

CALCAREOUS CLAYSTONE:lt-med gry,occ grn,com glauc grs,tr liths, tr foss frags,sft-mod hd,sbbiky.

NO CO2
NO H2S

CALCAREOUS SILTSTONE:lt-med gry,mod brn/gry,tr liths,com glauc grs,tr foss frag,mod hd-frm,occ hd, sbbiky.

CALCAREOUS CLAYSTONE:lt-med gry,grnsh gry,lt brn,occ dk brn,com glauc grs,tr,liths,tr foss frags,tr pyr,sft-mod hd,sbbiky.

CALCAREOUS SILTSTONE:med gry,mod brn/gry,tr liths,mod hd-frm,occ hd, sbbiky.

SURVEY @ 2111.10m: 15.99° 111.6°

CALCAREOUS CLAYSTONE:lt-med gry,grnsh gry,lt brn,occ dk brn,com glauc grs,tr,liths,tr foss frags,tr pyr,sft-mod hd,sbbiky.

SAMPLE CONTAMINATED WITH BARACARB

LATROBE COARSE CLASTICS: 2124.5mMD (-1167mSS)

CONTROLLED DRILLING FROM 2126m

SANDSTONE:trns,lt gry,dom med-v crs,occ vf aggs,pr srt,sbang-ang, tr mod strg sil cmt,mnr off wh arg mtz,tr pyr,tr glauc,tr foss frags,com lse clr qtz,mod hd-occ hd aggs,pr vi por,fr-gd inf por,tr 5% fluor.

2129-2133m: Tr-5% dll brn/yel ptchy fluor,tr pl yel c/c,thk r/r.
2133-2139m: Tr-rr fluor as above.

SANDSTONE:clr-trns,lt gry,med-v crs,pr srt,sbang-ang,tr wk sil cmt,fr glauc,tr pyr,gen lse & cln,fr-gd inf por,tr fluor.

SURVEY @ 2139.98m: 13.98° 108.5°

SAMPLE CONTAMINATED WITH BARACARB MUD ADDITIVE

NO CO2
NO H2S

SANDSTONE:clr-trns,med-v crs,dom med-crs,pr srt,sbang,tr pyr,tr glauc,gen lse & cln,gd inf por,no fluor.

SANDSTONE:clr-trns,med-crs,mod pr srt,sbang,fr-loc com pyr,gen lse

WOB: 30-35 klbs
RPM: 65
SPP: 2700-2790 psi
FLW: 557-573 gpm

WOB: 30-35 klbs
RPM: 65
SPP: 2650-2700 psi
FLW: 547-563 gpm

99/1

99/1

pr,gr,ss & cln,gd inf por,tr flour.

2148-2151m: Tr dll yel ptchy fluor,tr pl yel c/c,thk flm.

SANDSTONE:clr-trnsl,med-crs, mod pr srt,sbang,tr-loc com pyr,gen lse & cln,gd inf por.

SURVEY @ 2168.79m: 9.86° 104.21°

SANDSTONE:clr-trnsl,off wh,lt gry,mnr brn,f-crs,pr srt,sbang-sbrnd i/p,tr-loc com dol cmt,tr pyr,gen lse, com hd aggs,pr vis por,gd inf por, com min fluor only.

CLAYSTONE:lt gry/gry,med brn/gry, rr micro carb spks & off wh liths,frm sbbiky.

SANDSTONE:clr-trnsl,frstd i/p,f-v crs,v pr srt,sbrnd-sbang,com ang, lse,fr-gd inf por,no fluor.

Rmf: 0.15 ohm @ 75°F

SURVEY @ 2197.64m: 6.92° 99.24°

LATROBE N. ASPERUS: 2196mMD (-1238mSS)

COAL:dk brn,v dk brn-blk,dll,mnr sbvit i/p,silty,frm-mod hd i/p,sbfiss-sbbiky,hckly-evn i/p.

SILTSTONE:med brn,brn/gry,arg, tr aren,com off wh liths,occ carb spks,mnr micmic,frm,sbbiky.

SANDSTONE:clr-trnsl,frstd,f-med, com v crs,mod pr srt,occ pyr,lse,fr-gd inf por,no fluor.

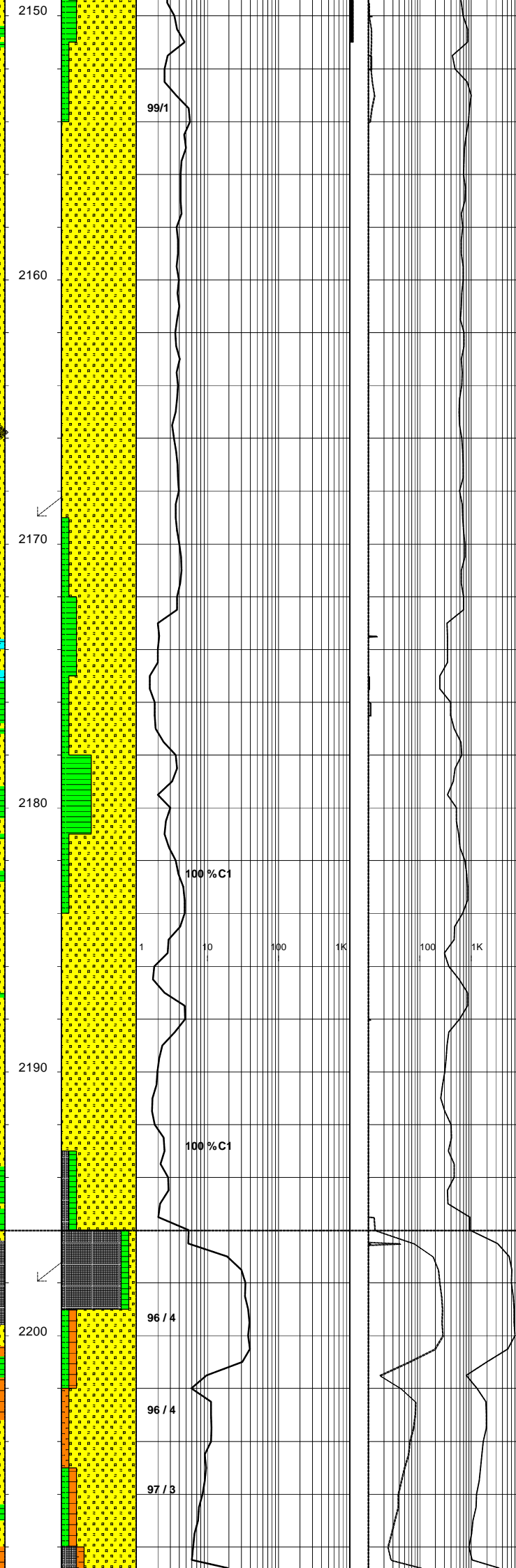
CLAYSTONE:lt-med gry/grn,lt-med gry/brn,mnr glauc & off wh liths,frm, sbbiky-sbfiss.

SANDSTONE:clr-trnsl,lt gry,frstd, f-crs,occ v crs,pr srt,sbang-sbrnd, occ ang,occ mod strg sil & mnr mod wk calc cmt i/p,rr lt gry arg mtx i/p.

WOB: 21-25 klbs
RPM: 65
SPR: 2600-2700 psi
FLW: 540-560 gpm

MW: 10.45
FV: 60
PV: 26
YP: 38
Gels: 9/13/19
WL: 5.4
CK: 1
Sol: 8.6
pH: 9.50
Cl: 38k

WOB: 25-28 klbs
RPM: 65
SPR: 2600-2700 psi
FLW: 540-560 gpm



99/1

2150

2160

2170

2180

2190

2200

100 % C1

100 % C1

1

10

100

1K

100

1K

10K

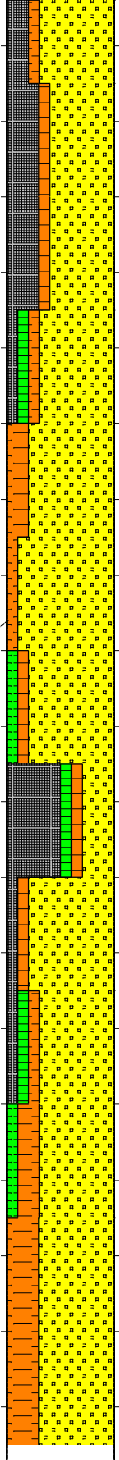
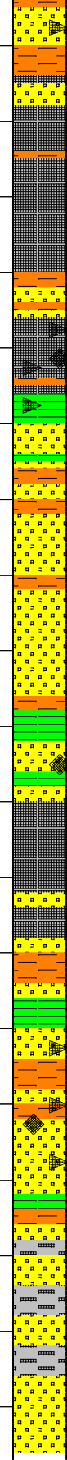
96 / 4

96 / 4

97 / 3

WOB: 27-32 klbs
RPM: 70
SPP: 2670-2720 psi
FLW: 540 gpm

WOB: 29-34 klbs
RPM: 70
SPP: 2670-2720 psi
FLW: 540 gpm



96 / 4
96 / 4
97 / 3
97 / 3
2220
95 / 5 / Tr
2230
96 / 4 / Tr
96 / 4 / Tr
2240
96 / 4 / Tr
2250
96 / 4 / Tr

pred lse,mnr mod hd aggs,pr-v pr vi
por,fr-gd inf por,no fluor.

COAL:dk brn,v dk brn-blk,dll-ea,
stly,frm,sbbkly-sbfiss i/p,hckly-evn
i/p.

SANDSTONE:clr-trnsl,frstd,lt gry-
trnsl,f-crs,occ v crs,pr srt,com mod
strg sil cmt,rr off wh arg mtx i/p,mnr
liths,occ nod pyr,pred lse,mnr mod
hd-fri aggs,pr-v pr vis por,fr-gd inf
por,no fluor.

SILTSTONE:med brn,gry/brn,arg,
aren,com off wh liths,com carb spks
i/p,frm-mod hd,sbbkly-sbfiss.

SURVEY @ 2226.47m: 3.33° 92.87°

CLAYSTONE:lt-med gry,lt gry/grn,
mnr glauc,tr micmic,frm-mod hd,
sbbkly-sbfiss.

COAL:v dk brn-blk i/p,dll-ea,stly,
grd to carb SLTST i/p,frm,sbbkly-
sbfiss,hckly-evn.

SANDSTONE:clr-trnsl,frstd i/p,f-crs,
sbang-ang,occ sbnd,tr carb spks,
lse,fr-gd inf por,no fluor.

SILTSTONE:med brn,tn,arg,aren i/p,
occ carb spks & micriams,occ off
wh liths,micmic i/p,frm-mod hd,
sbbkly-sbfiss.

CLAYSTONE:lt gry,lt gry/grn,mnr
glauc,tr off wh liths,frm,sbbkly.

SANDSTONE:clr-trnsl,f-med,mod wl
srt,sbang-sbrnd,tr pyr,lse,fr-gd inf
por,no fluor.

CARB SILTSTONE:dk brn,arg,carb,
grd to COAL i/p,rr off wh liths,frm,
sbbkly-sbfiss i/p.

