

Scale: 5" / 100'  
Measured Depth Log

Well Name Latham T34-P31-2HC

Location SWSE SEC. 2 T4N R63W

State CO

County WELD

Country USA

Rig Number CADE 26

API Number 05-123-38789

AFE # 14149

Region DJ BASIN

Field WATTENBERG

Spud Date 6/2/2014

Drilling Completed 6/12/2014

Surface Coordinates 342' FSL x 2209' FEL (LAT: 40.33523, -104.4036)

Bottom Hole Coordinates 470' FNL x 1613' FEL (LAT: 40.34760, -104.40175) PROJECTED

Ground Elevation 4520'

K.B. Elevation 4537'

Logged Interval 5950' To 11038'

Total Depth 11038'

Formation CODELL SS

Type of Drilling Fluid H2O, LSND

Zone Color Code

- Oil
- Note
- Error
- Condensate
- Core
- Water

Rock Types

- Silty Shale
- Chalk
- SHALY SANDSTONE
- SHALY SILTSTONE
- No Sample
- SANDSTONE
- UNKNOWN
- ANHYDRITE
- gypsum
- SALT
- SIDERITE or LIMONITE
- DOLOMITE
- CHERT
- COAL
- MARLSTONE

Accessories

- F FOSSIL
- ARGILLACEOUS
- ARGILLITE GRAIN
- GASTROPOD
- OOLITE
- AMPHIPORA
- BELEMNITE
- BIOLASTIC
- BRACHIOPOD
- PISOLITE
- PLANT REMAINS
- CEPHALOPOD
- CORAL
- CRINOID
- ECHINOID
- FISH
- FORAMINIFERA
- ANHYDRITIC
- B BENTONITE
- BITUMENOUS SUBSTANCE
- BRECCIA FRAGMENTS
- CALCAREOUS
- CARBONACEOUS FLAKES
- CHTLT
- CHTLT
- COAL - THIN BEDS
- DOLOMITIC
- FELDSPAR
- FERRUGINOUS PELLET
- FERRUGINOUS

ding

- Gas
- Pressure
- Seal

- CLAYSTONE
- SHALE
- SHALE GRAY
- SHALE COLORED
- SILTSTONE
- CONGLOMERATE
- BRECCIA
- TILL
- BENTONITE
- TUFF
- IGNEOUS
- METAMORPHIC
- CEMENT

Stringer

- GLAUCONITE
- GYPSEIFEROUS
- HEAVY MINERAL
- KAOLIN
- MINERAL CRYSTALS
- NODULES
- PHOSPHATE PELLETS
- PYRITE
- SALT CAST
- SANDY
- SILICEOUS
- SILTY
- TUFFACEOUS
- ANHYDRITE STRINGER
- BENTONITE STRINGER
- COAL STRINGER
- DOLOMITE STRINGER
- GYPSUM STRINGER
- LIMESTONE STRINGER
- MARLSTONE (CALC) STRG
- MARLSTONE (DOL) STRG
- SANDSTONE STRINGER
- SHALE STRINGER
- SILTSTONE STRINGER

Other Symbols

Oil Show

- PINPOINT
- VUGGY

- FORMATION TOP
- GAS SHOW

- CASING
- L LITHOGRAPHIC

- DEAD

- MINDEPTH
- MN DEPTH

- MX MICROXLN
- MS MUDSTONE

- EVEN

Engineering

- NORMAL FAULT

- A ANGULAR

- PS PACKSTONE

- QUESTIONABLE

- BIT

- OIL SHOW

- R ROUNDED

- WS WACKSTONE

- SPOTTED STAINING

- CASING

- OVERTURNED STRATA

- B SUBANG

- Connection Down

- REVERSE FAULT

- P SUBRND

Porosity

- CONNECTION (LEFT)
- SIDEWALL CORE (LEFT)

- M MODERATE

- E EARTHY

- CONNECTION (RIGHT)
- SIDEWALL CORE (RIGHT)

Textures

- P POOR

- FENESTRAL

- CONNECTION GAS
- SLIDE

- BS BOUNDSTONE
- W WELL

- F FRACTURE

- Connection Gas Down
- SURVEY

- C CHALKY

Chalk

- INTERCRYSTALLINE
- CORE - LOST

- TRIP GAS

- CX CRYPTOXLN

- INTEROOLITIC

- CORE - RECOVERED
- WIRELINE TESTED - LEFT
- E EARTHY

- MOLDIC

- DST INTERVAL

- WIRELINE TESTED - RT

- FX FINELYXLN

- ORGANIC

- FAULT

- FORMATION TOP

- GS GRAINSTONE

ROP  
ROP —  
GAMMA —

Bit #: 4  
Type: HE04JNRSV  
Size: 8.75  
Depth In: 5,890'  
Jets: 3 x 20  
S/N: 1387664

Total Gas & Chromatograph

GAS —  
C1 —  
C2 —  
C3 —  
C4 —

COLUMBINE LOGGING RIGGED UP ON  
6/5/2014 MANNED 2-PERSON LOGGING  
WITH BLOODHOUND GAS  
CHROMATOGRAPH UNIT #0696 BEGAN  
ON 6/7/2014, 12:30 MST at 5,950' MD

Depth Labels

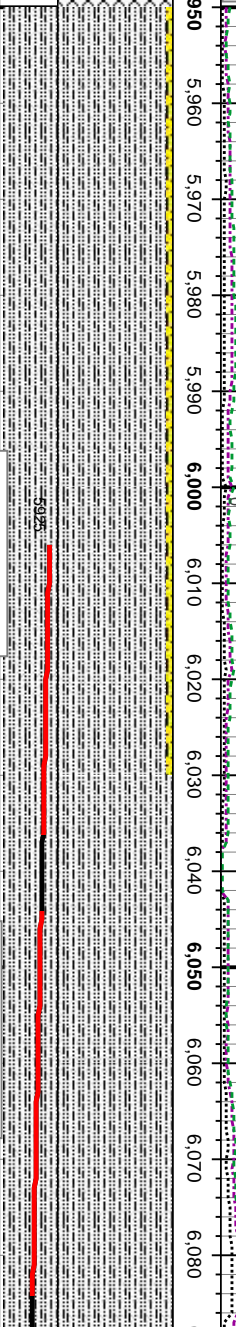
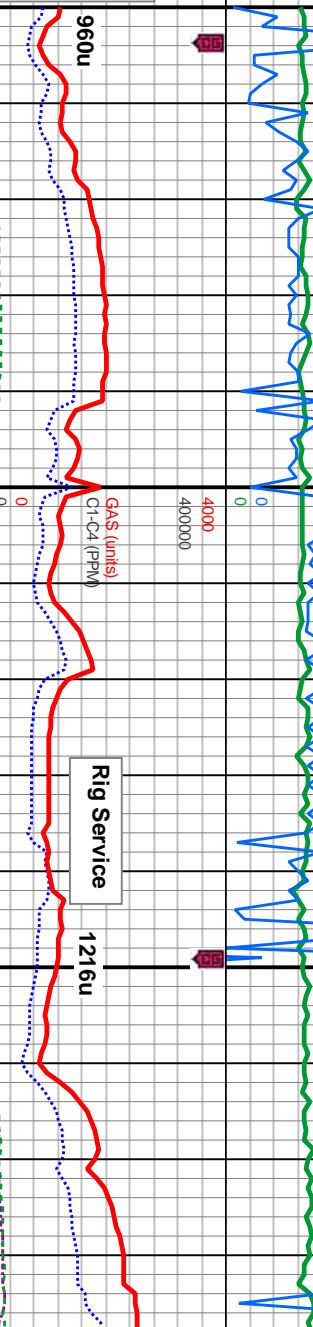
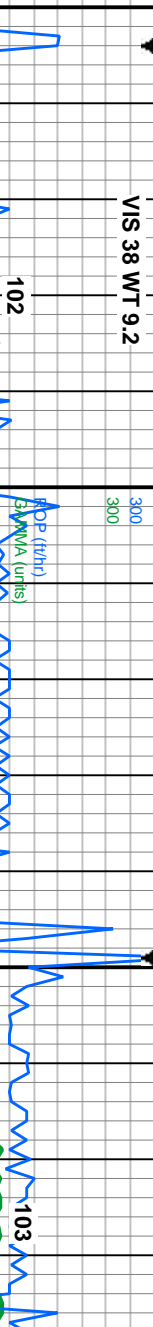
% Lith

Well Bore  
TVD —

Oil Show

Images

VIS 38 WT 9.2



MD: 6,006'  
Inclination: 8.26 °  
Azimuth: 342.35 °  
TVD: 5,959.01'  
VS: 495.02'

MD: 6,053'  
Inclination: 13.84 °  
Azimuth: 349.5 °  
TVD: 6,005.13'  
VS: 492.97'

TVD (ft)

95% SLTY SH: med-dk gy, occ lt gry, mod  
sft-sl firm, sb blkly - sb plty, rthy - gt, mtx;  
sily, sl calc, 5% SHY SS: s&p, vf-f gr, sb ang  
- sb rd, mod srt, mod hd - hd, sb blkly - blkly,  
mics, sl calc

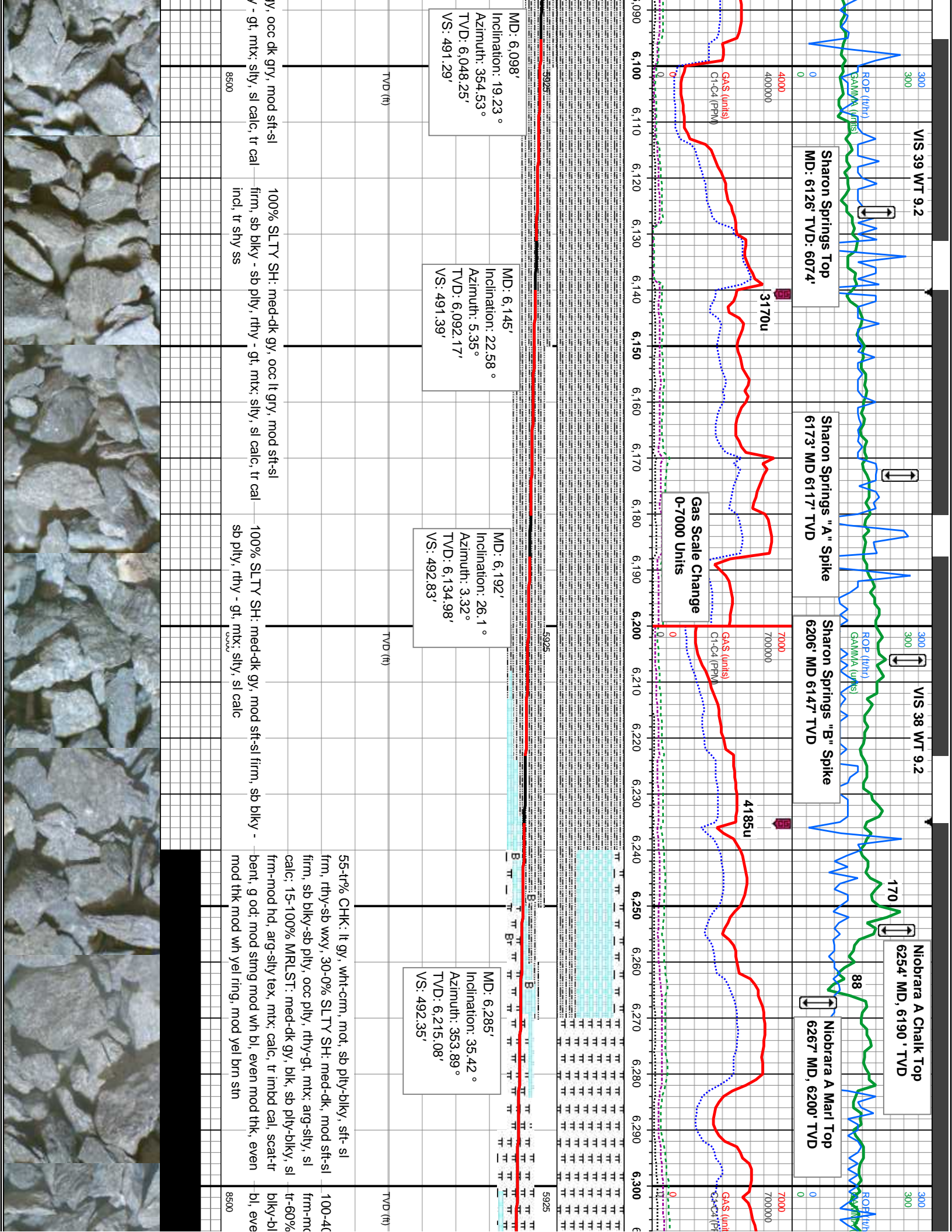
95-100% SLTY SH: lt-med gy, occ dk gry, mod sft-sl  
firm, sb blkly - sb plty, rthy - gt, mtx; sily, sl calc, 5-0%  
SHY SS: s&p-lt gry, vf-f gr, sb ang - sb rd, mod srt,  
mod hd - hd, sb blkly - blkly, mics, sl calc

100% SLTY SH: lt-med g  
firm, sb blkly - sb plty, rthy  
incl, tr shy ss

E  
G  
M  
F  
T  
S









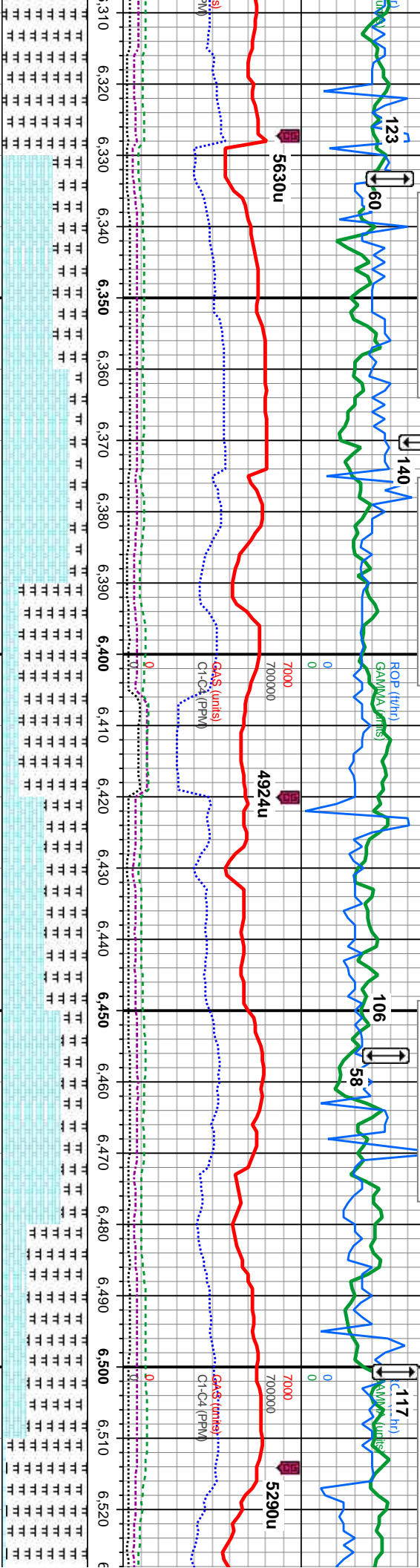
Niobrara B Chalk Top  
6333' MD, 6253' TVD

Niobrara B Marl Top  
6371' MD, 6281' TVD

VIS 38 WT 9.3

Niobrara C Chalk Top  
6456' MD, 6335' TVD

Niobrara C Marl Top  
6501' MD, 6359' TVD



MD: 6,332'  
Inclination: 40.19°  
Azimuth: 352.01°  
TVD: 6,252.21'  
VS: 488.79'

MD: 6,378'  
Inclination: 45.42°  
Azimuth: 357.29°  
TVD: 6,285.96'  
VS: 485.95'

MD: 6,425'  
Inclination: 51.56°  
Azimuth: 2.42°  
TVD: 6,317.1'  
VS: 485.93'

MD: 6,472'  
Inclination: 57.95°  
Azimuth: 3.21°  
TVD: 6,344.21'  
VS: 487.83'

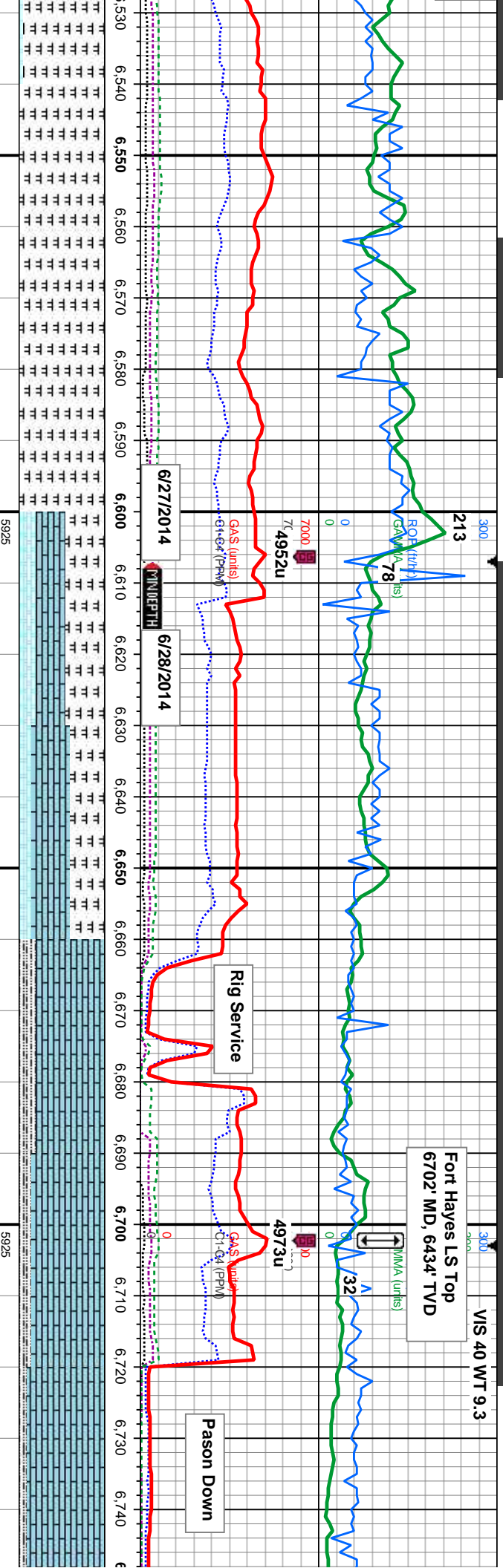
MD: 6,519'  
Inclination: 62.3°  
Azimuth: 2.82°  
TVD: 6,367.59'  
VS: 489.97'

80-20% CHK: It gy, wht-crm, mot, sb ply-blky, sft-si  
frm, rthy-sb wxy 20-80%: MRLST: med-dk gy, blk, sb  
ply-blky, sl frm-mod hd, arg-sly tex, mtx; calc, sl calc,  
chk flor, tr cal frags, fr od; mod sting bri wh bl, even  
mod thk mod wh yel ring, mod yel brn sin

50-70% CHK: It gy, wht-crm, mot, sb ply-blky, sft-si  
frm, rthy-sb wxy 50-30%: MRLST: med-dk gy, blk,  
sb ply-blky, sl frm-mod hd, arg-sly tex, mtx; calc, sl  
calc, occ ls & imbd cal, scatt bent; mod-fast string  
mod wh bl, even mod thk mod wh yel ring, mod yel  
brn sin

70-95%: MRLST: med-dk gy, blk, sb ply-blky  
frm-mod hd, arg-sly tex, mtx; calc, sl calc, 3C  
CHK: It gy, wht-crm, mot, sb ply-blky, sft-si  
rthy-sb wxy, tr imbd cal; fast sting bri wh bl, i  
thn mod wh yel ring, mod yel brn sin



Fort Hayes LS Top  
6702' MD, 6434' TVD

MD: 6,566'  
Inclination: 65.97 °  
Azimuth: 2.32°  
TVD: 6,388.07'  
VS: 491.86'

MD: 6,613'  
Inclination: 69.25 °  
Azimuth: 2.47°  
TVD: 6,405.97'  
VS: 493.68'

MD: 6,661'  
Inclination: 70.47 °  
Azimuth: 3°  
TVD: 6,422.5'  
VS: 495.83'

MD: 6,708'  
Inclination: 76.83 °  
Azimuth: 1.53°  
TVD: 6,435.72'  
VS: 497.6'

100%: MRLST: med-dk gy, blk, sb pty-blky, sl  
frm-mod hd, arg-sily tex, mt; calc, sl calc, tr chk, tr  
foss frags, tr bent, tr uphole contaminants of sily sh;  
mod string bri wh bl, even mod thn mod wh yel ring,  
mod yel brn stn

45-40 %: MRLST: med-dk gy, blk, sb pty-blky, sl  
frm-mod hd, arg-sily tex, mt; calc, sl calc 35-45% LS:  
wh-it gry, mcxln, sm, mod firm, 20-15% CHK: lt gy,  
wht-crm, mod, sb pty-blky, sft- sl frm, rthy-sb wxy, tr  
bent, tr imbd cal, fr od; slow sting bri wh bl, even dull  
thn wh yel ring, mod yel brn stn

80-85% LS: wh-it gry, mcxln, sm, mod firm, tr imbd  
pyr 15-0% SLTY SH: lt-med, some dk gy, mod sft -  
sl firm, sb blkly-sb pty, occ pty, rthy - gt, mt; arg -  
sily, sl calc, tr cal frags, occ uphole contaminants  
of chk and mst; v slow sting wh bl, even dull thn  
wh yel ring, mod thn yel brn stn

90% LS: wh-it gry, mcxln  
10% SLTY SH: lt-med, s  
sb blkly-sb pty, occ pty, l  
calc, cal incl, tr uphole co  
string wh bl, even dull thn  
brn stn

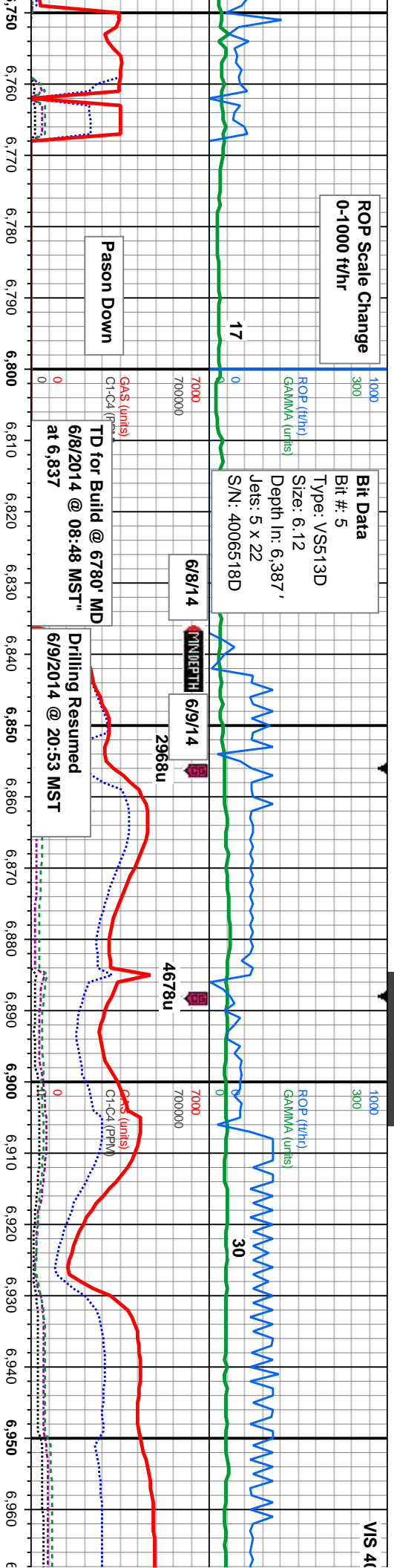




ROP Scale Change  
0-1000 ft/hr

Bit Data  
Bit #: 5  
Type: VSS513D  
Size: 6.12  
Depth In: 6.387'  
Jets: 5 x 22  
S/N: 4006518D

VIS 4k



Pason Down

TD for Build @ 6780' MD  
6/8/2014 @ 08:48 MST"

Drilling Resumed  
6/9/2014 @ 20:53 MST

MD: 6,757'  
Inclination: 85.7 °  
Azimuth: 358.71 °  
TVD: 6,443.16'  
VS: 497.69'

MD: 6,795'  
Inclination: 89.19 °  
Azimuth: 359.18 °  
TVD: 6,444.85'  
VS: 496.99'

Projection to Bit @  
MD: 6837  
INC: 89.19  
AZI: 359.18  
TVD: 6445.45  
VS: 336.42  
High: 8.55'  
Left: 8.41'

MD: 6,926'  
Inclination: 91.11 °  
Azimuth: 1.85 °  
TVD: 6,444.51'  
VS: 498.17'

, sm, mod firm, tr imbd pyr  
ome dk gy, mod sft - sl firm,  
tthy - gt, mtk: arg - sfty, sl  
ntaminants of chk, v slow  
wh yel ring, mod thn yel

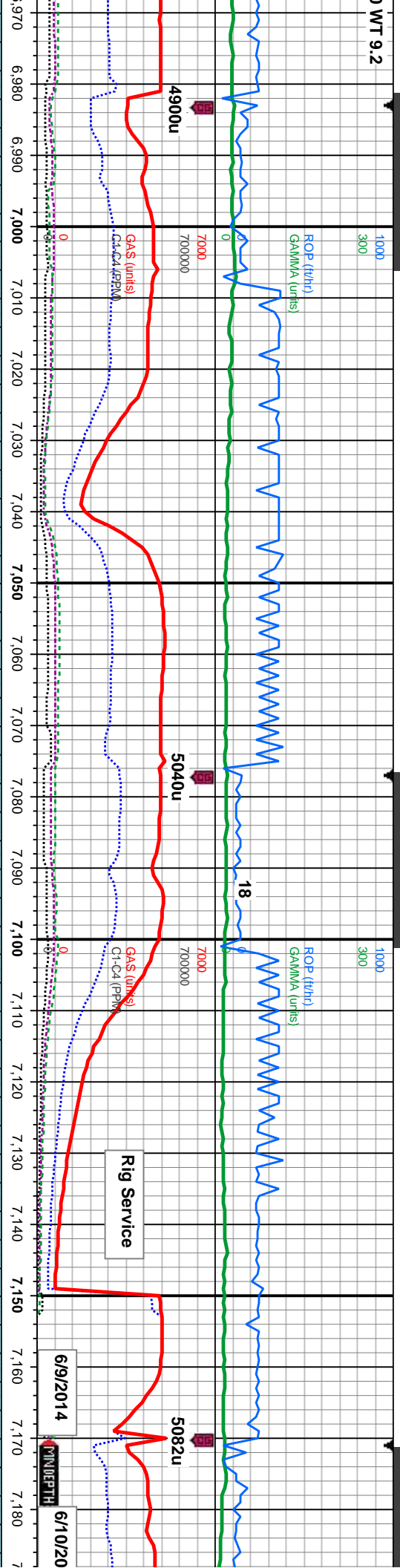
95% LS: wh-lt gry, mckln, sm, mod firm, tr imbd pyr  
5% SLTY SH: lt-med, some dk gy, mod sft - sl firm,  
sb blkly-sb ply, occ ply, rthy - gt, mtk: arg - sfty, sl  
calc, cal incl: slow string wh bl, even dull v thn wh yel  
ring, tr yel brn stn

100% LS: wh-lt gry, mckln, sm, mod firm, tr  
imbd pyr, occ cal incl, tr sfty sh, some cnt;  
fast string wh bl, even dull thn wh yel ring, thn  
yel brn stn

100% LS: wh-lt gry, mckln, sm, mod firm, tr  
imbd pyr, occ cal incl, occ sfty sh; slow-mod  
string wh bl, even dull thn wh yel ring, mod  
thn yel brn stn

100% LS: wh-lt gry, mckln, sm, mod firm, tr  
imbd pyr, occ cal incl, occ sfty sh; slow-mod  
string wh bl, even dull thn wh yel ring, mod  
thn yel brn stn





MD: 7.021'  
Inclination: 90.18 °  
Azimuth: 2.18 °  
TVD: 6,443.44'  
VS: 501.51'

MD: 7.115'  
Inclination: 89.91 °  
Azimuth: 2.59 °  
TVD: 6,443.37'  
VS: 505.42'

100% L.S.: wh-lt gry, mckln, sm, mod firm, tr  
limbd pyr, occ cal incl, occ silty sh; fast string  
bri wh bl, even mod thk mod wh yel ring, mod  
yel brn stn

100% L.S.: wh-lt gry, mckln, sm, mod firm, tr  
limbd pyr, occ cal incl, occ silty sh; fast string  
bri wh bl, even mod thk mod wh yel ring, mod  
yel brn stn

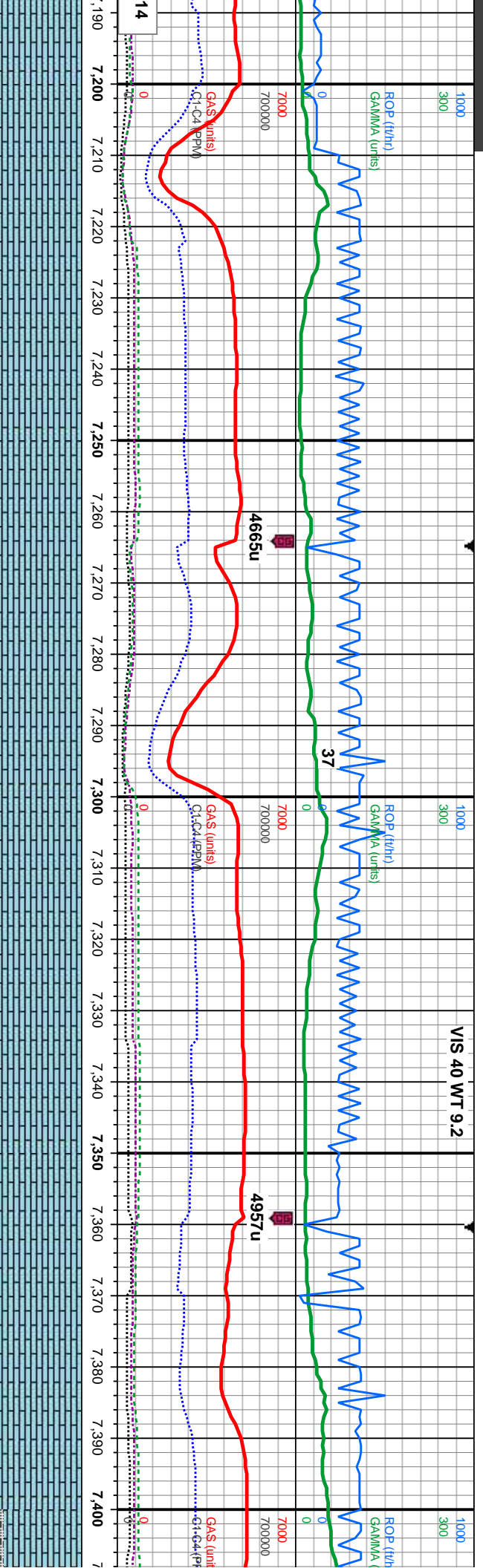
100% L.S.: wh-lt gry, mckln, sm, mod firm, tr  
limbd pyr, occ cal incl, occ silty sh; fast string  
bri wh bl, even mod thk mod wh yel ring, mod  
yel brn stn

100% L.S.: wh-lt gry, mckln, sm, mod firm, tr  
limbd pyr, occ cal incl, occ silty sh; fast string  
bri wh bl, even mod thk bri wh yel ring, mod  
yel brn stn

100% L.S.: wh-lt gry, mckln, sm, mod firm, tr  
limbd pyr, occ cal incl, occ silty sh; fast string  
bri wh bl, even mod thk bri wh yel ring, mod  
yel brn stn







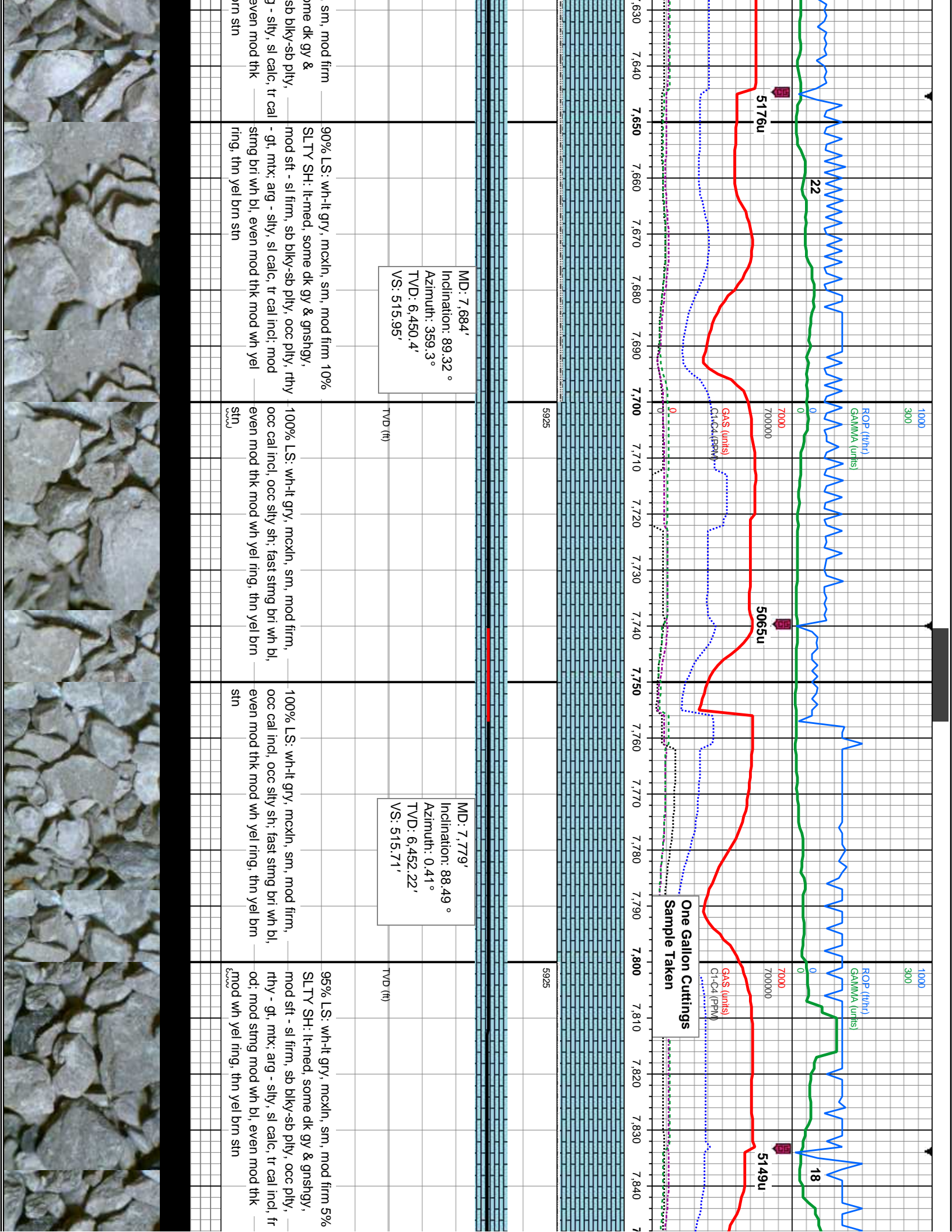
MD: 7,210'  
Inclination: 88.05 °  
Azimuth: 0.94°  
TVD: 6,445.06'  
VS: 508.35'

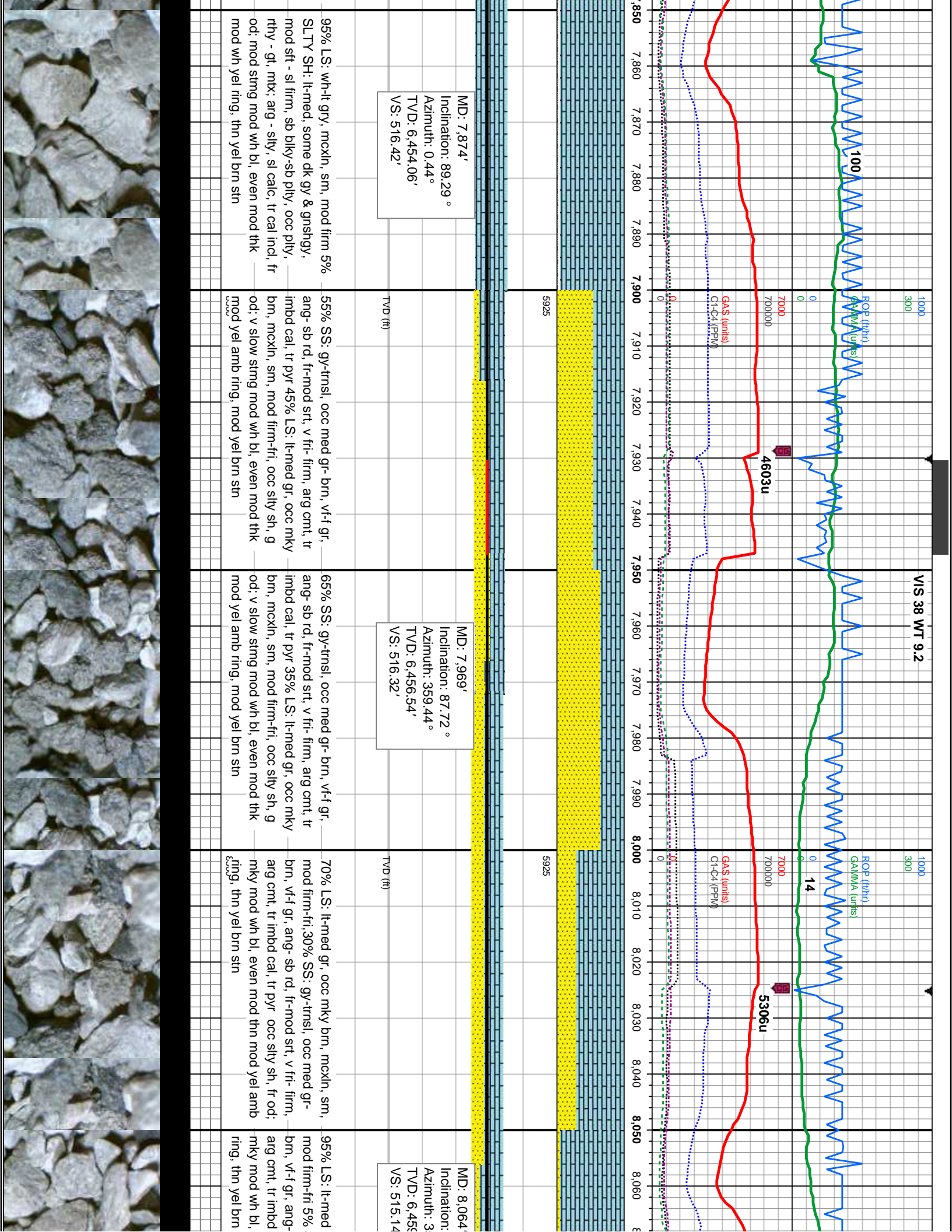
MD: 7,305'  
Inclination: 88.89 °  
Azimuth: 1.77°  
TVD: 6,447.6'  
VS: 510.59'

MD: 7,400'
Inclination: 89°
Azimuth: 0.75°
TVD: 6,448.77'
VS: 512.68'



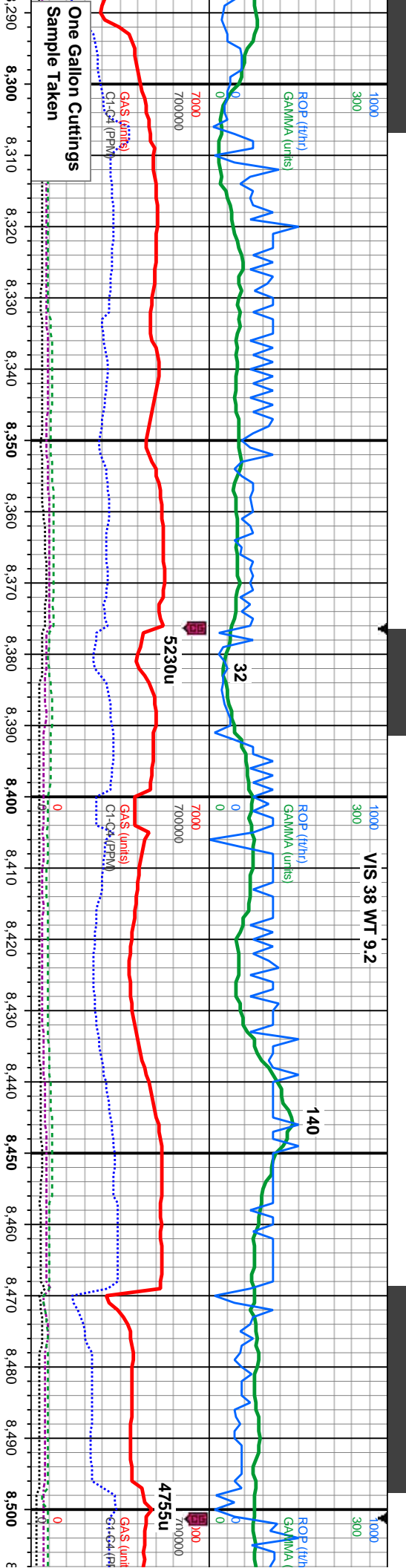












MD: 8,318'  
Inclination: 89.51 °  
Azimuth: 0.37°  
TVD: 6,461.19'  
VS: 513.9'

TVD Scale Change  
6400-7000'

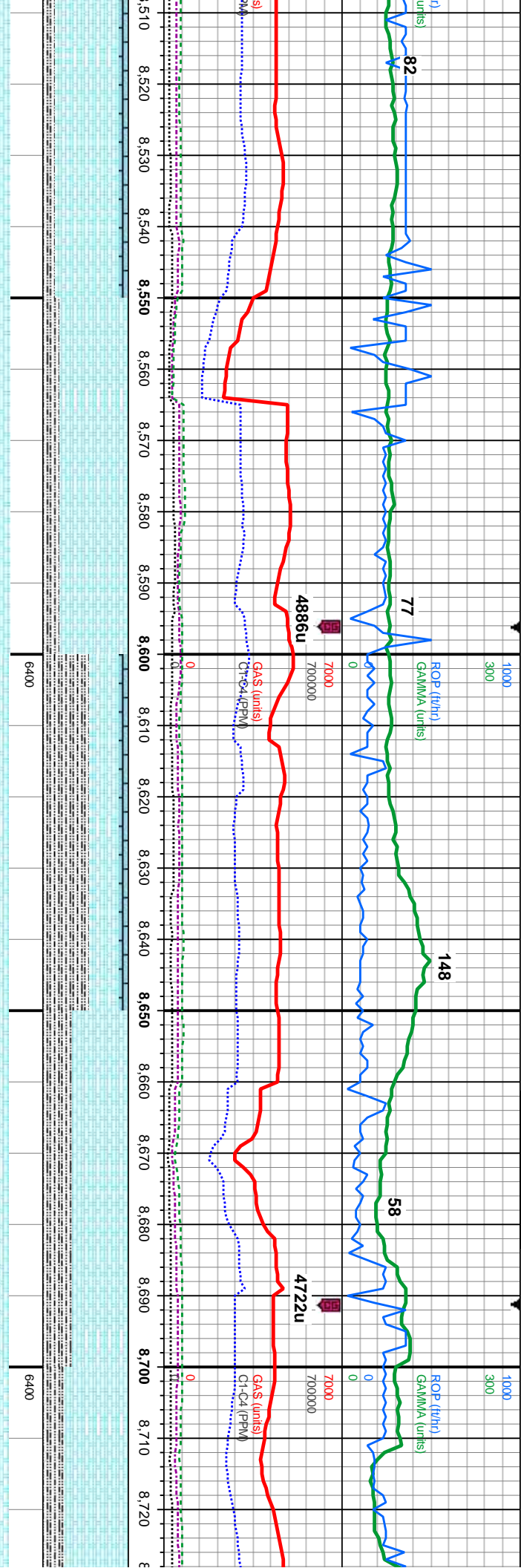
MD: 8,413'  
Inclination: 89.57 °  
Azimuth: 0.36°  
TVD: 6,461.95'  
VS: 514.51'

MD: 8,500'  
Inclination: 89.57 °  
Azimuth: 0.36°  
TVD: 6,461.95'  
VS: 514.51'

mod firm, & ss, fr	100% L.S.: lt-med gry, mckln, sm, mod firm, occ cal incl, tr inoc foss, occ silty sh, fr od; fast stng bri wh bl, even mod thn mod wh yel ring, mod thn yel brn stn	100% L.S.: lt-med gry, mckln, sm, mod firm, occ cal incl, tr cal frags, tr imbd pyr, occ silty sh, fr od; fast stng bri wh bl, even mod thn mod wh yel ring, mod thn yel brn stn	80% L.S.: wh-lt gry, med gry, mckln, sm, mod firm, 20% S.L.T.Y. SH: lt-med, some dk gy & gnshgy, mod sft - sl firm, sb blkly-sb pty, occ pty, rthy - gt, mtb; arg - silty, sl calc, tr cal incl; fast stng bri wh bl, even mod thn mod yel amb ring, mod thn yel brn stn	55% L.S.: wh-lt gry, med gry, bf, mckln, sm, mod firm, 45% S.L.T.Y. SH: lt-med, some dk gy & gnshgy, mod sft - sl firm, sb blkly-sb pty, occ pty, rthy - gt, mtb; arg-silty, sl calc, cal incl; tr fos frags, fast stng bri wh bl, even mod thn mod yel amb ring, mod thn yel brn stn	75% C sft-sil f gy, sor sb blkly sl calc, mod firm bri wh yel brn
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n: 87.59 °  
1.61°  
64.31'  
14'

MD: 8.603'  
Inclination: 87.72 °  
Azimuth: 1.43 °  
TVD: 6,468.2'  
VS: 518.65'

MD: 8.697'  
Inclination: 89.97 °  
Azimuth: 1.94 °  
TVD: 6,470.09'  
VS: 521.42'

HK: lt gy, wht-frm, mot, sb ply-blky, rthy-sb wxy, 15% SLTY SH: lt-med dk gy & gnshgy, mod sft - sl firm, -sb ply, occ ply, rthy-gt, mtk: arg-sily, 10% LS: wh-lt gry, bf, mcnxn, sm, imbd & lse cal, scat pyr, mod sting sft, even thn mod wh yel ring, mod thn

80% CHK: lt-med gy, wht-frm, mot, sb ply-blky, sft- sl frm, rthy-sb wxy, 20% SLTY SH: lt-med gy, some dk gy & gnshgy, mod sft - sl firm, sb blky-sb ply, occ ply, rthy-gt, mtk: arg-sily, sl calc, tr lse & imbd cal, mod sting bri wh bl, even thn mod wh yel ring, mod thn yel brn sin

55% SLTY SH: lt-med gy, some dk gy & gnshgy, mod sft - sl firm, sb blky-sb ply, occ ply, rthy-gt, mtk: arg-sily, sl calc, 35% CHK: lt-med gy, occ wht-frm, mot, sb ply-blky, sft- sl frm, rthy-sb wxy, 10% LS: wh-lt gry, bf, mcnxn, sm, mod firm, imbd & lse cal, some diss pyr, mky bri wh bl, even thn mod yel amb ring, mod thn yel brn sin

65% CHK: lt-med gy, wht-frm, mot, sb ply-blky, sft- sl frm, rthy-sb wxy, 35% SLTY SH: lt-med gy, some dk gy & gnshgy, mod sft - sl firm, sb blky-sb ply, occ ply, rthy-gt, mtk: arg-sily, sl calc, imbd & lse cal, some diss pyr, mky bri wh bl, even thn mod yel amb ring, mod thn yel brn sin

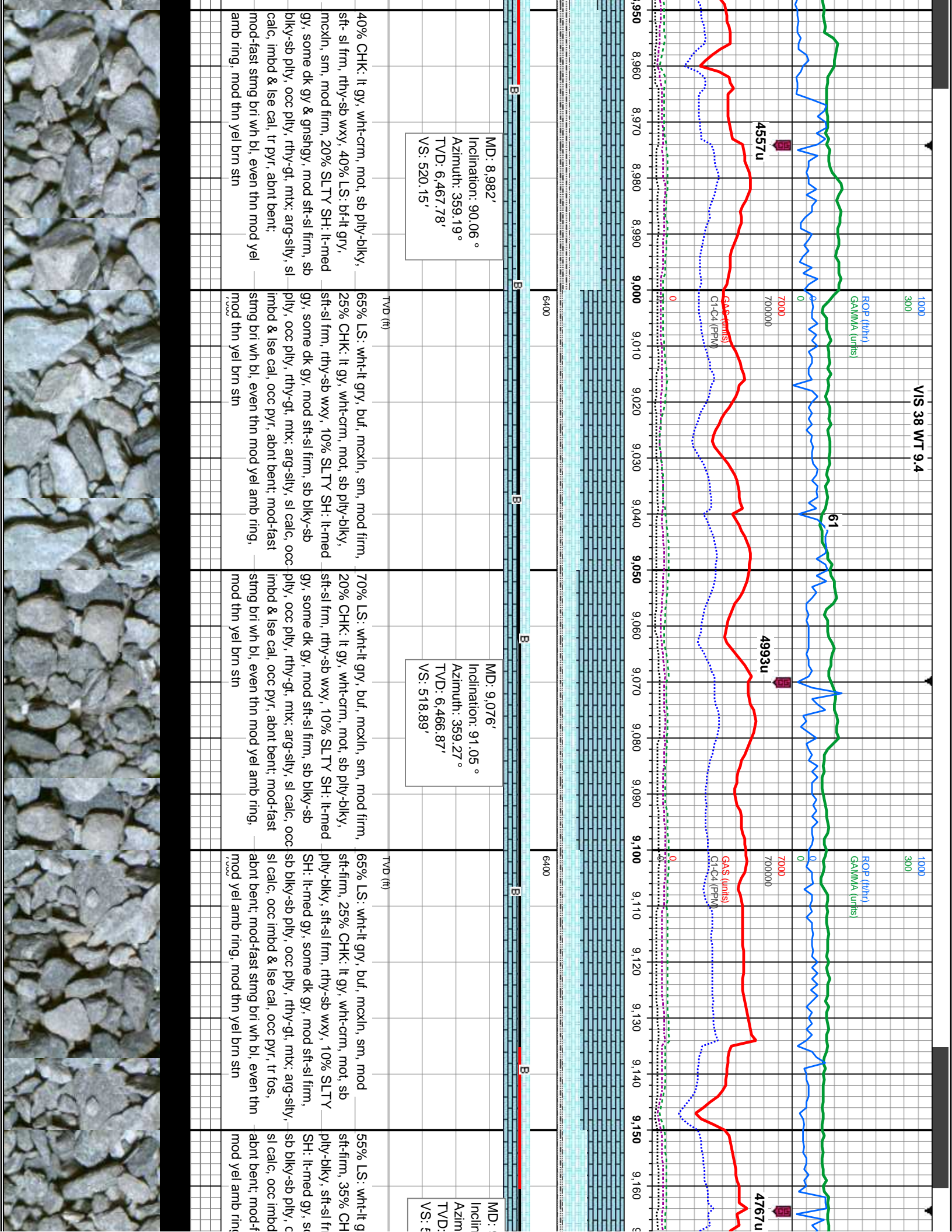
75% CHK: lt-med gy, mot, frm, brit, rthy-sb wxy, 25% SLTY SH: lt-med gy, some dk gy & gnshgy, mod sft - sl frm, sb blky-sb ply, occ ply, rthy-gt, mtk: arg-sily, sl calc, tr lse & imbd cal, some diss pyr, mky bri wh bl, even thn mod yel amb ring, mod thn yel brn sin











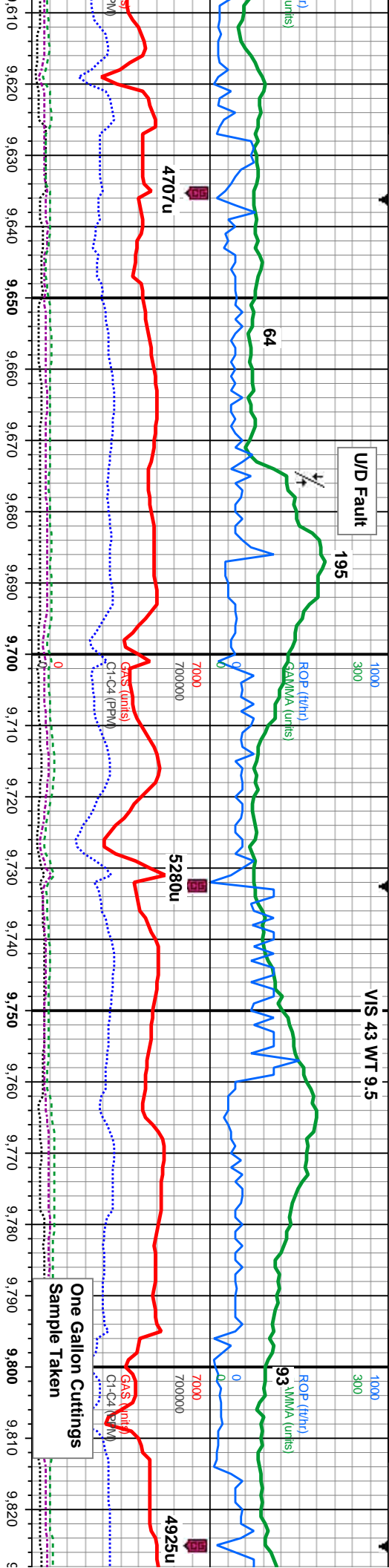












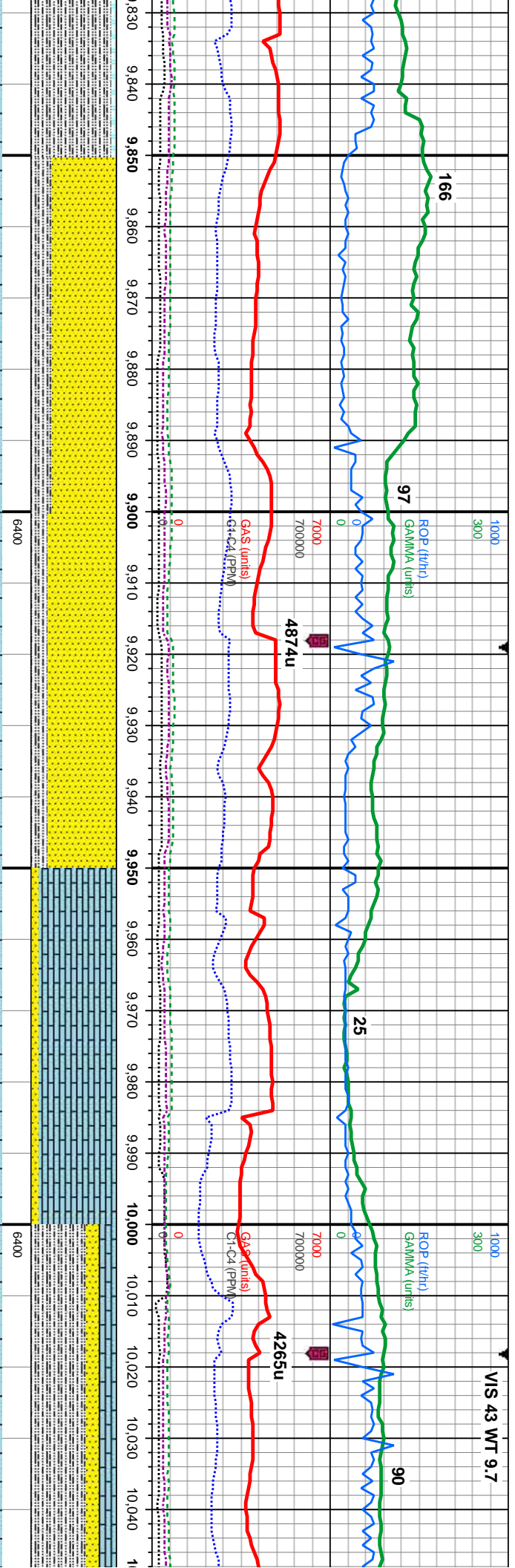
MD: 9,645'  
Inclination: 89.78 °  
Azimuth: 0.66°  
TVD: 6,466.81'  
VS: 515.02'

MD: 9,740'  
Inclination: 90.22 °  
Azimuth: 0.1°  
TVD: 6,466.81'  
VS: 515.65'

S: wht-lt gry, buf, mcxln, sm, mod	95% SLTY SH: lt-med gy, occ dk gy, mod	75% CHK: lt gy, wht-crm, mot, sb ply-blky, sft-sl frm, rthy-sb wxy 20% SLTY SH: lt-med gy, some dk gy & gnshtgy, mod sft - sl frm, sb blky-sb ply, occ ply, rthy-gt, mt; arg-slty, mcxln, sm, mod sft-firm, abnt cal frags, scat imbd & ls pyr, abnt bent, scat fos, scat bent, fr od, slow-mod milky, bright wh bl, even thn dull yel amb ring, tr yel brn sin	90% SLTY SH: lt-med gy, some dk gy & gnshtgy, mod sft - sl frm, sb blky-sb ply, occ ply, rthy-gt, mt; arg-slty, gy, wht-crm, mot, sb ply-blky, sft-sl frm, rthy-sb wxy, occ imbd cal, tr bent, fr od, fast-mod stmg, bright wh bl, even thn mod yel amb ring, g yel brn sin	95% SLTY SH: lt-med gy, gnshtgy, mod sft - sl frm, ply, rthy-gt, mt; arg-slty, gy, wht-crm, mot, sb ply-blky, rthy-sb wxy, occ imbd cal slow-mod milky, dull wh bl amb ring, mod yel brn sin
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D: 9,835'  
Inclination: 89.23 °  
Azimuth: 0.67 °  
D: 6,467.26'  
VS: 516.29'

MD: 9,930'  
Inclination: 89.85 °  
Azimuth: 359.84 °  
TVD: 6,468.02'  
VS: 516.71'

MD: 10,025'  
Inclination: 89.85 °  
Azimuth: 0.14 °  
TVD: 6,468.27'  
VS: 516.69'

some dk gy & sb blkly-sb ply, occ sl calc, 5% CHK: lt blkly, sft- sl frm, tr bent, fr od, even thn dull yel

75% SS: gy-trnsl, occ med gr- brn, vf-f gr, ang- sb rd, fr-mod srt, v fr- frm, arg cnt, tr imbd cal, tr pyr 25% SLTY SH: lt-med gy, some dk gy & gnshgy, mod sft - sl frm, sb blkly-sb ply, occ ply, rthy-gt, mt; arg-sily, sl calc, tr ls, scatt bent, scatt imbd & loose cal, g od, slow-mod milky, dull wh bl, even thn dull yel amb ring, mod yel brn stn

80% SS: gy-trnsl, occ med gr- brn, vf-f gr, ang- sb rd, fr-mod srt, v fr- frm, arg cnt, tr imbd cal, tr pyr 20% SLTY SH: lt-med gy, some dk gy & gnshgy, mod sft - sl frm, sb blkly-sb ply, occ ply, rthy-gt, mt; arg-sily, sl calc, tr ls, scatt bent, scatt imbd & loose cal, g od, slow-mod milky, dull wh bl, even thn dull yel amb ring, mod yel brn stn

90% LS: lt-med gr, occ mky brn, mcxln, sm, mod firm-fri, 10% SS: gy-trnsl, occ med gr- brn, vf-f gr, ang- sb rd, fr-mod srt, v fr- frm, arg cnt, tr imbd cal, tr pyr, occ sily sh, g od, slow-mod milky, dull wh bl, even thn dull yel amb ring, mod yel brn stn

65% SLTY SH: lt-med gy, some dk gy & gnshgy, mod sft - sl frm, sb blkly-sb ply, occ ply, rthy-gt, mt; arg-sily, sl calc 20% LS: lt-med gr, occ mky brn, mcxln, sm, mod firm-fri 15% SS: gy-trnsl, occ med gr- brn, vf-f gr, ang- sb rd, fr-mod srt, v fr- frm, arg cnt, tr imbd cal, tr pyr, occ sily sh, g od, slow-mod milky, dull wh bl, even thn dull yel amb ring, mod yel brn stn

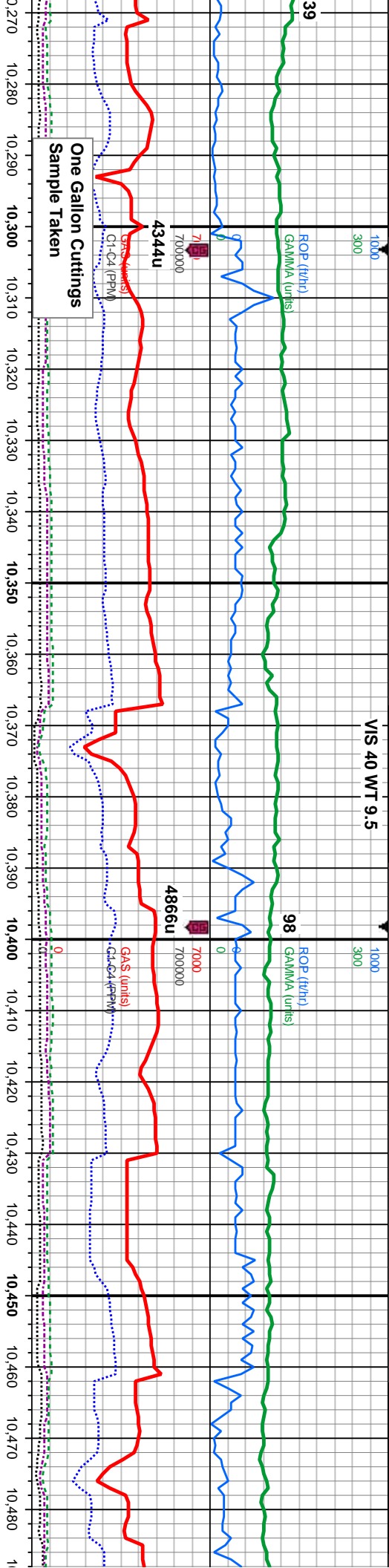








VIS 40 WT 9.5



6400

6400

MD: 10,310'  
Inclination: 90.52 °  
Azimuth: 359.61 °  
TVD: 6,471.68'  
VS: 513.09'

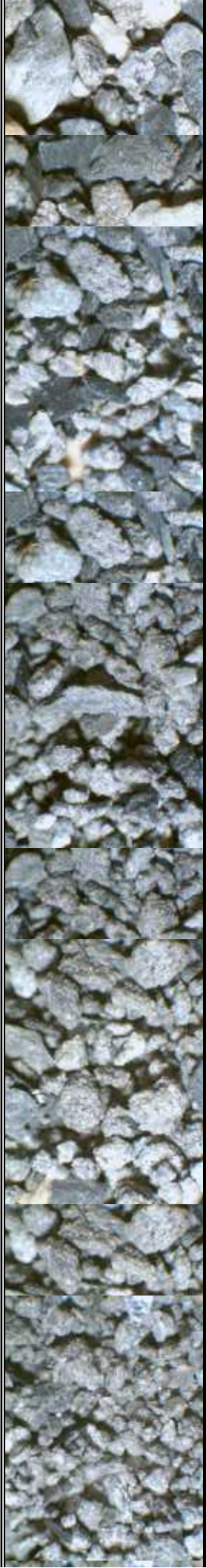
MD: 10,404'  
Inclination: 91.66 °  
Azimuth: 1.15 °  
TVD: 6,469.89'  
VS: 513.71'

B										B									

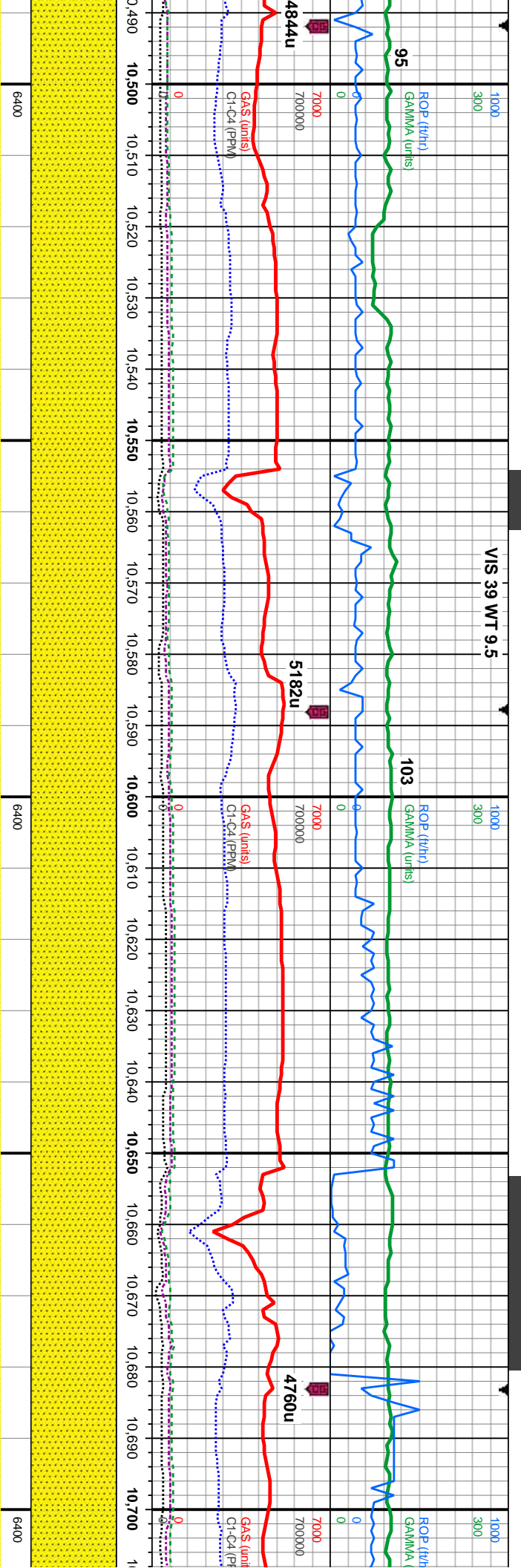
l, occ med gr- brn, vf-f gr, ang-sb rd, fr-mod srt, v fri- firm, arg cnt, lt-med gy, blk, some dk gy & - sl firm, sb blk- sb ply, mt; arg-slt; sl calc, 5% b ply- ply, pyr ctg, occ LS, g blk, dull wh bl, even thn dull mod yel brn stn

90% SS: gy-trnsl, occ med gr- brn, s&p, vf-f gr, ang-sb rd, fr-ply srt, v fri- firm, arg cnt, 10% SLTY SH: med-dk gy, occ blk, mod sft - sl firm, sb blk- sb ply, occ ply, rthy-gt, mt; arg-slt; sl calc, some bent, g od, fast-mod string, bright wh bl, even thn mod yel amb ring, g yel brn stn

100% SS: lt gy-trnsl, occ med gr- b vf-f gr, ang-sb rd, fr-ply srt, v fri- firm cnt, occ slty sh, some bent, g od, f bright wh bl, even thn mod yel amb mod yel brn stn







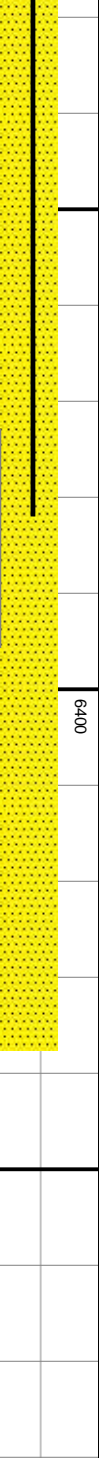
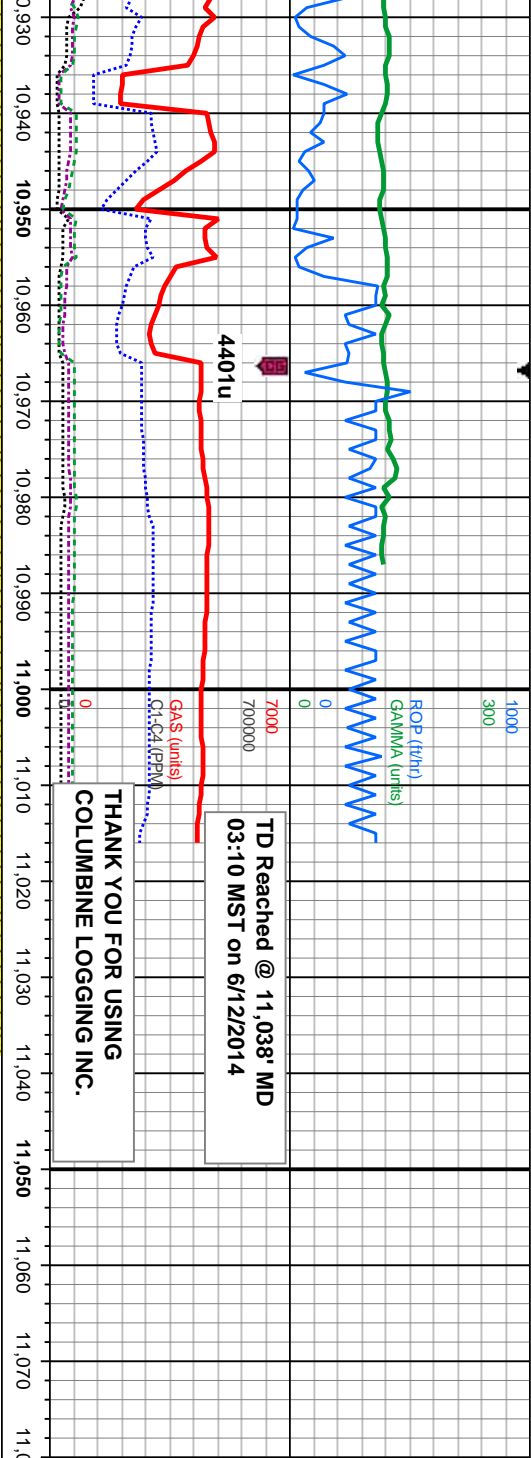
MD: 10,499' Inclination: 90.34 ° Azimuth: 1.63 ° TVD: 6,468.23' VS: 516.02'	MD: 10,594' Inclination: 90.22 ° Azimuth: 1.63 ° TVD: 6,467.77' VS: 518.72'	MD: 10,689' Inclination: 89.94 ° Azimuth: 2.68 ° TVD: 6,467.64' VS: 522.29'
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TVD (ft)	TVD (ft)	TVD (ft)
100% SS: lt gy-trnsl, occ med gr-brn, some s&p, vf-f gr, ang-sb rd, fr-ply srt, v fri- firm, arg cmnt, occ silty sh, some bent, g od, fast stmg, bright wh bl, even thn mod yel amb ring, mod yel brn stn	100% SS: lt gy-trnsl, occ med gr-brn, some s&p, vf-f gr, ang-sb rd, fr-ply srt, v fri- firm, arg cmnt, occ silty sh, some bent, occ lse cal, tr pyr, g od, fast stmg, bright wh bl, even thn mod yel amb ring, mod yel brn stn	100% SS: lt-med gry, tmsl, occ med gr-brn, vf-f gr, ang-sb rd, fr-ply srt, v fri- firm, arg cmnt, some bent, occ lse cal, or LS & SLTY SH, g od, mod -fast stmg, bright wh bl, even mod thk bri wh yel ring, v thn yel brn stn









MD: 10,982'  
Inclination: 90.49 °  
Azimuth: 1.82 °  
TVD: 6,467.17'  
VS: 533.45'

Projection to bit  
MD: 11038  
INC: 90.49.  
AZM: 1.82  
TVD: 6466.69  
VS: 4511.42  
High: 5.32  
Right: 2.85

bl, occ med gr-brn,  
t, v fri- firm, arg cnt,  
SH, fr od, fast  
mod thk bri wh yel

100% SS: lt-med gry, trnsi, occ med gr-brn, v-f gr, ang-sb rd, fr-ply srt, v fri-  
firm, arg cnt, tr cal frags, tr pyr, tr SLTY SH, g od, fast strmg, bright wh bl,  
even mod thn bri wh yel ring, v thn yel bn str

TVD (ft)  
7000

