Smoke Ranch 1-21

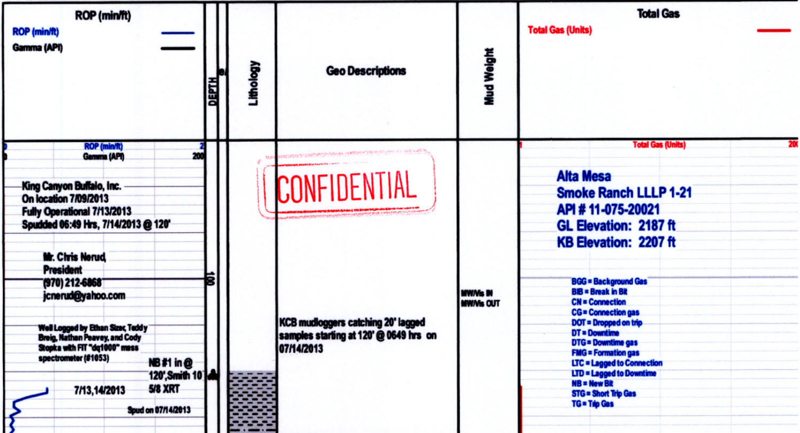
Company Man, Ed West
Company Man, Roger Locke
Contractor, TD Well Services
Rig Number 101
Tool Pusher, Tony Mueller
Mud Company, Sinclair Services
Mud Man, Clint Woods

CONFIDENTIAL

▨ Sh tnbrn	▨ Dol gy	▨ Bent	▨ Ls tan	▨ Dol
▨ Sh rd	▨ Dol pk	▨ Cht	▨ Cement	▨ Ls l
▨ Sh gn	▨ Anhy rose	▨ Coal	▨ Congl	▨ Ls
▨ Sh bl	▨ Anhy	▨ Ls off wh	▨ Dol dkbrn	▨ Ls

MINERAL	B Bent	▨ Chtdk	▨ Ferr	▨ Marl
▨ Vertfrac	▨ Bit	▨ Chtlt	▨ Glau	▨ Minxl
▨ Anhy	▨ Brecfrag	▨ Dol	▨ Gyp	▨ Nodule
▨ Arggrn	▨ Calc	▨ Feldspar	▨ Hvymin	▨ Phos
▨ Arg	▨ Carb	▨ Ferrpel	K Kaol	P Pyr

POROSITY	▨ Fenest	☒ Inter	O Organic	V Vuggy
E Earthy	F Fracture	▨ Moldic	P Pinpoint	



King Canyon Buffalo, Inc.
On location 7/09/2013
Fully Operational 7/13/2013
Spudded 06:49 Hrs, 7/14/2013 @ 120'

Mr. Chris Nerud,
President
(970) 212-6868
jcnerud@yahoo.com

Well Logged by Ethan Sizer, Teddy Breig, Nathan Peavey, and Cody Stopka with FIT "dq1000" mass spectrometer (#1053)

NB #1 in @ 120', Smith 10 5/8 XRT

7/13,14/2013

Spud on 07/14/2013

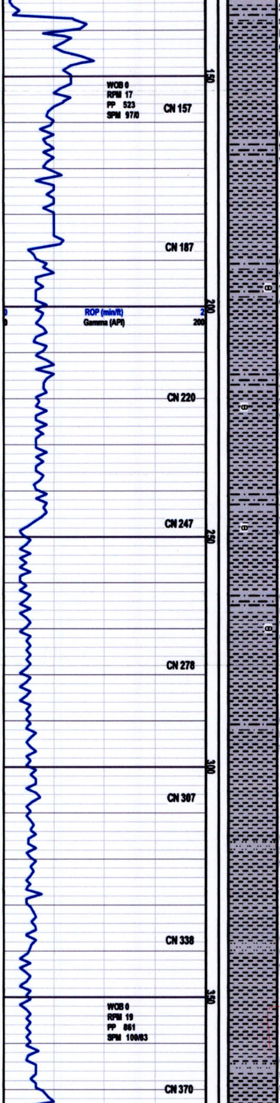
CONFIDENTIAL

KCB mudloggers catching 20' lagged samples starting at 120' @ 0649 hrs on 07/14/2013

MW/Vis IN
MW/Vis OUT

Alta Mesa
Smoke Ranch LLLP 1-21
API # 11-075-20021
GL Elevation: 2187 ft
KB Elevation: 2207 ft

BGG = Background Gas
BIB = Break in Bit
CN = Connection
CG = Connection gas
DOT = Dropped on trip
DT = Downtime
DTG = Downtime gas
FMG = Formation gas
LTC = Lagged to Connection
LTD = Lagged to Downtime
NB = New Bit
STG = Short Trip Gas
TG = Trip Gas



SLTY CLYST 60% vltgy-ltgy, vsft-sft, lmpy, slty, rr hem, fr biot, fr mus CLYST 40% ltgy-vltgy, sft-vsft, lmpy, tr vs l slty, tr qtz grns in cly mtx

CLYST 75% ltgy-vltgy, sft-vsft, lmpy, rr hem, fr biot, fr mus, SLTY CLYST 25% vltgy-ltgy-gy, stf-vsft, lmpy, slty

CLYST 70% ltgy-vltgy, sft-vsft, lmpy, rr hem, fr biot, fr mus, rr Fe nod, SLTY CLYST 30% vltgy-ltgy-gy, vsft, lmpy, slty, rr qtz grns in cly mtx

CLYST 70% vltgy-ltgy, sft-vsft, lmpy, rr hem, fr biot, fr mus, rr Fe nod, SLTY CLYST 30% vltgy-ltgy-gy, vsft, lmpy, slty, tr qtz grns in cly mtx

CLYST 70% vltgy-ltgy, sft-vsft, lmpy, fr biot, fr mus, rr Fe nod, SLTY CLYST 30% vltgy-ltgy-gy, vsft, lmpy, slty, tr qtz grns in cly mtx

CLYST 70% vltgy, sft-vsft, lmpy, tr biot, tr mus, rr Fe nod, SLTY CLYST 30% vltgy-ltgy-gy, vsft, lmpy, slty, rr qtz grns in cly mtx

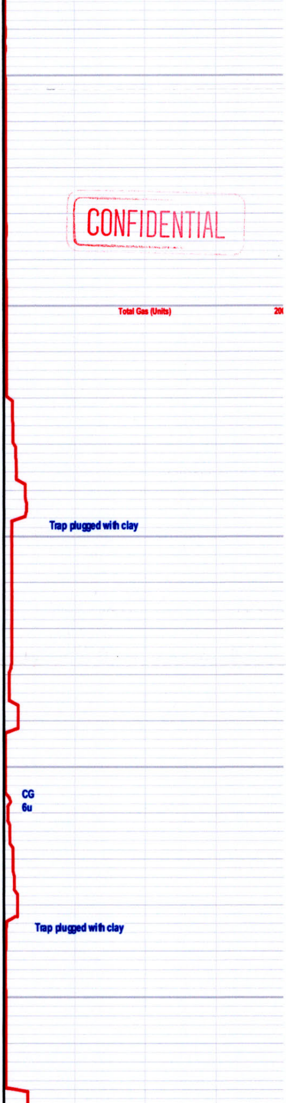
CLYST 90% vltgy-ltgy, vsft, lmpy, rr biot, rr mus, SLTY CLYST 10% vltgy-ltgy, vsft, lmpy, slty, tr qtz grns in cly mtx

CLYST 90% vltgy, vsft, lmpy, rr biot, rr mus, SLTY CLYST 10% vltgy-ltgy, vsft, lmpy, slty, tr qtz grns in cly mtx

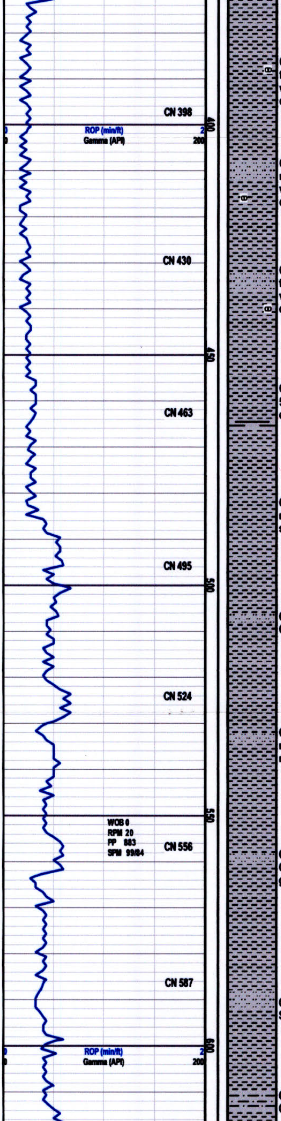
CLYST 90% vltgy-ltgy, vsft, lmpy, SLTY CLYST 10% vltgy-ltgy, vsft, lmpy, slty, tr qtz grns in cly mtx

CONFIDENTIAL

CLYST 90% vltgy-ltgy, vsft, lmpy, rr biot, rr mus, SLTY CLYST 10% vltgy-ltgy, vsft, lmpy, slty



CONFIDENTIAL



CLYST 70% vltgy-ltgy, sft-vsft, lmpy, tr biot, tr mus, rr Fe nod, SLTY CLYST 30% vltgy-ltgy-gy, vsft, lmpy, slty, rr qtz grns in cly mtx

CLYST 70% vltgy, sft-vsft, lmpy, tr biot, tr mus, rr Fe nod, SLTY CLYST 30% vltgy-ltgy-gy, vsft, lmpy, slty, rr qtz grns in cly mtx

CLYST 70% vltgy-ltgy, sft-vsft, lmpy, tr biot, tr mus, rr Fe nod, SLTY CLYST 30% vltgy-ltgy-gy, vsft, lmpy, slty, rr qtz grns in cly mtx

CLYST 95% vltgy, vsft, lmpy, SLTY CLYST 5% vltgy-ltgy, vsft, lmpy, slty, tr qtz grns in cly mtx

CONFIDENTIAL

CLYST 95% vltgy-ltgy, vsft, lmpy, rr biot, rr mus, SLTY CLYST 5% vltgy-ltgy, vsft, lmpy, slty

CLYST 95% vltgy-ltgy, vsft, lmpy, SLTY CLYST 5% vltgy, vsft, lmpy, slty

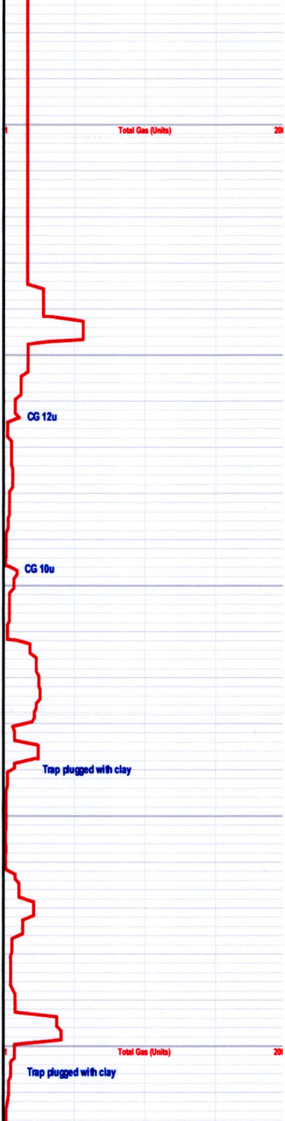
CLYST 95% vltgy-ltgy, vsft, lmpy, rr biot, rr mus, SLTY CLYST 5% vltgy, vsft, lmpy, slty, rr qtz grns in cly mtx

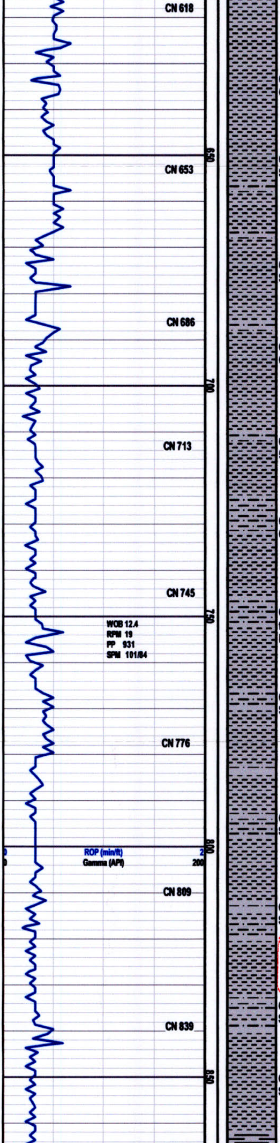
CLYST 95% vltgy-ltgy, vsft, lmpy, SLTY CLYST 5% vltgy-ltgy, vsft, lmpy, slty, rr qtz grns in cly mtx

CONFIDENTIAL

CLYST 95% vltgy, vsft, lmpy, rr biot, rr mus, SLTY CLYST 5% vltgy-ltgy, vsft, lmpy, slty

CLYST 95% ltgy, vsft, lmpy, rr biot, SLTY CLYST 5% vltgy-ltgy, vsft, lmpy, slty





CLYST 95% vltgy, vsft, lmpy, rr biot, SLTY CLYST 5% vltgy-ltgy, vsft, lmpy, slty

CLYST 95% vltgy, vsft, lmpy, rr biot, rr mus, SLTY CLYST 5% vltgy-ltgy, vsft, lmpy, slty

CLYST 95% vltgy, vsft, lmpy, rr biot,tr qtz clr, SLTY CLYST 5% vltgy-ltgy, vsft, lmpy, slty

CLYST 95% vltgy, vsft, lmpy, rr biot, SLTY CLYST 5% vltgy-ltgy, vsft, lmpy, slty

CONFIDENTIAL

CLYST 95% vsft, lmpy, rr biot, SLTY CLYST 5% vltgy-ltgy, vsft, lmpy, slty, tr qtz clr

CLYST 95% vltgy, vsft, lmpy, rr biot, SLTY CLYST 5% vltgy-ltgy, vsft, lmpy, slty

CLYST 95% vltgy, vsft, lmpy, rr biot, rr mus, tr qtrz clr SLTY CLYST 5% vltgy-ltgy, vsft, lmpy, slty

CLYST 95% ltgy-vltgy, vsft, lmpy, rr biot, SLTY CLYST 5% vltgy-ltgy, vsft, lmpy, slty

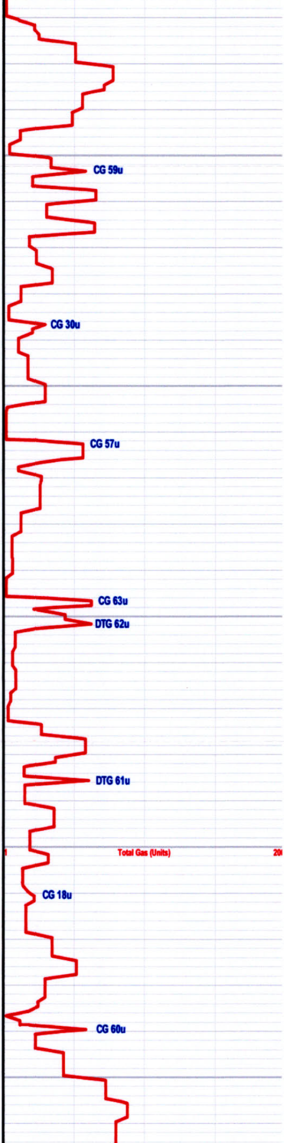
CLYST 95% vltgy, vsft, lmpy, rr biot, rr mus, SLTY CLYST 5% ltgy, vsft, lmpy, slty

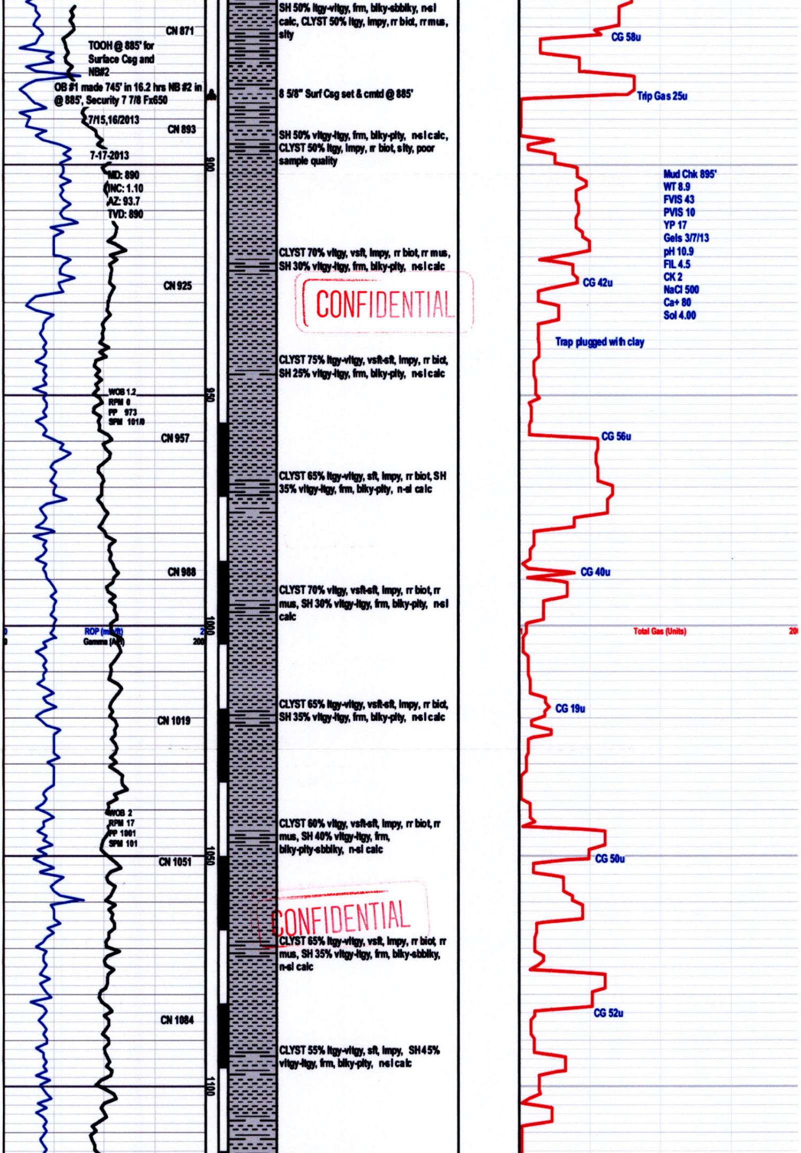
CLYST 95% vltgy, vsft, lmpy, rr biot, rr mus, SLTY CLYST 5% vltgy-ltgy, vsft, lmpy, slty

CONFIDENTIAL

CLYST 95% vltgy, vsft, lmpy, rr biot, rr mus, SLTY CLYST 5% vltgy-ltgy, vsft, lmpy, slty

CLYST 95% vltgy, vsft, lmpy, rr biot, rr mus, SLTY CLYST 5% vltgy-ltgy, vsft, lmpy, slty





TOOH @ 885' for Surface Csg and NB#2

OB #1 made 745' in 16.2 hrs NB #2 in @ 885', Security 7 7/8 Fx650

7/15,16/2013

7-17-2013

MD: 890
INC: 1.10
AZ: 93.7
TVD: 890

WOB 1.2
RPM 0
PP 973
SPM 101/0

WOB 2
RPM 17
PP 1001
SPM 101

SH 50% ltgy-vltgy, frm, blky-sbblky, n-sl calc, CLYST 50% ltgy, lmpy, rr biot, rr mus, slty

8 5/8" Surf Csg set & cmtd @ 885'

SH 50% vltgy-ltgy, frm, blky-plty, n-sl calc, CLYST 50% ltgy, lmpy, rr biot, slty, poor sample quality

CLYST 70% vltgy, vsft, lmpy, rr biot, rr mus, SH 30% vltgy-ltgy, frm, blky-plty, n-sl calc

CONFIDENTIAL

CLYST 75% ltgy-vltgy, vsft-sft, lmpy, rr biot, SH 25% vltgy-ltgy, frm, blky-plty, n-sl calc

CLYST 65% ltgy-vltgy, sft, lmpy, rr biot, SH 35% vltgy-ltgy, frm, blky-plty, n-sl calc

CLYST 70% vltgy, vsft-sft, lmpy, rr biot, rr mus, SH 30% vltgy-ltgy, frm, blky-plty, n-sl calc

CLYST 65% ltgy-vltgy, vsft-sft, lmpy, rr biot, SH 35% vltgy-ltgy, frm, blky-plty, n-sl calc

CLYST 60% vltgy, vsft-sft, lmpy, rr biot, rr mus, SH 40% vltgy-ltgy, frm, blky-plty-sbblky, n-sl calc

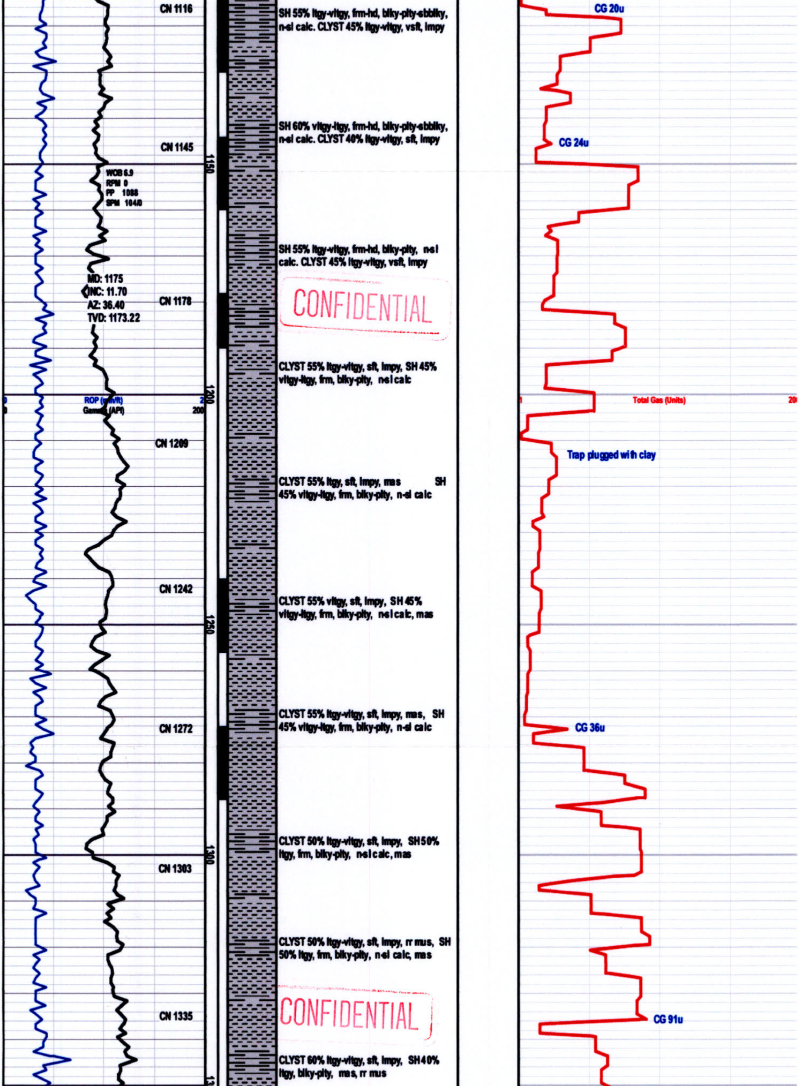
CONFIDENTIAL

CLYST 65% ltgy-vltgy, vsft, lmpy, rr biot, rr mus, SH 35% vltgy-ltgy, frm, blky-sbblky, n-sl calc

CLYST 55% ltgy-vltgy, sft, lmpy, SH45% vltgy-ltgy, frm, blky-plty, n-sl calc

Mud Chk 895'
WT 8.9
FVIS 43
PVIS 10
YP 17
Gels 3/7/13
pH 10.9
FIL 4.5
CK 2
NaCl 500
Ca+ 80
Sol 4.00

Trap plugged with clay



SH 55% ltgy-vltgy, frm-hd, blky-plty-sbblky, n-sl calc. CLYST 45% ltgy-vltgy, vsft, lmpy

SH 60% vltgy-ltgy, frm-hd, blky-plty-sbblky, n-sl calc. CLYST 40% ltgy-vltgy, sft, lmpy

SH 55% ltgy-vltgy, frm-hd, blky-plty, n-sl calc. CLYST 45% ltgy-vltgy, vsft, lmpy

CONFIDENTIAL

CLYST 55% ltgy-vltgy, sft, lmpy, SH 45% vltgy-ltgy, frm, blky-plty, n-sl calc

CLYST 55% ltgy, sft, lmpy, mas SH 45% vltgy-ltgy, frm, blky-plty, n-sl calc

CLYST 55% vltgy, sft, lmpy, SH 45% vltgy-ltgy, frm, blky-plty, n-sl calc, mas

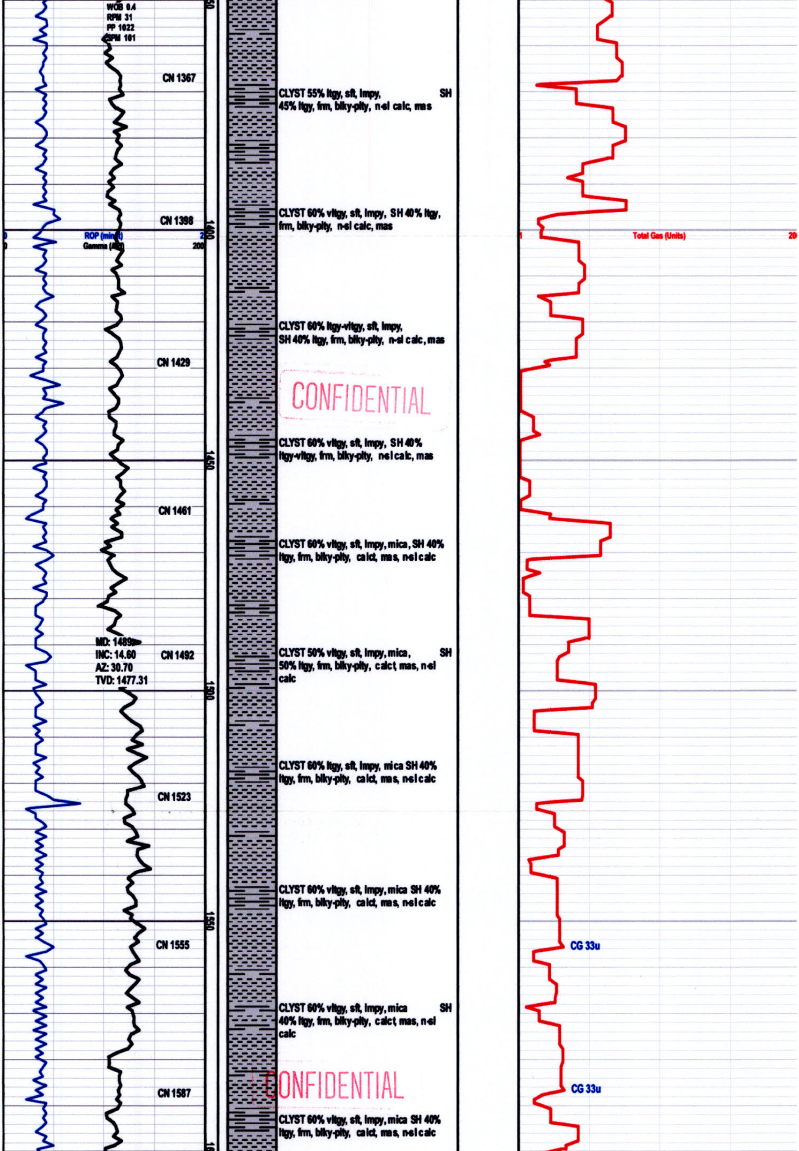
CLYST 55% ltgy-vltgy, sft, lmpy, mas, SH 45% vltgy-ltgy, frm, blky-plty, n-sl calc

CLYST 50% ltgy-vltgy, sft, lmpy, SH 50% ltgy, frm, blky-plty, n-sl calc, mas

CLYST 50% ltgy-vltgy, sft, lmpy, rr mus, SH 50% ltgy, frm, blky-plty, n-sl calc, mas

CONFIDENTIAL

CLYST 60% ltgy-vltgy, sft, lmpy, SH 40% ltgy, blky-plty, mas, rr mus



CLYST 55% ltgy, sft, lmpy, SH 45% ltgy, frm, blky-plty, n-sl calc, mas

CLYST 60% vltgy, sft, lmpy, SH 40% ltgy, frm, blky-plty, n-sl calc, mas

CLYST 60% ltgy-vltgy, sft, lmpy, SH 40% ltgy, frm, blky-plty, n-sl calc, mas

CONFIDENTIAL

CLYST 60% vltgy, sft, lmpy, SH 40% ltgy-vltgy, frm, blky-plty, n-sl calc, mas

CLYST 60% vltgy, sft, lmpy, mica, SH 40% ltgy, frm, blky-plty, calct, mas, n-sl calc

CLYST 50% vltgy, sft, lmpy, mica, SH 50% ltgy, frm, blky-plty, calct, mas, n-sl calc

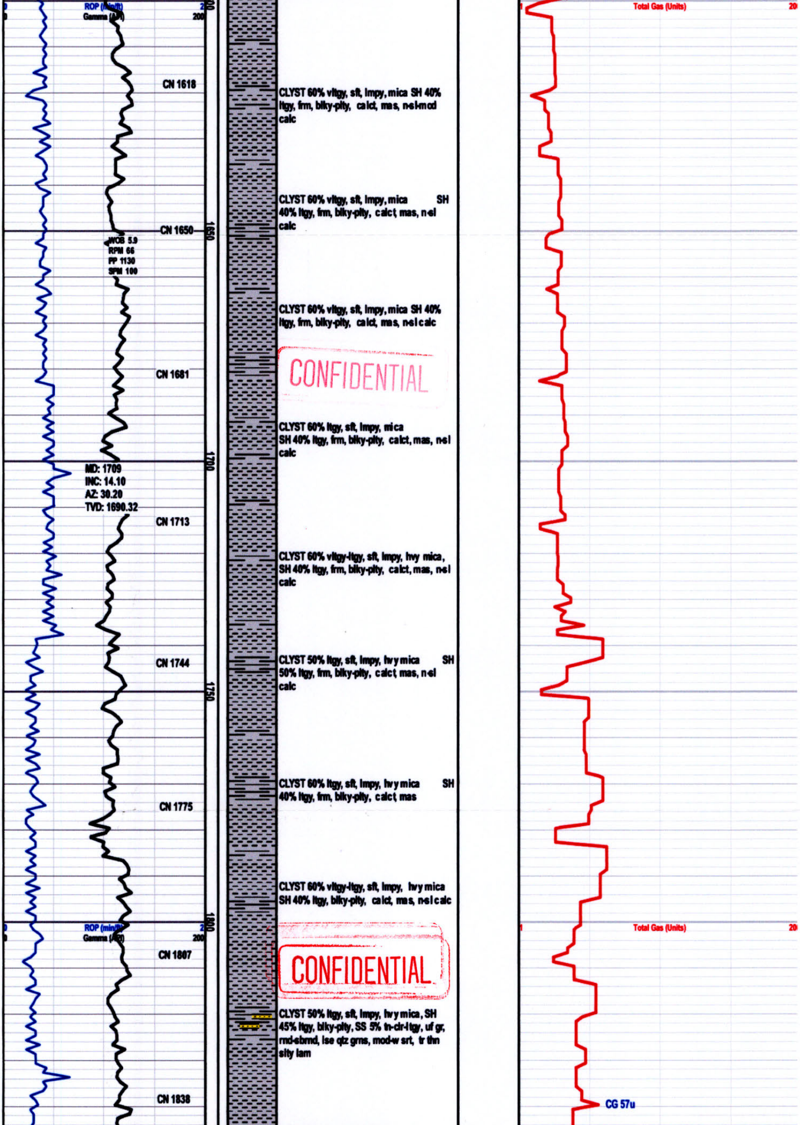
CLYST 60% ltgy, sft, lmpy, mica SH 40% ltgy, frm, blky-plty, calct, mas, n-sl calc

CLYST 60% vltgy, sft, lmpy, mica SH 40% ltgy, frm, blky-plty, calct, mas, n-sl calc

CLYST 60% vltgy, sft, lmpy, mica SH 40% ltgy, frm, blky-plty, calct, mas, n-sl calc

CONFIDENTIAL

CLYST 60% vltgy, sft, lmpy, mica SH 40% ltgy, frm, blky-plty, calct, mas, n-sl calc



CLYST 60% vltgy, sft, lmpy, mica SH 40% ltgy, frm, blky-plty, calct, mas, n-sl-mod calc

CLYST 60% vltgy, sft, lmpy, mica SH 40% ltgy, frm, blky-plty, calct, mas, n-sl calc

CLYST 60% vltgy, sft, lmpy, mica SH 40% ltgy, frm, blky-plty, calct, mas, n-sl calc

CONFIDENTIAL

CLYST 60% ltgy, sft, lmpy, mica SH 40% ltgy, frm, blky-plty, calct, mas, n-sl calc

CLYST 60% vltgy-ltgy, sft, lmpy, hvy mica, SH 40% ltgy, frm, blky-plty, calct, mas, n-sl calc

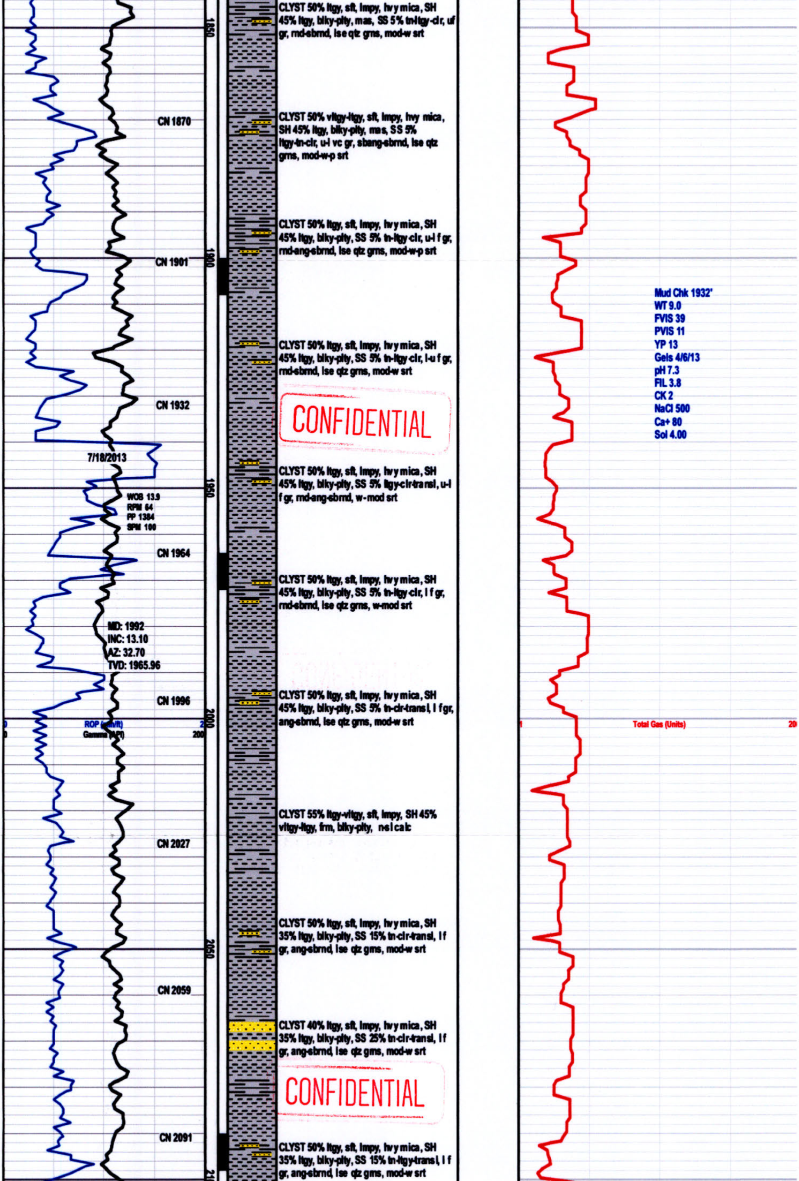
CLYST 50% ltgy, sft, lmpy, hvy mica SH 50% ltgy, frm, blky-plty, calct, mas, n-sl calc

CLYST 60% ltgy, sft, lmpy, hvy mica SH 40% ltgy, frm, blky-plty, calct, mas

CLYST 60% vltgy-ltgy, sft, lmpy, hvy mica SH 40% ltgy, blky-plty, calct, mas, n-sl calc

CONFIDENTIAL

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, blky-plty, SS 5% tn-clr-ltgy, uf gr, rnd-sbrnd, lse qtz grns, mod-w srt, tr thn slty lam



CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, blky-plty, mas, SS 5% tn-ltgy-clr, uf gr, rnd-sbrnd, lse qtz grns, mod-w srt

CLYST 50% vltgy-ltgy, sft, lmpy, hvy mica, SH 45% ltgy, blky-plty, mas, SS 5% ltgy-tn-clr, u-l vc gr, sbang-sbrnd, lse qtz grns, mod-w-p srt

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, blky-plty, SS 5% tn-ltgy-clr, u-l f gr, rnd-ang-sbrnd, lse qtz grns, mod-w-p srt

Mud Chk 1932'
WT 9.0
FVIS 39
PVIS 11
YP 13
Gels 4/6/13
pH 7.3
FIL 3.8
CK 2
NaCl 500
Ca+ 80
Sol 4.00

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, blky-plty, SS 5% tn-ltgy-clr, l-u f gr, rnd-sbrnd, lse qtz grns, mod-w srt

CONFIDENTIAL

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, blky-plty, SS 5% ltgy-clr-transl, u-l f gr, rnd-ang-sbrnd, w-mod srt

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, blky-plty, SS 5% tn-ltgy-clr, l f gr, rnd-sbrnd, lse qtz grns, w-mod srt

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, blky-plty, SS 5% tn-clr-transl, l f gr, ang-sbrnd, lse qtz grns, mod-w srt

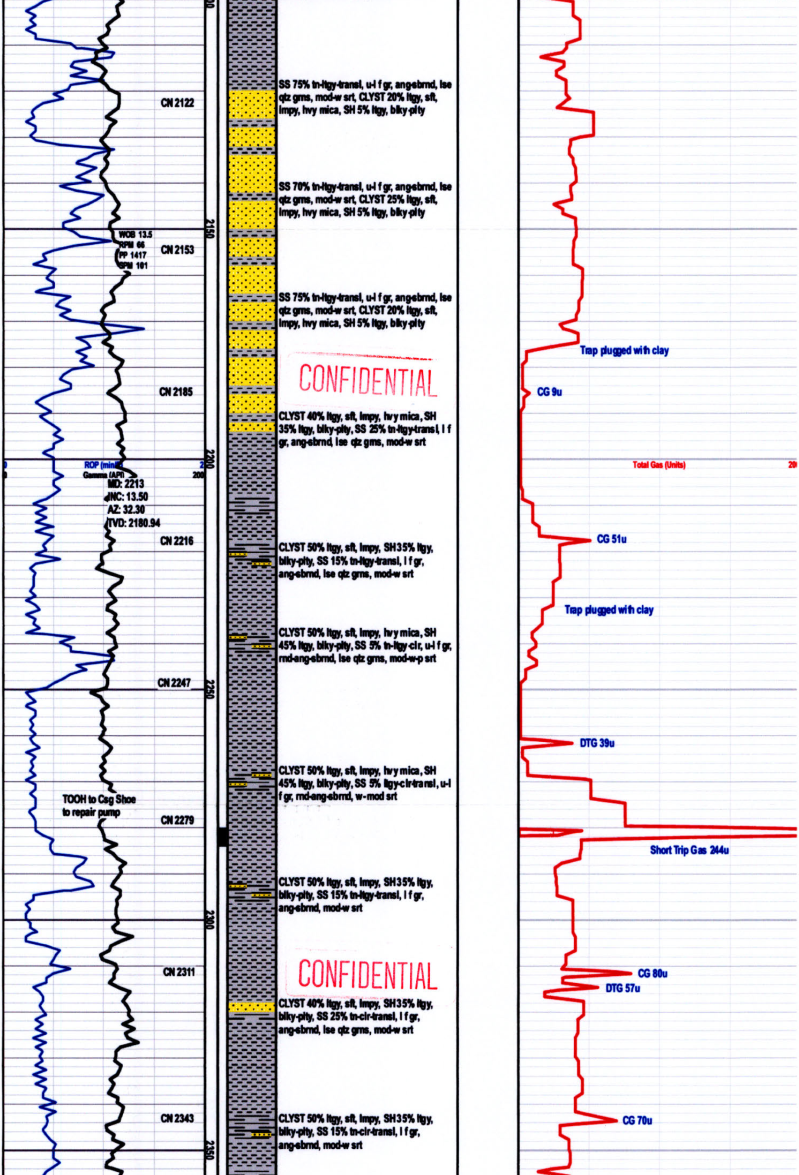
CLYST 55% ltgy-vltgy, sft, lmpy, SH 45% vltgy-ltgy, frm, blky-plty, n-sl calc

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 35% ltgy, blky-plty, SS 15% tn-clr-transl, l f gr, ang-sbrnd, lse qtz grns, mod-w srt

CLYST 40% ltgy, sft, lmpy, hvy mica, SH 35% ltgy, blky-plty, SS 25% tn-clr-transl, l f gr, ang-sbrnd, lse qtz grns, mod-w srt

CONFIDENTIAL

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 35% ltgy, blky-plty, SS 15% tn-ltgy-transl, l f gr, ang-sbrnd, lse qtz grns, mod-w srt



SS 75% tn-ltgy-transl, u-l f gr, ang-sbrnd, lse qtz grns, mod-w srt, CLYST 20% ltgy, sft, lmpy, hvy mica, SH 5% ltgy, blky-plty

SS 70% tn-ltgy-transl, u-l f gr, ang-sbrnd, lse qtz grns, mod-w srt, CLYST 25% ltgy, sft, lmpy, hvy mica, SH 5% ltgy, blky-plty

SS 75% tn-ltgy-transl, u-l f gr, ang-sbrnd, lse qtz grns, mod-w srt, CLYST 20% ltgy, sft, lmpy, hvy mica, SH 5% ltgy, blky-plty

CONFIDENTIAL

CLYST 40% ltgy, sft, lmpy, hvy mica, SH 35% ltgy, blky-plty, SS 25% tn-ltgy-transl, l f gr, ang-sbrnd, lse qtz grns, mod-w srt

CLYST 50% ltgy, sft, lmpy, SH35% ltgy, blky-plty, SS 15% tn-ltgy-transl, l f gr, ang-sbrnd, lse qtz grns, mod-w srt

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, blky-plty, SS 5% tn-ltgy-clr, u-l f gr, rnd-ang-sbrnd, lse qtz grns, mod-w-p srt

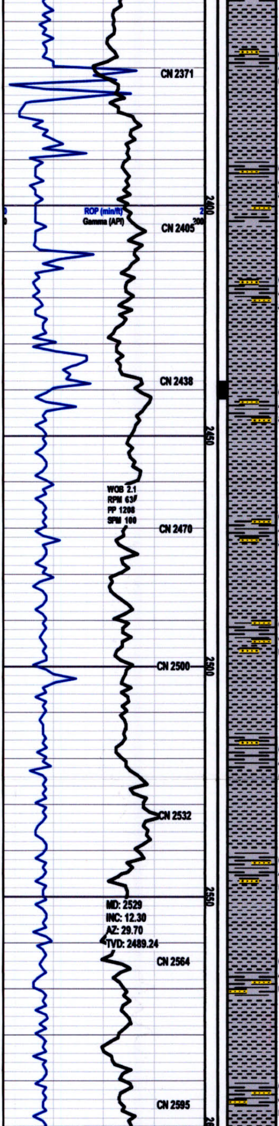
CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, blky-plty, SS 5% ltgy-clr-transl, u-l f gr, rnd-ang-sbrnd, w-mod srt

CLYST 50% ltgy, sft, lmpy, SH35% ltgy, blky-plty, SS 15% tn-ltgy-transl, l f gr, ang-sbrnd, mod-w srt

CONFIDENTIAL

CLYST 40% ltgy, sft, lmpy, SH35% ltgy, blky-plty, SS 25% tn-clr-transl, l f gr, ang-sbrnd, lse qtz grns, mod-w srt

CLYST 50% ltgy, sft, lmpy, SH35% ltgy, blky-plty, SS 15% tn-clr-transl, l f gr, ang-sbrnd, mod-w srt



CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, blky-plty, SS 5% tn-ltgy-clr, l-u f gr, rnd-sbrnd, mod-w srt

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, blky-plty, SS 5% ltgy-tn, l fgr, ang-sbrnd, mod-w srt

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, blky-plty, SS 5% ltgy-tn, l fgr, ang-sbrnd, mod-w srt

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, plty, SS 5% ltgy-tn, l f gr, ang-sbrnd, mod-w srt

CONFIDENTIAL

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, blky-plty, SS 5% ltgy-tn, l fgr, ang-sbrnd, mod-w srt

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, plty, SS 5% ltgy-tn, l f gr, ng-sbrnd, mod-w srt

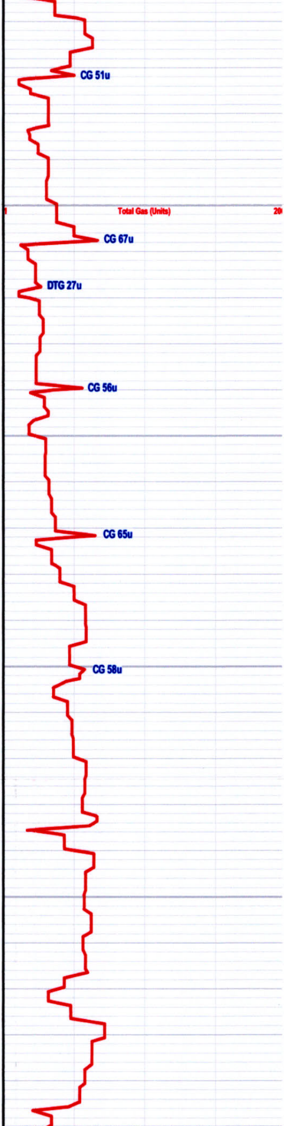
CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, plty, SS 5% ltgy-lttn, l f gr, ng-sbrnd-ang

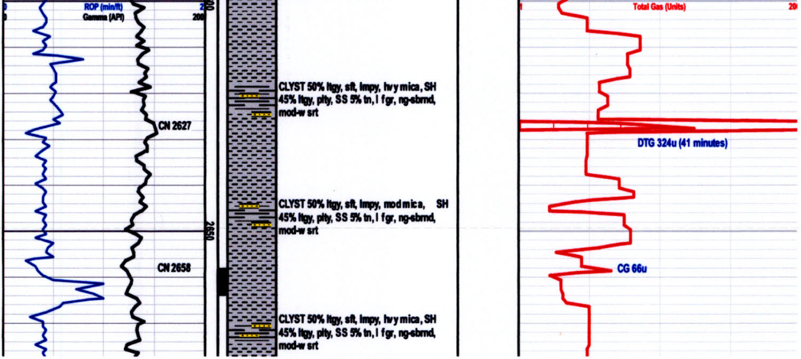
CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% vltgy-ltgy, plty, SS 5% ltgy-tn, l fgr, ng-sbrnd, mod-w srt

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, plty, SS 5% tn, l fgr, ng-sbrnd, mod-w srt

CONFIDENTIAL

CLYST 50% ltgy, sft, lmpy, modmica, SH 45% ltgy, plty, SS 5% tn, l fgr, ng-sbrnd, mod-w srt

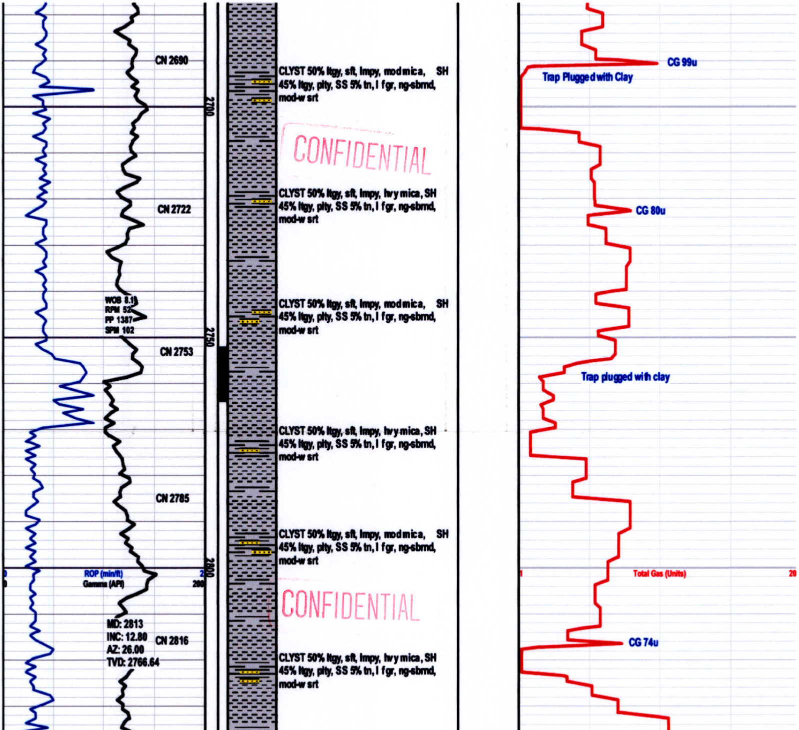




CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, plty, SS 5% tn, l fgr, ng-sbrnd, mod-w srt

CLYST 50% ltgy, sft, lmpy, mod mica, SH 45% ltgy, plty, SS 5% tn, l fgr, ng-sbrnd, mod-w srt

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, plty, SS 5% tn, l fgr, ng-sbrnd, mod-w srt



CLYST 50% ltgy, sft, lmpy, mod mica, SH 45% ltgy, plty, SS 5% tn, l fgr, ng-sbrnd, mod-w srt

CONFIDENTIAL

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, plty, SS 5% tn, l fgr, ng-sbrnd, mod-w srt

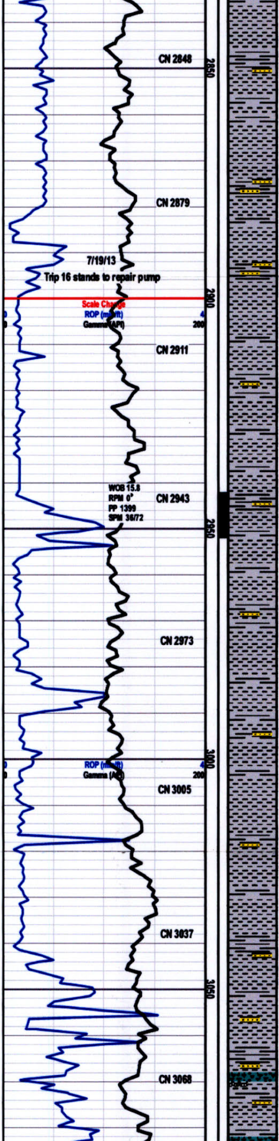
CLYST 50% ltgy, sft, lmpy, mod mica, SH 45% ltgy, plty, SS 5% tn, l fgr, ng-sbrnd, mod-w srt

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, plty, SS 5% tn, l fgr, ng-sbrnd, mod-w srt

CLYST 50% ltgy, sft, lmpy, mod mica, SH 45% ltgy, plty, SS 5% tn, l fgr, ng-sbrnd, mod-w srt

CONFIDENTIAL

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, plty, SS 5% tn, l fgr, ng-sbrnd, mod-w srt



CLYST 50% ltgy, sft, lmpy, modmica, SH 45% ltgy, plty, SS 5% tn, l fgr, ng-sbrnd, mod-w srt

CLYST 50% ltgy, sft, lmpy, hvy mica, SH 45% ltgy, plty, SS 5% tn, l fgr, ng-sbrnd, mod-w srt

CLYST 60% ltgy, sft, lmpy, SH35% ltgy, blky-plty, SS 10% tn-ltgy-transl, l f gr, ang-sbrnd, w srt

CLYST 70% ltgy, sft, lmpy, SH25% ltgy, blky-plty, SS 5% tn-ltgy-transl, l f gr, ang-sbrnd, lse qtz grns, mod-w srt

CONFIDENTIAL

CLYST 60% ltgy, sft, lmpy, SH35% ltgy, blky-plty, SS 5% tn-ltgy, l f gr, ang-sbrnd, mod-w srt

CLYST 50% ltgy, sft, lmpy, SH35% ltgy, blky-plty, SS 15% tn-ltgy, l f gr, ang-sbrnd, mod-w srt

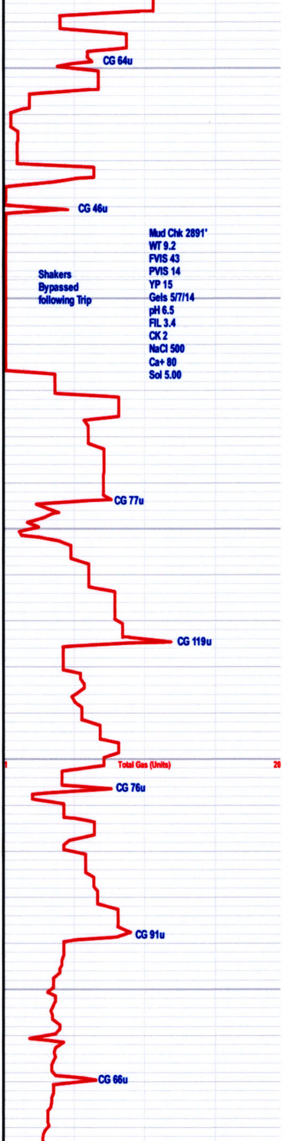
CLYST 60% ltgy, sft, lmpy, SH35% ltgy, blky-plty, SS 5% tn-ltgy-vltgy, l f gr, ang-sbrnd, mod-w srt

CLYST 70% ltgy-vltgy, sft, lmpy, SH 25% ltgy, blky-plty, SS 5% tn-ltgy-transl, l fgr, ang-sbrnd, mod-w srt

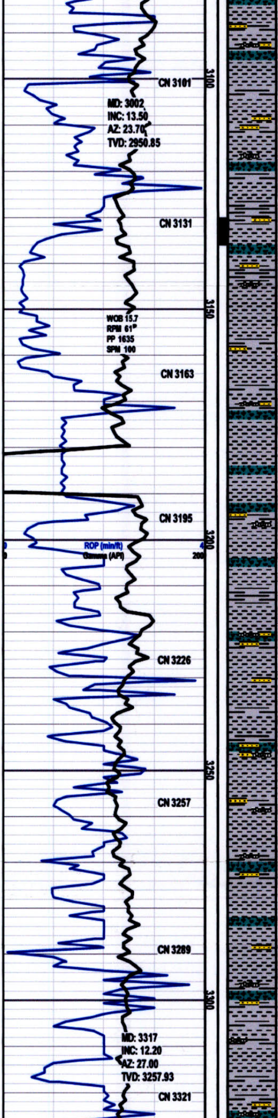
CLYST 60% ltgy, sft-frm, lmpy, SH35% ltgy, blky-plty, SS 5% tn-ltgy, l f gr, ang-sbrnd, mod-w srt

CONFIDENTIAL

CLYST 60% ltgy, frm-sft, lmpy, SH35% ltgy, blky-plty, SS 3% tn-ltgy, l f gr, ang-sbrnd, mod-w srt, TUFF 2% ltblugy-blugrn-gygrn, hd, aphantic, aphyric, fr bent



Mud Chk 2891'
WT 9.2
FVIS 43
PVIS 14
YP 15
Gels 5/7/14
pH 6.5
FIL 3.4
CK 2
NaCl 500
Ca+ 80
Sol 5.00



CLYST 70% ltgy, frm-sft, lmpy, SH25% ltgy, blky-sbblky, SS 3% tn-ltgy, u-l f gr, ang-sbrnd, mod-w srt, TUFF 2% ltblugy-blugrn-gygrn, hd, aphantic, aphyric, fr bent

CLYST 60% ltgy, frm-sft, lmpy, SH31% ltgy, blky-plty, SS 5% tn-ltgy, l f gr, ang-sbrnd, mod-w srt, TUFF 4% ltblugy-blugrn-gygrn, hd, aphantic, aphyric, occ bent

CLYST 70% ltgy-vltgy, frm-sft-hd, lmpy, SH 21% ltgy, blky-plty, SS 5% tn-ltgy-transl, l f gr, ang-sbrnd, mod-w srt, bent, TUFF 4% ltblugy-blugrn-gygrn, hd, aphantic, aphyric, fr bent

CLYST 60% ltgy, frm-sft, lmpy, SH35% ltgy, blky-plty, SS 3% tn-ltgy, l f gr, ang-sbrnd, mod-w srt, TUFF 2% ltblugy-blugrn-gygrn, hd, aphantic, aphyric, fr bent

CONFIDENTIAL

CLYST 70% ltgy, sft-frm, lmpy, SH21% ltgy, blky-plty, SS 5% tn-ltgy, l-u f gr, ang-sbrnd, mod-w srt, bent, TUFF 4% ltblugy-blugrn-gygrn, hd, aphantic, aphyric, occ bent

CLYST 60% ltgy, frm-sft, lmpy, SH35% ltgy, blky-plty, SS 3% tn-ltgy, l f gr, ang-sbrnd, mod-w srt, TUFF 2% ltblugy-blugrn-gygrn, hd, aphantic, aphyric, fr bent

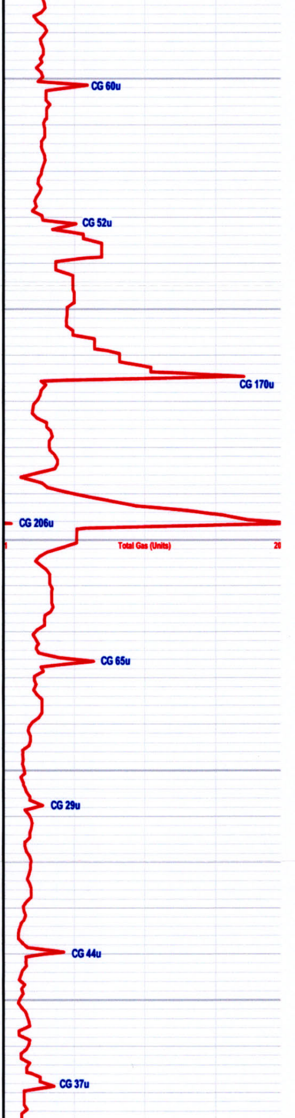
CLYST 80% ltgy, hd, lmpy, SH10% ltgy, blky-plty, SS 8% tn-ltgy, l-u f gr, ang-sbrnd, mod-w srt, TUFF 2% ltblugy-blugrn-gygrn, hd, aphantic, aphyric, fr bent

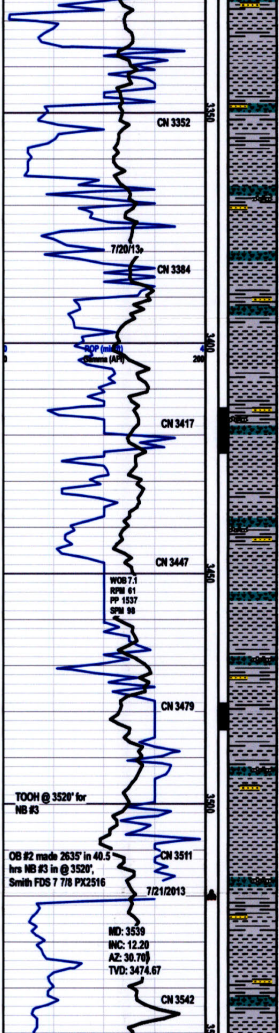
CLYST 60% ltgy, frm-sft, lmpy, SH35% ltgy, blky-plty, SS 3% tn-ltgy, l f gr, ang-sbrnd, TUFF 2% ltblugy-blugrn-gygrn, hd, aphantic, aphyric, occ bent

CLYST 70% ltgy, frm-sft, lmpy, SH22% ltgy, blky-plty, SS 5% tn-ltgy, l f gr, ang-sbrnd, mod-w srt, TUFF 3% ltblugy-blugrn-gygrn, hd, aphantic, aphyric, occ bent

CONFIDENTIAL

CLYST 60% ltgy, frm-sft-hd, lmpy, SH35% ltgy, blky-plty, SS 3% tn-ltgy, l f gr, ang-sbrnd, mod-w srt, TUFF 2% ltblugy-blugrn-gygrn, hd, aphantic, aphyric, occ bent





TOOH @ 3520' for
NB #3

OB #2 made 2635' in 40.5
hrs NB #3 in @ 3520',
Smith FDS 7 7/8 PX2516

MD: 3539
INC: 12.20
AZ: 30.70
TVD: 3474.67

CLYST 80% ltgy, hd, lmpy, SH10% ltgy, blky-plty, SS 8% tn-ltgy, l-u f gr, ang-sbrnd, TUFF 2% ltblugy-blugrn-gygrn, hd, aphantic, aphyric

CLYST 80% ltgy, hd-frm, lmpy, SH10% ltgy, blky-plty, SS 8% tn-ltgy, l-u f gr, ang-sbrnd, mod-w srt, TUFF 2% ltblugy-blugrn-gygrn, hd, aphantic, aphyric, fr bent

CLYST 75% ltgy, hd, lmpy, SH10% ltgy, blky-plty, SS 13% tn-ltgy, l-u f gr, ang-sbrnd, TUFF 2% ltblugy-blugrn-gygrn, hd, aphantic, aphyric

CLYST 65% ltgy, hd-frm-sft, lmpy, SH20% ltgy, blky-plty, SS 13% tn-ltgy, l-u f gr, ang-sbrnd, TUFF 2% ltblugy-blugrn-gygrn, hd, aphantic, aphyric, fr bent

CONFIDENTIAL

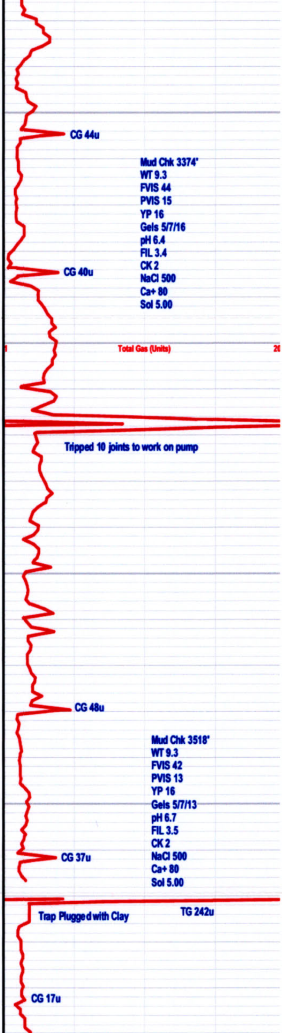
CLYST 60% ltgy, hd, lmpy, SH25% ltgy, blky-plty, SS 13% tn-ltgy, l-uf gr, ang-sbrnd, TUFF 2% ltblugy-blugrn-gygrn, hd, aphantic, aphyric

CLYST 65% ltgy, hd-frm, lmpy, SH20% ltgy, blky-plty, SS 12% tn-ltgy, l-uf gr, ang-sbrnd, TUFF 3% ltblugy-blugrn-gygrn, hd, aphantic, aphyric, occ bent

CLYST 60% ltgy, hd, lmpy, SH25% ltgy, blky-plty, SS 13% tn-ltgy, l-uf gr, ang-sbrnd, TUFF 2% ltblugy-blugrn-gygrn, hd, aphantic, aphyric

CLYST 60% ltgy, hd, lmpy, SH25% ltgy, blky-plty, SS 13% tn-ltgy, l-uf gr, ang-sbrnd, TUFF 2% ltblugy-blugrn-gygrn, hd, aphantic, aphyric, occ bent

CLYST 60% ltgy, hd, lmpy, SH25% ltgy, blky-plty, SS 13% tn-ltgy, l-u f gr, ang-sbrnd, TUFF 2% ltblugy-blugrn-gygrn, hd-frm, aphantic, aphyric



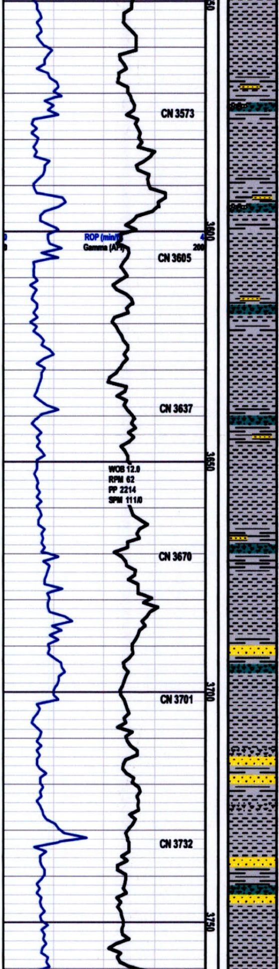
Mud Chk 3374'
WT 9.3
FVIS 44
PVIS 15
YP 16
Gels 5/7/16
pH 6.4
FIL 3.4
CK 2
NaCl 500
Ca+ 80
Sol 5.00

Tripped 10 joints to work on pump

Mud Chk 3518'
WT 9.3
FVIS 42
PVIS 13
YP 16
Gels 5/7/13
pH 6.7
FIL 3.5
CK 2
NaCl 500
Ca+ 80
Sol 5.00

Trap Plugged with Clay

CONFIDENTIAL



CLYST 65% ltgy, hd-sft, lmpy, SH 20% ltgy, blky-plty, SS 13% tn-ltgy, l-u f gr, ang-sbrnd, TUFF 2% ltblugy-blugrn-gygrn, hd-sft-frm, aphantic, aphyric, fr bent

CLYST 65% ltgy, hd-frm-sft, lmpy, SH 20% ltgy, blky-plty, SS 13% tn-ltgy, l-u f gr, ang-sbrnd, TUFF 2% ltblugy-blugrn-gygrn, hd, aphantic, aphyric, fr bent

CLYST 55% ltgy, hd, lmpy, SH 38% ltgy, blky-plty, SS 5% tn-ltgy, l-u f gr, ang-sbrnd, TUFF 2% ltblugy-blugrn-gygrn, hd-frm, aphantic, aphyric

CLYST 55% ltgy, hd-frm-sft, lmpy, SH 38% ltgy, blky-plty, SS 5% tn-ltgy, l-u f gr, ang-sbrnd, TUFF 2% ltblugy-blugrn-gygrn, hd-frm, aphantic, aphyric

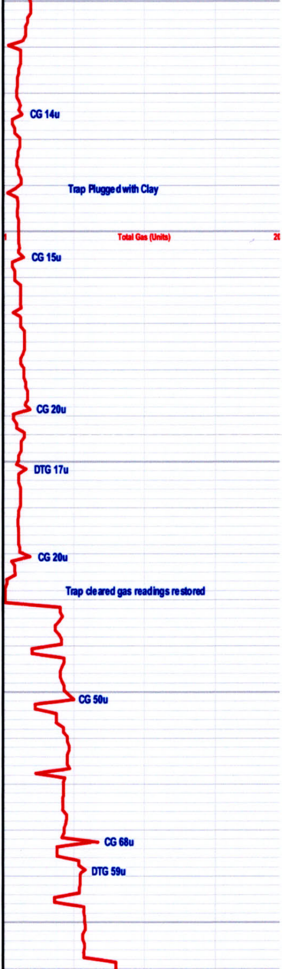
CLYST 50% ltgy, hd, lmpy, SH 43% ltgy, blky-plty, SS 5% tn-ltgy, l-u f gr, ang-sbrnd, TUFF 2% ltblugy-blugrn-gygrn, hd-frm, aphantic, aphyric

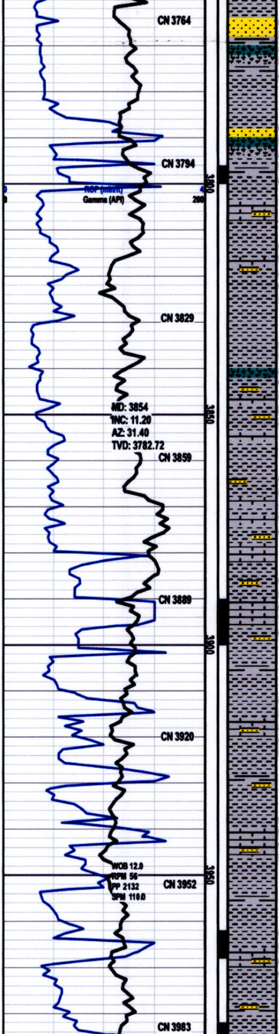
CONFIDENTIAL

CLYST 60% ltgy, hd, lmpy, SH 25% ltgy, blky-plty, SS 13% ltgy-tn, l-u f gr, ang-sbrnd, lse qtz grns, mod-w srt, TUFF 2% ltblugy-blugrn-gygrn, hd-frm, aphantic, aphyric

CLYST 55% ltgy, hd-frm-sft, lmpy, SH 28% ltgy, blky-plty, SS 15% ltgy, l-u f gr, ang-sbrnd, mod-w srt TUFF 2% ltgy-blugrn-gygrn, hd-frm, aphantic, aphyric

CLYST 55% ltgy, hd-frm-sft, lmpy, SH 25% ltgy, blky-plty, SS 18% ltgy-vltgy, l-u f gr, ang-sbrnd, lse qtz grns, mod-w srt, TUFF 2% ltblugy-blugrn-gygrn, hd-frm, aphantic, aphyric





CLYST 55% ltgy, hd-frm-sft, lmpy, SH25% ltgy, blky-plty, SS 18% tn-ltgy, l-u f gr, ang-sbrnd, lse qtz grns, mod-w srt, TUFF 2% ltblugy-blugrn-gygrn, hd-frm, aphantic, aphyric

CLYST 50% ltgy, hd-frm-sft, lmpy, SH30% ltgy, blky-plty, SS 18% tn-ltgy, l-u f gr, ang-sbrnd, lse qtz grns, mod-w srt, TUFF 2% ltblugy-blugrn-gygrn, hd-frm, aphantic, aphyric

CONFIDENTIAL

CLYST 50% ltgy-gy, hd-frm-sft, lmpy, SH30% ltgy, blky-plty, SS 10% tn-ltgy, l-u f gr, ang-sbrnd, lse qtz grns, mod-w srt, LS 10% offwh-wh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns

CLYST 50% ltgy-gy, hd-frm-sft, lmpy, SH30% ltgy, blky-plty, SS 10% tn-ltgy, l-u f gr, ang-sbrnd, lse qtz grns, mod-w srt, LS 8% wh-offwh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns, TUFF 2% ltblugy-blugrn-gygrn, hd-frm, aphantic, aphyric

CLYST 50% ltgy, hd-sft, lmpy, SH30% ltgy, blky-plty, SS 10% tn-ltgy, l-u f gr, ang-sbrnd, lse qtz grns, mod-w srt, LS 10% wh-offwh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns

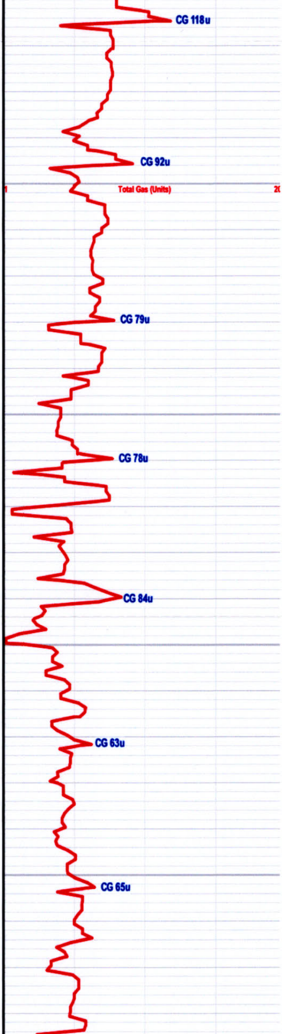
CLYST 50% ltgy, hd, lmpy, SH20% ltgy, blky-plty, LS 20% wh-offwh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns, SS 10% tn-ltgy, l-u f gr, ang-sbrnd, lse qtz grns, mod-w srt

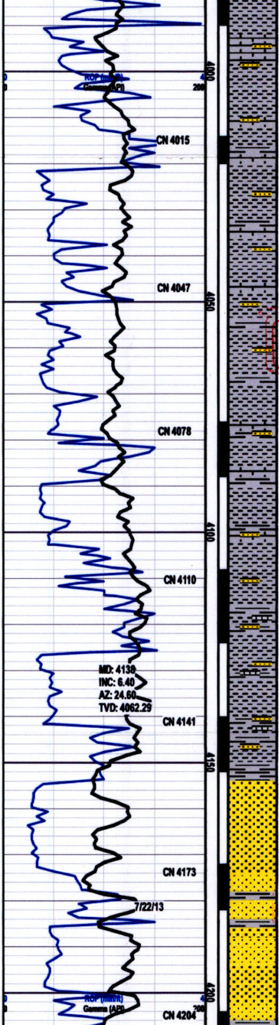
CLYST 50% ltgy-gy, hd-frm-sft, lmpy, SH30% ltgy, blky-plty, SS 10% tn-ltgy, l-u f gr, ang-sbrnd, lse qtz grns, mod-w srt, LS 10% offwh-wh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns

CONFIDENTIAL

CLYST 50% ltgy, hd, lmpy, SH20% ltgy, blky-plty, LS 20% wh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns, SS 10% tn-ltgy, l-u f gr, ang-sbrnd, lse qtz grns, mod-w srt

CLYST 50% ltgy-gy, hd-frm-sft, lmpy, SH30% ltgy, blky-plty, SS 10% tn-ltgy, l-u f gr, ang-sbrnd, lse qtz grns, mod-w srt, LS 10% offwh-wh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns





CLYST 50% ltgy, hd, lmpy, SH20% ltgy, blky-plty, LS 20% wh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns, SS 10% tn, l-u f gr, ang-sbrnd, lse qtz grns, mod-w srt

CLYST 50% ltgy-gy, hd-frm-sft, lmpy, SH30% ltgy, blky-plty, SS 10% tn-ltgy, l-u f gr, ang-sbrnd, lse qtz grns, mod-w srt, LS 10% offwh-wh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns

CLYST 50% ltgy, hd, lmpy, SH20% ltgy, blky-plty, LS 20% wh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns, SS 10% tn, l-u f gr, ang-sbrnd, lse qtz grns, mod-w srt

CONFIDENTIAL

CLYST 50% ltgy, hd-sft, lmpy, SH30% ltgy, blky-plty, SS 10% tn, l-u f gr, ang-sbrnd, lse qtz grns, mod-w srt, LS 10% wh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns

CLYST 50% ltgy-gy, hd-frm-sft, lmpy, SH30% ltgy, blky-plty, SS 10% tn-ltgy, l-u f gr, ang-sbrnd, lse qtz grns, mod-w srt, LS 10% offwh-wh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns

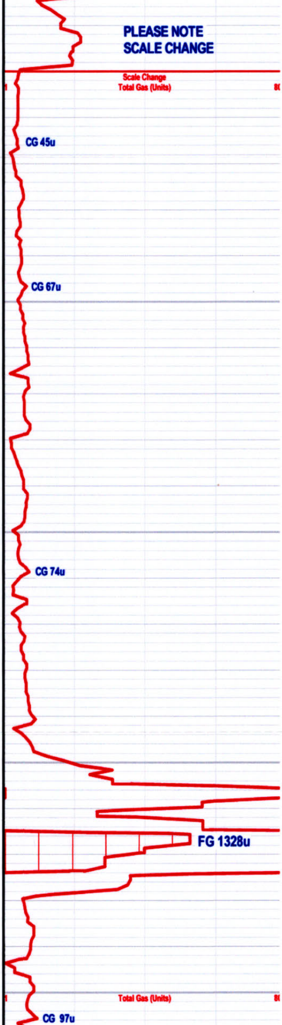
CLYST 40% gy, hd-frm-sft, lmpy, SH 27% ltgy, blky-plty, SS 25% tn, l-u f gr, ang-sbrnd, lse qtz grns, mod-w srt, LS 8% offwh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns

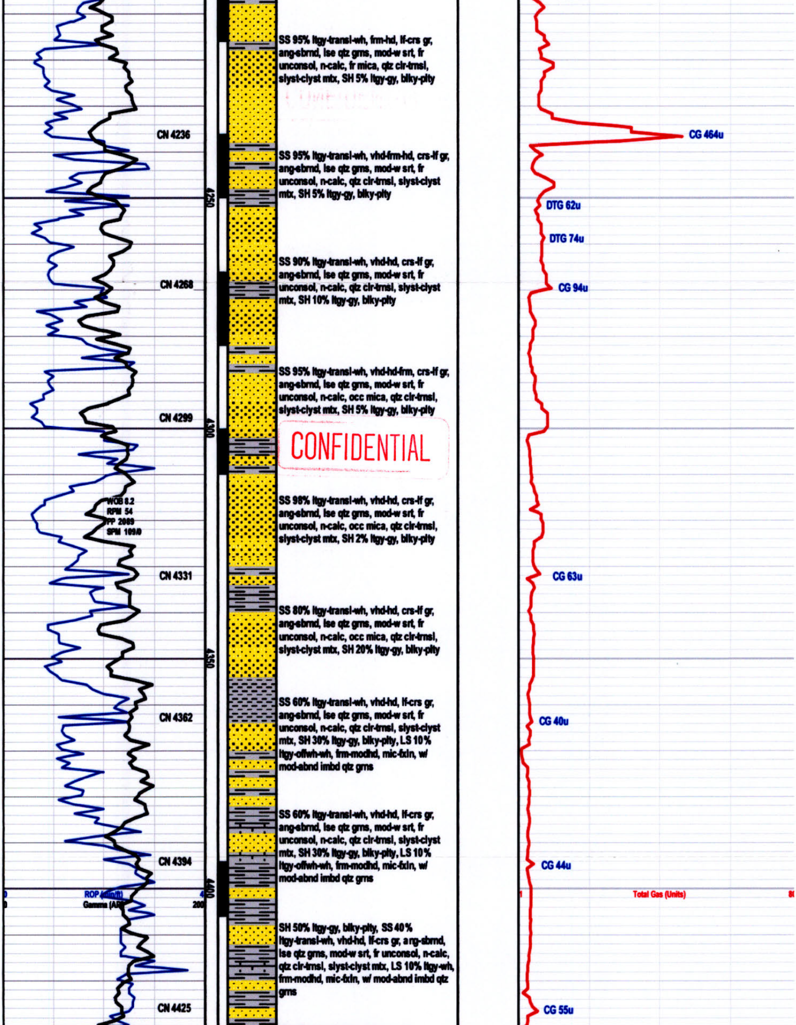
CLYST 40% ltgy-gy, hd-frm-sft, lmpy, SH27% ltgy, blky-plty, SS 25% tn-ltgy, l-u f gr, ang-sbrnd, lse qtz grns, mod-w srt, LS 8% offwh-wh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns

SS 95% ltgy-transl-wh, frm-hd, lf-crs gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, occ mica, qtz clr-trnsl, cly-clyst mtx, SH 5% ltgy-gy, blky-plty

CONFIDENTIAL

SS 95% ltgy-transl-wh, frm-hd, lf-crs gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, occ mica, qtz clr-trnsl, slyst-clyst mtx, SH 5% ltgy-gy, blky-plty





SS 95% ltgy-transl-wh, frm-hd, lf-crs gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, fr mica, qtz clr-trnsl, slyst-clyst mtx, SH 5% ltgy-gy, blky-plty

SS 95% ltgy-transl-wh, vhd-frm-hd, crs-lf gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx, SH 5% ltgy-gy, blky-plty

SS 90% ltgy-transl-wh, vhd-hd, crs-lf gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx, SH 10% ltgy-gy, blky-plty

SS 95% ltgy-transl-wh, vhd-hd-frm, crs-lf gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, occ mica, qtz clr-trnsl, slyst-clyst mtx, SH 5% ltgy-gy, blky-plty

CONFIDENTIAL

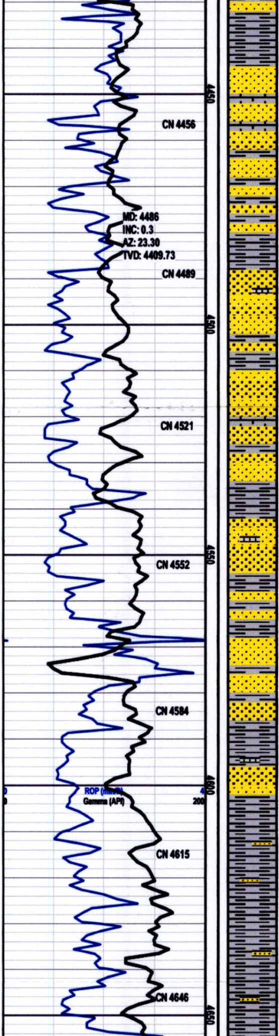
SS 98% ltgy-transl-wh, vhd-hd, crs-lf gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, occ mica, qtz clr-trnsl, slyst-clyst mtx, SH 2% ltgy-gy, blky-plty

SS 80% ltgy-transl-wh, vhd-hd, crs-lf gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, occ mica, qtz clr-trnsl, slyst-clyst mtx, SH 20% ltgy-gy, blky-plty

SS 60% ltgy-transl-wh, vhd-hd, lf-crs gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx, SH 30% ltgy-gy, blky-plty, LS 10% ltgy-offwh-wh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns

SS 60% ltgy-transl-wh, vhd-hd, lf-crs gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx, SH 30% ltgy-gy, blky-plty, LS 10% ltgy-offwh-wh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns

SH 50% ltgy-gy, blky-plty, SS 40% ltgy-transl-wh, vhd-hd, lf-crs gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx, LS 10% ltgy-wh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns



SH 70% ltgy-gy, blky-plty, SS 25% ltgy-transl-wh, vhd-hd, lf-crs gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx, LS 5% ltgy-offwh-wh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns

SH 50% ltgy-gy, blky-plty, SS 40% ltgy-transl-wh, vhd-hd, lf-crs gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx, LS 10% ltgy-wh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns

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SS 60% ltgy-transl-wh, vhd-hd, crs-lf gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx, SH 30% ltgy-gy, blky-plty, LS 10% ltgy-wh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns

SS 80% ltgy-transl-wh, vhd-hd, crs-lf gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, occ mica, qtz clr-trnsl, slyst-clyst mtx, SH 20% ltgy-gy, blky-plty

SH 50% ltgy-gy, blky-plty, SS 40% ltgy-transl-wh, vhd-hd, lf-crs gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx, LS 10% ltgy-wh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns

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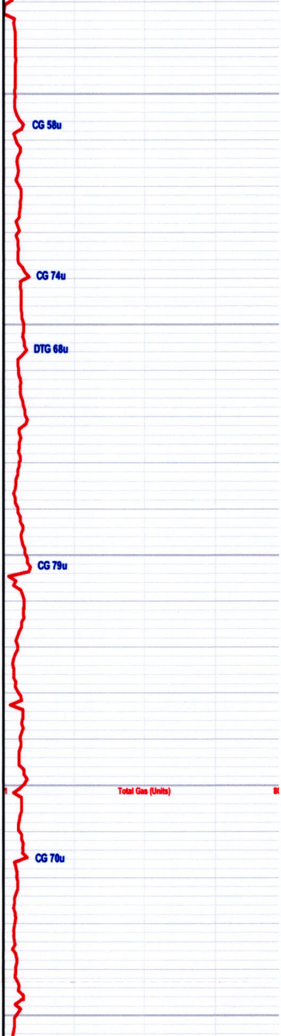
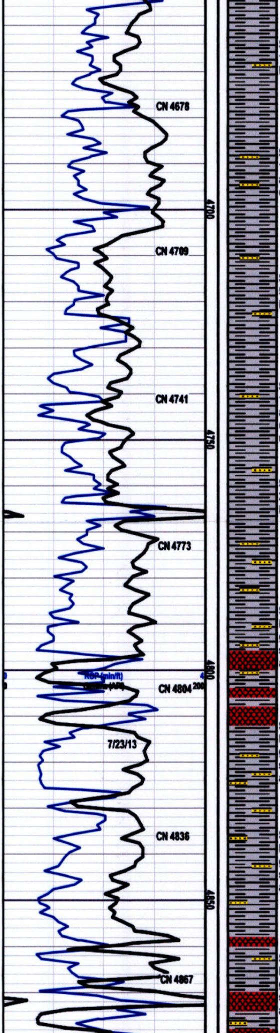
SS 60% ltgy-transl-wh, vhd-hd, crs-lf gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, occ mica, qtz clr-trnsl, slyst-clyst mtx, SH 40% ltgy-gy, blky-plty

SH 70% ltgy-gy, blky-plty, SS 25% ltgy-transl-wh, vhd-hd, lf-crs gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx, LS 5% ltgy-offwh-wh, frm-modhd, mic-fxln, w/ mod-abnd imbd qtz grns

SH 85% ltgy-gy, frm-modhd, slty, blky, SS 15% ltgy-transl-wh, vhd-hd, lf-crs gr, ang-sbrnd, lse qtz grns, fr unconsol, n-calc, qtz clr-trnsl

SH 90% ltgy-gy, frm-hd-modhd, blky-plty, SS 10% ltgy-transl-wh, vhd-hd, lf-crs gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx





SH 90% ltgy-gy, frm-modhd, blky-plty, SS 10% ltgy-transl-wh, hd, lf-crs gr, ang-sbrnd, lse qtz grns, unconsol, n-calc, qtz clr-trnsl

SH 90% ltgy-gy, frm-hd-modhd, blky-plty, SS 10% ltgy-transl-wh, vhd-hd, lf-crs gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, qtz clr, slyst mtx

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SH 85% ltgy-gy, frm-hd-modhd, blky-plty, SS 5% ltgy-transl-wh, hd, lf-crs gr, ang-sbrnd, lse qtz grns, unconsol, n-calc, qtz clr-trnsl

SH 90% ltgy-gy, frm-modhd, blky-plty, SS 10% ltgy-transl-wh, vhd-hd, lf-crs gr, ang-sbrnd, lse qtz grns, mod-w srt, fr unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx

SH 75% ltgy-gy, frm-modhd, blky-plty, SS 25% ltgy-transl-wh, hd, lf-crs gr, ang-sbrnd, lse qtz grns, unconsol, n-calc, qtz clr-trnsl

SH 70% ltgy-gy, frm-hd, blky-plty, SS 25% ltgy-transl-wh, vhd-hd, lf-crs gr,sbrnd, lse qtz grns, unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx, BAS 5% blk, hd, mic-fxl, aphantic, aphyric

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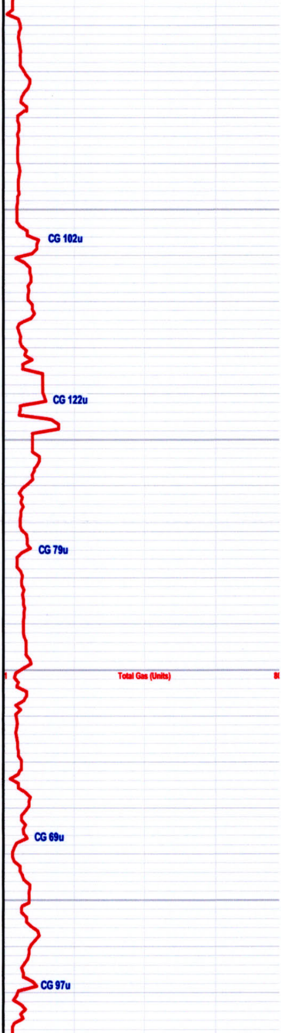
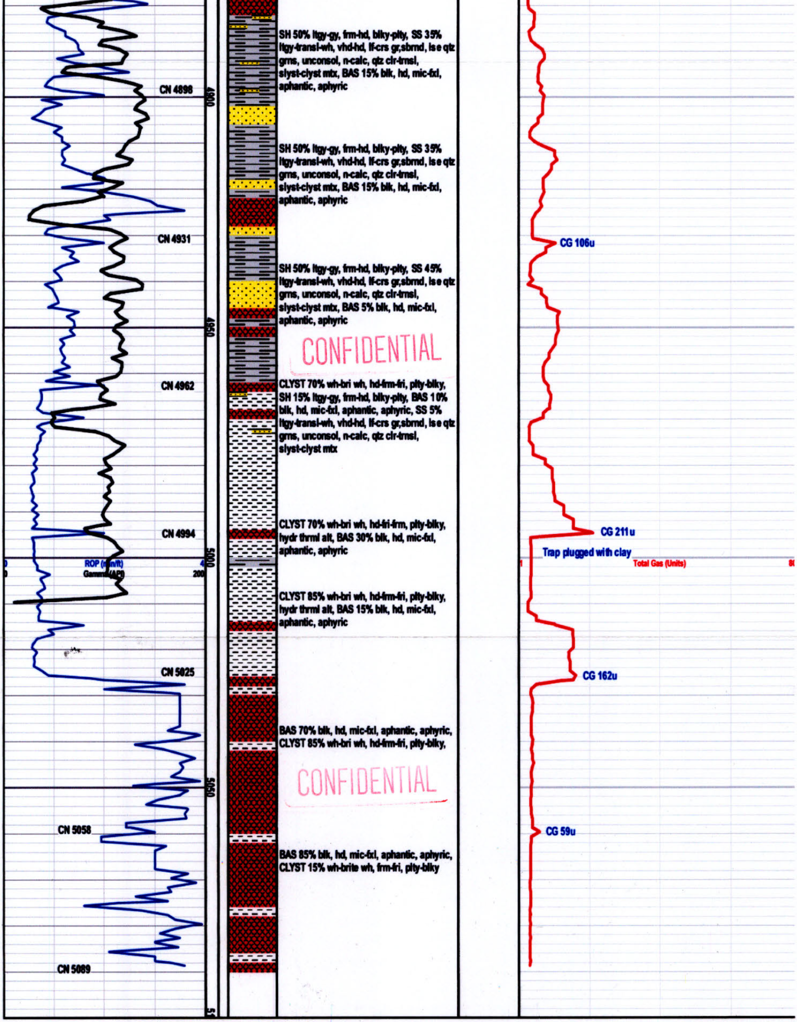
SH 60% ltgy-gy, frm-hd, blky-plty, SS 25% ltgy-transl-wh, vhd-hd, lf-crs gr,sbrnd, lse qtz grns, unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx, BAS 15% blk, hd, mic-fxl, aphantic, aphyric

SH 60% ltgy-gy, frm-hd, blky-plty, SS 25% ltgy-transl-wh, vhd-hd, lf-crs gr,sbrnd, lse qtz grns, unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx, BAS 15% blk, hd, mic-fxl, aphantic, aphyric

SH 60% ltgy-gy, frm-hd, blky-plty, SS 25% ltgy-transl-wh, vhd-hd, lf-crs gr,sbrnd, lse qtz grns, unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx, BAS 15% blk, hd, mic-fxl, aphantic, aphyric





SH 50% ltgy-gy, frm-hd, blky-plty, SS 35% ltgy-transl-wh, vhd-hd, lf-crs gr,sbrnd, lse qtz grns, unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx, BAS 15% blk, hd, mic-fxl, aphantic, aphyric

SH 50% ltgy-gy, frm-hd, blky-plty, SS 35% ltgy-transl-wh, vhd-hd, lf-crs gr,sbrnd, lse qtz grns, unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx, BAS 15% blk, hd, mic-fxl, aphantic, aphyric

SH 50% ltgy-gy, frm-hd, blky-plty, SS 45% ltgy-transl-wh, vhd-hd, lf-crs gr,sbrnd, lse qtz grns, unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx, BAS 5% blk, hd, mic-fxl, aphantic, aphyric

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CLYST 70% wh-bri wh, hd-frm-fri, plty-blky, SH 15% ltgy-gy, frm-hd, blky-plty, BAS 10% blk, hd, mic-fxl, aphantic, aphyric, SS 5% ltgy-transl-wh, vhd-hd, lf-crs gr,sbrnd, lse qtz grns, unconsol, n-calc, qtz clr-trnsl, slyst-clyst mtx

CLYST 70% wh-bri wh, hd-fri-frm, plty-blky, hydr thrml alt, BAS 30% blk, hd, mic-fxl, aphantic, aphyric

CLYST 85% wh-bri wh, hd-frm-fri, plty-blky, hydr thrml alt, BAS 15% blk, hd, mic-fxl, aphantic, aphyric

BAS 70% blk, hd, mic-fxl, aphantic, aphyric, CLYST 85% wh-bri wh, hd-frm-fri, plty-blky,

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BAS 85% blk, hd, mic-fxl, aphantic, aphyric, CLYST 15% wh-brite wh, frm-fri, plty-blky

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