CONFIDENTIAL

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| | |
|---|---|
| **OPERATOR:** | **BRIDGE ENERGY LLC.** |
| **WELL:** | **ML INVESTMENTS #1-10** |
| **LOCATION:** | **NE NW, SEC. 10, T8N,R4W** |
| **COUNTY:** | **PAYETTE** |
| **STATE:** | **IDAHO** |
| **SPOT:** | **862.9' FNL; 2301.3' FWL** |
| **ELEVATION:** | **GL: 2247'; KB: 2260' est** |
| **FIELD:** | **WILDCAT** |
| **SPUD DATE:** | **MARCH 2, 2010** |
| **TD DATE:** | **MARCH 11, 2010** |
| **DATES LOGGED:** | **MARCH 2, 2010 TO MARCH 11, 1010** |
| **DEPTHS LOGGED:** | **60' TO 6800'** |
| **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

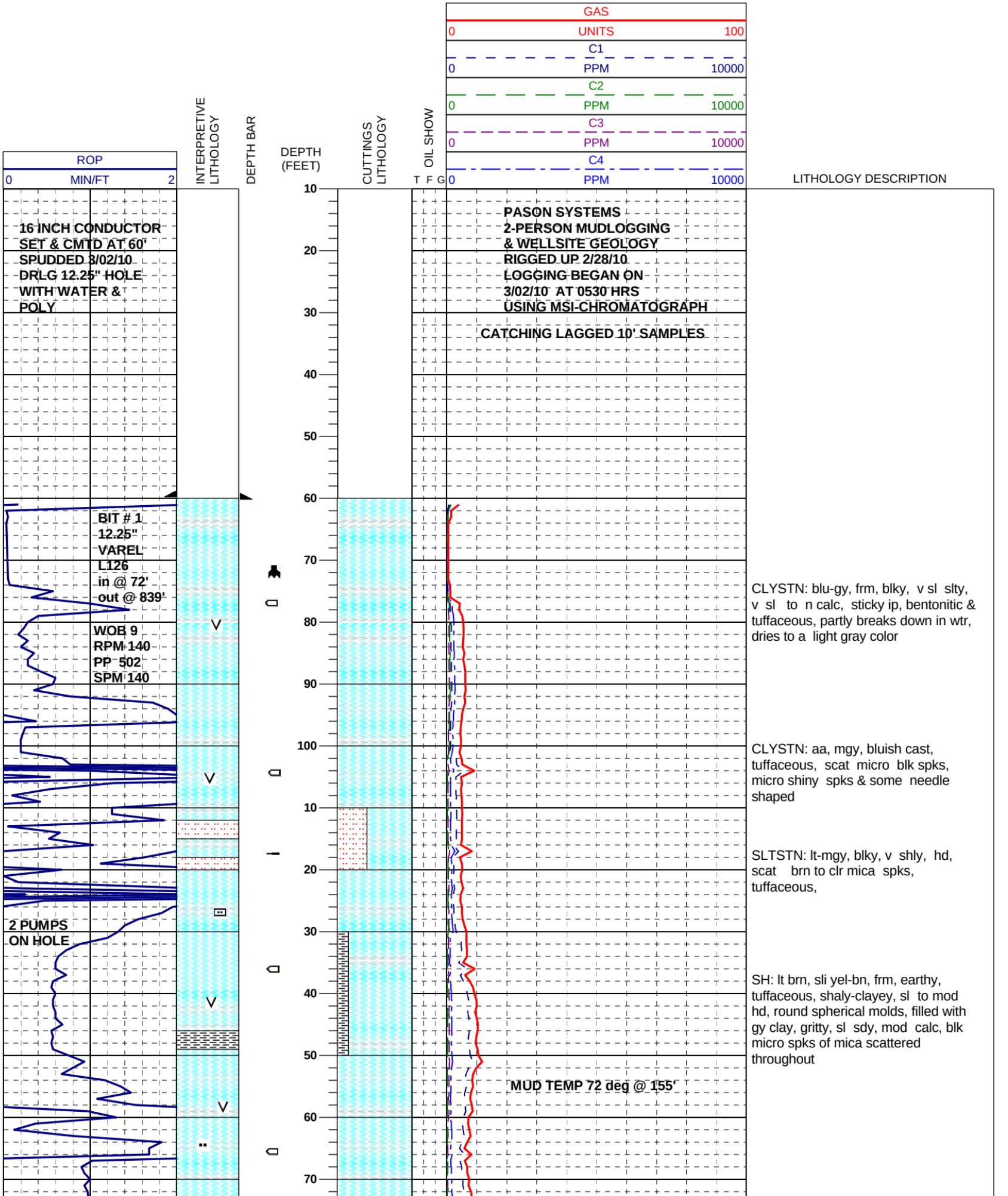
| | | | |
|---|---|---|---|
| Claystone | No Sample | Sandstone | Shale |
| Siltstone | Tuff | Volcanics | |

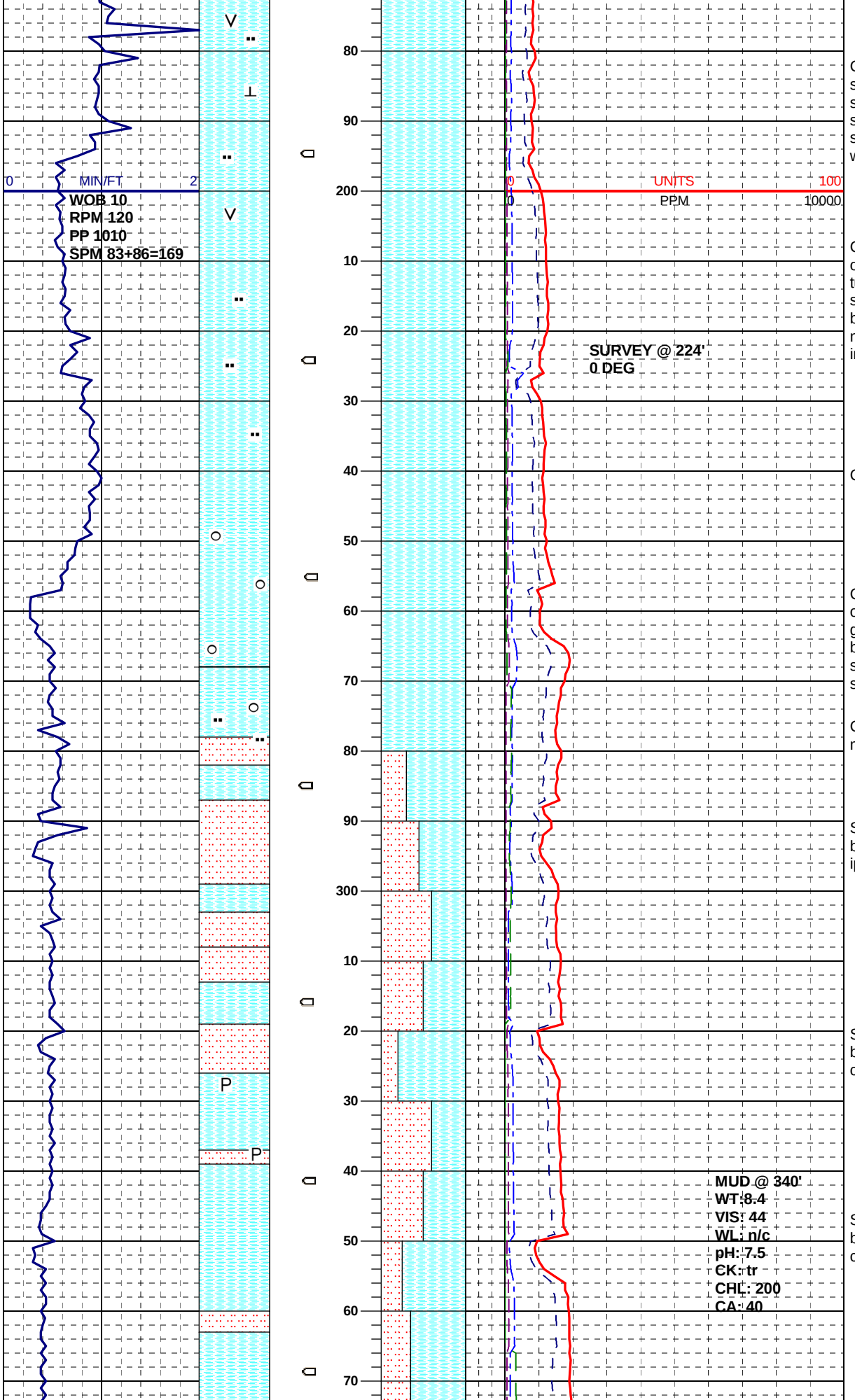
## MODIFIERS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| B | Bentonite | ⊥ | Calcareous | ■ | Carbonaceous Flakes | + | Feldspar |
| ¶ | Heavy Dark Minerals | ◡ | Micaceous | | Pebbles | P | Pyrite |
| ○ | Sand Grains | | Sandstone Stringers | | Sandy | Λ | Siliceous |
| | Silt Stringers | ▪▪ | Silty | V | Tuffaceous | | |

## ENGINEERING SYMBOLS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Bit Change | | Casing | | Casing | | Connection |
| CG | Connection Gas | | Midnight Depth | — | Off Bottom | TG | Trip Gas |


GAS
0 UNITS 100
C1
0 PPM 10000
C2
0 PPM 10000
C3
0 PPM 10000
C4
0 PPM 10000
ROP
0 MIN/FT 2
INTERPRETIVE LITHOLOGY
DEPTH BAR
DEPTH (FEET)
CUTTINGS LITHOLOGY
OIL SHOW
T F G
LITHOLOGY DESCRIPTION
16 INCH CONDUCTOR SET & CMTD AT 60'
SPUDDED 3/02/10
DRLG 12.25" HOLE WITH WATER & POLY
PASON SYSTEMS
2-PERSON MUDLOGGING & WELLSITE GEOLOGY
RIGGED UP 2/28/10
LOGGING BEGAN ON 3/02/10 AT 0530 HRS
USING MSI-CHROMATOGRAPH
CATCHING LAGGED 10' SAMPLES
BIT # 1
12.25"
VAREL
L126
in @ 72'
out @ 839'
WOB 9
RPM 140
PP 502
SPM 140
2 PUMPS ON HOLE
MUD TEMP 72 deg @ 155'
CLYSTN: blu-gy, frm, blky, v sl slty, v sl to n calc, sticky ip, bentonitic & tuffaceous, partly breaks down in wtr, dries to a light gray color
CLYSTN: aa, mgy, bluish cast, tuffaceous, scat micro blk spks, micro shiny spks & some needle shaped
SLTSTN: lt-mgy, blky, v shly, hd, scat brn to clr mica spks, tuffaceous,
SH: lt brn, sli yel-bn, frm, earthy, tuffaceous, shaly-clayey, sl to mod hd, round spherical molds, filled with gy clay, gritty, sl sdy, mod calc, blk micro spks of mica scattered throughout




CLYSTN: lt-mgy, blky, frm, occ sl hd, sl calc, occ mod calc, tuffaceous, slty, occ scat micro blk spks, sticky, sft in part, bldg up on shaker screens, rare nodule yel chert or chal w/ blk inclusions

CLYST: lt-mgy, crm gy, blky, frm, sft - occ sl hd, sl calc, occ mod calc, tuffaceous, slty, occ scat micro blk spks, poss shy frag, sticky, sft in part, bldg up on shaker screens, rare nodule yel chert or chal w/ blk inclusions

CLYST: AA w/ incr slty mtx

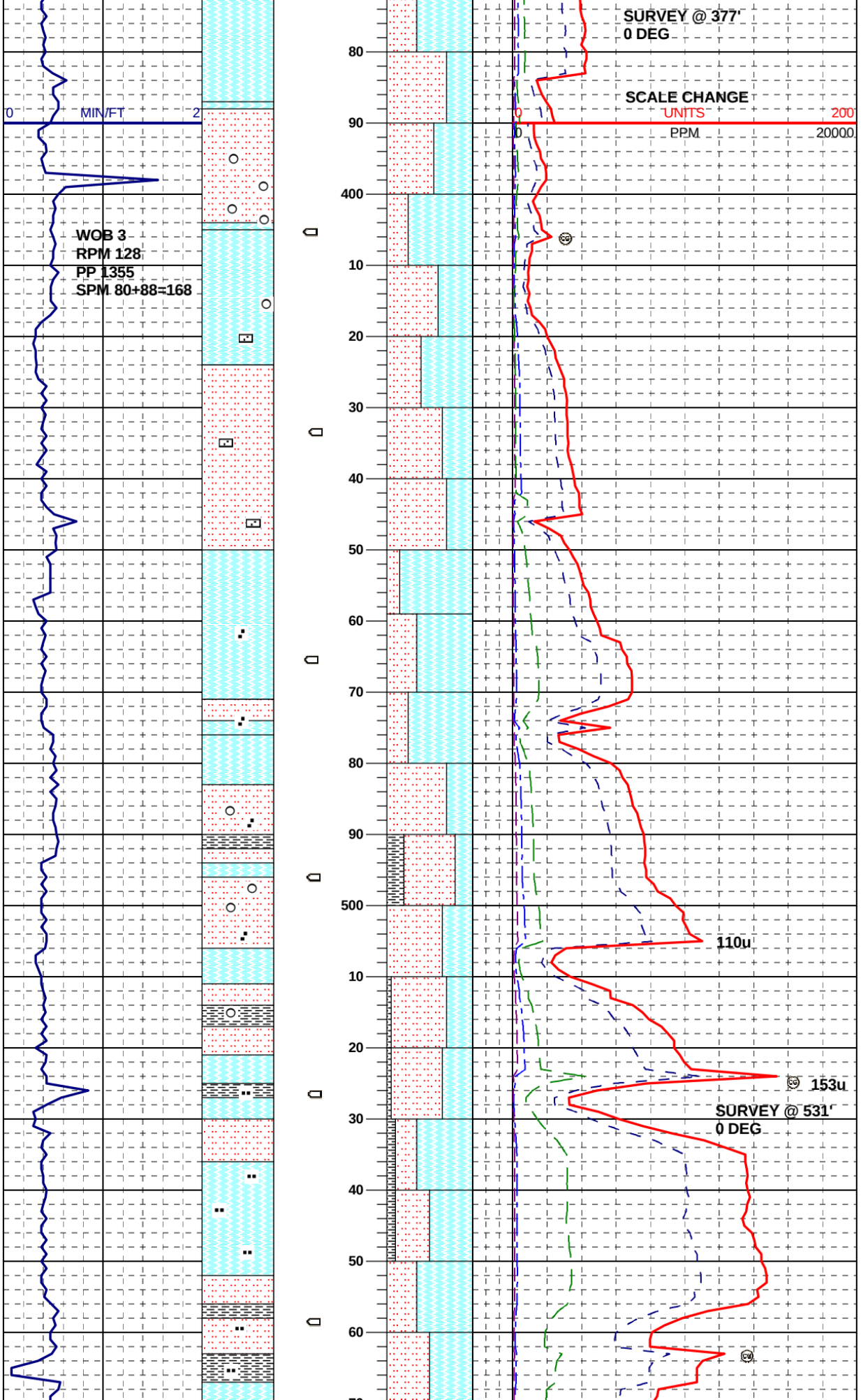
CLYST: lt-mgy, crm gy, blky, frm, sft - occ sl hd, sl calc, occ mod calc, incr gt, tuffaceous, slty, occ scat micro blk spks, poss shy frag, sticky, SS: scat blk - clr xl, hd, cgl, scat unconsol sdy frag

CLYST:incr slty, incr sdy xl spec, mica, gt - slty, w/ incr sd

SLTST: wh - off wh- lt-mgy, blky, hd, brn to clr mica spks, tuffaceous, chly ip, blk poss spec

SLTST: wh - off wh- lt-mgy, blky, hd, brn to clr mica spks, tuffaceous, decr chlky, occ blk spec, incr cly

SLTST: wh - off wh- lt-mgy, blky, hd, brn to clr mica spks, tuffaceous, decr chlky, occ blk spec, v cly mtx, cly res




SLTST: wh - off wh- lt-mgy, blky, hd, brn to clr mica spks, tuffaceous, decr chlky, occ blk spec, v cly mtx, cly res, scat ss frag, uncons xl, clr - trnsl

CLYST: scat sdy clr xl frag, sl mica, gt - slty, v slty

SLTST: wh - off wh- lt-mgy, blky, clr mica spks, tuffaceous, abnt sdy incl, occ blk spec, v cly mtx, cly res, scat SS frag, uncons xl, clr - trnsl

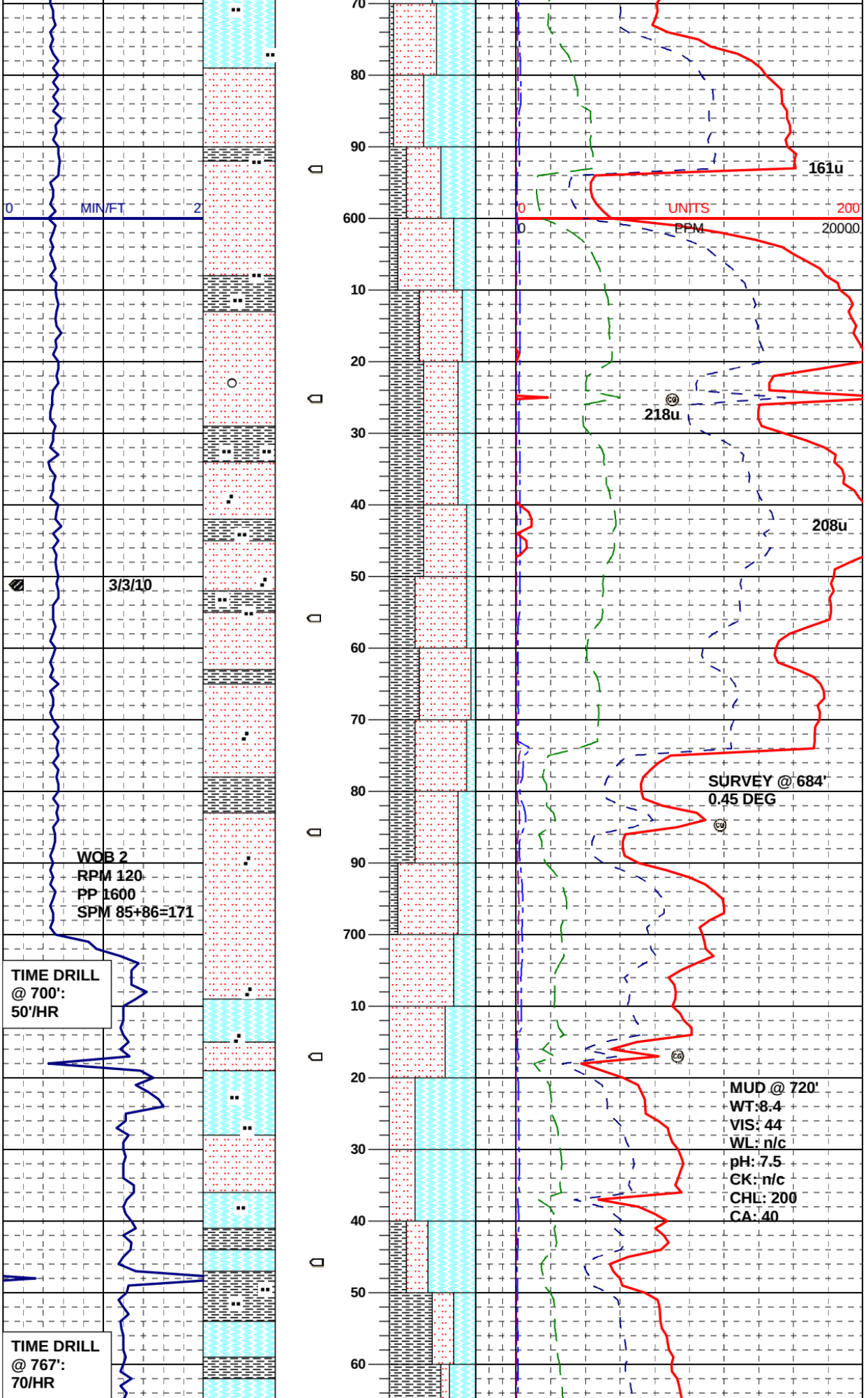
CLYST: scat sdy clr xl frag, sl mica, sl gt - slty, slty ip, sft

CLYST: gy - dkgy, scat sdy clr xl frag, grdg - SH, sl gt - slty, slty ip, sft

SH: gy - dkgy, grdg - CLYST

SLTST: wh - off wh- lt-mgy, blky, clr mica spks, shy mtx, occ sdy incl, v cly mtx, grdg - cl sltst, n calc, scat intbd SS frag, uncons xl, clr - trnsl

CLYST: gy - dkgy, m hd - sb sft, occ scat sdy clr xl frag, SHY ip, sl gt - slty, slty ip




SLTST: wh - off wh- lt-mgy, blky, clr mica spks, shy mtx, occ sdy incl, v cly mtx, grdg - CLST, SHY ip, n calc

SH: gy - dkgy-m gy, sft, abnt slty strk, v cl, grdg - sltst

SLTST: wh - off wh- lt-mgy, blky, clr mica spks, shy mtx, occ sdy incl, v cly mtx, grdg - clyst, grdg - SLTY SH

SH: lt gy - dkgy-m gy, sft, abnt slty strk, v cl, pred grdg - sltst, tr intbd ss

SH: lt gy - dkgy-m gy, sft, abnt slty strk, v cl, pred grdg - sltst, lrg ctgs pos up hole

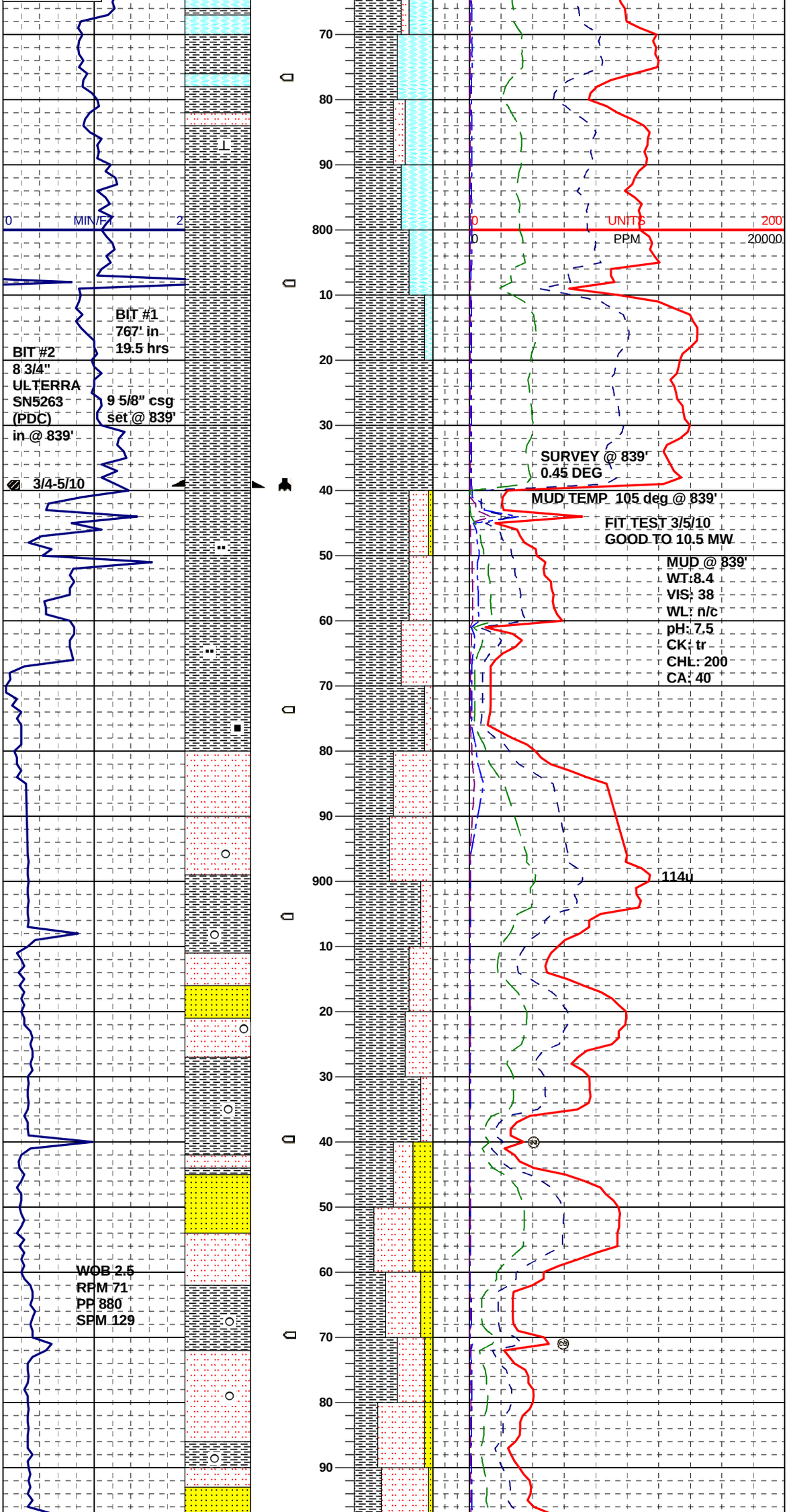
SLTST: wh - off wh- lt-mgy, blky, clr mica spks, shy mtx, occ sdy incl, mica incl, v cly mtx, pred grdg - clyst, grdg - SLTY SH

SH: aa, v cl, abnt large rd ctgs

SLTST: wh - off wh- lt-mgy, blky, clr mica spks, shy mtx, occ sdy incl, mica incl, v cly mtx, pred grdg - clyst, occ grdg - SLTY SH, abnt wh slty res

CLYST: gy - lt gy, m hd - sb sft, occ scat sdy clr xl frag, occ v sl gt - slty, slty ip, sticky ip, incr hd

SH: lt gy - m gy - tn - crm, sft - sbhd, occ v sl slty, v cl, blk gr spec, occ grdg - slty sh




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

SH: mgy to occ ltgy, gen sl darker color than above, n to sl calc, blky, frm to sl hd, micro blk spks common

**TOH, TIH, CIRC**
**BTMS UP, TRIP**
**GAS = 300 UNITS**

SLTSTN: lt gy, frm, sl hd, sl sdy, v sl calc, some scat blk spks, cly

SH: mgy, frm, sl hd, blky, occ fltg rnd amber colored sd grains in a few chips, slty, cly, some scattered blk carb lams, scat rnd v cse clr qtz grains scattered in spl NFSOC

SLTSTN: ltgy, off wh, scat micro blk spks, frm-sl hd, shly, clayey, sl calc ip

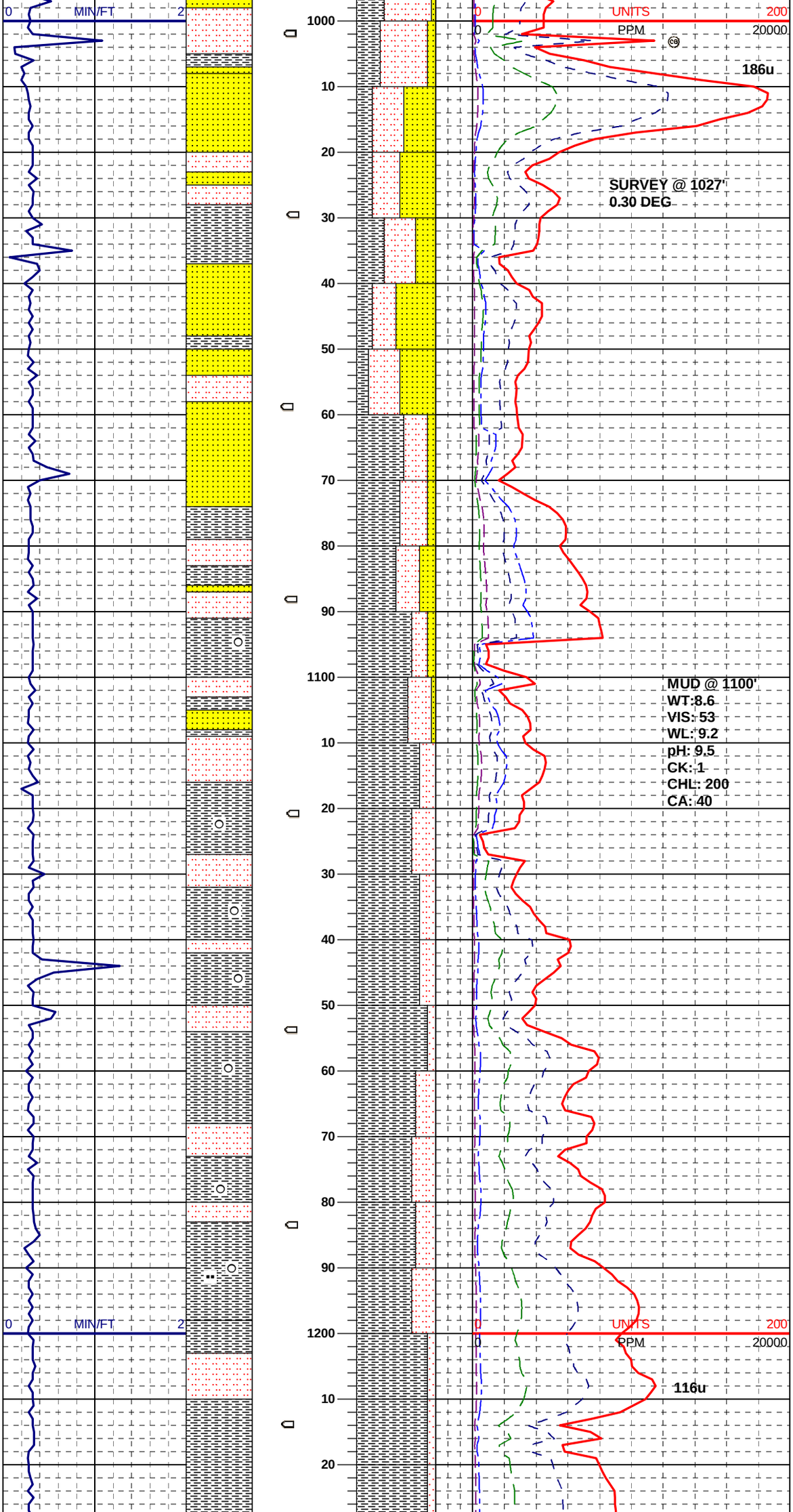
SH: mgy, frm, sl hd, blky, occ fltg rnd amber colored sd grains in a few chips, slty, cly, some scattered blk carb lams, scat rnd v cse clr qtz grains scattered in spl NFSOC

NOTE: abnt metal ctgs

SS: cl - trnsl - off wh, rd - sbrd, pred uncons xl, scat multi gr clus, abnt slty strk, NFSOC

SH: mgy-off bl, frm, sl hd, blky, occ fltg rnd amber colored sd grains in a few chips, slty, cly, some scattered blk carb lams, scat rnd v cse clr qtz grains scattered in spl

SLTSTN: ltgy -off wh, scat micro blk spks, frm-sl hd-fri, shly, sl clayey, m calc ip




SS: cl - trnsl - off wh, some grn mineral grains, rd - sbrd, pred uncons xl, scat multi gr clus, occ slty strk, NFSOC

SS: cl - trnsl - off wh, glauc, rd - sbrd, pred uncons xl, scat multi gr clus, occ slty strk, NFSOC

SS: cl - trnsl - off wh, occ sl glauc, f - m gr,c, rd - sbrd, pred uncons, scat multi gr clus, occ slty strk, NFSOC

SH: mgy-off bl, frm, sl hd, blky, occ fltg rnd amber colored sd grains in a few chips, slty, cly, some scattered blk carb lams, scat rnd v cse clr qtz grains scattered in spl

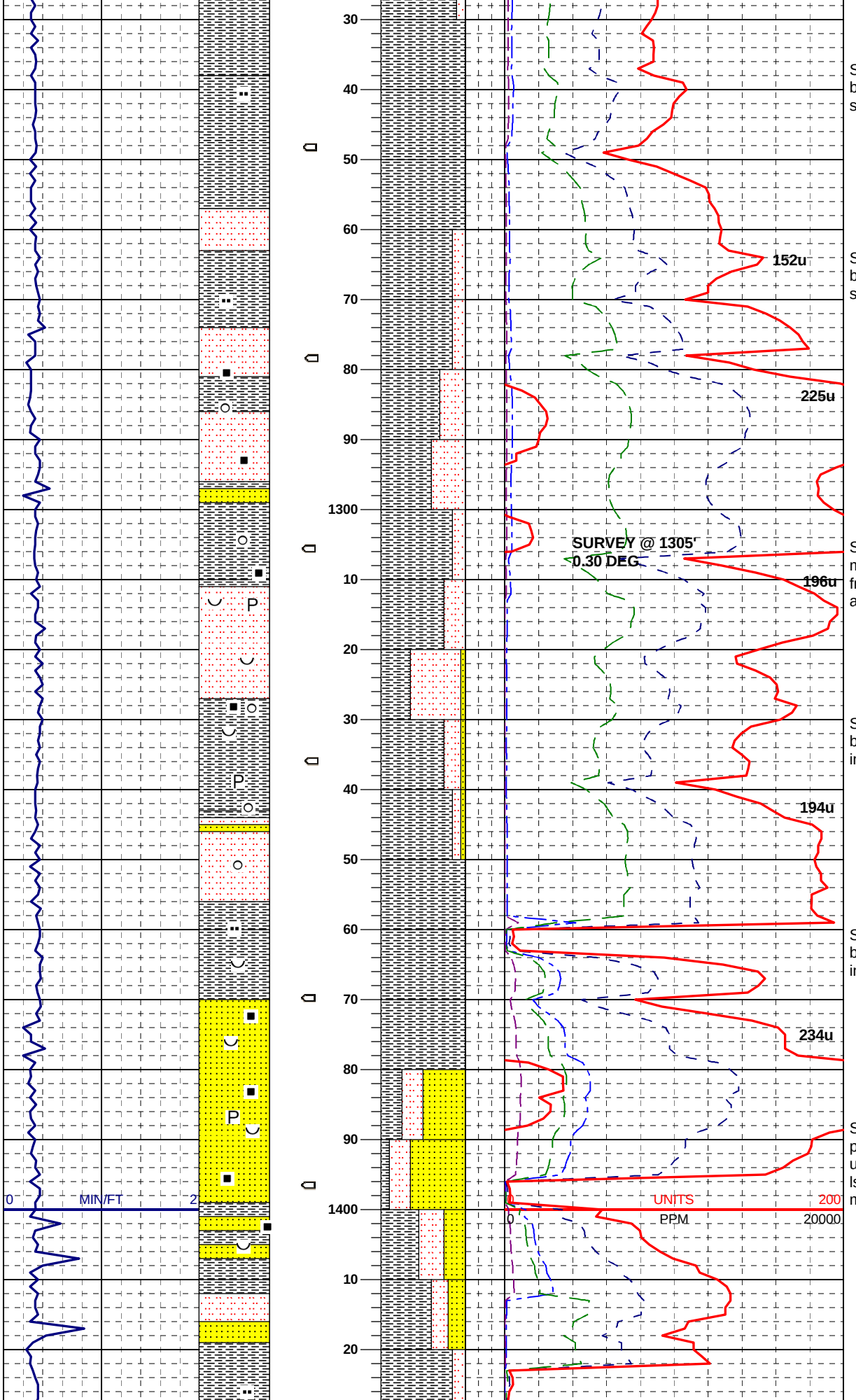
SH: mgy-off bl, frm, sl hd, blky, slty, cly, scat rnd v cse clr qtz grains scattered in spl

SH: mgy-off bl, frm, sl hd, blky, slty, cly, scat rnd v cse clr qtz grains scattered in spl

SLTSTN: ltgy -off wh, scat micro blk spks, frm-sl hd-fri, shly, sl cl, m calc ip

SH: mgy-off bl, frm, sl hd, blky, slty, cly, scat rnd v cse clr qtz grains scattered in spl

SH: mgy-off bl, frm, sl hd, blky, slty, cly, slty strk




SH: mgy-gy-lt gy, frm -sbsft, sl hd, blky - sbblky, slty, occ clayey, tr slty strk

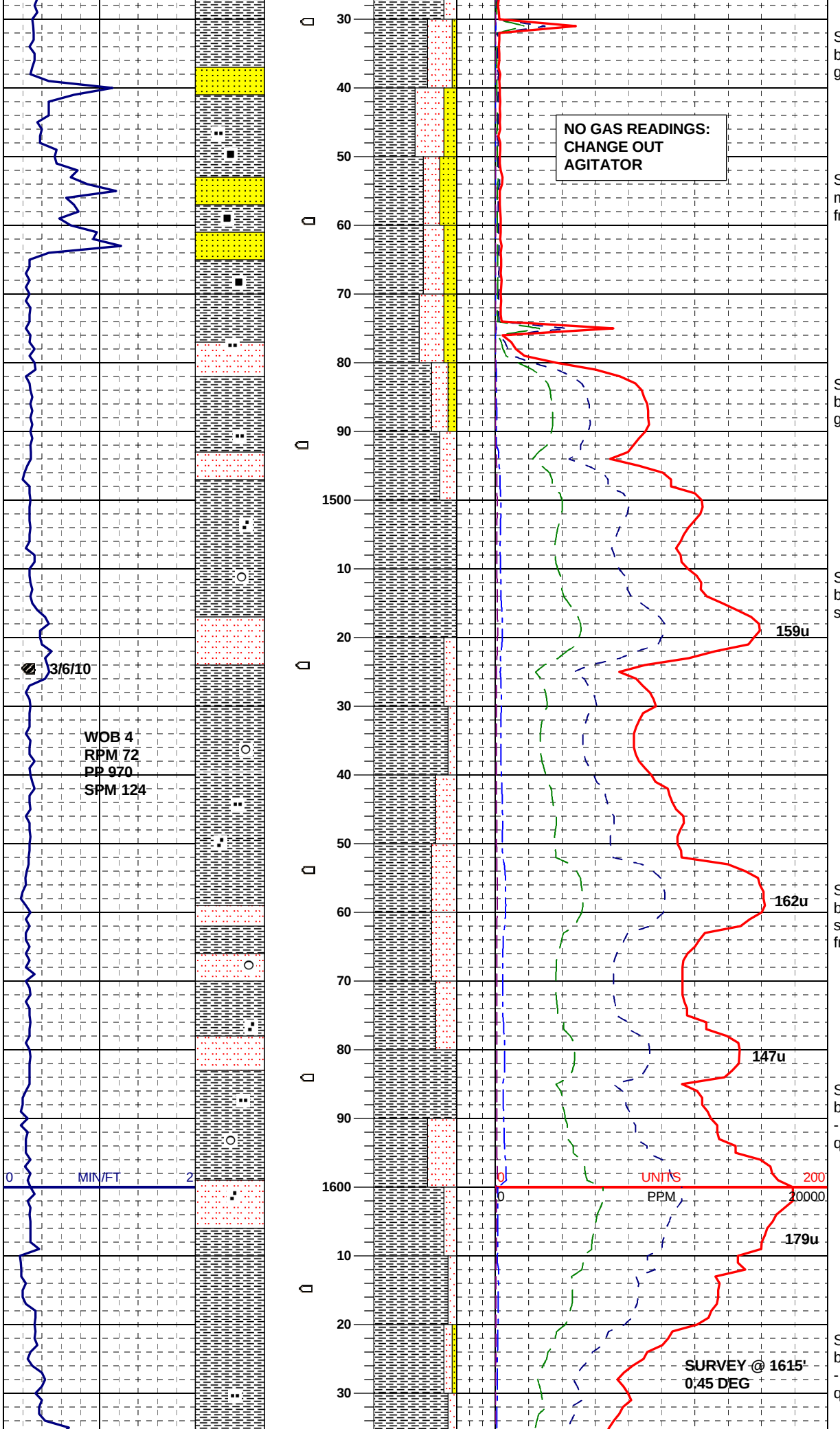
SH: mgy-gy-lt gy, frm -sbsft, sl hd, blky - sbblky, slty, occ clayey, abnt slty strk, incr grdg - sltst

SLTSTN: ltgy -off wh- crm, scat micro blk spks, occ carb strk / spec, frm-sl hd-fri, shy, sl cl, m calc ip, abnt mica frag/ incl

SH: mgy-gy-lt gy, frm -sbsft, sl hd, blky - sbblky, slty, mica, abnt slty strk, incr grdg - sltst, pyr incl

SH: mgy-gy-lt gy, frm -sbsft, sl hd, blky - sbblky, slty, mica, abnt slty strk, incr grdg - sltst, pyr incl

SS: cl - trnsl - off wh, occ sl glauc, pred c gr, occ f gr, rd - sbrd, pred uncons, scat multi gr clus, tr w cons lse cmt mtx v f gr, occ slty strk, abnt mica frag, abnt carb spec, NFSOC




SH: mgy-gy-lt gy, frm -sbsft, sl hd, blky - sbblky, slty, abnt slty strk, abnt grdg - sltst

SLTSTN: ltgy -off wh- crm, scat micro blk spks, occ carb strk / spec, frm-sl hd-fri, shy, metalic lstr

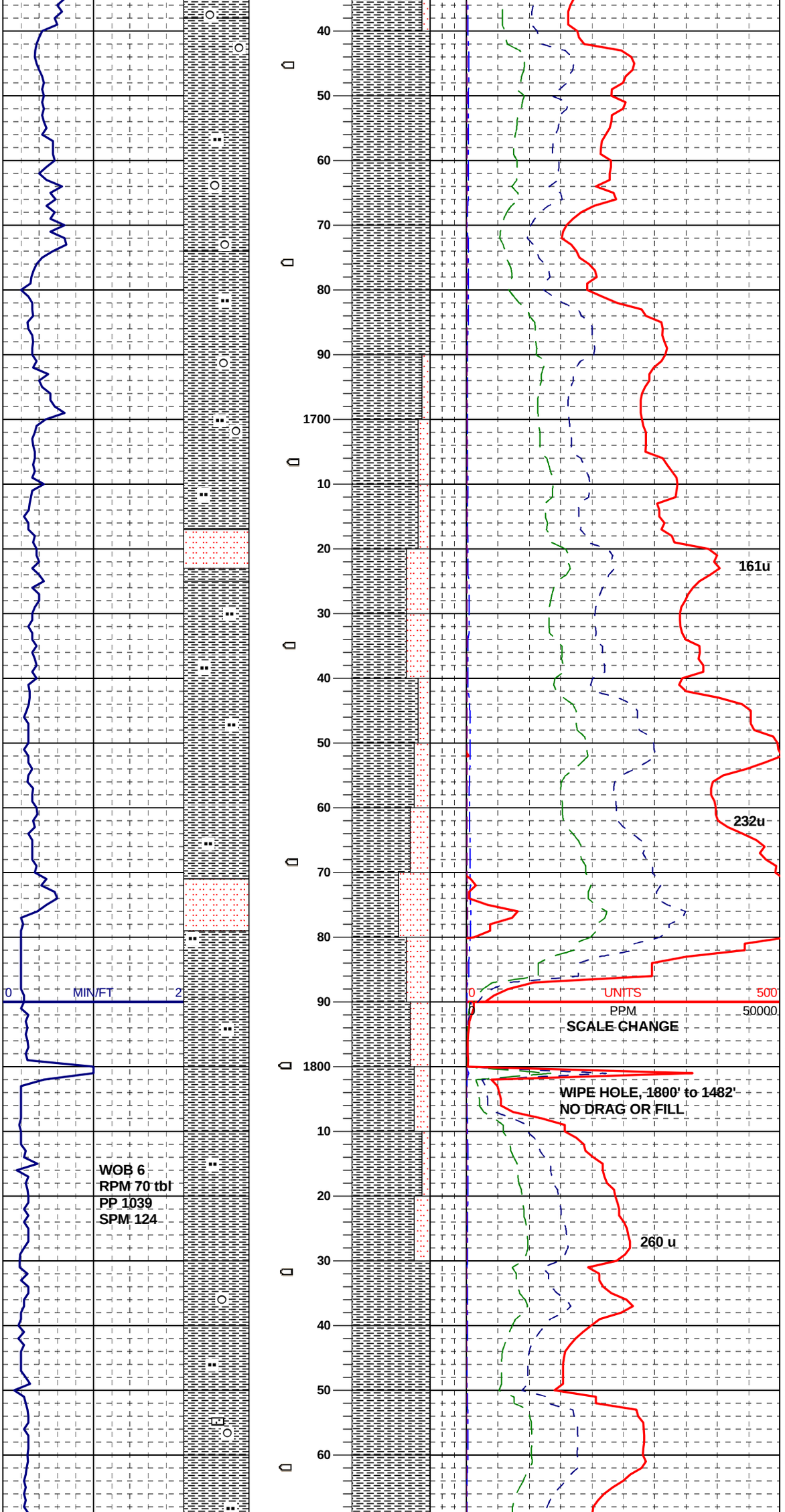
SH: mgy-gy-lt gy, frm -sbsft, sl hd, blky - sbblky, slty, abnt slty strk, abnt grdg - sltst, carb incl/ vn

SH: mgy-gy-lt gy, frm -sbsft, sl hd, blky - sbblky, abnt slty strk, occ grdg - sltst, scat uncons qtz ss frag

SH: mgy-gy-lt gy, frm -sbsft, sl hd, blky - sbblky, abnt slty strk, grdg - sltst, tr sdy incl, scat uncons qtz ss frag

SH: mgy-gy-lt gy, frm -sbsft, sl hd, blky - sbblky, abnt slty strk, abnt grdg - sltst, tr sdy incl, scat uncons/ multi gr qtz ss frag, mica

SH: mgy-gy-lt gy, frm -sbsft, sl hd, blky - sbblky, abnt slty strk, abnt grdg - sltst, tr sdy incl, scat uncons/ multi gr qtz ss frag, mica




SH: mgy-gy-lt gy, frm -sbsft, sl hd, blky - sbblky, abnt slty strk, abnt grdg - sltst, tr sdy incl, scat uncons c qtz ss frag

SH: mgy-gy-lt gy, frm -sbsft, sl hd, blky - sbblky, abnt slty strk, abnt grdg - sltst, tr sdy incl, scat uncons c qtz ss frag, blk metalic frag thru spl

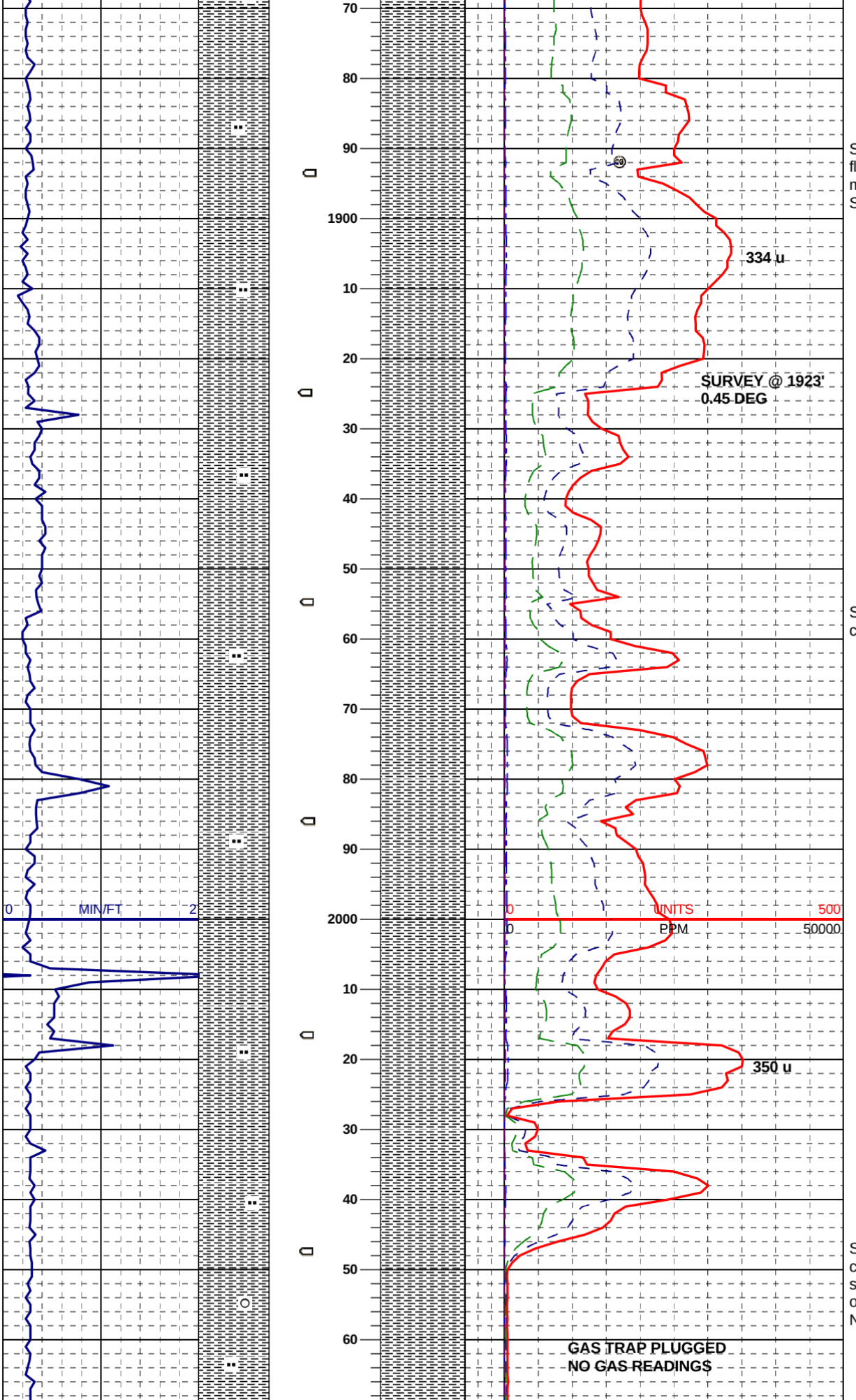
SH: mgy-gy-lt gy, frm -sbsft, sl hd, blky - sbblky, flky, abnt slty strk, abnt grdg - sltst, tr sdy incl, scat uncons c qtz ss frag, blk carb spec

SH: mgy-gy-lt gy, frm -sbsft, sl hd, blky - sbblky, flky, abnt slty strk, abnt grdg - sltst, tr sdy incl, scat uncons c qtz ss frag, blk carb spec

SH: mgy-gy-lt gy, frm -sbsft, sl hd, blky - sbblky, flky, abnt slty strk, abnt grdg - sltst, tr sdy incl, scat uncons c qtz ss frag, blk carb spec

**WIPER TRIP GAS**
**360 UNITS**

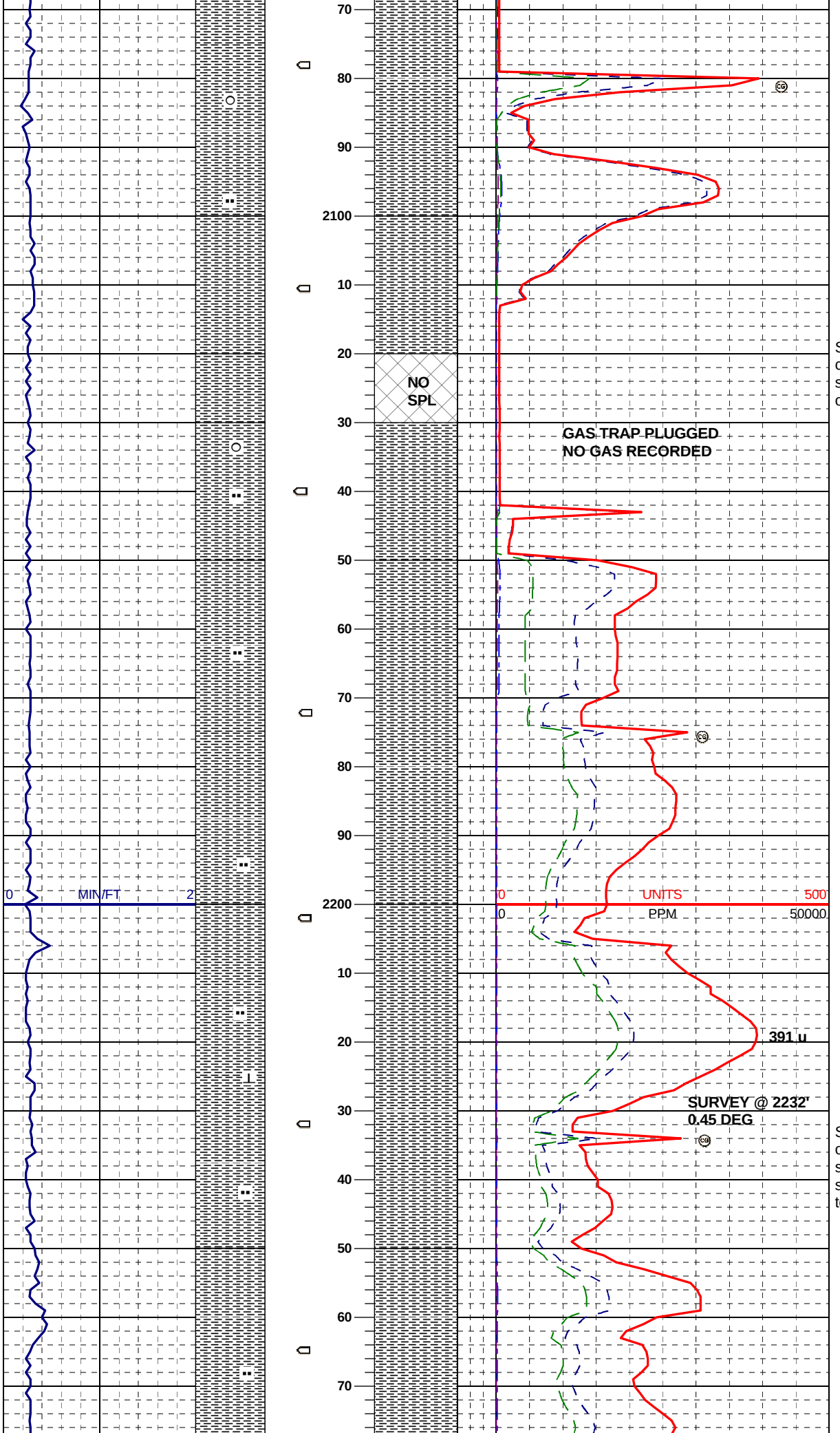
SH: mgy-gy-lt gy, frm -sbsft, sl hd, blky - sbblky, flky, slty, tr floating lse v cse, clr qtz, occ blk carb spec, tr ltgy, wh, SS, vfg, mica, sl calc, NFSOC




SH: lt-mgy, frm-sft, bent, blky-sbblky, flky, gen slty, occ tr fltg qtz grains, micro spks of mica, occ ltgy shly SLTSTN

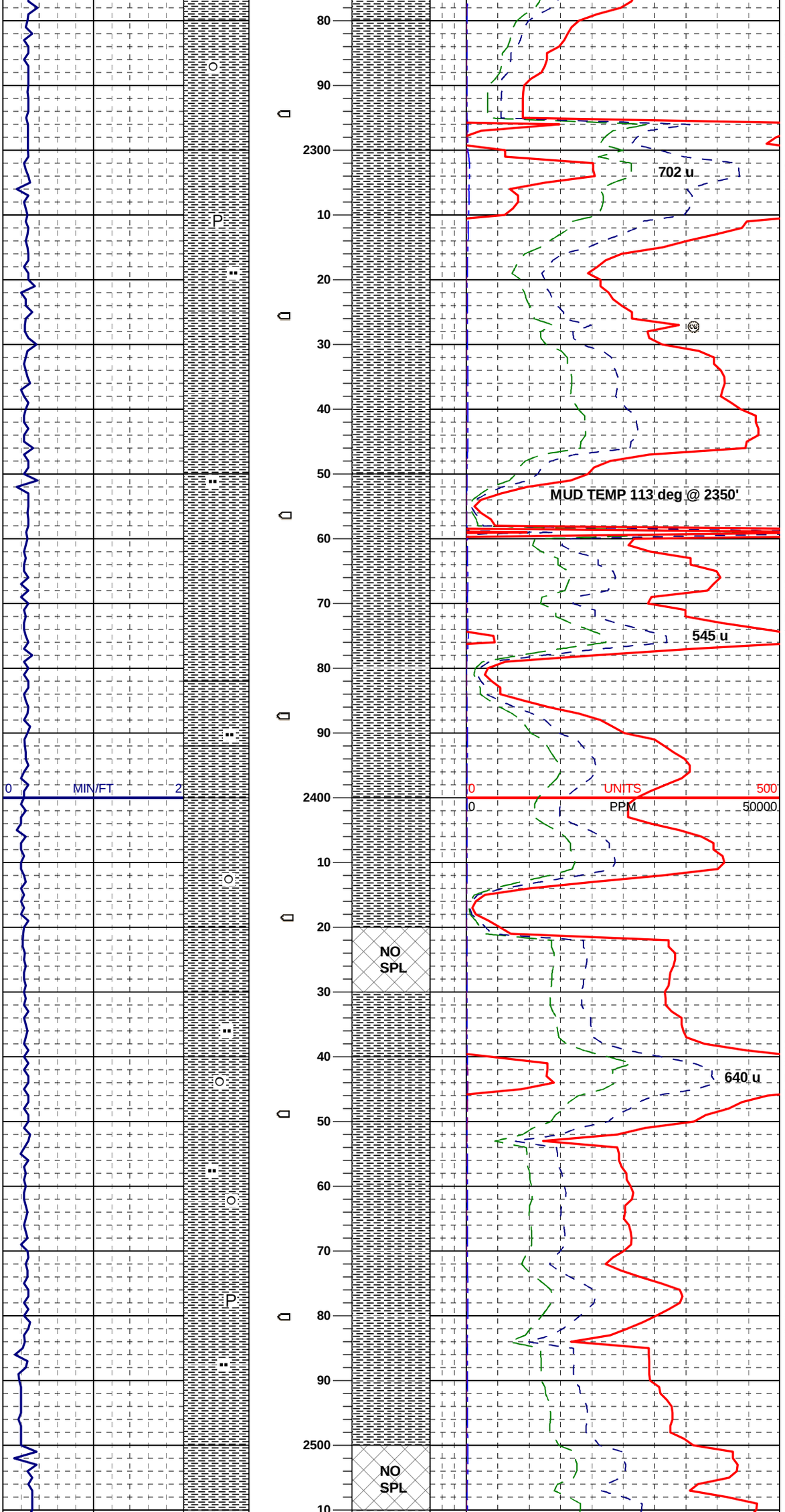
SH: lt-mgy, blky-sbblky, frm-sft, sl calc ip, slty, occ piece of wh BENT?

SH: lt-mgy, blky-sbblky, frm-sft, sl calc ip, slty, occ scat wh bent? in spls, micro spks of mica common, occ clr sbang, loose qtz grains, NFSOC




SH: lt-mgy, blky-sbblky, frm-sft, sl calc ip, slty, occ scat wh BENT in spls, micro spks of mica common, occ scat vfg qtz grains, NFSOC

SH: med to lt gy, blky to sbblky, frm, occ sft, sl hd ip, sl calc, slty, occ sd grains, rare brn mottled, micro spks of mica, occ tr lse chips of wh to lt tan bent?



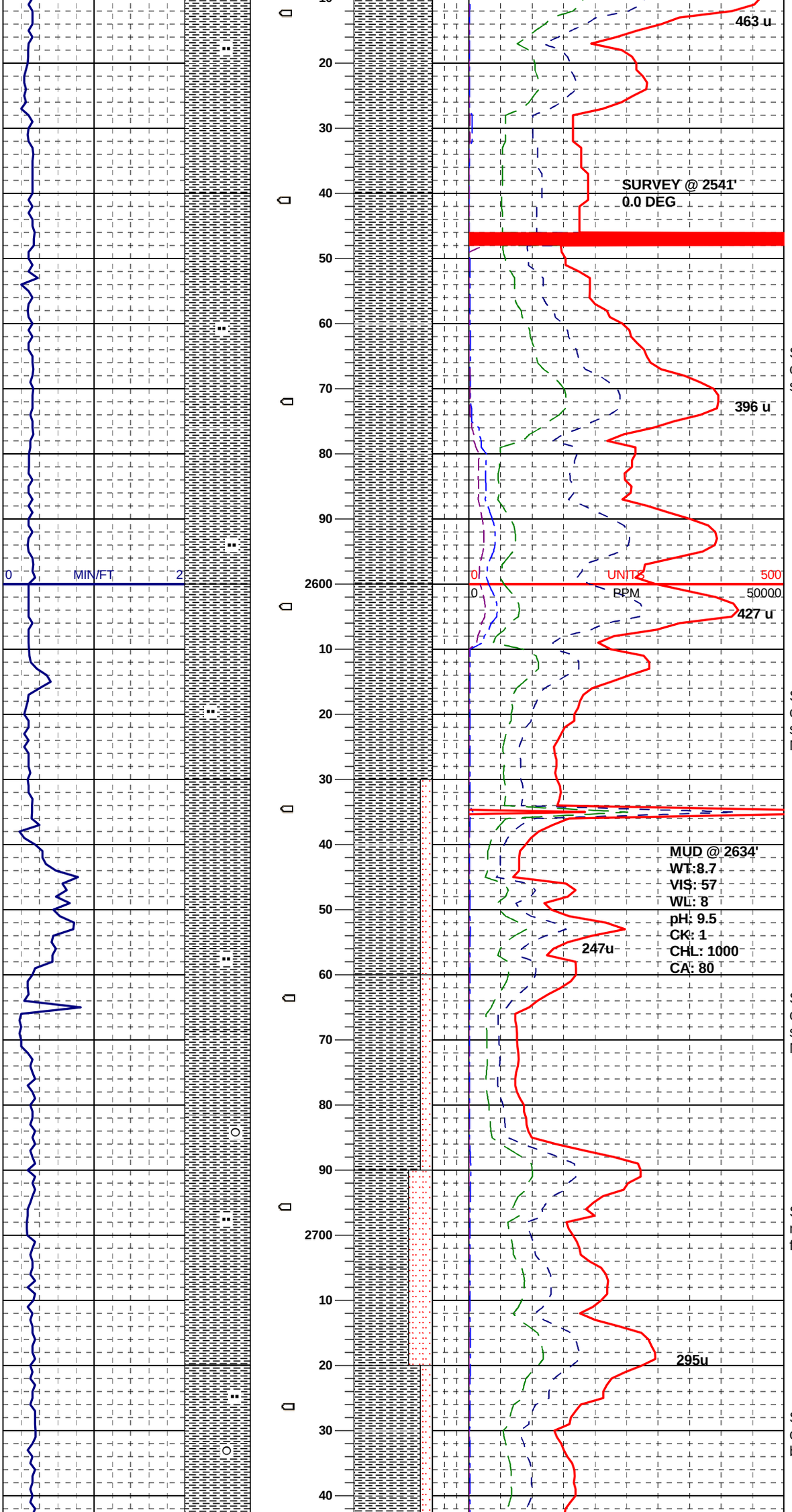

SH: AA, occ trace of scat,lse, cse, clr, qtz grains in spls, NFSOC

SH: lt-mgy, blky-sbblky, frm, sl sft, slty, rare pyrite, NFSOC

SH: med to lt gy, blky to sbblky, frm, occ sft, sl calc, slty, occ sd grains, micro spks of mica, occ scattered wh to tan, bent? in spl NFSOC,

SH: lt-mgy, blky-sbblky, frm, sl calc, slty, occ lse qtz grains in spls, micro spks of mica, occ blk spks, NFSOC

SH: lt-mgy, blky-sbblky, slty, sl calc, occ lse qtz grains, mica & blk spks aa, rare pyrite, NFSOC



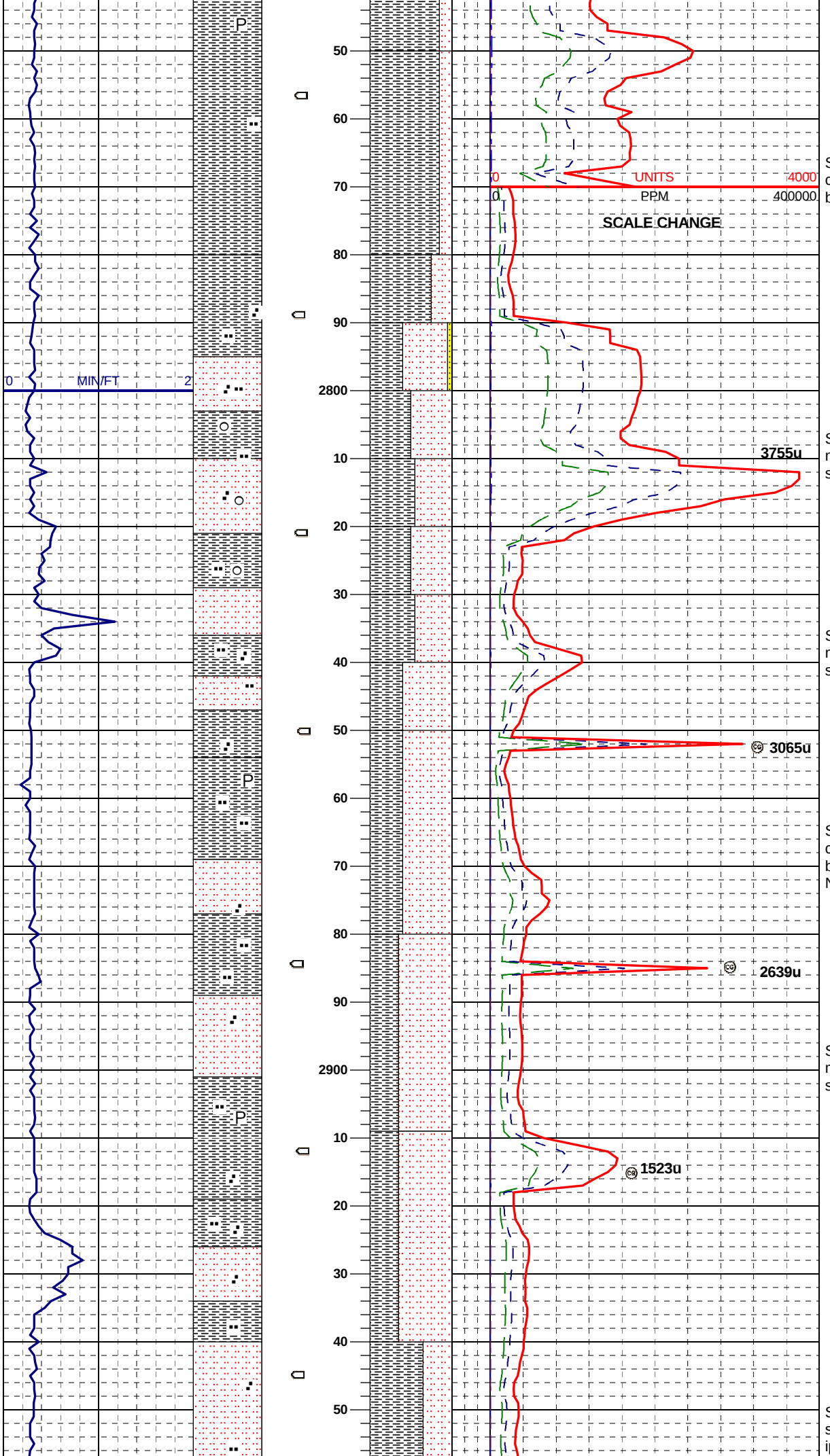

SH: lt-mgy, blky-sbblky, slty, mod calc, occ lse qtz grains, mica & blk spks aa, occ wh bent, NFSOC

SH: lt-mgy, blky-sbblky, slty, mod calc, occ lse qtz grains, mica & blk spks aa, occ wh bent, slty ip, NFSOC

SH: lt-mgy, blky-sbblky, slty, mod calc, occ lse qtz grains, mica & blk spks aa, occ wh bent, slty ip, NFSOC

SLTSTN: ltgy -off wh- crm, scat micro blk spks, occ carb strk / spec, frm-sl hd-fri, shy ip, grdg - sh

SH: lt-mgy, blky-sbblky, slty, mod calc, occ lse qtz grains, occ wh bent, slty ip, NFSOC




SH: lt-mgy, blky-sbblky, slty, mod calc, occ lse qtz grains, occ wh bent, slty ip, tr pyr frag, NFSOC

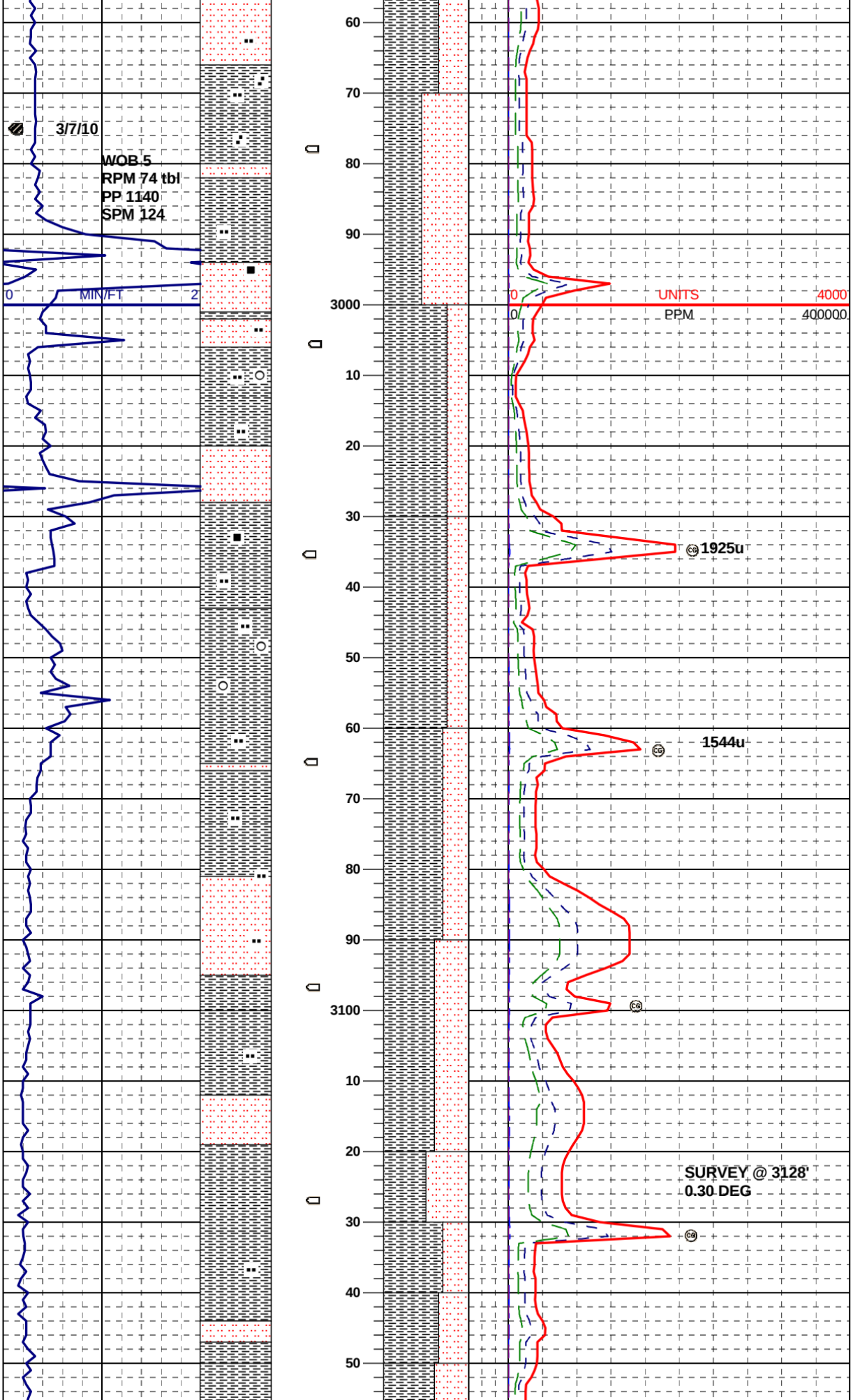
SLTSTN: ltgy -off wh- crm-lt brn, scat micro blk spks, frm-sl hd-fri, shy ip, sl sdy ip, tr uncons clr qtz frag, NFSOC

SLTSTN: ltgy -off wh- crm-lt brn, scat micro blk spks, frm-sl hd-fri, shy ip, sl sdy ip, tr uncons clr qtz frag, pyr frag

SH: lt-mgy, blky-sbblky, slty, mod calc, occ lse qtz grains, occ wh bent, slty ip, grdg - sltst, tr pyr frag, NFSOC

SLTSTN: ltgy -off wh- crm-lt brn, scat micro blk spks, frm-sl hd-fri, shy ip, sl sdy ip, tr uncons clr qtz frag, pyr frag

SLTSTN: ltgy -off wh- crm-lt brn, occ scat micro blk spks, frm-sl hd-fri, shy ip, sl sdy ip, intbd vf gr ss

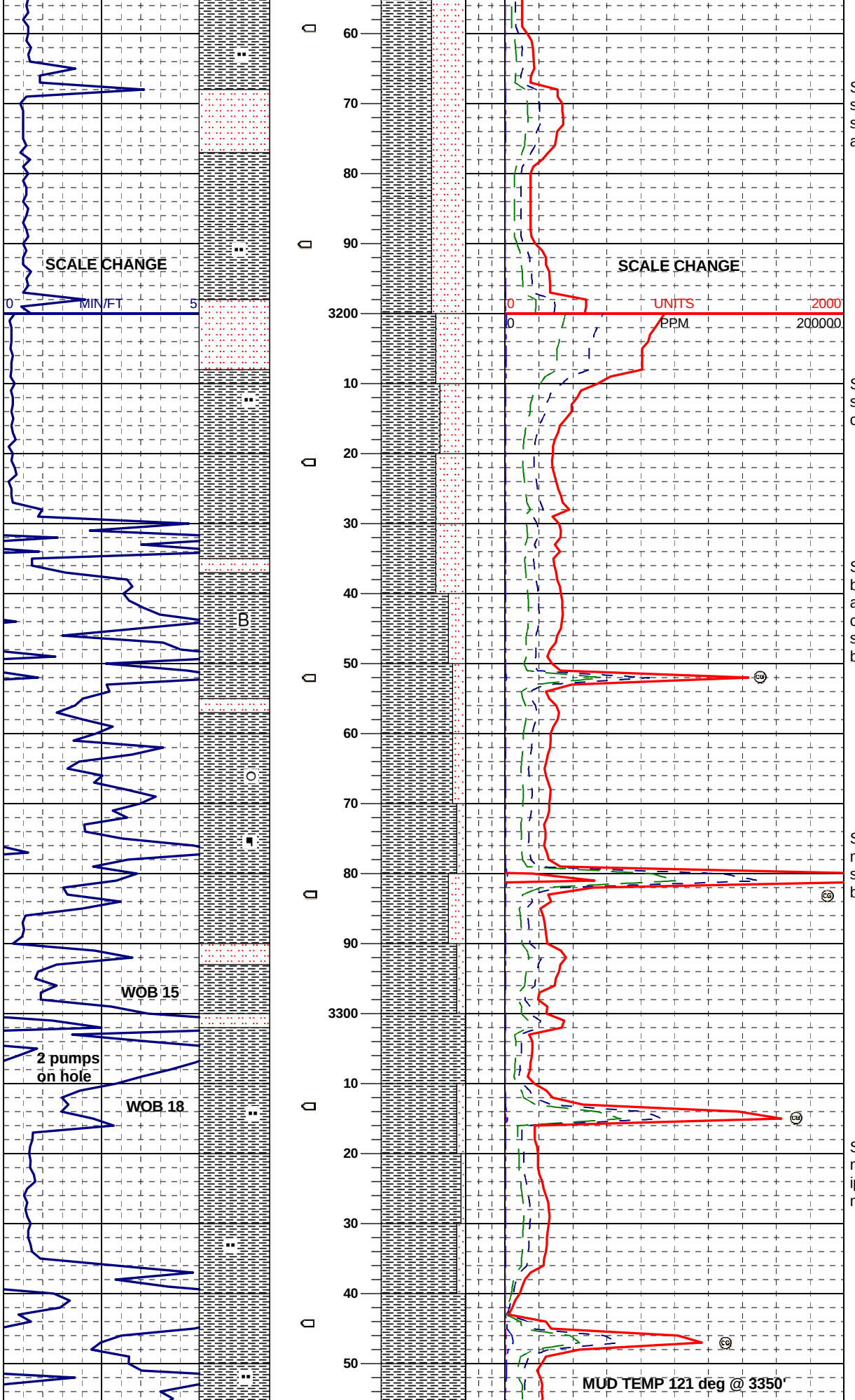



SLTSTN: ltgy -off wh--lt brn, occ scat micro blk spks, frm-sl hd-fri, shy ip, sl sdy ip, tr intbd vf gr ss, scat blk carb frag

SH: lt-mgy, blky-sbblky, slty, mod calc, occ lse qtz grains, occ wh bent, slty ip, grdg - sltst, tr pyr frag, blk carb spec, NFSOC

SLTSTN: ltgy -off wh--lt brn, occ scat micro blk spks, frm-sl hd-fri, shy ip, sl sdy ip, tr intbd vf gr ss

SH: lt-mgy, blky-sbblky, slty, mod calc, occ lse qtz grains, occ wh bent, slty ip, grdg - sltst, tr pyr frag, blk carb spec, NFSOC



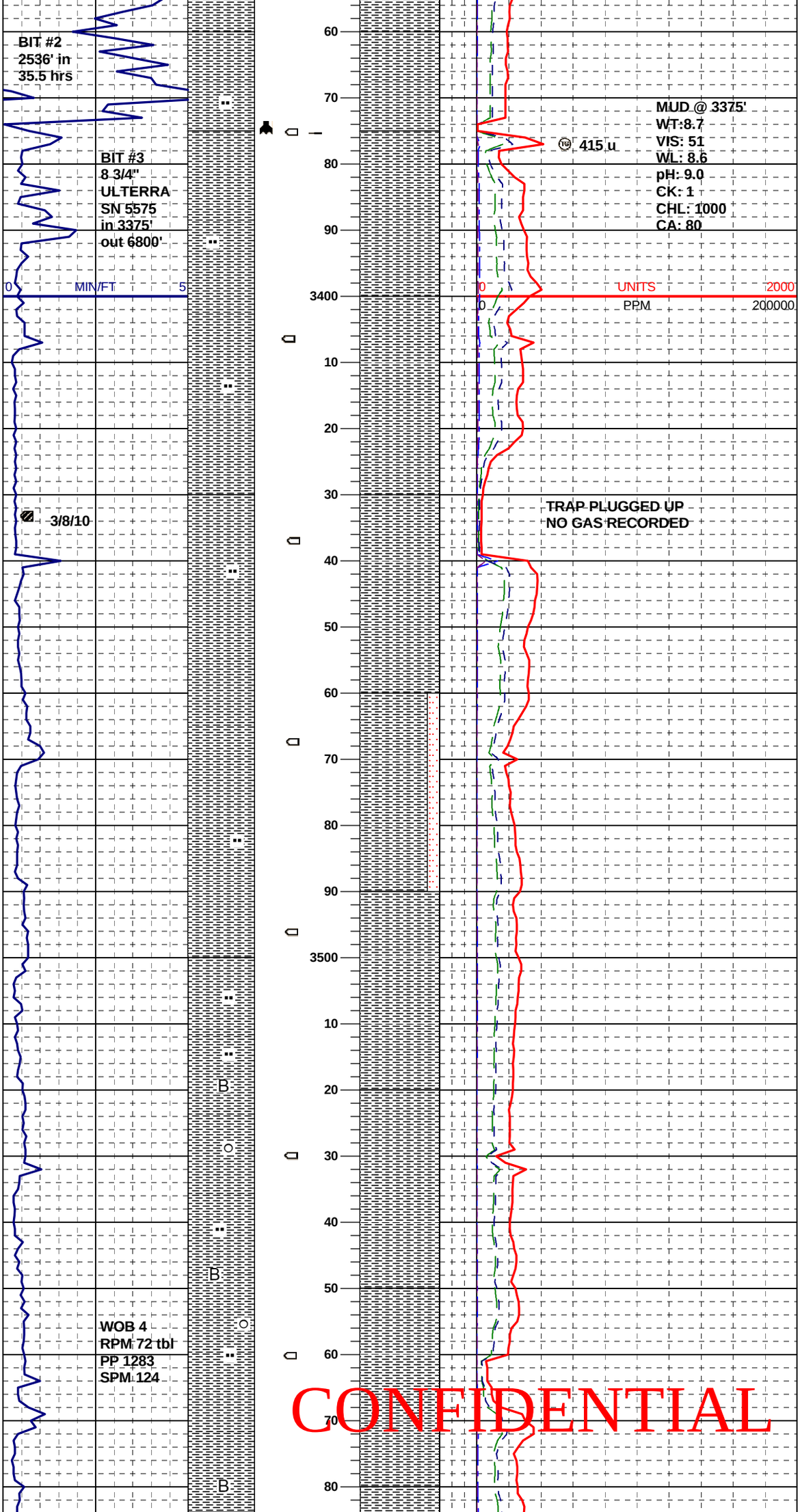

SLTSTN: ltgy, off wh, blky-sbblky, shly, v sl calc, micro spks mica, some scat blk spks, grdg to SH aa, NFSOC

SH: lt to mgy, blky-sbblky, frm-sft, slty, grdg to SLTSTN, aa, rare lse clr qtz grains in spls, NFSOC

SH & SLTSTN: aa, scat wh, op, bent fragments in spls, very clayey and sticky cuttings due to PDC bit crushing and grinding probably hard shale to a powder along with some bentonite beds

SH: ltgy, occ mgy, brn-gy, blky?, sft, mushy, difficult to wash clay out of spls, rare loose large qtz grains, tr wh bent, rare dark minerals

SH: ltgy, off wh, sm mgy, slty, sft, mushy, tends to be v clayey & sticky ip, bentonitic, rare tr sd grain, sm micro blk spks




TOH @ 3375'
BIT BALLED UP
W/ CLAY, CHG
BITS, TIH

SH: ltgy, off wh, sm mgy, slty, sft, mushy, tends to be v clayey & sticky ip, bentonitic, rare tr sd grain

SH: ltgy, off wh, sm mgy, slty, sft, mushy, tends to be v clayey & sticky ip, bentonitic, rare tr sd grain

SH: ltgy, off wh, sm mgy, slty, sft, mushy, decr v clayey & sticky ip, bentonitic, rare tr sd grain, incr slty

SH: ltgy, off wh, sm mgy, slty, sft, mushy, occ cly ip, bentonitic, rare tr sd grain, sl slty, scat wh flor bent frag

SH: ltgy, off wh, sm mgy, slty, occ cly ip, bentonitic, rare tr sd grain, sl slty, scat wh flor bent frag, rare dk minerals poss carb frag

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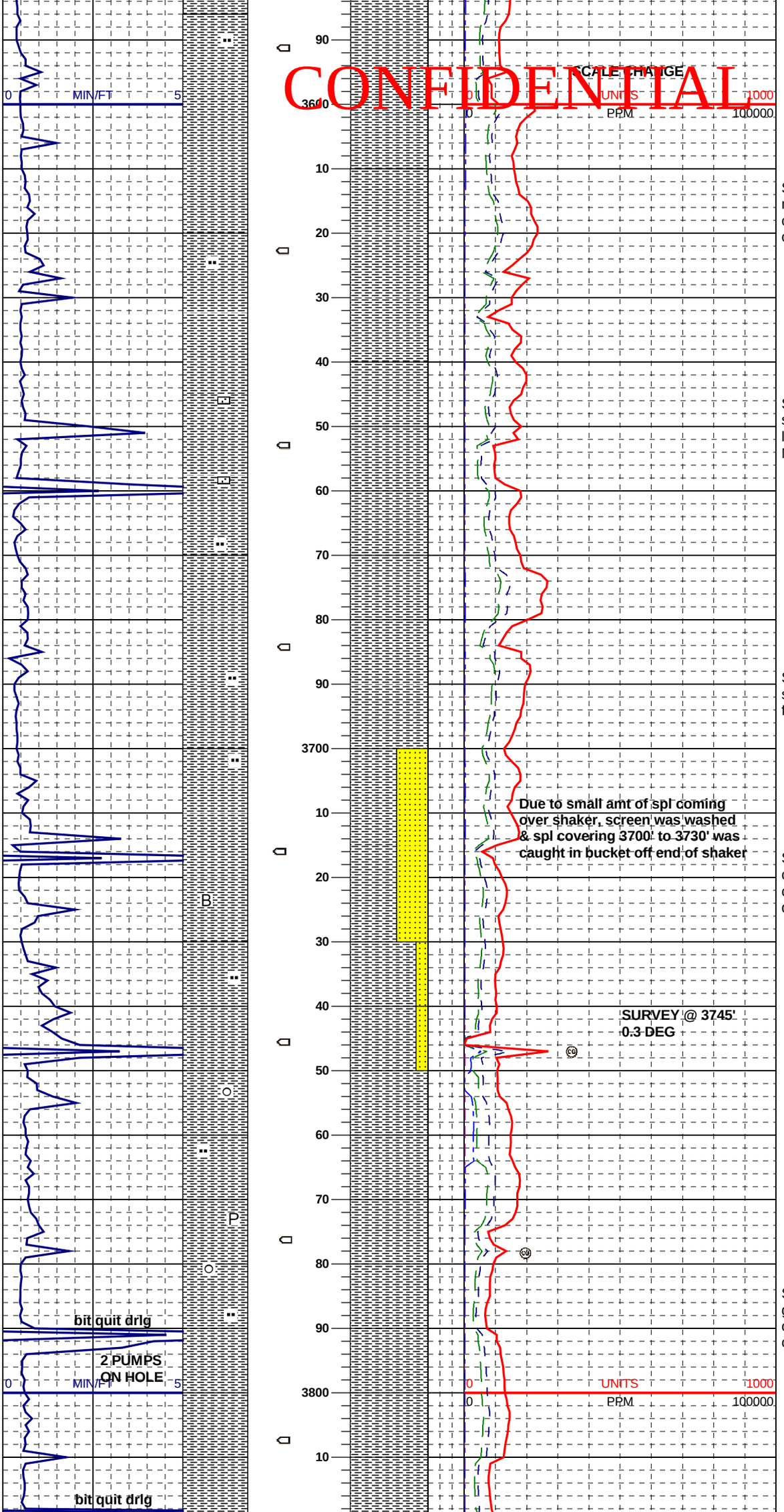


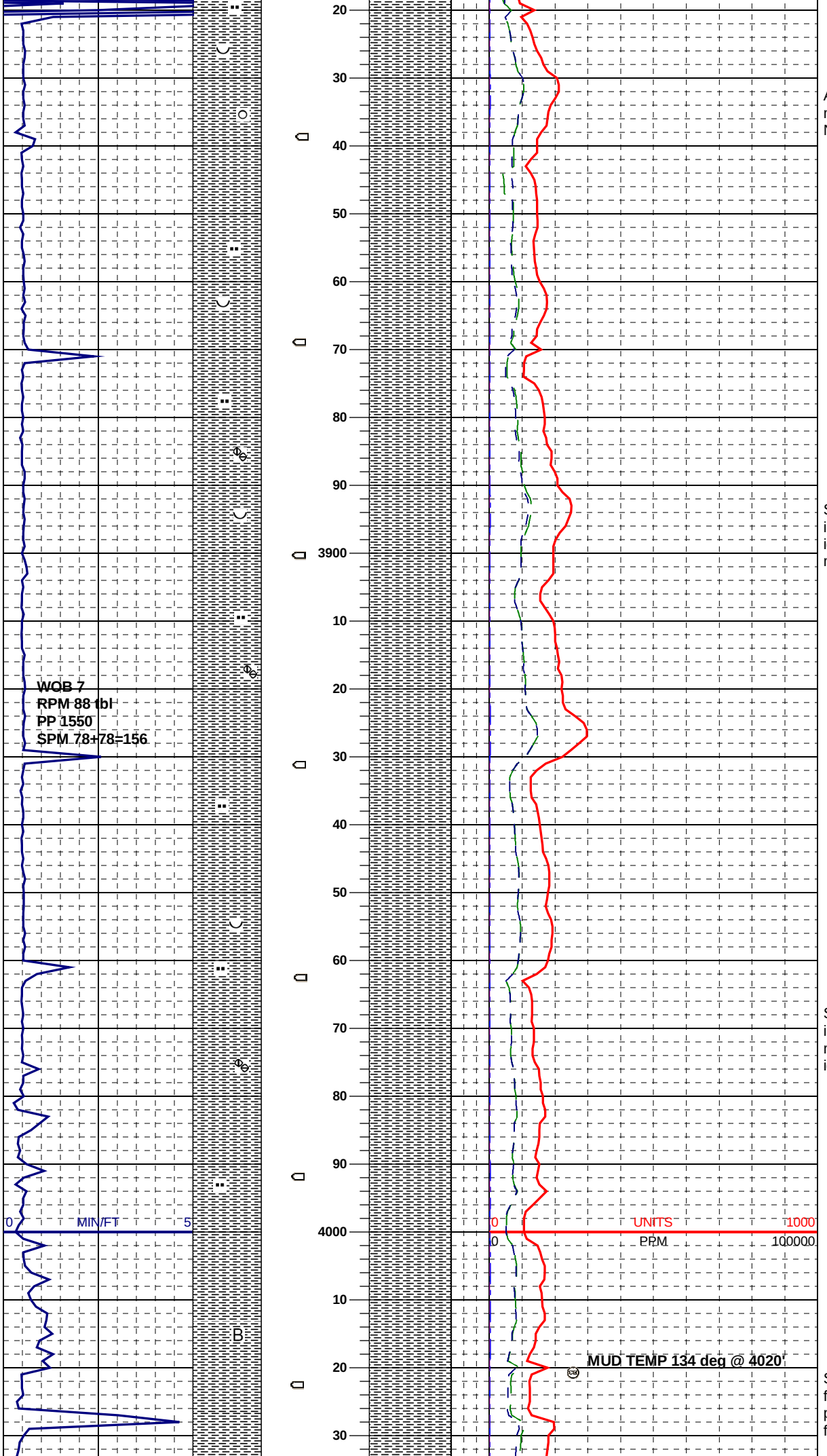

SH: ltgy, off tan- wh, lt tan tint, rare mgy, slty, sft, mushy, tends to be v clayey ip, bentonitic, rare tr sd grain, occ slty ip

SS: a few pieces of wh, vfg, sandstone in spl. prob occurs as thin laminations, v sft, w/ blk mica flakes, NFSOC

SH: lt gy, tan-gy, sbblky, frm, sft, slty, scat pieces of wh bent in spl, occ a few lse qtz grains, trace lse pyrite xls,

SS: clr, trnsl, wh, sli s&p, fg, wk calc cmtd clstr, blk mica flakes, abund, cse grained lse qtz, ang-sbrd, clr & op qtz, sm blk incl, NFSOC

SH: ltgy, tan-gy, occ mgy, frm-sft, slty, gen n calc to sl calc, a few pieces of wh bent in spls, occ scat lse cse qtz grains

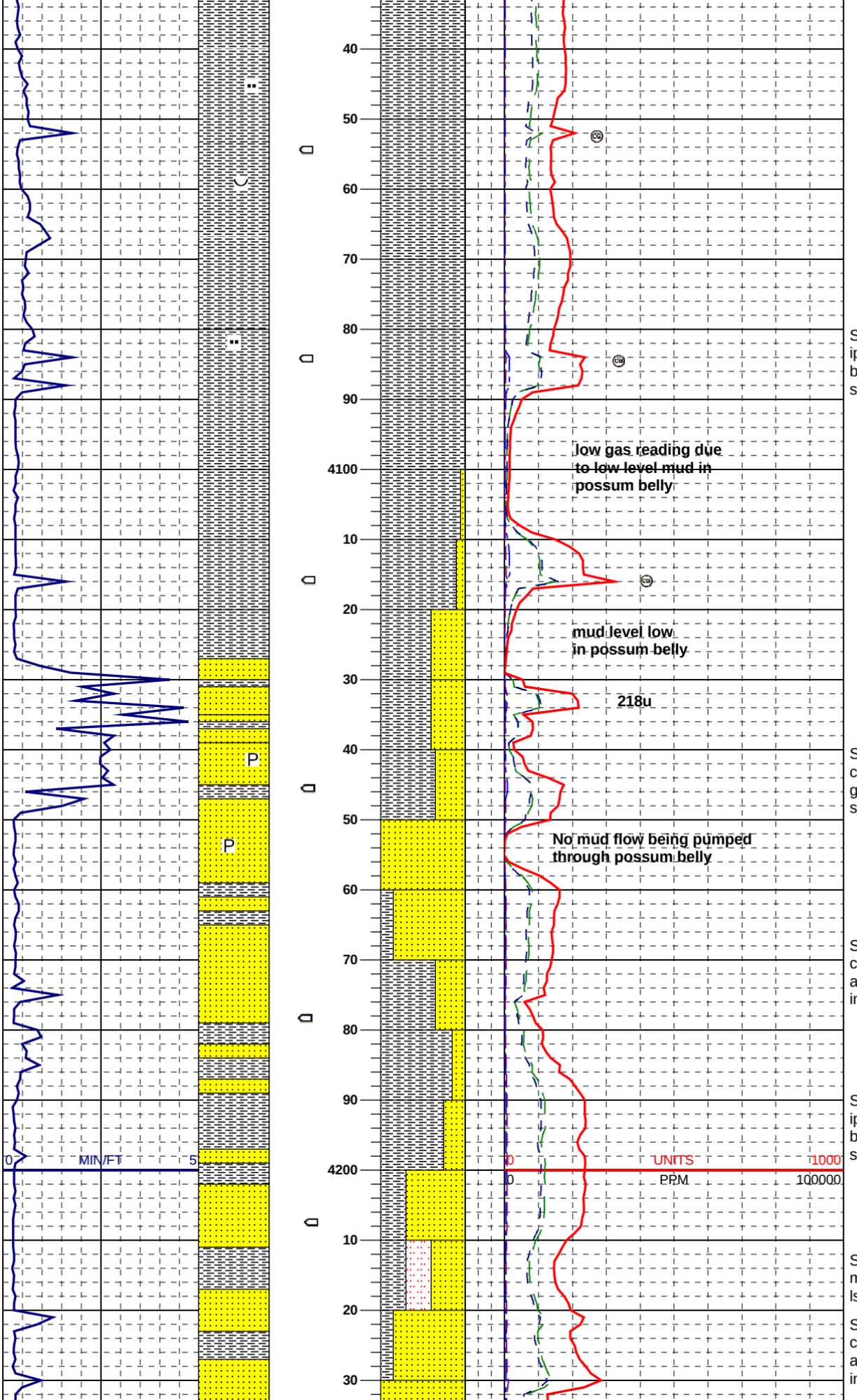



A few clstrs of SS,sl s&p, vf-fg, blk mica flakes, calc cmt, may be cvg, NFSOC

SH: ltgy, tan-gy, sbblky, frm-sft, slty ip, scat micro spks of mica, a few ign rock pebs, wh xln w/ green mineral, olivine?

SH: ltgy, tan-gy, sbblky, frm-sft, slty ip, sl calc ip, scat micro spks of mica gen present in shale, a few lse ign rock pebs, wh xln w/ qtz & biotite

SH: ltgy-brn, brn-gy, occ brn, sbblky, frm-sft, slty, sl to n calc, occ lse, pieces of pyrite in spl, scat wh bent flakes sometimes present




SH: ltgy, brn-gy, sbblky, frm-sft, slty ip, sl calc to n calc, micro spks of brn-blk mica generally present in shale

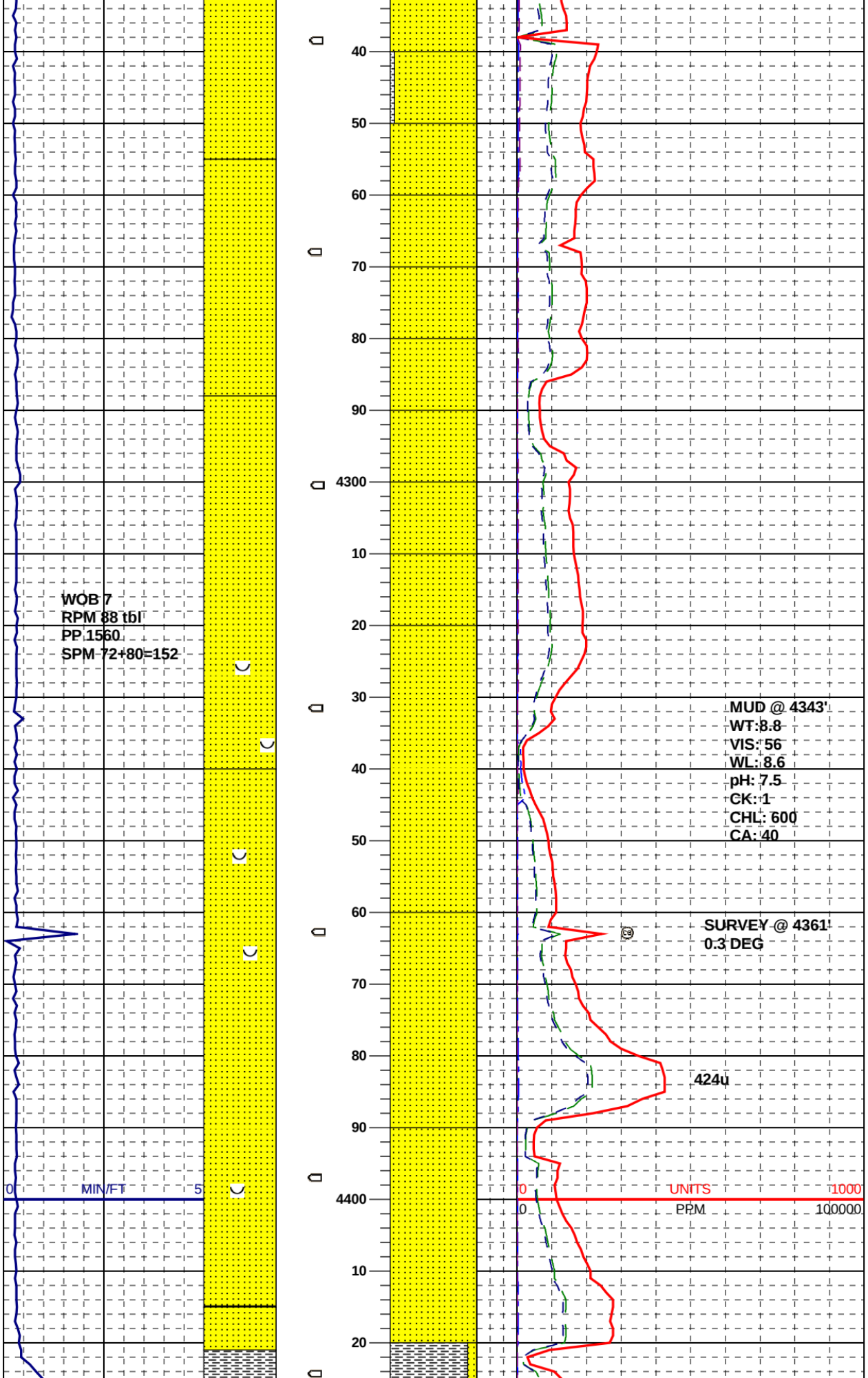
SS: clr, trnsl, wh, sli s&p, fg, wk calc cmtd clstr, blk mica flakes, cse grained lse qtz, ang-sbrd, clr & op qtz, sm blk incl, NFSOC

SS: clr, trnsl, wh, sli s&p, fg, wk calc cmtd clstr, v cse - m grained lse qtz, ang-sbrd, clr & op qtz, sm blk / gold incl, pyr frag, NFSOC

SH: ltgy, brn-gy, sbblky, frm-sft, slty ip, sl calc to n calc, micro spks of brn-blk mica generally present in shale

SS: wh - fros - crm, ang - sbang, micro xl - vf gr, pred w consol, abnt lse qtz gr, tt cmt mtx, sl calc

SS: clr, trnsl, wh, sli s&p, fg, wk calc cmtd clstr, v cse - m grained lse qtz, ang-sbrd, clr & op qtz, sm blk / gold incl, pyr frag, NFSOC



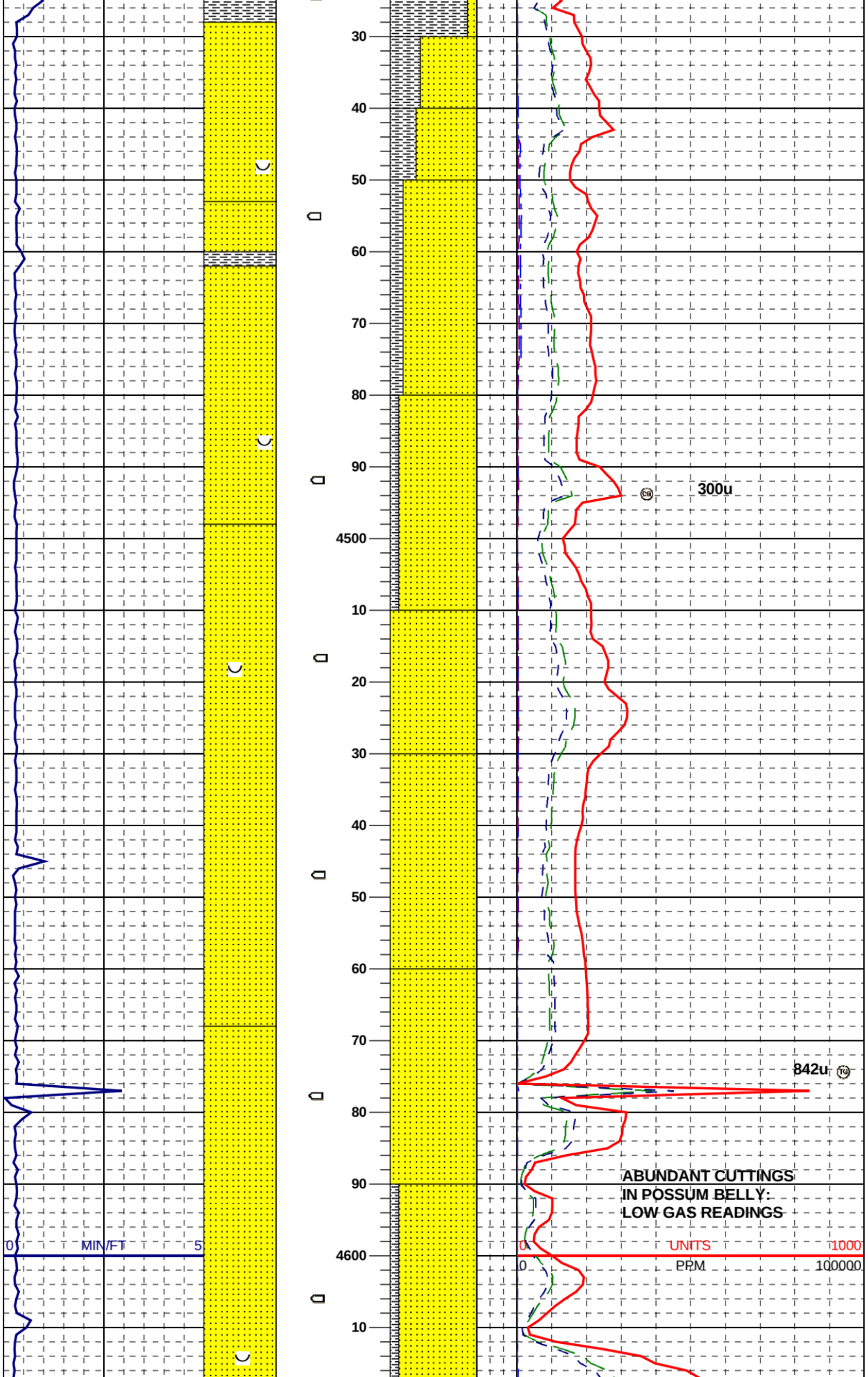

SS: clr, trnsl, wh, sli s&p, fg, wk calc cmtd clstr, v cse - m grained lse qtz, ang-sbrd, clr & op qtz, pyr frag, NFSOC

SS: clr, trnsl, wh, sli s&p, fg, wk calc cmtd clstr, v cse - m grained lse qtz, ang-sbrd, clr & op qtz, metallic mica flk, NFSOC

SS: aa, v cln sd

SS: clr, trnsl, wh, sli s&p, fg, wk calc cmtd clstr, v cse - m grained lse qtz, ang-sbrd, clr & op qtz, metallic mica flk, NFSOC

SS: clr, trnsl, wh, sli s&p, fg, wk calc cmtd clstr, v cse - m grained lse qtz, ang-sbrd, clr & op qtz, abnt metallic gld mica flk / frag, blk carb frag, NFSOC



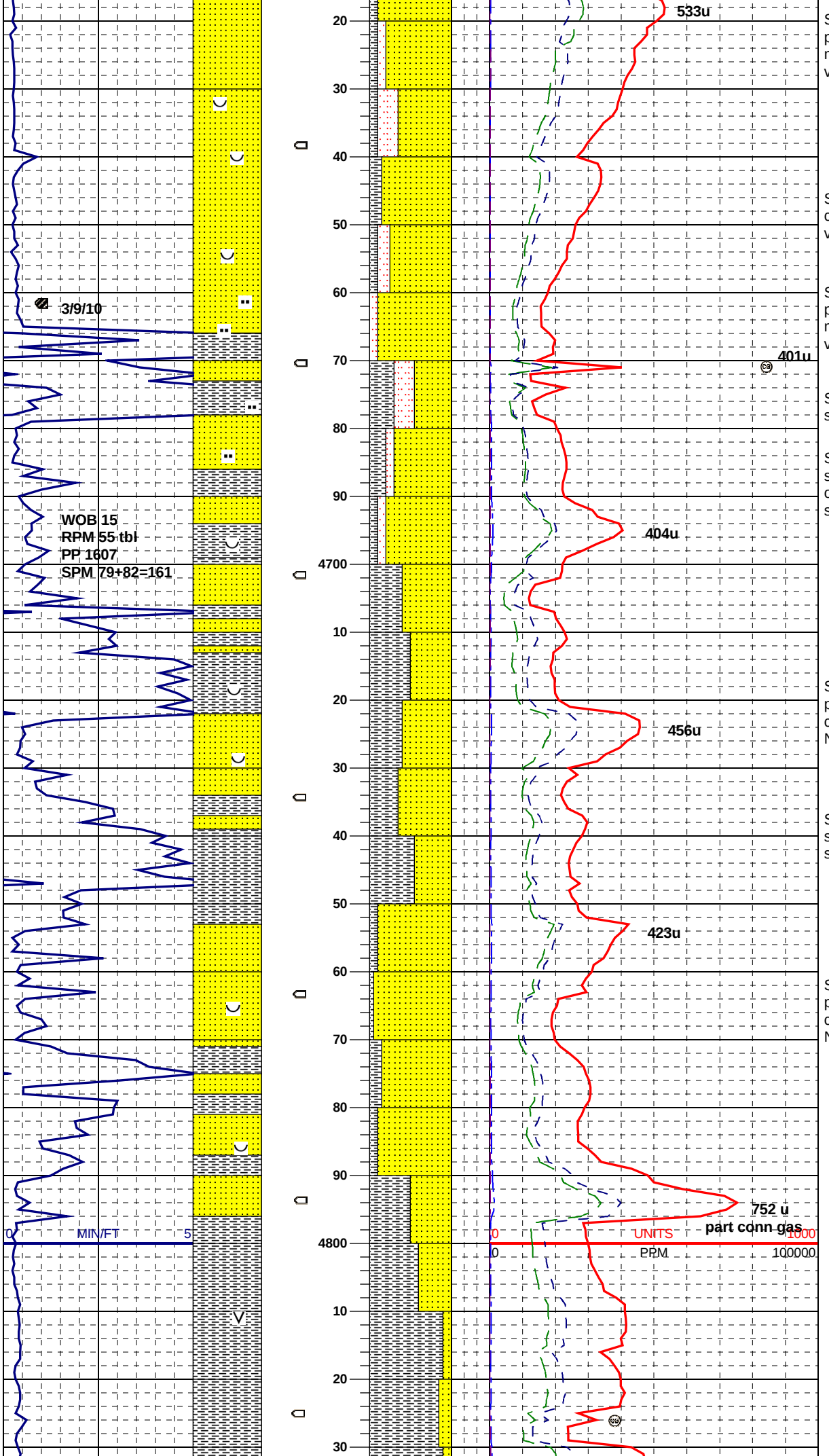

SH: ltgy, brn-gy, lt tan, sbblky, frm-sft, slty ip, sl calc to n calc, micro spks of brn-blk mica generally present in shale

SS: clr, trnsl, wh, sli s&p, fg, wk calc cmtd clstr, v cse - m grained lse qtz, tr p sort multi gr clus, ang-sbrd, clr & op qtz, abnt metallic gld mica flk / frag, NFSOC

SS: clr, trnsl, wh, sli s&p, fg, wk calc cmtd clstr, v cse - m grained lse qtz, tr p sort multi gr clus, ang-sbrd, clr & op qtz, abnt metallic gld mica flk / frag, NFSOC

**WIPER TRIP**
**@ 4578'**

SS: clr, trnsl, wh, sli s&p, fg, wk calc cmtd clstr, v cse - m grained lse qtz, tr p sort multi gr clus, ang-sbrd, clr & op qtz, occ consol lse cmt mtx por sort gr, NFSOC




SS: clr - trnsl - wh, ang - sbrd, c gr, pred uncons, occ consol - lse cmt mtx, por sort, scat brn slty frag w / blk vn, abnt mica frag

SLTST: brn - lt brn, sft - v sft, lse consol, intbd vf sd gr, intbd mica, blk vn / incl

SS: clr - trnsl - wh, ang - sbrd, c gr, pred uncons, occ consol - lse cmt mtx, por sort, scat brn slty frag w / blk vn, abnt mica frag

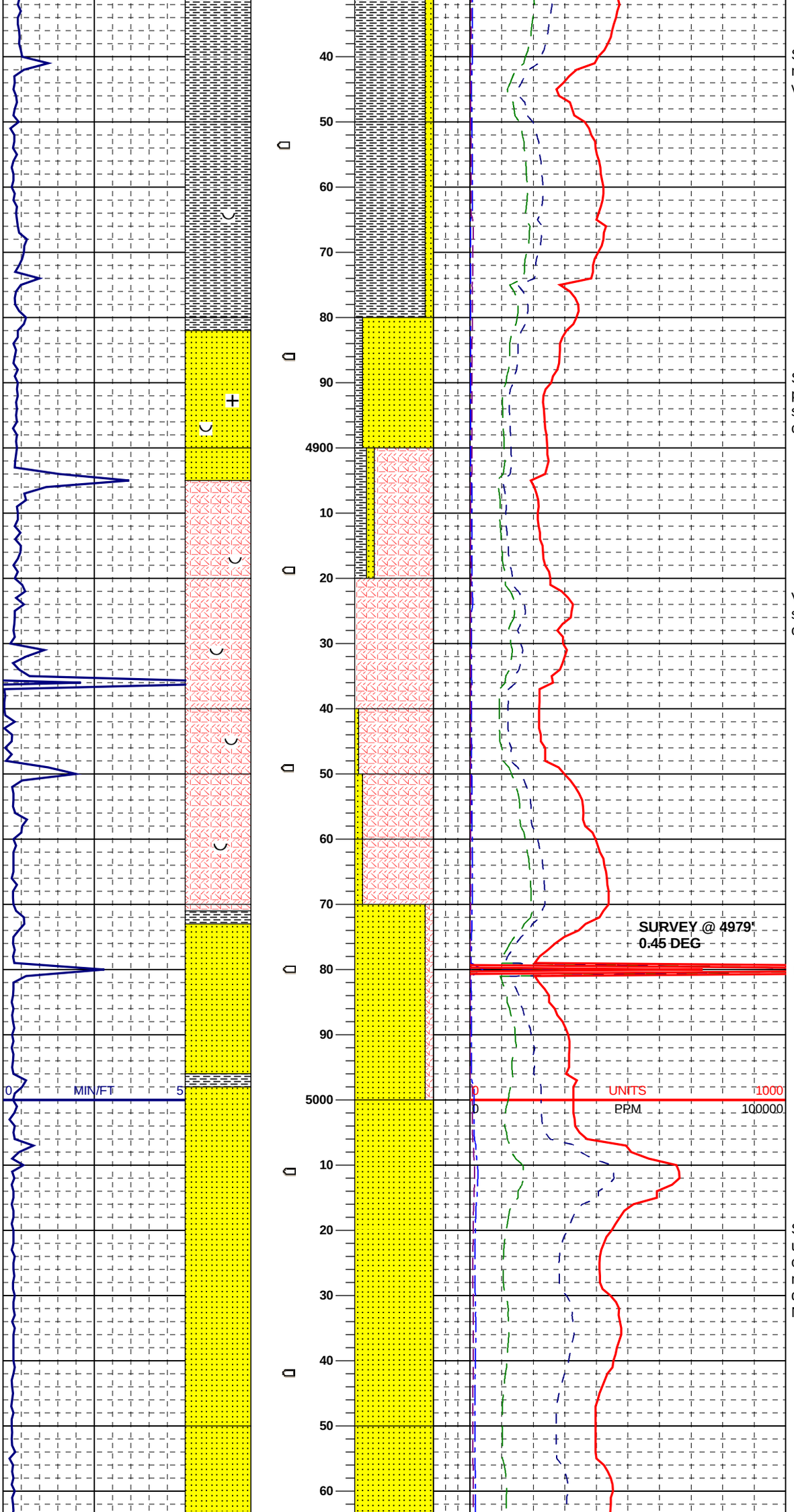
SS: abnt w consol m cmt qtz gr, p sort, abnt cly res

SH: ltgy, brn-gy, lt tan, sbblky, frm-sft, slty ip, sl calc to n calc, micro spks of brn-blk mica generally present in shale, brn / blk sft tuf frag???

SS: clr, trnsl, unconsl lse grains, poor srt, ang to sbrd, clr to op qtz, wk calc cmt to n calc, micaeous NFSOC

SH, dkgy, mgy, brn, sbblky, frm-sft, slty ip, mica spks, sm darker lams, some chips in spls appear tuffaceous

SS: clr, trnsl, unconsl lse grains, poor srt, ang to sbrd, clr to op qtz, wk calc cmt to n calc, micaeous NFSOC



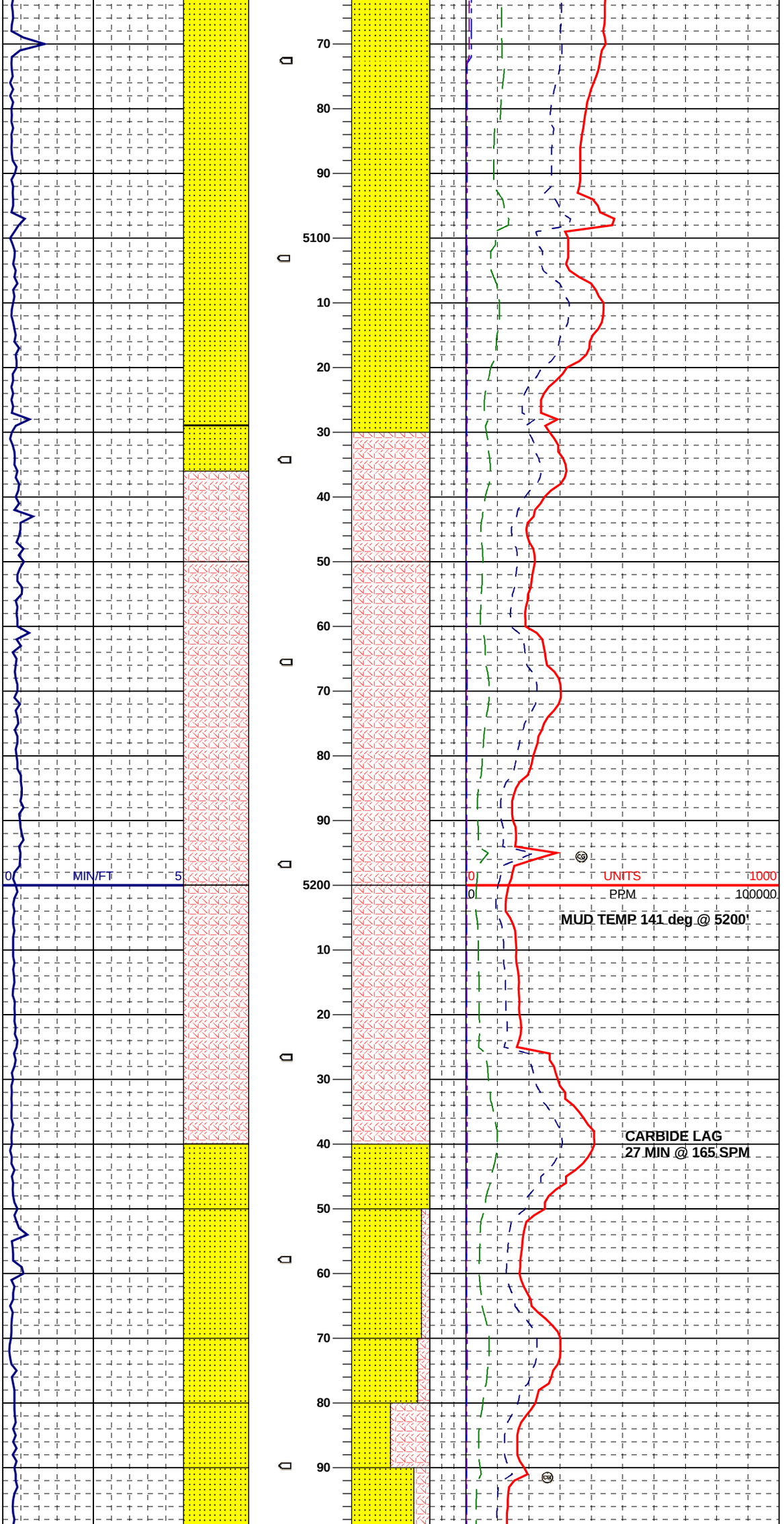

SH: m-dkgy, occ tan, blky, smooth, tr mica, sft, clayey, occ has a volcanic look, tuffaceous?

SS: clr, trnsl, unconsl lse grains, poor srt, ang to sbrd, clr to op qtz, some plagioclase feldspar, wk calc cmt to n calc, micaeous NFSOC

VOLCANICS: lt-mgy, frm-sl hd, occ sft & crumbly, abnd blk mica, vf xln, occ mxln, prob tuffaceous ip

**DOWNTIME GAS= 2700 u**

SS: clr, trnsl, op wh, m-vcse grained, unconsl lse qtz grains, sbang- sbrd, occ ang, clr - opaque qtz, some scat mica in spl, some minor amounts of dk to med gy, slty, sft to sl hd shale, NFSOC

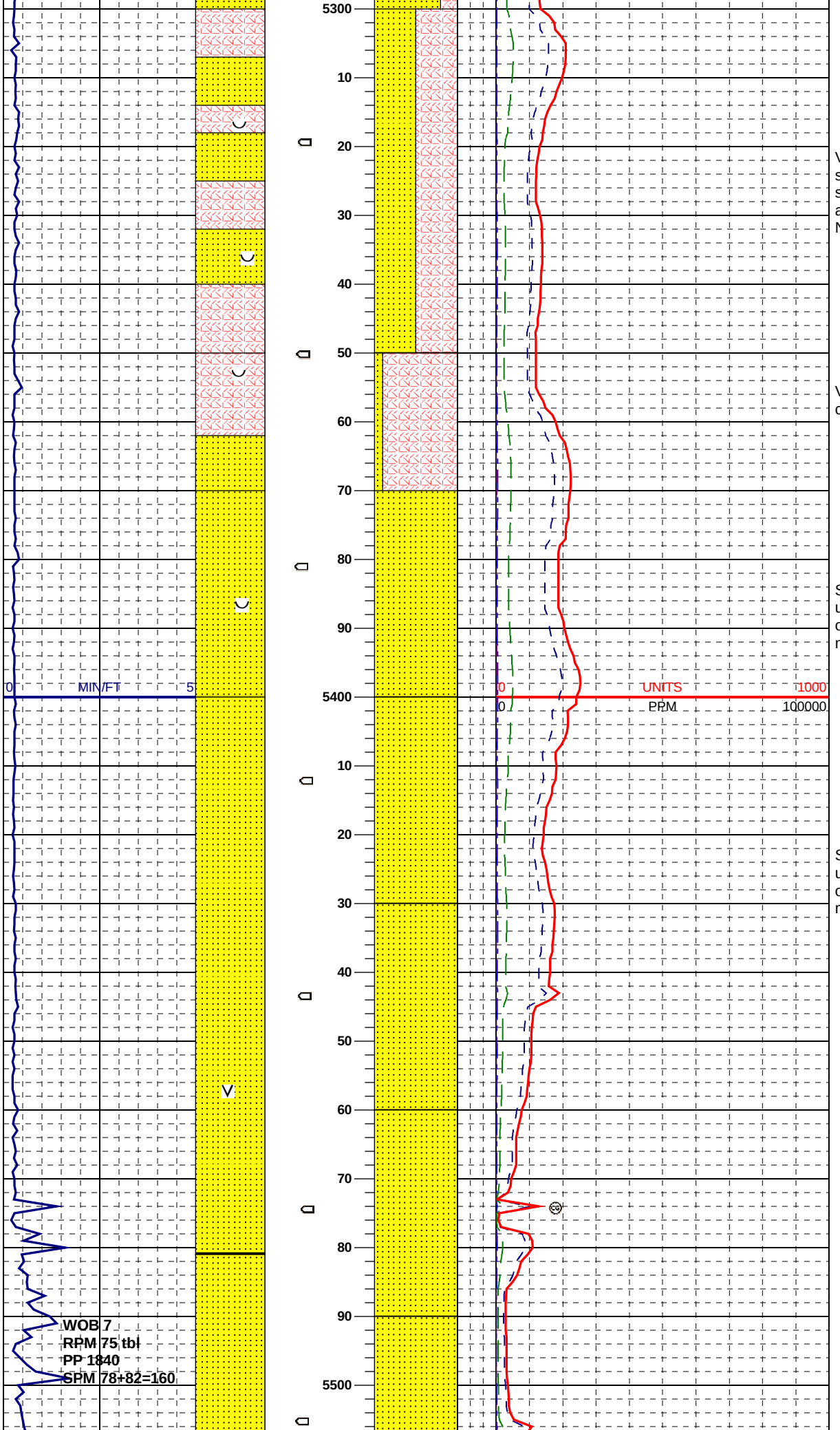



SS: clr, trnsl, op wh, m-vcse grained, unconsl lse qtz grains, sbang- sbrd, occ ang, clr - opaque qtz, some scat mica in spl, some minor amounts of dk to med gy, slty, sft to sl hd shale, NFSOC

VOLCANICS: m-dkgy, wh with blk streaks, blky, mod hd to occ sl sft, abundant gold and black mica, vf-m xln, tuffaceous ip, NFSOC

VOLCANICS: dkgy, to blk, darker than above, vf-f xln, micaeous, blky, crumbly to occ sl hd, sl calc ip, Could be BASALT

SS: clr, trnsl, op wh, m-vcse grained, unconsl lse qtz grains, sbang- sbrd, occ ang, clr - opaque qtz, some scat mica in spl, some minor amounts of dk to med gy VOLCANICS aa, NFSOC

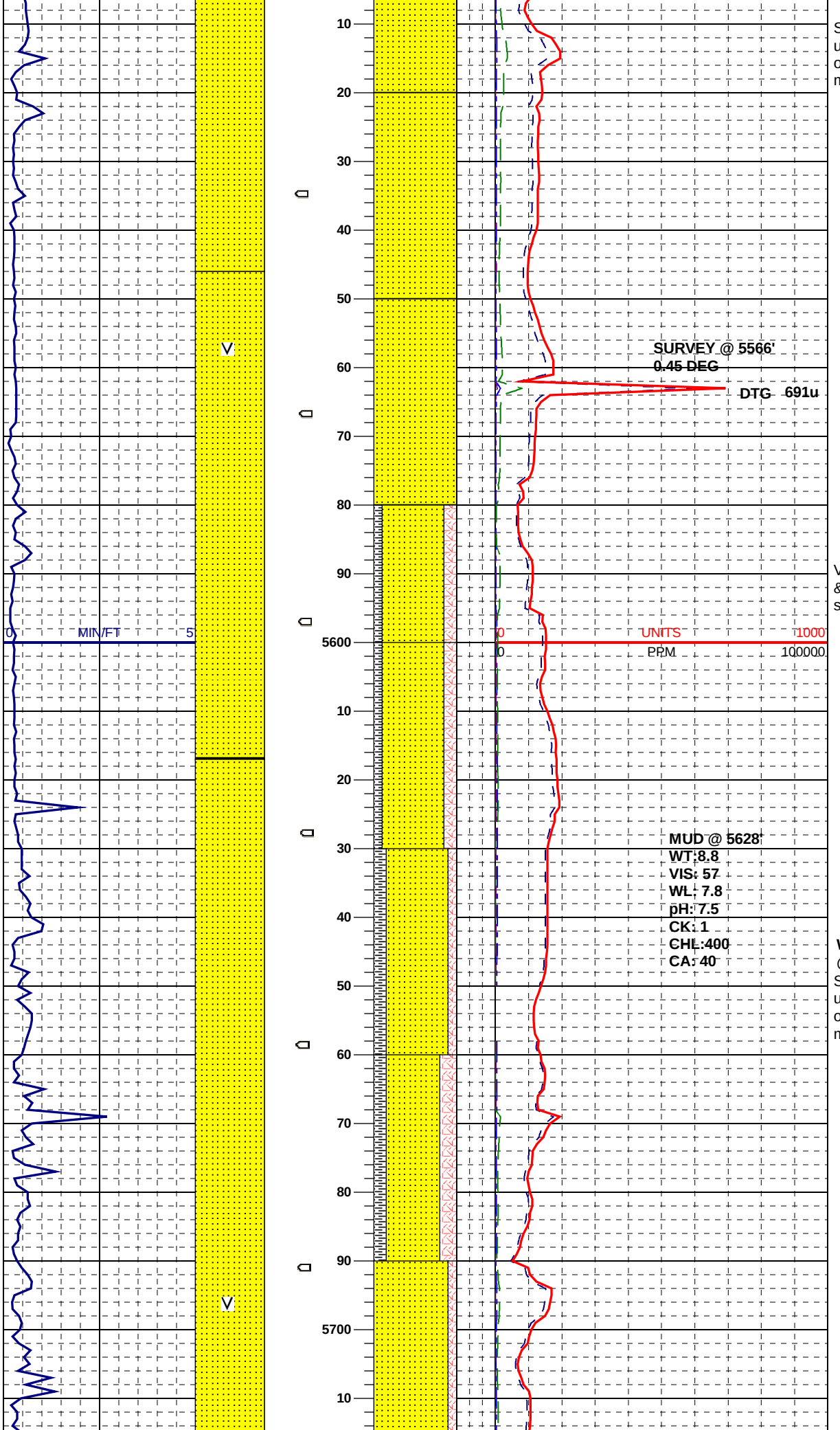



VOLCANICS: lt to mgy, blk incl & streaks of mica, vf-f xln, frm, sbblky, occ sl hd, lighter color than above
NFSOC

VOLCANICS: aa, increase in darker color rock

SS: clr, trnsl, op wh, m-vcse grained, unconsl lse qtz grains, sbang- sbrd, occ ang, clr - opaque qtz, some scat mica in spl, NFSOC

SS: clr, trnsl, op wh, m-vcse grained, unconsl lse qtz grains, sbang- sbrd, occ ang, clr - opaque qtz, some scat mica in spl, NFSOC

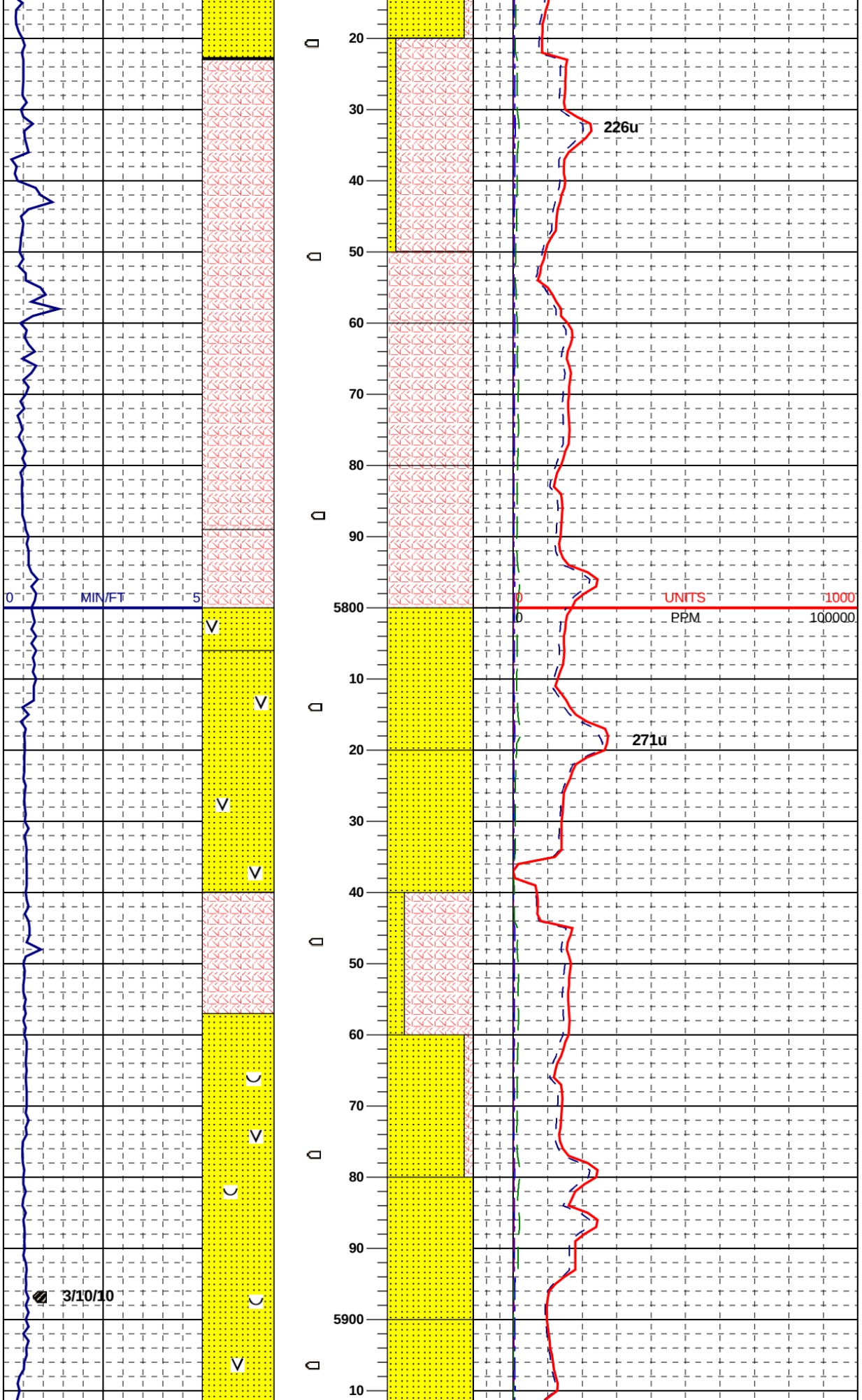



SS: clr, trnsl, op wh, m-vcse grained, unconsl lse qtz grains, sbang- sbrd, occ ang, clr - opaque qtz, some scat mica in spl, NFSOC

VOLCANICS: lt - mgy - lt br, blk incl & streaks of mica, vf-f xln, frm, sbblky, occ sl hd

**WIPER TRIP @ 5659'**

SS: clr, trnsl, op wh, m-vcse grained, unconsl lse qtz grains, sbang- sbrd, occ ang, clr - opaque qtz, some scat mica in spl, NFSOC



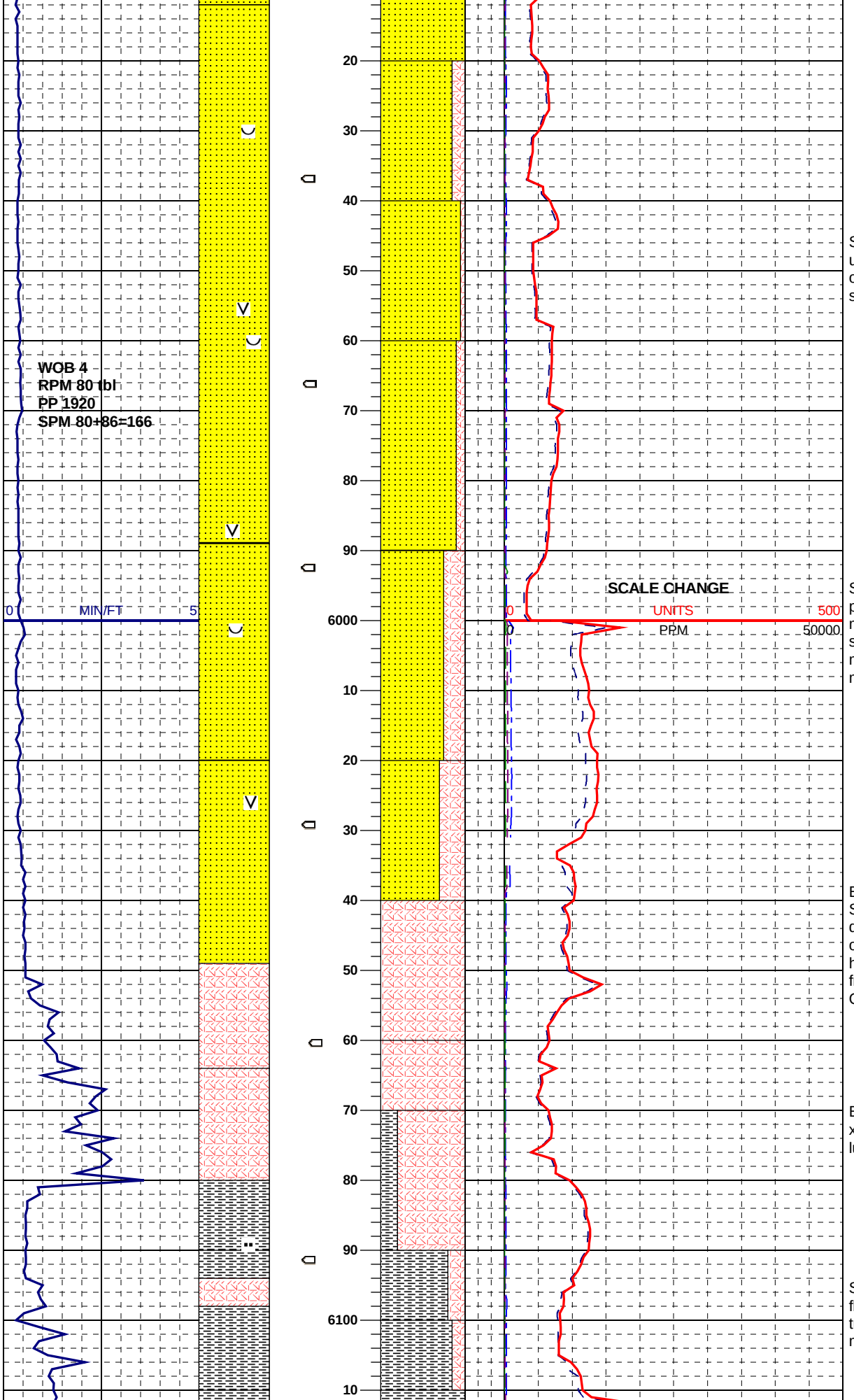

VOLCANICS: lt - mgy - lt br, blk incl & streaks of mica, vf-f xln, frm, sbblky, occ sl hd - pred sft

VOLCANICS:aa, dk brn, incr dark, incr hd

SS: clr, trnsl, op wh, m-vcse grained, unconsl lse qtz grains, sbang- sbrd, occ ang, clr - opaque qtz, some scat mica in spl, NFSOC

VOLCANICS: lt - mgy - lt br - dk brn, blk incl & streaks of mica, vf-f xln, frm, sbblky, incr hd - abnt sft

SS: clr, trnsl, op wh, m-vcse grained, unconsl lse qtz grains, sbang- sbrd, occ ang, clr - opaque qtz, some scat mica in spl, poss wh calcite frag, NFSOC



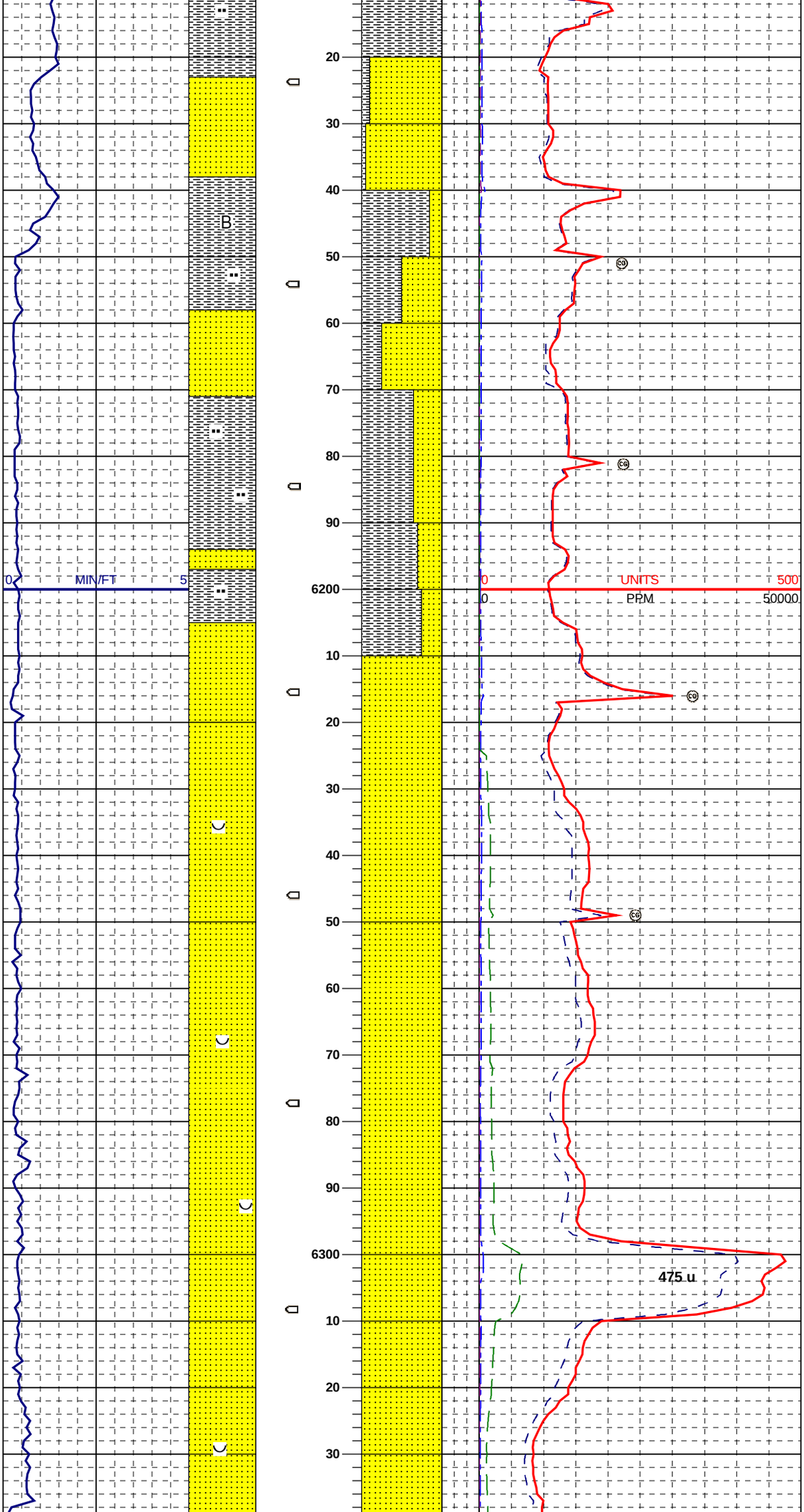

SS: clr, trnsl, op wh, m-v c grained, unconsl lse qtz grains, sbang- sbrd, occ ang, clr - opaque qtz, abnt ica in spl, poss wh calcite frag, NFSOC

SS: clr, trnsl, op wh, m-v c grained, pred unconsl lse qtz grains, abnt multi cl gr, v fri, tt cmt mtx sbang-sbrd, occ ang, clr - opaque qtz, abnt mica in spl, poss wh calcite frag, blk min frag, NFSOC

BASALT:INCR VERY DARK SAMPLE: blk - off blk - lt - mgy - lt br - dk brn, v hd - fri, blk incl & streaks of mica or poss basalt, vf-f xln, frm - hd, sbblky, incr hd - abnt sft, poss bas frag w/ occ AQUA GREEN colored Olivine

BASALT: aa w/ wh cmt, gls incl, sdy xl incl, abnt gn color, occ pyr / met lus, scat bent frag

SH: mgy, brn-gy, sbblky-plty, frm, flaky ip, sl hd to sl sft, slty, tuffaceous, scat blk spks, sl micaceous, NFSOC



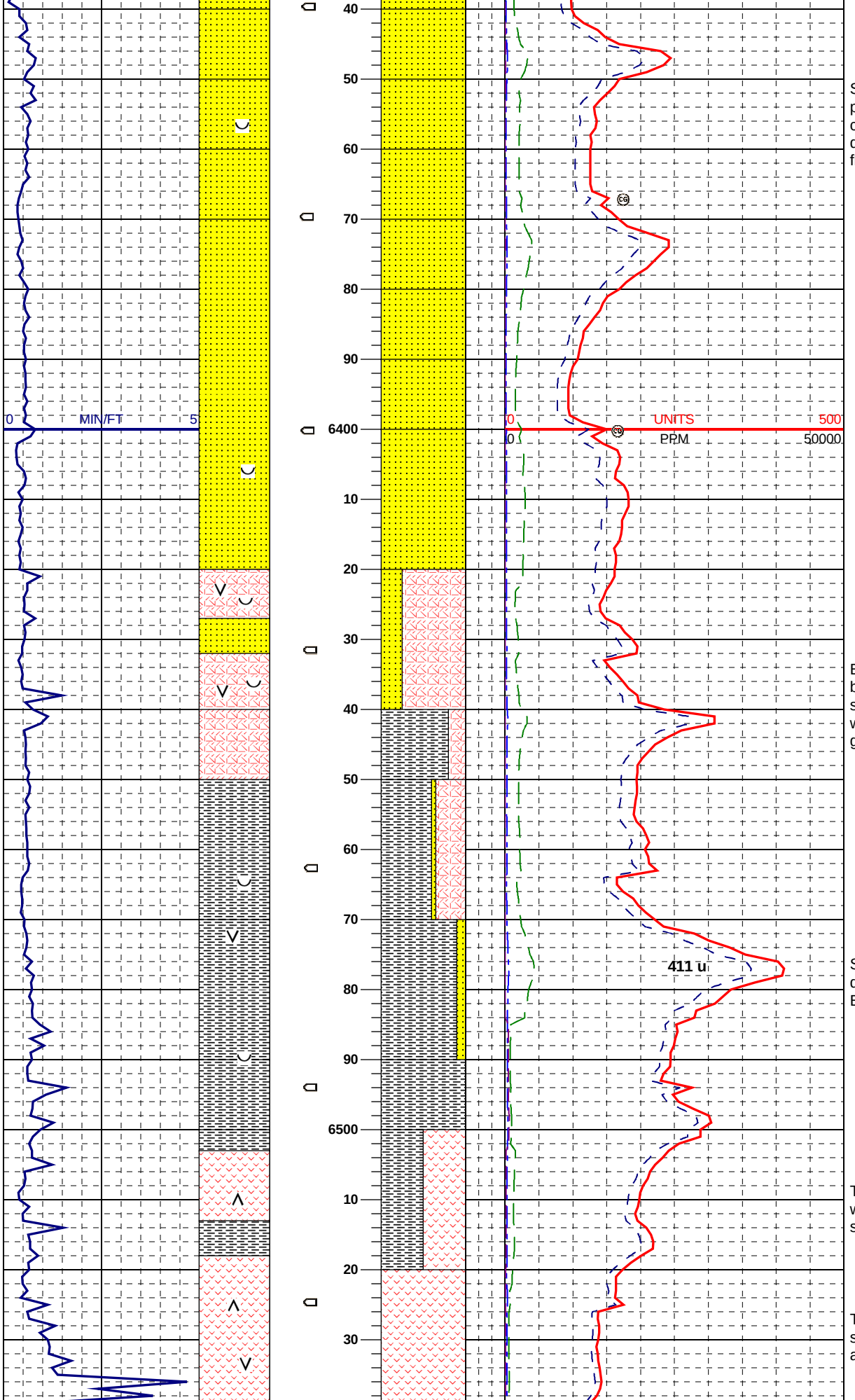

SS: wh, clr, trnsl, m-cse grained, occ scat v cse grains, clr & op qtz, sbang-sbrd, wh clay cmt, pred drls up into lse grains, NFSOC

SH: lt-mgy, mottled to sl s&p look ip, frm-sft, crumbly ip, slty, micaeous, has almost an organic look, occ brn-gy, tuffaceous ip, NFSOC

SS: wh, clr, trnsl, cse to very cse grained, drls up into lse grains, sbang -sbrd, clr to opaque qtz, scat wh BENT flakes in spls, NFSOC

SS: wh, clr, trnsl, med to v cse grained, pred drls up into lse grains, some calc cmtd clstrs, sbang-sbrd, clr & op qtz, mica common, occ trace wh BENT flakes in spls, NFSOC

SS: wh, clr, trnsl, cse to v cse, occ med grained, drls up loose, sbang-sbrd clr & op qtz, brn mica flakes, NFSOC



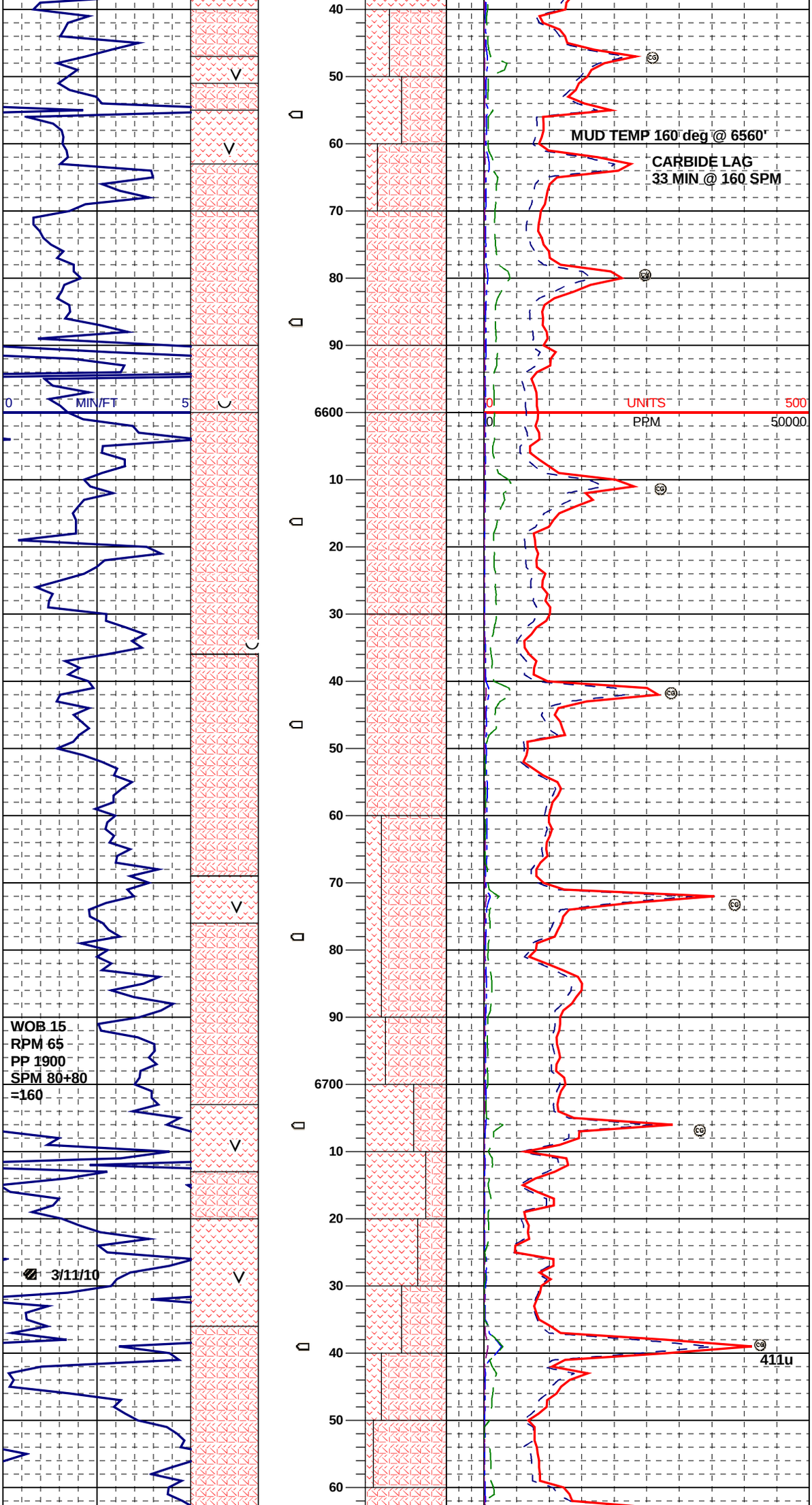

SS: wh, clr, trnsl, med to cse grained, pred drls up into lse grains, some calc cmtd clstrs, sbang-sbrd, clr & op qtz, brn-gold mica flakes, scattered flakes of wh BENT, NFSOC

BASALT: black, weathered volcanic basalt? similar in gross view to blk shale ,blky, sl sft, f xln, blk grnd mass w/ vf-f xls of pale gy incl, shly ip, has grainy texture ip, micaeous,

SH: dkgy, blk, similar to above, prob derived from highly weathered BASALT, platey, frm, occ sft

TUFF: wh, hd, micro xln,partly weathered ? chalky and somewhat shale like ip

TUFF: wh, hd, micro xln, dns, occ somewhat chalky, prob due to bit action, siliceous




BASALT: blk, mottled grn-blk, spls grnd up by bit ip, to grn clay, gen hd, occ sl sft, interbedded with white TUFF aa

VOLCANICS: SH:? green-white, grn -gy, partly ground up bit flour, could be very hard olivine basalt lava ground up by bit action, tuffaceous

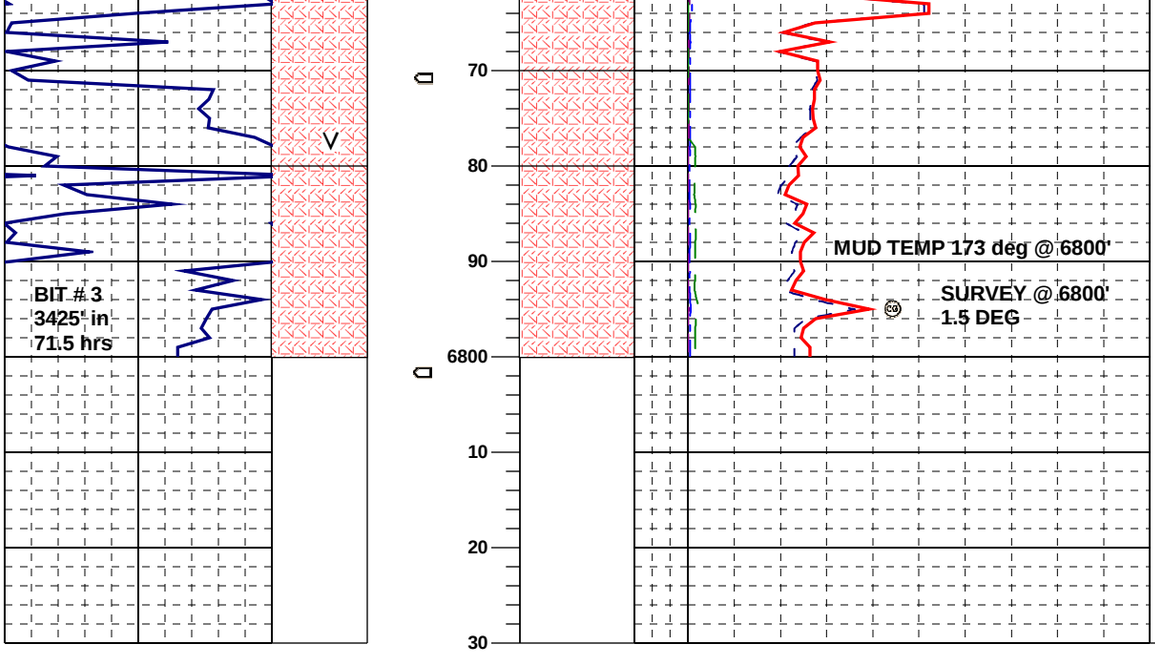
BASALT: green, with black minerals, , olivine rich basalt, m to cse xln, blk pyroxene minerals common, also wh-op, plagioclase feldspar xls

BASALT: green, with black minerals, , olivine rich basalt, m to cse xln, blk pyroxene minerals common, also wh-op, plagioclase feldspar xls, abnt wh frag

TUFF: wh, hd, micro xln, dns, occ somewhat chalky, prob due to bit action, siliceous

VOLCANICS: grn-gy, partly ground up bit flour, pos very hard olivine basalt lava ground up by bit action, tuffaceous

TUFF: wh, hd, micro xln, dns, occ somewhat chalky, prob due to bit action, siliceous BASALT: dk blk - blk, hd - m hd frag




VOLCANICS: grn-gy, wh-green/blk, hard, vf to cse xln, drls up into fine to cse size frags & xls, qtz, feld, blk minerals, olivine, some wh tuff aa, fair amt of qtz sd, and trash from uphole

**TOTAL DEPTH 6800' DRLR**
**06:30 HRS, 3/11/10**
**CIRC & COND MUD**
**TOH FOR E LOGS**

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