



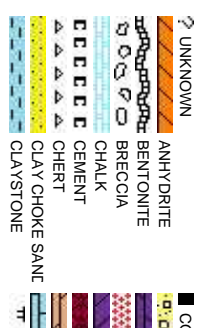
Scale: 5" / 100'  
Measured Depth Log

Well Name	Rohn State LD09_64_1HN HORIZ		
Location	NE SE SEC. 9, T9N, R58W		
State	COLORADO	County	WELD
Country	USA	Rig Number	H&P326
API Number	05-123-37528	AFE #	139472
Region	DJ BASIN	Field	WILDCAT
Spud Date	10/31/2013	Drilling Completed	11/6/2013
Surface Coordinates	2,050' FSL, 480' FEL Lat 40.76421, Long 103.86165		
Bottom Hole Coordinates	1650' FSL, 660' FWL Lat 40.76312, Long 103.87649		
Ground Elevation	4716'	K.B. Elevation	4746'
Logged Interval	1300'	To	9687'
Formation	NIOBRARA B		
Type of Drilling Fluid	LSND		

Company Noble Energy Inc  
Address 1625 Broadway  
Denver, CO 80202

Name EVAN HOWELL  
Company NOBLE ENERGY  
Address 1625 Broadway  
Denver, CO 80202

Chris Willatt  
Jessica Silvey



Operator

Suite 2200  
202

Geologist

BY INC.  
Suite 2200  
202

Other

Rock Types

CONGLOMERATE

DOLOMITE

GRANITE

GYPSUM

IGNEOUS

SIDERITE or LIMONITE

LIMESTONE

MARLSTONE

METAMORPHIC

NO SAMPLE

SALT

SANDSTONE

SALT-PEPPER SANC

SHALE

SHALE COLORED

LIMESTONE

SHALE GRAY

SHALY SANDSTONE

SHALY SILTSTONE

SILTY SHALE

SILTSTONE

TUFF

WELDED TUFF

Accessories

F FOSSIL

ARGILLACEOUS

GLAUCONITE

TUFFACEOUS

GASTROPOD

ARGILLITE GRAIN

GYPSIFEROUS

ANHYDRITE STRINGER

ALGAE

OOLITE

HEAVY MINERAL

ANHYDRITE STRINGER

AMPHIPORA

OSTRACOD

INOCERAMUS

BENTONITE STRINGER

BELEMNITE

PELECYPOD

KAOLIN

BENTONITE STRINGER

BIOCLASTIC

PELLET

MARLSTONE

COAL STRINGER

BRACHIOPOD

PISOLITE

CARBONACEOUS FLAKES

DOLOMITE STRINGER

BRYOZOA

PLANT REMAINS

CHERT

GYPSUM STRINGER

CEPHALOPOD

PLANT SPORES

COAL - THIN BEDS

Limestone STRINGER

CORAL

SCAPHOPOD

DOLOMITIC

MARLSTONE (CALC) STRG

CRINOID

STROMATOPOROID

FELDSPAR

MARLSTONE (DOL) STRG

ECHINOID

FERRUGINOUS PELLET

SANDY

SANDSTONE STRINGER

FISH

Minerals

SILTACEOUS

SHALE STRINGER

FORAMINIFERA

ANHYDRITIC

FERRUGINOUS

SILTSTONE STRINGER

SILTY

Other Symbols

MOLDIC

FAULT

WIRELINE TESTED - LEFT

E EARTHY

ORGANIC

FORMATION TOP

WIRELINE TESTED - RT

FX FINELYXLN

DEAD

PINPOINT

GAS SHOW

GS GRAINSTONE

EVEN

VUGGY

MINERPTH MN DEPTH

L LITHOGRAPHIC

QUESTIONABLE

NORMAL FAULT

A ANGULAR

MX MICROXLN

SPOTTED STAINING

OIL SHOW

R ROUNDED

MS MUDSTONE

BIT

OVERTURNED STRATA

B SUBANG

PS PACKSTONE

CONNECTION (LEFT)

REVERSE FAULT

R SUBRND

WS WACKESTONE

CONNECTION (RIGHT)

SIDEWALL CORE (LEFT)

FENESTRAL

CONNECTION GAS

CORE - LOST

SLIDE

Textures

Sorting

INTERCRYSTALLINE

CORE - RECOVERED

SURVEY

BS BOUNDSTONE

INTEROOLITIC

DST INTERVAL

TRIP GAS

C CHALKY

CRYPTOXLN

M MODERATE

P POOR

W WELL

Slide/Rotate

ROP  
ROF  
GAMMA

Total Gas & Chromatograph  
GAS  
C1  
C2  
C3  
C4  
CO2

Depth Labels

% Lith

Well Bore  
TVD

Oil Show

Images

COLUMBINE LOGGING INC.  
RIGGED UP ON 11/01/2013  
MANNED 2-PERSON LOGGING  
WITH BLOODHOUND GAS  
CHROMATOGRAPH UNIT #0298

LOG CONTINUES FROM FILE:  
Rohn State LD09\_64\_1HN\_VERT.mplot

Bit Data  
Bit #: 2  
Type: SEC MMD55  
Size: 8.75  
Depth In: 5,015 '  
Depth Out: 6,144 '  
Jets: 5x14  
S/N: 12220597

BEGIN 50' SAMPLES WITH  
50' DESCRIPTIONS

80% SLTY SH: med-dk gy, occ crm, sft-mod  
frm, blk-y - sb pty, silty-rthy tex, non calc  
20%SHY SS: lt-medgy, trnsi-op, vf-med gr,  
sb md-sb blk-y, occ pty, p srt, arg mnx,  
p-mod cmt, occ mod calc

100% SLTY SH: med-dk gy, occ crm,  
sft-mod frm, blk-y - sb pty, silty-rthy tex, sl-mod  
fiss, non calc

100% SLTY SH: med-dk gy, occ crm,  
sft-mod frm, blk-y - sb pty, silty-rthy tex, sl-mod  
fiss, non calc

ML  
TV  
Inc  
AZ

TR  
FR  
MOD  
G  
E





WT: 10.15 VIS: 37

WT: 10.45 VIS: 37

ROP (ft/hr)  
WOB 48  
RPM 4200  
PP 67, 67  
SPM 67, 67

71

68

90

75

9u

GAS (units)  
C1-C4 (PPM)  
CO2 (units)

574u

1742u

1885u

76u

970u

5000

MD: 5,155

D: 5,108.17

Inclination: 17.1°

Azimuth: 258.7°

MD: 5,212

TVD: 5,161.05

Inclination: 26.4°

Azimuth: 258.7°

MD: 5,344

TVD: 5,280.15

Inclination: 31.4°

Azimuth: 281.1°

100% SLTY SH: med-dk gy, occ crm,  
sft-mod frm, blkly - sb plty, silty-rthy tex, sl-mod  
fiss, non calc

100% SLTY SH: med-dk gy, occ crm,  
sft-mod frm, blkly - sb plty, silty-rthy tex, sl-mod  
fiss, non calc, tr shy ss

100% SLTY SH: med-dk gy, occ crm,  
sft-mod frm, blkly - sb plty, silty-rthy tex, sl-mod  
fiss, nsl-mod calc, tr shy ss

100% SLTY SH: med-dk gy, occ crm,  
sft-mod frm, blkly - sb plty, silty-rthy tex, sl-mod  
fiss, sl-mod calc, tr dissn pyr, tr shy ss, incr  
slt

100% SLTY SH:  
sft-mod frm, blkly  
fiss, sl-mod calc



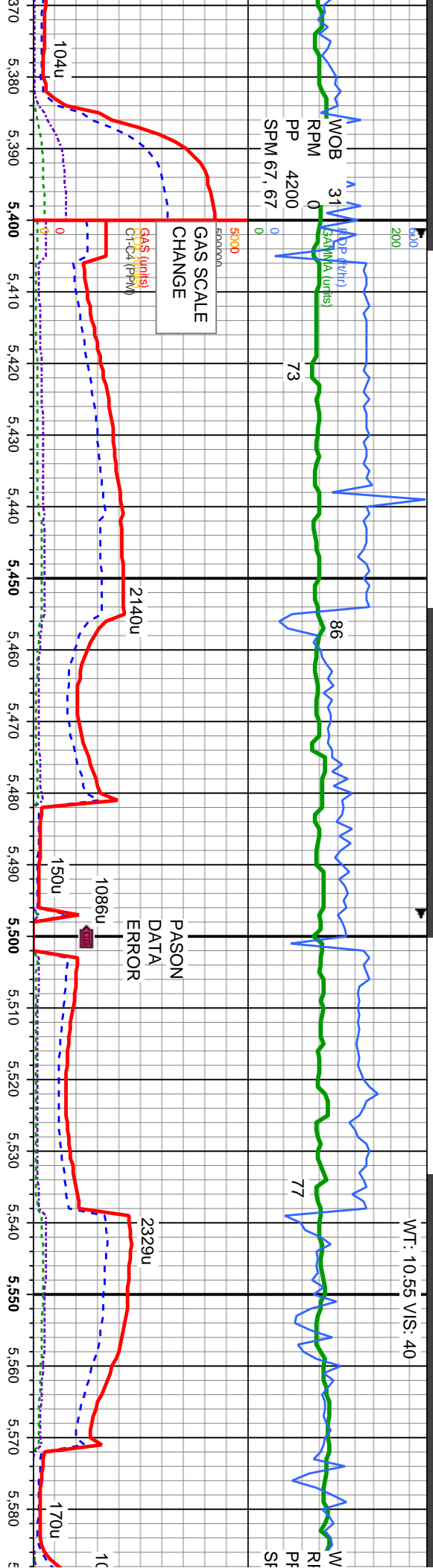
WT: 10.55 VIS: 40

WOB 31  
RPM 4200  
PP 67, 67  
SPM 67, 67

ROP (ft/hr)  
GAMMA (API)  
GAS (ppm)  
GAS (ppm)  
GAS (ppm)

GAS SCALE  
CHANGE

PASON  
DATA  
ERROR



MD: 5,401.0  
TVD: 5,327.25  
Inclination: 37.1 °  
Azimuth: 281.1 °

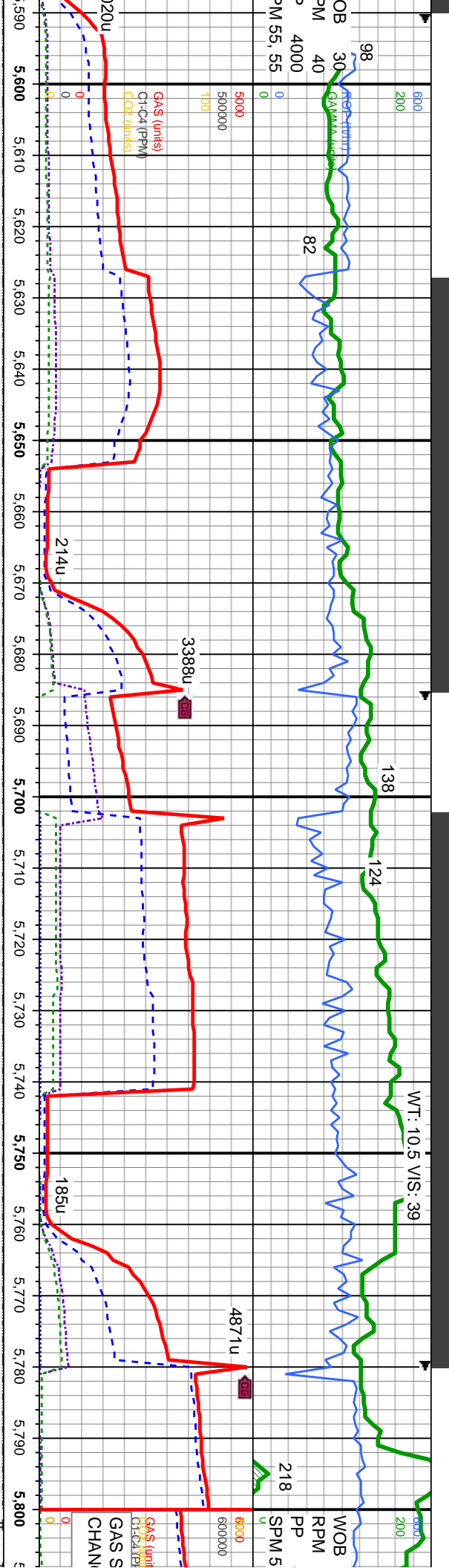
MD: 5,533.0  
TVD: 5,432.21  
Inclination: 41.2 °  
Azimuth: 264.2 °

TVD (ft)

med-dk gy, occ crm, - sb pty, silty-rthy tex, sl-mod tr dissim pyr, tr shy ss	100% SLTY SH: med-dk gy, occ crm, sft-mod frm, blkly - sb pty, silty-rthy tex, sl-mod fss, sl-mod calc, v tr dissim pyr, tr shy ss	100% SLTY SH: med-dk gy, occ crm, sft-mod frm, blkly - sb pty, silty-rthy tex, sl-mod fss, v tr calc, v tr dissim pyr, tr shy ss	100% SLTY SH: med-dk gy, occ crm, sft-mod frm, blkly - sb pty, silty-rthy tex, sl-mod fss, v tr calc, v tr dissim pyr, tr shy ss	100% SLTY SH: med-dk gy, occ crm, sft-mod frm, blkly - sb pty, silty-rthy tex, sl-mod fss, v tr calc, v tr dissim pyr, tr shy ss
6000				







MD: 5,628'  
TVD: 5,500.36'  
Inclination: 47.1°  
Azimuth: 260°

MD: 5,722'  
TVD: 5,556.84'  
Inclination: 58.9°  
Azimuth: 262.3°

MD: 5,779'  
TVD: 5,582.47'  
Inclination: 67.6°  
Azimuth: 262.3°

SHARON SPRINGS  
5790' MD, 5586' TVD

100% SLTY SH: lt-gy, occ tan-crm, sft-mod  
frm, blkly - sb plty, silty-rthy tex, mod fiss, v tr  
calc, v tr diss pyr

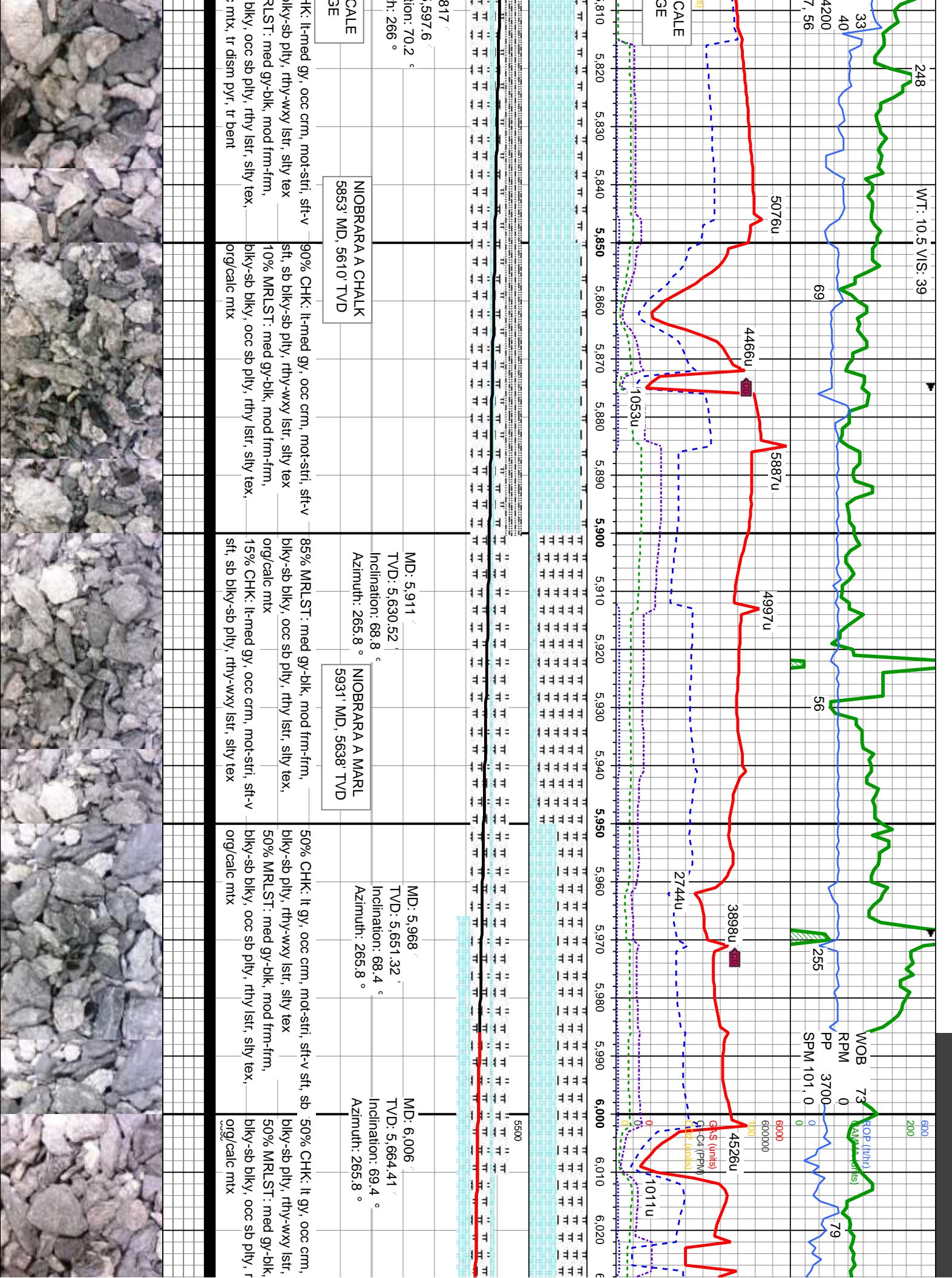
100% SLTY SH: lt-gy, occ tan-crm, sft-mod  
frm, blkly - sb plty, silty-rthy tex, mod fiss, v tr  
calc, v tr diss pyr

100% SLTY SH: lt-med gy, occ tan, sft-mod  
frm, blkly - sb plty, silty-rthy tex, mod fiss, v tr  
calc, mod-abnt bent

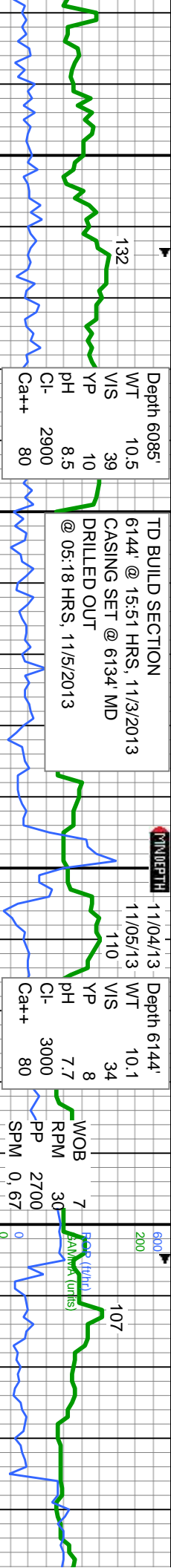
80% MRLST: med gy-blk, mod frm-frm,  
blkly-sb blkly, occ sb plty, rthy, silty tex, org/calc  
mtx, tr diss pyr, tr bent

20% SLTY SH: lt-med gy, occ tan, sft-mod  
frm, blkly - sb plty, silty-rthy tex, mod fiss, v tr  
calc, mod-abnt bent







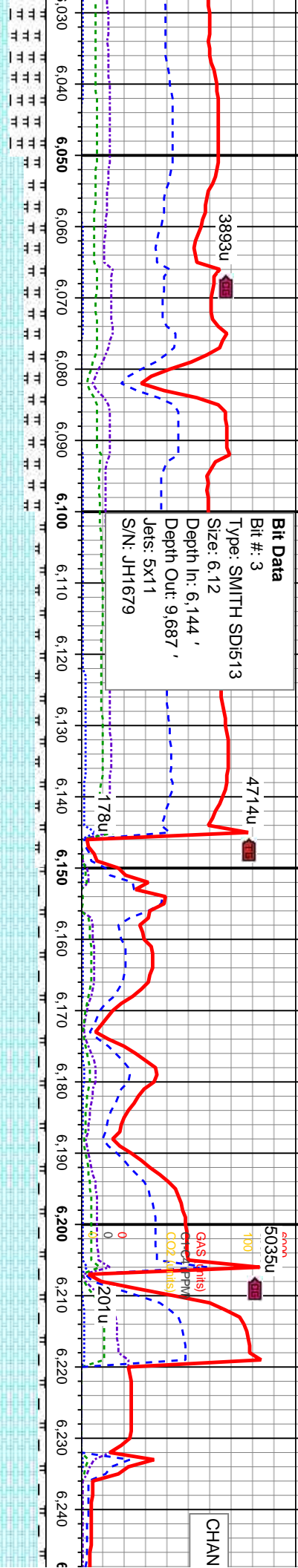


TD BUILD SECTION  
6144' @ 15:51 HRS, 11/3/2013  
CASING SET @ 6134' MD  
DRILLED OUT  
@ 05:18 HRS, 11/5/2013

**Bit Data**

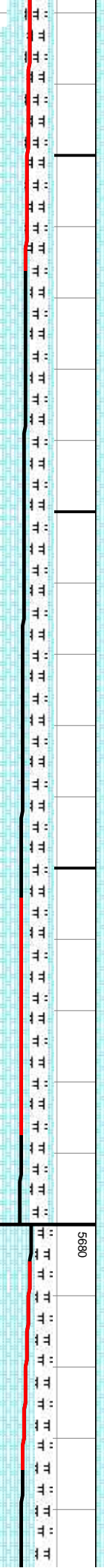
Bit #: 3  
Type: SMITH SD1513  
Size: 6.12  
Depth In: 6.144'  
Depth Out: 9.687'  
Jets: 5x11  
S/N: JH1679

CHAN



Depth 6144'  
11/04/13  
11/05/13  
WT 10.1  
VIS 34  
YP 8  
pH 7.7  
Cl- 3000  
Ca++ 80  
WOB 7  
RPM 30  
PP 2700  
SPM 0.67  
FCB (ft/hr) 107  
FAN/MPH (units)

5035u  
100  
GAS (mls)  
CHL (PPM)  
CO2 (mls)  
201u



5680

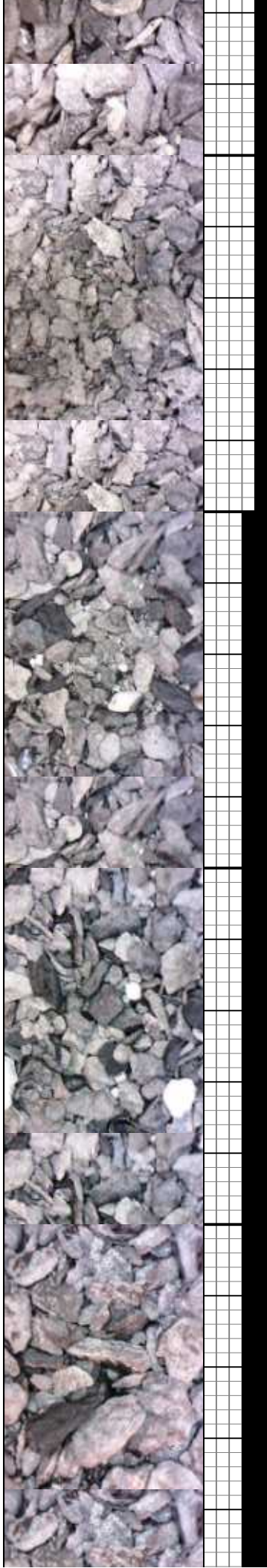
MD: 6.063'  
TVD: 5.681.78'  
Inclination: 75.1 °  
Azimuth: 265.8 °  
NIOBRARA B CHALK  
6090 MD, 5687' TVD

MD: 6.144'  
TVD: 5.692.73'  
Inclination: 87.4 °  
Azimuth: 263 °

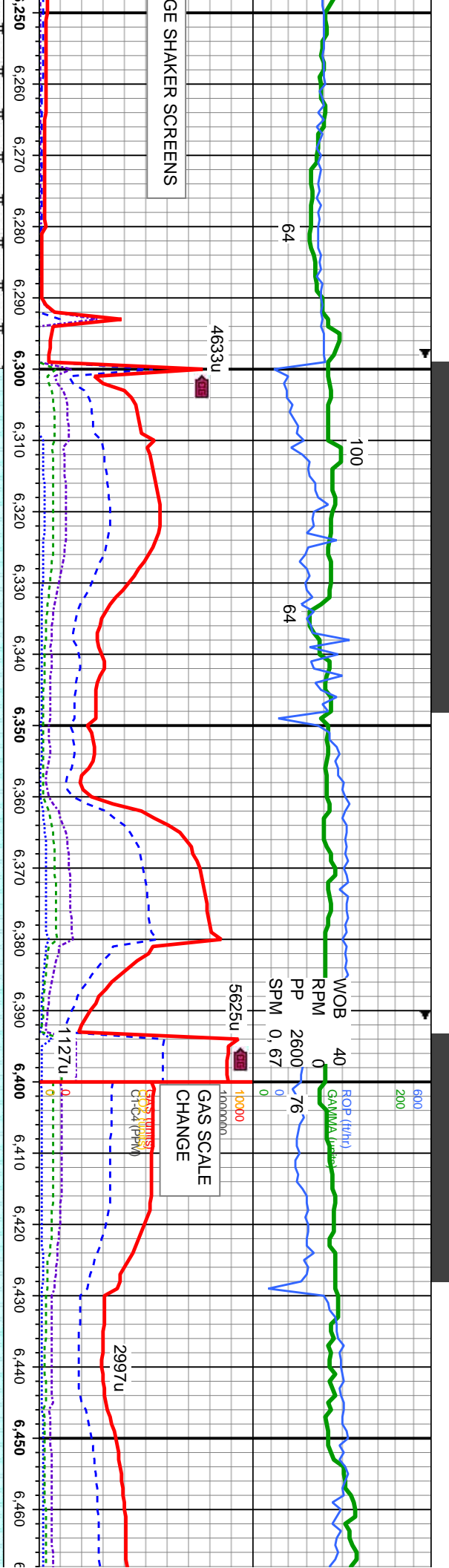
**TV D SCALE CHANGE**

MD: 6.233'  
TVD: 5.699.09'  
Inclination: 87.8 °  
Azimuth: 262.6 °

mot-stri, sft-v sft, sb  
silty tex  
mod frm-frn,  
thly lstr, silty tex,  
70% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb  
biky-sb pty, rthy-wxy lstr, silty tex  
30% MRLST: med gy-blk, mod frm-frn,  
biky-sb biky, occ sb pty, rthy lstr, silty tex,  
org/calc mtx  
85% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb  
biky-sb pty, rthy-wxy lstr, silty tex, tr calcite  
15% MRLST: med gy-blk, mod frm-frn,  
biky-sb biky, occ sb pty, rthy lstr, silty tex,  
org/calc mtx  
90% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb  
biky-sb pty, rthy-wxy lstr, silty tex, tr calcite  
10% MRLST: med gy-blk, mod frm-frn,  
biky-sb biky, occ sb pty, rthy lstr, silty tex,  
org/calc mtx  
90% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb  
biky-sb pty, rthy-wxy lstr, silty tex, tr calcite  
10% MRLST: med gy-blk, mod frm-frn,  
biky-sb biky, occ sb pty, rthy lstr, silty tex,  
org/calc mtx





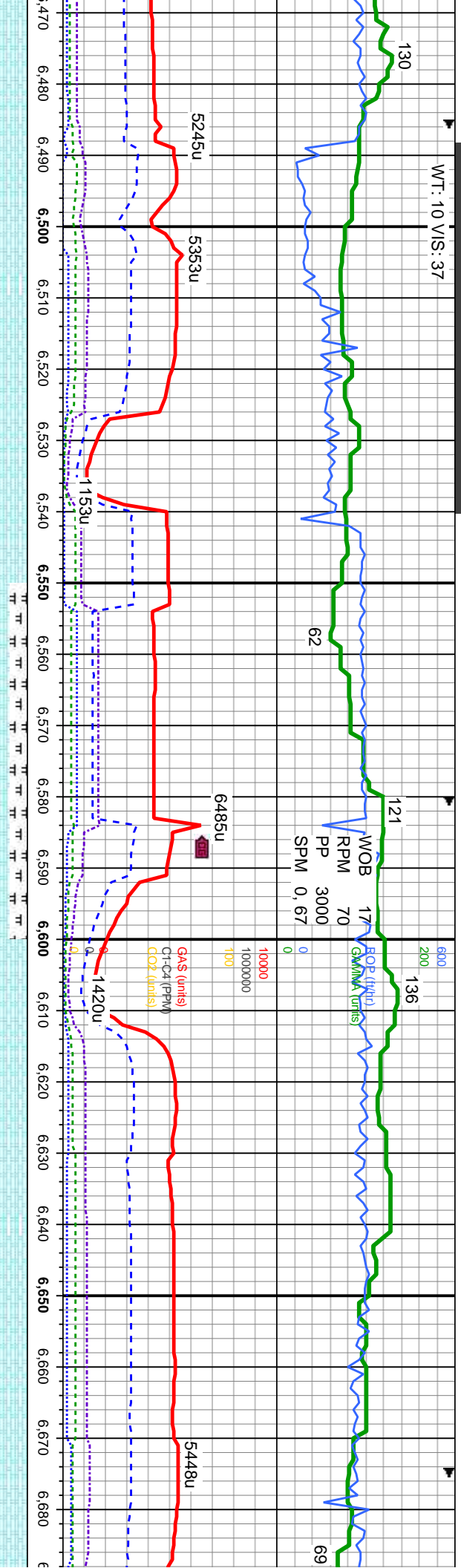


GE SHAKER SCREENS

90% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb biky-sb pty, rthy-wxy lstr, silty tex, tr calcite	100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb biky-sb pty, rthy-wxy lstr, silty tex, tr calcite, tr mrl	100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb biky-sb pty, rthy-wxy lstr, silty tex, tr calcite, tr mrl	100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb biky-sb pty, rthy-wxy lstr, silty tex, tr calcite, tr mrl, sl
10% MRLST: med gy-blk, mod frm-frm, biky-sb biky, occ sb pty, rthy lstr, silty tex, org/calc mtx			
MD: 6,326' TVD: 5,702.18' Inclination: 88.4° Azimuth: 264.5°			
MD: 6,421' TVD: 5,704.42' Inclination: 88.9° Azimuth: 267.5°			



WT: 10 VIS: 37



MD: 6,515'  
TVD: 5,706.63'  
Inclination: 88.4°  
Azimuth: 269.8°

75% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb biky-sb pty, rthy-wxy lstr, silty tex, sl flr

100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb biky-sb pty, rthy-wxy lstr, silty tex, tr calcite, tr mrl, sl flr

MD: 6,610'  
TVD: 5,709.12'  
Inclination: 88.6°  
Azimuth: 271.2°

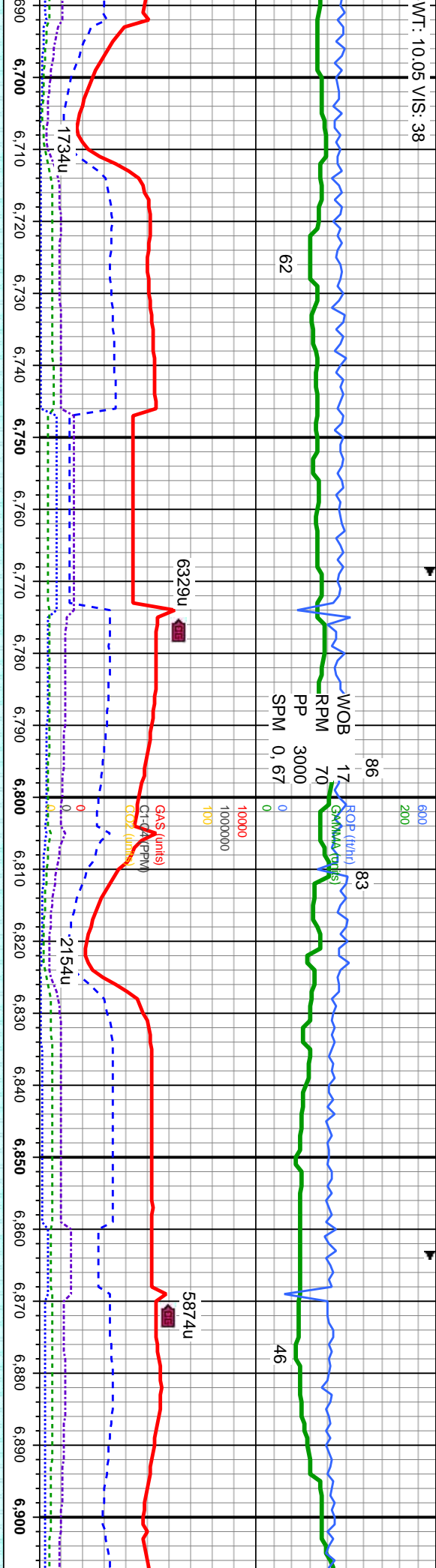
100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb biky-sb pty, rthy-wxy lstr, silty tex, tr calcite, tr mrl, sl flr

100% CHK: lt gy, occ crm, mot-stri, sb biky-sb pty, rthy-wxy lstr, silty tex, calcite, tr mrl, sl flr





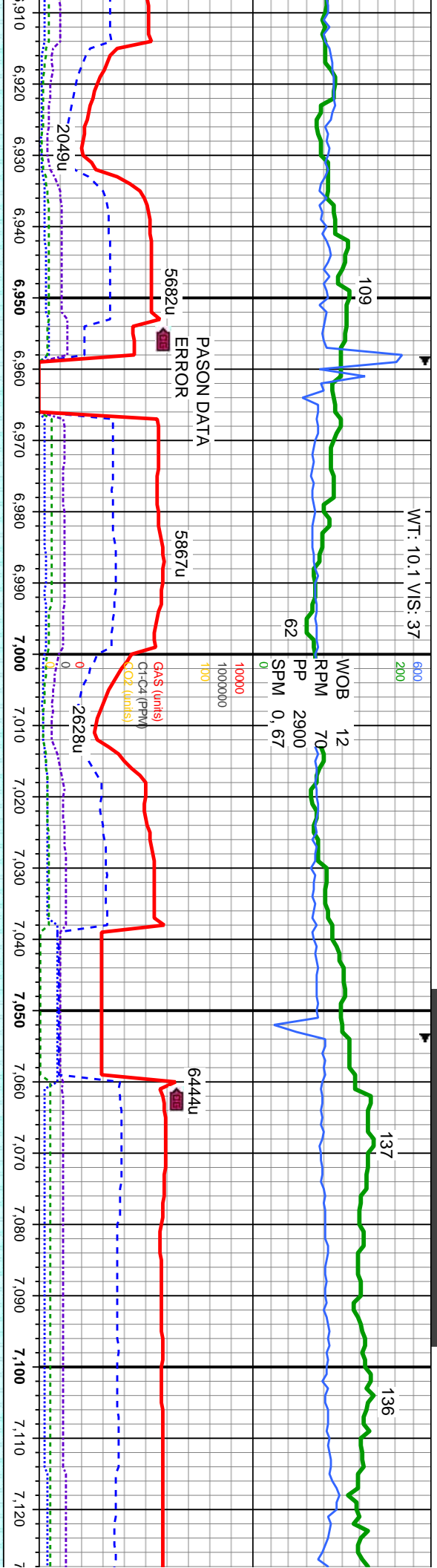
WT: 10.05 VIS: 38



MD: 6,704'	MD: 6,799'	MD: 6,893'
TVD: 5,711.01'	TVD: 5,711.92'	TVD: 5,711.92'
Inclination: 89.1°	Inclination: 89.8°	Inclination: 90.2°
Azimuth: 271.4°	Azimuth: 271.6°	Azimuth: 271.9°

sft-v sft,	100% CHK: lt gy, occ crm, mot-stri, sft-v sft,	100% CHK: lt gy, occ crm, mot-stri, sft-v sft,	100% CHK: lt gy, occ crm, mot-stri, sft-v sft,	100% CHK: lt gy, occ crm, mot-stri, sft-v sft,
sb biky-sb plty,	sb biky-sb plty, rthy-wxy lstr, silty tex, tr	sb biky-sb plty, rthy-wxy lstr, silty tex, tr	sb biky-sb plty, rthy-wxy lstr, silty tex, tr	sb biky-sb plty, rthy-wxy lstr, silty tex, tr
calcite, tr mrl, sl flor	calcite, tr mrl, sl flor	calcite, tr mrl, sl flor	calcite, tr mrl, sl flor	calcite, tr mrl, sl flor





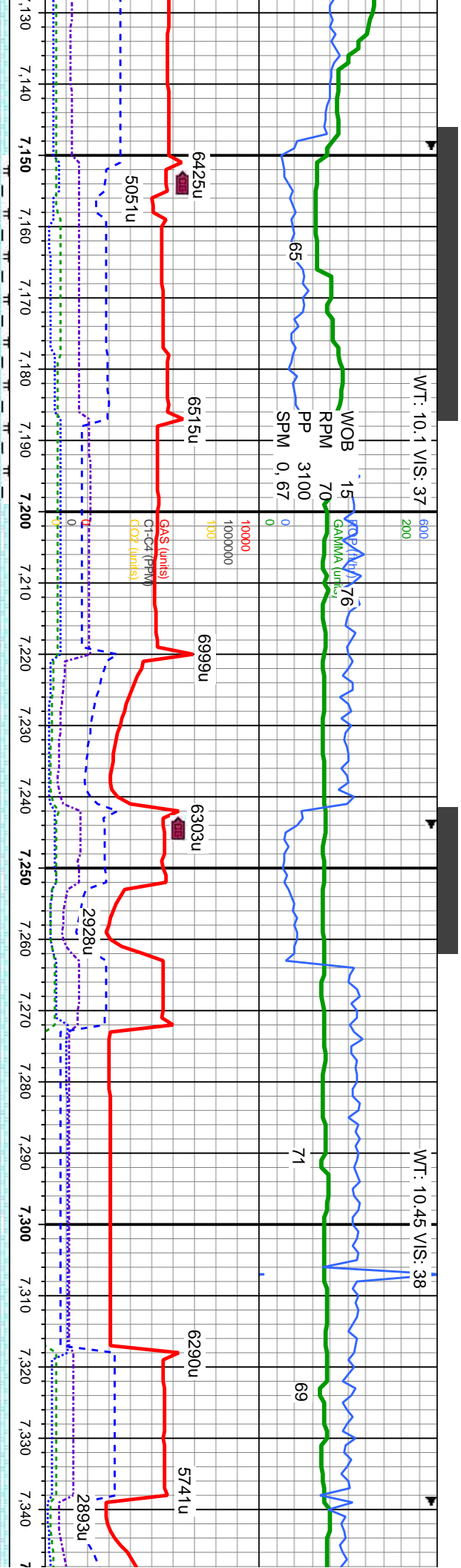
MD: 6,989  
TVD: 5,711.08  
Inclination: 90.8 °  
Azimuth: 271.9 °

MD: 7,083  
TVD: 5,709.19  
Inclination: 91.5 °  
Azimuth: 272.1 °

CHK: lt gy, occ crm, mot-stri, sft-v sft, sb pty, rthy-wxy lstr, silty tex, tr mrl, v tr inoc, sl flor	100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb pty, rthy-wxy lstr, silty tex, tr calcite, tr mrl, v tr inoc, sl flor	100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb pty, rthy-wxy lstr, silty tex, tr calcite, tr mrl, v tr inoc, sl flor	100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb pty, rthy-wxy lstr, silty tex, tr calcite, tr mrl, v tr inoc, sl flor	100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb pty, rthy-wxy lstr, silty tex, tr inoc, mod dull flor
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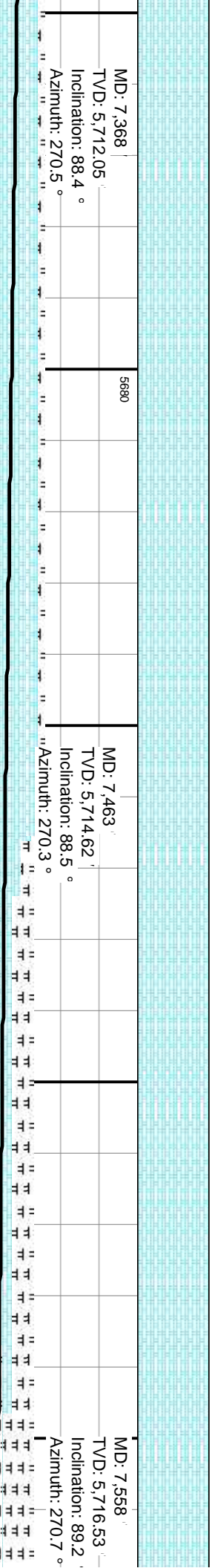
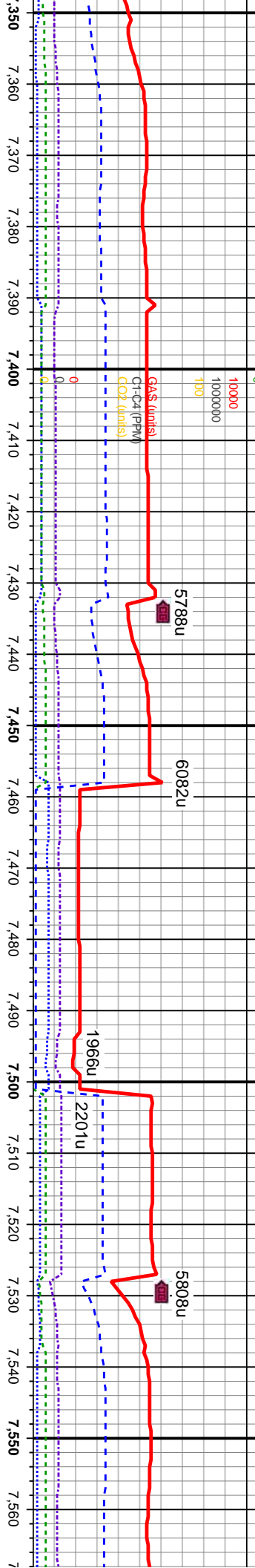
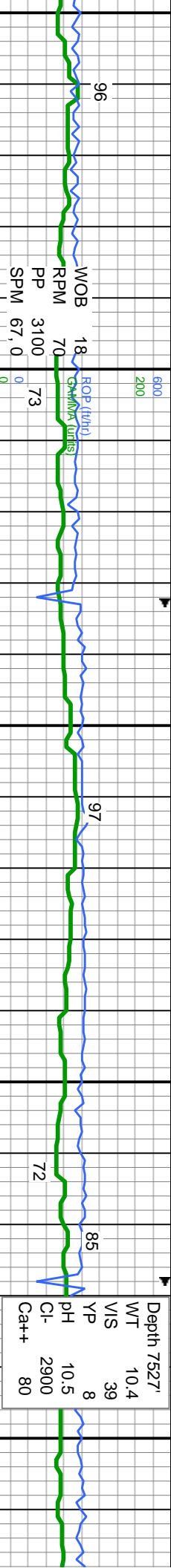


MD: 7,179  
TVD: 5,707.94  
Inclination: 90 °  
Azimuth: 271.4 °

MD: 7,274  
TVD: 5,709.35  
Inclination: 88.3 °  
Azimuth: 270.3 °

	90% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb pty, rthy-wxy lstr, silty tex, mod dull flor	100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb pty, rthy-wxy lstr, silty tex, tr mlst, mod dull flor	100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb pty, rthy-wxy lstr, silty tex, tr mlst, mod dull flor	100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb pty, rthy-wxy lstr, silty tex, tr mlst, mod dull flor
	10% MRLST: med gy-blk, mod frm-frm, blk-y-sb blk-y, occ sb pty, rthy lstr, silty tex, org/calc mtz			



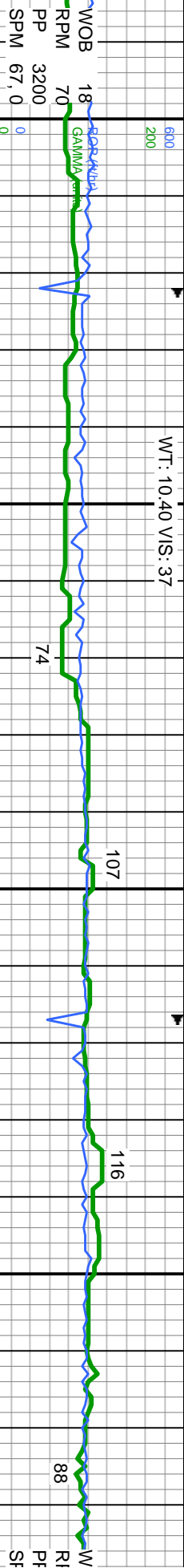


100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb ply, rthy-wxy lstr, silty tex, tr mrlst	100% CHK: med -dk gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb ply, rthy-wxy lstr, silty tex, tr mrlst, mod dull flr	100% CHK: med -dk gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb ply, rthy-wxy lstr, silty tex, tr mrlst, mod dull flr	100% CHK: med -dk gy, mot-stri, sft-v sft, sb blk-y-sb ply, rthy-wxy lstr, silty tex, tr mrlst, mod dull flr	100% CHK: med -dk gy, mot-stri, sft-v sft, sb blk-y-sb ply, rthy-wxy lstr, silty tex, tr mrlst, mod dull flr	100% CHK: mec sft, sb blk-y-sb pl tr mrlst, mod dul
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WT: 10.40 VIS: 37



MD: 7,748  
TVD: 5,717.52  
Inclination: 91.2 °  
Azimuth: 273 °

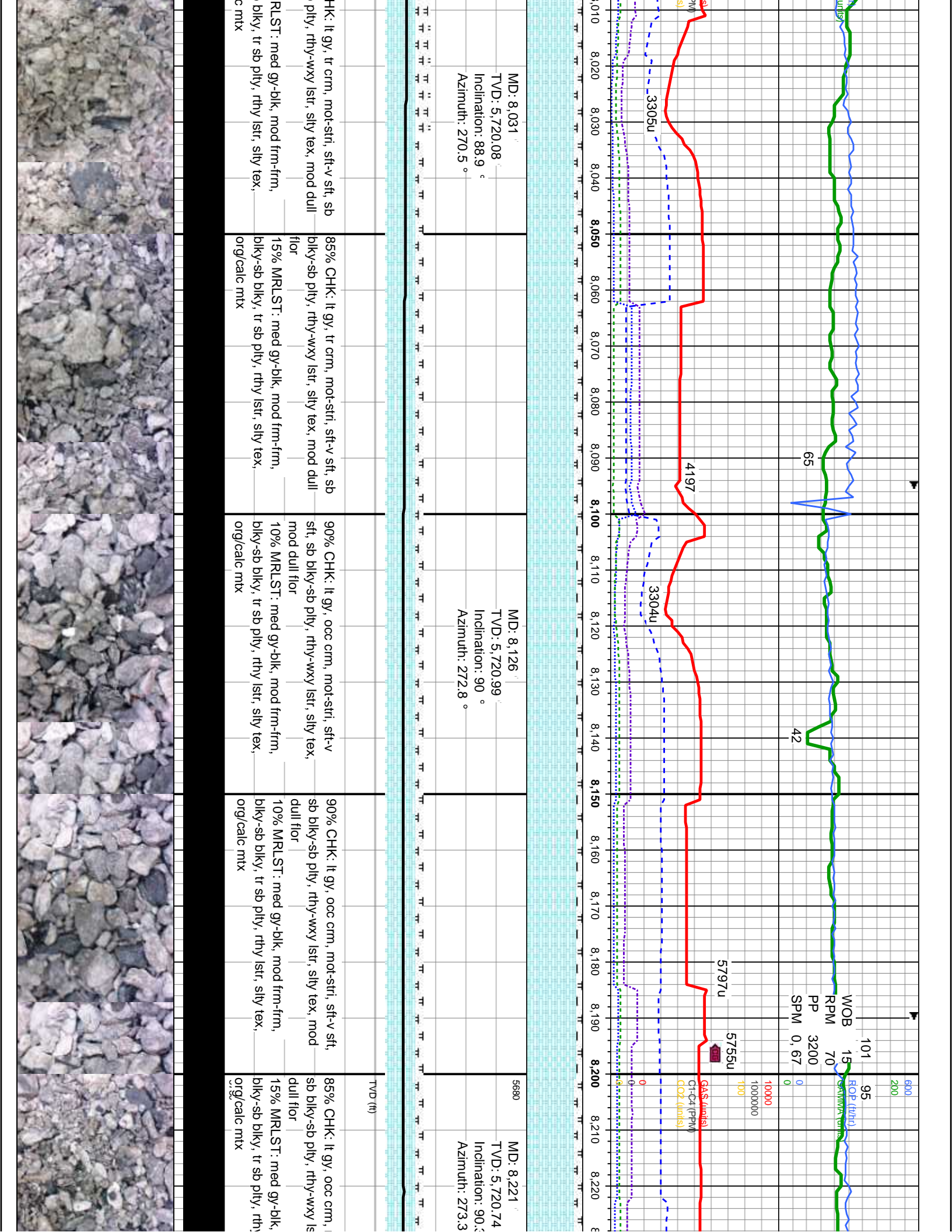
MD: 7,653  
TVD: 5,717.86  
Inclination: 89.2 °  
Azimuth: 270.2

TVD (ft)	90% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blkly-sb pty, rthy-wxy lstr, silty tex, mod dull flr	90% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blkly-sb pty, rthy-wxy lstr, silty tex, mod dull flr	90% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blkly-sb pty, rthy-wxy lstr, silty tex, mod dull flr	90% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blkly-sb pty, rthy-wxy lstr, silty tex, mod dull flr
	10% MRLST: med gy-blk, mod frm-frm, blkly-sb blkly, occ sb pty, rthy lstr, silty tex, org/calc mtx	10% MRLST: med gy-blk, mod frm-frm, blkly-sb blkly, occ sb pty, rthy lstr, silty tex, org/calc mtx	10% MRLST: med gy-blk, mod frm-frm, blkly-sb blkly, tr sb pty, rthy lstr, silty tex, org/calc blkly-sb blkly, tr sb pty, rthy lstr, silty tex, org/calc mtx	10% MRLST: med gy-blk, mod frm-frm, blkly-sb blkly, tr sb pty, rthy lstr, silty tex, org/calc blkly-sb blkly, tr sb pty, rthy lstr, silty tex, org/calc mtx









WT: 10.40 V/S: 35

WT: 10.40 V/S: 37

74

67

132

137

WOB 15  
RPM 70  
PP 3200  
SPM 0.67

ROP (ft/hr)  
GAMMA (units)

6158u 5371u

6136u

3294u

6409u

GAS (units)  
GDP (units)

8.230 8.240 8.250 8.260 8.270 8.280 8.290 8.300 8.310 8.320 8.330 8.340 8.350 8.360 8.370 8.380 8.390 8.400 8.410 8.420 8.430 8.440

MD: 8.315'  
TVD: 5,721.56'  
Inclination: 88.7°  
Azimuth: 272.3°

MD: 8.410'  
TVD: 5,724.05'  
Inclination: 88.3°  
Azimuth: 271°

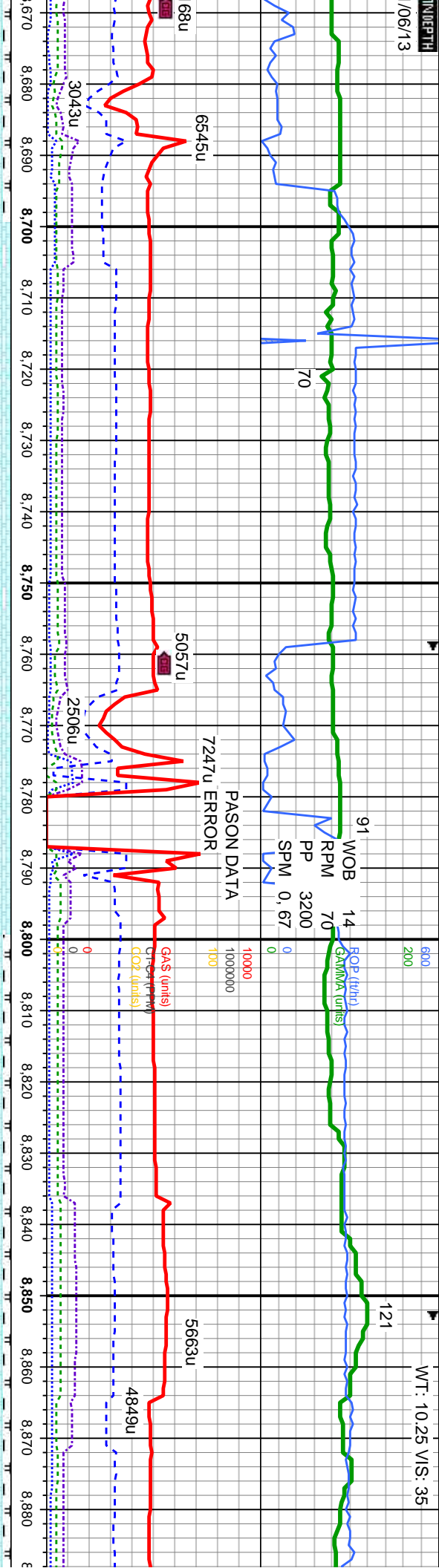
TVD (ft)

mod-str, sft-v sft, str, silty tex, mod	85% CHK: lt gy, occ crm, mod-str, sft-v sft, sb blk-y-sb ply, rthy-wxy lstr, silty tex, mod dull flr	90% CHK: lt gy, occ crm, mod-str, sft-v sft, sb blk-y-sb ply, rthy-wxy lstr, silty tex, mod dull flr	90% CHK: lt gy, occ crm, mod-str, sft-v sft, sb blk-y-sb ply, rthy-wxy lstr, silty tex, mod dull flr	90% CHK: lt gy, occ crm, mod-str, sft-v sft, sb blk-y-sb ply, rthy-wxy lstr, silty tex, mod dull flr
mod frm-fr, / lstr, silty tex,	15% MRLST: med gy-blk, mod frm-fr, blk-y-sb blk-y, tr sb ply, rthy lstr, silty tex, org/calc mtx	10% MRLST: med gy-blk, mod frm-fr, blk-y-sb blk-y, tr sb ply, rthy lstr, silty tex, org/calc mtx	10% MRLST: med gy-blk, mod frm-fr, blk-y-sb blk-y, tr sb ply, rthy lstr, silty tex, org/calc mtx	10% MRLST: med gy-blk, mod frm-fr, blk-y-sb blk-y, tr sb ply, rthy lstr, silty tex, org/calc mtx









MD: 8.695  
TVD: 5,726.79  
Inclination: 89 °  
Azimuth: 270.2 °

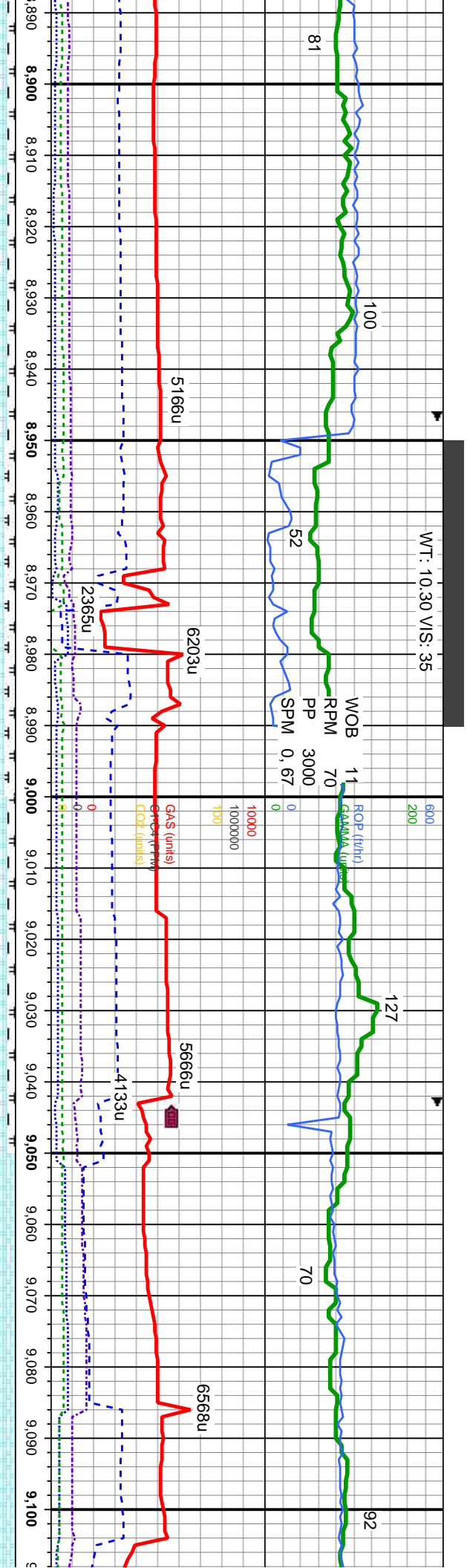
MD: 8.789  
TVD: 5,727.52  
Inclination: 90.1 °  
Azimuth: 269.5 °

MD: 8.883  
TVD: 5,726  
Inclination:  
Azimuth: 26

occ crm, mot-stri, sft-v sft, rthy-wxy lst, silty tex, mod	100% CHK: lt gy-gry, occ crm, mot-stri, sft-v sft, sb blk-y-sb pty, rthy-wxy lst, silty tex, tr mlst, mod dull flr	100% CHK: lt gy-gry, occ crm, mot-stri, sft-v sft, sb blk-y-sb pty, rthy-wxy lst, silty tex, tr mlst, mod dull flr	90% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb pty, rthy-wxy lst, silty tex, mod dull flr	10% MRLST: med gy-blk, mod frm-frm, blk-y-sb blk-y, tr sb pty, rthy lst, silty tex, org/calc mix	90% CHK: lt gy, occ crm, mot-stri, s blk-y-sb pty, rthy-wxy lst, silty tex, 10% MRLST: med gy-blk, mod frm-frm, blk-y-sb blk-y, tr sb pty, rthy lst, silty org/calc mix
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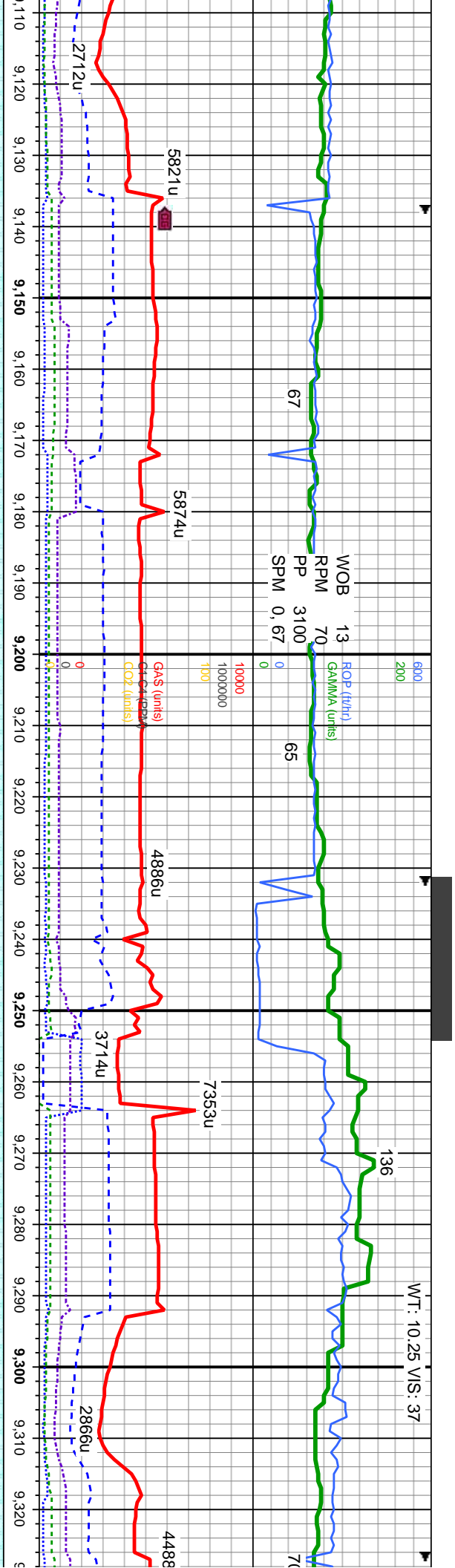


MD: 8,978'  
TVD: 5,727.28'  
Inclination: 88.6°  
Azimuth: 267.7°

MD: 9,073'  
TVD: 5,729.36'  
Inclination: 88.9°  
Azimuth: 266.1°

ft-v sft, sb mod dull flr	90% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb ply, rthy-wxy lstr, silty tex, mod dull flr	85% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb ply, rthy-wxy lstr, silty tex, mod dull flr	90% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb ply, rthy-wxy lstr, silty tex, mod dull flr	100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb ply, rthy-wxy lstr, silty tex, tr mlst, mod dull flr
frm, tex,	100% MRLST: med gy-blk, mod frm-frm, blk-y-sb blk-y, tr sb ply, rthy lstr, silty tex, org/calc mtx	15% MRLST: med gy-blk, mod frm-frm, blk-y-sb blk-y, tr sb ply, rthy lstr, silty tex, org/calc mtx	10% MRLST: med gy-blk, mod frm-frm, blk-y-sb blk-y, tr sb ply, rthy lstr, silty tex, org/calc mtx	100% (





MD: 9,167'  
TVD: 5,730.75'  
Inclination: 89.4°  
Azimuth: 266.1°

5680

MD: 9,262'  
TVD: 5,733.57'  
Inclination: 87.2°  
Azimuth: 267°

CHK: lt gy, occ crm, mot-stri, sft-v sft, sb plty, rthy-wxy lstr, silty tex, tr mlst, mod dull flr

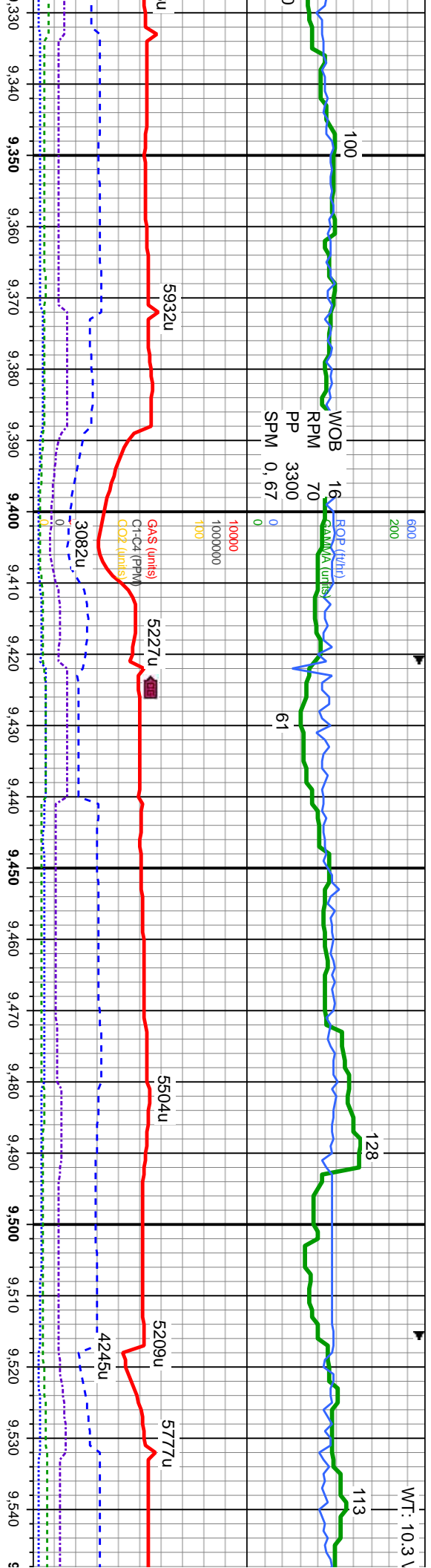
100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb plty, rthy-wxy lstr, silty tex, tr mlst, mod dull flr

100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb plty, rthy-wxy lstr, silty tex, tr mlst, mod dull flr

100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb plty, rthy-wxy lstr, silty tex, tr mlst, mod dull flr







MD: 9,356  
TVD: 5,737.67  
Inclination: 87.8 °  
Azimuth: 267.9 °

MD: 9,451  
TVD: 5,740.98  
Inclination: 88.2 °  
Azimuth: 267.7 °

MD: 9,544  
TVD: 5,740.98  
Inclination: 88.2 °  
Azimuth: 267.7 °

100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb ply, rthy-wxy lstr, silty tex, tr mlst, mod dull flr	100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb ply, rthy-wxy lstr, silty tex, tr mlst, mod dull flr	100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb ply, rthy-wxy lstr, silty tex, tr mlst, mod dull flr	100% CHK: lt gy, occ crm, mot-stri, sft-v sft, sb blk-y-sb ply, rthy-wxy lstr, silty tex, tr mlst, mod dull flr



