GOOLSBY BROTHERS and associates, inc.

575 Union Blvd, Suite 208
Lakewood, CO 80228
303-945-2960 Office

Geological Wellsite
Supervision

www.goolsbybrothers.com

PETCOM

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

Well Name: D&C Farms 13C-33HZ
Location: Section 28, T1N, R67W, Weld County, CO.
License Number: API: 05-123-37889-00 Region: Wattenberg
Spud Date: 5 Oct 2013 Drilling Completed: 11 Oct 2013
Surface Coordinates: 501' FSL X 1488' FWL SESW
LAT: 40.016204 LONG: -104.899559
Bottom Hole 460 ' FSL X 610' FWL SWSW (Proj) Sec. 33
Coordinates: LAT: 40.00123 LONG: -104.902676
Ground Elevation (ft): 5008' K.B. Elevation (ft): 5024'
Logged Interval (ft): 7300' To: 13010' Total Depth (ft): 13010'
Formation: Codell
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: John Adams & Robin Brackman
Company: Goolsby Brothers & Assoc. (GBA), Inc. (www.goolsbybrothers.com)
Address: 575 Union Blvd.
Suite 208,
Lakewood CO. 80228

E-logs

MWD GR 7300' - 12955'
MWD IND 8200' - 12926'

Casing

9 5/8" Surface Casing set @ 1040'
7" Intermediate Casing set @ 8261' MD, set on 8 Oct 2013
& run 4 1/2" Production Liner & Packer on 12 Oct 2013.

Comments

1) Drilling Contractor: Xtreme Drilling, Rig # 23
2) Directional Drilling: Weather ford Drilling Services
MWD/LWD: John Jackson, Michael Nguyen
3) Gas Equipment: Mudlogging Systems Inc.
by Terra Services Redbox # ML-TGC 326 & 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

Trip for MM Resume drilling 01:30 10-6-13

Trip for MM resume drilling 05:00 7 Oct 2013

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

Bit #1 8.75" Hughes DP504X, 6X18 JETS; MWD GR/Survey BHA w/ Directional Mud Motor; In @ 1035'.

GBA two man crew start on 10/5/13 using Striplog and ML-448 TGC Gas detector.

Gas Buster on line

MD 7289 TVD 7180.87
INC 3.2 AZ 148.66
N 90.44 E -672.03
VS -93.64 DL 4.09

SH: (100%) dk gy-blk, sb plty-plty, occ carb, n calc, slty ip, tr ss, fis, cly mtrx, sl lmy, tr carb frag, tr pyr, no min fluor, rthy-gray, frm-sft, NFSOC.

Niobrara "A" top

MD 7374 TVD 7264.9
INC 14.04 AZ 163.15
N 78.51 E -667.79
VS -81.69 DL 12.91

SH: (100%) dk gy-blk, sb plty-plty, occ carb, n calc, slty ip, tr ss, fis, cly mtrx, sl lmy, tr carb frag, tr pyr, no min fluor, rthy-gray, frm-sft, NFSOC.

Sharon Springs top @ 7435' MD, 7323' TVD.

MD 7459 TVD 7345.32
INC 23.39 AZ 158.22
N 52.92 E -656.52
VS -56.06 DL 11.15

Niobrara "A" top @ 7475'MD, 7360 TVD.

SH (60%) v dk gy-blk, frm, plty, fiss, sb wxy-wxy, n slty, carb, v calc, MRLST (40%) m gy brn, m sft, blky, flky, rthy, m hi arg cont / shly, chlky, sl mttld,

SH (50%) v dk gy-blk, frm, plty, fiss, sb wxy-wxy, n slty, carb, v calc. MRLST (40%) m gy brn, m sft, blky, flky, rthy, m hi arg cont / shly, chlky, sl mttld, CHLK: (10%) blk-dk brnsh gy, sl mot-mot, sb plty-sb blky, v carb, v calc, v arg, no dry flor, wk slw milky cut & fnt dl yl resid ring flor.

MD 7544 TVD 7422.71
INC 25.45 AZ 162.25
N 19.85 E -646.69
VS -22.95 DL 3.12

SH (40%) v dk gy-blk, frm, plty, fiss, sb wxy-wxy, n slty, carb, v calc, MRLST (40%) m gy brn, m sft, blky, flky, rthy, m hi arg cont / shly, chlky, sl mttld, CHLK: (20%) blk-dk brnsh gy, sl mot-mot, sb plty-sb blky, v carb, v calc, v arg, no dry flor, wk slw milky cut & fnt dl yl resid ring flor.

MRLST (40%) m gy brn, m sft, blky, flky, rthy, m hi arg cont / shly, chlky, sl mttld, CHLK: (40%) blk-dk brnsh gy, sl mot-mot, sb plty-sb blky, v carb, v calc, v arg, no dry flor, wk slw milky cut & fnt dl yl resid ring flor, SH (20%) v dk gy-blk, frm, plty, fiss, sb wxy-wxy, n slty, carb, v calc.

MD 7630 TVD 7496.93
INC 29.83 AZ 169.97
N -18.78 E -637.29
VS 15.71 DL 6.65

Niobrara "B" top @ 7646'MD, 7513 TVD.

MRLST (40%) m gy brn, m sft, blky, flky, rthy, m hi arg cont / shly, chlky, sl mttld, CHLK: (40%) blk-dk brnsh gy, sl mot-mot, sb plty-sb blky, v carb, v calc, v arg, no dry flor, wk slw milky cut & fnt dl yl resid ring flor, SH (20%) v dk gy-blk, frm, plty, fiss, sb wxy-wxy, n slty, carb, v calc.

MD 7715 TVD 7568.34
INC 40.47 AZ 174.28
N -67.19 E -630.84
VS 64.15 DL 12.85

MRLST (40%) m gy brn, m sft, blky, flky, rthy, m hi arg cont / shly, chlky, sl mttld, CHLK: (40%) blk-dk brnsh gy, sl mot-mot, sb plty-sb blky, v carb, v calc, v arg, no dry flor, wk slw milky cut & fnt dl yl resid ring flor, SH (20%) v dk gy-blk, frm, plty, fiss, sb wxy-wxy, n slty, carb, v calc.

Niobrara "C" Chalk @ 7780'MD, 7616' TVD.

MD 7801 TVD 7630.57
INC 46.78 AZ 171.51
N -126.02 E -623.43
VS 123 DL 7.66

CHLK: (50%) blk-dk brnsh gy, sl mot-mot, sb plty-sb blky, v carb, v calc, v arg, no dry flor, wk slw milky cut & fnt dl yl resid ring flor, MRLST (40%) m gy brn, m sft, blky, flky, rthy, m hi arg cont / shly, chlky, sl mttld, SH (10%) v dk gy-blk, frm, plty, fiss, sb wxy-wxy, n slty, carb, v calc.

MD 7886 TVD 7682.54
INC 57.74 AZ 177.39
N -192.79 E -612.1
VS 189.8 DL 14

CHLK: (50%) blk-dk brnsh gy, sl mot-mot, sb plty-sb blky, v carb, v calc, v arg, no dry flor, wk slw milky cut & fnt dl yl resid ring flor, MRLST (40%) m gy brn, m sft, blky, flky, rthy, m hi arg cont / shly, chlky, sl mttld, SH (10%) v dk gy-blk, frm, plty, fiss, sb wxy-wxy, n slty, carb, v calc.

CHLK: (60%) blk-dk brnsh gy, sl mot-mot, sb plty-sb blky, v carb, v calc, v arg, no dry flor, wk slw milky cut & fnt dl yl resid ring flor, MRLST 3(0%) m gy brn, m sft, blky, flky, rthy, m hi arg cont / shly, chlky, sl mttld, SH (10%) v dk gy-blk, frm, plty, fiss, sb wxy-wxy, n slty, carb, v calc.

MD 7972 TVD 7723.15
INC 65.86 AZ 179.23
N -268.49 E -615.01
VS 265.5 DL 9.63

MD 8057 TVD 7756.27
INC 68.29 AZ 182.9
N -346.74 E -616.49
VS 343.74 DL 4.9

Top: Fort Hays; 8044' MD, 7751' TVD

LS: (90%) gysh brn-lt brn-off wh, m hd, occ frm, plty rr sb blky, flky, smth - wxy, micr xlin SH (10%) v dk gy-blk, frm, plty, fiss, sb wxy-wxy, n slty, carb, v calc,

MD 8142 TVD 7781.03
INC 77.82 AZ 187.47
N -427.59 E -623.81
VS 424.56 DL 12.53

SS: (60%) gy- gysh bn-dkgysh bn - dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn milky cut, fr rsd rng flor. LS: (30%) gysh brn-lt brn-off wh, m hd, occ frm, plty rr sb blky, flky, smth - wxy, micr xlin, SH (10%) v dk gy-blk, frm, plty, fiss, sb wxy-wxy, n slty, v carb, v calc,

SS: (100%) gysh bn-dkgysh bn - dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn milky cut, fr rsd rng flor.

MD 8201 TVD 7788.67
INC 87.27 AZ 187.22
N -485.54 E -631.38
VS 482.49 DL 16.02

SS: (100%) gysh bn-dkgysh bn - dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn milky cut, fr rsd rng flor.

IC point 8266' MD.
15:10 7 Oct 2013

60% Casing cement, crmy tan, SS: (40%) gysh bn-dkgysh bn - dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn milky cut, fr rsd rng flor.

Begin drilling lateral section @ 5:30 AM 10/8/13

SS: (100%) gysh bn-dkgysh bn - dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn milky cut, fr rsd rng flor.

MD 8361 TVD 7792.74
INC 89.82 AZ 184.37
N -644.64 E -647.52
VS 641.53 DL 2.39

SS: (100%) gysh bn-dkgysh bn - dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn milky cut, fr rsd rng flor.

MD 8446 TVD 7792.66
INC 90.26 AZ 183.53
N -729.44 E -653.38
VS 726.31 DL 1.12

SS: (100%) gysh bn-dkgysh bn - dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn milky cut, fr rsd rng flor.

MD 8532 TVD 7791.56
INC 91.23 AZ 182.7
N -815.3 E -658.05
VS 812.15 DL 1.48

SS: (100%) gysh bn-dkgysh bn - dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn milky cut, fr rsd rng flor.

MD 8617 TVD 7790.33
INC 90.43 AZ 183.05
N -900.19 E -662.31
VS 897.02 DL 1.03

SS: (100%) gysh bn-dkgysh bn - dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn milky cut, fr rsd rng flor.

MD 8703 TVD 7789.4
INC 90.8 AZ 181.59
N -986.11 E -665.79
VS 982.93 DL 1.75

SS: (100%) gysh bn-dkgysh bn - dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn milky cut, fr rsd rng flor.

MD 8788 TVD 7788.68
INC 90.18 AZ 181.49
N -1071.08 E -668.08
VS 1067.89 DL 0.74

SS: (100%) gysh bn-dkgysh bn - dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn milky cut, fr rsd rng flor.

MD 8873 TVD 7788.66
INC 89.82 AZ 179.65
N -1156.07 E -668.92
VS 1152.88 DL 2.21

SS: (100%) gysh bn-dkgysh bn - dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn milky cut, fr rsd rng flor.

MD 8958 TVD 7787.9
INC 91.23 AZ 180.05
N -1241.06 E -668.7
VS 1237.87 DL 1.72

LS: (80%) gysh brn-lt brn-off wh, m hd, occ frm, plty rr sb blky, flky, smth - wxy, micr xlin bn-dkgysh bn - dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, yel-grn milky cut, fr rsd rng flor. SS: (20%) gy- gysh v spty dry cut flor

MD 9043 TVD 7786.8
INC 90.25 AZ 179.77
N -1326.05 E -668.57
VS 1322.86 DL 1.2

TOOH for mud motor 13:30 9 Oct 2013

LS: (100%) gysh brn-lt brn-off wh, m hd, occ frm, plty rr sb blky, flky, smth - wxy, micr xlin

MD 9128 TVD 7786.53
INC 90.12 AZ 179.49
N -1411.05 E -668.02
VS 1407.86 DL 0.36

MD 9214 TVD 7784.77
INC 92.22 AZ 180.76
N -1497.03 E -668.2
VS 1493.83 DL 2.85

LS: (100%) gysh brn-lt brn-off wh, m hd, occ frm, plty rr sb blky, flky, smth - wxy, micr xlin

MD 9299 TVD 7781.55
INC 92.12 AZ 180.88
N -1581.96 E -669.42
VS 1578.76 DL 0.18

MRLST: (70%) m gy brn, m sft, blky, flky, rthy, m hi arg cont / shly, chlky, sl mttld, LS: (30%) gysh brn-lt brn-off wh, m hd, occ frm, plty rr sb blky, flky, smth - wxy, micr xlin

MD 9385 TVD 7778.89
INC 91.42 AZ 180.25
N -1667.91 E -670.27
VS 1664.71 DL 1.09

MD 9470 TVD 7777.06
INC 91.05 AZ 179.63
N -1752.89 E -670.19
VS 1749.69 DL 0.85

MRLST: (50%) m gy brn, m sft, blky, flky, rthy, m hi arg cont / shly, chlky, sl mttld, LS: (50%) gysh brn-lt brn-off wh, m hd, occ frm, plty rr sb blky, flky, smth - wxy, micr xlin

Fault: Upthrow 28'

MD 9556 TVD 7775.81
INC 90.62 AZ 178.53
N -1838.87 E -668.8
VS 1835.67 DL 1.37

Mud Wt & Vis; 9.6, 31

Mud Wt & Vis; 9.9, 38

Mud Wt & Vis; 9.9, 36

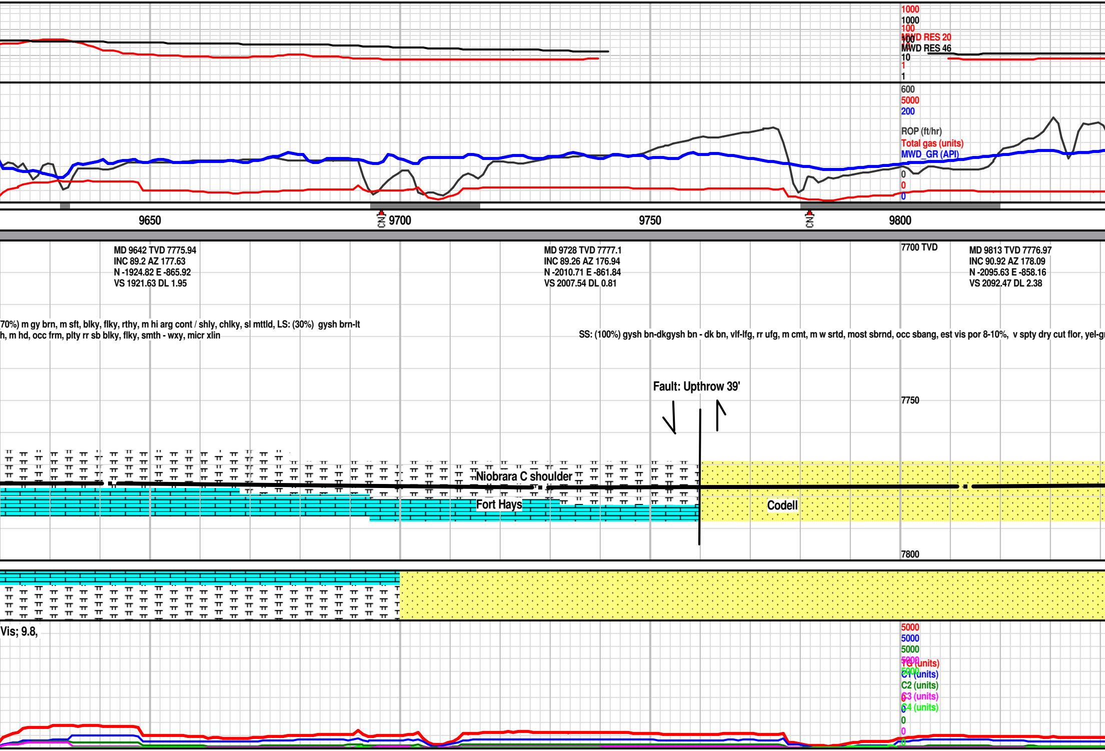
Mud Wt & Vis; 9.3, 30

Mud Wt & Vis; 9.2, 34

Trip gas

Mud Wt & Vis; 8.9, 35

Mud Wt & 36



MD 9642 TVD 7775.94
INC 89.2 AZ 177.63
N -1924.82 E -865.92
VS 1921.63 DL 1.95

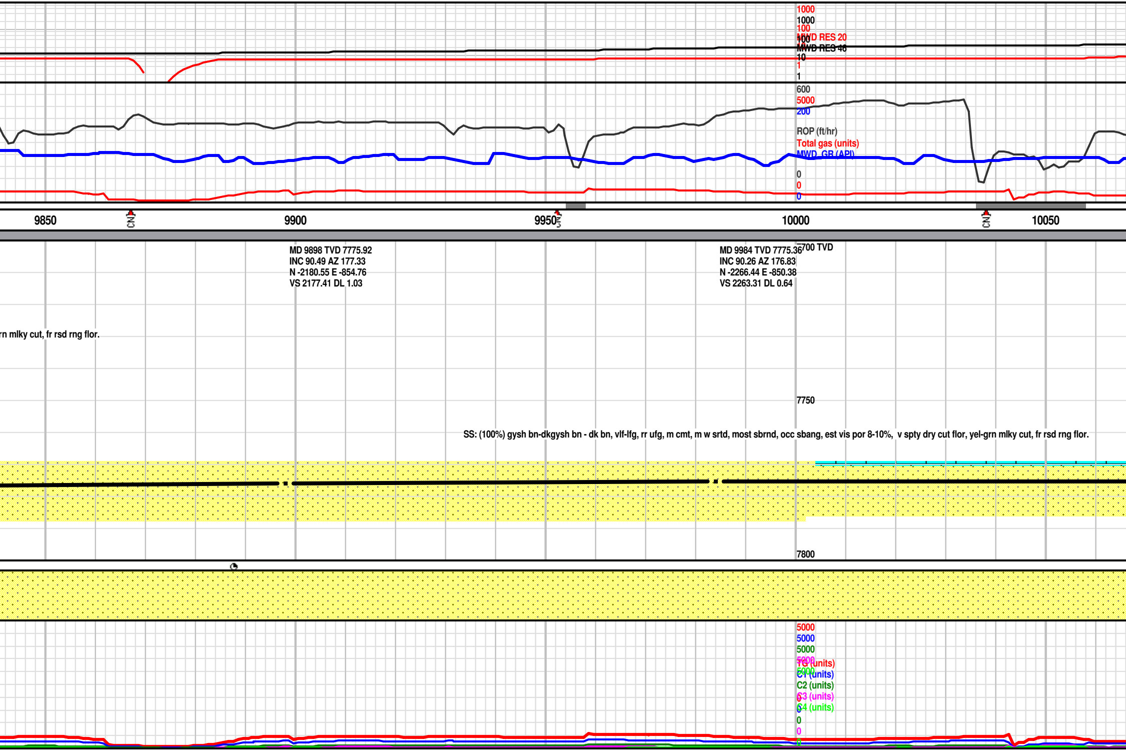
MD 9728 TVD 7777.1
INC 89.26 AZ 176.94
N -2010.71 E -861.84
VS 2007.54 DL 0.81

MD 9813 TVD 7776.97
INC 90.92 AZ 178.09
N -2095.63 E -858.16
VS 2092.47 DL 2.38

70%) m gy brn, m sft, blky, flky, rthy, m hi arg cont / shly, chlky, sl mttld, LS: (30%) gysh brn-lt
h, m hd, occ frm, plty rr sb blky, flky, smth - wxy, micr xlin

SS: (100%) gysh bn-dkgysh bn - dk bn, vlf-lfg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-g

Vis; 9.8,

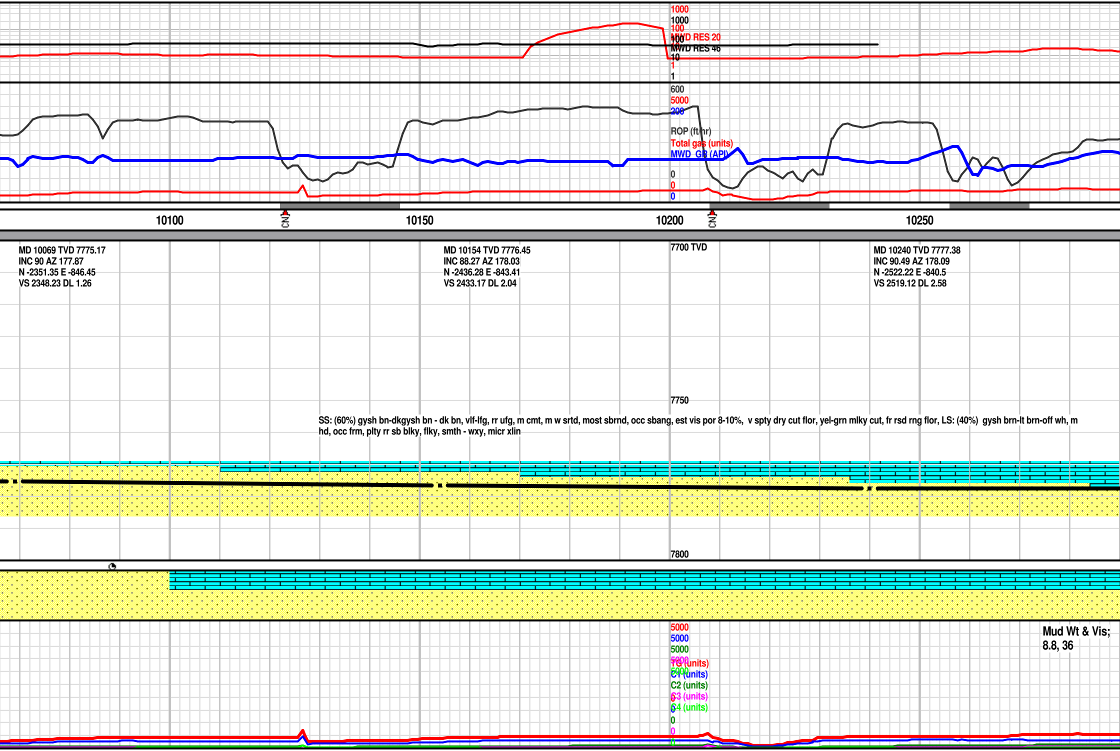


MD 9898 TVD 7775.92
INC 90.49 AZ 177.33
N -2180.55 E -854.76
VS 2177.41 DL 1.03

MD 9984 TVD 7775.36
INC 90.26 AZ 176.83
N -2266.44 E -850.38
VS 2263.31 DL 0.64

rn mlky cut, fr rsd rng flor.

SS: (100%) gysh bn-dkgysh bn - dk bn, vlf-lfg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn mlky cut, fr rsd rng flor.



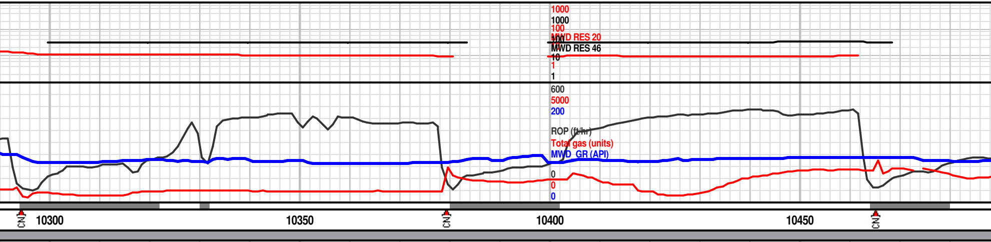
MD 10069 TVD 7775.17
INC 90 AZ 177.87
N -2351.35 E -846.45
VS 2348.23 DL 1.26

MD 10154 TVD 7776.45
INC 88.27 AZ 178.03
N -2436.28 E -843.41
VS 2433.17 DL 2.04

MD 10240 TVD 7777.38
INC 90.49 AZ 178.09
N -2522.22 E -840.5
VS 2519.12 DL 2.58

SS: (60%) gysh bn-dkgysh bn - dk bn, vlf-lfg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn mlky cut, fr rsd rng flor, LS: (40%) gysh brn-lt brn-off wh, m hd, occ frm, plty rr sb blky, flky, smth - wxy, micr xlin

Mud Wt & Vis;
8.8, 36



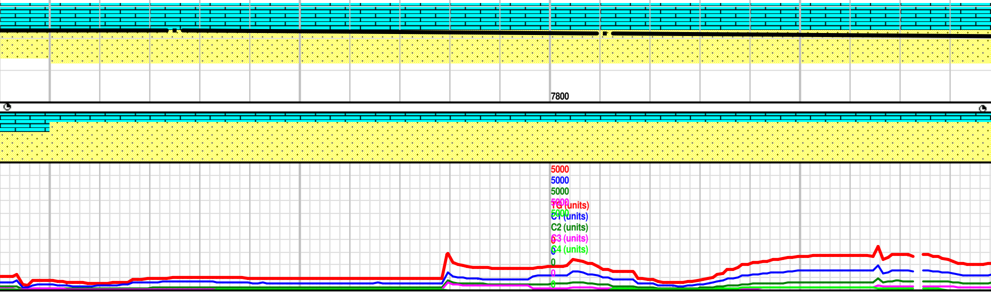
7700 TVD

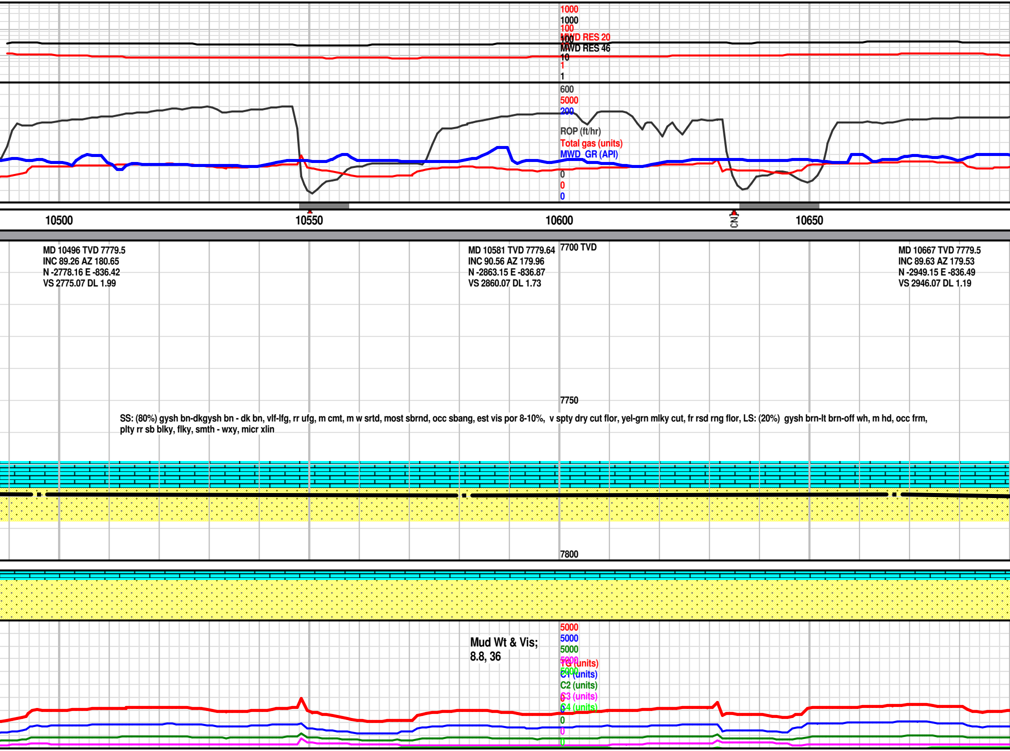
MD 10325 TVD 7777.52
INC 89.32 AZ 178.93
N -2607.19 E -838.29
VS 2604.1 DL 1.69

MD 10411 TVD 7778.5
INC 89.38 AZ 178.96
N -2693.17 E -836.71
VS 2690.08 DL 0.08

7750

SS: (80%) gysh bn-dkgysh bn - dk bn, vlf-lfg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn mlky cut, fr rsd rng flor, LS: (20%) gysh brn-lt brn-off wh, m hd, occ frm, plty rr sb blky, flky, smth - wxy, micr xlin





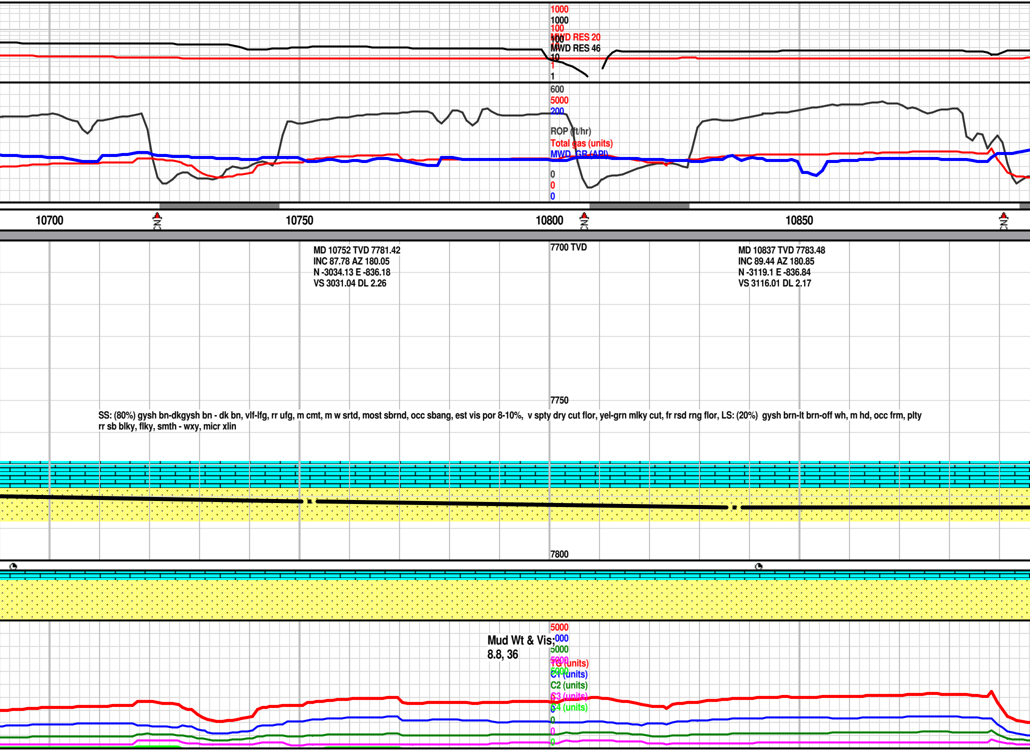
MD 10496 TVD 7779.5
INC 89.26 AZ 180.65
N -2778.16 E -836.42
VS 2775.07 DL 1.99

MD 10581 TVD 7779.64
INC 90.56 AZ 179.96
N -2863.15 E -836.87
VS 2860.07 DL 1.73

MD 10667 TVD 7779.5
INC 89.63 AZ 179.53
N -2949.15 E -836.49
VS 2946.07 DL 1.19

SS: (80%) gysh bn-dkgysh bn - dk bn, vlf-lfg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn mlky cut, fr rsd rng flor, LS: (20%) gysh brn-lt brn-off wh, m hd, occ frm, plty rr sb blky, flky, smth - wxy, micr xlin

Mud Wt & Vis;
8.8, 36

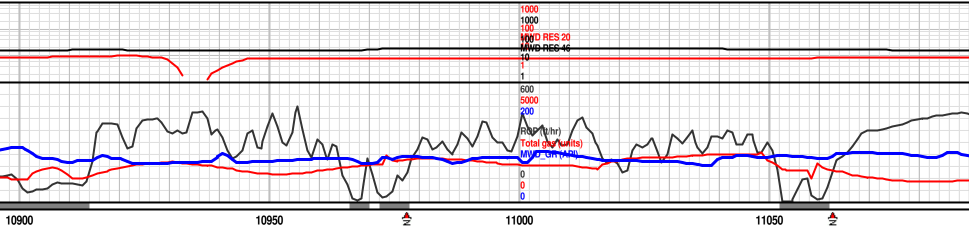


MD 10752 TVD 7781.42
INC 87.78 AZ 180.05
N -3034.13 E -836.18
VS 3031.04 DL 2.26

MD 10837 TVD 7783.48
INC 89.44 AZ 180.85
N -3119.1 E -836.84
VS 3116.01 DL 2.17

SS: (80%) gysh bn-dkgysh bn - dk bn, vlf-lfg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn mlky cut, fr rsd rng flor, LS: (20%) gysh brn-lt brn-off wh, m hd, occ frm, plty rr sb blky, flky, smth - wxy, micr xlin

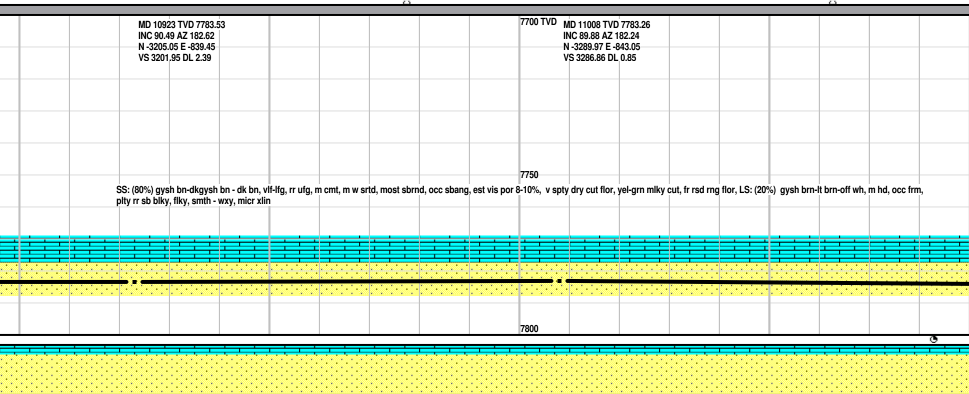
Mud Wt & Vis:
8.8, 36

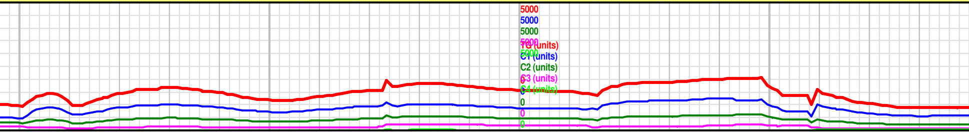


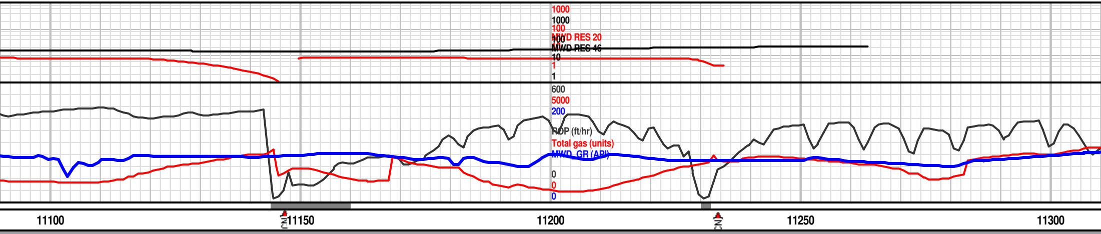
MD 10923 TVD 7783.53
INC 90.49 AZ 182.62
N -3205.05 E -839.45
VS 3201.95 DL 2.39

MD 11008 TVD 7783.26
INC 89.88 AZ 182.24
N -3289.97 E -843.05
VS 3286.86 DL 0.85

SS: (80%) gysh bn-dkgysh bn - dk bn, vlf-lfg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn mlky cut, fr rsd rng flor, LS: (20%) gysh brn-lt brn-off wh, m hd, occ frm, plty rr sb blky, flky, smth - wxy, micr xlin







MD 11093 TVD 7784.03
INC 89.08 AZ 180.61
N -3374.94 E -845.16
VS 3371.82 DL 2.14

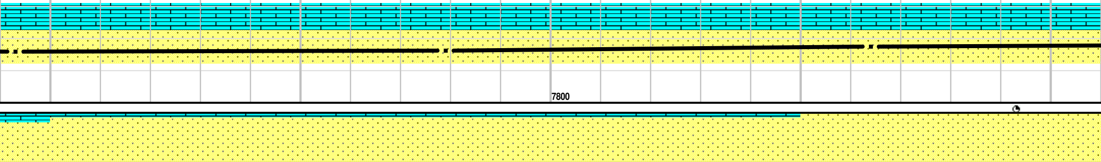
MD 11179 TVD 7783.84
INC 91.17 AZ 182.32
N -3460.9 E -847.36
VS 3457.78 DL 3.14

7700 TVD

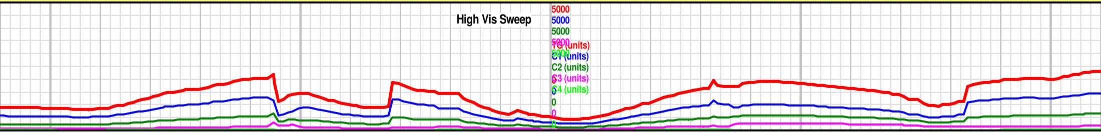
MD 11264 TVD 7782.42
INC 90.74 AZ 181.66
N -3545.84 E -850.31
VS 3542.7 DL 0.93

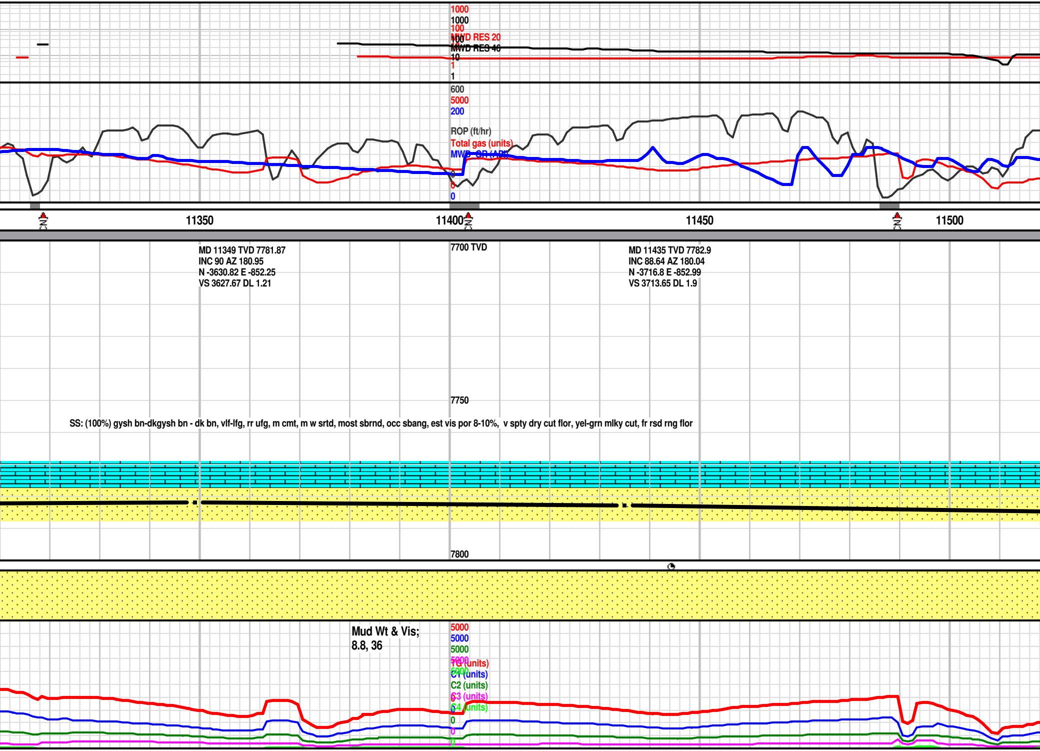
7750

SS: (90%) gysh bn-dkgysh bn - dk bn, vlf-lfg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn mlky cut, fr rsd rng flor, LS: (10%) gysh brn-lt brn-off wh, m hd, occ frm, plty rr sb blky, flky, smth - wxy, micr xlin



High Vis Sweep



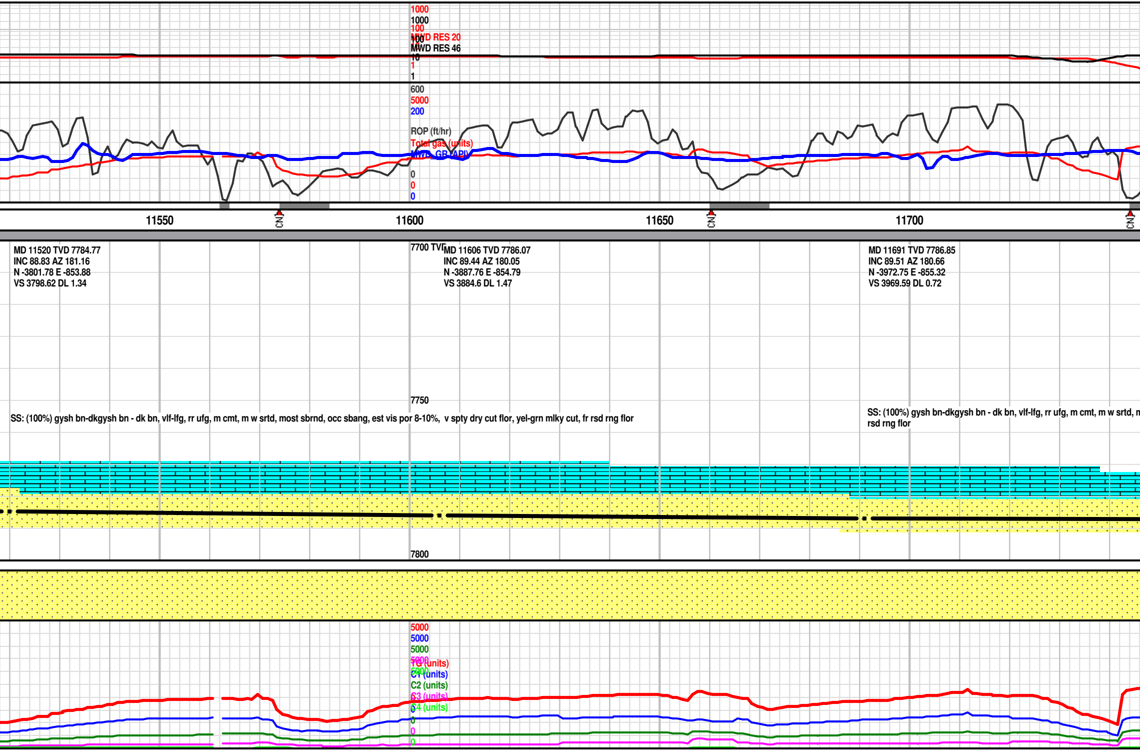


MD 11349 TVD 7781.87
INC 90 AZ 180.95
N -3630.82 E -852.25
VS 3627.67 DL 1.21

MD 11435 TVD 7782.9
INC 88.64 AZ 180.04
N -3716.8 E -852.99
VS 3713.65 DL 1.9

SS: (100%) gysh bn-dkgysh bn - dk bn, vlf-lfg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn mlky cut, fr rsd rng flor

Mud Wt & Vis;
8.8, 36



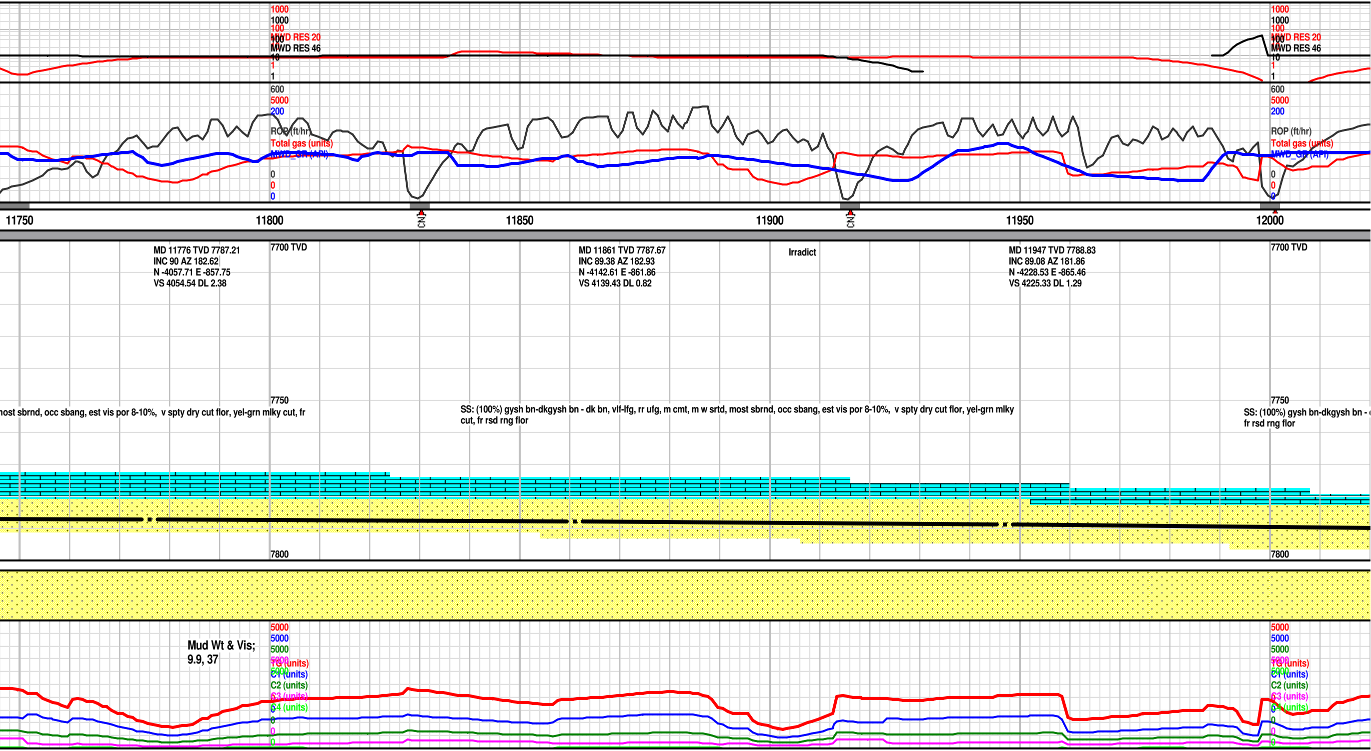
MD 11520 TVD 7784.77
INC 88.83 AZ 181.16
N -3801.78 E -853.88
VS 3798.62 DL 1.34

MD 11606 TVD 7786.07
INC 89.44 AZ 180.05
N -3887.76 E -854.79
VS 3884.6 DL 1.47

MD 11691 TVD 7786.85
INC 89.51 AZ 180.66
N -3972.75 E -855.32
VS 3969.59 DL 0.72

SS: (100%) gysh bn-dkgysh bn - dk bn, vlf-lfg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn mlky cut, fr rsd rng flor

SS: (100%) gysh bn-dkgysh bn - dk bn, vlf-lfg, rr ufg, m cmt, m w srtd, m
rsd rng flor



MD 11776 TVD 7787.21
INC 90 AZ 182.62
N -4057.71 E -857.75
VS 4054.54 DL 2.38

MD 11861 TVD 7787.67
INC 89.38 AZ 182.93
N -4142.61 E -861.86
VS 4139.43 DL 0.82

Irradict

MD 11947 TVD 7788.83
INC 89.08 AZ 181.86
N -4228.53 E -865.46
VS 4225.33 DL 1.29

ost sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn mlky cut, fr

SS: (100%) gysh bn-dkgysh bn - dk bn, vlf-lfg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn mlky cut, fr rsd rng flor

SS: (100%) gysh bn-dkgysh bn -
fr rsd rng flor

Mud Wt & Vis;
9.9, 37

dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn mlky cut,

SS: (100%) gysh bn-dkgysh bn - dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn mlky cut, fr rsd rng flor

SS: (100%) gysh bn-dkgysh bn - dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn mlky cut, fr rsd rng flor

SS: (100%) gysh bn-dkgysh bn - dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn mlky cut, fr rsd rng flor

SS: (100%) gysh bn-dkgysh bn - dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn mlky cut, fr rsd rng flor

SS: (100%) gysh bn-dkgysh bn - dk bn, vfl-flg, rr ufg, m cmt, m w srtd, most sbrnd, occ sbang, est vis por 8-10%, v spty dry cut flor, yel-grn mlky cut, fr rsd rng flor

TD 15:20 on 11 Oct 2013

	SSD	TVD	MD
Sharon Springs	-2290	7323	7435
Niobrara A	-2336	7360	7475
Niobrara B	-2489	7513	7464
Niobrara C	-2592	7616	7780
Fort Hays	-2727	7751	8044
Codell	-2750	7774	8114

Thank you
Goolsby Brothers & Assoc.