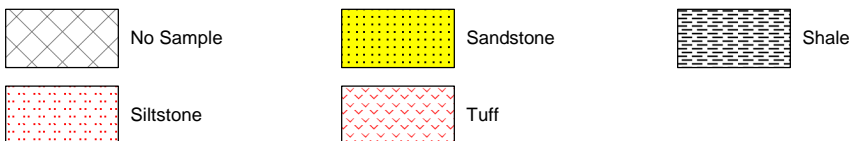


LOG created using L PLOT VH Version 3.0, April 02, 2010, Copyright (C) 1999-2009 Pason Systems Corp.

**OPERATOR:** BRIDGE ENERGY LLC.  
**WELL:** ESPINO # 1-2  
**LOCATION:** NE SE, SEC. 2, T7N, R4W  
**COUNTY:** PAYETTE  
**STATE:** IDAHO  
**SPOT:** 1248' FEL, 1603' FSL, SECTION 2  
**ELEVATION:** GL- 2223', KB- 2235'  
**FIELD:** PLYMOUTH PROSPECT  
**SPUD DATE:** MARCH 27,2010  
**TD DATE:** APRIL 2, 2010  
**DATES LOGGED:** MARCH 27, 2010 TO APRIL 2, 2010  
**DEPTHS LOGGED:** 140' TO 4500'  
**LOGGERS:** HAL SCHMIDT, MAX MODERN  
**DRILLING FLUID:** LSND  
**DRILLING RIG:** ENSIGN #516  
**API:**  
**LOG TYPE:** MUDLOG  
**SCALE:** 1:240 (5 inches per 100 feet)  
**REMARKS:**

### LITHOLOGIES



### MODIFIERS

└	Calcareous	■	Carbonaceous Flakes	✕	Crystals	+	Feldspar
↔	Fractures	∪	Micaceous	P	Pyrite	○	Sand Grains
▣	Sandstone Stringers	—	Shale Laminae	..	Silty	∇	Tuffaceous

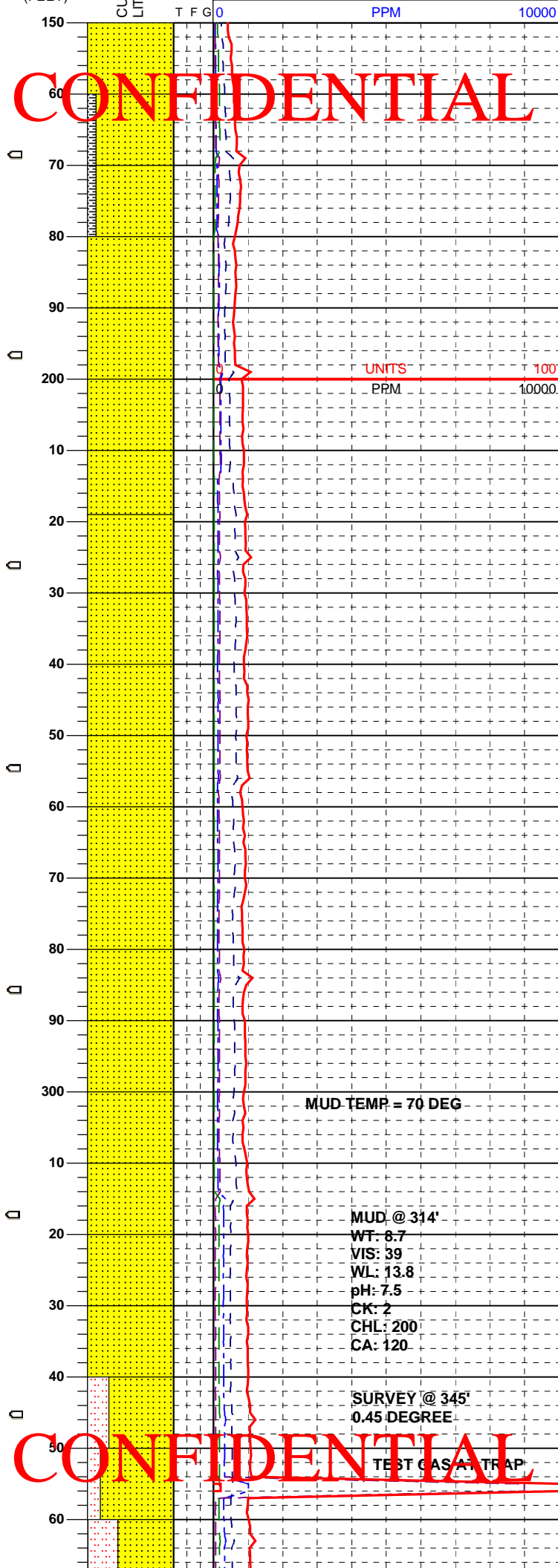
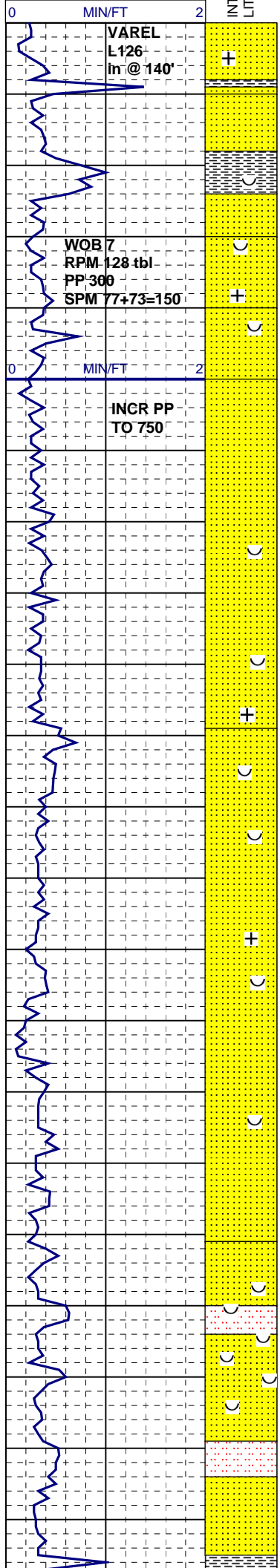
### ENGINEERING SYMBOLS

⚙	Bit Change	◄	Casing	◄	Casing	◻	Connection
⊗	Connection Gas	⊗	Midnight Depth	⊗	Trip Gas		

GAS	100
0	UNITS
0	C1
0	PPM
0	10000
0	C2
0	PPM
0	10000
0	C3
0	PPM
0	10000
0	C4

INTERPRETIVE LOG  
 DEPTH BAR  
 DEPTH (FEET)  
 LOGGERS LOG  
 OIL SHOW

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LITHOLOGY DESCRIPTION

mica flakes, occ green colored qtz? grains. uncons lse grains, NFSOC

SH: ltgy, sft, sl frm, mushy ip, slty, blk mica spks, non calc

SS: clr, trnsl, m-cse grained, clr to opaque qtz, occ op wh feld, sbang-sbrd, abnt blk and clr mica flakes, uncons lse grains, NFSOC

SS: clr, trnsl, m-cse grained, clr to opaque qtz, occ op wh feld, sbang-sbrd, abnt blk and clr mica flakes, uncons lse grains, occ v f gr sd, NFSOC

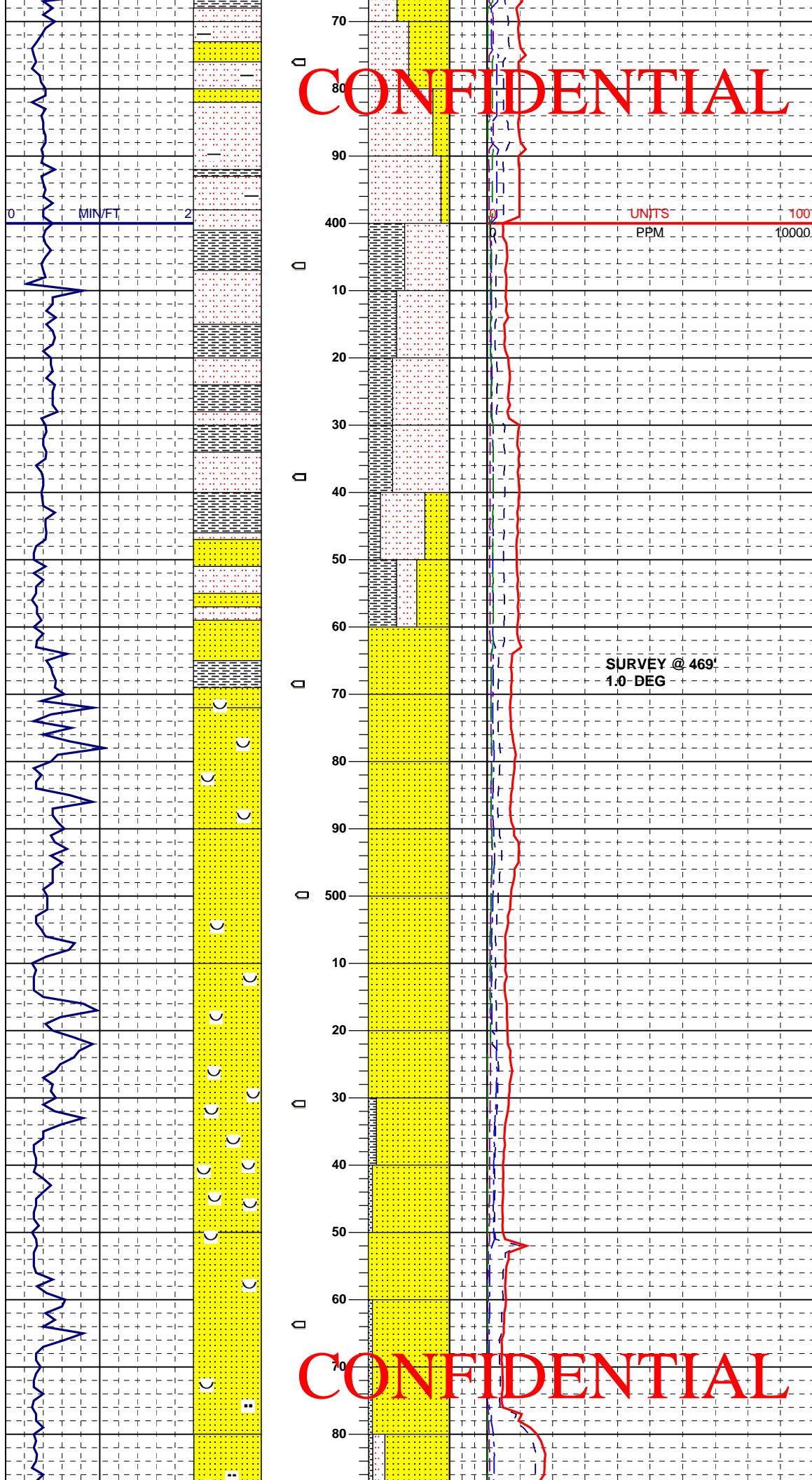
SS: clr, trnsl, occ lt gy, m-cse grained, clr to opaque qtz, occ op wh feld, sbang-sbrd, abnt blk and clr mica flakes, uncons lse grains, occ v f gr consol frag, NFSOC

SS: clr, trnsl, occ lt gy, m-cse grained, clr to opaque qtz, occ op wh feld, sbang-sbrd, abnt blk and clr mica flakes, uncons lse grains, occ v f gr consol frag, NFSOC

SS: wh - clr, trnsl, occ bl gn, occ lt gy, v f - hd - v fri, m - p sort, sbang-sbrd, lse slty cmt frag, incr slty strk, abnt blk mica frag, wood frag, NFSOC

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SLTST: wh - off wh- lt-mgy, tan, blkly - ang, incr shy strk ,clr mica spks, sl grdg - slty sh, scat c qtz grains

SH: lt gy - m gy - tn - crm, sbsft - sbhd, v slty, grdg - slty sh, abnt cl res, incr hd

SLTST: wh - off wh- lt-mgy, tan, blkly - ang, incr shy strk ,clr mica spks, occ grdg - slty sh, sl cl

SS: wh - clr, trnsl, occ bl gn, pred lse cse qtz gr, sbang-sbrd, lse slty cmt frag, cln sd NFSOC

SS: wh - clr, trnsl, occ bl gn, pred lse cse qtz gr, sbang-sbrd, lse slty cmt frag, cln sd, tr sh frag, slty incl w/ blk poss carb spec, NFSOC

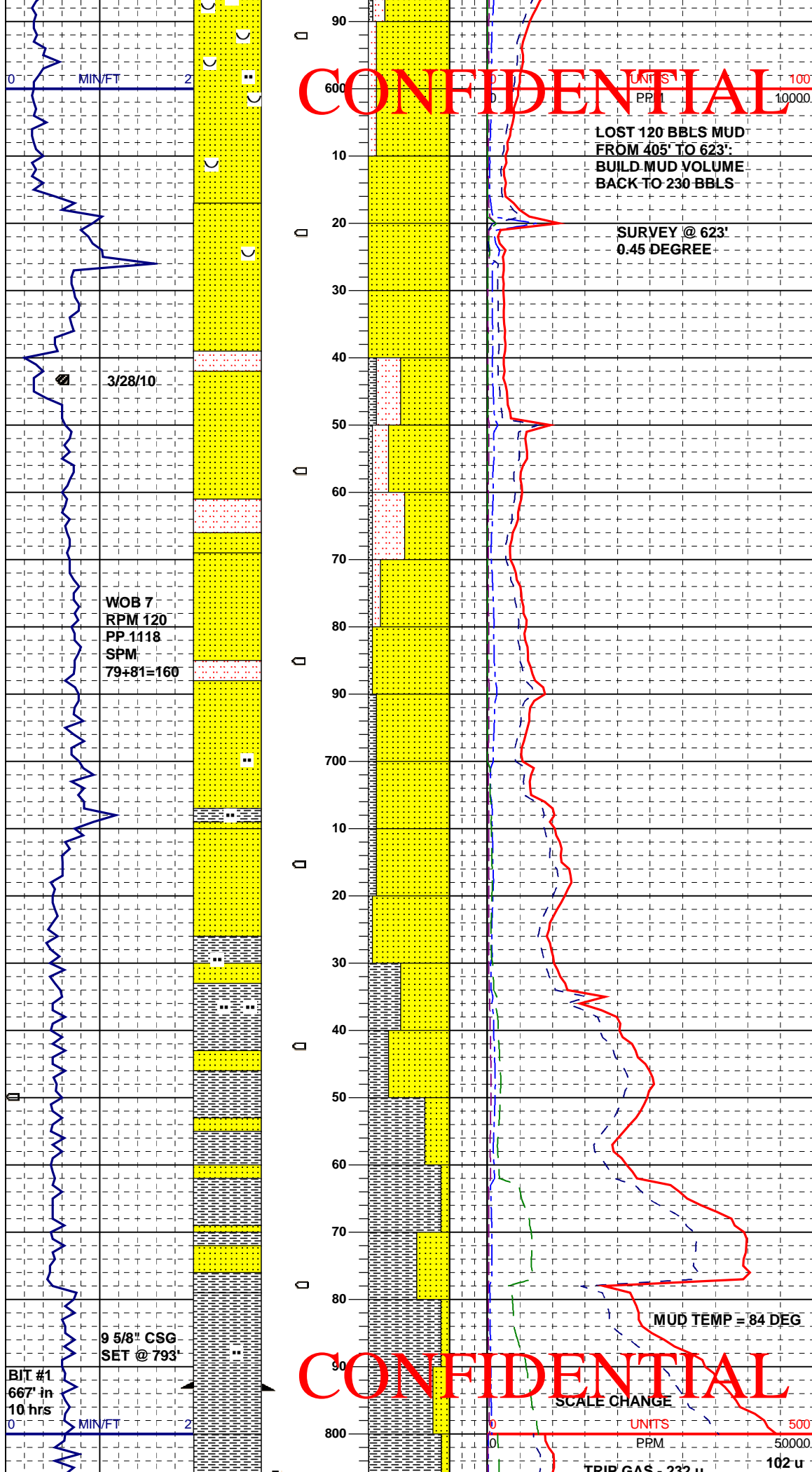
SS: wh - clr, trnsl, occ bl gn, pred lse cse qtz gr, fld frag, sbang-sbrd, cln sd, tr sh frag, 10% blk mica flk, NFSOC

SS: wh - clr, trnsl, occ bl gn spec, pred lse cse qtz gr, abnt op - wh fld frag, sbang-sbrd, tr sh frag, 15% blk mica flk, slty res, NFSOC

SS: wh - clr - lt gy, trnsl, pred lse cse gr, vf - abnt op - wh fld frag, sbang-sbrd, tr sh frag, incr slty occ shy w/

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embd c sd gr, NFSOC

SS: wh - clr, trnsl, occ bl gn spec, pred lse unconcs cse qtz gr, abnt op - wh fld frag, sbang-sbrd, tr slty, 15% blk mica flk, tr sh frag, NFSOC

SS: wh - clr, trnsl, occ bl gn spec, pred lse cse qtz gr, abnt op - wh fld frag, sbang-sbrd, tr slty, 10% blk mica flk, tr sh frag, tr slty strk, NFSOC

SLTST: wh - off wh- lt-mgy, shy ip, abnt slty res in sample, scat gy hd sh frag

SLTST: wh - off wh- lt-mgy, shy ip, embd cse gr, abnt slty res in sample, scat gy hd sh frag

SS: wh - clr, trnsl, occ bl gn spec, pred lse cse qtz gr, abnt op - wh fld frag, sbang-sbrd, tr slty, tr sh frag, tr slty strk, NFSOC

SS: wh - clr, trnsl, occ bl gn incl, pred lse cse qtz gr, abnt op - wh fld frag, sbang-sbrd, tr slty, scat sh frag, NFSOC

SH: lt gy - dk gy-m gy, tan, sft - sbhd, sl rthy, abnt slty strk, v cl, pred grd - sltst, tr intbd ss, sl clayey ip, abnt slty res

SH: tan - lt tan, lt gy, sft - sbhd, rthy, occ v cl, tr intbd ss, v clayey ip, cly res

SH: tan - lt tan, lt gy - gy, sft - sbhd, blk - sbbkly, rthy, sl slty, clayey ip, abnt unconcs sd sd grains, sl calc, scat blk mica frag

**At surface casing depth 807'. Circ hole, slowly gain 130 bbls in 60 min, Gas incr 180 units over background of 50 units, 98% C1 & C2, circ out 8" wtr flow, incr mud wt to 9.3, cse SS, abnt. wood fragments blk-brn, organic, altered to carb. in part, & scat pieces of gy sh,**

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UNITS 10000  
PRM 50000  
TRIP GAS - 232 u 102 u

3/29-30/10  
BIT #2  
8-3/4"  
ULTERRA  
MS1655  
(PDC)  
in @ 807'

MUD @ 807'  
WT: 9.3  
VIS: 42  
VL: 1.1  
pH: 7.5  
CK: 2  
CHL: 200  
CA: 80

coming over shaker  
CALIBRATE GAS DETECTOR  
3/29/10  
FIT test 10.5 lb/g @ 817'

SH: ltgy, mgy, sbblky, frm, sl sft, slty,  
micro carb spks common, sm scat,  
lse, qtz grains in spl,

SS: clr, wh, m to cse grained, clr &  
op, qtz & feld, sbang-sbrd, cleavage  
faces on much of feld grains, drls up  
into loose grains, NFSOC

Abnt feldspar in sands

SH: ltgy, mgy, sbblky, frm, sl sft, slty,  
micro carb spks common, sm scat,  
lse, qtz grains in spl,

SS: clr, wh, m to cse grained, clr &  
op, qtz & feld, sbang-sbrd, drls up  
into loose grains, NFSOC

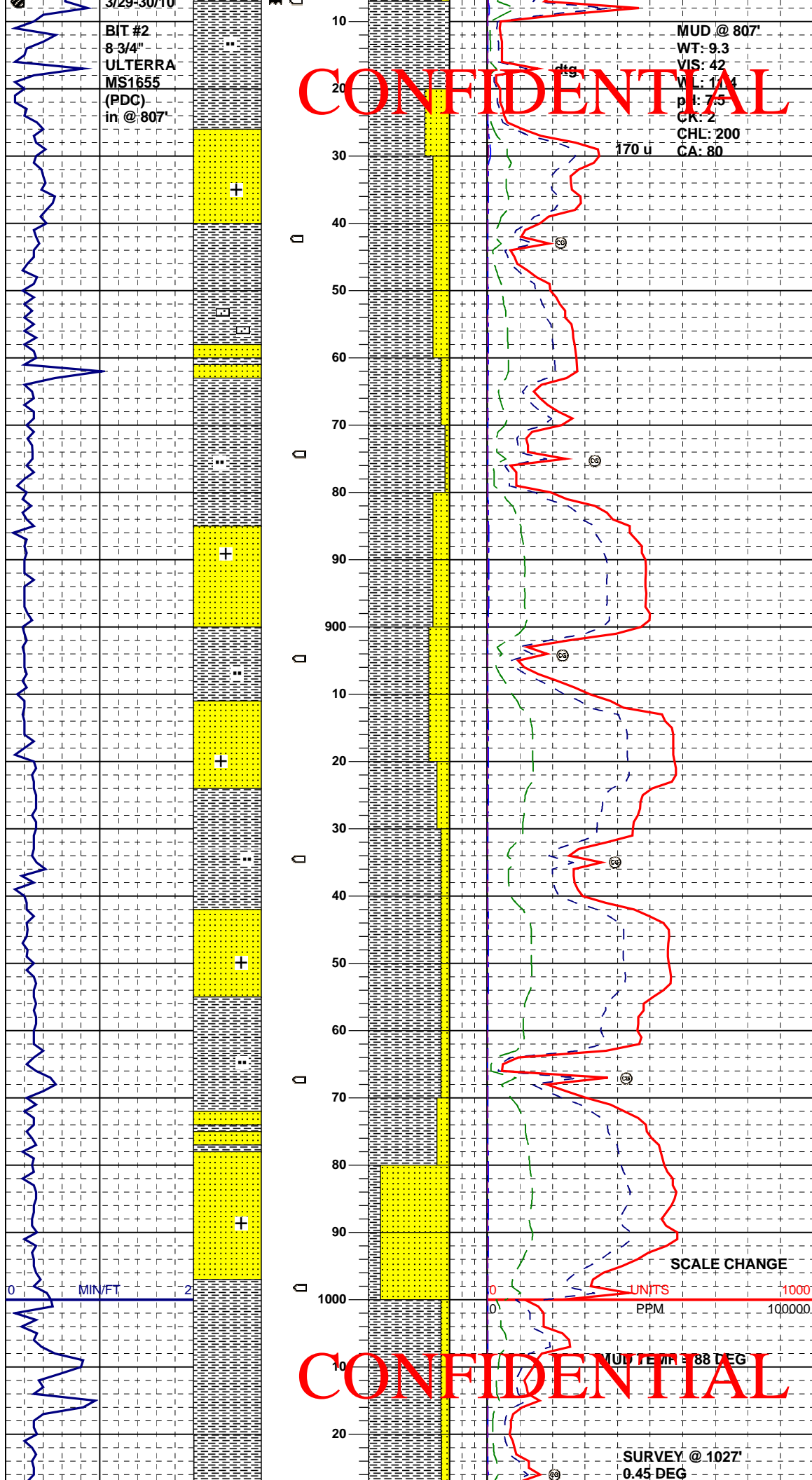
SH: lt to med gy, sbblky, frm-sl sft,  
slty, occ micro carb specks

SS: clr, wh, m to cse grained, clr &  
op, qtz & feld, sbang-sbrd, drls up  
into loose grains, NFSOC

SH: lt to mgy, sbblky, frm-sft, occ  
sticky, clayey, non silty when  
compared to shales above.

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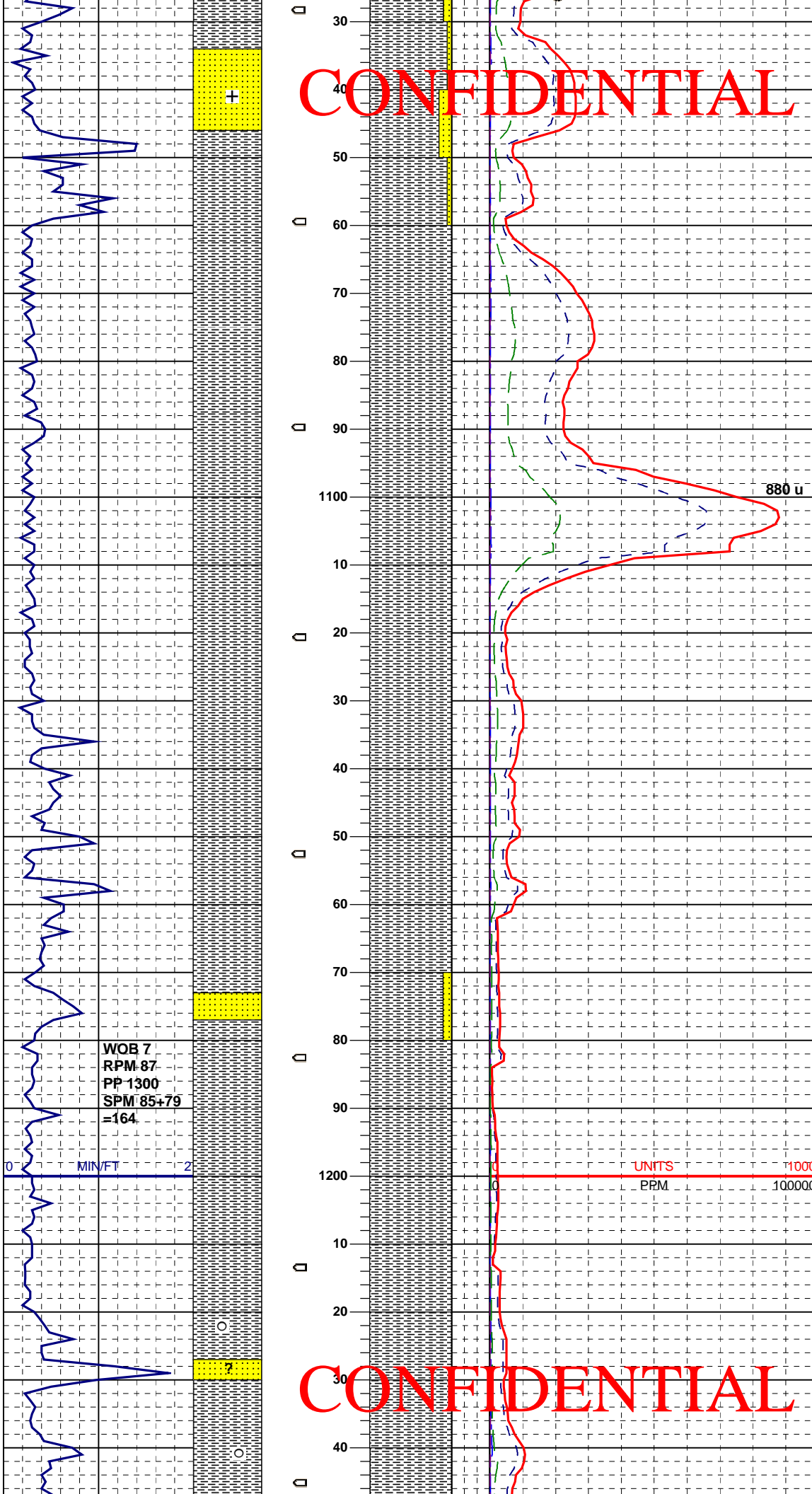
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SURVEY @ 1027'  
0.45 DEG

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SS: clr, wh, m to cse grained, clr & op, qtz & feld, sbang-sbrd, drls up into loose grains, NFSOC



SH: lt-mgy, sbbiky, frm-sft, non calc, non stly, clayey, could be described as claystone

Fractured shale?  
No sand in samples

SH: lt-mgy, sbbiky, frm-sft, non calc, non stly, clayey, could be described as claystone, rare fltg sd grains in shale

SS: wh, clr, mg, occ isolated cse grasins, unconsl, cr & op qtz & feld, NFSOC

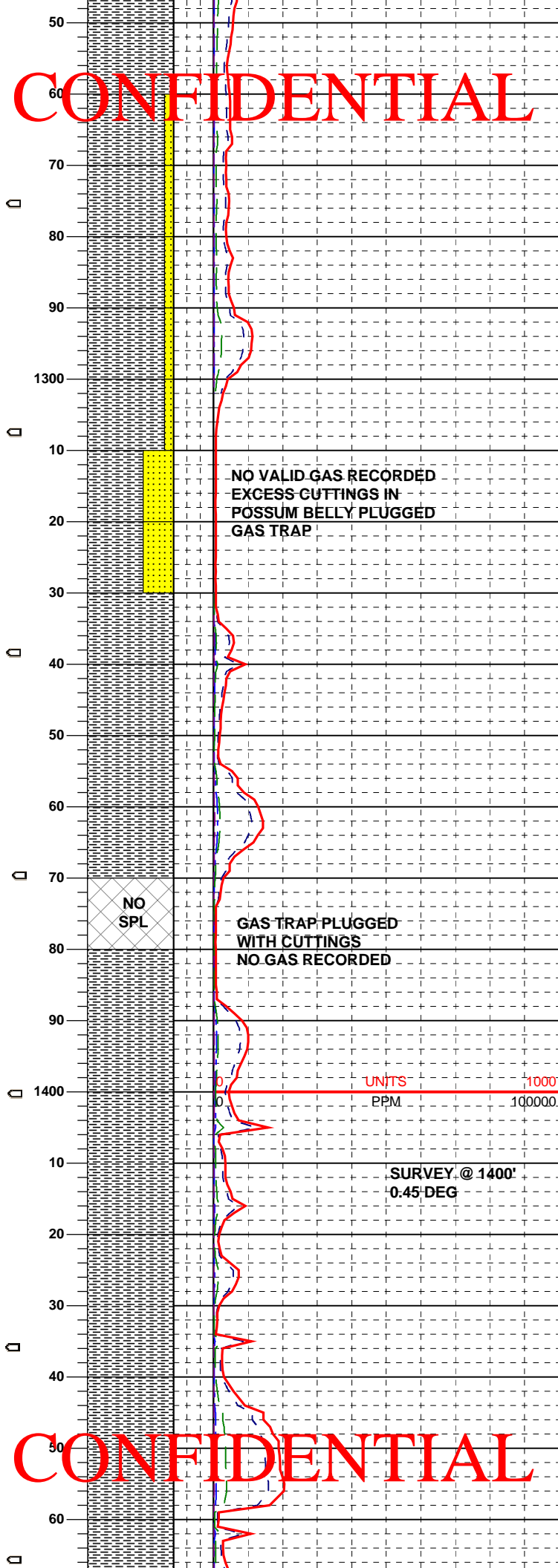
WOB 7  
RPM-87  
PP-1300  
SPM 85+79  
=164

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SH: lt to mgy, sbbiky, frm-sft, sticky ip, clayey ip. smooth text. non calc.

non slty, occ lse scat ss grains in spls.

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SS: wh, clr, pred med grained, some scat cse grains, unconsl, no clstrs, clr & op qtz, some feld, NFSOC

**NO VALID GAS RECORDED  
EXCESS CUTTINGS IN  
POSSUM BELLY PLUGGED  
GAS TRAP**

SS: clr, opaque, wh, v cse qtz, sbang-sbrd, clr grains, sm feld, unconsl lse grains, NFSOC

**NO SPL**

**GAS TRAP PLUGGED  
WITH CUTTINGS  
NO GAS RECORDED**

SH: lt to mgy, sbbkly, frm-sft, sticky ip, clayey ip, smooth text, non calc, grdg to claystone in part

UNITS 10000  
PPM 100000

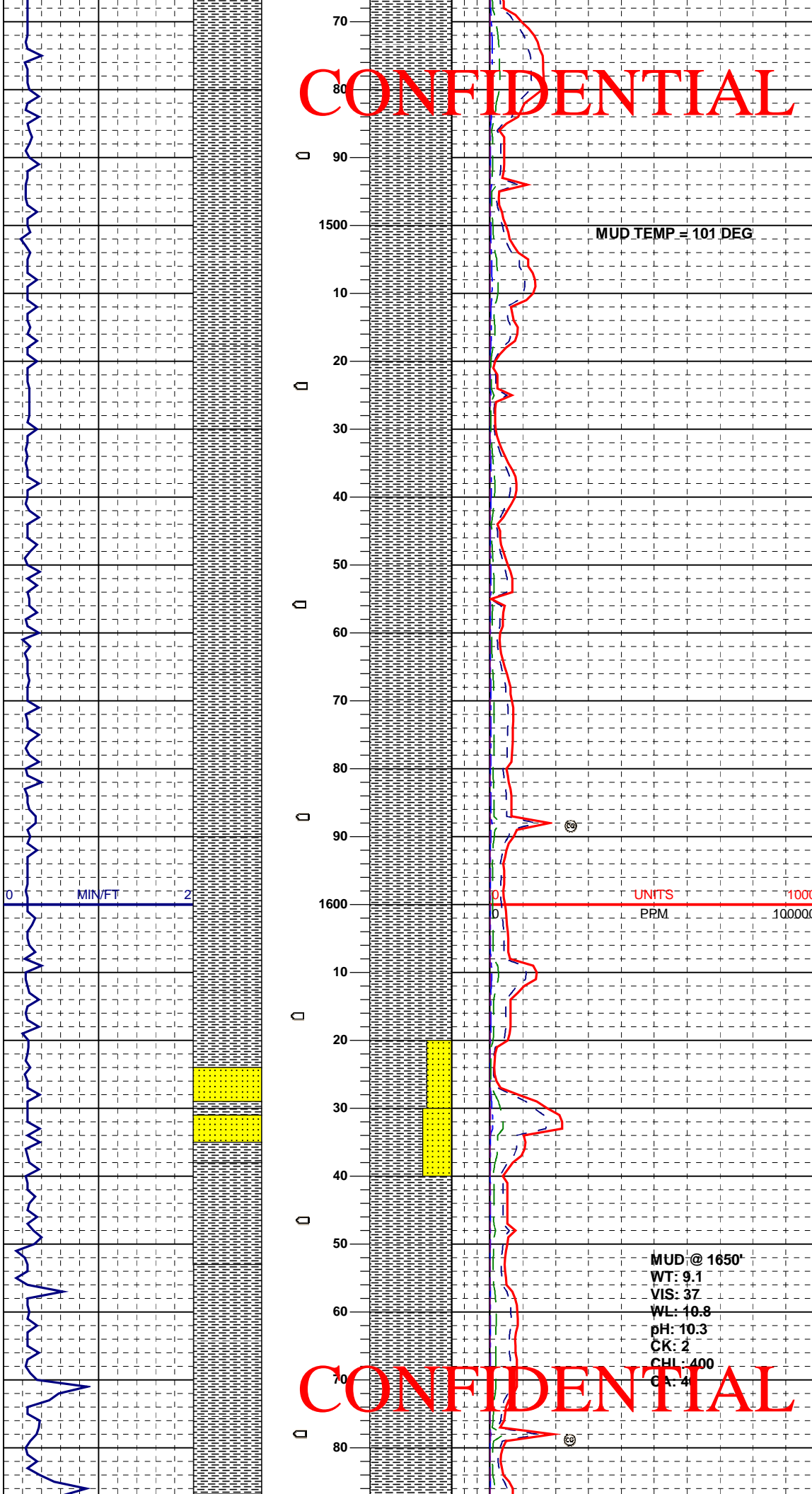
**SURVEY @ 1400'  
0.45 DEG**

SH: lt to mgy, sbbkly, frm-sft, sticky ip, clayey ip, smooth text, non calc, grdg to claystone in part

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SH: lt to mgy, sbbkly, frm-sft, sticky ip, clayey ip, smooth text, non calc, grdg to claystone in part, occ slty strk

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SH: lt to mgy, sbbly, frm-sft, sticky ip, clayey ip, smooth text, non calc, decr grd to claystone in part, incr slty ip

SH: lt to mgy, sbbly, frm-sft, sticky ip, v clayey ip, smooth text, non calc, abnt grd to claystone in part, sl slty ip

SH: lt to mgy, sbbly, frm-sft, sticky ip, v clayey ip, smooth text, non calc, abnt grd to claystone

SS: wh, clr, pred m - cse grained, some scat cse grains, pred unconsl, no clstrs, clr & op qtz, some feld, NFSOC

SH: lt - mgy, sbbly, frm-sft, sticky ip, v clayey ip, wh chky incl, smooth text, non calc, abnt grd to claystone

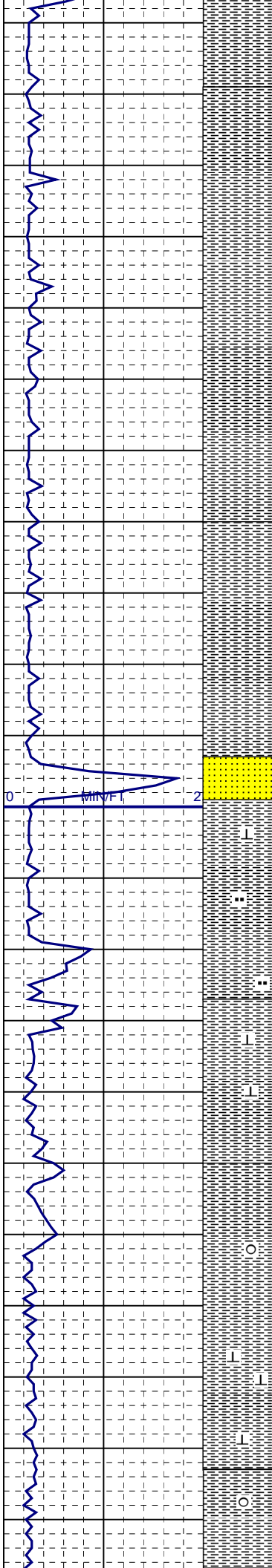
SH: lt - mgy, sbbly, frm-sft, sticky ip, v clayey ip, wh chky incl, smooth text, non calc, abnt grd to claystone, occ lse cse sd grain

MUD @ 1650'  
WT: 9.1  
VIS: 37  
WL: 10.8  
pH: 10.3  
CK: 2  
CHI: 400  
CA: 4

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90  
10  
20  
30  
40  
50  
60  
70  
80  
90  
1800  
10  
20  
30  
40  
50  
60  
70  
80  
90  
1900

SH: lt - mgy, sbbiky, frm-sft, sticky ip, v clayey ip, wh chky incl, smooth- wxy text, non calc, abnt grdg to claystone

SH: lt - mgy, sbbiky, frm-sft, sticky ip, v clayey ip, smooth- wxy text, non calc, occ slty frag

SH: lt - mgy, sbbiky, frm-sft, sticky ip, v clayey ip, smooth- wxy text, non calc, occ slty frag

SS: wh, clr, pred m - cse grained, ang - sbang, pred unconsl, no clstrs, clr & op qtz, some feld, occ blk mica frag, NFSOC

UNITS  
PPM 10000  
10000

SURVEY @ 1800°  
0.45 DEG

SH: aa w/ incr wh frag, v calc, chky ip, abnt chky / slty res

SH: tan - lt brn, lt - mgy, sbbiky, frm-sft, sticky ip, clayey ip, smooth- wxy text, CALC, occ slty frag

SH: aa w/ GREY and DARK GREY, NON CALC

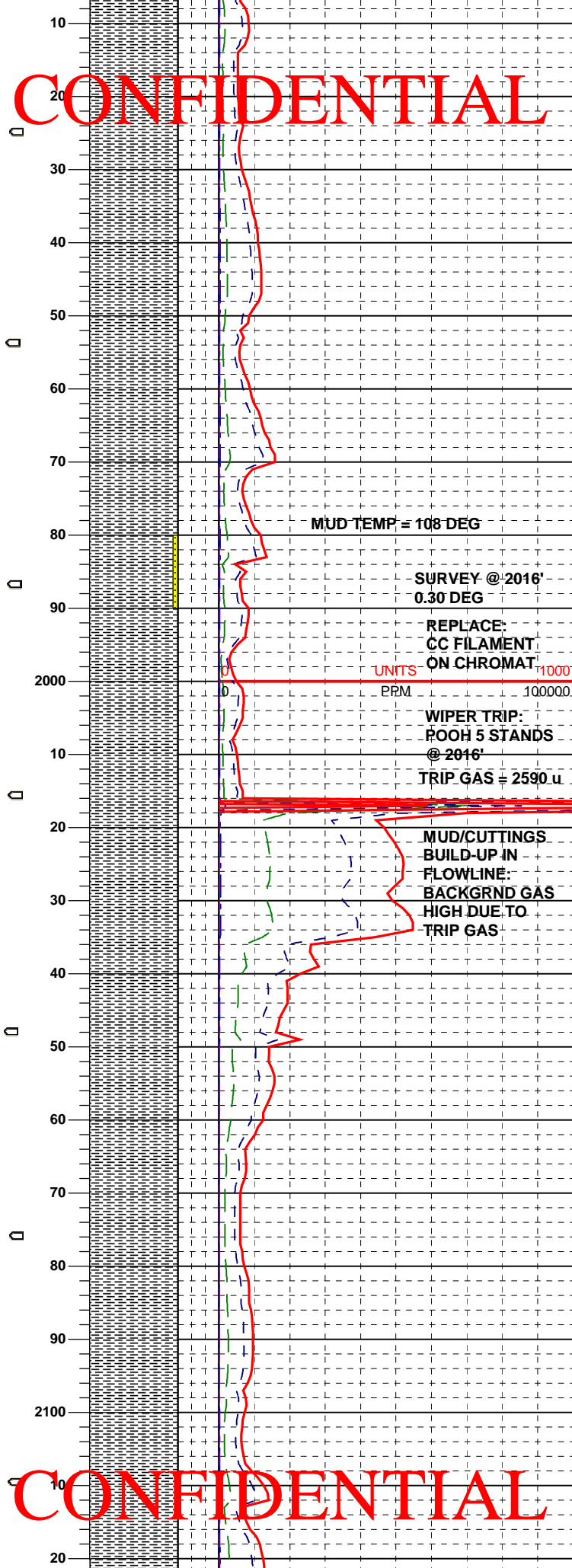
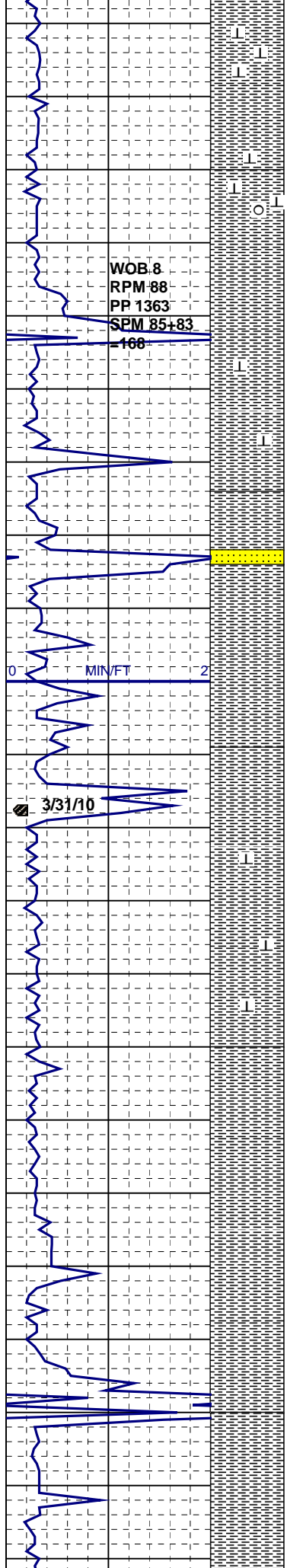
SH: gy - lt - mgy, sbbiky, frm-sft, sticky ip, v clayey ip, smooth- wxy text, non calc

SH: TAN- LT BRN, lt - mgy, sbbiky, frm-sft, sticky ip, clayey ip, smooth- wxy text, CALC, occ slty frag

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SH: gy - lt - mgy, occ tan, sbbiky, frm-sft, v clayey ip, smooth- wxy text, sl calc, poss lmv mtx

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SH: TAN- LT BRN, lt - mgy, sbbly, frm-sft, sticky ip, clayey ip, smooth-wxy text, CALC, occ slty frag

SH: aa w/ abnt cly / slty res thru sample, clr mica frag, v calc, occ cse sand grains

SH: gy - lt - mgy, occ tan, sbbly, frm-sft, v clayey ip, smooth- wxy text, sl calc

SH: TAN- LT BRN, lt - mgy, sbbly, frm-sft, sticky ip, clayey ip, smooth-wxy text, CALC, occ slty frag

MUD TEMP = 108 DEG

SURVEY @ 2016'  
0.30 DEG

REPLACE:  
CC FILAMENT  
ON CHROMAT

UNITS 1000  
PRM 100000

WIPER TRIP:  
POOH 5 STANDS  
@ 2016'  
TRIP GAS = 2590.u

MUD/CUTTINGS  
BUILD-UP IN  
FLOWLINE:  
BACKGRND GAS  
HIGH DUE TO  
TRIP GAS

SH: tan- lt brn, lt - mgy, sbbly, frm-sft, sticky ip, clayey ip, smooth- wxy text, CALC, occ slty frag, w consol sd frag w/ lse cmt, vf gr

SH: tan- lt brn, lt - mgy, sbbly, frm-sft, sticky ip, clayey ip, smooth- wxy text, sl calc, occ slty frag

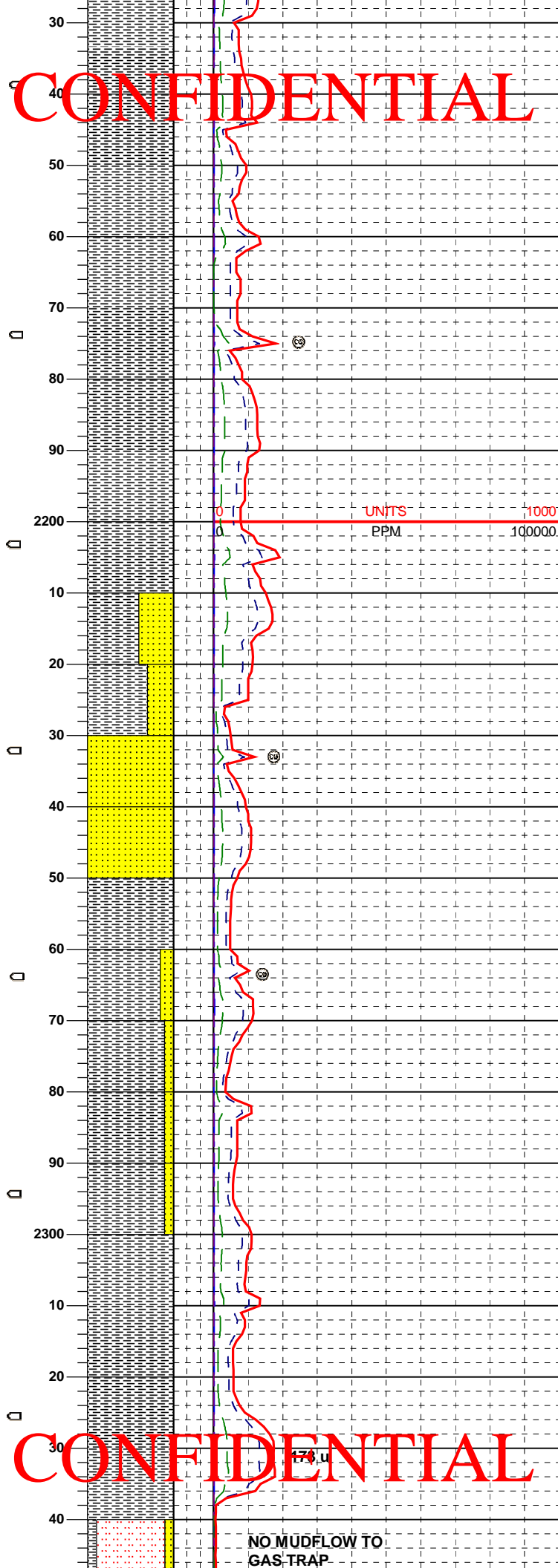
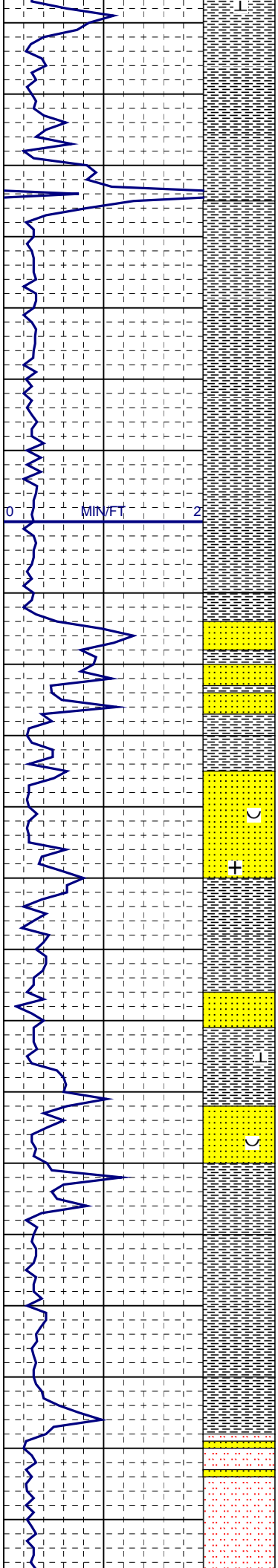
SH: gy - tan- lt brn, lt - mgy, sbbly, frm-sft, sticky ip, clayey ip, smooth-wxy text, sl calc, occ slty frag, occ lse c sd

SH: gy - lt gy - m gy, occ lt brn, sbbly, frm-sft, clayey ip, smooth-wxy text, non calc

SH: gy - lt gy - m gy, occ lt brn, sbbly, frm-sft, clayey ip, smooth-wxy text, non calc

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SH: LIGHT BROWN - TAN, gy - lt gy - m gy, sbblky, frm-sft, rthy - clayey ip, smooth- wxy text, tan - lt brn rthy frag = m calc, gy - m gy frag = non calc

SH: gy - lt gy - m gy, occ lt brn, sbblky, frm-sft, clayey ip, sl rthy, smooth- wxy text, non calc

SH: gy - lt gy - m gy, occ lt brn, sbblky, frm-sft, clayey ip, sl rthy, smooth- wxy text, non calc

SS: clr, wh, m to v cse, clr & op qtz, unconsol lse grains, qtz & some feld, scat to abnt clr and blk mica flakes NFSOC

SH: ltg, ltbrn to tan, mgy, sbblky-sbply, occ flakey and sl fissle, calc, slty ip,

SH: lt brn, gy-brn, sbblky to plty, frm, non calc,

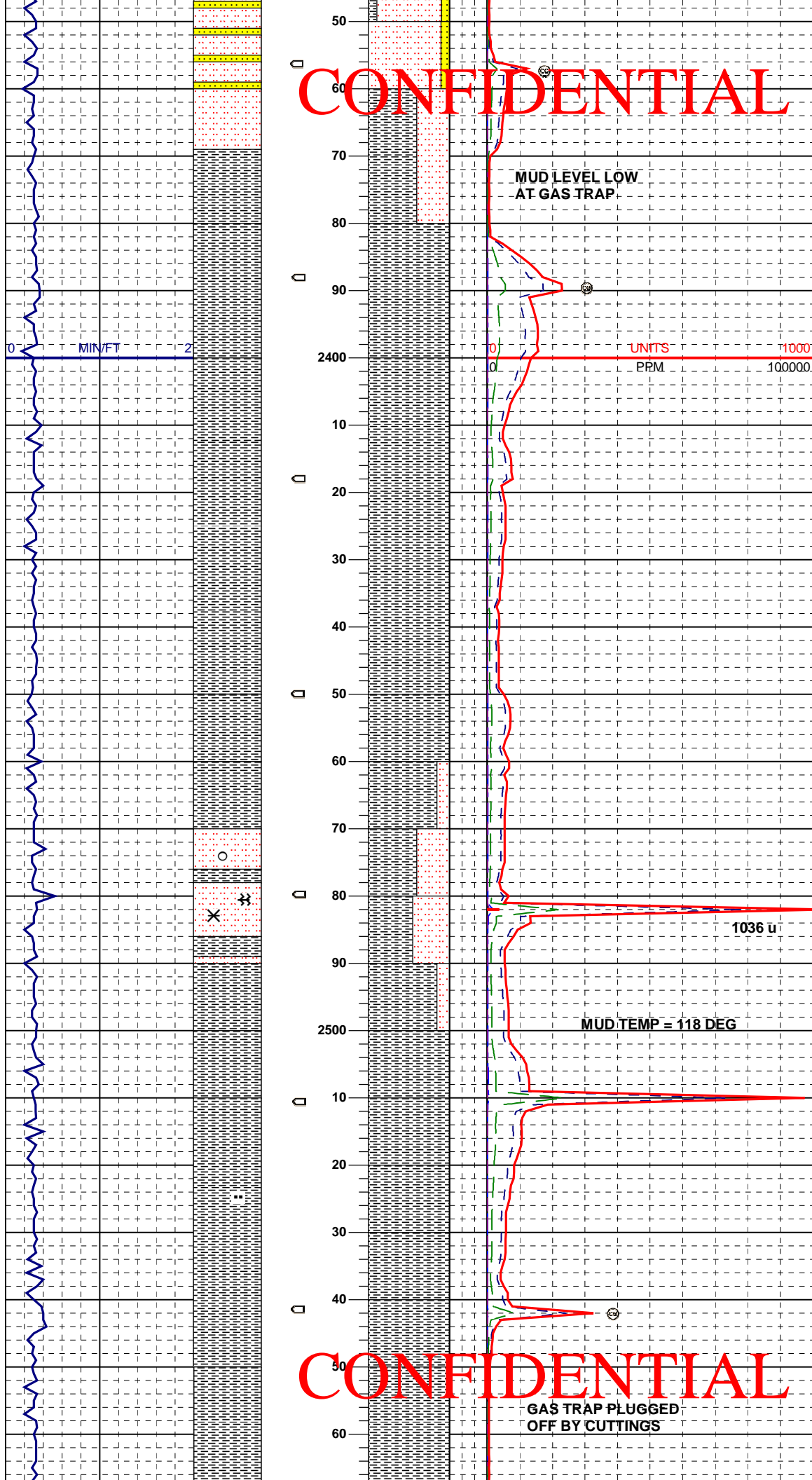
SH: lt to mgy, sbblky-sbply, frm, slty ip, non-calc, smooth texture

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NO MUDFLOW TO GAS TRAP

SLTSTN: wh, blk, sbblky, frm

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SLTSTN: wh, blk, sbbkly, lmm, tuffaceous, some micro ltrn specks, sl calc ip, sdy ip, some intbds of SS: wh, vf-fg, occ blk specks, sl calc, fri, sft, NFSOC

SH: lt to mgy, sbbkly-sbply, frm, slty ip, non-calc, smooth texture

SH: lt to mgy, occ ltrn, sbbkly-sbply, slty ip, gen non-calc, smooth, frm to sft

SLTSTN: ltgy, slightly s&p, blk mica spks, sft, shly, slightly sdy, occ large loose crystals of calcite in spl, poss fracture filling. NFSOC

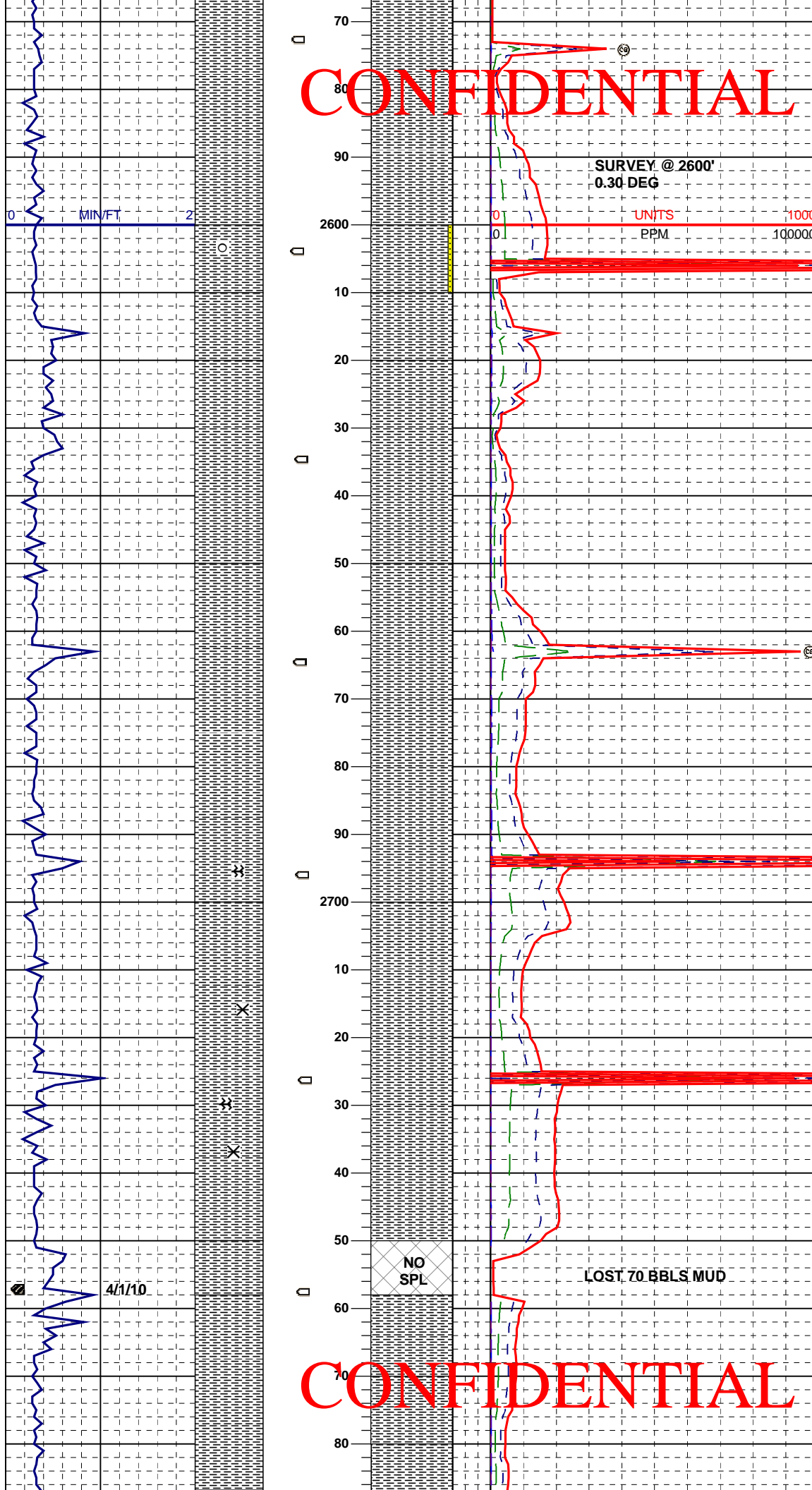
SH: lt to mgy, sbbkly-sbply, frm-sl sft, scat micro spks of mica, sl calc ip, slty ip, occ scattered lse qtz grains in spl.

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GAS TRAP PLUGGED OFF BY CUTTINGS

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SH: lt to mgy, sbblky-sbply, occ tr  
brn shale, frm-sl sft, stly ip, scat  
mica spks, occ tr SLTSTN in spls,



**SURVEY @ 2600'**  
**0.30 DEG**

UNITS 0 1000  
PPM 0 100000

**2936 units (downtime gas)**

**946 u**

SH: lt-mgy, sbblky-sbply, frm-sft, rare  
calcite crystal, poss frac fill? stly ip,  
shale is gen non-calc

**2564 u**

**2925 u**

SH: lt-mgy, sbblky-sbply, frm-sft, scat  
wh to clr, calcite crystals, prob frac  
fill, stly ip, shale is gen non-calc

**TOOH @ 2757':**  
**CLEAN BIT & TOOLS.**  
**COND MUD, STAGE BACK**  
**IN, CIRC & CLEAN HOLE**  
**@ 1921' 5064 UNITS**  
**@ 2418' 5846 UNITS**  
**@ 2670' 2800 UNITS**

**LOST 70 BBLs MUD**

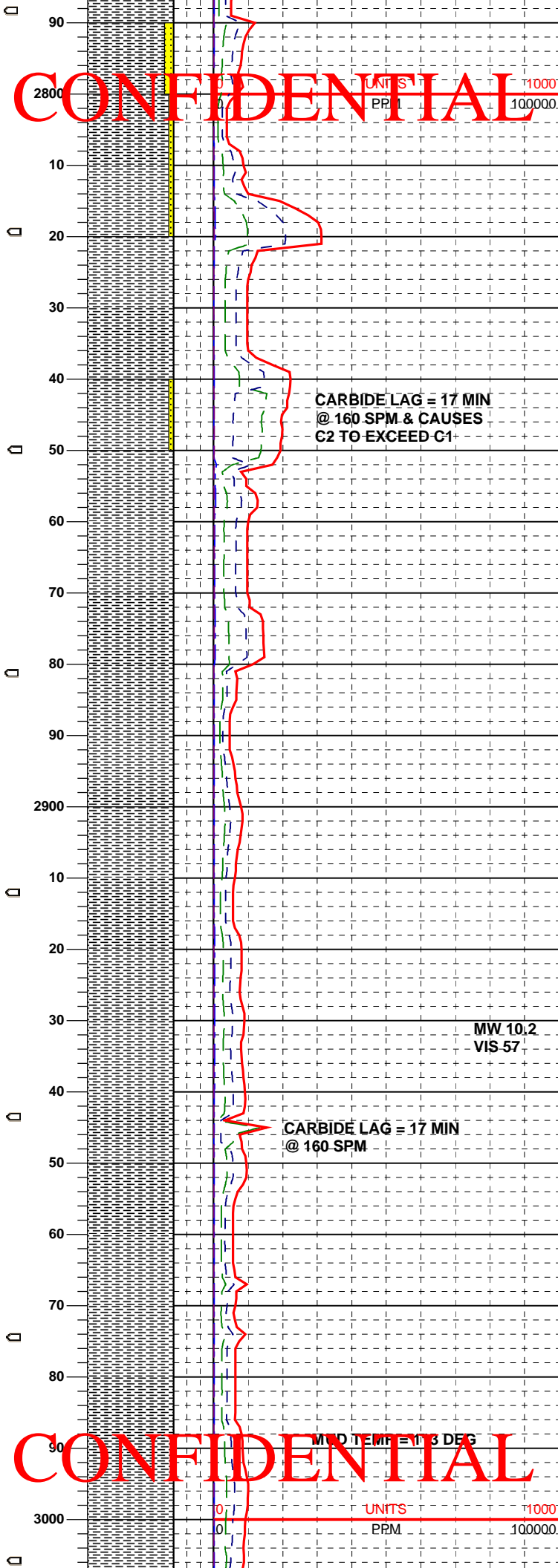
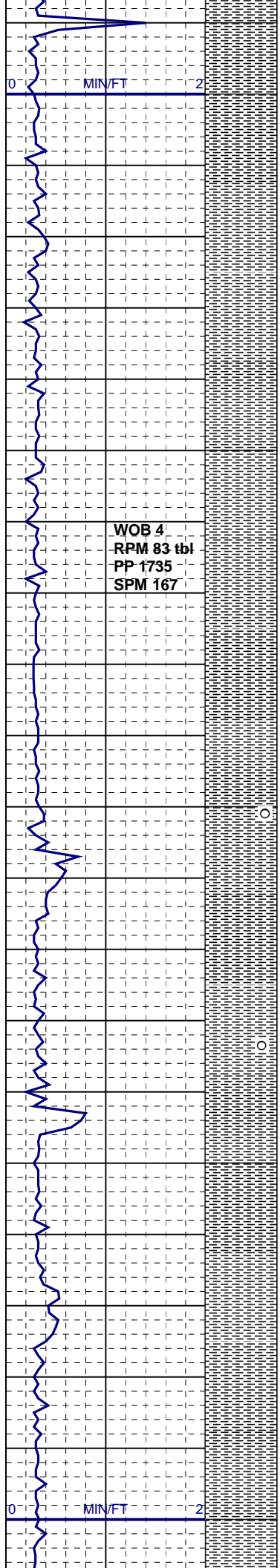
**NO  
SPL**

4/1/10

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SH: mgy, 20 % gy-brn, sbblky-sbply,  
frm, sl hd, sl calc ip, smooth, occ  
micro blk spks

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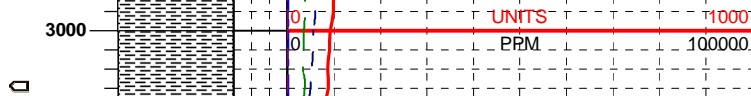
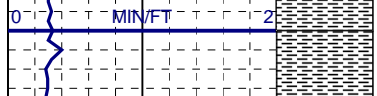


SS: cl, wh, sl s&p, vf-mg, occ v cse grains, a few wk calc cmtd clstrs, w/ blk mica spks, otherwise unconst lse grains, sbang-sbrd, NFSOC

SH: mgy, gy-brn, sbbkly-sbplty, frm, sl hd, sl calc ip, smooth, occ micro blk spks, scat pieces wh-crm, bentonite in spls

SH: mgy, gy-brn, sbbkly-sbplty, frm, sl hd, sl calc ip, smooth, occ micro blk spks, scat pieces tan--crm, shale, calc, mod, occ tr of vfg, s&p, ss, calc, sft, with blk mica flakes

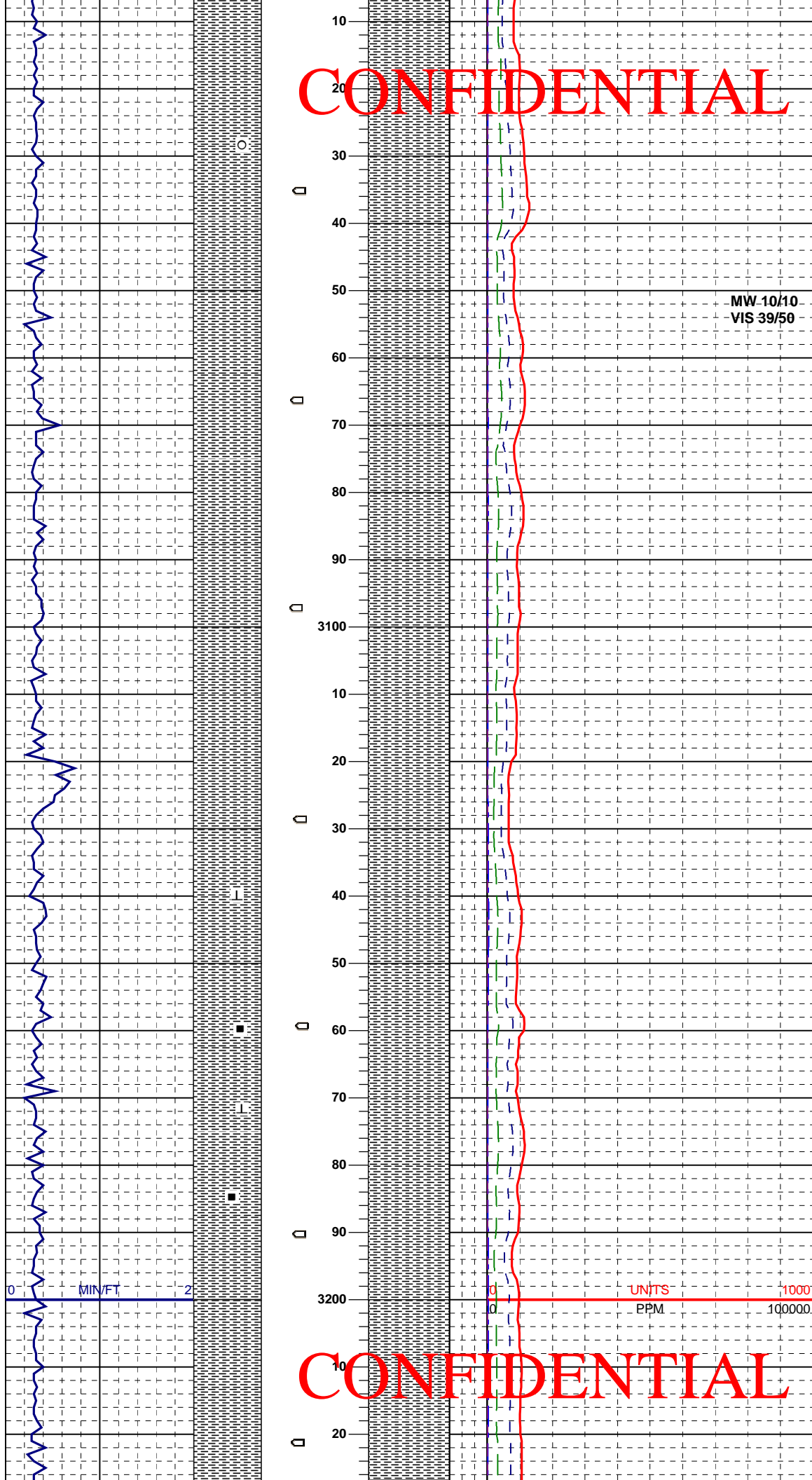
**CONFIDENTIAL**



SH: mgy, tr lt-brn, sbbkly-sbplty, frm, sl hd, sl calc ip, smooth, occ micro blk spks, scat pieces tan--crm, calc, shale, mod hd, rare, ltgy,vfg, s&p,

ss, calc, sft, with blk mica flakes

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MW 10/10  
VIS 39/50

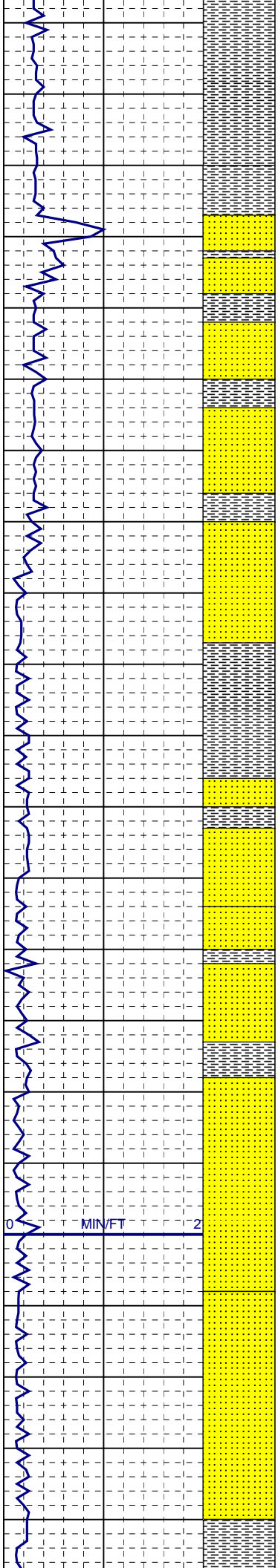
SH: mgy, tr lt-brn, sbbkly-sbplty, frm,  
sl hd, sl calc ip, smooth, occ micro  
blk spks

SH: lt-mgy, sbbkly-sbplty, sft when  
wet, some chips with micro blk  
spks, calc ip,

SH: lt to mgy, sbbkly-sbplty, sft-frm,  
mod calc, scat blk-brn grains of  
organic? material, no cut or fluor,  
scat traces of wh-crm, bent in spls

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CONFIDENTIAL



0  
10  
20  
30  
40  
50  
60  
70  
80  
90  
3300  
10  
20  
30  
40  
50  
60  
70  
80  
90  
3400  
10  
20  
30  
40

SH, lt-mgy, sbbly-sbply, sft frm, occ sl hd, smooth, gen sl to mod calc, occ rare trace bent fragment aa

SS: clr - trnsl, wh, v cse, ang - sbang, clr & op qtz, uncnsl lse grains, qtz & some feld, poss faint yel mineral FLOR?, n cut

SS: clr - trnsl, wh, v cse, ang - sbang, clr & op qtz, cln sd, uncnsl lse grains, qtz & some feld, v calc, 5% pale yel mineral FLOR?, n cut

SS: clr - trnsl, wh, v cse - m gr, ang - sbang, clr & op qtz, cln sd, uncnsl lse grains, qtz & some feld, v calc, 5% scattered faint pale yel mineral FLOR?, n cut

SH, lt-mgy - lt brn, sbbly-sbply, sft frm, occ sl hd, rthy - org, gen sl to mod calc, slty ip, occ rare trace bent fragment

SS: clr - trnsl, wh, v cse - m gr, ang - sbang, clr & op qtz, cln sd, uncnsl lse grains, qtz & some feld, 5% scattered faint pale yel mineral FLOR?, n cut

SS: aa, incr cln

SS: clr - trnsl, wh, cse - m gr, incr f gr, ang - sbang, clr & op qtz, cln sd, uncnsl lse grains, qtz & some feld, scattered faint pale yel poss mineral FLOR?, n cut

SS: clr - trnsl, wh, m gr - f gr, scat c, ang - sbang, clr & op qtz, cln sd, uncnsl lse grains, qtz & some feld, scattered faint pale yel poss mineral FLOR?, n cut

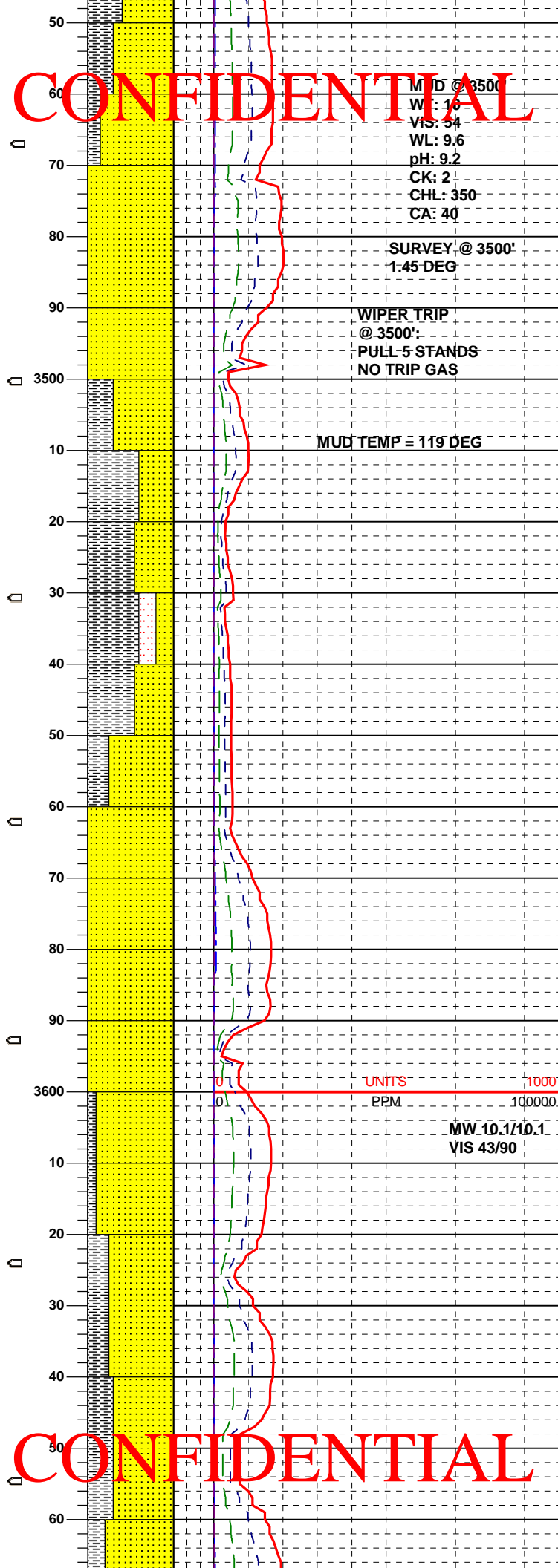
SH, lt-mgy - lt brn, sbbly-sbply, sft frm, occ sl hd, rthy - org, gen sl to mod calc, slty ip

SS: clr - trnsl, wh, m gr - f gr, scat c,

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ang - sbang, clr & op qtz, cln sd, unconsl lse grains, qtz & some feld, scattered faint pale yel poss mineral FLOR?, n cut

SS: clr - trnsl, wh, pred m gr - f gr, occ vf, scat c, ang - sbang, clr & op qtz, cln sd, unconsl lse grains, qtz & some feld, trace faint pale yel poss mineral FLOR?, n cut

SS: aa very clean sand

SH: lt-mgy - lt brn, sbbly-sbply, sft-frm, occ sl hd, rthy - org, gen sl to mod calc, slty ip

SH: lt-mgy - lt brn lt tan, sbbly-sbply, sft-frm, occ sl hd, rthy, gen sl to mod calc, slty ip, abnt grdg - sltst, scat sd gr

SS: clr - trnsl, wh, pred m gr - f gr, occ vf, abnt c, ang - sbang, clr & op qtz, cln sd, unconsl lse grains, qtz & some feld, trace faint pale yel poss mineral FLOR?, n cut

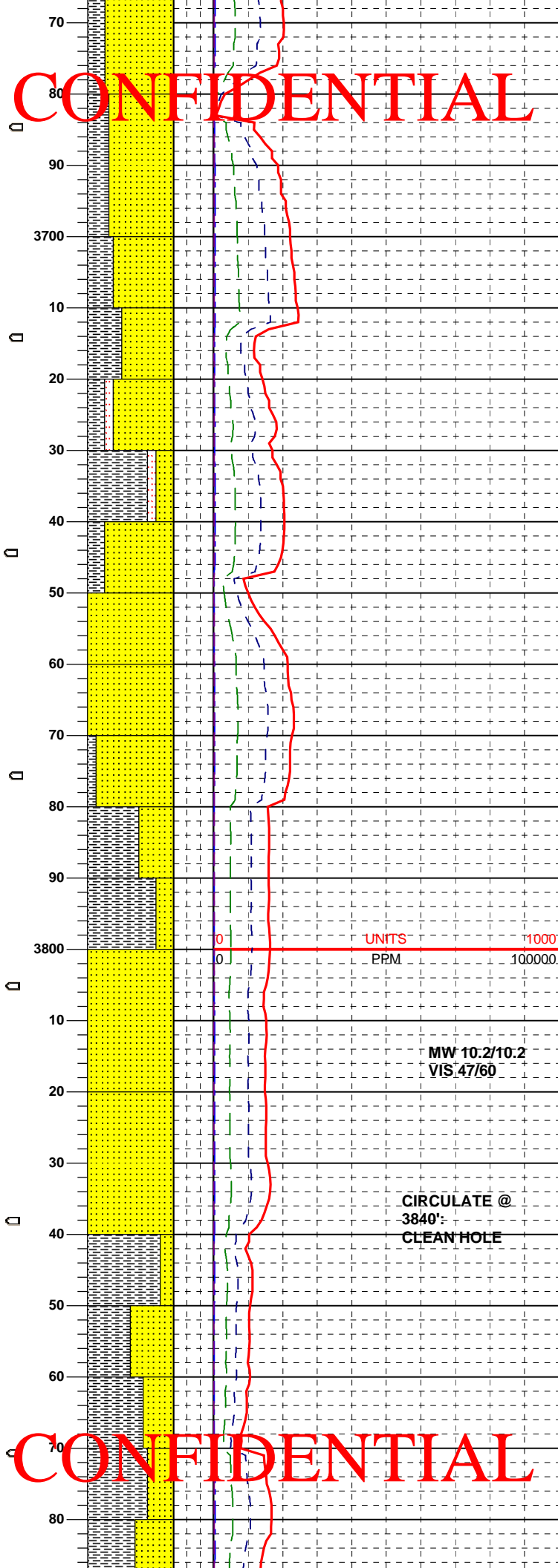
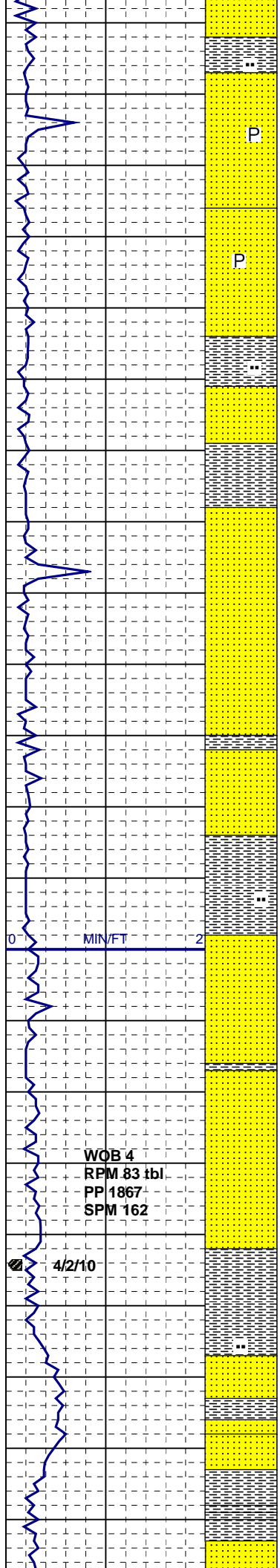
SS: clr - trnsl, wh, pred m gr - f gr, occ vf, abnt c, ang - sbang, clr & op qtz, cln sd, unconsl lse grains, qtz & some feld, trace faint pale yel poss mineral FLOR?, n cut

SS: clr - trnsl, wh, pred m gr - f gr, occ vf, ang - sbang, clr & op qtz, cln sd, unconsl lse grains, trace faint pale yel poss mineral FLOR?, n cut

SH: lt-mgy - lt brn lt tan, sbbly-sbply, sft-frm, occ sl hd, rthy, gen sl to mod calc, slty ip

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SS: clr - trnsl, wh, pred m gr - f gr, occ vf, ang - sbang, clr & op qtz, cln sd, unconst lse grains, tr pyr, NFSOC

SS: clr - trnsl, wh, pred m gr - f gr, occ vf, ang - sbang, clr & op qtz, cln sd, unconst lse grains, NFSOC

SS: clr - trnsl, wh, pred m gr - f gr, occ vf, ang - sbang, clr & op qtz, unconst lse grains, occ calc cemented clus, occ lse feld, slty res throughout sample, tr pyr, NFSOC

SH: lt gy-mgy - lt brn lt tan, crm, sbblky-sbply, sft frm, occ sl hd, rthy, gen sl to mod calc, slty ip, bent frag, blk mica frag

SS: clr - trnsl, wh, pred m gr - f gr, ang - sbang, clr & op qtz, unconst lse grains, occ calc cemented clus, occ lse feld, NFSOC

SH: lt gy-mgy - lt brn lt tan, sbblky-sbply, sft frm, occ sl hd, rthy - org, n calc, slty ip, bent ip, lse blk carb frag ??

SS: clr - trnsl, wh, pred m gr - f gr, pred lse ang - sbang, clr & op qtz, unconst lse grains, occ lse feld, NFSOC

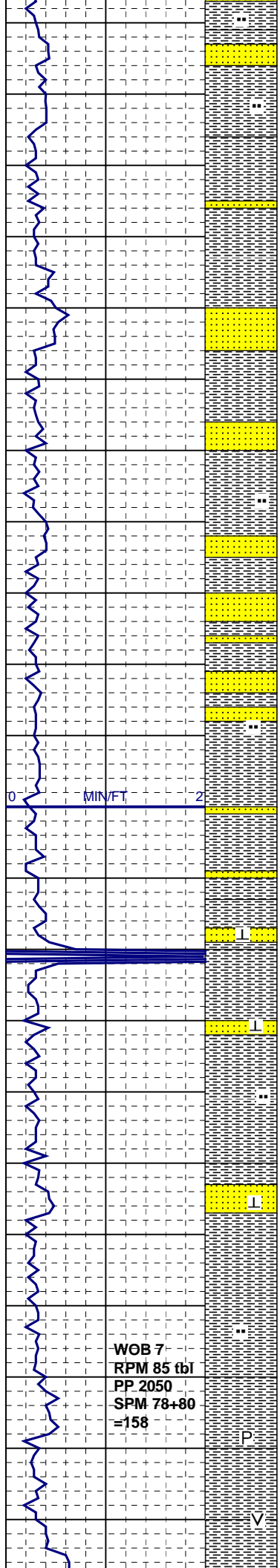
SS: clr - trnsl, wh, v cse, ang - sbang, clr & op qtz, unconst lse grains, qtz & some feld, v calc

SH: lt gy-mgy, lt brn - lt tan, sbblky-sbply, sft frm, occ sl hd, rthy - org, n calc, slty ip, poss bent ip, tuf ??

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SH: lt gy-mgy, lt brn - lt tan, sbblky-sbply, sft frm, occ sl hd, rthy - org, n calc, slty, poss bent mt, tuf ??

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90  
10  
20  
30  
40  
50  
60  
70  
80  
90  
4000  
10  
20  
30  
40  
50  
60  
70  
80  
90  
4100

SH: lt gy-mgy, lt brn - lt tan, sbbkly-sbply, sft frm, occ sl hd, rthy - org, n calc, sl slty, poss bent mtx, blk volcanic material?? tuf ??

SH: lt gy-mgy, lt brn - lt tan - tan sbbkly-sbply, sft frm, occ sl hd, rthy - org, cly ip, n calc, sl slty, poss bent mtx, dk hd tuf mat??

SS: clr - trnsl, wh, v cse, ang - sbang, clr & op qtz, uncons lse grains, qtz & some feld, v calc, scat slty gr

SH: lt gy-mgy, lt brn - lt tan - tan sbbkly-sbply, sft frm, occ sl hd, rthy - org, clayey in part, n calc, sl slty, poss bent mtx, dk hd tuf mat??

SS: clr - trnsl, wh, v cse, ang - sbang, clr & op qtz, uncons lse grains, qtz & some feld, V CALC, partly composed of clear calcite rhombs, part safe carb mud additive?

SH: lt gy-mgy, lt brn - lt tan - tan sbbkly-sbply, sft frm, occ sl hd, rthy - org, sl clayey in part, N CALC, sl slty, poss bent mtx, sl tuf sh?? jet black volcanic material?

SH: lt brn, gy-brn, occ ltgy, sbbkly-sbply, frm, sft, slty, calc ip, SS in spl may be partly cvgs from wiper trip?

SH: gy-brn to brn, sbbkly, frm, sl hd, slty, non to mod calc, occ blk spks, rare volc rock frags in spls, tr pyrite

UNITS  
PPM 1000  
100000

MUD TEMP = 134 DEG

SURVEY @ 4025'  
1.3 DEG

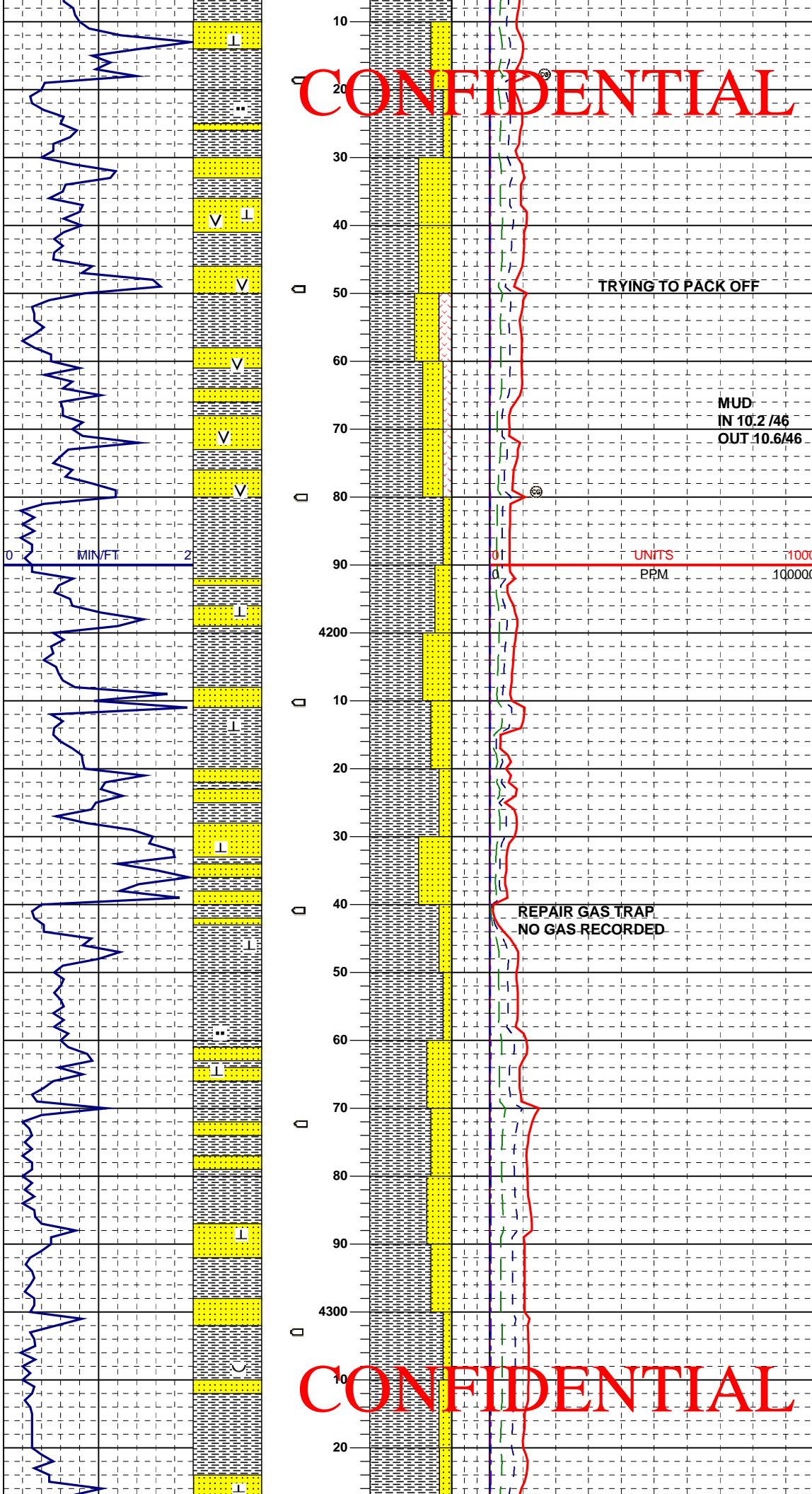
WIPER TRIP  
@ 4025':  
PULL 5 STANDS

140 u

WOB 7  
RPM 85 tbi  
PP 2050  
SPM 78+80  
=158

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SS: wh, clr, f-mg, occ cse grained, very calc, drls up into loose grains and calcite crystals, prob tite and well cemented. NFSOC

SS: clr, wh, trnsl, f-cse grained, unconsol loose crystals and grains, very calc cmt, drls up as clr calcite rhombs, sbang to sbrd qtz, scat frags of wh, siliceous tuff, some colored blk and white w/ m xln.

VOLCANICS: tuff, wh, siliceous ip, calc ip, hd to frm, sm mica incl, may be fragments incorporated in SS; some fragments of blk, basalt, hard, some blk, soft, shale, grnd up basalt?

SH: lt brn, gy-brn, sbbkly, sbply, occ lt gy, slty, frm to sft, calc ip

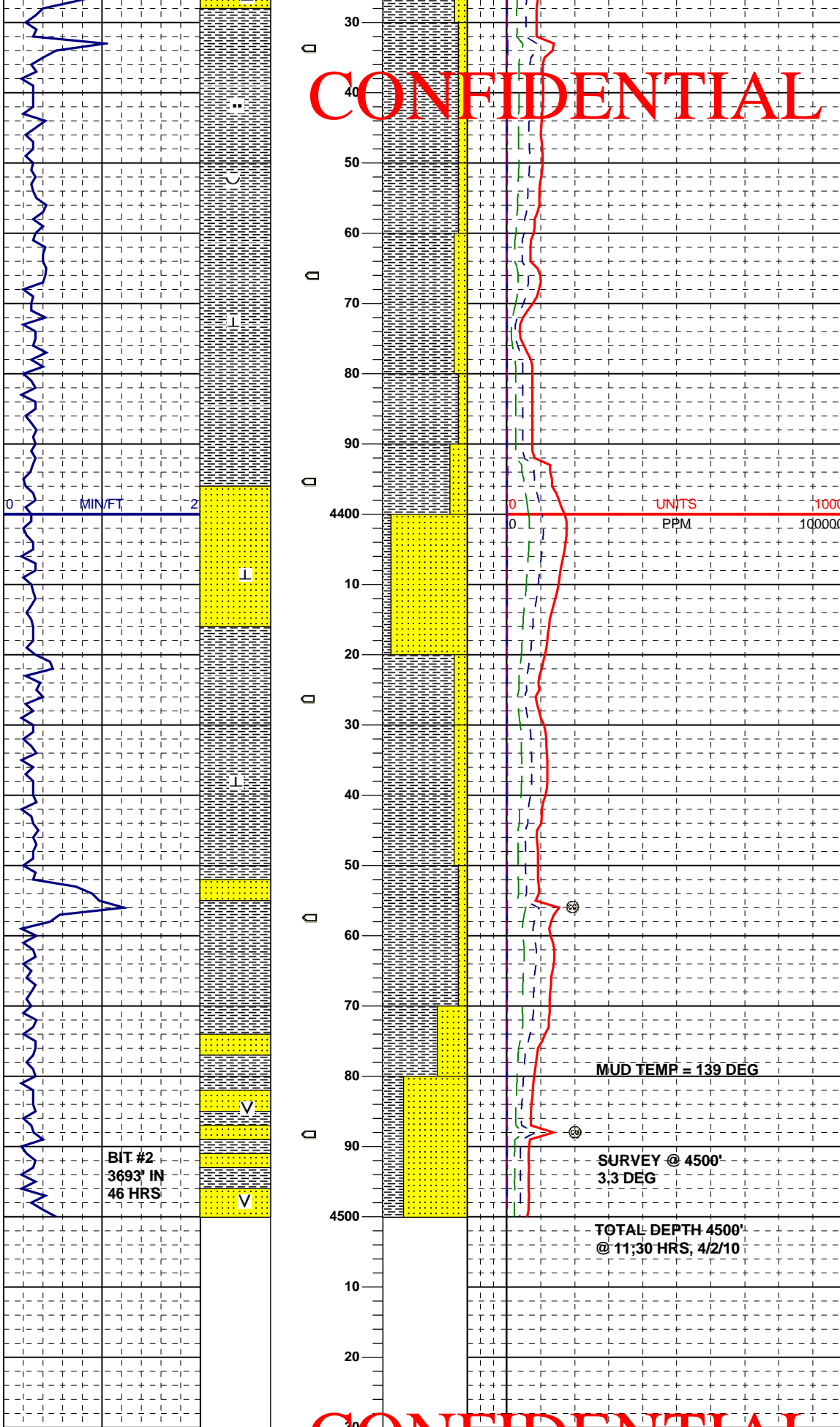
SS: wh, clr, trnsl, f-mg, occ cse grained, clr & op grains, very calc, calcite cmt but drills up into loose crystals and grains. NFSOC

SH: lt brn, gy-brn, sbbkly, sbply, occ lt gy, slty, frm to sft, calc ip

SS: clr, trnsl, wh, f-cse grained, tr v cse grains, clr & op qtz, calcite cement, drls up into loose unconsolidated grains, NFSOC

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SH: ltgy, occ mgy, sbbkly-sbply, frm, slty ip, calc ip, scat free blk mica flakes in spls, occ piece of wh-crm, bent in spls

SS: wh, clr, m-cse grained, occ v cse grained, ang to sbrd, grains, mod amount of calcite xls, very calc, drills up into loose grains and crystals, NFSOC

SH: ltgy, ltbrn, gy-brn, sbbkly-sbply, frm, sft in part, slty, calc, scat pieces of wh bent flakes in spls, tuffaceous ip

SS: wh, clr, trnsl, f-cse grained, unconsl lse grains & xls, calcite and qtz, scat pieces of hard, black, basalt, in spl, est 1%, NFSOC

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