GOOLSBY BROTHERS
and associates, inc.
575 Union Blvd, Suite 208
Lakewood, CO 80228
303-945-2860 Office
Geological Wellsite
Supervision
PETCOM
www.goolsbybrothers.com

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

Well Name: CANNON 13N-10HZ
Location: Section 10, T2N, R66W, Weld County, CO.
License Number: API: 05-123-36688 **Region:** Wattenberg
Spud Date: 5 May 2013 **Drilling Completed:** 10 May 2013
Surface Coordinates: 365' FNL X 1195' FWL NWNW
LAT: 40.158847 LONG: -104.768597
Bottom Hole Coordinates: 761' FSL X 341' FWL SWSW (Proj) Sec 10, T2N, R66W
Lat: 40.146634 LONG: -104.771671
Ground Elevation (ft): 4949' **K.B. Elevation (ft):** 4965'
Logged Interval (ft): 6800' **To:** 11605' **Total Depth (ft):** 11605'
Formation: Niobrara B
Type of Drilling Fluid: Polymer-Gel

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

OPERATOR

Company: Kerr-McGee Oil & Gas Onshore LP
Address: Granite Tower - 1099 18th St, Ste 1800
Denver, CO 80202
CO Geologist, Tom Birmingham

GEOLOGIST

Name: Robin Brackman, John Adams
Company: Goolsby Brothers & Assoc. (GBA), Inc. (www.goolsbybrothers.com)
Address: 575 Union Blvd.
Suite 208,
Lakewood CO. 80228

E-logs

MWD GR & RES 6800' - 11565'

Casing

9 5/8" Surface Casing set @ 950'
7" Intermediate Casing set @ 7658' MD, set on 7 May, 2013
run 4 1/2" production liner to run to 10713' MD on 10 May, 2013.

Comments

1) Drilling Contractor: Xtreme Drilling, Rig # 23
2) Directional Drilling: Weatherford Drilling Services
MWD: Travis Daily & Denny Palmer
3) Gas Equipment: Mudlogging Systems Inc.
by Terra Services
Redbox # ML-360 & Ratcliff Agitator

ROCK TYPES

- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Oil sat.
- Congl
- Dol
- Gyp
- Igne
- Lmst
- Meta
- Mrlst
- Salt
- Shale
- Shcol
- Shgy
- Ss
- Sltst
- Ss
- Chalk
- Carb sh
- Slty sh

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
- Chlkstg
- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg

TEXTURE
- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

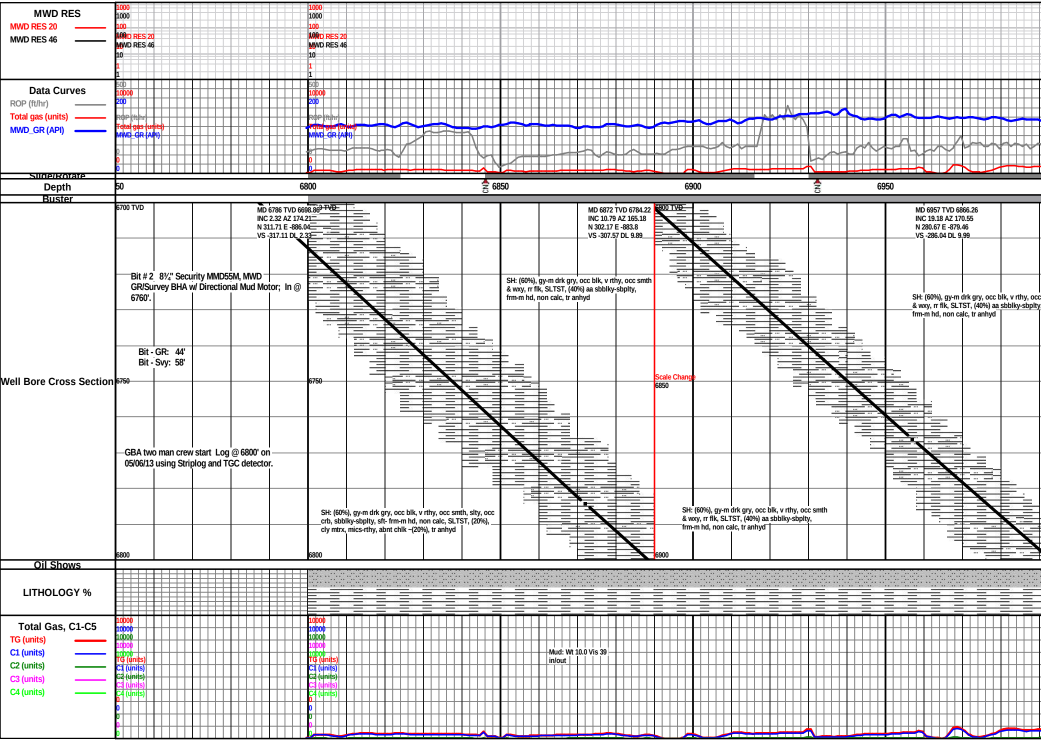
OTHER SYMBOLS

OIL SHOWS
- Even
- Spotted
- Ques
- Dead
- Vspotty
- near even

POROSITY TYPE
- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

ROUNDING
- Rounded
- Subrnd
- Subang
- Angular

SORTING
- Well
- Moderate
- Poor



MD 6786 TVD 6698.86
INC 2.32 AZ 174.21
N 311.71 E -886.04
VS -317.11 DL 2.33

MD 6872 TVD 6784.22
INC 10.79 AZ 165.18
N 302.17 E -883.8
VS -307.57 DL 9.89

MD 6957 TVD 6866.26
INC 19.18 AZ 170.55
N 280.67 E -879.46
VS -286.04 DL 9.99

Bit # 2 8¾" Security MMD55M, MWD GR/Survey BHA w/ Directional Mud Motor; In @ 6760'.

Bit - GR: 44'
Bit - Svy: 58'

GBA two man crew start Log @ 6800' on 05/06/13 using Striplog and TGC detector.

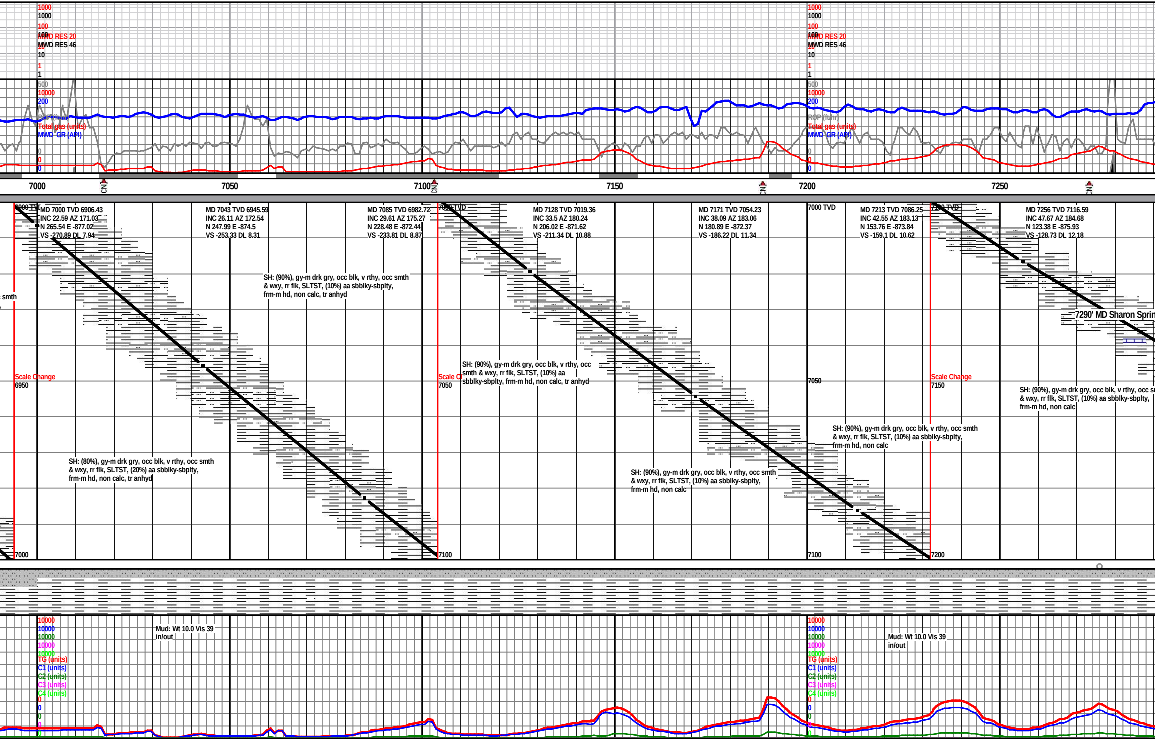
SH: (60%), gy-m drk gry, occ blk, v rthy, occ smth, slty, occ crb, sbblky-sbplty, sft- frm-m hd, non calc, SLTST, (20%), cly mtrx, mics-rthy, abnt chlk ~(20%), tr anhyd

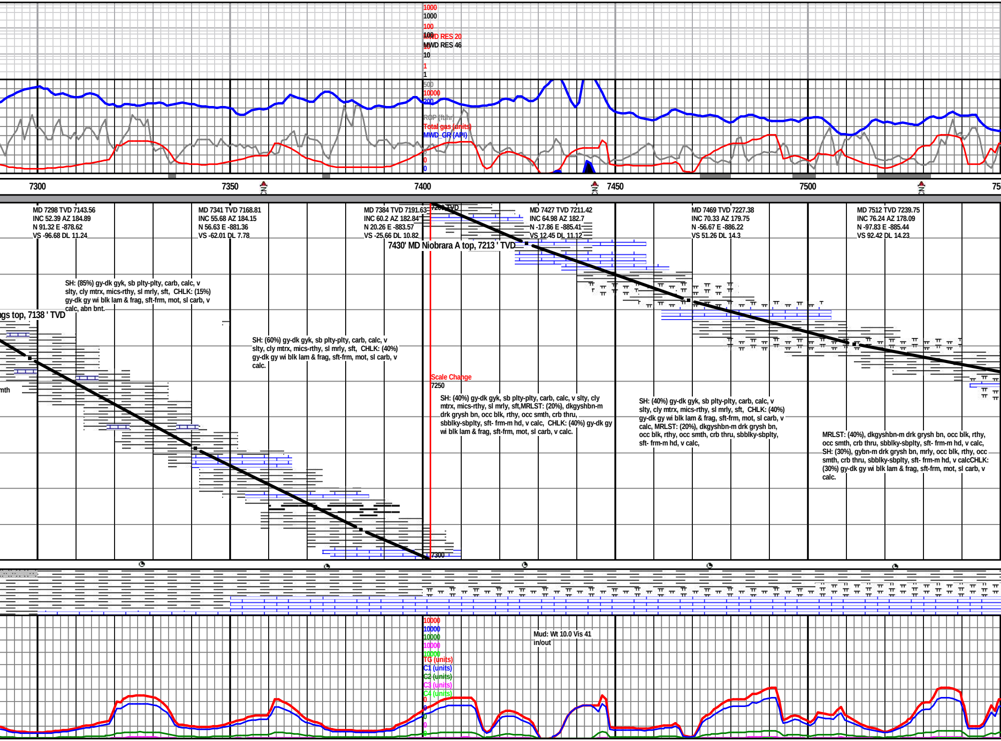
SH: (60%), gy-m drk gry, occ blk, v rthy, occ smth & wxy, rr flk, SLTST, (40%) aa sbblky-sbplty, frm-m hd, non calc, tr anhyd

SH: (60%), gy-m drk gry, occ blk, v rthy, occ smth & wxy, rr flk, SLTST, (40%) aa sbblky-sbplty, frm-m hd, non calc, tr anhyd

SH: (60%), gy-m drk gry, occ blk, v rthy, occ & wxy, rr flk, SLTST, (40%) aa sbblky-sbplty frm-m hd, non calc, tr anhyd

Mud: Wt 10.0 Vis 39
in/out





MD 7298 TVD 7143.56
INC 52.39 AZ 184.89
N 91.32 E -878.62
VS -96.68 DL 11.24

MD 7341 TVD 7168.81
INC 55.68 AZ 184.15
N 56.63 E -881.36
VS -62.01 DL 7.78

MD 7384 TVD 7191.63
INC 60.2 AZ 182.84
N 20.26 E -883.57
VS -25.66 DL 10.82

MD 7427 TVD 7211.42
INC 64.98 AZ 182.7
N -17.86 E -885.41
VS 12.45 DL 11.12

MD 7469 TVD 7227.38
INC 70.33 AZ 179.75
N -56.67 E -886.22
VS 51.26 DL 14.3

MD 7512 TVD 7239.75
INC 76.24 AZ 178.09
N -97.83 E -885.44
VS 92.42 DL 14.23

SH: (85%) gy-dk gyk, sb plty-plty, carb, calc, v slty, cly mtrx, mics-rthy, sl mrly, sft, CHLK: (15%) gy-dk gy wi blk lam & frag, sft-frm, mot, sl carb, v calc, abn bnt.

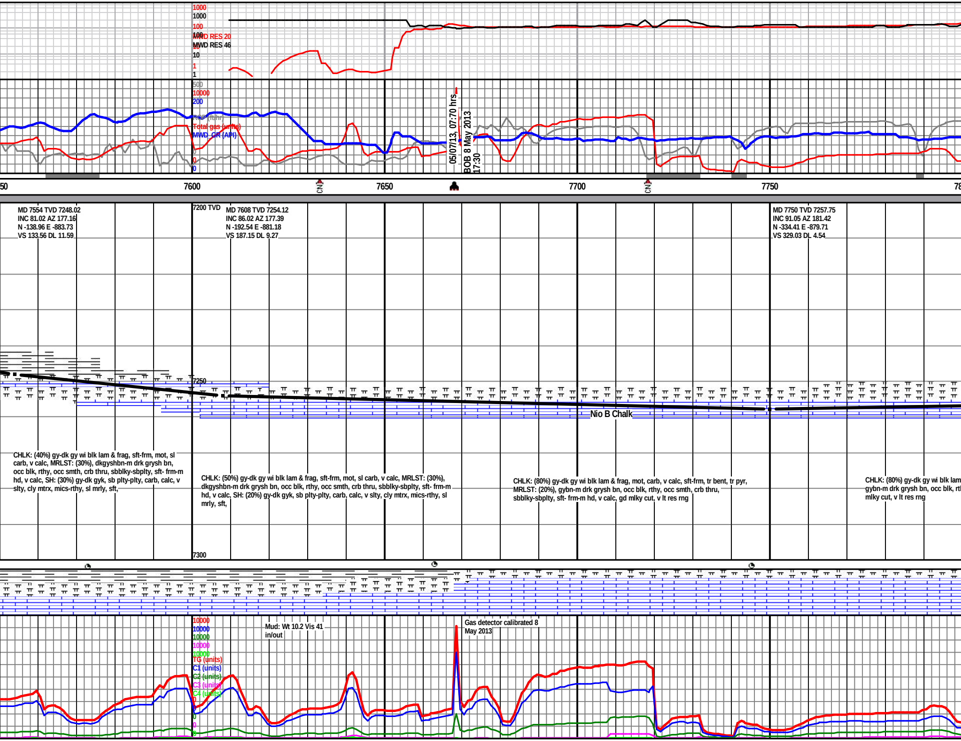
SH: (60%) gy-dk gyk, sb plty-plty, carb, calc, v slty, cly mtrx, mics-rthy, sl mrly, sft, CHLK: (40%) gy-dk gy wi blk lam & frag, sft-frm, mot, sl carb, v calc.

SH: (40%) gy-dk gyk, sb plty-plty, carb, calc, v slty, cly mtrx, mics-rthy, sl mrly, sft,MRLST: (20%), dkgyshbn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, CHLK: (40%) gy-dk gy wi blk lam & frag, sft-frm, mot, sl carb, v calc.

SH: (40%) gy-dk gyk, sb plty-plty, carb, calc, v slty, cly mtrx, mics-rthy, sl mrly, sft, CHLK: (40%) gy-dk gy wi blk lam & frag, sft-frm, mot, sl carb, v calc, MRLST: (20%), dkgyshbn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc,

MRLST: (40%), dkgyshbn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, SH: (30%), gybn-m drk grysh bn, mrly, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calcCHLK: (30%) gy-dk gy wi blk lam & frag, sft-frm, mot, sl carb, v calc.

Mud: Wt 10.0 Vis 41
in/out



MD 7554 TVD 7248.02
INC 81.02 AZ 177.16
N -138.96 E -883.73
VS 133.56 DL 11.59

MD 7608 TVD 7254.12
INC 86.02 AZ 177.39
N -192.54 E -881.18
VS 187.15 DL 9.27

MD 7750 TVD 7257.75
INC 91.05 AZ 181.42
N -334.41 E -879.71
VS 329.03 DL 4.54

CHLK: (40%) gy-dk gy wi blk lam & frag, sft-frm, mot, sl carb, v calc, MRLST: (30%), dkgyshbn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, SH: (30%) gy-dk gyk, sb plty-plty, carb, calc, v slty, cly mtrx, mics-rthy, sl mrly, sft,

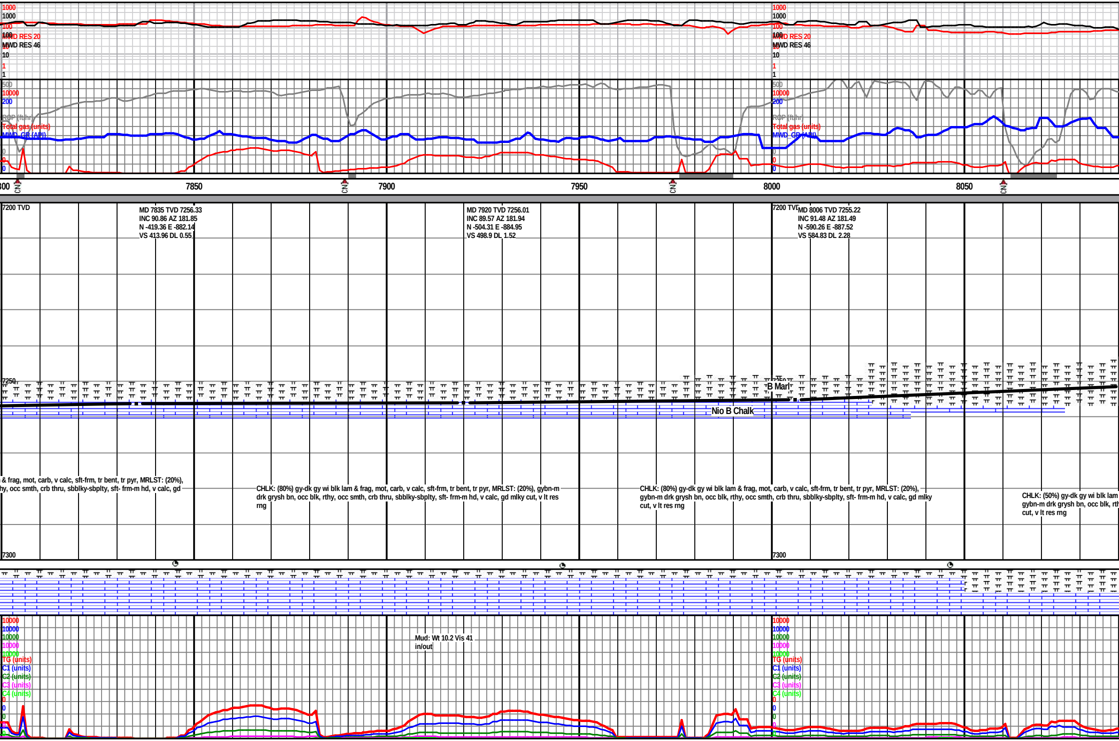
CHLK: (50%) gy-dk gy wi blk lam & frag, sft-frm, mot, sl carb, v calc, MRLST: (30%), dkgyshbn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, SH: (20%) gy-dk gyk, sb plty-plty, carb, calc, v slty, cly mtrx, mics-rthy, sl mrly, sft,

CHLK: (80%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, tr bent, tr pyr, MRLST: (20%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd mlky cut, v lt res rng

CHLK: (80%) gy-dk gy wi blk lam
gybn-m drk grysh bn, occ blk, rt
mlky cut, v lt res rng

Mud: Wt 10.2 Vis 41 in/out

Gas detector calibrated 8 May 2013



MD 7835 TVD 7256.33
INC 90.86 AZ 181.85
N -419.36 E -882.14
VS 413.96 DL 0.55

MD 7920 TVD 7256.01
INC 89.57 AZ 181.94
N -504.31 E -884.95
VS 498.9 DL 1.52

MD 8006 TVD 7255.22
INC 91.48 AZ 181.49
N -590.26 E -887.52
VS 584.83 DL 2.28

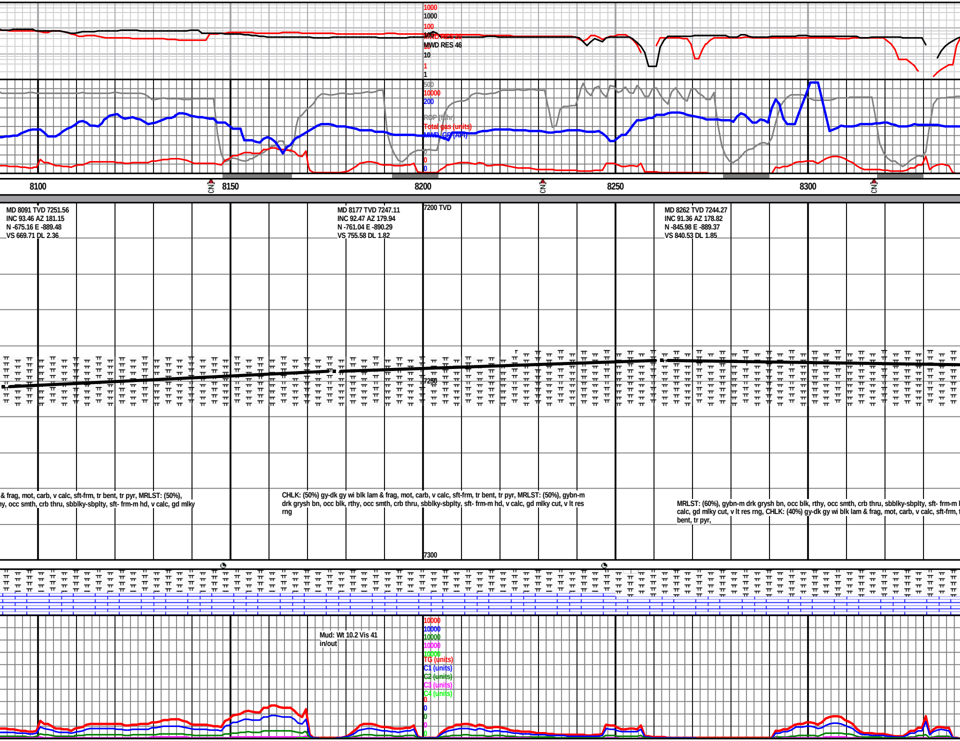
& frag, mot, carb, v calc, sft-frm, tr bent, tr pyr, MRLST: (20%),
hy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd

CHLK: (80%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, tr bent, tr pyr, MRLST: (20%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd mlky cut, v lt res rng

CHLK: (80%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, tr bent, tr pyr, MRLST: (20%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd mlky cut, v lt res rng

CHLK: (50%) gy-dk gy wi blk lam
gybn-m drk grysh bn, occ blk, rth
cut, v lt res rng

Mud: Wt 10.2 Vis 41
in/out



MD 8091 TVD 7251.56
INC 93.46 AZ 181.15
N -675.16 E -889.48
VS 669.71 DL 2.36

MD 8177 TVD 7247.11
INC 92.47 AZ 179.94
N -761.04 E -890.29
VS 755.58 DL 1.82

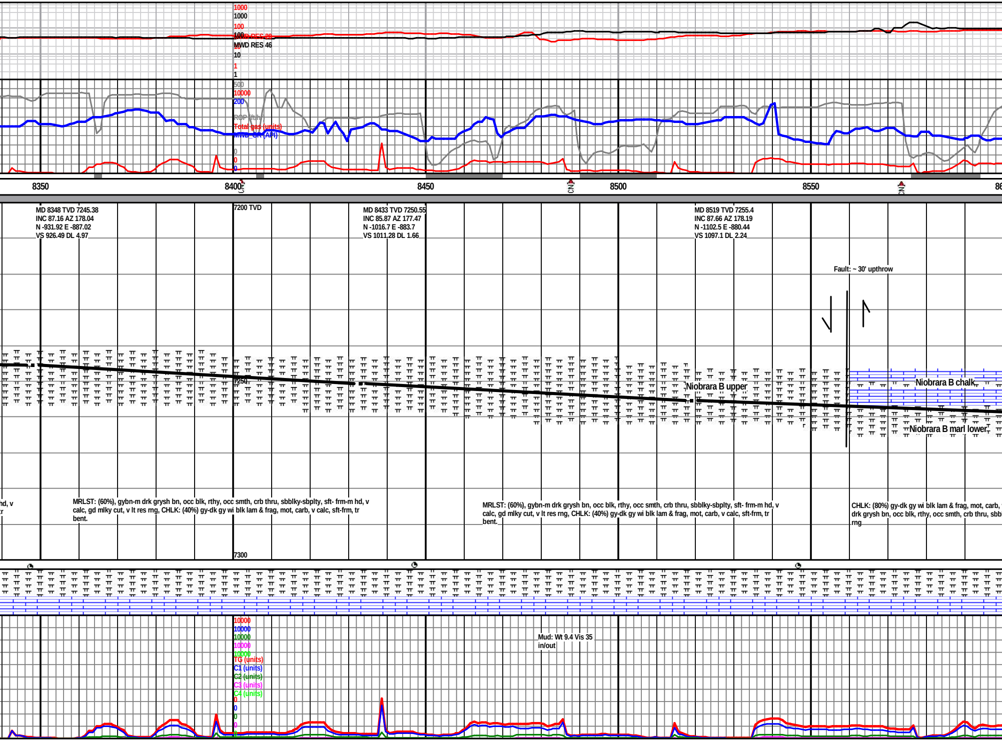
MD 8262 TVD 7244.27
INC 91.36 AZ 178.82
N -845.98 E -889.37
VS 840.53 DL 1.85

& frag, mot, carb, v calc, sft-frm, tr bent, tr pyr, MRLST: (50%),
hy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd mlky

CHLK: (50%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, tr bent, tr pyr, MRLST: (50%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd mlky cut, v lt res rng

MRLST: (60%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m h
calc, gd mlky cut, v lt res rng, CHLK: (40%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, t
bent, tr pyr,

Mud: Wt 10.2 Vis 41
in/out



MD 8348 TVD 7245.38
INC 87.16 AZ 178.04
N -931.92 E -887.02
VS 926.49 DL 4.97

MD 8433 TVD 7250.55
INC 85.87 AZ 177.47
N -1016.7 E -883.7
VS 1011.28 DL 1.66

MD 8519 TVD 7255.4
INC 87.66 AZ 178.19
N -1102.5 E -880.44
VS 1097.1 DL 2.24

Fault: ~ 30' upthrow

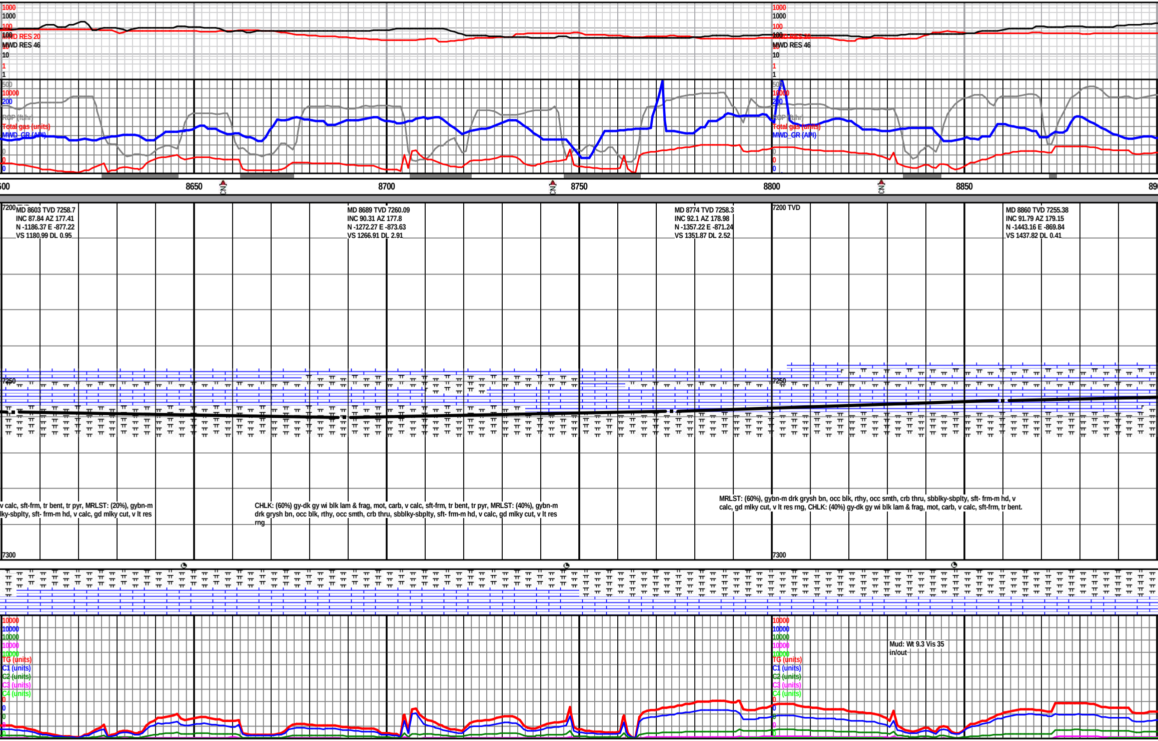
hd, v
tr

MRLST: (60%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd mlky cut, v lt res rng, CHLK: (40%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, tr bent.

MRLST: (60%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd mlky cut, v lt res rng, CHLK: (40%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, tr bent.

CHLK: (80%) gy-dk gy wi blk lam & frag, mot, carb,
drk grysh bn, occ blk, rthy, occ smth, crb thru, sbb
rng

Mud: Wt 9.4 Vis 35
in/out



MD 8603 TVD 7258.7
INC 87.84 AZ 177.41
N -1186.37 E -877.22
VS 1180.99 DL 0.95

MD 8689 TVD 7260.09
INC 90.31 AZ 177.8
N -1272.27 E -873.63
VS 1266.91 DL 2.91

MD 8774 TVD 7258.3
INC 92.1 AZ 178.98
N -1357.22 E -871.24
VS 1351.87 DL 2.52

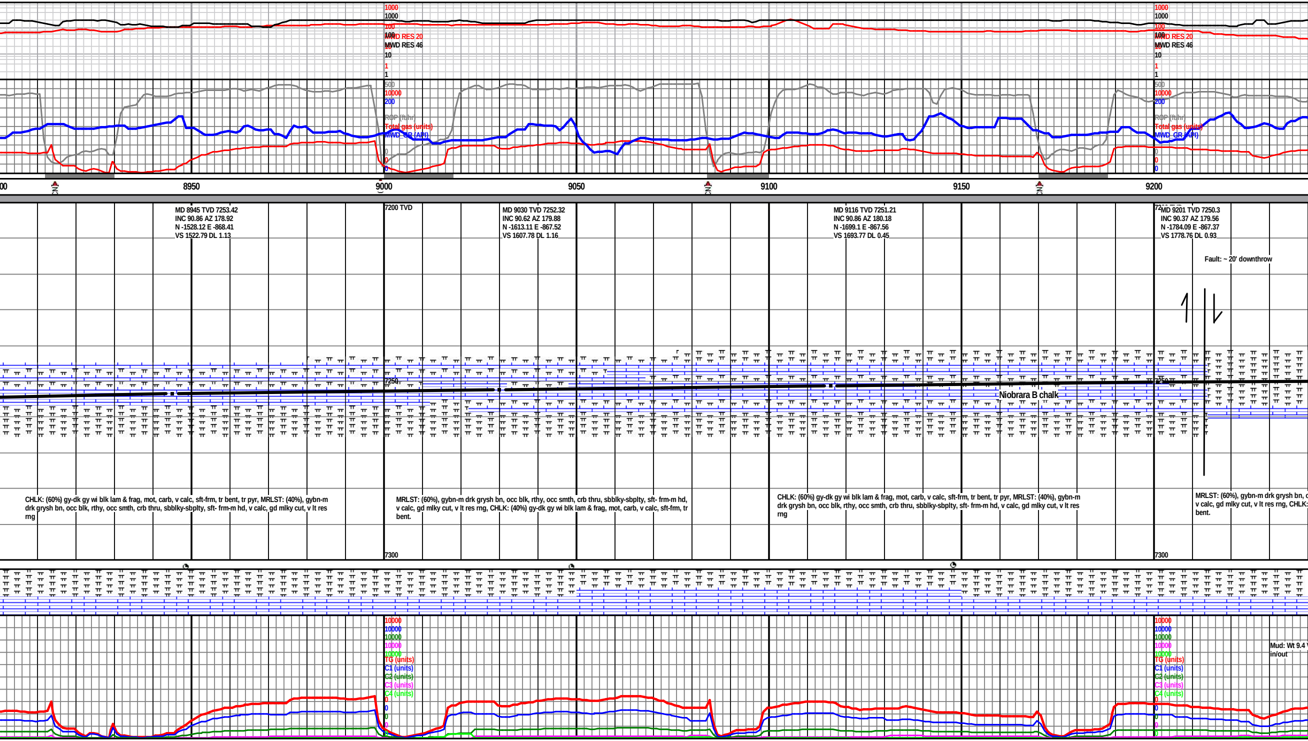
MD 8860 TVD 7255.38
INC 91.79 AZ 179.15
N -1443.16 E -869.84
VS 1437.82 DL 0.41

v calc, sft-frm, tr bent, tr pyr, MRLST: (20%), gybn-m lky-sbplty, sft- frm-m hd, v calc, gd mlky cut, v lt res

CHLK: (60%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, tr bent, tr pyr, MRLST: (40%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd mlky cut, v lt res rng

MRLST: (60%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd mlky cut, v lt res rng, CHLK: (40%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, tr bent.

Mud: Wt 9.3 Vis 35
in/out



MD 8945 TVD 7253.42
INC 90.86 AZ 178.92
N -1528.12 E -868.41
VS 1522.79 DL 1.13

MD 9030 TVD 7252.32
INC 90.62 AZ 179.88
N -1613.11 E -867.52
VS 1607.78 DL 1.16

MD 9116 TVD 7251.21
INC 90.86 AZ 180.18
N -1699.1 E -867.56
VS 1693.77 DL 0.45

MD 9201 TVD 7250.3
INC 90.37 AZ 179.56
N -1784.09 E -867.37
VS 1778.76 DL 0.93

CHLK: (60%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, tr bent, tr pyr, MRLST: (40%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd mlky cut, v lt res rng

MRLST: (60%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd mlky cut, v lt res rng, CHLK: (40%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, tr bent.

CHLK: (60%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, tr bent, tr pyr, MRLST: (40%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd mlky cut, v lt res rng

MRLST: (60%), gybn-m drk grysh bn, c
v calc, gd mlky cut, v lt res rng, CHLK:
bent.

MD 9287 TVD 7249.87
INC 90.19 AZ 180.4
N -1870.09 E -867.34
VS 1864.76 DL 1

MD 9372 TVD 7249.78
INC 89.94 AZ 180.16
N -1955.09 E -867.76
VS 1949.75 DL 0.41

MD 9458 TVD 7250.51
INC 89.08 AZ 179.9
N -2041.09 E -867.8
VS 2035.75 DL 1.04

MD 9543 TVD 7252.29
INC 88.52 AZ 180.7
N -2126.07 E -868.25
VS 2120.72 DL 1.15

MD 9628 TVD 7253.07
INC 90.43 AZ 181.48
N -2211.04 E -869.86
VS 2205.69 DL 2.43

MD 9714 TVD 7253.82
INC 88.58 AZ 180.25
N -2297.02 E -871.16
VS 2291.66 DL 2.58

MD 9799 TVD 7256.06
INC 88.4 AZ 181.11
N -2381.99 E -872.17
VS 2376.62 DL 1.03

MD 9885 TVD 7258.73
INC 88.03 AZ 180.16
N -2467.94 E -873.12
VS 2462.56 DL 1.18

MD 9970 TVD 7261.25
INC 88.58 AZ 180.34
N -2552.9 E -873.49
VS 2547.52 DL 0.68

MD 10055 TVD 7262.58
INC 89.63 AZ 180.99
N -2637.88 E -874.48
VS 2632.49 DL 1.45

MD 10141 TVD 7264.15
INC 88.27 AZ 180.38
N -2723.86 E -875.51
VS 2718.46 DL 1.73

MD 10226 TVD 7265.39
INC 90.06 AZ 181.26
N -2808.84 E -876.72
VS 2803.43 DL 2.35

MD 10312 TVD 7264.66
INC 90.92 AZ 180.22
N -2894.83 E -877.83
VS 2889.41 DL 1.57

MD 10397 TVD 7263.74
INC 90.31 AZ 179.98
N -2979.82 E -877.98
VS 2974.4 DL 0.77

MD 10483 TVD 7262.59
INC 91.23 AZ 179.31
N -3065.81 E -877.45
VS 3060.39 DL 1.32

MD 10568 TVD 7261.31
INC 90.49 AZ 178.58
N -3150.79 E -875.88
VS 3145.38 DL 1.22

MD 10653 TVD 7260.08
INC 91.17 AZ 178.86
N -3235.75 E -873.99
VS 3230.36 DL 0.87

MD 10739 TVD 7258
INC 91.6 AZ 178.92
N -3321.71 E -872.32
VS 3316.32 DL 0.5

MD 10824 TVD 7255.49
INC 91.79 AZ 179.37
N -3406.67 E -871.05
VS 3401.28 DL 0.57

MD 10910 TVD 7253.12
INC 91.36 AZ 178.44
N -3492.62 E -869.41
VS 3487.24 DL 1.19

MD 10995 TVD 7250.97
INC 91.54 AZ 179.11
N -3577.57 E -867.59
VS 3572.2 DL 0.82

MD 11080 TVD 7248.5
INC 91.79 AZ 178.85
N -3662.52 E -866.08
VS 3657.16 DL 0.42

MD 11166 TVD 7245.45
INC 92.28 AZ 179.42
N -3748.46 E -864.78
VS 3743.1 DL 0.87

MD 11251 TVD 7241.93
INC 92.47 AZ 178.91
N -3833.37 E -863.55
VS 3828.03 DL 0.64

MD 11337 TVD 7238.09
INC 92.65 AZ 178.79
N -3919.27 E -861.82
VS 3913.93 DL 0.25

MD 11422 TVD 7234.56
INC 92.1 AZ 178.63
N -4004.18 E -859.91
VS 3998.85 DL 0.67

MD 11507 TVD 7230.95
INC 92.77 AZ 178.2
N -4089.07 E -857.56
VS 4083.75 DL 0.94

MD 11551 TVD 7228.8
INC 92.83 AZ 177.93
N -4132.99 E -856.08
VS 4127.68 DL 0.63

MD 11605 TVD 7226
INC 92.83 AZ 177.93
VS 4181

occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, (40%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, tr

MRLST: (70%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd mlky cut, v lt res rng, CHLK: (30%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, tr bent.

MRLST: (70%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd mlky cut, v lt res rng, CHLK: (30%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, tr bent.

MRLST: (70%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd mlky cut, v lt res rng, CHLK: (30%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm.

150' samples due to ROP

MRLST: (70%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd mlky cut, v lt res rng, CHLK: (30%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm.

MRLST: (60%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd mlky cut, v lt res rng, CHLK: (40%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm.

MRLST: (60%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, tr pyr, tr bnt, CHLK: (40%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, gd mlky cut, v lt res rng,

SH: (70%) gybn-m drk grysh bn, mrly, occ blk, rthy, occ smth, rr crb thru, sbblky-sbplty, sft- frm-m hd, v calc, MRLST: (30%) dkgyshbn-m drk grysh bn, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, tr bent, tr pyr.

SH: (60%) gybn-m drk grysh bn, mrly, occ blk, rthy, occ smth, rr crb thru, sbblky-sbplty, sft- frm-m hd, v calc, MRLST: (40%) dkgyshbn-m drk grysh bn, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, tr bent, tr pyr.

SH: (70%) gybn-m drk grysh bn, mrly, occ blk, rthy, occ smth, rr crb thru, sbblky-sbplty, sft- frm-m hd, v calc, MRLST: (30%) dkgyshbn-m drk grysh bn, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, tr bent, tr pyr.

SH: (80%) gybn-m drk grysh bn, mrly, occ blk, rthy, occ smth, rr crb thru, sbblky-sbplty, sft- frm-m hd, v calc, MRLST: (20%) dkgyshbn-m drk grysh bn, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, tr bent, tr pyr.

SH: (70%) gybn-m drk grysh bn, mrly, occ blk, rthy, occ smth, rr crb thru, sbblky-sbplty, sft- frm-m hd, v calc, MRLST: (30%) dkgyshbn-m drk grysh bn, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, tr bent, tr pyr.

MRLST: (90%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, tr pyr, tr bnt, CHLK: (10%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, gd mlky cut, v lt res rng,

MRLST: (90%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, tr pyr, tr bnt, CHLK: (10%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, gd mlky cut, v lt res rng,

MRLST: (70%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, tr pyr, tr bnt, CHLK: (300%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, gd mlky cut, v lt res rng,

CHLK: (70%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, gd mlky cut, v lt res rng,MRLST: (30%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, tr pyr, tr bnt

CHLK: (80%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm, gd mlky cut, v lt res rng,MRLST: (20%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, tr pyr, tr bnt

MRLST: (70%), gybn-m drk grysh bn, occ blk, rthy, occ smth, crb thru, sbblky-sbplty, sft- frm-m hd, v calc, gd mlky cut, v lt res rng, CHLK: (30%) gy-dk gy wi blk lam & frag, mot, carb, v calc, sft-frm.

Formations top's (ft)

Formation	MD	TVD	SS
Sharon Springs	7290	7138	-2173
Niobrara A	7430	7213	-2248
Niobrara B	7610	7248	-2283
TL Heel	7715	7258	-2293
TL Toe	11605	7228	-2263

Thank You
John Adams & Robin Brackman
Goolsby Brothers & Assoc. Inc
05/10/2013