

Scale: 5" / 100'
Measured Depth Log

Location NWSV Sec 34-T6N-R62W

Country	USA
Rig Number	NABORS M22

Region	DJ Basin	Field	Wattenberg
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Surface Coordinates NWSW Sec 34-T6N-R62W
2330' FSL, 370' FWL

Bottom Hole Coordinates **Projected:**
NESE Sec 35-T6N-R62W
2156' FSL, 500' FEL

5836' Logged Interval

Type of Drilling Fluid LSND

Company Bill Barrett Corp.

Geologist

Name Scott Hampton


Company Bill Barrett Corp.

Address 1099 18th Street, Suite 2300
Denver, CO 80202

Charles Trodick Senior Wellsite Geologist

Zone Color Coding

Oil
Note
Error



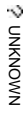





















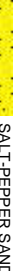





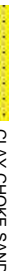





Condensate

Core

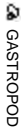

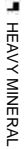




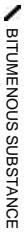
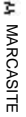


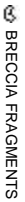
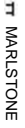
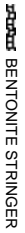



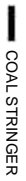


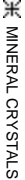

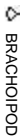




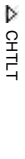


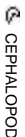
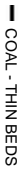










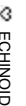


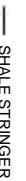

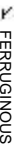






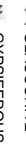
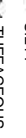
Water

Gas	Pressure	Seal
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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 SANI	 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	 C CALCAREOUS	 M MICACEOUS	 COAL STRINGER
 BIOCLASTIC	 CARBONACEOUS FLAKES	 M MINERAL CRYSTALS	 DOLOMITE STRINGER
 BRACHIOPOD	 P PISOLITE	 N NODULES	 GYPSUM STRINGER
 BRYOZOA	 PLANT REMAINS	 P PHOSPHATE PELLETS	 LIMESTONE STRINGER
 CEPHALOPOD	 PLANT SPORES	 P PYRITE	 MARLSTONE (CALC) STRG
 CORAL	 SCAPHOPOD	 S SALT CAST	 MARLSTONE (DOL) STRG
 CRINOID	 STROMATOPOROID	 S SANDY	 SANDSTONE STRINGER
 ECHINOID	 FERRUGINOUS PELLET	 S SIDERITE	 SHALE STRINGER
 FISH	 F FERRUGINOUS	 S SILICEOUS	 SILTSTONE STRINGER
 FORAMINIFERA	 A ANHYDRITIC	 S SILTY	
 F FOSSIL	 A ARGILLACEOUS	 T TUFFACEOUS	

Fossils


Minerals

Stringer


Oil Show

 PINPOINT
 VUGGY

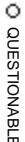
Engineering




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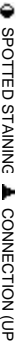
EVEN




QUESTIONABLE



BIT






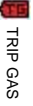

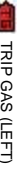
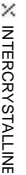

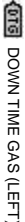

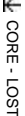

SPOTTED STAINING





CONNECTION (UP)

Engineering

Porosity

 CONNECTION (DOWN)	 CONNECTION GAS	 CONNECTION GAS (LEFT)	 TRIP GAS
 E EARTHY	 F FENESTRAL	 F FRACTURE	 TRIP GAS (LEFT)
 INTERCRYSTALLINE	 DOWN TIME GAS	 INTEROOLITIC	 DOWN TIME GAS (LEFT)
 MOLDIC	 CORE - LOST	 ORGANIC	 CORE - RECOVERED

ther 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 **MS** MUDSTONE

Rounding


 **MINDEPTH** MN DEPTH (DOWN) **A** ANGULAR **PS** PACKSTONE

 NORMAL FAULT **R** ROUNDED **WS** WACKESTONE

 OVERTURNED STRATA **B** SUBANG


 REVERSE FAULT **R** SUBRND

Sorting

 CASING **M** MODERATE

Textures

 SIDEWALL CORE (LEFT) **P** POOR

 SIDEWALL CORE (RIGHT) **BS** BOUNDSTONE **W** WELL

 SLIDE **C** CHALKY

 **CS** SURVEY **CS** CRYPTOXLN

Slide/Rotate

ROP
ROP
GAMMA

In/Out Mud Wt: 9.8+/9.8 Vis 45/45

104

ROP (ft/hr)
GAMMA (cp)

99

ROP (ft/hr)
GAMMA (cp)

100

Total Gas & Chromatograph

GAS
C1
C2
C3
C4

Columbine Logging 2-Manned
Geosteering Operational 8/27/2014
Bloodhound # 0052

439u
5000
C1 75.1%
C2 11.8%
C3 9.1%
C4 4.0% (units)
C1-C4 (PPM)

1161u

GAS (units)
C1-C4 (PPM)

TROUBLE SHOOTING GAS LINE

Depth Labels

% Lith

Well Bore
TVD

Oil Show

E
G
M
F
T
ST

SHY SLTST: lt - med gy, gy brn, s&p, mod frm,
brn, sb-ply - sb blk, rthy tex, vf occ f-med gr, w srt,
non calc, SLTY SH: lt - dk gy, sft - frm, sb ply - sb
blk, rthy tex, non calc, tr SHY SS

SHY SLTST: lt - med gy, gy brn, s&p, mod frm,
brn, sb-ply - sb blk, rthy tex, vf occ f-med gr, w srt,
non calc, SLTY SH: lt - dk gy, sft - frm, sb ply - sb
blk, rthy tex, non calc, tr SHY SS

SHY SLTST: lt - med gy, gy brn, s&p, mod frm,
brn, sb-ply - sb blk, rthy tex, vf occ f-med gr, w srt,
non calc, SLTY SH: lt - dk gy, sft - frm, sb ply - sb
blk, rthy tex, non calc, tr SHY SS

SHY SLTST: lt - med gy, gy brn, s&p, mod frm,
brn, sb-ply - sb blk, rthy tex, vf occ f-med gr, w srt,
non calc, SLTY SH: lt - dk gy, sft - frm, sb ply - sb
blk, rthy tex, non calc, tr SHY SS

MD: 5,867'
TVD: 5,846.4'
Inclination: 4.4°
Azimuth: 66.6°
VS: -362.73'

MD: 5,914'
TVD: 5,892.9'
Inclination: 11.8°
Azimuth: 65.6°
VS: -356.62'

MD: 5,961'
TVD: 5,938.34'
Inclination: 17.6°
Azimuth: 64.3°
VS: -345.71'

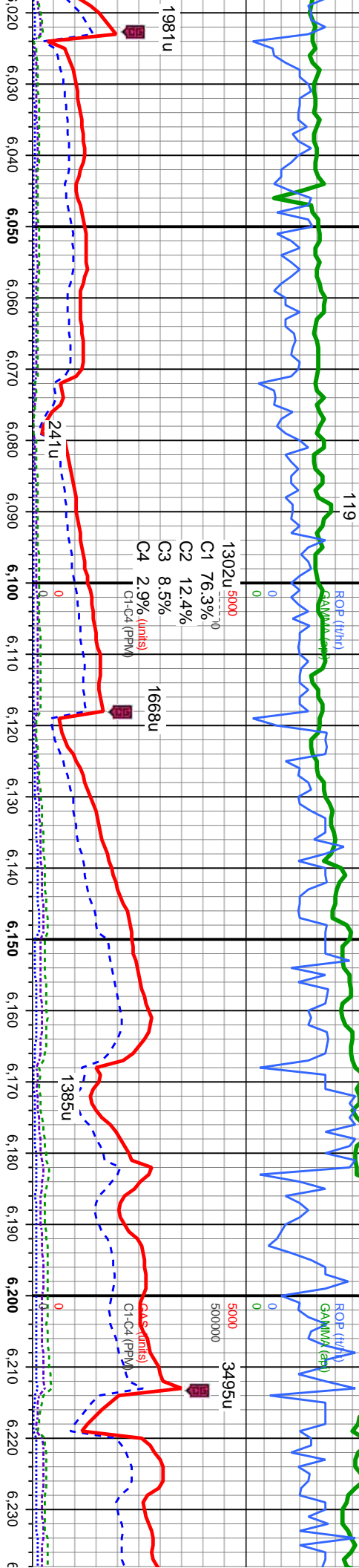
MD: 6,008'
TVD: 5,982.78'
Inclination: 20.4°
Azimuth: 71.1°
VS: -331.42'

Images

In/Out Mud Wt: 9.8/9.8+ Vis 38/40

In/Out Mud Wt: 9.8/9.8 Vis 34/38

In/Out Mud V



MD: 6,057'
TVD: 6,028.24'
Inclination: 23.4 °
Azimuth: 76.8 °
VS: -313.74'

MD: 6,104'
TVD: 6,070.57'
Inclination: 28.1 °
Azimuth: 83.5 °
VS: -293.56'

MD: 6,152'
TVD: 6,111.99'
Inclination: 32.6 °
Azimuth: 86.8 °
VS: -269.36'

MD: 6,199'
TVD: 6,151.13'
Inclination: 34.6 °
Azimuth: 86.9 °
VS: -243.37'

Logger Top Sharon Springs
6124' MD/ 6087.83' TVD

Logger Top Niobrara
6238' MD/ 6183' TVD

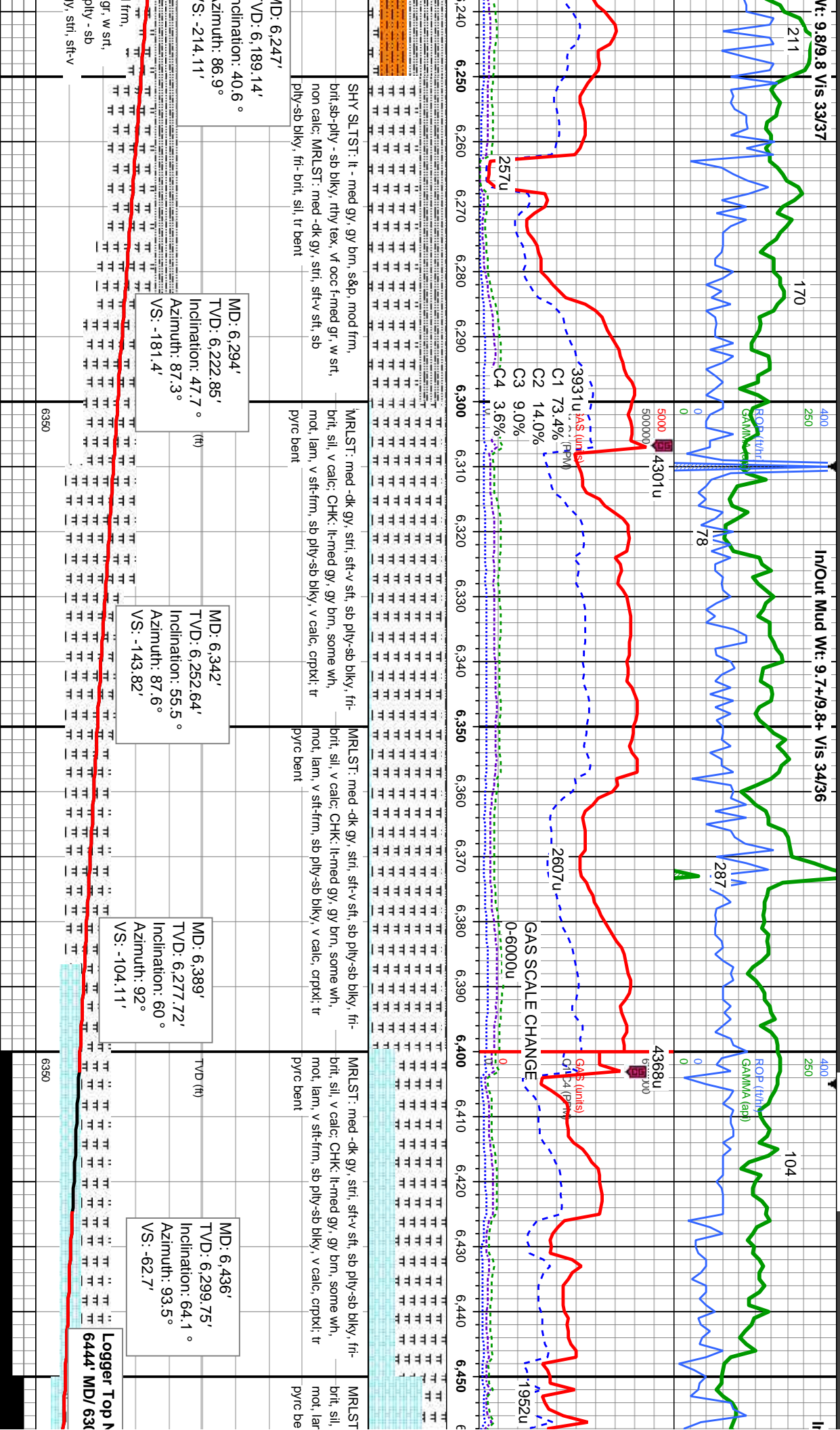
id gy, gy brn, s&p, mod frm,
rthy tex, v/ occ f-med gr, w srt,
lt - dk gy, sft - frm, sb ply - sb
alc, tr SHY SS

SHY SLTST: lt - med gy, gy brn, s&p, mod frm,
brit/sb-ply - sb blk, rthy tex, v/ occ f-med gr, w srt,
non calc, SLTY SH: lt - dk gy, sft - frm, sb ply - sb
blk, rthy tex, non calc, tr SHY SS

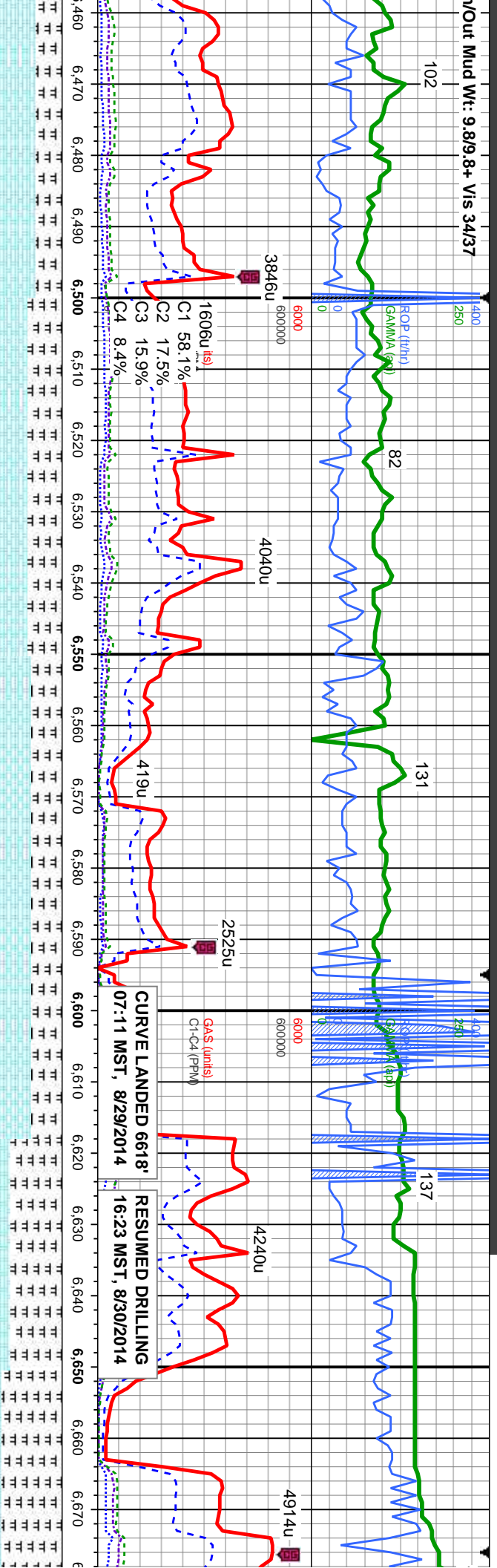
SHY SLTST: lt - med gy, gy brn, s&p, mod frm,
brit/sb-ply - sb blk, rthy tex, v/ occ f-med gr, w srt,
non calc, SLTY SH: lt - dk gy, sft - frm, sb ply - sb
blk, rthy tex, non calc, tr SHY SS

SHY SLTST: lt - med gy, gy brn, s&p, mod frm,
brit/sb-ply - sb blk, rthy tex, v/ occ f-med gr, w srt,
non calc, SLTY SH: lt - dk gy, sft - frm, sb ply - sb
blk, rthy tex, non calc

SHY SLTST: lt - med gy, gy brn, s&p, mod frm,
brit/sb-ply - sb blk, rthy tex, v/ occ f-med gr, w srt,
non calc, SLTY SH: lt - dk gy, sft - frm, sb ply - sb
blk, rthy tex, non calc, MRLST: med-dk c
sft, sb ply-sb blk, fir- brit, sill



In/Out Mud Wt: 9.8/9.8+ Vis 34/37



med -dk gy, stri, sft-v sft, sb ply-sb blk, fr-
- brt, sil, v calc: CHK: lt-med gy, gy brn, some wh,
mod, lam, v sft-frn, sb ply-sb blk, v calc, crptxl: tr
pyrc bent

MRSLT: med -dk gy, blk, stri, mod frn - hd, sb ply
- sb blk, frt- brt, sil, v calc: CHK: lt - med gy, bf -
brn, gy brn, mod, lam, v sft-frn, sb ply-sb blk, v
calc, crptxl: tr bent, tr pyrc

MRSLT: med -dk gy, blk, stri, mod frn - hd, sb ply
- sb blk, frt- brt, sil, v calc: CHK: lt - med gy, bf -
brn, gy brn, mod, lam, v sft-frn, sb ply-sb blk, v
calc, crptxl: tr bent, tr pyrc

MD: 6,484'
TVD: 6,318.02'
Inclination: 71.1 °
Azimuth: 92.8 °
VS: -18.49'

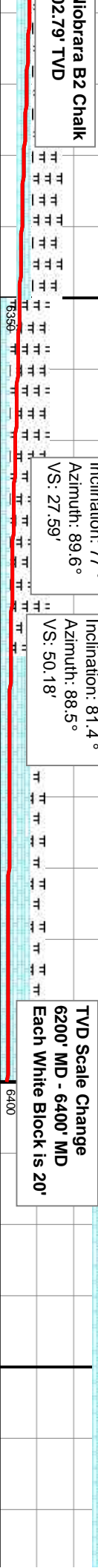
MD: 6,532'
TVD: 6,331.21'
Inclination: 77 °
Azimuth: 89.6 °
VS: 27.59'

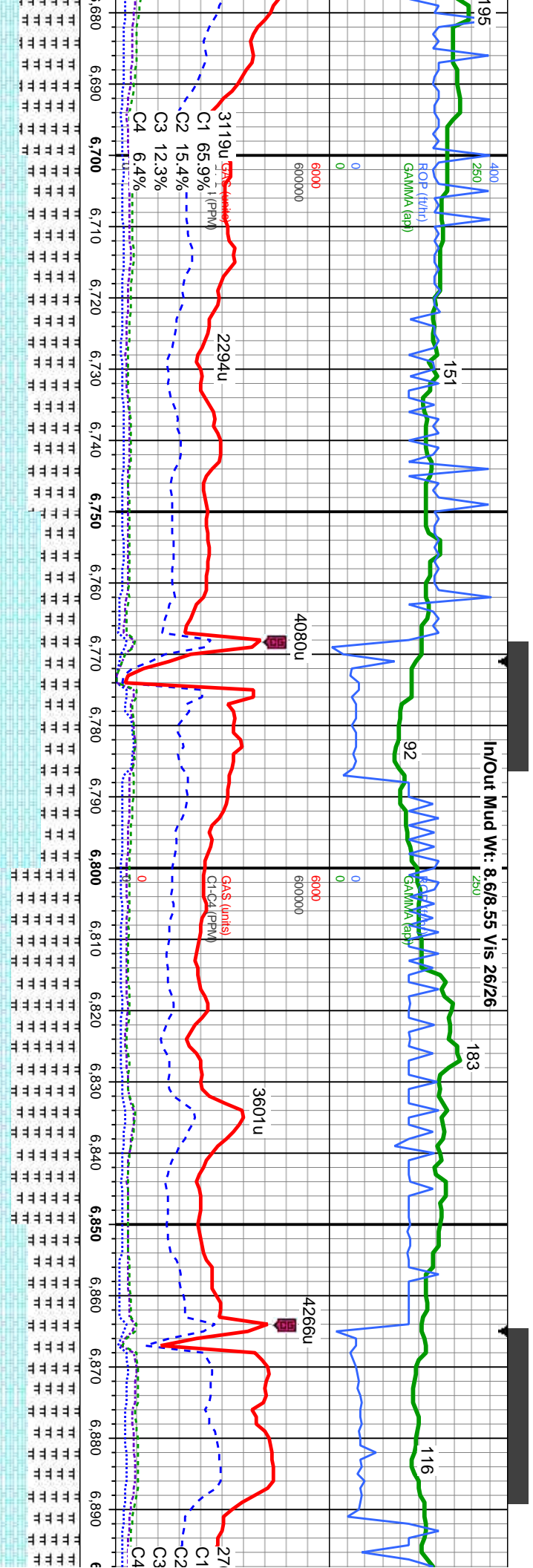
MD: 6,555'
TVD: 6,336.52'
Inclination: 81.4 °
Azimuth: 88.5 °
VS: 50.18'

MD: 6,615'
TVD: 6,339.65'
Inclination: 90.7 °
Azimuth: 84.5 °
VS: 109.92'

TVD Scale Change
6200' MD - 6400' MD
Each White Block is 20'

39' Target Area

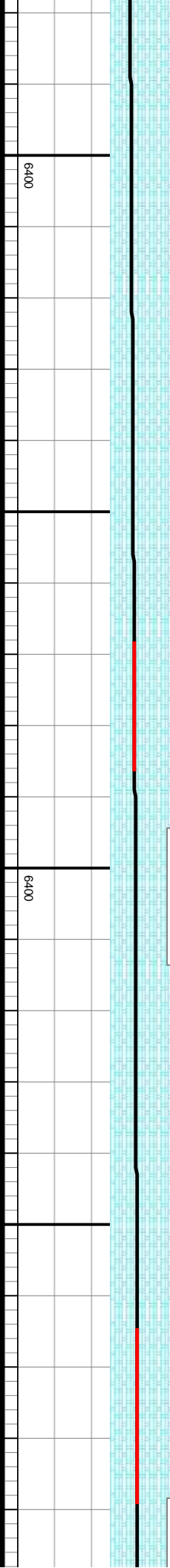


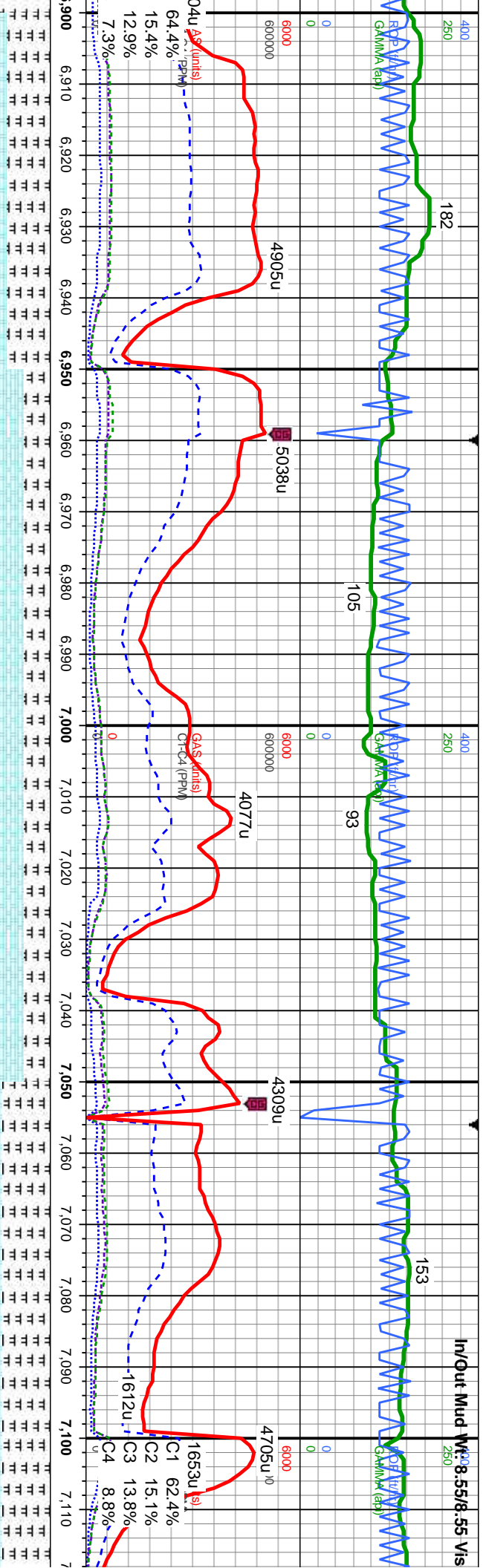


mod frm - hd, sb ply - sb blk, frt- brt, sil, v calc: CHK: It - med gy, bf - sb ply-sb blk, v	MRSLT: med -dk gy, blk, stri, mod frm - hd, sb ply - sb blk, frt- brt, sil, v calc: CHK: It - med gy, bf - brn, gy brn, mot, lam, v st-frm, sb ply-sb blk, v calc, crptxi: tr bent, tr pyr	MRSLT: med -dk gy, blk, stri, mod frm - hd, sb ply - sb blk, frt- brt, sil, v calc: CHK: It - med gy, bf - brn, gy brn, mot, lam, v st-frm, sb ply-sb blk, v calc, crptxi: tr bent, tr pyr	MRSLT: med -dk gy, blk, stri, mod frm - hd, sb ply - sb blk, frt- brt, sil, v calc: CHK: It - med gy, bf - brn, gy brn, mot, lam, v st-frm, sb ply-sb blk, v calc, crptxi: tr bent, tr pyr
TVD (ft)			

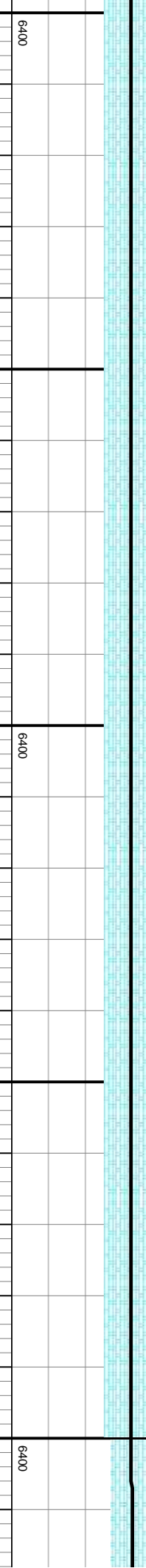
MD: 6,804'
TVD: 6,335.2'
Inclination: 92 °
Azimuth: 87.7°
VS: 298.66'

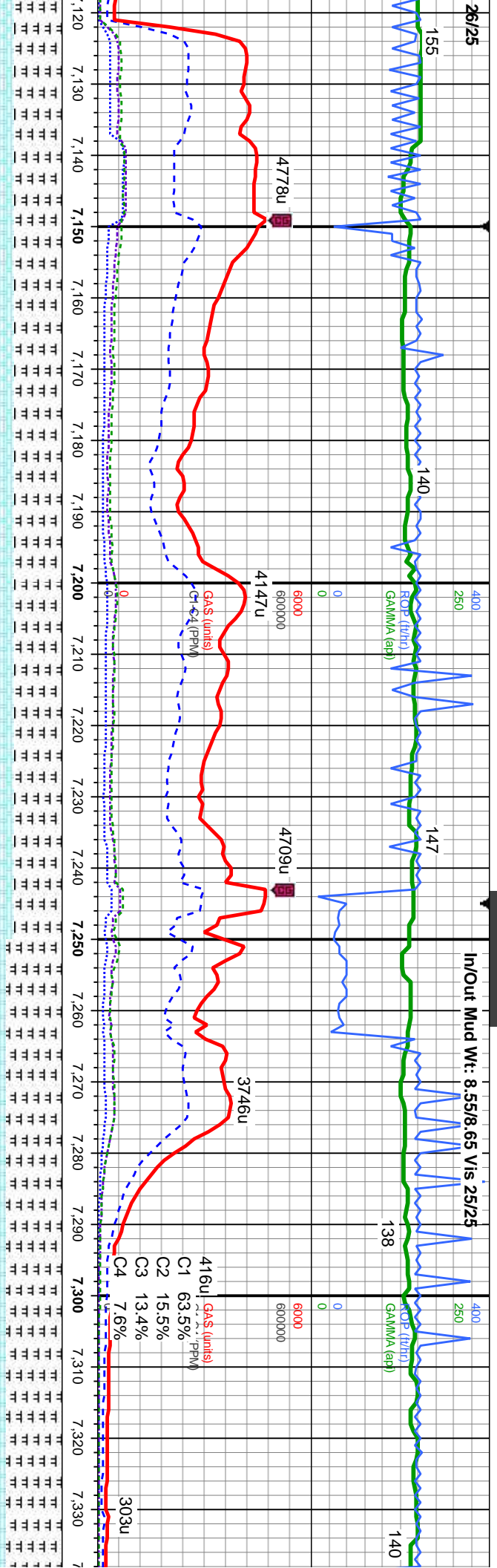
MD: 6,86'
TVD: 6.3
Inclination:
Azimuth:
VS: 393.





34.12'	MD: 6.995'	MD: 7.089'
n: 89.3 °	TVD: 6,334.46'	TVD: 6,334.05'
89.1 °	Inclination: 90.3 °	Inclination: 90.2 °
64'	Azimuth: 89.1 °	Azimuth: 88.4 °
	VS: 489.63'	VS: 583.63'
		TVD (ft)





Y, blk, sfti, mod frm - hd, sb ply
- sb blk, ftr- brt, sil, v calc: CHK: It - med gy, bf -
- m, v sft-frm, sb ply-sb blk, v
calc, crptxi: tr bent, tr pyr

MRSLT: med -dk gy, blk, sfti, mod frm - hd, sb ply
- sb blk, ftr- brt, sil, v calc: CHK: It - med gy, bf -
- brn, gy brn, mot, lam, v sft-frm, sb ply-sb blk, v
calc, crptxi: tr bent, tr pyr

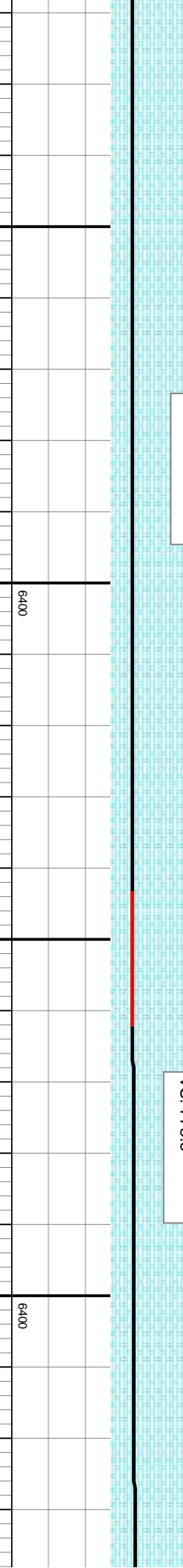
MRSLT: med -dk gy, blk, sfti, mod frm - hd, sb ply
- sb blk, ftr- brt, sil, v calc: CHK: It - med gy, bf -
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calc, crptxi: tr bent, tr pyr

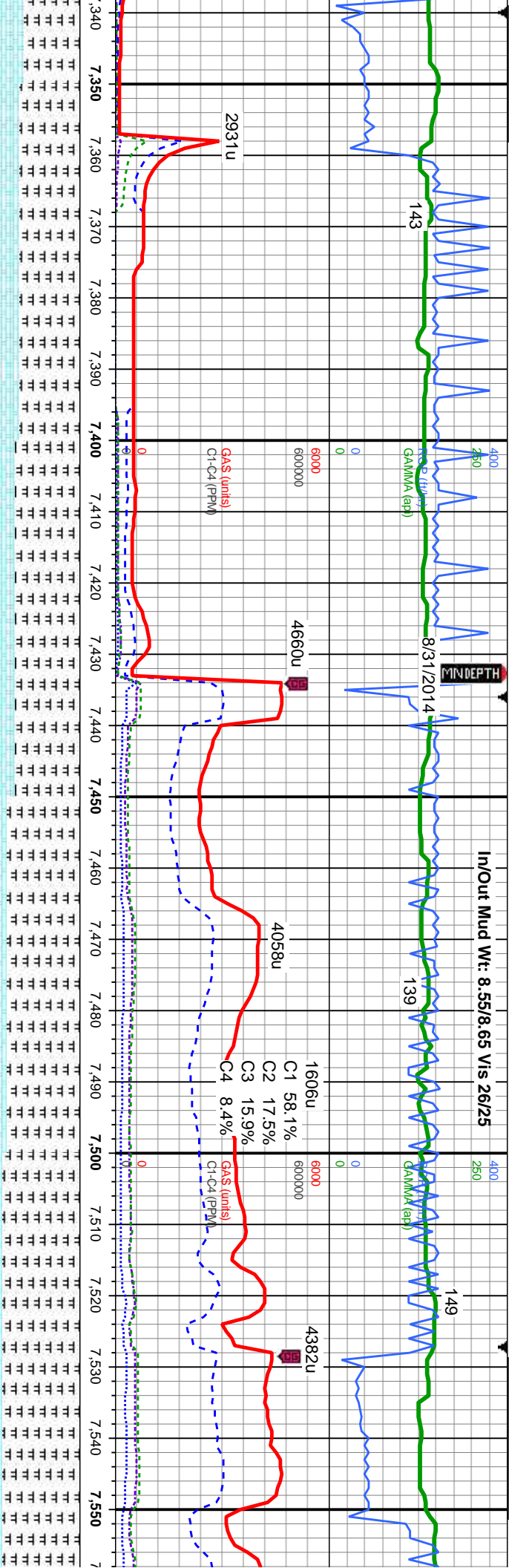
MRSLT: med -dk gy, blk, sfti, mod frm - hd, sb ply
- sb blk, ftr- brt, sil, v calc: CHK: It - med gy, bf -
- brn, gy brn, mot, lam, v sft-frm, sb ply-sb blk, v
calc, crptxi: tr bent, tr pyr

MRSLT: med -dk gy, blk, sfti, mod frm - hd, sb ply
- sb blk, ftr- brt, sil, v calc: CHK: It - med gy, bf -
- brn, gy brn, mot, lam, v sft-frm, sb ply-sb
calc, crptxi: tr bent, tr pyr

MD: 7,184'
TVD: 6,333.71'
Inclination: 90.2°
Azimuth: 87°
VS: 678.62'

MD: 7,279'
TVD: 6,333.13'
Inclination: 90.5°
Azimuth: 88.6°
VS: 773.6'





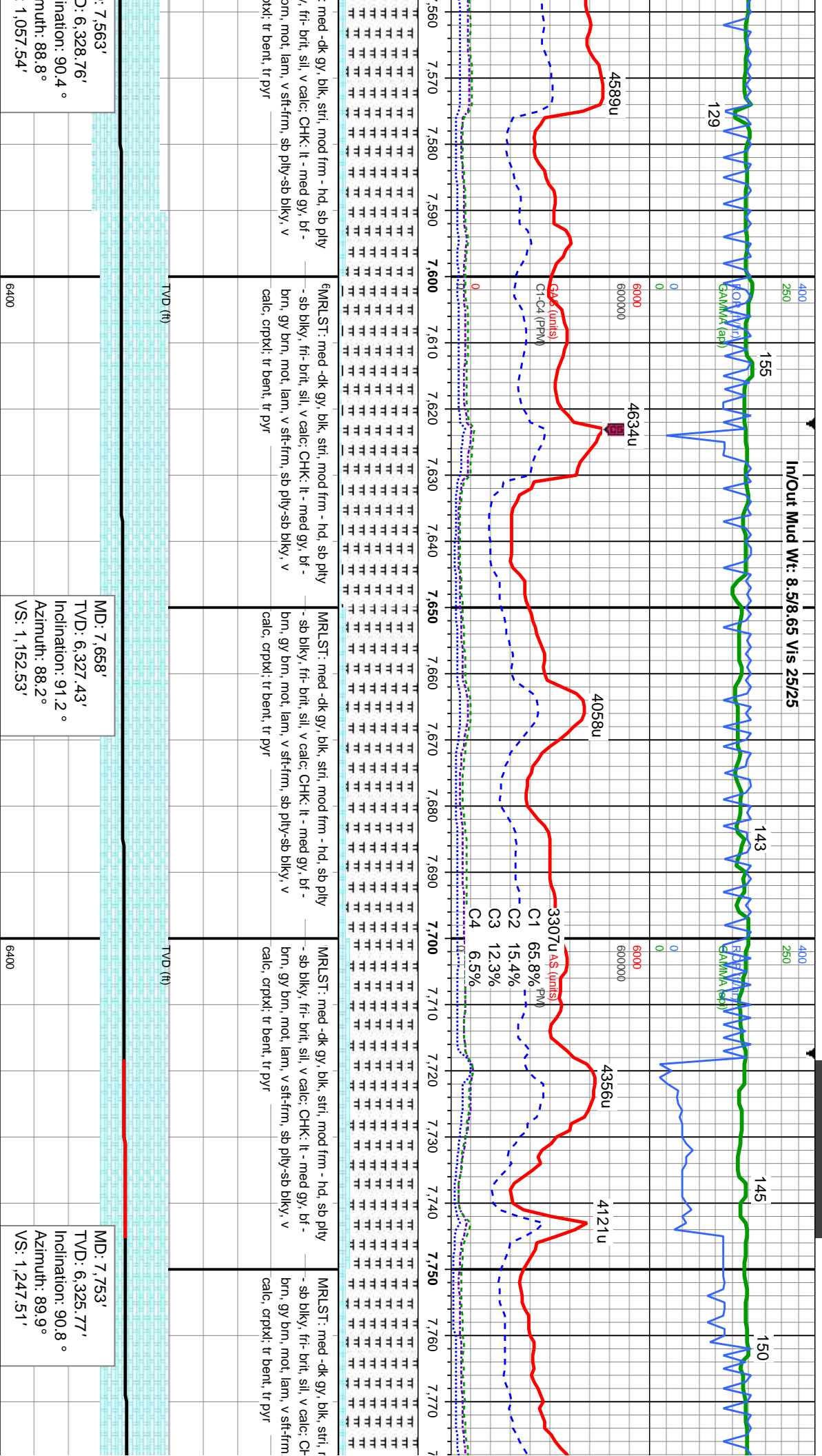
MR.LST: med -dk gy, blk, stri, mod frm - hd, sb ply
- sb blk, fri- brt, sil, v calc: CHK: It - med gy, bf -
brn, gy brn, mot, lam, v st-frm, sb ply-sb blk, v
calc, crpxl: tr bent, tr pyr

MR.LST: med -dk gy, blk, stri, mod frm - hd, sb ply
- sb blk, fri- brt, sil, v calc: CHK: It - med gy, bf -
brn, gy brn, mot, lam, v st-frm, sb ply-sb blk, v
calc, crpxl: tr bent, tr pyr

MR.LST: med -dk gy, blk, stri, mod frm - hd, sb ply
- sb blk, fri- brt, sil, v calc: CHK: It - med gy, bf -
brn, gy brn, mot, lam, v st-frm, sb ply-sb blk, v
calc, crpxl: tr bent, tr pyr

MR.LST: med -dk gy, blk, stri, mod frm - hd, sb ply
- sb blk, fri- brt, sil, v calc: CHK: It - med gy, bf -
brn, gy brn, mot, lam, v st-frm, sb ply-sb blk, v
calc, crpxl: tr bent, tr pyr

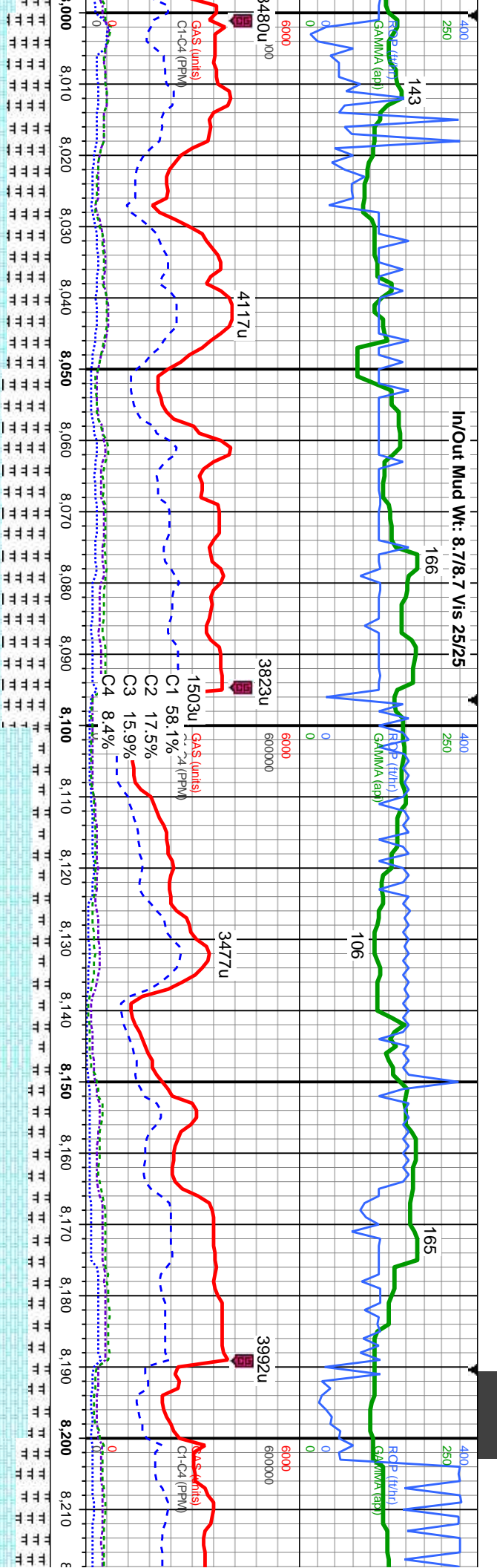
MD
TVD
Incl
Azi
VS



MD: 7,563'
TVD: 6,328.76'
Inclination: 90.4°
Azimuth: 88.8°
VS: 1,057.54'

MD: 7,658'
TVD: 6,327.43'
Inclination: 91.2°
Azimuth: 88.2°
VS: 1,152.53'

MD: 7,753'
TVD: 6,325.77'
Inclination: 90.8°
Azimuth: 89.9°
VS: 1,247.51'



CHK: lt - med gy, bf - brn, gy brn, mot, lam, v
sft frm, sb ply-sb blk, v calc, crpxl: tr bent, tr pyr;
MRLST: med -dk gy, blk, stri, mod frm - hd, sb ply
-sb blk, fri- brt, sil, v calc

MRLST: med -dk gy, blk, stri, mod frm - hd, sb ply
-sb blk, fri- brt, sil, v calc; CHK: lt - med gy, bf -
brn, gy brn, mot, lam, v sft frm, sb ply-sb blk, v
calc, crpxl: tr bent, tr pyr

CHK: lt - med gy, bf - brn, gy brn, mot, lam, v
sft frm, sb ply-sb blk, v calc, crpxl: tr bent, tr pyr;
MRLST: med -dk gy, blk, stri, mod frm - hd, sb ply
-sb blk, fri- brt, sil, v calc

CHK: lt - med gy, bf - brn, gy brn, mot, lam, v
sft frm, sb ply-sb blk, v calc, crpxl: tr bent, tr pyr;
MRLST: med -dk gy, blk, stri, mod frm - hd, sb ply
-sb blk, fri- brt, sil, v calc

CHK: lt - med gy, bf - brn, gy brn, mot, lam, v
sft frm, sb ply-sb blk, v calc, crpxl: tr bent, tr pyr;
MRLST: med -dk gy, blk, stri, mod frm - hd, sb ply
-sb blk, fri- brt, sil, v calc

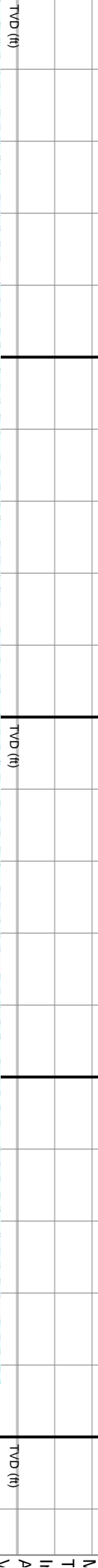
MD: 8.037'
TV/D: 6.321.15'
Inclination: 88.8°
Azimuth: 90°
VS: 1.531.37'

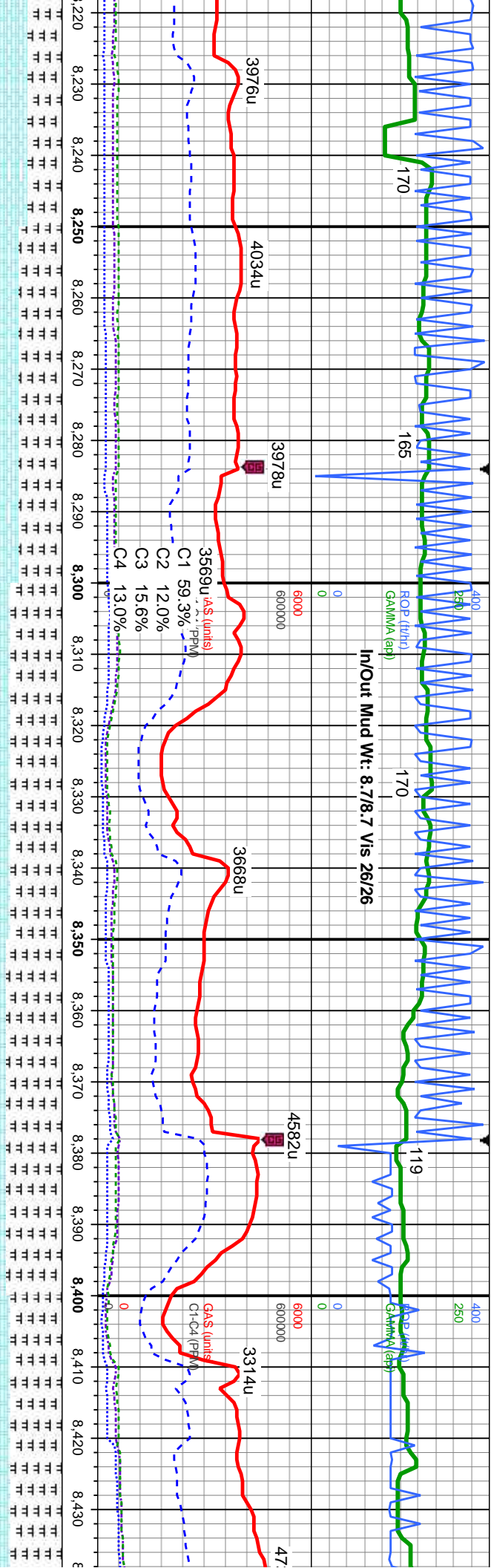
MD: 8.132'
TV/D: 6.323.22'
Inclination: 88.7°
Azimuth: 90.4°
VS: 1.626.31'

MD: 8.132'
TV/D: 6.323.22'
Inclination: 88.7°
Azimuth: 90.4°
VS: 1.626.31'

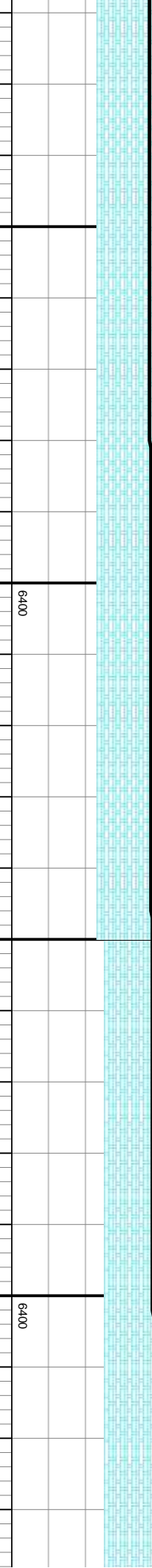
MD: 8.132'
TV/D: 6.323.22'
Inclination: 88.7°
Azimuth: 90.4°
VS: 1.626.31'

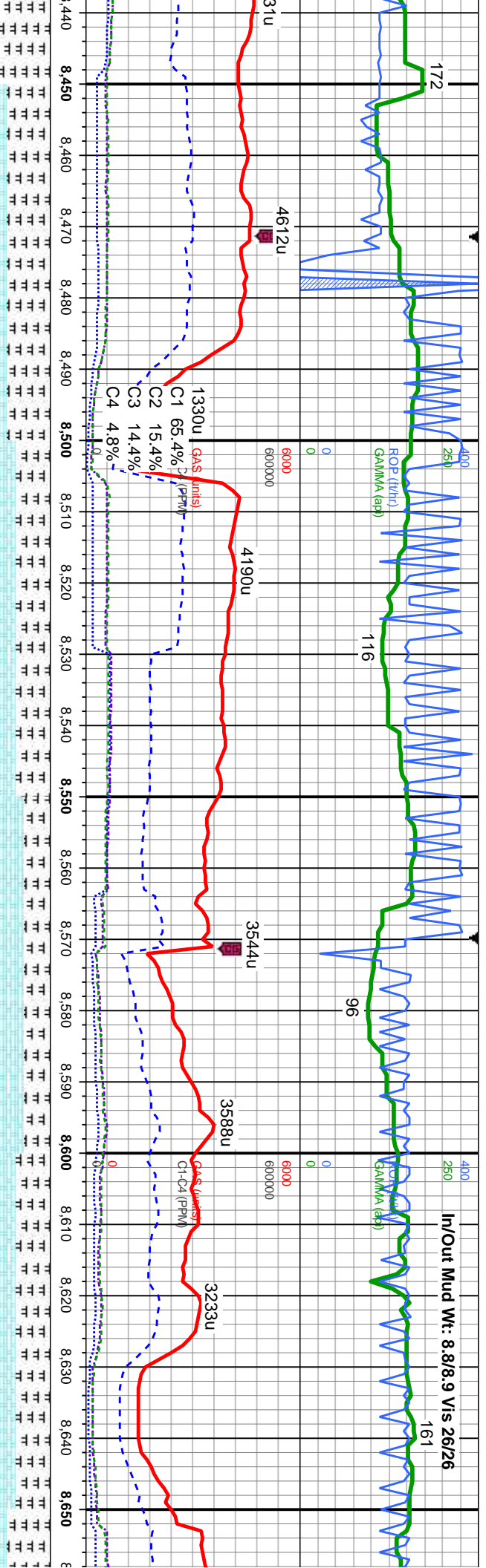
MD: 8.132'
TV/D: 6.323.22'
Inclination: 88.7°
Azimuth: 90.4°
VS: 1.626.31'





f - brn, gy brn, mot, lam, v - sb blk, v calc, crpxl; tr bent, tr pyr; - y, blk, stri, mod frm - hd, sb ply l, v calc		MR LST: med -dk gy, blk, stri, mod frm - hd, sb ply - sb blk, fri- brt, sil, v calc; CHK: lt - med gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb blk, v calc, crpxl; tr bent, tr pyr		fMR LST: med -dk gy, blk, stri, mod frm - hd, sb ply - sb blk, fri- brt, sil, v calc; CHK: lt - med gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb blk, v calc, crpxl; tr bent, tr pyr		fMR LST: med -dk gy, blk, stri, mod frm - l - l - l - sb blk, fri- brt, sil, v calc; CHK: lt - med gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb calc, crpxl; tr bent, tr pyr	
MD: 8,227' VD: 6,324.38' Inclination: 89.9 ° Azimuth: 89.9 ° S: 1,721.26'		MD: 8,322' TVD: 6,323.39' Inclination: 91.3 ° Azimuth: 90.2 ° VS: 1,816.22'		MD: 8,417' TVD: 6,322.06' Inclination: 90.3 ° Azimuth: 89.1 ° VS: 1,911.19'			
TVD (ft)		TVD (ft)		TVD (ft)			





sd sb ply
gy, bf -
biky, v

CHK: It - med gy, bf - brn, gy brn, mot, lam, v
sft-frm, sb ply-sb biky, v calc, crptxl, tr bent, tr pyr,
MRLST: med -dk gy, blk, stri, mod frm - hd, sb ply
-sb biky, fir- brt, sil, v calc

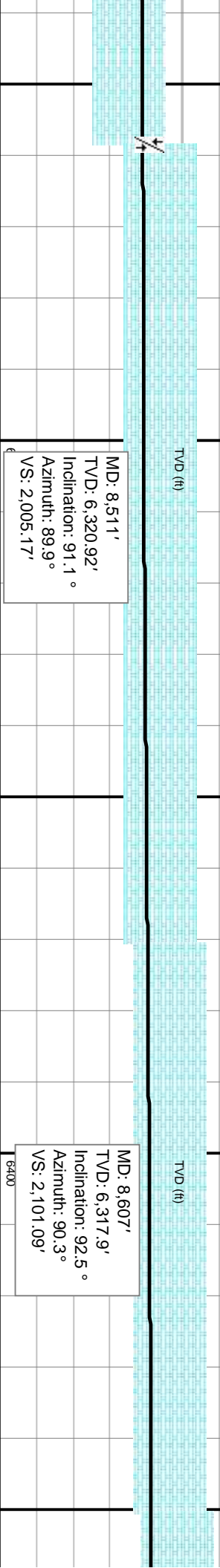
CHK: It - med gy, bf - brn, gy brn, mot, lam, v
sft-frm, sb ply-sb biky, v calc, crptxl, tr fos, tr bent,
tr pyr, MRLST: med -dk gy, blk, stri, mod frm - hd,
sb ply - sb biky, fir- brt, sil, v calc, tr fos

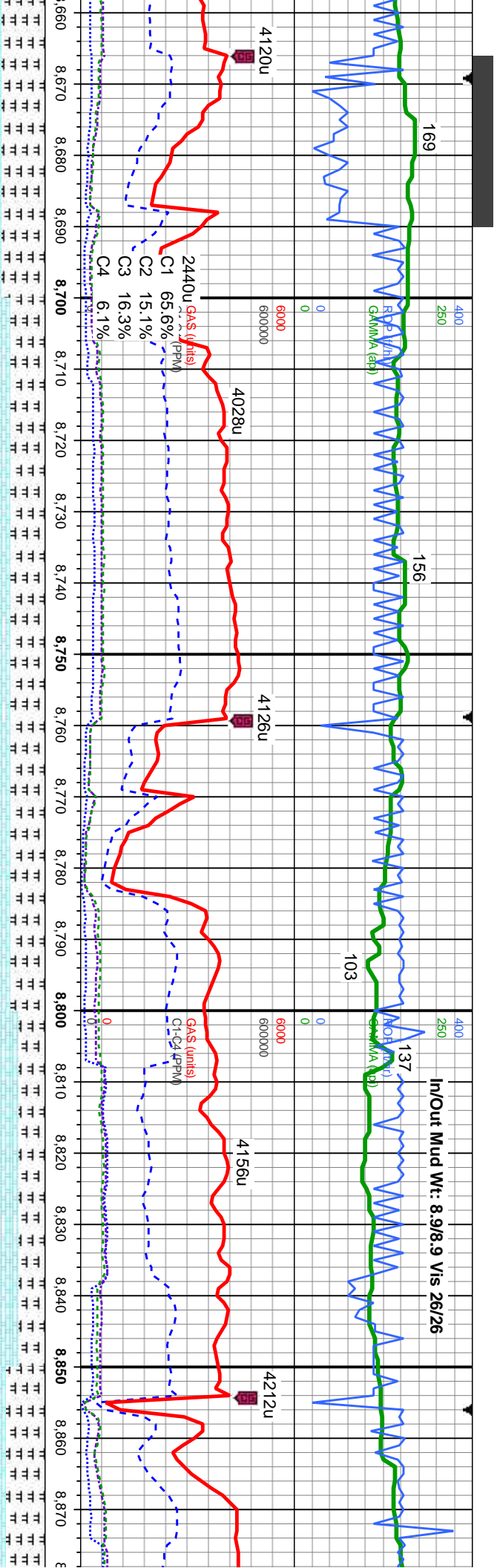
6CHK: It - med gy, bf - brn, gy brn, mot, lam, v
sft-frm, sb ply-sb biky, v calc, crptxl, tr fos, tr bent,
tr pyr, MRLST: med -dk gy, blk, stri, mod frm - hd,
sb ply - sb biky, fir- brt, sil, v calc, tr fos

CHK: It
sft-frm,
tr pyr, l
sb ply

MD: 8,511'
TVD: 6,320.92'
Inclination: 91.1°
Azimuth: 89.9°
VS: 2,005.17'

MD: 8,607'
TVD: 6,317.9'
Inclination: 92.5°
Azimuth: 90.3°
VS: 2,101.09'





- med gy, bf - brn, gy brn, mot, lam, v
- sb pily-sb blkly, v calc, crpxl, tr fos: tr bent,
MRSLT: med -dk gy, blk, sfri, mod frm - hd,
sb blkly, fir- brit, sil, v calc, tr fos

MRSLT: med -dk gy, blk, sfri, mod frm - hd, sb pily
- sb blkly, fir- brit, sil, v calc, tr fos: CHK: lt - med
gy, bf - brn, gy brn, mot, lam, v sft-frm, sb pily-sb
blkly, v calc, crpxl, tr fos: tr bent, tr pyr

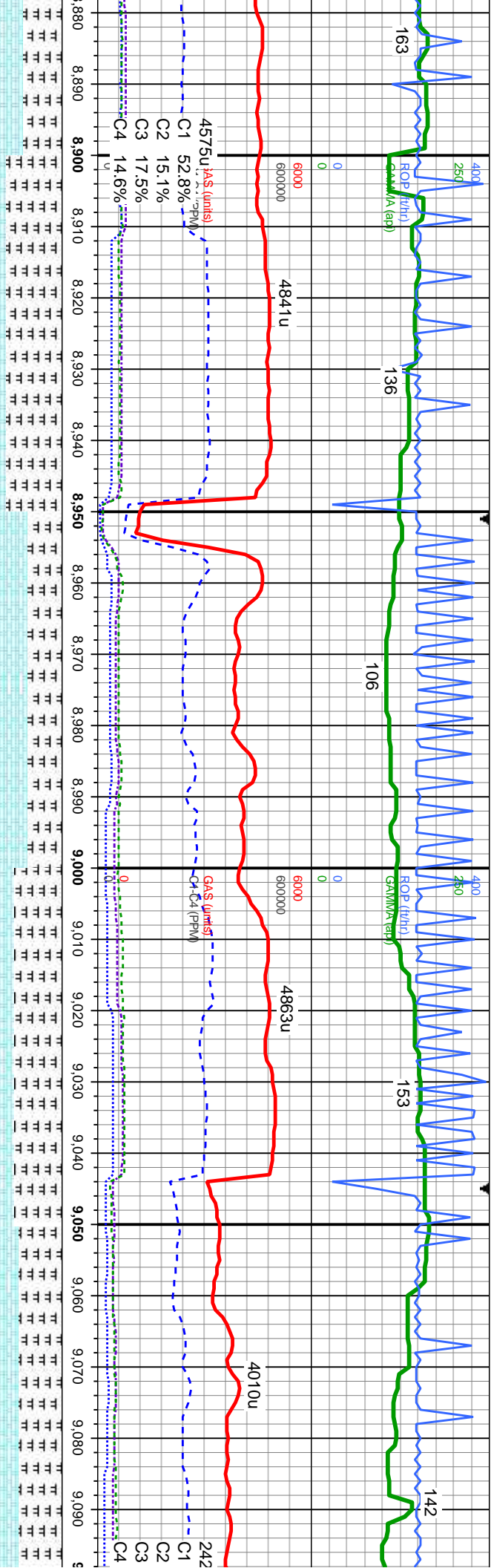
CHK: lt - med gy, bf - brn, gy brn, mot, lam, v
sft-frm, sb pily-sb blkly, v calc, crpxl, tr fos: tr bent,
tr pyr: MRSLT: med -dk gy, blk, sfri, mod frm - hd,
sb pily - sb blkly, fir- brit, sil, v calc, tr fos

CHK: lt - med gy, bf - brn, gy brn, mot, lam, v
sft-frm, sb pily-sb blkly, v calc, crpxl, tr fos: tr bent,
tr pyr: MRSLT: med -dk gy, blk, sfri, mod frm - hd,
sb pily - sb blkly, fir- brit, sil, v calc, tr fos

CHK: lt - med gy, bf - brn, gy brn, mot, lam, v
sft-frm, sb pily-sb blkly, v calc, crpxl, tr fos: tr bent,
tr pyr: MRSLT: med -dk gy, blk, sfri, mod frm - hd,
sb pily - sb blkly, fir- brit, sil, v calc, tr fos

MD: 8,701'
TVD: 6,316.1'
Inclination: 89.7°
Azimuth: 90.2°
VS: 2,195.02'

MD: 8,796'
TVD: 6,316.51'
Inclination: 89.8°
Azimuth: 90.5°
VS: 2,289.98'



Formation	GR (API)	ρ_b (lb/hr)	ϕ_n (ppm)
mod, lam, v			
crptxl, tr fos; tr bent,			
gy, stri, mod frm - hd,			
calc, tr fos			

MRSLT: med -dk gy, blk, stri, mod frm - hd, sb ply
- sb blkyl, fri- brit, sil, v calc, tr fos: CHK: lt - med
gy, bf - brn, gy brn, mod, lam, v sft-frm, sb ply-sb
blkyl, v calc, crptxl, tr fos: tr bent, tr pyr

CHK: lt - med gy, bf - brn, gy brn, mod, lam, v
sft-frm, sb ply-sb blkyl, v calc, crptxl, tr fos: tr bent,
tr pyr: MRSLT: med -dk gy, blk, stri, mod frm - hd,
sb ply - sb blkyl, fri- brit, sil, v calc, tr fos

MRSLT: med -dk gy, blk, stri, mod frm - hd, sb ply
- sb blkyl, fri- brit, sil, v calc, tr fos: CHK: lt - med
gy, bf - brn, gy brn, mod, lam, v sft-frm, sb ply-sb
blkyl, v calc, crptxl, tr fos: tr bent, tr pyr

MRSLT: med -dk gy, blk, stri, mod frm - hd, sb ply
- sb blkyl, fri- brit, sil, v calc, tr fos: CHK: lt - med
gy, bf - brn, gy brn, mod, lam, v sft-frm, sb ply-sb
blkyl, v calc, crptxl, tr fos: tr bent, tr pyr

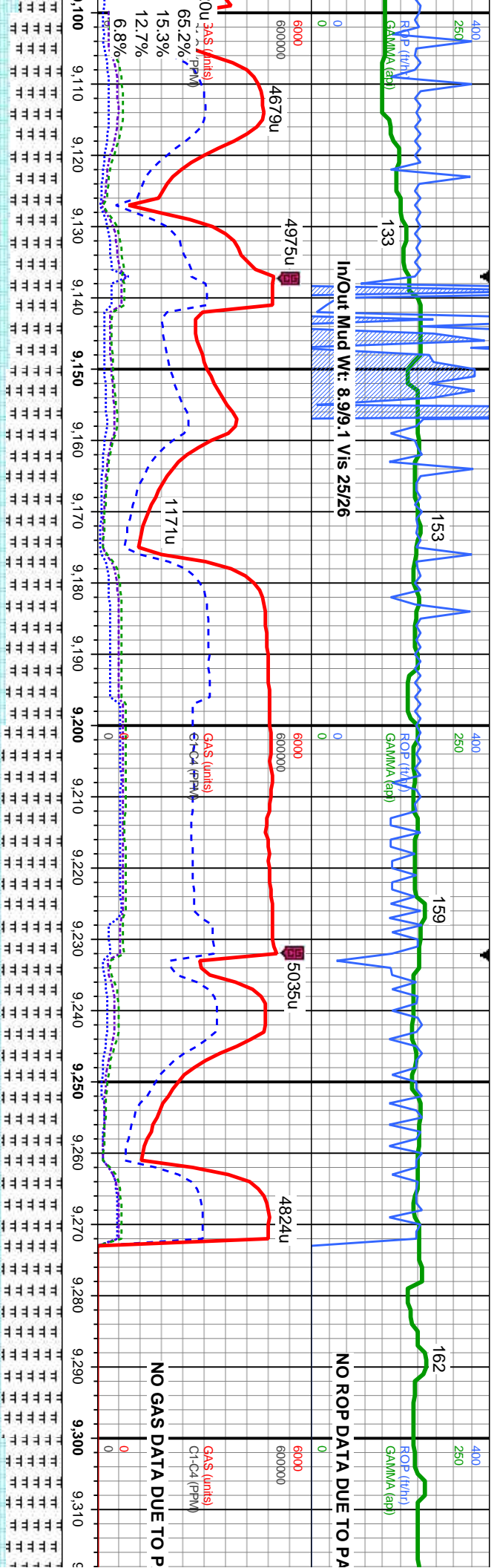
TVD (ft)

TVD (ft)

MD: 8,890'	MD: 8,984'	MD: 9,078'
TVD: 6,317.08'	TVD: 6,316.76'	TVD: 6,314.71'
Inclination: 89.5°	Inclination: 90.9°	Inclination: 91.6°
Azimuth: 90.1°	Azimuth: 90.8°	Azimuth: 90.9°
VS: 2,383.93'	VS: 2,477.88'	VS: 2,571.78'

6400

6400



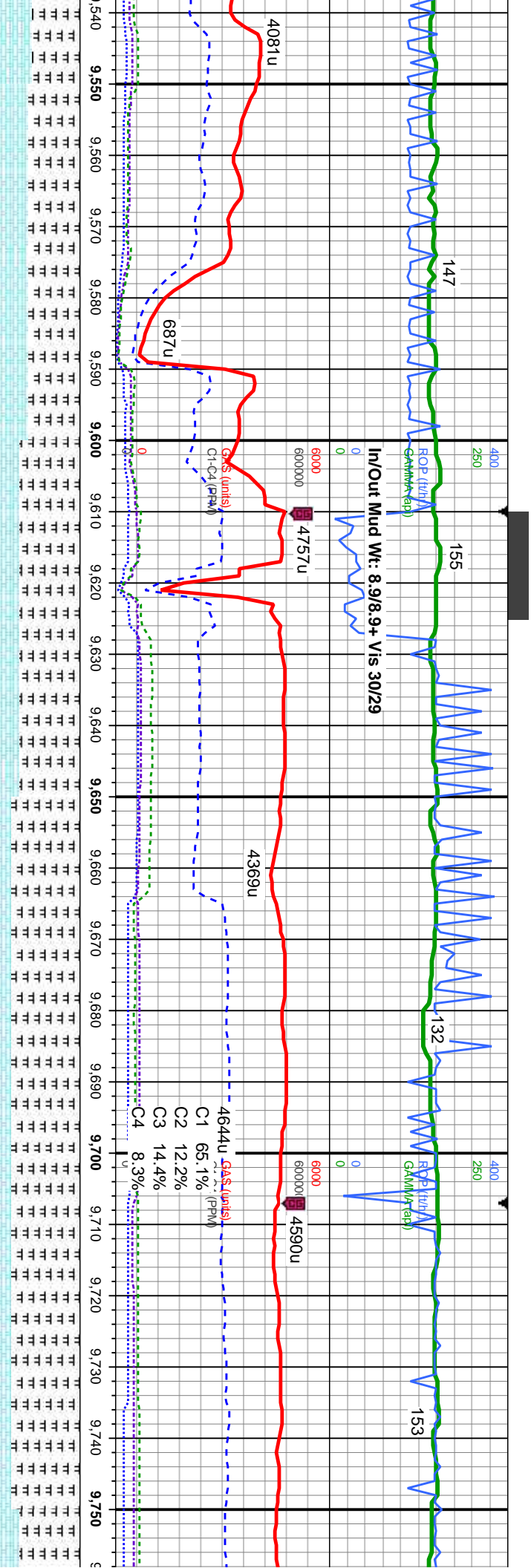
MRSLT: med -dk gy, blk, stri, mod frm - hd, sb ply - sb blkly, fri- brnt, sil, v calc, tr fos: CHK: lt - med gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb blkly, v calc, crptxl, tr fos: tr bent, tr pyr	MRSLT: med -dk gy, blk, stri, mod frm - hd, sb ply - sb blkly, fri- brnt, sil, v calc, tr fos: CHK: lt - med gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb blkly, v calc, crptxl, tr fos: tr bent, tr pyr	MRSLT: med -dk gy, blk, stri, mod frm - hd, sb ply - sb blkly, fri- brnt, sil, v calc, tr fos: CHK: lt - med gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb blkly, v calc, crptxl, tr fos: tr bent, tr pyr	MRSLT: med -dk gy, blk, stri, mod frm - hd, sb ply - sb blkly, fri- brnt, sil, v calc, tr fos: CHK: lt - med gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb blkly, v calc, crptxl, tr fos: tr bent, tr pyr
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TVD (ft)	TVD (ft)	TVD (ft)
6400	6400	6400

MD: 9,173'
TVD: 6,313.46'
Inclination: 89.9 °
Azimuth: 90 °
VS: 2,666.72'

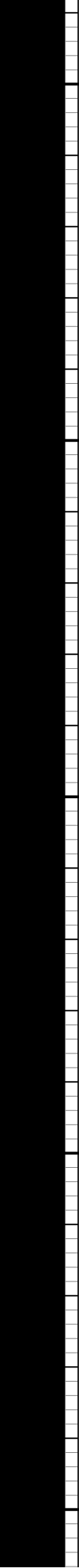
MD: 9,267'
TVD: 6,313.38'
Inclination: 90.2 °
Azimuth: 89.9 °
VS: 2,760.69'

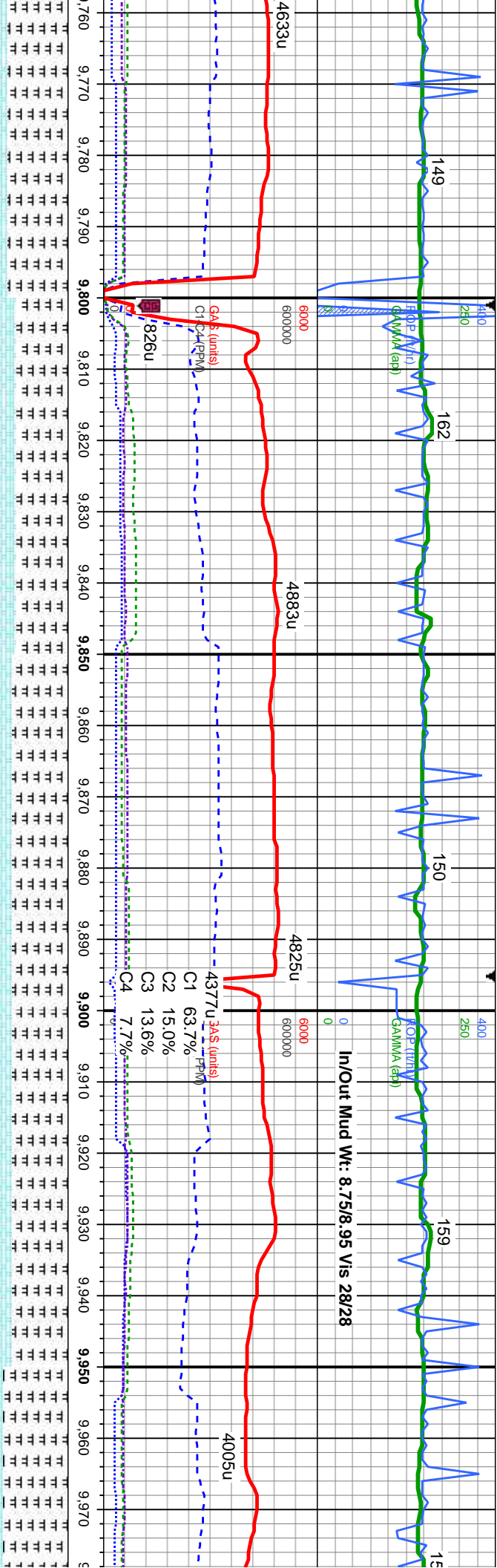
TVD (ft)	TVD (ft)
6400	6400



med	MR.LST: med -dk gy, blk, stri, mod frm - hd, sb ply	MR.LST: med -dk gy, blk, stri, mod frm - hd, sb ply	MR.LST: med -dk gy, blk, stri, mod frm - hd, sb ply	MR.LST: med -dk gy, blk, stri, mod frm - hd, sb ply
ply	- sb blkly, fri- brt, sil, v calc, tr fos: CHK: lt - med	- sb blkly, fri- brt, sil, v calc, tr fos: CHK: lt - med	- sb blkly, fri- brt, sil, v calc, tr fos: CHK: lt - med	- sb blkly, fri- brt, sil, v calc, tr fos: CHK: lt - med
sb	gy, bf - brn, gy brn, mot, lam, v st-frm, sb ply-sb	gy, bf - brn, gy brn, mot, lam, v st-frm, sb ply-sb	gy, bf - brn, gy brn, mot, lam, v st-frm, sb ply-sb	gy, bf - brn, gy brn, mot, lam, v st-frm, sb ply-sb
ply-sb	blkly, v calc, crpxl, tr fos: tr bent, tr pyr	blkly, v calc, crpxl, tr fos: tr bent, tr pyr	blkly, v calc, crpxl, tr fos: tr bent, tr pyr	blkly, v calc, crpxl, tr fos: tr bent, tr pyr

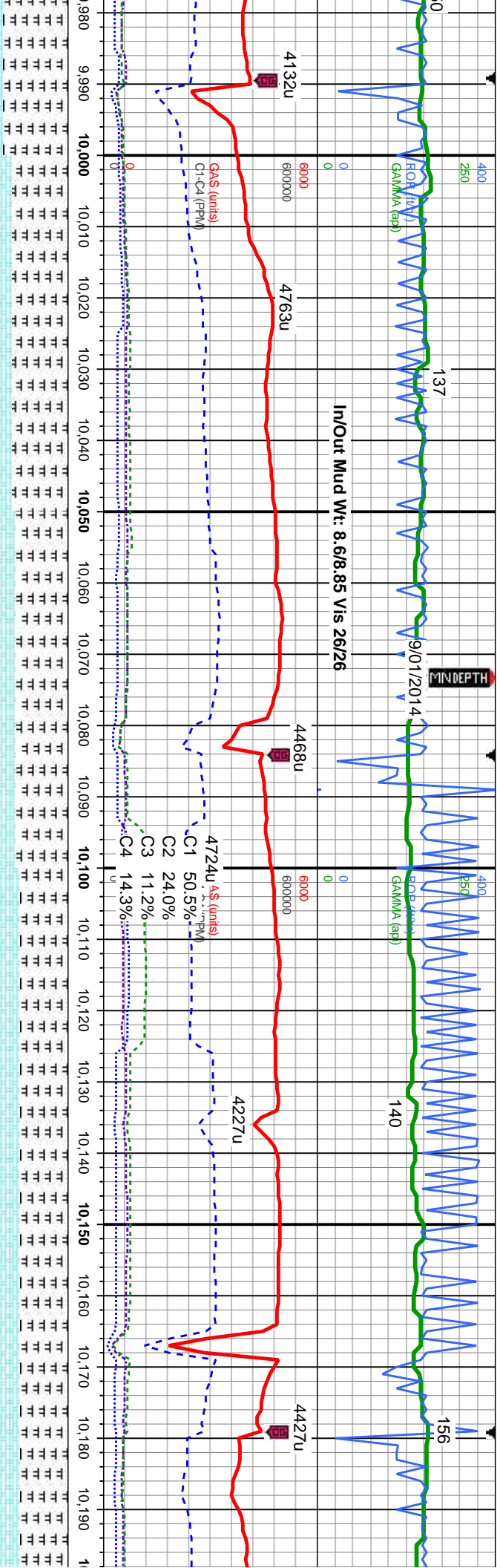
MD: 9.551'	MD: 9.645'	MD: 9.740'
TVD: 6,309.91'	TVD: 6,308.43'	TVD: 6,307.44'
Inclination: 91.2°	Inclination: 90.6°	Inclination: 90.6°
Azimuth: 89.2°	Azimuth: 88.8°	Azimuth: 88.4°
VS: 3,044.61'	VS: 3,138.59'	VS: 3,233.59'





med -dk gy, blk, stri, mod frm - hd, sb ply	MRSLT: med -dk gy, blk, stri, mod frm - hd, sb ply	MRSLT: med -dk gy, blk, stri, mod frm - hd, sb ply	MRSLT: med -dk gy, blk, stri, mod frm - hd, sb ply
1/4, fri- brlt, sil, v calc, tr fos: CHK: lt - med	- sb blkly, fri- brlt, sil, v calc, tr fos: CHK: lt - med	- sb blkly, fri- brlt, sil, v calc, tr fos: CHK: lt - med	- sb blkly, fri- brlt, sil, v calc, tr fos: CHK: lt - med
on, gy brn, mot, lam, v sft-frm, sb ply-sb	gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb	gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb	gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb
calc, crptxl, tr fos: tr bent, tr pyr	blkly, v calc, crptxl, tr fos: tr bent, tr pyr	blkly, v calc, crptxl, tr fos: tr bent, tr pyr	blkly, v calc, crptxl, tr fos: tr bent, tr pyr

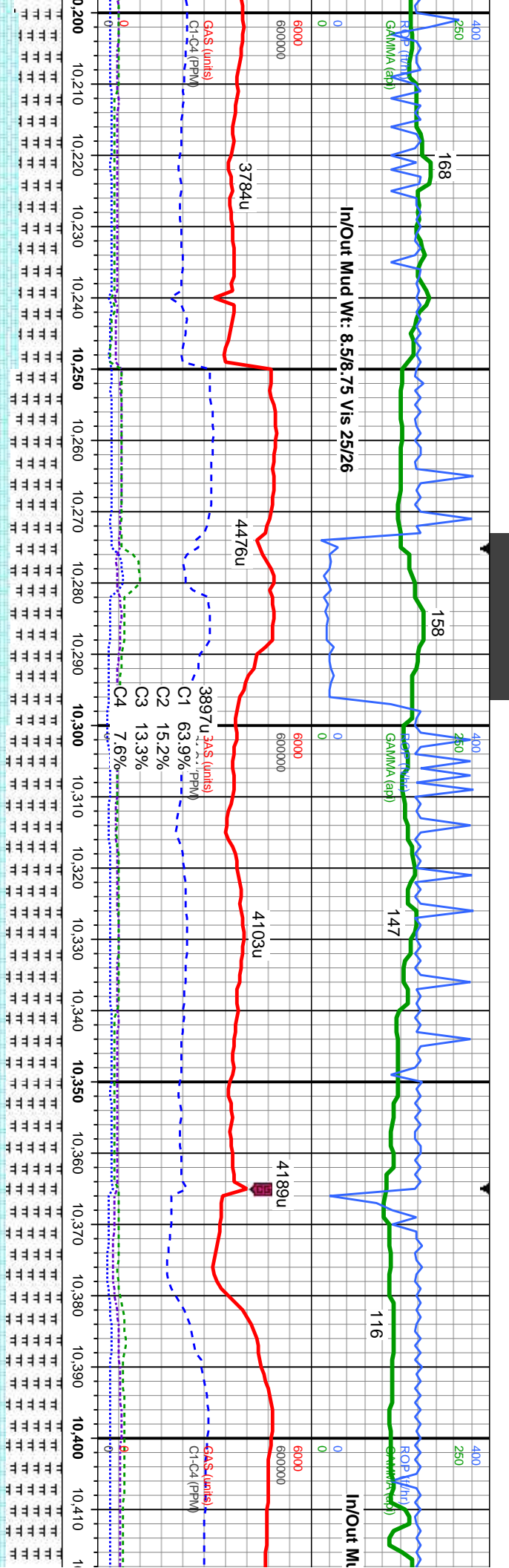
TVD (ft)		TVD (ft)	
MD: 9,834'		MD: 9,928'	
TVD: 6,306.21'		TVD: 6,305.06'	
Inclination: 90.9°		Inclination: 90.5°	
Azimuth: 88.4°		Azimuth: 88.4°	
VS: 3.327.58'		VS: 3.421.57'	
6400		6400	



mod frm - hd, sb ply	mod frm - hd, sb ply	mod frm - hd, sb ply	mod frm - hd, sb ply
fos: CHK: lt - med	fos: CHK: lt - med	fos: CHK: lt - med	fos: CHK: lt - med
st-frm, sb ply-sb	st-frm, sb ply-sb	st-frm, sb ply-sb	st-frm, sb ply-sb
	gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb	gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb	gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb
	bkly, v calc, crpxl, tr fos, tr bent, tr pyr	bkly, v calc, crpxl, tr fos, tr bent, tr pyr	bkly, v calc, crpxl, tr fos, tr bent, tr pyr

TVD (ft)			
6400			
MD: 10,024'			
TVD: 6,304.89'			
Inclination: 89.7°			
Azimuth: 87.5°			
VS: 3,517.57'			

TVD (ft)			
6400			
MD: 10,119'			
TVD: 6,304.81'			
Inclination: 90.4°			
Azimuth: 87.1°			
VS: 3,612.54'			

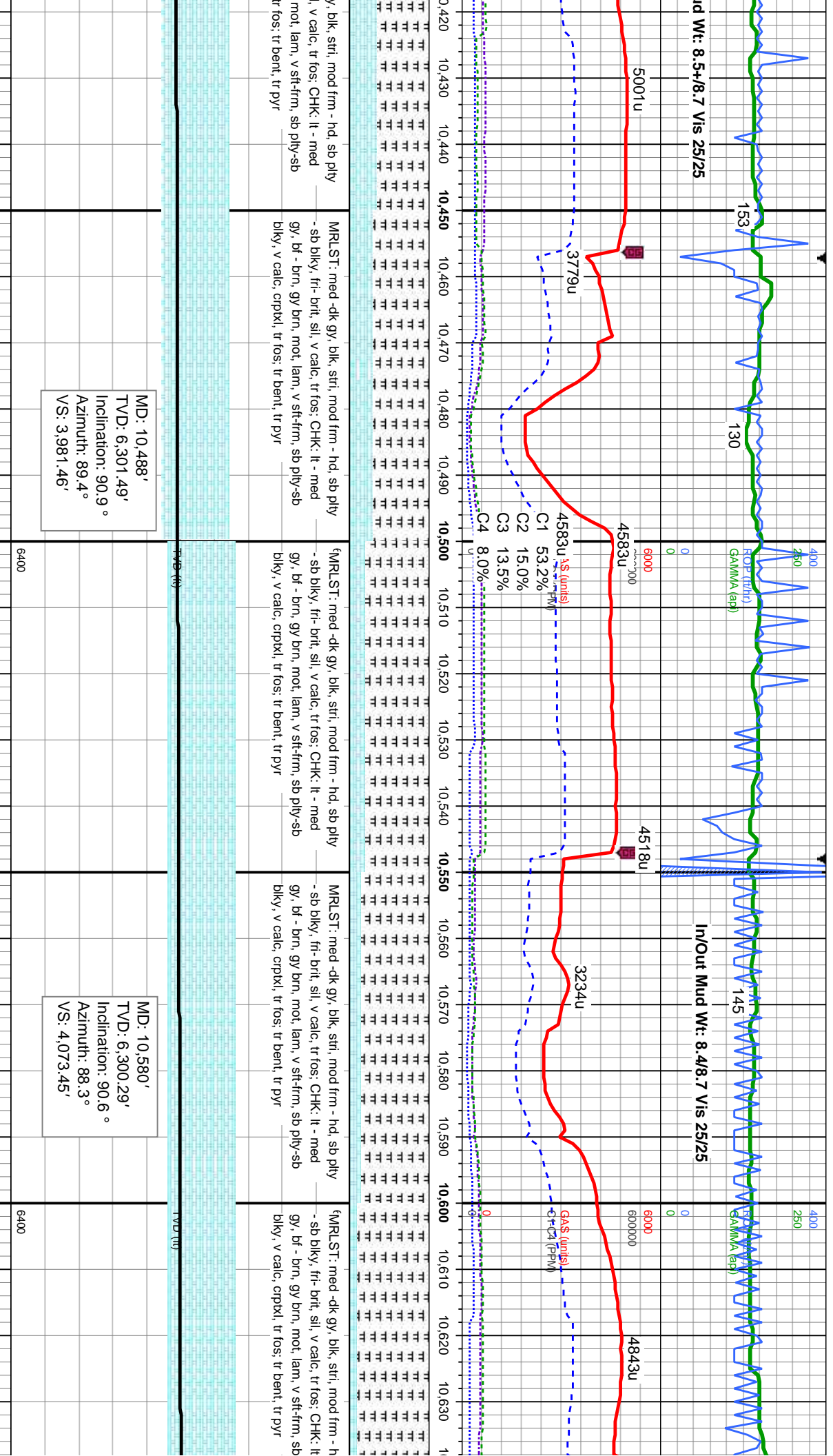


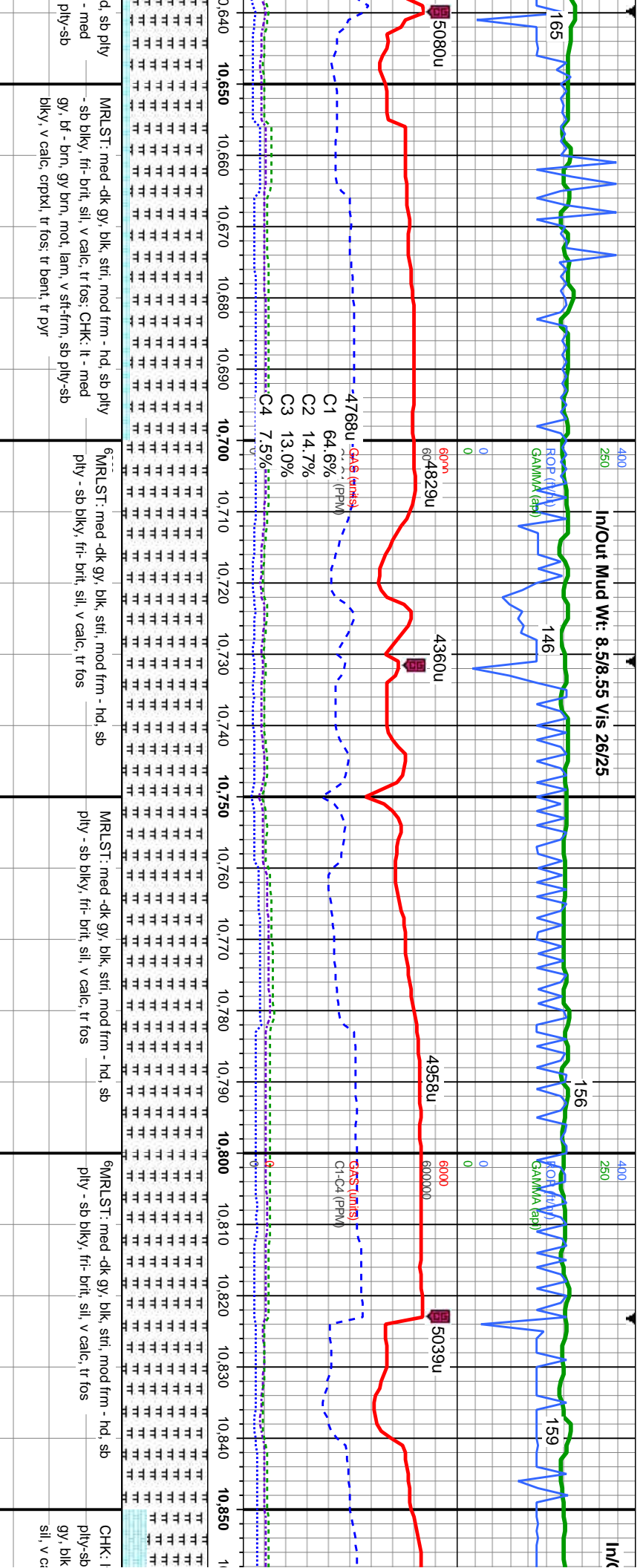
6MRLST: med -dk gy, blk, stri, mod frm - hd, sb ply - sb blkgy, fit- brt, sil, v calc, tr fos: CHK: lt - med gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb blkgy, v calc, crptxl, tr fos, tr bent, tr pyr	MRLST: med -dk gy, blk, stri, mod frm - hd, sb ply - sb blkgy, fit- brt, sil, v calc, tr fos: CHK: lt - med gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb blkgy, v calc, crptxl, tr fos, tr bent, tr pyr	6MRLST: med -dk gy, blk, stri, mod frm - hd, sb ply - sb blkgy, fit- brt, sil, v calc, tr fos: CHK: lt - med gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb blkgy, v calc, crptxl, tr fos, tr bent, tr pyr	MRLST: med -dk gy, blk, stri, mod frm - hd, sb ply - sb blkgy, fit- brt, sil, v calc, tr fos: CHK: lt - med gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb blkgy, v calc, crptxl, tr fos, tr bent, tr pyr	MRLST: med -dk g - sb blkgy, fit- brt, sil gy, bf - brn, gy brn, blkgy, v calc, crptxl,
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MD: 10,214'
TVD: 6,303.48'
Inclination: 91.2 °
Azimuth: 86.7 °
VS: 3,707.49'

MD: 10,305'
TVD: 6,302.45'
Inclination: 90.1 °
Azimuth: 88.9 °
VS: 3,798.47'

MD: 10,396'
TVD: 6,302.29'
Inclination: 90.1 °
Azimuth: 88.7 °
VS: 3,889.47'





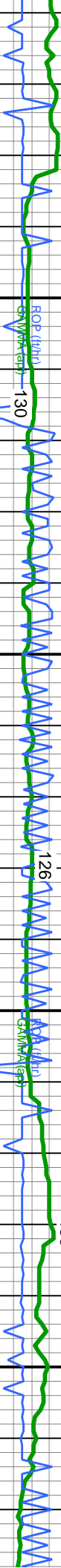
MD: 10,672'
TVD: 6,299.08'
Inclination: 90.9 °
Azimuth: 87.6 °
VS: 4,165.43'

MD: 10,764'
TVD: 6,297.88'
Inclination: 90.6 °
Azimuth: 88.3 °
VS: 4,257.42'

MD: 10,863'
TVD: 6,297.02
Inclination: 90
Azimuth: 89.6
VS: 4,346.41'

Out Mud Wt: 8.7/8.7 Vis 25/25

160



5066u

6000

5040u

5039u

6000

504813u

3382u

4934u

65.8%

14.8%

12.7%

6.7%

64.5

64.5

64.5

64.5

64.5

64.5

64.5

64.5

64.5

64.5

64.5

64.5

64.5

64.5

64.5

64.5

C1

C2

C3

C4

C1-C4

C1-C4

C1-C4

C1-C4

C1-C4

C1-C4

C1-C4

C1-C4

C1-C4

C1-C4

C1-C4

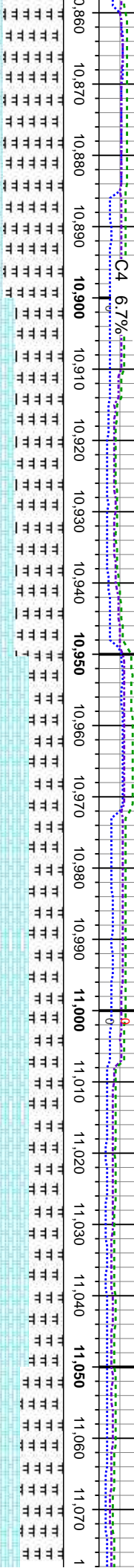
C1-C4

C1-C4

C1-C4

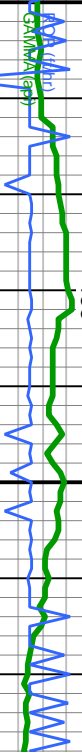
C1-C4

C1-C4



In/Out Mud Wt: 8.7/8.7 Vis 25/25

155



- med gy brn, gy brn, v mot, v sft frm, sb
biky, v calc, crptl, tr fos, MRLST: med -dk
stri, mod frm - hd, sb ply - sb biky, fri-
brit, calc, tr bent w/ pyr

CHK: It - med gy, bf - brn, gy brn, mot, lam, v
sft frm, sb ply-sb biky, v calc, crptl, tr fos; tr bent,
tr pyr; MRLST: med -dk gy, blk, stri, mod frm - hd,
sb ply - sb biky, fri- brit, sil, v calc, tr fos

CHK: It - med gy, bf - brn, gy brn, mot, lam, v
sft frm, sb ply-sb biky, v calc, crptl, tr fos; tr bent,
tr pyr; MRLST: med -dk gy, blk, stri, mod frm - hd,
sb ply - sb biky, fri- brit, sil, v calc, tr fos

CHK: It - med gy, bf - brn, gy brn, mot, lam, v
sft frm, sb ply-sb biky, v calc, crptl, tr fos; tr bent,
tr pyr; MRLST: med -dk gy, blk, stri, mod frm - hd,
sb ply - sb biky, fri- brit, sil, v calc, tr fos

MRLST: med -dk gy, blk, stri,
- sb biky, fri- brit, sil, v calc, tr
gy, bf - brn, gy brn, mot, lam, v
biky, v calc, crptl, tr fos; tr bent

1/4

TVD (ft)

TVD (ft)

MD: 10,944'

TVD: 6,295.99'

Inclination: 90.8°

Azimuth: 89.9°

VS: 4,437.39'

MD: 11,036'

TVD: 6,293.5'

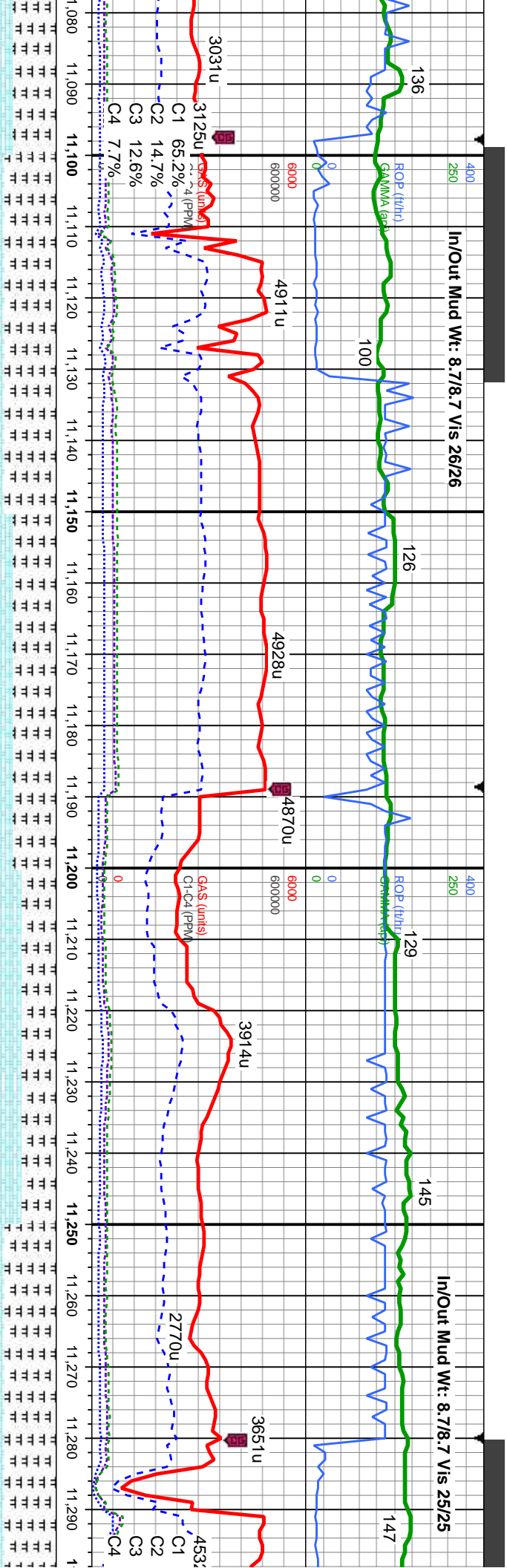
Inclination: 92.3°

Azimuth: 90.2°

VS: 4,529.32'

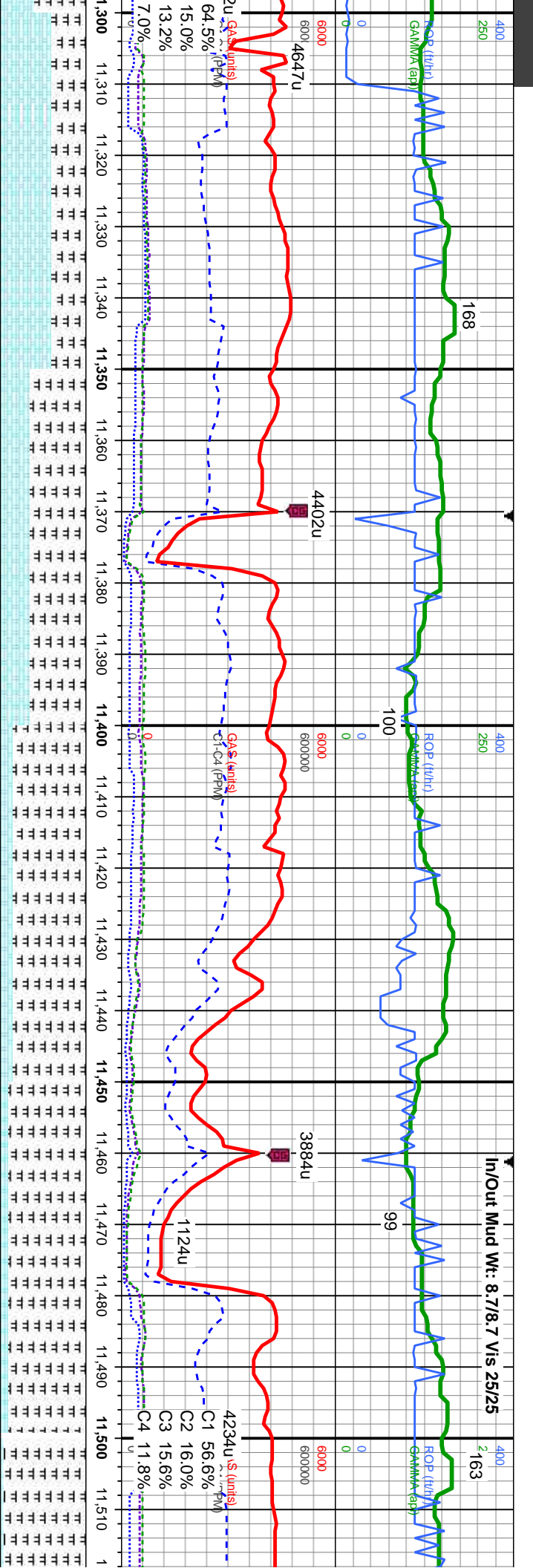
6400

6400



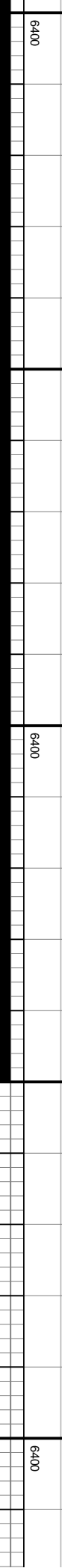
mod frm - hd, sb ply	MRSLT: med -dk gy, blk, stri, mod frm - hd, sb ply	MRSLT: med -dk gy, blk, stri, mod frm - hd, sb ply	CHK: lt - med gy, bf - brn, gy brn, mot, lam, v	MRSLT: med -dk gy, blk, stri, mod frm - hd, sb ply
fos: CHK: lt - med	- sb blk, fri- brt, sil, v calc, tr fos: CHK: lt - med	- sb blk, fri- brt, sil, v calc, tr fos: CHK: lt - med	sft-frm, sb ply-sb blk, v calc, crpxl, tr fos: tr bent, tr pyr	- sb blk, fri- brt, sil, v calc, tr fos: CHK: lt - med
v sft-frm, sb ply-sb	gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb	gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb	tr pyr: MRSLT: med -dk gy, blk, stri, mod frm - hd,	gy, bf - brn, gy brn, mot, lam, v sft-frm, sb ply-sb
nt, tr pyr	blk, v calc, crpxl, tr fos: tr bent, tr pyr	blk, v calc, crpxl, tr fos: tr bent, tr pyr	sb ply - sb blk, fri- brt, sil, v calc, tr fos	blk, v calc, crpxl, tr fos: tr bent, tr pyr

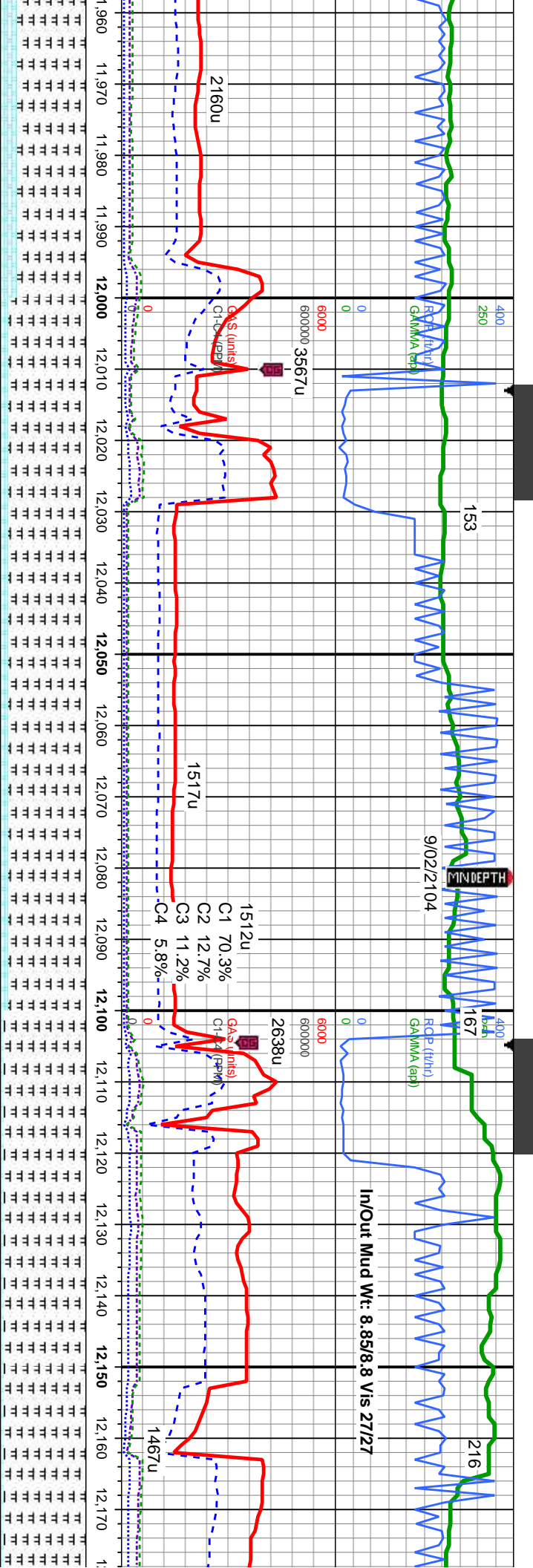
TVD (ft)	TVD (ft)
MD: 11,128'	MD: 11,220'
TVD: 6,291.82'	TVD: 6,291.74'
Inclination: 89.8°	Inclination: 90.3°
Azimuth: 89.7°	Azimuth: 90°
VS: 4,621.27'	VS: 4,713.25'
6400	6400



CHK: It - med gy, bf - brn, gy brn, mot, lam, v stf frm, sb ply-sb blk, v calc, crptxl, tr fos, tr bent, tr pyr, MRLST: med -dk gy, blk, stri, mod frm - hd, sb ply - sb blk, fri- brt, sil, v calc, tr fos	MRLST: med -dk gy, blk, stri, mod frm - hd, sb ply - sb blk, fri- brt, sil, v calc, tr fos: CHK: It - med gy, bf - brn, gy brn, mot, lam, v stf frm, sb ply-sb blk, v calc, crptxl, tr fos, tr bent, tr pyr	MRLST: med -dk gy, blk, stri, mod frm - hd, sb ply - sb blk, fri- brt, sil, v calc, tr fos: CHK: It - med gy, bf - brn, gy brn, mot, lam, v stf frm, sb ply-sb blk, v calc, crptxl, tr fos, tr bent, tr pyr	MRLST: med -dk gy, blk, stri, mod frm - hd, sb ply - sb blk, fri- brt, sil, v calc, tr fos: CHK: It - med gy, bf - brn, gy brn, mot, lam, v stf frm, sb ply-sb blk, v calc, crptxl, abnt fos, tr bent	MRLST: med -dk g - sb blk, fri- brt, si occ It gy, bf - brn, g ply-sb blk, v calc,
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TVD (ft)	TVD (ft)	TVD (ft)
MD: 11,311' TVD: 6,292.21' Inclination: 89.1° Azimuth: 88.4° VS: 4,804.24'	MD: 11,403' TVD: 6,293.66' Inclination: 89.1° Azimuth: 88.4° VS: 4,896.23'	MD: 11,494' TVD: 6,295.01' Inclination: 89.2° Azimuth: 88.7° VS: 4,987.22'





3°

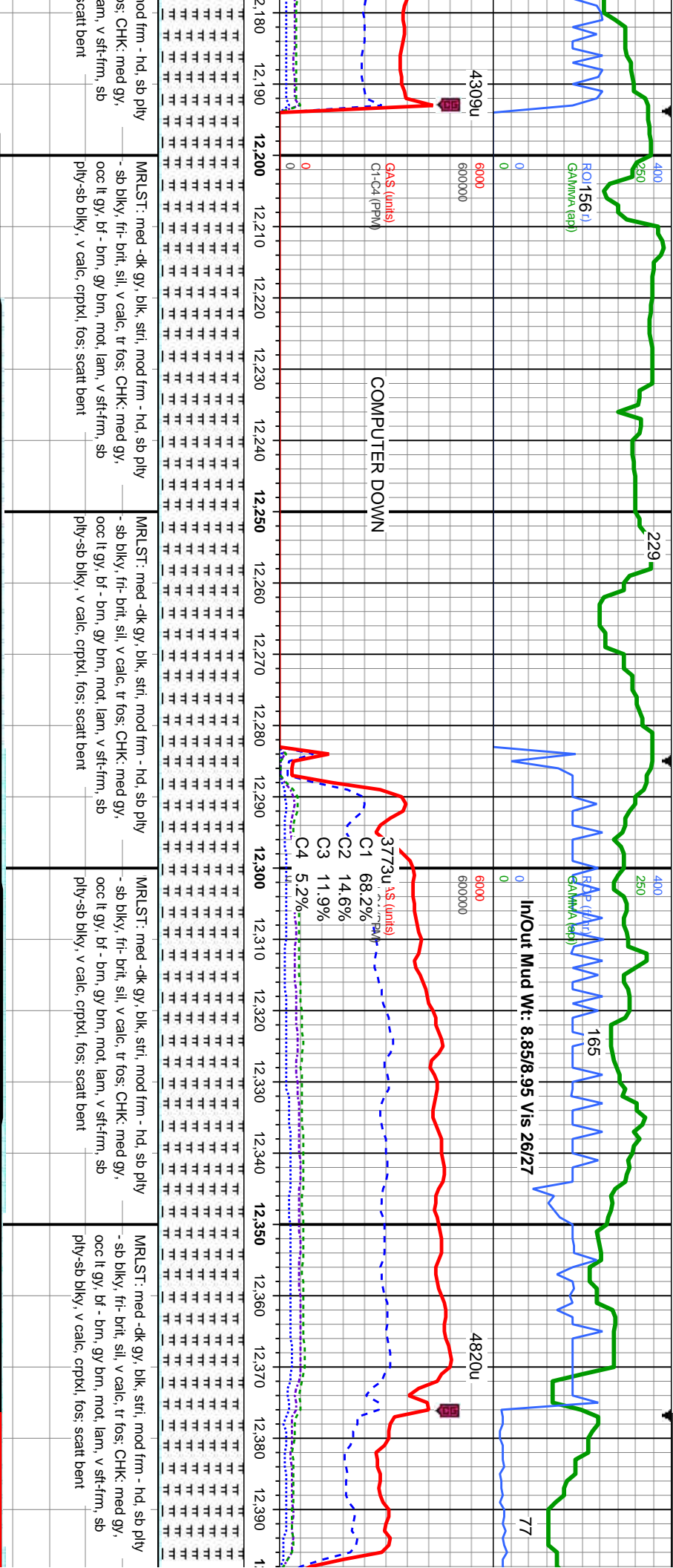
MD: 12,042'
TVD: 6,289.95'
Inclination: 89.9°
Azimuth: 89.1°
VS: 5.535.09'

med -dk gy, blk, stri, mod frm - hd, sb ply
fri- brit, sil, v calc, tr fos: CHK: med gy,
bf - brn, gy brn, mot, lam, v sft-frm, sb
ply-sb blk, v calc, crptxl, fos: abnt bent

MD: 12,133'
TVD: 6,289.87'
Inclination: 90.2°
Azimuth: 88.4°
VS: 5.626.09'

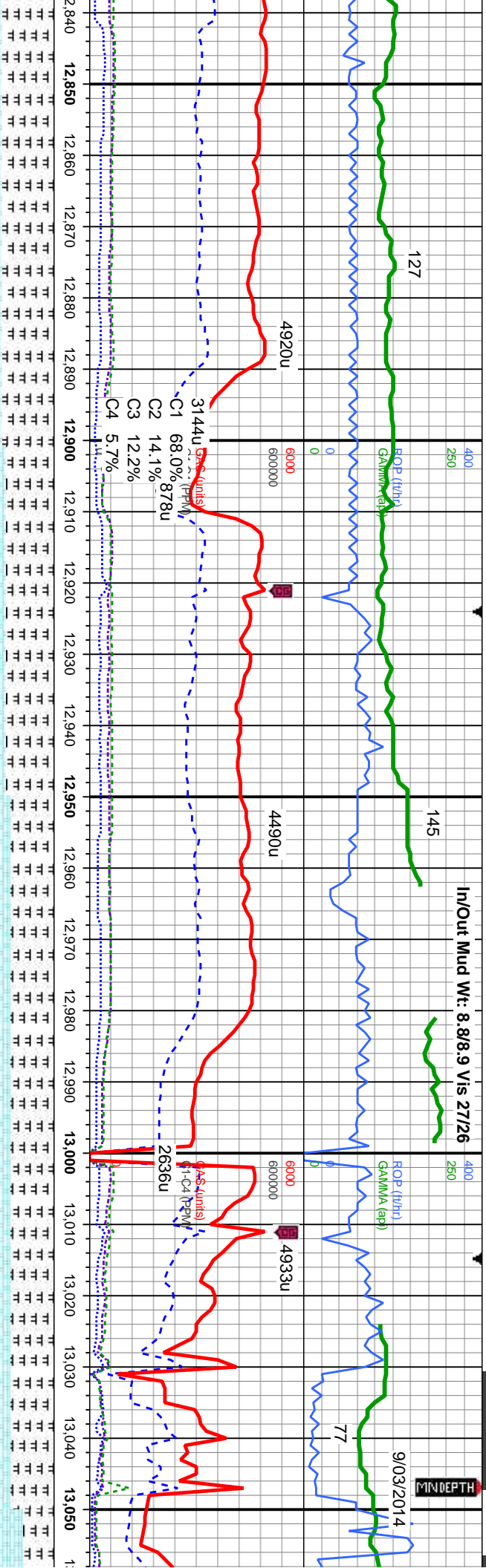
med -dk gy, blk, stri, mod frm - hd, sb ply
fri- brit, sil, v calc, tr fos: CHK: med gy,
bf - brn, gy brn, mot, lam, v sft-frm, sb
ply-sb blk, v calc, crptxl, fos: abnt bent

MD: 12,133'
TVD: 6,289.87'
Inclination: 90.2°
Azimuth: 88.4°
VS: 5.626.09'



MD: 12,224'
TVD: 6,287.02'
Inclination: 90.6°
Azimuth: 87.9°
VS: 5,717.04'

MD: 12,316'
TVD: 6,286.21'
Inclination: 90.4°
Azimuth: 88.5°
VS: 5,809.04'



MD: 12,864'
TVD: 6,284.68'
Inclination: 91.5°
Azimuth: 87.4°
VS: 6,356.5'

MD: 12,954'
TVD: 6,281.62'
Inclination: 92.4°
Azimuth: 87.5°
VS: 6,446.43'

MD: 13,045'
TVD: 6,277.97'
Inclination: 92.2°
Azimuth: 88°
VS: 6,537.35'

TVD (ft)

TVD (ft)

d, sb pity
ed gy,
m, sb

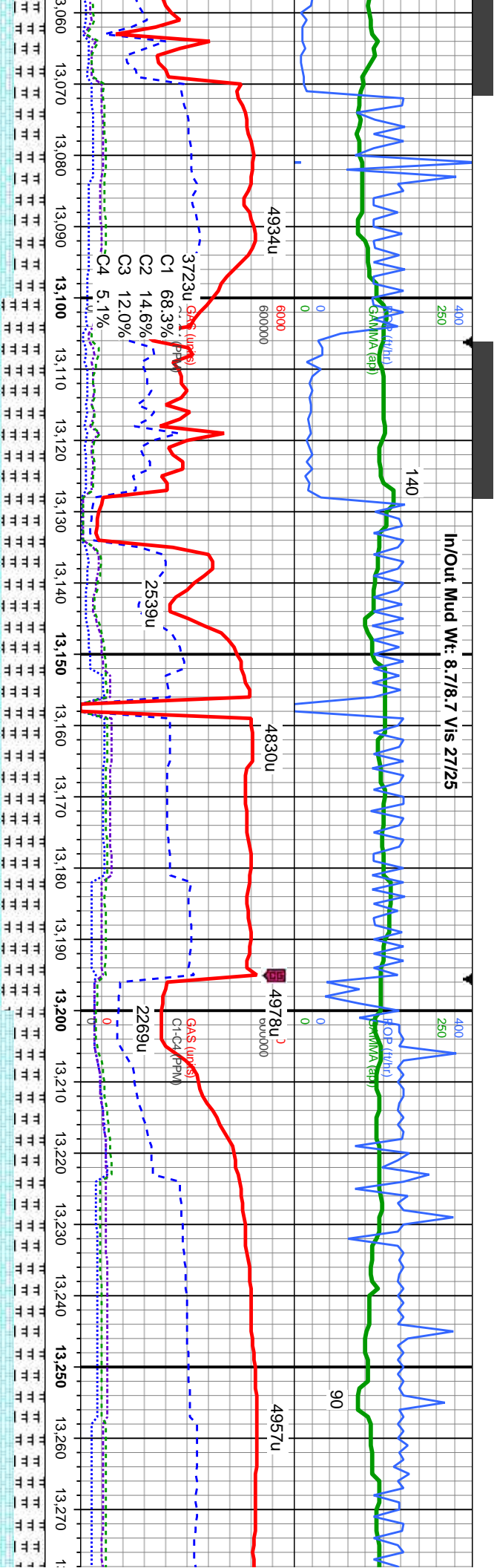
MLRSL1: med-dk gy, blk, stri, mod frm - hd, sb ply
-sb blkly, fri-brt, sil, v calc, tr fos; CHK: med gy,
-occ it gy, bf -bm, gy brn, mot, lam, v sft-frm, sb
ply-sb blkly, v calc, cpxtx, fos, scatt bent

MRLST: med-dk gy, blk, stri, mod frm - hd, sb ply
 -sb blkly, fri-brit, sil, v calc, tr fos; CHK: med gy,
 -occ it gy, bf -bm, gy brn, mot, lam, v sft-frm, sb
 ply-sb blkly, v calc, cipxk, fos; scatt bent

MRLST: med -dk gy, blk, stri, mod frm - hd, sb ply
 - sb bkly, fri- brit, sil, v calc, tr fos; CHK: med gy,
 - occ it gy, bf - brn, gy brn, mod, lam, v sft-frm, sb
 ply-sb bkly, v calc, cipxal, fos, scatt bent

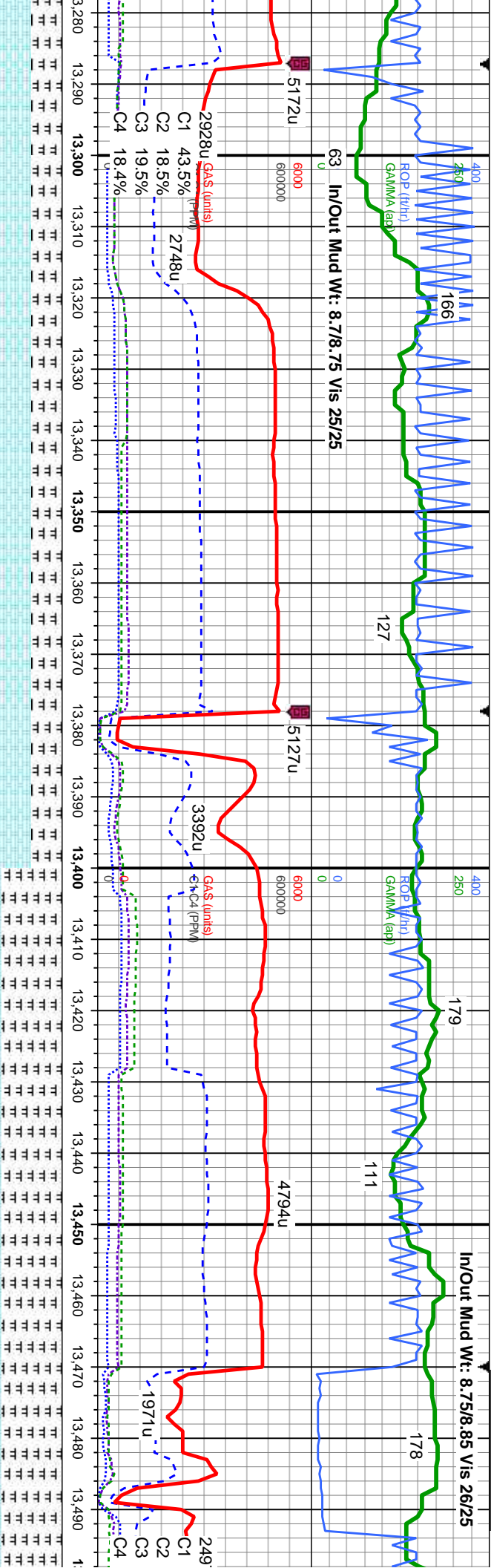
—MRSLT: med-dk gy, blk, strī, mod frm - hd, sb ply
 -sb blkly, fri-brī, sil, v calc, t' fos; CHK: med gy,
 -occ it gy, bf -bm, gy brn, mot, lam, v sft-frm, sb
 ply-sb blkly, v calc, cripxl, fos; scatt bent

CHK: It
sb pity-
blk, stri,
calc, tr f



6200	MD: 13,136' TVD: 6,276.62' Inclination: 89.5 ° Azimuth: 88.1 ° VS: 6,628.32'	6200	MD: 13,228' TVD: 6,277.34' Inclination: 89.6 ° Azimuth: 88.4 ° VS: 6,720.32'
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TVD (ft)	TVD (ft)
gy-med gy, bf-brn, crm, mot, lam, v sft-firm, sb biky, v calc, crptxl; MRLST: med-dk gy, mod frm-hd, sb ply-sb biky, fr-brit, sil, v tr fos; tr bent	CHK: med gy-dk gy, bf-brn, mot, lam, v sft-firm, sb ply-sb biky, v calc, crptxl; MRLST: med-dk gy, blk, stri, mod frm-hd, sb ply-sb biky, fr-brit, sil, v calc, tr fos; tr bent
CHK: med gy-dk gy, bf-brn, mot, lam, v sft-firm, sb ply-sb biky, v calc, crptxl; MRLST: med-dk gy, blk, stri, mod frm-hd, sb ply-sb biky, fr-brit, sil, v calc, tr fos; tr bent	CHK: med gy-dk gy, bf-brn, mot, lam, v sft-firm, sb ply-sb biky, v calc, crptxl; MRLST: med-dk gy, blk, stri, mod frm-hd, sb ply-sb biky, fr-brit, sil, v calc, tr fos; tr bent



MD: 13,320'
TVD: 6,277.1'
Inclination: 90.7°
Azimuth: 88.4°
VS: 6,812.32'

CHK: med gy-dk gy, bf-brn, mot, lam, v sft-fm, sb
ply-sb blk, v calc, crpxl; MRLST: med-dk gy, blk,
stri, mod frm-hd, sb ply-sb blk, fr-brit, sil, v calc,
tr fos; tr bent

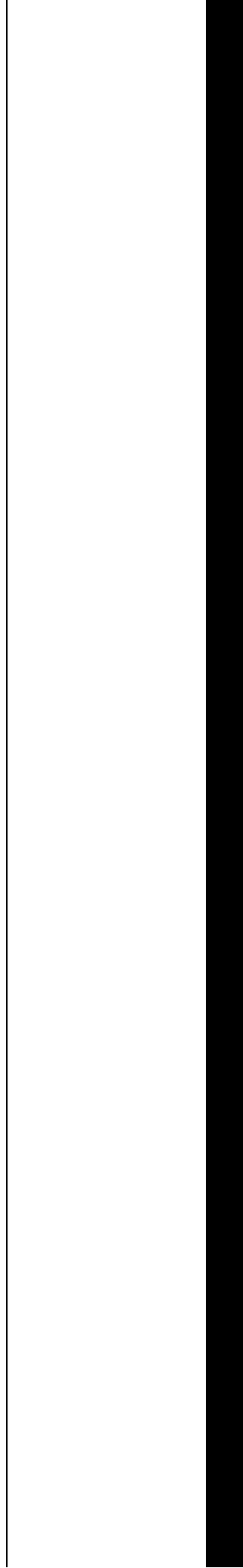
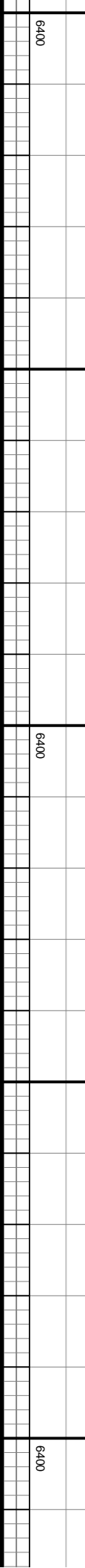
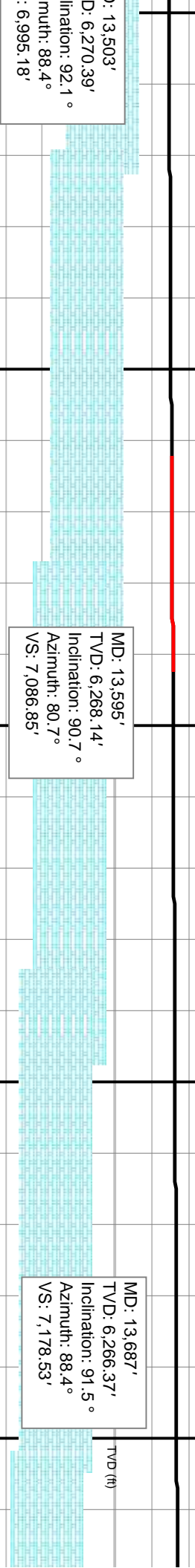
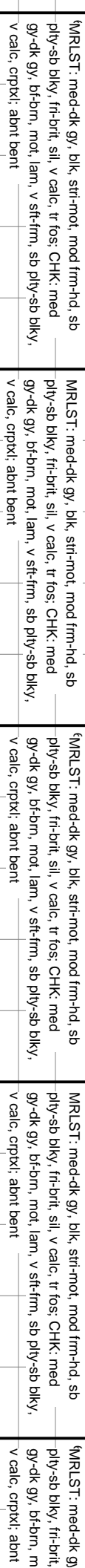
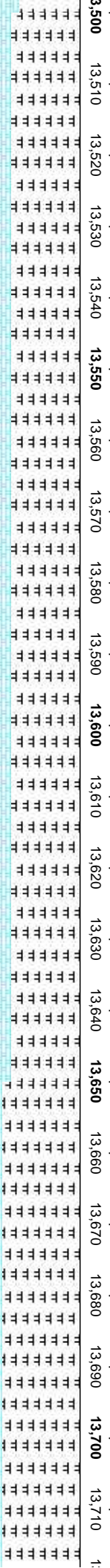
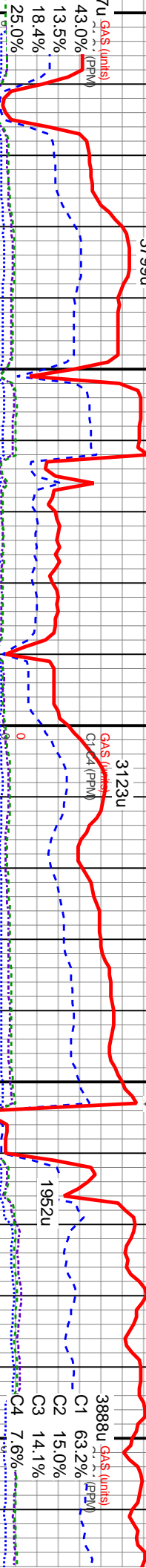
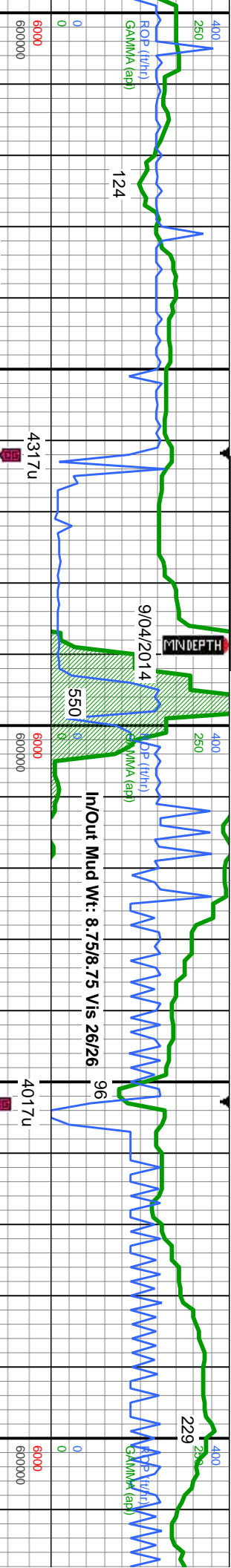
MD: 13,411'
TVD: 6,274.32'
Inclination: 92.8°
Azimuth: 87.7°
VS: 6,903.26'

MRLST: med-dk gy, blk, stri-mot, mod frm-hd, sb
ply-sb blk, fr-brit, sil, v calc, tr fos; CHK: med
gy-dk gy, bf-brn, mot, lam, v sft-fm, sb ply-sb blk,
v calc, crpxl; tr bent

MRLST: med-dk gy, blk, stri-mot, mod frm-hd, sb
ply-sb blk, fr-brit, sil, v calc, tr fos; CHK: med
gy-dk gy, bf-brn, mot, lam, v sft-fm, sb ply-sb blk,
v calc, crpxl; tr bent

CHK: med gy-dk gy, bf-brn, mot, lam, v sft-fm, sb
ply-sb blk, v calc, crpxl; MRLST: med-dk gy, blk,
stri, mod frm-hd, sb ply-sb blk, fr-brit, sil, v calc,
tr fos; tr bent

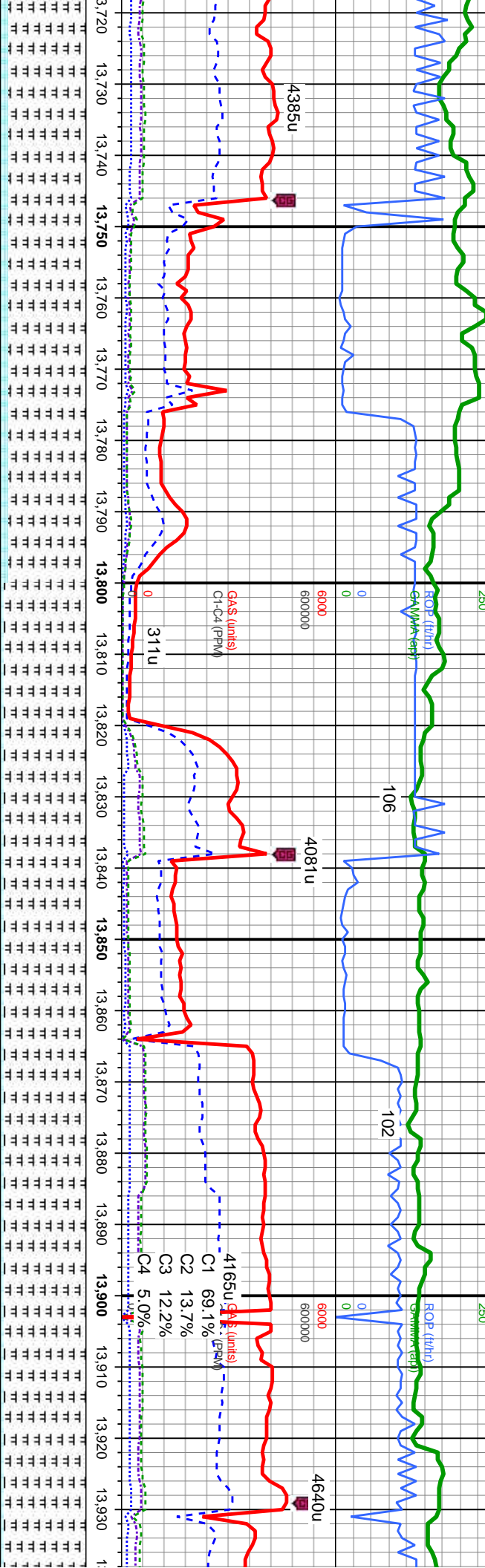
MC
TV
Inc
Azi
VS



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In/Out Mud Wt: 8.8/8.8 Vis 26/26

In/Out Mud Wt: 8.8/8.85 Vis 26/27



blk, strf-mot, mod frm-hd, sb
sil, v calc, tr fos, CHK: med
ot, lam, v sft-frm, sb ply-sb blk, bent

MRSLT: med-dk gy, blk, strf-mot, mod frm-hd, sb
ply-sb blk, fri-brt, sil, v calc, tr fos, CHK: med
gy-dk gy, bf-brn, mot, lam, v sft-frm, sb ply-sb blk, v calc, crpxl: abnt bent

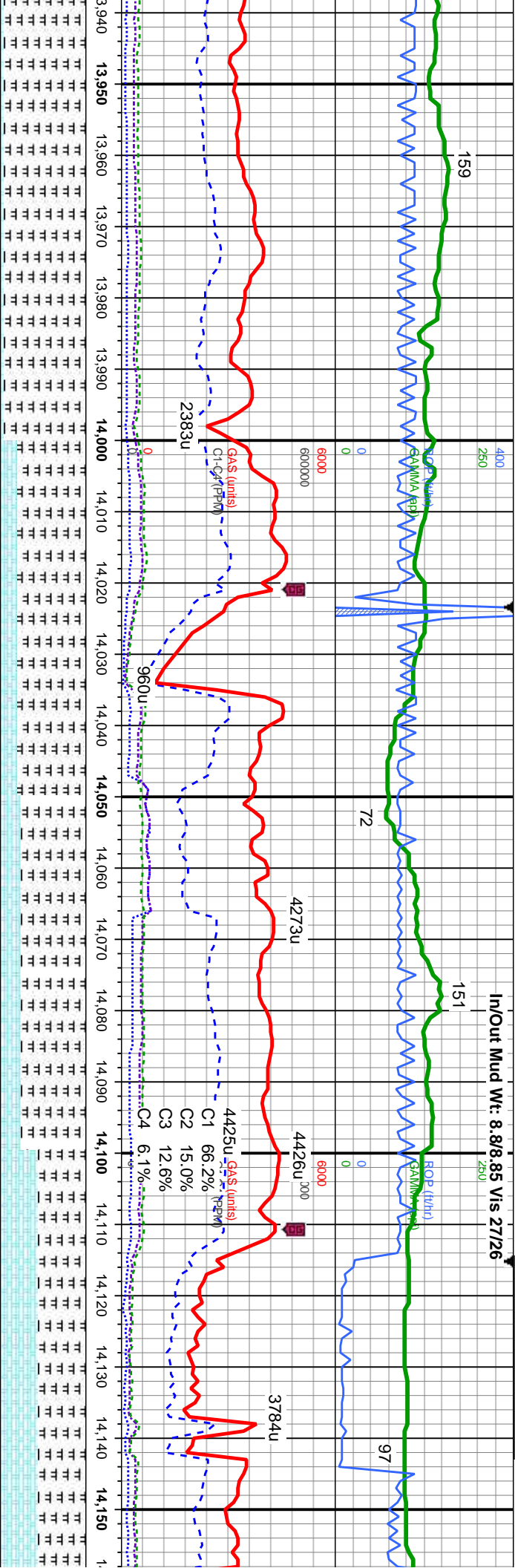
MD: 13,779'
TVD: 6,264.68'
Inclination: 90.6°
Azimuth: 88.9°
VS: 7,270.52'

MRSLT: med-dk gy, blk, strf-mot, mod frm-hd, sb
ply-sb blk, fri-brt, sil, v calc, tr fos, CHK: med
gy-dk gy, bf-brn, mot, lam, v sft-frm, sb ply-sb blk, v calc, crpxl: abnt bent

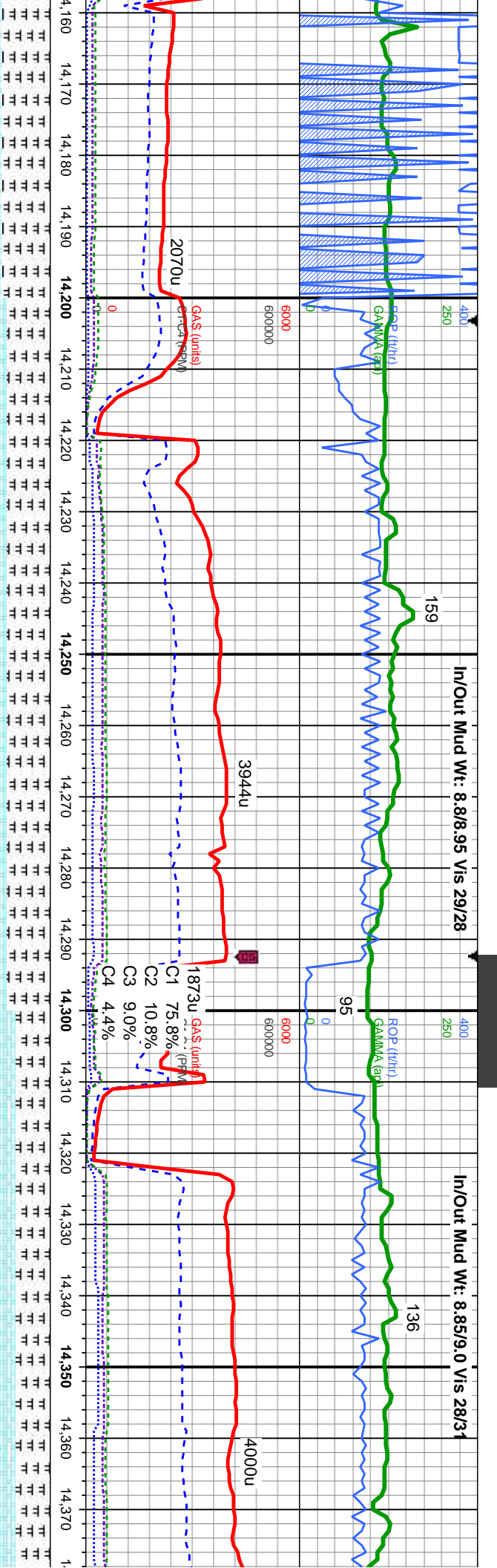
MD: 13,870'
TVD: 6,265'
Inclination: 89°
Azimuth: 89.2°
VS: 7,361.51'

MRSLT: med-dk gy, blk, strf-mot, mod frm-hd, sb
ply-sb blk, fri-brt, sil, v calc, tr fos, CHK: med
gy-dk gy, bf-brn, mot, lam, v sft-frm, sb ply-sb blk, v calc, crpxl: abnt bent

MRSLT: med-dk gy, blk, strf-mot, mod frm-hd, sb
ply-sb blk, fri-brt, sil, v calc, tr fos, CHK: med
gy-dk gy, bf-brn, mot, lam, v sft-frm, sb ply-sb blk, v calc, crpxl: abnt bent



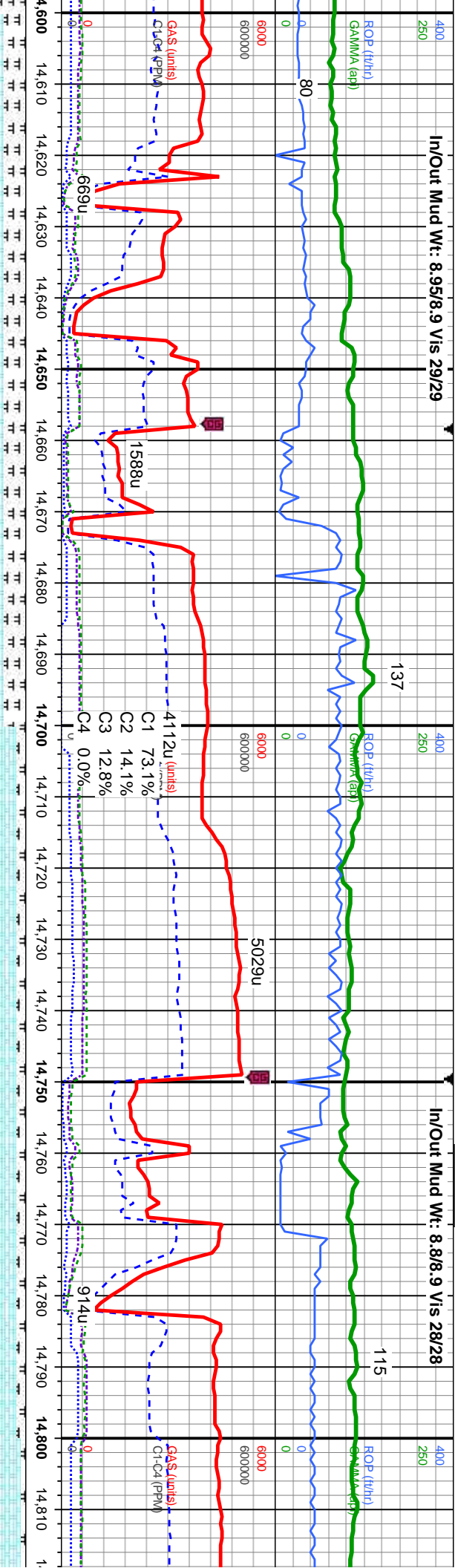
MD: 13,963' TVD: 6,265.89' Inclination: 89.9 ° Azimuth: 89.2 ° VS: 7,454.5'		MD: 14,054' TVD: 6,265.42' Inclination: 90.7 ° Azimuth: 88.7 ° VS: 7,545.5'		MD: 14,145' TVD: 6,266.21' Inclination: 88.3 ° Azimuth: 89.1 ° VS: 7,636.48'	
MRSLST: med-dk gy, blk, str-mot, mod frm-hd, sb	MRSLST: med-dk gy, blk, str-mot, mod frm-hd, sb	MRSLST: med-dk gy, blk, str-mot, mod frm-hd, sb	MRSLST: med-dk gy, blk, str-mot, mod frm-hd, sb	MRSLST: med-dk gy, blk, str-mot, mod frm-hd, sb	MRSLST: med-dk gy, blk, str-mot, mod frm-hd, sb
ply-sb blk, fr-brit, sil, v calc, tr fos; CHK: med	ply-sb blk, fr-brit, sil, v calc, tr fos; CHK: med	ply-sb blk, fr-brit, sil, v calc, tr fos; CHK: med	ply-sb blk, fr-brit, sil, v calc, tr fos; CHK: med	ply-sb blk, fr-brit, sil, v calc, tr fos; CHK: med	ply-sb blk, fr-brit, sil, v calc, tr fos; CHK: med
gy-dk gy, bf-brn, mot, lam, v sft-frm, sb ply-sb blk,	gy-dk gy, bf-brn, mot, lam, v sft-frm, sb ply-sb blk,	gy-dk gy, bf-brn, mot, lam, v sft-frm, sb ply-sb blk,	gy-dk gy, bf-brn, mot, lam, v sft-frm, sb ply-sb blk,	gy-dk gy, bf-brn, mot, lam, v sft-frm, sb ply-sb blk,	gy-dk gy, bf-brn, mot, lam, v sft-frm, sb ply-sb blk,
v calc, crpxl; abnt bent	v calc, crpxl; tr inoc fos, tr cal	v calc, crpxl; tr inoc fos, tr cal	v calc, crpxl; tr inoc fos, tr cal	v calc, crpxl; tr inoc fos, tr cal	v calc, crpxl; tr inoc fos, tr cal
6400	6400	6400	6400	6400	6400



6200		6200	
TVD (ft)		TVD (ft)	
MD: 14,235' TVD: 6,267.39' Inclination: 90.2° Azimuth: 91.8° VS: 7,726.42'		MD: 14,326' TVD: 6,268.1' Inclination: 88.9° Azimuth: 89.7° VS: 7,817.34'	
MRLST: med-dk gy, blk, stri-mot, mod frm-hd, sb ply-sb blk, fri-brt, sil, v calc; CHK: med gy-dk gy, bf-brn, mot, lam, v sft-frm, sb ply-sb blk, v calc, cpixl; tr inoc fos, tr cal, com bent		MRLST: med-dk gy, blk, stri-mot, mod frm-hd, sb ply-sb blk, fri-brt, sil, v calc; CHK: med gy-dk gy, bf-brn, mot, lam, v sft-frm, sb ply-sb blk, v calc, cpixl; tr inoc fos, tr cal, com bent	
med-dk gy, blk, stri-mot, mod frm-hd, sb ply-sb blk, fri-brt, sil, v calc; CHK: med gy-dk gy, bf-brn, mot, lam, v sft-frm, sb ply-sb blk, v calc, cpixl; tr inoc fos, tr cal		CHK: med gy-dk gy, bm, some sft-frm, sb ply-sb blk, v calc, c med-dk gy, blk, stri-mot, mod fr blk, fri-brt, sil, v calc; tr inoc to	

In/Out Mud Wt: 8.95/8.9 Vis 29/29

In/Out Mud Wt: 8.8/8.9 Vis 28/28



98'
88.48'
i: 89.6 °
87.3°
.28'

MD: 14,690'
TVD: 6,267.59'
Inclination: 91.5 °
Azimuth: 88.3°
VS: 8,181.26'

MD: 14,782'
TVD: 6,265.99'
Inclination: 90.5 °
Azimuth: 88.4°
VS: 8,273.25'

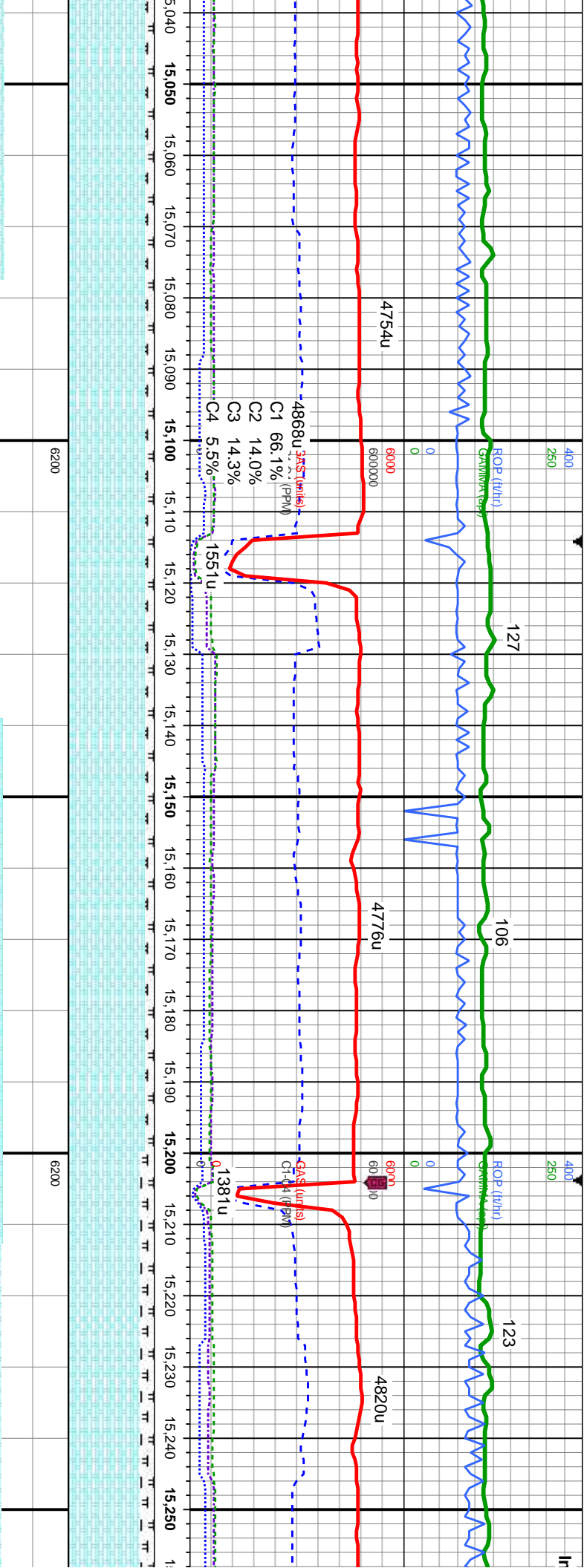
CHK: It gy-dk gy, brn, some crm, mot, lam, v sft-frm,
sb pily-sb blkly, v calc, crptxl: MRLST: med-dk gy,
blk, str-mot, mod frm-hd, sb pily-sb blkly, fr-brt, sil,
v calc: tr inoc fos, tr cal, com bent

CHK: It gy-dk gy, brn, some crm, mot, lam, v sft-frm,
sb pily-sb blkly, v calc, crptxl: MRLST: med-dk gy,
blk, str-mot, mod frm-hd, sb pily-sb blkly, fr-brt, sil,
v calc: tr inoc fos, tr cal, com bent

CHK: It gy-dk gy, brn, some crm, mot, lam, v sft-frm,
sb pily-sb blkly, v calc, crptxl: MRLST: med-dk gy,
blk, str-mot, mod frm-hd, sb pily-sb blkly, fr-brt, sil,
v calc: tr inoc fos, tr cal, com bent

CHK: It gy-dk gy, brn, some crm, mot, lam, v sft-frm,
sb pily-sb blkly, v calc, crptxl: MRLST: med-dk gy,
blk, str-mot, mod frm-hd, sb pily-sb blkly, fr-brt, sil,
v calc: tr inoc fos, tr cal, com bent

CHK: It gy-dk gy, brn, some crm, mot, lam, v sft-frm,
sb pily-sb blkly, v calc, crptxl: MRLST: med-dk gy,
blk, str-mot, mod frm-hd, sb pily-sb blkly, fr-brt, sil,
v calc: tr inoc fos, tr cal, com bent



MD: 15,055'
TVD: 6,263.45'
Inclination: 90.5°
Azimuth: 87.7°
VS: 8,546.23'

CHK: lt gy-dk gy, brn, some crm, mot, lam, v sft-frm,
sb ply-sb blk, v calc, crpxl: MRLST: med-dk gy,
blk, str-mot, mod frm-hd, sb ply-sb blk, fr-brt, sil,
v calc; tr inoc fos, tr cal, tr bent

MD: 15,145'
TVD: 6,263.45'
Inclination: 89.5°
Azimuth: 87°
VS: 8,636.21'

CHK: lt gy-dk gy, brn, some crm, mot, lam, v sft-frm,
sb ply-sb blk, v calc, crpxl: MRLST: med-dk gy,
blk, str-mot, mod frm-hd, sb ply-sb blk, fr-brt, sil,
v calc; tr inoc fos, tr cal, tr bent

MD: 15,240'
TVD: 6,264.36'
Inclination: 89.4°
Azimuth: 86.9°
VS: 8,731.17'

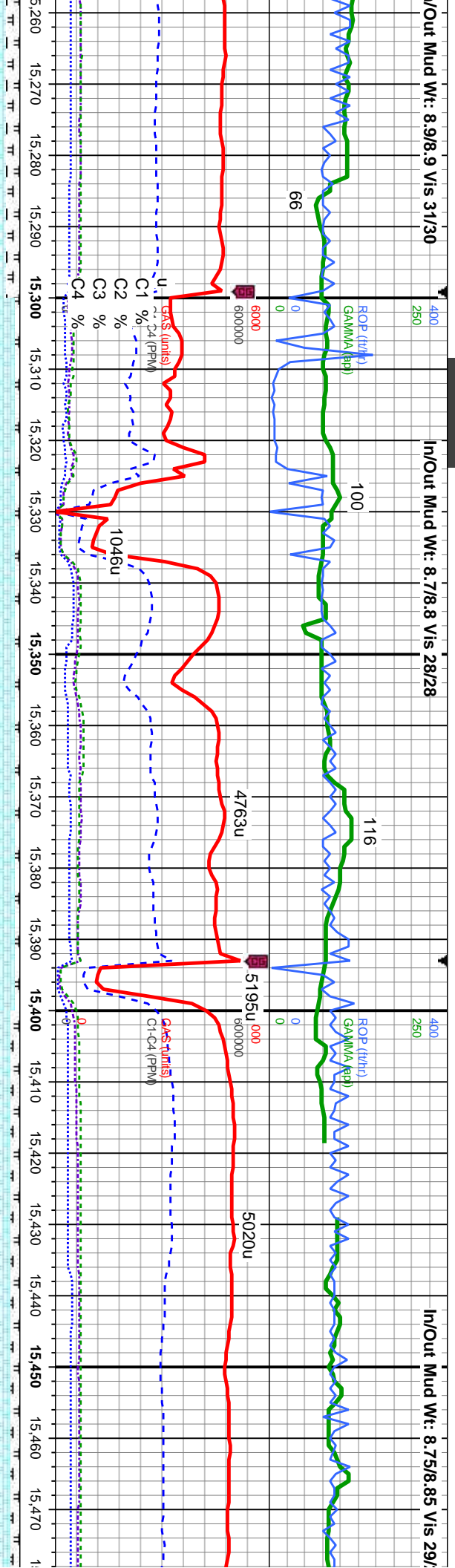
CHK: lt gy-dk gy, brn, some crm, mot, lam, v sft-frm,
sb ply-sb blk, v calc, crpxl: MRLST: med-dk gy,
blk, str-mot, mod frm-hd, sb ply-sb blk, fr-brt, sil,
v calc; tr inoc fos, tr cal, tr bent

CHK: lt gy-dk gy, brn, some crm, mot, lam, v sft-frm,
sb ply-sb blk, v calc, crpxl: MRLST: med-dk gy,
blk, str-mot, mod frm-hd, sb ply-sb blk, fr-brt, sil,
v calc; tr inoc fos, tr cal, tr bent

In/Out Mud Wt: 8.9/8.9 Vis 31/30

In/Out Mud Wt: 8.7/8.8 Vis 28/28

In/Out Mud Wt: 8.75/8.85 Vis 29/



6200

6200

MD: 15,335'
TVD: 6,263.53'
Inclination: 91.6°
Azimuth: 87.7°
VS: 8,826.13'

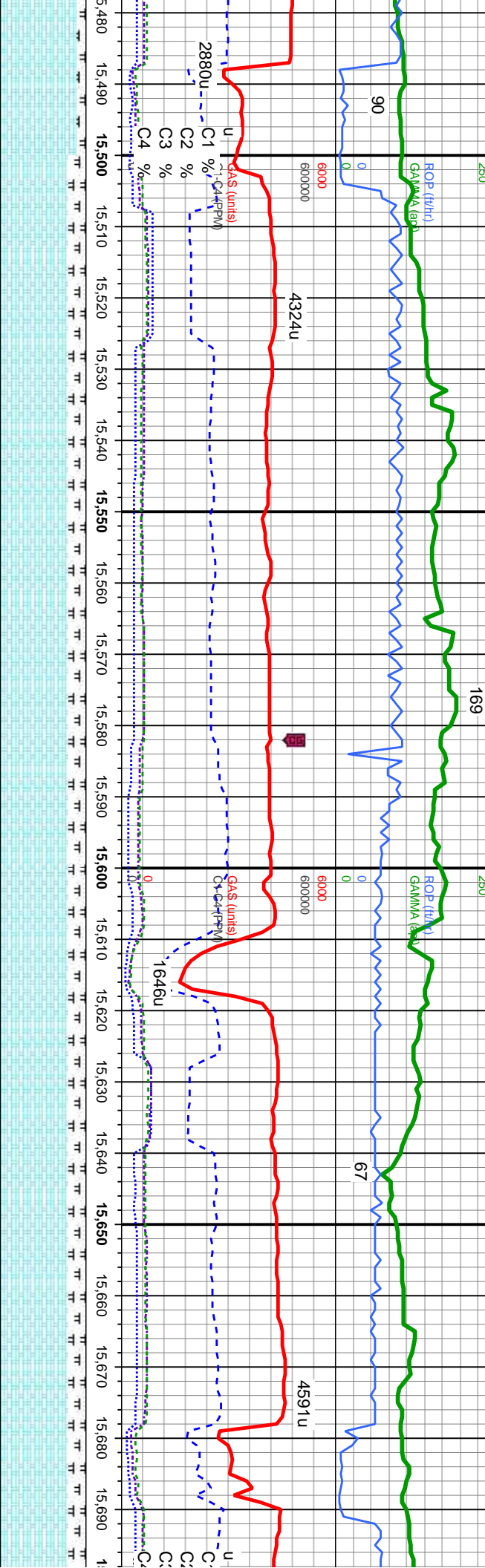
MD: 15,429'
TVD: 6,260.58'
Inclination: 92°
Azimuth: 87.7°
VS: 8,920.07'

gy-dk gy, brn, some crn, mot, lam, v sft-frn, sb ply-sb blk, v calc, crptxt: MRLST: med-dk gy, mot, mod frm-hd, sb ply-sb blk, fr-brt, sil, inoc fos, tr cal, tr bent

CHK: It gy-med gy, brn, crn, mot, lam, v sft-frn, sb ply-sb blk, v calc, crptxt: MRLST: med-dk gy, blk, str-mot, mod frm-hd, sb ply-sb blk, fr-brt, sil, v calc: tr inoc fos, tr cal, tr bent

CHK: It gy-med gy, brn, crn, mot, lam, v sft-frn, sb ply-sb blk, v calc, crptxt: MRLST: med-dk gy, blk, str-mot, mod frm-hd, sb ply-sb blk, fr-brt, sil, v calc: tr inoc fos, tr cal, tr bent

CHK: It gy-med gy, brn, crn, mot, lam, v sft-frn, sb ply-sb blk, v calc, crptxt: MRLST: med-dk gy, blk, str-mot, mod frm-hd, sb ply-sb blk, fr-brt, sil, v calc: tr inoc fos, tr cal, tr bent

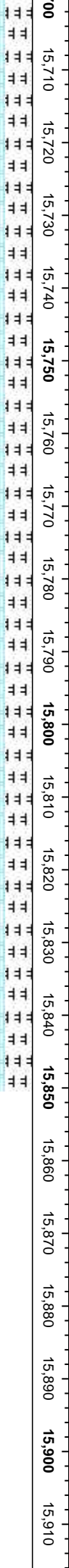
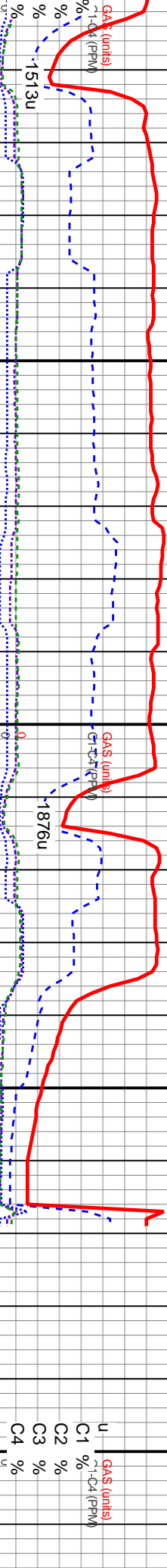
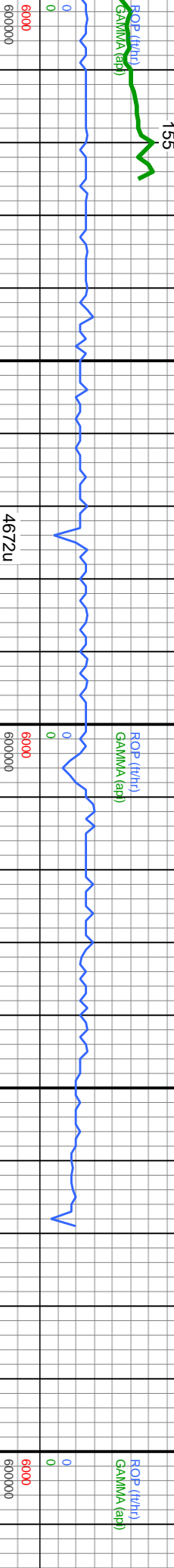
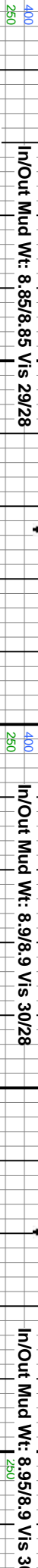


6200	6200
MD: 15,524' TVD: 6,257.93' Inclination: 91.2 ° Azimuth: 88.5° VS: 9,015.03'	MD: 15,619' TVD: 6,255.44' Inclination: 91.8 ° Azimuth: 88.7° VS: 9,110'
CHK: It gy-dk gy, brn, crm, mot, lam, v sft-frm, sb ply-sb blk, v calc, crptxt: MRLST: med-dk gy, blk, sft-mot, mod frm-hd, sb ply-sb blk, fr-brt, sil, v calc: tr inoc fos, tr cal, tr bent	CHK: It gy-dk gy, brn, crm, mot, lam, v sft-frm, sb ply-sb blk, v calc, crptxt: MRLST: med-dk gy, blk, sft-mot, mod frm-hd, sb ply-sb blk, fr-brt, sil, v calc: tr inoc fos, tr cal, tr bent
ot, lam, v sft-frm, sb	CHK: It gy-dk gy, brn, crm, mot, lam, v sft-frm, sb ply-sb blk, v calc, crptxt: MRLST: med-dk gy, blk, sft-mot, mod frm-hd, sb ply-sb blk, fr-brt, sil, v calc: tr inoc fos, tr cal, tr bent
ST: med-dk gy, blk,	CHK: It gy-dk gy, brn, crm, mot, lam, v sft-frm, sb ply-sb blk, v calc, crptxt: MRLST: med-dk gy, blk, sft-mot, mod frm-hd, sb ply-sb blk, fr-brt, sil, v calc: tr inoc fos, tr cal, tr bent
blk, fr-brt, sil, v	CHK: It gy-dk gy, brn, crm, mot, lam, v sft-frm, sb ply-sb blk, v calc, crptxt: MRLST: med-dk gy, blk, sft-mot, mod frm-hd, sb ply-sb blk, fr-brt, sil, v calc: tr inoc fos, tr cal, tr bent

In/Out Mud Wt: 8.85/8.85 Vis 29/28

In/Out Mud Wt: 8.9/8.9 Vis 30/28

In/Out Mud Wt: 8.95/8.9 Vis 30/28



MD: 15,714'
TVD: 6,253.92'
Inclination: 90.03 °
Azimuth: 90.4°
VS: 9,204.96'

MD: 15,809'
TVD: 6,252.98'
Inclination: 91.1 °
Azimuth: 90.1°
VS: 9,299.92'

CHK: It gy-dk gy, brn, crm, mot, lam, v sft-frn, sb
ply-sb blk, v calc, crptxt, MRLST: med-dk gy, blk,
sft-mot, mod frm-hd, sb ply-sb blk, fr-brt, sil, v
calc: tr inoc fos, tr cal, tr bent

CHK: It gy-dk gy, brn, crm, mot, lam, v sft-frn, sb
ply-sb blk, v calc, crptxt, MRLST: med-dk gy, blk,
sft-mot, mod frm-hd, sb ply-sb blk, fr-brt, sil, v
calc: tr inoc fos, tr cal, tr bent

6400

6400

