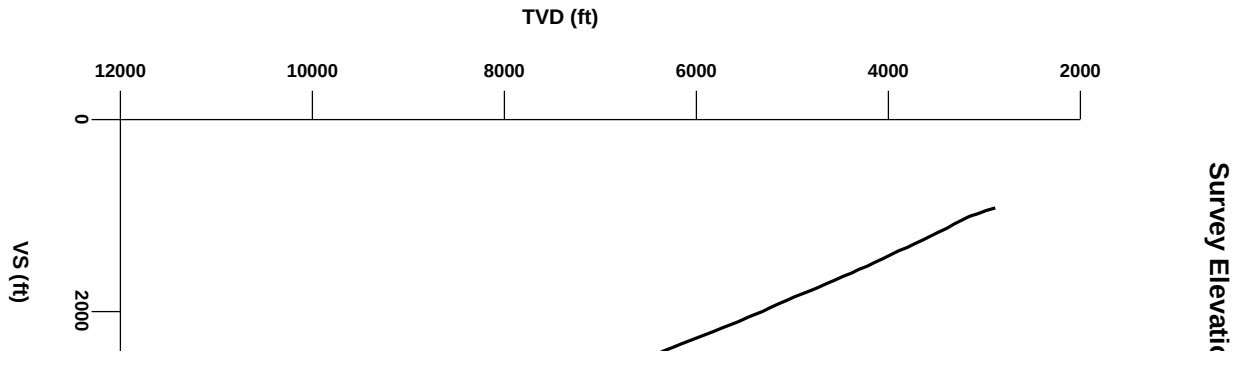
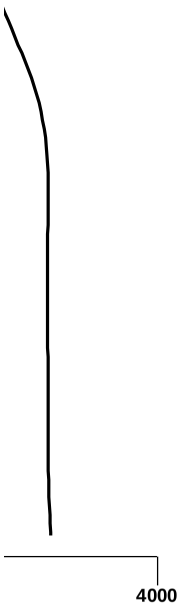
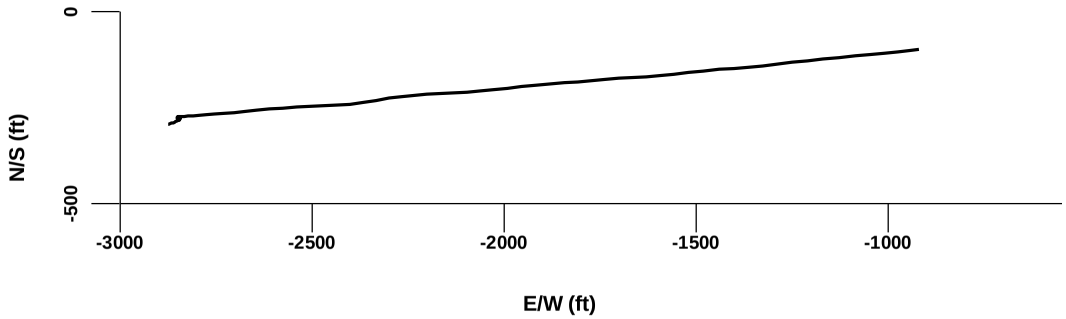
OPERATOR:	**ENCANA OIL & GAS (USA) INC.**
WELL:	**SG 8502C-35 D36 496**
LOCATION:	**NWNW SECTION 36, T4S, R96W**
COUNTY:	**GARFIELD**
STATE:	**COLORADO**
SPOT:	**344' FNL 1064' FWL**
ELEVATION:	**8290' GL 8322' KB**
FIELD:	**GRAND VALLEY**
SPUD DATE:	**JANUARY 20, 2013**
TD DATE:	**JANUARY 25, 2013**
DATES LOGGED:	**1/20/13 - 1/25/13**
DEPTHS LOGGED:	**3045' - 12405'**
LOGGERS:	**ELIZABETH RECKS, PETER RECKS**
DRILLING FLUID:	**LSND WATER-BASED MUD**
DRILLING RIG:	**PATTERSON-UTI DRILLING #326**
API:	**05-045-2093200**
LOG TYPE:	**VERTICAL**
SCALE:	**1:240 (5 inches per 100 feet)**
REMARKS:	**RIG SUPERVISORS: CURT CHILDERS, ROBERT ESCOJEDA, NORMAN McCREARY, MIKE QUINTANA** **ENCANA GEOLOGIST: RAFFAELLO SACERDOTI** **WELLSITE GEOLOGICAL SERVICES PROVIDED BY COLUMBINE LOGGING INC.**



on



Survey Plan



-500

LITHOLOGIES

Carbonaceous Shale | Coal | Limestone | Nothing

Sandstone | Shale | Shaly Sandstone | Silty Shale

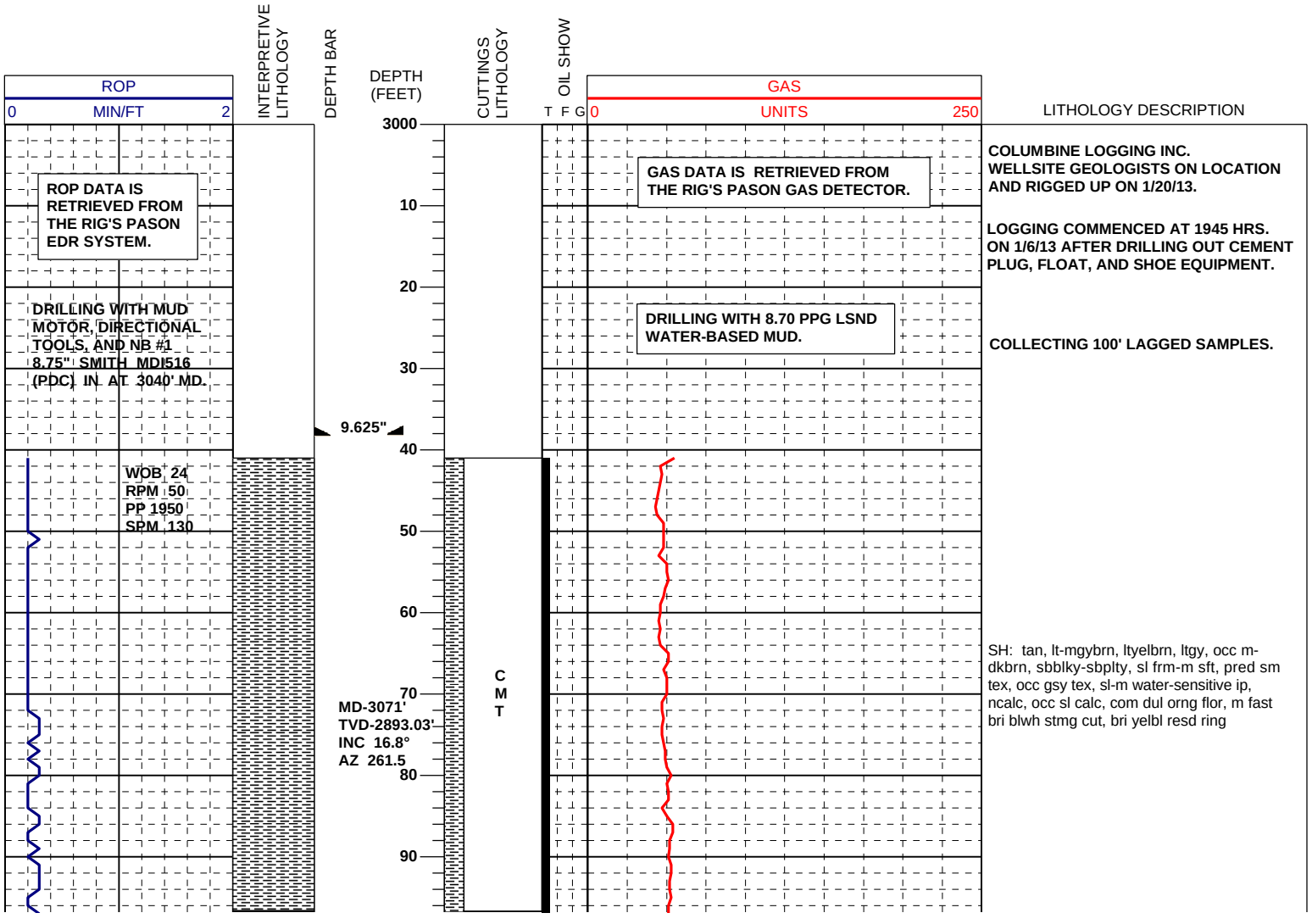
ENGINEERING SYMBOLS

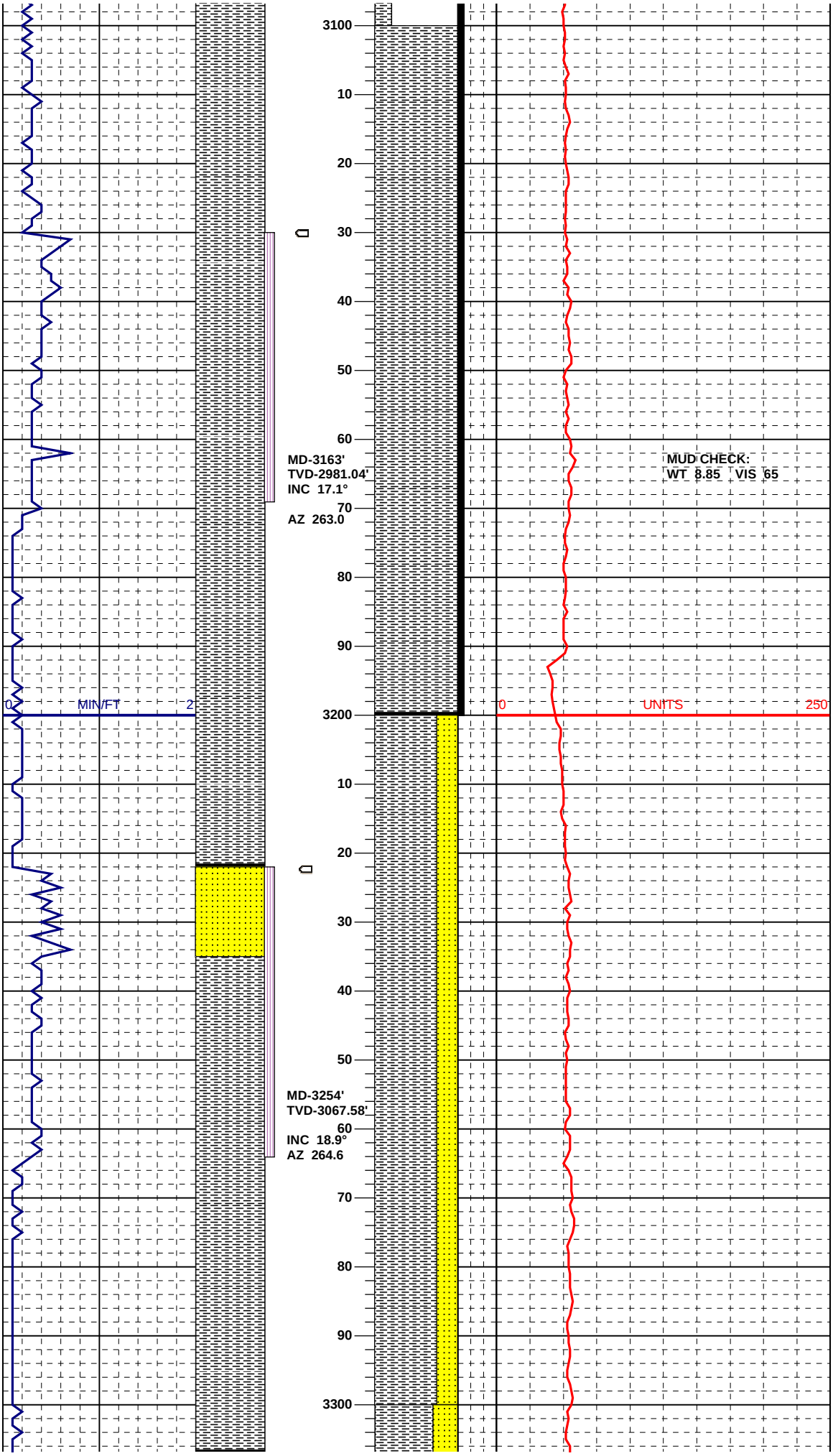
Bit Change | Casing | Casing

Connection | Gas Show | Midnight Depth

BAR SYMBOLS

Sliding

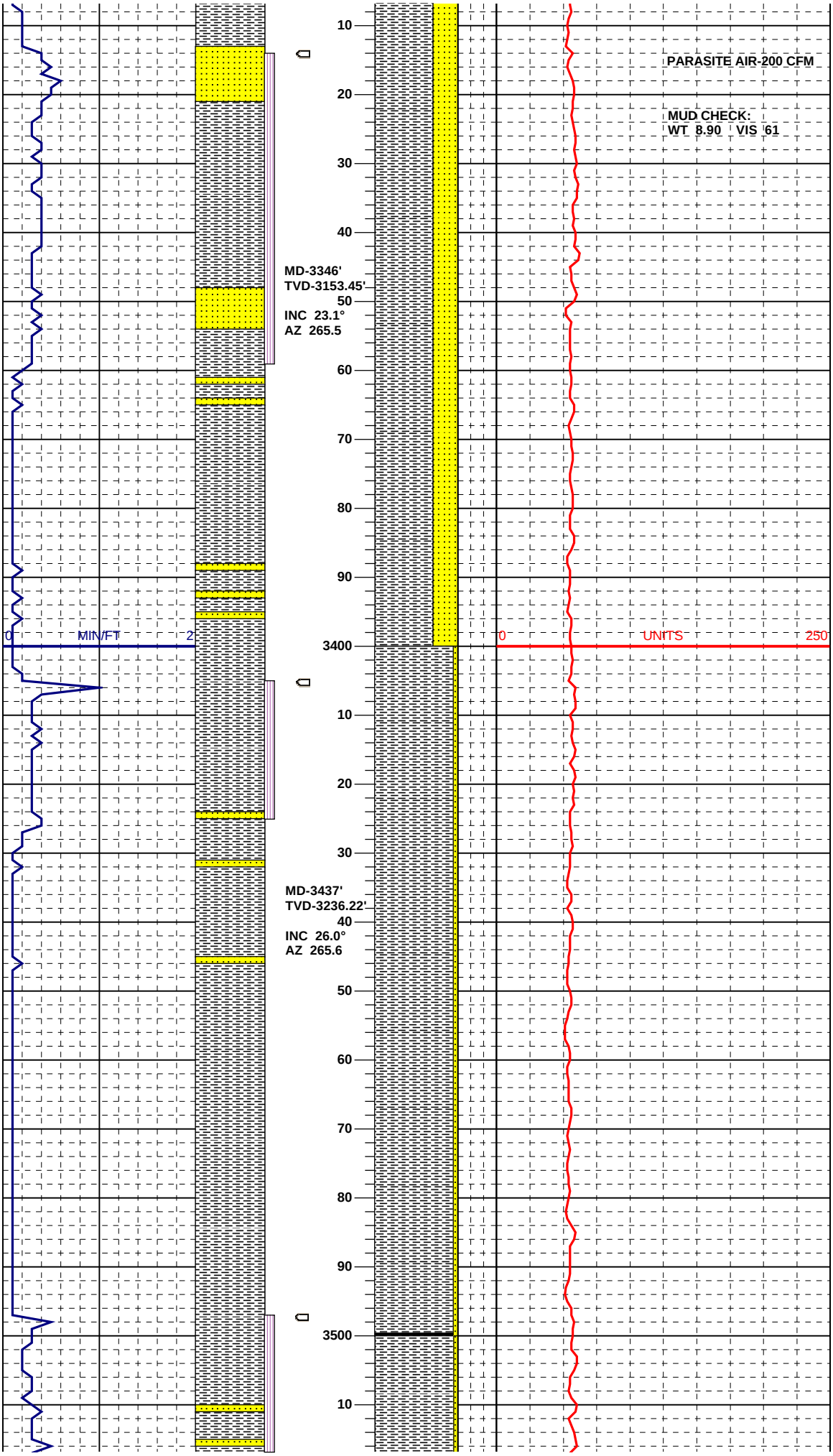




SH: tan, lt-mgybrn, ltyelbrn, ltgy, occ m-dkbrn, sbblky-sbplty, sl frm-m sft, pred sm tex, occ gsy tex, sl-m water-sensitive ip, ncalc, occ sl calc, com dul orng flor, m fast bri blwh stmg cut, bri yelbl resd ring, also dul yelwh flor, m fast blwh stmg cut, bri yelbl resd ring

SS: clr-trnsl-wh, vf-fgr, tr mgr, sbang-sbrd, pred wsrt, m hd-sl fri, m-wcmt, sl-m calc, tr wh cly fl, no vis por, tr dk shy grs, rr dk mica, NFSOC

SH: ltgybrn-ltyelbrn, ltredbrn-ltbrn, offwh-ltgy, tan, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, n-sl calc, tr dul orng-gold flor w/ m fast bri blwh stmg cut, bri yelbl resd ring

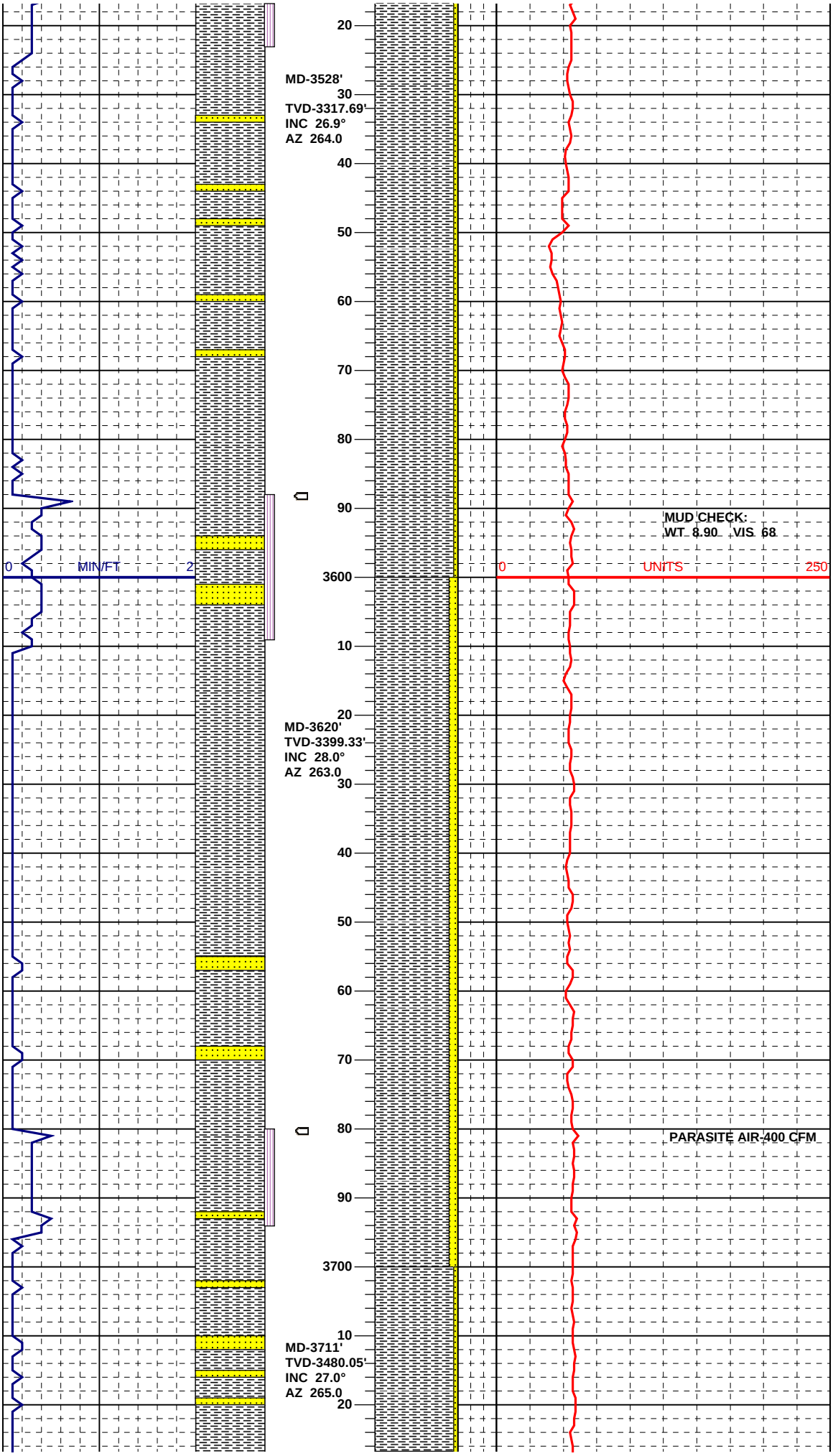


START PARASITE AIR TO SLOW MUD LOSSES IN THE WASATCH.

SS: clr-trnsl-wh, vf-fgr, tr mgr, sbang-sbrd, pred wsrt, m hd-sl fri, m-wcmt, sl-m calc, tr wh cly fl, no vis por, tr dk shy grs, tr intgran pyr & intgwn pyr clus, rr dk mica, NFSOC

SH: ltgybrn-ltyelbrn, ltredbrn-ltbrn, offwh-ltgy, tan, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, n-sl calc, rr dul orng-gold flor w/ m fast bri blwh stmg cut, bri yelbl resd ring

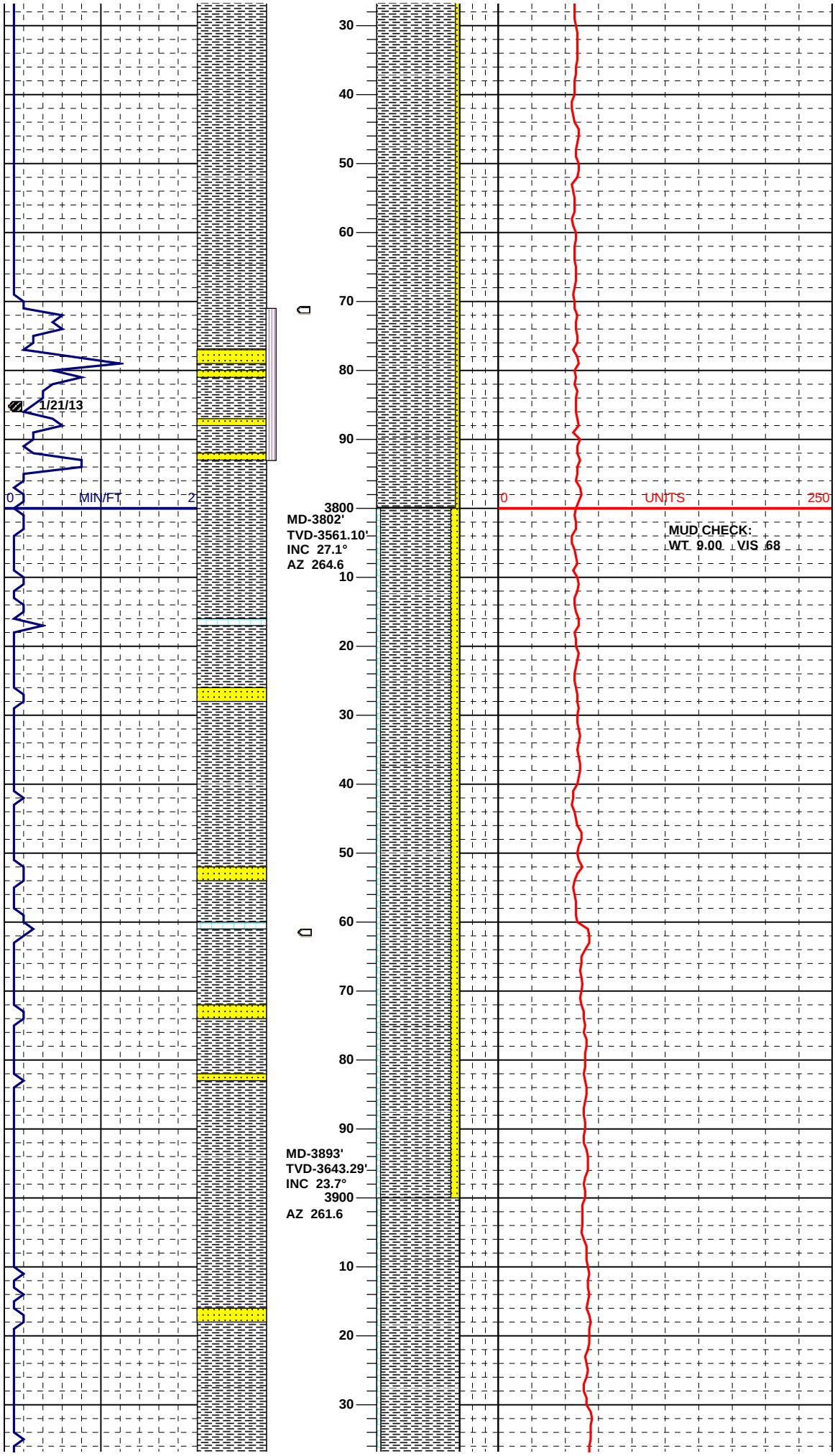
SH: redbrn, lt brn, lt gy, lt gygn, yelbrn-ltgybrn, tan, sbblky-sbplty, sl firm-m sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc



SH: redbrn, lt brn, lt gy, lt gygn, yelbrn-ltgybrn, tan, sbblky-sbplty, sl firm-m sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc

SS: clr-trnsl-wh, lt gn, vf-fgr, sbang-sbrd, pred wsrt, m hd-v fri, m-w cmt, sl calc, tr wh cly fl, no vis por, tr dk shy grs, NFSOC

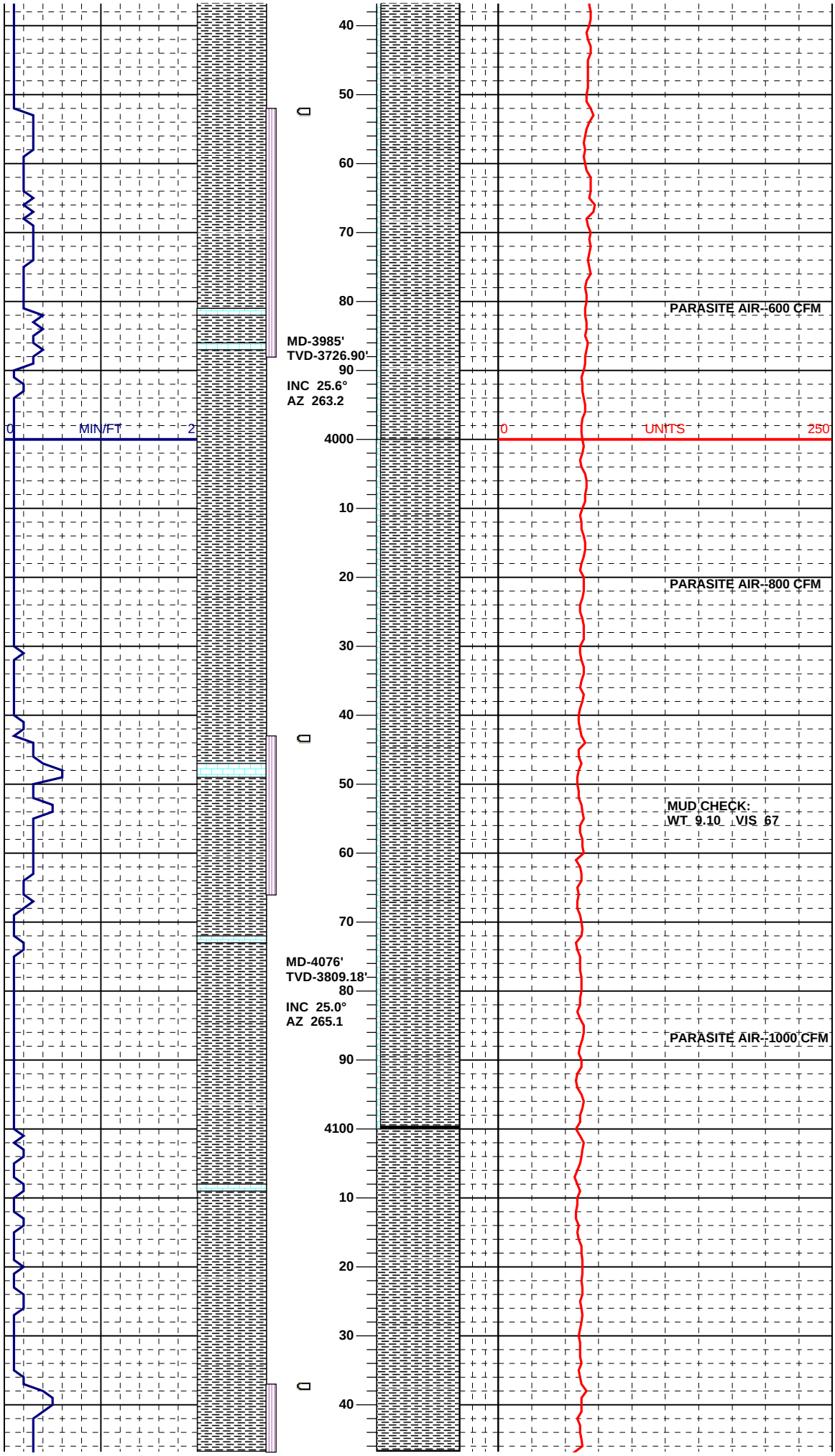
BEGINNING TO SEEP MUD AT 10-25 BBLS/HR.

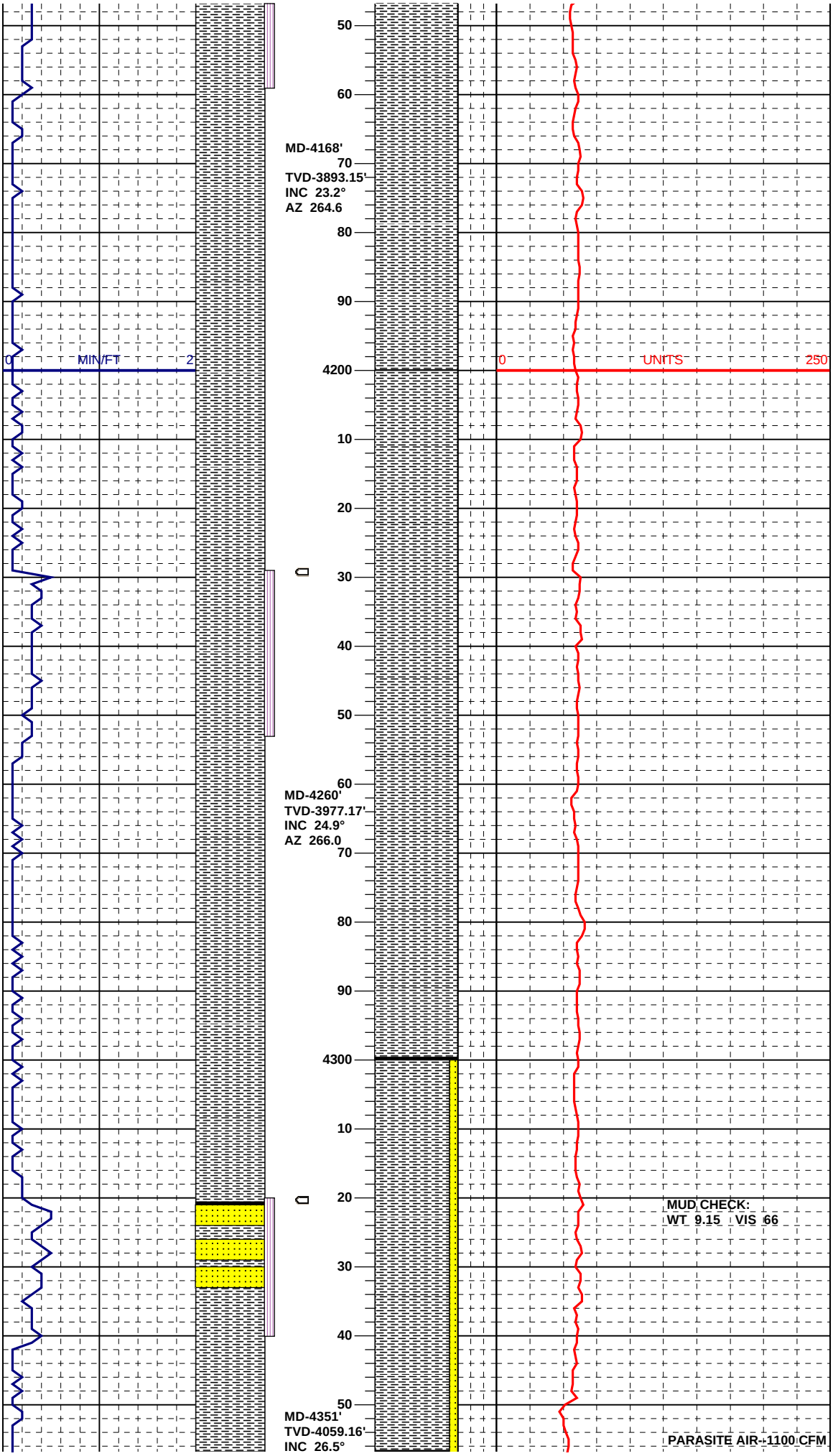


SH: tan, lt gy, redbrn, lt brn, yelbrn-ltgybrn, sbblky-sbplty, sl firm-m sft, pred sm tex, tr sl slty, sl water-sensitive ip, sl-m calc

LS: ltgy, offwh-ltgy mot, crpxln, sbblky, sl sft, sl arg, NFSOC

SS: clr-trnsl-wh, vf-fgr, sbang-sbrd, pred wsrt, m hd-v fri, m-w cmt, sl calc, tr wh cly fl, no vis por, tr dk shy grs, tr pyr, NFSOC

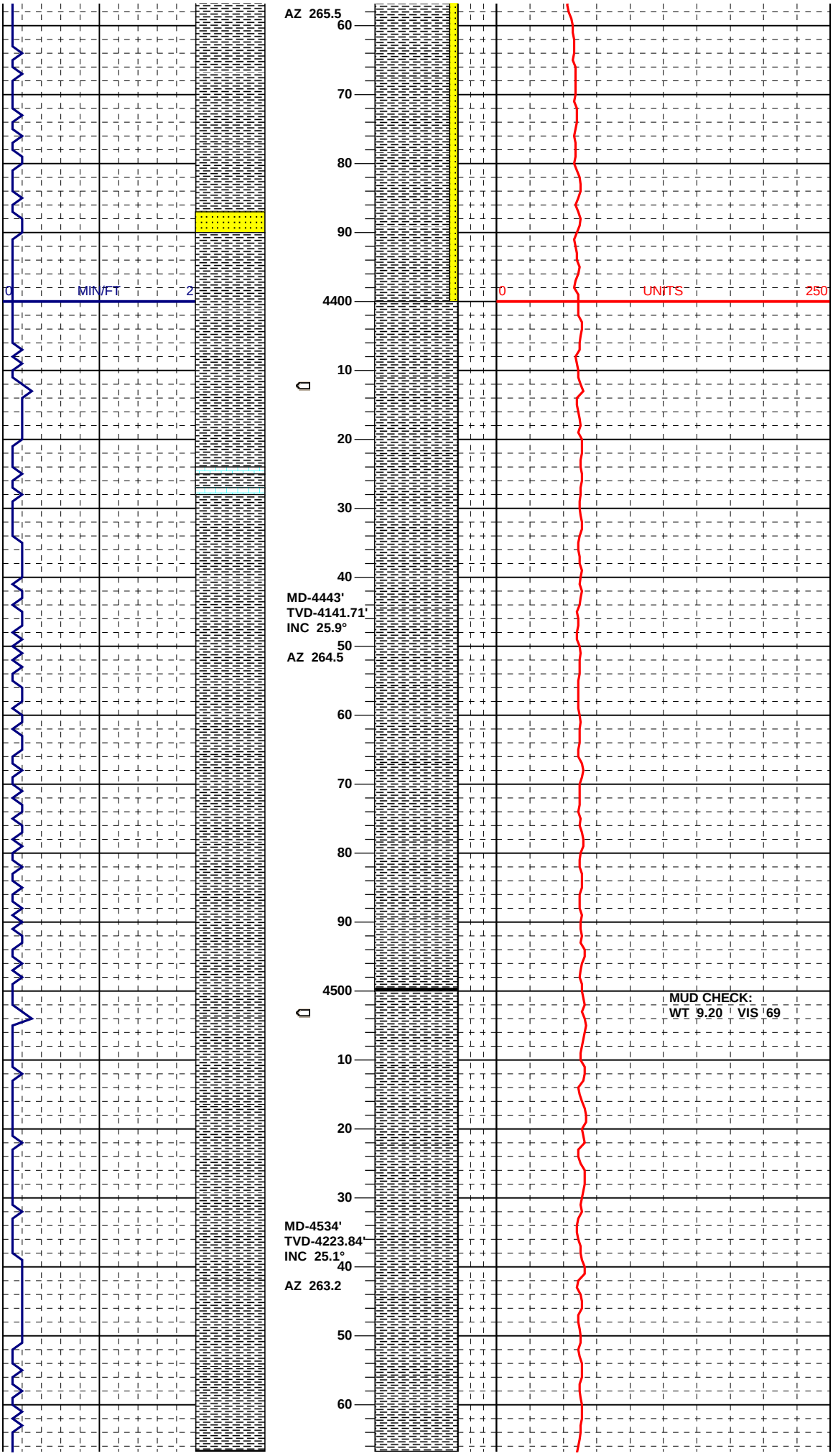

0
MIN/FT
2
0
UNITS
250
MD-3985'
TVD-3726.90'
INC 25.6°
AZ 263.2
MD-4076'
TVD-3809.18'
INC 25.0°
AZ 265.1
PARASITE AIR--600 CFM
PARASITE AIR--800 CFM
MUD CHECK:
WT 9.10 VIS 67
PARASITE AIR--1000 CFM
SH: tan, lt gybrn, lt brn, sbblky-sbplty, firm, pred sm tex, tr sl slty, sl water-sensitive ip, m calc
LS: ltgy, offwh-ltgy mot, crpxln, sbblky, sl sft, sl arg, NFSOC
LS: ltgy, offwh-ltgy mot, crpxln, sbblky, sl sft, sl arg, NFSOC
SH: tan, lt gybrn, lt brn, sbblky-sbplty, firm, pred sm tex, tr sl slty, sl water-sensitive ip, m -v calc



SH: redbrn, lt brn, lt gy, yelbrn-ltgybrn, tan, lt gygn, sbblky-sbplty, sl firm-m sft, pred sm tex, occ sl slty, sl water-sensitive ip, n-sl calc

SH: redbrn, lt brn, lt gy, yelbrn-ltgybrn, tan, lt gygn, sbblky-sbplty, sl firm-m sft, pred sm tex, occ sl slty, sl water-sensitive ip, n-sl calc

SH: ltgybrn-ltyelbrn, ltredbrn-ltbrn, offwh-ltgy, tan, occ yel/gy mot, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc

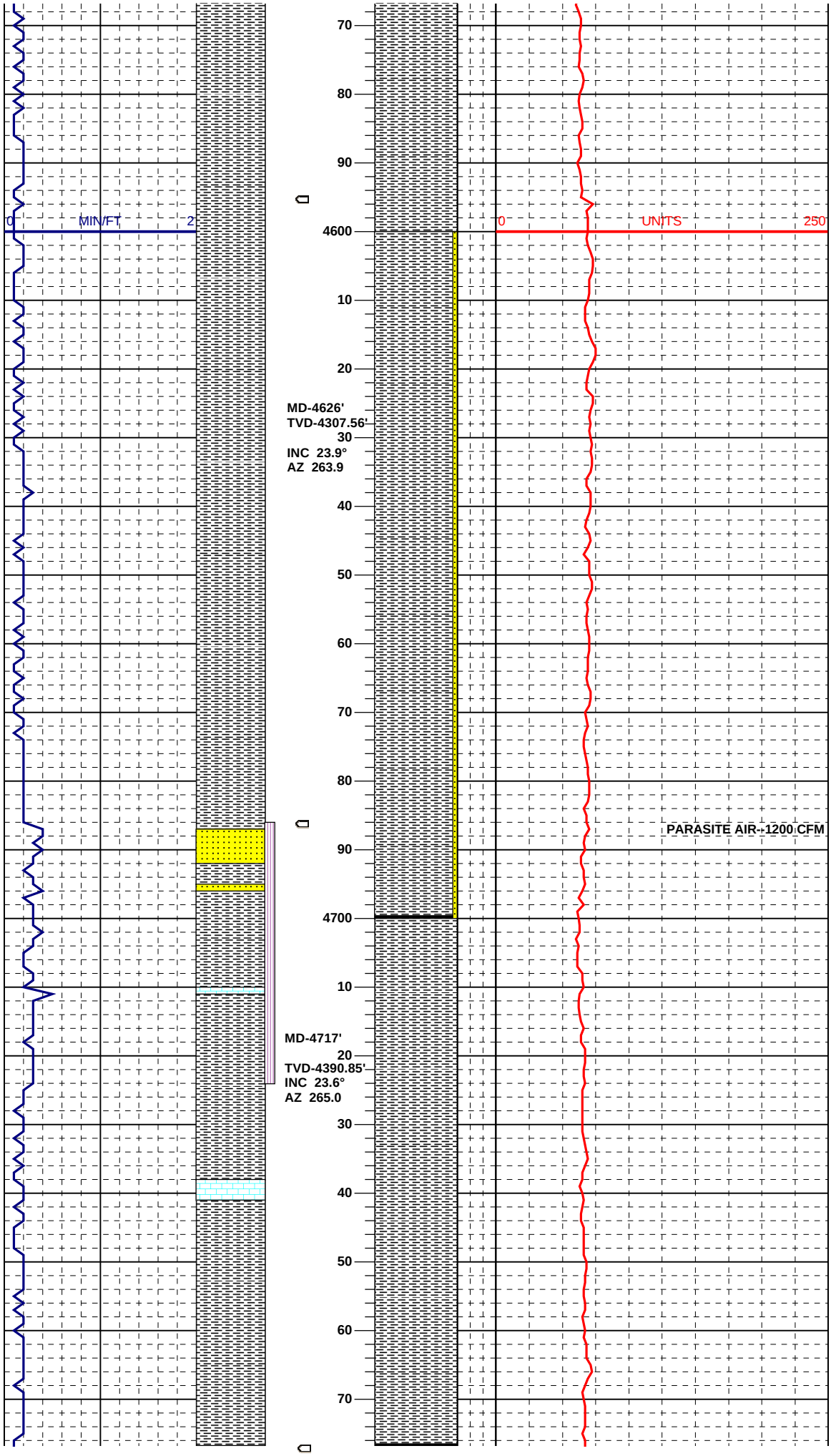


SS: clr-trnsl-wh, occ offwh-ltgy, vf-fgr, sbang -sbrd, pred wsrt, m hd-sl fri, m-wcmt, n-sl calc, tr wh cly fl, no vis por, tr dk shy grs, rr dk mica, NFSOC

TR LS: ltgy, offwh-ltgy mot, crpxln, sbblky, sl sft, sl arg, NFSOC

SH: ltredbrn-ltbrn, ltgybrn-ltyelbrn, offwh-ltgy, tan, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc

SH: ltredbrn-ltbrn, ltgybrn-ltyelbrn, offwh-ltgy, tan, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc

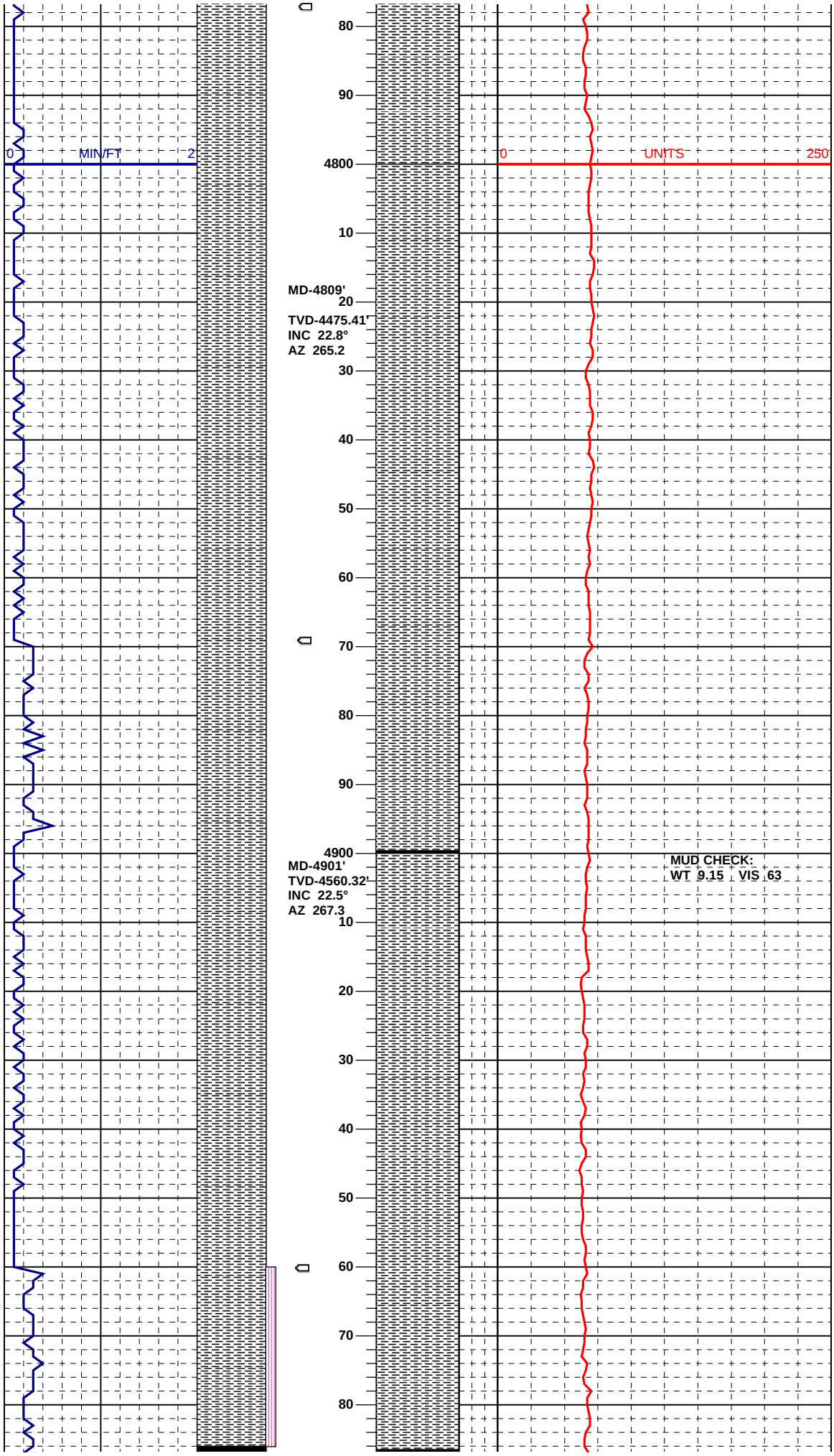


SH: ltredbrn-ltbrn, ltgybrn-ltyelbrn, offwh-ltgy, tan, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc

SS: clr-trnsl-wh, occ offwh-ltgy, vf-fgr, sbang-sbrd, pred wsrt, m hd-sl fri, m-wcmt, n-sl calc, tr wh cly fl, no vis por, tr dk shy grs, rr dk mica, NFSOC

TR LS: ltgy, offwh-ltgy mot, crpxln, sbblky, sl sft, sl arg, NFSOC

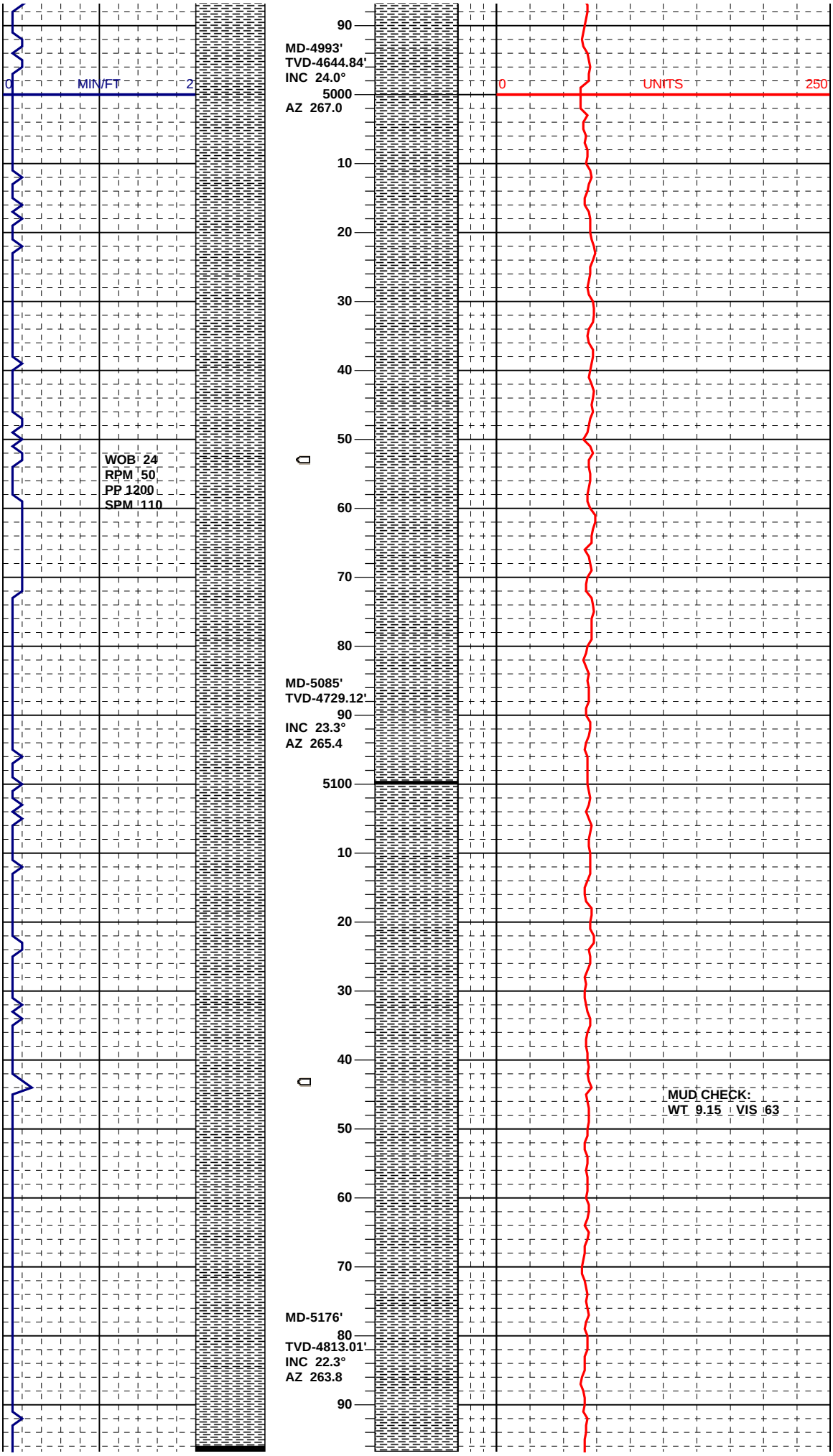
SH: ltgy-ltgybrn, ltyelbrn, ltredbrn-ltbrn, offwh-ltgy, tan, occ yel/gy mot, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc



MUD SEEPAGE HAS SLOWED TO LESS THAN 10 BBLS/HR.

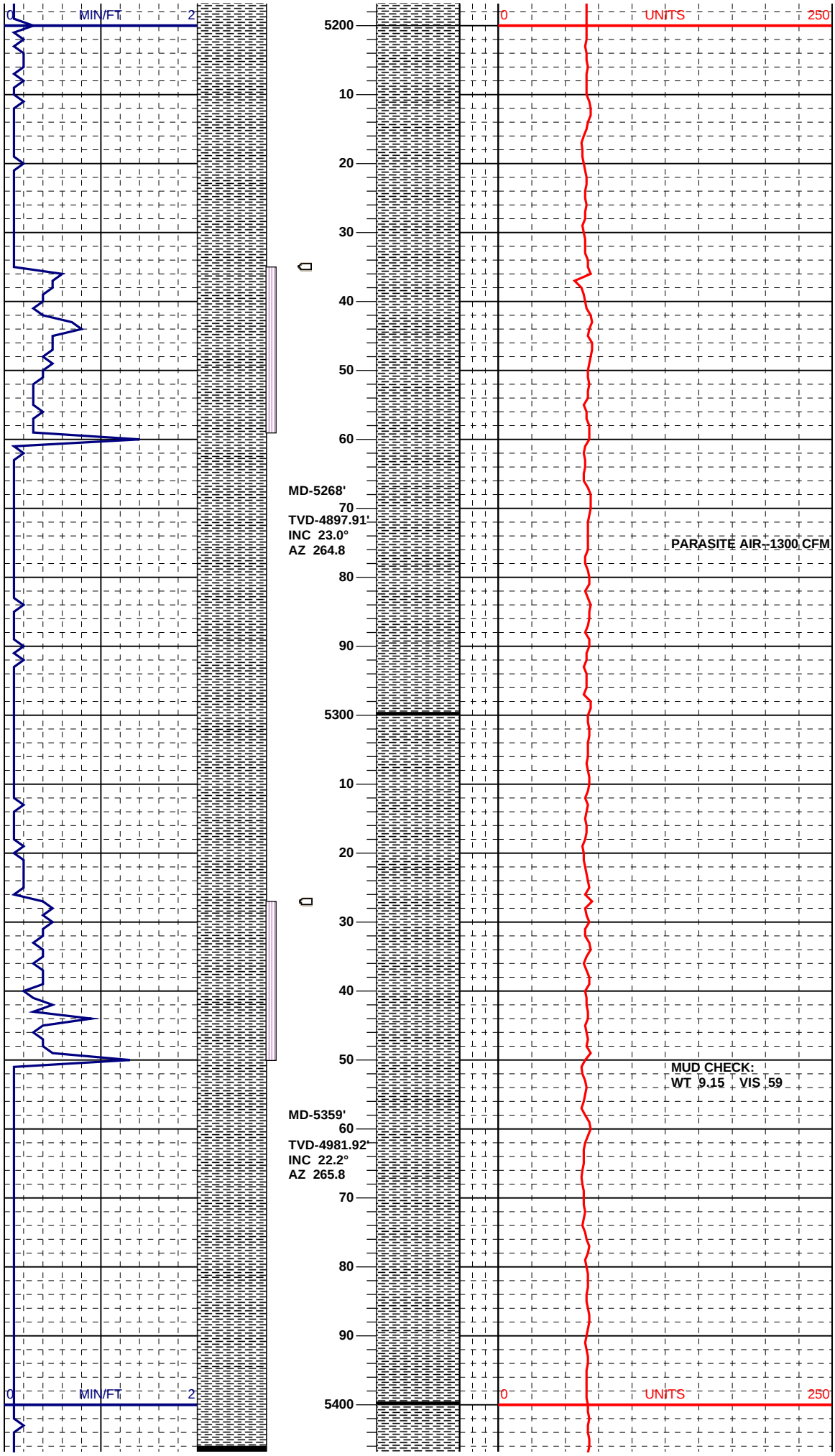
SH: ltredbrn-ltbrn, ltgybrn-ltyelbrn, offwh-ltgy, tan, occ yel/gy mot, ltgygn, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, rr pyr stks, ncalc

SH: ltyelbrn, ltredbrn-ltbrn, ltgybrn, offwh-ltgy, tan, occ yel/gy mot, ltgygn, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, rr pyr stks, ncalc



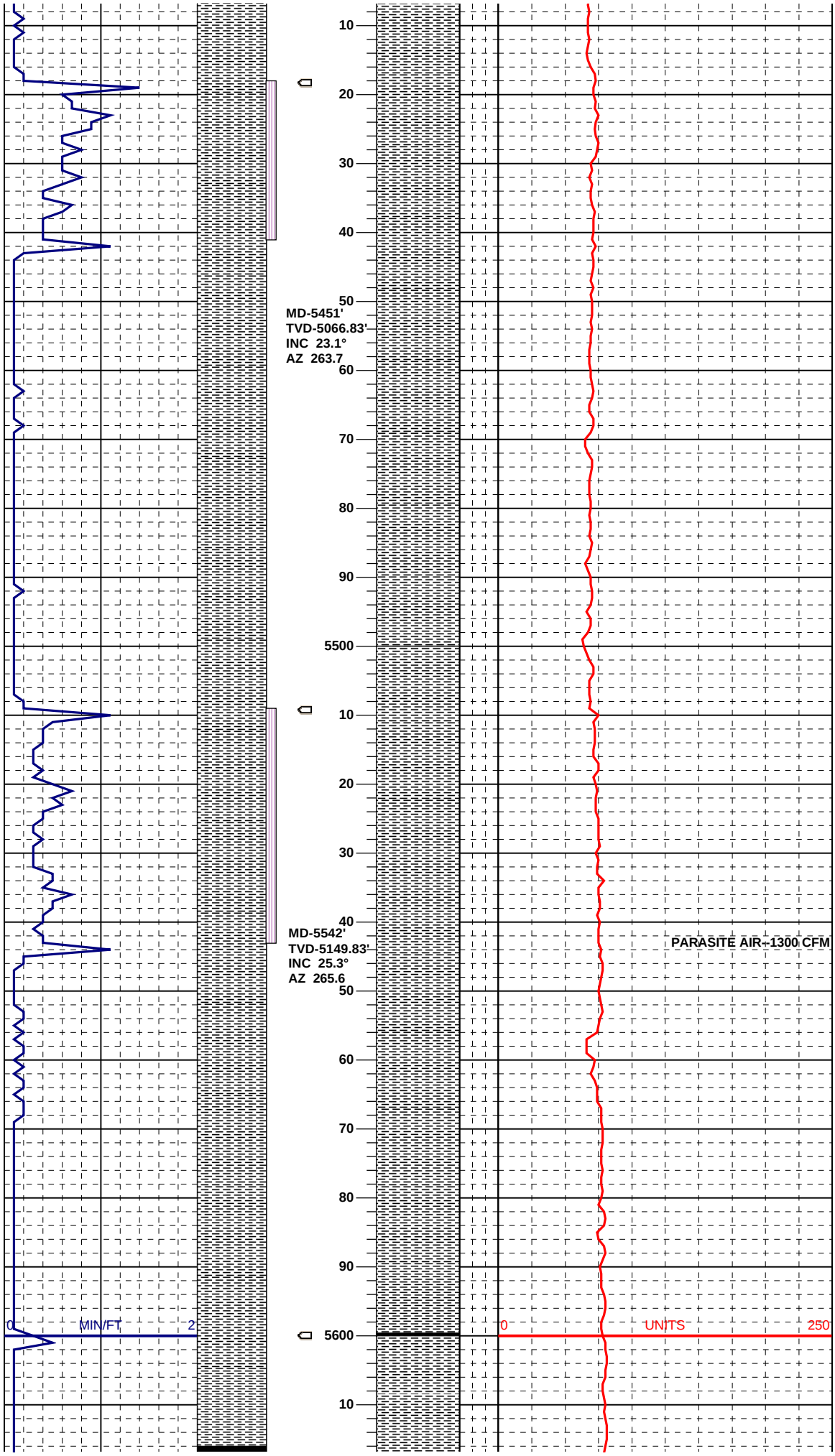
SH: ltyelbrn, ltredbrn-ltbrn, ltgybrn, offwh-ltgy, tan, occ yel/gy mot, ltgygn, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc

SH: ltyelbrn, ltgy-ltgybrn, ltredbrn-ltbrn, offwh-tan, occ yel/gy mot, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, rr pyr stks, ncalc



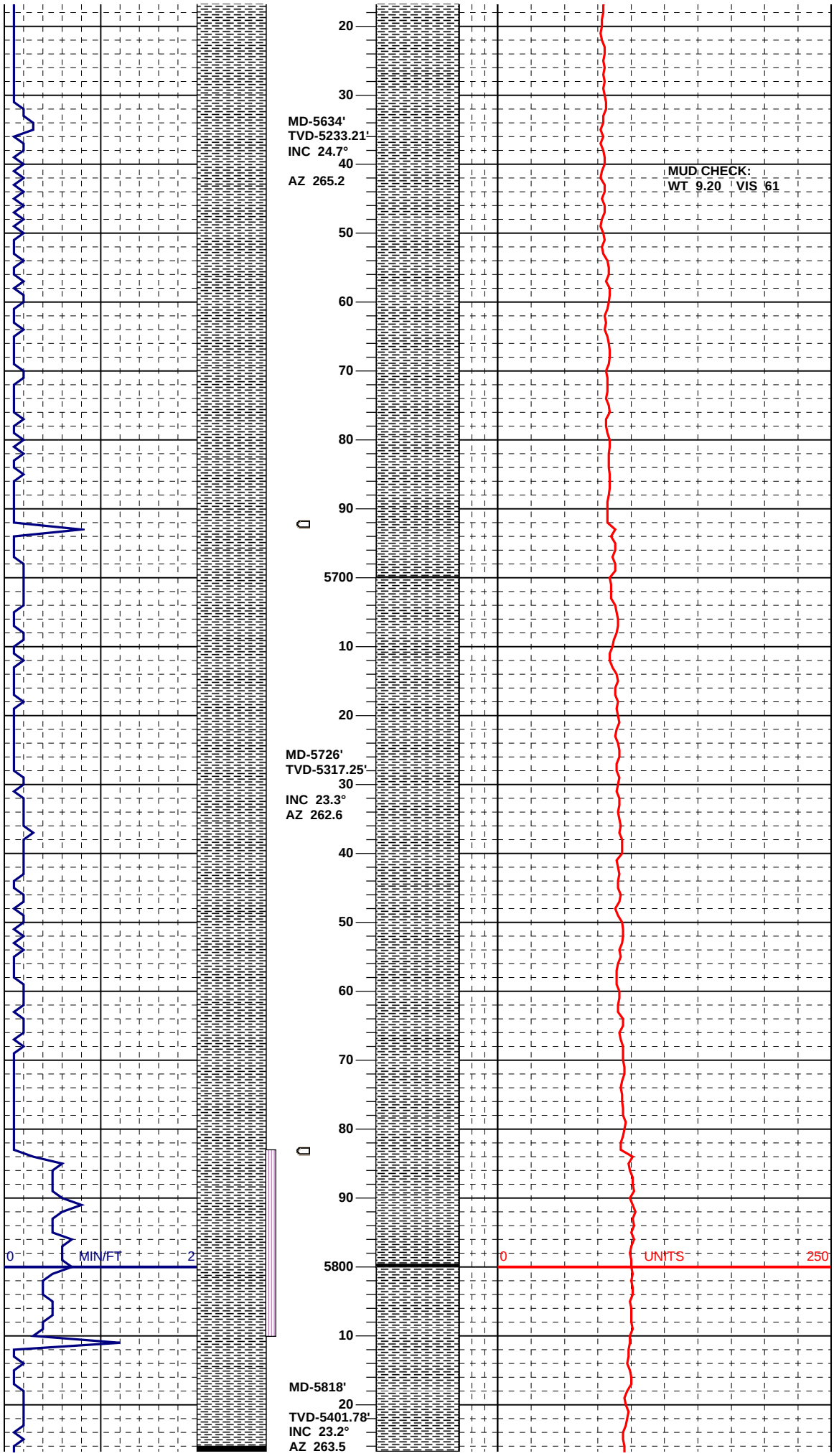
SH: ltyelbrn, ltgy-ltgybrn, offwh-tan, occ yel/gy mot, ltredbrn-ltbrn, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc

SH: ltgy-ltgybrn, ltyelbrn, offwh-tan, occ ltredbrn-ltbrn, yel/gy mot, mgybrn-mbrn, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc



SH: ltgy-ltgybrn, ltyelbrn, offwh-tan, occ ltredbrn-ltbrn, yel/gy mot, mgybrn-mbrn, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc

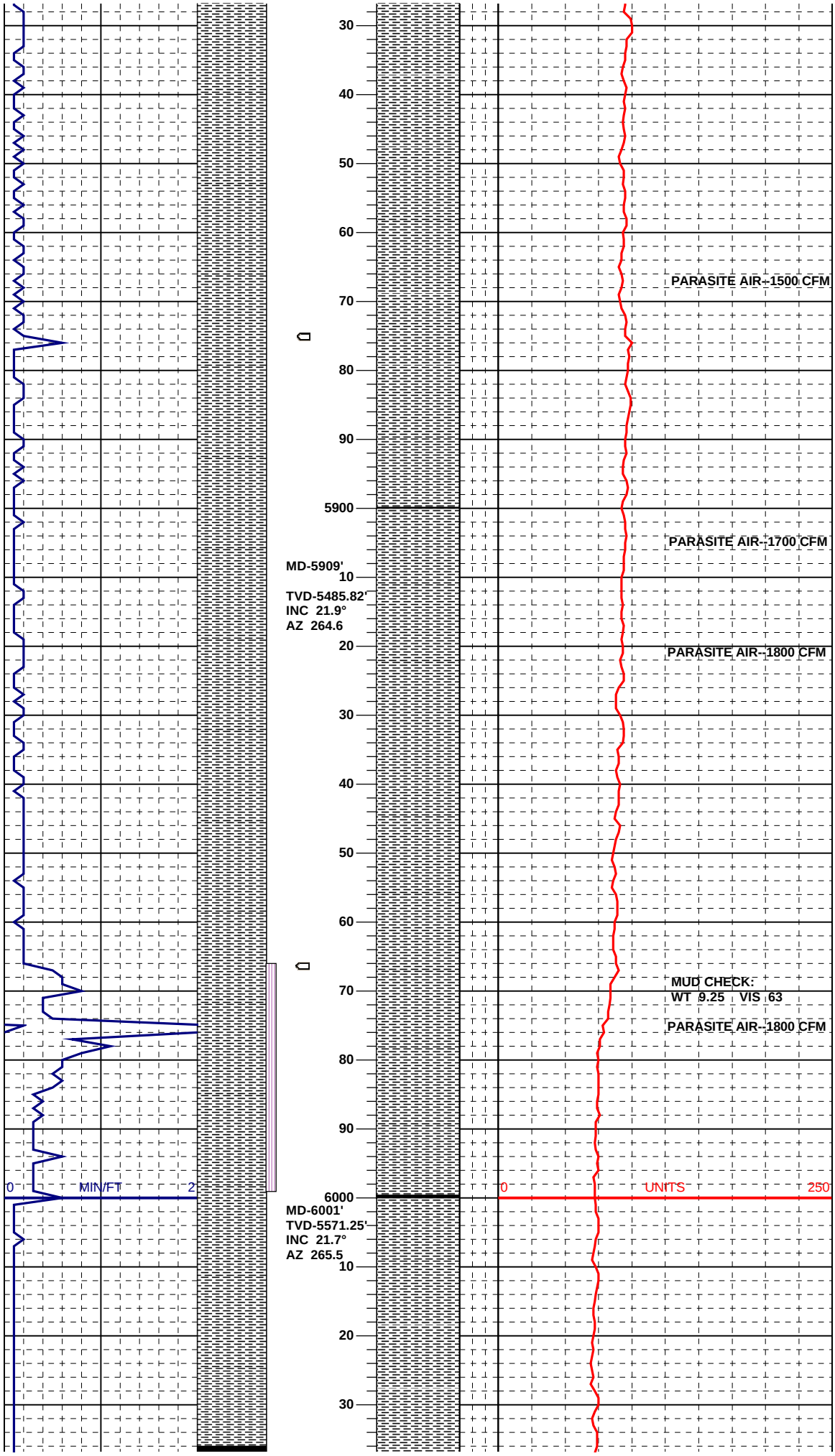
SH: ltgy-ltgybrn, ltyelbrn, offwh-tan, occ ltredbrn-ltbrn, yel/gy mot, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc



SH: ltgy-ltgybrn, ltyelbrn, offwh-tan, occ ltredbrn-ltbrn, yel/gy mot, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc

SH: ltredbrn-ltbrn, ltgy-ltgybrn, ltyelbrn, offwh-tan, occ yel/gy mot, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc

MUD SEEPAGE INCREASING TO 10-25 BBLS/HR.



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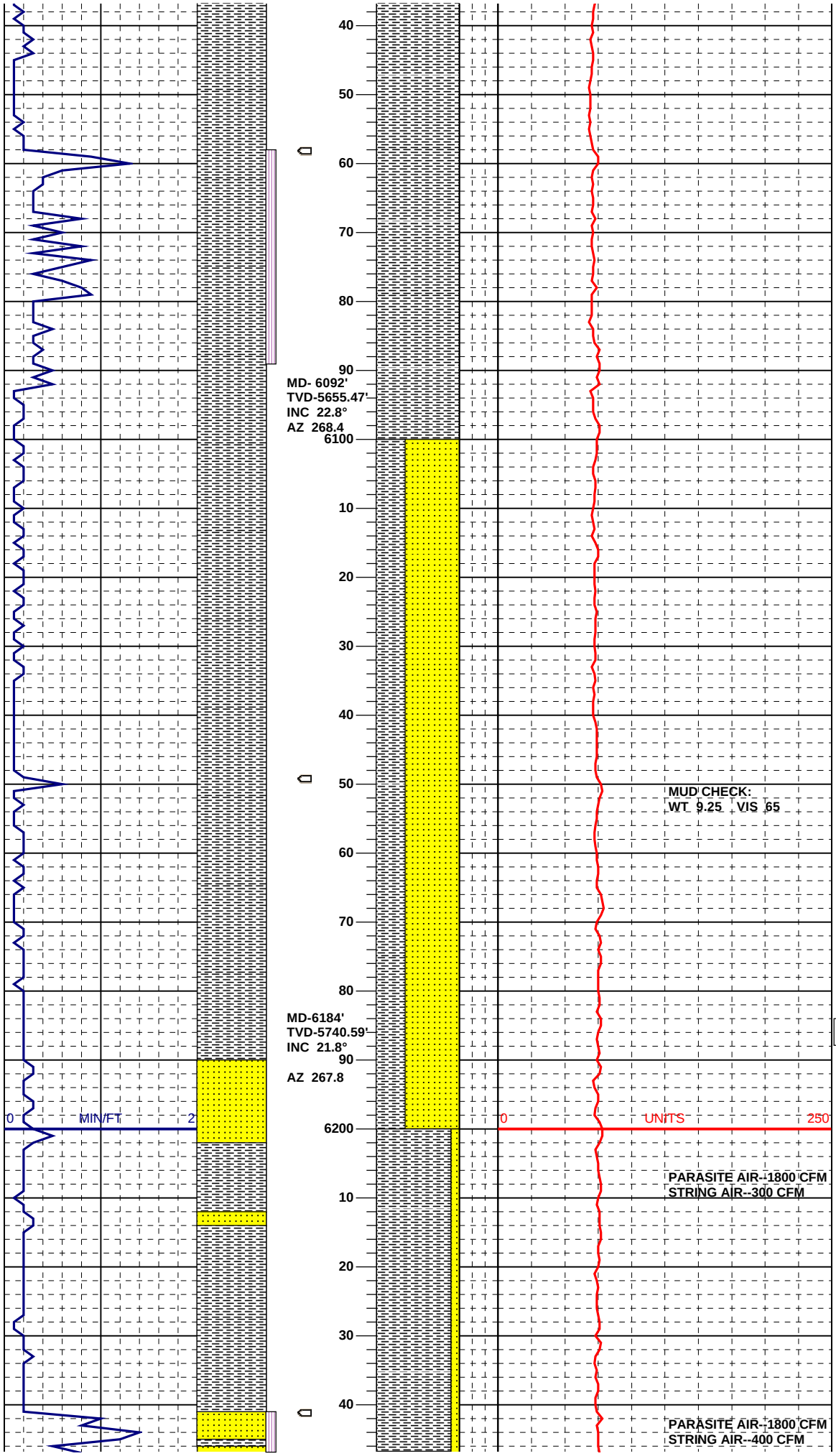
SH: ltgy-ltgybrn, ltyelbrn, offwh-tan, occ ltredbrn-ltbrn, yel/gy mot, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc



SH: ltgy-ltgybrn, ltredbrn-ltbrn, ltyelbrn, offwh-tan, occ yel/gy mot, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc

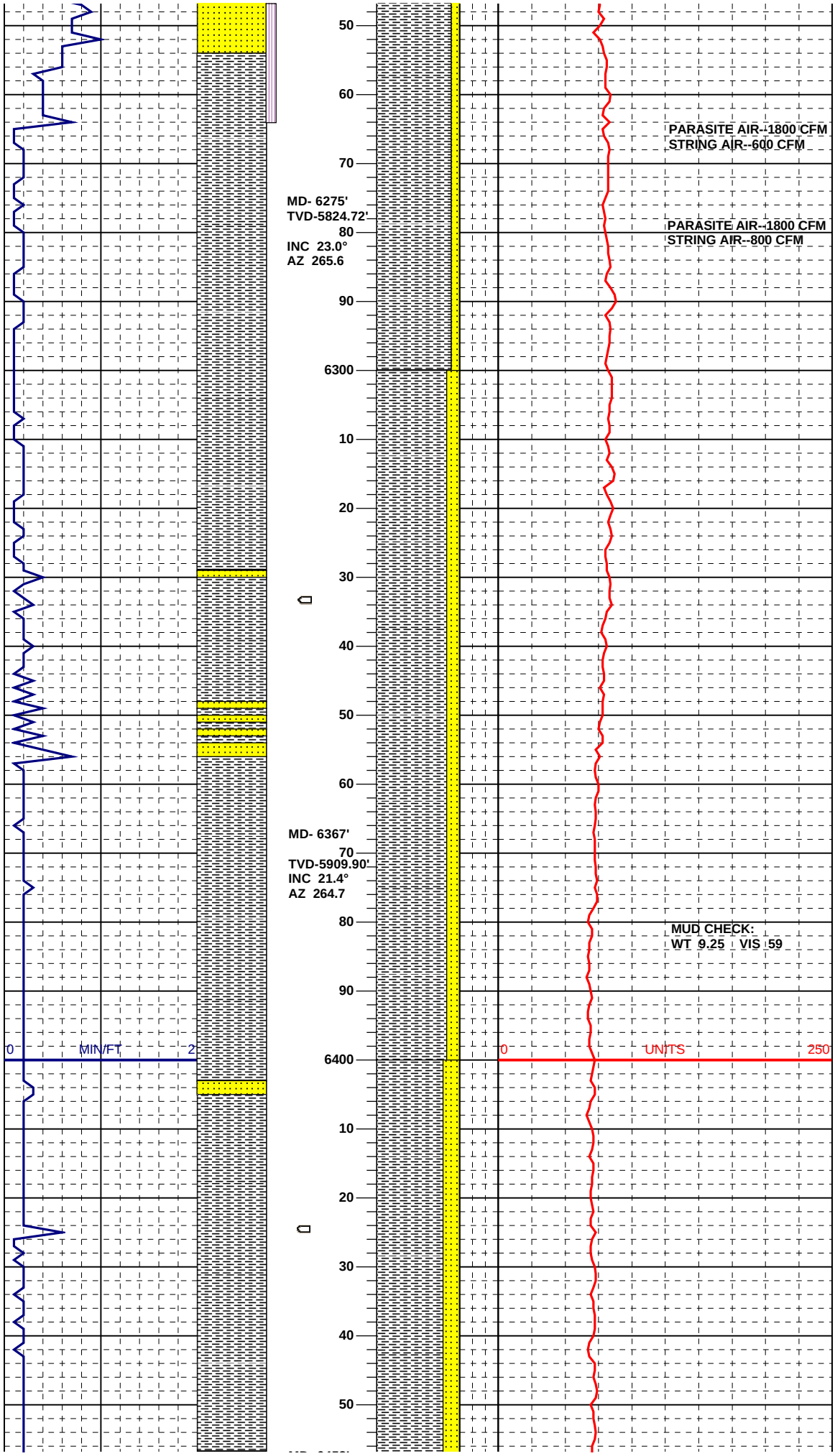
SH: ltredbrn-ltbrn, ltgy-ltgybrn, ltyelbrn, offwh-tan, occ yel/gy mot, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc

POSSIBLE WASATCH G TOP = 6190' MD

SS: clr-trnsl-wh, occ offwh-ltgy, vf-fgr, occ grdg to v sdy SLTST, sbang, occ sbrd, pred wsrt, mhd-sl fri, m-wcmt, sl-m calc, tr-occ wh cly fl, no vis por, tr dk shy grs & carb flk, rr gn mica, NFSOC

START DRILL STRING AIR TO SLOW WASATCH G MUD LOSSES.

SS: clr-trnsl-wh, occ offwh-ltgy, vf-fgr, occ grdg to v sdy SLTST, sbang, occ sbrd, pred



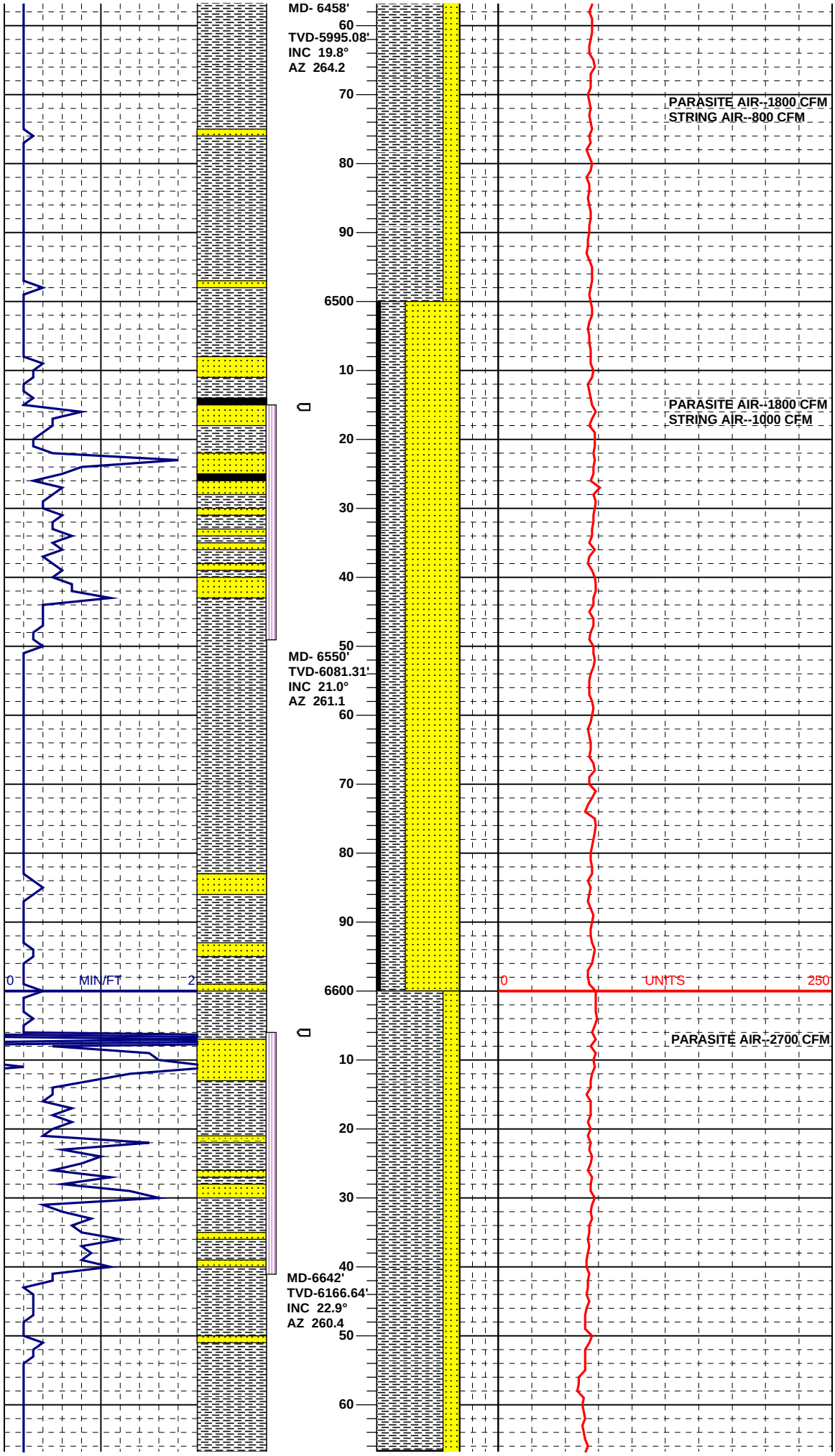
wsrt, mhd-sl fri, m-wcmt, sl-m calc, tr-occ wh cly fl, no vis por, tr dk shy grs & carb flk, tr intgran pyr, rr gn mica, NFSOC

SH: ltgy-ltgybrn, ltredbrn-ltbrn, ltyelbrn, offwh-tan, occ yel/gy mot, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc

SH: ltredbrn-ltbrn, ltgy-ltgybrn, ltyelbrn, offwh-tan, occ yel/gy mot, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc

SS: clr-trnsl-wh, occ offwh-ltgy, vf-fgr, grdg ip to v sdy SLTST, sbang, occ sbrd, pred wsrt, mhd-sl fri, m-wcmt, sl-m calc, tr-occ wh cly fl, no vis por, tr dk shy grs & carb flk, NFSOC

SS: clr-trnsl-wh, offwh-ltgy, occ ltgygn, pred vfgr, grdg ip to v sdy SLTST, sbang, occ sbrd, pred wsrt, mhd-sl fri, m-wcmt, sl-m calc, tr-occ wh cly fl, no vis por, tr dk shy grs & carb flk, NFSOC



SH: ltgy-ltgybrn, ltredbrn-ltbrn, ltyelbrn, offwh-tan, occ yel/gy mot, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc

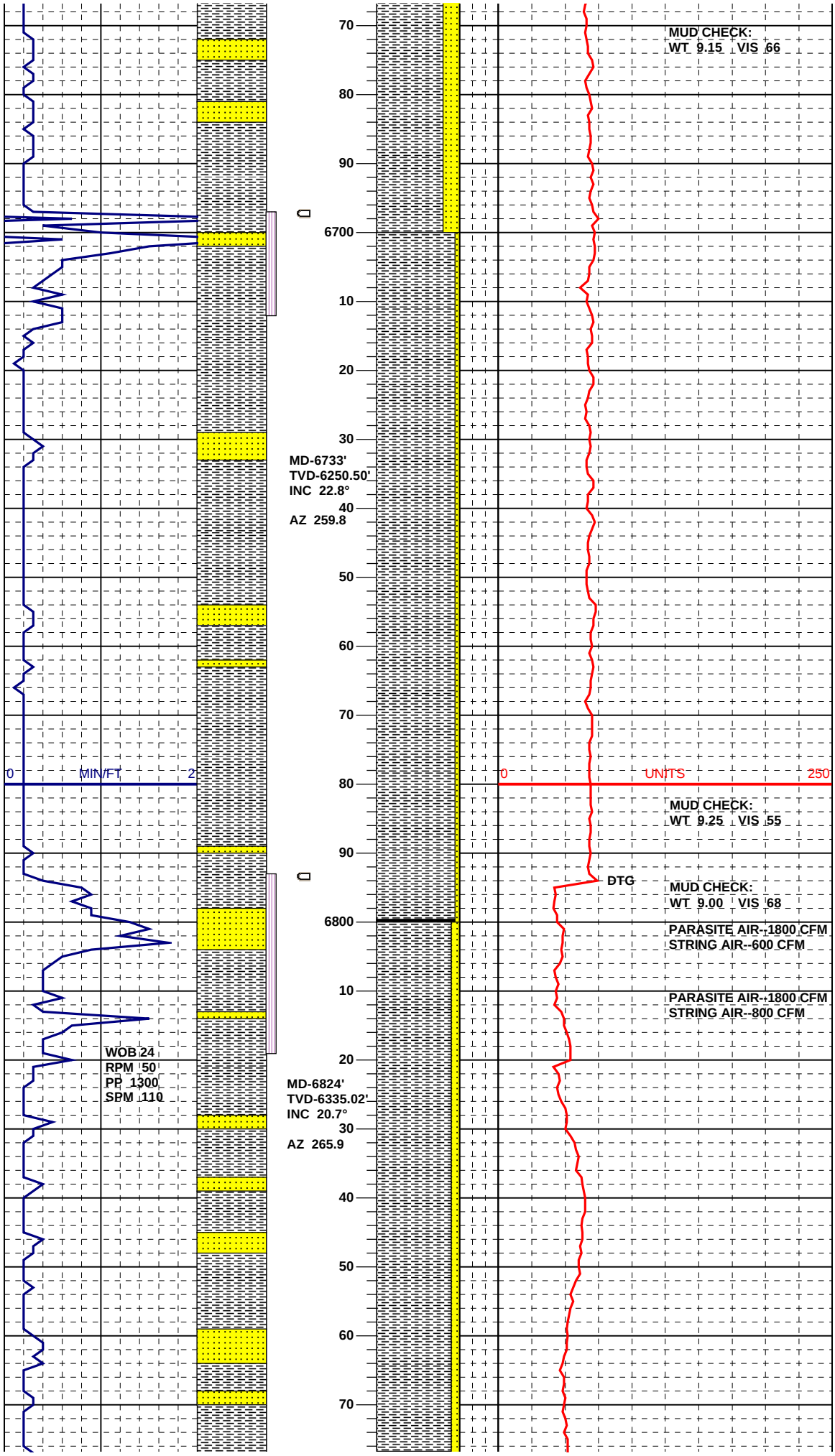
COAL: blk, dull. blky, m frm-sl sft, shy ip, no vis bldg gas

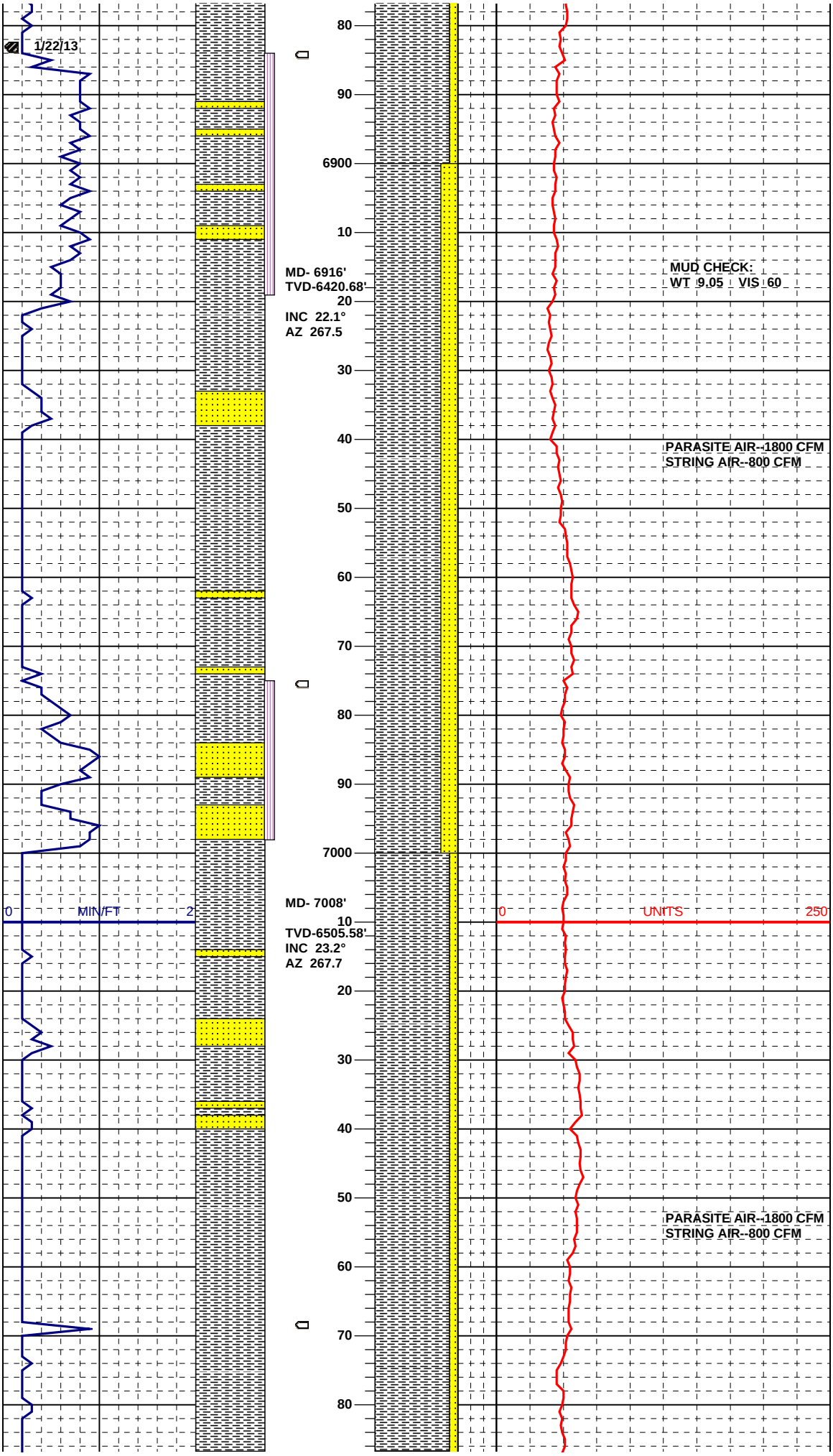
SS: clr-trnsl-wh, offwh-ltgy, vf-fgr, grdg ip to v sdy SLTST, sbang-sbrd, pred wsrt, mhd-sl fri, m-wcmt, sl-m calc, tr-occ wh cly fl, no vis por, tr dk shy grs & carb flk, NFSOC

SH: ltgy-ltgybrn, ltyelbrn, offwh-tan, occ ltredbrn-ltbrn, yel/gy mot, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, sl water-sensitive ip, ncalc

SS: clr-trnsl-wh, offwh-ltgy, vf-fgr, grdg ip to v sdy SLTST, sbang-sbrd, pred wsrt, mhd-sl fri, m-wcmt, sl-m calc, tr-occ wh cly fl, no vis por, tr dk shy grs & carb flk, NFSOC

SH: mbrn-mgybrn, ltgy-ltgybrn, occ offwh-tan, dkbrn-brnblk, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, tr carb SH, sl water-sensitive ip, tr dk mica, rr vfgr dism pyr, ncalc


MUD CHECK:
WT 9.15 VIS 66
TR COAL FRAGMENTS IN SPL AFTER 35 MINUTE RIG SERVICE AT 6697' MD.
MD-6733'
TVD-6250.50'
INC 22.8°
AZ 259.8
SH: mbrn-mgybrn, ltgybrn, occ tan, dkbrn, brnblk, sbblky-sbplty, m firm-sl sft, pred sm tex, occ sl slty, tr carb SH, sl water-sensitive ip, tr dk mica, tr vfgr dism pyr, ncalc
0 MIN/FT 2
0 UNITS 250
MUD CHECK:
WT 9.25 VIS 55
CIRCULATE AT 6793' WITH 1700-2600 CFM PARASITE AIR WHILE CUTTING DRILLING LINE. BRING ON STRING AIR AT 300 CFM AND INCREASE TO 800 CFM WITH 1800 CFM PARASITE AIR. 400 BBLS LOST DURING CIRCU-ATION.
DTG
MUD CHECK:
WT 9.00 VIS 68
PARASITE AIR--1800 CFM
STRING AIR--600 CFM
BYPASS AIR WHILE CHANGING OUT ROTATING HEAD RUBBER. BRING AIR BACK ON AT 1800 CFM PARASITE/ 300 CFM STRING WHILE REAMING 2 STANDS TO BOTTOM. NO COAL OR LARGE SHALE CAVINGS NOTED FROM REAMED INTERVAL.
PARASITE AIR--1800 CFM
STRING AIR--800 CFM
WOB 24
RPM 50
PP 1300
SPM 110
MUD SEEPAGE CONTINUES AT 10-25 BBLS/HR.
MD-6824'
TVD-6335.02'
INC 20.7°
AZ 265.9
SS: clr-trnsl, offwhite, ltgy, vf-fgr, occ grdg ip to v sdy SLTST, sbang-sbrd, pred wsrt, mhd-sl fri, m-wcmt, sl-m calc, occ offwhite cly fl, no vis por, tr dk shy grs & carb flk, tr pyr, NFSOC
SH: mbrn-mgybrn, ltgy-ltgybrn, occ tan-ltredbrn, ltyelbrn, dkbrn-brnblk, sbblky-sbplty,



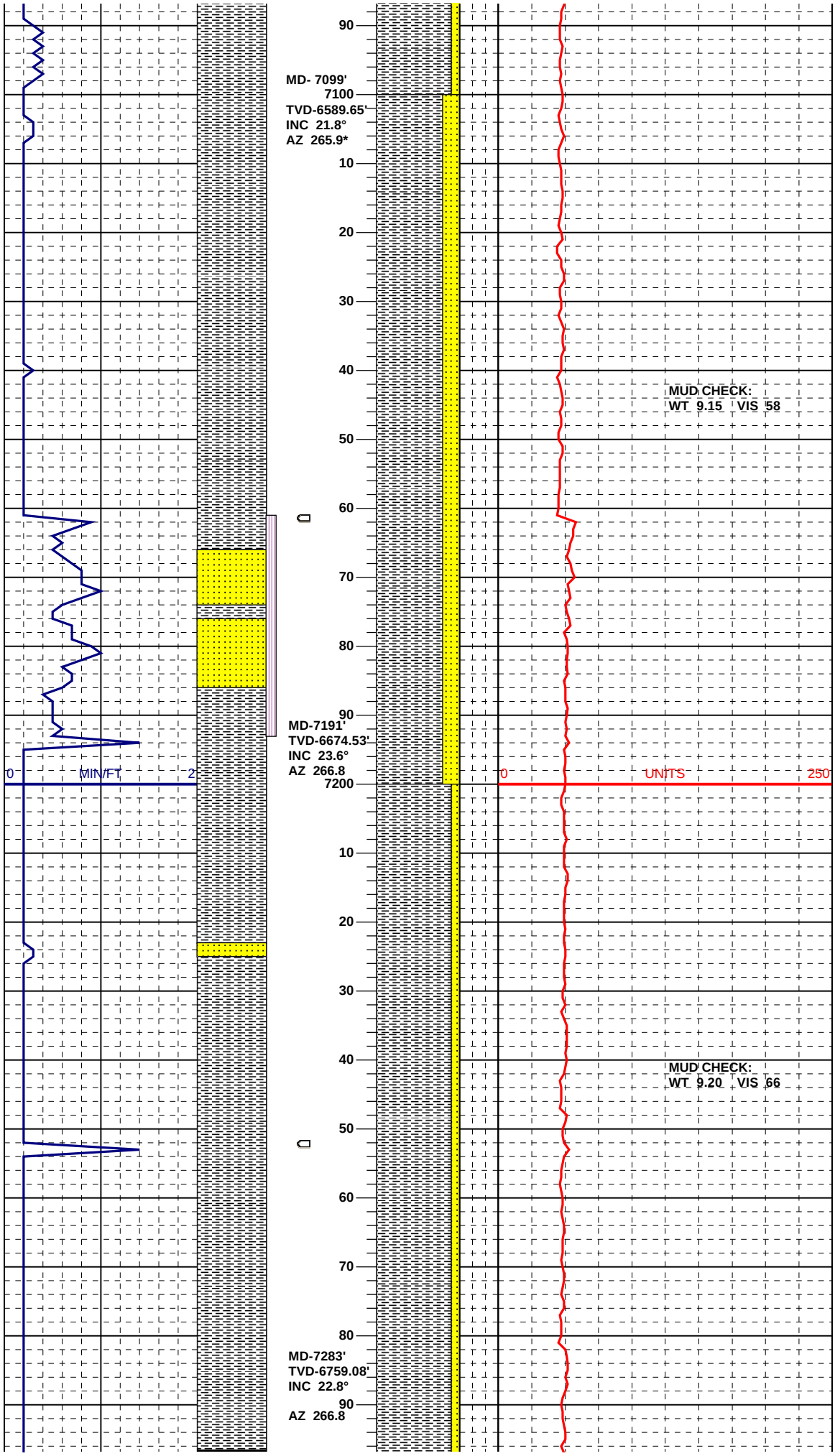
m frm-sl sft, pred sm tex, occ sl slty, tr carb SH, sl water-sensitive ip, tr dk mica, rr vfgr dism pyr, ncalc

SS: offwhite, clr-trnsl, tan, ltgy, vf-fgr, sbang -sbrd, pred wsrt, mhd-sl fri, m-wcmt, sl-m calc, offwhite cly fl, no vis por, tr dk shy grs & carb flk, tr pyr, NFSOC

SH: mbrn-mgybrn, ltgy-ltgybrn, occ tan-ltredbrn, ltyelbrn, dkbrn-brnblk, sbblky-sbplty, m frm-sl sft, pred sm tex, occ sl slty, tr carb SH, sl water-sensitive ip, tr dk mica, rr vfgr dism pyr, ncalc

SS: clr-trnsl-wh, offwh-vltgy-tan, vf-fgr, grdg ip to v sdy SLTST, sbang, occ sbrd, pred wsrt, mhd-sl fri, m-wcmt, sl-m calc, wh cly fl ip, no vis por, tr dk shy grs, rr mica, NFSOC

SH: lt-mgybrn, ltgy, ltyelbrn, ltredbrn, occ m-dkbrn, sbblky-sbplty, sl-m frm, occ sl sft, sm-sl gt tex, occ sl-m slty, sl water-sensitive ip, rr dk mica, rr lse intgwn pyr clus, ncalc

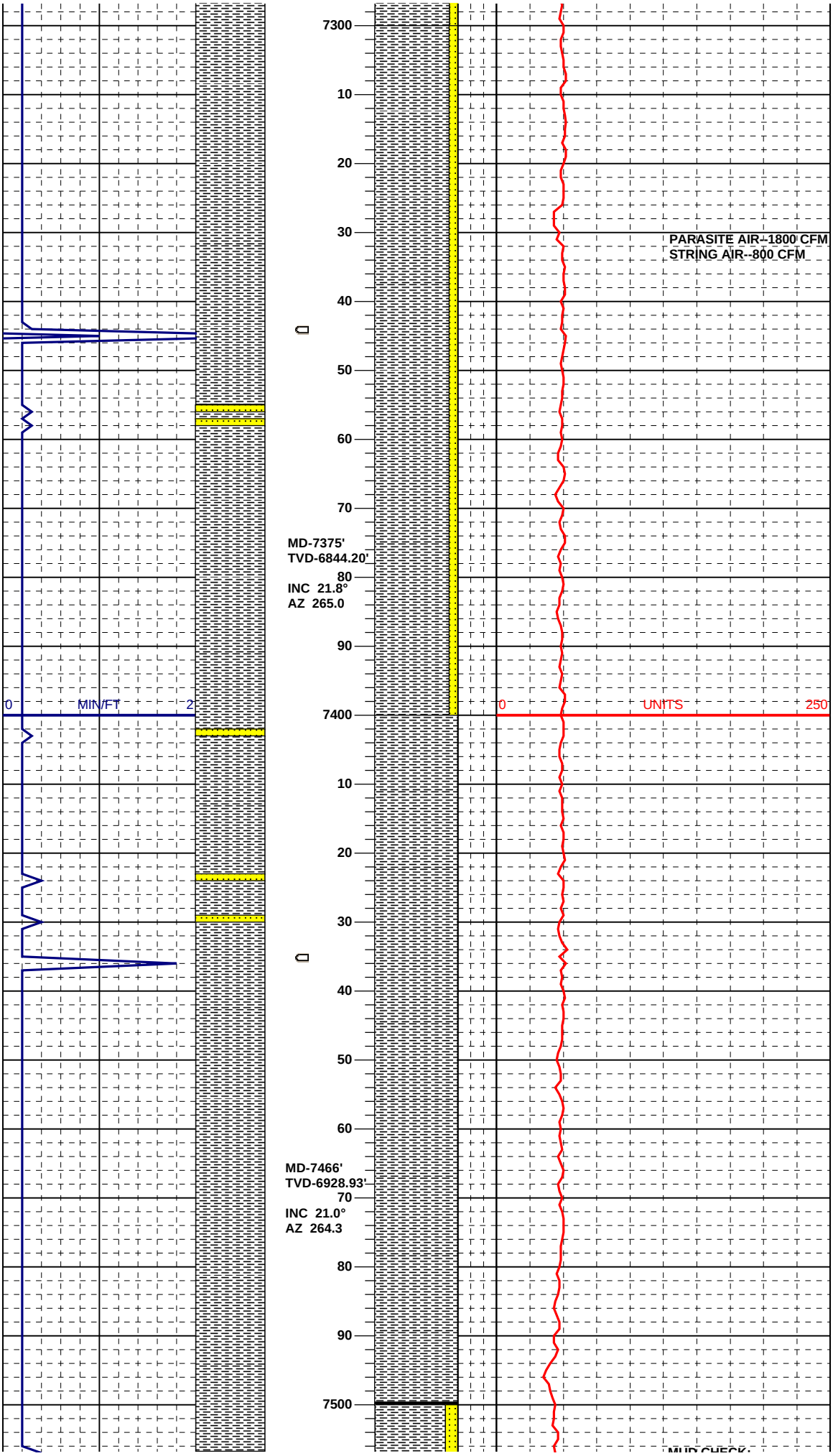


SH: lt-mgybrn, ltgy, ltyelbrn, ltredbrn, occ m-dkbrn, sbblky-sbplty, sl-m frm, occ sl sft, sm-sl gt tex, occ sl-m slty, sl water-sensitive ip, rr dk mica, ncalc

SS: clr-trnsl-wh, offwh-vltgy-tan, vf-fgr, grdg ip to v sdy SLTST, sbang, occ sbrd, pred wsrt, mhd-sl fri, m-wcmt, sl-m calc, wh cly fl ip, no vis por, tr dk shy grs, rr mica, NFSOC

SS: aa

SH: ltgy-ltgybrn, ltredbrn, ltyelbrn, occ ltgygn, yel/gy mot, m-dkbrn, sbblky-sbplty, sl-m frm, occ sl sft, sm-sl gt tex, occ sl-m slty, sl water-sensitive ip, rr dk mica, ncalc

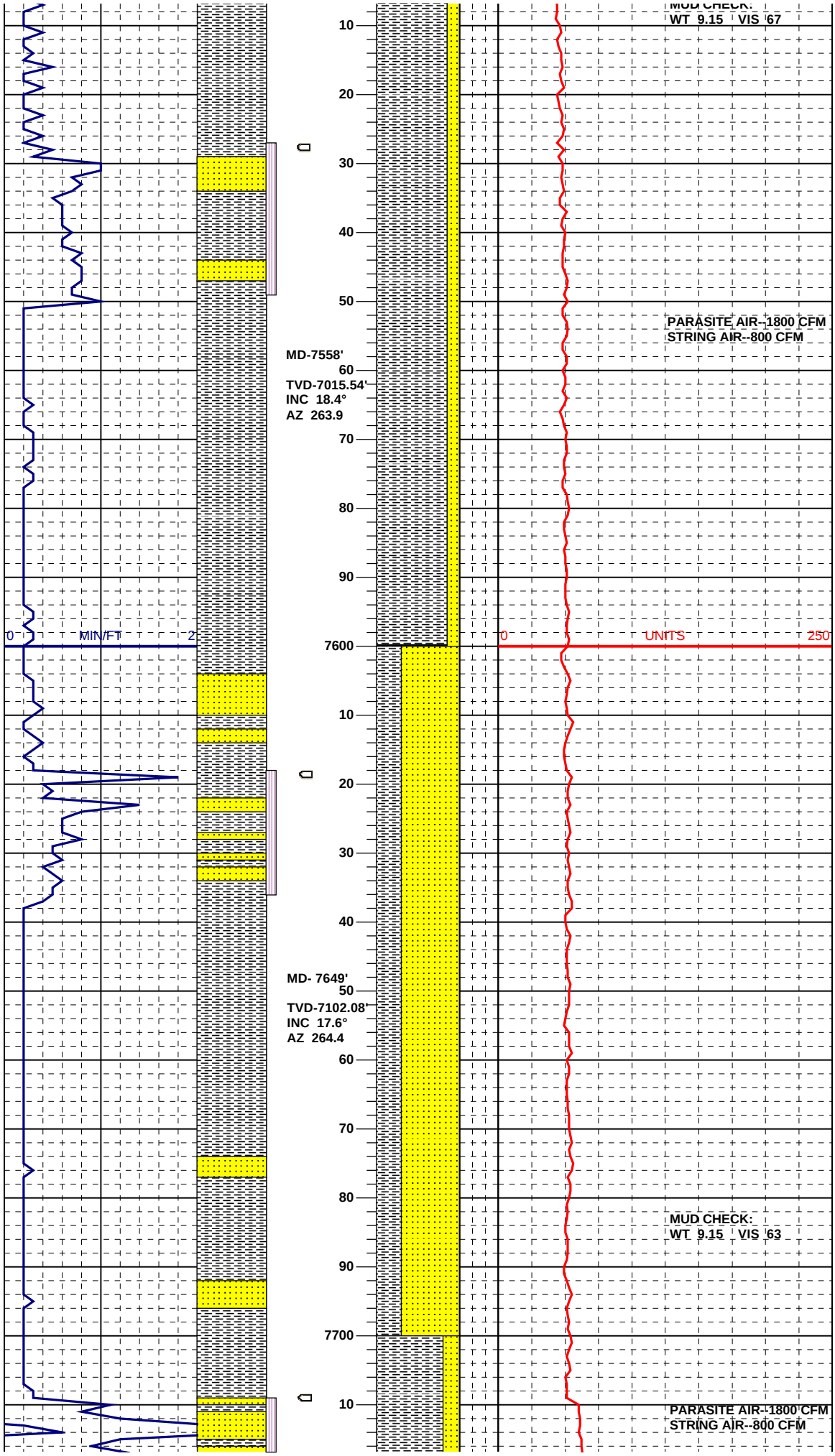


SH: ltredbrn, ltgy-ltgybrn, ltyelbrn, occ ltgygn, yel/gy mot, m-dkbrn, sbblky-sbplty, sl-m frm, occ sl sft, sm-sl gt tex, occ sl-m slty, sl water-sensitive ip, rr dk mica, ncalc

SS: clr-trnsl-wh, offwh-vltgy-tan, occ ltgygn, vf-fgr, grdg ip to v sdy SLTST, sbang, occ sbrd, pred wsrt, mhd-sl fri, m-wcmt, sl-m calc, wh cly fl ip, no vis por, tr dk shy grs, rr dk mica, rr chlorite, NFSOC

MUD SEEPAGE HAS SLOWED TO 5-10 BBLS/HR.

SH: ltredbrn, ltgy-ltgybrn, ltyelbrn, occ ltgygn, yel/gy mot, m-dkbrn, sbblky-sbplty, sl-m frm, occ sl sft, sm-sl gt tex, occ sl-m slty, sl water-sensitive ip, rr dk mica, ncalc

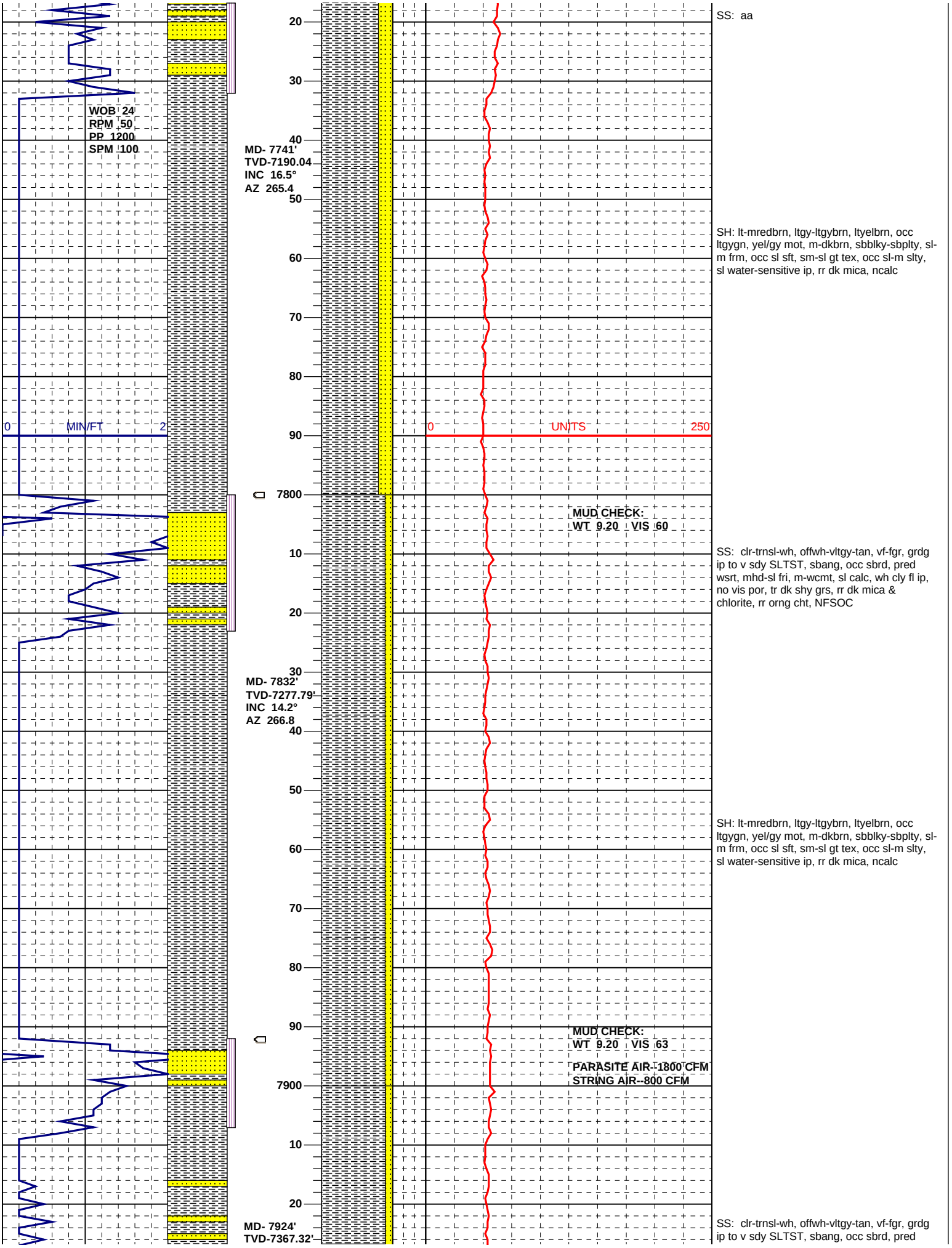


SS: clr-trnsl-wh, offwh-vltgy-tan, occ ltgygn, vf-fgr, grdg ip to v sdy SLTST, sbang, occ sbrd, pred wsrt, mhd-sl fri, m-wcmt, sl-m calc, wh cly fl ip, no vis por, tr dk shy grs, rr dk mica, rr chlorite, NFSOC

SH: pred lt-mredbrn, occ ltgy-ltgybrn, ltyelbrn, tr ltgygn, yel/gy mot, m-dkbrn, sbblky-sbplty, sl-m frm, occ sl sft, sm-sl gt tex, occ sl-m slty, sl water-sensitive ip, rr dk mica, ncalc

SS: clr-trnsl-wh, occ offwh-vltgy-tan, vf-mgr, grdg ip to v sdy SLTST, sbang-sbrd, m-wsrt, mhd-v fri, p-wcmt, abnt lse qtz grs, n-sl calc, tt-tr vis por in consol frag, tr dk shy grs, rr dk mica, NFSOC

SH: lt-mredbrn, ltgy-ltgybrn, ltyelbrn, tr ltgygn, yel/gy mot, m-dkbrn, sbblky-sbplty, sl-m frm, occ sl sft, sm-sl gt tex, occ sl-m slty, sl water-sensitive ip, rr dk mica, ncalc



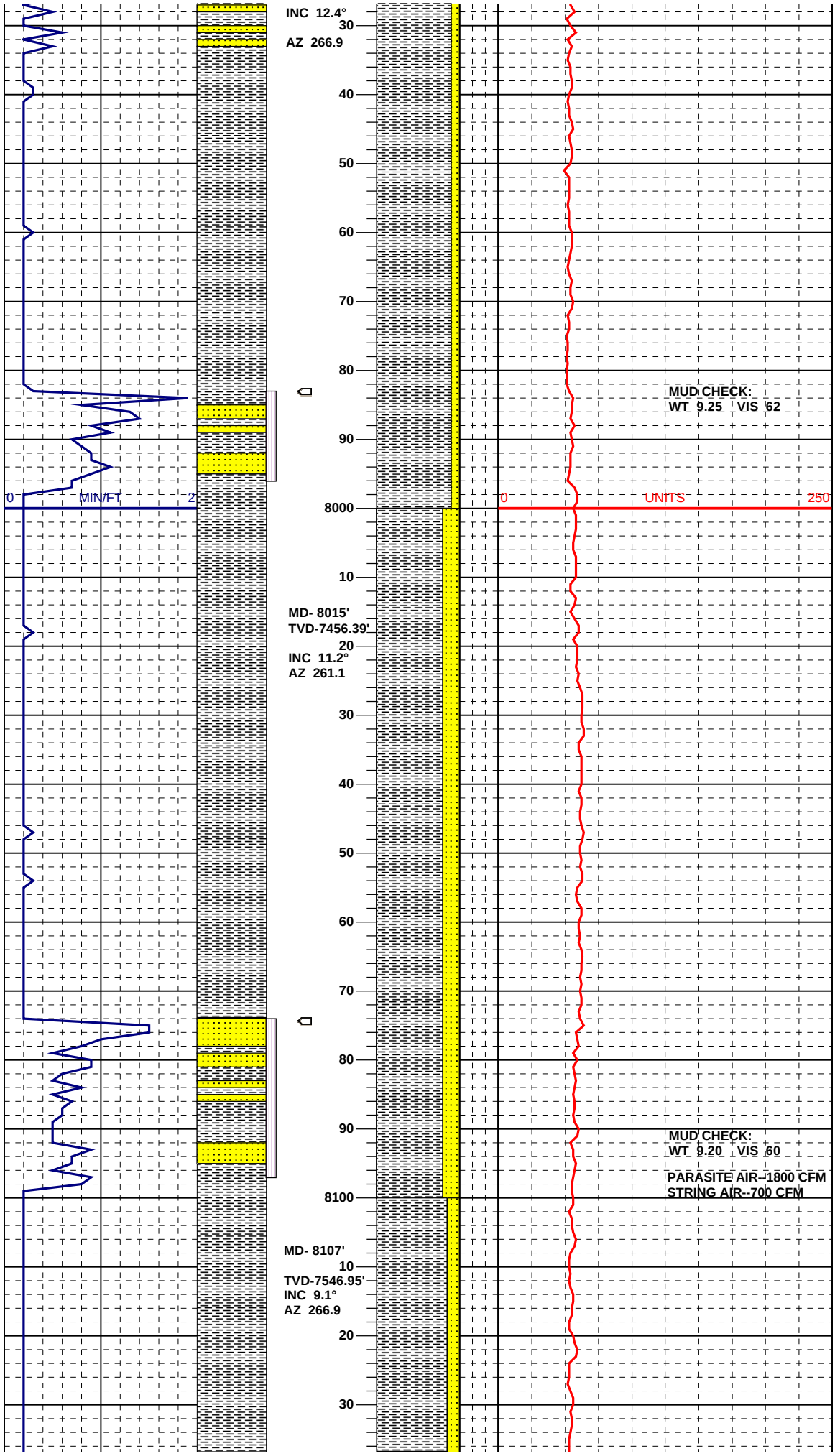
SS: aa

SH: lt-mredbrn, ltgy-ltgybrn, ltyelbrn, occ ltgygn, yel/gy mot, m-dkbrn, sbblky-sbplty, sl-m frm, occ sl sft, sm-sl gt tex, occ sl-m slty, sl water-sensitive ip, rr dk mica, ncalc

SS: clr-trnsl-wh, offwh-vltgy-tan, vf-fgr, grdg ip to v sdy SLTST, sbang, occ sbrd, pred wsrt, mhd-sl fri, m-wcmt, sl calc, wh cly fl ip, no vis por, tr dk shy grs, rr dk mica & chlorite, rr orng cht, NFSOC

SH: lt-mredbrn, ltgy-ltgybrn, ltyelbrn, occ ltgygn, yel/gy mot, m-dkbrn, sbblky-sbplty, sl-m frm, occ sl sft, sm-sl gt tex, occ sl-m slty, sl water-sensitive ip, rr dk mica, ncalc

SS: clr-trnsl-wh, offwh-vltgy-tan, vf-fgr, grdg ip to v sdy SLTST, sbang, occ sbrd, pred



wsrt, mhd-sl fri, m-wcmt, sl calc, wh cly fl ip, no vis por, tr dk shy grs, rr dk mica & chlorite, rr orng cht, NFSOC

SH: lt-mredbrn, ltgy-ltgybrn, ltyelbrn, occ ltgygn, yel/gy mot, m-dkbrn, sbblky-sbplty, sl-m frm, occ sl sft, sm-sl gt tex, occ sl-m slty, sl water-sensitive ip, rr dk mica, ncalc

MUD CHECK:
WT 9.25 VIS 62

MUD LOSSES INCREASING TO 20-40 BBLS/HR.

MD- 8015'
TVD-7456.39'
INC 11.2°
AZ 261.1

SH: lt-mredbrn, ltgy-ltgybrn, ltyelbrn, occ ltgygn, yel/gy mot, m-dkbrn, sbblky-sbplty, sl-m frm, occ sl sft, sm-sl gt tex, occ sl-m slty, sl water-sensitive ip, rr dk mica, ncalc

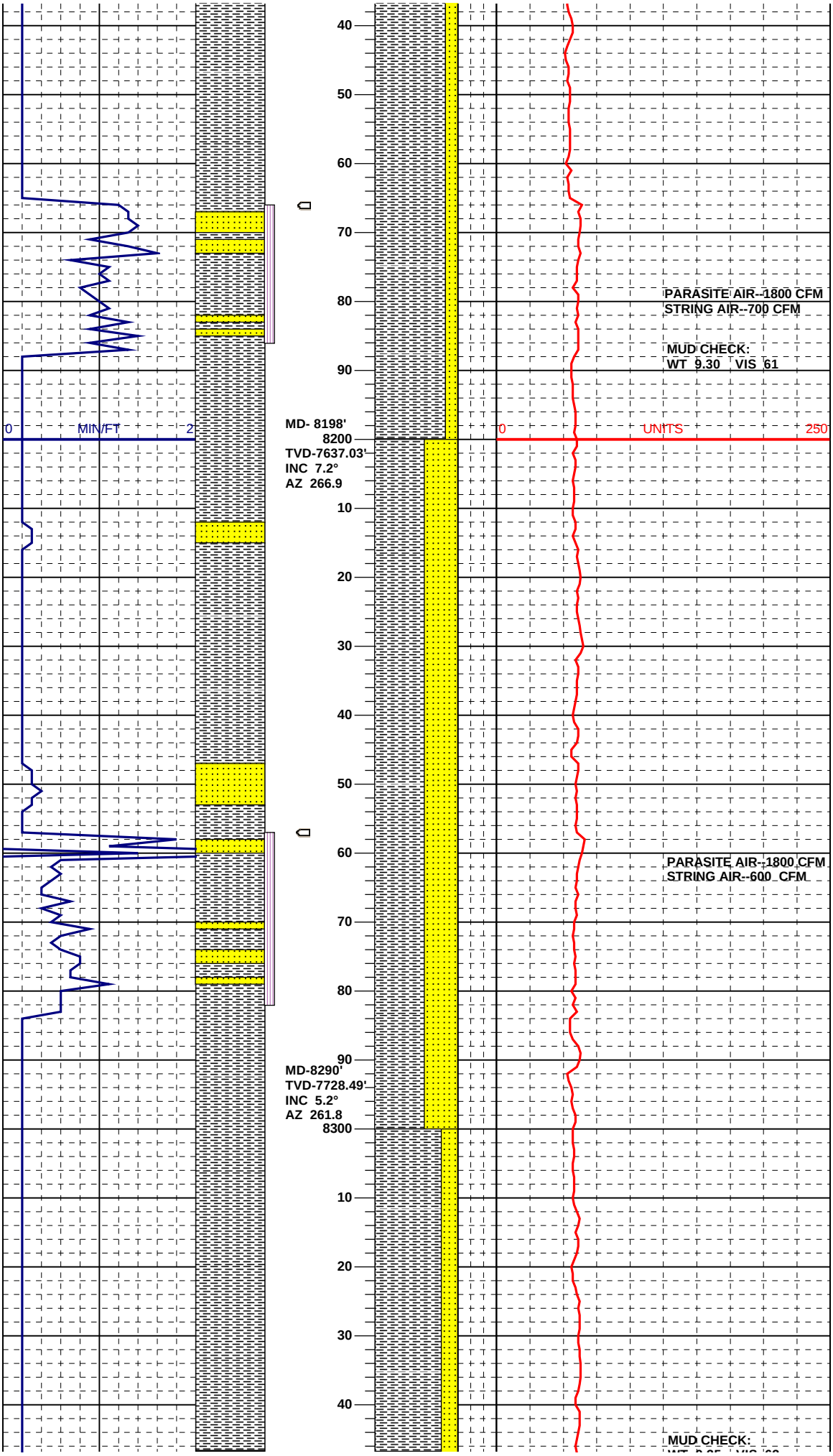
SS: clr-trnsl-wh, offwh-vltgy-tan, vf-fgr, grdg ip to v sdy SLTST, sbang, occ sbrd, pred wsrt, mhd-sl fri, m-wcmt, sl calc, wh cly fl ip, no vis por, tr dk shy grs, rr dk mica, NFSOC

MUD CHECK:
WT 9.20 VIS 60

PARASITE AIR--1800 CFM
STRING AIR--700 CFM

MD- 8107'
TVD-7546.95'
INC 9.1°
AZ 266.9

SH: ltgy-ltgybrn, ltredbrn-ltbrn, ltyelbrn, occ ltgygn, yel/gy mot, m-dkbrn, sbblky-sbplty, sl-m frm, occ sl sft, sm-sl gt tex, occ sl-m slty, sl water-sensitive ip, rr dk mica, ncalc



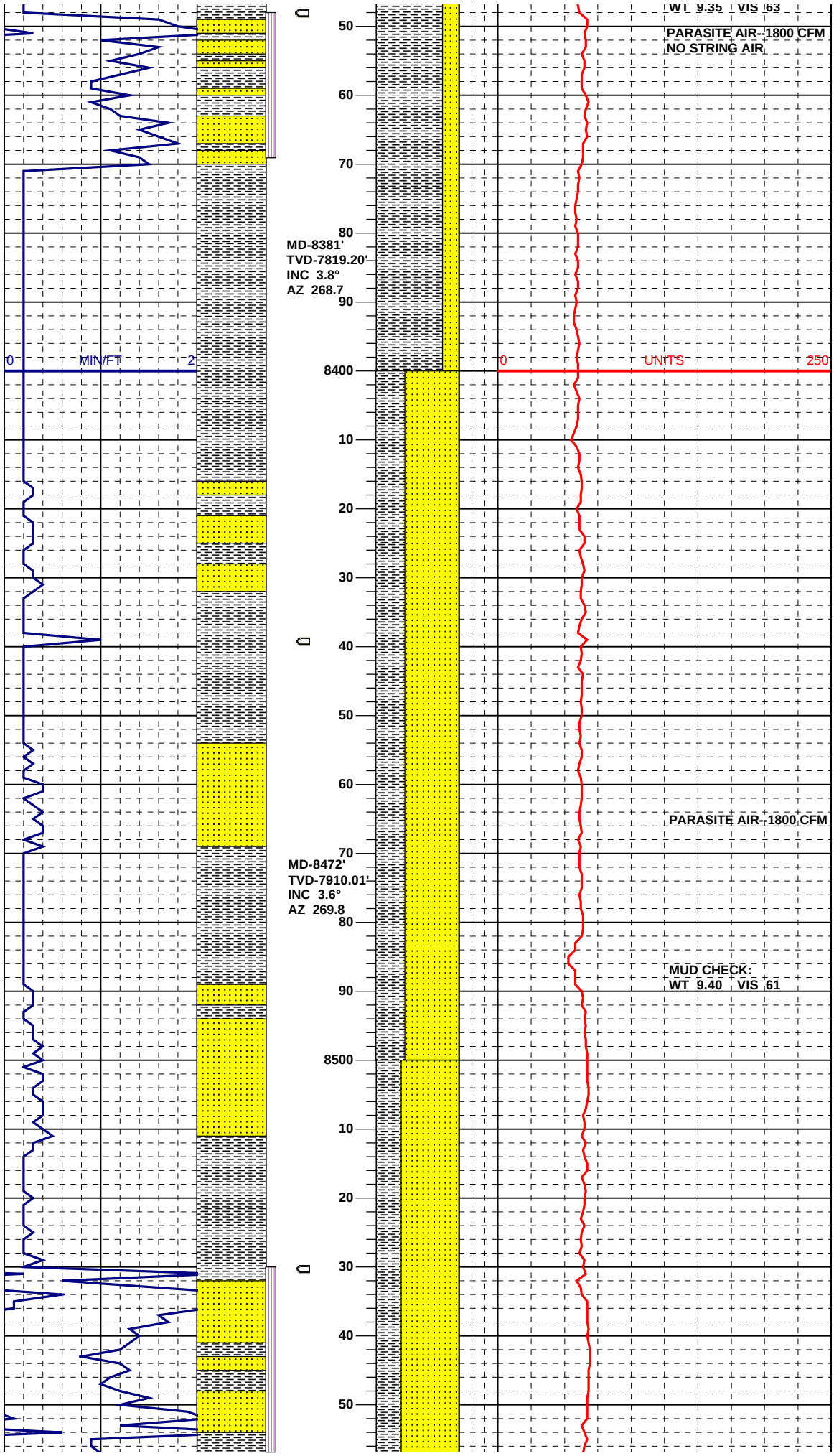
SS: clr-trnsl-wh, offwh-vltgy-tan, vf-fgr, grdg ip to v sdy SLTST, sbang, occ sbrd, pred wsrt, mhd-sl fri, m-wcmt, sl calc, wh cly fl ip, no vis por, tr dk shy grs, rr dk mica & chlorite, rr orng cht, NFSOC

SH: ltgy-ltgybrn, ltredbrn-ltbrn, ltyelbrn, occ ltgygn, yel/gy mot, m-dkbrn, sbblky-sbplty, sl-m frm, occ sl sft, sm-sl gt tex, occ sl-m slty, sl water-sensitive ip, rr dk mica, ncalc

SS: clr-trnsl-wh, offwh-vltgy-tan, vf-fgr, occ mgr, grdg ip to v sdy SLTST, sbang, occ sbrd, pred wsrt, mhd-v fri, m-pcmt, abnt lse qtz grs, sl calc, wh cly fl ip, no vis por in consol frag, tr dk shy grs, rr dk mica & chlorite, rr orng cht, NFSOC

MUD LOSSES INCREASED TO 40-50 BBLS/HR.

SH: ltgy-ltgybrn, ltredbrn-ltbrn, ltyelbrn, occ ltgygn, yel/gy mot, m-dkbrn, sbblky-sbplty, sl-m frm, occ sl sft, sm-sl gt tex, occ sl-m slty, sl water-sensitive ip, rr dk mica, ncalc



BOOSTER ON AIR EQUIPMENT WENT DOWN--CAN NOT PUMP DRILL STRING AIR AND PARASITE AIR IS NOW LIMITED TO 1800 CFM. MUD LOSSES INCREASED TO 75-100 BBLS/HR.

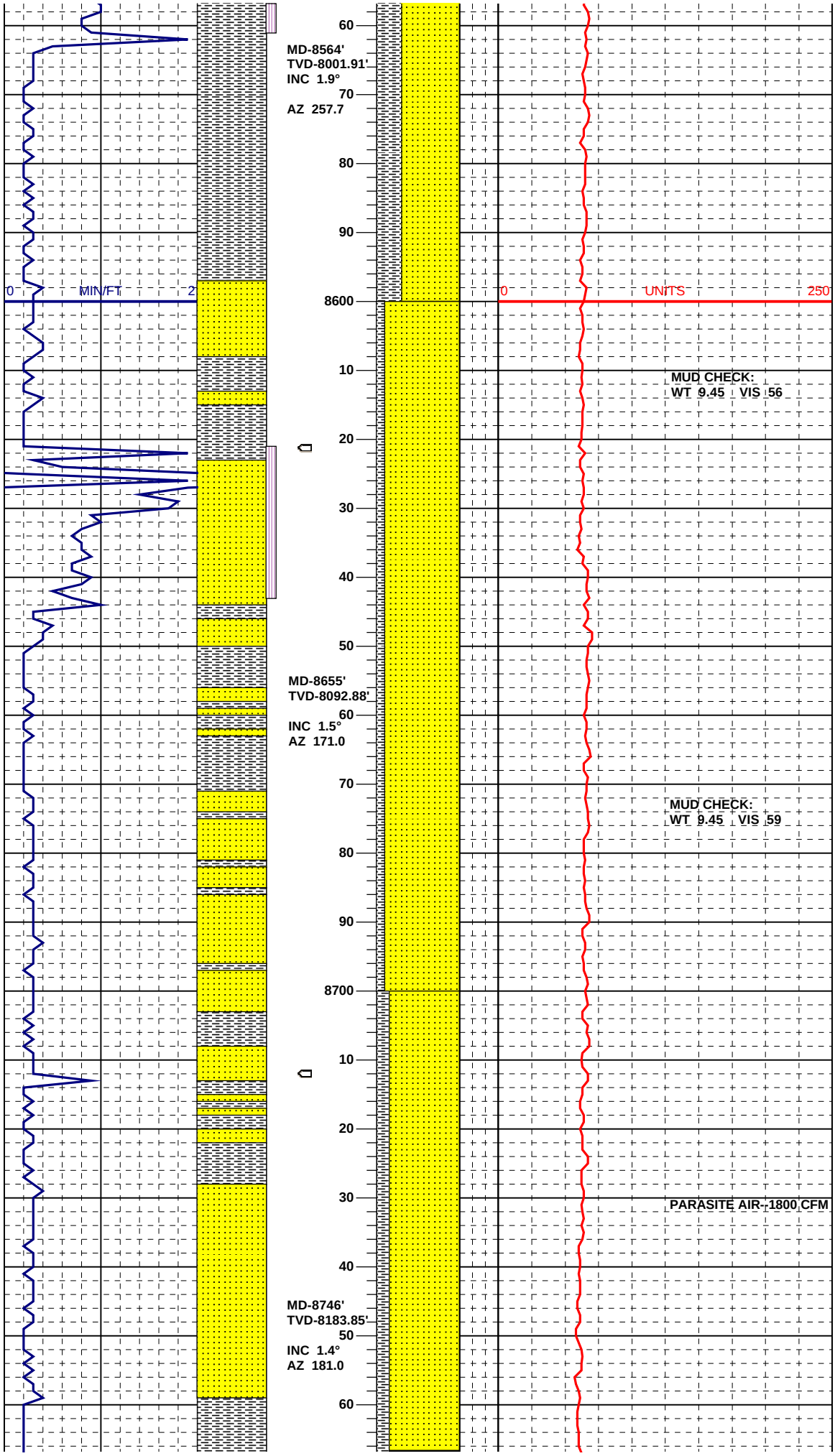
SS: clr-trnsl-wh, offwh-vltgy-tan, vf-fgr, grdg ip to v sdy SLTST, sbang, occ sbrd, pred wsrt, mhd-sl fri, m-wcmt, sl calc, wh cly fl ip, no vis por, tr dk shy grs, rr dk mica, NFSOC

SH: ltgy, occ ltgybrn, tr ltredbrn-ltbrn, ltyelbrn, ltgygn, sbblky-sbplty, sl-m frm, occ sl sft, sm-sl gt tex, occ sl slty, rr dk mica, ncalc

POSSIBLE WILLIAMS FORK TOP = 8454' MD

SS: clr-trnsl-wh, ltgy, vf-fgr, occ m-cgr, sbang-sbrd, pred wsrt, occ msrt, mhd-v fri, m-pcmt, abnt lse qtz grs, n-sl calc, wh cly fl ip, tt-fr vis por, tr dk shy grs & carb frag, tr dk mica, NFSOC

SS: clr-trnsl-wh, ltgy, vf-fgr, occ m-cgr, sbang-sbrd, pred wsrt, occ msrt, mhd-v fri, m-pcmt, abnt lse qtz grs, n-sl calc, wh cly fl ip, tt-fr vis por, tr dk shy grs & carb frag, tr dk mica, NFSOC



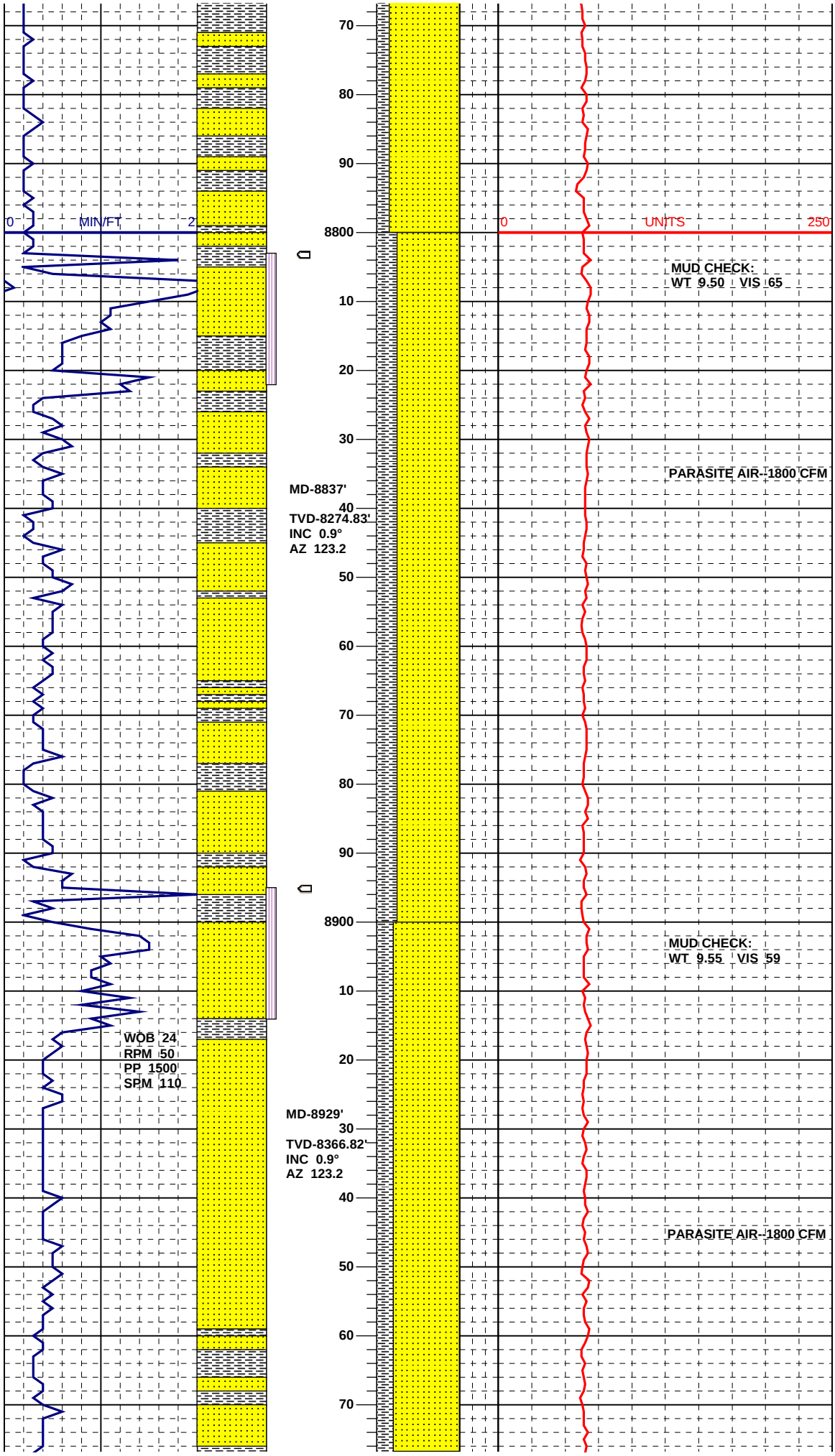
SH: ltgy, occ ltgybrn, tr ltredbrn-ltbrn, ltyelbrn, ltgygn, sbblky-sbplty, sl-m frm, occ sl sft, sm-sl gt tex, occ sl slty, rr dk mica, ncalc

SS: clr-trnsl-wh, vf-fgr, occ mgr, sbang-sbrd, pred wsrt, occ msrt, v fri, pcmt, pred lse qtz grs, n-sl calc, tr dk shy grs & carb frag, tr dk mica, NFSOC

SH: ltgy, occ ltgybrn, tr ltredbrn-ltbrn, ltyelbrn, ltgygn, sbblky-sbplty, sl-m frm, occ sl sft, sm-sl gt tex, occ sl slty, rr dk mica, ncalc

NOTE: VARICOLORED WASATCH FRAGMENTS PERSIST IN SPLS UNTIL FURTHER NOTED.

SS: clr-trnsl-wh, f-m gr, sbang-sbrd, pred wsrt, occ msrt, v fri, pcmt, pred lse qtz grs, n-sl calc, tr dk shy grs & carb frag, tr dk mica, NFSOC



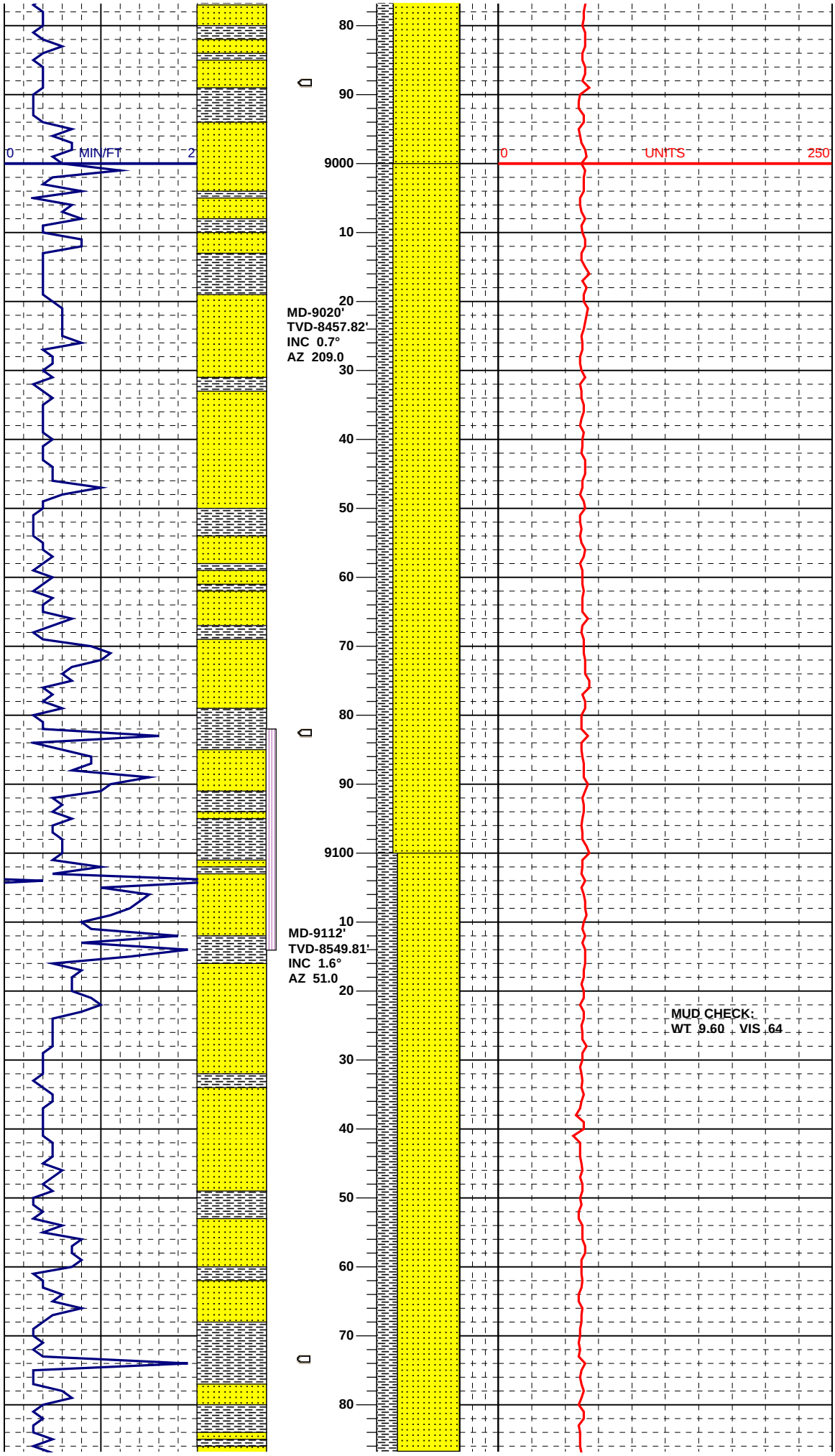
MUD LOSSES HAVE SLOWED TO 10-15 BBL/HR.

SS: clr-trnsl-wh, f-vfgr, occ mgr, sbang-sbrd, pred wsrt, occ msrt, v fri, p-m cmt, occ lse qtz grs, n-sl calc, SH & carb frag, tr dk mica, NFSOC

MUD LOSSES INCREASING AGAIN-NOW UP TP 50 BBLS/HR.

SH: ltgy, occ ltgybrn, sbblky-sbplty, sl-m firm, occ sl sft, sm-sl gt tex, occ sl slty, rr dk mica, ncalc

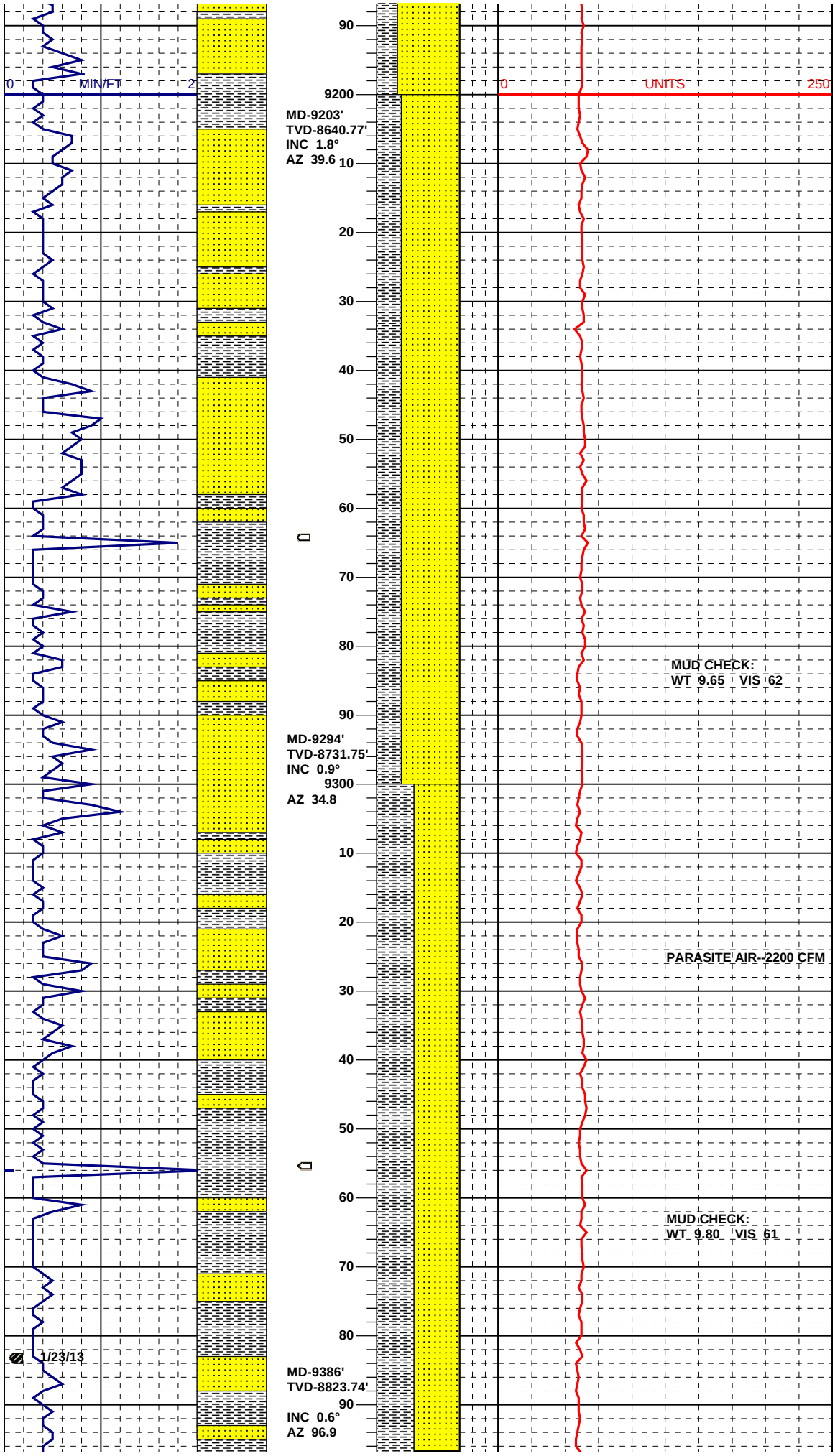
SS: clr-trnsl-wh, f-vfgr, occ mgr, sbang-sbrd, pred wsrt, occ msrt, v fri, p-m cmt, occ lse qtz grs, n-sl calc, SH & carb frag, tr dk mica, NFSOC



SS: clr-trnsl-wh, occ lt gy, f-vfgr, occ mgr, sbang-sbrd, pred wsrt, occ msrt, v fri, p-m cmt, occ lse qtz grs, n-sl calc, SH & carb frag, tr dk mica, NFSOC

SH: ltgy, sbblky-sbplty, sl-m firm, occ sl sft, sm-sl gt tex, occ sl slty, rr dk mica, ncalc

SS: clr-trnsl-wh, lt gy, vf-fgr, occ mgr, sbang-sbrd, pred wsrt, occ msrt, v fri, p-m cmt, occ lse qtz grs, n-sl calc, SH & carb frag, tr dk mica, NFSOC



SS: clr-trnsl-wh, lt gy, vf-fgr, sbang-sbrd, pred wsrt, occ msrt, v fri, p-m cmt, tr lse qtz grs, n-sl calc, SH & carb frag, tr dk mica, NFSOC

MUD CHECK:
WT 9.65 VIS 62

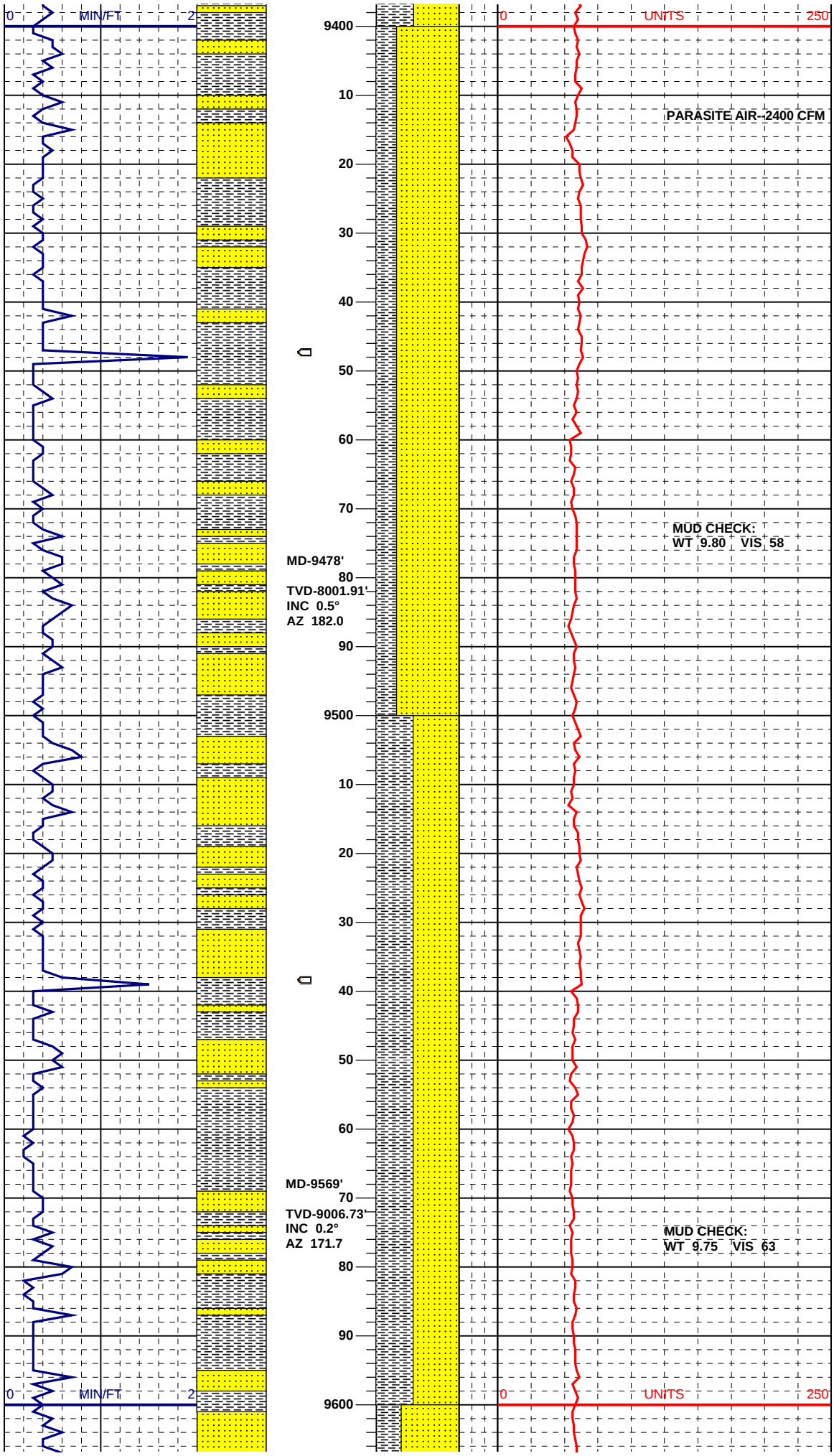
SH: lt gy, lt gybrn, m brn, sbblky-sbplty, sl-m firm, occ sl sft, sm-sl gt tex, occ sl slty, tr carb, rr dk mica, ncalc

PARASITE AIR--2200 CFM

SS: clr-trnsl-wh, lt gy, offwhite, vf-fgr, sbang-sbrd, pred wsrt, occ msrt, v fri, p-m cmt, n-sl calc, SH & carb frag, tr dk mica, NFSOC

MUD LOSSES NOW 20-30 BBLS/HR.

MUD CHECK:
WT 9.80 VIS 61

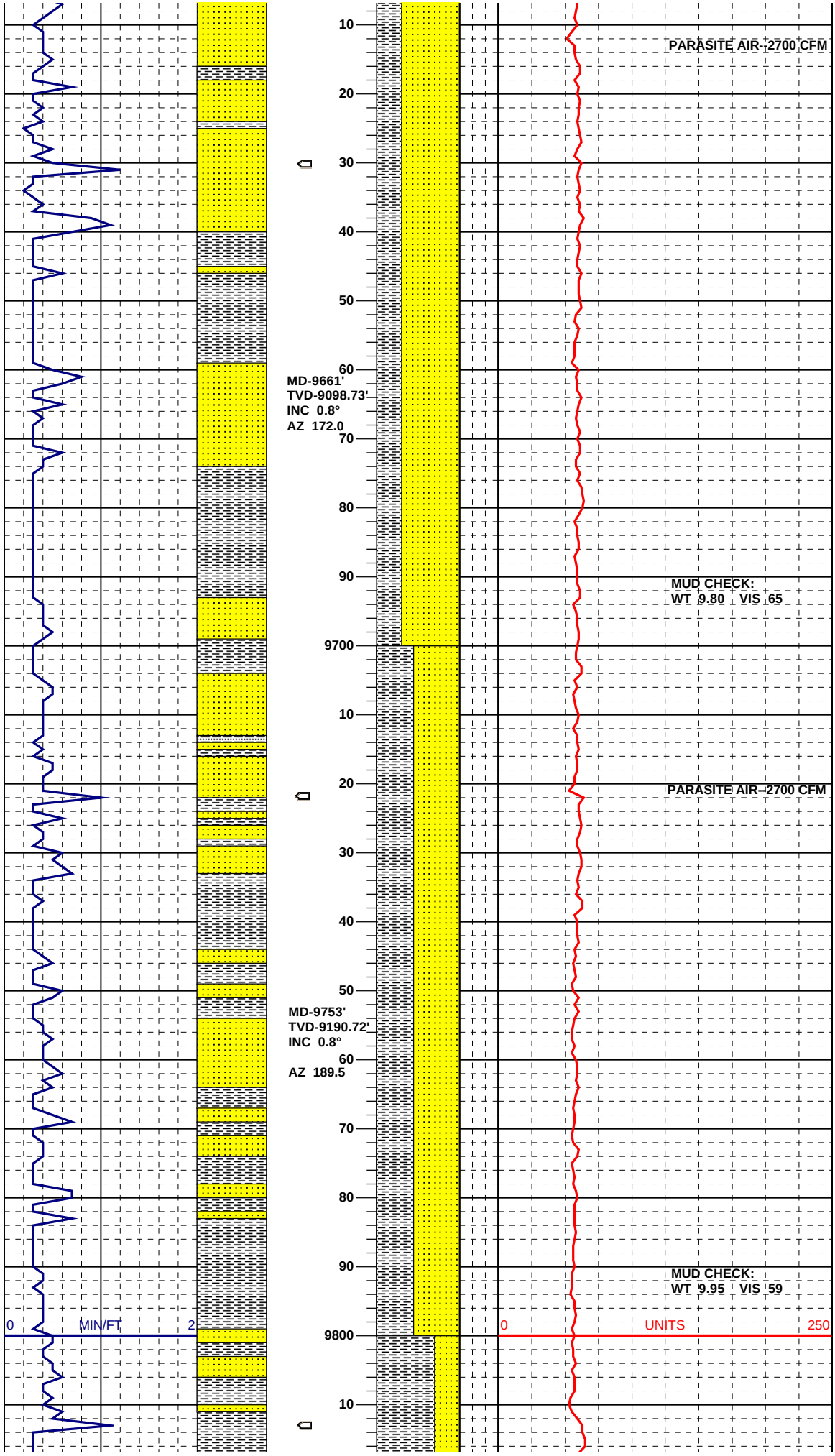


SS: clr-trnsl-wh, occ lt gy, f-vfgr, occ mgr, sbang-sbrd, pred wsrt, occ msrt, v fri, p-m cmt, occ lse qtz grs, n-sl calc, occ SH & carb frag, tr dk mica, NFSOC

SS: clr-trnsl-wh, tr lt gy, vf-fgr, occ mgr, sbang-sbrd, pred wsrt, occ msrt, sl fri, mcmt, tr lse qtz grs, n-sl calc, tr dk SH & carb frag, tr dk mica, NFSOC

MUD LOSSES INCREASING AGAIN-- NOW 50-75 BBLS/HR.

SH: lt-mgy, occ ltgybrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, occ sl slty, rr dk mica, ncalc

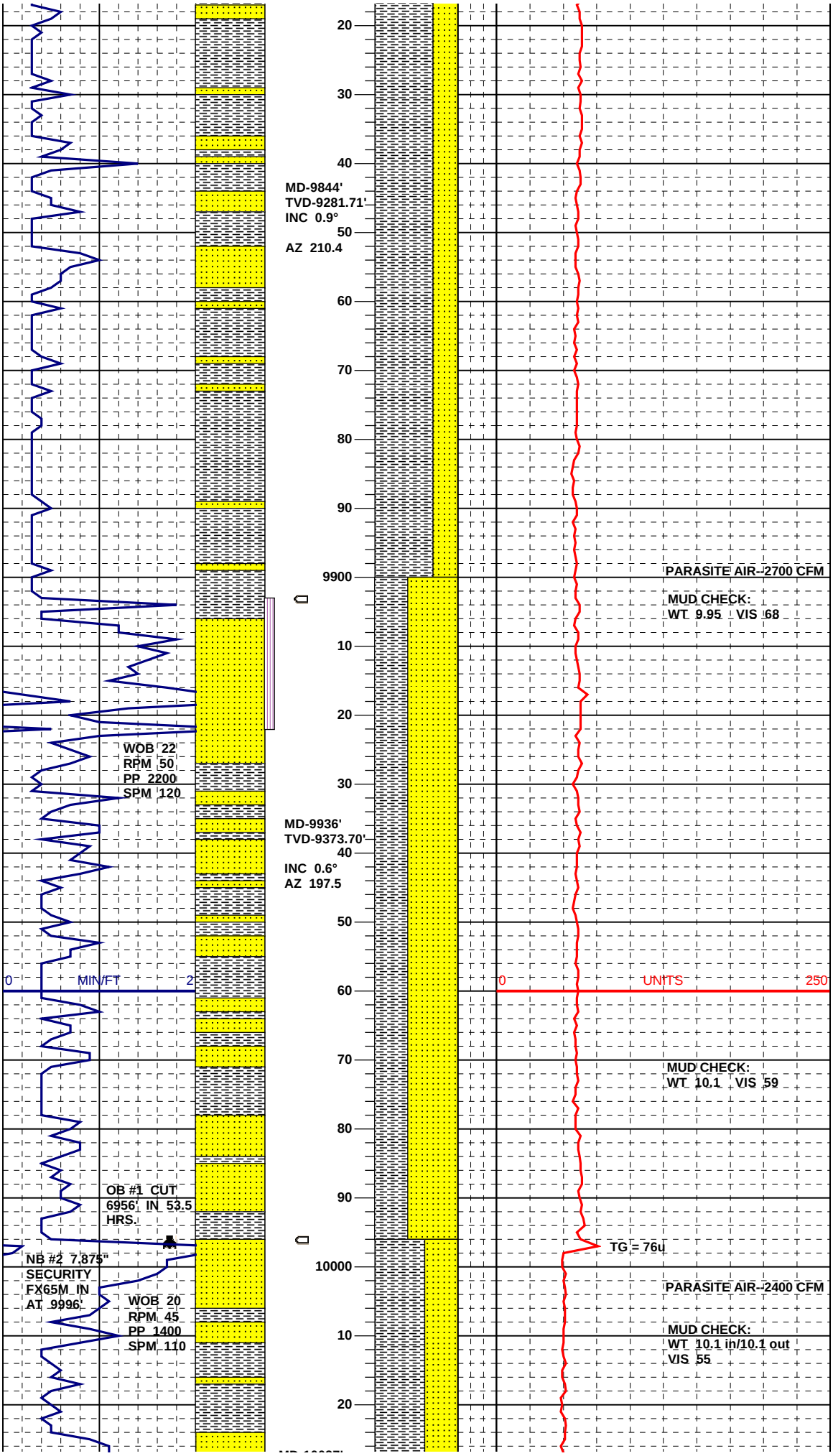


SS: clr-trnsl-wh, vf-fgr, occ mgr, sbang-sbrd, pred wsrt, occ msrt, m-v fri, pcmt, abnt lse qtz grs, n-sl calc, tr dk shy grs & carb frag, tr dk mica, NFSOC

SH: lt-mgy, occ ltgybrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, occ sl slty, rr dk mica, ncalc

SS: clr-trnsl-wh, occ offwh-ltgy, vf-fgr, occ mgr, occ grdg to v sdy SLTST, sbang-sbrd, pred wsrt, occ msrt, m-v fri, m-pcmt, occ lse qtz grs, n-sl calc, tr dk shy grs & carb frag, tr dk mica, NFSOC

SH: lt-mgy, occ ltgybrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, occ sl slty, rr dk mica, ncalc



SS: clr-trnsl-wh, offwh-ltgy, vf-fgr, grdg ip to v sdy SLTST, sbang-sbrd, wsrt, mhd-sl fri, m -wcmt, tr lse qtz grs, n-sl calc, tt, tr dk shy grs & carb frag, tr dk mica, NFSOC

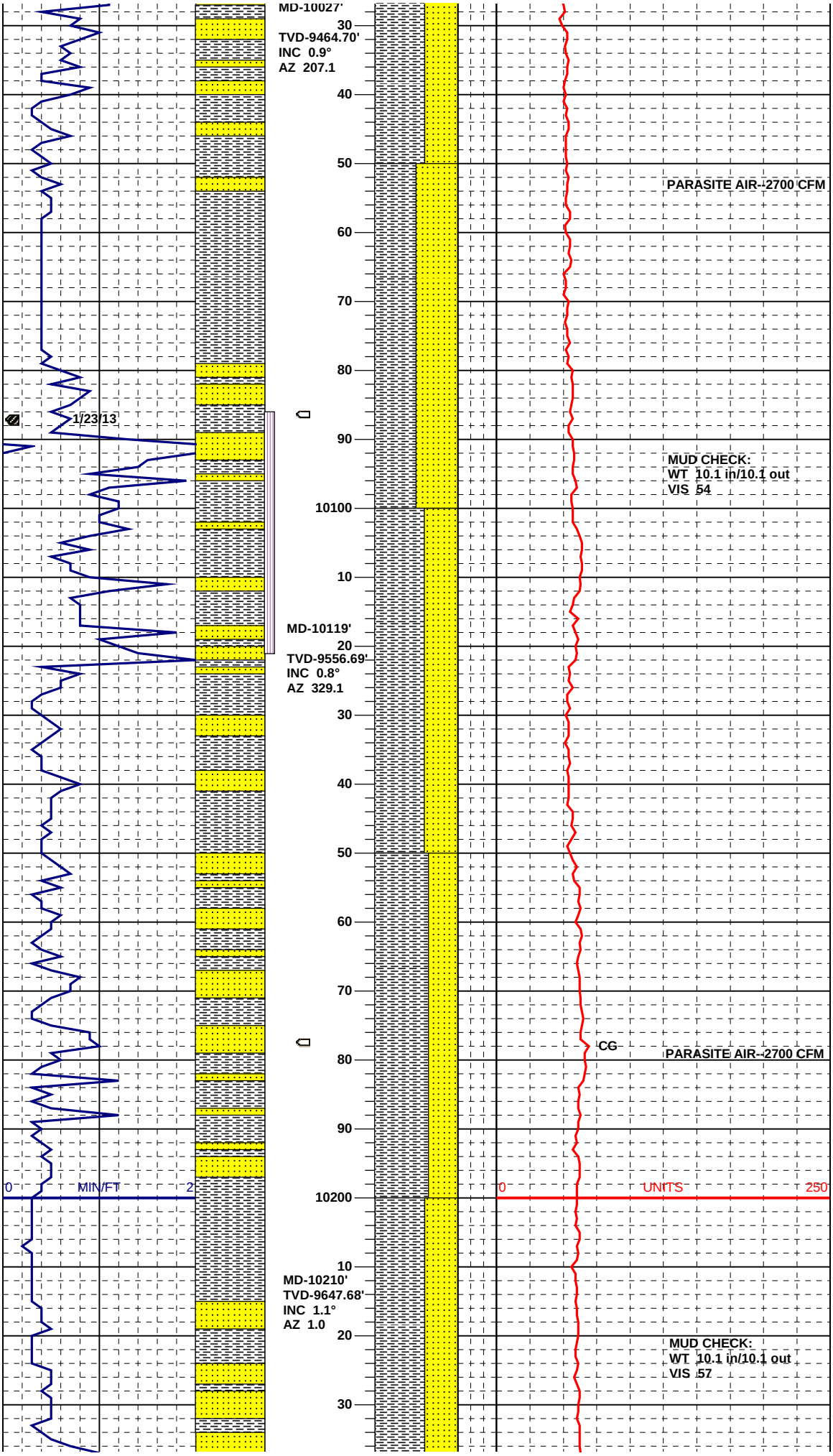
SH: lt-mgy, occ ltgybrn, dkgybrn-dkbrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, occ sl slty, rr dk mica, ncalc

SS: clr-trnsl-wh, vf-fgr, occ mgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, m-v fri, m-pcmt, abnt lse qtz grs, n-sl calc, tr dk shy grs & carb frag, tr dk mica, NFSOC

SH: lt-mgy, occ ltgybrn, dkgybrn-dkbrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, occ sl slty, rr dk mica, ncalc

CIRCULATE BOTTOMS UP AT 9996' MD & TOOH FOR A BIT CHANGE. PICK UP NEW BIT AND MUD MOTOR; CHANGE MWD BATTERY PACK. TIH; CIRCULATE BOTTOMS UP AT 8000'. TIH; TAG UP AT 8950'. WASH 11 STANDS TO BOTTOM. DRILL AHEAD LOSING MUD AT 15-35 BBLS/HR.

NOTE: LAGGED SPL FROM START OF W/R WAS ALL WASATCH WITH PIECES UP TO 1/2" IN COARSE SIEVE. SCATTERED WASATCH FRAGMENTS CONTINUE IN NEW DRILLED SPLS UNTIL FURTHER NOTED.



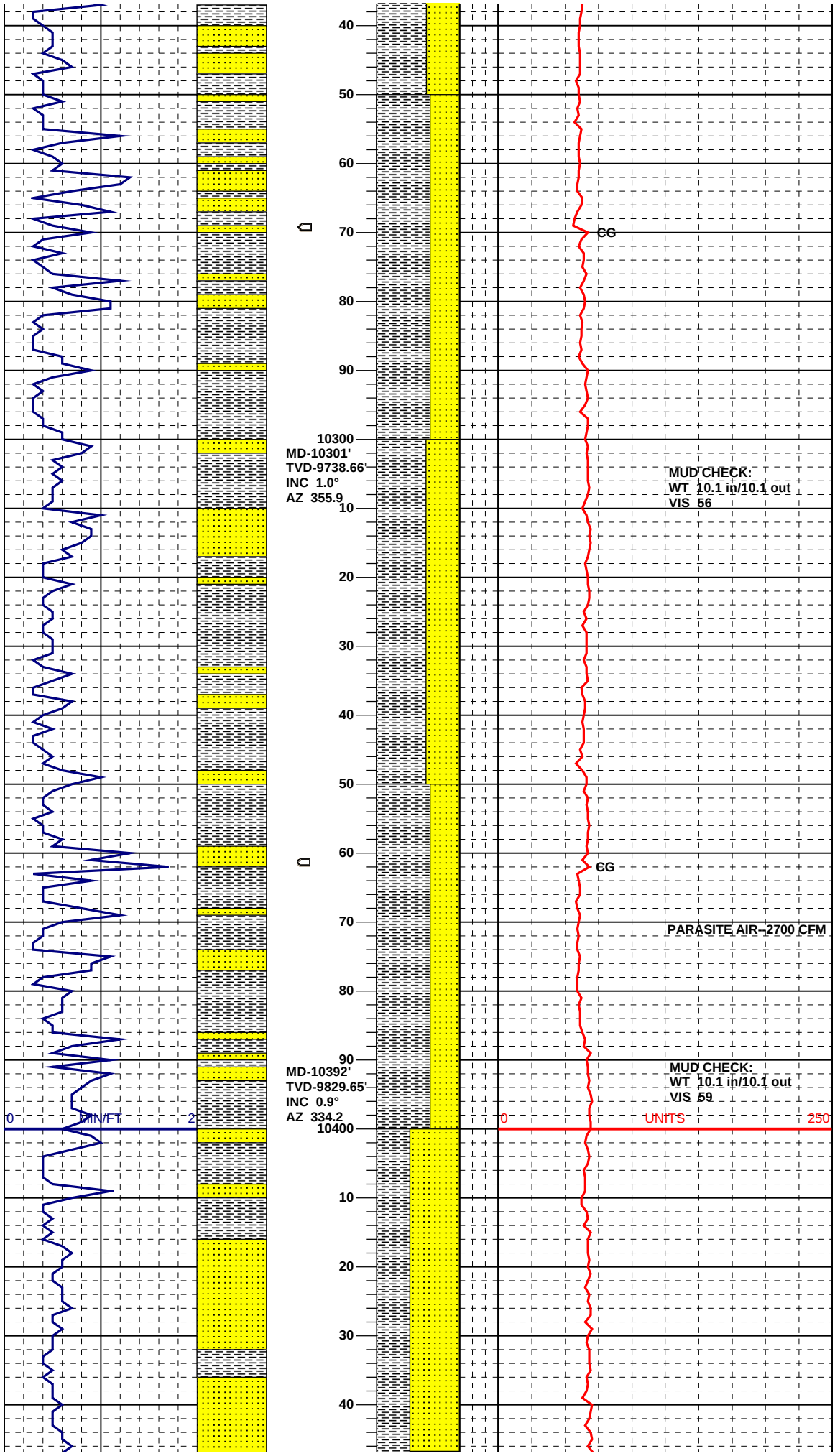
SH: lt-mgy, occ lt-m gybrn, dkbrn, sbblky-sbplty, sl-m firm, sm-sl gt tex, occ sl slty, tr dism pyr, rr dk mica, ncalc

SS: clr-trnsl-wh, lt gy, offwh, f-vfgr, occ mgr, sbang-sbrd, pred wsrt, occ msrt, m-v fri, m-pcmt, occ lse qtz grs, n-sl calc, occ SH & carb frag, tr dk mica, NFSOC

SS: clr-trnsl-wh, lt gy, offwh, f-vfgr, occ mgr, sbang-sbrd, pred wsrt, occ msrt, m-v fri, m-pcmt, occ lse qtz grs, n-sl calc, occ SH & carb frag, tr dk mica, NFSOC

SH: lt-mgy, occ lt-m gybrn, dkbrn, sbblky-sbplty, sl-m firm, sm-sl gt tex, occ sl slty, rr dk mica, ncalc

SS: clr-trnsl-wh, lt gy, offwh, f-vfgr, occ mgr, sbang-sbrd, pred wsrt, occ msrt, m-v fri, m-pcmt, occ lse qtz grs, n-sl calc, occ SH & carb frag, tr dk mica, NFSOC



SS: clr-trnsl-wh, offwh-ltgy, vf-fgr, grdg ip to v sdy SLTST, sbang-sbrd, wsrt, mhd-sl fri, m -wcmt, tr lse qtz grs, n-sl calc, tt, tr dk shy grs & carb frag, tr dk mica, NFSOC

MUD LOSSES HAVE SLOWED TO 15-20 BBLS /HR.

SH: lt-mgy, occ ltgybrn, dkgybrn-dkbrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, occ sl slty, rr dk mica, ncalc

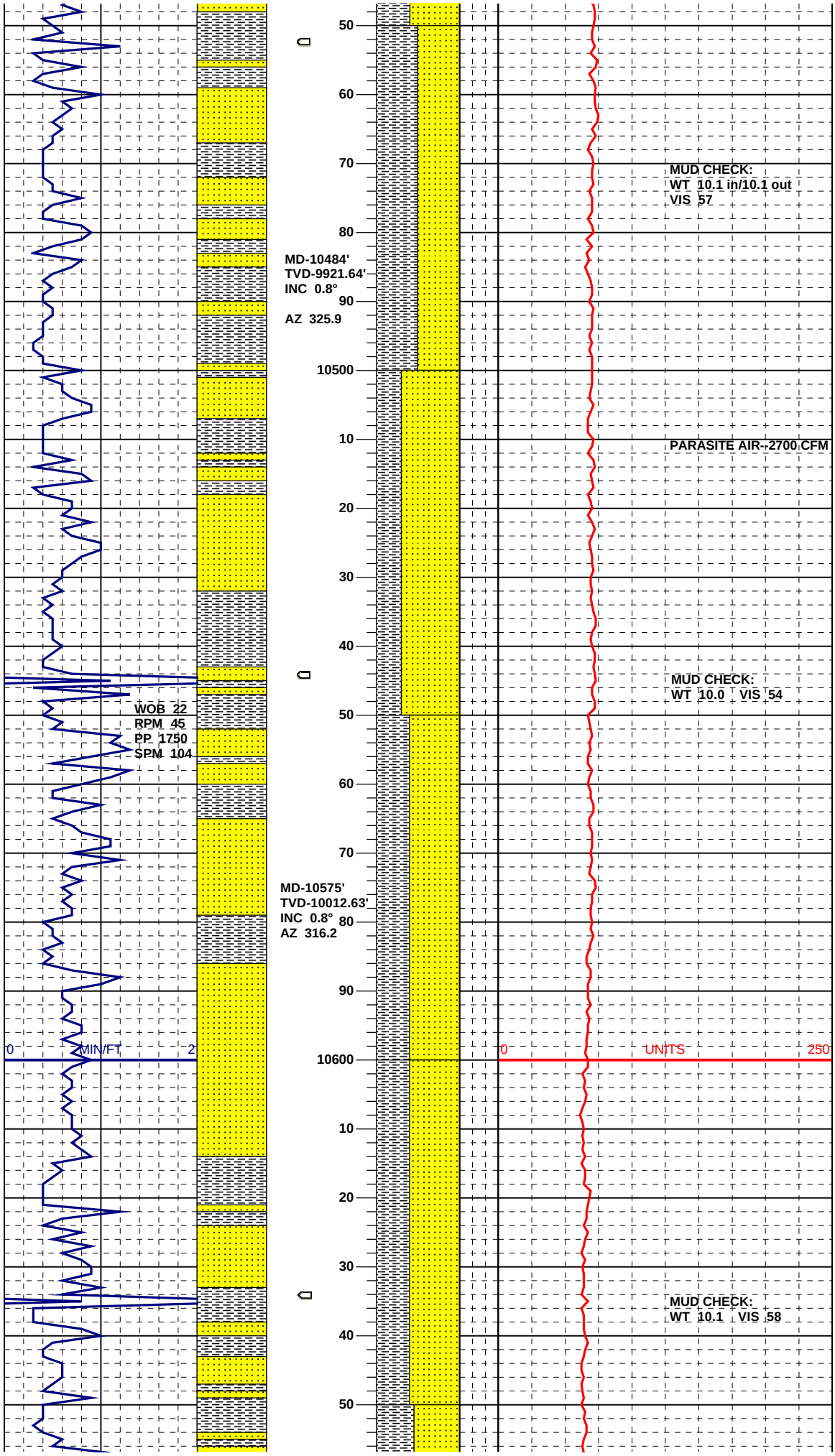
SS: clr-trnsl-wh, occ offwh-ltgy, vf-fgr, occ mgr, occ grdg to v sdy SLTST, sbang-sbrd, pred wsrt, occ msrt, m-v fri, m-pcmt, com lse qtz grs, n-sl calc, tr dk shy grs & carb frag, tr dk mica, NFSOC

SH: lt-mgy, lt-mgybrn, occ dkgybrn-dkbrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, occ sl slty, rr dk mica, rr vfgr dism pyr, ncalc

SS: clr-trnsl-wh, offwh-ltgy, vf-fgr, grdg ip to v sdy SLTST, sbang-sbrd, wsrt, mhd-sl fri, m -wcmt, tr lse qtz grs, n-sl calc, tt, tr dk shy grs & carb frag, tr dk mica, NFSOC

SH: lt-mgy, lt-mgybrn, occ dkgybrn-dkbrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, occ sl slty, rr dk mica, ncalc

SS: clr-trnsl-wh, vf-fgr, occ mgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, m-v fri, m-pcmt, abnt lse qtz grs, n-sl calc, tr dk shy grs & carb frag, tr dk mica, NFSOC



SH: lt-mgy, lt-mgybrn, occ dkgybrn-dkbrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, occ sl slty, rr dk mica, ncalc

SS: clr-trnsl-wh, vf-fgr, occ mgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, com lse qtz grs, n-sl calc, tr dk shy grs & carb frag, tr dk mica, NFSOC

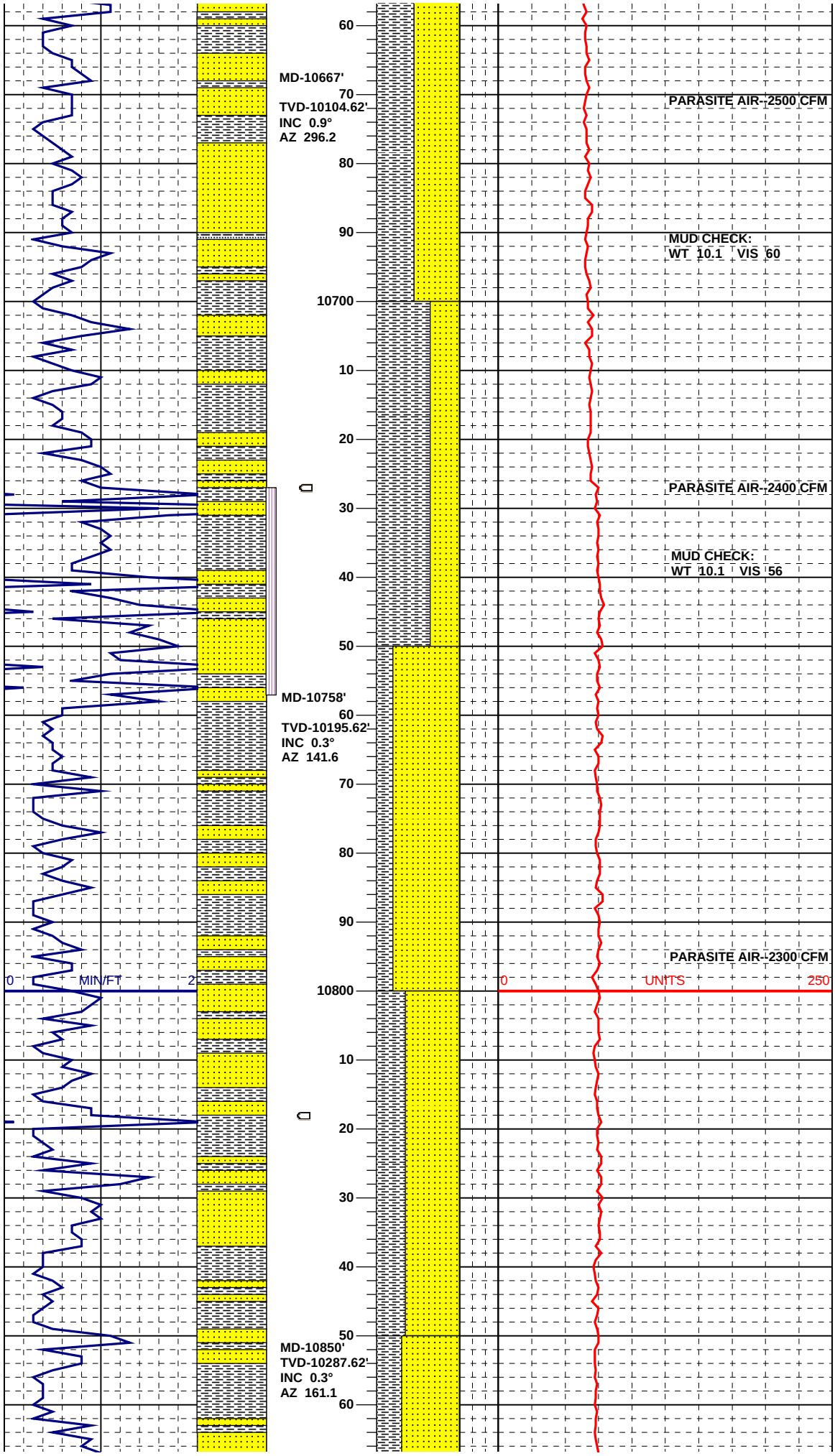
SS: clr-trnsl-wh, vf-fgr, occ mgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, com lse qtz grs, n-sl calc, tr dk shy grs & carb frag, tr dk mica, NFSOC

SH: lt-mgy, lt-mgybrn, occ dkgybrn-dkbrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, occ sl slty, rr dk mica, vrr vfgr dism pyr, ncalc

SS: clr-trnsl-wh, vf-fgr, occ mgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, com lse qtz grs, n-sl calc, tr cly fl, pred tt, tr dk shy grs & carb frag, tr dk mica, NFSOC

SS: clr-trnsl-wh, vf-fgr, occ grdg to vsdy SLTST, sbang-sbrd, wsrt, sl-m fri, mcmt, com lse qtz grs, n-sl calc, tr dk shy grs & carb frag, tr dk mica, NFSOC

SH: lt-mgy, lt-mgybrn, occ dkgybrn-dkbrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, occ sl slty, rr dk mica, ncalc



SS: clr-trnsl-wh, vf-fgr, occ mgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, com lse qtz grs, n-sl calc, tr cly fl, pred tt, tr dk shy grs & carb frag, tr dk mica, NFSOC

SH: lt-mgy, lt-mgybrn, occ dkgybrn-dkbrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, occ sl slty, rr dk mica, ncalc

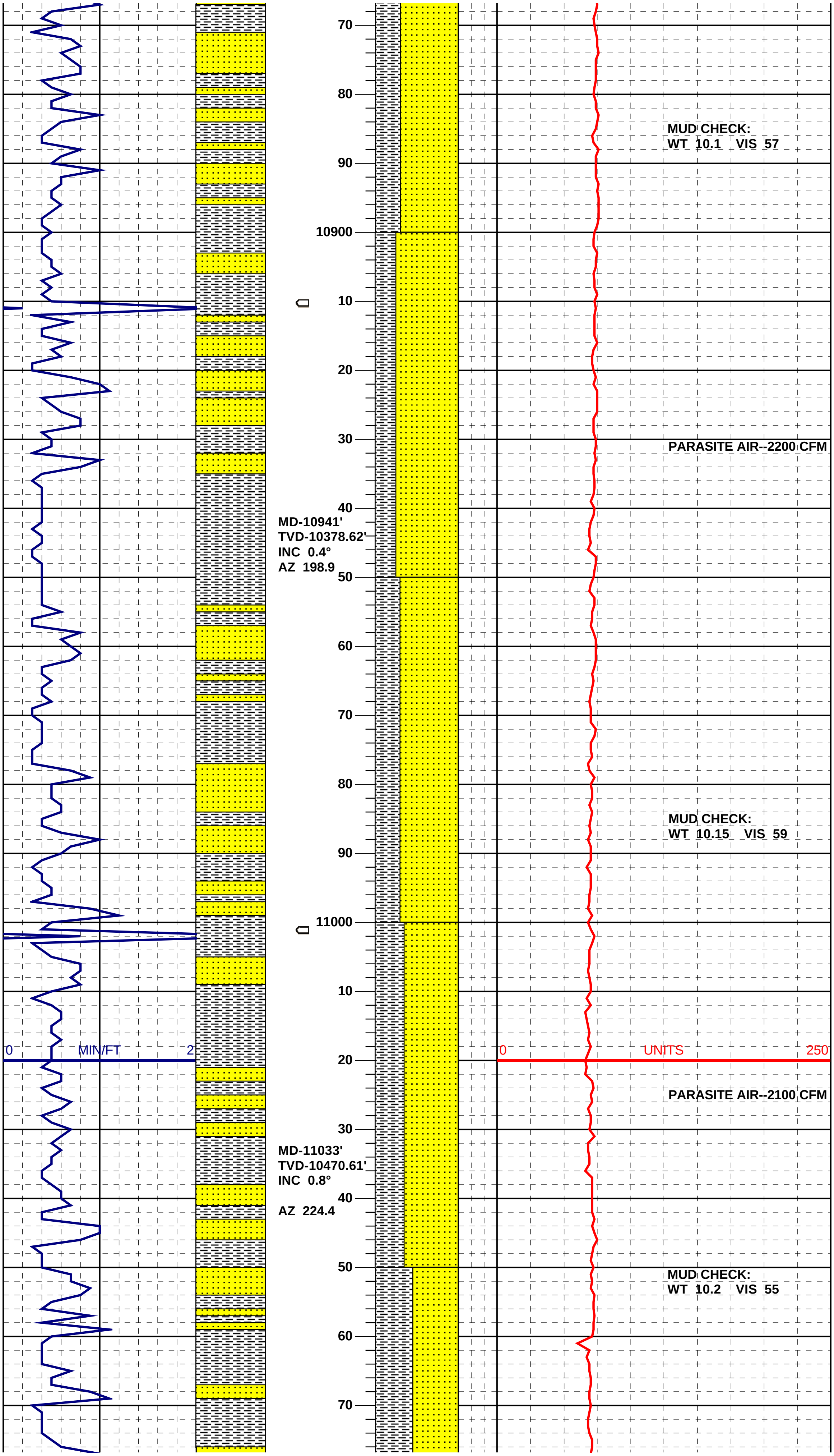
MUD NOW SEEPING AT ABOUT 10 BBLS/HR OR LESS.

SS: clr-trnsl-wh, vf-fgr, occ mgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, com lse qtz grs, n-sl calc, tr cly fl, pred tt, tr dk shy grs & carb frag, tr dk mica, NFSOC

SH: lt-mgy, lt-mgybrn, occ dkgybrn-dkbrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, occ sl slty, rr dk mica, ncalc

SS: clr-trnsl-wh, vf-fgr, occ mgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, com lse qtz grs, n-sl calc, tr cly fl, pred tt, tr dk shy grs & carb frag, tr dk mica, NFSOC

SH: lt-mgy, lt-mgybrn, occ dkgybrn-dkbrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, occ sl slty, rr dk mica, ncalc



SS: clr-trnsl-wh, vf-fgr, occ grdg to vsdy SLTST, sbang-sbrd, wsrt, sl-m fri, mcmt, com lse qtz grs, n-sl calc, tr dk shy grs & carb frag, tr dk mica, NFSOC

SS: clr-trnsl-wh, vf-fgr, occ mgr, sbang-sbrd, pred wsrt, occ msrt, m-v fri, m-pcmt, abnt lse qtz grs, n-sl calc, tr dk shy grs & carb frag, tr dk mica, NFSOC

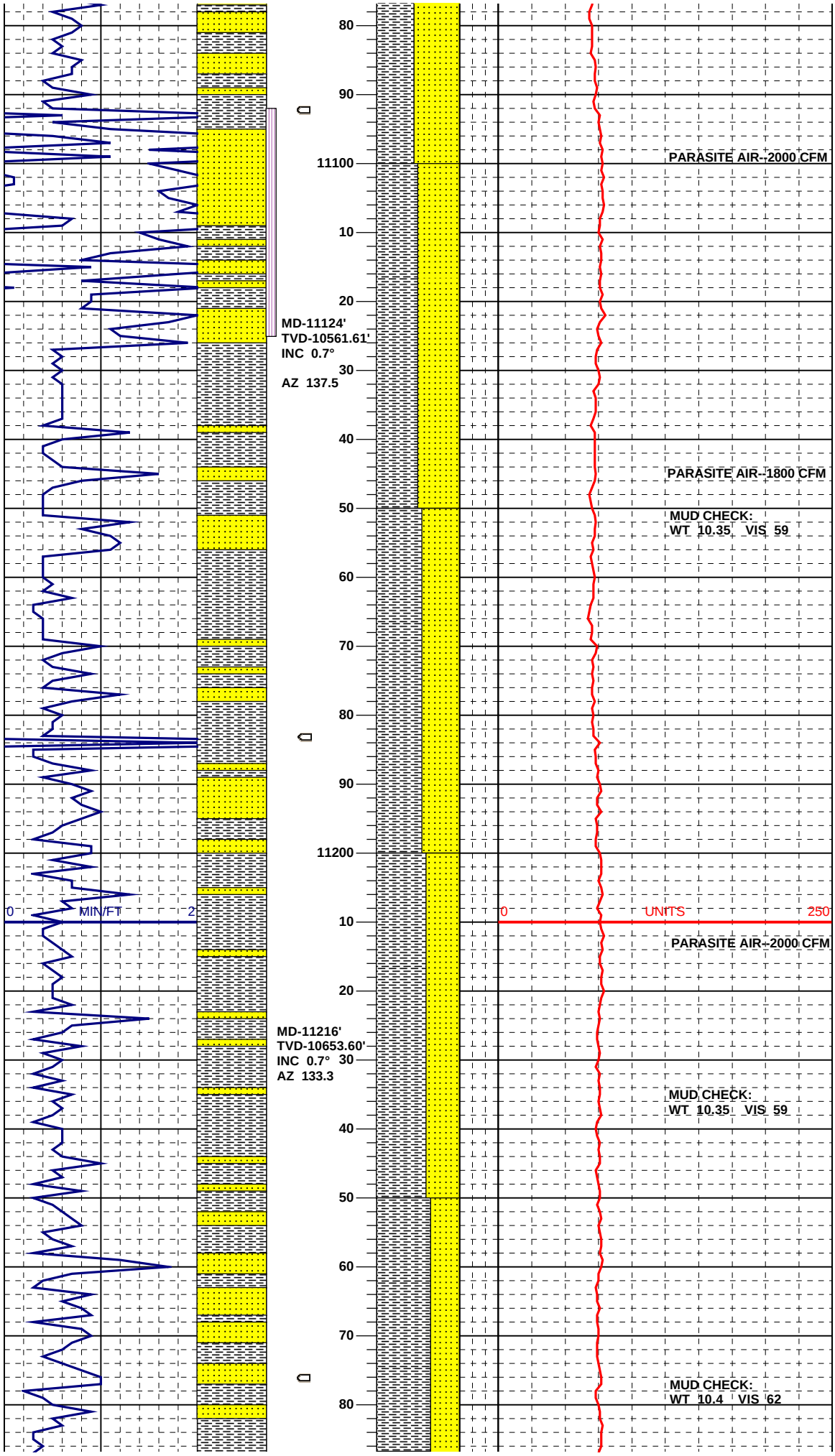
SH: lt-mgy, lt-mgybrn, occ dkgybrn-dkbrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, occ sl slty, rr dk mica, ncalc

SS: clr-trnsl-wh, vf-fgr, occ mgr, sbang-sbrd, pred wsrt, occ msrt, m-v fri, m-pcmt, abnt lse qtz grs, n-sl calc, tr dk shy grs & carb frag, tr dk mica, NFSOC

SH: lt-mgy, lt-mgybrn, occ dkgybrn-dkbrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, occ sl slty, rr dk mica, ncalc

SS: clr-trnsl-wh, vf-fgr, occ mgr, sbang-sbrd, pred wsrt, occ msrt, m-v fri, m-pcmt, abnt lse qtz grs, n-sl calc, tr dk shy grs & carb frag, tr dk mica, NFSOC

SH: lt-mgy, lt-mgybrn, occ dkgybrn-dkbrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, occ sl slty, rr dk mica, ncalc



SS: clr-trnsl-wh, vf-fgr, occ mgr, sbang-sbrd, pred wsrt, occ msrt, m-v fri, m-pcmt, abnt lse qtz grs, n-sl calc, tr dk shy grs & carb frag, tr dk mica, NFSOC

PARASITE AIR--2000 CFM

SS: clr-trnsl-wh, incr offwh-ltgybrn, vf-fgr, occ mgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, tr lse qtz grs, n-sl calc, tr cly fl, pred tt, tr-occ dk shy grs & carb frag, tr dk mica, rr carb stks, NFSOC

MUD LOSSES BEGINNING TO INCREASE AFTER 11130' MD--NOW 50-100 BBLS/HR.

SH: lt-mgy, lt-mgybrn, occ dkgybrn-dkbrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, sl-m slty ip, rr dk mica, ncalc

PARASITE AIR--1800 CFM

MUD CHECK:
WT 10.35 VIS 59

SH: mgy-mgybrn, occ ltgy-lgybrn, dkgybrn-dkbrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, sl-m slty ip, rr dk mica, ncalc

SS: offwh-ltgybrn, occ clr-trnsl-wh, vf-fgr, occ mgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, tr lse qtz grs, n-sl calc, tr cly fl, pred tt, tr-occ dk shy grs & carb frag, tr dk mica, rr carb stks, NFSOC

PARASITE AIR--2000 CFM

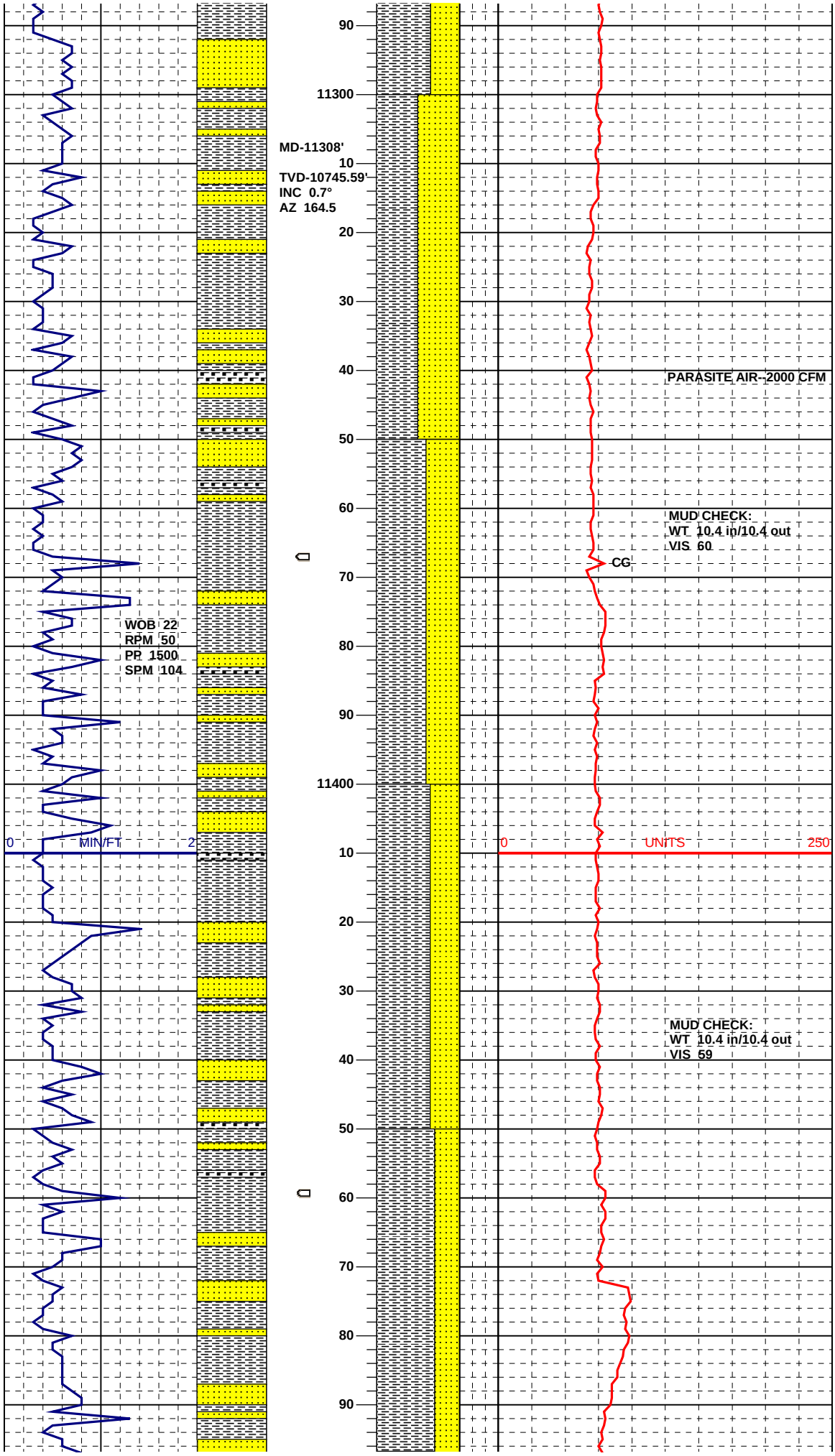
SH: mgy-mgybrn, occ ltgy-lgybrn, dkgybrn-dkbrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, sl -m slty ip, rr dk mica, ncalc

MUD CHECK:
WT 10.35 VIS 59

SS: offwh-ltgybrn, occ clr-trnsl-wh, vf-fgr, occ mgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, tr lse qtz grs, n-sl calc, tr cly fl, pred tt, tr-occ dk shy grs & carb frag, tr dk mica, rr carb stks, NFSOC

MUD CHECK:
WT 10.4 VIS 62

SS: offwhite, clr-trnsl-wh, vf-fgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, tr lse qtz grs, n-sl calc, tr cly fl, pred tt, occ SH & carb frag, tr dk mica, rr carb stks, NFSOC



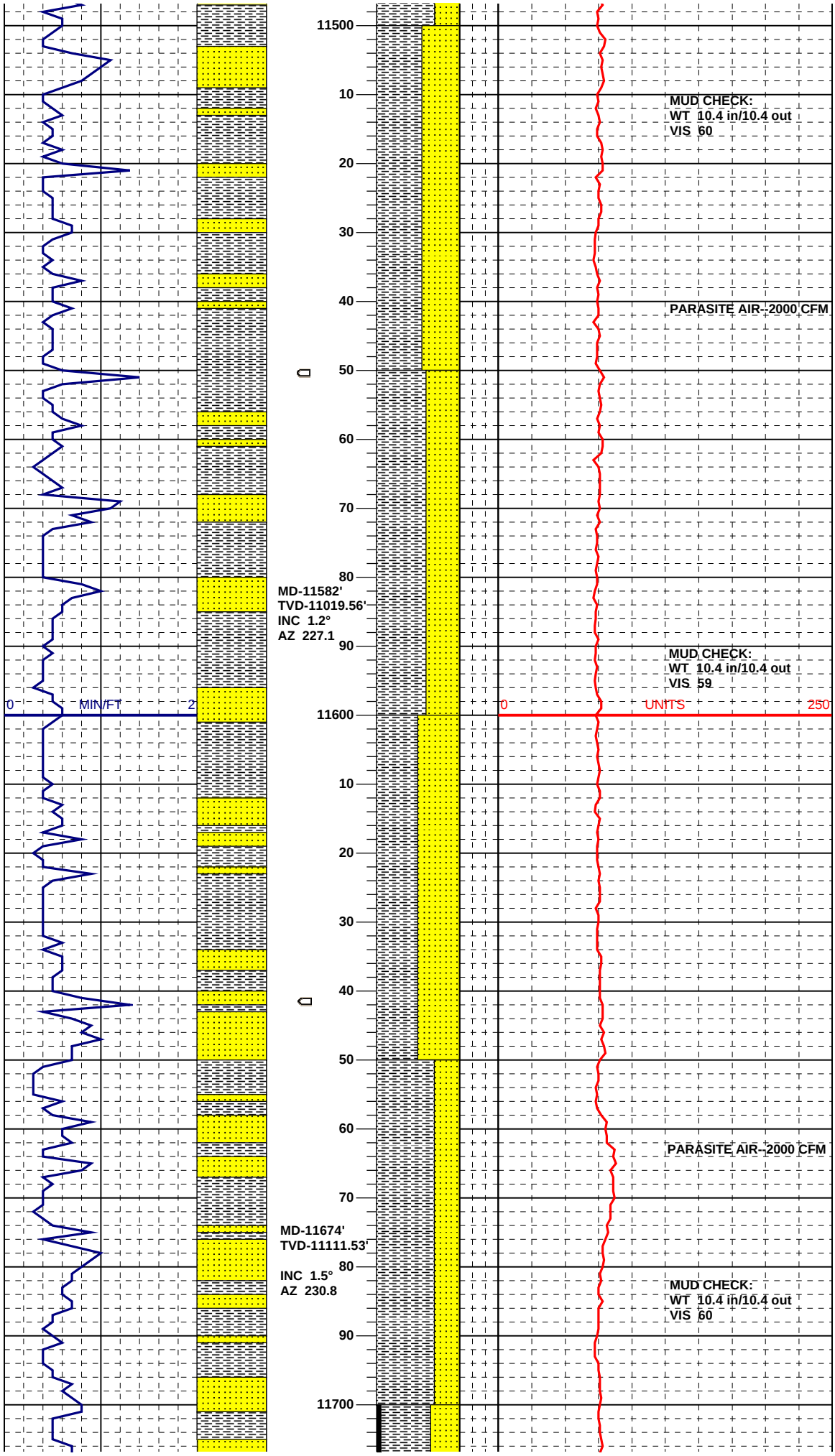
SS: offwhite, clr-trnsl-wh, vf-fgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, tr lse qtz grs, n-sl calc, tr cly fl, pred tt, occ SH & carb frag, tr dk mica, rr carb stks, NFSOC

SH: lt-m gybrn, lt-dk brn, sbblky-sbplty, sl-m firm, sm-sl gt tex, sl-m slty ip, sl carb ip w/ coaly frag, rr dk mica, ncalc

SS: offwhite, lt brn, clr-trnsl-wh, vf-fgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, n-sl calc, tr cly fl, pred tt, occ SH & carb frag, tr dk mica, rr carb stks, NFSOC

MUD LOSSES HAVE SLOWED TO LESS THAN 10 BBLS/HR.

SH: lt-m gybrn, lt-dk brn, sbblky-sbplty, sl-m firm, sm-sl gt tex, sl-m slty ip, sl carb ip w/ coaly frag, rr dk mica, ncalc



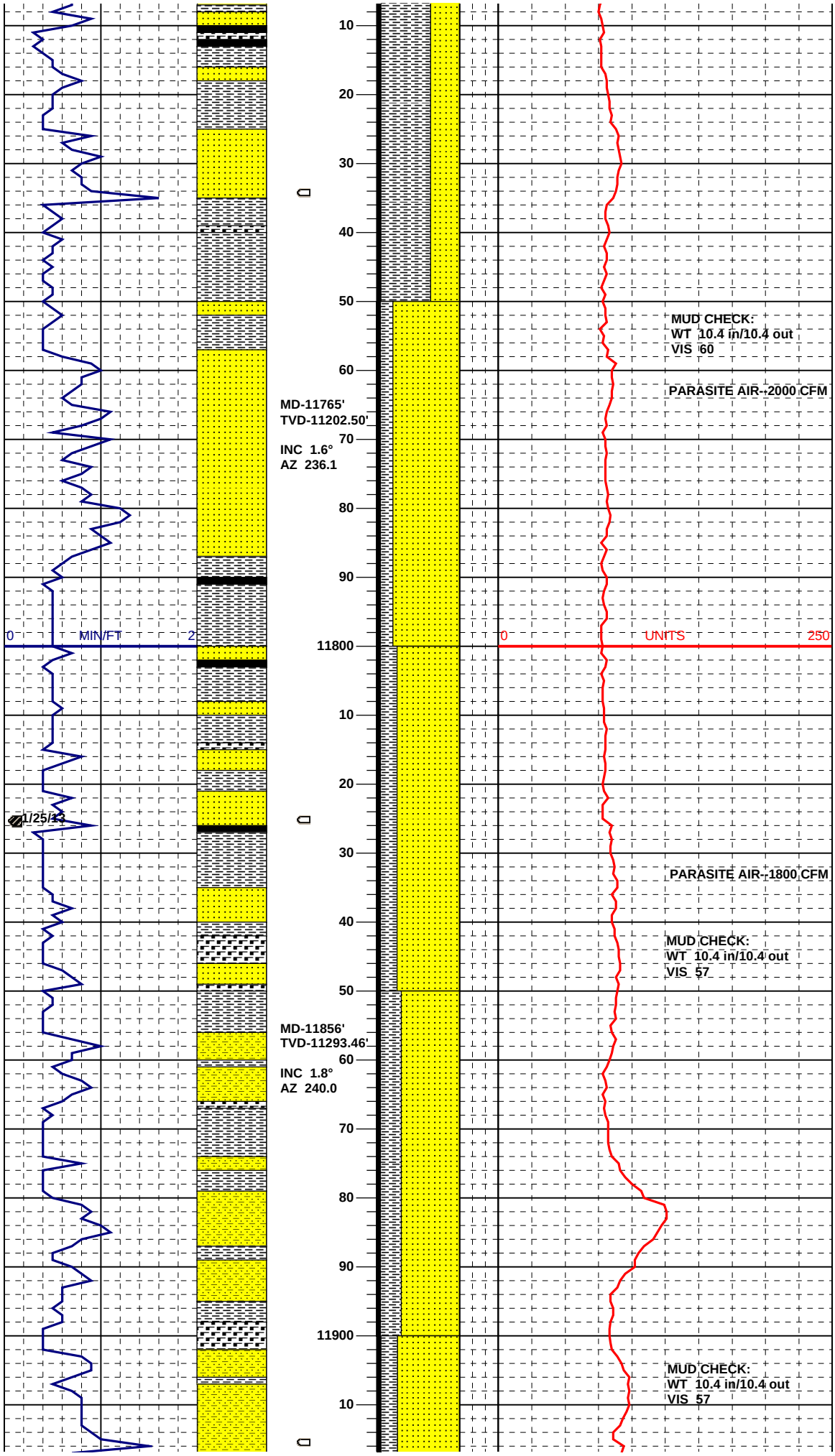
SS: offwhite, lt brn, clr-trnsl, f-vfgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, sl calc, occ cly fl, pred tt, occ SH & carb frag, tr dk mica, rr carb stks, NFSOC

MUD LOSSES HAVE INCREASED AGAIN TO 40-60 BBLS,HR.

SH: m-dk gybrn, m-dk brn, sbblky-sbplty, sl-m firm, sm-sl gt tex, sl-m slty ip, sl carb ip w/ coaly frag, rr dk mica, ncalc

SS: offwhite, lt brn, clr-trnsl, f-vfgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, sl calc, occ cly fl, pred tt, occ SH & carb frag, tr dk mica, rr carb stks, NFSOC

SS: lt brn, offwhite, clr-trnsl, f-vfgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, sl calc, occ cly fl, pred tt, SH & carb frag, tr dk mica, tr carb stks, NFSOC



POSSIBLE CAMEO TOP = 11710' MD

COAL: blk, dull, sbblky-blky, sl-m frm, shy ip grdg ro v carb SH, tr vis bldg gas

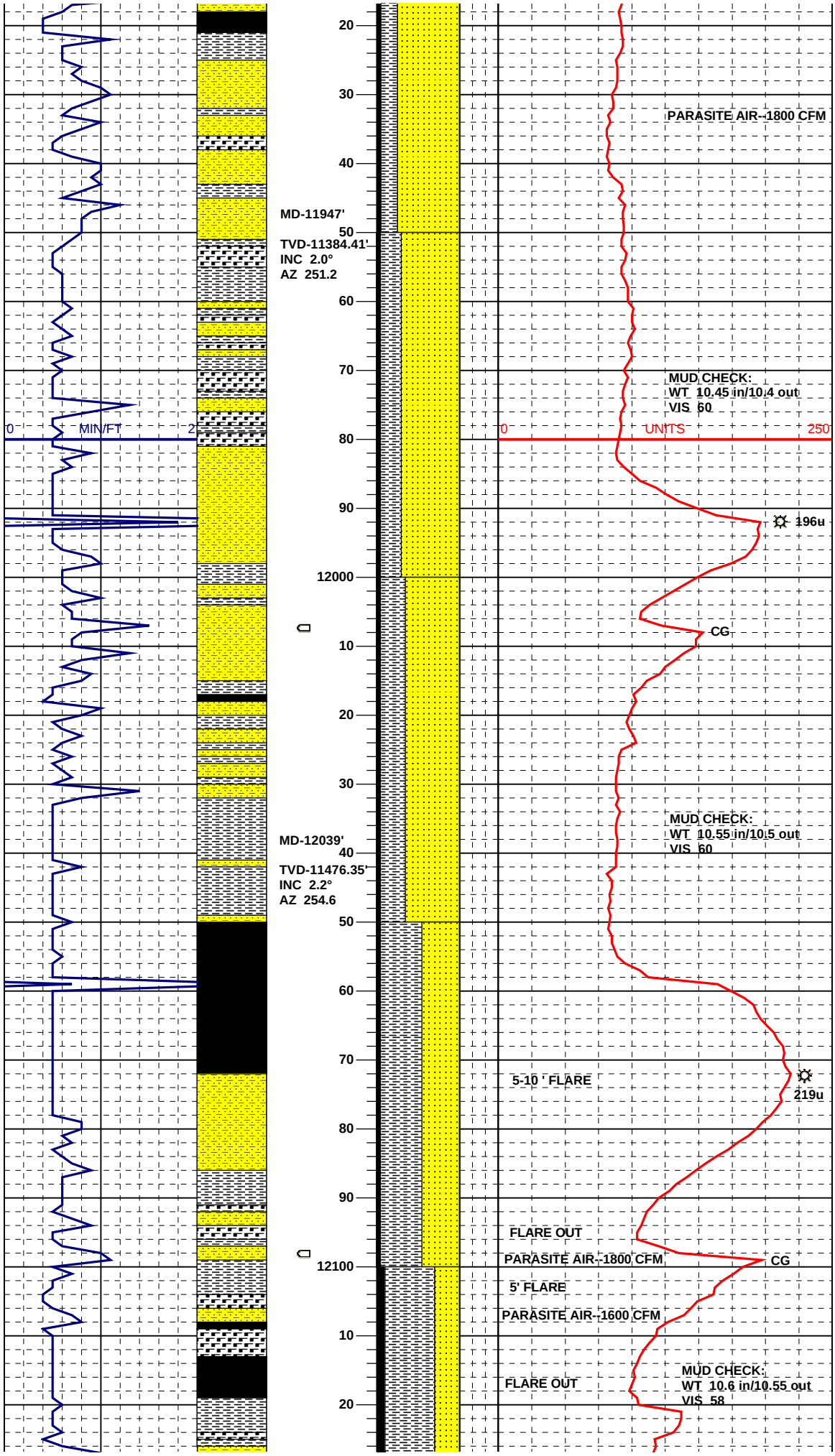
MUD LOSSES HAVE SLOWED TO 10 BBLS/HR OR LESS.

SH: m-dk gybrn, m-dk brn, sbblky-sbplty, sl-m firm, sm-sl gt tex, sl-m slty ip, carb ip w/ coaly frag, tr dism pyr, rr dk mica, ncalc

SS: offwhite, clr-trnsl, lt brn, f-vfgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, sl calc, occ cly fl, pred tt, SH & carb frag, tr dk mica, tr carb stks, NFSOC

SS: offwhite, clr-trnsl, lt brn, f-vfgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, sl calc, occ cly fl, pred tt, SH & carb frag, tr dk mica, tr carb stks, NFSOC

SS: lt-m brn, offwhite, clr-trnsl, f-vfgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, sl calc, occ cly fl, pred tt, SH & carb frag, tr dk mica, tr carb stks, NFSOC



COAL: blk, dull, sbblky-blky, sl-m frm, shy ip, fr vis bldg gas

SS: lt-m brn, offwhite, clr-trnsl, f-vfgr, occ grdg to vsdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, sl calc, occ cly fl, pred tt, SH & carb frag, tr dk mica, tr carb stks, NFSOC

SH: dk-m brn, sbblky-sbplty, sl-m firm, sm-sl gt tex, sl-m slty ip, carb w/ coal frag, rr dk mica, ncalc

SS: aa

SS: offwh-ltbrn, clr-trnsl, f-vfgr, occ grdg to v sdy SLTST, sbang-sbrd, wsrt m-v fri, m-pcmt, pred lse qtz grs, sl calc, tr SH & carb frag, rr dk mica, rr carb stks, NFSOC

MUD LOSSES INCREASED AGAIN TO 20-40 BBL/HR.

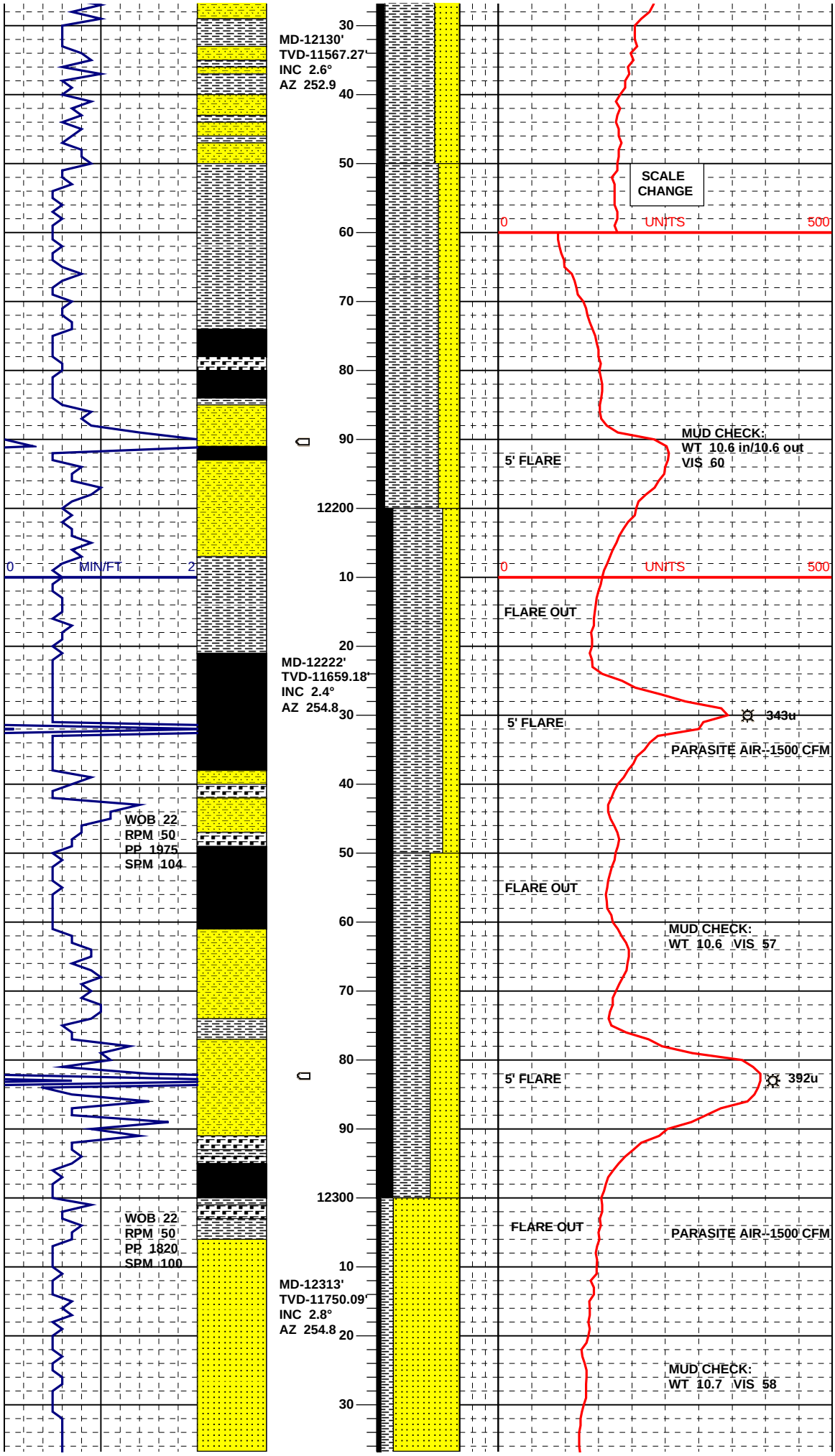
COAL: blk, dull, sbblky-blky, sl-m frm, shy ip grdg to v carb SH, rr pyr stks, tr-fr vis bldg gas

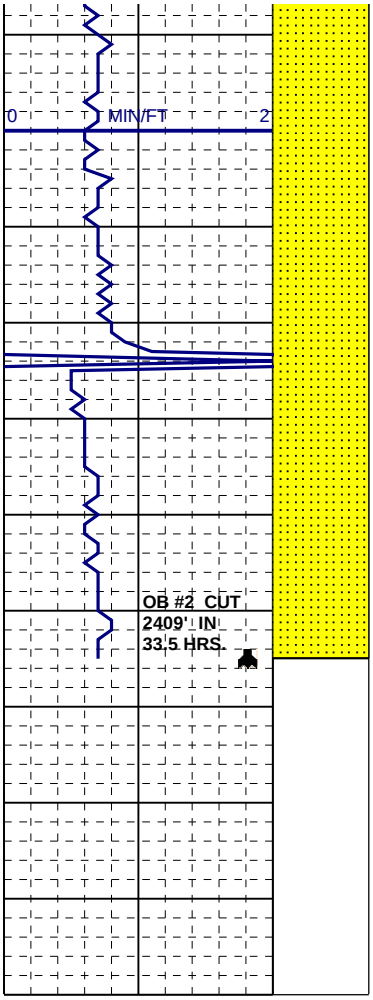
SH: m-dkbrn, sbblky-sbplty, sl-m frm, sm-sl gt tex, sl-m slty ip, carb w/ coal frag, rr dk mica, ncalc

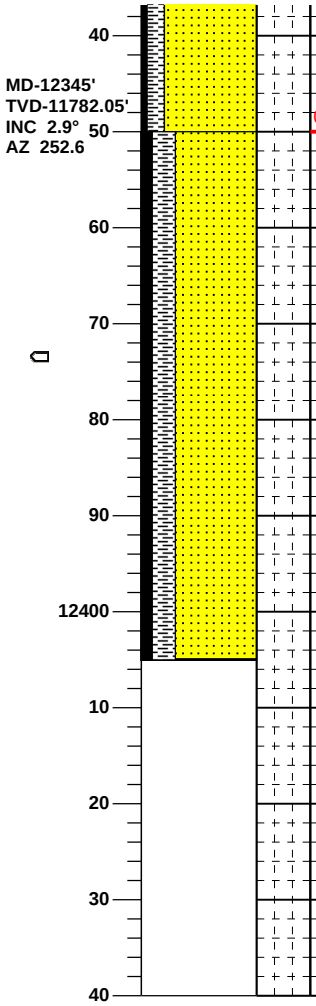
COAL: blk, dull-bri, sbblky-blky, sl-m frm, shy ip grdg to v carb SH, fr-g vis bldg gas

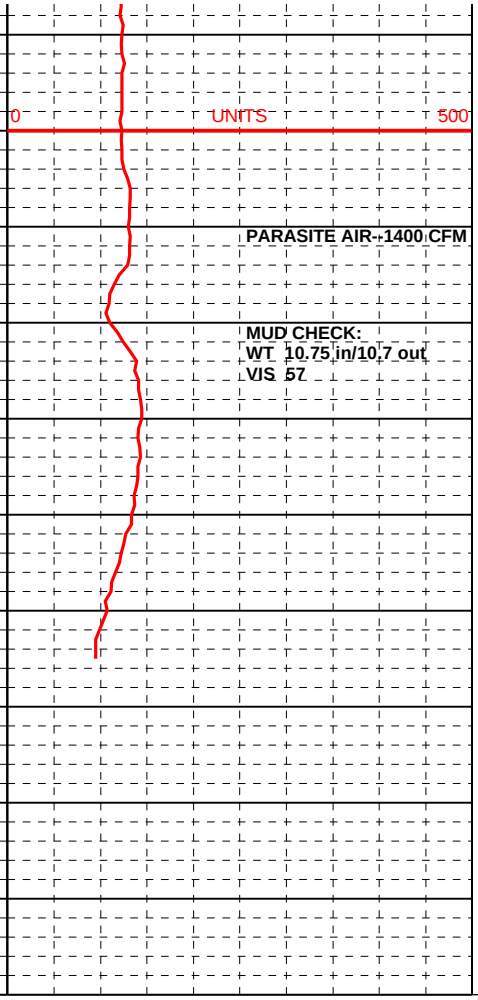
SS: lt-mbrn, offwh, clr-trnsl, f-vfgr, occ grdg to v sdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, sl calc, occ cly fl, pred tt, occ SH & carb frag, tr dk mica, tr carb stks, NFSOC

COAL: blk, dull-bri, sbblky-blky, sl-m frm, shy ip grdg to v carb SH, tr-fr vis bldg gas


MD-12130'
TVD-11567.27'
INC 2.6°
AZ 252.9
SCALE CHANGE
0 UNITS 500
SS: lt-mbrn, offwh, clr-trnsl, f-vfgr, occ grdg to v sdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, sl calc, occ cly fl, pred tt, occ SH & carb frag, tr dk mica, tr carb stks, NFSOC
SH: m-dkbrn, occ brnblk, sbblky-sbplty, sl-m frm, sm-sl gt tex, sl-m slty ip, carb w/ coal frag, rr dk mica, ncalc
COAL: blk, dull-bri, sbblky-blky, sl-m frm, shy ip grdg to v carb SH, tr-fr vis bldg gas
MUD CHECK:
WT 10.6 in/10.6 out
VIS 60
5' FLARE
SS: lt-mbrn, offwh, clr-trnsl, f-vfgr, occ grdg to v sdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, tr-com lse qtz grs, sl calc, occ cly fl, pred tt, occ SH & carb frag, tr dk mica, tr carb stks, NFSOC
0 MIN/FT 2
0 UNITS 500
FLARE OUT
SH: m-dkbrn, occ brnblk, sbblky-sbplty, sl-m frm, sm-sl gt tex, sl-m slty ip, carb w/ coal frag, rr dk mica, ncalc
MD-12222'
TVD-11659.18'
INC 2.4°
AZ 254.8
5' FLARE
343u
PARASITE AIR--1500 CFM
COAL: blk, dull-bri, sbblky-blky, sl-m frm, shy ip grdg to v carb SH, fr-g vis bldg gas
WOB 22
RPM 50
PP 1975
SPM 104
FLARE OUT
COAL: blk, dull-bri, sbblky-blky, sl-m frm, shy ip grdg to v carb SH, tr-fr vis bldg gas
MUD CHECK:
WT 10.6 VIS 57
SH: m-dkbrn, occ brnblk, sbblky-sbplty, sl-m frm, sm-sl gt tex, sl-m slty ip, carb w/ coal frag, rr dk mica, ncalc
5' FLARE
392u
SS: lt-mbrn, offwh, clr-trnsl, f-vfgr, occ grdg to v sdy SLTST, sbang-sbrd, pred wsrt, occ msrt, sl-m fri, mcmt, abnt lse qtz grs, sl calc, occ cly fl, pred tt when in consol frag, occ SH & carb frag, tr dk mica, tr carb stks, NFSOC
WOB 22
RPM 50
PP 1820
SPM 100
FLARE OUT
PARASITE AIR--1500 CFM
POSSIBLE ROLLINS TOP = 12306' MD
MD-12313'
TVD-11750.09'
INC 2.8°
AZ 254.8
MUD CHECK:
WT 10.7 VIS 58
SS: clr-trnsl-wh, vf-fgr, sbang-sbrd, wsrt, m fri-mhd, m-wcmt, abnt lse qtz grs, n-sl calc, tt -tr vis por in consol frag, tr SH frag & tr dk mica, NFSOC







SS: clr-trnsl-wh, vf-fgr, sbang-sbrd, wsrt, m fri-mhd, m-wcmt, abnt lse qtz grs, n-sl calc, tt -tr vis por in consol frag, tr SH frag & tr dk mica, NFSOC

NOTE: ALL WILLIAMS FORK, CAMEO, & ROLLINS SAMPLES HAVE CONTAINED WASATCH CAVINGS IN VARYING AMTS.

DRILLER'S TD = 12405' MD AT 0830 HRS. ON 1/25/13. CIRCULATE BOTTOMS UP. MAKE A WIPER TRIP TO 6000' THEN TOOH TO RUN 4.5" CASING.

COLUMBINE GEOLOGISTS RELEASED WHEN CASING WAS LANDED AT 0030 HRS. ON 1/27/13.