



Scale: 5" / 100'
Measured Depth Log

Well Name Spurling 36C-34HZ

Location NW/4NW: SEC 34, TWP 2N 67W 6 PM

State COLORADO

County WELD

Country U.S.A.

Rig Number XTREME 6

API Number 05123391280000

AFE # 2085790.DRL

Region D-J BASIN

Field WATTENBERG

Spud Date 4/17/2014

Drilling Completed 4/25/2014

Surface Coordinates 377' FNL, 1178' FWL

Bottom Hole Coordinates 460' FFSSL, 2450' FFWLL

Ground Elevation 5,013'

K.B. Elevation 5,033'

Logged Interval 7,200' To 12,343'

Total Depth 12,343

Formation CODELL

Type of Drilling Fluid LSND/ PHPA

Operator

Company Anadarko

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

Geologist

Name ISAAC SMITH & IRENE KADEL-HARDER (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	PISOLITE	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	S SANDY
ECHINOID		S SIDERITE	SHALE STRINGER
FISH		FERRUGINOUS PELLET	
FORAMINIFERA	ANHYDRITIC	F FERRUGINOUS	SILTY
F FOSSIL	ARGILLACEOUS	GLAUCONITE	SILTY TUFFACEOUS
		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
	MINDEPTH MN DEPTH UP	Rounding			
	MINDEPTH MN DEPTH (DOWN)		A ANGULAR		PS PACKSTONE
	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 SPURLING 36C-34HZ AT 7,200' MD.
DRILLING 8.75" HOLE. BIT #1, SMITH, SD1611.
DEPTH IN: 1,086' MD. KOP: 7,188' MD.

ROP
ROF
GAMMA

Total Gas & Chromatograph

A diagram of a gas chromatogram. It features five horizontal bars of increasing length from top to bottom, each labeled on the left. The top bar is red and labeled 'GAS'. The second bar is blue and labeled 'C1'. The third bar is green and labeled 'C2'. The fourth bar is purple and labeled 'C3'. The bottom bar is dotted blue and labeled 'C4'.

Depth Labels

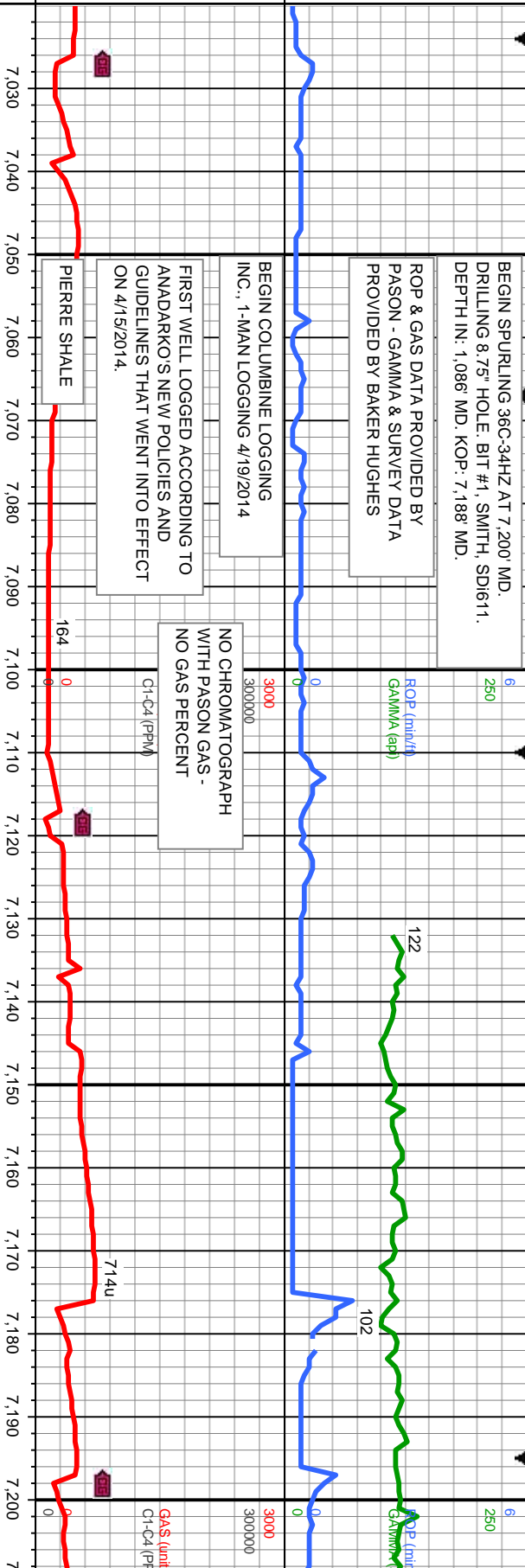
% Lith

Well Bore

TV-D

Oil Show

Images



THE INTERPRETATION OF THE WELLBORE LITHOLOGY IS NOT TO SCALE

SCAVENGER TANK IN OPERATION
WITH FOUR TOTAL SHAKERS.

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.

[illegible]

WT IN 10/ OUT 10
VIS IN 44/ OUT 44

TV-D SC

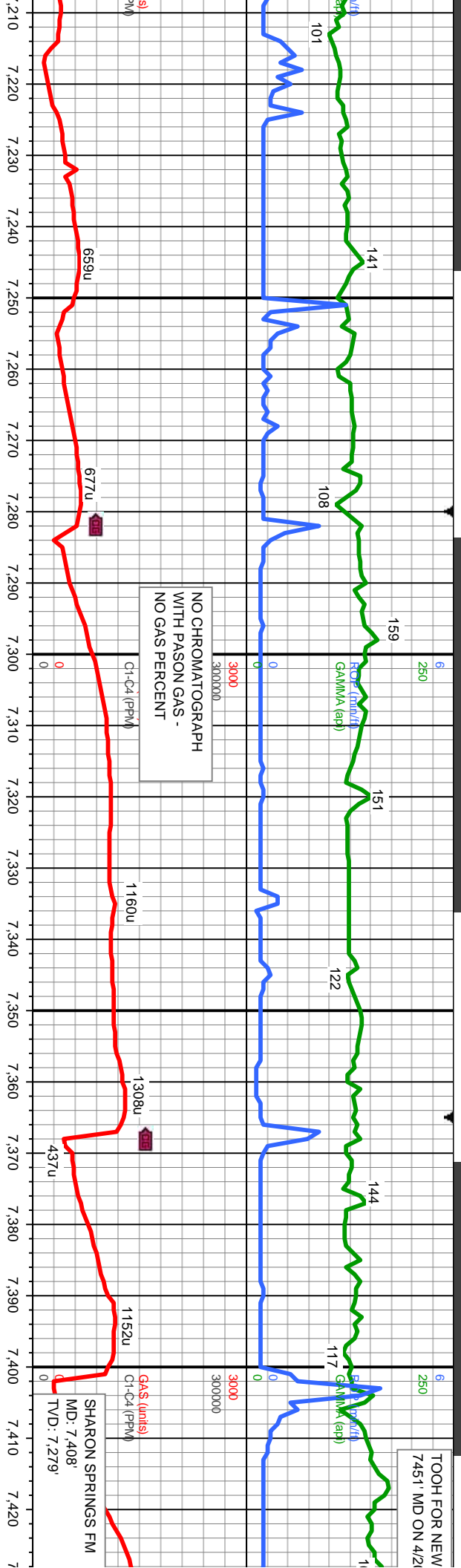
MD: 7,061
TVD: 6,939.55
Incl.: 11.37
Azim.: 75.72
VS: -321.49

MD: 7,146.
TVD: 7,022.71
Incl.: 12.51 -
Azim.: 70.27 -
VS: -326.72.

MD: 7,188.
TVD: 7,063.82
Incl.: 11.19 -
Azim.: 77.19 -
VS: -329.19.

SLTY SH: med-dk gy-blk, sb blk-y-sb pily - pily, frm- mod frm
sl fri, slty, sl gt; difse strng dull bl cut, thn dull bl resdl ring





WALE CHANGE

MD: 7,231.
TVD: 7,106.08
Incl.: 10.16 -
Azim.: 92.2 -
VS: -329.99 -

MD: 7,274.
TVD: 7,148.4
Incl.: 10.41 -
Azim.: 111.21 -
VS: -328.46 -

MD: 7,316.
TVD: 7,189.64
Incl.: 11.46 -
Azim.: 121.25 -
VS: -324.95 -

MUD DATA
WT: 10.0 @ 124F
FV: 42
PV: 14
YP: 12
CK: 1/
Sol: 8
pH / Temp: 9.6 @ 120F
Chl: 2,600

MD: 7,359.
TVD: 7,231.63
Incl.: 13.46 -
Azim.: 124.73 -
VS: -319.9 -

WT IN 9.9/ OUT 10
VIS IN 40/ OUT 41

TVD SCALE CHANGE

MD: 7,401.
TVD: 7,272.31
Incl.: 15.3 -
Azim.: 128.99 -
VS: -313.66 -

SLTY SH: med-dk gy-blk, sb biky-sb pily, frm- mod frm, -
sl fri, silty, sl gti, difse string dull bl cut, thn dull bl resd ring

SLTY SH: med-dk gy-blk, sb biky-sb pily, frm- mod frm, -
sl fri, silty, sl gti, difse string dull bl cut, thn dull bl resd ring

SLTY SH: med-dk gy-blk, sb frm- mod frm, sl fri, silty, sl gti, difse string dull bl cut, thn dull bl resd ring



MUDMOTOR AT
4/20/14 AT 9:00 AM

MINDEPTH
4/20/14 -
4/21/14

NO DATA FROM PASON

NO DATA FROM PASON

NO CHROMATOGRAPH
WITH PASON GAS -
NO GAS PERCENT

NO DATA FROM PASON

NO DATA FROM PASON

NO DATA FROM PASON

NO DATA FROM PASON

NO DATA FROM PASON

NO DATA FROM PASON

Bit # 1
Type: SMITH SDI611
Size: 8.75
Depth In: 1.086
Depth Out: 7.450
Hours: 22.8
Total Drilled: 6.364
Avg Ft/Hr: 279.12
Jets: 6X20
S/N: JH3611

NO DATA FROM PASON

NO DATA FROM PASON

NO DATA FROM PASON

NO DATA FROM PASON

NO DATA FROM PASON

NO DATA FROM PASON

NO DATA FROM PASON

NO DATA FROM PASON

NO DATA FROM PASON

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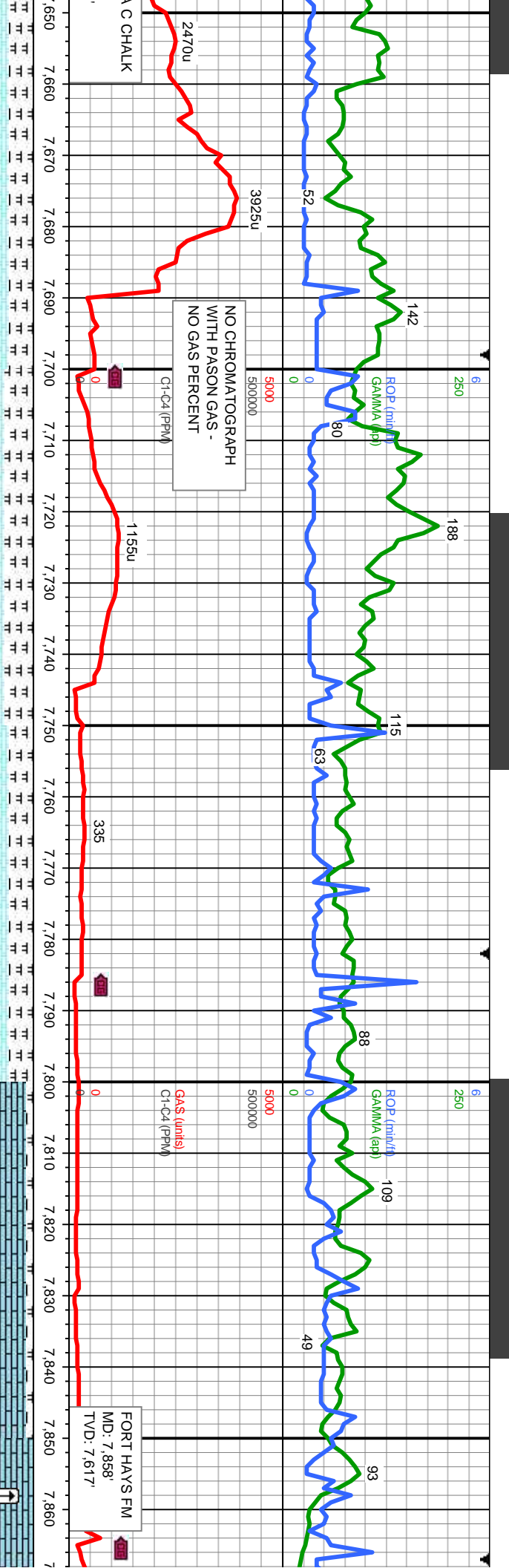
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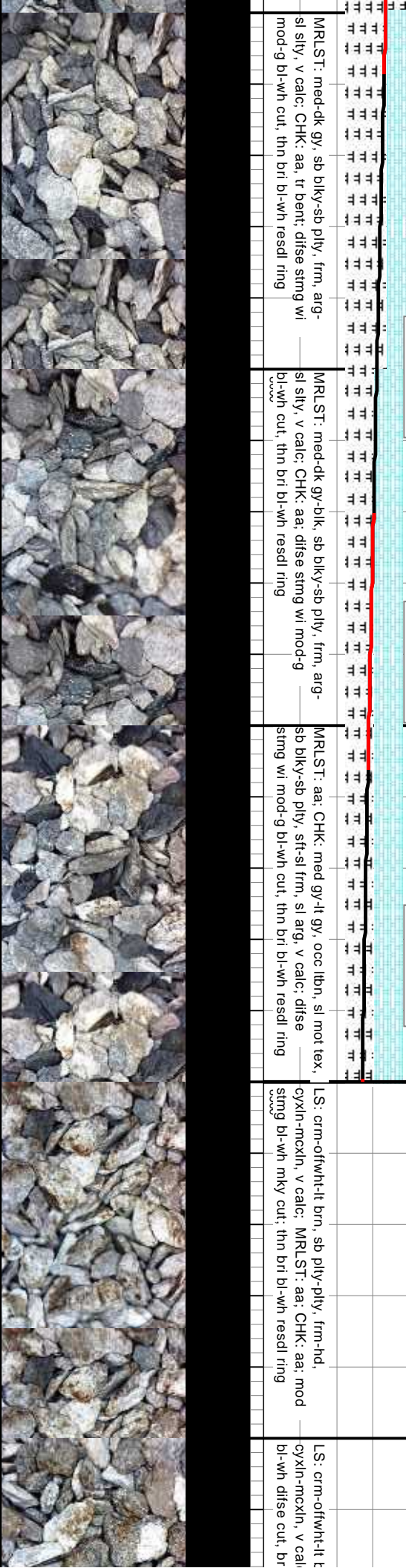
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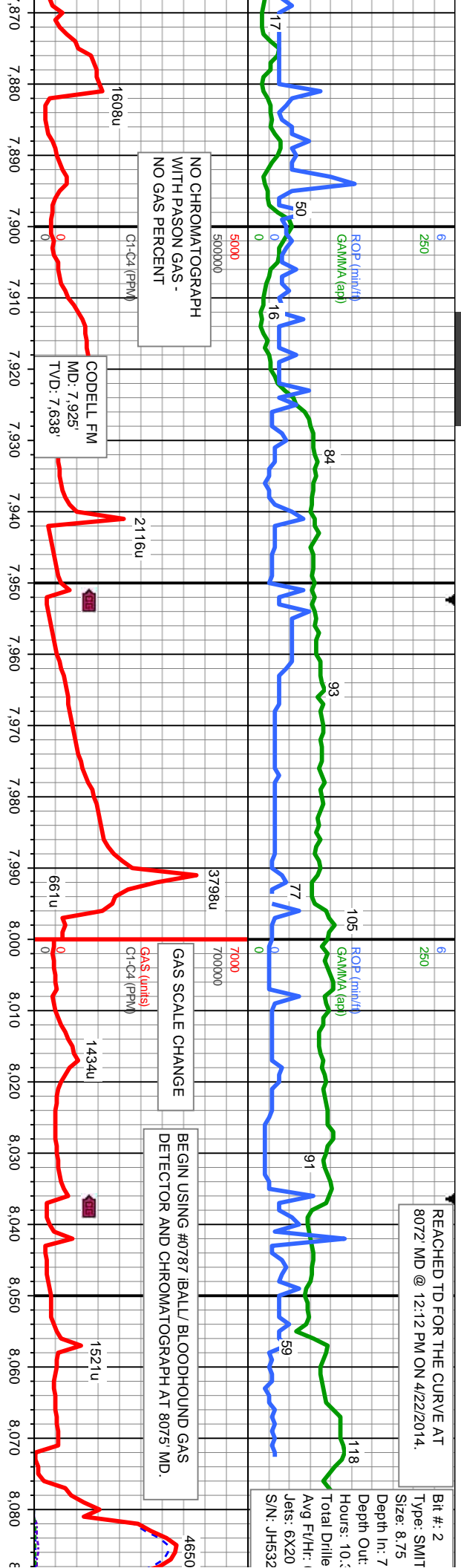
MD: 7.658. TVD: 7.501.13 Incl.: 40.02 - Azim.: 168.38 - VS: -215.46		MD: 7.699. TVD: 7.531.15 Incl.: 45.77 - Azim.: 171.81 - VS: -188		MD: 7.742. TVD: 7.559.57 Incl.: 51.49 - Azim.: 174.36 - VS: -155.99		MD: 7.784. TVD: 7.583.95 Incl.: 57.5 - Azim.: 176.91 - VS: -121.93		MD: 7.827. TVD: 7.604.83 Incl.: 64.37 - Azim.: 178.91 - VS: -84.4		MD: 7.866. TVD: 7.62 Incl.: 87.5 Azim.: 2.4 VS: -45.75	
MRLST: med-dk gy, sb blk-y-sb pily, frm, arg-silv, v calc; CHK: aa, tr bent; difse sting wi mod-g bl-wh cut, thn bri bl-wh resdl ring		MRLST: med-dk gy-blk, sb blk-y-sb pily, frm, arg-silv, v calc; CHK: aa; difse sting wi mod-g bl-wh cut, thn bri bl-wh resdl ring		MRLST: aa; CHK: med gy-bl gy, occ lbn, sl mot tex, sb blk-y-sb pily, sft-sl frm, sl arg, v calc; difse sting wi mod-g bl-wh cut, thn bri bl-wh resdl ring		LS: crm-offwh-lt brn, sb pily-pily, frm-hd, cyxln-mcxln, v calc; MRLST: aa; CHK: aa; mod bl-wh mky cut; thn bri bl-wh resdl ring		LS: crm-offwh-lt brn, sb pily-pily, frm-hd, cyxln-mcxln, v calc; MRLST: aa; CHK: aa; mod bl-wh difse cut, br			



REACHED TD FOR THE CURVE AT
8072' MD @ 12:12 PM ON 4/22/2014.

Bit #: 2
Type: SMTT
Size: 8.75

Depth In: 7
Depth Out:
Hours: 10.3
Total Drille
Avg Fv/Hr:
Jets: 6X20
S/N: JH532



WT IN 10.1/ OUT 10.1
VIS IN 42/ OUT 41

WT IN 10.3/ OUT 10.2
VIS IN 42/ OUT 41

MUD DATA
WT: 9.2 @ 82F
FV: 40
PV: 12
YP: 10
CK: 1/2
Sol: 5.5
pH / Temp: 9.1 @ 82F
Chl: 2.700

PROJECTED TO BIT

MD: 7,912
TVD: 7,634.9
Incl.: 88.67
Azim.: 0
VS: -5

MD: 7,954
TVD: 7,644.73
Incl.: 89.23
Azim.: 359.85
VS: 35.82

MD: 7,996
TVD: 7,650.88
Incl.: 89.87
Azim.: 358.81
VS: 77.35

MD: 8,032
TVD: 7,653.4
Incl.: 90.09
Azim.: 358.16
VS: 113.23

MD: 8,072
TVD: 7,653.92
Incl.: 90.24
Azim.: 357.2
VS: 153.21

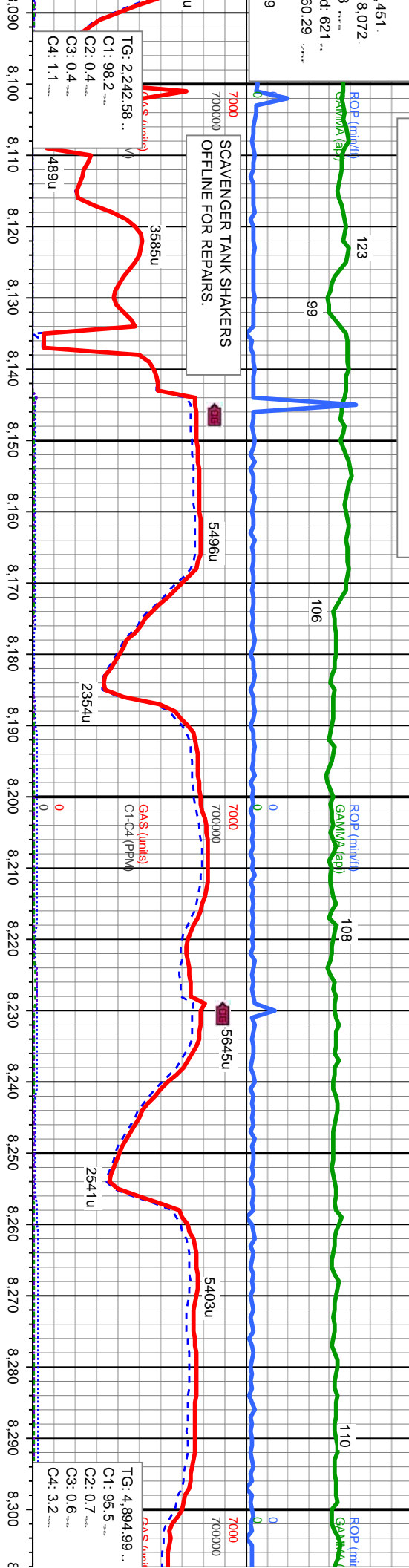
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SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w strd, mod cons, mod calc cnt; lt bl flr wi g bri, bl-wh dfse cut, thn bri bl resd ring

SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w strd, mod cons, mod calc cnt; lt bl flr wi g bri, bl-wh dfse cut, thn bri bl resd ring



BEGIN DRILLING LATERAL ON 4/24/14 AT 8:35 AM. 6.125" HOLE WITH BIT #3. VAREL. VS513D. DEPTH IN: 8072 MD.



MUD DATA
WT: 9.2 @ 83F
FV: 45
PV: 10
YP: 11
CK: 1/
Sol: 5
pH / Temp: 9.7 @ 82F
Chl: 2,800

WT IN 9.2/ OUT 9.2
VIS IN 42/ OUT 42

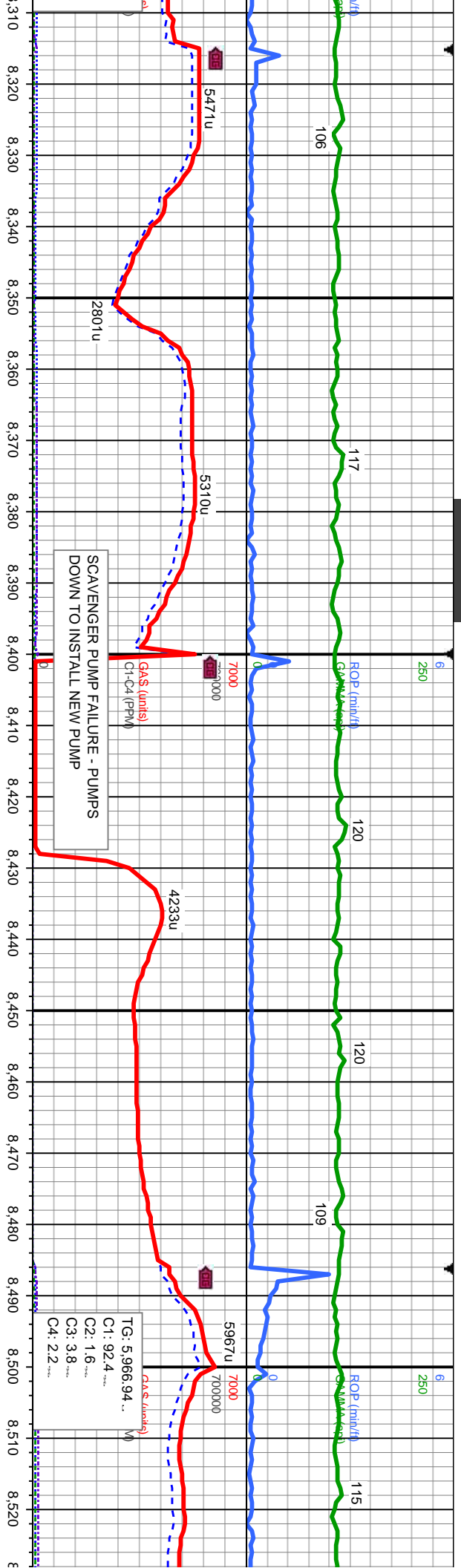
MD: 8,181
TVD: 7,653.96
Incl.: 89.96
Azim.: 357.8
VS: 262.18

WT IN 9.2/ OUT 9.2
VIS IN 46/ OUT 46

MD: 8,267
TVD: 7,654.57
Incl.: 89.69
Azim.: 359.95
VS: 348.17

SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w srd, mod cons, sl calc cnt; mod string lt bl flwr w/ bri bl-wh disce cut, thn bri bl resdl ring

SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w srd, mod cons, sl calc cnt; mod string lt bl flwr w/ bri bl-wh disce cut, thn bri bl resdl ring



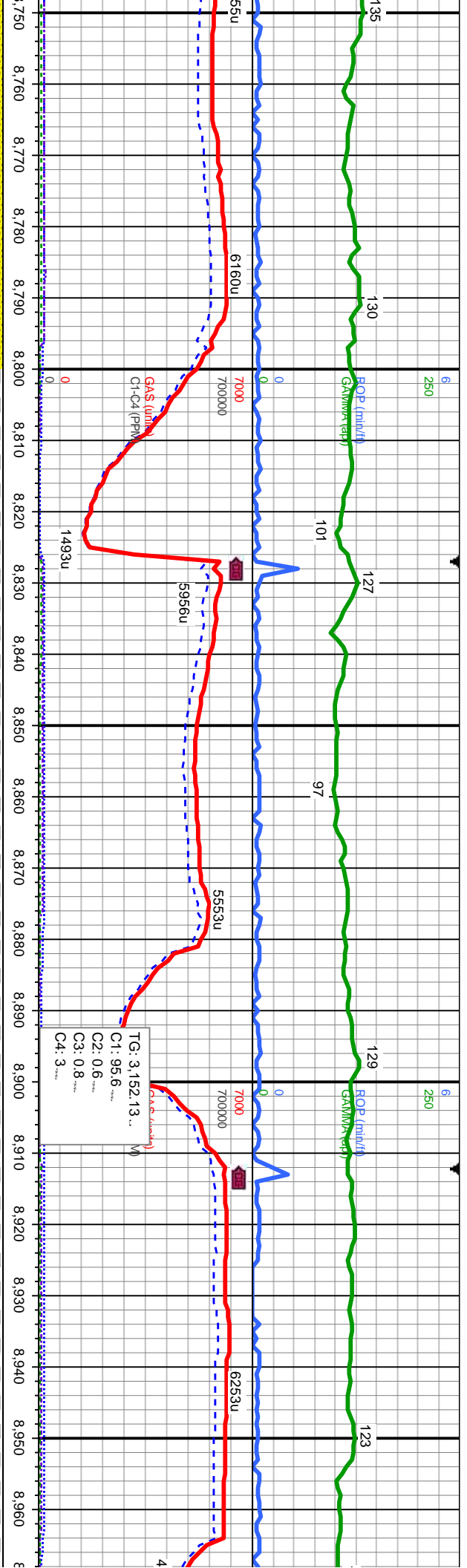
MD: 8,352.
TVD: 7,655.61
Incl.: 89.22 -
Azim.: 179.4 -
VS: 433.15 -

TVD (ft)

TVD (ft)

MD: 8,523.
TVD: 7,656.6
Incl.: 90.06 -
Azim.: 179.7
VS: 604.14 -

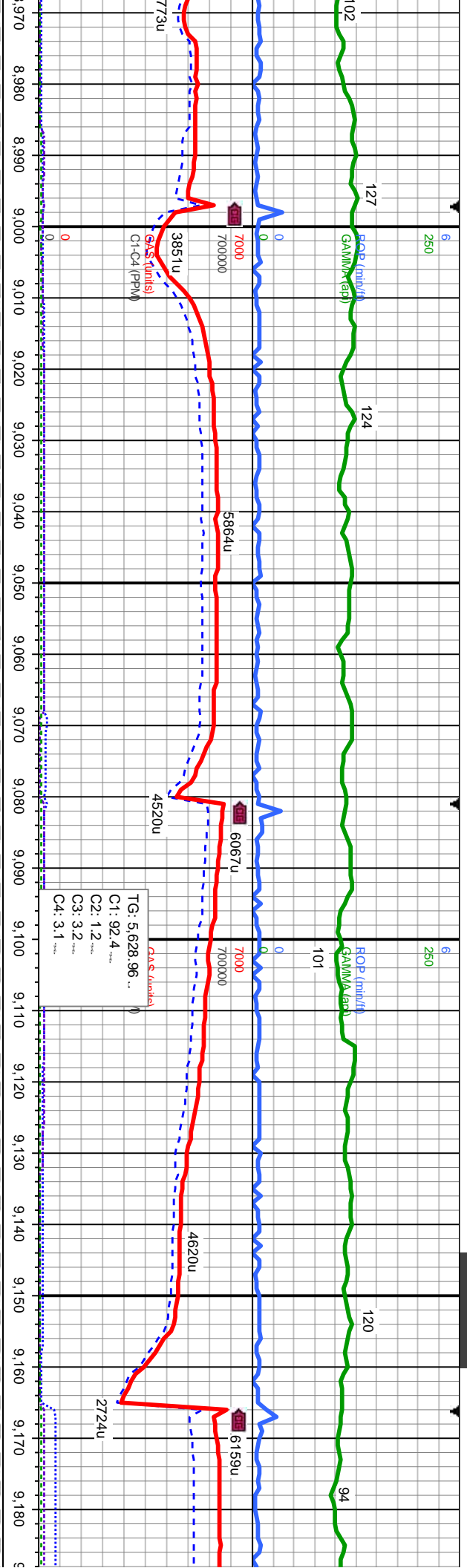
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MD: 8,863
TVD: 7,653.73
Incl.: 90.33
Azim.: 179.99
VS: 944.12

SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w strd, mod cons, sl calc cnt, rr pyr incl; SH: med gy-dk gy-blk, ply-sb ang-ang, frm,slic, non-calc; rad stmg lt bl wh flr wi bri bl-wh disse cut, thn bri bl resd ring





WT IN 9.3/ OUT 9.3
VIS IN 45/ OUT 45

MD: 9.032
TVD: 7.653.15
Incl.: 90.06
Azim.: 180.8
VS: 1.113.11

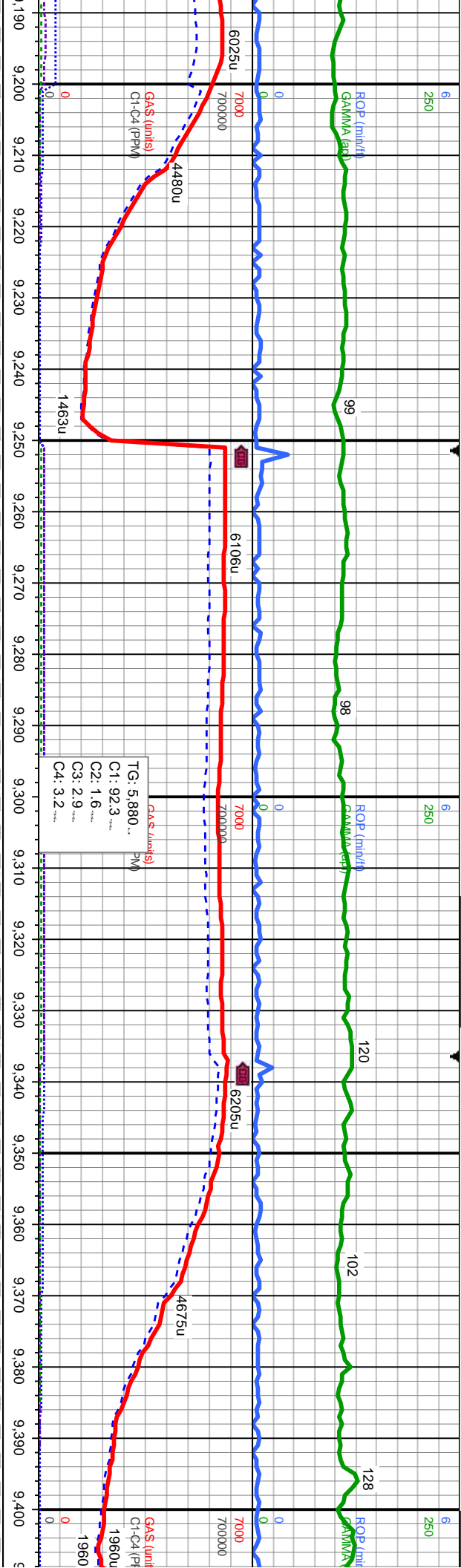
TG: 5.628.96...
C1: 92.4
C2: 1.2
C3: 3.2
C4: 3.1

b-rnd-rnd, mod-w
g-ang, frm, silc,
l resd ring

SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w
strd, mod cons, sl calc cnt; SH: med gy-dk gy-blk, ply-sb ang-ang, frm, silc,
non-calc; rad stmg lt bl wh flwr wi bri bl-wh disse cut, thn bri bl resd ring

SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w
strd, mod cons, sl calc cnt; SH: med gy-dk gy-blk, ply-sb ang-ang, frm, silc,
non-calc; rad stmg lt bl wh flwr wi bri bl-wh disse cut, thn bri bl resd ring



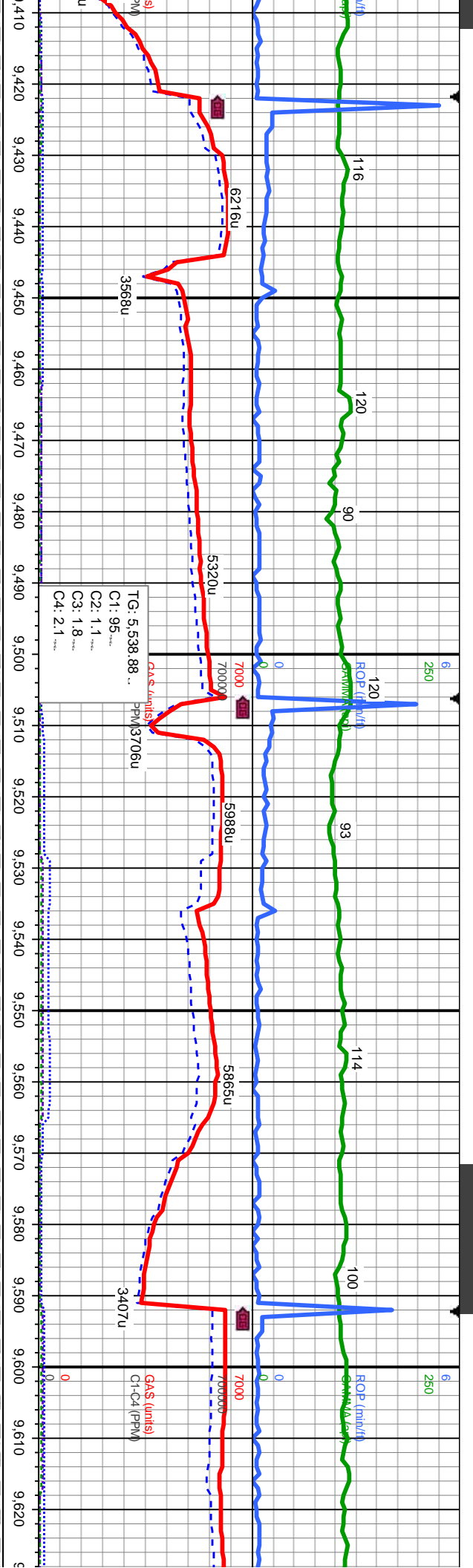


MD: 9,202.
TVD: 7,653.3
Incl.: 89.84
Azim.: 180.99
VS: 1,283.1

TG: 5,880..
C1: 92.3
C2: 1.6
C3: 2.9
C4: 3.2

MD: 9,373.
TVD: 7,653.91
Incl.: 89.75
Azim.: 182.29
VS: 1,454.04

6500	6500	6500	6500
SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w srted, mod cons, sl calc cnt; SH: med gy-dk gy-blk, ply-sb ang-ang, frm,silc, non-calc, scat wh-clr sd gr incl; rad sting lt bl wh flor wi bri bl-wh difse cut, thk bri bl resdl ring	SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w srted, mod cons, sl calc cnt; SH: med gy-dk gy-blk, ply-sb ang-ang, frm,silc, non-calc, scat wh-clr sd gr incl; rad sting lt bl wh flor wi bri bl-wh difse cut, thk bri bl resdl ring	SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w srted, mod cons, sl calc cnt; SH: med gy-dk gy-blk, ply-sb ang-ang, frm,silc, non-calc, scat wh-clr sd gr incl; rad sting lt bl wh flor wi bri bl-wh difse cut, thk bri bl resdl ring	SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w srted, mod cons, sl calc cnt; SH: med gy-dk gy-blk, ply-sb ang-ang, frm,silc, non-calc, scat wh-clr sd gr incl; rad sting lt bl wh flor wi bri bl-wh difse cut, thk bri bl resdl ring
8500	8500	8500	8500



WT IN 9.3/ OUT 9.3
VIS IN 45/ OUT 45

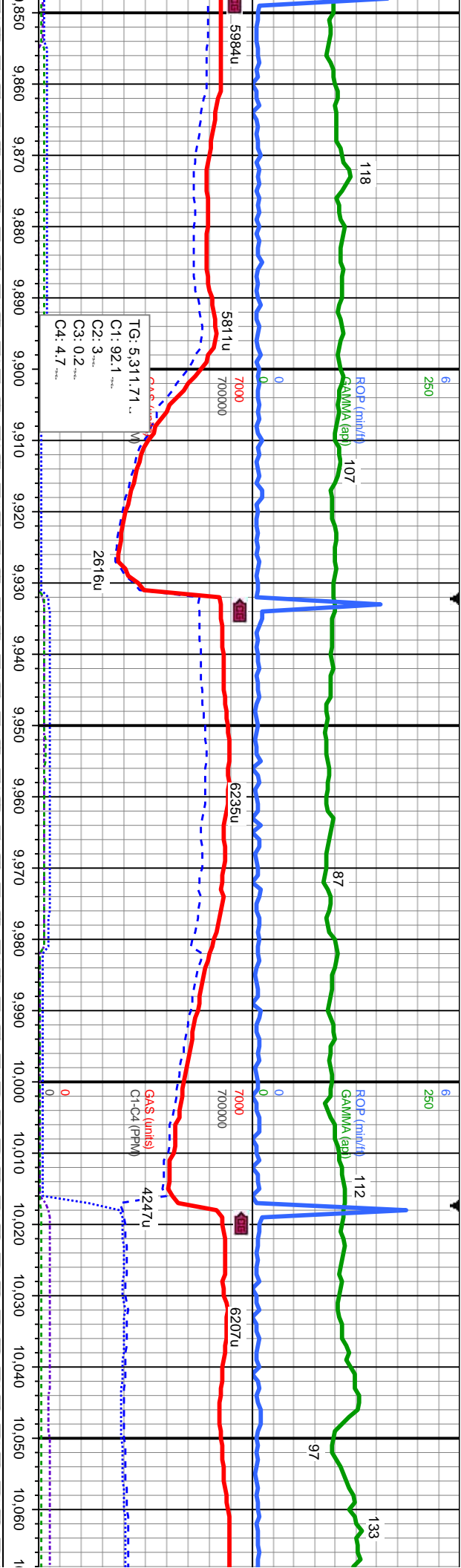
MD: 9.543
TVD: 7.653.6
Incl.: 90.46 -
Azim.: 177.85 -
VS: 1.623.99

SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w strd, mod cons, sl calc cnt; SH: med gy-dk gy-blk, ply-sb ang-ang, frm,silc, non-calc, r wh-clr sd gr incl; fnt rad stmg lt bl wh flwr wl bl-wh dlse cut, thk bri bl resdl ring

SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w strd, mod cons, sl calc cnt; SH: med gy-dk gy-blk, ply-sb ang-ang, frm, silc, non-calc; rad stmg lt bl wh flwr wl bl-wh dlse cut, thk bri bl resdl ring

SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w strd, mod cons, sl calc cnt; SH: med gy-dk gy-blk, ply-sb ang-ang, frm, silc, non-calc; rad stmg lt bl wh flwr wl bl-wh dlse cut, thk bri bl resdl ring





MD: 9,883.
TVD: 7,653.31
Incl.: 89.38
Azim.: 177.82
VS: 1,963.69

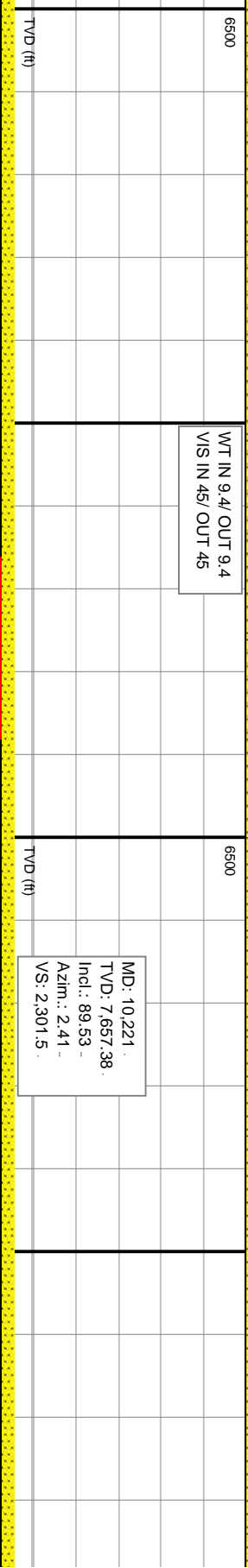
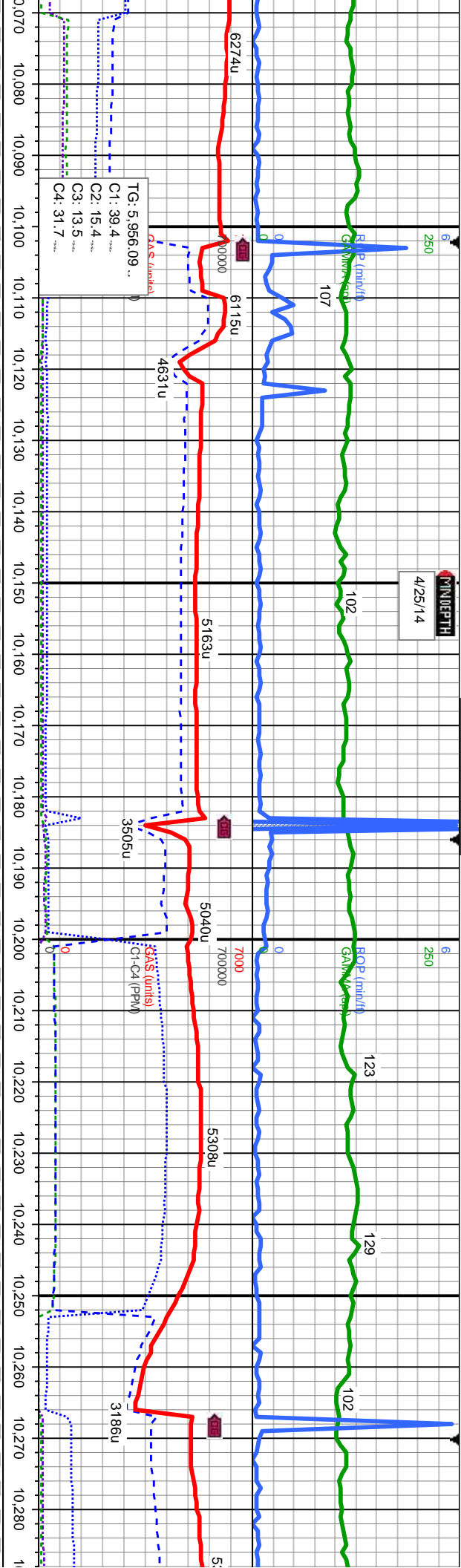
TVD (ft)

TVD (ft)

MD: 10,054.
TVD: 7,656.36
Incl.: 88.57
Azim.: 178.23
VS: 2,134.54

gr-c gr, mod-v frm, sb-rnd-rnd, mod-w strd, srt, mod cons, sl calc cmt, SH: med gy-dk gy-blk, pty-sb ang-ang, frm, silc, non-calc, r	SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w strd, srt, mod cons, sl calc cmt, SH: med gy-dk gy-blk, pty-sb ang-ang, frm, silc, non-calc, r
wh-clr sd gr inci; rad stmg lt bl wh flwr wi bri bl-wh disse cut, thn bri bl resd ring	wh-clr sd gr inci; rad stmg lt bl wh flwr wi bri bl-wh disse cut, thn bri bl resd ring





b-rnd-rnd, mod-w
n, sb-rnd - sb ang,
calc, non-calc, r
thin bri bl resd ring

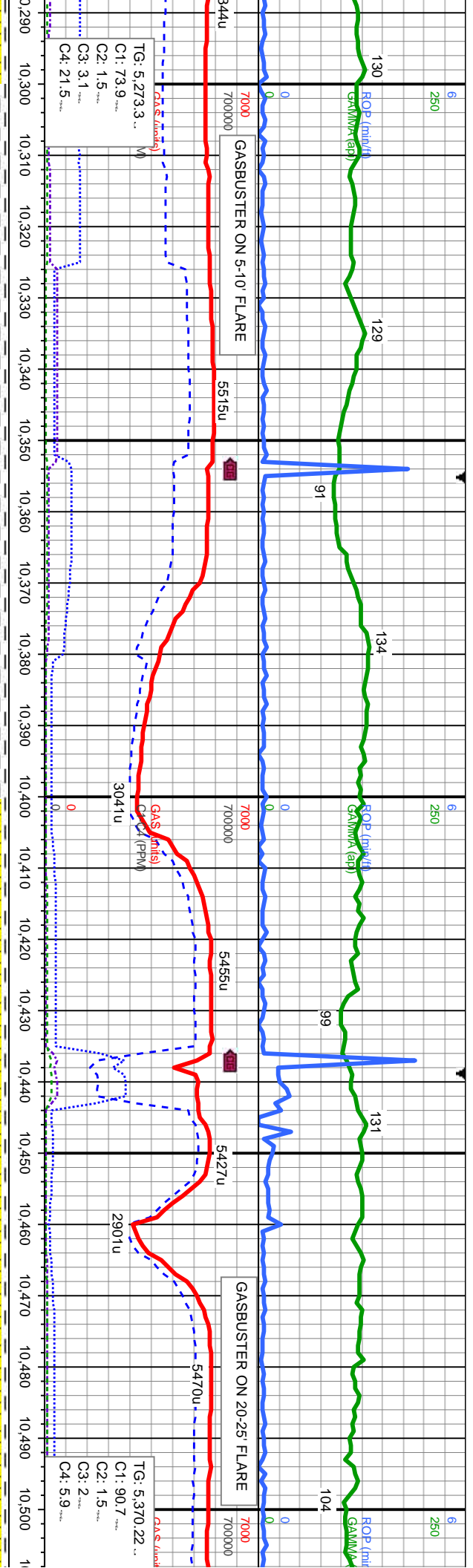
SS: lt-med brn, lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w
strd, mod cons, sl calc cnt; scat wh-clr, med gr-c gr, mod frm, sb-rnd - sb ang,
cons, calc cnt; SH: med gy-dk gy-blk, ply-sb ang-ang, frm, silc, non-calc, r
wh-clr sd gr incl; rad stmg lt bl wh flwr wi bri bl-wh disse cut, thin bri bl resd ring

8500

SS: lt-med brn, lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w
strd, mod cons, sl calc cnt; scat wh-clr, med gr-c gr, mod frm, sb-rnd - sb ang,
cons, calc cnt; SH: med gy-dk gy-blk, ply-sb ang-ang, frm, silc, non-calc, r
wh-clr sd gr incl; rad stmg lt bl wh flwr wi bri bl-wh disse cut, thin bri bl resd ring

8500





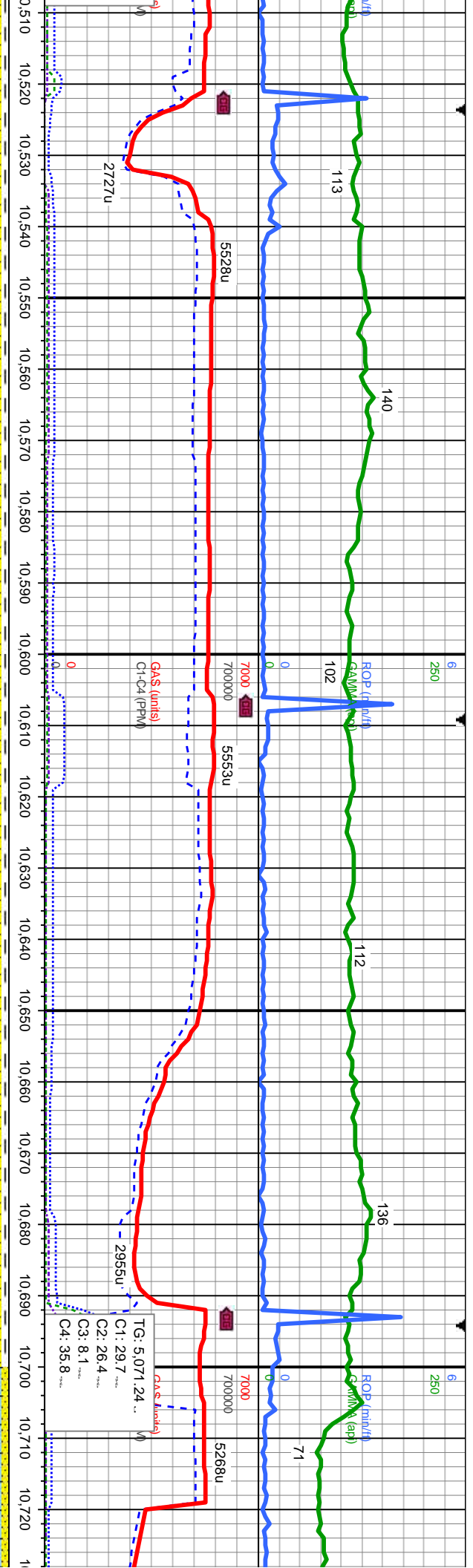
6500	WT IN 9.5/ OUT 9.5 VIS IN 43/ OUT 43
8500	MD: 10,390 TVD: 7,657.81 Incl.: 89.75 - Azim.: 2.05 - VS: 2.470.47
TVD (ft)	

6500	WT IN 9.5/ OUT 9.5 VIS IN 43/ OUT 43
8500	
TVD (ft)	

SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w
strd, mod cons, sl calc cmt; scat wh-clr, med gr-c gr, mod frm, sb-rnd - sb ang,
cons, calc cmt; SH: med gy-dk gy-blk, ply-sb ang-ang, frm, silc, non-calc, rr
wh-clr sd gr incl; rad sting lt bl wh flor w/ bri bl-wh dfse cut, thn bri bl resd ring

SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w
strd, mod cons, sl calc cmt; scat wh-clr, med gr-c gr, mod frm, sb-rnd - sb ang,
cons, calc cmt; SH: med gy-dk gy-blk, ply-sb ang-ang, frm, silc, non-calc, rr
wh-clr sd gr incl; rad sting lt bl wh flor w/ bri bl-wh dfse cut, thn bri bl resd ring





MD: 10,560.
TVD: 7,668.05
Incl.: 89.35 -
Azim.: 2.41 -
VS: 2,640.45.

FAULT 1 OF 1:
MD: 10,707'
TVD: 7,666'
VS: 2,787'
42' DOWNWARD THROW

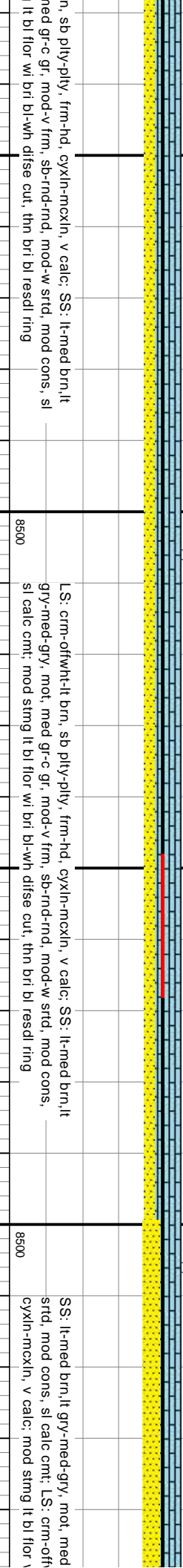
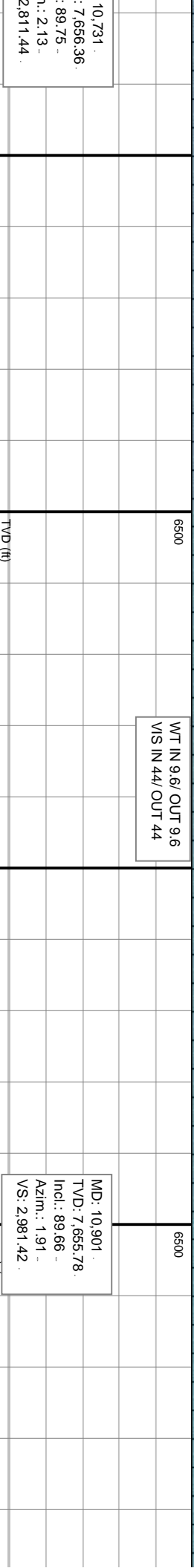
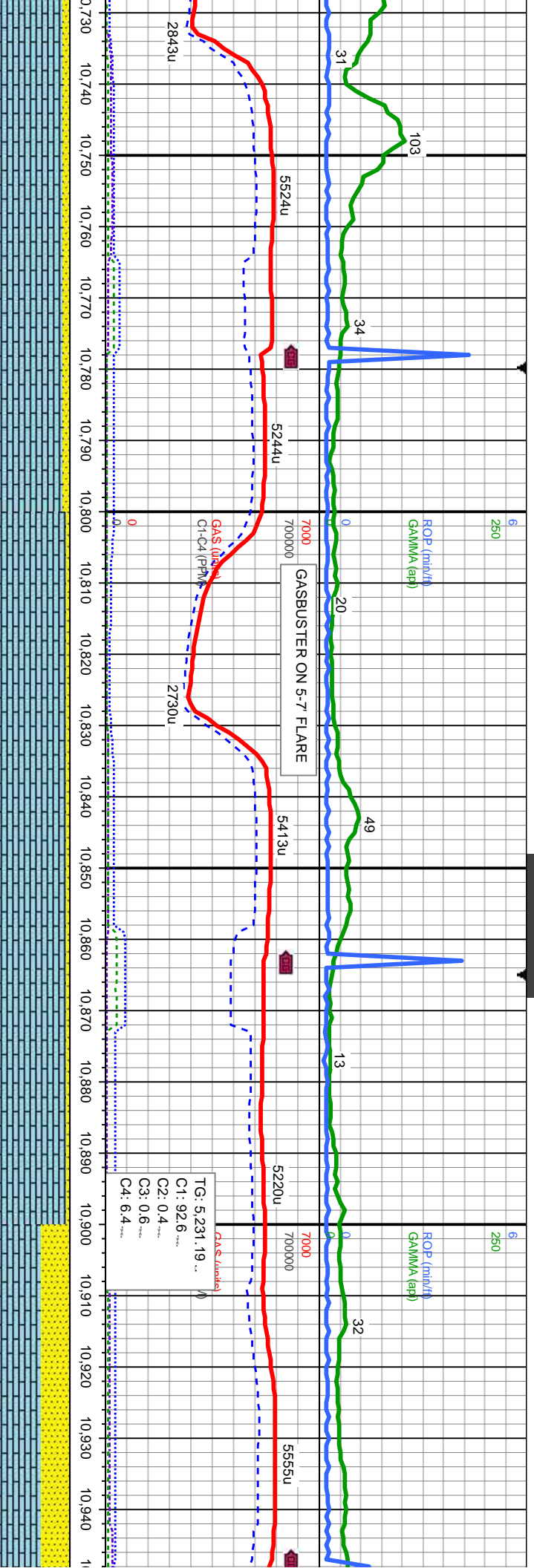
MD:
TVD
Incl.
Azim
VS:

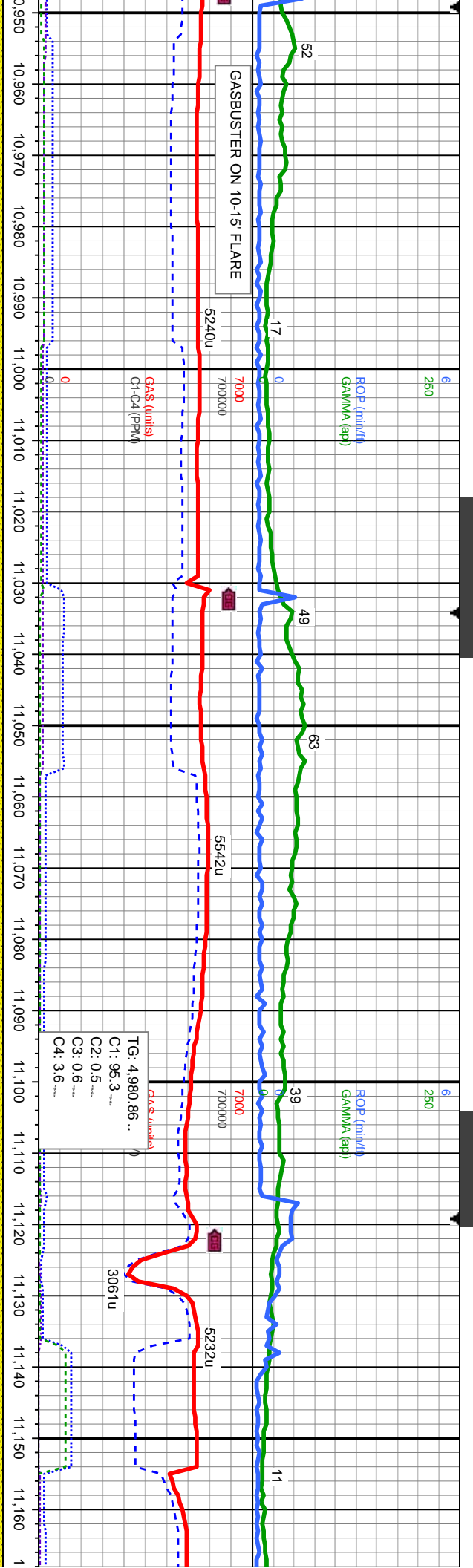
SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w srtd,
mod cons, sl calc cnt; SH: med gy-dk gy-blk, ply-sb ang-ang, frm, silc, non-calc, r
wh-clr sd gr incl; mod smtg lt bl flwr wr bri, bl-wh disse cut, thn bri bl resdl ring

SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd,
mod-w srtd, mod cons, sl calc cnt; LS: crm-offwht-lt brn, sb ply-ply,
frm-hd, cyxln-mcxln, v calc; SH: med gy-dk gy-blk, ply-sb ang-ang, frm, silc,
non-calc; mod smtg lt bl flwr wr bri, bl-wh disse cut, thn bri bl resdl ring

LS: crm-offwht-lt br
gry-med-gry, mot, r
calc cnt; mod smtg





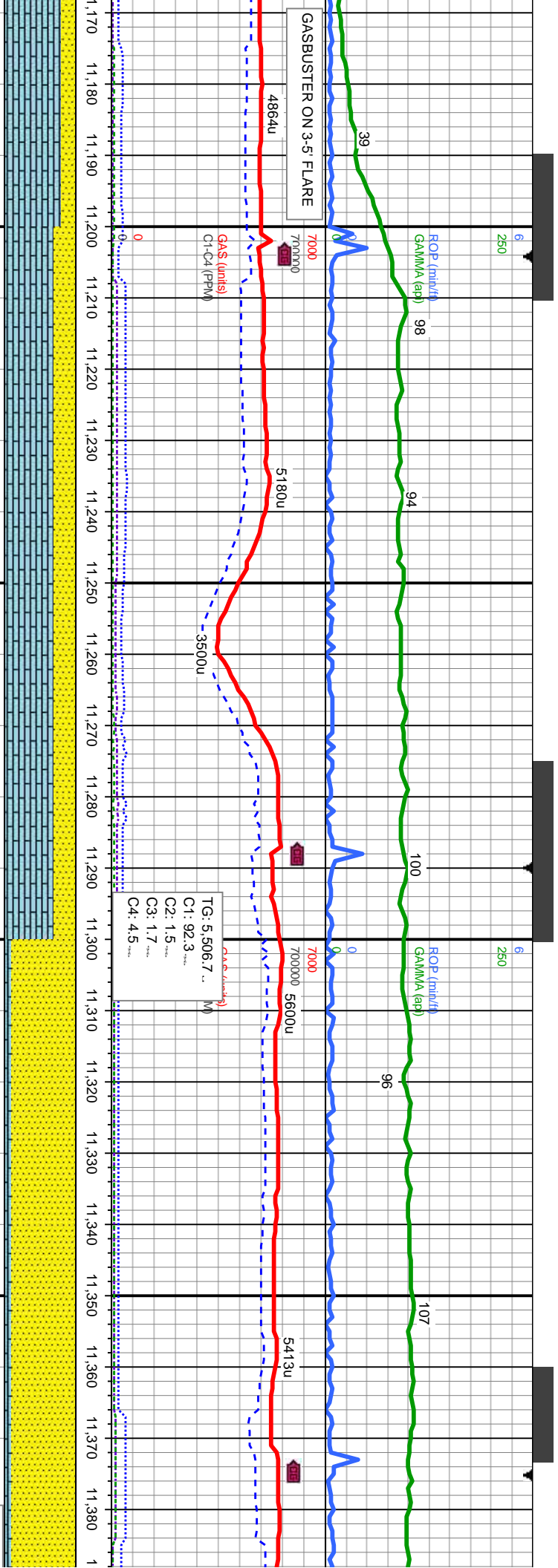


WT IN 9.6/ OUT 9.6
VIS IN 44/ OUT 44

MD: 11,070.
TVD: 7,652.51
Incl.: 89.5.
Azim.: 1.21
VS: 3,150.35.

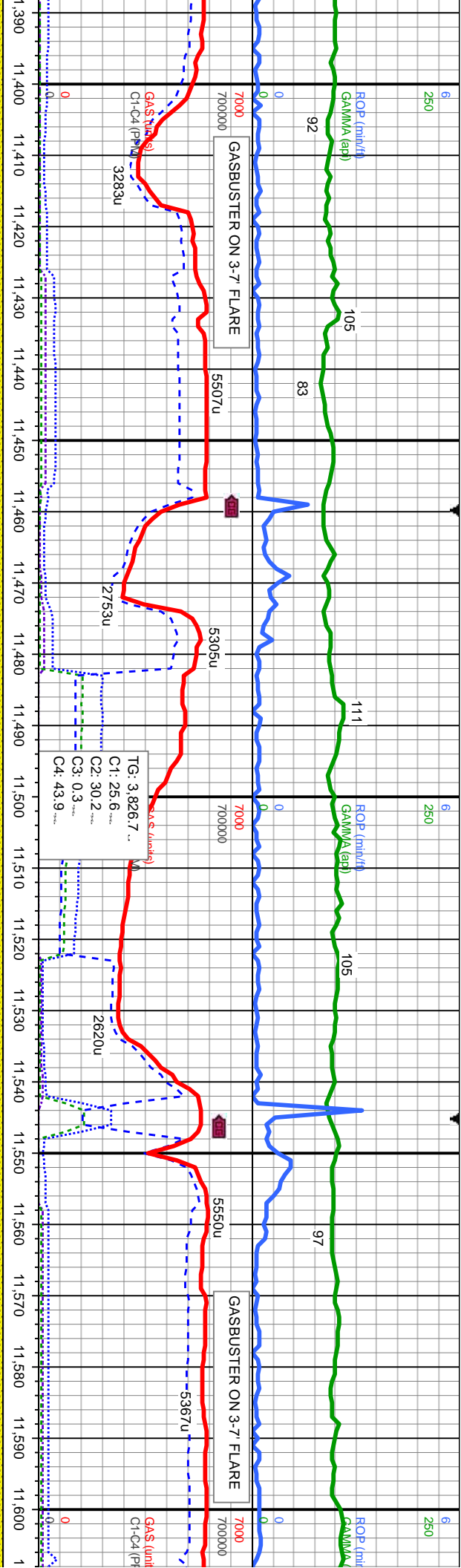
gr-c gr, mod-v frm, sb-rnd-rnd, mod-w wh-t brn, sb ply-pty, frm-hd, wi bri bl-wh difse cut, thn bri bl resd ring	8500	LS: crm-offwh-t brn, sb ply-pty, frm-hd, cyxln-mcxl, v calc; SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w srd, mod cons, sl calc cnt; mod stmg lt bl flwr wi bri bl-wh difse cut, thn bri bl resd ring





SS: lt-med brn,lt strd, mod cons, sl resd ring	SS: lt-med brn,lt gry-med-gry, mot, med gr-c-gr, mod-v frm, sb-rnd-rnd, mod-w strd, mod cons, sl calc cmt; LS: crm-offwht-lt brn, sb ply-pty, frm-hd, cyxln-mcxln, v calc; mod sting lt bl flr wi bri bl-wh difse cut, thn bri bl resd ring	SS: lt-med brn,lt gry-med-gry, mot, med gr-c-gr, mod-v frm, sb-rnd-rnd, mod-w strd, mod cons, sl calc cmt; LS: crm-offwht-lt brn, sb ply-pty, frm-hd, cyxln-mcxln, v calc; mod sting lt bl flr wi bri bl-wh difse cut, thn bri bl resd ring
8500	8500	8500



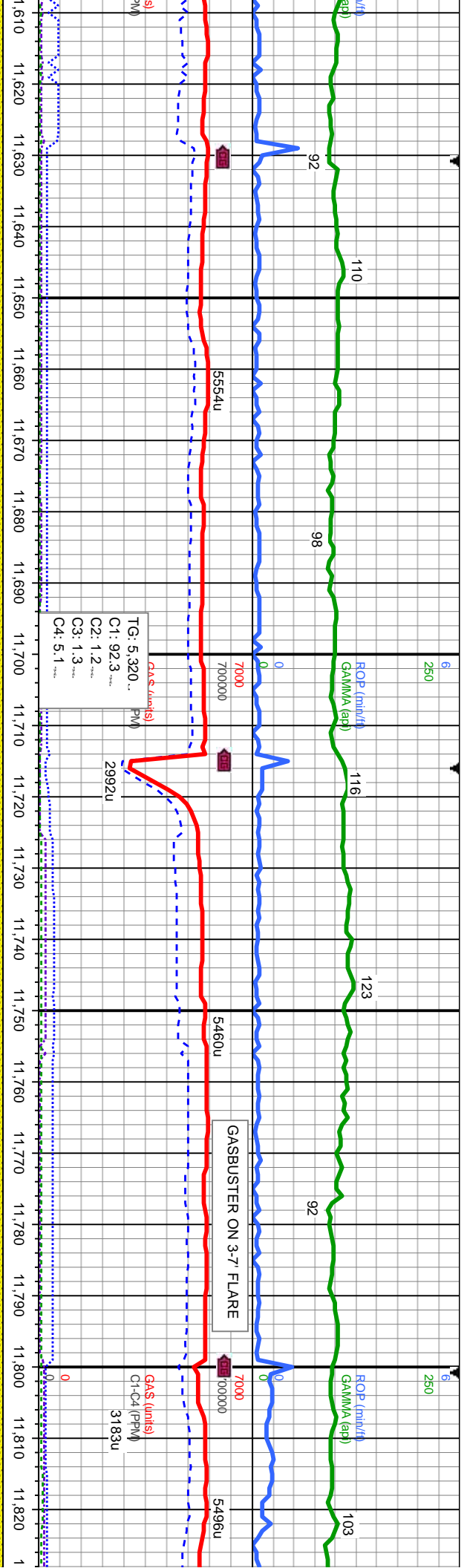


7/ OUT 9.7 V OUT 44	6500	MD: 11,411 TVD: 7,662.42 Incl.: 88.91 Azim.: 1.69 VS: 3,491.27	TVD (ft)
WT IN 9.7/ OUT 9.7 V/S IN 43/ OUT 43	6500	MD: 11,582 TVD: 7,654.56 Incl.: 88.91 Azim.: 1.69 VS: 3,662.18	TVD (ft)

SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w strd, mod cons, sl calc cnt; LS: crm-offwh-lt brn, sb ply-ply, frm-hd, cylin-mcxln, v calc; mod sting lt bl flr wr bri bl-wh disse cut, thn bri bl resdl ring

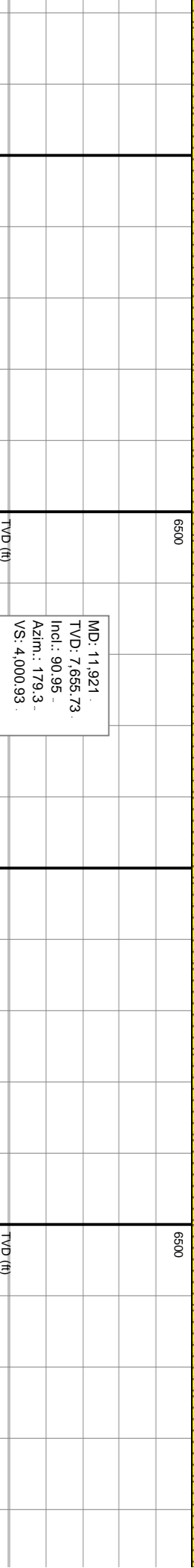
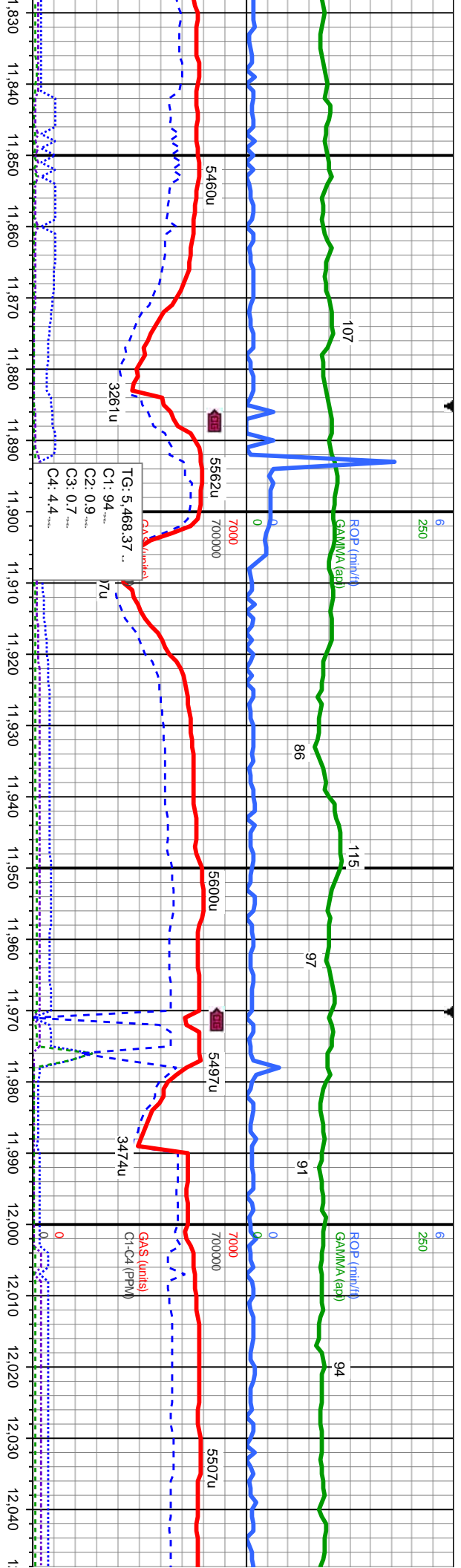
SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w strd, mod cons, sl calc cnt; mod sting lt bl flr wr bri bl-wh disse cut, thn bri bl resdl ring





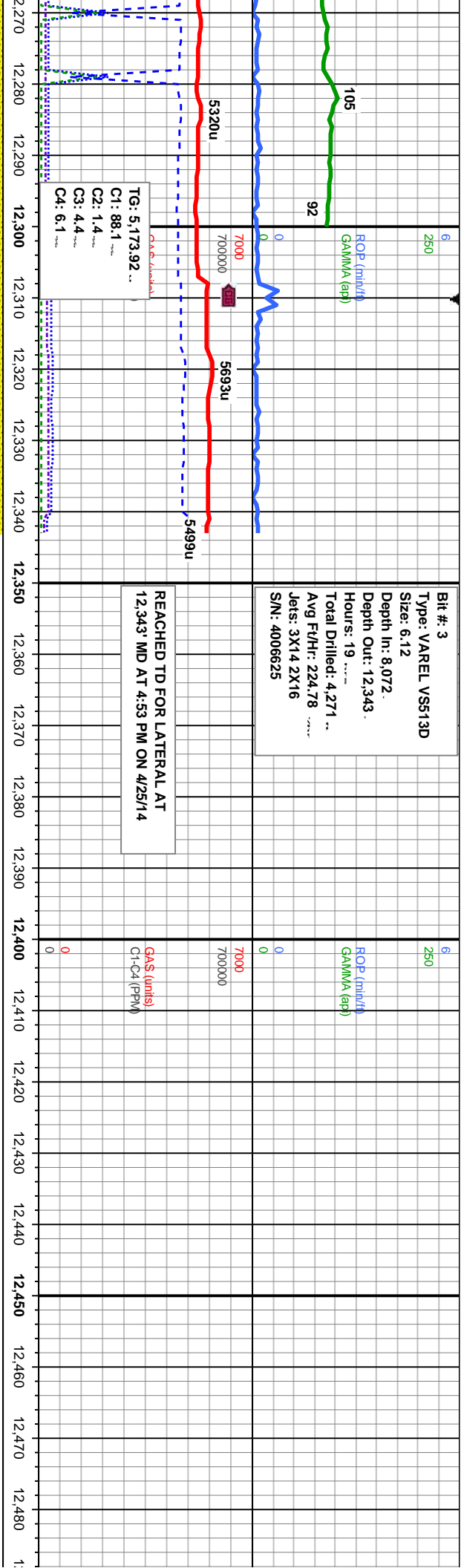
SS: lt-med brn,lt gry-med-gry, mot, med gr-c, gr, mod-v frm, sb-rnd-rnd, mod-w srt, mod cons, sl calc cmt; mod stmg lt bl flr wr bri bl-wh dfse cut, thn bri bl resd ring	8500	SS: lt-med brn,lt gry-med-gry, mot, med gr-c, gr, mod-v frm, sb-rnd-rnd, mod-w srt, mod cons, sl calc cmt; mod stmg lt bl flr wr bri bl-wh dfse cut, thn bri bl resd ring	8500
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SS: lt-med brn,lt gry-med-gry, mot, med gr-c gr, mod-v frm, sb-rnd-rnd, mod-w srt'd, mod cons, sl calc cnt; mod sting lt bl flwr wi bri bl-wh dfse cut, thn bri bl resdl ring





MD: 12,294.
TVD: 7,654.63.
Incl.: 88.67
Azim.: 178.25
VS: 4,373.78

TVD (ft)

MD: 12,343.
TVD: 7,655.76.
Incl.: 88.67
Azim.: 178.25
VS: 4,422.74

TVD (ft)

THANK YOU FOR USING
COLUMBINE LOGGING INC.!

MUD DATA
WT: 9.8 @ 102F
FV: 43
PV: 10
YP: 14
CK: 1/
Sol: 5
pH / Temp: 9.5 @ 102F
Chl: 2,600

TVD (ft)

PROJECTED TO BIT

b-rnd-rnd, mod-w strd,
cut, thn bri bl resd ring

SS: lt-med brn, lt gry-med-gry, mod, med gr-c
gf, mod-v frm, sb-rnd-rnd, mod-w strd, mod
cons, sl calc cnt; mod stmg lt bl flor wi bri
bl-wh difse cut, thn bri bl resd ring



