



Scale: 5" / 100'
Measured Depth Log

Well Name	Sickler 1N-34HZ		
Location	SWSE: SEC 34, TWP 2N 67W 6 PM		
State	COLORADO	County	WELD
Country	U.S.A.	Rig Number	XTREME 6
API Number	05123393760000	AFE #	2094574.DRL
Region	D-J BASIN	Field	WATTENBERG
Spud Date	7/19/2014	Drilling Completed	7/25/2014
Surface Coordinates	399' FSL, 1449' FEL		
Bottom Hole Coordinates	50' FFNLL, 660' FFELL		
Ground Elevation	4,949'	K.B. Elevation	4,969'
Logged Interval	7,100' To 13,078'	Total Depth	13,078'
Formation	NIOBRARA		
Type of Drilling Fluid	LSND/ PHPA		

Operator

Company Anadarko
Address Granite Tower
1099 18th St. #1800
Denver, CO 80202
(JIM)

Geologist

Name ISAAC SMITH & JIM FRANK (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	SILTY SHALE
BRECCIA	DOLOMITIC LIMESTONE	SALT	SILTSTONE
CHALK	GRANITE	SANDSTONE	TILL
CEMENT	GYPSUM	SALT-PEPPER SAND	TUFF
CHERT	IGNEOUS	SHALE	WELDED TUFF
CLAY CHOKE SAND	SIDERITE or LIMONITE	SHALE COLORED	
CLAYSTONE	LIMESTONE	SHALE GRAY	

Accessories

GASTROPOD	ARGILLITE GRAIN	HEAVY MINERAL	
INOCERAMUS	B BENTONITE	K KAOLIN	
ALGAE	BITUMENOUS SUBSTANCE	M MARCASITE	ANHYDRITE STRINGER
AMPHIPORA	BRECCIA FRAGMENTS	M MARLSTONE	BENTONITE STRINGER
BELEMNITE	PELCOYPOD	M MICACEOUS	COAL STRINGER
BIOCLASTIC	PELLET	MINERAL CRYSTALS	DOLOMITE STRINGER
BRACHIOPOD	P ISOLITE	N NODULES	GYPSUM STRINGER
BRYOZOA	PLANT REMAINS	PHOSPHATE PELLETS	LIMESTONE STRINGER
CEPHALOPOD	PLANT SPORES	COAL - THIN BEDS	MARLSTONE (CALC) STRG
CORAL	SCAPHOPOD	D DOLOMITIC	MARLSTONE (DOL) STRG
CRINOID	STROMATOPOROID	F FELDSPAR	SANDSTONE STRINGER
ECHINOID		S SIDERITE	SHALE STRINGER
FISH		F FERRUGINOUS PELLET	
FORAMINIFERA	ANHYDRITIC	F FERRUGINOUS	SILTCEOUS
F FOSSIL	ARGILLACEOUS	GLAUCONITE	SILTY
		GYPSIFEROUS	TUFFACEOUS

Oil Show

P PINPOINT
V VUGGY






































Engineering

D DEAD
E EVEN
Q QUESTIONABLE
B BIT
S SPOTTED STAINING
C CONNECTION (UP)

Porosity

C CONNECTION (DOWN)
E EARTHY
F FENESTRAL
T TRIP GAS
F FRACTURE
T TRIP GAS (LEFT)
I INTERCRYSTALLINE
D DOWN TIME GAS
I INTEROOLITIC
D DOWN TIME GAS
M MOLDIC
C CORE - LOST
O ORGANIC
C 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 1N-34HZ AT 7,100' MD.
DRILLING 8.75" HOLE. BIT #1, SMITH, SD1611.
DEPTH IN: 1,283 MD. KOP: 6,984' MD.

ROP
ROP —
GAMMA —

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

BEGIN COLUMBINE LOGGING INC.,
1-MAN LOGGING 7/21/2014.

Total Gas & Chromatograph

GAS —
C1 —
C2 —
C3 —
C4 —

Depth Labels

% Lith

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

SCAVENGER TANK IN OPERATION
WITH FOUR TOTAL SHAKERS.

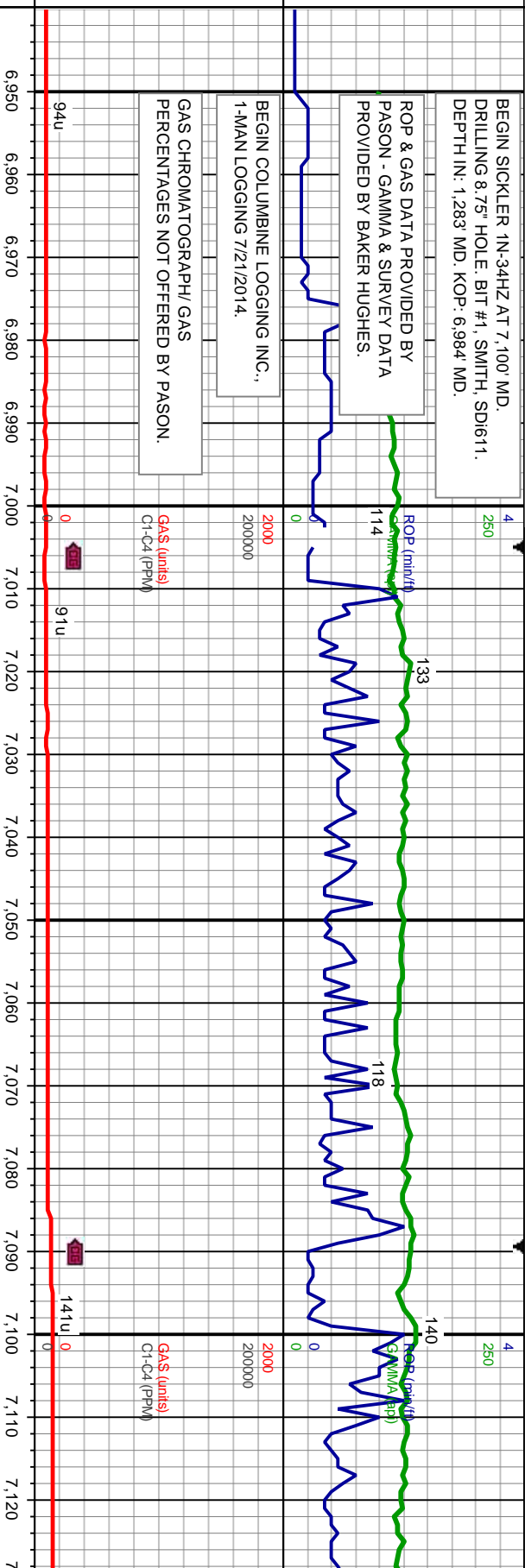
Well Bore
TVD —

ACETONE WAS USED AS THE CUTTING AGENT
WITH THE DMPLE 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

Images

GAS CHROMATOGRAPH/ GAS
PERCENTAGES NOT OFFERED BY PASON.



WT IN 10/ OUT 10
VIS IN 47/ OUT 47

MD: 6,998
TVD: 6,832.68
Incl.: 2.27 -
Azim.: 2.02 -
VS: -920.36

MD: 7,041
TVD: 6,875.49
Incl.: 7.94 -
Azim.: 356.57 -
VS: -916.54

WT: 10.1 @ 120F
FV: 50
PV: 13
YP: 13
CK AP/T/HT: 1/1/100
Sol.: 9
pH/ Temp.: 9.6 @ 120F
Chl.: 3.100

MD: 7,083
TVD: 6,916.62
Incl.: 15.06 -
Azim.: 355.71 -
VS: -908.19

WT IN 10/ OUT 10
VIS IN 50/ OUT 50

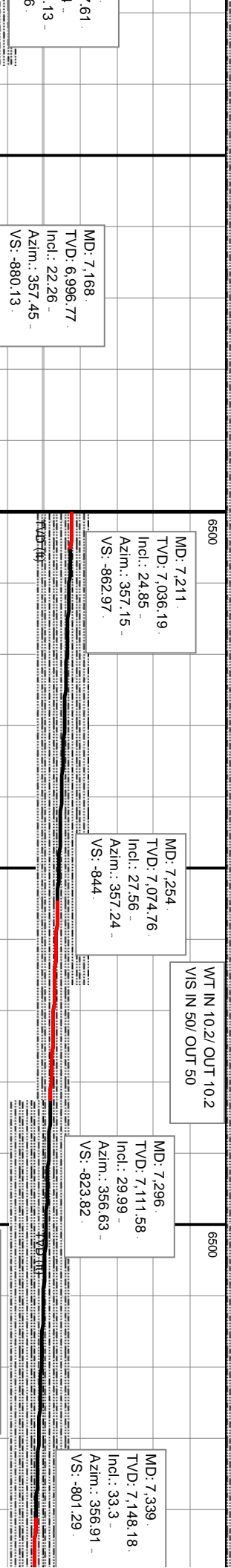
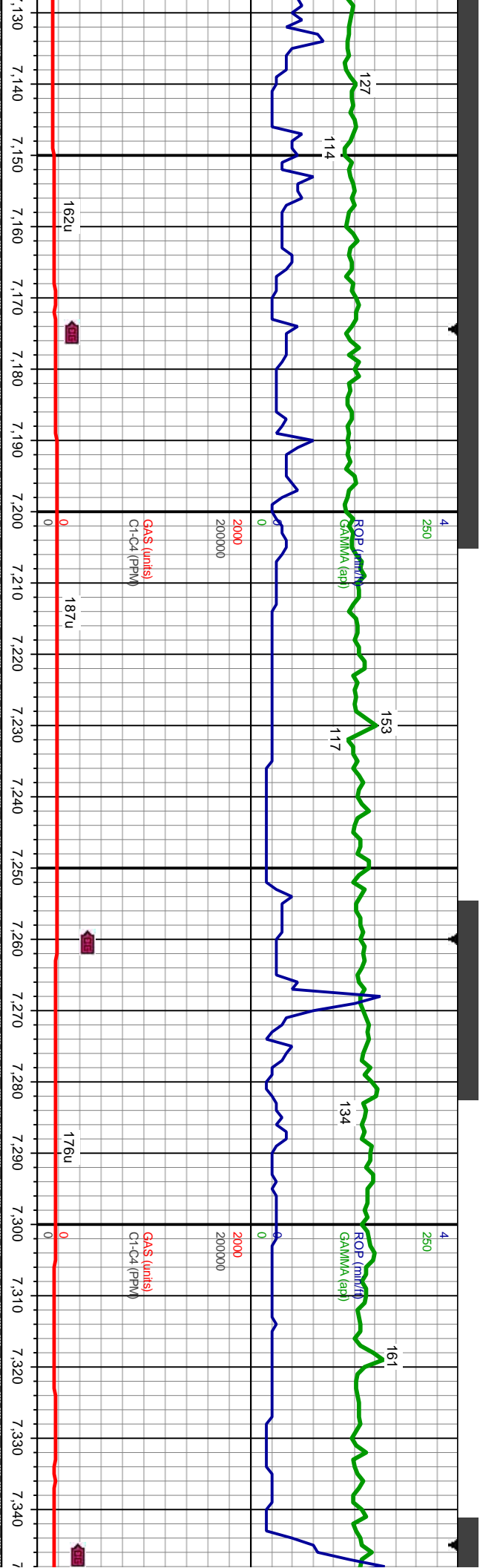
MD: 7,126
TVD: 6,957
Incl.: 20.0 -
Azim.: 356
VS: -895.2

100' SAMPLE INTERVAL
100' SAMPLE DESCRIPTION

SLTY SH: med-dk gy-blk, sb blk-y-sb ply, frm- mod frm, sl fri, sl gt
sily, v sl calc, difse sl string dul bl-wh cut, thn dul bl resd ring

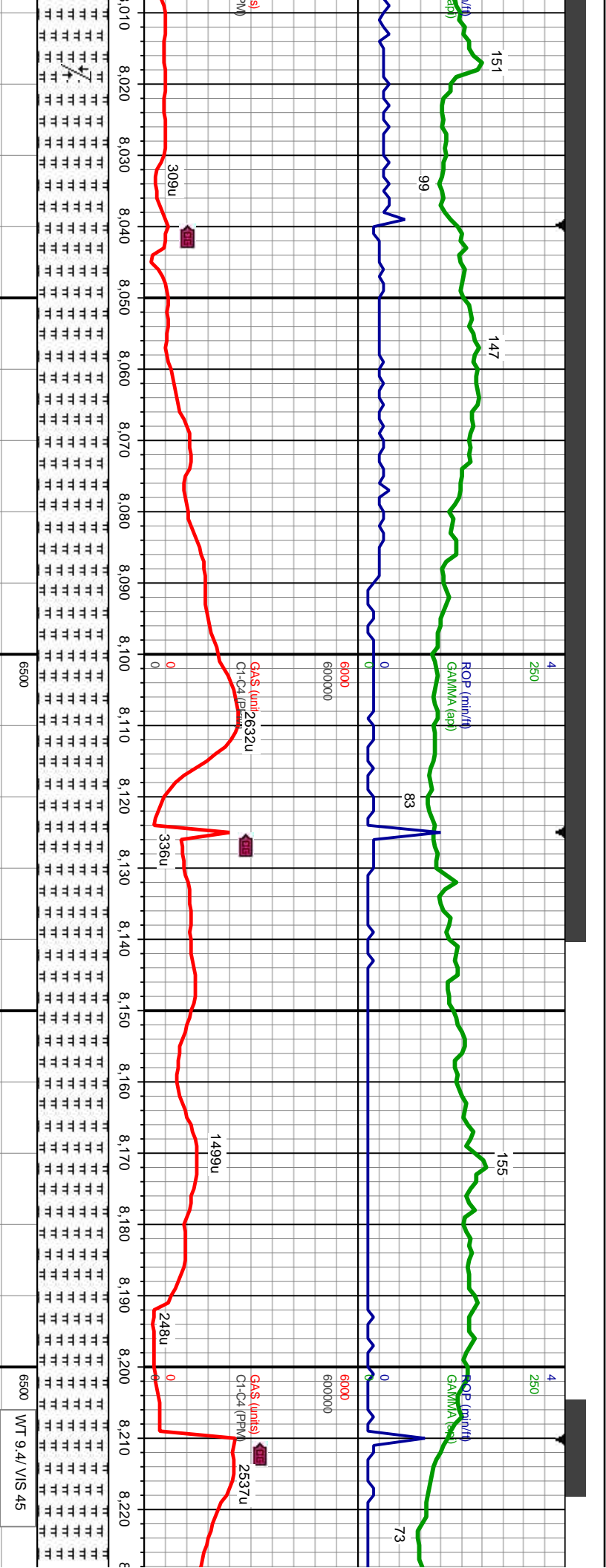
SLTY SH: med-dk
sily, v sl calc, difse





<p>gy-blk, sb blk-y-sb pily, frm- mod frm, sl fri, sl gt sl sting dul bl-wh cut, thn dul bl resdl ring</p>	<p>MD: 7,168. TVD: 6,996.77 Incl.: 22.26 Azim.: 357.45 VS: -880.13</p> <p>TVD SCALE CHANGE</p>	<p>SLTY SH: med-dk gy-blk, sb blk-y-sb pily, frm- mod frm, sl fri, sl gt slty, v sl calc, difse sl sting dul bl-wh cut, thn dul bl resdl ring</p>
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FAULT 1 OF 7:
MD: 8,018'
TVD: 7,391'
VS: -213'
17' DOWNWARD THROW

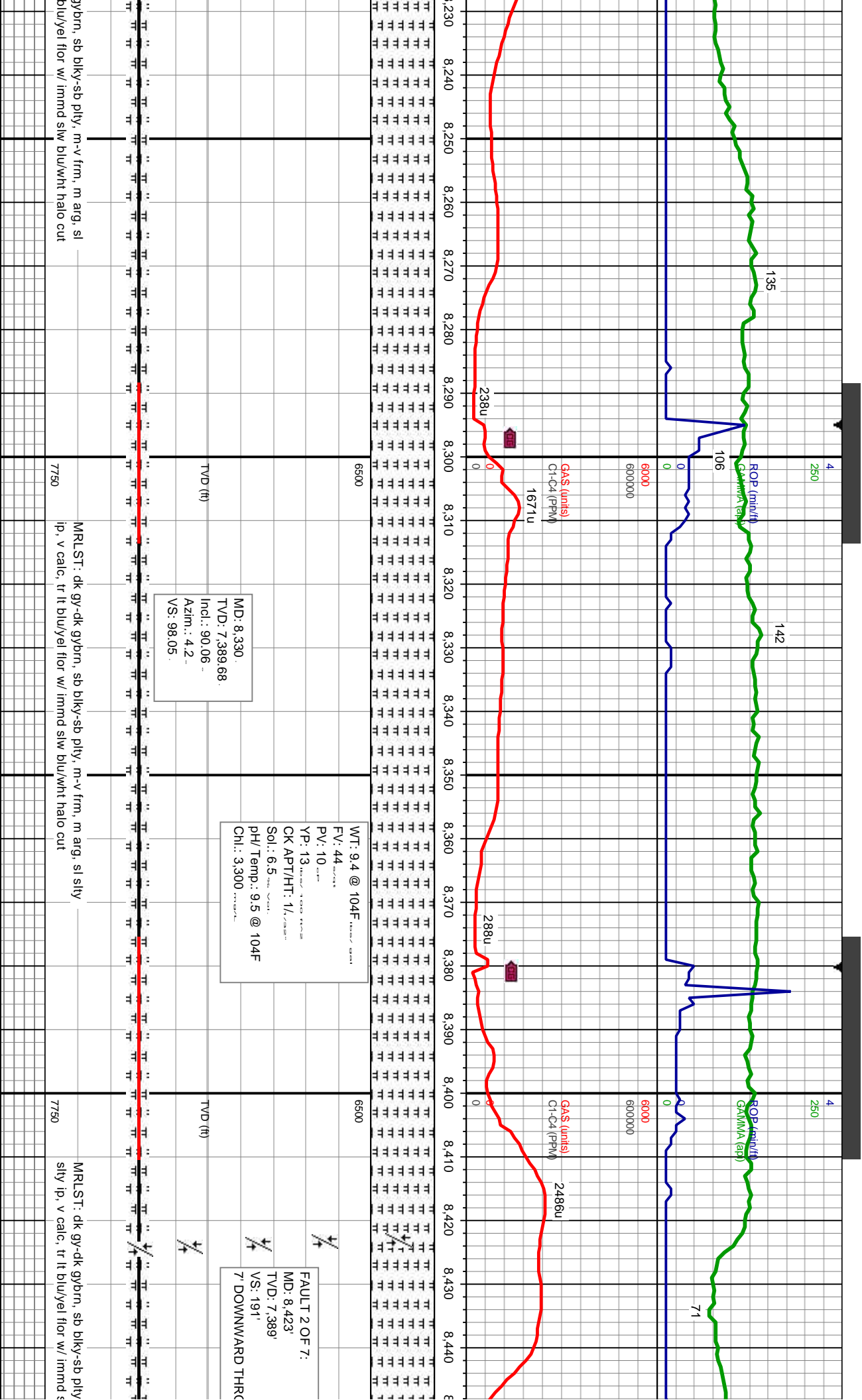
MD: 8,074
TVD: 7,380.48
Incl: 90.68 -
Azim: 3.43 -
VS: -157.33

MD: 8,159
TVD: 7,389.91
Incl: 90.09 -
Azim: 3.92 -
VS: -72.51

MRLST: dk gy-dk gybrn, sb blk-y-sb pty, m-v frm, m-v arg, sl
sily ip, v calc, tr lt blu/yel flr w/ immd slw blu/wht halo cut

MRLST: dk gy-dk gybrn, sb blk-y-sb pty, m-v frm, m arg, sl
sily ip, v calc, tr lt blu/yel flr w/ immd slw blu/wht halo cut

MRLST: dk gy-dk (k
sily ip, v calc, tr lt

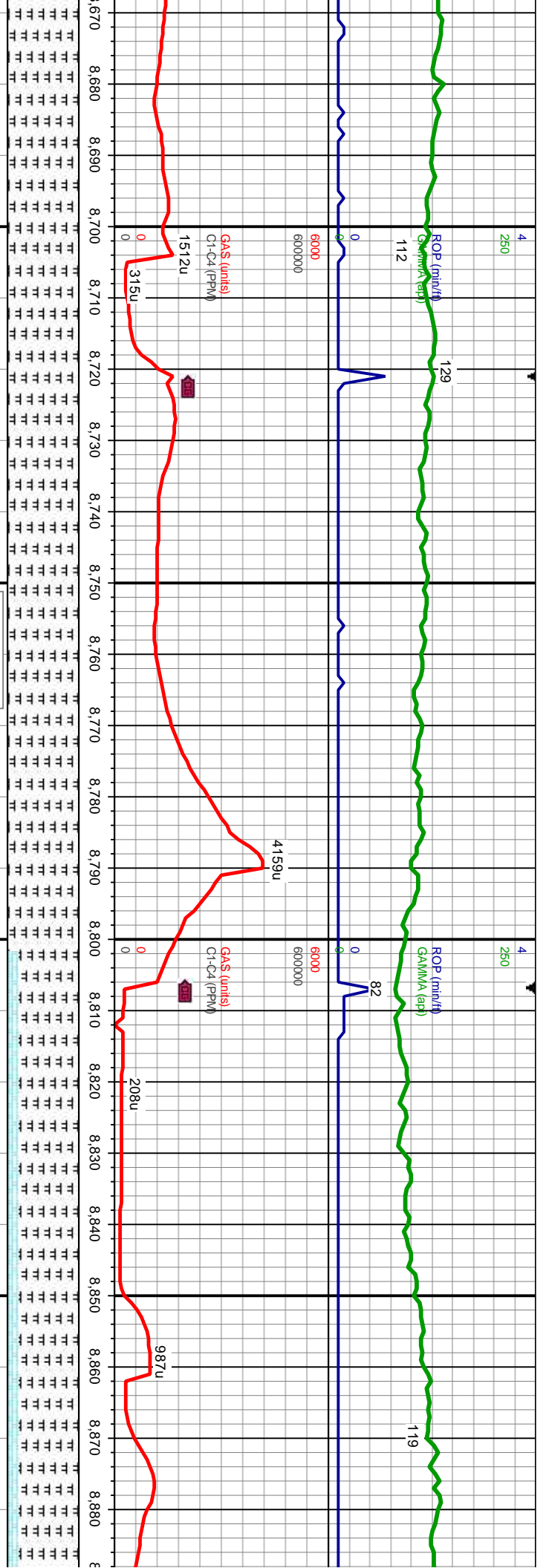


MD: 8,330.
TVD: 7,389.68.
Incl.: 90.06.
Azim.: 4.2.
VS: 98.05.

WT: 9.4 @ 104F
EV: 44
PV: 10
YP: 13
CK APT/HT: 1/
Sol.: 6.5
pH/Temp.: 9.5 @ 104F
CH: 3,300

FAULT 2 OF 7:
MD: 8,423'
TVD: 7,389'
VS: 191'
7' DOWNWARD THRC





MD: 8,671
TVD: 7,383.22
Incl.: 91.2
Azim.: 359.77
VS: 38.75

TVD (ft)

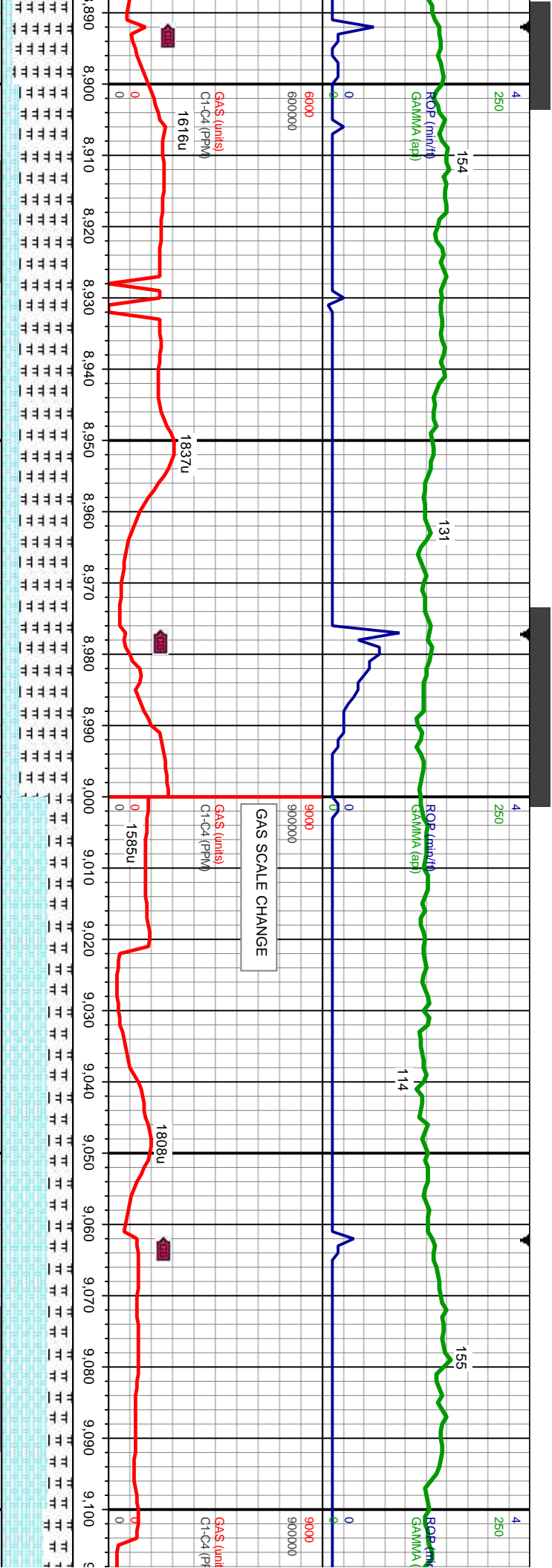
TVD (ft)

MD: 8,841
TVD: 7,379.29
Incl.: 91.45
Azim.: 0.02
VS: 608.71

MRLST: dk gy-dk gybrn, sb blk-y-sb plty, m-v frm, m arg, sl
stly ip, v calc; tr lt blu/yel flwr w/ immnd slw blu/wht halo cut

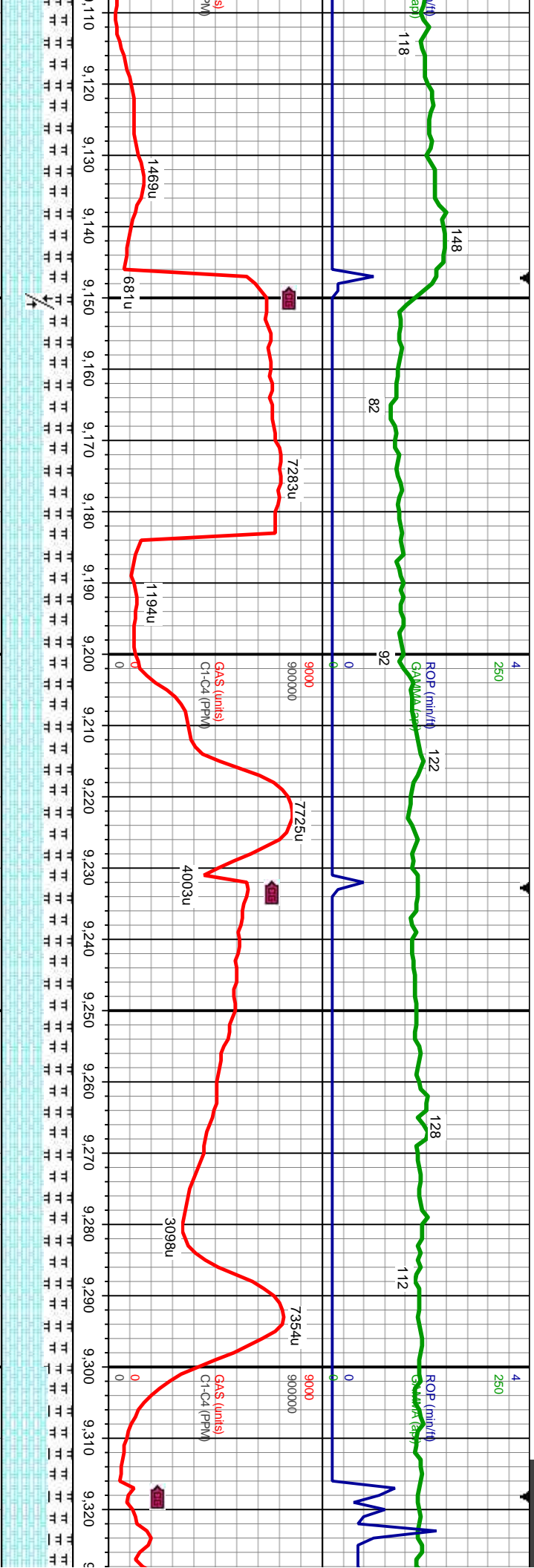
MRLST: dk gy-dk gybrn, sb blk-y-sb plty, m-v frm, m arg, sl stly ip, v calc, CHK: med gy
mot, sb blk-y-sb plty, stl-sl frm, sl arg, v calc; tr lt blu/yel flwr w/ immnd slw blu/wht halo





6500		WT 9.4/ VIS 49	6500		WT IN 9.4/ OUT 9.4 VIS IN 49/ OUT 49	6500	
TVD (ft)			TVD (ft)			TVD (ft)	
7750		MR.LST: med-dk gy-blk, sb blk-y-sb pily, frm, arg, sl slty, sl mot ip, v calc, tr lnoc, tr cal frags; CHK: med gy-lt gy, rthy tex, sb blk-y-sb pily, sft-sl frm, sl arg, v calc; bri difse, bl-wh mky cut; bri bl-wh resd ring	7750		MR.LST: med-dk gy-blk, sb blk-y-sb pily, frm, arg, sl slty, sl mot ip, v calc, tr lnoc, tr cal frags; CHK: med gy-lt gy, rthy tex, sb blk-y-sb pily, sft-sl frm, sl arg, v calc; bri difse, bl-wh mky cut; bri bl-wh resd ring	7750	



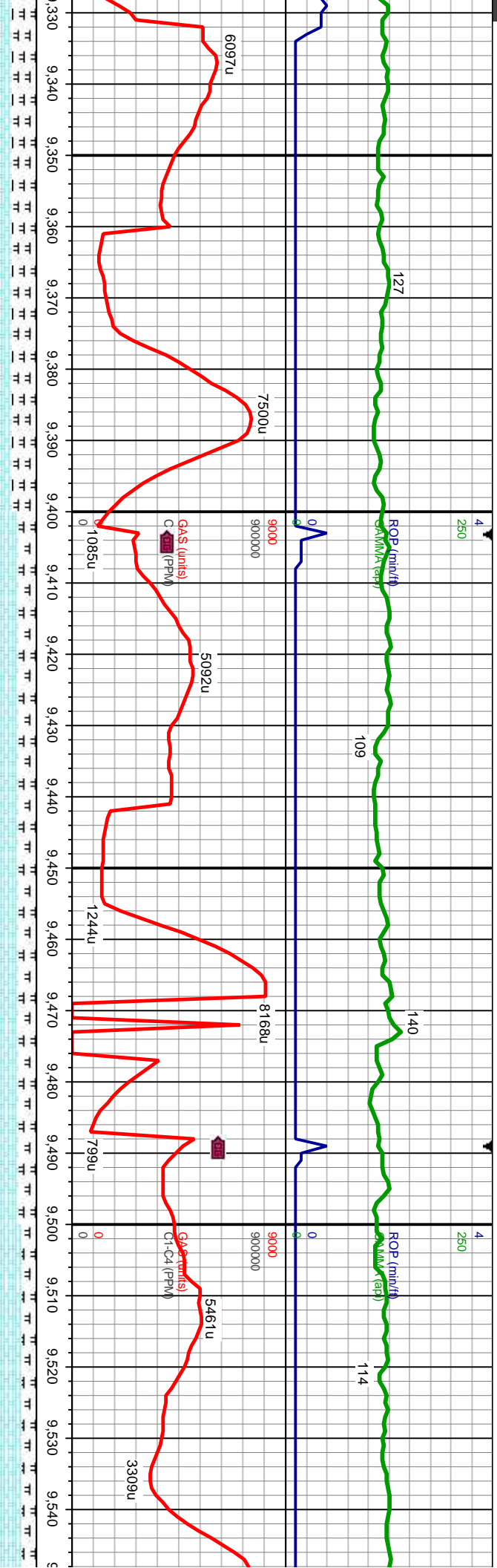


FAULT 3 OF 7:
MD: 9,150'
TVD: 7,376'
VS: 918'
4' UPWARD THROW

MD: 9,182.
TVD: 7,375.55
Incl.: 90.27 -
Azim.: 357.16 -
VS: 949.5.

MRLST: med-dk gy-blk, sb blk-y-sb pily, frm, arg, sl silty, sl mot ip, v calc, rr inoc, tr cal frags; CHK: med gy-lt gy, rthy tex, sb blk-y-sb pily, sft-sl frm, sl arg, v calc; bri difse, bl-wh mky cut; bri bl-wh resd ring		7750	MRLST: med-dk gy-blk, sb blk-y-sb pily, frm, arg, sl silty, sl mot ip, v calc, rr inoc, tr cal frags; CHK: med gy-lt gy, rthy tex, sb blk-y-sb pily, sft-sl frm, sl arg, v calc; bri difse, bl-wh mky cut; bri bl-wh resd ring		7750
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MD: 9.352.
TVD: 7.375.8.
Incl.: 89.56 -
Azim.: 358.05 -
VS: 1.119.36 .

TVD (ft)

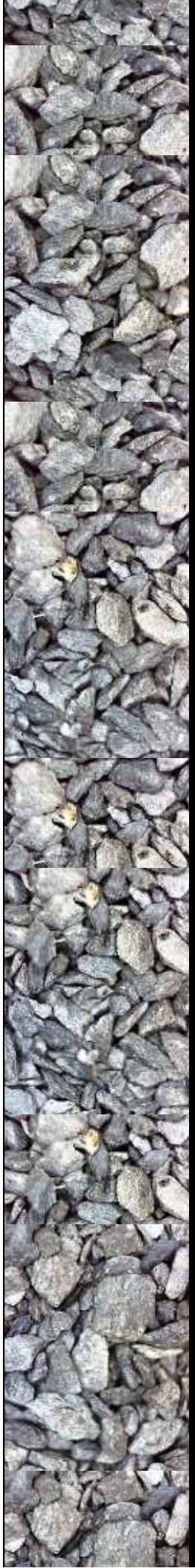
TVD (ft)

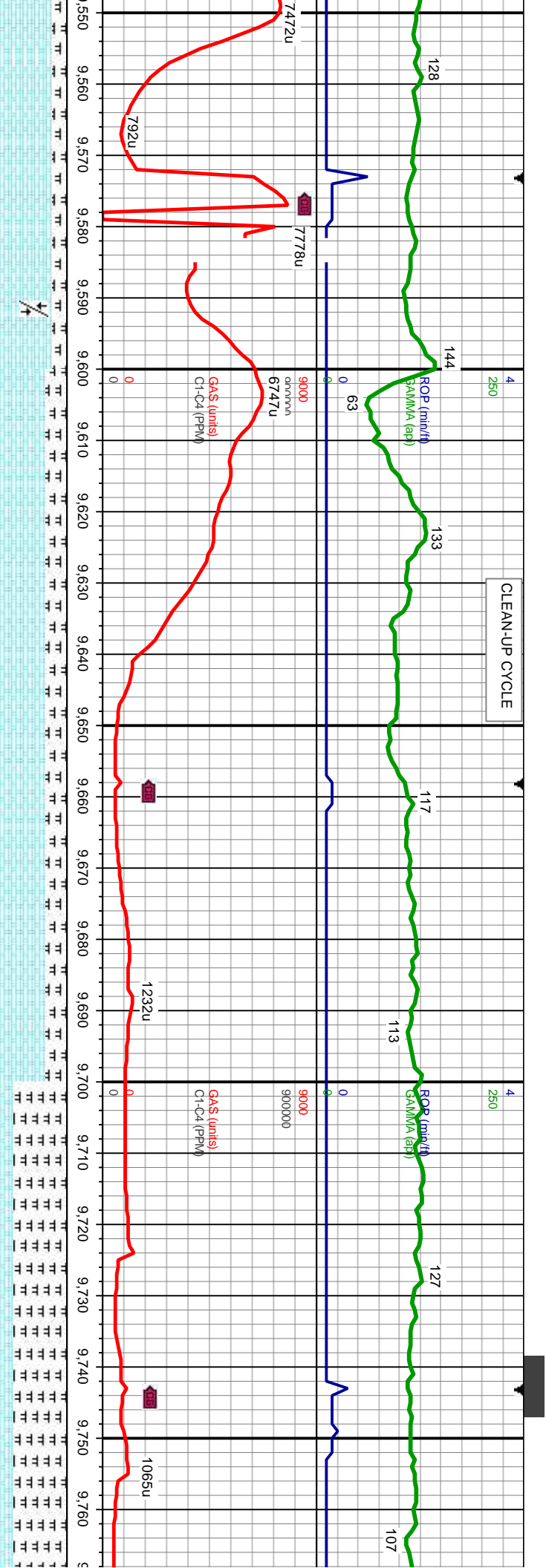
MD: 9.522.
TVD: 7.376.51
Incl.: 89.96 -
Azim.: 357.77 -
VS: 1.289.25 .

-blk, sb blk-y-sb pily, frm, arg, sl silty, mot, v calc, rr
bent; CHK: med gy-it gy, rthy tex, sb blk-y-sb pily, -
calc; bri difse, bl-wh mky cut; bri bl-wh resd ring

MRSLT: med-dk gy-blk, sb blk-y-sb pily, frm, arg, sl silty, mot, v calc, rr
Inoc, tr cal frags, tr bent; CHK: med gy-it gy, rthy tex, sb blk-y-sb pily, -
sft-sl frm, sl arg, v calc; bri difse, bl-wh mky cut; bri bl-wh resd ring

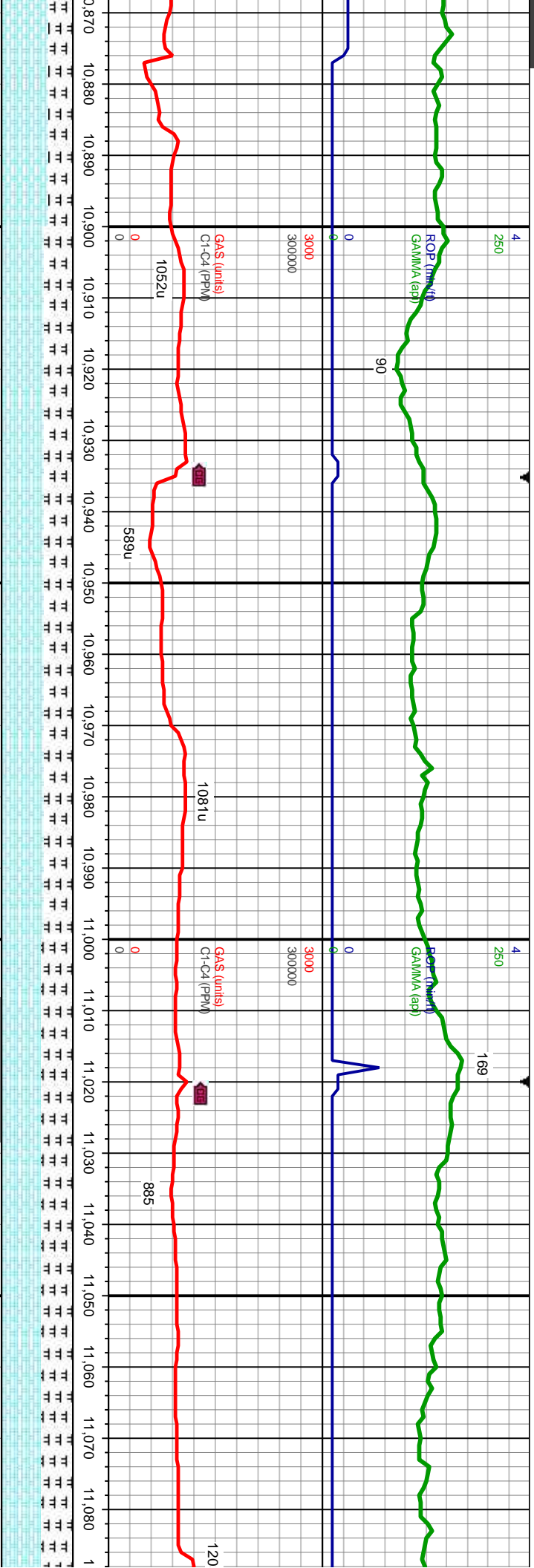
MRSLT: med-dk gy-blk, sb blk-y-sb pily,
Inoc, tr cal frags, tr bent; CHK: med gy-
sft-sl frm, sl arg, v calc; bri difse, bl-wh





FAULT 4 OF 7: MD: 9.591' TVD: 7.377' VS: 1.358' 18' DOWNWARD THROW		6500	MD: 9.692' TVD: 7.377.18 Incl.: 89.59 - Azim.: 357.15 - VS: 1.459.09		6500
TVD (ft)			TVD (ft)		
frm, arg, sl silty, mot, v calc, rr	MRST: med-dk gy-blk, sb blk-sb pily, frm, arg, sl silty, mot, v calc, rr		MRST: med-dk gy-blk, sb blk-sb pily, frm, arg, sl silty, mot, v calc, rr		
lt gy, rthy tex, sb blk-sb pily,	Inoc, tr cal frags, tr bent; CHK: med gy-lt gy, rthy tex, sb blk-sb pily,		Inoc, tr cal frags, tr bent; CHK: med gy-lt gy, rthy tex, sb blk-sb pily,		
mky cut; bri bl-wh resd ring	sft-sl frm, sl arg, v calc; bri difse, bl-wh mky cut; bri bl-wh resd ring	7750	sft-sl frm, sl arg, v calc; bri difse, bl-wh mky cut; bri bl-wh resd ring	7750	





MD: 10,884.
TVD: 7,371.33
Incl.: 90.18 -
Azim.: 0.9 -
VS: 2,650.34

TVD (ft)

6500

WT IN 9.4/ OUT 9.4
VIS IN 44/ OUT 44

6500

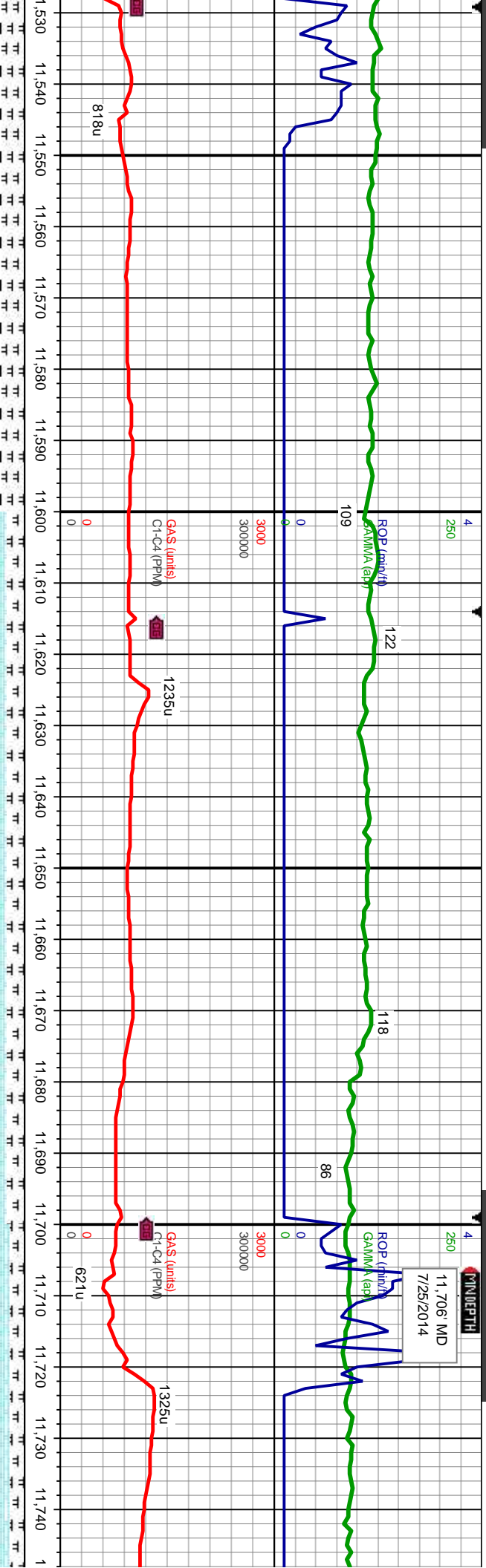
TVD (ft)

MD: 11,054.
TVD: 7,370.25
Incl.: 90.55 -
Azim.: 0.01 -
VS: 2,820.33

CHK: med gy-lt gy, sl mot, sb blk-y-sb pty, sft-sl frm, sl arg, v
calc: MRLST: dk gy-dk gybrn, sb blk-y-sb pty, m-v frm, m arg, sl
sfty ip, v calc: fr lt blu/yel flr w/ immd slw blu/wht halo cut

CHK: med gy-lt gy, sl mot, sb blk-y-sb pty, sft-sl frm, sl arg, v
calc: MRLST: dk gy-dk gybrn, sb blk-y-sb pty, m-v frm, m arg, sl
sfty ip, v calc: fr lt blu/yel flr w/ immd slw blu/wht halo cut





9.4 @ 116F
47
12
11
APT/HT: 1/
: 6
Temp.: 9.7 @ 116F
: 3,300

MD: 11,565.
TVD: 7,366.72.
Incl.: 90.52 -
Azim.: 359.98 -
VS: 3,331.3.

6500 WT IN 9.4/ OUT 9.4
VIS IN 44/ OUT 44

TVD (ft)

TVD (ft)

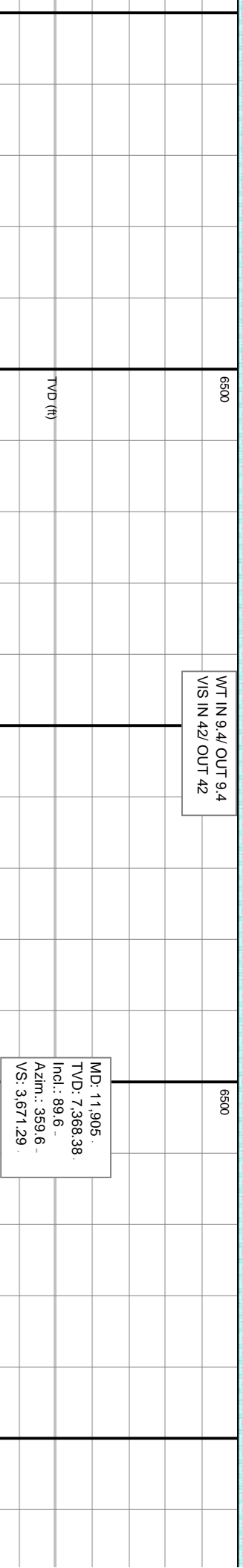
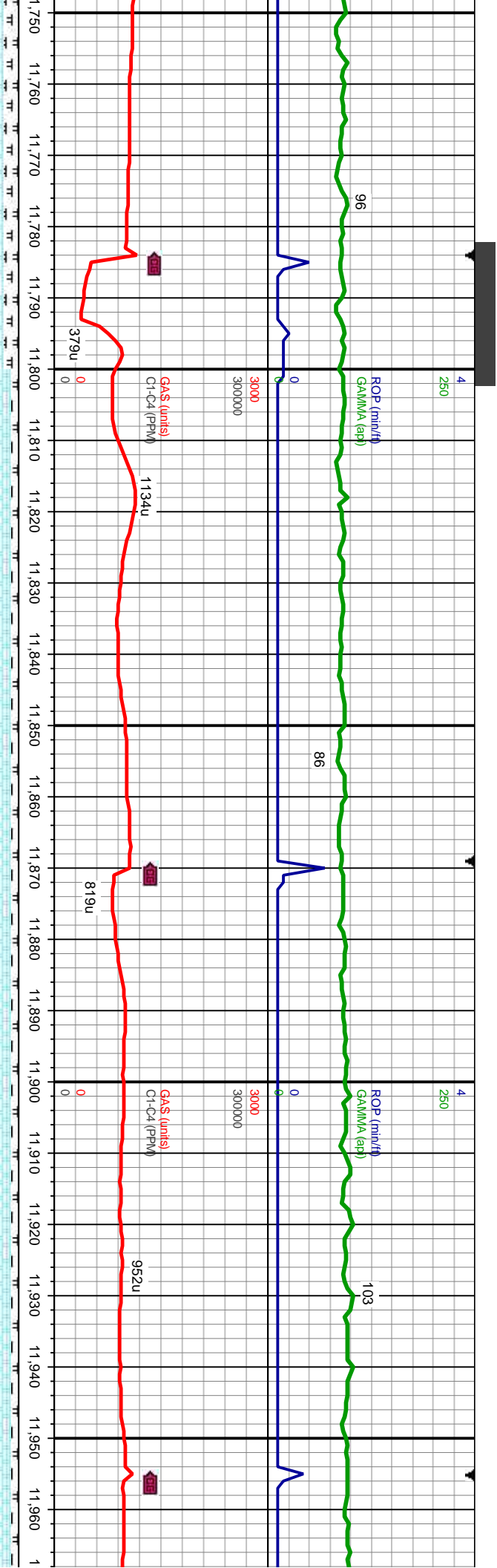
MD: 11,735.
TVD: 7,366.87.
Incl.: 89.38 -
Azim.: 0.33 -
VS: 3,501.3.

gy-ll gy, sl mot, sb blk-y-sb ply, sft-sl frm, sl arg, v
ST: dk gy-dk gybrn, sb blk-y-sb ply, m-v frm, m arg, sl
alc: tr lt blu/yel flr w/ immd slw blu/wht halo cut

CHK: med gy-ll gy, sl mot, sb blk-y-sb ply, sft-sl frm, sl arg, v
calc: MRLST: dk gy-dk gybrn, sb blk-y-sb ply, m-v frm, m arg,
sl slty ip, v calc: tr lt blu/yel flr w/ immd slw blu/wht halo cut

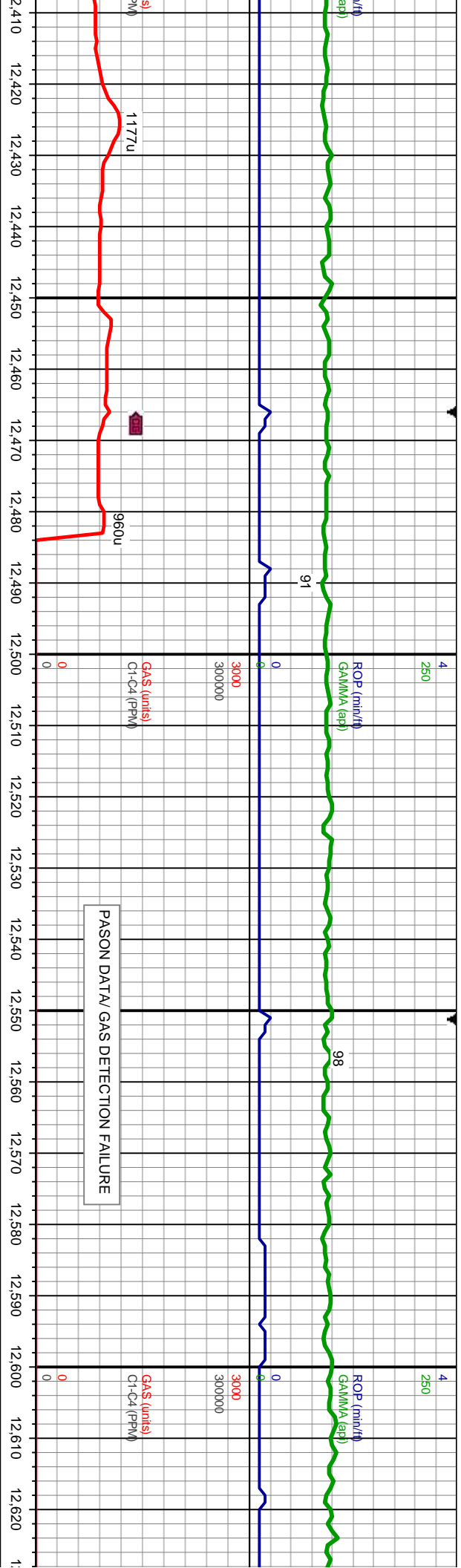
CHK: med gy-ll gy, sl mot, sb
calc: MRLST: dk gy-dk gybrn,
slty ip, v calc: tr lt blu/yel flr





biky-sb pily, stfsi frm, sl arg, v	CHK: med gy-it gy, sl mot, sb biky-sb pily, stfsi frm, sl arg, v
sb biky-sb pily, m-v frm, m arg, sl	calc: MRLST: dk gy-dk gybrn, sb biky-sb pily, m-v frm, m arg, sl sily ip, v calc: tr it blu/yel flr w/ immd slw blu/wht halo cut
w/ immd slw blu/wht halo cut	





MD: 12,416 TVD: 7,369.51 Incl.: 89.84 - Azim.: 2.35 - VS: 4,181.97		MD: 12,585 TVD: 7,369.31 Incl.: 90.3 - Azim.: 0.97 - VS: 4,350.89	
TVD (ft)		TVD (ft)	
6500		6500	

CHK: med gy-lt gy-ltbn, rthy tex, sb biky-sb pily, sft-mod frm, sl arg, v calc, tr cal frags, v rr lnoc, stng wi mky strgs, bri bl-wh flr wi bl-wh dlse cut, thn bl resd ring

CHK: med gy-lt gy-ltbn, rthy tex, sb biky-sb pily, sft-mod frm, sl arg, v calc, tr cal frags, v rr lnoc, v rr pyr, stng wi mky strgs, bri bl-wh flr wi bl-wh dlse cut, thn bl resd ring



