

Décollement
Consulting
Inc.



Scale: 5" / 100'
Measured Depth Log

Well Name Pronghorn12-42 28HNB

Location SWNW Sec 28 T5N R61W

State Colorado

Country USA

API Number 05-123-38634-00

County Weld

Rig Number Ensign 136

Field DJ. Basin

Spud Date 1/22/2014

Surface Coordinates 1412 FNL X 350 FWL

Ground Elevation 4616

Logged Interval 5700'

Formation Niobrara "B"

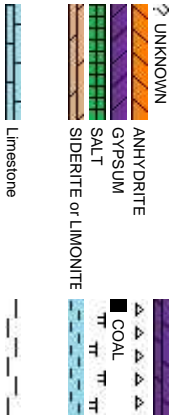
Type of Drilling Fluid WBM

K.B. Elevation 4633

Total Depth '

Company Bonanza Creek Energy
Address 410 17th Street, Suite 1100
Denver, CO 80202

Name Leo Carrasco/Chris Irwin
Company Décollement Consulting
Address 13300 Braun Road
Golden, CO 80401



Operator

500

Geologist

Inc.

Rock Types

DOLomite

CHERT

MARLSTONE

CLAYSTONE

SHALE

SHALE GRAY

SHALE COLORED

SILTSTONE

SANDSTONE

CONGLOMERATE

TILL

BENTONITE

TUFF

IGNEOUS

METAMORPHIC

BRECCIA

Chalk

Accessories

F FOSSIL

G GASTROPD

ALGAE

AMPHIPORA

BELLEMITE

BIOLCLASTIC

BRACHIOPOD

BRYOZOA

CEPHALOPD

CORAL

CRINOID

ECHINOID

FISH

FORAMINIFERA

ANHYDRITIC

- ARGILLACEOUS

/ ARGILLITE GRAIN

B BENTONITE

BITUMENOUS SUBSTANCE

BRECCIA FRAGMENTS

C CALCAREOUS

C CARBONACEOUS FLAKES

CHTDK

CHTLT

- COAL - THIN BEDS

/ DOLOMITIC

+ FELDSPAR

• FERRUGINOUS PELLET

> FERRUGINOUS

< GLAUCONITE

// GYPSIFEROUS

† HEAVY MINERAL

K KAOLIN

T MARLSTONE

✱ MINERAL CRYSTALS

• NODULES

• PHOSPHATE PELLET

P PYRITE

田 SALT CAST

: SANDY

~ 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

O ORGANIC

P PINPOINT

D DEAD

EVEN

O QUESTIONABLE

SPOTTED STAINING

GAS SHOW

P PINPOINT

V VUGGY

NORMAL FAULT

OIL SHOW

OVERTURNED STRATA

REVERSE FAULT

SIDEWALL CORE (LEFT)

SIDEWALL CORE (RIGHT)

SLIDE

SURVEY

TRIP GAS

WIRELINE TESTED - LEFT

WIRELINE TESTED - RT

L LITHOGRAPHIC

MX MICROXLN

MMS MUDSTONE

A ANGULAR

R ROUNDED

a SUBANG

r SUBRND

BS BOUNDSTONE

P POOR

C CHALKY

CX CRYPTOXLN

E EARTHY

FX FINELYXLN

GS GRAINSTONE

L LITHOGRAPHIC

Sorting

M MODERATE

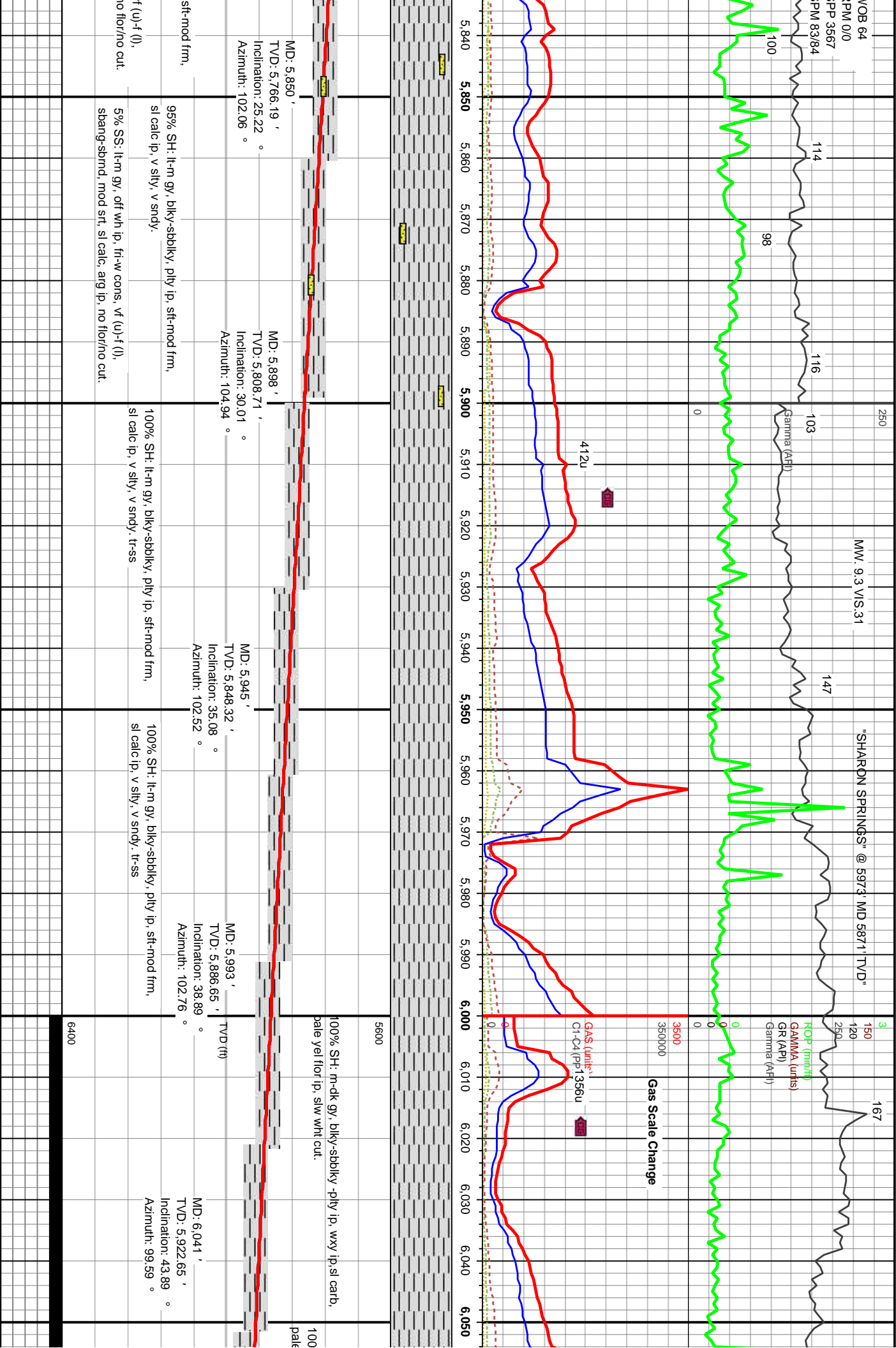
P POOR

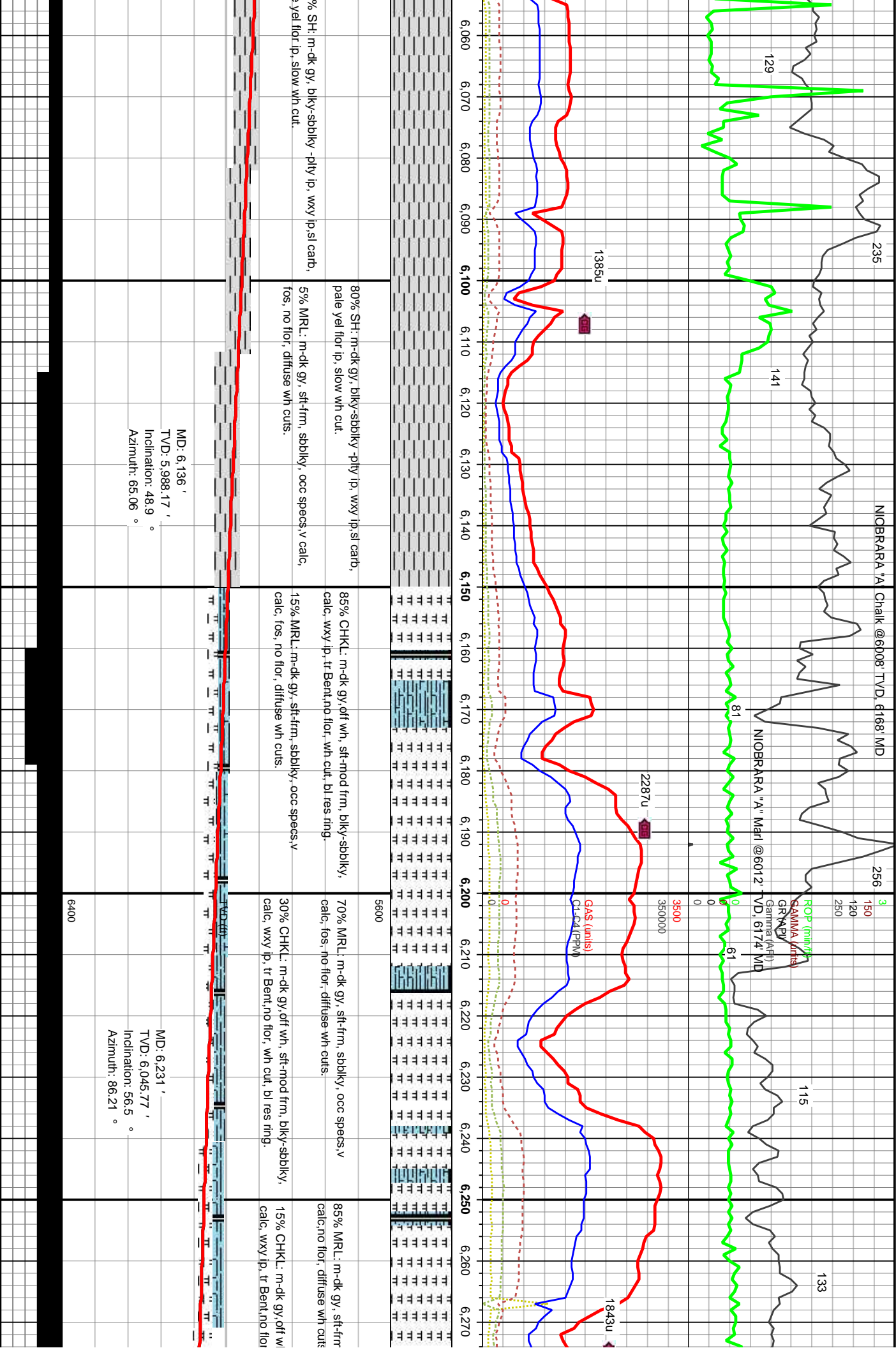
W WELL

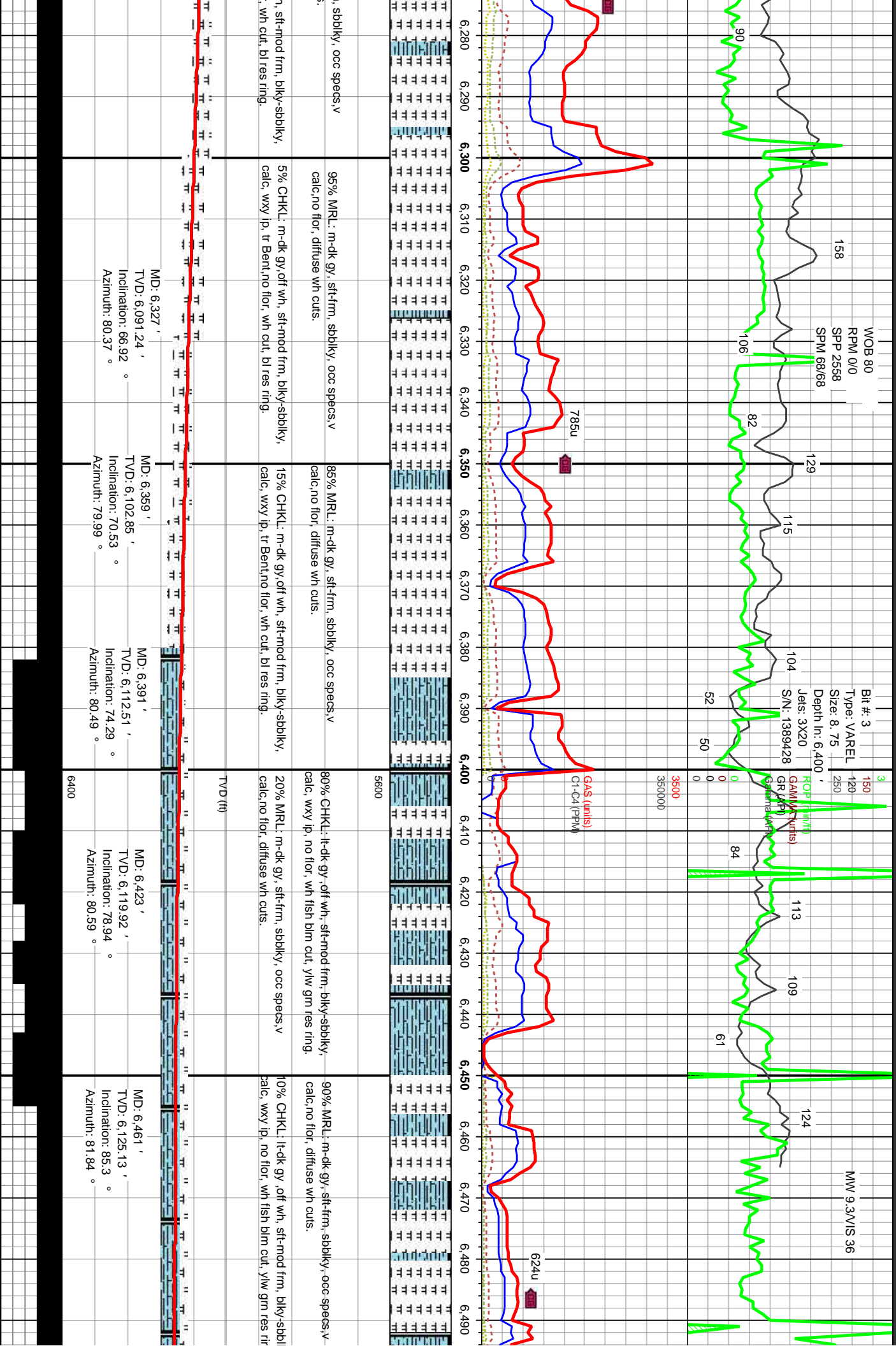
Chalk

Rounding

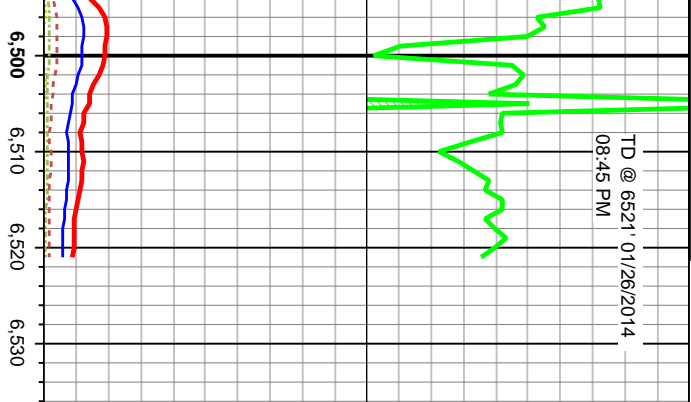
Slide/Rotate			
<div> <div>ROP</div> <div>ROF</div> <div>GAMMA</div> <div>GR</div> <div>Gamma</div> </div>		<div> <div>Decollement on location</div> <div>01/25/2014 Start logging @</div> <div>5700'</div> </div>	
<div> <div>Total Gas & Chromatograph</div> <div>GAS</div> <div>C1</div> <div>C2</div> <div>C3</div> <div>C4</div> </div>		<div> <div>Bit #. 2</div> <div>Type: VAREL</div> <div>Size: 8.75</div> <div>Depth In: 5,620 '</div> <div>Jets: 5X20</div> <div>S/N: 4004200</div> <div>111</div> <div>MMW. 9.3 VIS.34</div> <div>100</div> <div>ROP (r/f/f)</div> <div>GAMMA (r/f/f)</div> <div>GR (API)</div> <div>Gamma (AFI)</div> <div>110</div> <div>101</div> </div>	
<div> <div>Depth Labels</div> <div>5,650</div> <div>5,660</div> <div>5,670</div> <div>5,680</div> <div>5,690</div> <div>5,700</div> <div>5,710</div> <div>5,720</div> <div>5,730</div> <div>5,740</div> <div>5,750</div> <div>5,760</div> <div>5,770</div> <div>5,780</div> <div>5,790</div> <div>5,800</div> <div>5,810</div> <div>5,820</div> <div>5,830</div> </div>		<div> <div>126</div> <div>100000</div> <div>100000</div> <div>382u</div> <div>0</div> </div>	
<div> <div>Interp Lith</div> <div></div> </div>		<div> <div>5600</div> <div>5600</div> </div>	
<div> <div>Well Bore</div> <div>TVD</div> <div></div> </div>		<div> <div>MD: 5,708 '</div> <div>TVD: 5,632.07 '</div> <div>Inclination: 10.76 °</div> <div>Azimuth: 78.88 °</div> <div>TVD (ft)</div> <div>90% SH: lt-m gy, blk-y-sbdky, pty ip, sft-mod frm, sl calc ip, v silty, v sndy.</div> <div>10% SS: lt-m gy, off wh ip, fri-w cons, vf (u)-f (l), sbang-sbrnd, mod srt, sl calc, arg ip, no fltor/no cut.</div> <div>6400</div> </div>	
<div> <div>Oil Show</div> <div>20</div> <div>40</div> <div>60</div> <div>80</div> </div>		<div> <div>MD: 5,755 '</div> <div>TVD: 5,677.76 '</div> <div>Inclination: 16.26 °</div> <div>Azimuth: 87.99 °</div> <div>TVD (ft)</div> <div>95% SH: lt-m gy, blk-y-sbdky, pty ip, sft-mod frm, sl calc ip, v silty, v sndy.</div> <div>5% SS: lt-m gy, off wh ip, fri-w cons, vf (u)-f (l), sbang-sbrnd, mod srt, sl calc, arg ip, no fltor/no cut.</div> <div>6400</div> </div>	
<div> <div>Images</div> <div></div> </div>		<div> <div>MD: 5,803 '</div> <div>TVD: 5,723.11 '</div> <div>Inclination: 21.92 °</div> <div>Azimuth: 97.75 °</div> <div>TVD (ft)</div> <div>95% SH: lt-m gy, blk-y-sbdky, pty ip, sl calc ip, v silty, v sndy.</div> <div>5% SS: lt-m gy, off wh ip, fri-w cons, v sbang-sbrnd, mod srt, sl calc, arg ip, r</div> <div>6400</div> </div>	







TD @ 6521' 01/26/2014
08:45 PM



75% MRL: m-dk gy, sft-fm, sbblky, occ
calc, no flor, diffuse wh cuts.

25% CHKL: lt-dk gy, oft wh, sft-mod frm
calc, wxy lp, no flor, wh fish blm cut, ylw

BIT PROJECTION

MD: 6,521'

TVD: 6,126'

Inclination: 91.3°

Azimuth: 90.24°

