



Scale: 5" / 100'
Measured Depth Log

Well Name KAISER A-10HN

Location SEC.10-T6N-R65W

State COLORADO

County WELD

Country USA

Rig Number FRONTIER 8

API Number 05-123-39604

AFE # 39604

Region DJ BASIN

Field WATTENBERG

Spud Date 8/2/2014

Drilling Completed 9/25/2014

Surface Coordinates 413 FNL 434 FEL, Lat/Long: 40.507362/-104.641403

Bottom Hole Coordinates 140' FNL 465' FWL

Ground Elevation 4801'

K.B. Elevation 4824'

Logged Interval 6000' To 11705

Total Depth 11705

Formation NIOBRARA

Type of Drilling Fluid FWLSND

Operator

Company BAYSWATER EXPLORATION AND PRODUCTION, L
Address 730 17th Street, Suite 610
Denver, CO 80202

Geologist

Name ROBERT DAVIS, RIKKI WITHERSPOON
Company COLUMBINE LOGGING INC
Address 2385 S Lipan St.
Denver, CO 80223

Zone Color Coding



Rock Types



Accessories

Fossils

- GASTROPOD
- INOCERAMUS
- OOULITE
- OSTRACOD
- BELEMNITE
- BIOCLASTIC
- BRACHIOPOD
- BRYOZOA
- CEPHALOPOD
- CORAL
- CRINOID
- ECHINOID
- FISH
- FORAMINIFERA
- FOSSIL

Minerals

- ARGILLITE GRAIN
- BENTONITE
- BITUMENOUS SUBSTANCE
- BRECCIA FRAGMENTS
- CALCAREOUS
- CARBONACEOUS FLAKES
- CHITDK
- CHTLT
- COAL - THIN BEDS
- DOLOMITIC
- FELDSPAR
- FERRUGINOUS PELLET
- FERRUGINOUS
- GLAUCONITE
- GYPSIFEROUS
- HEAVY MINERAL
- KAOLIN
- MARCASITE
- MARLSTONE
- MICACEOUS
- MINERAL CRYSTALS
- MODULES
- PHOSPHATE PELLETS
- PYRITE
- SALT CAST
- SANDY
- SIDERITE
- SILICEOUS
- SILTY
- TUFFACEOUS

Stringer

- ANHYDRITE STRINGER
- BENTONITE STRINGER
- COAL STRINGER
- DOLOMITE STRINGER
- GYPSUM STRINGER
- LIMESTONE STRINGER
- MARLSTONE (CALC) STRG
- MARLSTONE (DOL) STRG
- SANDSTONE STRINGER
- SHALE STRINGER
- SILTSTONE STRINGER

Other Symbols

Oil Show

- P PINPOINT
- VUGGY
- DEAD
- EVEN
- QUESTIONABLE
- BIT
- SPOTTED STAINING
- CONNECTION (UP)

Engineering

- DST INTERVAL
- FAULT
- FORMATION TOP
- GAS SHOW
- OIL SHOW
- MN DEPTH UP

Rounding

- WIRELINE TESTED - LEFT
- E EARTHY
- WIRELINE TESTED - RT
- FX FINELYN
- DRILL STEM TEST
- MN DEPTH
- L LITHOGRAPHIC
- MX MICROXLN
- MUDSTONE

Porosity

- CONNECTION (DOWN)
- CONNECTION GAS
- CONNECTION GAS (LEFT)
- TRIP GAS
- TRIP GAS (LEFT)
- DOWN TIME GAS
- DOWN TIME GAS (LEFT)
- CORE - LOST
- CORE - RECOVERED

Textures

- ANGULAR
- ROUNDED
- SUBANG
- SUBRND
- SIDEWALL CORE (LEFT)
- SIDEWALL CORE (RIGHT)
- SLIDE
- BOUNDSTONE
- CHALKY
- CRYPTOXLN
- POOR
- WELL

Sorting

- MODERATE

LC



- STONE
- AMORPHIC
- AMPLE
- STONE
- PEPPER SAND
- E COLORED
- E GRAY
- SHALY SANDSTONE
- SHALY SILTSTONE
- SILTY SHALE
- SILTSTONE
- TILL
- TUFF
- WELDED TUFF

ROP
ROP

Total Gas & Chromatograph

- GAS
- C1
- C2
- C3
- C4

COLUMBINE LOGGING
RIGGED UP
ON 8/9/2014
MANNED 2-PERSON
LOGGING WITH
BLOODHOUND GAS
CHROMATOGRAPH #0298

Depth Labels



% Lith

GAMMA
GAMMA

Bit Data

Bit #: 2
Type: SD1519
Size: 8.75
Depth In: 758'
Jets: 7 x13
S/N: JJ5822

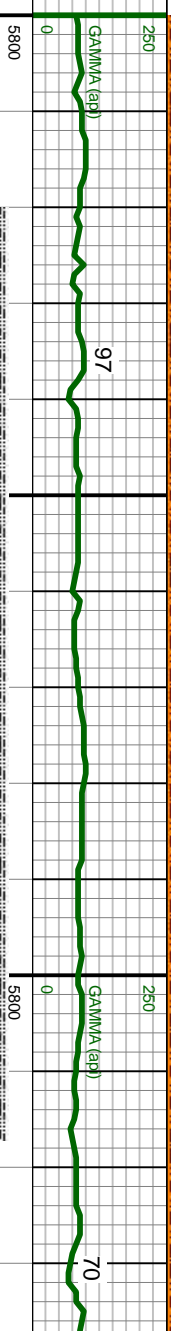
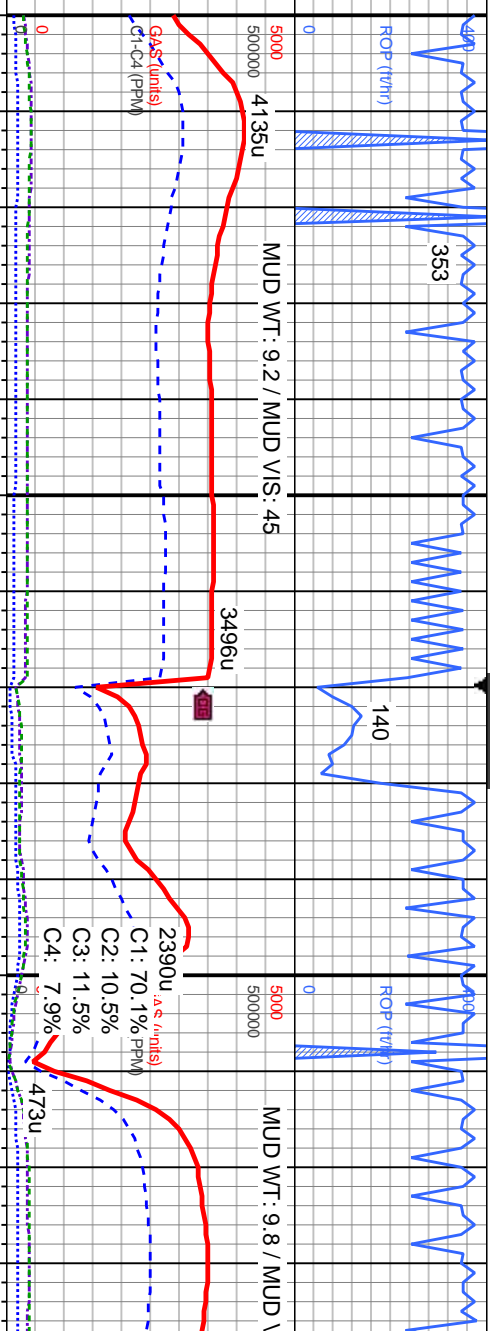
Well Bore
TVD

BEGIN LOGGING F/ 6000' MD @
10:26 HRS ON 8/10/14

Oil Show

EGMFTST

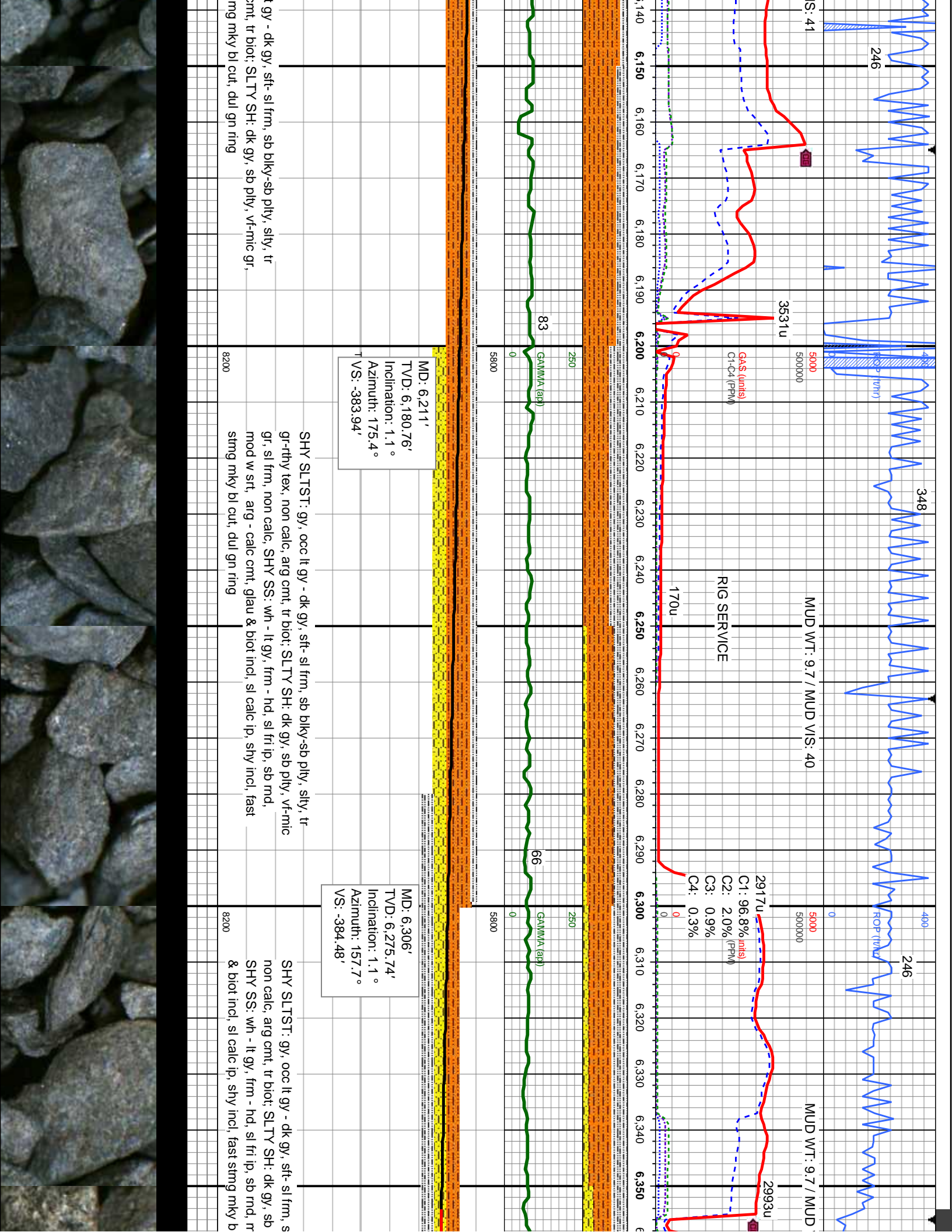
Images

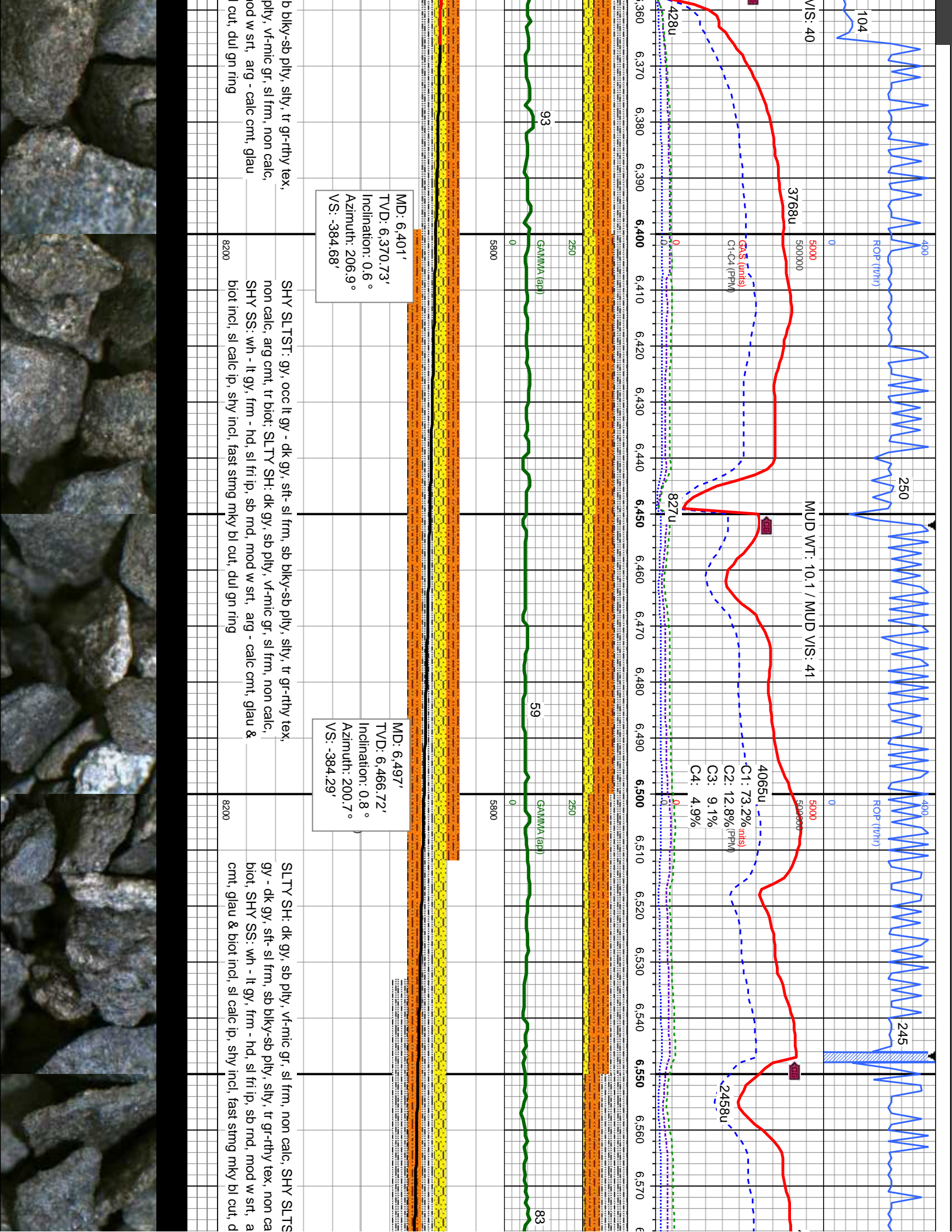


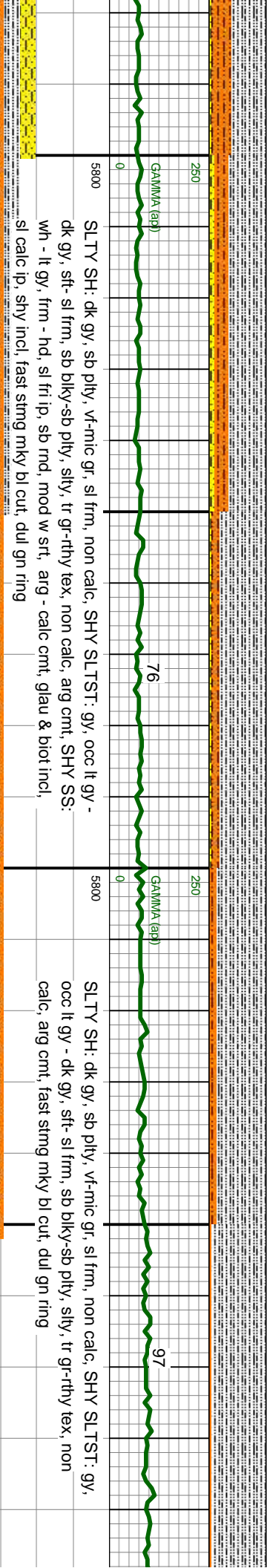
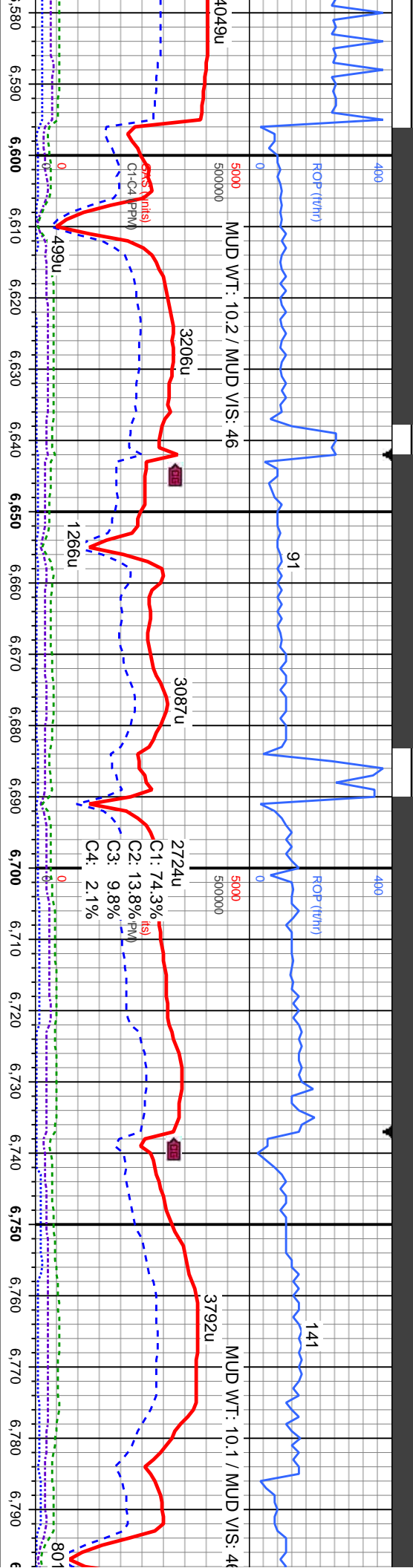
SHY SLTST: gy, occ lt gy - dk gy, sft-sl frm, sb blkyy-sb pty, slty, tr gr-rthy, non calc, arg cnt, tr biot; SLTY SH: dk gy, sb pty, vf-mic gr, non calc, tr shy ss, fast strng mky bl cut, dul gn ring

SHY SLTST: gy, occ lt gy, sft-sl frm, sb blkyy-sb pty, slty, tr gr-rthy, non calc, arg cnt, tr biot; SLTY SH: dk gy, sb pty, vf-mic gr, non calc, tr shy ss, fast strng mky bl cut, dul gn ring









SLTY SH: dk gy, sb pty, vfrmic gr, sl frm, non calc, SHY SLTST: gy, occ lt gy -
dk gy, sft- sl frm, sb biky-sb pty, slty, tr gr-rthy tex, non calc, arg cmt, SHY SS:
wh - lt gy, frm - hd, sl fri ip, sb rnd, mod w srl, arg - calc cmt, glau & biot incl,
sl calc ip, shy incl, fast sting mky bl cut, dul gn ring

MD: 6,592' TVD: 6,561.71' Inclination: 1.2° Azimuth: 218° VS: -383.54'

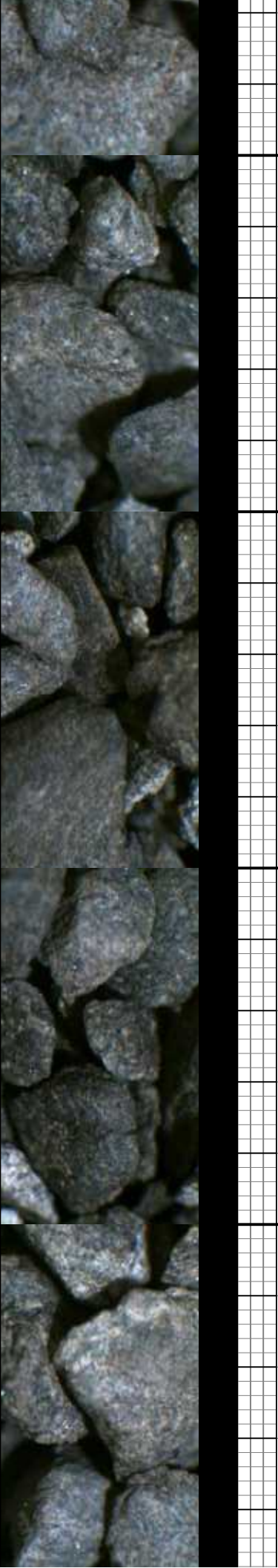
MD: 6,640' TVD: 6,609.63' Inclination: 5.1° Azimuth: 270° VS: -381.12'

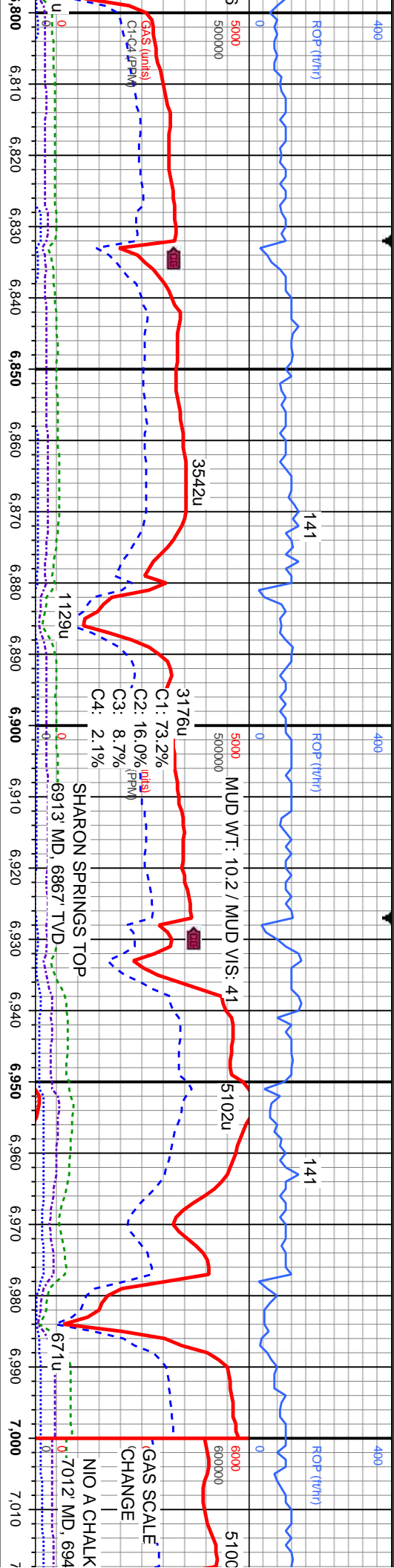
MD: 6,687' TVD: 6,656.26' Inclination: 9.1° Azimuth: 280.4° VS: -269.79'

MD: 6,735' TVD: 6,703.31' Inclination: 13.7° Azimuth: 288.1° VS: 272.24'

MD: 6,782' TVD: 6,748.44' Inclination: 18.6° Azimuth: 290.5° VS: 276.6'

T: gy, occ lt
C: arg cmt, tr
g - calc
dul gn ring





SLTY SH: dk gy, sb pily, vf-mic gr, w srt, w rmd, sl frm, non calc, rr bent, fast sting mky bl cut, dul bl gn ring

SLTY SH: dk gy, sb pily, vf-mic gr, w srt, w rmd, sl frm, non calc, com bent, fast sting mky bl cut, bri bl ring

SLTY SH: med-dk gy, sb pily-pily, vf-mic gr, slty tex, frm, non calc, CHK: lt gy-med gy, sb biky-biky, sft-sl frm, mot tex, calc, MRLST: med gy, frm, brit, gt tex, lam, sb pily, fast sting mky bl cut, bri bl ring

SLTY SH: med gr, slty tex, frm, r biky-biky, sft-sl frm, med gy, frm, bri sting mky bl cut

MD: 6,830'
TVD: 6,793.22'
Inclination: 23.5 °
Azimuth: 289.1 °
VS: 282.41'

MD: 6,877'
TVD: 6,835.4'
Inclination: 28.8 °
Azimuth: 285.8 °
VS: 288.57'

MD: 6,925'
TVD: 6,876.36'
Inclination: 34 °
Azimuth: 280.2 °
VS: 294.1'

MD: 6,972'
TVD: 6,914.31'
Inclination: 38.3 °
Azimuth: 278.4 °
VS: 298.55'

MD: 7,000'
TVD: 6,944.31'
Inclination: 38.3 °
Azimuth: 278.4 °
VS: 298.55'



8/11/2014

MINDEPTH

ROP (ft/hr)

102

MUD WT: 10.3 / MUD VIS: 48

ROP (ft/hr)

66

MUD WT: 10.1 / MUD VIS: 52

ROP (ft/hr)

61

MUD WT: 10.1 / MUD VIS: 52

TOP

NIO B CHALK TOP

TOOH @ 7117 MD

NIO C

4 TVD

769u

4970u

4116u

427u

7.020

7.030

7.040

7.050

7.060

7.070

7.080

7.090

7.100

7.110

7.120

7.130

7.140

7.150

7.160

7.170

7.180

7.190

7.200

7.210

7.220

7.230

7.240

7.250

7.260

7.270

7.280

7.290

7.300

7.310

7.320

7.330

7.340

7.350

7.360

7.370

7.380

7.390

7.400

7.410

7.420

7.430

7.440

7.450

7.460

7.470

7.480

7.490

7.500

7.510

7.520

7.530

7.540

7.550

7.560

7.570

7.580

7.590

7.600

7.610

7.620

7.630

7.640

7.650

7.660

7.670

7.680

7.690

7.700

7.710

7.720

7.730

7.740

7.750

7.760

7.770

7.780

7.790

7.800

7.810

7.820

7.830

7.840

7.850

7.860

7.870

7.880

7.890

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7.930

7.940

7.950

7.960

7.970

7.980

7.990

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8.720

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8.750

8.760

8.770

8.780

8.790

8.800

8.810

8.820

8.830

8.840

8.850

8.860

8.870

8.880

8.890

8.900

8.910

8.920

8.930

8.940

8.950

8.960

8.970

8.980

8.990

9.000

9.010

9.020

9.030

9.040

9.050

MD: 7,068'
TVD: 6,984.67'
Inclination: 47.7°
Azimuth: 273.3°
VS: 305.2'

MD: 7,163'
TVD: 7,039.09'
Inclination: 62.2°
Azimuth: 270.9°
VS: -121.94'

dk gy, sb pty-pty, vf-mic
mot calc; CHK: lt-med gy, sb
frm, mot tex, calc, MRLST:
i, gt tex, lam, sb pty, fast
bri bl ring

MRLST: med gy, sb pty, frm, brit, gt tex, lam,
f gr, p srt, v calc; CHK: lt-med gy, sb
biky-biky, sft-sl frm, mot tex, vf gr, mod srt, v
calc, tr fos frags, fast stmg mky bl cut, bri bl
ring

MRLST: med gy, sb pty, frm, brit, gt tex, lam,
f gr, p srt, v calc; CHK: lt-med gy, sb
biky-biky, sft-sl frm, mot tex, vf gr, mod srt, v
calc, tr fos frags, tr bent, fast stmg mky bl
cut, bri bl ring

CHK: lt gy-gy brn, cm, sb biky-biky, v sft,
mot tex, calc, MRLST: med - dk gy, sft - sl
frm, brit, mot, microxln, sb pty - sb biky, tr
bent, fast stmg mky bl cut, bri bl ring

CHK: lt gy-gy brn, cm, sb biky-biky
tex, calc, MRLST: med - dk gy, sft
brit, mot, microxln, sb pty - sb biky
bent, tr lnoc, fast stmg mky bl cut, i

