



Scale: 5" / 100'
Measured Depth Log

Well Name Elliott State 40C-17HZ

Location NWNW SEC 17, T3N, R67W

State Colorado

Country USA

API Number 05-123-39081

Region DJ Basin

Spud Date 5/6/2014

Surface Coordinates 1546' FNL & 779' FWL

Bottom Hole Coordinates 2340' FFNL & 50' FFELL

County Weld

Rig Number Ensign 138

Field Wattenberg

Drilling Completed 5/11/2014

Ground Elevation 4813'

K.B. Elevation 4826'

Logged Interval 6850' To 12573'

Total Depth 12573'

Formation Codell Sandstone

Type of Drilling Fluid H2O, LSND

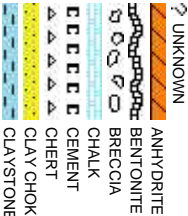
Company Anadarko

Address Granite Tower
1099 18th St, S
Denver, CO 802

Name Zach Uber & Ry

Company Columbine Logg

Address 2385 S. Lipan S
Denver, CO 802



Operator

Unit #1800
202

Geologist

an Nicholas

ing, Inc.

it.
223

Rock Types

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

Accessories

Fossils	GASTROPOD	ARGILLITE GRAIN	HEAVY MINERAL	Stringer
INOCERAMUS	B BENTONITE	K KAOLIN	ANHYDRITE STRINGER	BENTONITE STRINGER
ALGAE	O OOLITE	M MARCASTITE	COAL STRINGER	DOLOMITE STRINGER
AMPHIPORA	O OSTRACOD	M MICACEOUS	GYPSUM STRINGER	LIMESTONE STRINGER
BELEMNITE	P PELECYPOD	C CARBONACEOUS FLAKES	P PYRITE	MARLSTONE (CALC) STRG
BIOCLASTIC	P PELLET	C CHITDK	S SALT CAST	SANDSTONE (DOL) STRG
BRACHIOPOD	P PISOLITE	T THIN BEDS	S SANDY	SHALE STRINGER
BRYOZOA	P PLANT REMAINS	D DOLOMITIC	S SIDERITE	SILTSTONE STRINGER
CEPHALOPOD	S SCAPHOPOD	F FELDSPAR		
CORAL	S STROMATOPOROID	F FERRUGINOUS PELLET		
CRINOID				
ECHINOID				
Minerals	F FISH	F FERRUGINOUS	S SILICEOUS	
FORAMINIFERA	A ANHYDRITIC	G GLAUCONITE	S SILTY	
F FOSSIL	A ARGILLACEOUS	G GYPSIFEROUS	T TUFACEOUS	

Other Symbols

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

Slide/Rotate

ROP
ROF
GAMMA

ROP SCALE:
0 -400 FT/HR

GAMMA SCALE:
0 -300 API

Total Gas & Chromatograph

GAS
C1
C2
C3
C4

PASON TOTAL GAS
IN "GAS 10000" UNITS

Depth Labels

% Lith

100' SAMPLE INTERVALS

Bit Data
Type: SMITH/SDI 611
Size: 8.75
Jets: 3x15/3x16

Well Bore
TVD

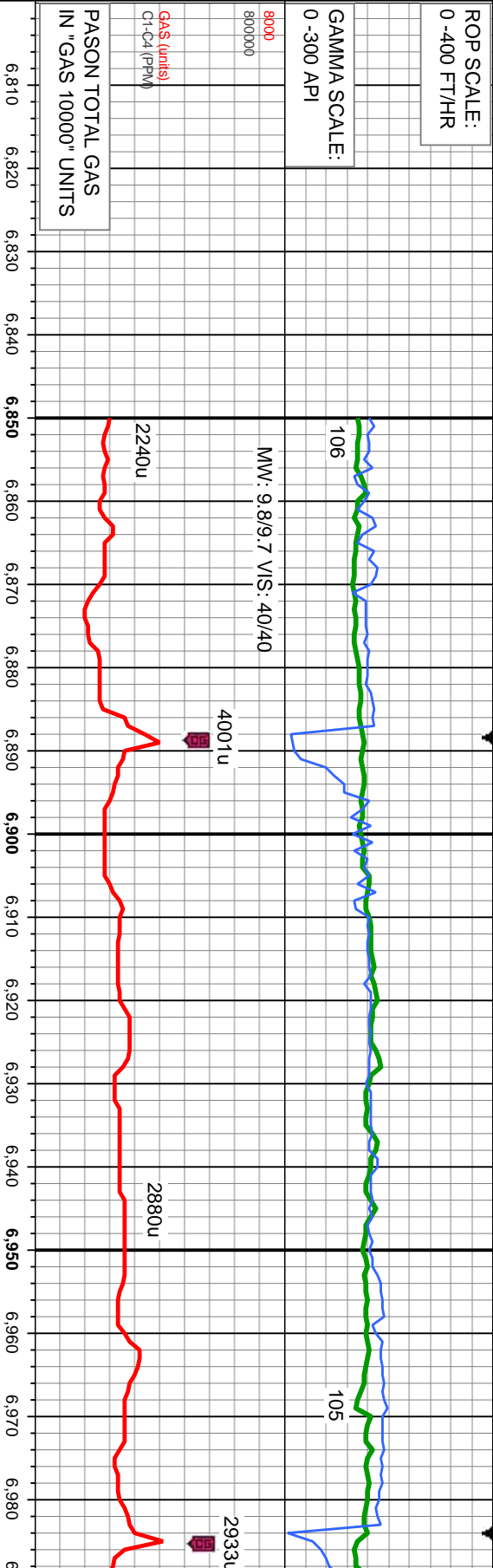
TVD (ft)

COLUMBINE LOGGING INC.
RIGGED UP ON 05/07/2014
BEGAN LOGGING ON
05/08/2014 @ 03:34 HRS MST

Oil Show

ESTIMATE

Images

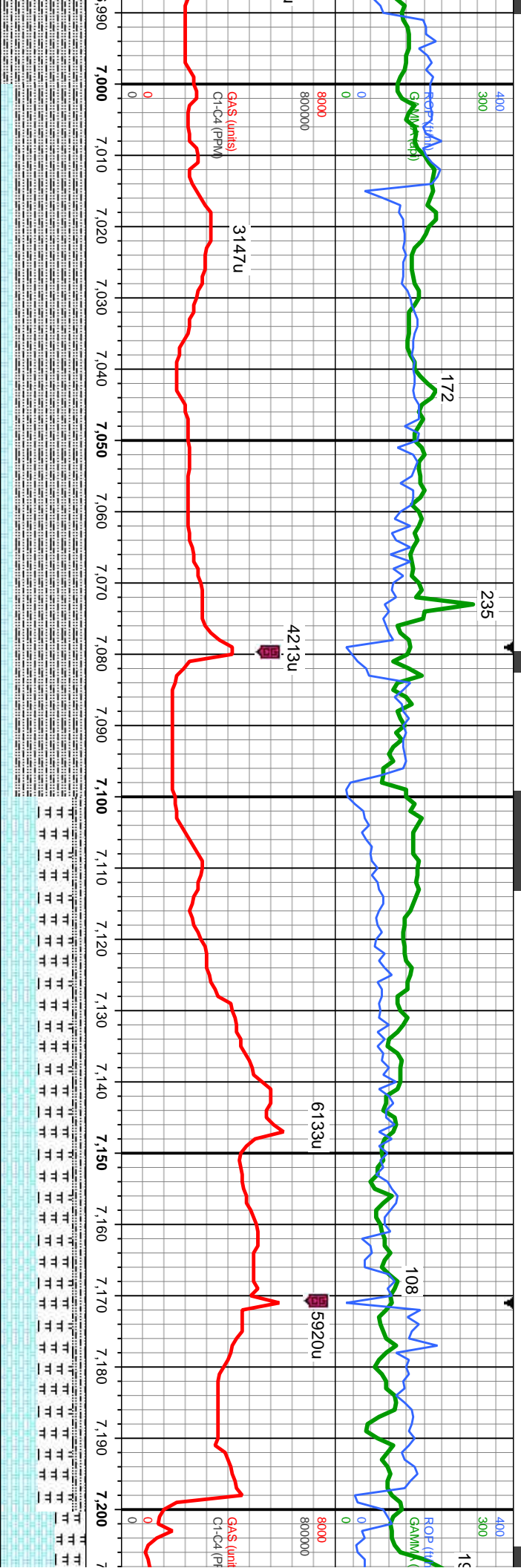


MD: 6,920'
TVD: 6,710.79'
Inclination: 19.7°
Azimuth: 108.8°
VS: -1,099.97'



100% SLTY SH: lt-med gy brn, sme dk gy, mot ip, frm-hd, sb blkly-sb pfty, silty calc

100% SLTY SH: lt-med gy brn, sme dk gy, mot ip, frm-hd, sb blkly-sb pfty, silty calc; OIL SHOW: dim lt yel-gn slow cut, dim yel-gn blotchy ring, no str, no od



Sharon Spring Top:
MD: 7009'
TVD: 6792'

Niobrara Top:
MD: 7075'
TVD: 6849'

Niobrara B Chalk Top:
MD: 7141'
TVD: 6901'

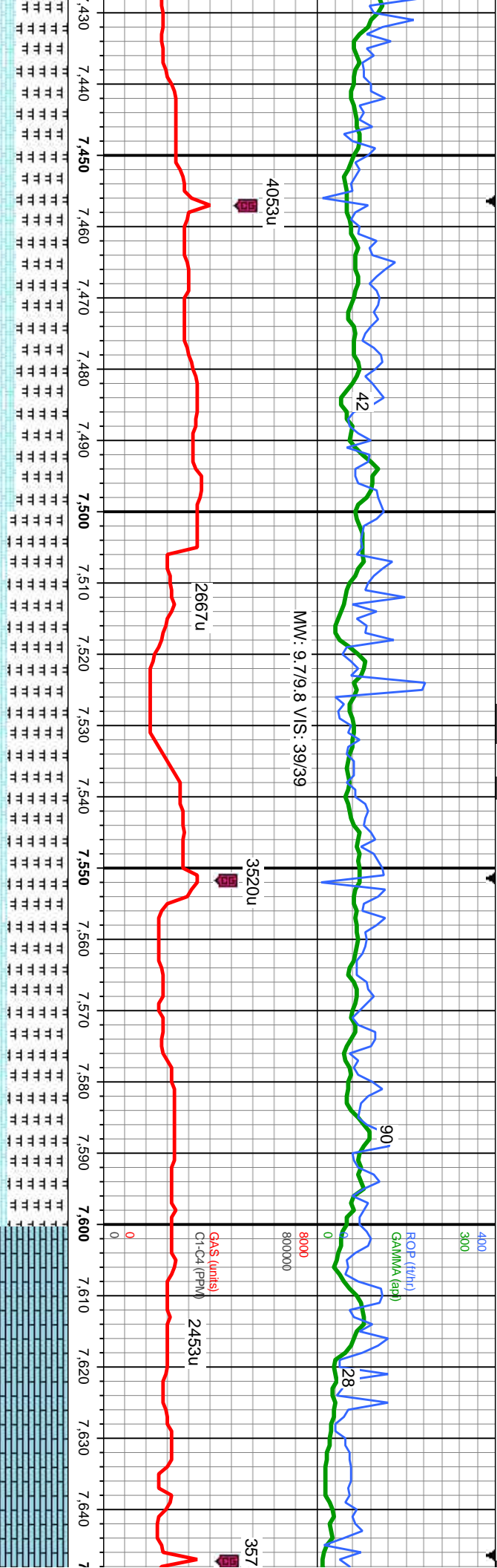
MD: 7,203'
TVD: 6,948
Inclination:
Azimuth: 92
VS: -951.48

MD: 7,015'
TVD: 6,797.35'
Inclination: 28.7°
Azimuth: 105.7°
VS: -1,062.42'

85% SLTY SH: lt-med gy brn, sme dk gy, mot ip, frm-hd, sb biky-sb pily, silty tex, sl calc; 15% CHK: lt gy-med gy, wh incl, mot ip, biky - sb pily, rthy tex, frm-fri, v calc; OIL SHOW: bri gn-yei cut, mod bri gn-yei ring, tr yei min flor, solid gn-yei resd stn, no od

45% CHK: lt gy-med gy, wh incl, mot ip, biky - sb pily, rthy tex, frm-fri, v calc; 40% MRLST: dk-med gy brn, mod frm, brit-fri ip, gr tex, sb pily - sb biky, arg-sily, calc, sme wh inoc foss; 15% SLTY SH: lt-med gy brn, sme dk gy, mot ip, frm-hd, sb biky-sb pily, silty tex, sl calc; OIL SHOW: bri gn cut, mod bri gn-yei ring, tr yei min flor, solid gn-yei resd stn, no od





MD: 7,487'
TVD: 7,092.84'
Inclination: 73.9 °
Azimuth: 92.2°
V/S: -711.61'

MD: 7,581'
TVD: 7,115.02'
Inclination: 78.8 °
Azimuth: 91.8°
V/S: -620.29'

Ft. Hays Limestone Top:
MD: 7617'
TVD: 7121'

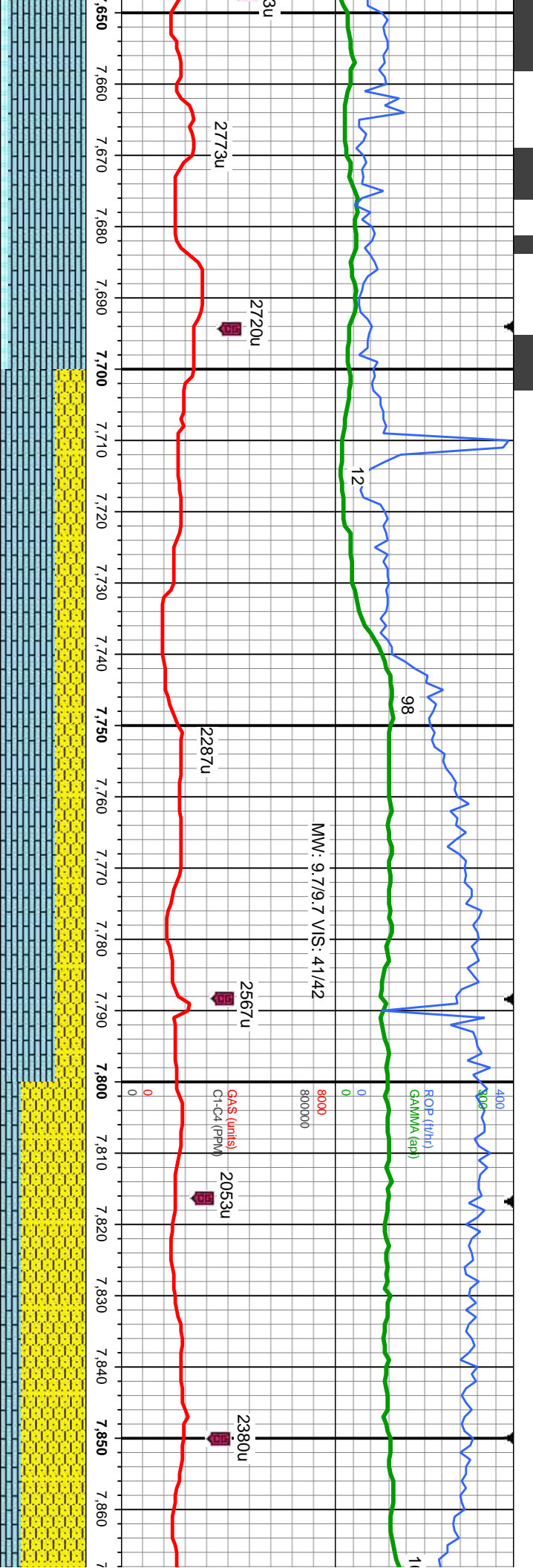
MD: 7,645'
TVD: 7,125.
Inclination: 8
Azimuth: 91
V/S: -557.2'

mod gy brn, mod frm, brit-fri ip, gt tex, sb pily - sb blkly, arg-sily, calc;
d gy, sb blkly-sb pily, frm-occ brit, rthy tex, sme tr bent, mtx, v calc;
OIL SHOW: bri bl mlky cut, tr yel min flor, mod bl-wh resdl ring, no

70% MRLST: dk-med gy brn, mod frm, brit-fri ip, gt tex, sb pily - sb blkly, arg-sily, calc;
30% CHK: mot lt-med gy, sb blkly-sb pily, frm-occ brit, rthy tex, sme tr bent, mtx, v calc;
OIL SHOW: bri bl mlky cut, tr yel min flor, mod bl-wh resdl ring, no od

90% LMST: off wh-bf-lt brn, mot, sb blkly
calc; 10% MRLST: dk-med gy brn, mod
calc; OIL SHOW: bri bl-wh string mlky cu





Bit Data
Type: Varrel/VS 513D
Size: 6.12
Jets: 5x16

TOOH for intermediate casing
on 5/8/14 @ 16:15 HRS MST

75' 11.9°
9°

MD: 7,724'
TVD: 7,132.7'
Inclination: 88°
Azimuth: 92.5°
VS: -478.55'

Codell Sandstone Top:
MD: 7737'
TVD: 7133'

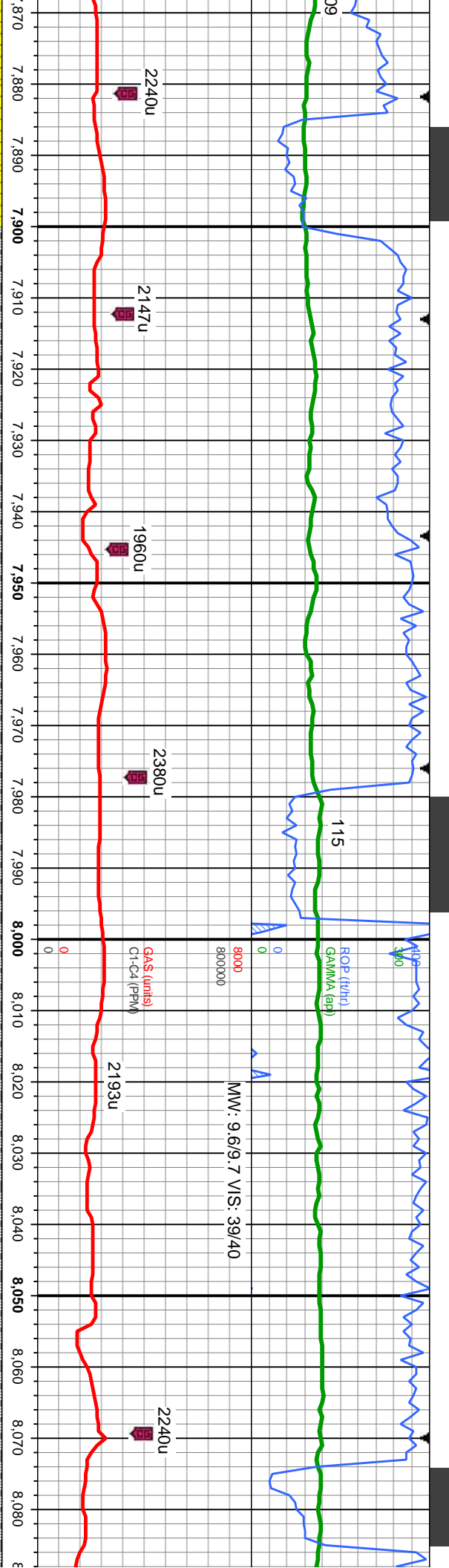
MD: 7,817'
TVD: 7,136.11'
Inclination: 87.8°
Azimuth: 91°
VS: -385.61'

RESUME DRILLING @
10:41 HRS ON 04/10/14

65% LMST: off wh-bf-lt brn, mot, sb blk-y-ply, microxin- crpxln, sm-sily tex, sft-firm, v calc; 35% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb md, p-mod srt, fri brit, mod-gd cons, sl calc; OIL SHOW: bri bl-wh stimg mlky cut, sme yel min flr, mod bl resd ring, no od

75% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb md, f cons, sl calc; 25% LMST: off wh-bf-lt brn, mot, sb blk-y-ply tex, sft-firm, v calc; OIL SHOW: bri bl-wh stimg mlky cut, sme yel min flr, mod bl resd ring, no od



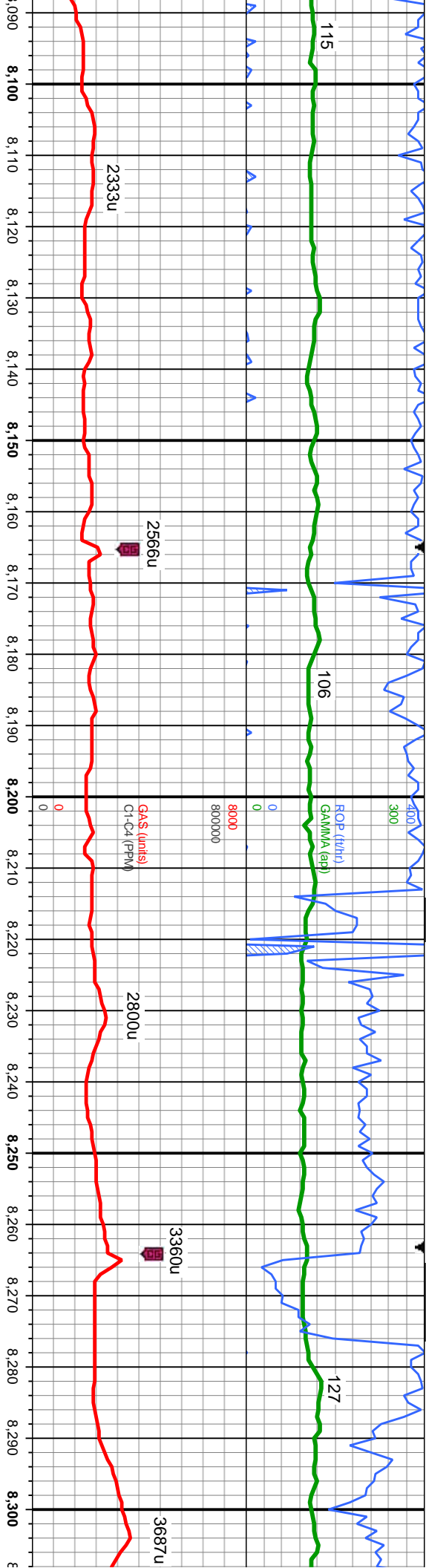


MD: 7,911'
TVD: 7,138.81'
Inclination: 88.9°
Azimuth: 92.1°
VS: -291.66'

MD: 8,006'
TVD: 7,139.56'
Inclination: 90.2°
Azimuth: 92.8°
VS: -196.67'

o-mod srt, fri brit, mod-gd	90% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd cons, v sl calc; 10% SLTY SH:lt-gy gy, sme blk, sb pty-sb blk, frm, rthy lstr, arg-sily, non calc; OIL SHOW: bri bl mlky cut, tr yel min flr, mod bl-wh resd ring, no od	85% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd cons, v sl calc; 15% SLTY SH:lt-gy gy, sme blk, sb pty-sb blk, frm, rthy lstr, non calc; OIL SHOW: bri bl-wh mlky cut, sme yel min flr, mod bl-wh resd ring
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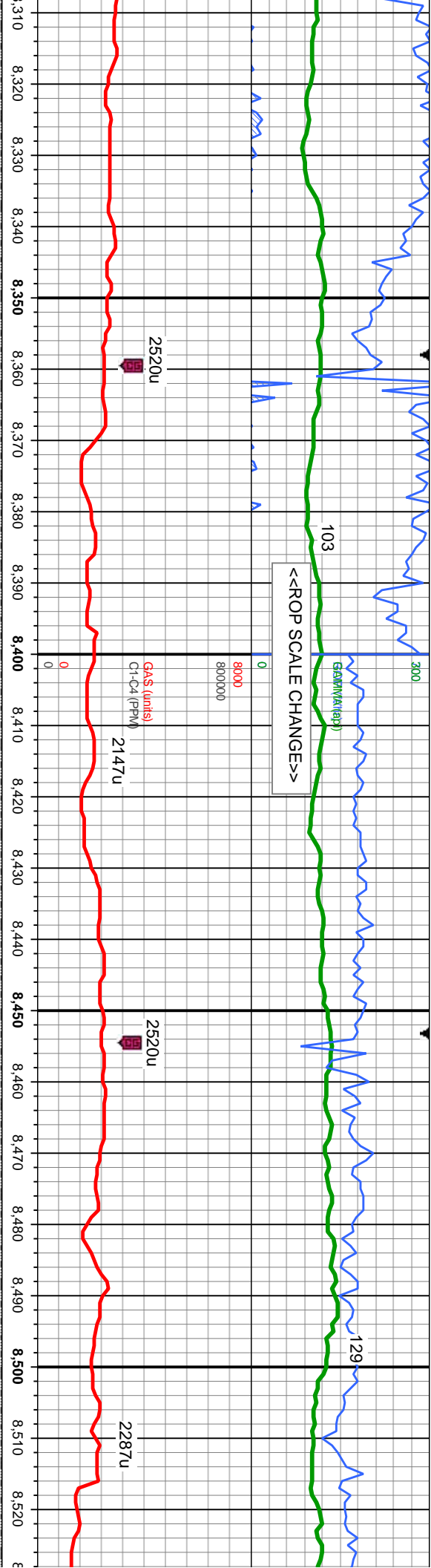




MD: 8,101' TVD: 7,138.32' Inclination: 91.3° Azimuth: 92.4° VS: -101.68'	MD: 8,198' TVD: 7,136.12' Inclination: 91.3° Azimuth: 92.3° VS: -4.71'	MD: 8,293' TVD: 7,135.2' Inclination: 89.8° Azimuth: 92.2° VS: 90.28'
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od-gd arg-sily, v si calc; OIL SHOW: od	100% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb md, p-mod srt, fri brit, mod-gd cons, v si calc; OIL SHOW: bri lt bl-wh milky stmg cut, bri wh thk ring, solid bri bl resd stn, no od	90% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb md, p-mod srt, fri brit, mod-gd cons, v si calc; 10% SLTY SH:lt-gy gy, sme blk, sb ply-sb blk, frm, rthy istr, arg-sily, non calc; OIL SHOW: bri bl milky cut, tr yel min flor, mod bl-wh resd ring, no od	90% S si calc OIL S
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MD: 8,388'
TVD: 7,135.29'
Inclination: 90.1 °
Azimuth: 92.4 °
VS: 185.28'

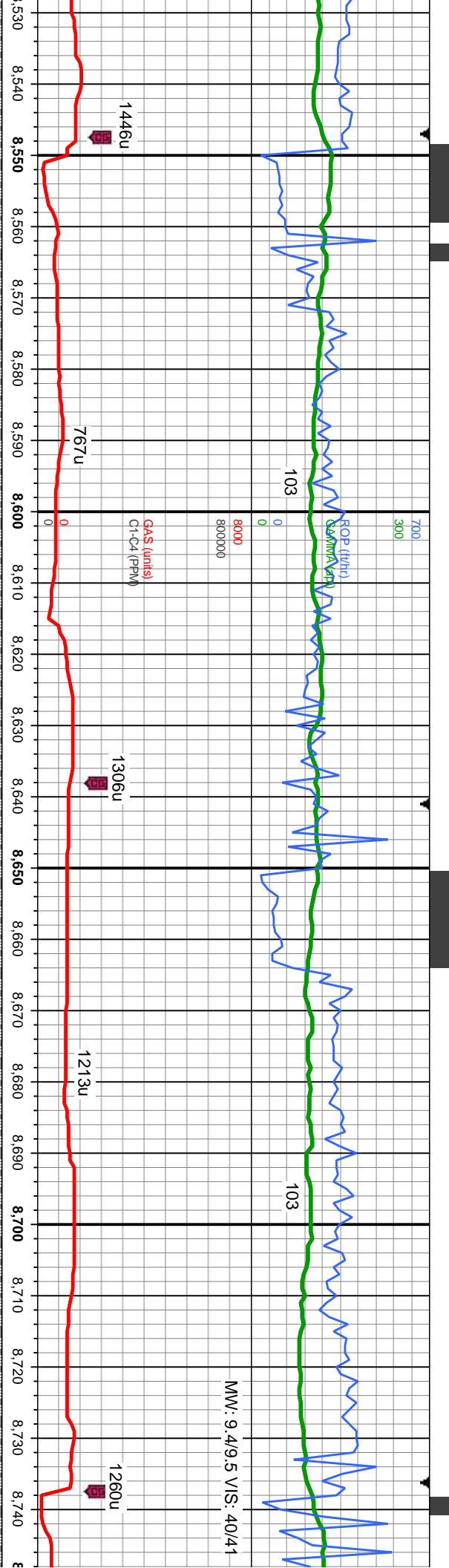
MD: 8,482'
TVD: 7,135.29'
Inclination: 89.9 °
Azimuth: 92.8 °
VS: 279.27'

SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb md, p-mod srt, fri brit, mod-gd cons, 10% SLTY SH:lt-gy gy, sme blk, sb ply-sb blk, frm, rthy lstr, arg-sily, non calc; HOW: bri bl mlky cut, tr yel min flor, mod bl-wh resd ring, no od

85% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd cons, sl calc; 15% SLTY SH:lt-gy gy, sme blk, sb ply-sb blk, frm, rthy lstr, arg-sily, non calc; OIL SHOW: bri bl mlky cut, tr yel min flor, mod bl-wh resd ring, no od

85% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd cons, sl calc; 15% SLTY SH:lt-gy gy, sme blk, sb ply-sb blk, frm, rthy lstr, arg-sily, non calc; OIL SHOW: bri bl mlky cut, tr yel min flor, mod bl-wh resd ring, no od





MD: 8,576'
TVD: 7,134.14'
Inclination: 91.5 °
Azimuth: 92.6°
VS: 373.25'

-TVB-104-

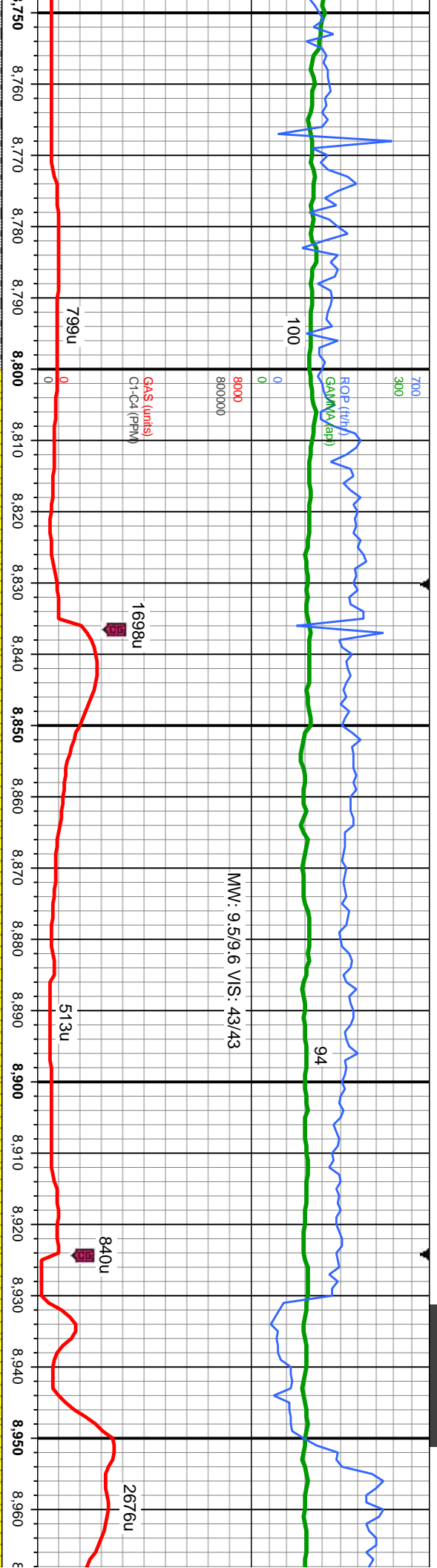
MD: 8,671'
TVD: 7,131.9'
Inclination: 91.2 °
Azimuth: 92.3°
VS: 468.22'

brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd
r SH:lt-gy gy, sme blk, sb pty-sb blk, frm, rthy lstr, arg-sily, non
jn milky cut, tr yel min flr, mod bl-gn resdl ring, no od

85% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd
cons, sl calc: 15% SLTY SH:lt-gy gy, sme blk, sb pty-sb blk, frm, rthy lstr, arg-sily, non
8000 calc: OIL SHOW: bri bl-gn milky cut, tr yel min flr, mod bl-gn resdl ring, no od

90% SHY SS: dk gy-dk brn, c gr, occ f gr, sb
sl calc: 10% SLTY SH:lt-gy gy, sme blk, sb p
OIL SHOW: bri bl-wh string milky cut, sme y





MD: 8,765'
TVD: 7,130.26'
Inclination: 90.8 °
Azimuth: 91.8 °
VS: 562.21'

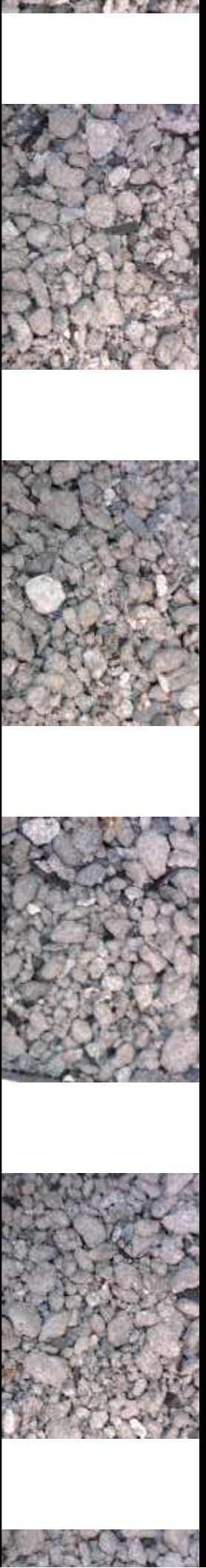
MD: 8,859'
TVD: 7,128.7'
Inclination: 91.1 °
Azimuth: 91.4 °
VS: 656.19'

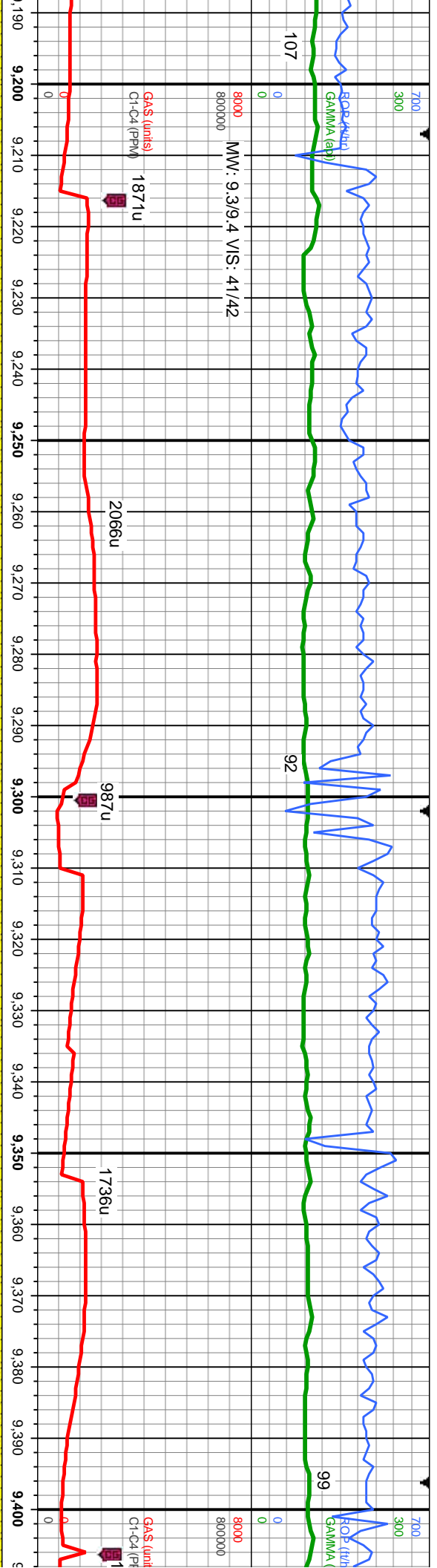
MD: 8,954'
TVD: 7,127.87'
Inclination: 89.9 °
Azimuth: 90.4 °
VS: 751.17'

ang-sb md, p-mod srt, fri brit, mod-gd cons,
bly-sb blk, frm, rthy lstr, arg-sly, non calc;
el min flr, mod bl resd ring, no od

100% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd
cons, sl calc; tr SLTY SH:lt-gy gy, sme blk, sb ply-sb blk, frm, rthy lstr, arg-sly, non
calc; OIL SHOW: bri lt bl-wh mlky sting cut, bri wh thk ring, solid bri bl resd sin, no od

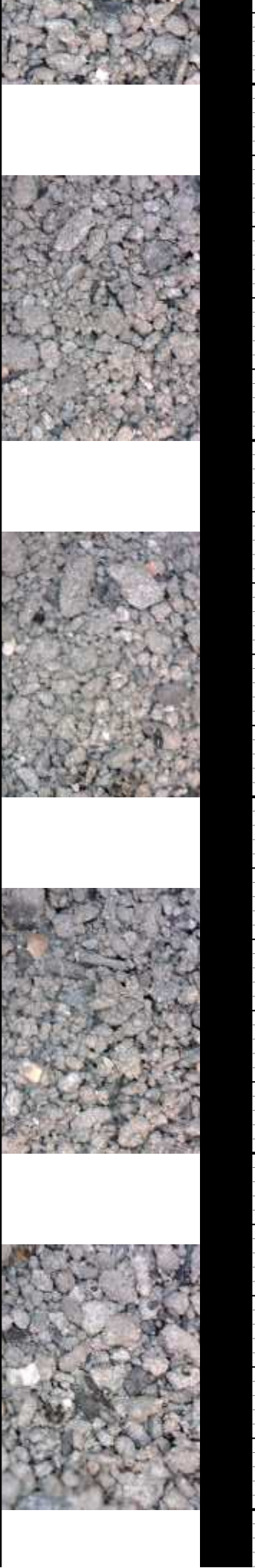
100% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod
cons, sl calc; tr SLTY SH:lt-gy gy, sme blk, sb ply-sb blk, frm
calc; OIL SHOW: bri lt bl-wh mlky sting cut, bri wh thk ring, solid

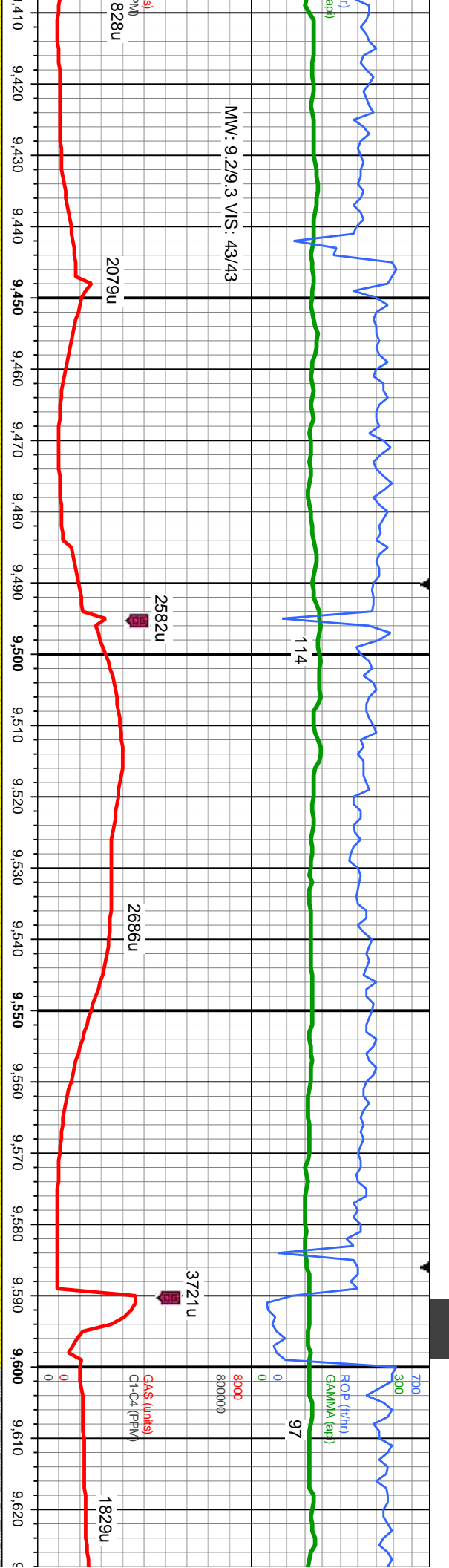




Depth (ft)	MD	TVD	Inclination	Azimuth	VS
9,237'	MD: 9,237'	TVD: 7,129.65'	Inclination: 89.4 °	Azimuth: 90.9 °	VS: 1,034.08'
9,284'	MD: 9,284'	TVD: 7,130.1'	Inclination: 89.5 °	Azimuth: 90.8 °	VS: 1,081.07'
9,331'	MD: 9,331'	TVD: 7,130.55'	Inclination: 89.4 °	Azimuth: 90.8 °	VS: 1,128.06'
9,378'	MD: 9,378'	TVD: 7,131.09'	Inclination: 89.3 °	Azimuth: 90.8 °	VS: 1,175.05'

Interval	Description
9,237' - 9,284'	100% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd cons, sl calc; tr SLTY SH:lt-gy gy, sme blk, sb pily-sb blk, frm, rthy lstr, arg-sily, non calc; OIL SHOW: bri bl stmg cut, bri wh-it bl solid ring, sl gn resdl ring
9,284' - 9,378'	100% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd cons, sl calc; tr SLTY SH:lt-gy gy, sme blk, sb pily-sb blk, frm, rthy lstr, arg-sily, non calc; OIL SHOW: bri bl-wh stmg milky cut, bri wh-it bl solid ring, sl gn resdl ring





MD: 9,425'
TVD: 7,131.7'
Inclination: 89.2 °
Azimuth: 90.8 °
VS: 1,222.03'

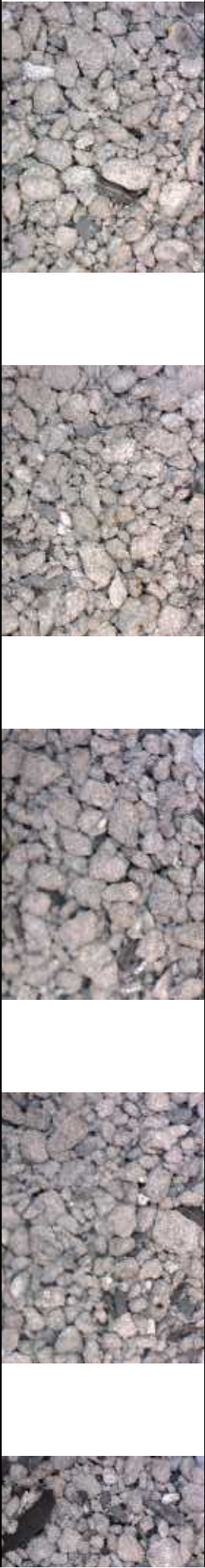
MD: 9,521'
TVD: 7,133.21'
Inclination: 89 °
Azimuth: 90.7 °
VS: 1,318'

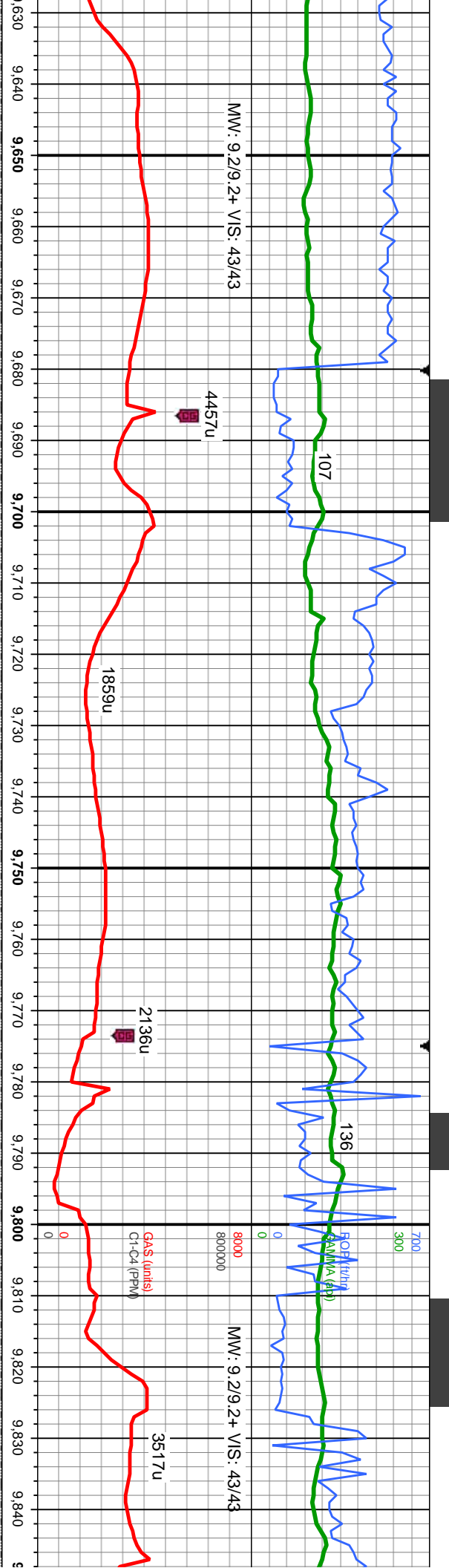
MD: 9,615'
TVD: 7,134.93'
Inclination: 88.9 °
Azimuth: 91.5 °
VS: 1,411.98'

0% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brt, mod-gd
ns, sl calc; tr SLTY SH:lt-gy gy, sme blk, sb ply-sb blk, frm, rthy lstr, arg-sly, non
calc; OIL SHOW: bri bi-wh stmg cut, bri wh- bl solid ring, sl gn resd ring

100% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brt, mod-gd
cons, sl calc; tr SLTY SH:lt-gy gy, sme blk, sb ply-sb blk, frm, rthy lstr, arg-sly, non
calc; OIL SHOW: bri lt bi-wh mlky stmg cut, bri wh thk ring, solid bri bl resd stn, no od

90% SHY SS: dk gy-c
cons, sl calc; 10% S
non calc; OIL SHOW:
resd stn, no od





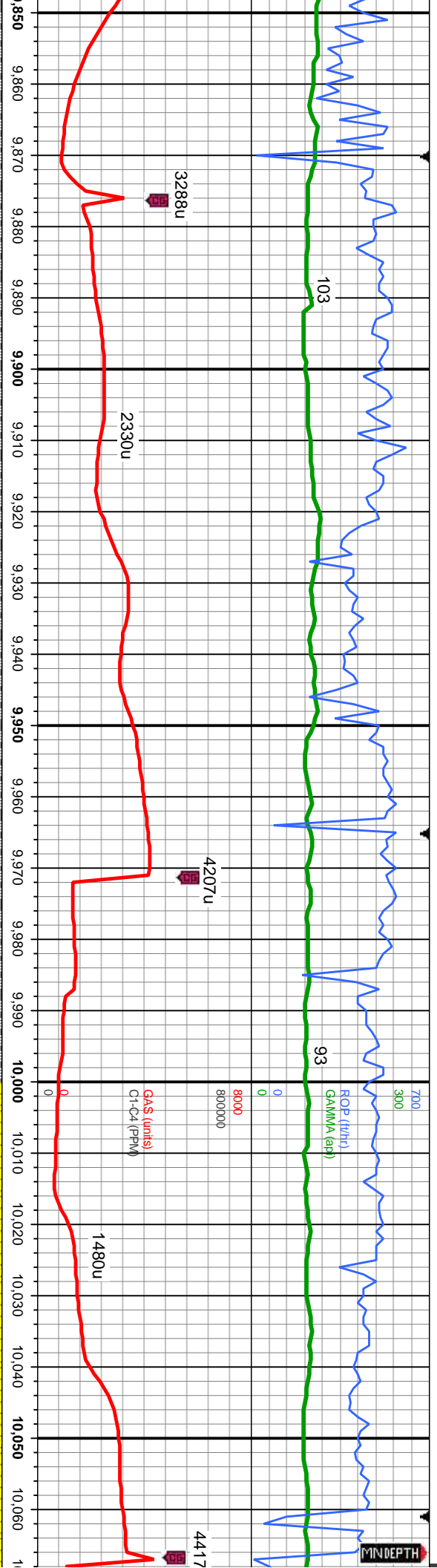
MD: 9,710'
TVD: 7,135.76'
Inclination: 90.1 °
Azimuth: 91.9 °
VS: 1,506.97'

MD: 9,805'
TVD: 7,135.18'
Inclination: 90.6 °
Azimuth: 92.2 °
VS: 1,601.97'

blk brn, c gr, occ f gr,sb ang-sb rnd, p-mod srt, fri brit, mod-gd	75% SHY SS: dk gy-dk brn, c gr, occ f gr,sb ang-sb rnd, p-mod srt, fri brit, mod-gd
LTY SH:lt-gy gy, sme blk, sb pty-sb blk, frm, rhy lst, arg-sly,	cons, sl calc; 25% SLTY SH:lt-gy gy, sme blk, sb pty-sb blk, frm, rhy lst, arg-sly,
bri gn-yel cut, mod bri gn-yel ring, tr yel min flor, solid gn-yel	non calc; OIL SHOW: bri gn-yel cut, mod bri gn-yel ring, tr yel min flor, solid gn-yel
	resd stn, no od

85% SHY SS: dk gy-dk brn, c gr, occ f gr	8000
cons, sl calc; 15% SLTY SH:lt-gy gy, sme	
non calc; OIL SHOW: bri bl-wh string mlk	





MD: 9,900'
TVD: 7,133.52'
Inclination: 91.4 °
Azimuth: 92.5 °
VS: 1,696.95'

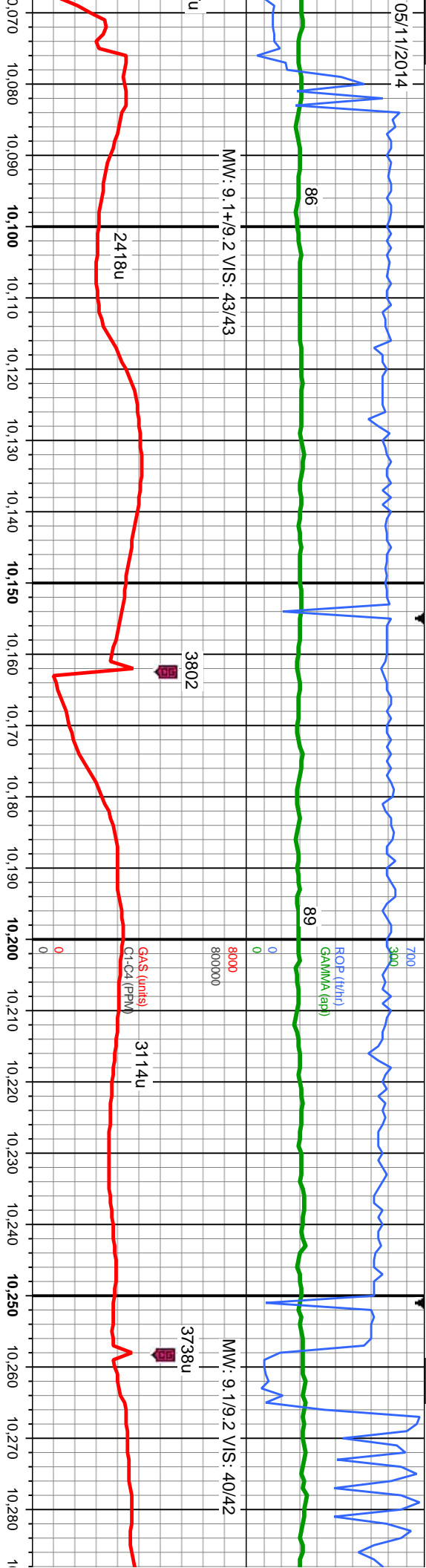
MD: 9,996'
TVD: 7,130.92'
Inclination: 91.7 °
Azimuth: 92 °
VS: 1,792.91'

sb ang-sb rnd, p-mod srt, fri brit, mod-gd
ne blk, sb plty-sb blk, frm, rthy lstr, arg-sily,
y cut, bri wh-it bi solid ring, si gn resd ring

90% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd
cons, si calc; 10% SLTY SH:lt-gy gy, sme blk, sb plty-sb blk, frm, rthy lstr, arg-sily,
non calc; OIL SHOW: bri bi-wh stmg mlky cut, bri wh-it bi solid ring, si gn resd ring

100% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd,
cons, si calc; tr SLTY SH:lt-gy gy, sme blk, sb plty-sb blk
calc; OIL SHOW: bri bi-wh stmg mlky cut, bri wh-it bi solid





MW: 9.1+9.2 VIS: 43/43

3802

3114u

3738u

MW: 9.1/9.2 VIS: 40/42

MD: 10,090'
TVD: 7,129.37'
Inclination: 90.2°
Azimuth: 91.5°
VS: 1,886.9'

MD: 10,186'
TVD: 7,128.61'
Inclination: 90.7°
Azimuth: 91.3°
VS: 1,982.89'

Fault #1
MD: 10245'
TVD: 7128'
Throw: 7' down

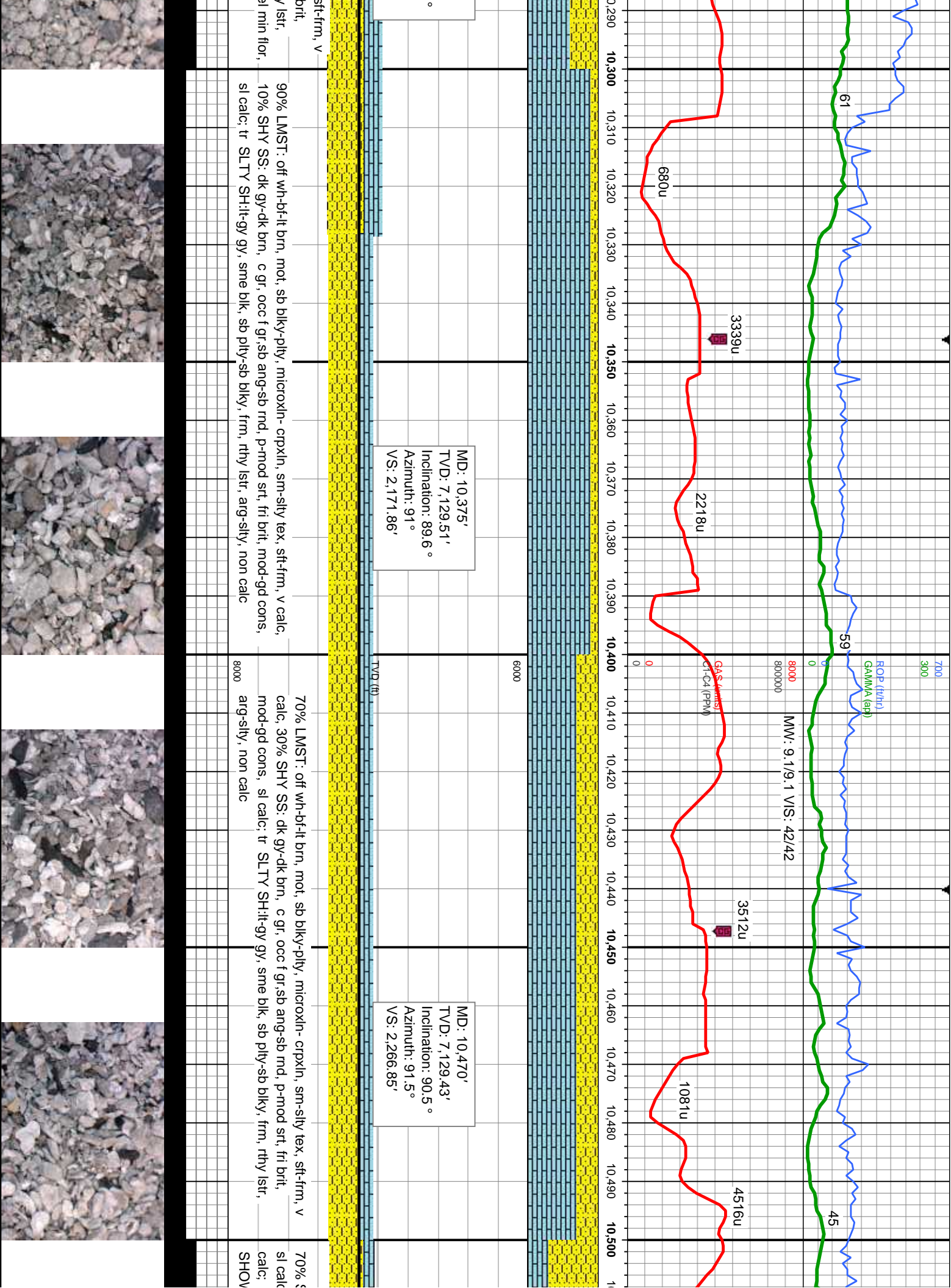
MD: 10,281'
TVD: 7,128.61'
Inclination: 89.3°
Azimuth: 91.1°
VS: 2,077.88'

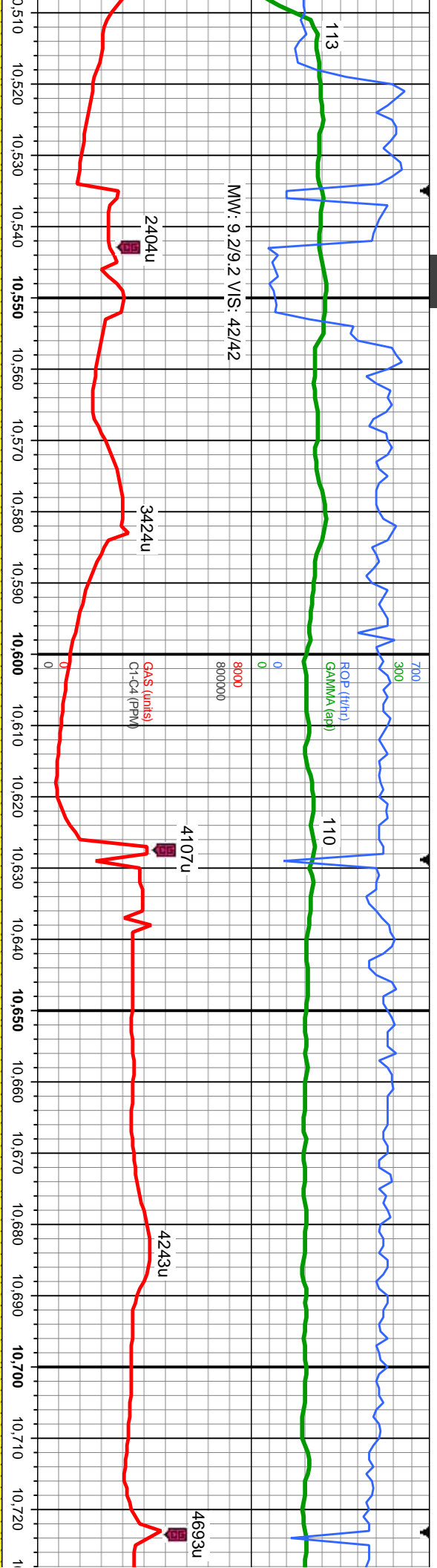
p-mod srt, fri brit, mod-gd
; frm, rthy lstr, arg-sily, non
ring, sl gn resdl ring

100% SHY SS: dk gy-dk brn, c gr, occ f gr,sb ang-sb rnd, p-mod srt, fri brit, mod-gd
cons, sl calc; tr SLTY SH:lt-gy gy, sme blk, sb pily-sb blk, frm, rthy lstr, arg-sily, non
calc; OIL SHOW: bri bl stmg cut, bri lt bl solid ring, sl gn resdl ring, no od

60% LMST: off wh-bl-lt brn, mot, sb blk-y-pily, microxin- crpxln, sm-sily tex, ; calc,
40% SHY SS: dk gy-dk brn, c gr, occ f gr,sb ang-sb rnd, p-mod srt, fri
mod-gd cons, sl calc; tr SLTY SH:lt-gy gy, sme blk, sb pily-sb blk, frm, rthy
arg-sily, non calc, tr pyr; OIL SHOW: bri gn-yel cut, mod bri gn-yel ring, tr yv
solid gn-yel resdl stn, no od







Fault #2
MD: 10510'
TVD: 7129'
Throw: 32 up

MD: 10,564'
TVD: 7,129.27'
Inclination: 89.7 °
Azimuth: 91.9 °
VS: 2,360.85'

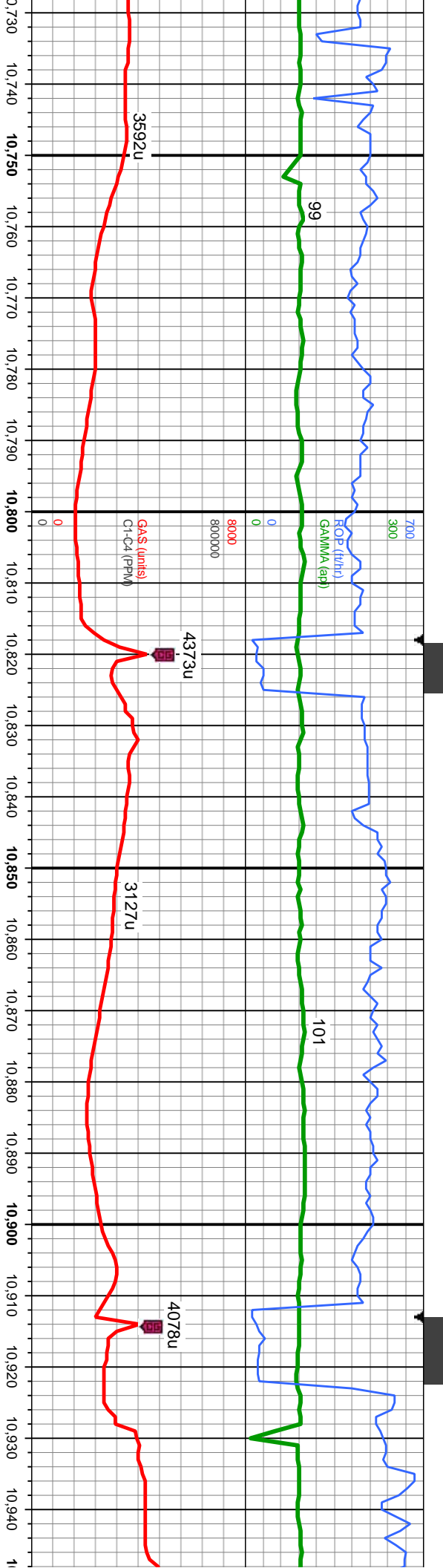
MD: 10,658'
TVD: 7,129.35'
Inclination: 90.2 °
Azimuth: 92.1 °
VS: 2,454.85'

SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd cons, 30% LMST: off wh-brit brn, mot, sb blkly-pily, microxln- cpxln, sm-sily tex, sft-frm, v tr SLTY SH:lt-gy gy, sme blk, sb pily-sb blkly, frm, rthy lstr, arg-sily, non calc; OIL SHOW: bri grn cut, mod bri grn ring, tr yel min flor, solid grn-yel resdl stn, no od

100% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd cons, sl calc; tr SLTY SH:lt-gy gy, sme blk, sb pily-sb blkly, frm, rthy lstr, arg-sily, non calc; OIL SHOW: bri grn cut, mod bri grn ring, tr yel min flor, solid grn-yel resdl stn, no od

100% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd cons, sl calc; tr SLTY SH:lt-gy gy, sme blk, sb pily-sb blkly, frm, rthy lstr, arg-sily, non calc; OIL SHOW: bri grn cut, mod bri grn ring, tr yel min flor, solid grn-yel resdl stn, no od



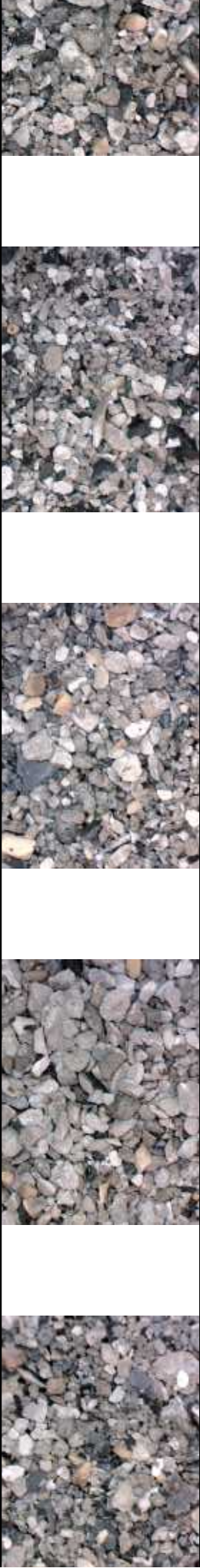


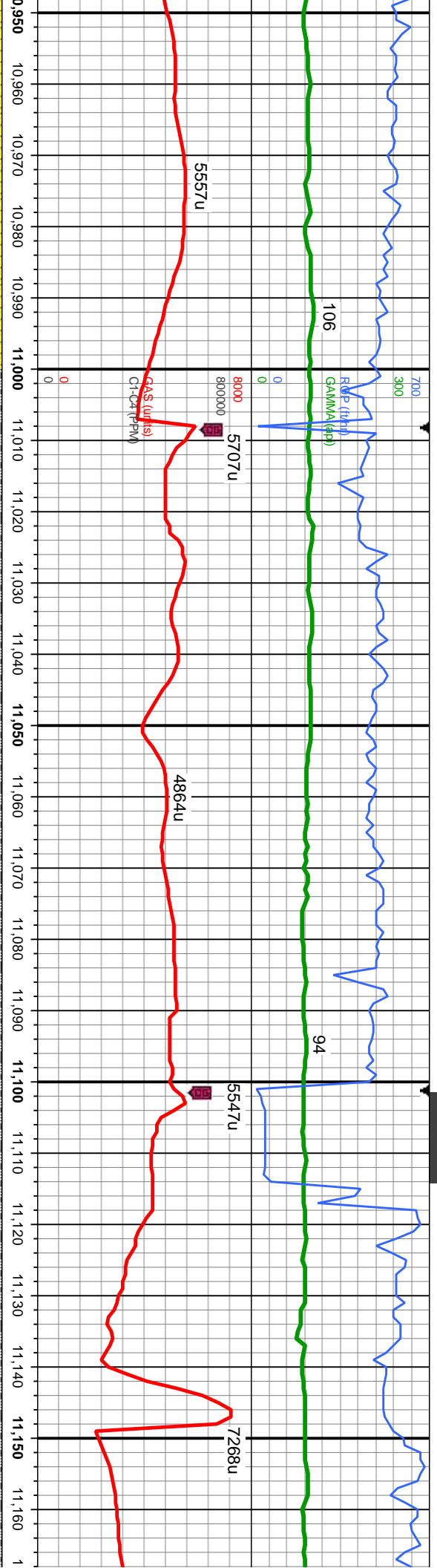
MD: 10,754'
TVD: 7,128.68'
Inclination: 90.6 °
Azimuth: 92.5°
VS: 2,550.85'

MD: 10,848'
TVD: 7,127.94'
Inclination: 90.3 °
Azimuth: 92°
VS: 2,644.84'

MD: 10,942'
TVD: 7,128.19'
Inclination: 89.4°
Azimuth: 91.6°
VS: 2,738.84'

Depth (ft)	Description	Notes
10,754'	brn, c gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd	
10,754' - 10,848'	ht-ilt-gy gy, sme blk, sb pily-sb blk, frm, rthy lstr, ang-sily, non	
10,848' - 10,942'	wh stmg milky cut, bri wh-ilt bl solid ring, sl gn resdl ring	
10,942'	100% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd	
10,942' - 10,942'	cons, sl calc; OIL SHOW: bri bl-wh stmg milky cut, bri wh-ilt bl solid ring, sl gn resdl	
10,942'	stn, no od	





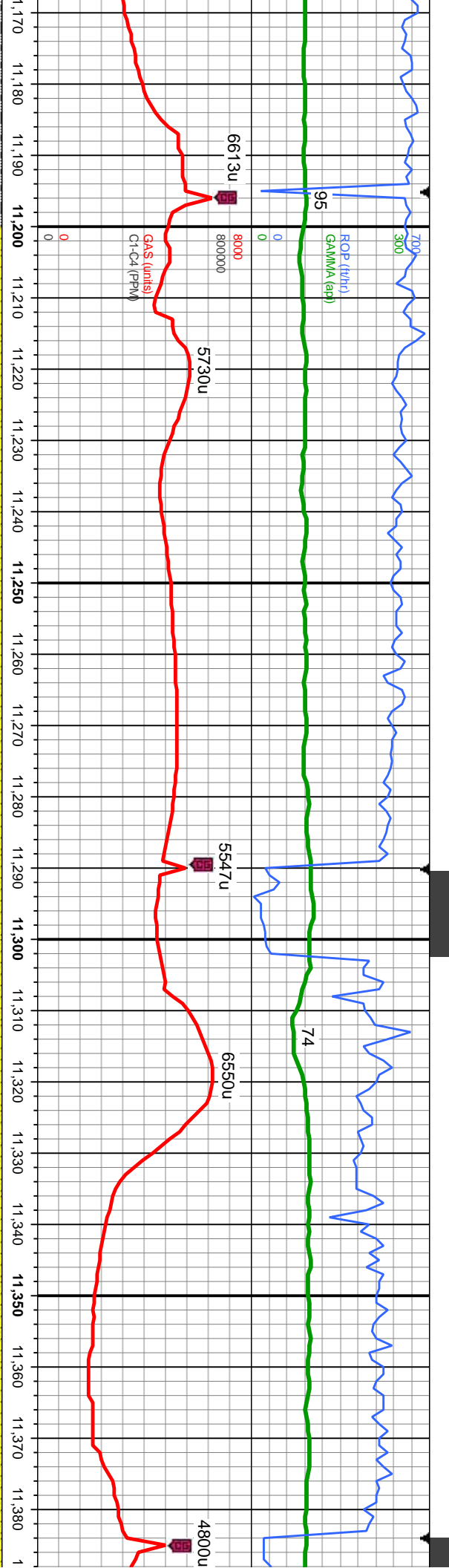
MD: 11,036'
TVD: 7,129.83'
Inclination: 88.6°
Azimuth: 91°
VS: 2,832.82'

MD: 11,131'
TVD: 7,131.57'
Inclination: 89.3°
Azimuth: 91.2°
VS: 2,927.79'

90% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd cons, v sl calc; 10% SLTY SH:lt-gy gy, sme blk, sb pily-sb blk, frm, rthy lstr, arg-sily, non calc; OIL SHOW: bri lt bl-wh milky string cut, bri wh thk ring, solid bri bl resdi str, no od

90% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd cons, v sl calc; 10% SLTY SH:lt-gy gy, sme blk, sb pily-sb blk, frm, rthy lstr, arg-sily, non calc; OIL SHOW: bri bl-wh string milky cut, bri wh-lt bl sol



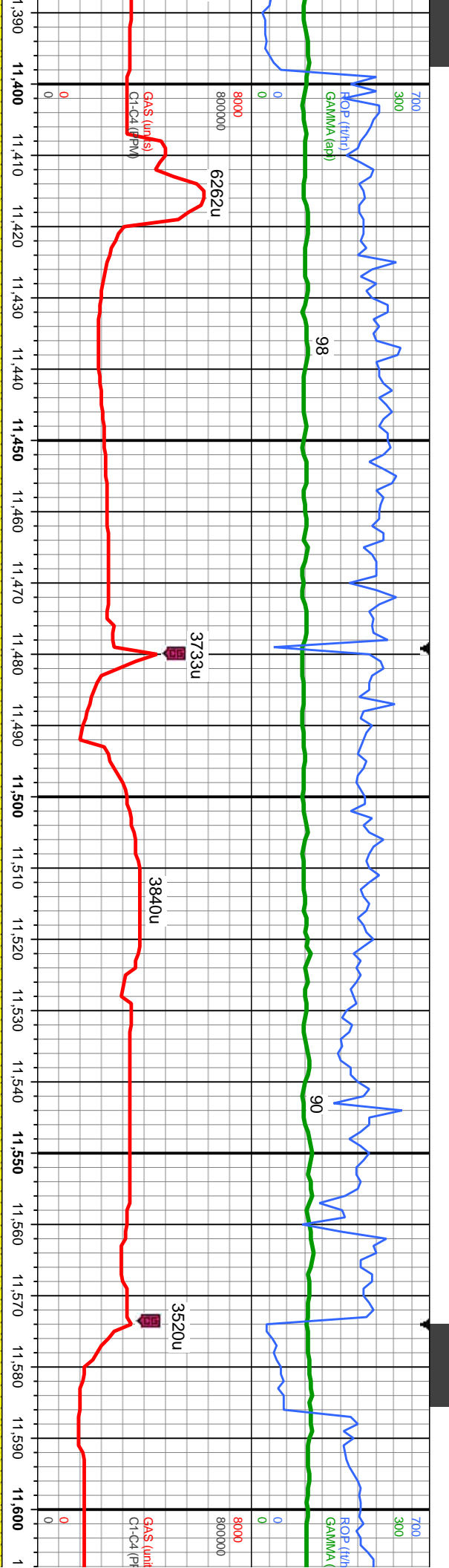


MD: 11,225'
TVD: 7,132.06'
Inclination: 90.1 °
Azimuth: 91.4 °
VS: 3,021.79'

MD: 11,319'
TVD: 7,132.14'
Inclination: 89.8 °
Azimuth: 90.7 °
VS: 3,115.77'

mod srt, fri brit, mod-gd ky, frm, rthy lsrt, arg-slt, id ring, sl gn resdl ring	100% SHY SS: dk gy-dk brn, c gr, occ f gr,sb ang-sb rnd, p-mod srt, fri brit, mod-gd cons, sl calc; OIL SHOW: bri bl-wh string milky cut, bri wh-it bl solid ring, sl gn resdl ring	100% SHY SS: dk gy-dk brn, c gr, occ f gr,sb ang-sb rnd, p-mod srt, fri brit, mod-g cons, sl calc; OIL SHOW: bri lt bl-wh milky string cut, bri wh thk ring, solid bri bl res stn, no od
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MD: 11,414'
TVD: 7,131.81'
Inclination: 90.6°
Azimuth: 90.3°
VS: 3,210.74'

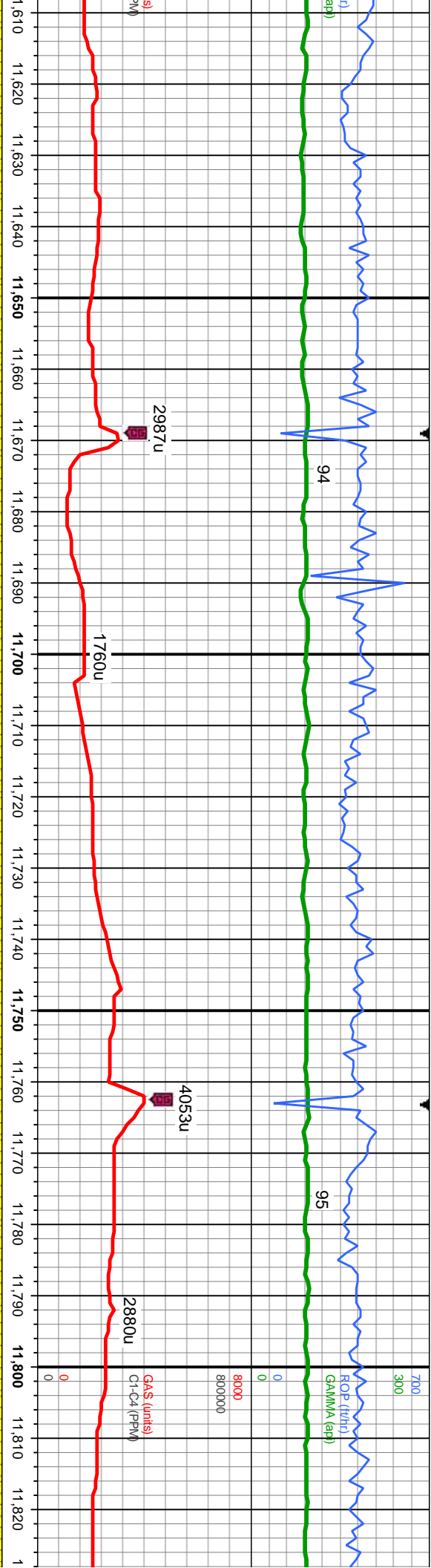
MD: 11,509'
TVD: 7,130.57'
Inclination: 90.9°
Azimuth: 90.5°
VS: 3,305.7'

MD: 11,604'
TVD: 7,130.0'
Inclination: 8°
Azimuth: 90°
VS: 3,400.6'

100% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd cons, sl calc; OIL SHOW: bri lt bl-wh milky stmg cut, bri wh thk ring, solid bri bl resdl

100% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd cons, sl calc; OIL SHOW: bri bl-wh stmg milky cut, bri wh-lt bl solid ring, sl gn resdl





4'
9.3°
5°
7'

MD: 11,698'
TVD: 7,131.39'
Inclination: 89.5°
Azimuth: 90.4°
VS: 3,494.63'

MD: 11,793'
TVD: 7,131.88'
Inclination: 89.9°
Azimuth: 90.8°
VS: 3,589.6'

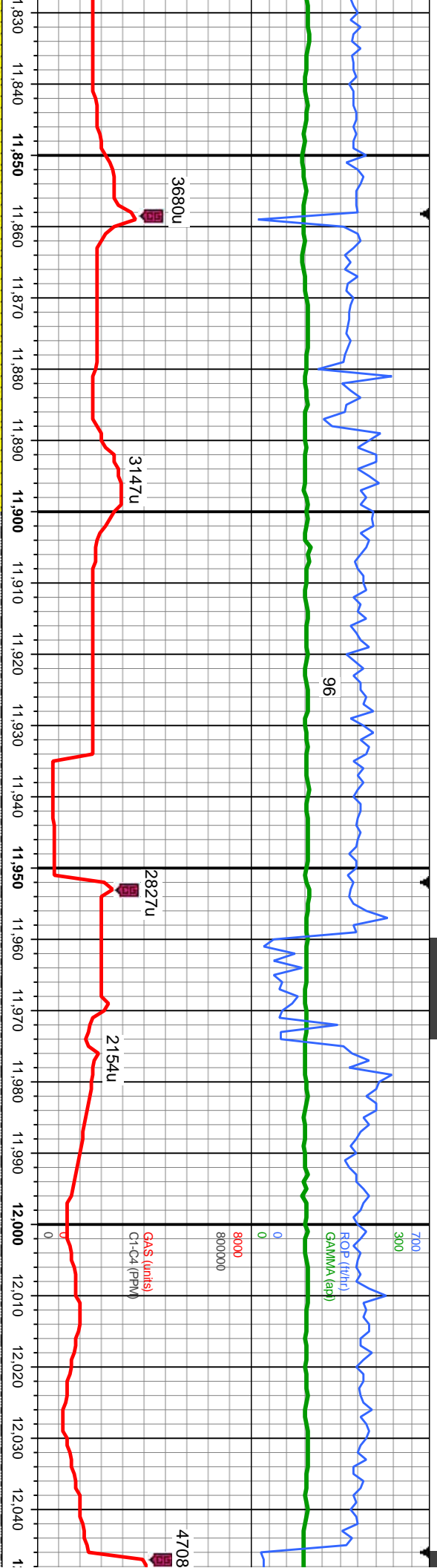
TVD (ft)

100% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd
cons, sl calc; tr SLTY SH:lt-gy gy, sme blk, sb pty-sb blk, frm, rthy lstr, arg-sily, non
aalc; OIL SHOW: bri lt bl-wh mky smng cut, bri wh thk ring, solid bri bl resd str, no od

100% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd cons,
sl calc; tr SLTY SH:lt-gy gy, sme blk, sb pty-sb blk, frm, rthy lstr, arg-sily, sl calc; OIL
SHOW: bri bl-wh smng mky cut, bri wh-it bl solid ring, sl gn resd ring

100% SHY SS: dk gy
cons, sl calc; tr SLTY
aalc; OIL SHOW: bri lt





MD: 11,887'
TVD: 7,131.56'
Inclination: 90.5 °
Azimuth: 91.2 °
VS: 3,683.59'

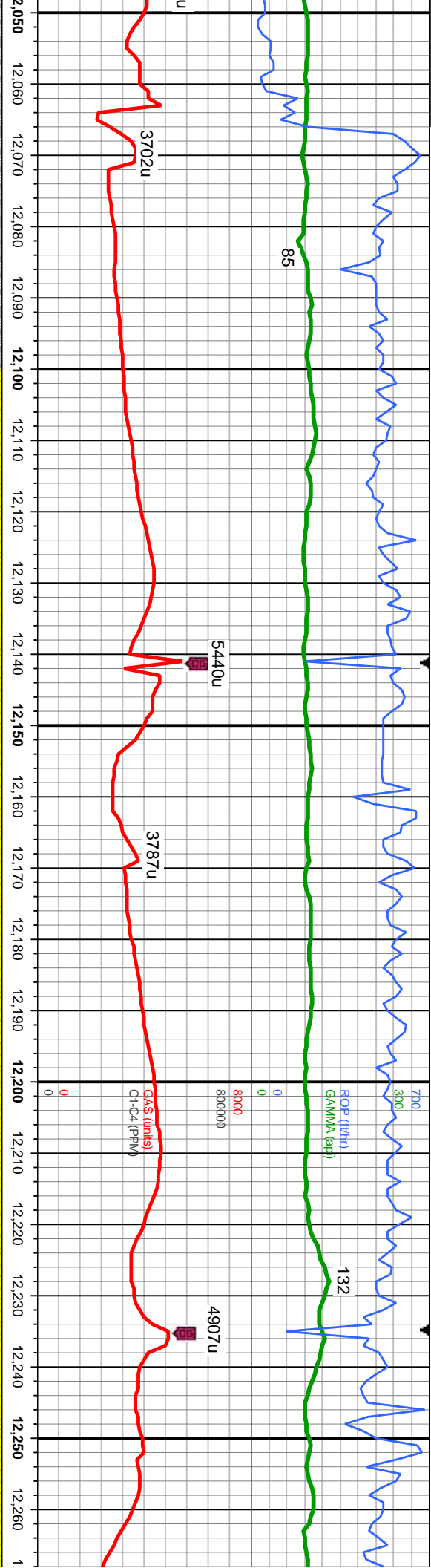
MD: 11,981'
TVD: 7,131.06'
Inclination: 90.1 °
Azimuth: 89.9 °
VS: 3,777.56'

dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd
SH:lt-gy gy, sme blk, sb ply-sb blk, frm, rthy lstr, arg-sily, sl
bl-wh stmg milky cut, bri wh-lt bl solid ring, sl gn resd ring

90% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd cons, v
sl calc; 10% SLTY SH:lt-gy gy, sme blk, sb ply-sb blk, frm, rthy lstr, arg-sily, non calc;
OIL SHOW: bri bl-wh stmg milky cut, bri wh-lt bl solid ring, sl gn resd ring

90% SHY SS: dk gy-dk brn, c gr, occ f g
cons, v sl calc; 10% SLTY SH:lt-gy gy, s
non calc; OIL SHOW: bri bl-wh stmg mil





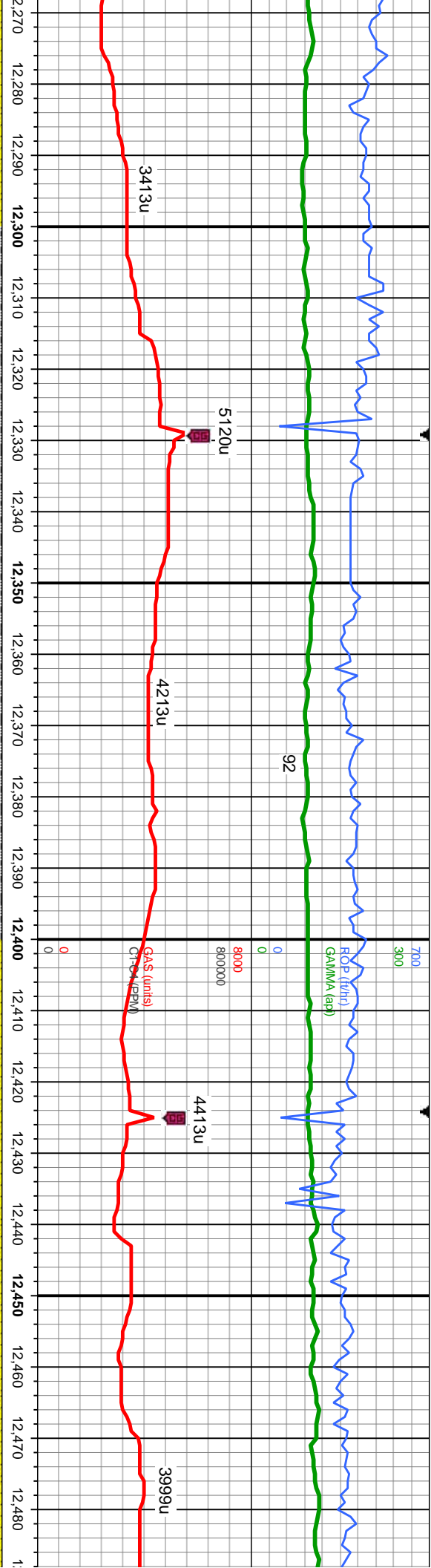
MD: 12,076'
TVD: 7,131.98'
Inclination: 88.8 °
Azimuth: 91 °
VS: 3,872.52'

MD: 12,171'
TVD: 7,133.8'
Inclination: 89 °
Azimuth: 91 °
VS: 3,967.49'

MD: 12,265'
TVD: 7,135.
Inclination: 8
Azimuth: 91
VS: 4,061.4'

r, sb ang-sb rnd, p-mod srt, fri brit, mod-gd	100% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd
sme blk, sb pily-sb blk, frm, rthy lstr, arg-sily,	cons, sl calc, tr SLTY SH:lt-gy gy, sme blk, sb pily-sb blk, frm, rthy lstr, arg-sily, sl
ly cut, bri wh-lt bl solid ring, sl gn resd ring	calc; OIL SHOW: bri lt bl-wh milky stmg cut, bri wh thk ring, solid bri bl resd stn, no od





11' 4° 7'

MD: 12,359'
TVD: 7,135.69'
Inclination: 89.9°
Azimuth: 91°
VS: 4,155.46'

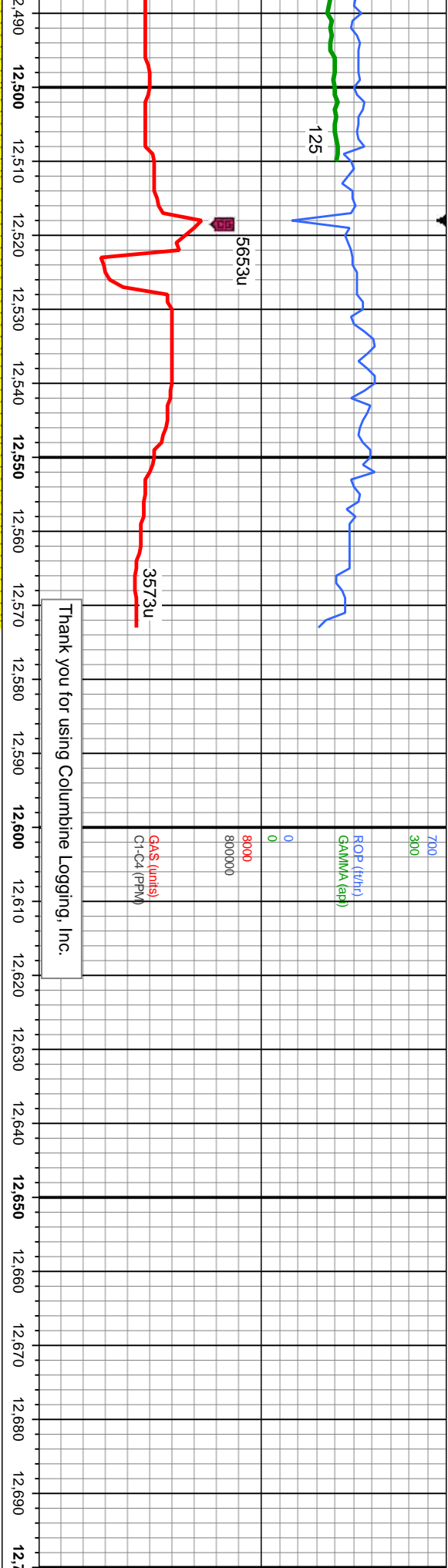
MD: 12,453'
TVD: 7,135.6'
Inclination: 90.2°
Azimuth: 90.9°
VS: 4,249.45'

p-mod srt, fri brit, mod-gd
y, frm, rthy lstr, arg-slt, sl
ring, sl gn resdl ring

90% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit, mod-gd
cons, v sl calc; 10% SLTY SH:lt-gy gy, sme blk, sb pily-sb blk, frm, rthy lstr, arg-slt,
non calc; OIL SHOW: bri bl-wh strng milky cut, bri wh-lt bl solid ring, sl gn resdl ring

100% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod srt, fri brit,
cons, sl calc; tr SLTY SH:lt-gy gy, sme blk, sb pily-sb blk, frm, rthy lstr, arg-slt,
calc; OIL SHOW: bri bl-wh strng milky cut, bri wh-lt bl solid ring, sl gn resdl ri





Thank you for using Columbine Logging, Inc.

MD: 12,508'
TVD: 7,135.41'
Inclination: 90.2°
Azimuth: 91.2°
VS: 4,304.44'

MD: 12,573'
TVD: 7,135.18'
Inclination: 90.2°
Azimuth: 91.2°
VS: 4,369.44'

TD @ 12573' MD @ 12:30
HRS MST on 5/11/14

100% SHY SS: dk gy-dk brn, c gr, occ f gr, sb ang-sb rnd, p-mod
srt, fri brt, mod-gd cons, sl calc; tr SLTY SH:lt-gy gy, sme blk, sb
ply-sb blk, frm, rthy lstr, arg-sly, sl calc; OIL SHOW: brl bl-wh
sting milky cut, brl wh-lt bl solid ring, bl-gn rescl ring

