



Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: Howard 3C-28HZ
Location: Weld County, CO.
License Number: 05123376770000
Spud Date: 09/02/13
Surface Coordinates: 246'FSL & 1882'FWL, SEC.28, T1N-R67W
Region: Weld County
Drilling Completed: 09/07/13
Bottom Hole Coordinates: 1'FNL & 1890'FWL, SEC.28, T1N-R67W
Ground Elevation (ft): 5036' K.B. Elevation (ft): 5049'
Logged Interval (ft): 7200' To: 8120' Total Depth (ft): 12707
Formation: Codell
Type of Drilling Fluid: Water Based Mud

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Anadarko Petroleum Corporation
Address: Granite Tower
1099 18th Street, #1800
Denver, CO 80202

GEOLOGIST

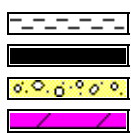
Name: Scott Crozier / Ben Thompson
Company: Great Divide Consulting, Inc
Address: P.O. Box 630263
Highlands Ranch, CO 80163

Comments

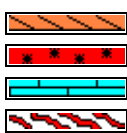
ROCK TYPES



Anhy
Bent
Brec
Cht



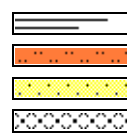
Clyst
Coal
Congl
Dol



Gyp
Igne
Lmst
Meta



Mrlst
Salt
Shale
Shcol



Shgy
Sltst
Ss
Till

ACCESSORIES

MINERAL

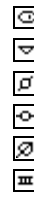
Anhy
Arggrn
Arg
Bent
Bit
Brecfrag
Calc
Carb
Chtdk
Chtlt
Dol
Feldspar
Ferrpel
Ferr
Glau



Gyp
Hvymin
Kaol
Marl
Minxl
Nodule
Phos
Pyr
Salt
Sandy
Silt
Sil
Sulphur
Tuff

FOSSIL

Algae
Amph
Belm
Bioclst
Brach
Bryozoa
Cephal
Coral
Crin
Echin
Fish
Foram
Fossil
Gastro
Oolite



Ostra
Pelec
Pellet
Pisolite
Plant
Strom

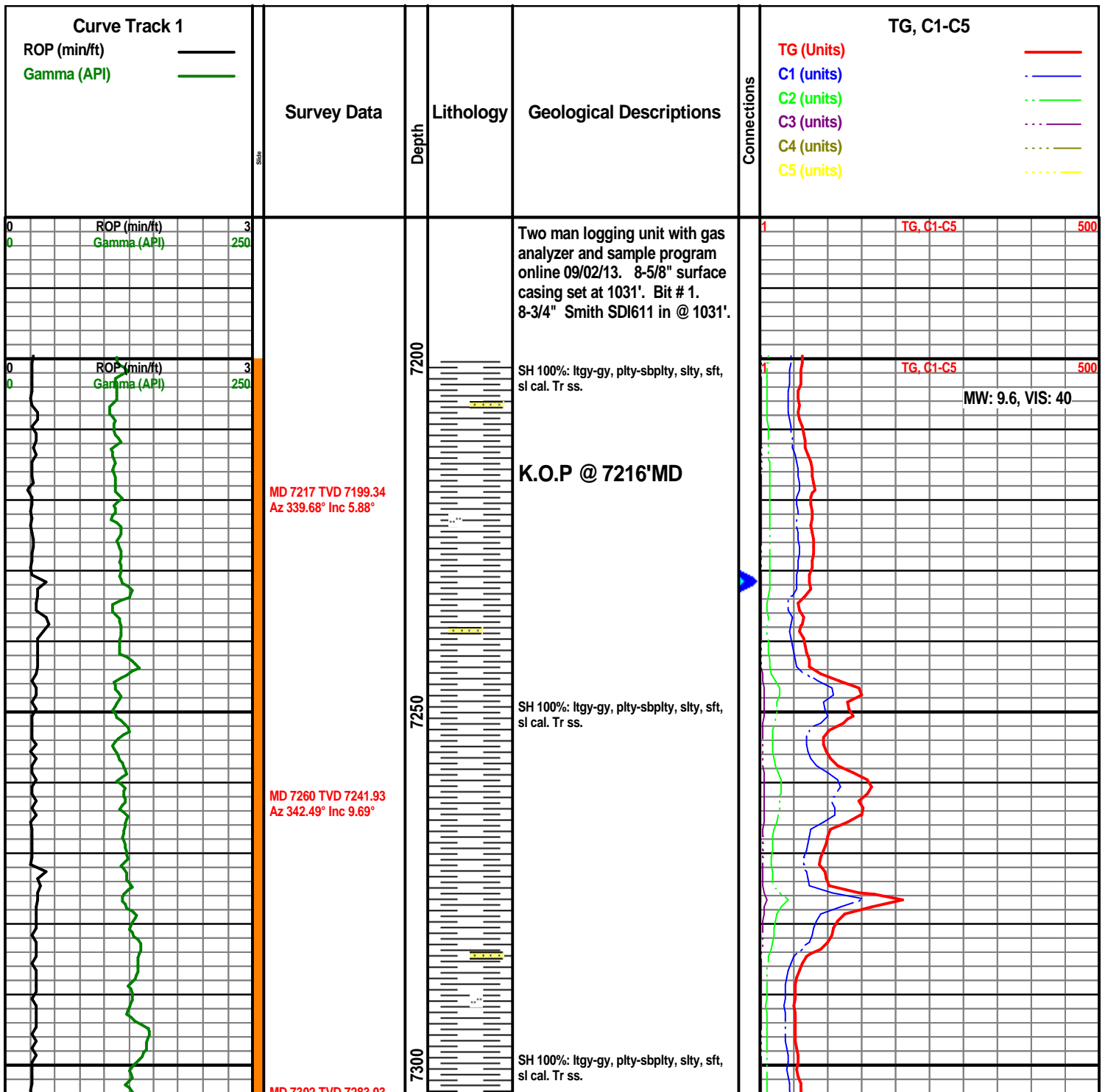
STRINGER

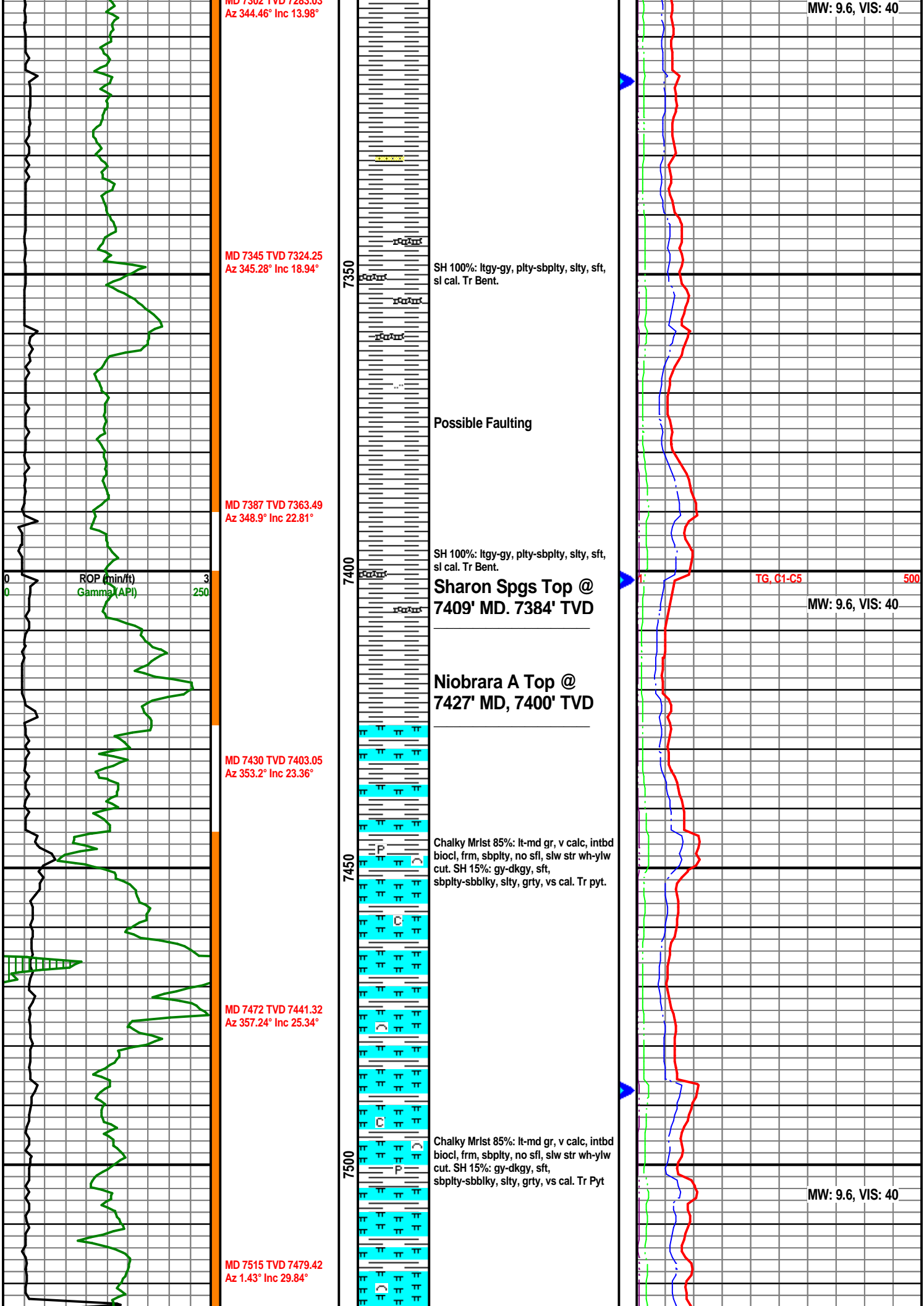
Anhy
Arg
Bent
Coal
Dol
Gyp
Ls
Mrst

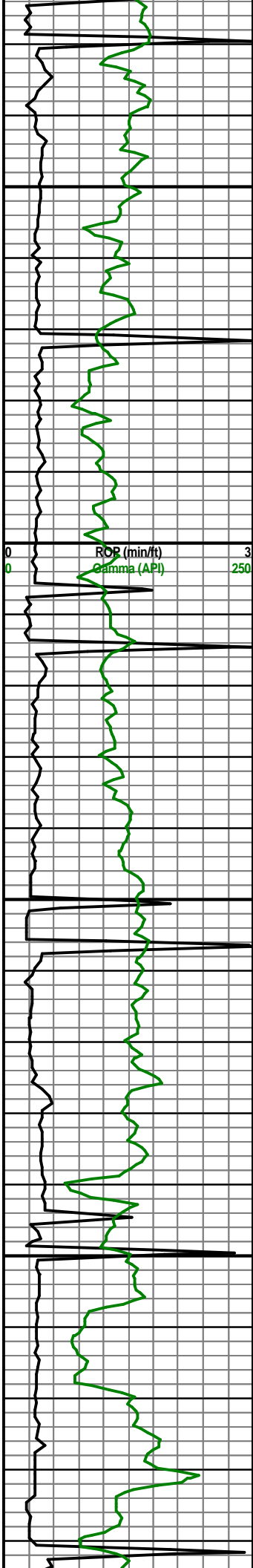
Sltstrg
Ssstrg

TEXTURE

Boundst
Chalky
Cryxln
Earthy
Finexln
Grainst
Lithogr
Microxln
Mudst
Packst
Wackest







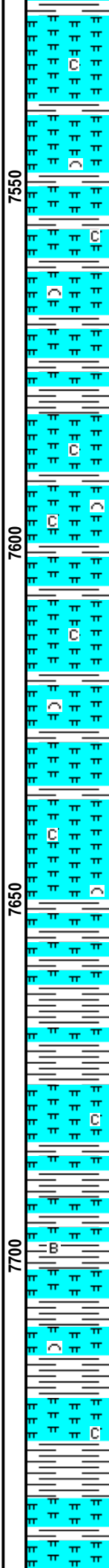
MD 7557 TVD 7515.24
Az 1.97° Inc 33.08°

MD 7600 TVD 7550.12
Az 1.33° Inc 38.45°

MD 7642 TVD 7582.17
Az 0.8° Inc 42.06°

MD 7685 TVD 7613.56
Az 1.17° Inc 44.16°

MD 7727 TVD 7642.37
Az 1.74° Inc 49.16°



Chalky Mrlst 85%: lt-md gr, v calc, intbd biocl, frm, sbplty, no sfl, slw str wh-ylw cut. SH 15%: gy-dkgy, sft, sbplty-sbbiky, slty, grty, vs cal. Tr Frac Fill.

Possible Faulting

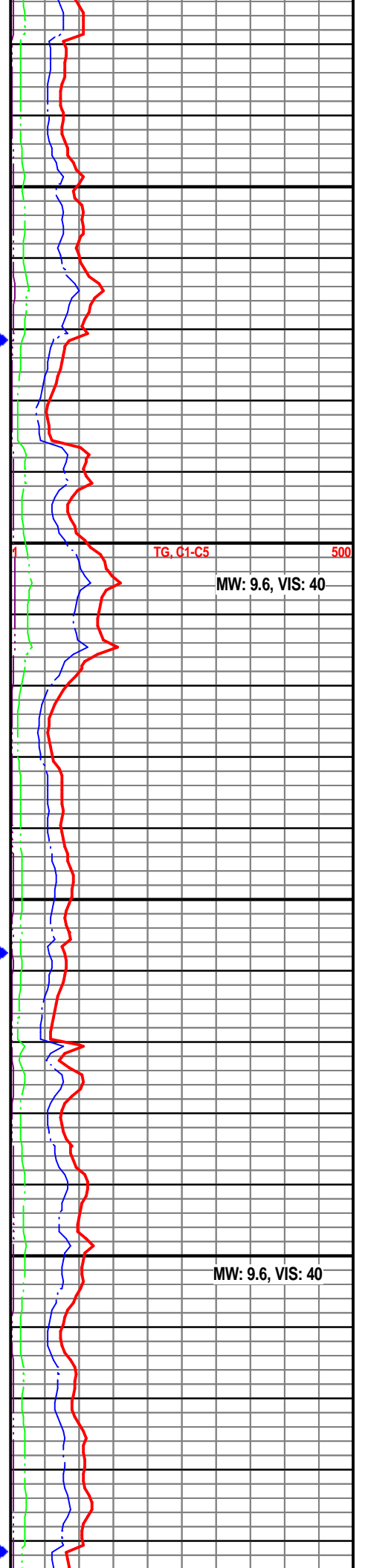
Niobrara B Top @
7569' MD, 7525' TVD

Chalky Mrlst 90%: lt-md gr, v calc, intbd biocl, frm, sbplty, no sfl, slw str wh-ylw cut. SH 10%: gy-dkgy, sft, sbplty-sbbiky, slty, grty, vs cal. Tr Frac Fill.

Chalky Mrlst 90%: lt-md gr, v calc, intbd biocl, frm, sbplty, no sfl, slw str wh-ylw cut. SH 10%: gy-dkgy, sft, sbplty-sbbiky, slty, grty, vs cal. Tr Frac Fill.

Niobrara C Top @
7689' MD, 7616' TVD

Chalky Mrlst 90%: lt-md gr, v calc, intbd biocl, frm, sbplty, no sfl, slw str wh-ylw cut. SH 10%: gy-dkgy, sft, sbplty-sbbiky, slty, grty, vs cal. Tr Bent.

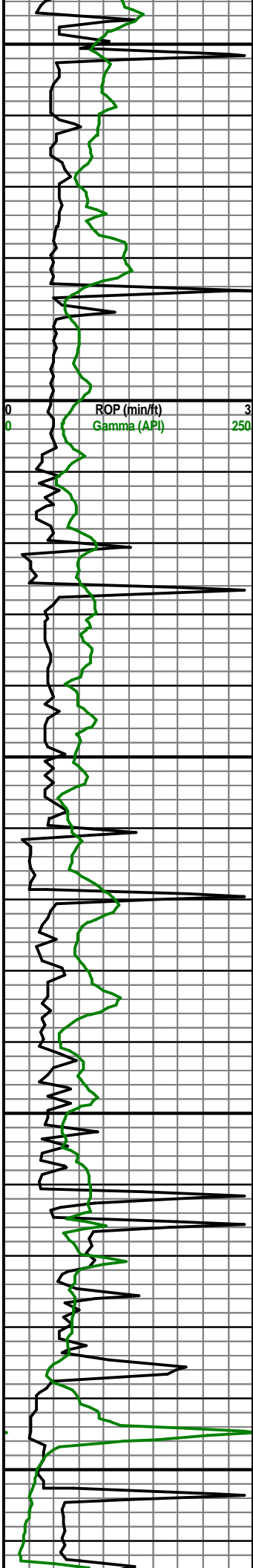


TG, C1-C5

500

MW: 9.6, VIS: 40

MW: 9.6, VIS: 40



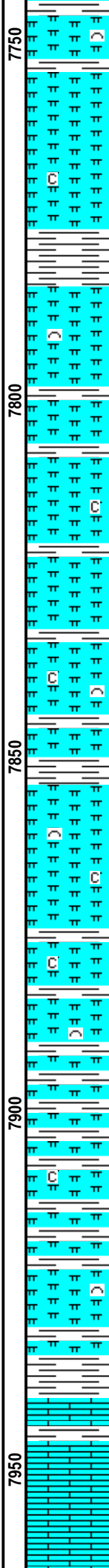
MD 7769 TVD 7668.91
Az 1.67° Inc 52.47°

MD 7812 TVD 7693.61
Az 0.37° Inc 57.37°

MD 7854 TVD 7714.65
Az 359.6° Inc 62.5°

MD 7897 TVD 7732.92
Az 0.53° Inc 67.2°

MD 7939 TVD 7747.96
Az 0.01° Inc 70.81°



Chalky Mrlst 90%: lt-md gr, v calc, intbd biocl, frm, sbpity, no sfl, slw str wh-ylw cut. SH 10%: gy-dkgy, sft, sbpity-sbbiky, slty, grty, vs cal. Tr Bent.

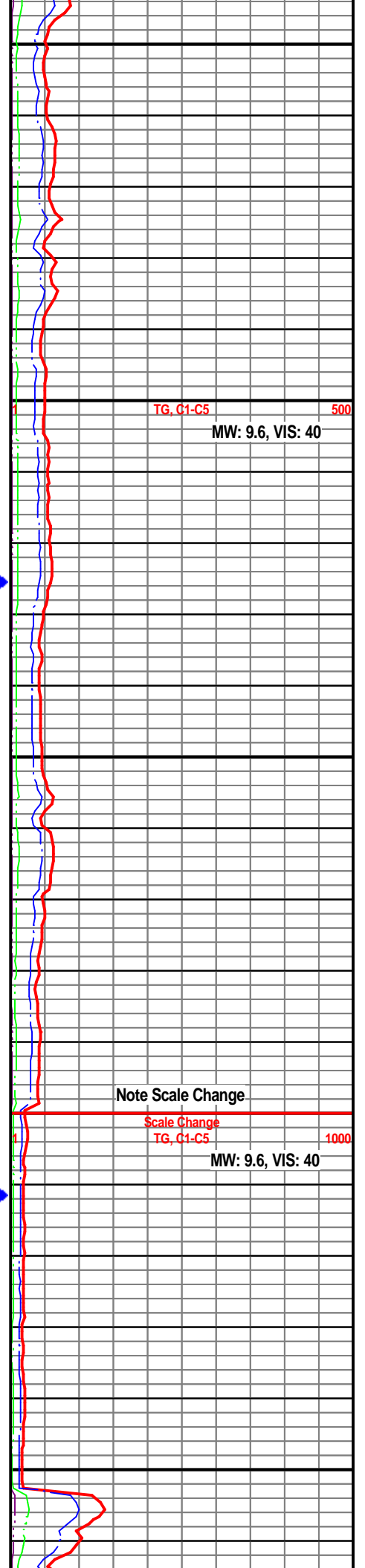
Chalky Mrlst 90%: lt-md gr, v calc, intbd biocl, frm, sbpity, no sfl, slw str wh-ylw cut. SH 10%: gy-dkgy, sft, sbpity-sbbiky, slty, grty, vs cal. Tr Bent.

Chalky Mrlst 90%: lt-md gr, v calc, intbd biocl, frm, sbpity, no sfl, slw str wh-ylw cut. SH 10%: gy-dkgy, sft, sbpity-sbbiky, slty, grty, vs cal. Tr Bent. Tr Pyt

Chalky Mrlst 80%: lt-md gr, v calc, intbd biocl, frm, sbpity, no sfl, slw str wh-ylw cut. SH 20%: gy-dkgy, sft, sbpity-sbbiky, slty, grty, vs cal. Tr Bent. Tr Pyt

Ft. Hays Top @
7940' MD 7748' TVD

LS 80%: ltgy, blk, frm-hrd, v calc, crypxln-mxln, nsf, nsfc. Chalky Mrlst 15%: lt-md gr, v calc, intbd biocl, frm, sbpity, no sfl, SH 5% gy-dkgy, sft, sbpity-sbbiky, slty, grty, vs cal.



TG, C1-C5

500

MW: 9.6, VIS: 40

Note Scale Change

Scale Change

TG, C1-C5

1000

MW: 9.6, VIS: 40

