



Scale: 5" / 100'
Measured Depth Log

Well Name GLEASON LC26-720

Location SESE 26 9N 59W

State COLORADO

County WELD

Country USA

Rig Number H&P #273

API Number 05-123-40689

AFE # 200374

Region DJ BASIN

Field WATTENBERG

Spud Date 4/27/2015

Drilling Completed 5/2/2015

Surface Coordinates LAT: 40.71574

LONG: -103.93774

500' FSL

626' FEL

Bottom Hole Coordinates PROJECTED:

330' FNL

660' FEL

Ground Elevation 4888'

K.B. Elevation 4912'

Logged Interval 800' To 10160'

Total Depth 10160'

Formation NIOBRARA A CHALK

Type of Drilling Fluid H2O, LSND

Operator

Company Noble Energy Inc.

Address 1625 BROADWAY
DENVER, CO 80202
(303) 228-4000

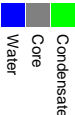
Geologists

Name MICHAEL ANDERSON, SHANNA GILBERT,

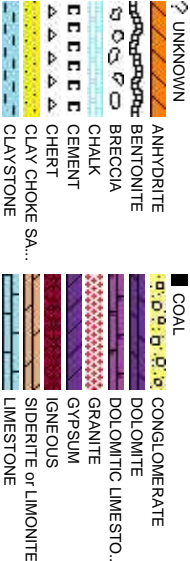
Company COLUMBINE LOGGING, INC.

Address 602 S. LIPAN ST
DENVER, COLORADO 80223
(303) 289-7764

Zone Color Cc



Rock Type



Accessories

Fossils		Stringer	
GASTROPOD	ARGILLITE GRAIN	HEAVY MINERAL	
INOCERAMUS	B BENTONITE	K KAOLIN	
ALGAE	O OOLITE	M MARCASITE	
AMPHIPORA	O OSTRACOD	BIT BITUMENOUS SUBSTANCE	ANHYDRITE STRINGER
BELEMNITE	P PELLET	B BRECCIA FRAGMENTS	BENTONITE STRINGER
BIOCLASTIC	P PISOLUTE	C CALCAREOUS	COAL STRINGER
BRACHIOPOD	PLANT REMAINS	CARBONACEOUS FLAKES	DOLOMITE STRINGER
BRYOZOA	CHERT	CHERT	GYPSUM STRINGER
CEPHALOPOD	COAL - THIN BEDS	N NODULES	LIMESTONE STRINGER
CORAL	DOLOMITIC	PHOSPHATE PELLET	MARLSTONE (CALC) STRG
CRINOID	F FELDSPAR	P PYRITE	MARLSTONE (DOL) STRG
ECHINOID	FERRUGINOUS PELLET	S SALT CAST	SANDSTONE STRINGER
FISH	F FERRUGINOUS	S SANDY	SHALE STRINGER
FORAMINIFERA	GLAUCONITE	S SIDERITE	SILTSTONE STRINGER
F FOSSIL	G GYPSIFEROUS	S SILTY	
	ARGILLACEOUS	T TUFFACEOUS	

TRACY LAWSON

Other Symbols

Oil Show		Engineering	
P PINPOINT	DST INTERVAL	WIRELINE TESTED - LE...	E EARTHY
V VUGGY	FAULT	WIRELINE TESTED - RT	FX FINELYXLN
D DEAD	FORMATION TOP	DRILL STEM TEST	GS GRAINSTONE
E EVEN	GAS SHOW	MN DEPTH	L LITHOGRAPHIC
Q QUESTIONABLE	OIL SHOW	MN DEPTH	MX MICROXLN
SPOTTED STAIN...	CONNECTION (UP)	MN DEPTH UP	MS MUDSTONE

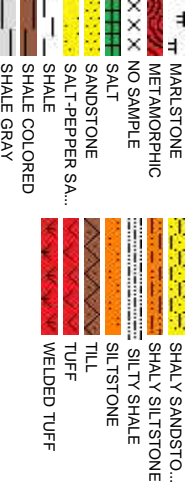
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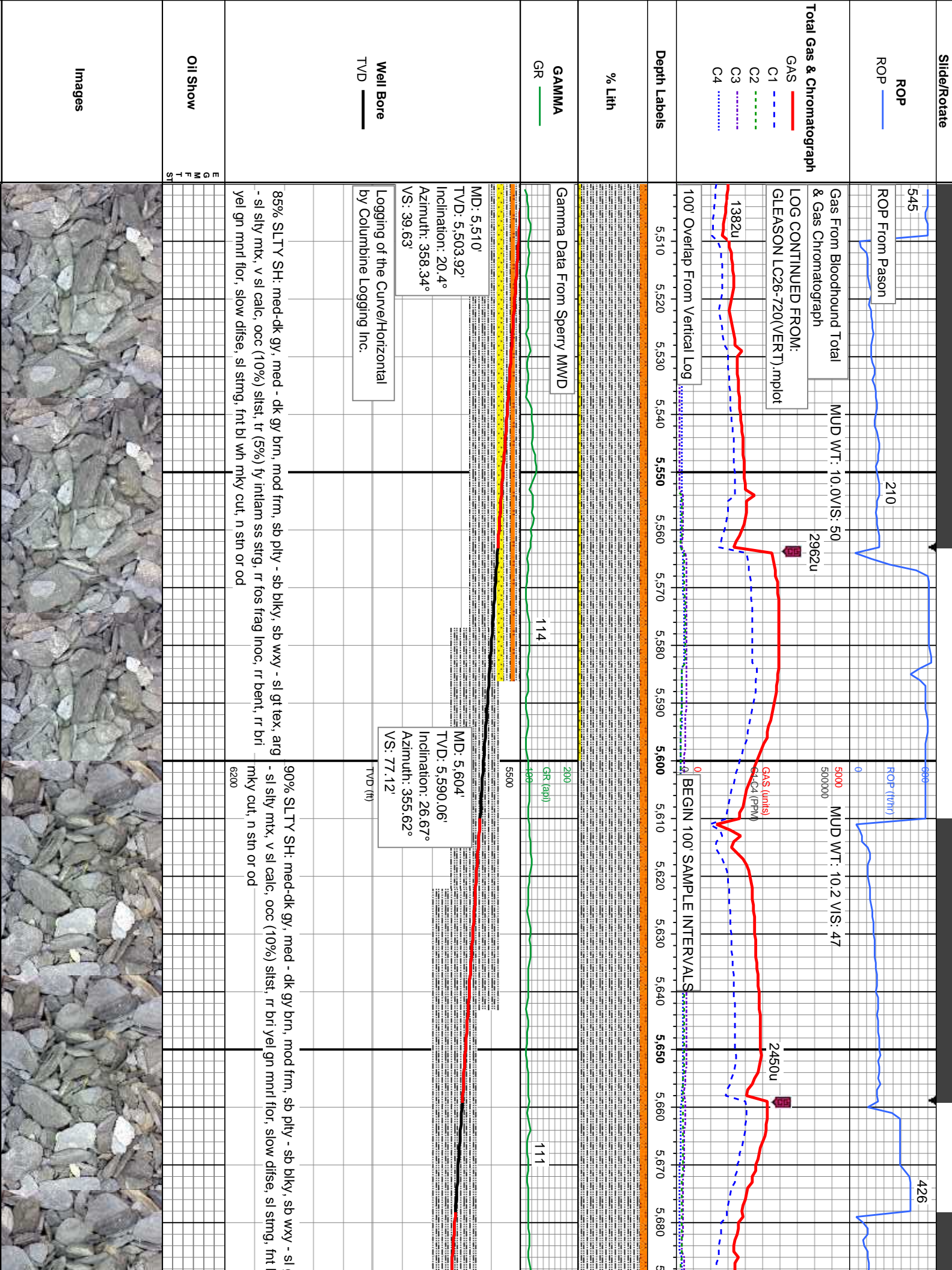


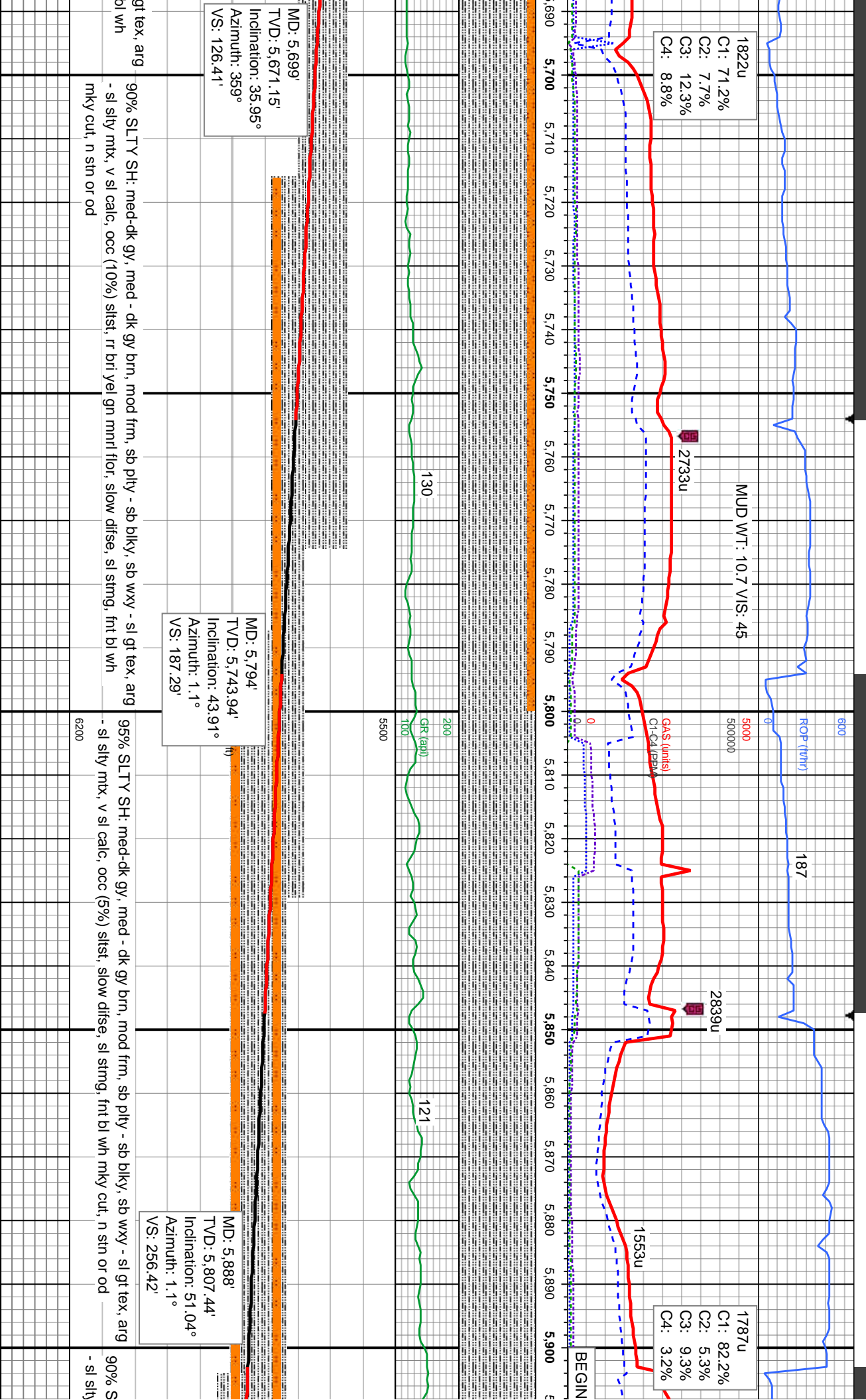
Porosity

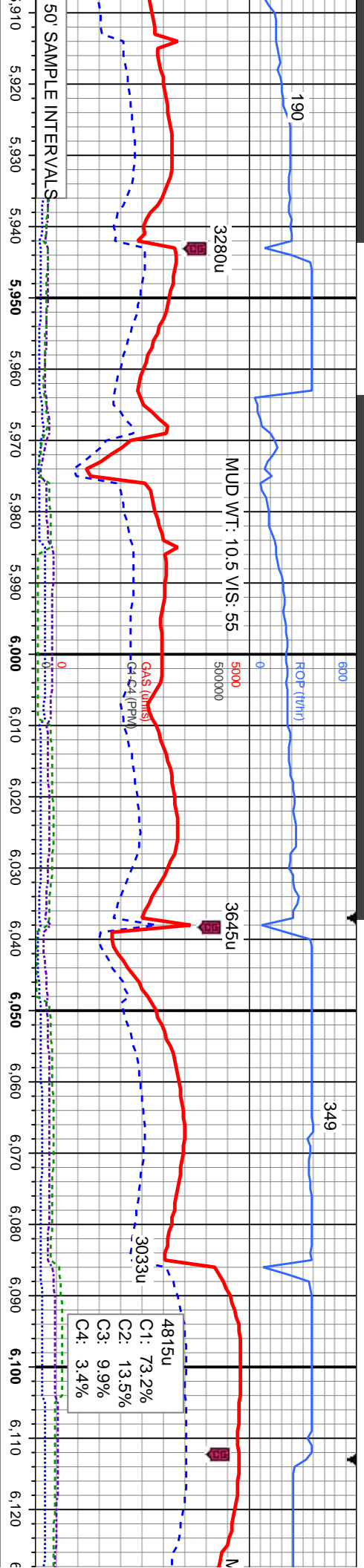
CONNECTION (DOWN)	A ANGULAR	PS PACKSTONE
E EARTHY	NORMAL FAULT	WS WACKESTO...
F FENESTRAL	OVERTURNED STRATA	
F FRACTURE	REVERSE FAULT	S SUBANG
INTERCORYSTALL...	CASING	S SUBRUND
INTEROILUTIC	SIDEWALL CORE (LEFT)	SORTING
M MOLDIC	SIDEWALL CORE (RIGHT)	P POOR
O ORGANIC	SLIDE	W WELL
	SURVEY	

Textures









MD: 5,983'
TVD: 5,861.2'
Inclination: 59.95°
Azimuth: 1.23°
VS: 334.52'

LOGGER TOP SHARON SPRINGS:
6,041' MD/5,886' TVD

LOGGER TOP NIOBRARA A CHALK:
6,076' MD/5,907' TVD

MD: 6,077'
TVD: 5,901.7'
Inclination: 68.95°
Azimuth: 2.74°
VS: 419.03'

SLTY SH: med-dk gy, med - dk gy brn, mod frm, sb pily - sb blkgy, sb wxy - sl gt tex, arg
mtx, v sl calc, occ slst, slow difse, sl stmg, frt bl wh mky cut, n stn or od

CHK: It gy wh-med gy, mot, sft-brit, v calc, rthy tex, blkgy-sb pily, MRLST: med-dk gy brn, sl
mot, sb blkgy-sb pily, brit-frm, rthy tex, v calc; It SLTY SH, abnt bent, abnt-com bri yel-orig
min flor, fr difse, slow-fast stmg, mod bri bl wh mky cut, n stn or od

CHK: It gy wh-med gy, mc
mot, sb blkgy-sb pily, brit-fr
fr difse, slow-fast stmg, m



04/29/15 05/01/15

FINDEPTH

164

248

168

MUD WT: 10.6 VIS: 52

MUD WT: 10.25 VIS: 37

180u
C1: 73.8%
C2: 14.2%
C3: 11.3%
C4: 0.7%

Clogged Shaker

GAS (units)
Cl-C4 (PPM)

1813u

6,130

6,140

6,150

6,160

6,170

6,180

6,190

6,200

6,210

6,220

6,230

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6,970

6,980

6,990

7,000

7,010

7,020

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7,040

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7,910

7,920

7,930

LOGGER TOP NIOBRARA A
MARL: 6192' MD/5,934 TVD

MD: 6,172'
TVD: 5,930.91'
Inclination: 75.23°
Azimuth: 1.66°
VS: 509.15'

MD: 6,227'
TVD: 5,940.92'
Inclination: 83.77°
Azimuth: 1.25°
VS: 563.08'

Resume Drilling @
2316 hrs on 04/30/15

TD Intermediate @ 6281' MD
@ 2010 hrs on 04/29/15

Bit Data
Bit #: 3
Type: HDBS SFD55
Size: 6.12
Depth In: 6,281'
Jets: 5x13
SN: 12671465

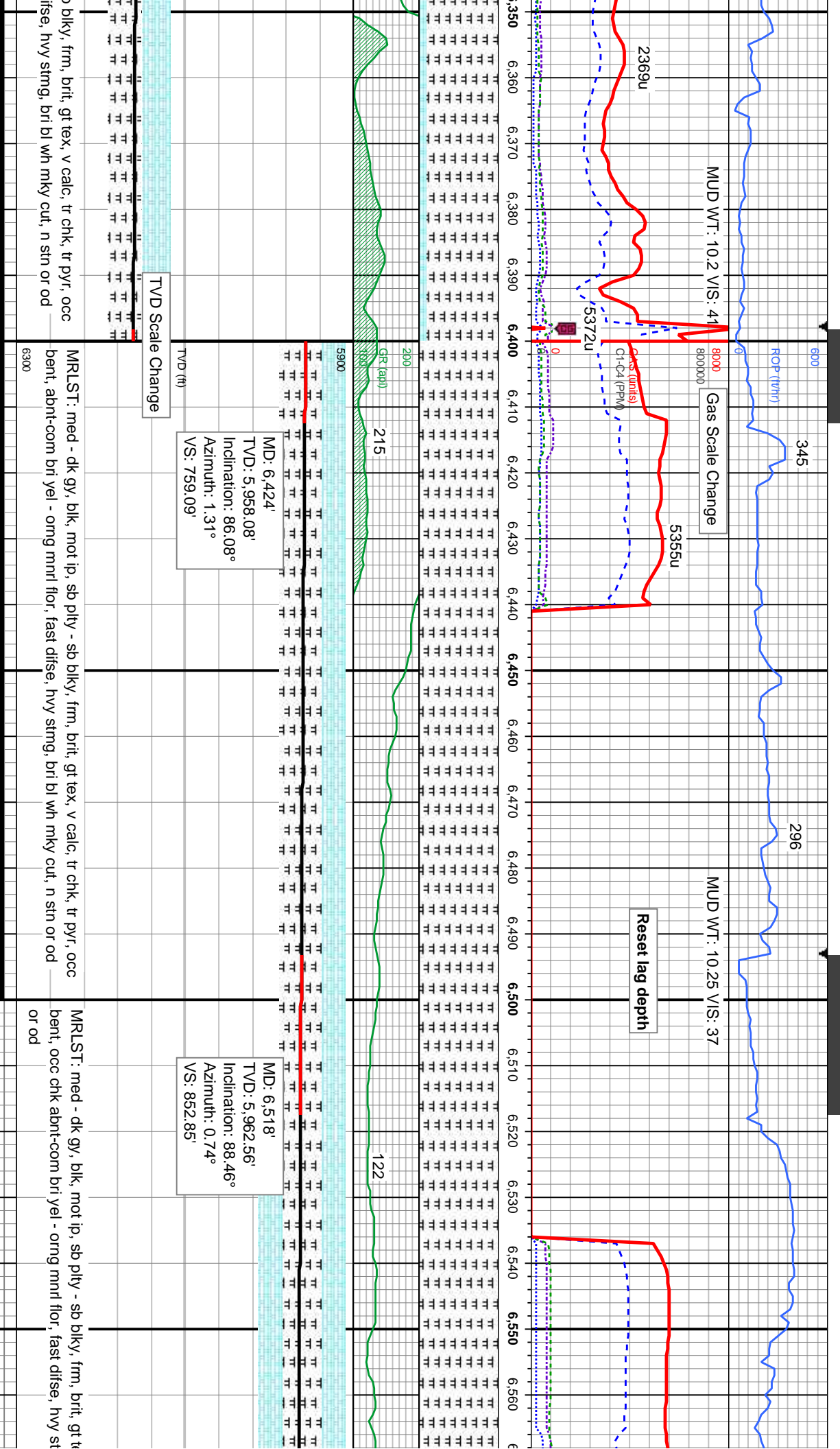
MD: 6,329'
TVD: 5,950.8'
Inclination: 85.12°
Azimuth: 0.34°
VS: 664.48'

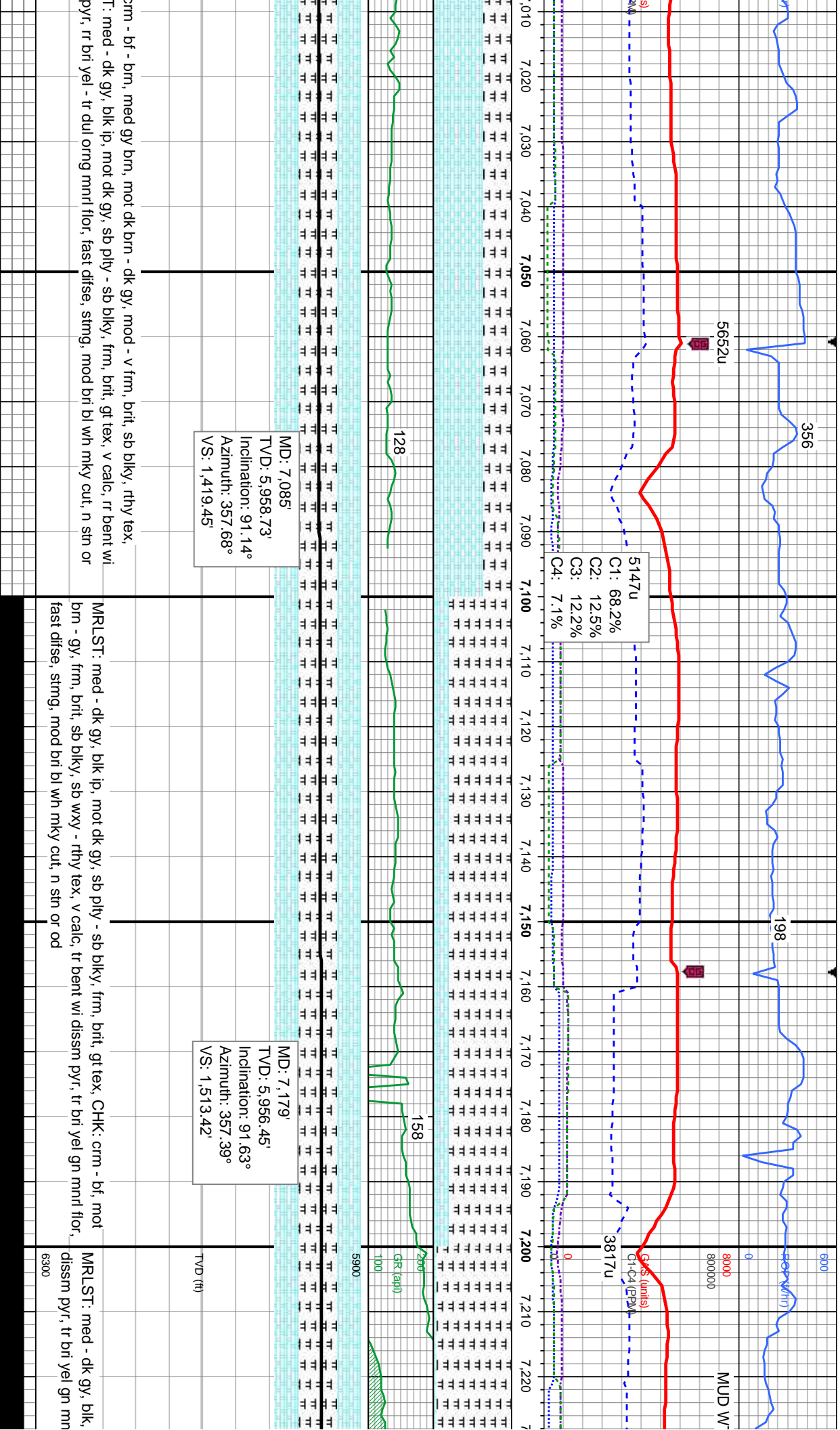
it, sft-brit, v calc, rthy tex, blk-y-sb pily; MRLST: med-dk gy brn, sl
m, rthy tex, v calc; tr pyr, abnt bent, abnt-com bri yel-orgng min flor,
od bri bl wh mky cut, n stn or od

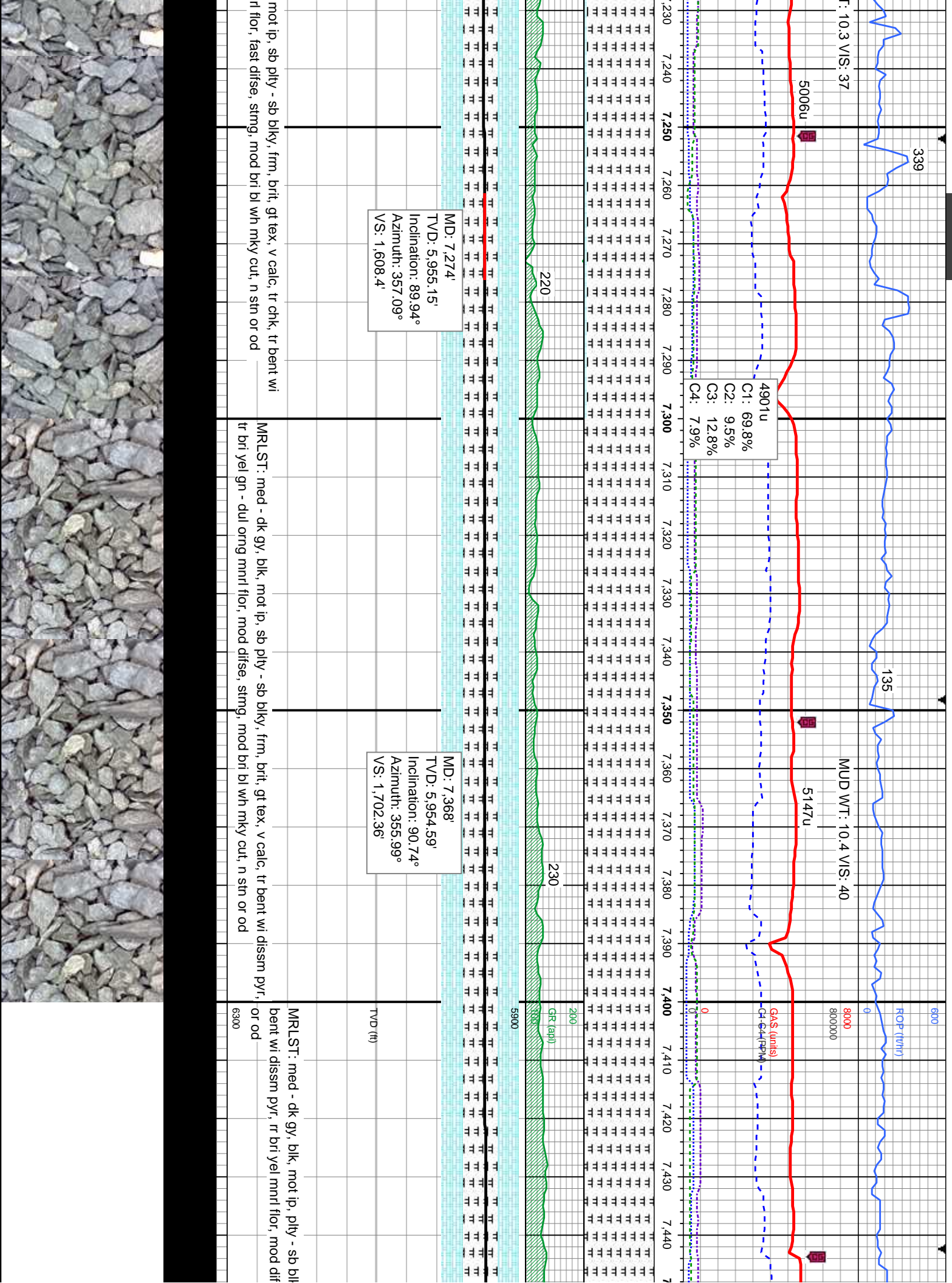
CHK: lt gy wh-med gy, mot, sft-brit, v calc, rthy tex, blk-y-sb pily; MRLST: med-dk gy brn, sl
mot, sb blk-y-sb pily, brit-firm, rthy tex, v calc; tr pyr, abnt bent, abnt-com bri yel-orgng min flor, fr
dflse, slow-fast stmg, mod bri bl wh mky cut, n stn or od

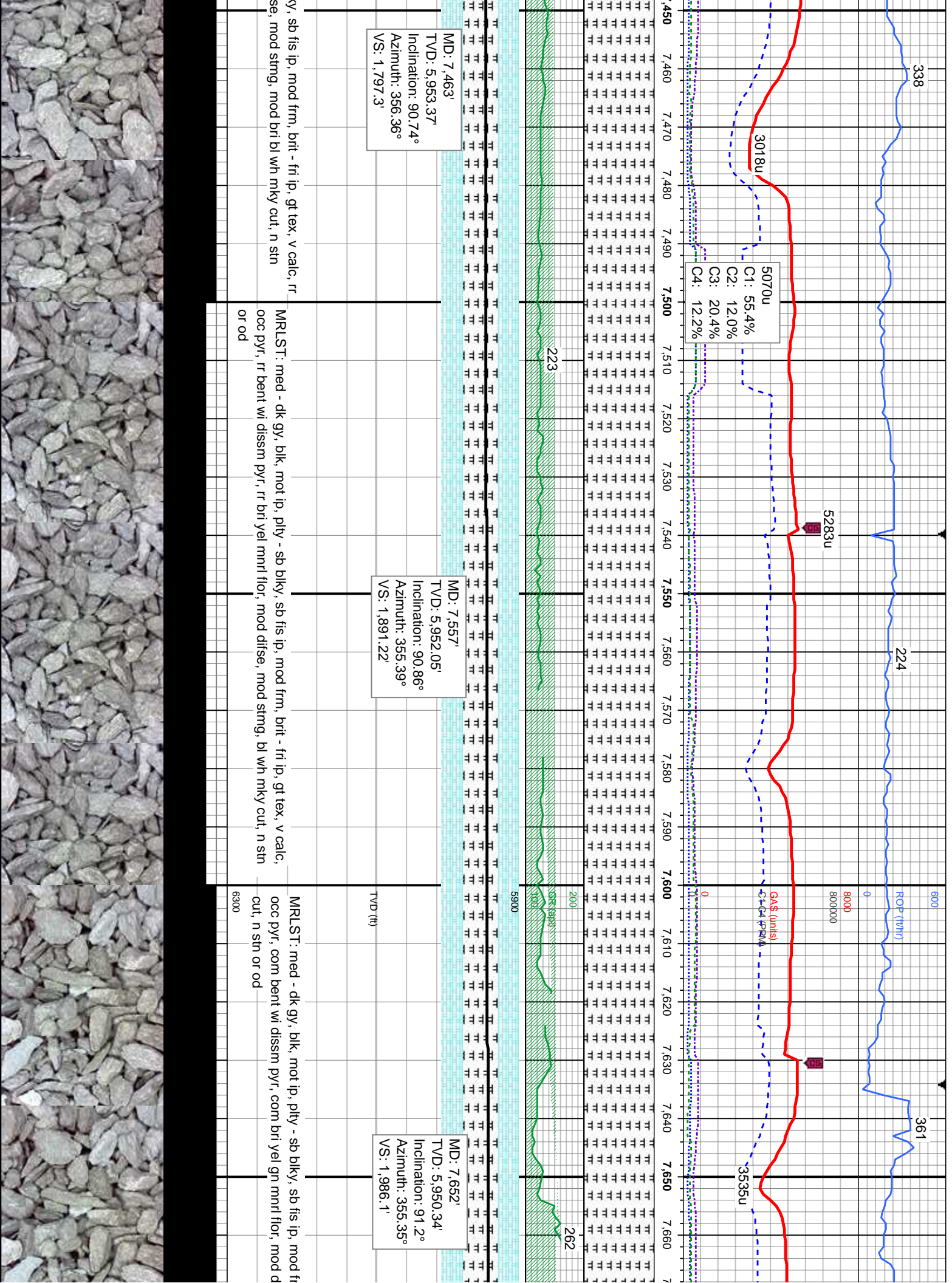
MRLST: med - dk gy, blk, mot ip, sb pily - st
bent, abnt-com bri yel - orgng mnrl flor, fast d

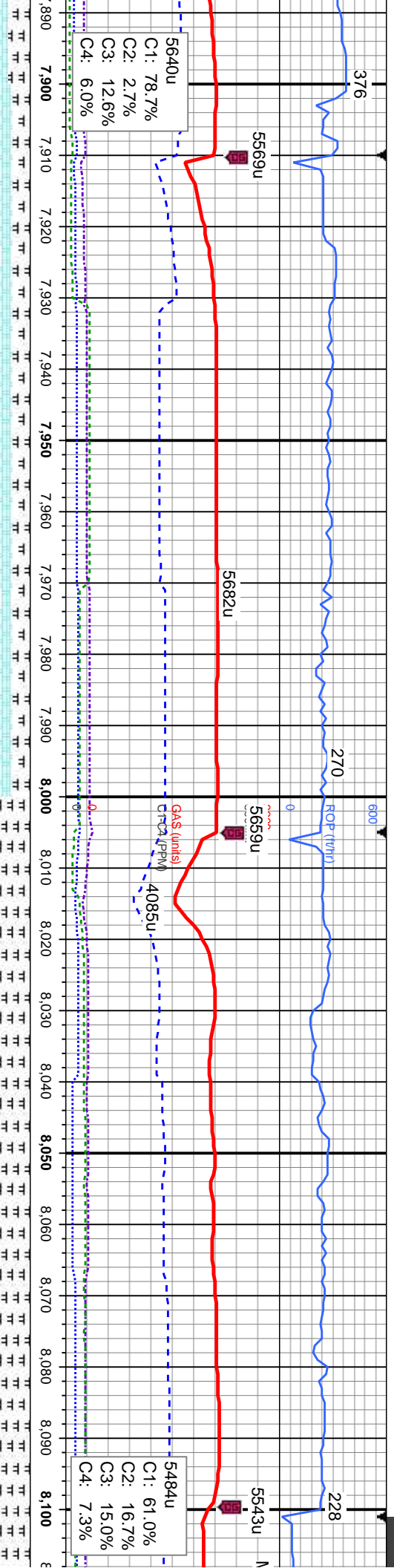












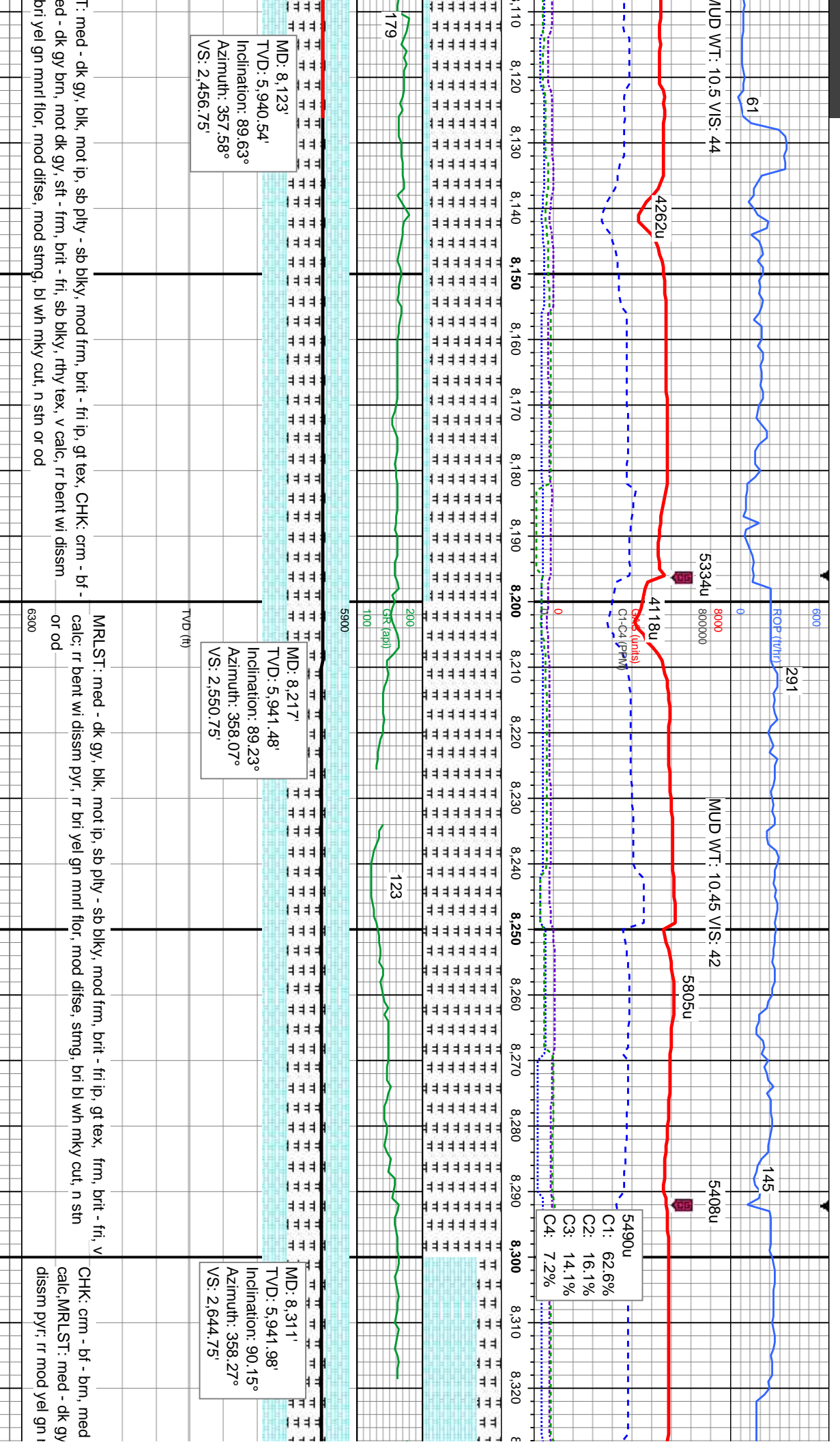
MD: 7,934'
TVD: 5,943.14'
Inclination: 90.8°
Azimuth: 357.02°
VS: 2,267.8'

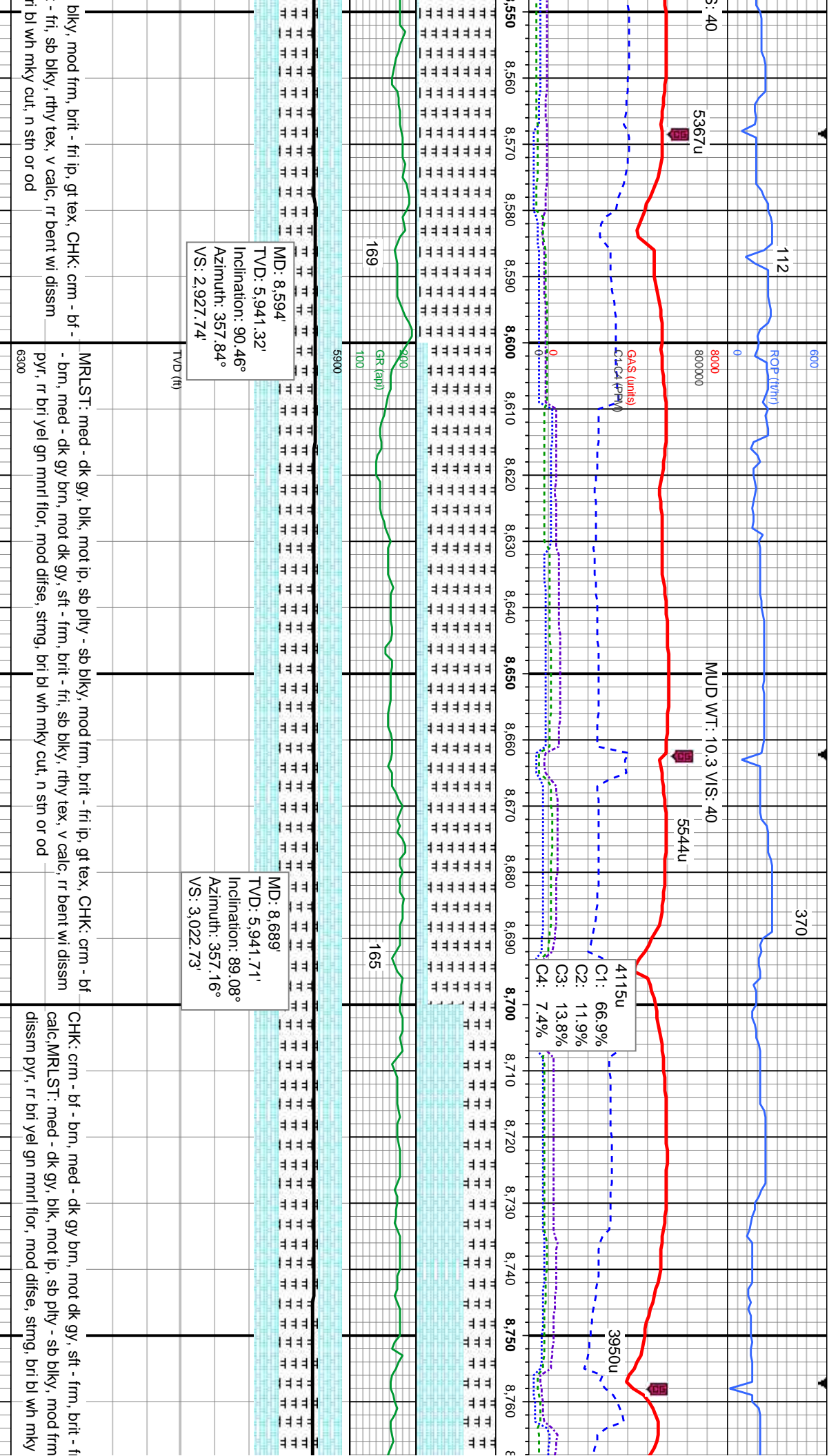
MD: 8,029'
TVD: 5,941.35'
Inclination: 91.36°
Azimuth: 357°
VS: 2,362.77'

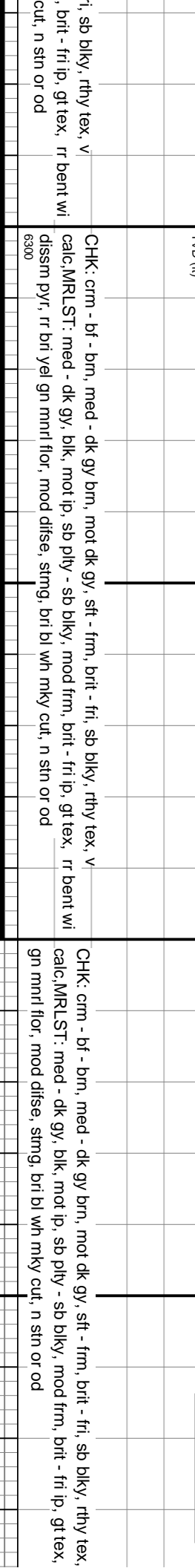
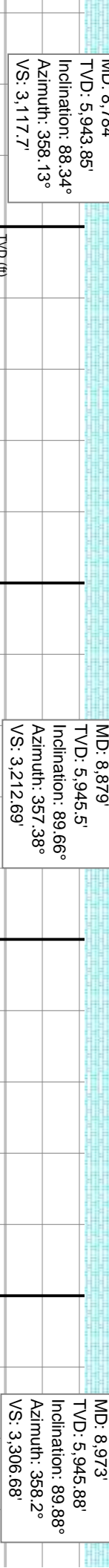
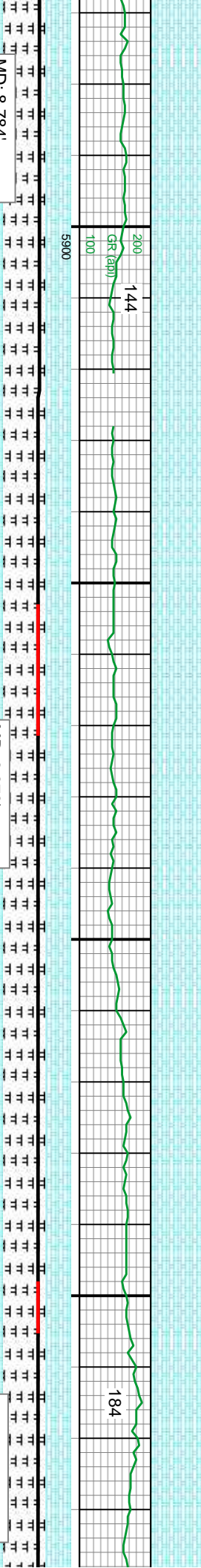
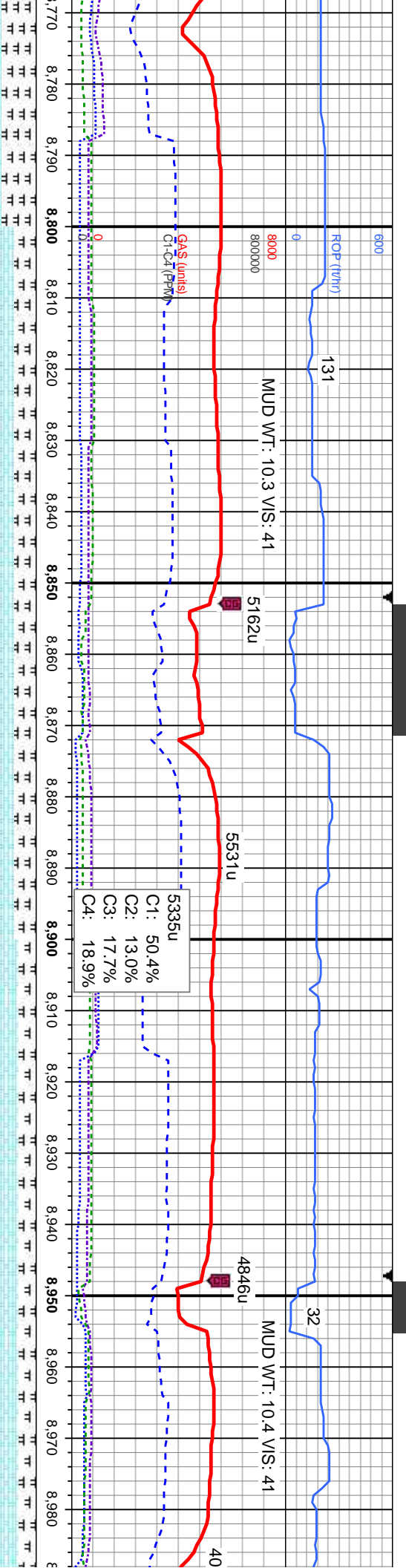
- fri ip, sb
n, brit - fri
se, sting,
CHK: crm - bf - brn, lt - med gy, med gy brn, mot dk brn - dk gy, stf - frm, brit - fri, sb blkly,
rthy tex, MRLST: med - dk gy, dk gy brn, mot ip, sb ply - sb blkly, mod frm, brit - fri ip, gt tex,
v calc, rr bent wi dissm pyr, rr bri yel gn mnrl flor, fast difse, sting, bri bl wh mky cut, n stn
or od

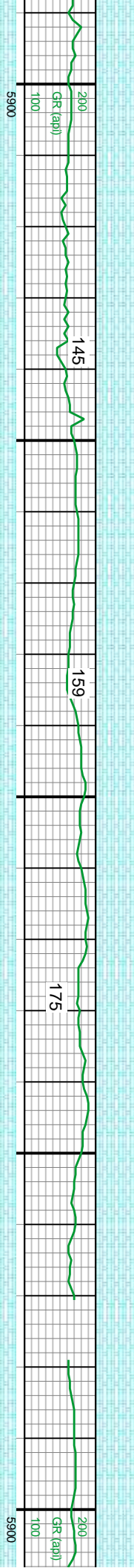
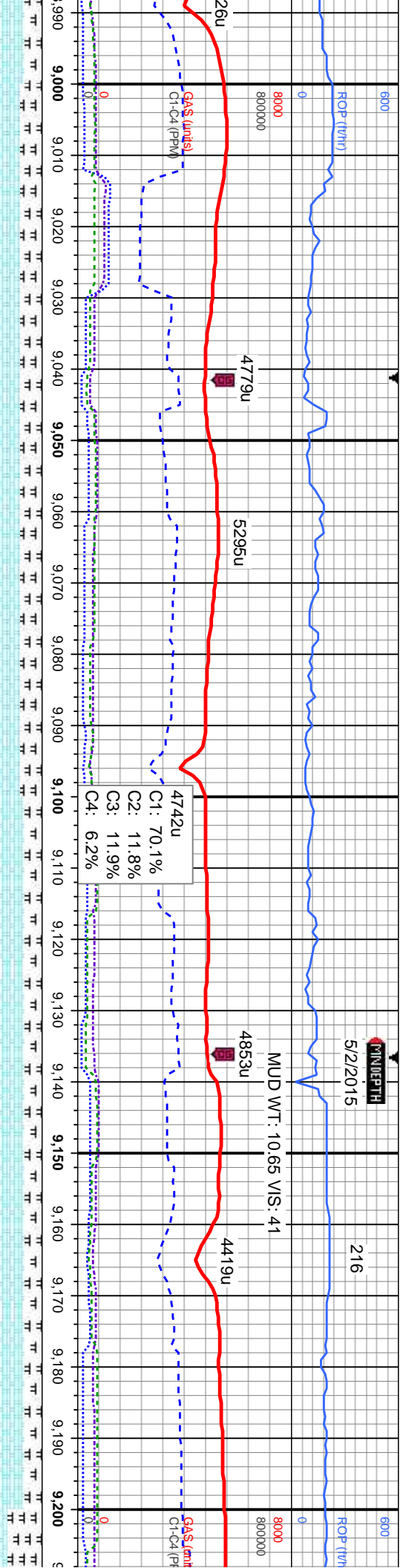
MRLST: med - dk gy, blk, mot ip, sb ply - sb blkly, mod frm, brit - fri ip, gt tex, CHK: crm - bf -
brn, med - dk gy brn, mot dk gy, stf - frm, brit - fri, sb blkly, rthy tex, v calc, rr bent wi dissm
pyr, rr bri yel gn mnrl flor, mod difse, mod sting, bl wh mky cut, n stn or od











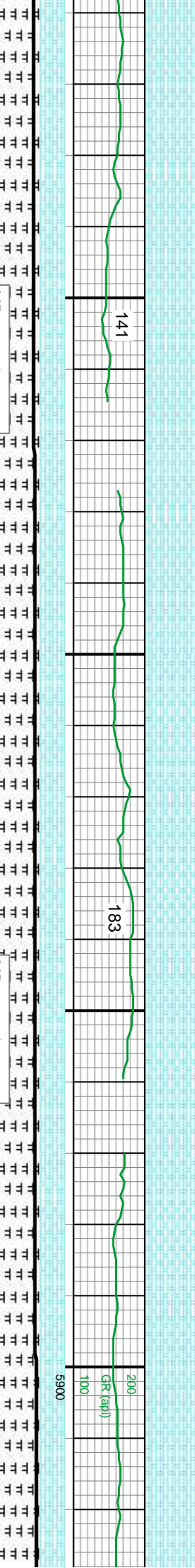
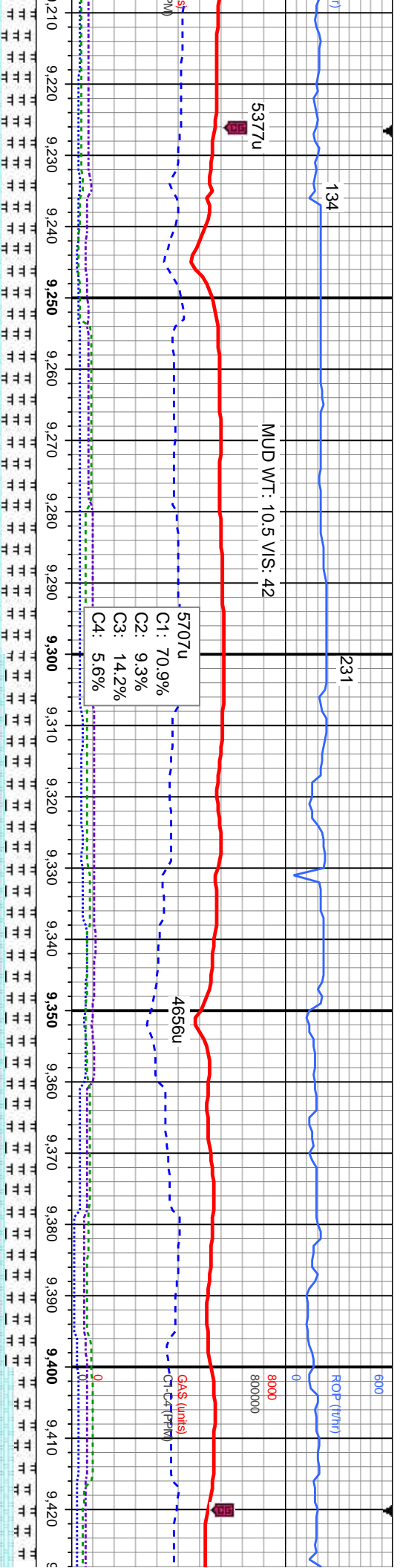
MD: 9,068'
TVD: 5,945.35'
Inclination: 90.77°
Azimuth: 357.49°
VS: 3,401.68'

MD: 9,162'
TVD: 5,944.08'
Inclination: 90.77°
Azimuth: 357.78°
VS: 3,495.67'

CHK: crm - bf - brn, med - dk gy brn, mot dk gy, sft - frm, brit - fri, sb blk, rthy tex, v
calc, MRLST: med - dk gy, blk, mot ip, sb pily - sb blk, mod frm, brit - fri ip, gt tex, rr bri yel
gn mnrl flr, mod difse, string, bri bl wh mky cut, n sin or od

CHK: crm - bf - brn, med - dk gy brn, mot dk gy, sft - frm, brit - fri, sb blk, rthy tex, v
calc, MRLST: med - dk gy, blk, mot ip, sb pily - sb blk, mod frm, brit - fri ip, gt tex, rr bri yel
gn mnrl flr, mod difse, string, bri bl wh mky cut, n sin or od





MD: 9,257'
TVD: 5,943.17'
Inclination: 90.34°
Azimuth: 357.63°
VS: 3,590.66'

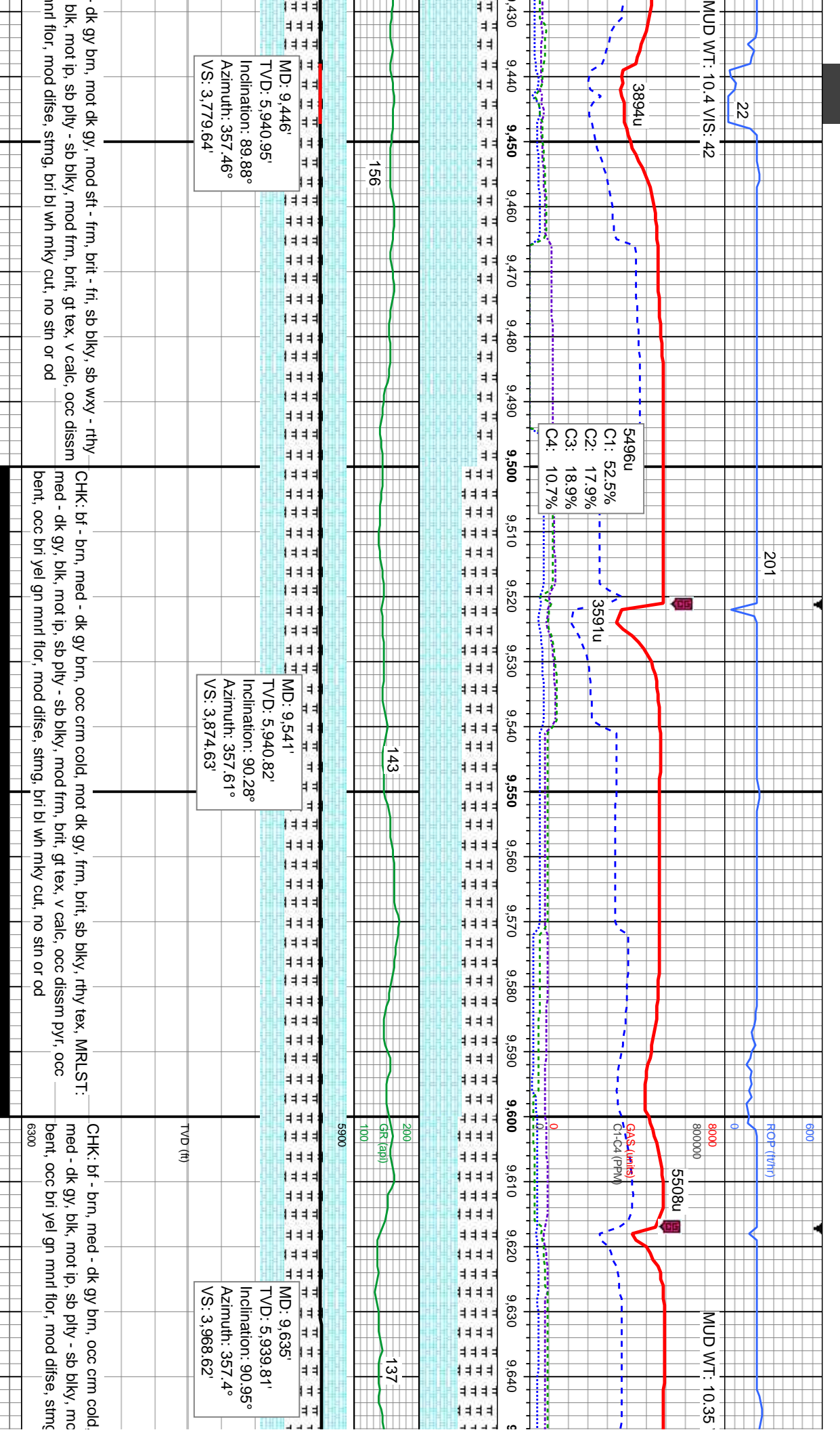
MD: 9,352'
TVD: 5,941.86'
Inclination: 91.23°
Azimuth: 357.68°
VS: 3,685.65'

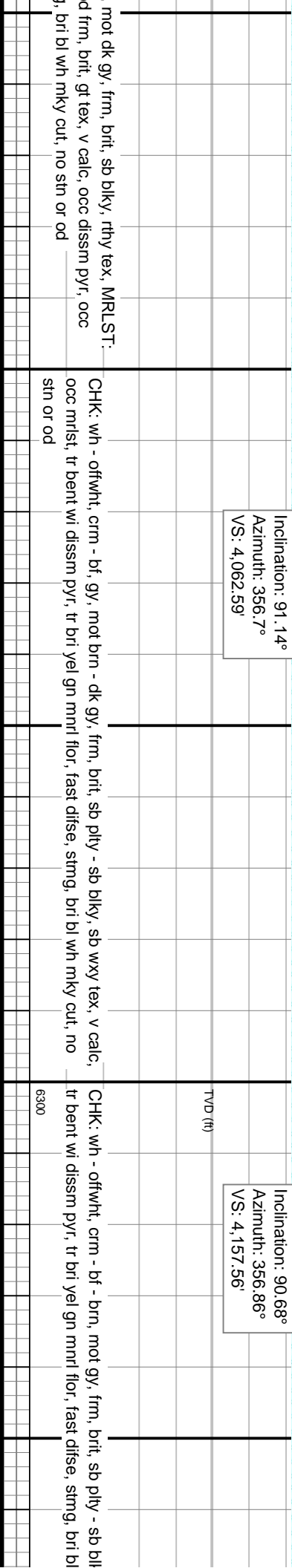
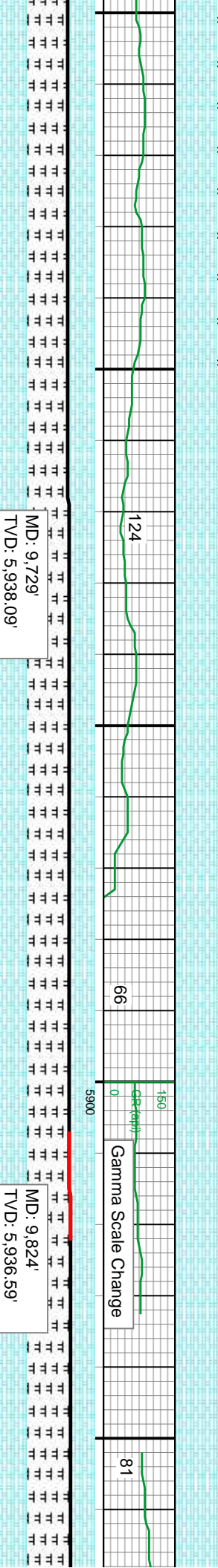
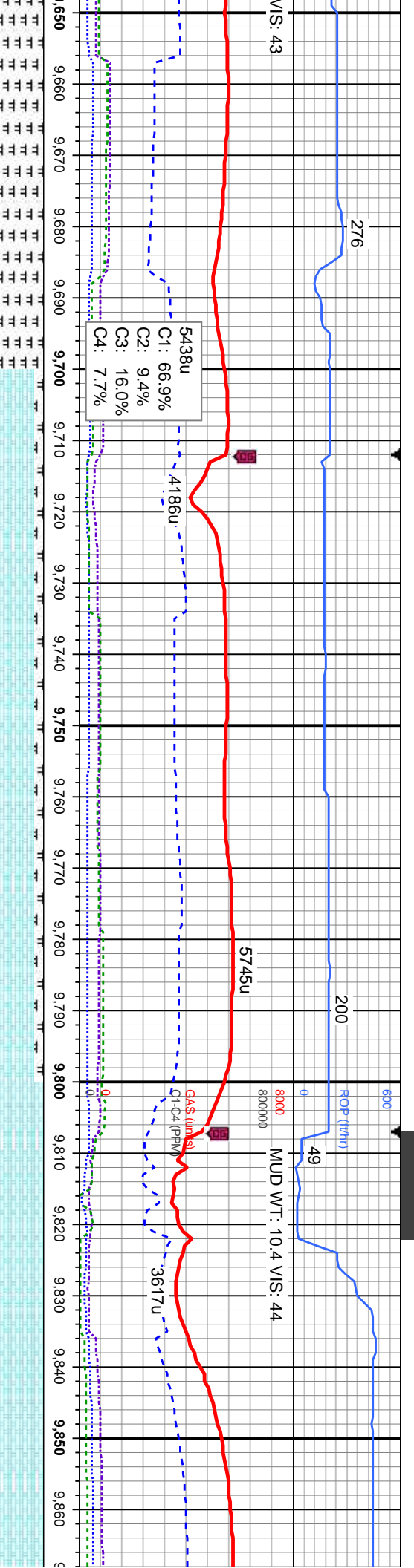
CRM - bf - brn, med - dk gy brn, mot dk gy, sft - frm, brit - fri, sb blk, rthy tex, v
RLST: med - dk gy, blk, mot ip, sb ply - sb blk, mod frm, brit - fri ip, gt tex, rr bri yel
flor, mod difse, stmg, bri bl wh mky cut, no stn or od

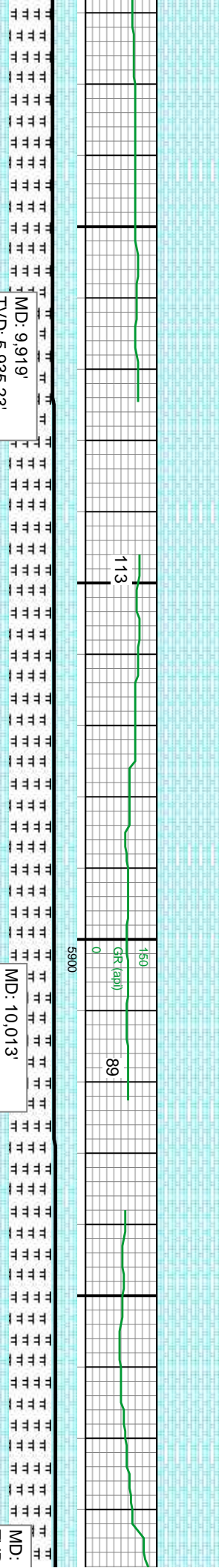
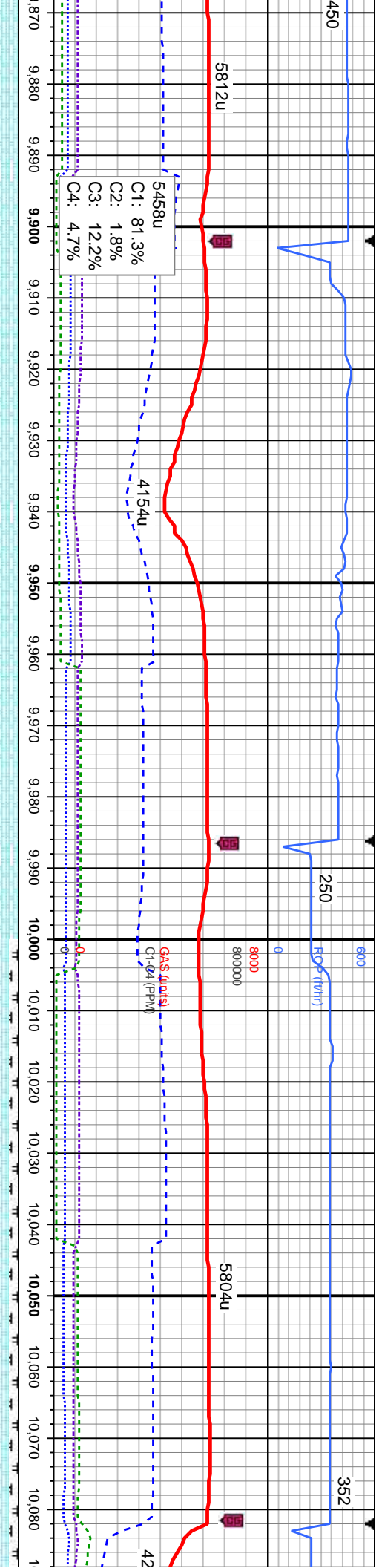
CHK: crm - bf - brn, med - dk gy brn, mot dk gy, sft - frm, brit - fri, sb blk, rthy tex, v
calc.MRLST: med - dk gy, blk, mot ip, sb ply - sb blk, mod frm, brit, gt - wxy tex, rr bri yel gn
mrl flor, mod difse, stmg, bri bl wh mky cut, no stn or od

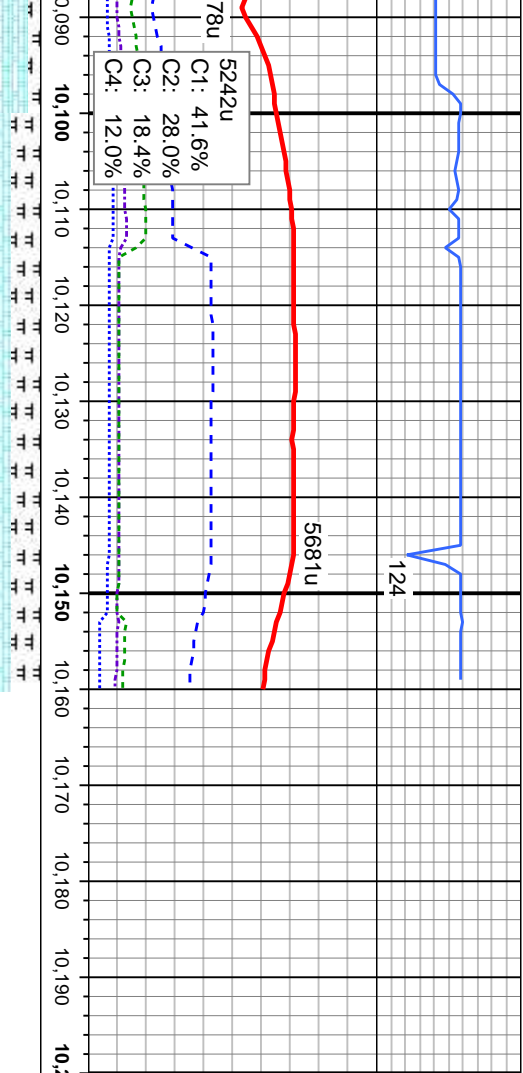
CHK: crm - bf - brn, med -
tex, MRLST: med - dk gy,
pyr, rr bent, rr bri yel gn r











Gleason LC26-720 Wellbore TD @
10160' MD @ 0806 hrs on 05/02/15

Thank you for using
Columbine Logging Inc.

MD: 10,160'
TVD: 5,930.53'
Inclination: 91.54°
Azimuth: 355.68°
VS: 4,493.32'

PROJECTION TO BIT

CHK: oftwht, crm - bf - brn, med - dk gy brn ip, mot dk
brn - dk gy, frm, brit, sb pily - sb blk, sb wxy tex,
MRLST: med - dk gy, blk, mot ip, pily - sb blk, mod
frm, brit, gt tex, v calc, dui yel gn chk flr, fast difse,
stimg, bri bl wh mky cut, no stn or od

