



Scale: 5" / 100'
Measured Depth Log

Well Name State Seventy Holes A-E-3HNB

Location NWNW SEC 3 T4N R62W

State COLORADO

Country USA

API Number 05-123-38883-00

Region DJ BASIN

Spud Date 3/12/2014

County WELD

Rig Number CADE 26

Field WATTENBERG

Drilling Completed 3/19/2014

Surface Coordinates 424' FNL x 634' FWL (LAT:40.347710, 104.319748)

Bottom Hole Coordinates (PROJECTED)470' FSL x 10' FWL (LAT: 40.335387, 104.321029)

| | | | |
|------------------|-------|----------------|--------|
| Ground Elevation | 4534' | K.B. Elevation | 4551' |
| Logged Interval | 5900' | To | 10870' |
| | | Total Depth | 10870' |

Formation NIOBRARA, B-CHALK

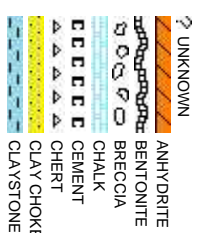
Type of Drilling Fluid H2O, LSND

Company Bonanza Creek

Name Paul McKay

Company Bonanza Creek

Address 410 17th Street
Denver, CO 80202



Operator

Energy Inc.

Geologist

Energy Inc.

, Suite 1500
2022

Rock Types

| | | |
|----------------------|------------------|-----------------|
| CONGLOMERATE | MARLSTONE | SHALY SANDSTONE |
| DOLOMITE | METAMORPHIC | SHALY SILTSTONE |
| DOLOMITIC LIMESTONE | NO SAMPLE | SILTY SHALE |
| GRANITE | SALT | SILTSTONE |
| GYPSUM | SANDSTONE | TUFF |
| IGNEOUS | SALT-PEPPER SAND | WELDED TUFF |
| SIDERITE or LIMONITE | SHALE | |
| LIMESTONE | SHALE COLORED | |
| | SHALE GRAY | |

Accessories

| | | | |
|----------------|-----------------|--------------------------|-----------------------|
| Fossils | GASTROPOD | ARGILLITE GRAIN | HEAVY MINERAL |
| INOCERAMUS | B BENTONITE | K KAOLIN | ANHYDRITE STRINGER |
| ALGAE | O OOLITE | BIT BITUMENOUS SUBSTANCE | B BENTONITE STRINGER |
| AMPHIPORA | O OSTRACOD | B BRECCIA FRAGMENTS | COAL STRINGER |
| BELEMNITE | P PELECYPOD | C CALCAREOUS | DOLOMITE STRINGER |
| BIOCLASTIC | P PELLET | C CARBONACEOUS FLAKES | G GYPSUM STRINGER |
| BRACHIOPOD | P PISOLITE | CHT CHERT | LIMESTONE STRINGER |
| BRYOZOA | P PLANT REMAINS | COAL - THIN BEDS | MARLSTONE (CALC) STRG |
| CEPHALOPOD | S PLANT SPORES | DOLOMITIC | MARLSTONE (DOL) STRG |
| CORAL | S SCAPHOPOD | F FELDSPAR | SANDSTONE STRINGER |
| CRINOID | S STROMATOPOROD | F FERRUGINOUS PELLET | SHALE STRINGER |
| ECHINOID | | F FERRUGINOUS | S SILTY |
| FISH | Minerals | T TUFFACEOUS | SILTSTONE STRINGER |
| FORAMINIFERA | A ANHYDRITIC | G GLAUCONITE | |
| F FOSSIL | A ARGILLACEOUS | G GYPSIFEROUS | Stringer |

Other Symbols

| | | | | |
|---------------------|-------------------------|-------------------------|--------------------------|-----------------|
| Oil Show | P PINPOINT | DST INTERVAL | W WIRELINE TESTED - LEFT | E EARTHY |
| V VUGGY | F FAULT | W WIRELINE TESTED - RT | F FINELY XLN | |
| D DEAD | F FORMATION TOP | D DRILL STEM TEST | G GRAINSTONE | |
| E EVEN | G GAS SHOW | MN DEPTH | L LITHOGRAPHIC | |
| Q QUESTIONABLE | B BIT | O OIL SHOW | M MICRO XLN | |
| S SPOTTED STAINING | C CONNECTION (UP) | MN DEPTH UP | M MUDSTONE | |
| C CONNECTION (DOWN) | MN DEPTH (DOWN) | A ANGULAR | P PACKSTONE | |
| Porosity | C CONNECTION GAS | N NORMAL FAULT | R ROUNDED | W WACKESTONE |
| E EARTHY | C CONNECTION GAS (LEFT) | O OVERTURNED STRATA | S SUBANG | |
| F FENESTRAL | T TRIP GAS | R REVERSE FAULT | S SUBRND | |
| F FRACTURE | T TRIP GAS (LEFT) | C CASING | | Textures |
| I INTERCRYSTALLINE | D DOWN TIME GAS | S SIDEWALL CORE (LEFT) | | P POOR |
| I INTERCRYSTALLINE | D DOWN TIME GAS (LEFT) | S SIDEWALL CORE (RIGHT) | | M MODERATE |
| M MOLDIC | C CORE - LOST | S SLIDE | | W WELL |
| O ORGANIC | C CORE - RECOVERED | S SURVEY | | C CRYPTOXLN |

Slide/Rotate

ROP
ROF
GAMMA

Bit Data
Bit #: 3
Type: HEO4JMRS
Size: 8.75
Depth In: 5,710'
Jets: 3 x 20
S/N: 1387677

Total Gas & Chromatograph

GAS
C1
C2
C3
C4

Depth Labels

% Lith

Well Bore
TVD

Oil Show

EGMFTST

Images

COLUMBINE LOGGING RIGGED UP ON
3/16/2014 MANNED 2-PERSON LOGGING
WITH BLOODHOUND GAS
CHROMATOGRAPH UNIT #0077 BEGAN
ON 3/16/2014, 18:40 MST at 5800' MD



MD: 5,819'
Inclination: 17.06 °
Azimuth: 178.91 °
TVD: 5,721.8'
VS: -309.01'

MD: 5,866'
Inclination: 22.86 °
Azimuth: 176.31 °
TVD: 5,765.96'
VS: -293.1'

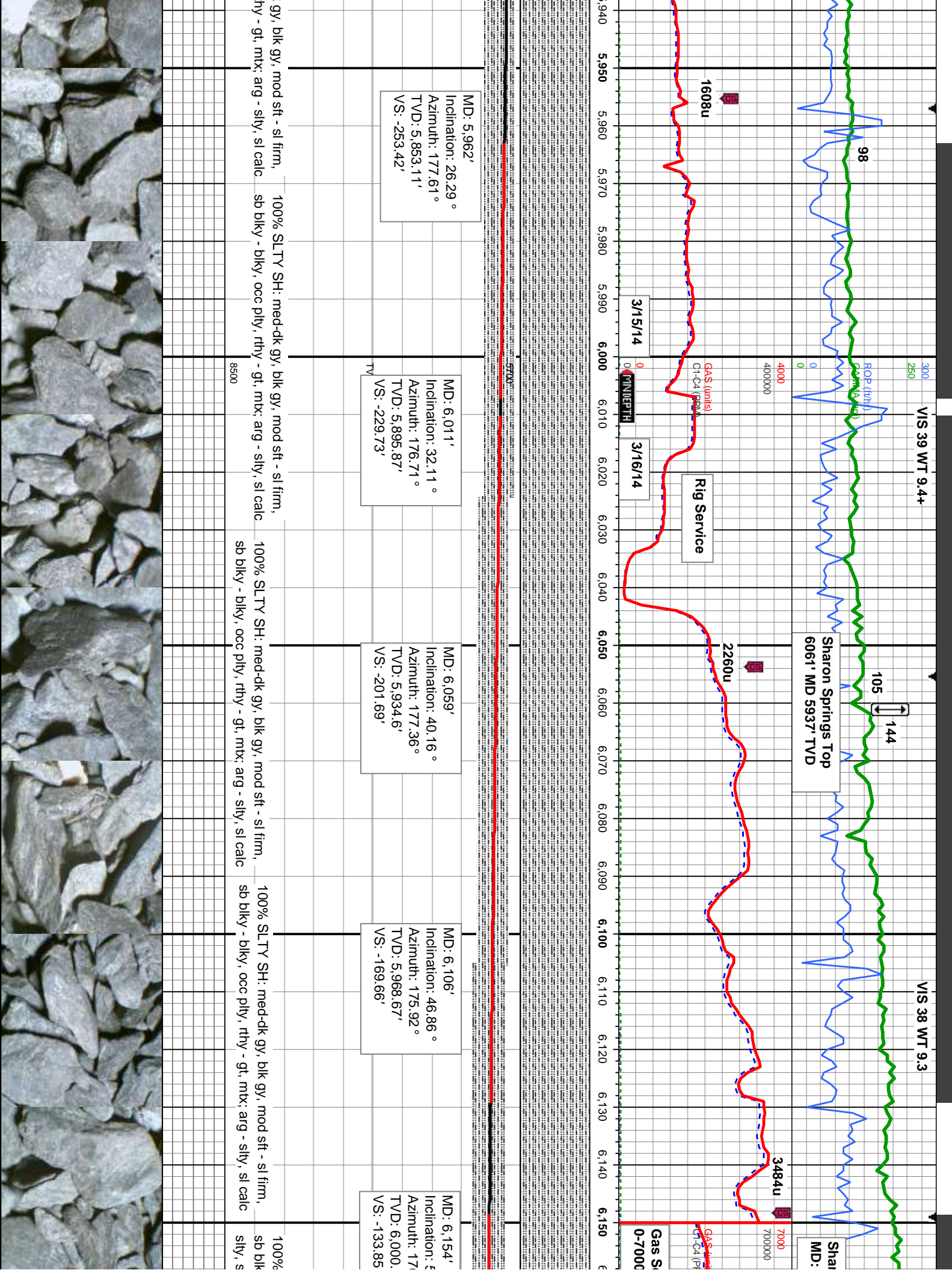
MD: 5,915'
Inclination: 25.01 °
Azimuth: 173.55 °
TVD: 5,810.74'
VS: -273.51'

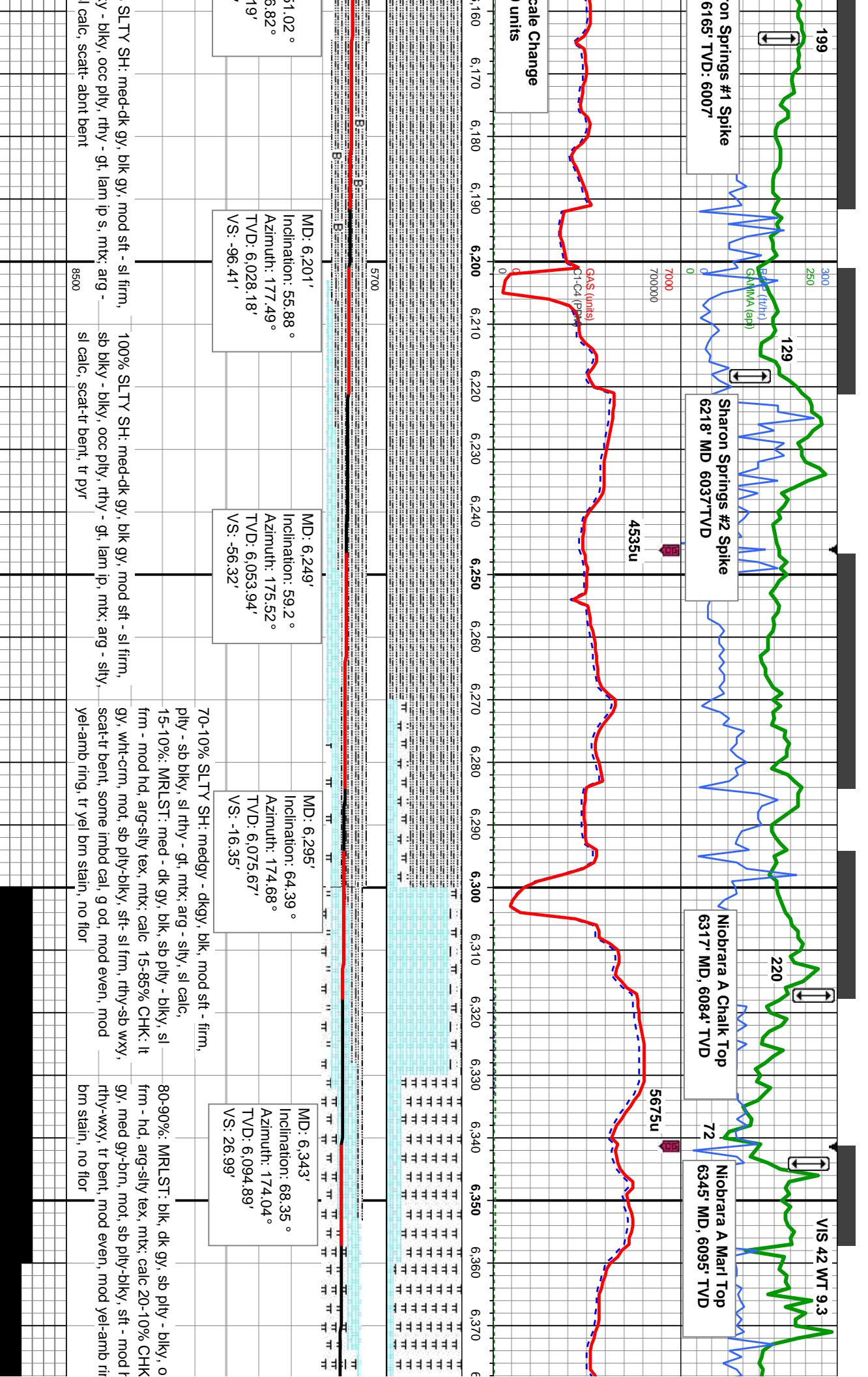
100% SLTY SH: med-dk gy, blk gy, mod sft
- sl firm, sb blk - blk, occ pty, rthy - gt,
mtx: arg - slty, sl calc

100% SLTY SH: med-dk gy, blk gy, mod sft - sl firm,
sb blk - blk, occ pty, rthy - gt, mtx: arg - slty, sl calc

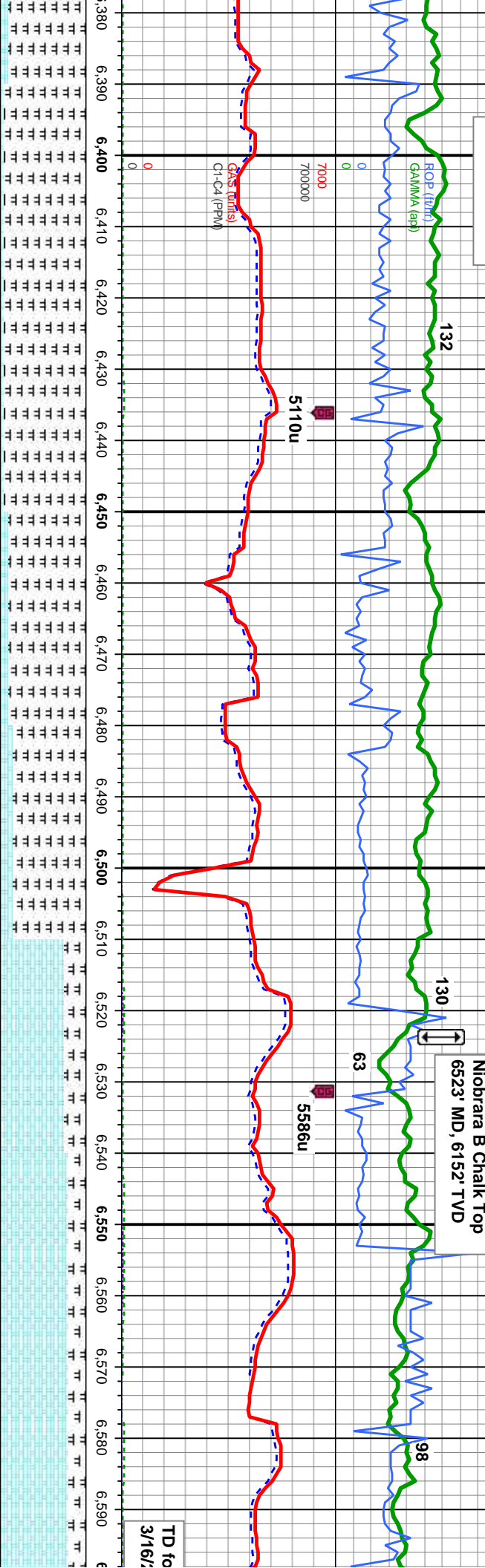
100% SLTY SH: med-dk
sb blk - blk, occ pty, r







Tangent Section



VIS 43 WT 9.3

Niobrara B Chalk Top
6523' MD, 6152' TVD

130

63

5586u

98

TD to
3/16/

MD: 6,390'

Inclination: 69.7 °

Azimuth: 173.4 °

TVD: 6,111.71'

VS: 70.09'

MD: 6,438'

Inclination: 69.54 °

Azimuth: 173.42 °

TVD: 6,128.43'

VS: 114.24'

MD: 6,485'

Inclination: 74.07 °

Azimuth: 175.2 °

TVD: 6,143.1'

VS: 158.17'

MD: 6,533'

Inclination: 80.24 °

Azimuth: 175.53 °

TVD: 6,153.76'

VS: 204.34'

MD: 6,580'

Inclination: 82.93 °

Azimuth: 177.11 °

TVD: 6,160.64'

VS: 250.35'

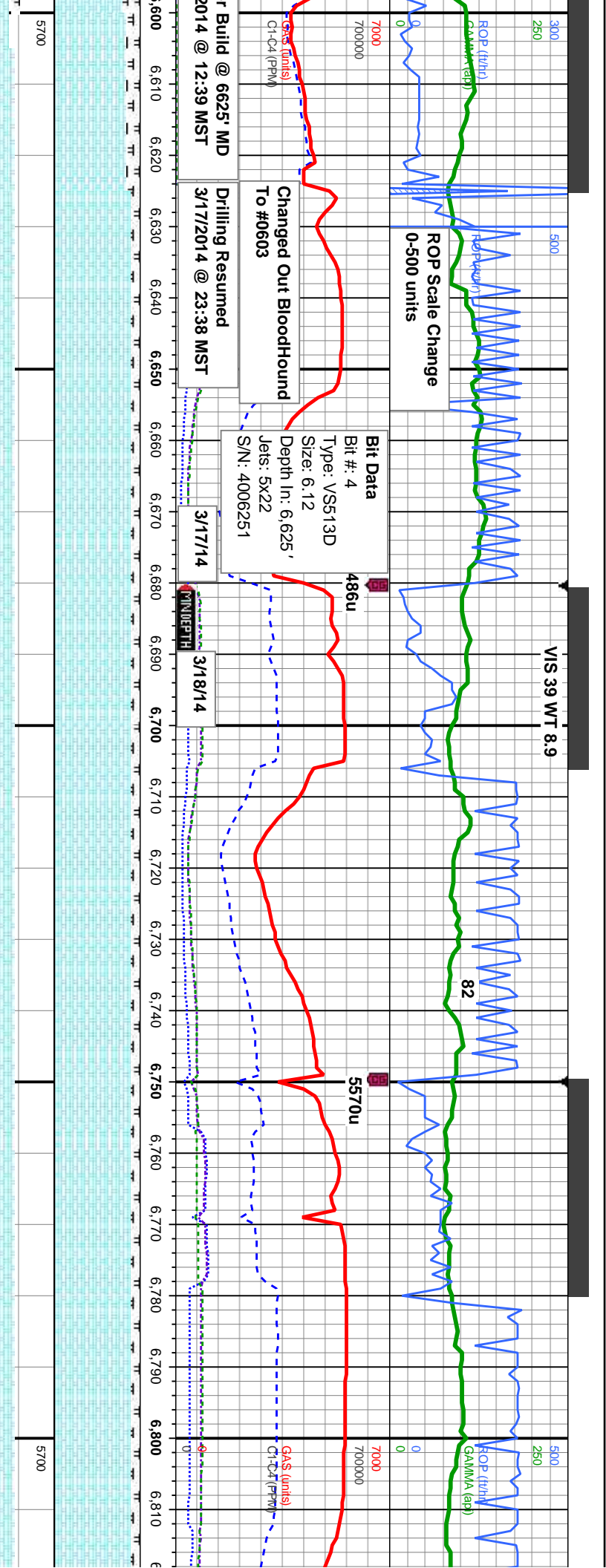
95%: MRLST: blk, dk gy, sb pily - blk, occ pily, occ
bndd, sl frm - hd, arg-sily tex, mtx: calc, 5% CHK:
lt-med gy, med gy-brn, mot, sb pily-blky, sft - mod
hd, rthy-wxy, tr pyr, tr bent, slow bri bishwh stmg,
scat flor, med thin yel-wh ring, fr sn

90-85%: MRLST: blk, dk gy, sb pily - blk, occ pily,
occ bndd, sl frm - hd, arg-sily tex, mtx: calc, 10-15%
CHK: lt-med gy, med gy-brn, mot, sb pily-blky, sft -
mod hd, rthy-wxy, slow bri bishwh stmg, scat flor,
med thin yel-wh ring, fr sn

75-80% CHK: wht-frm, lt-med gry, occ dk brn, mot,
sb blk, mod sft-sl frm, rthy, v calc, some imbd & ise
cal, 25-20% MRLST: dk gy, blk, sb pily - blk, sl frm -
mod hd, arg-sily tex, tr pyr, some uphole con, g od,
fast bri bishwh stmg, some flor, med-thk yel-wh ring,
mod sn

80-85% CHK: wht-frm, lt-
mot, sb blk, mod sft-sl frm
imbd, 20-25% MRLST: d
frm - mod hd, arg-sily tex,
od, fast bri bishwh stmg, s
yel-wh ring, mod stn



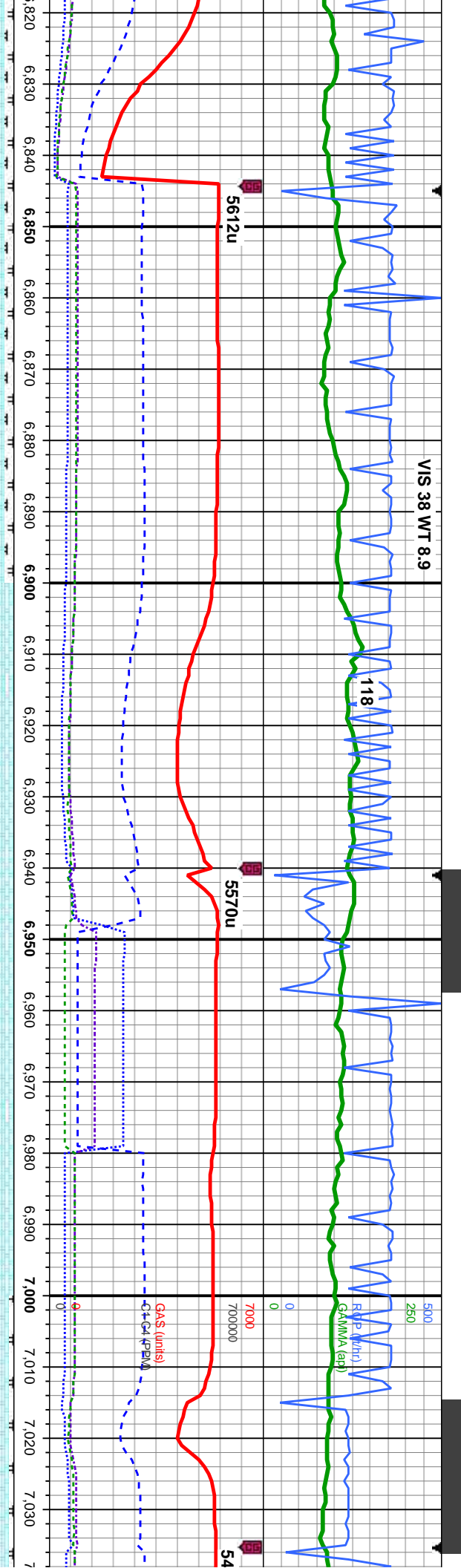


MD: 6,697'
Inclination: 88.28 °
Azimuth: 177.55 °
TVD: 6,169.61'
VS: 366.04'

MD: 6,792'
Inclination: 91.45 °
Azimuth: 176.89 °
TVD: 6,169.83'
VS: 460.25'

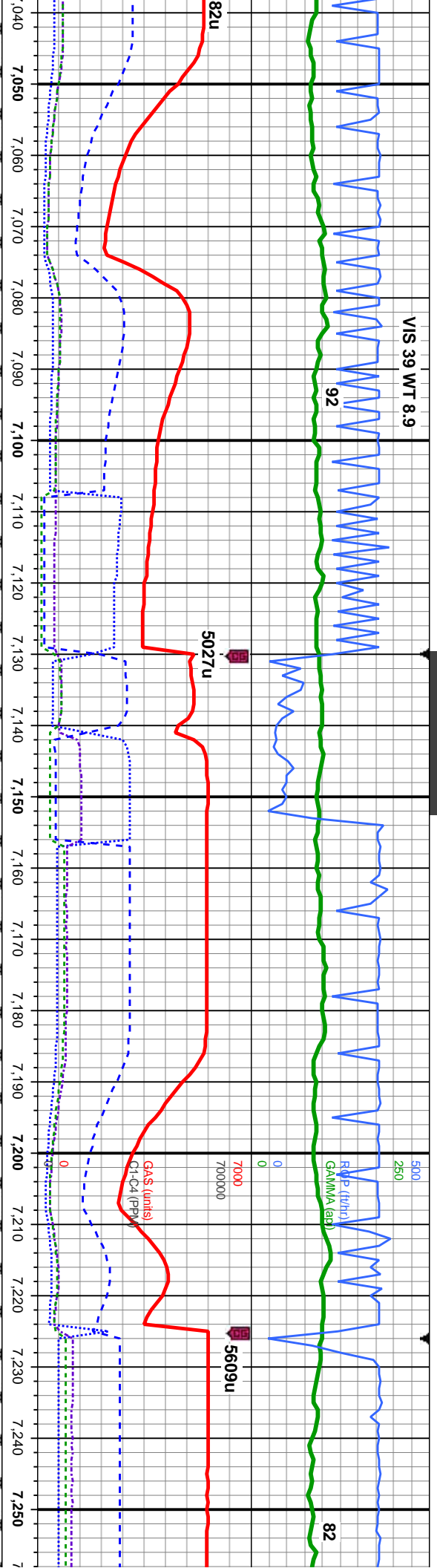
| | | | | |
|--|---|--|---|--|
| med gry, occ dk brn, n, rthy, v calc, some k gy, blk, sb ply - blk, sl abnt uphole con, mod some flor, med-thk | 90% CHK: crm, lt-med gry, occ dk brn, mot, sb blk, mod sft-sl frm, rthy, v calc, 10% MRLST: dk gy, blk, sb ply - blk, sl frm - mod hd, arg-sily tex, abnt uphole con, tr lse cal, g od, v fast brl bishwh stmg, some flor, thk brl yel-wh ring, thk stn | 90% CHK: crm, lt-med gry, occ dk brn, mot, sb blk, mod sft-sl frm, rthy, v calc, 10% MRLST: dk gy, blk, sb ply - blk, sl frm - mod hd, arg-sily tex, tr cal and fos frags, g chk flor, g od, fast brl bishwh stmg, some flor, med-thk yel-wh ring, mod stn | 90% CHK: crm, lt-med gry, occ dk brn, mot, sb blk, mod sft-sl frm, rthy, v calc, 10% MRLST: dk gy, blk, sb ply - blk, sl frm - mod hd, arg-sily tex, tr cal and fos frags, tr bent, g chk flor, g od, fast brl bishwh stmg, some flor, med-thk yel-wh ring, mod stn | 90% CHK: crm, lt-med gry, occ dk brn, mot, sb blk, mod sft-sl frm, rthy, v calc, 10% MRLST: dk gy, blk, sb ply - blk, sl frm - mod hd, arg-sily bent, g chk flor, some flor, thk b |
| 8500 | | | | |





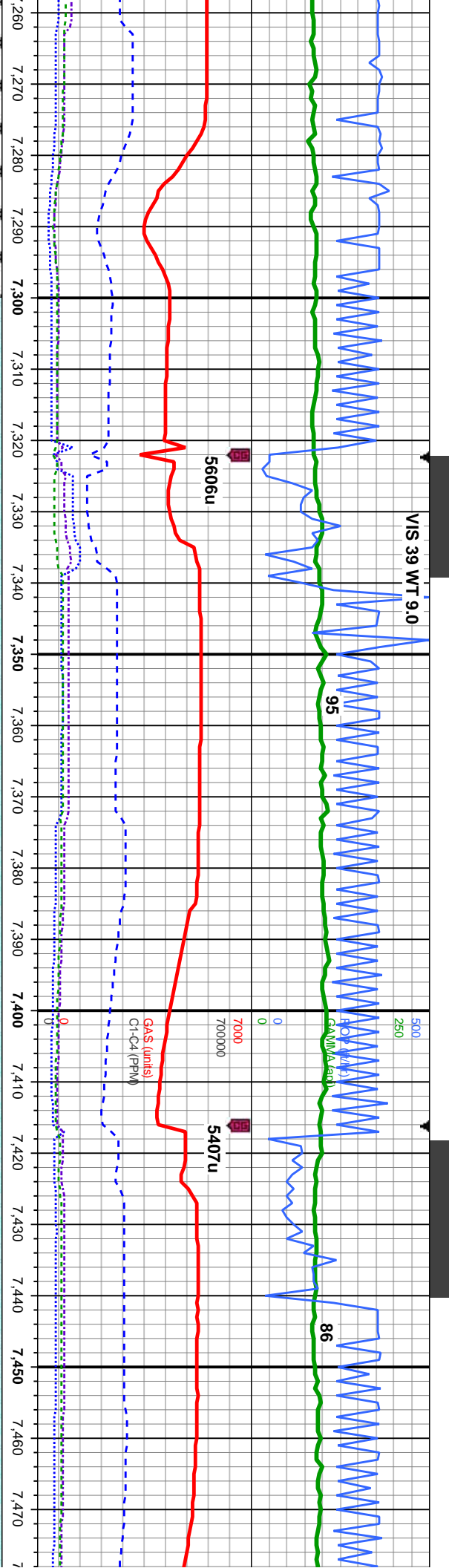
| | | | | | | |
|--|--|---|---|---|---|---|
| MD: 6,887' Inclination: 91.79 ° Azimuth: 176.18 ° TVD: 6,167.14' VS: 554.29' | | It-med gry, occ dk brn, mot, sl frm, rthy, v calc, 10% blk, sb pty - blk, sl frm - mod hd, arg-sily tex, tr cal and fos frags, tr bent, g chk flor, g od, fast bri blshwh string, some flor, thk bri yel-wh ring, thk sin | 90% CHK: crm, lt-med gry, occ dk brn, mot, sb blk, mod sft-sl frm, rthy, v calc, 10% MRLST: dk gy, blk, sb pty - blk, sl frm - mod hd, arg-sily tex, tr cal and fos frags, tr bent, g chk flor, g od, fast bri blshwh string, some flor, thk bri yel-wh ring, thk sin | 100% CHK: crm, lt-med gry, occ dk brn, mot, sb blk, mod sft-sl frm, rthy, v calc, g chk flor, g od, fast bri blshwh string, some flor, thk bri yel-wh ring, thk sin | 100% CHK: crm, lt-med gry, occ dk brn, mot, sb blk, mod sft-sl frm, rthy, v calc, g chk flor, g od, fast bri blshwh string, some flor, thk bri yel-wh ring, thk sin | 95% CHK: lt-med gry, occ dk brn a mot, sb blk, mod sft-sl frm, rthy, v MRLST: dk gy, blk, sb pty - blk, s mod hd, arg-sily tex, tr cal and fos bent, g chk flor, g od, fast bri blshw some flor, thk bri yel-wh ring, thk sin |
| TVD (ft) | | | | | | |





| | | | | | | |
|--|--|--|---|---|--|-------|
| MD: 7,076' Inclination: 91.36 ° Azimuth: 175.92 ° TVD: 6,163.84' VS: 741.13' | | 95% CHK: lt-med gry, occ dk brn and crm, mot, sb blk, mod sft-sl frm, rthy, v calc 5% MRLST: dk gy, blk, sb pty - blk, sl frm - mod hd, arg-sily tex, tr bent, g chk flr, g od, cnt contaminants, v fast bri bishwn stmg, some flr, thk bri yel-wh ring, thk sin | 95% CHK: lt-med gry, occ dk brn and crm, mot, sb blk, mod sft-sl frm, rthy, v calc 5% MRLST: dk gy, blk, sb pty - blk, sl frm - mod hd, arg-sily tex, g chk flr, g od, cnt contaminants, fast bri bishwn stmg, some flr, thk bri yel-wh ring, thk sin | 95% CHK: lt-med gry, occ dk brn and crm, mot, sb blk, mod sft-sl frm, rthy, v calc 5% MRLST: dk gy, blk, sb pty - blk, sl frm - mod hd, arg-sily tex, g chk flr, g od, v fast bri bishwn stmg, some flr, thk bri yel-wh ring, thk sin | 95% CHK: lt-med gry, occ dk brn and crm, mot, sb blk, mod sft-sl frm, rthy, v calc 5% MRLST: dk gy, blk, sb pty - blk, sl frm - mod hd, arg-sily tex, g chk flr, g od, v fast stmg bri whi bl, even mod thk bri whn yel, thk yel-brn | 95% C |
| MD: 7,171' Inclination: 89.63 ° Azimuth: 175.77 ° TVD: 6,163.02' VS: 835.03' | | | | | | |
| TVD (ft) | | | | | | |





MD: 7,266'
Inclination: 89.94°
Azimuth: 175.36°
TVD: 6,163.37'
VS: 928.86'

HK: lt-med gry, occ dk brn and crm, mod blk, mod sft-sl frm, rthy, v calc 5%
100% CHK: lt-med gry, occ crm, mot, blk-sb blk, mod sft-sl frm, rthy, v calc, occ imbd cal, tr fos, v g chk flr & od, v fast stmg bri whi bl, even mod thk bri wh yel, thk yel-brn

MD: 7,361'
Inclination: 90.31°
Azimuth: 175.17°
TVD: 6,163.17'
VS: 1,022.62'

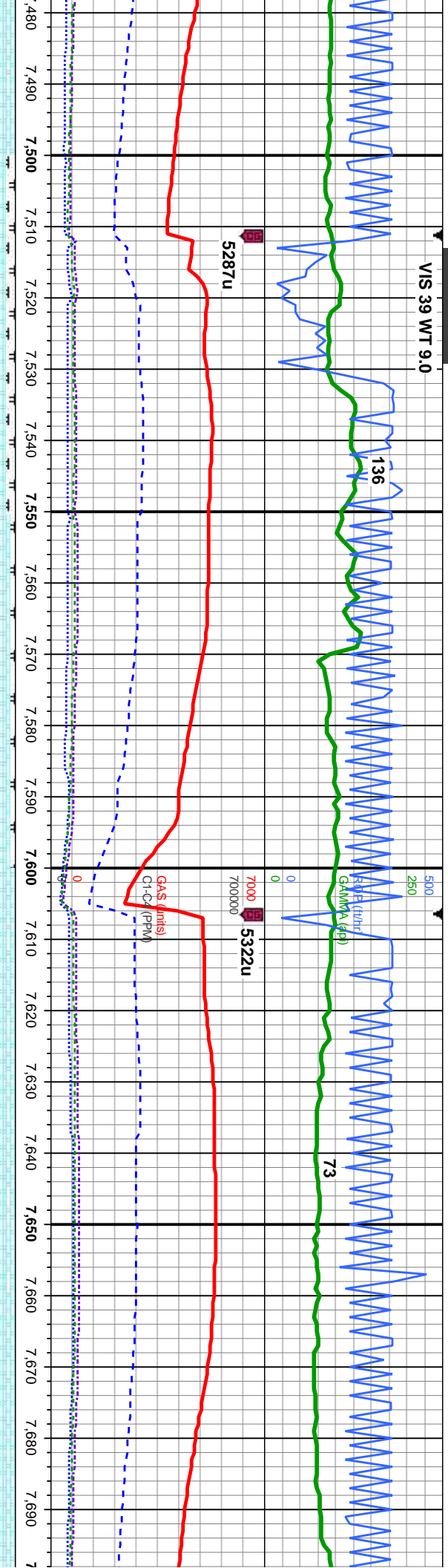
100% CHK: lt-med gry, occ crm, mot, blk-sb blk, mod sft-sl frm, rthy, v calc, occ imbd cal, tr fos, v g chk flr & od, v fast stmg bri whi bl, even mod thk bri wh yel, thk yel-brn

MD: 7,456'
Inclination: 90.5°
Azimuth: 176.7°
TVD: 6,162.5'
VS: 1,116.54'

100% CHK: lt-med gry, occ crm, mot, blk-sb blk, mod sft-sl frm, rthy, v calc, occ imbd cal, v g chk flr & od, v fast stmg bri whi bl, even mod thk bri wh yel, thk yel-brn



VIS 39 WT 9.0



MD: 7,551'
Inclination: 89.23 °
Azimuth: 176.89 °
TVD: 6,162.72'
VS: 1,210.67'

MD: 7,646'
Inclination: 90.93 °
Azimuth: 177.17 °
TVD: 6,162.59'
VS: 1,304.85'

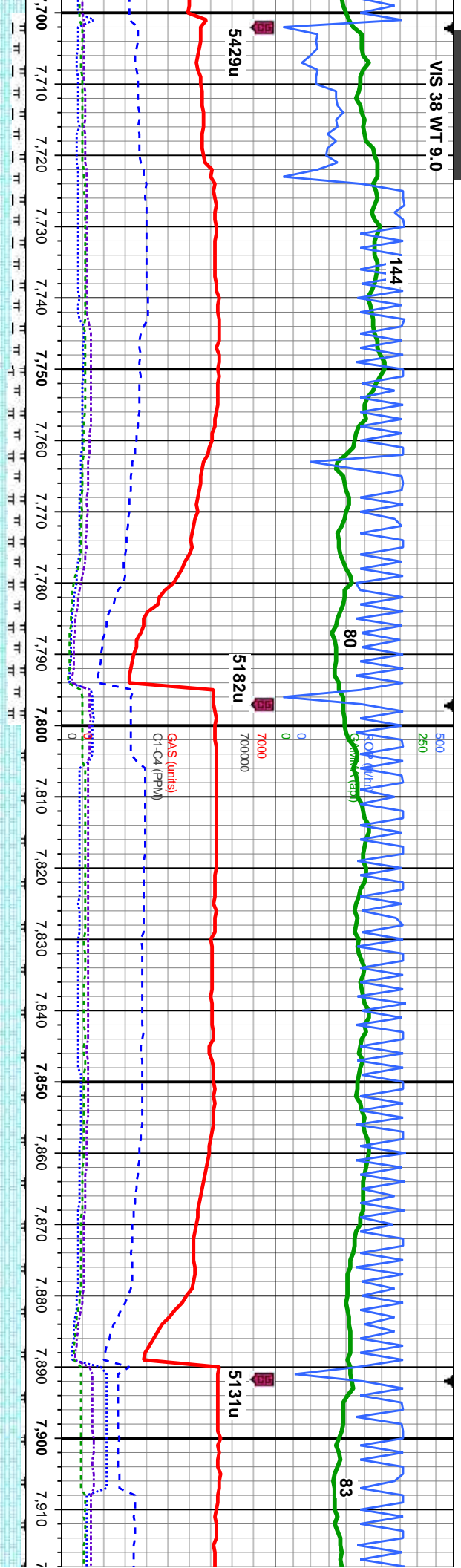
95% CHK: lt-med gry, occ dk brn, mot, blk-y-sb blk-y, mod sft-sl frm, rthy, v calc, 5% MRLST: dk gy, blk, sb pily - sub blk-y, sl frm - mod hd, arg-sily tex, tr lse & imbed cal, g chk flor, g od: v fast stimg bri whi bl, even mod thk mod yel amb, mod yel-brn

95% CHK: lt-med gry, occ dk brn, mot, blk-y-sb blk-y, mod sft-sl frm, rthy, v calc, 5% MRLST: dk gy, blk, sb pily - sub blk-y, sl frm - mod hd, arg-sily tex, tr lse & imbed cal, g chk flor, g od: v fast stimg bri whi bl, even mod thk mod yel amb, mod yel-brn

100% CHK: lt-med gry, occ crm, mot, blk-y-sb blk-y, mod sft-sl frm, rthy, v calc, occ imbd cal, v g chk flor & od: v fast stimg bri whi bl, even mod thk bri wh yel, thk yel-brn

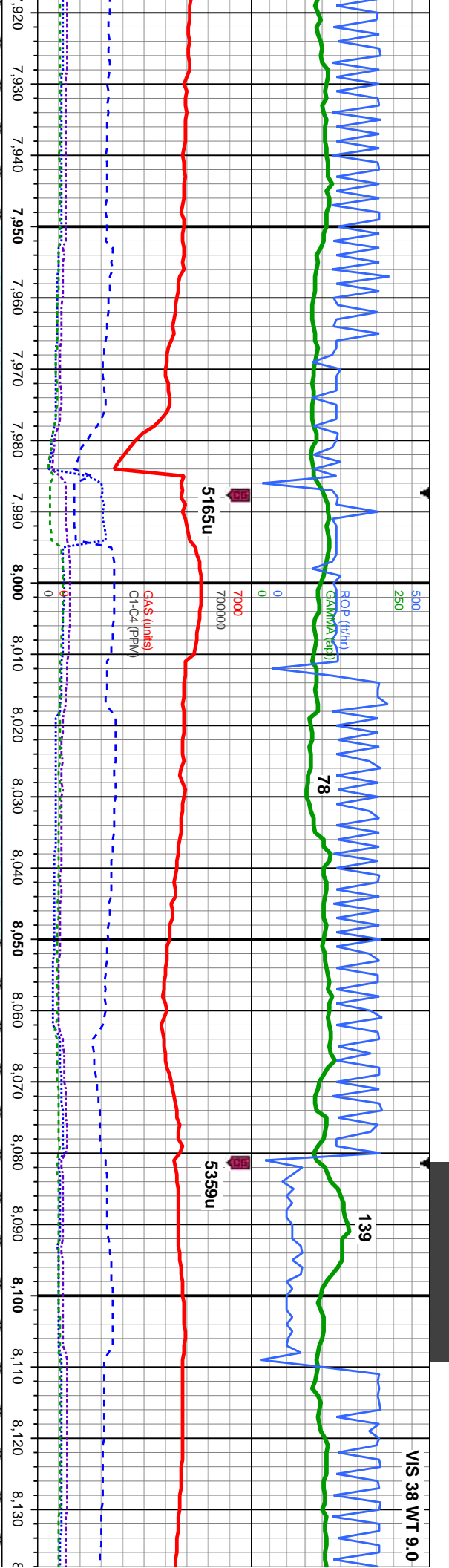
100% CHK: lt-med gry, occ crm, mot, blk-y-sb blk-y, mod sft-sl frm, rthy, v calc, occ imbd cal, v g chk flor & od: v fast stimg bri whi bl, even mod thk bri wh yel, thk yel-brn





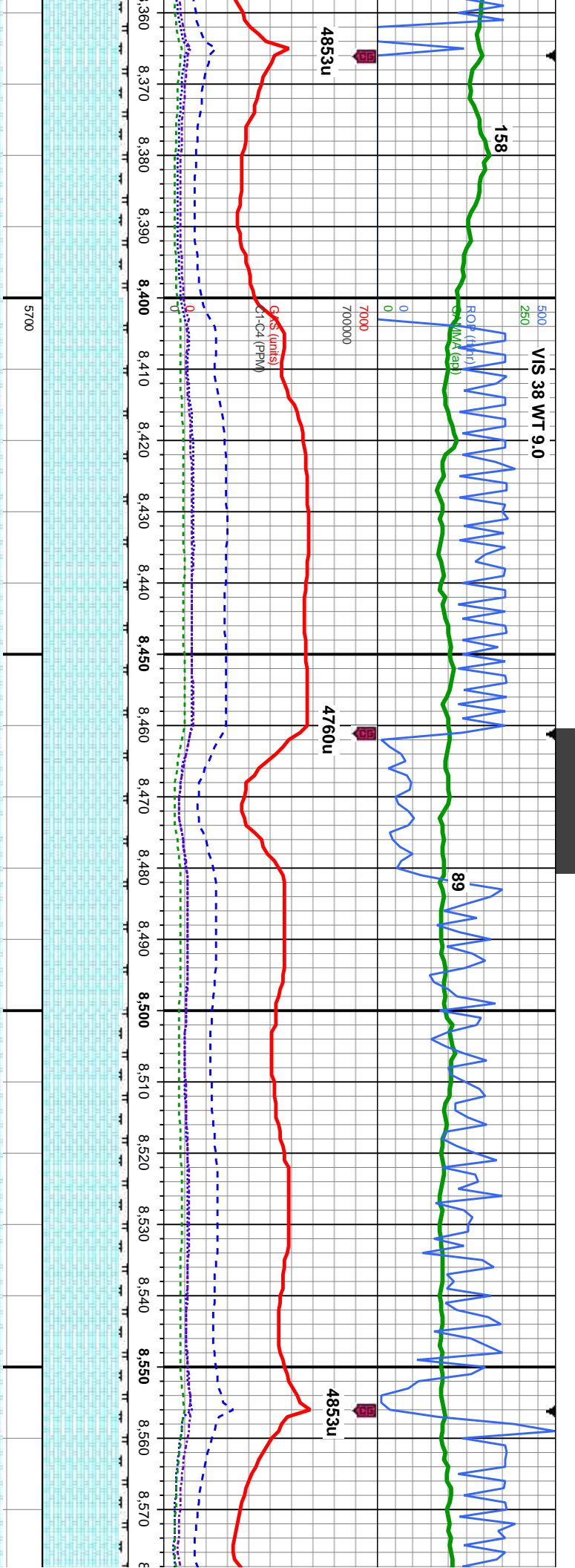
| | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|
| MD: 7,741' Inclination: 89.07 ° Azimuth: 175.72 ° TVD: 6,162.59' VS: 1,398.89' | | 85% CHK: lt-med gry, occ dk gry & brn, mot, sb blk/sb ply, mod sft-sl frm, rthy, v calc, 15% MRLST: dk gy, blk, sb ply - sub blk/s, sl frm - mod hd, arg-sily tex, occ imbed cal, some chk flr, mod oc; v fast stmg bri whi bl, even mod thk bri wh yel, thk yel-brn | MD: 7,836' Inclination: 89.75 ° Azimuth: 176.67 ° TVD: 6,163.56' VS: 1,492.88' | | 95% CHK: lt-med gry, occ dk gry & brn, mot, sb blk/sb ply, mod sft-sl frm, rthy, v calc, 15% MRLST: dk gy, blk, sb ply - sub blk/s, sl frm - mod hd, arg-sily tex, occ imbed cal, some chk flr, mod oc; v fast stmg bri whi bl, even mod thk bri wh yel, thk yel-brn | MD: 7,836' Inclination: 89.75 ° Azimuth: 176.67 ° TVD: 6,163.56' VS: 1,492.88' | | 95% CHK: lt-med gry, occ dk gry & brn, mot, sb blk/sb ply, mod sft-sl frm, rthy, v calc, 15% MRLST: dk gy, blk, sb ply - sub blk/s, sl frm - mod hd, arg-sily tex, occ imbed cal, some chk flr, mod oc; v fast stmg bri whi bl, even mod thk bri wh yel, thk yel-brn | MD: 7,836' Inclination: 89.75 ° Azimuth: 176.67 ° TVD: 6,163.56' VS: 1,492.88' | | 95% CHK: lt-med gry, occ dk gry & brn, mot, sb blk/sb ply, mod sft-sl frm, rthy, v calc, 15% MRLST: dk gy, blk, sb ply - sub blk/s, sl frm - mod hd, arg-sily tex, occ imbed cal, some chk flr, mod oc; v fast stmg bri whi bl, even mod thk bri wh yel, thk yel-brn |
|--|--|--|--|--|--|--|--|--|--|--|--|





| | | | | |
|--|---|---|---|---|
| d gry, occ dk gry & brn, mot, mod sft-sl frm, rthy, v calc, blk, sb ply - sub blk, sl g-sily tex, occ imbed cal, v fast stng bri whi bri wh yel, thk yel-brn | 100% CHK: lt-med gry, wht-crm, mot, sb blk-sb ply, mod sft-sl frm, rthy, v calc, tr imbed cal, tr fos, some bent, g chk flr, g od, v fast stng bri whi bl, even mod thk bri wh yel, thk yel-brn | 100% CHK: lt-med gry, wht-crm, mot, sb blk-sb ply, mod sft-sl frm, rthy, v calc, tr imbed cal, tr fos, some bent, g chk flr, g od, v fast stng bri whi bl, even mod thk bri wh yel, thk yel-brn | 95% CHK: lt-med gry, wht-crm, mot, sb blk-sb ply, mod sft-sl frm, rthy, v calc, 5% MRLST: dk gry, blk, sb ply - sub blk, sl frm - mod hd, arg-sily tex, occ imbed cal, some bent, g chk flr, g od, v fast stng bri whi bl, even mod thk bri wh yel, thk yel-brn | 95% CHK: lt-med gry, wht-crm, mot, sb blk-sb ply, mod sft-sl frm, rthy, v c MRLST: dk gry, blk, sb ply - sub blk mod hd, arg-sily tex, occ imbed cal bent, g chk flr, g od, v fast stng bri bent, g chk flr, g od, v fast stng bri even mod thk bri wh yel, thk yel-brn |
|--|---|---|---|---|



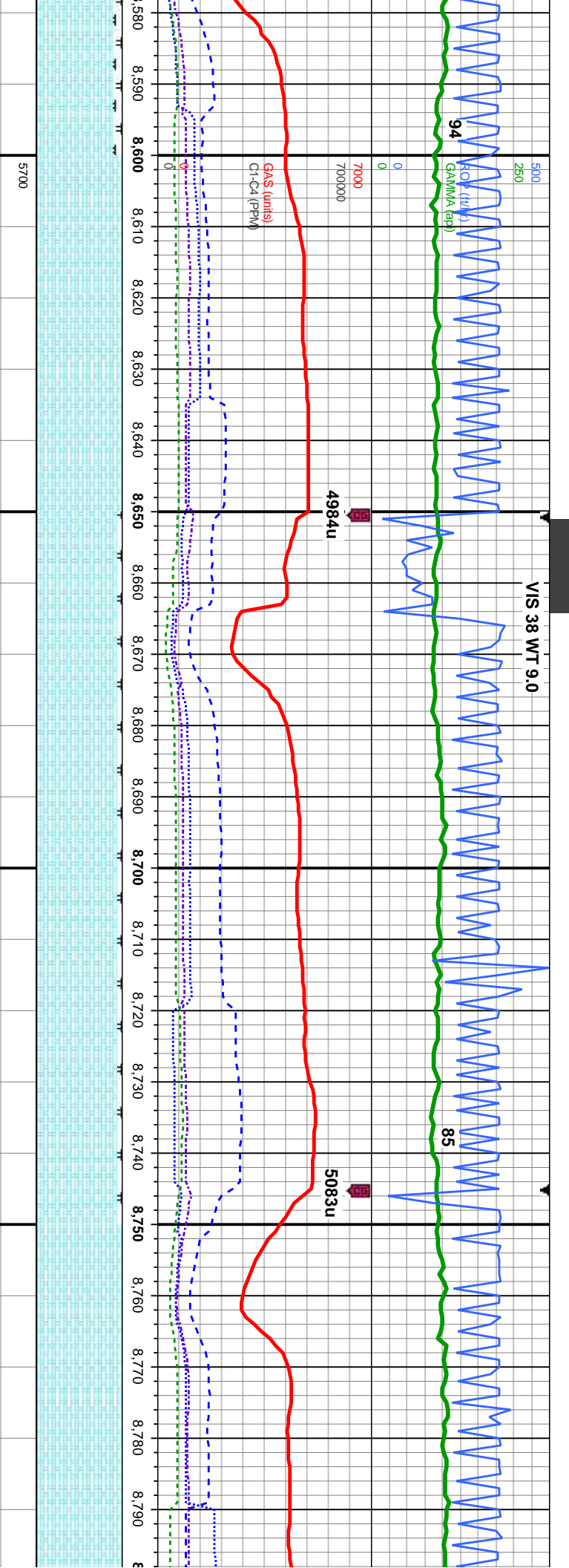


MD: 8,406'
Inclination: 89.01 °
Azimuth: 177.27 °
TVD: 6,162.37'
VS: 2,057.51'

MD: 8,501'
Inclination: 89.1 °
Azimuth: 176.17 °
TVD: 6,163.94'
VS: 2,151.61'

| | | | | |
|--|---|--|---|---|
| HK: lt-med gry, wht-crm, mot, sb ply, mod sft-sl frm, rthy, v calc, 10% dk gy, blk, sb ply - sub blk, sl frm - arg-sily tex, occ imbed cal, tr fos, tr chk flor, g od; v fast stmg bri whi bl, mod thk bri wh yel, thk yel-brn | 95% CHK: lt-med gry, mot, sb blk-sb ply, mod sft-sl frm, rthy, v calc, 5% MRLST: dk gy, blk, sb ply - sub blk, sl frm - mod hd, arg-sily tex, occ imbed & lse cal, tr pyr, tr fos, some bent, g chk flor, g od; mod stmg bri whi bl, even mod thk bri wh yel, thk yel-brn | 95% CHK: lt-med gry, wht-crm, mot, sb blk-sb ply, mod sft-sl frm, rthy, v calc, 5% MRLST: dk gy, blk, sb ply - sub blk, sl frm - mod hd, arg-sily tex, occ imbed, tr fos, tr bent, g chk flor, g od; mod stmg bri whi bl, even mod thk bri wh yel, thk yel-brn | 90% CHK: lt-med gry, wht-crm, occ dk brn, mot, sb blk-sb ply, mod sft-sl frm, rthy, v calc, 10% MRLST: dk gy, blk, sb ply - sub blk, sl frm - mod hd, arg-sily tex, occ imbed, tr fos, tr bent, g chk flor, g od; mod stmg bri whi bl, even mod thk bri wh yel, thk yel-brn | 90% CHK: lt-med gry, wht-crm, occ dk brn, mot, sb blk-sb ply, mod sft-sl frm, rthy, v calc, 10% MRLST: dk gy, blk, sb ply - sub blk, sl frm - mod hd, arg-sily tex, occ imbed, tr fos, tr bent, g chk flor, g od; mod stmg bri whi bl, even mod thk bri wh yel, thk yel-brn |
|--|---|--|---|---|





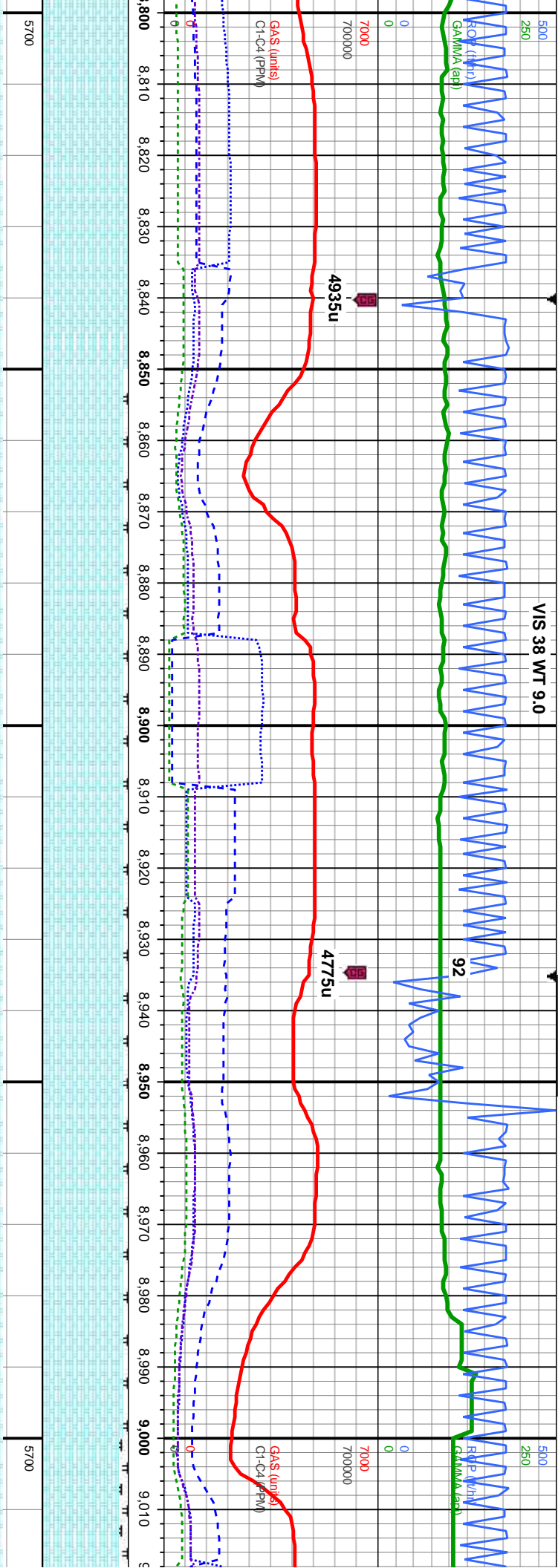
MD: 8,595'
Inclination: 90.65 °
Azimuth: 176.7°
TVD: 6,164.14'
VS: 2,244.67'

| | | | | |
|--|---|---|---|--|
| t-crm, mot, sb | 100% CHK: lt-med gry, wht-crm, mot, sb | 95% CHK: lt-med gry, occ dk gry, mot, sb | 95% CHK: lt-med gry, occ dk gry, mot, sb | 100% CHK: lt-med gry, wht-crm, mot, sb |
| l, rthy, v calc, 10% | bkly-sb pty, mod sft-si frm, rthy, v calc, tr | bkly-sb pty, mod sft-si frm, rthy, v calc, 5% MRLST: dk gy, blk, sb pty - sub bkly, si frm - mod hd, arg-sily tex, occ imbed & lse cal, tr bent, v g chk flor, g od; fast stmg bri whi bl, even mod thk bri | bkly-sb pty, mod sft-si frm, rthy, v calc, 5% MRLST: dk gy, blk, sb pty - sub bkly, si frm - mod hd, arg-sily tex, occ imbed & lse cal, tr bent, v g chk flor, g od; v fast stmg bri whi bl, even mod thk bri wh yel, thk yel-brn | bkly-sb pty, mod sft-si frm, rthy, v calc, tr imbed cal, tr fos, some bent, v g chk flor, g od; v fast stmg bri whi bl, even mod thk bri wh yel, thk yel-brn |
| - sub bkly, si frm - imbed, tr fos, tr | | | | |
| stmg bri whi bl, thk yel-brn | | | | |

MD: 8,690'
Inclination: 90.09 °
Azimuth: 177.36°
TVD: 6,163.53'
VS: 2,338.85'

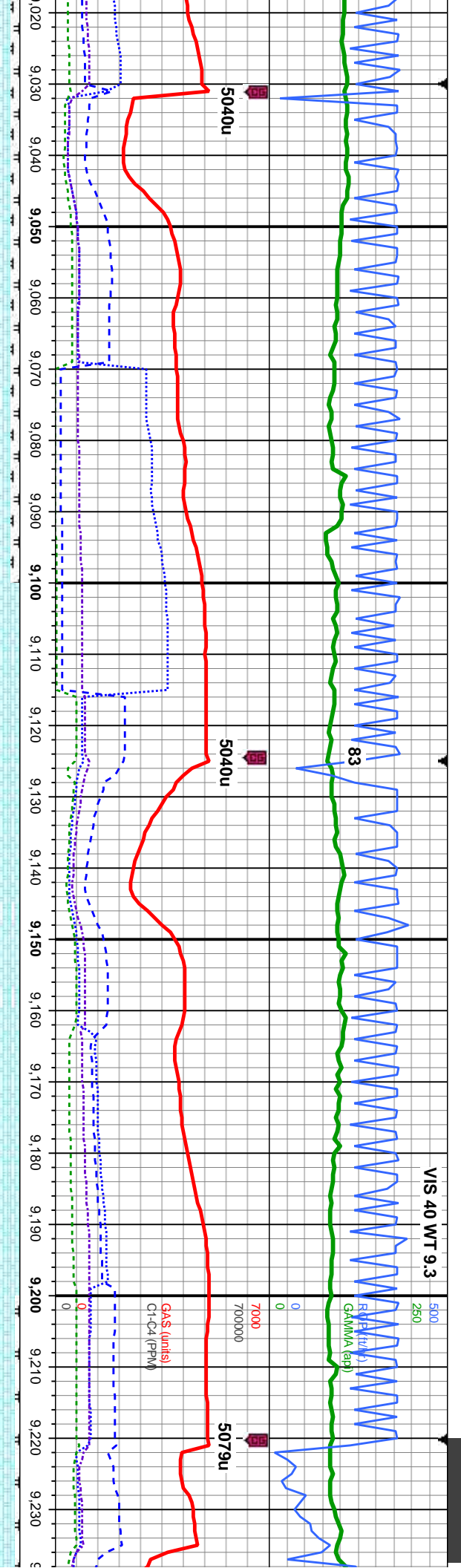
MD: 8,785'
Inclination: 90.28 °
Azimuth: 177.41°
TVD: 6,163.22'
VS: 2,433.11'





| | |
|--|--|
| MD: 8,880' Inclination: 90.62 ° Azimuth: 177.24 ° TVD: 6,162.5' VS: 2,527.34' | |
| 95% CHK: lt-med gry, occ dk gry, mot, sb biky-sb pily, mod sft-sl frm, rthy, v calc, 5% MRLST: dk gy, blk, sb pily - sub biky, sl frm - mod hd, arg-sily tex, occ imbed & lse cal, tr bent, v g chk flor, g od; v fast sting bri whi bl, even mod thk bri wh yel, v thk yel-brn | 90% CHK: lt-med gry, wht-crm, mot, sb biky-sb pily, mod sft-sl frm, rthy, v calc, tr imbed cal, tr fos, some bent, v g chk flor, g od; v fast sting bri whi bl, even mod thk bri wh yel, v thk yel-brn |
| TVD (ft) | TVD (ft) |

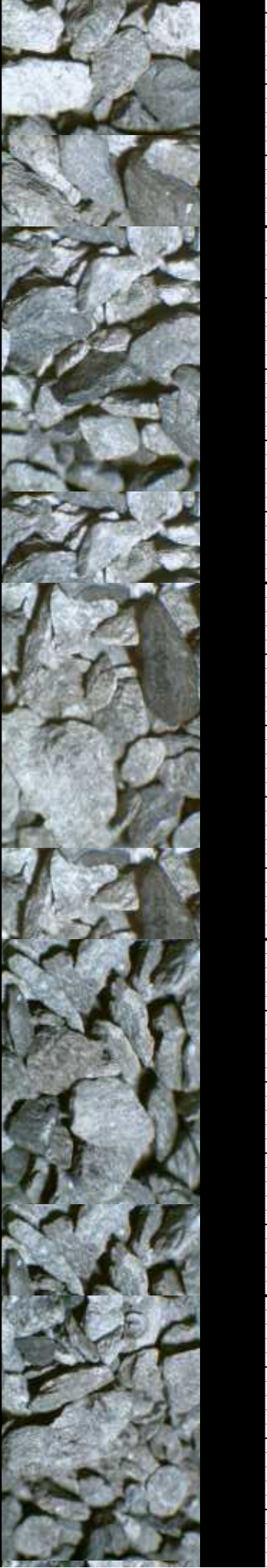


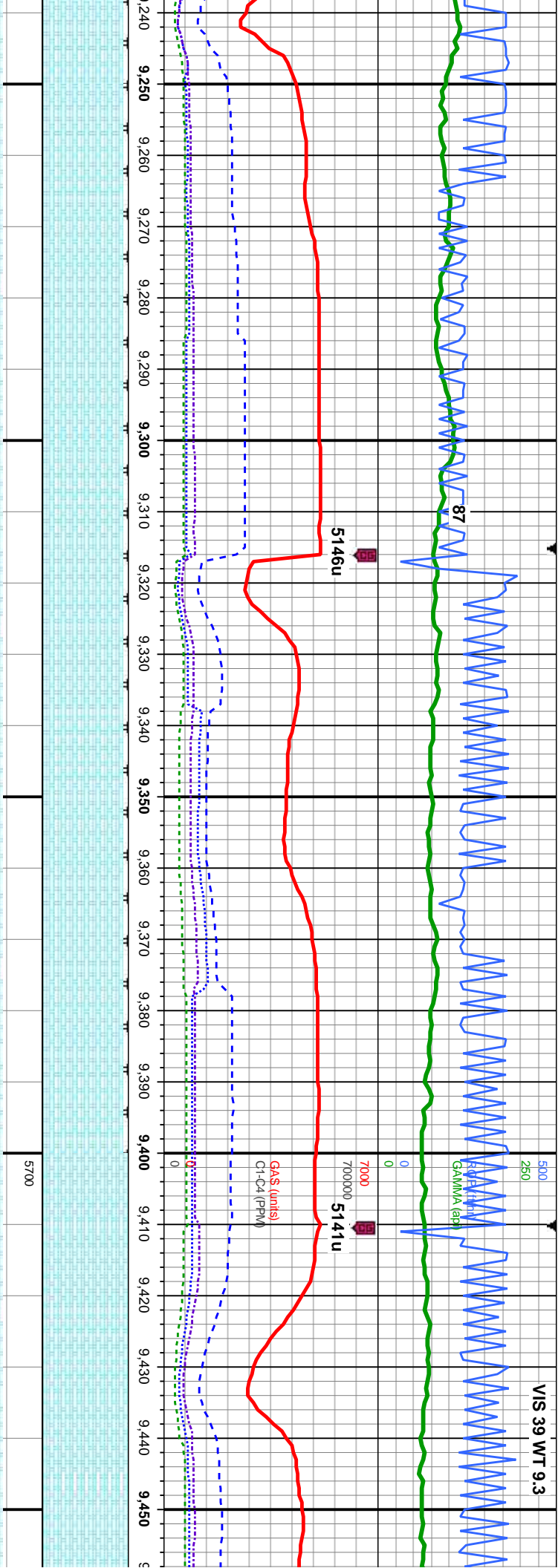


MD: 9,069'
Inclination: 89.19 °
Azimuth: 177.43 °
TVD: 6,164.68'
VS: 2,714.8'

MD: 9,164'
Inclination: 90.22 °
Azimuth: 178.19 °
TVD: 6,165.17'
VS: 2,809.14'

| | | | | |
|--|---|---|---|--|
| d gry, occ dk gry, mot, sb d sft-si frm, rthy, v calc, 10% blk, sb ply - sub blk, si frm - tex, tr lse cal, tr bent, g chk sting bri whi bl, even mod k yel-brn | 90% CHK: lt-med gry, occ dk gry, mot, sb blk-sb ply, mod sft-si frm, rthy, v calc, 10% MRLST: dk gy, blk, sb ply - sub blk, si frm - mod hd, arg-sily tex, tr cal frags, tr bent, g chk flr, g od; v fast sting bri whi bl, even mod thk bri wh yel, thk yel-brn | 100% CHK: lt-med gry, occ dk gry, mot, sb blk-sb ply, mod sft-si frm, rthy, v calc, tr cal frags and imbd cal, v g chk flr, g od; v fast sting bri whi bl, even mod thk bri wh yel, mod yel-brn | 100% CHK: lt-med gry, occ dk gry, mot, sb blk-sb ply, mod sft-si frm, rthy, v calc, tr cal frags and imbd cal, v g chk flr, g od; v fast sting bri whi bl, even mod thk bri wh yel, mod yel-brn | 95% CHK: lt-med gry, occ dk gry, n blk-sb ply, mod sft-si frm, rthy, v c MRLST: dk gy, blk, sb ply - sub blk mod hd, arg-sily tex, tr imbd & loos bent, g chk flr, g od; ; v fast sting t even mod thk bri yel-amb, thk yel-b |
|--|---|---|---|--|





MD: 9,260'
Inclination: 88.89 °
Azimuth: 178.58 °
TVD: 6,165.91'
VS: 2,904.58'

95% CHK: lt-med gry, occ dk gry, mot, sb
biky-sb pily, mod sft-sl frm, rthy, v calc, 5%
MRLST: dk gy, blk, sb pily - sub biky, sl frm -
mod hd, arg-sily tex, tr imbd & loose cal, tr
bent, g chk flor, g od; v fast stmg bri whi bl,
even mod thk bri yel-amb, thk yel-brn

95% CHK: lt-med gry, occ dk gry, mot, sb
biky-sb pily, mod sft-sl frm, rthy, v calc, 5%
MRLST: dk gy, blk, sb pily - sub biky, sl frm -
mod hd, arg-sily tex, tr imbd & loose cal, g
chk flor, g od; v fast stmg bri whi bl, even v
thk bri wh yel, thk yel-brn

MD: 9,355'
Inclination: 89.69 °
Azimuth: 177.52 °
TVD: 6,167.09'
VS: 2,998.96'

95% CHK: lt-med gry, occ dk gry, mot, sb
biky-sb pily, mod sft-sl frm, rthy, v calc, 5%
MRLST: dk gy, blk, sb pily - sub biky, sl frm -
mod hd, arg-sily tex, tr imbd & loose cal, g
chk flor, g od; v fast stmg bri whi bl, even v
thk bri wh yel, thk yel-brn

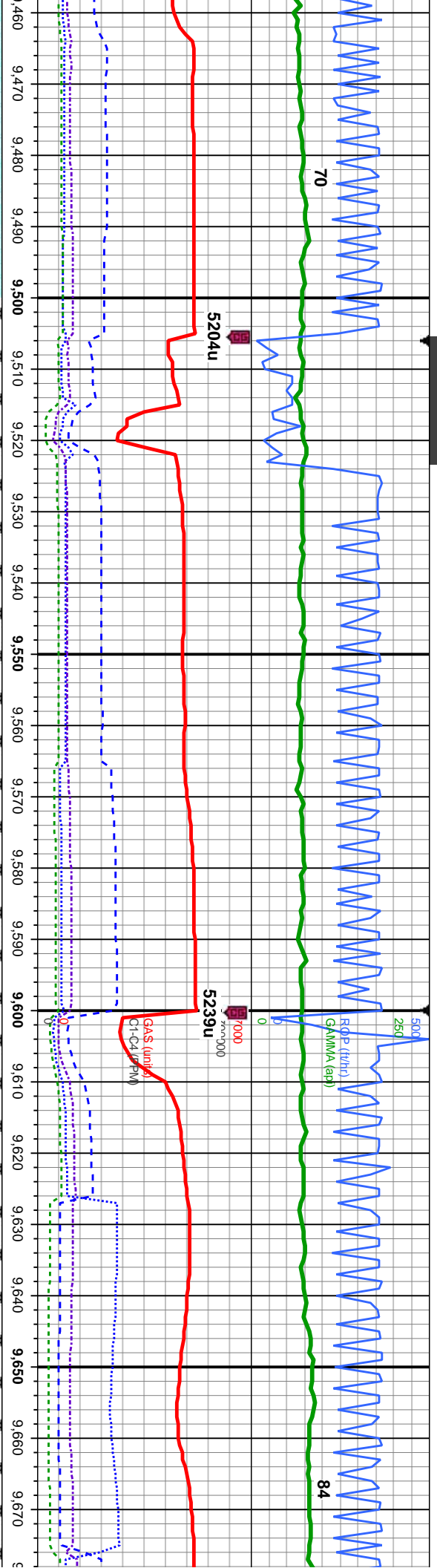
TVD (ft)

MD: 9,450'
Inclination: 90.0
Azimuth: 178.5
TVD: 6,166.76
VS: 3,093.34'

100% CHK: lt-med gry, occ dk gry, mot, sb
biky-sb pily, mod sft-sl frm, rthy, v calc, tr
loose cal, g chk flor, g od; v fast stmg bri
whi bl, even v thk bri yel-amb, thk yel-brn

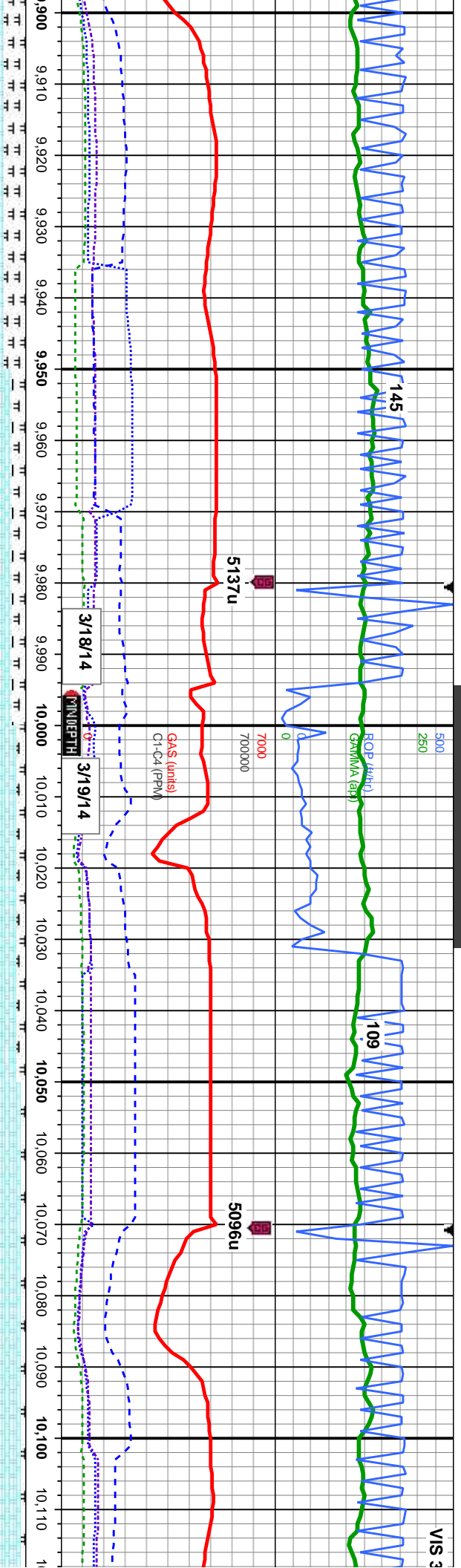
100%
biky-s
loose
whi bl





| | | | | | |
|--|--|---|--|---|--|
| 71° 77° | | MD: 9,545' Inclination: 90.22° Azimuth: 176.83° TVD: 6,165.99' VS: 3,187.66' | | MD: 9,640' Inclination: 90.49° Azimuth: 176.55° TVD: 6,165.4' VS: 3,281.76' | |
| CHK: lt-med gry, occ dk gry, mot, sb b ply, mod sft-sl frm, rthy, v calc, tr chk flr, g od, v fast stmg bri even v thk bri yel-amb, thk yel-brn | | 95% CHK: lt-med gry, occ dk gry, mot, sb biky-sb ply, mod sft-sl frm, rthy, v calc, 5% MRLST: dk gy, blk, sb ply - sub biky, sl frm - mod hd, arg-sily tex, tr imbd & loose cal, g chk flr, g od, v fast stmg bri whi bl, even v thk bri wh yel, thk yel-brn | | 95% CHK: lt-med gry, occ dk gry, mot, sb biky-sb ply, mod sft-sl frm, rthy, v calc, 5% MRLST: dk gy, blk, sb ply - sub biky, sl frm - mod hd, arg-sily tex, tr imbd & loose cal, g chk flr, g od, v fast stmg bri whi bl, even v thk bri wh yel, thk yel-brn | |
| | | TVD (ft) | | | |



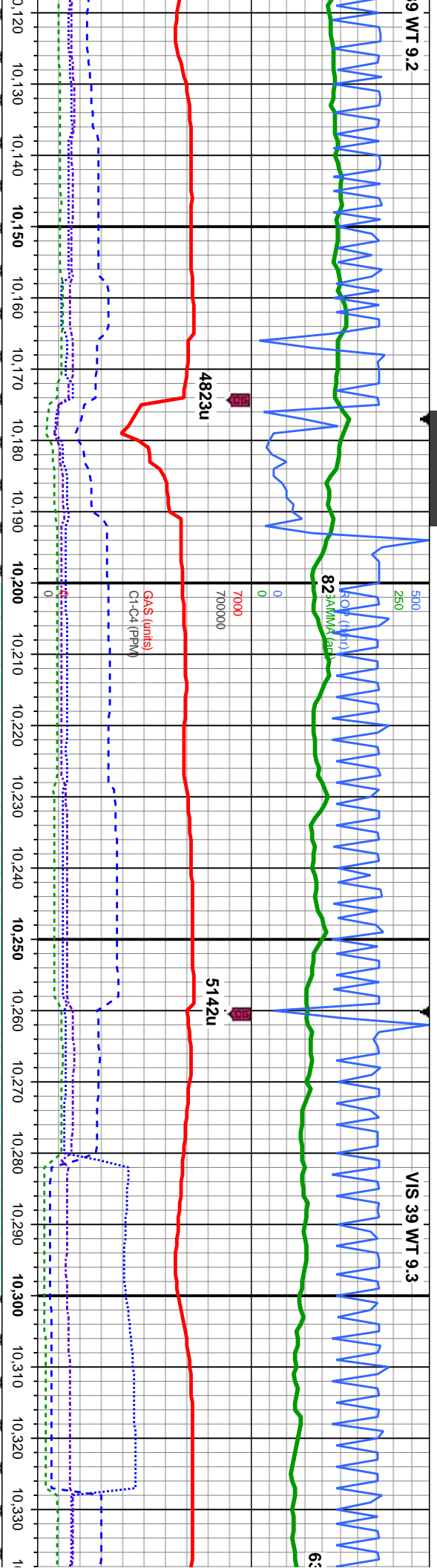


| | | | | | | |
|--|--|--|---|--|--|--|
| MD: 9,925' Inclination: 90.06 ° Azimuth: 173.38 ° TVD: 6,163.17' VS: 3,563.48' | | 75% CHK: med-dk gry, occ lt gry & crm, mot, sb blk-y-sb ply, mod sft-sl frm, rthy, v calc, 25% MRLST: dk gy, blk, sb ply - sub blk-y, sl frm - mod hd, arg-sily tex, tr imbd & loose cal, fr od, mod-fast bishwh stmg, no flr, med thk bri gn-wh ring, mod sin | 85% CHK: lt-med gry, occ dk gry, mot, sb blk-y-sb ply, mod sft-sl frm, rthy, v calc, 15% MRLST: dk gy, blk, sb ply - sub blk-y, sl frm - mod hd, arg-sily tex, tr imbd & loose cal, mod chk flr, fr od, mod-fast bishwh stmg, no flr, med thk bri gn-wh ring, mod sin | 90% CHK: lt-med gry, occ dk gry, mot, sb blk-y-sb ply, mod sft-sl frm, rthy, v calc, 10% MRLST: dk gy, blk, sb ply - sub blk-y, sl frm - mod hd, arg-sily tex, tr imbd & loose cal, mod chk flr, fr od, fast bri bishwh stmg, some flr, thk bri yel-wh ring, thk sin | 95% CHK: lt-med gry, occ dk gry, mot, sb blk-y-sb ply, mod sft-sl frm, rthy, v calc, 5% MRLST: dk gy, blk, sb ply - sub blk-y, sl frm - mod hd, arg-sily tex, g chk flr, fr od, fast bri bishwh stmg, some flr, thk bri yel-wh ring, thk sin | 95% CHK: lt-med gry, occ dk gry, mot, sb blk-y-sb ply, mod sft-sl frm, rthy, v calc, 5% MRLST: dk gy, blk, sb ply - sub blk-y, sl frm - mod hd, arg-sily tex, g chk flr, fr od, fast bri bishwh stmg, some flr, thk bri yel-wh ring, thk sin |
|--|--|--|---|--|--|--|



9 WT 9.2

VIS 39 WT 9.3



5700

5' : 90.52° 76.76° 3.5' 0.06'

MD: 10,210' Inclination: 88.67° Azimuth: 176.64° TVD: 6,164.17' VS: 3,845.16'

MD: 10,305' Inclination: 88.92° Azimuth: 176.74° TVD: 6,166.17' VS: 3,939.25'

d gry, occ dk gry, mot, sb
d sft-sl frm, rthy, v calc, 5%
blk, sb pty - sub blk, sl frm -
tex, g chk flr, fr od, fast bri
flr, thk bri yel-wh ring,

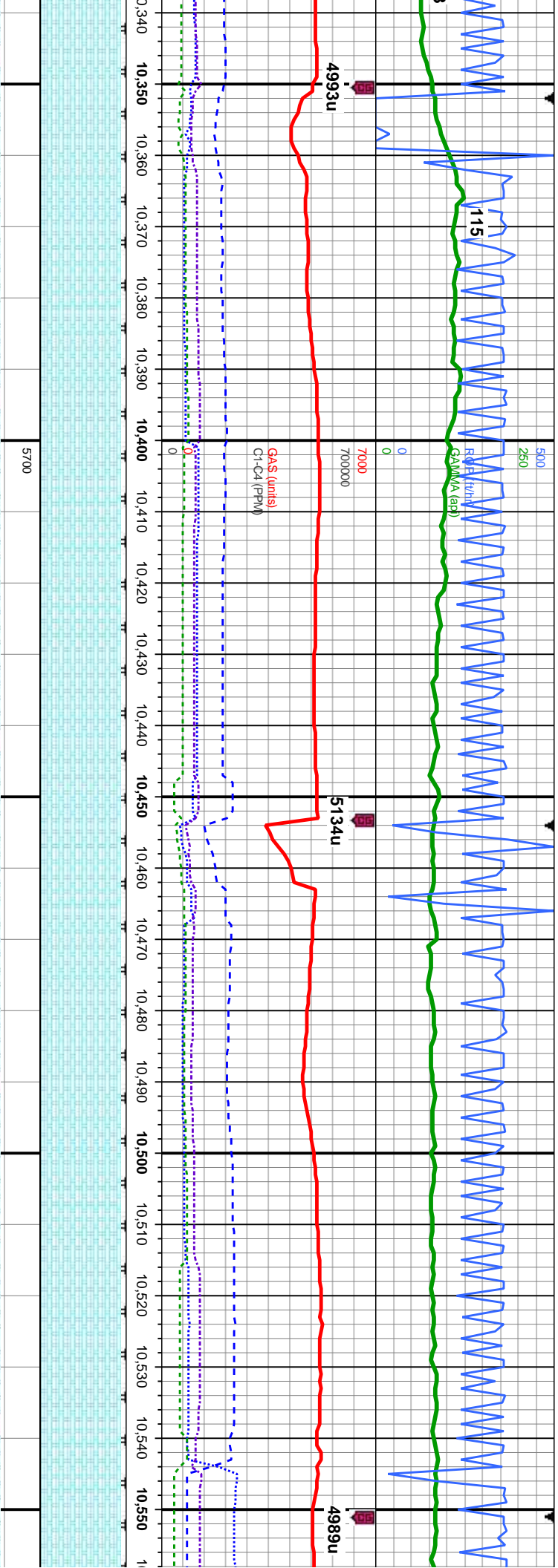
95% CHK: lt-med gry, occ dk gry, mot, sb
blk-sb pty, mod sft-sl frm, rthy, v calc, 5%
MRLST: dk gy, blk, sb pty - sub blk, sl frm -
mod hd, arg-sily tex, g chk flr, fr od, fast bri
bshwh stmg, some flr, thk bri yel-wh ring,
thk stn

100% CHK: lt-med gry, occ dk gry, mot, sb
blk-sb pty, mod sft-sl frm, rthy, v calc, g chk
flr, g od, fast bri bshwh stmg, some flr,
thk mod yel amb ring, thk stn

100% CHK: lt-med gry, occ dk gry, mot, sb
blk-sb pty, mod sft-sl frm, rthy, v calc, g chk
flr, g od, fast bri bshwh stmg, some flr,
thk bri yel-wh ring, thk stn

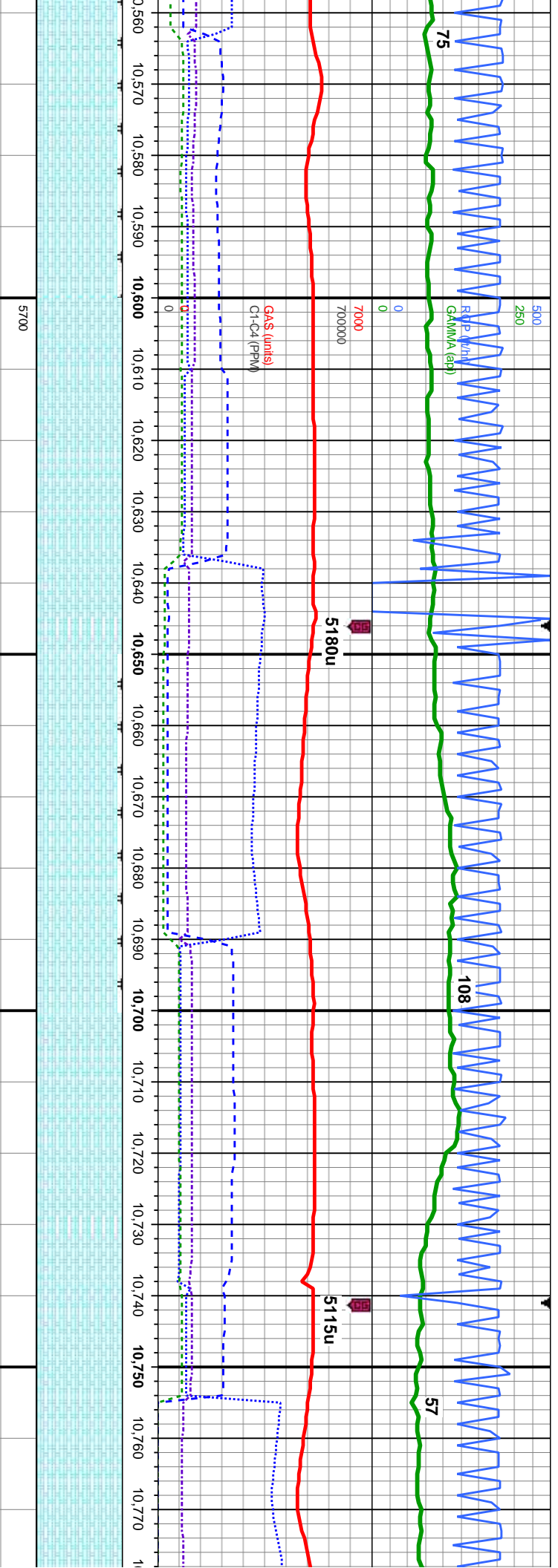
95% CHK: lt-med gry, occ dk gry, r
blk-sb pty, mod sft-sl frm, rthy, v
MRLST: dk gy, blk, sb pty - sub blk
mod hd, arg-sily tex, occ loose & ir
g chk flr, fr od, v fast bri bshwh st
flr, thk bri yel-wh ring, thk stn





| | | | | | |
|---|--|---|--|--|--|
| MD: 10,400' Inclination: 89.42 ° Azimuth: 176.67 ° TVD: 6,167.55' VS: 4,033.35' | | 95% CHK: lt-med gry, occ dk gry, mot, sb biky-sb ply, mod sft-sl frm, rthy, v calc, 5% MRLST: dk gy, blk, sb ply - sub biky, sl frm - mod hd, arg-sily tex, occ loose & imbd cal, g chk flr, fr od, v fast bri blshwh stmg, some flr, thk bri yel-wh ring, thk stn | 95% CHK: lt-med gry, occ dk gry, mot, sb biky-sb ply, mod sft-sl frm, rthy, v calc, 5% MRLST: dk gy, blk, sb ply - sub biky, sl frm - mod hd, arg-sily tex, occ loose & imbd cal, v g chk flr, g od, fast bri blshwh stmg, some flr, thk bri yel-wh ring, thk stn | 95% CHK: lt-med gry, occ dk gry, mot, sb biky-sb ply, mod sft-sl frm, rthy, v calc, 5% MRLST: dk gy, blk, sb ply - sub biky, sl frm - mod hd, arg-sily tex, occ loose & imbd cal, v g chk flr, g od, v fast bri blshwh stmg, some flr, thk bri yel-wh ring, thk stn | 95% C biky-sl MRLS mod h chk flo flr, thi |
|---|--|---|--|--|--|





MD: 10,590'
Inclination: 90.28 °
Azimuth: 177.32 °
TVD: 6,167.99'
VS: 4,221.62'

D (ft)

| | | | | |
|--|---|--|---|---|
| HK: lt-med gry, wht-crm, mot, sb ply, mod sft-sl frm, rthy, v calc, 5% dk gy, blk, sb ply - sub blk, sl frm - d, arg-sily tex, tr loose & imbd cal, v g od, v fast bri blshwh stmg, some k bri yel-wh ring, thk sin | 100% CHK: lt-med gry, wht-crm, mot, sb blk-sb ply, mod sft-sl frm, rthy, v calc, tr sec cal, v g chk flor, g od, v fast bri blshwh stmg, some flor, thk bri yel-wh ring, thk sin | 95% CHK: lt-med gry, wht-crm, mot, sb blk-sb ply, mod sft-sl frm, rthy, v calc, 5% MRLST: dk gy, blk, sb ply - sub blk, sl frm - mod hd, arg-sily tex, tr loose & imbd cal, v g chk flor, g od, fast bri blshwh stmg, some flor, thk bri yel-wh ring, thk sin | 100% CHK: lt-med gry, wht-crm, mot, sb blk-sb ply, mod sft-sl frm, rthy, v calc, tr sec cal, v g chk flor, g od, fast bri blshwh stmg, some flor, thk bri yel-wh ring, thk sin | 100% CHK: lt-med gry, wht-crm, mot, sb blk-sb ply, mod sft-sl frm, rthy, v calc, tr sec cal, v g chk flor, g od, fast bri blshwh stmg, some flor, thk bri yel-wh ring, thk sin |
|--|---|--|---|---|

MD: 10,685'
Inclination: 90.8 °
Azimuth: 177.41 °
TVD: 6,167.1'
VS: 4,315.87'

