GOLSBY BROTHERS
GOLSBY DRILLING INC.
Mailing Address: PO Box 790
Sterling, CO 80751
970-522-1544

Geological Mellula
Supervisor:

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

Well Name: Barclay 18C-29HZ
Location: SESE Sec. 18 T7N R67W
Location: SESE Sec. 18 T7N R67W, Weld County, CO.
License Number: API#: 2507305
Field: Wildcat Region: Waterberg
Surface Coordinates: 40° 33' 1.440" N, -104.88° W, SESE, Sec. 18, T7N R67W
Bottom Hole Coordinates: 40° 33' 1.440" N, -104.88° W, SESE, Sec. 18, T7N R67W
Ground Elevation (ft): 4858 K.B. Elevation (ft): 4882
Logged Interval (MD): From: 7000 To: 14,700 Total Depth (MD): 14,700
Formation: Codell
Type of Drilling Fluid: Water Based (Polymer-Bitten)
Mudlogging Unit: Provided by KRAKOWKA, LLC from Wellsight Systems 1-855-447-1534 www.WellSight.com

OPERATOR

Company: Anadarko Petroleum Corporation
Address: Oranize Tower - 1099 18th St, Ste 1850
Denver, CO 80202
720-Drewdgrick, Michael Chisam.

WELLSIGHT

WELLSIGHT

Name: John Adams, Tiki Cross.
Company: Golsby Brothers & Assoc. (GBA), Inc. (www.golsbybrothers.com)
Address: 970-522-1544
Suite 206
Lakewood CO. 80228

0 logs

MWD Gamma from 6858' - 7370' md

Casing

Intermediate casing: 7", Set at 7858' on 1 Apr 2015
Liner: 4 1/2", perfed and isolated by, on 1 Apr 2015

Comments

Drilling Contractor: H&P 511
Company Man: Lance Tafoya, Josh Johnson
Mud Logger: Jeremy Hicks, Kenna Schlarp
Wireline Services: Halliburton

ROCK TYPES

Anhy	Fill grst	Salt	Ss
Anhy Nod	Gyp	Shale	Cht/Ch
Bent	Gyp Nod	Sltst	Dolo ss
Chk	Salt	Tuff	Sdy ss
Clyst	Limst	Vn	
Coal	Marlst	Wthd	

GENERAL
- Anhy
- Angle
- Bent
- Bit
- Bit Trip
- Bowspring
- Cave
- Circ
- Clyst
- Coal
- Fish
- Fishnger
- Flare
- Fluor
- Gas
- Gas Peaks
- Kick
- Lost Circ
- Mud

WOOD
- Wood
- Nodule
- Pebble
- Pyrt
- Salt
- Sandy
- Sch
- Sulphur
- Tuff

GREEN
- Algal
- Bentonite
- Brick
- Brown
- Brwn/Gn
- Dispersing
- Gilsonite
- Limst

ACCESSORIES
- Arg
- Calc
- Carb
- Fissile
- Foram
- Fossils
- Glauc
- Oolitic
- Pelec
- Phos
- Pisolitic
- Sandy
- Shcly

STRINGER
- Anhy Stringer
- Arg
- Bent
- Brk
- Chk
- Clyst
- Coal
- Dol
- Gyp
- Lmst
- Salt
- Sltst
- Ss
- Tuff

FEATURE
- Bioturbation
- Cavity
- Cavity
- Fracture
- Fracture
- Lithologic
- Vertical
- Worm
- Worm
- Packed
- Recover

OTHER SYMBOLS

OIL SHOWS
- Spotty
- Scattered
- Even
- Cut
- Visibility
- Weak Cut

FORMATION TYPE
- Anhy
- Fm Dip
- Fracture
- Fault
- Shale
- Unspec

BOUNDARY
- Projected
- Inferred

BOUNDARY
- Projected
- Inferred
- Angular

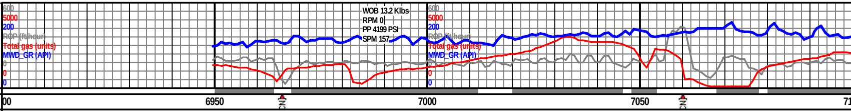
CONTACT
- Sharp
- Gradational
- Poor

Data Curves

ROP (ft/hour)

Total gas (units)

MWD_GR (API)

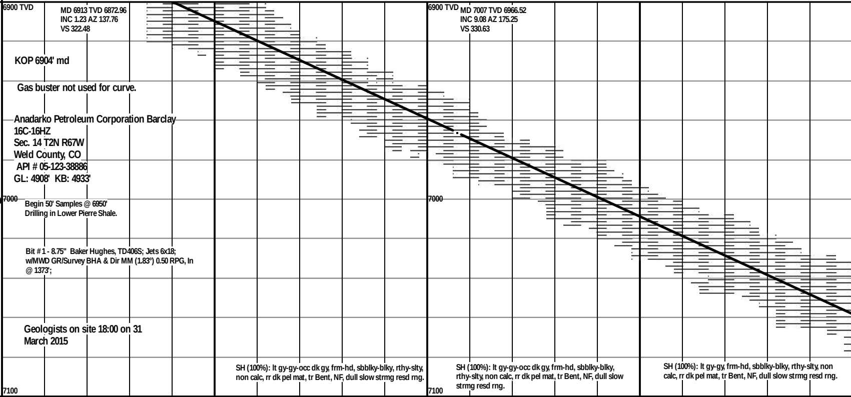


Slide/Rotate

Depth

Buster

Well Bore Cross Section



MD 6913 TVD 6872.96
INC 1.23 AZ 137.76
VS 322.48

MD 7007 TVD 6966.52
INC 9.08 AZ 175.25
VS 330.63

KOP 6904' md

Gas buster not used for curve.

Anadarko Petroleum Corporation Barclay
16C-16HZ
Sec. 14 T2N R67W
Weld County, CO
API # 05-123-38886
GL: 4908' KB: 4933'

Begin 50' Samples @ 6950'
Drilling in Lower Pierre Shale.

Bit # 1 - 8.75" Baker Hughes, TD406S; Jets 6x18; w/MWD GR/Survey BHA & Dir MM (1.83°) 0.50 RPG, In @ 1373';

Geologists on site 18:00 on 31 March 2015

SH (100%): lt gy-gy-occ dk gy, frm-hd, sbblky-blky, rthy-slty, non calc, rr dk pel mat, tr Bent, NF, dull slow strmg resd rng.

SH (100%): lt gy-gy-occ dk gy, frm-hd, sbblky-blky, rthy-slty, non calc, rr dk pel mat, tr Bent, NF, dull slow strmg resd rng.

SH (100%): lt gy-gy, frm-hd, sbblky-blky, rthy-slty, non calc, rr dk pel mat, tr Bent, NF, dull slow strmg resd rng.

SplPics

Oil Shows

Total Gas, C1-C5

TG (units)

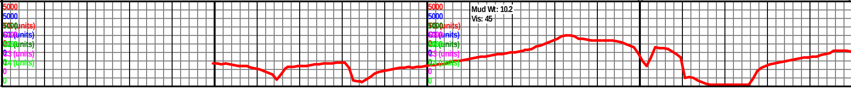
C1 (units)

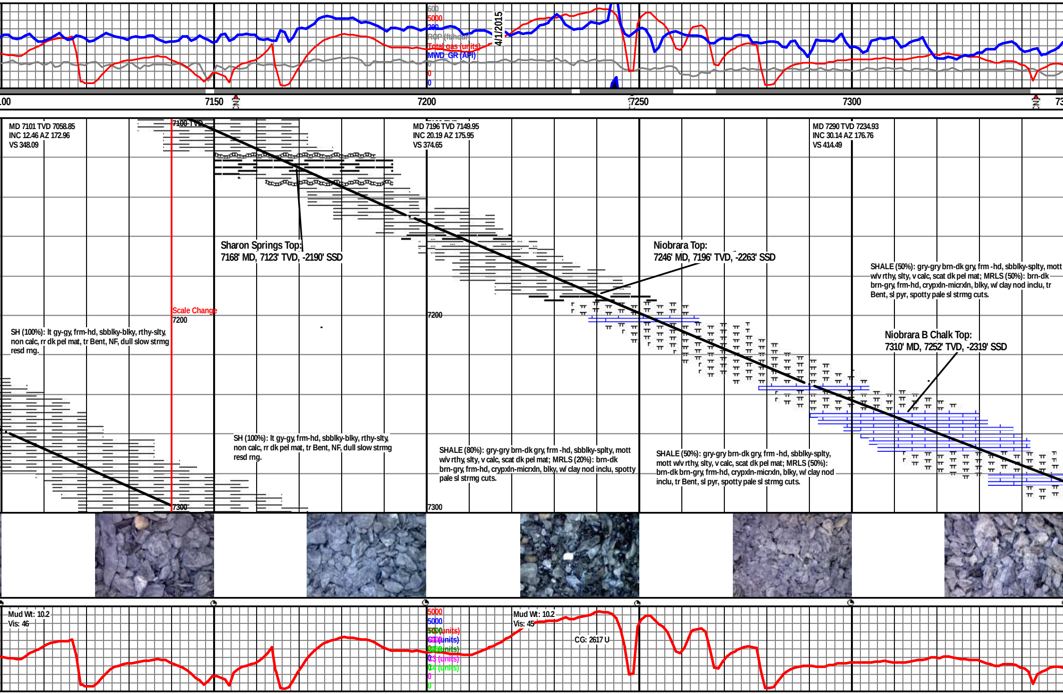
C2 (units)

C3 (units)

C4 (units)

Mud Wt: 10.2
Vis: 45





MD 7101 TVD 7058.85
INC 12.46 AZ 172.96
VS 348.09

MD 7196 TVD 7149.95
INC 20.19 AZ 175.95
VS 374.65

MD 7290 TVD 7234.93
INC 30.14 AZ 176.76
VS 414.49

Sharon Springs Top:
7168' MD, 7123' TVD, -2190' SSD

Niobrara Top:
7246' MD, 7196' TVD, -2263' SSD

Niobrara B Chalk Top:
7310' MD, 7252' TVD, -2319' SSD

SH (100%): lt gy-gy, frm-hd, sbblky-blky, rthy-slty, non calc, rr dk pel mat, tr Bent, NF, dull slow strmg resd rng.

SH (100%): lt gy-gy, frm-hd, sbblky-blky, rthy-slty, non calc, rr dk pel mat, tr Bent, NF, dull slow strmg resd rng.

SHALE (80%): gry-gry brn-dk gry, frm -hd, sbblky-splty, mott w/v rthy, slty, v calc, scat dk pel mat; MRLS (20%): brn-dk brn-gry, frm-hd, crypxln-micrxln, blky, w/ clay nod inclu, spotty pale sl strmg cuts.

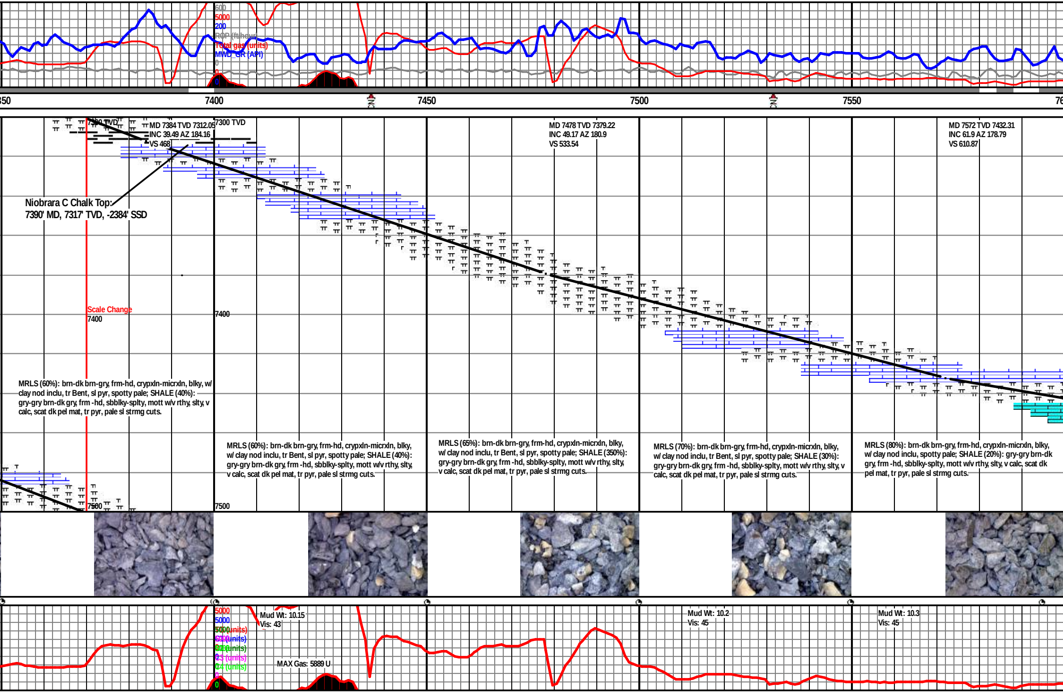
SHALE (50%): gry-gry brn-dk gry, frm -hd, sbblky-splty, mott w/v rthy, slty, v calc, scat dk pel mat; MRLS (50%): brn-dk brn-gry, frm-hd, crypxln-micrxln, blky, w/ clay nod inclu, tr Bent, sl pyr, spotty pale sl strmg cuts.

SHALE (50%): gry-gry brn-dk gry, frm -hd, sbblky-splty, mott w/v rthy, slty, v calc, scat dk pel mat; MRLS (50%): brn-dk brn-gry, frm-hd, crypxln-micrxln, blky, w/ clay nod inclu, tr Bent, sl pyr, spotty pale sl strmg cuts.

Mud Wt: 10.2
Vis: 46

Mud Wt: 10.2
Vis: 45

CG: 2617 U



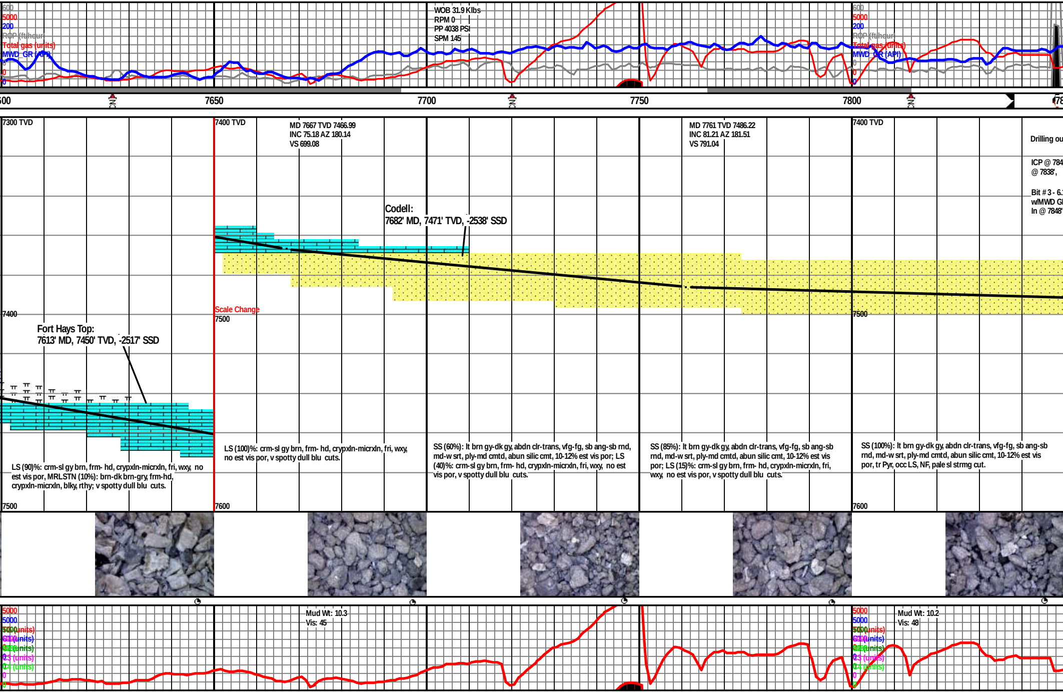
MRLS (60%): brn-dk brn-gry, frm-hd, crypxln-micrxln, blky, w/ clay nod inclu, tr Bent, sl pyr, spotty pale; SHALE (40%): gry-gry brn-dk gry, frm -hd, sbblky-splty, mott w/v rthy, slty, v calc, scat dk pel mat, tr pyr, pale sl strmg cuts.

MRLS (60%): brn-dk brn-gry, frm-hd, crypxln-micrxln, blky, w/ clay nod inclu, tr Bent, sl pyr, spotty pale; SHALE (40%): gry-gry brn-dk gry, frm -hd, sbblky-splty, mott w/v rthy, slty, v calc, scat dk pel mat, tr pyr, pale sl strmg cuts.

MRLS (65%): brn-dk brn-gry, frm-hd, crypxln-micrxln, blky, w/ clay nod inclu, tr Bent, sl pyr, spotty pale; SHALE (350%): gry-gry brn-dk gry, frm -hd, sbblky-splty, mott w/v rthy, slty, v calc, scat dk pel mat, tr pyr, pale sl strmg cuts.

MRLS (70%): brn-dk brn-gry, frm-hd, crypxln-micrxln, blky, w/ clay nod inclu, tr Bent, sl pyr, spotty pale; SHALE (30%): gry-gry brn-dk gry, frm -hd, sbblky-splty, mott w/v rthy, slty, v calc, scat dk pel mat, tr pyr, pale sl strmg cuts.

MRLS (80%): brn-dk brn-gry, frm-hd, crypxln-micrxln, blky, w/ clay nod inclu, spotty pale; SHALE (20%): gry-gry brn-dk gry, frm -hd, sbblky-splty, mott w/v rthy, slty, v calc, scat dk pel mat, tr pyr, pale sl strmg cuts.



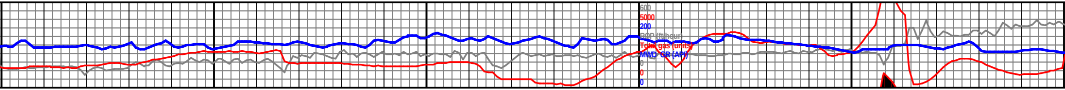
LS (90)%: crm-sl gy brn, frm- hd, crypxln-micrxln, fri, wxy, no est vis por, MRLSTN (10%): brn-dk brn-gry, frm-hd, crypxln-micrxln, blky, rthy; v spotty dull blu cuts.

LS (100)%: crm-sl gy brn, frm- hd, crypxln-micrxln, fri, wxy, no est vis por, v spotty dull blu cuts.

SS (60%): lt brn gy-dk gy, abdn clr-trans, vfg-fg, sb ang-sb rnd, md-w srt, ply-md cmtd, abun silic cmt, 10-12% est vis por; LS (40)%: crm-sl gy brn, frm- hd, crypxln-micrxln, fri, wxy, no est vis por, v spotty dull blu cuts.

SS (85%): lt brn gy-dk gy, abdn clr-trans, vfg-fg, sb ang-sb rnd, md-w srt, ply-md cmtd, abun silic cmt, 10-12% est vis por; LS (15)%: crm-sl gy brn, frm- hd, crypxln-micrxln, fri, wxy, no est vis por, v spotty dull blu cuts.

SS (100%): lt brn gy-dk gy, abdn clr-trans, vfg-fg, sb ang-sb rnd, md-w srt, ply-md cmtd, abun silic cmt, 10-12% est vis por, tr Pyr, occ LS, NF, pale sl strmg cut.



350

7900

7950

8000

8050

810

t of ICP on 2 Apr 2015 @ 18:17

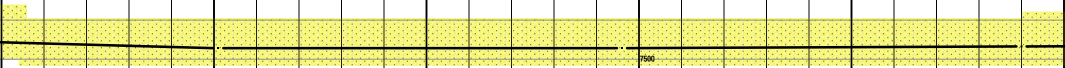
8' md on 4/1/15 AT 8:15 am. 7" casing, set

125" Baker Hughes, TD405S; Jets 5x18;
R/Survey BHA & Dir MM (1.83°) 0.50 RPG,

MD 7901 TVD 7494.5
INC 90.07 AZ 181.86
VS 930.62

MD 7996 TVD 7494.33
INC 90.13 AZ 181.22
VS 1025.59

MD 8090 TVD
INC 90.77 AZ
VS 1119.56

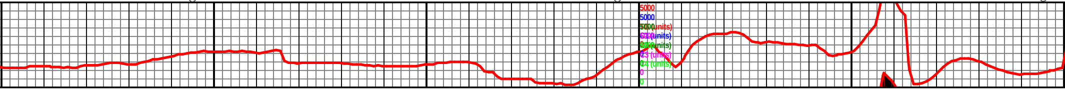


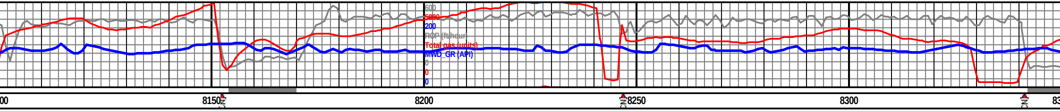
7600

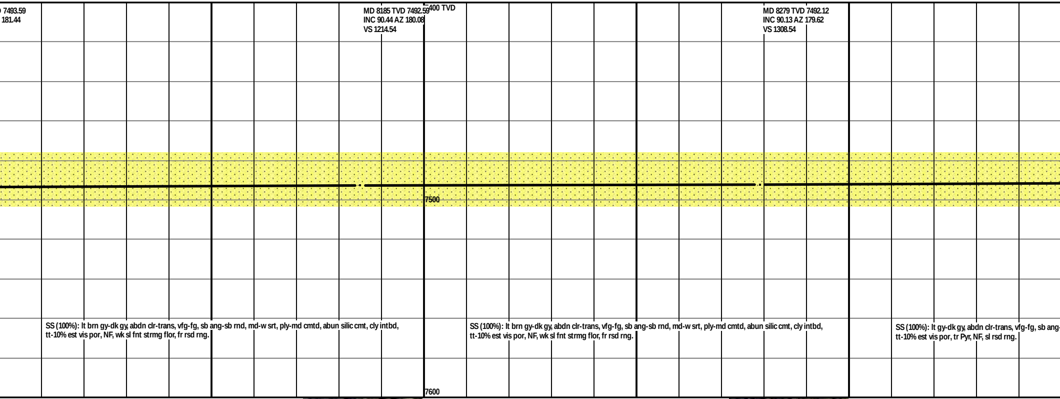
SS (100%): lt brn gy-dk gy, abdn clr-trans, vfg-fg, sb ang-sb rnd, md-w srt, ply-md cmtd, abun silic cmt, cly intbd, tt-10% est vis por, NF, wk sl fnt strmg cut.

SS (100%): lt brn gy-dk gy, abdn clr-trans, vfg-fg, sb ang-sb rnd, md-w srt, ply-md cmtd, abun silic cmt, cly intbd, tt-10% est vis por, NF, wk sl fnt strmg flor, fr rsd rng.

SS (100%): lt brn gy-dk gy, abdn clr-trans, vfg-fg, sb ang-sb rnd, md-w srt, ply-md cmtd, abun silic cmt, cly intbd, tt-10% est vis por, NF, wk sl fnt strmg flor, fr rsd rng.







7493.59
181.44

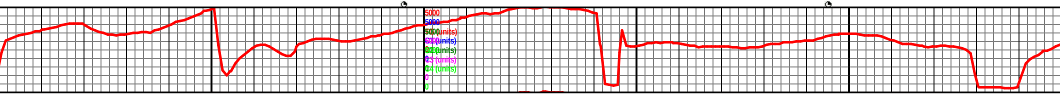
MD 8185 TVD 7492.59
INC 90.44 AZ 180.08
VS 1214.54

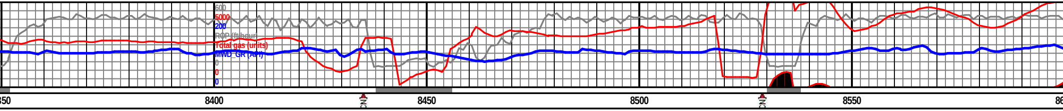
MD 8279 TVD 7492.12
INC 90.13 AZ 179.62
VS 1308.54

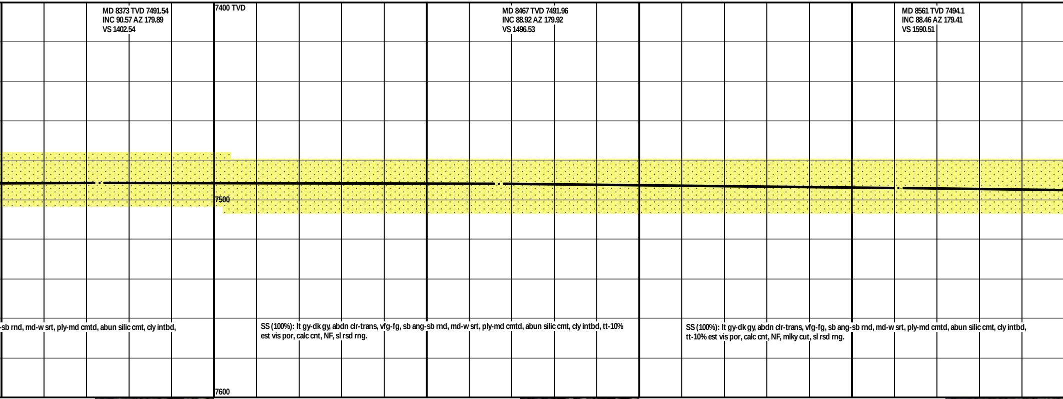
SS (100%): lt brn gy-dk gy, abdn clr-trans, vfg-fg, sb ang-sb rnd, md-w srt, ply-md cmtd, abun silic cmt, cly intbd, tt-10% est vis por, NF, wk sl fnt strmg flor, fr rsd rng.

SS (100%): lt brn gy-dk gy, abdn clr-trans, vfg-fg, sb ang-sb rnd, md-w srt, ply-md cmtd, abun silic cmt, cly intbd, tt-10% est vis por, NF, wk sl fnt strmg flor, fr rsd rng.

SS (100%): lt gy-dk gy, abdn clr-trans, vfg-fg, sb ang-
tt-10% est vis por, tr Pyr, NF, sl rsd rng.







MD 8373 TVD 7491.54
INC 90.57 AZ 179.89
VS 1402.54

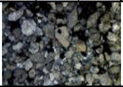
MD 8467 TVD 7491.96
INC 88.92 AZ 179.92
VS 1496.53

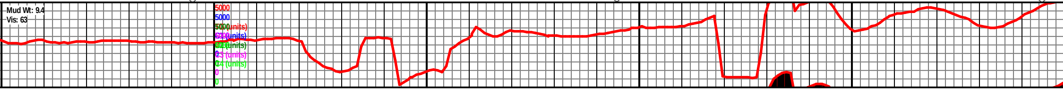
MD 8561 TVD 7494.1
INC 88.46 AZ 179.41
VS 1590.51

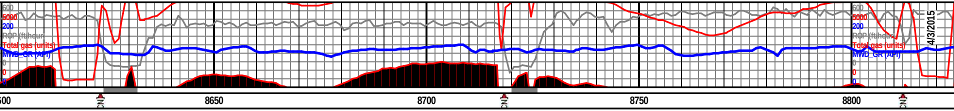
-sb rnd, md-w srt, ply-md cmtd, abun silic cmt, cly intbd,

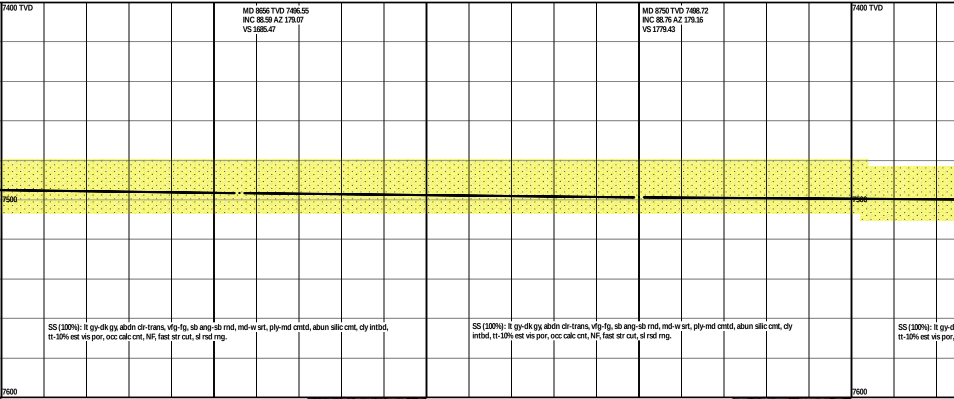
SS (100%): lt gy-dk gy, abdn clr-trans, vfg-fg, sb ang-sb rnd, md-w srt, ply-md cmtd, abun silic cmt, cly intbd, tt-10% est vis por, calc cnt, NF, sl rsd rng.

SS (100%): lt gy-dk gy, abdn clr-trans, vfg-fg, sb ang-sb rnd, md-w srt, ply-md cmtd, abun silic cmt, cly intbd, tt-10% est vis por, calc cnt, NF, mlky cut, sl rsd rng.




Mud Wt: 9.4
Vis: 63





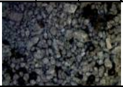
MD 8656 TVD 7496.55
INC 88.59 AZ 179.07
VS 1685.47

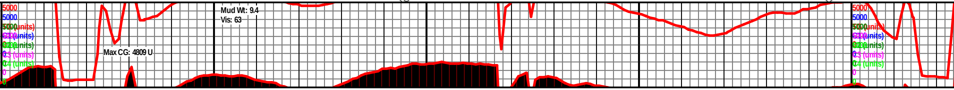
MD 8750 TVD 7498.72
INC 88.76 AZ 179.16
VS 1779.43

SS (100%): lt gy-dk gy, abdn clr-trans, vfg-fg, sb ang-sb rnd, md-w srt, ply-md cmtd, abun silic cmt, cly intbd, tt-10% est vis por, occ calc cnt, NF, fast str cut, sl rsd rng.

SS (100%): lt gy-dk gy, abdn clr-trans, vfg-fg, sb ang-sb rnd, md-w srt, ply-md cmtd, abun silic cmt, cly intbd, tt-10% est vis por, occ calc cnt, NF, fast str cut, sl rsd rng.

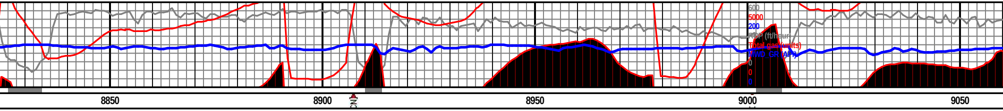
SS (100%): lt gy-d
tt-10% est vis por,

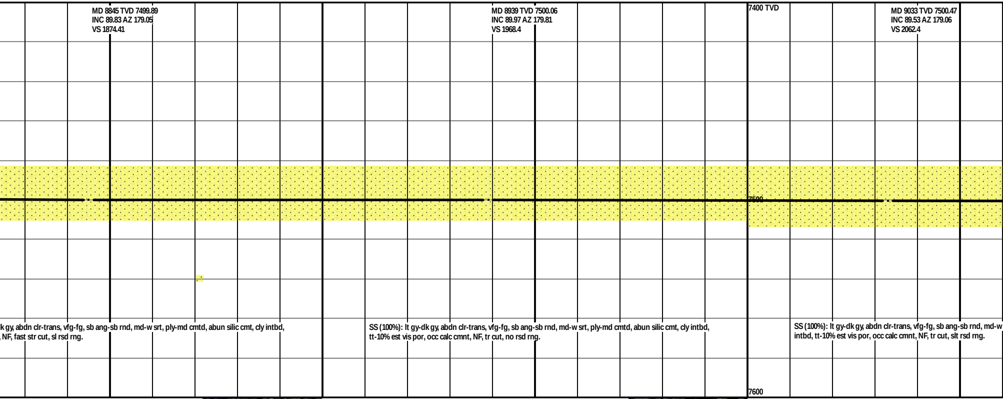




Mud Wt: 9.4
Vis: 63

Max CG: 4809 U





MD 8845 TVD 7499.89
INC 89.83 AZ 179.05
VS 1874.41

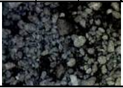
MD 8939 TVD 7500.06
INC 89.97 AZ 179.81
VS 1968.4

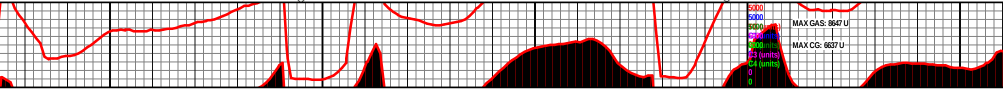
MD 9033 TVD 7500.47
INC 89.53 AZ 179.06
VS 2062.4

k gy, abdn clr-trans, vfg-fg, sb ang-sb rnd, md-w srt, ply-md cmtd, abun silic cmt, cly intbd,
, NF, fast str cut, sl rsd rng.

SS (100%): lt gy-dk gy, abdn clr-trans, vfg-fg, sb ang-sb rnd, md-w srt, ply-md cmtd, abun silic cmt, cly intbd, tt-10% est vis por, occ calc cmnt, NF, tr cut, no rsd rng.

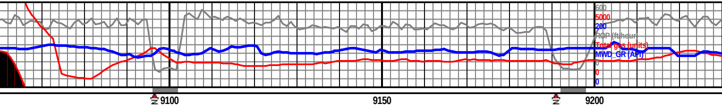
SS (100%): lt gy-dk gy, abdn clr-trans, vfg-fg, sb ang-sb rnd, md-w
intbd, tt-10% est vis por, occ calc cmnt, NF, tr cut, slt rsd rng.

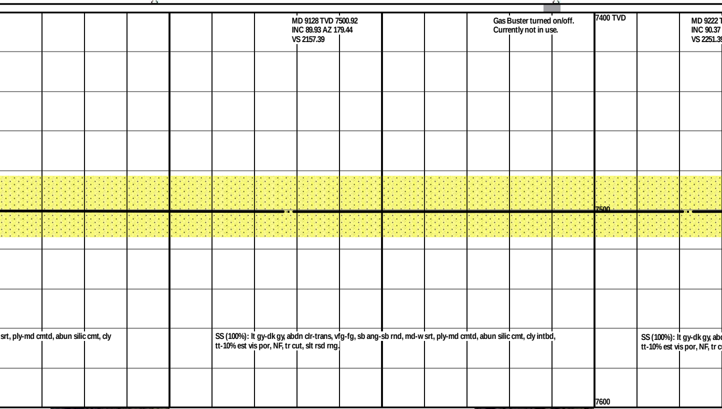




MAX GAS: 8647 U

MAX CG: 6637 U





MD 9128 TVD 7500.92
INC 89.93 AZ 179.44
VS 2157.39

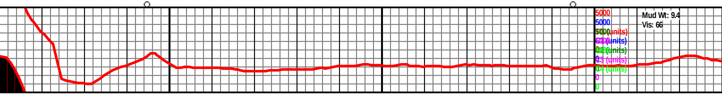
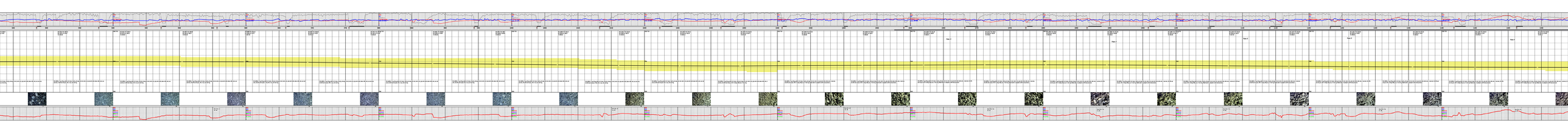
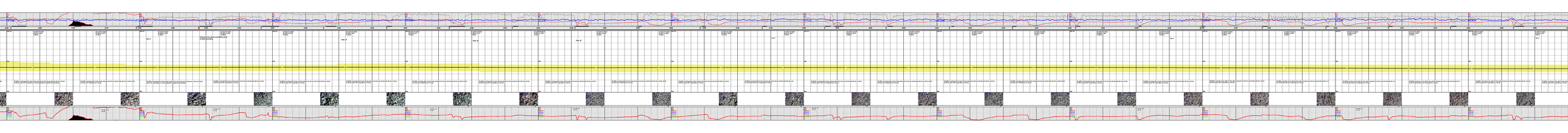
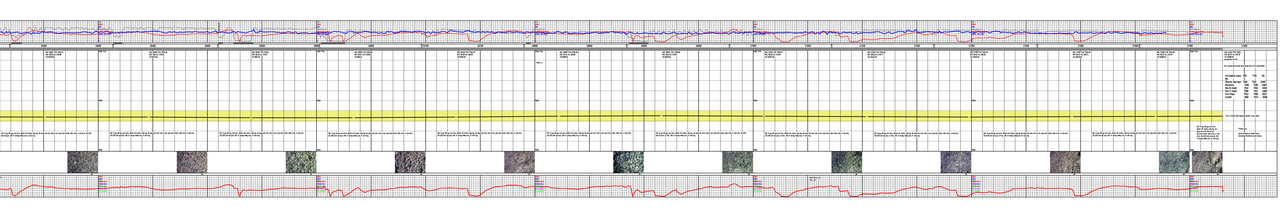
Gas Buster turned on/off.
Currently not in use.

MD 9222 T
INC 90.37
VS 2251.3

srt, ply-md cmtd, abun silic cmt, cly

SS (100%): lt gy-dk gy, abdn clr-trans, vfg-fg, sb ang-sb rnd, md-w srt, ply-md cmtd, abun silic cmt, cly intbd, tt-10% est vis por, NF, tr cut, slt rsd rng.

SS (100%): lt gy-dk gy, abd
tt-10% est vis por, NF, tr c



Mud Wt: 9.4
Vis: 66