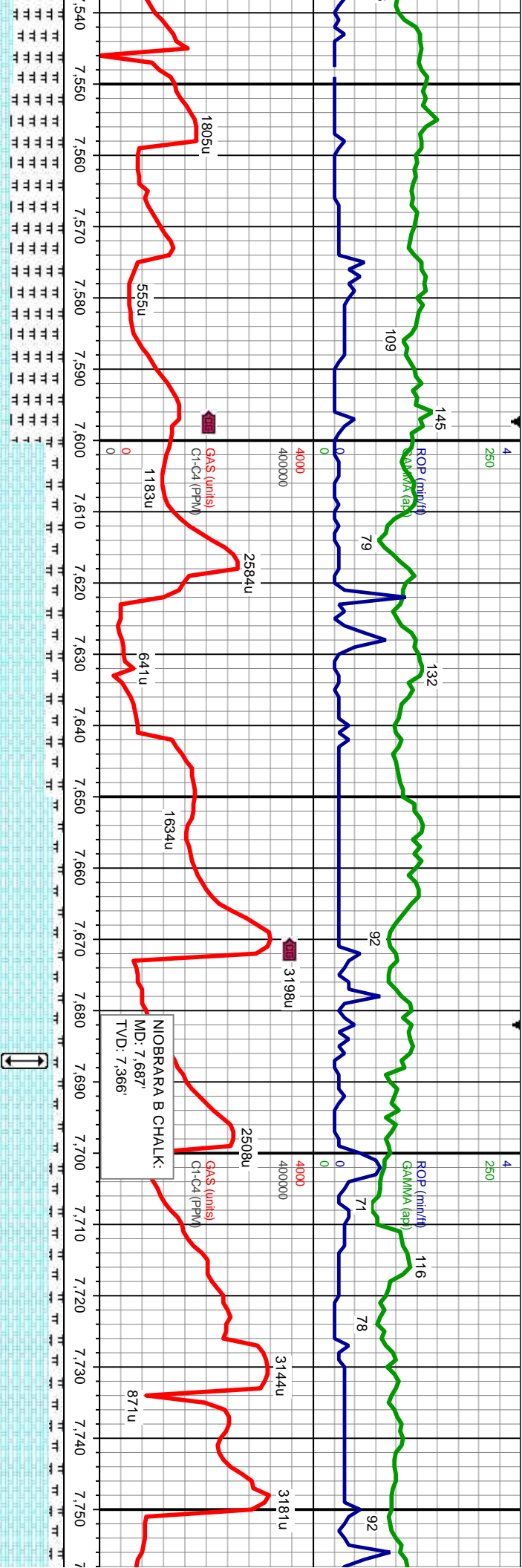
MD: 7,427.  
TVD: 7,262.95  
Incl.: 56 -  
Azim.: 358.36 -  
VS: -648.9

MD: 7,470.  
TVD: 7,285.94  
Incl.: 59.35 -  
Azim.: 357.94 -  
VS: -612.61

MD: 7,512.  
TVD: 7,306.35  
Incl.: 62.52 -  
Azim.: 357.83 -  
VS: -575.95

OUT 10.1 UT 41	MD: 7,342. TVD: 7,210.01 Incl.: 46.47 - Azim.: 359.44 - VS: -715.25	MD: 7,384. TVD: 7,237.55 Incl.: 51.55 - Azim.: 359.61 - VS: -683.56	MD: 7,427. TVD: 7,262.95 Incl.: 56 - Azim.: 358.36 - VS: -648.9	MD: 7,470. TVD: 7,285.94 Incl.: 59.35 - Azim.: 357.94 - VS: -612.61	MD: 7,512. TVD: 7,306.35 Incl.: 62.52 - Azim.: 357.83 - VS: -575.95
gy-blk, sb blk-ly-sb ply - sl fri, silty, difse sl string dul bl resd ring	SLTY SH: med-dk gy-blk, sb blk-ly-sb ply - ply, frm- mod frm, sl fri, silty, difse sl string dul bl-wh cut, thn dul bl resd ring	SLTY SH: med-dk gy-blk, sb blk-ly-sb ply - ply, frm- mod frm, sl fri, silty, difse sl string dul bl-wh cut, thn dul bl resd ring	SLTY SH: med-dk gy, sb blk-ly-sb ply, frm, arg- sl silty, v calc; CHK: med gy-ll gy, sl mot tex, sb blk-ly-sb ply, sft-sl frm, sl arg, v calc, tr bent, difse hvy string wi mod-g bl-wh cut, thk bri bl ring	MRSLT: med-dk gy, sb blk-ly-sb ply, frm, arg- sl silty, v calc; CHK: med gy-ll gy, sl mot tex, sb blk-ly-sb ply, sft-sl frm, sl arg, v calc, difse hvy string wi mod-g bl-wh cut, thk bri bl ring	MRSLT: med-dk gy, sb blk-ly-sb ply, frm silty, v calc; CHK: med gy-ll gy, sl mot tex, sb blk-ly-sb ply, sft-sl frm, sl arg, v calc, difse string wi mod-g bl-wh cut, thk bri bl ring





		6000		WT IN 10.2/OUT 10.2 VIS IN 45/OUT 45			
MD: 7.555. TVD: 7,324.8. Incl.: 66.63 - Azim.: 358.28 - VS: -537.16.		MD: 7.598. TVD: 7,340.5. Incl.: 70.55 - Azim.: 358.48 - VS: -497.17.		MD: 7,640. TVD: 7,353.52. Incl.: 73.32 - Azim.: 359.26 - VS: -457.27.			
		/D (ft)					
				WT: 10.2 @ 102F FV: 46 PV: 12 YP: 12 CK APT/HT: 1/1 Sol.: 9 pH/Temp.: 9.4 @ 102F Chl.: 3.100			
		MD: 7.683. TVD: 7,364.98. Incl.: 75.77 - Azim.: 359.52 - VS: -415.84.		TVD (ft)		6000	
		MD: 7.725. TVD: 7,374.12. Incl.: 79.07 - Azim.: 1.4 - VS: -374.85.					
				WT IN 1 VIS IN 4			

arg- sl sly, v calc: CHK: med gy-lt gy, sl mot tex, sb blk- sly, v calc: CHK: med gy-lt gy, sl mot tex, sb sly, v calc: CHK: med gy-lt gy, sl mot tex, sb sly, v calc: CHK: med gy-lt gy, sl mot tex, sb	arg- sl sly, v calc: CHK: med gy-lt gy, sl mot tex, sb blk- sly, v calc: CHK: med gy-lt gy, sl mot tex, sb sly, v calc: CHK: med gy-lt gy, sl mot tex, sb sly, v calc: CHK: med gy-lt gy, sl mot tex, sb	arg- sl sly, v calc: CHK: med gy-lt gy, sl mot tex, sb blk- sly, v calc: CHK: med gy-lt gy, sl mot tex, sb sly, v calc: CHK: med gy-lt gy, sl mot tex, sb sly, v calc: CHK: med gy-lt gy, sl mot tex, sb	arg- sl sly, v calc: CHK: med gy-lt gy, sl mot tex, sb blk- sly, v calc: CHK: med gy-lt gy, sl mot tex, sb sly, v calc: CHK: med gy-lt gy, sl mot tex, sb sly, v calc: CHK: med gy-lt gy, sl mot tex, sb	arg- sl sly, v calc: CHK: med gy-lt gy, sl mot tex, sb blk- sly, v calc: CHK: med gy-lt gy, sl mot tex, sb sly, v calc: CHK: med gy-lt gy, sl mot tex, sb sly, v calc: CHK: med gy-lt gy, sl mot tex, sb
--	--	--	--	--





REACHED TD FOR THE CURVE AT  
7.827 MD @ 11:54 PM ON 7/2/2014.

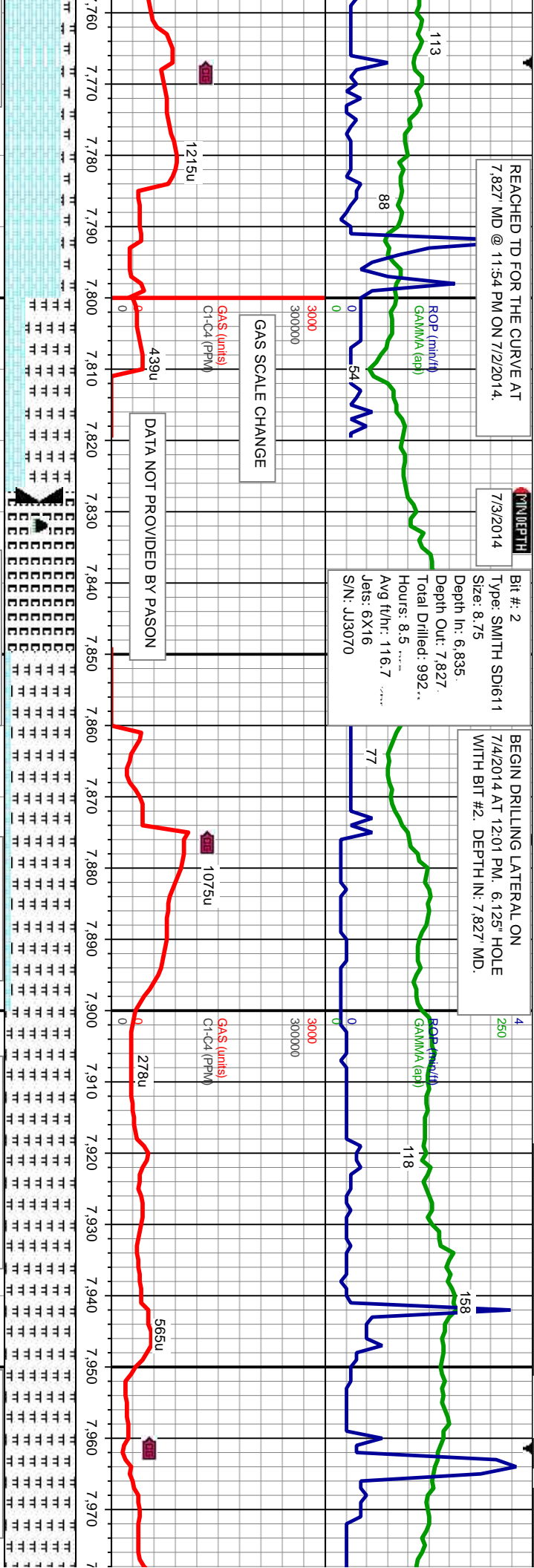
7/3/2014

BEGIN DRILLING LATERAL ON  
7/4/2014 AT 12:01 PM. 6.125" HOLE  
WITH BIT #2. DEPTH IN: 7.827' MD.

Bit #: 2  
Type: SMITH SD611  
Size: 8.75  
Depth In: 6.835.  
Depth Out: 7.827.  
Total Drilled: 992..  
Hours: 8.5  
Avg ft/hr: 116.7  
Jets: 6X16  
S/N: JJ3070

GAS SCALE CHANGE

DATA NOT PROVIDED BY PASON



0.2/ OUT 10.2  
6/ OUT 45

MD: 7.768.  
TVD: 7.381.3.  
Incl.: 81.72 -  
Azim.: 2.64 -  
VS: -332.47 -

MD: 7.785.  
TVD: 7.383.58.  
Incl.: 82.89 -  
Azim.: 2.64 -  
VS: -315.38 -

MD: 7.827.  
TVD: 7.386.9.  
Incl.: 88.04 -  
Azim.: 2.64 -  
VS: -273.54 -

WT: 10.3 @ 87F  
FV: 46  
PV: 12  
YP: 10  
CK APT/HT: 1/  
Sol.: 10  
pH/Temp.: 9.3 @ 87F  
Chl.: 3.000

WT IN 9.3/ OUT 9.3  
VIS IN 43/ OUT 43

100' SAMPLE INTERVAL  
100' SAMPLE DESCRIPTION

WT: 9.3 @ 86F  
FV: 43  
PV: 10  
YP: 8  
CK APT/HT: 1/  
Sol.: 6  
pH/Temp.: 9.5 @ 86F  
Chl.: 3.000

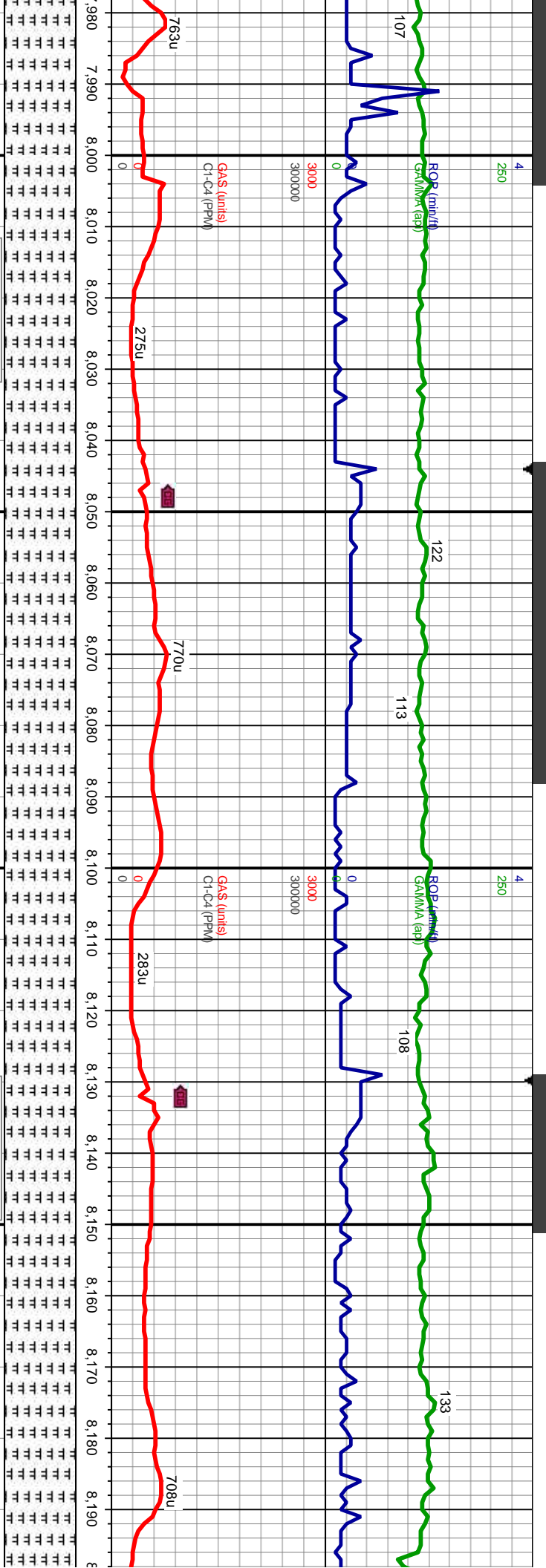
ad gy-it gy, sl mot tex, sb bly-sb ply,  
h, sl arg, v calc; MRLST: med-dk gy,  
sb ply, frm, arg- sl sily, v calc; difse  
g wi mod-g bl-wh cut, thk brl bl ring

CHK: aa: MRLST: med-dk gy, sb bly-sb  
ply, frm, arg- sl sily, v calc, tr bent, rr  
Inoc, rr pyr, rr cal frags: string, lt bl flr wi  
g brl bl-wh difse cut, brl bl resd sl gn ring

CHK: aa: MRLST: med-dk gy, sb bly-sb  
ply, frm, arg- sl sily, v calc, tr bent, rr  
Inoc, rr pyr, rr cal frags: difse hvy string  
wi mod-g bl-wh cut, thk brl bl ring

MRLST: med-dk gy-blk, sb bly-sb ply, frm- v frm, sl arg, sl sily, mot tex  
v calc, tr bent, rr pyr; difse hvy string wi mod-g bl-wh cut, thk brl bl ring



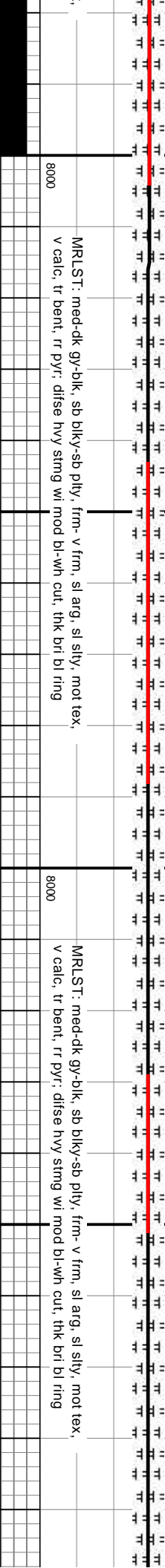


MD: 7.989.  
TVD: 7.401.34.  
Incl.: 86.1 -  
Azim.: 2.85 -  
VS: -112.27.

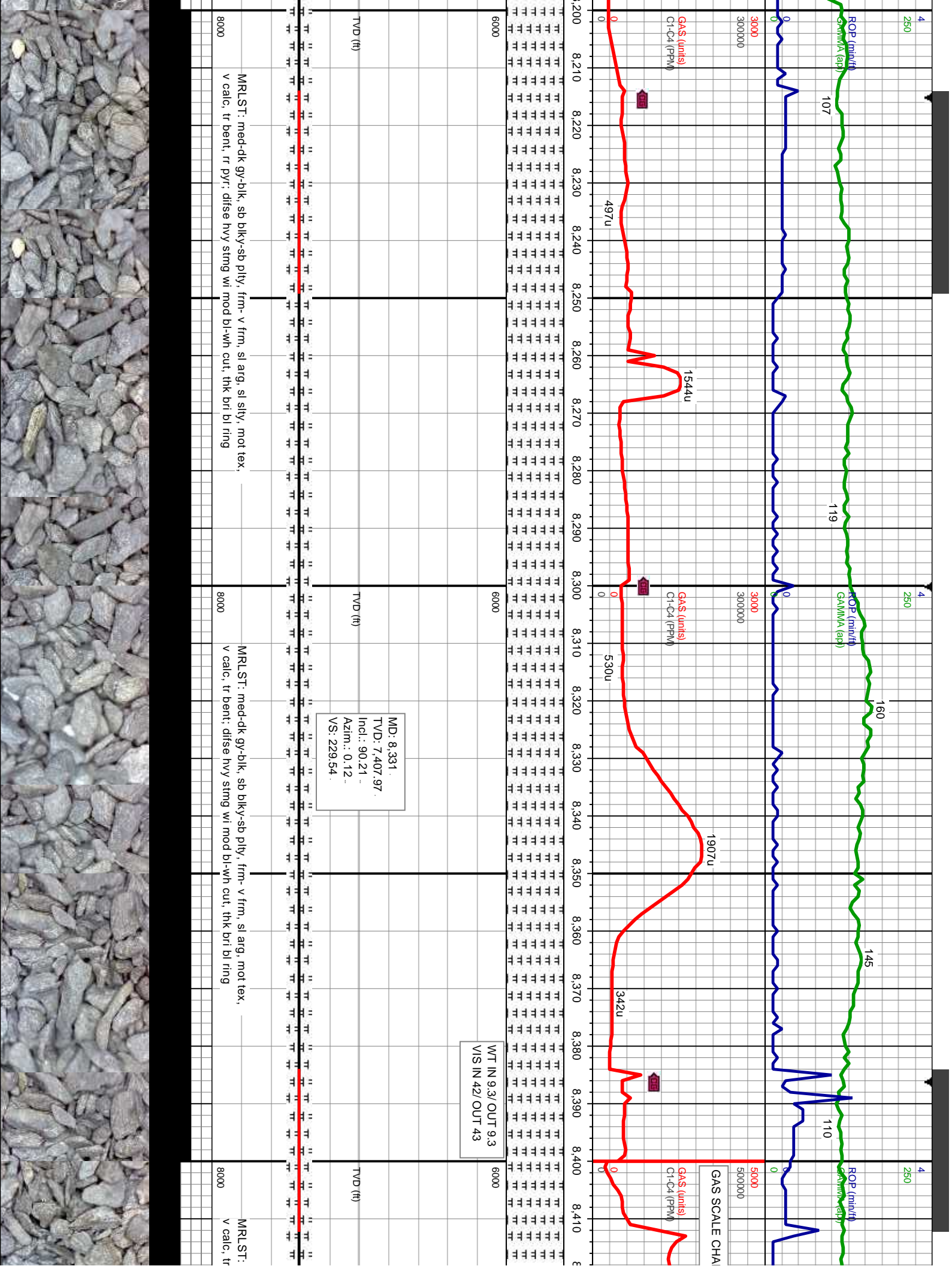
WT IN 9.3/ OUT 9.3  
VIS IN 42/ OUT 42

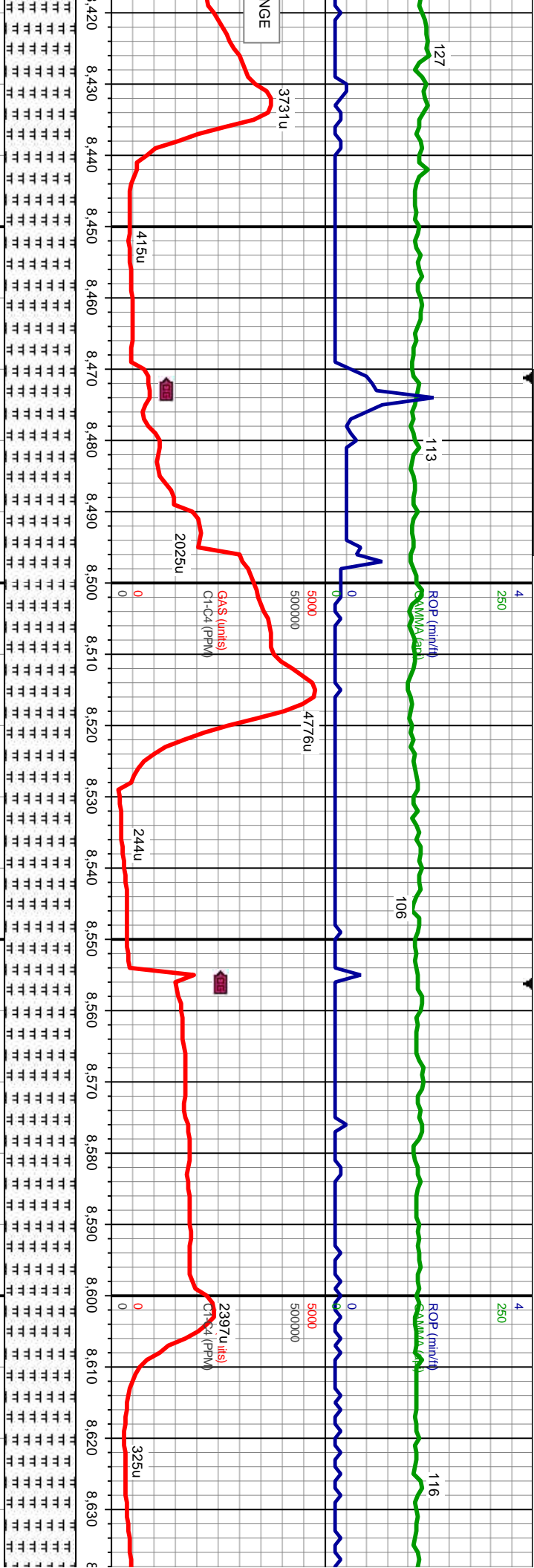
WT IN 9.3/ OUT 9.3  
VIS IN 42/ OUT 42

MD: 8.160.  
TVD: 7.407.72.  
Incl.: 89.62 -  
Azim.: 0.51 -  
VS: 58.55.









MD: 8.501  
TVD: 7,405.02  
Incl.: 91.78 -  
Azim.: 0.16 -  
VS: 399.5

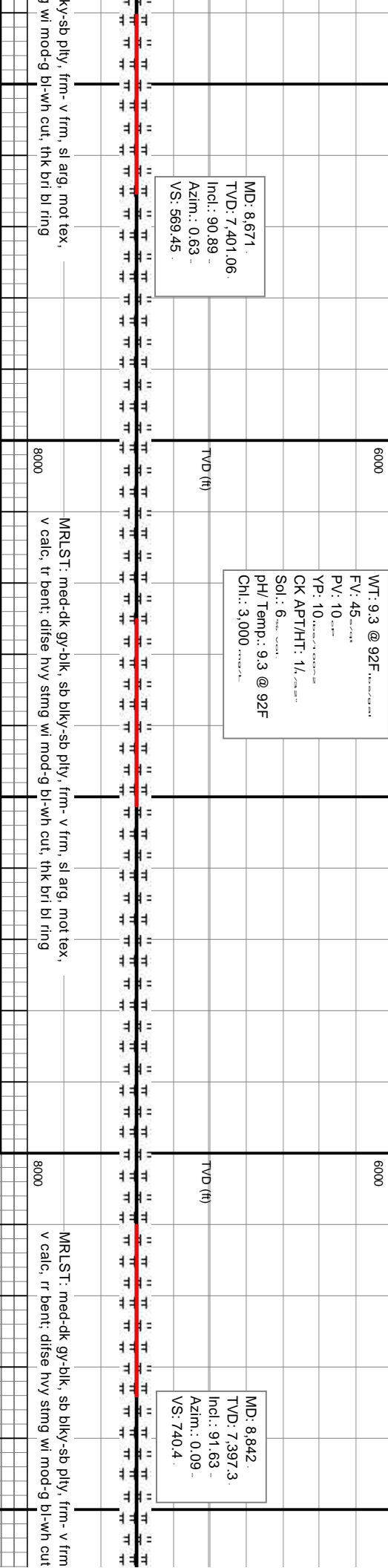
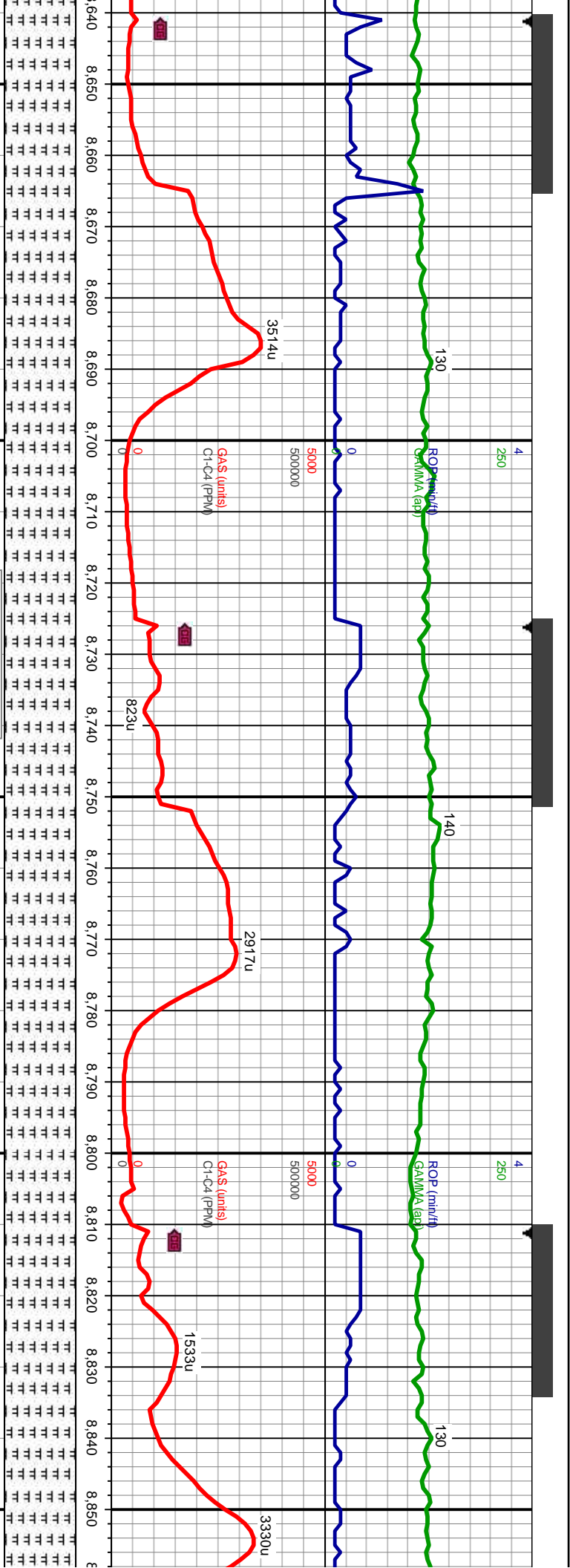
WT IN 9.3/ OUT 9.3  
VIS IN 42/ OUT 43

med-dk gy-blk, sb blk-y-sb pily, frm- v frm, sl arg, mot tex, —  
bent; difse hvy string wi mod bl-wh cut, thk bri bl ring

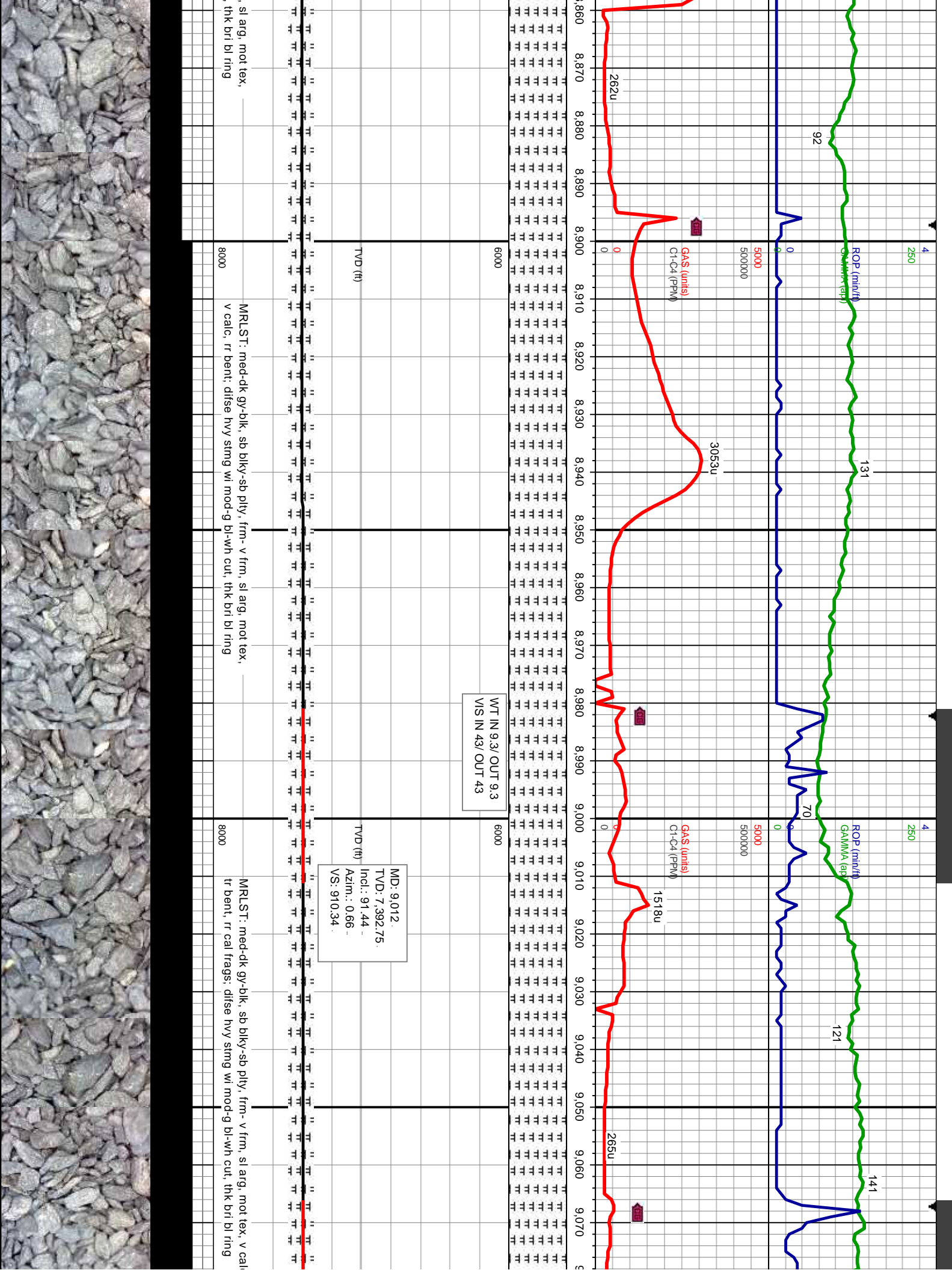
MRLST: med-dk gy-blk, sb blk-y-sb pily, frm- v frm, sl arg, mot tex, —  
v calc, tr bent; difse hvy string wi mod bl-wh cut, thk bri bl ring











4 MINDEPTH

2 7/5/2014

9112' MD

ROP (min/f)

123

GAS (units)

C1-C4 (PPM)

2635u

1060u

3194u

890u

938u

86

91

97

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

4

250

ROP (min/f)

GAMMA (cp)

97

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

86

MD: 9,183.  
TVD: 7,388.63  
Incl.: 91.32  
Azim.: 359.58  
VS: 1,081.27

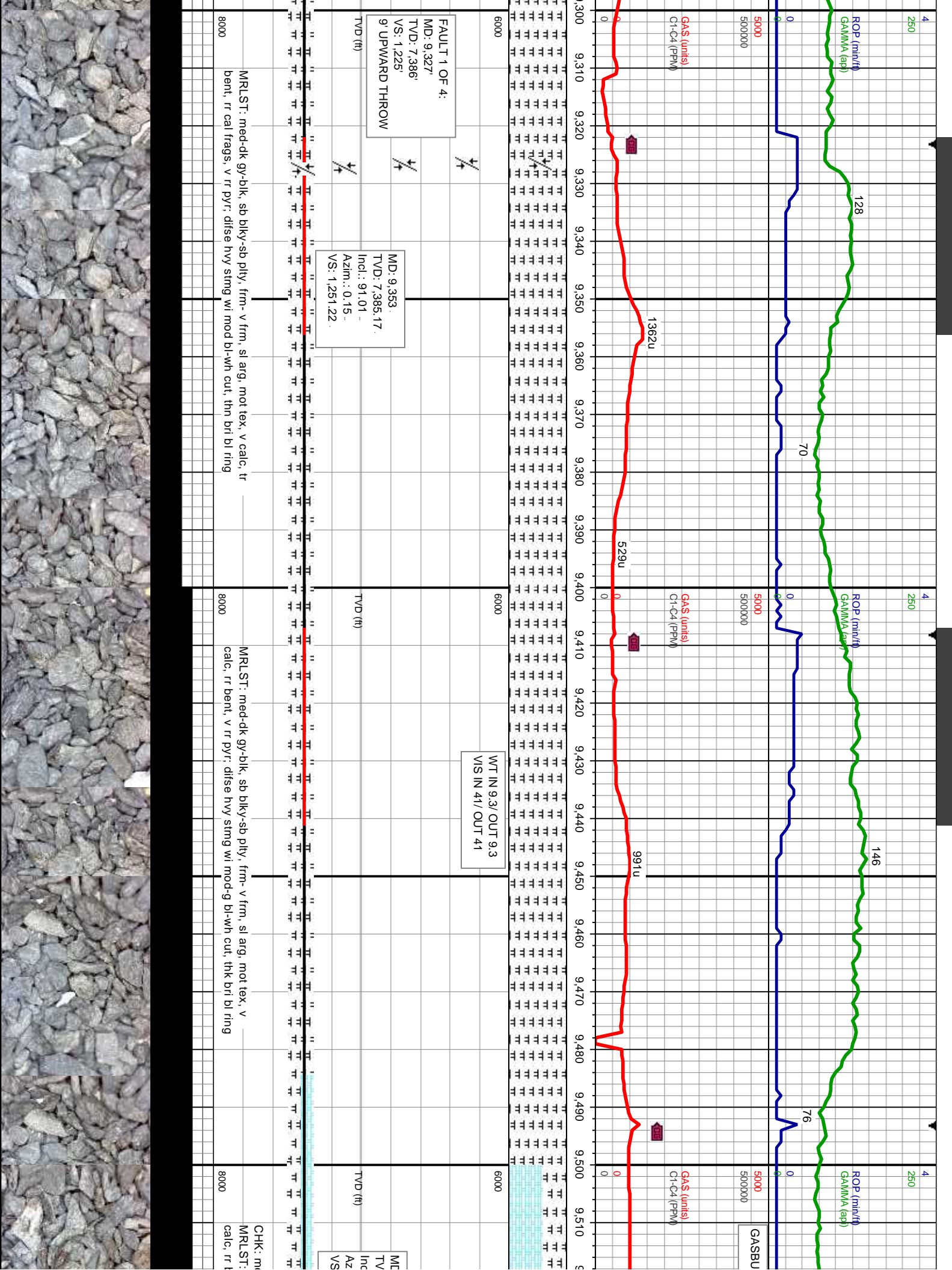
TVD (ft)

TVD (ft)

MRLST: med-dk gy-blk, sb blk-y-sb plty, frm- v frm, sl arg, mot tex, v calc, tr bent, rr cal frags, difse hvy stmg wi mod-g bl-wh cut, thk bri bl ring

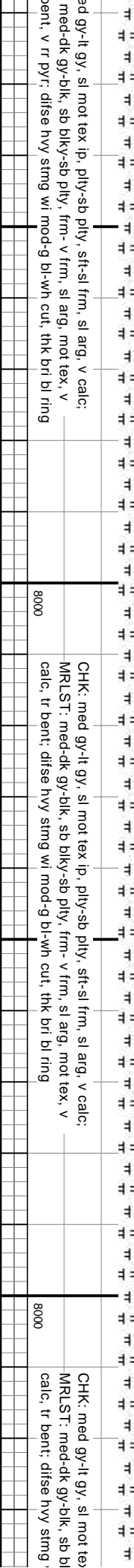
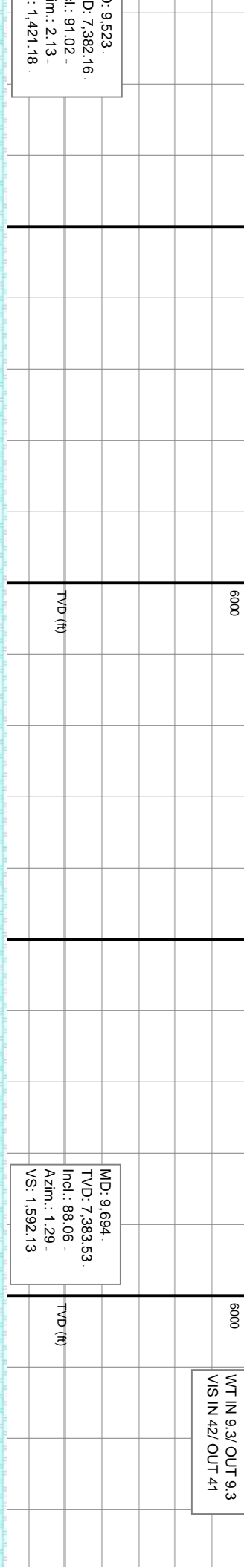
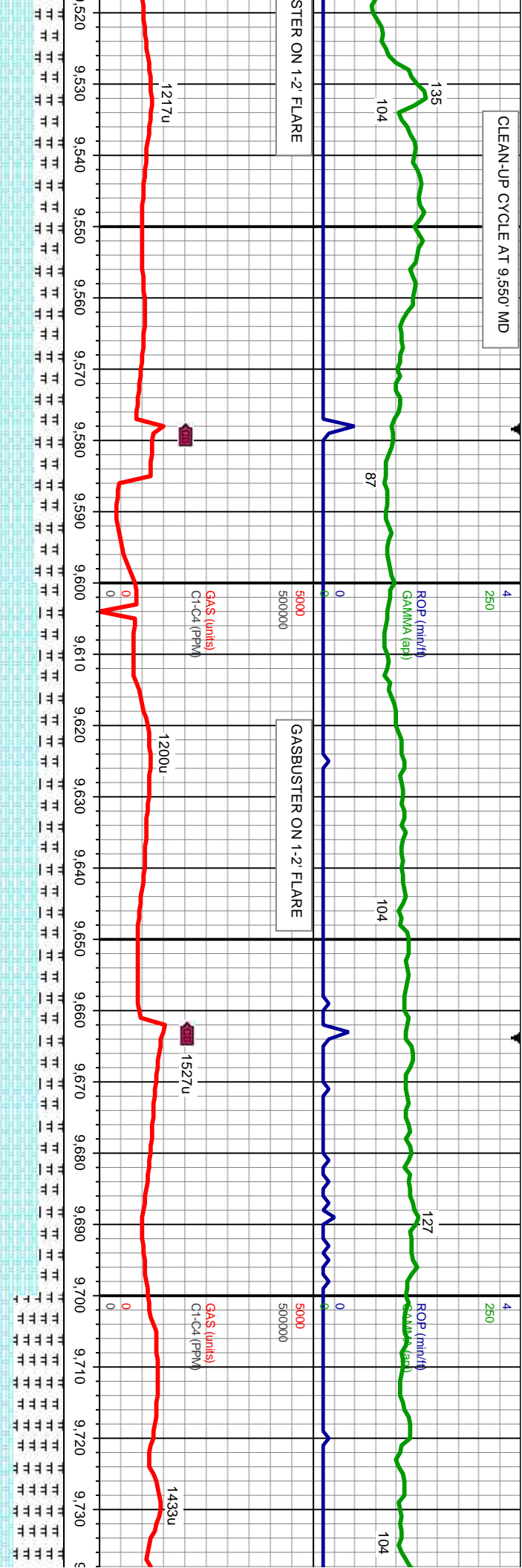
MRLST: med-dk gy-blk, sb blk-y-sb plty, frm- v frm, sl arg, mot tex, v calc, tr bent, rr cal frags, v rr pyr, difse hvy stmg wi mod bl-wh cut, thn bri bl ring

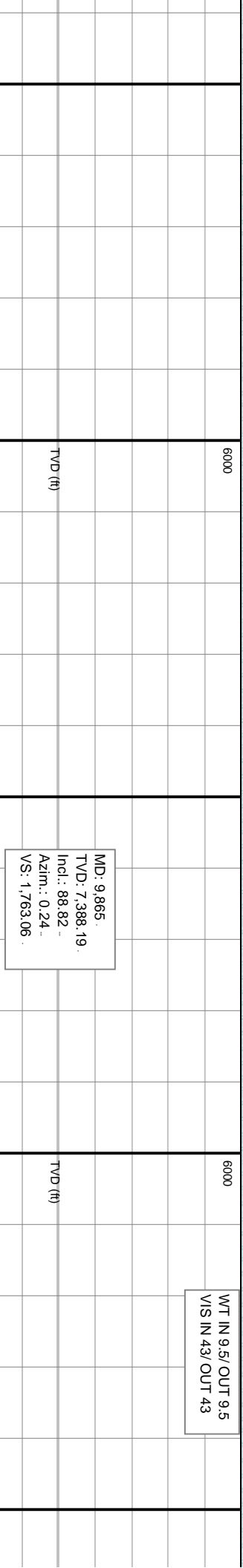
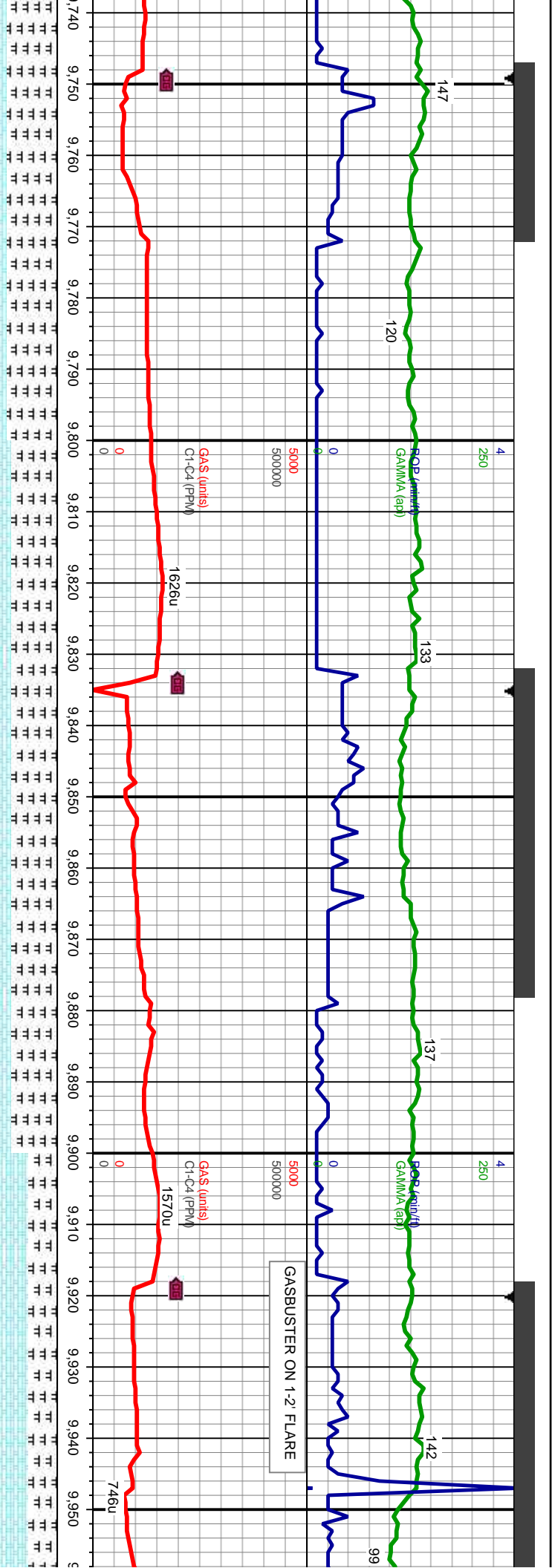






CLEAN-UP CYCLE AT 9,550' MD





MD: 9.865  
TVD: 7,388.19  
Incl: 88.82  
Azim.: 0.24  
VS: 1,763.06

ip, pily-sb pily, sft-sl frm, sl arg, v calc;	
ky-sb pily, frm- v frm, sl arg, mot tex, v	
wi mod-g bl-wh cut, thk bri bl ring	
8000	
CHK: med gy-lt gy, sl mot tex ip, pily-sb pily, sft-sl frm, sl arg, v calc;	
MRLST: med-dk gy-blk, sb blk-ly-sb pily, frm- v frm, sl arg, mot tex, v	
calc, tr bent; difse hvy string wi mod-g bl-wh cut, thk bri bl ring	
8000	
CHK: med gy-lt gy, sl mot tex ip, pily-sb pily, sft-sl frm, sl arg, v calc;	
MRLST: med-dk gy-blk, sb blk-ly-sb pily, frm- v frm, sl arg, mot tex, v	
calc, tr bent; difse hvy string wi mod-g bl-wh cut, thk bri bl ring	
8000	

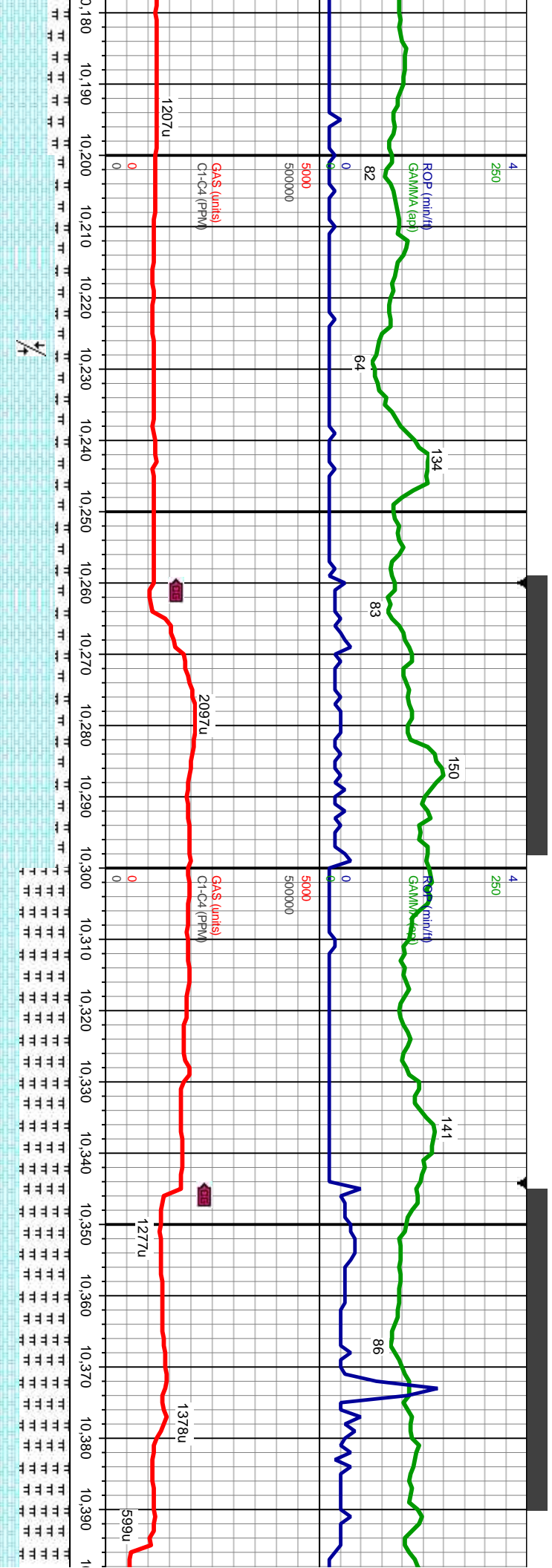
WT IN 9.5/ OUT 9.5  
VIS IN 43/ OUT 43

GASBUSTER ON 1-2 FLARE









MD: 10,205.  
TVD: 7,384.57.  
Incl.: 89.62.  
Azim.: 359.6.  
VS: 2,102.98.

FAULT 2 OF 4:  
MD: 10,226'  
TVD: 7,385'  
VS: 2,124'  
8 UPWARD THROW

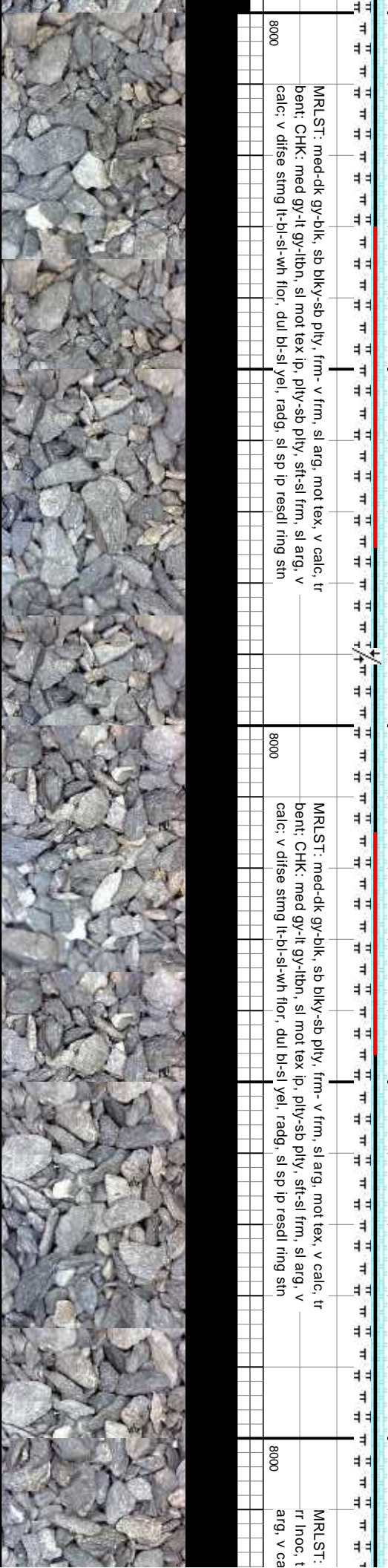
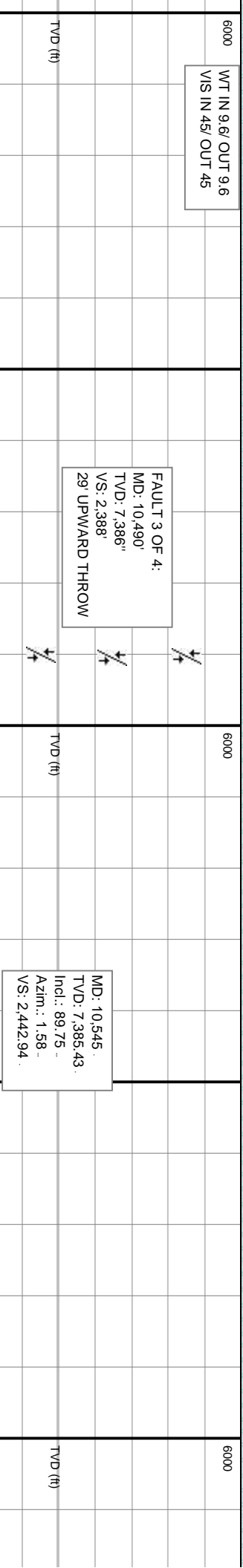
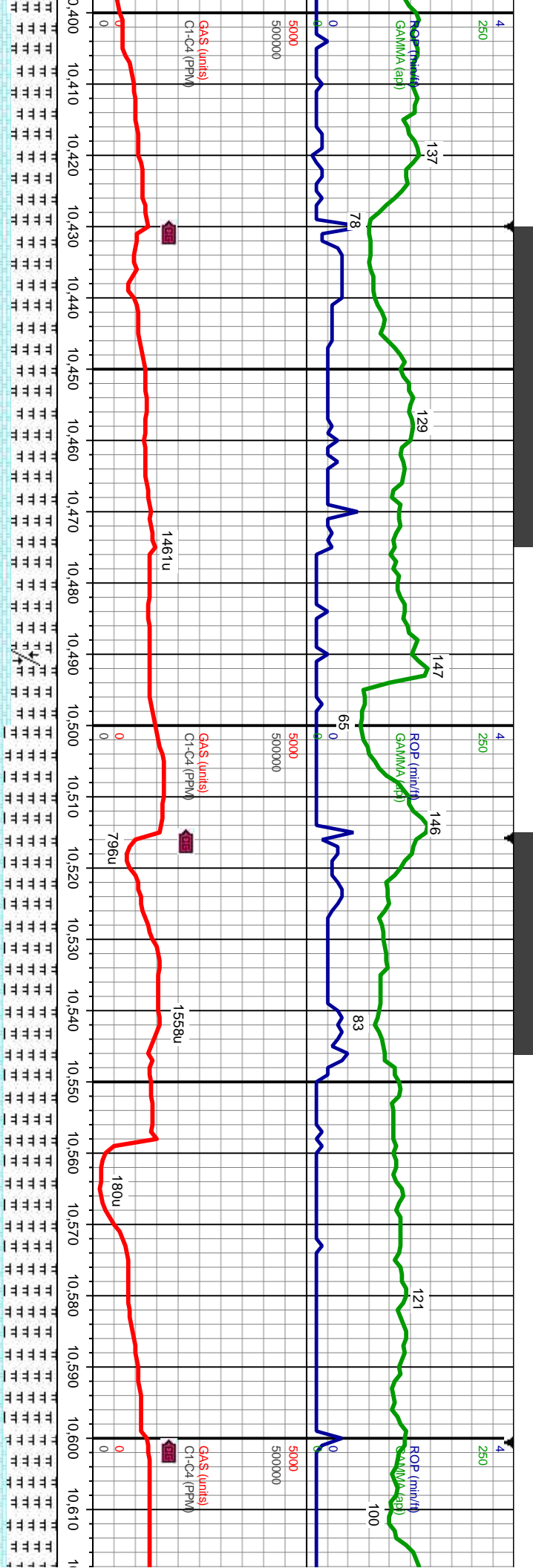
TVD (ft)

MD: 10,375.  
TVD: 7,386.01.  
Incl.: 89.35.  
Azim.: 0.68.  
VS: 2,272.96.

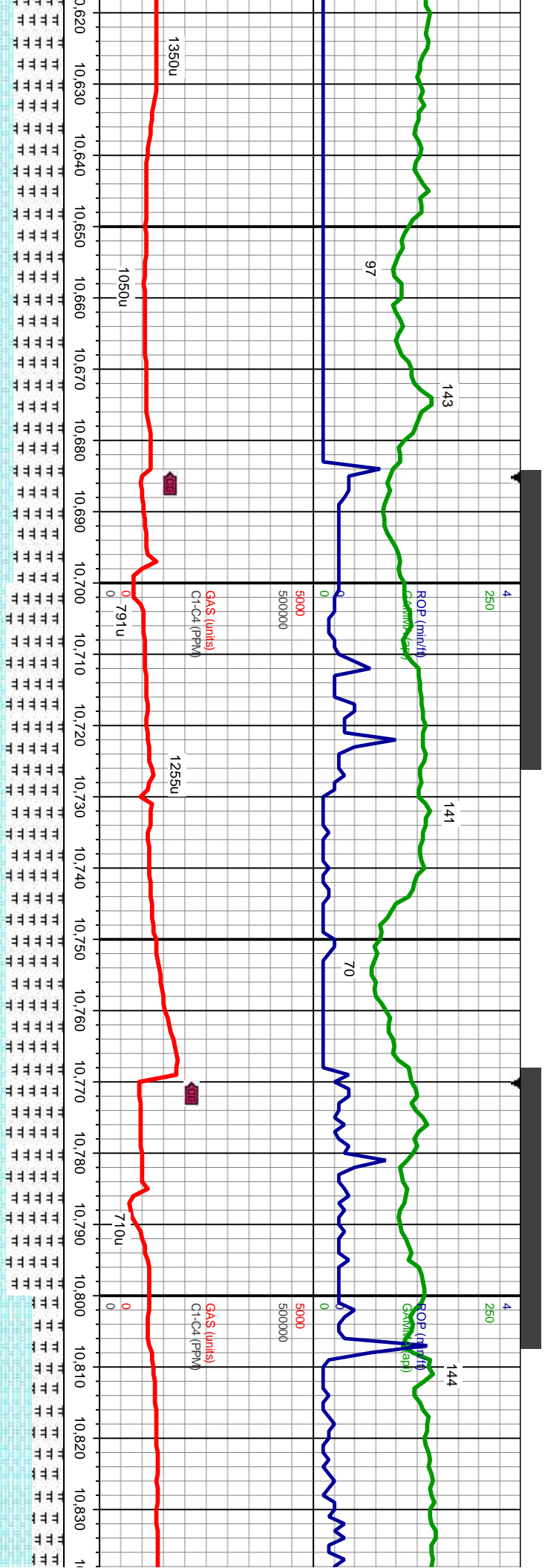
CHK: med gy-lt gy, sl mot tex ip, pily-sb pily, sft-sl frm, sl arg, v calc;  
MRSLST: med-dk gy-blk, sb blk-y-sb pily, frm- v frm, sl arg, mot tex, v  
calc, tr bent; difse hvy stmg wi mod-g bl-wh cut, thk bri bl ring

MRSLST: med-dk gy-blk, sb blk-y-sb pily, frm- v frm, sl arg, mot tex, v  
calc, com bent; CHK: med gy-lt gy, sl mot tex ip, pily-sb pily, sft-sl frm,  
sl arg, v calc; difse hvy stmg wi mod-g bl-wh cut, thk bri bl ring



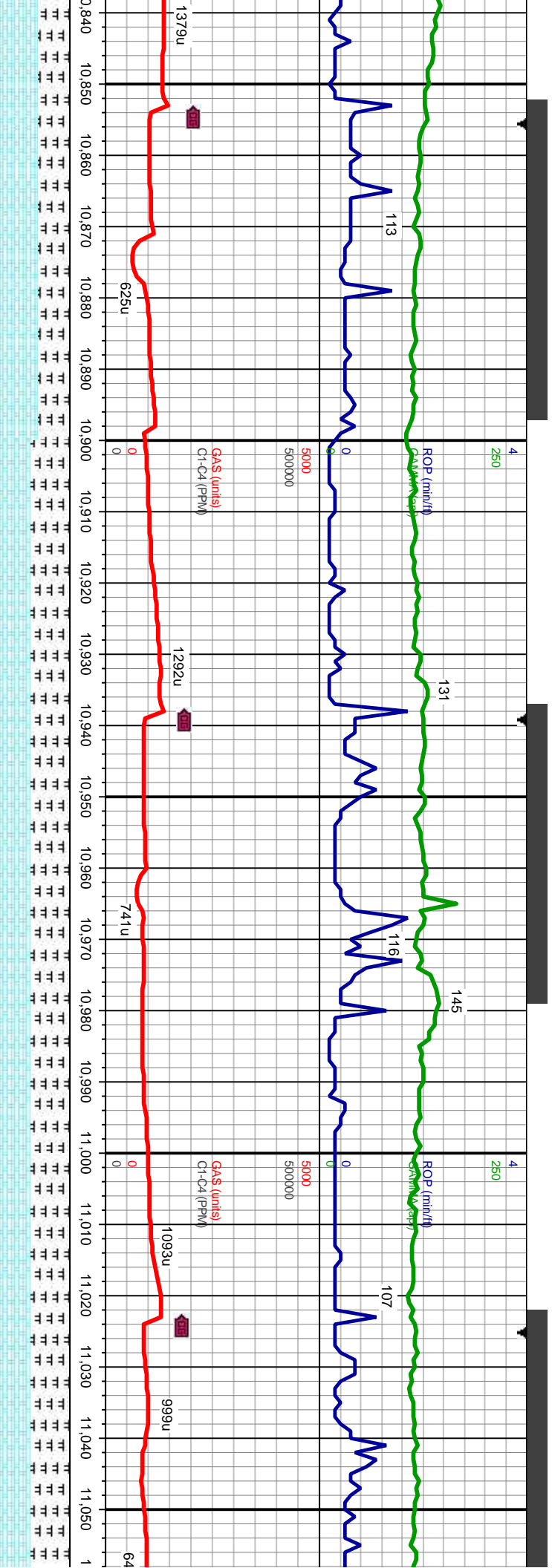






med-dk gy-blk, sb bly-sb pily, frm- v frm, sl arg, mot tex, v calc, rr bent, cal frag; CHK: med gy-lt gy-lbn, sl mot tex ip, pily-sb pily, sft-sl frm, sl	6000	MD: 10,715 TVD: 7,386.14 Incl.: 89.66 Azim.: 1.76 VS: 2,612.91	med-dk gy-blk, sb bly-sb pily, frm- v frm, sl arg, mot tex, v calc, rr bent, rr inoc, tr cal frag; CHK: med gy-lt gy-lbn, sl mot tex ip, pily-sb pily, sft-sl frm, sl	8000	MRUST: med-dk gy-blk, sb bly-sb pily, frm- v frm, sl arg, mot tex, v calc, rr bent, rr inoc, tr cal frag; CHK: med gy-lt gy-lbn, sl mot tex ip, pily-sb pily, sft-sl frm, sl	8000	CHK: med gy-lt gy-lbn, sl mc med-dk gy-blk, sb bly-sb pily, tr cal frag; v difse stmg lt-bl-s
---	------	--	---	------	--	------	---





MD: 10.885.  
TVD: 7,388.13  
Incl.: 89.5 -  
Azim.: 0.17 -  
VS: 2.782.89.

6000  
TVD (ft)

6000  
TVD (ft)

MD: 11.055  
TVD: 7,388  
Incl.: 89.01  
Azim.: 357.  
VS: 2.952.7

it tex ip, ply-sb ply, sft-sl frm, sl arg, v calc; MRLST:	ROP (m/min/h)	GA\$ (units)	C1-C4 (PPM)
1/2, frm- v frm, sl arg, mot tex, v calc; rr bent, rr inoc,	113	625u	0
bl-wh flor, dul bl-sl yel, radg, sl sp ip resd ring sin	131	1292u	0
	145	741u	0
	107	1093u	0
		999u	64

6000  
TVD (ft)

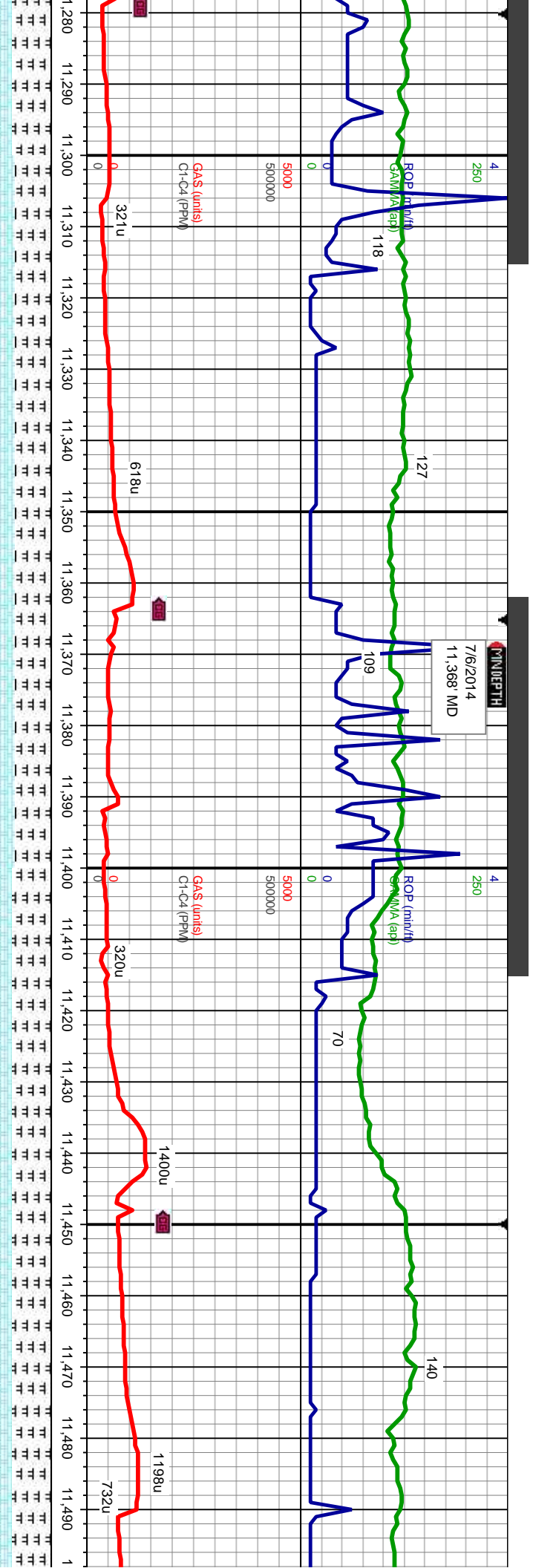
6000  
TVD (ft)

MD: 11.055  
TVD: 7,388  
Incl.: 89.01  
Azim.: 357.  
VS: 2.952.7









9.6/ OUT 9.6  
48/ OUT 49

6000

WT IN 9.6/ OUT 9.6  
VIS IN 47/ OUT 47

6000

WT IN 9.6/ OUT 9.6  
VIS IN 46/ OUT 46

TVD (ft)

MD: 11,396.  
TVD: 7,378.95  
Incl.: 88.91  
Azim.: 1.69  
VS: 3,293.2

(ft)

rr bent/ occ  
sb ply, sft-sl  
ring sin

8000

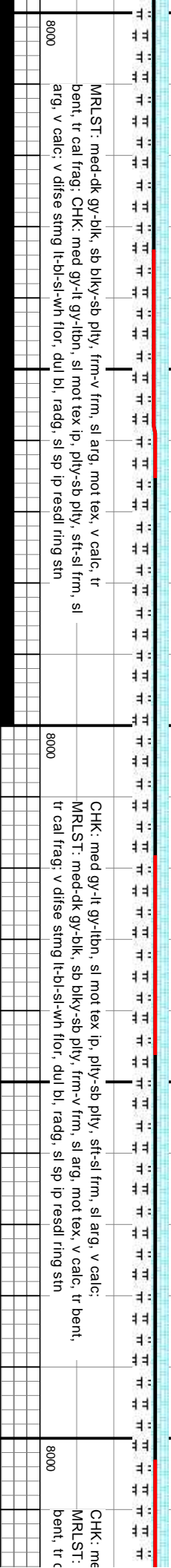
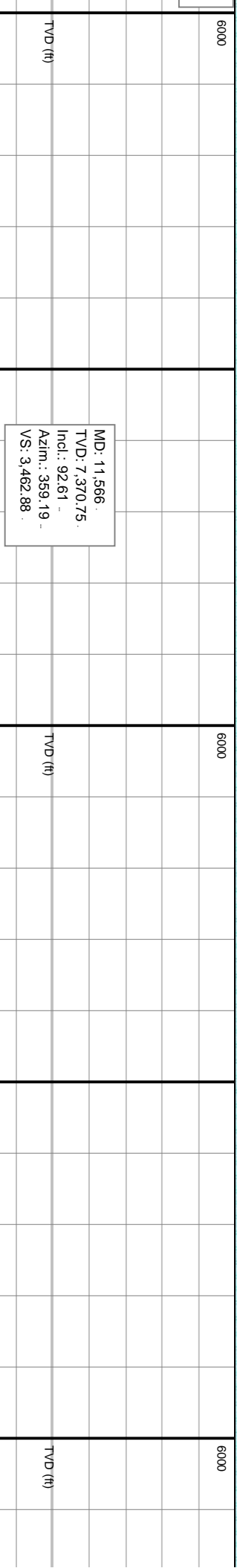
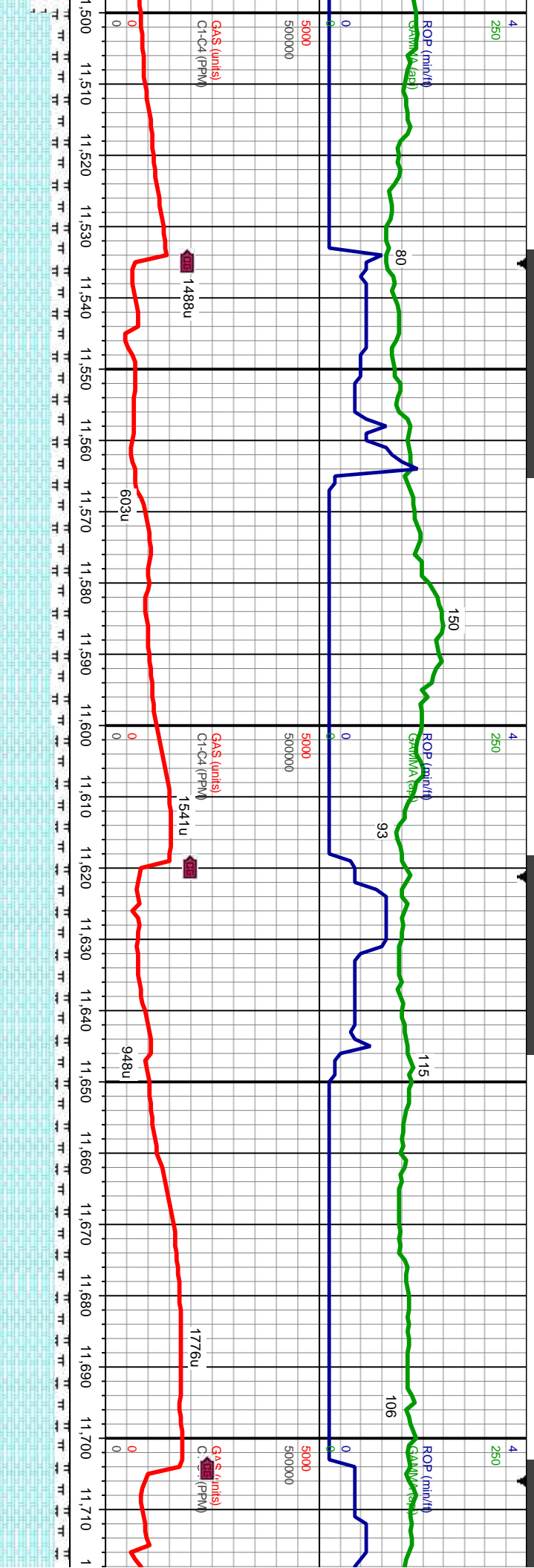
MRLST: med-dk gy-blk, sb blk-y-sb ply, frm- v frm, sl arg, mot tex, v calc, rr bent/ occ  
pyrc bent, rr inoc, tr cal frag, CHK: med gy-lt gy-lbn, sl mot tex ip, ply-sb ply, sft-sl  
frm, sl arg, v calc, v difse stmg lt-bl-sl-wh flor, dui bl, radg, sl sp ip resdl ring sin

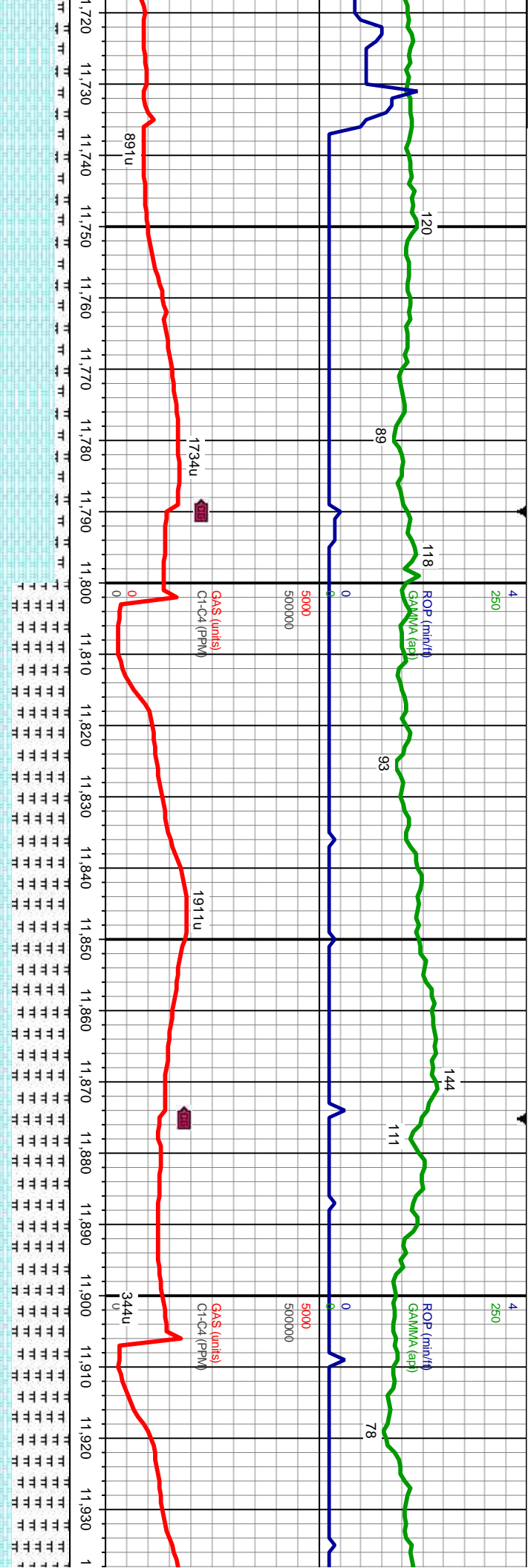
8000

MRLST: med-dk gy-blk, sb blk-y-sb ply, frm- v frm, sl arg, mot tex, v calc, rr bent/ occ  
pyrc bent, rr inoc, tr cal frag, CHK: med gy-lt gy-lbn, sl mot tex ip, ply-sb ply, sft-sl  
sl arg, v calc, v difse stmg lt-bl-sl-wh flor, dui bl, radg, sl sp ip resdl ring sin









MD: 11,735.  
TVD: 7,366.96  
Incl.: 89.96 -  
Azim.: 1.81 -  
VS: 3,631.8.

WT IN 9.6/ OUT 9.6  
VIS IN 46/ OUT 46

TVD (ft)

MD: 11,906.  
TVD: 7,370.25.  
Incl.: 87.84 -  
Azim.: 1.34 -  
VS: 3,802.74.

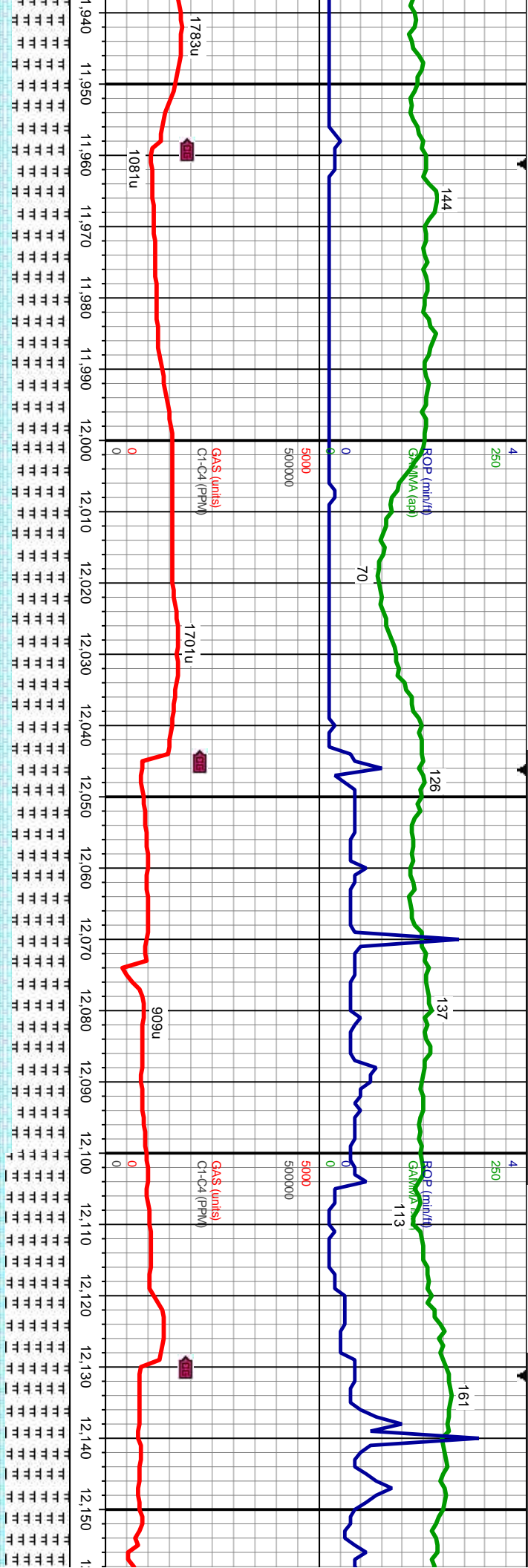
med-dk gy-blk, sb bly-sb ply, frm-v frm, sl arg, mot tex, v calc, tr  
cal frag, v difse stmg lt-bl-sl-wh flor, dul bl, radg, sl sp ip resd ring sin

MRLST: med-dk gy-blk, sb bly-sb ply, frm-v frm, sl arg, mot tex, v calc, tr  
bent, tr cal frag, CHK: med gy-lt gy-lbn, sl mot tex ip, ply-sb ply, sft-sl frm, sl  
arg, v calc, v difse stmg lt-bl-sl-wh flor, dul bl, radg, sl sp ip resd ring sin

MRLST: med-dk gy-blk, sb bly  
cal frag, v r rnoc, CHK: med d  
v calc, v difse stmg, rr strg lt-l





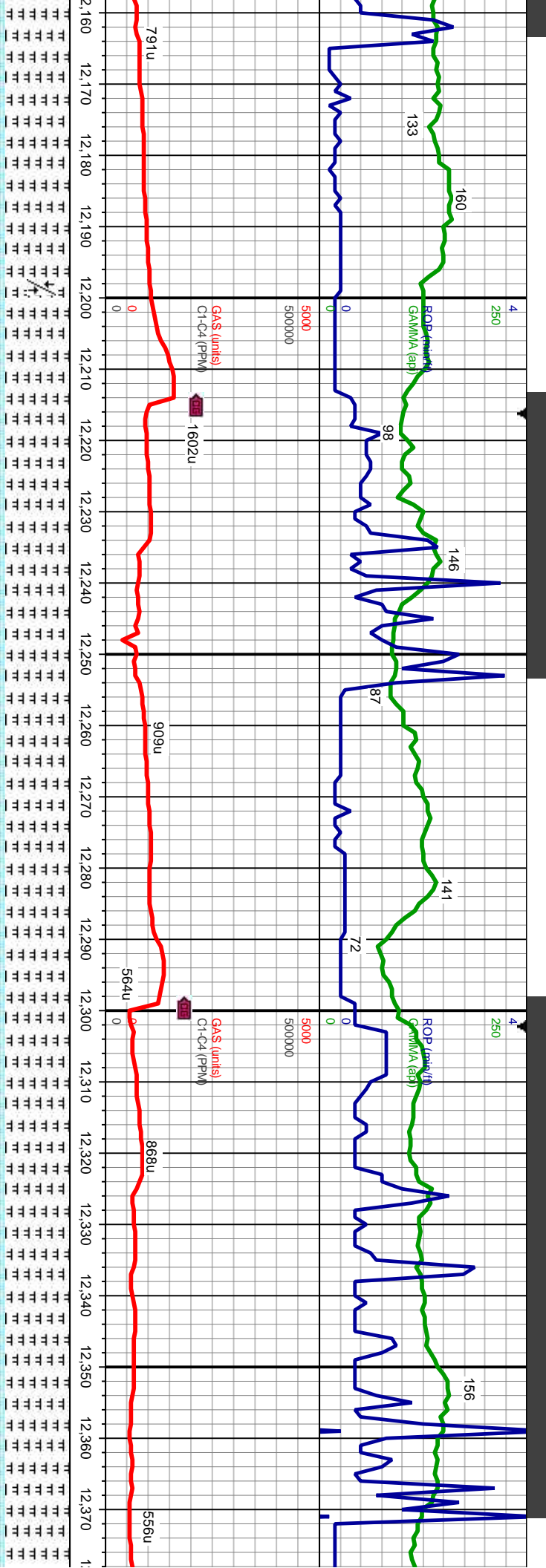


WT IN 9.6/ OUT 9.6 VIS IN 48/ OUT 48		6000	TVD (ft)	MD: 12.076. TVD: 7.377.38. Incl.: 87.35 - Azim.: 1.38 - VS: 3.972.58.	WT IN 9.6/ OUT 9.6 VIS IN 47/ OUT 47
		8000			

gy-sb pily, frm-v frm, sl arg, mot tex, v calc, tr bent, tr  
gy-lt gy-lbn, sl mot tex ip, pily-sb pily, sft-sl frm, sl arg, v  
bl-sl-wh flor, dul bl, radg, sl sp ip resd ring stn

MRL ST: med-dk gy-blk, sb bly-sb pily, frm-v frm, sl arg, mot tex, v calc, tr bent, tr cal  
frag, v rr inoc, CHK: med gy-lt gy-lbn, sl mot tex ip, pily-sb pily, sft-sl frm, sl arg, v  
calc, v difse string, rr strg lt-bl-sl-wh flor, dul bl, radg, sl sp ip resd ring stn





FAULT 4 OF 4:  
MD: 12,199'  
TVD: 7,384"  
VS: 4.095'  
21' DOWNWARD THROW

MD: 12,247'  
TVD: 7,387.74"  
Incl.: 85.7°  
Azim.: 1.94°  
VS: 4,143.24'

WT IN 9.6/ OUT 9.6  
VIS IN 48/ OUT 48

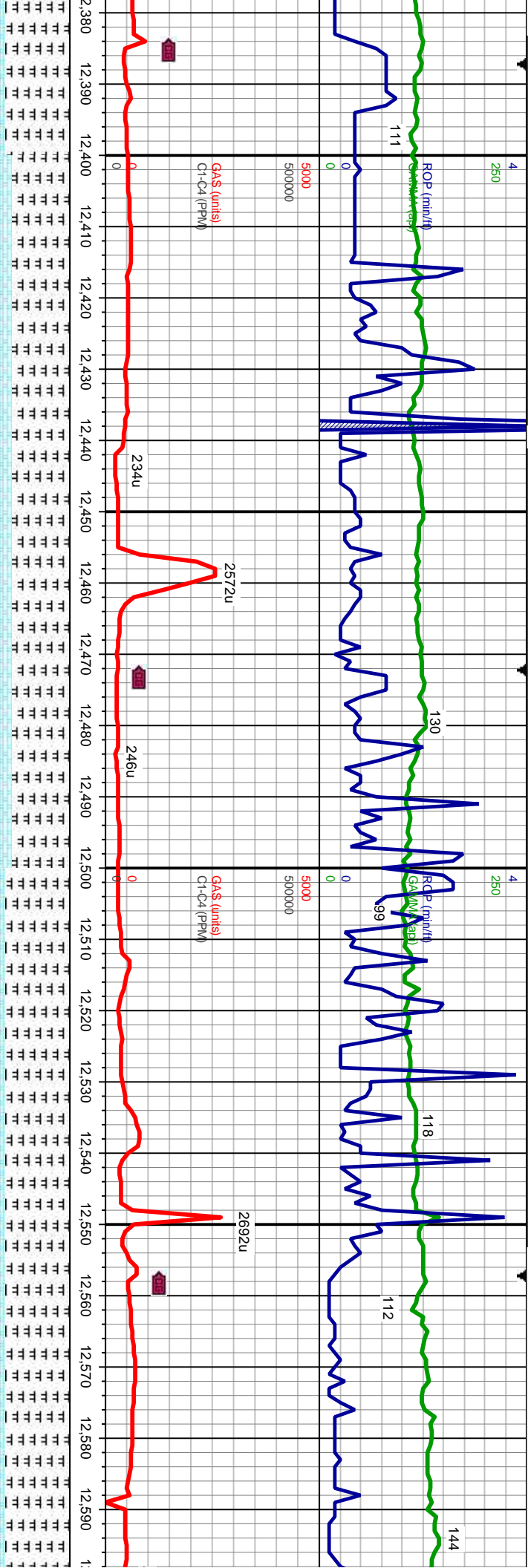
si arg, mot tex, v calc, com bent, ex ip, ply-sb ply, sft-sl frm, sl arg, v calc, v difse strng, rr strg lt-bl-sl-wh flor, dul bl, radg, sl sp ip resdl ring sin

MRLST: med-dk gy-blk, sb blyk-sb ply, frm-v frm, sl arg, mot tex, v calc, com bent, tr cal frag, v rr pyr, CHK: med gy-lt gy-lbn, sl mot tex ip, ply-sb ply, sft-sl frm, sl arg, v calc, v difse strng, rr strg lt-bl-sl-wh flor, dul bl, radg, sl sp ip resdl ring sin

MRLST: med-dk gy-blk, sb blyk-sb ply, frm-v frm, sl arg, mot tex, v calc, tr cal frag, v rr pyr, CHK: med gy-lt gy-lbn, sl mot tex ip, ply-sb ply, sft-sl arg, v calc, v difse strng, rr strg lt-bl-sl-wh flor, dul bl, radg, sl sp ip resdl







6000	MD: 12,417. TVD: 7,399.66 Incl.: 86.26 - Azim.: 359.81 - VS: 4,312.81	6000	WT IN 9.6/ OUT 9.6 VIS IN 47/ OUT 46	MD: 12,587. TVD: 7,406 Incl.: 89.47 - Azim.: 358.47 - VS: 4,482.6
TVD (ft)		TVD (ft)		

com bent, sl frm, sl ring sin	8000	MRLST: med-dk gy-blk, sb blk-y-sb ply, frm-v frm, sl arg, mot tex, v calc, com bent, tr cal frag, v rr pyr, CHK: med gy-lt gy-lbn, sl mot tex ip, ply-sb ply, sft-sl frm, sl arg, v calc,v difse strng, rr strg lt-bl-sl-wh flor, dul bl, radg, sl sp ip resdl ring sin	8000	MRLST: med-dk gy-blk, sb blk-y-sb ply, frm-v frm, sl arg, mot tex, v calc, com bent, tr cal frag, v rr pyr, CHK: med gy-lt gy-lbn, sl mot tex ip, ply-sb ply, sft-sl frm, sl arg, v calc,v difse strng, rr strg lt-bl-sl-wh flor, dul bl, radg, sl sp ip resdl ring sin
-------------------------------------	------	---	------	---

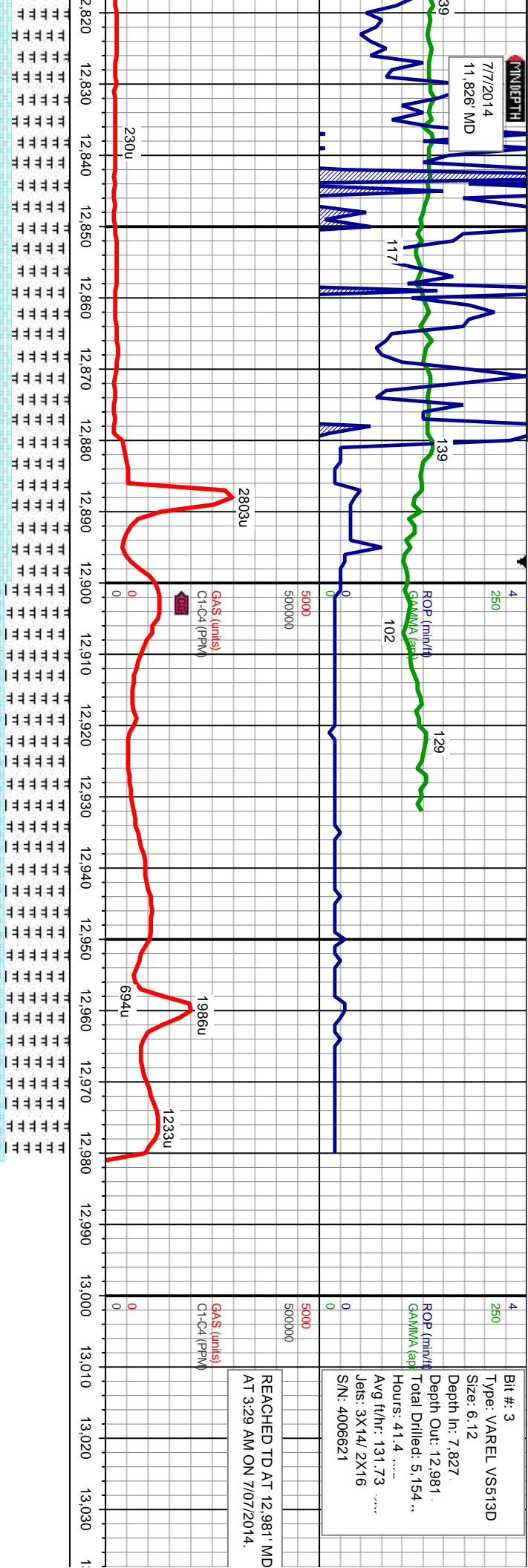






MINDEPTH

7/7/2014  
11,826 M/D



Bit #: 3  
Type: VAREL VS513D  
Size: 6.12  
Depth In: 7.827  
Depth Out: 12.981  
Total Drilled: 5.154  
Hours: 41.4  
Avg ft/hr: 131.73  
Jets: 3X14/ 2X16  
S/N: 4006621

REACHED TD AT 12,981' MD  
AT 3:29 AM ON 7/07/2014.

GAS (units)  
C1-C4 (PPM)

WT IN 9.6/ OUT 9.6+  
VIS IN 48/ OUT 47

WT IN 9.6/ OUT 9.6  
VIS IN 46/ OUT 47

PROJECTION TO BIT

MD: 12,927  
TVD: 7,400.14  
Incl.: 92.96  
Azim.: 0.87  
VS: 4,822.36

MD: 12,981  
TVD: 7,397.35  
Incl.: 92.96  
Azim.: 0.87  
VS: 4,876.28

TVD (ft)

WT: 9.7 @ 109F  
FV: 47  
PV: 10  
YP: 13  
CK APT/HT: 1/  
Sol.: 7.5  
pH/Temp.: 9.4 @ 109F  
Chl.: 2,900

med-dk gy-blk, sb blk-y-sb ply, frm-v frm, sl arg, mot tex, v calc, com bent,  
tr cal frag, v rr pyr: CHK: med gy-lt gy-lbn, sl mot tex ip, ply-sb ply, sft-sl frm, sl  
arg, v calc, v drise string, rr string lt-bl-sl-wh flor, dul bl, radg, sl sp ip resd ring str

MRIST: med-dk gy-blk, sb blk-y-sb ply, frm-v frm, sl arg, mot tex, v calc, com bent,  
tr cal frag, v rr pyr: CHK: med gy-lt gy-lbn, sl mot tex ip, ply-sb ply, sft-sl frm, sl  
arg, v calc, v drise string, rr string lt-bl-sl-wh flor, dul bl, radg, sl sp ip resd ring str

8000



