



Empirica

Scale: 5" / 100'
Measured Depth Log

Well Name Nelson Farm1_ST_Lat_Extraction.mplot

Location Sec.28-T07N-R67W

State CO

Country USA

API Number 05 123 39961 00

Region DJ Basin

Spud Date 8/27/2014

Surface Coordinates N 1,443,979.89'

E 3,164,958.28'

Lat 40°33'2.192" N

Long 104°54'23" W

Ground Elevation 4975'

Logged Interval 6400'

Formation Codell

Type of Drilling Fluid Water based mud

K.B. Elevation 4991'

County Weld

Rig Number Xtreme7

Field Wattenberg

Company Extration Oil & Gas
Address 1888 Sherman St., S
Denver, CO 80203

Name Hana Waldhauserova
Company ALS Empirica
Address 6360 W Sam Housto
Suite 100
Houston, TX 77041

Logging start date:
Logging end date:
2 man logging service



Operator

uite 500

Geologist

a & Edward Knight

n Pkwy N

Other

9/5/2014

ML-131

Rock Types

DERITE or LIMONITE
ESTONE
LUMONITE
ERT
AYSTONE

SHALE GRAY
SHALE COLORED
SILTSTONE
SANDSTONE
CONGLOMERATE
BRECCIA
TILL

BENTONITE
TUFF
IGNEOUS
METAMORPHIC
CEMENT

Accessories

F FOSSIL
GASTROPOD

ARGILLACEOUS
ARGILLITE GRAIN

GLAUCONITE
GYPSIFEROUS

ALGAE
AMPHIPORA
BELEMNITE
BIOCLASTIC
BRACHIOPOD
BRYOZOA
CEPHALOPOD
CORAL
CRINOID
ECHINOID

OOOLITE
OSTRACOD
PELECYPOD
PELLET
PISOLITE
PLANT REMAINS
PLANT SPORES
SCAPHOPOD
STROMATOPOROID

HEAVY MINERAL
KAOLIN
MARLSTONE
MINERAL CRYSTALS
NODULES
PHOSPHATE PELLETS
PYRITE
SALT CAST
SANDY
SILICEOUS

FORAMINIFERA
ANHYDRITIC

FERRUGINOUS
FERRUGINOUS PELLETS
FELDSPAR

SILTY
TUFFACEOUS

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

SILTSTONE STRINGER

Other Symbols

P PINPOINT
VUGGY

DTG
CASING
BIT

WIRELINE TESTED - RT
L LITHOGRAPHIC
MX MICROXLN
MS MUDSTONE
PS PACKSTONE
WS WACKSTONE

QUESTIONABLE
SPOTTED STAINING

CONNECTION (LEFT)
CONNECTION (RIGHT)
CONNECTION GAS

DST INTERVAL
FAULT
GAS SHOW
NORMAL FAULT

Porosity

MN DEPTH DOWN
MN DEPTH
MN DEPTH UP

OIL SHOW
OVERTURNED STRATA
REVERSE FAULT

E EARTHY
F FENESTRAL
F FRACTURE
INTERCRYSTALLINE
INTEROOLITIC
MOLDIC
ORGANIC

FORMATION TOP
CG UP
SLIDE
SURVEY
TRIP GAS

SIDEWALL CORE (LEFT)
CRYPTOXLN
CORE - RECOVERED
CORE - LOST
WIRELINE TESTED - LEFT

Textures

BS BOUNDSTONE
CHALKY
E EARTHY
FINELYXLN
GRAINSTONE

SILTY SHALE

EXTRACTION OIL & GAS

NELSON FARM 1 SIDE TRACK

ROP

ROF ———
GRC - - - - -

WOB: 31 K
RPM: 51
PP: 3322
SPM: 59/59
MW 10
VIS 38
Bit #: 4
Type: Smith 611
Size: 8 3/4
S/N: JJ2941

MW 9.9
VIS 35

ROF (min/ft)

ROP Scale = 0 - 5 min/ft

ROF (min/ft)



Slide/Rotate

Depth Labels



Total Gas & Chromatograph

GAS ———
C1 ———
C2 ———
C3 ———
C4 ———



Images



TVD Scale = 6,000' - 7,000'

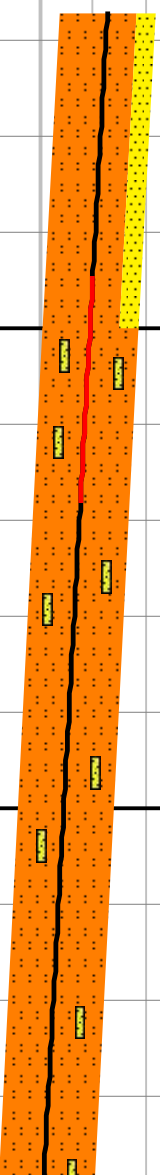
MD: 6,417'
Inclination: 8.7°
Azimuth: 32.84°
TVD: 6,373.5°
VS: -258.15'

MD: 6,502'
Inclination: 5.4°
Azimuth: 62.26°
TVD: 6,457.86°
VS: -250.39'

Well Bore
TVD ———

Nelson Farm1, ST
Weid Co, CO
Spud date: 8/27/2014
Surface Casing @ 813'
2 Manned Logging Continued:
9/5/2014 @ 6,400' MD

TVD (ft)

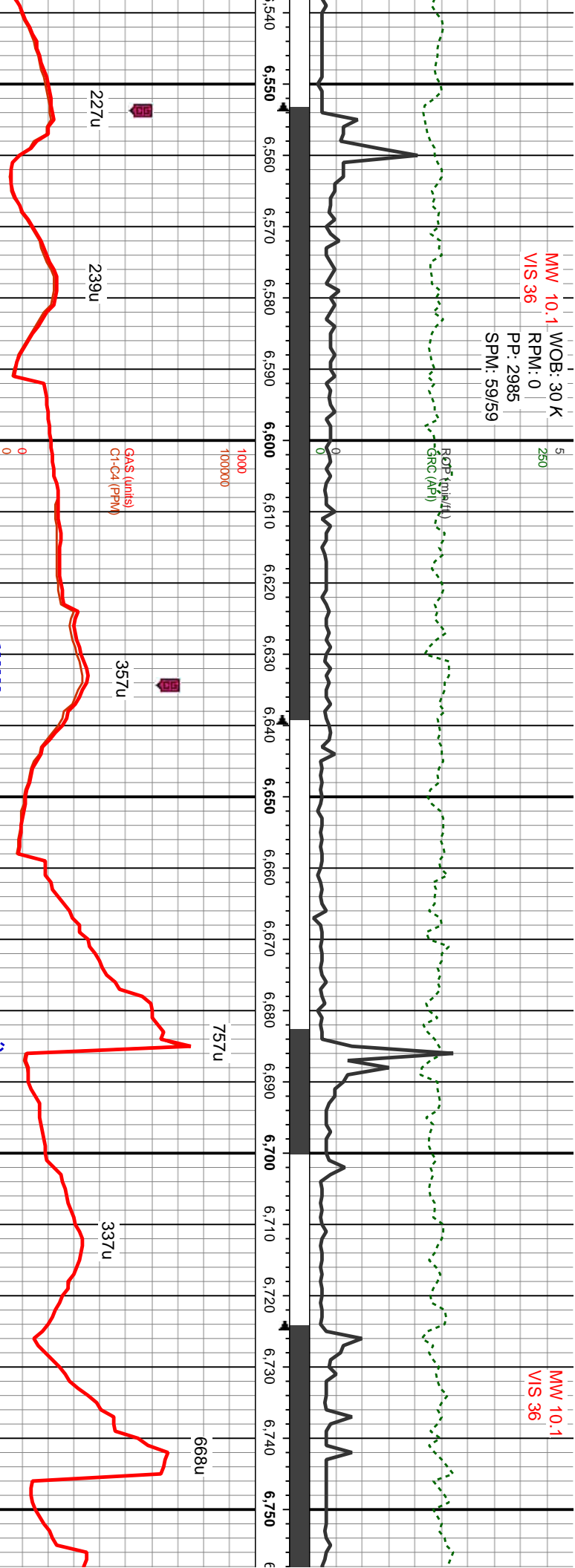


100% SLTST: v arg, lt-med gy, pred sb blk- sb pty, sft, sl calc, tr dissim pyr, occ lam; ss strg, tr calc xls

100% SLTST: v arg, lt-med gy, pred sb blk- sb pty, sft, sl calc, tr dissim p strg, tr calc xls; tr pyr

MW 10.1
VIS 36
WOB: 30 K
RPM: 0
PP: 2985
SPM: 59/59

5
250
RCF (1010/L)
GAC (AP)



MW 10.1
VIS 36

MD: 6,588'
Inclination: 12.2°
Azimuth: 60.2°
TVD: 6,542.81'
VS: -238.3°

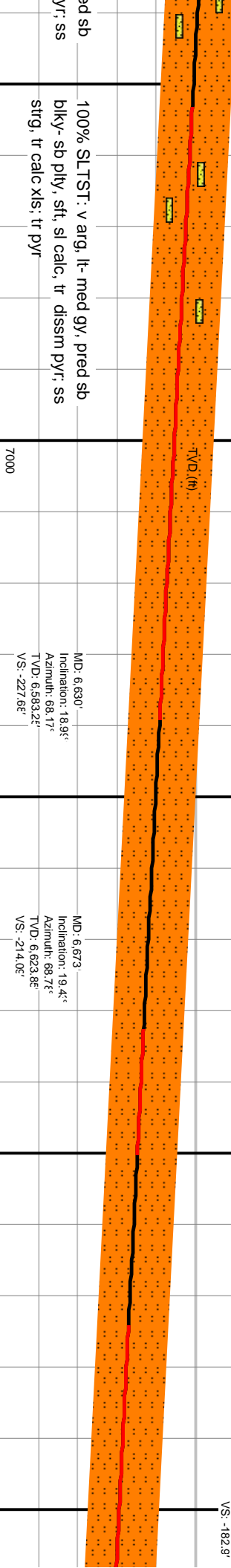
6000
100% SLTST: v arg, lt- med gy, pred sb
bkly- sb pily, sft, sl calc, tr dissim pyr, tr ss;
tr calc xls; tr pyr

100% SLTST: v arg, lt- med gy, pred sb
bkly- sb pily, fri, sl calc, tr dissim pyr, grd to
sh, occ lam; tr ss; tr pyr

100% SLTST: v arg, lt- med gy, pred sb
bkly- sb pily, fri, sl calc, tr dissim pyr, grd to
sh, occ lam; tr ss; tr pyr

100%
bkly-
sh, or

MD: 6,758'
Inclination: 2°
Azimuth: 72.1°
TVD: 6,702.5°
VS: -182.9°



100% SLTST: v arg, lt- med gy, pred sb
bkly- sb pily, sft, sl calc, tr dissim pyr, ss
strg, tr calc xls; tr pyr

7000

MD: 6,630'
Inclination: 18.9°
Azimuth: 68.17°
TVD: 6,583.2°
VS: -227.6°

MD: 6,673'
Inclination: 19.4°
Azimuth: 68.7°
TVD: 6,623.8°
VS: -214.0°

WOB: 29 K
RPM: 36
PP: 3605
SPM: 64/64

MW 10.2
VIS 38

Sharon Springs @ 6,923' MD 6,848' TVD

Niobrara A @ 6,968' MD 6,885' TVD

ROP (inches)
GRG (API)

667u

1000
1000000

GAS (units)
C1-C4 (PPM)

GAS SCALE
CHANGE:
0 - 30000u

300000
GAS (units)
C1-C4 (PPM)

908u

2595u

1203u



SLTST: v arg, lt- med gy, pred sb
biky- sb pily, fri, sl calc, tr dissim pyr, grd to
occ lam; tr ss; tr pyr; tr calc xls

100% SLTST: v arg, lt- med gy, pred sb
biky- sb pily, fri, sl calc, tr dissim pyr, grd to
sh, occ lam; tr ss; tr pyr; tr calc xls

100% SLTST: v arg, lt- med gy, pred sb
biky- sb pily, fri, sl calc, tr dissim pyr, grd to
sh, occ lam; tr ss; tr pyr

100% SLTST: v arg, lt- med gy, pred sb
biky- sb pily, fri, sl calc, tr dissim pyr, grd to
sh, occ lam; tr ss; tr pyr; sh stg

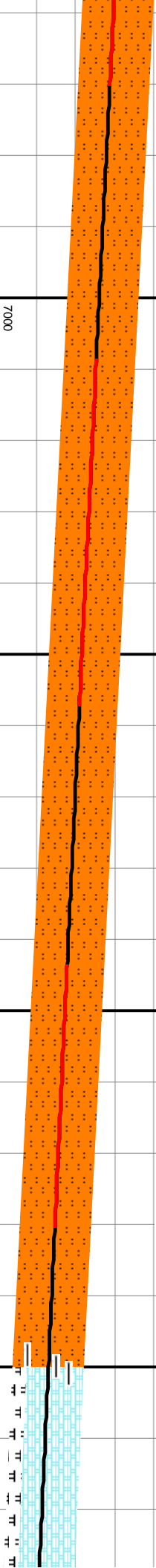
80% CHK: lt- med gy, lt- med
pred sb ang- sb biky, crp
20% MRLST: med- dk gy
calc, arg, biky- pily, com
tr pyr; tr ss; tr dk sh

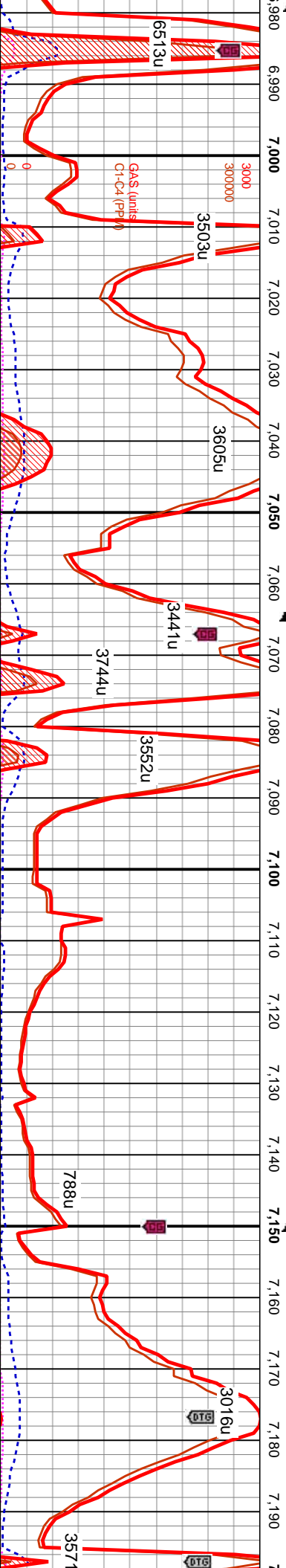
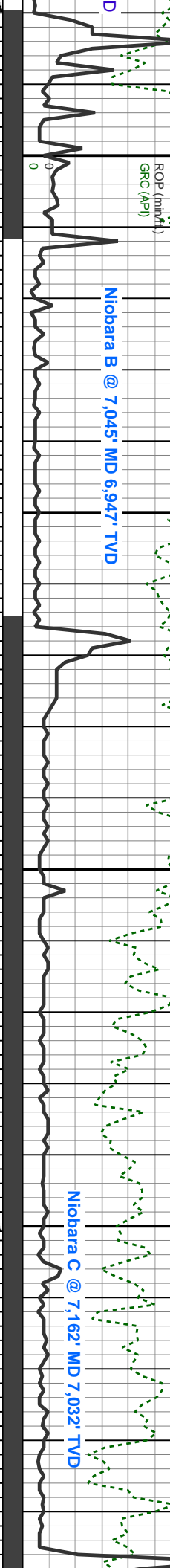
TVD (ft)

MD: 6,843'
Inclination: 27.8°
Azimuth: 76.52°
TVD: 6,778.65'
VS: -145.66°

MD: 6,928'
Inclination: 33.4°
Azimuth: 83.64°
TVD: 6,851.72'
VS: -102.46°

TV
6.8





brn, sft, mot, v calc,
xln, com chk incl;
, brn, fri, stri, sily,
dissm pyr; tr siltst;

D Scale Change:
100' - 7,800'

MD: 7,013'
Inclination: 35.1°
Azimuth: 81.27°
TVD: 6,921.7'
VS: -54.27°

MD: 7,099'
Inclination: 42.4°
Azimuth: 82.67°
TVD: 6,989.12'
VS: -2.51°

MD: 7,184'
Inclination: 53.0°
Azimuth: 84.17°
TVD: 7,046.2'
VS: 60.3°

20% CHK: lt- med gy, lt brn, sft, mot, v calc,
pred sb ang- sb blkly, crpxln; 80% MRLST:
med- dk gy, brn, fri, stri, sily, calc, arg, blkly-
ply, com dissm pyr; tr pyr; tr cal xls

20% CHK: lt- med gy, lt brn, sft, mot, v calc,
pred sb ang- sb blkly, crpxln; 80% MRLST:
med- dk gy, brn, fri, stri, sily, calc, arg, blkly-
ply, com dissm pyr; tr pyr; tr cal xls

40% CHK: lt- med gy, lt brn, sft, mot, v calc,
pred sb ang- sb blkly, crpxln; 60% MRLST:
med- dk gy, brn, fri, stri, sily, calc, arg, blkly-
ply, com dissm pyr; tr pyr; tr cal xls

60% CHK: lt- med gy, lt brn, sft, mot, v calc,
pred sb ang- sb blkly, crpxln; 40% MRLST:
med- dk gy, brn, fri, stri, sily, calc, arg, blkly-
ply, com dissm pyr; tr pyr; tr cal xls



