

Colin Higgins & Associates



Scale 1:500 Metric

Well Name: PRITCHARD 1
 Location: OTWAY BASIN (ONSHORE) SW VICTORIA
 Licence Number: PEP 151 Region: VIC
 Spud Date: 27 MAR 2006 Drilling Completed: 11 APR 2006
 Surface Coordinates: LAT 38 deg 0' 26.25" S
 LONG 141 deg 12' 35.40" E

Bottom Hole

Coordinates:
 Ground Elevation (m): 38 m K.B. Elevation (m): 42.3 m
 Logged Interval (m): 40 m To: 2543 m Total Depth (m): 2543 m
 Formation: TD in UPPER FLAXMAN FORMATION
 Type of Drilling Fluid: KCL Polymer

Printed by MUD.LOG from WellSight Systems Inc. 1-800-447-1534 www.wellsight.com

OPERATOR

Company: ESSENTIAL PETROLEUM RESOURCES LTD
 Address: MELBOURNE, VIC.
www.essentialpetroleum.com.au

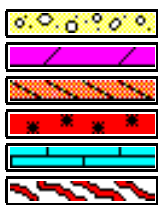
GEOLOGIST

Name: GORDON WAKELIN-KING
 Company: WAKELIN ASSOCIATES PL
 Address: gwakelin@eprl.com.au

ROCK TYPES



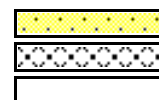
Anhy
 Bent
 Brec
 Cht
 Clyst
 Coal



Congl
 Dol
 Gyp
 Igne
 Lmst
 Meta



Mrlst
 Salt
 Shale
 Shcol
 Shgy
 Slst



Ss
 Till
 Blank

ACCESSORIES

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brefracg
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol

- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal

- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

STRINGER

- Anhy
- Arg
- Bent
- Coal

- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg

TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

OTHER SYMBOLS

POROSITY TYPE

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint

- Vuggy

SORTING

- Well
- Moderate
- Poor

ROUNDING

- Rounded
- Subrnd

- Subang
- Angular

OIL SHOWS

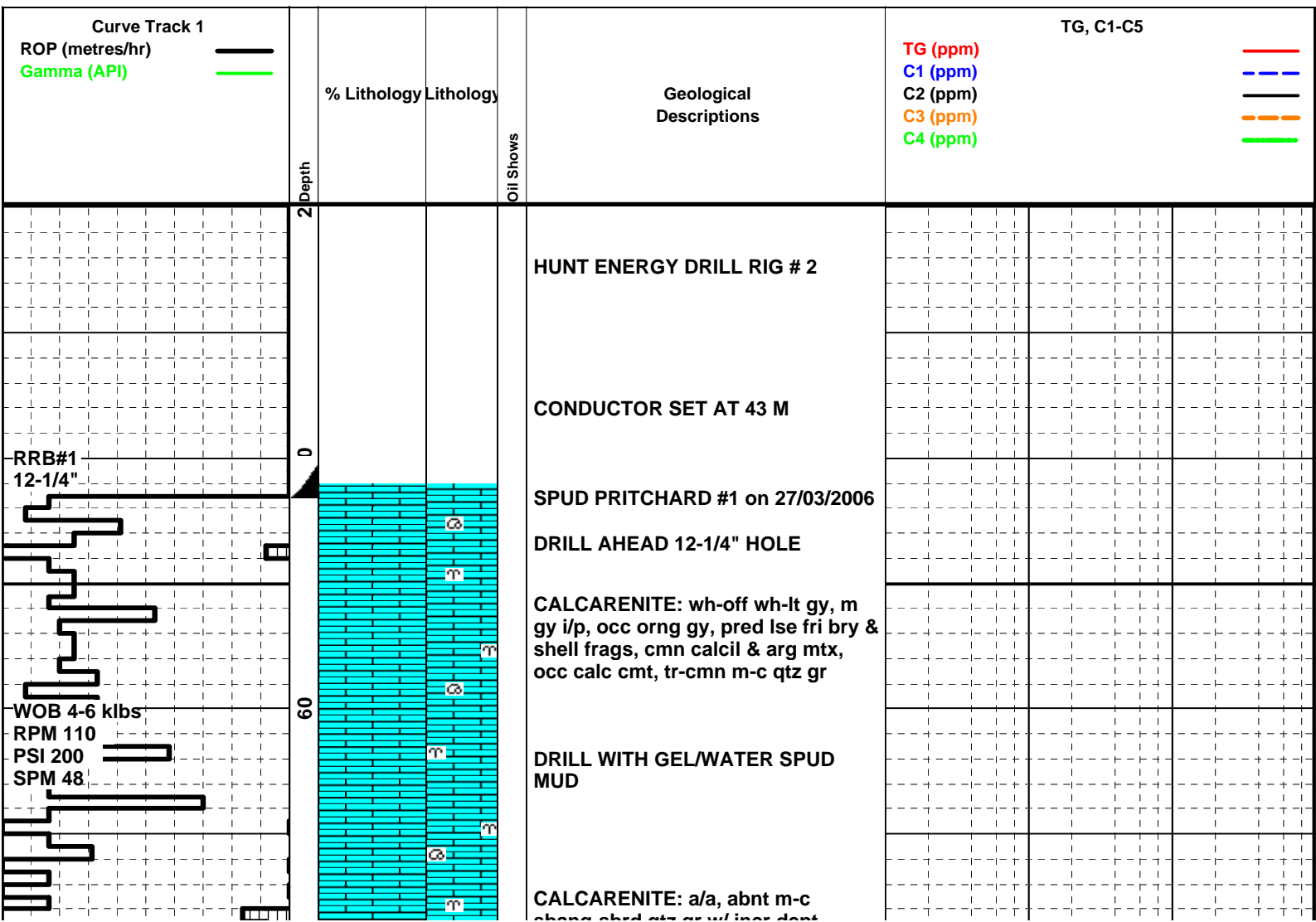
- Even
- Spotted
- Ques
- Dead

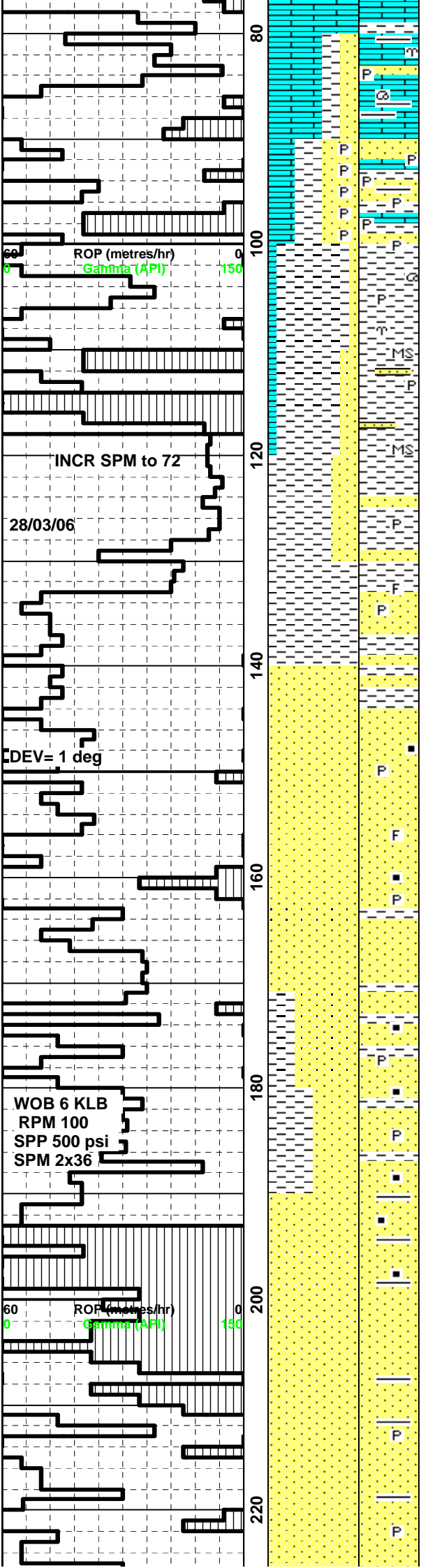
INTERVALS

- None
- Core
- Dst

EVENTS

- Rft
- Sidewall
- Csg13





sbang-sbrd qtz gr w/ incr dept

CLAYSTONE: m gy-m brn gy, cmn fossil frags, sft, calc, intbd w/ lst, cmn qtz gr

SANDSTONE: lt gy-m gy-lt brn, occ orng, lse i/p, f-c sbang- rd, cmn frstd, cmn calc cmt, arg mtx, cmn pyr, cmn fe stng, tr coal liths

PYRITE: abnt-20%, micxln & cmt

CLAYSTONE: m dk gy-v dk brn, occ m brn, v sft, stky, v calc, cmn pyr, occ vf-c sbang-sbrd qtz gr, cmn bry/gast & shell frags

CLAYSTONE: m dk gy-v dk brn, occ m brn, v sft, stky, v calc, cmn pyr, occ vf-c sbang-sbrd qtz gr, cmn bry/gast & shell frags

CLAYSTONE: dk gy brn-gy brn, sft-oc v hd, com pyr, tr foss, tr lse qtz, v calc i/p

SANDSTONE: clr-v lt brn-v lt gy, trnsl-rr opq, f-crs dom f-m, mod srtd, ang-sunrnd dom subang, lse w/tr arg mtx, com-abnt lse wh mica flakes, tr foss frags, fr inf por

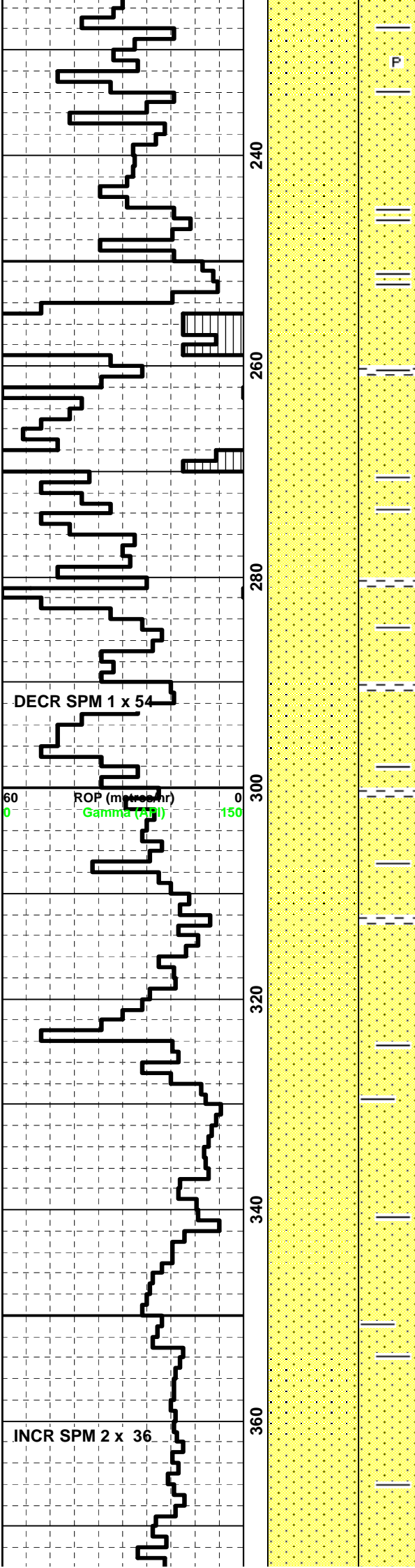
SANDSTONE: clr-v lt gy-v pl brn, f-m, w srtd, ang-rnd dom subrnd, lse, abnt lse crs mica flakes, tr-com carb silt, tr blk coal detritus, tr foss frags, tr lse pyr, gd inf por

CLAYSTONE: brn gy- dk brn, v sft-occ frm, amorph-subblky, v silty, calc, mod-v carb, tr coaly lam & frags, tr pyr, tr micas,

SANDSTONE: clr-v lt gy -v pl yel-occ wh, transl-rr opq, f-gran dom m- v crs, subang-w rnd dom rnd, w srtd, gen lse-unconsol, rr pyr, tr mica, gd-v gd inf por

SANDSTONE: clr-v lt gy-occ wh, m-gran dom crs-v crs, subang-rnd, mod-w srtd, gen lse grs, tr sil cmt, tr mica, gd-v gd inf por

| | | | | |
|----|-----|----------|------|-----------------|
| | | | | |
| 10 | 100 | TG (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C1 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C2 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C3 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C4 (ppm) | 1000 | 10 ⁴ |
| | | | | |
| | | NIL GAS | | |
| | | | | |
| 10 | 100 | TG (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C1 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C2 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C3 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C4 (ppm) | 1000 | 10 ⁴ |



SANDSTONE: clr-v lt gy-occ wh, transl-occ opq, vf-crs dom f-m, subang-subrnd, mod srtd, com-abnt lse mica, tr wk sil cmt, gen lse-unconsol, tr blk coal mtl, tr brn arg mtl, fr inf por

NIL GAS

SANDSTONE: gen a/a f-m qtz, tr lse mica, tr arg mtl, gd inf por

SANDSTONE: clr-v lt gy-occ wh, transl-occ opq, vf-crs dom f-m, subang-subrnd, mod srtd, com-abnt lse mica, tr wk sil cmt, gen lse-unconsol, tr blk coal mtl, tr brn arg mtl, fr inf por

SANDSTONE: clr-v lt gy-occ wh, transl-occ opq, vf-crs dom f-m, subang-subrnd, mod srtd, com-abnt lse mica, tr wk sil cmt, gen lse-unconsol, tr blk coal mtl, tr brn arg mtl, fr inf por

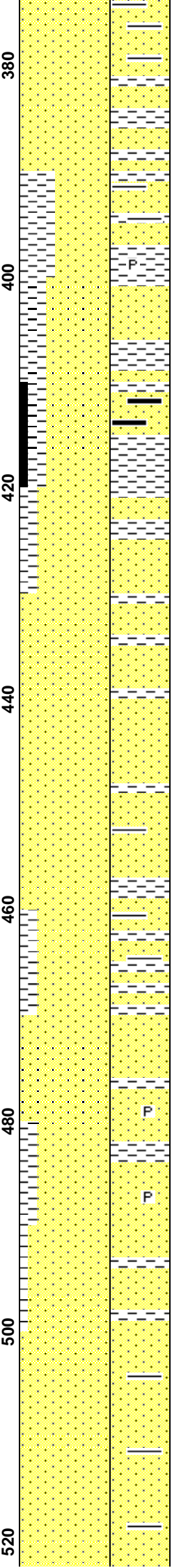
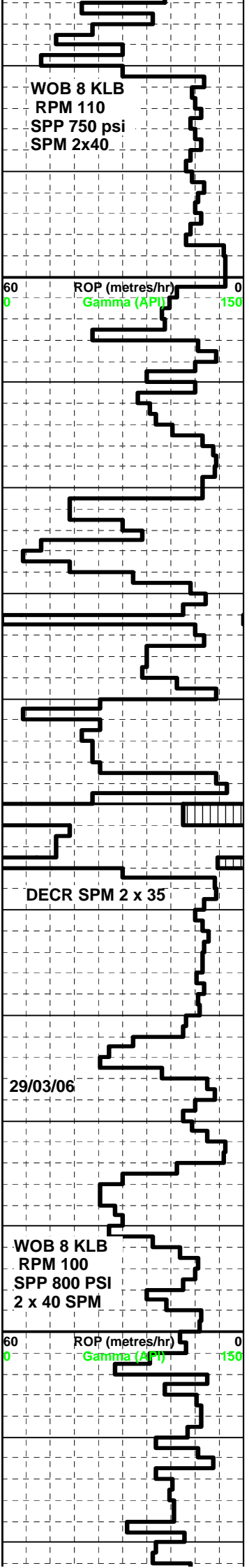
SANDSTONE: gen a/a f-m qtz, tr lse mica, tr arg mtl, gd inf por

| | | | | |
|----|-----|----------|------|-----------------|
| 10 | 100 | TG (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C1 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C2 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C3 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C4 (ppm) | 1000 | 10 ⁴ |

SANDSTONE: clr-v lt gy-occ wh, transl-occ opq, f-v crs dom m-crs, subang-rnd, mod srtd, tr lse mica, tr wk sil cmt, gen lse-unconsol, tr blk coal mtl, tr brn arg mtl, gd-v gd inf por

SANDSTONE: gen a/a pred m qtz, mod w srtd, tr lse mica, tr arg mtl, gd inf por

SANDSTONE: clr-v lt gy-occ wh, transl-occ opq, f-v crs, dom m-f, bcmg pred m w/incr depth, subang-rnd, mod srtd, tr lse mica, tr wk sil cmt, gen lse-unconsol, tr blk coal mtl, tr brn arg mtl, ad-v ad in



por

CLAYSTONE: m brn gy- occ m gy, v sft-occ frm, amorph-subblky, stky, silty i/p, tr qtz gr, calc, occ carb, tr coaly lam & frags, tr pyr, tr micas, Note: sample washing out

COAL: blk-gy blk, frm-mod hd, sbfis-blky, slty i/p, arg i/p

MW = 9.6 PPG, FV = 41

SANDSTONE: clr-v lt gy-occ wh, transl-occ opq, f-v crs, dom m-f, bcmg pred m w/incr depth, subang-rnd, mod srtd, rr lse mica, tr wk sil cmt, gen lse-unconsol, tr blk coal mtl, tr brn arg mtl, gd-v gd inf por

CLAYSTONE: m brn gy, v sft-occ frm, amorph-subblky, stky, disp, silty i/p, tr qtz gr, rr pyr, rr micas, Note: sample washing out

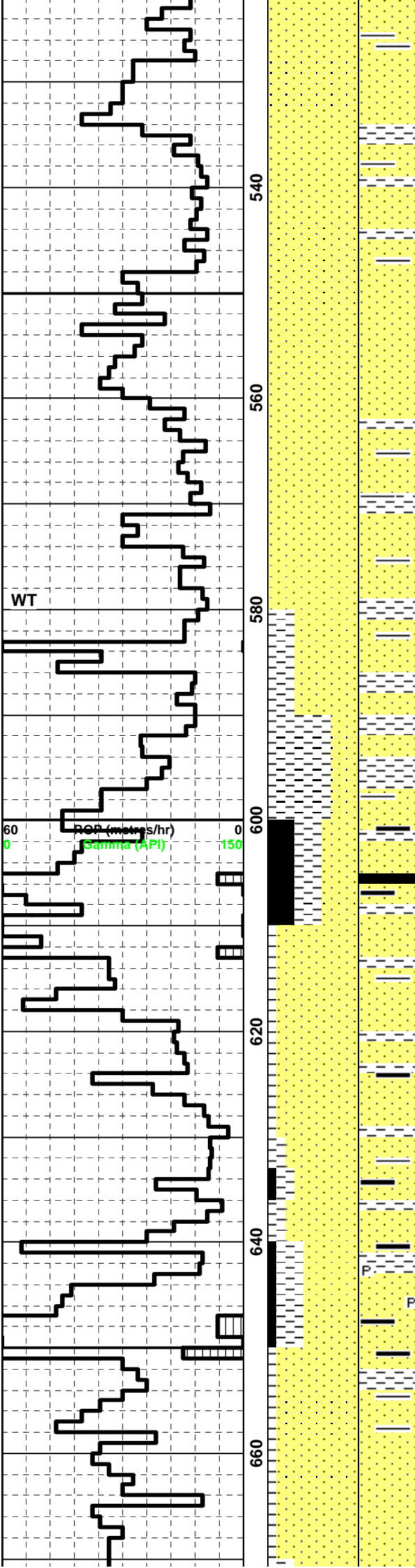
SANDSTONE: gen a/a, bcmg pred m-crs

SANDSTONE: clr-v lt gy-occ wh, f-gran dom m-crs, v pr srtd, tr brn arg mtx washing out, tr sil cmt, gen lse, com lse mica, tr carb mtl, tr lse pyr, pr-fr inf por

SANDSTONE: clr-clss-occ v pl yel wh, f-crs dom m, v w strd, lse w/tr arg mtx, ang-subrnd, tr lse mica, gd-v gd inf por

SANDSTONE: gen a/a bcmg v w srtd, clean and fine w/depth

| Depth (m) | TG (ppm) | C1 (ppm) | C2 (ppm) | C3 (ppm) | C4 (ppm) |
|-----------|----------|----------|----------|----------|----------|
| 380 | 100 | 100 | 100 | 100 | 100 |
| 400 | 100 | 100 | 100 | 100 | 100 |
| 420 | 100 | 100 | 100 | 100 | 100 |
| 440 | 100 | 100 | 100 | 100 | 100 |
| 460 | 100 | 100 | 100 | 100 | 100 |
| 480 | 100 | 100 | 100 | 100 | 100 |
| 500 | 100 | 100 | 100 | 100 | 100 |
| 520 | 100 | 100 | 100 | 100 | 100 |



SANDSTONE: class-clr-occ v pl yel, f-m dom f, subang-w rnd dom subrnd, v w srted, clean w/rr tr arg mtx, v gd inf por

SANDSTONE: class-clr-occ v pl brn-opq wh gran, f-v crs dom f-m, ang-w rnd dom subrnd, mod-w srted, clean w/rr arg mtx, tr sil cmt, tr lith & coal frags, fr-gd inf por

CLAYSTONE: m brn gy- occ m gy, v sft-occ frm, amorph-subblky, stky, silty i/p, tr qtz gr, calc, occ carb, rr pyr, Note: sample washing out

COAL: blk-gy blk, frm-mod hd, earthy where arg, sbfis-blky, slty i/p, plty - subconch fract, brit

SANDSTONE: class-clr-occ v pl brn-opq wh gran, f-v crs dom f-m, ang-w rnd dom subrnd, mod-w srted, clean w/rr arg mtx, tr sil cmt, tr lith & coal frags, fr-gd inf por

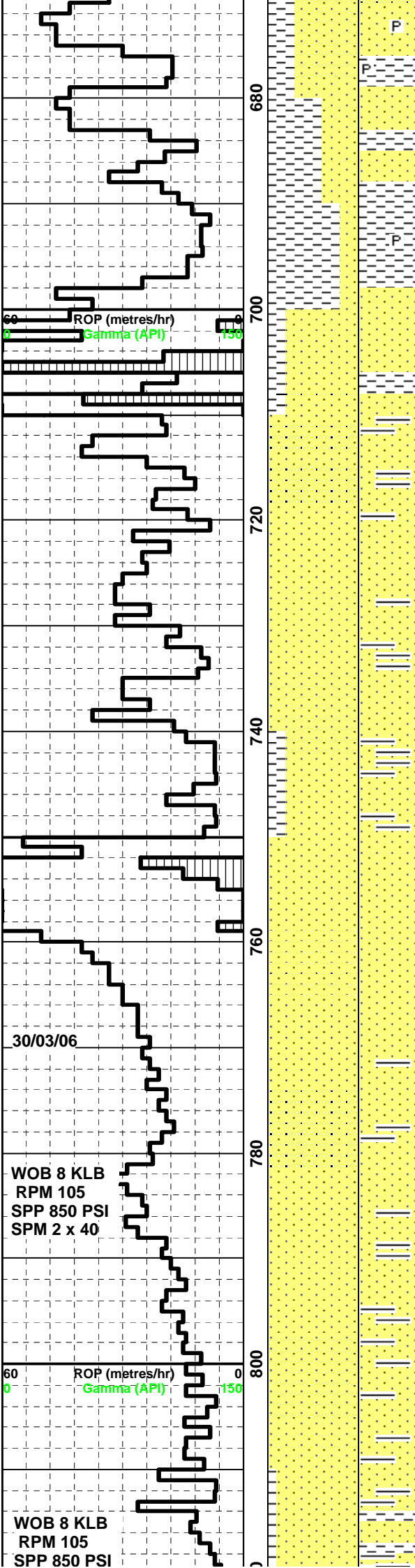
COAL: blk-gy blk, frm-mod hd, earthy where arg, sbfis-blky, slty i/p, plty - subconch fract, brit

CLAYSTONE: m brn gy- occ m gy, v sft-occ frm, amorph-subblky, stky, silty i/p, tr qtz gr, calc, occ carb, tr pyr, Note: sample washing out

SANDSTONE: clr-v lt gy-occ wh & pl brn, f-c, dom f-m, mod srted, bcmg c & pr srted w/ incr depth, tr brn arg mtx washing out, tr sil cmt, gen lse, com lse mica, tr carb mtl, tr lse pyr, gd vis por

Wiper Trip Gas = 0.0 units

| | | | | |
|----|-----|----------|------|-----------------|
| 10 | 100 | TG (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C1 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C2 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C3 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C4 (ppm) | 1000 | 10 ⁴ |



CLAYSTONE: m brn gy- occ m gy, v sft-occ frm, amorph-subblky, stky, silty i/p, tr qtz gr, calc, occ carb, tr pyr, Note: sample washing out

SANDSTONE: gen a/a, pred m-c, bcmg pred m w/incr depth, mod wl srted

SANDSTONE: clr-v lt gy-occ wh & pl brn, f-c, dom f-m, mod wl srted, tr arg mtx washing out, tr sil cmt, gen lse, uncon, tr lse mica, rr lse pyr, gd vis por

SANDSTONE: clr-v lt gy-v pl yel brn, m-crs, subang-rnd, v w srted, tr sil cmt, gen lse, rr lith frags, v gd inf por

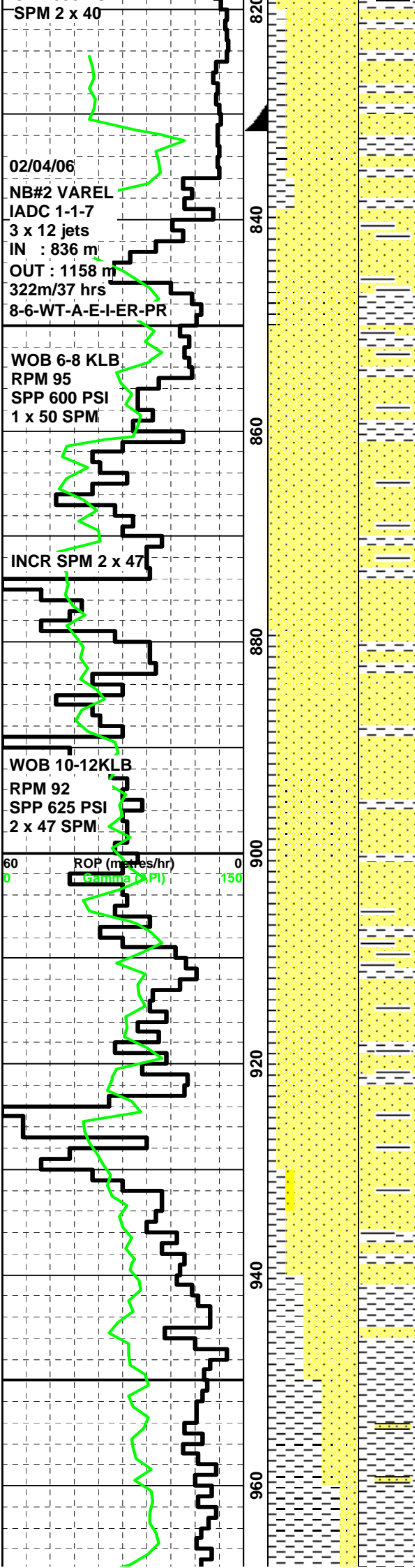
SANDSTONE: class-clr-v lt gy-pl yel brn, f-crs dom m, subang-w rnd dom subrnd, w srted, rr tr arg mtl, gen clean & lse, tr sil cmt, tr liths, gd inf por

SANDSTONE: clr-v lt gy-pl yel brn-occ opq wh, f-crs dom m, subang-rnd dom subrnd, w srted, clean w/tr arg mtx, tr sil cmt, tr liths, tr lse pyr, gd inf por

MW = 9.6 PPG, FV = 47

SANDSTONE: clr-v lt gy-pl yel brn-occ opq wh, f-crs dom m, subang-rnd dom subrnd, w srted, clean w/tr arg mtx, tr sil cmt, tr liths, tr lse pyr, gd inf por

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|----|-----|----------|------|-----------------|
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| 10 | 100 | TG (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C1 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C2 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C3 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C4 (ppm) | 1000 | 10 ⁴ |
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| | | | | |
| 10 | 100 | TG (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C1 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C2 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C3 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C4 (ppm) | 1000 | 10 ⁴ |



DRILLED 12-1/4" HOLE TO 836 m
SET 9-5/8" CASING AT 831 m
DISPLACE MUD TO KCL POLYMER
DRILL AHEAD 8-1/2" HOLE

POOR QUALITY SAMPLES

SANDSTONE:clr=v lt gy-occ pl yel
brn, f-crs dom f-m, subang-sub
rnd, mod srtd, tr arg mtx washing
out, tr sil cmt, tr liths, fr inf por

SANDSTONE:clr=v lt gy-occ pl yel
brn, f-crs dom f-m, subang-sub
rnd, mod srtd, tr arg mtx washing
out, tr sil cmt, tr liths, fr-gd inf por

SANDSTONE: clr-v lt gy-v pl brn,
f-crs incr crs i/p, subang-rnd, mod-w
srtd, incr tr pl brn arg mtx washing
out, incr lse mica flakes, tr sil cmt
gen lse, tr liths, fr inf por

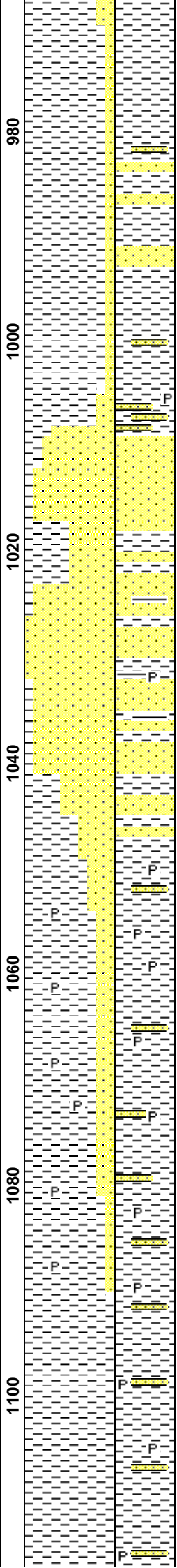
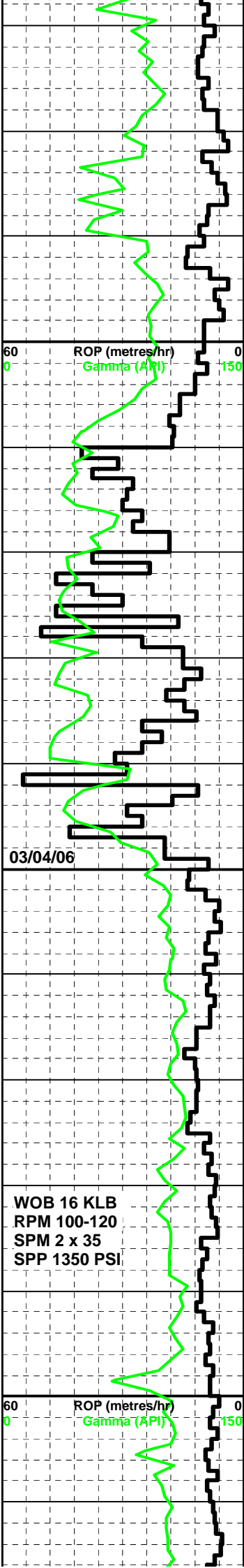
SANDSTONE: clr-v lt gy-v pl brn-occ
opq wh, f-crs dom m, subang-rnd,
mod srtd, incr pl brn arg mtx
washing out, tr lse mica, tr liths, gen
lse, fr inf por

SANDSTONE: clr-v lt gy-v pl brn-occ
opq wh, f-crs dom m, subang-rnd,
mod srtd, incr pl brn arg mtx
washing out, tr lse mica, tr liths, gen
lse, fr inf por

CLAYSTONE: m brn gy- occ m gy, v
sft-occ frm, amorph-subblky, stky,
disp. siltv i/o arda to ara sltst. tr at

CARBIDE LAG = HOLE 25% OVERGAUGE

| | | | | |
|----|-----|----------|------|-----------------|
| 10 | 100 | TG (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C1 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C2 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C3 (ppm) | 1000 | 10 ⁴ |
| 10 | 100 | C4 (ppm) | 1000 | 10 ⁴ |



CLAYSTONE: m brn gy- occ m gy, v sft-occ frm, amorph-subblky, stky, disp, silty i/p grdg to arg sltst, tr qtz gr, sl calc, tr carb, rr pyr, Note: sample washing out

CLAYSTONE: gen a/a, grdg to sltst w/incr depth, tr pyr

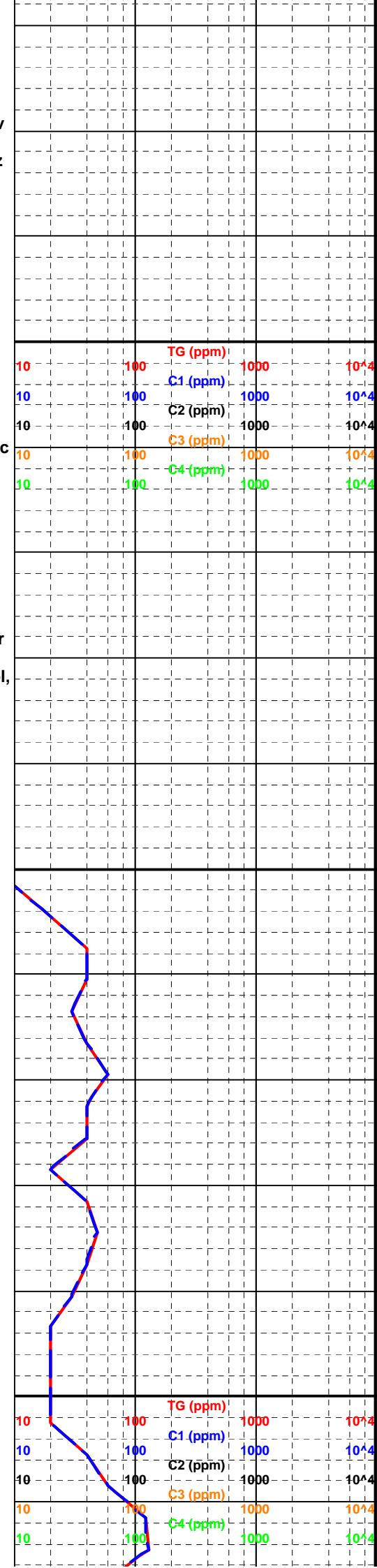
SANDSTONE: clr-v lt gy-v pl brn-occ opq wh, f-crs dom m-c, sbang-sbrnd, mod srted, pl brn arg mtx - washing out, tr lse mica, tr liths, gen lse, fr inf por, intebdd w/ Claystone, a/a

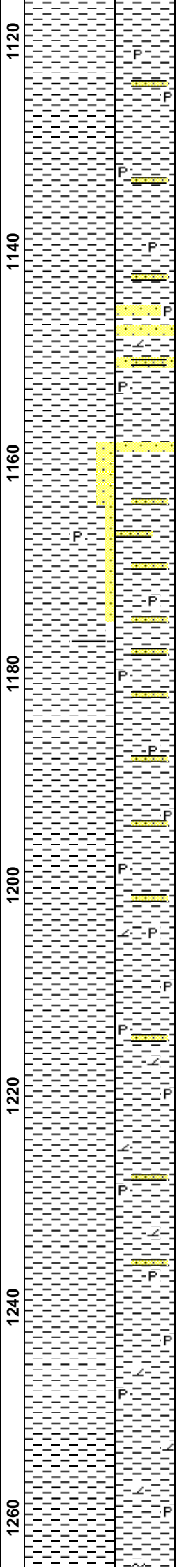
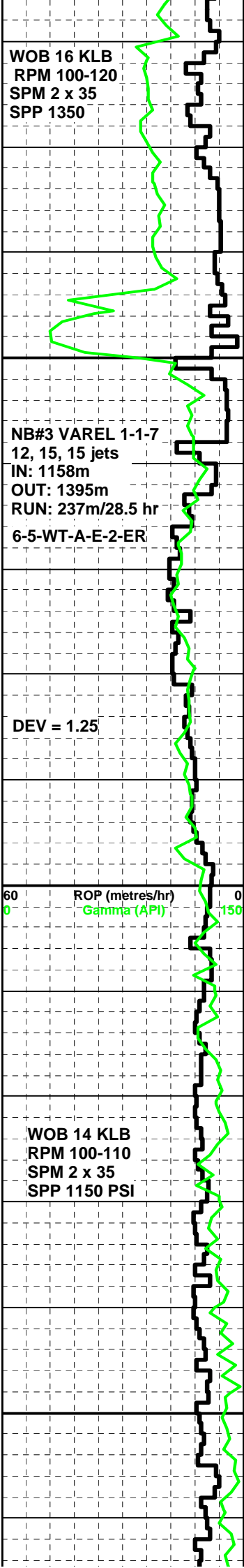
SANDSTONE: gen a/a, fining w/ incr depth bcmg pred m, com sbrnd, mod wl srted, tr pyr, tr coal det, tr dol, gd inf por

CLAYSTONE: lt gy brn-med brn gy, silty-aren i/p, disp-occ frm, micmic, com lse pyr nods, tr carb mtl, com lse crs qtz grs, non-calc

CLAYSTONE: med brn gy-gy brn, sft-frm, v silty i/p, amorph-blky, tr carb mtl & lam, com lse pyr nods,

CLAYSTONE: med gry brn-brn gy-occ brn, silty, disp-frm, amorph-subblky, incr carb mtl, lam & flecks, micmica,com m sand inclus, calc i/p





CLAYSTONE: med brn gy-med brn, gen a/a incr disp in mud

CLAYSTONE: med brn gy-med brn, gen a/a incr disp in mud: intbd w/ minor ssst stringers, tr pyr, mic mica, tr carb mat.

POOH @ 1158.6m

CLAYSTONE: med brn-brn gy-med gy, sft frm, dom disp, incr gy blk frm-subfiss, mnr lt gy v sft, f-m sand inclus, mica, tr pyr nods, tr carb mat/detritus, tr liths

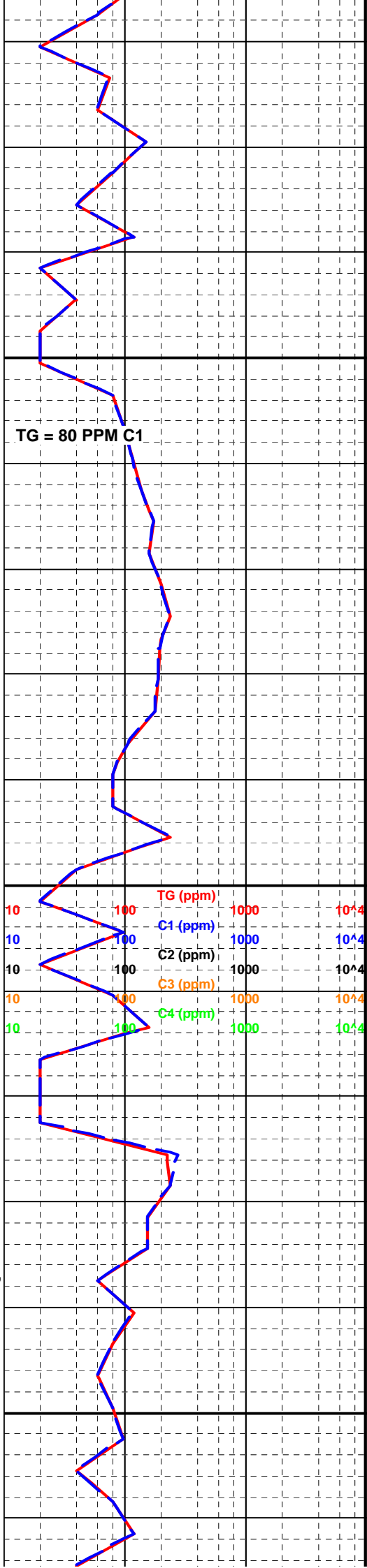
CLAYSTONE: med brn-brn gy-med gy, sft frm, dom disp, incr gy blk frm-subfiss and dol, mnr lt gy v sft, f-m sand inclus, mica, tr pyr nods, tr carb mat/detritus, tr liths, rr foss frag

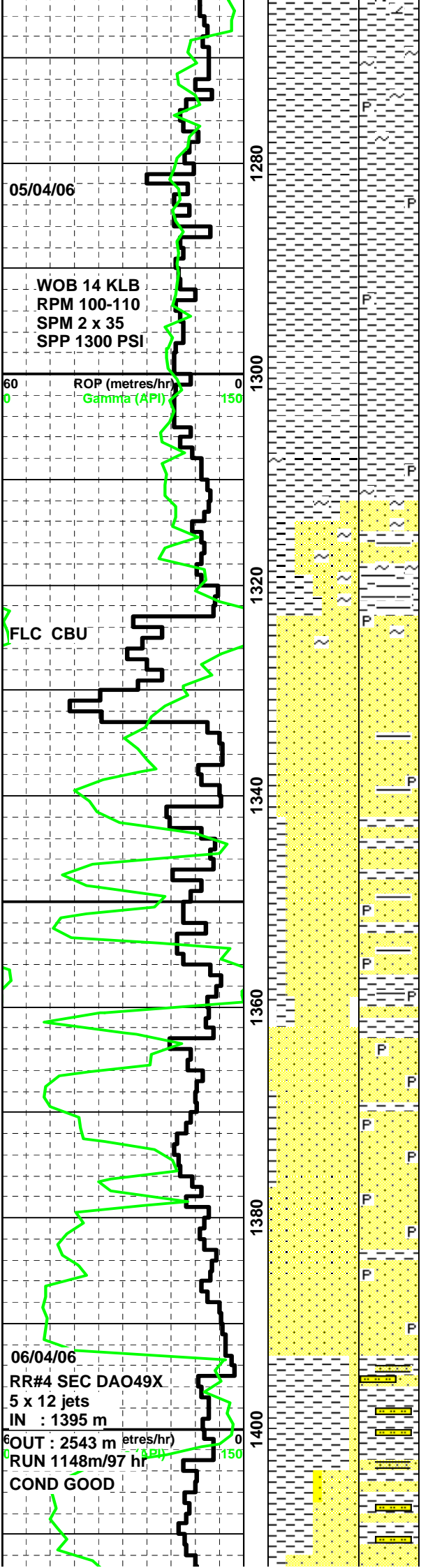
DOLOMITE, tr-3%, lt brn gy, micxln, v hd, v dull orng min fluor

CLAYSTONE: med brn gy-brn gy-med gy, sft frm, disp i/p, incr m gy w/ incr depth, frm-subfiss, calc, mnr lt gy v sft, micmica, rr pyr nods, tr carb mat/det, tr liths, rr foss frag

MW = 9.2 PPG, FV = 43

CLAYSTONE, gen a/a grd to Sltly Clyst, bcmg pred m brn gy-dk gy, rr crin foss, tr-5% dol a/a





CLAYSTONE , m gy brn- v dk gy, frm, sbfiss, rr-tr glau, sl carb i/p, calc, occ v thn lam of qtz siltst, tr carb f-m ssd, tr dol a/a, grdg i/p to carb shale & silty Claystone

CLAYSTONE: gy brn-med dkgy-dk gy, frm-hd, blk-subfiss, sli calc, tr qtz silt & sand incl, micmic,

CLAYSTONE: gy-med dk gy-dk gy frm-hd, blk-fiss, com silt lam, tr carb mtl/lam, incr tr glauc grs, tr qtz silt/sd, grdg i/p silty Clayst

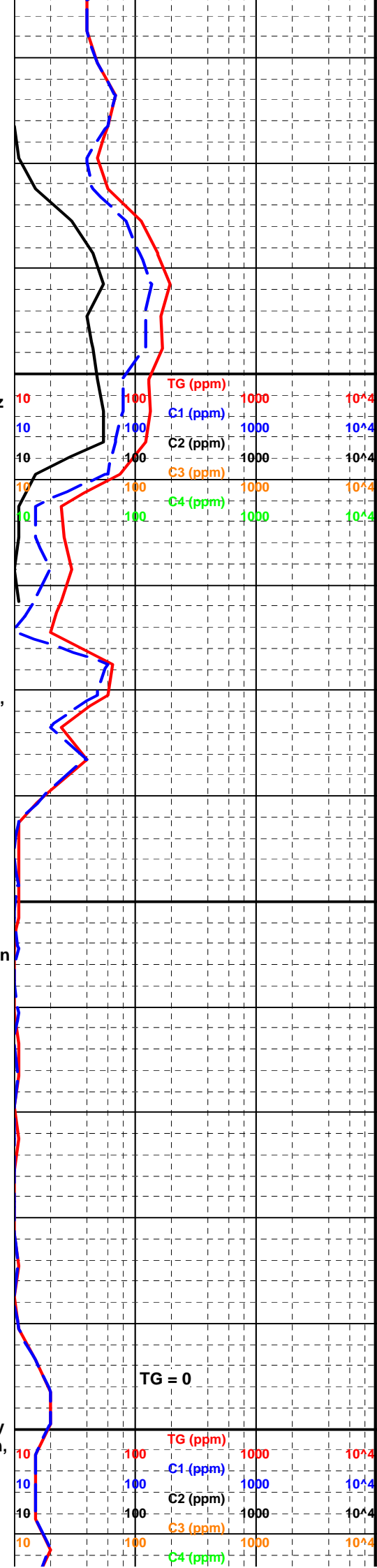
SANDSTONE: clr-v lt gy-pl grn-occ opq wh, transl-transp, f-crs dom med,subang-subrnd, mod-w srted, lse w/tr sil cmt, tr gy brn arg mtx, tr lse pyr, tr glauc grs, gd-v gd inf por, no oil show

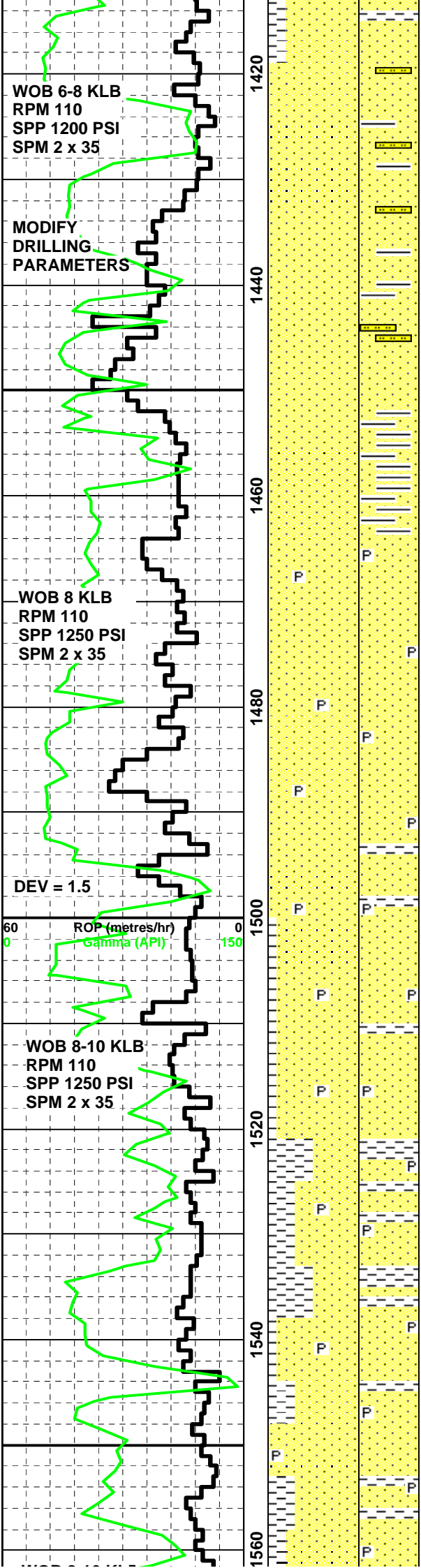
SANDSTONE: clr-v lt gy-pl grn-occ opq wh, transl-transp, f-crs dom med,subang-subrnd, mod-w srted, lse w/tr sil cmt, tr gy brn arg mtx, minor bwn dispersive cly and gy-grn firm sfiss claystone tr lse pyr, tr glauc grs, gd-v gd inf por, no oil show

POOH 1395 m

CLAYSTONE: gy-med brn gy, v silty grdg arg Siltst, com silt-vf qtz lamin, sft-frm, pyr, tr glauc, tr micas

SANDSTONE: clr-v lt av-wh. transl-





transp-occ opq wh, f-v crs dom m-crs, ang-subrnd, lse w/tr sil cmt, tr arg mtl, tr lse pyr, tr glauc gd inf por, no show

SANDSTONE: gen lse qtz grs a/a, bcmg f-m w/depth, incr tr lse mica, rr tr coal frag

SANDSTONE: gen lse qtz grs a/a, bcmg f-m w/depth, incr tr lse mica, rr tr coal frag

SHAKER SCREENS BLINDING
POOR SAMPLE RECOVERY

SANDSTONE: clr-v lt blu-occ pl blu wh, transl-occ opq wh, f-crs dom f-m, ang-rnd dom subang, w srtd lse qtz w/tr sil cmt, nil-tr silty mtx, fr-gd inf por, no show

SANDSTONE: massive, gen a/a bcmg clean, v w srtd lse m grs, gd-v gd inf por, no show

SANDSTONE: massive, gen a/a bcmg clean, v w srtd lse m grs, gd-v gd inf por, no show

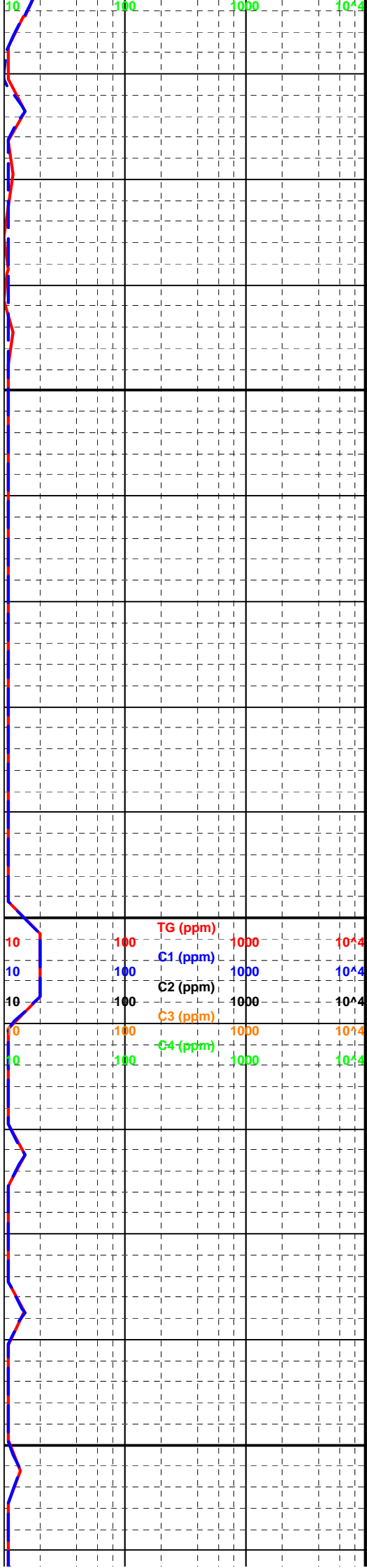
MW = 9.4 PPG , FV = 42

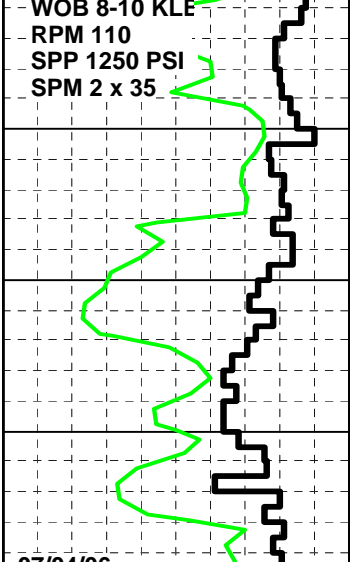
SANDSTONE: massive, gen a/a bcmg clean, v w srtd lse m grs, gd-v gd inf por, minor gy-blk firm subfiss and lesser lt-gy soft Claystone, 2% fluor bright white to dull yellow, no cut, no show.

CLAYSTONE: gy-blk firm sub-fiss, lesser lt-gy sft clyst, minr pyr,mic,

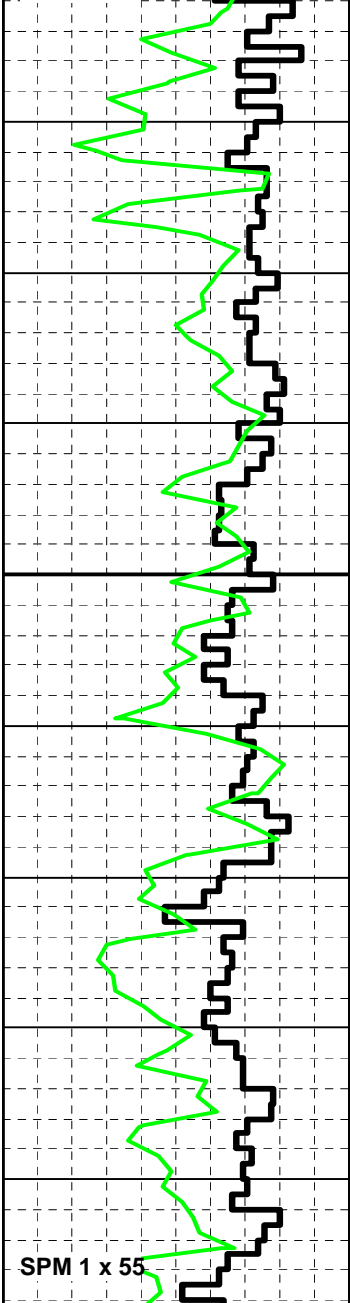
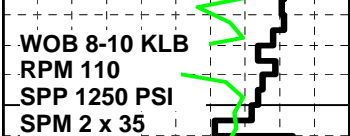
SANDSTONE: clr to lt-gy fine-med mod sort sub ang to sub rnd vein and magmatic qtz weak calc cmt, minor pyr,mic,

SANDSTONE: clr, m-crs, subang -subrnd, w srtd qtz snd, tr cmt, minr pyr cmt, tr clorite. no show.

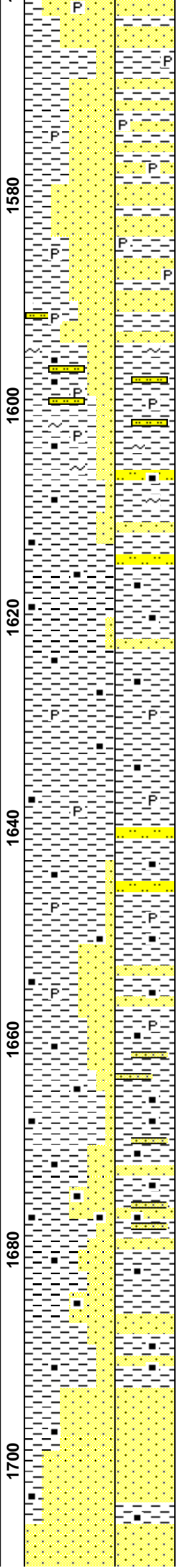




07/04/06



SPM 1 x 55



CLAYSTONE: gy-blk, firm- sub-fiss, lesser lt-gy sft clyst, mnr pyr, mic, tr carb mtl

SANDSTONE: clr-v lt gy-occ opq wh, f-crs dom m, w srtd, tr arg mtx, tr sil cmt, tr pyr nods, pr inf por, no show

CLAYSTONE: gy-med gy-brn, v silty grd arg Silst, v sft frm, disp-amorph, com carb lam & mtl, lse pyr

CLAYSTONE: off wh-lt gy-med gy v silty, v sft frm, disp-amorph, com carb lam & mtl, tr lse pyr, tr glauc, grd to frm arg Silst i/p

NOTE : INCR CO2 to 0.07 %

CLAYSTONE: off wh-lt gy-gy-occ brn gy, v silty, v sft-occ frm, disp-amorph, com vf sand inclus, tr carb lam & mtl, tr lse pyr, grd to arg Silst i/p

BACKGROUND CO2 0.03 %

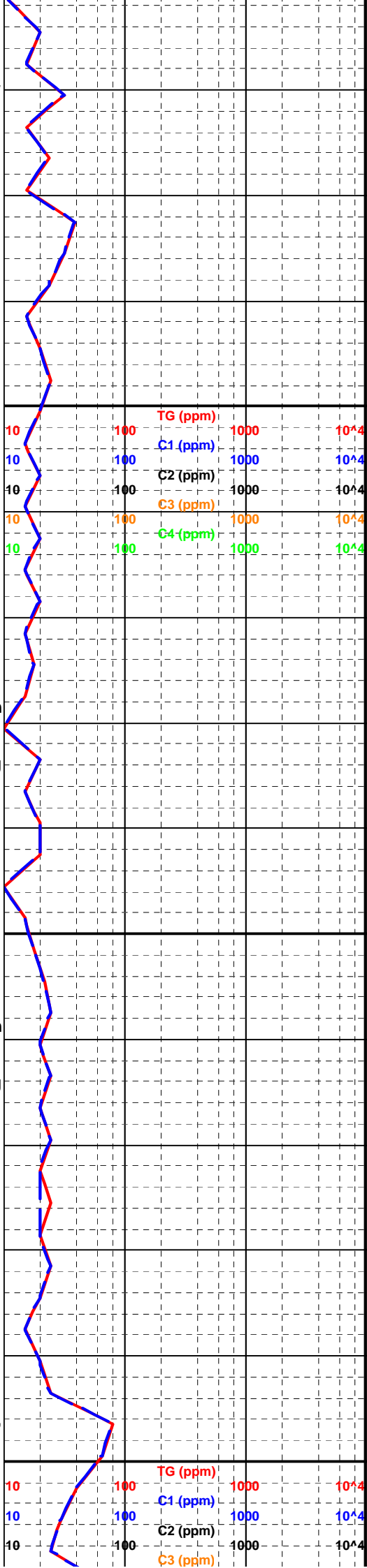
NOTE : UNWASHED SAMPLE AT SHAKERS IS STICKY CLAYSTONE

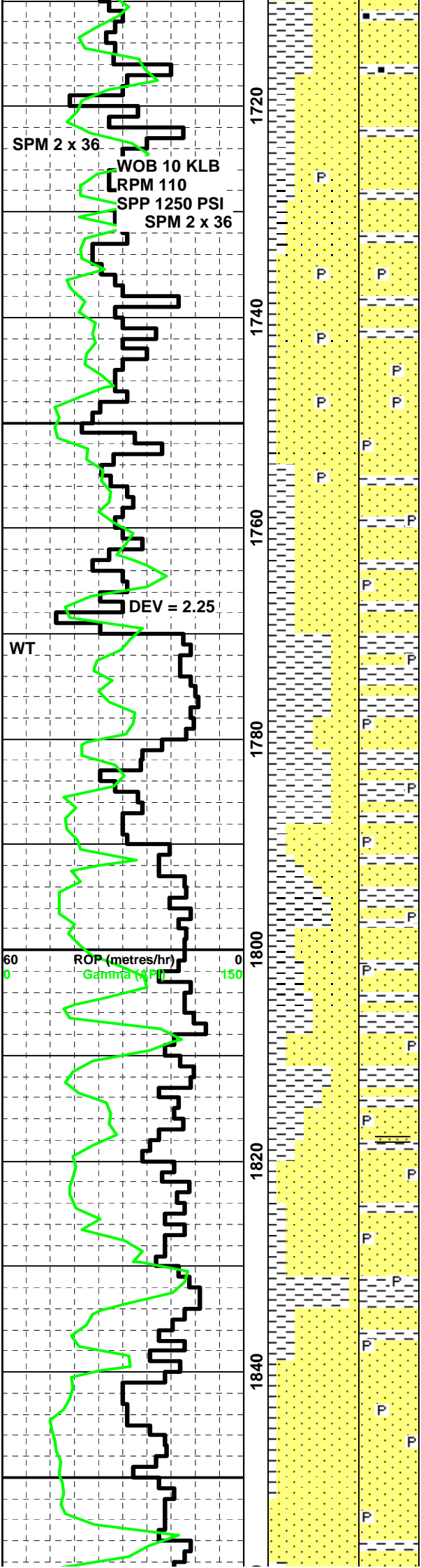
CLAYSTONE: off wh-lt gy-gy-occ brn gy, v silty, v sft-occ frm, disp-amorph, com vf sand inclus, tr carb lam & mtl, tr lse pyr, grd to arg Silst i/p

NOTE: INCR CO2 TO 0.08 %

SANDSTONE: clr-v lt blu-v lt gy, transl-opq, f-crs dom m, ang-subrnd, abnt arg mtx, lse, tr mica, tr pyr, pr inf por, no show

NOTE: CLAY MATRIX WASHING OUT OF SAMPLES





SANDSTONE: f-m gen a/a in clay mtx, lse qtz grs, pr inf por

NOTE: ABUNDANT CLAY MATRIX WASHING OUT OF SAMPLES

POOR CUTTINGS RECOVERY AT SHAKERS - SAMPLES COMPOSITE

SANDSTONE: clr-v lt blu-occ v pl yel wh, transl-occ opq, f-m, sub ang-rnd dom subrnd, w srted, abnt arg mtx, tr sil & pyr cmts, tr lse pyr, tr liths, pr inf por, no show

MW = 9.5 PPG, FV = 40

NOTE: ABUNDANT CLAY MATRIX WASHING OUT OF SAMPLES

SANDSTONE: clr-v lt blu-occ v pl yel wh, transl-occ opq, f-m, sub ang-rnd dom subrnd, w srted, abnt arg mtx, tr sil & pyr cmts, tr lse pyr, tr liths, pr inf por, no show

CO2 = 0.02 %

CLAYSTONE: gy-blk frm subfiss clst + org fr, lt-gy sft clst +org fr, tr pyr cmts ,msc, glauc. no show

SANDSTONE: clr-v lt blu-occ v pl yel wh, transl-occ opq, f-m, sub ang-rnd dom subrnd, w srted, abnt arg mtx, tr sil & pyr cmts, tr lse pyr, tr liths, pr inf por, no show

NOTE: CO2 RANGES VARY BETWEEN 0.03 TO 0.05 % FROM 1800M

CLAYSTONE: gy-blk frm s-fiss clyst tr org, lt-gy sft clyst tr org, tr :mic, pyr nod+cmt, glauc

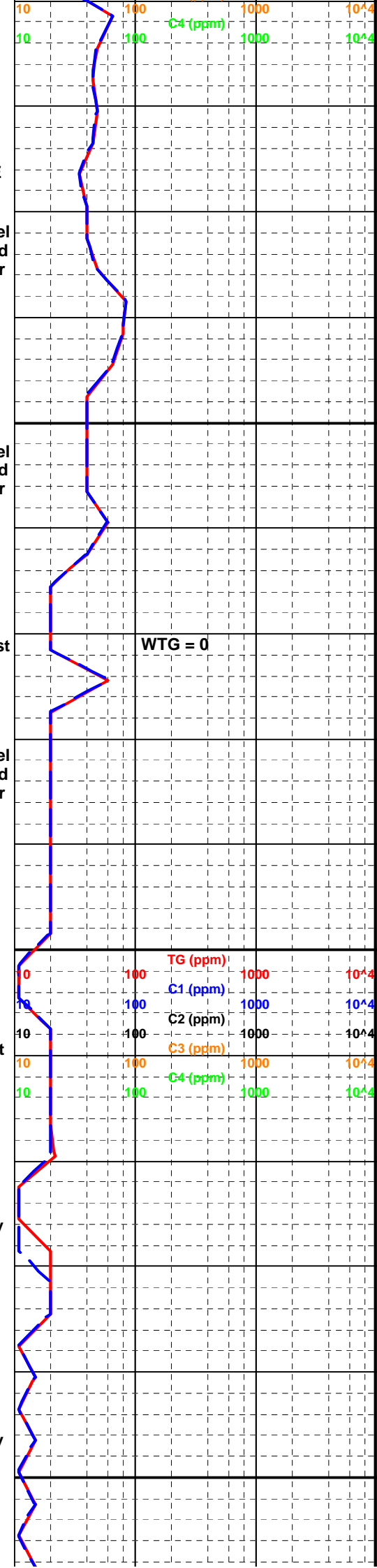
NOTE: CO2 RANGES VARY BETWEEN 0.06 TO 0.11 % FROM 1815 m TO 1900 m

SANDSTONE: clr - lt gy, tr lt yel, tr v lt blu, subrnd- rnd, v w srt, dis agg gns qtz, tr mic & glauc, com clay mtx dispersing, pr inf por

CO2 = 0.11 %

SANDSTONE: clr - lt gy, tr lt yel, tr v lt blu, subrnd- rnd, v w srt, dis agg gns qtz, tr mic & glauc, com clay mtx dispersing, pr inf por

CO2 = 0.10 %



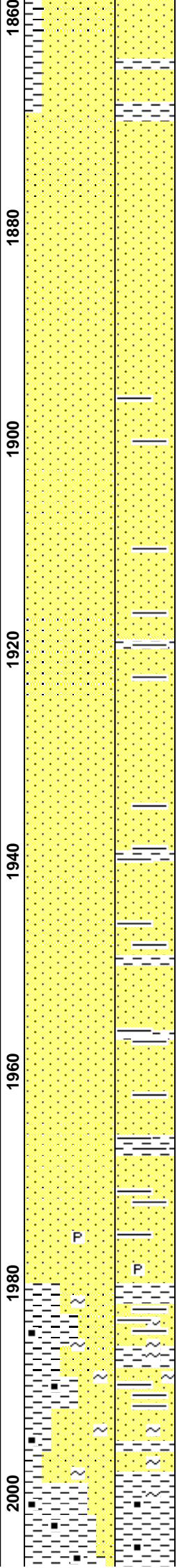
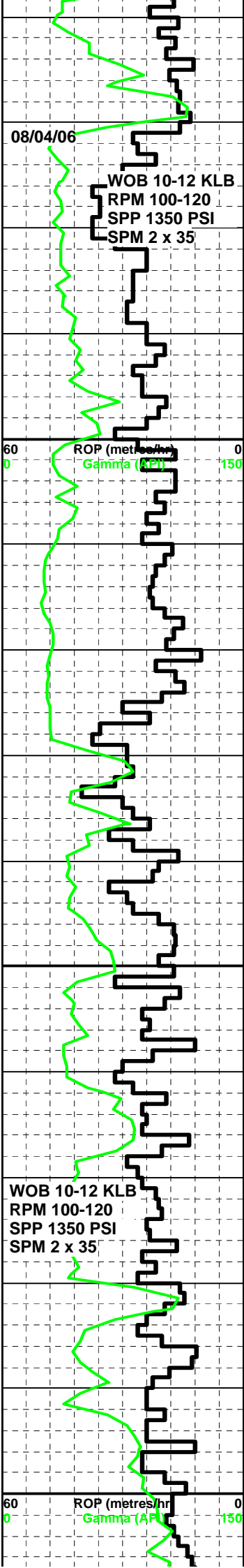
SPM 2 x 36
WOB 10 KLB
RPM 110
SPP 1250 PSI
SPM 2 x 36

WT
DEV = 2.25

ROP (metres/hr)
Gamma (API)

WTG = 0

TG (ppm)
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)



NOTE: SHAKERS BLINDING - POOR SAMPLE RECOVERY

SANDSTONE: clr-occ v pl yel-occ opq wh, transp-transl, f-m, subang-rnd, w-v w srtd, lse w/clay mtx washing out, tr sil cmt, pr inf por, no show

CO2 = 0.08 %

NOTE: SHAKERS BLINDING - POOR SAMPLE RECOVERY

CO2 = 0.11 %

SANDSTONE: gen a/a clean lse qtz grs bcmg sli crs w/depth

NOTE : CO2 0.08 % to 0.15 %

SANDSTONE: clr-v lt gy-rr v pl yel, f-crs dom f-m, subang-rnd, w-v w srtd, tr clay mtx, tr sil cmt, gen lse grs, clean, fr inf por, no show

CO2 = 0.07 %

SANDSTONE: clr-v lt gy-rr v pl yel, f-crs dom f-m, subang-rnd, w-v w srtd, tr clay mtx, tr sil cmt, gen lse grs, clean, fr inf por, no show

CO2 = 0.06 %

SANDSTONE: gen lse qtz a/a, incr arg mtx washing out

CO2 = 0.04 %

SANDSTONE: gen lse qtz a/a, incr arg mtx washing out

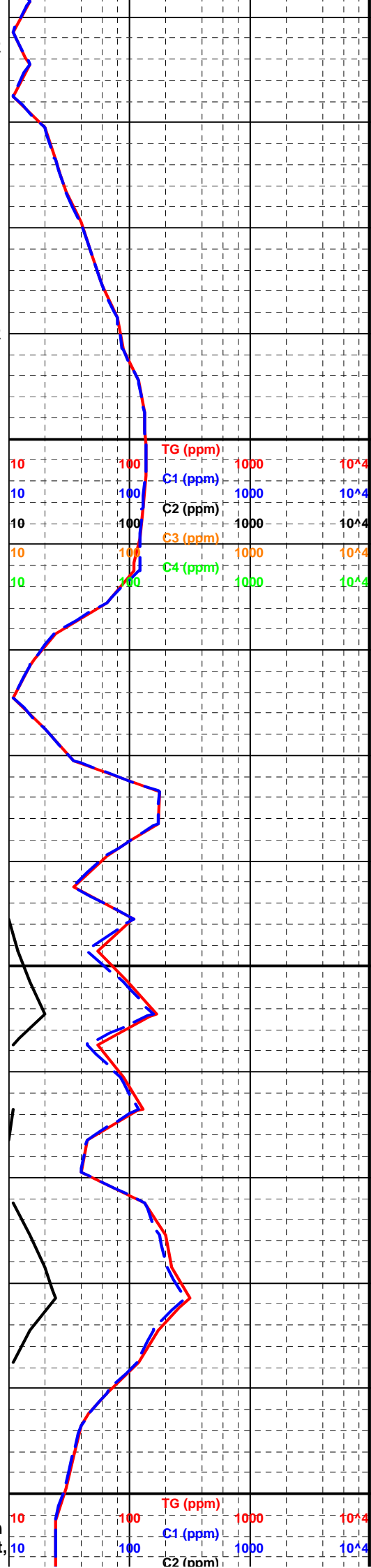
CO2 = 0.08 %

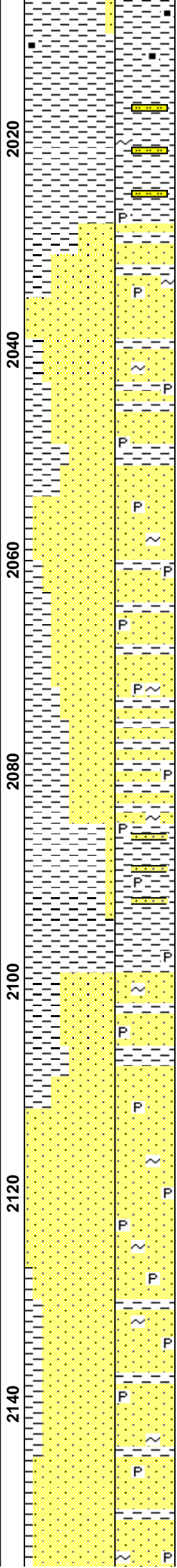
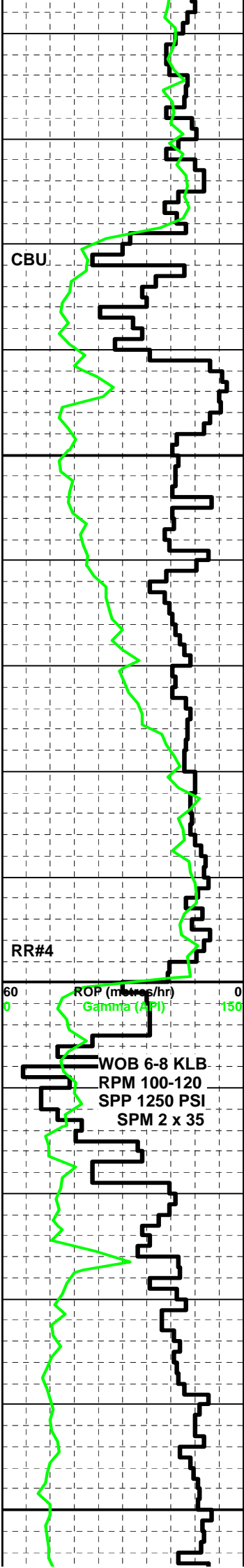
SANDSTONE: clr-off wh, v f-med dom vf aggs w/wh arg mtx, fri w/wk sil cmt, tr-com glauc, pr inf por, no show

CO2 = 0.03 %

CLAYSTONE: gy-med dk gy-occ brn gy, sft frm, v silty grdg arg Siltst, amorph-bkly, com v f sand inclus, com carb mtl & lam, glauc non calc

CLAYSTONE: gy-med dk gy-incr brn gy-brn, sft frm, v silty grdg arg Siltst, amorph-bkly, com v f sand inclus





amorph-biky, com v l sand inlus
com carb mtl & lam, glauc, tr brn xln
dol

CO2 = 0.04 %

CLAYSTONE: med dk gy, frm-occ
hd, v silty grdg arg Siltst, carb mtl &
lam, tr glauc, tr dol, blk, com vf qtz
inlus

CO2 = 0.03 %

MW = 9.7 PPG, FV = 40

SANDSTONE: gen lse qtz a/a, incr
arg

CLAYSTONE: med dk gy, frm-occ
hd, v silty grdg arg Siltst, carb mtl &
lam, tr glauc, tr dol, blk, com vf qtz
inlus

CO2 = 0.01 %

SANDSTONE: clr-off wh, v f-med
dom vf aggs w/wh arg mtx, fri w/wk
sil cmt, tr-com glauc, pr inf por, no
show

CO2 = 0.02 %

CLAYSTONE: med dk gy, frm-occ
hd, v silty grdg arg Siltst, carb mtl &
lam, tr glauc, tr dol, blk, com vf qtz
inlus

CO2 = 0.02 %

CLAYSTONE: med dk gy, frm-occ
hd, v silty grdg arg Siltst, carb mtl &
lam, tr glauc, tr dol, blk, com vf qtz
inlus

POOH AT 2098 m TO CHANGE BHA

CO2: 0.03 % to 0.15 % FROM 2100

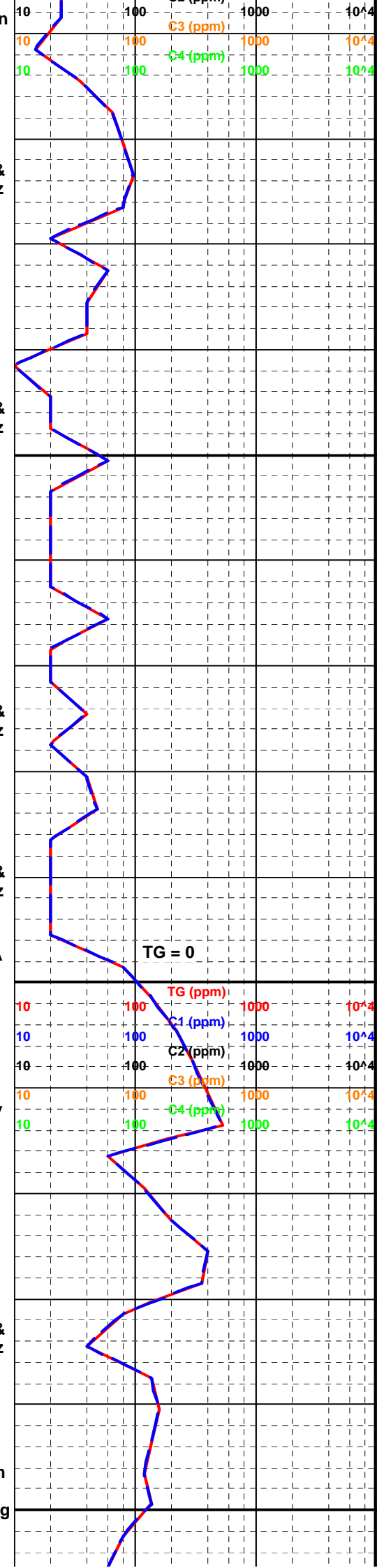
SANDSTONE: cl to lt gy tr lt-ylw tr v
lt-bl fin-med w-sor qtz dis ass with
fine gn m-cryst cmt, min gy-blk frm
sfis sl-clst lsr lt-gy sft clst, tr: glu,
pyr, mic, no.

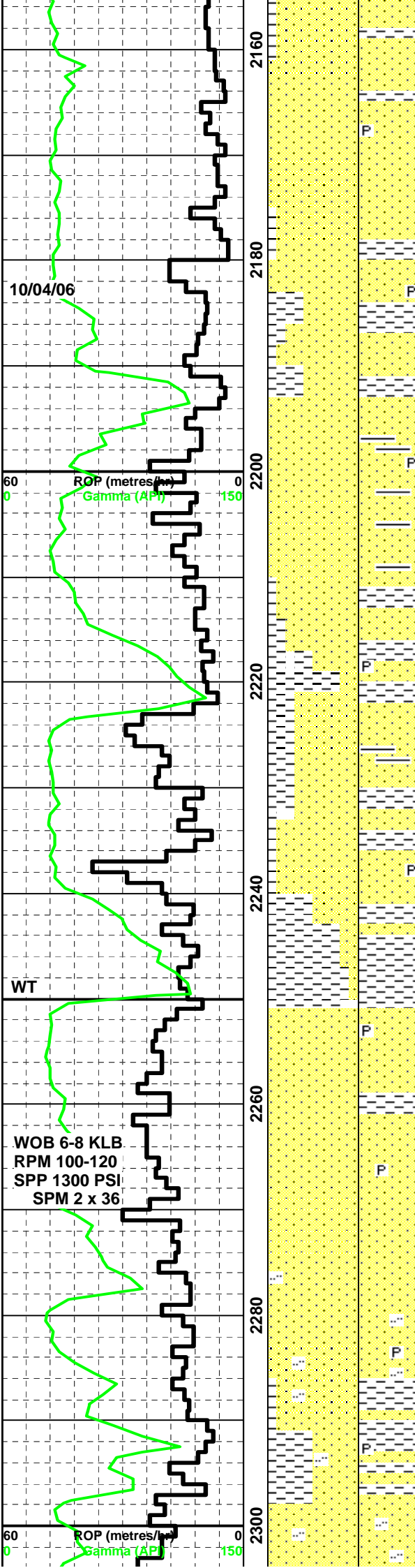
CO2: 0.03%

CLAYSTONE: med dk gy, frm-occ
hd, v silty grdg arg Siltst, carb mtl &
lam, tr glauc, tr dol, blk, com vf qtz
inlus, micmic,

CO2: 0.14%

SANDSTONE: v pl grn-clr-occ v pl
yel-v lt gy, transl-occ opq, vf-m dom
m, ang-rnd dom ang, v w
srtd-uniform, hi spher, clean w/tr arg
mtx, com chlor, pr inf por





CO2: 0.11%

SANDSTONE: v pl grn-clr-occ v pl yel-v lt gy, transl-occ opq, vf-m dom m, ang-rnd dom ang, v w srtd-uniform, hi spher, clean w/tr arg mtx, com chlor, pr inf por

CO2 = 0.04 %

SANDSTONE: clr-v pl yel-occ off wh, transl, vf-m dom m, ang-rnd dom subang, v w srtd-uniform, lse w/tr chlor cmt, tr arg mtx washing out, fr-pr inf por, no show

CO2 = 0.065 %

CLAYSTONE: mid gy-gy-occ brn, v silty, mic, tr chlor, tr carb specs, com vf sand & lithics, sft-frm, amorph-blky

NOTE: ABUNDANT CLAY MATRIX WASHING OUT OF SAMPLES

CO2 = 0.13 %

SANDSTONE: clr-v pl yel-occ off wh, transl, vf-m dom m, ang-rnd dom subang, v w srtd-uniform, lse w/tr chlor cmt, tr arg mtx washing out, fr-pr inf por, no show

CO2 = 0.11 %

CLAYSTONE: mid gy-med dk gy-gy blk, frm-occ hd, blk, com carb flec, tr liths, rr tr felds, non calc

MW = 9.6 PPG , FV = 42

SANDSTONE: clr-v pl yel-occ off wh, transl, vf-m dom m, ang-rnd dom subang, v w srtd-uniform, lse w/tr chlor cmt, tr arg mtx washing out, fr-pr inf por, no show

CO2 = 0.065 %

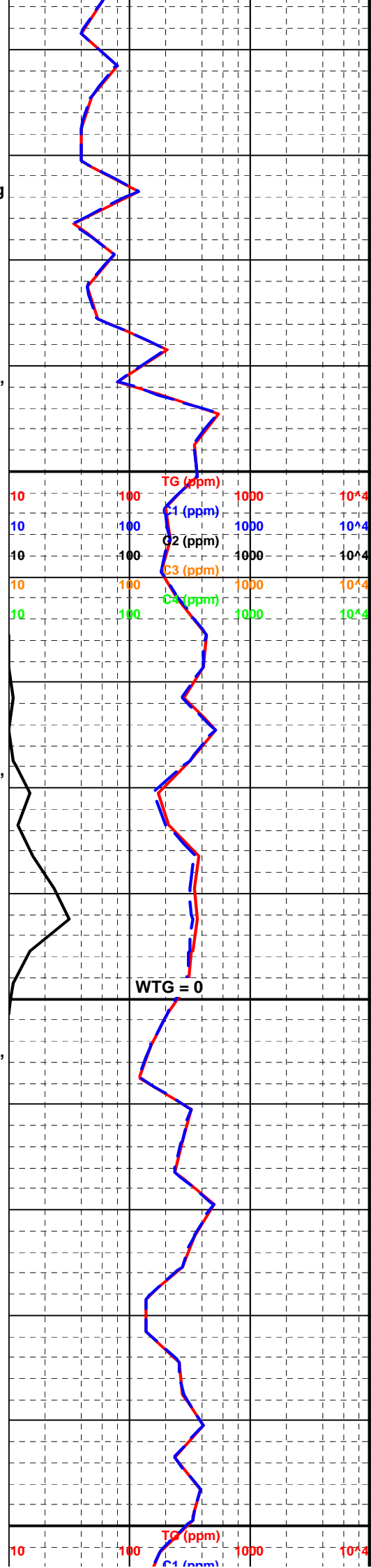
SANDSTONE: clr-v lt gy-occ pl yel, f-m gen ang-sub ang grs a/a bcmg f w/depth

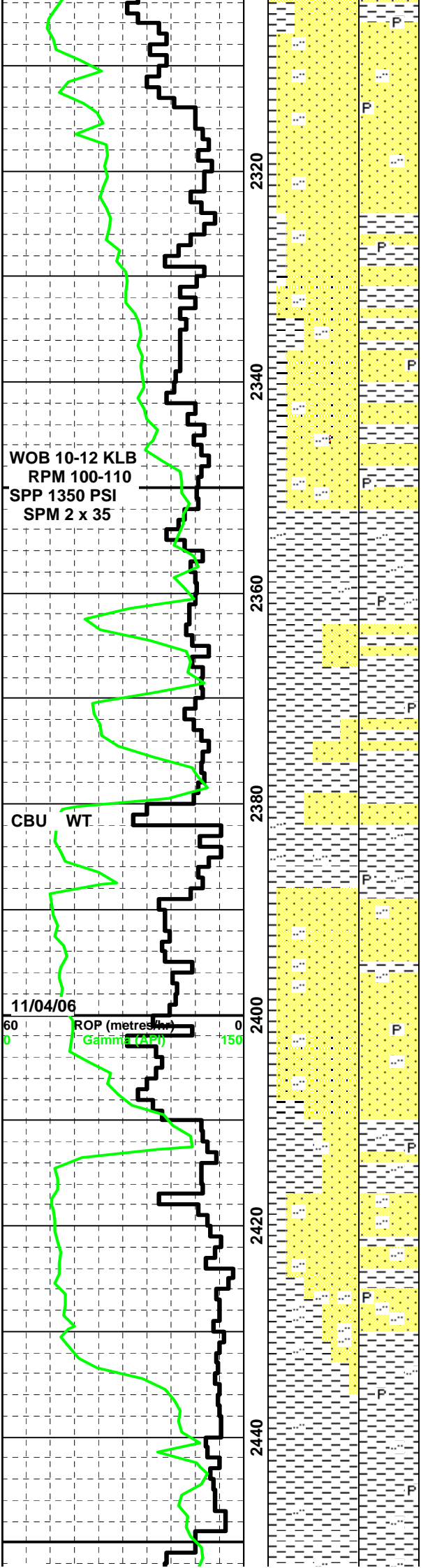
CO2 = 0.16 %

CLAYSTONE: mid gy-gy-occ brn, v silty, mic, tr chlor, tr carb specs, com vf sand & lithics, sft-frm, amorph-blky

NOTE: ABUNDANT CLAY MATRIX WASHING OUT OF SAMPLES

CO2 = 0.20 %





SANDSTONE: clr-v pl yel-occ off w/ transl, vf-m dom m, ang-rnd dom subang, v w srtd-uniform, lse w/tr chlor cmt, tr arg mtx washing out, fr-pr inf por, no show

NOTE: ABUNDANT CLAY MATRIX WASHING OUT OF SAMPLES

CO2 = 0.065 %

SANDSTONE: clr-v pl yel-occ off wh, transl, vf-m dom m, ang-rnd dom subang, v w srtd-uniform, lse w/tr chlor cmt, tr arg mtx washing out, fr-pr inf por, no show

CO2 = 0.26 %

SILTY CLAYSTONE: gy-blk frm sfiss clst with abt f-ang qtz inc, lt-gy fin qtz sst lit with mic cryt cal cmt. no

NOTE: ABUNDANT CLAY MATRIX WASHING OUT OF SAMPLES

CO2 = 0.28 %

SANDSTONE: cl to lt-gy + v lt-ylw fn-med s-ang to s-rnd dis agr gns, tr: mic pyr. no

CLAYSTONE: v silty grdng arg Siltstone: gy-blk frm s-fis clst +vfn qtz inc, tr: wh to lt-ylw s-rnd v-crs qtz gns. no

CO2 = 0.25 %

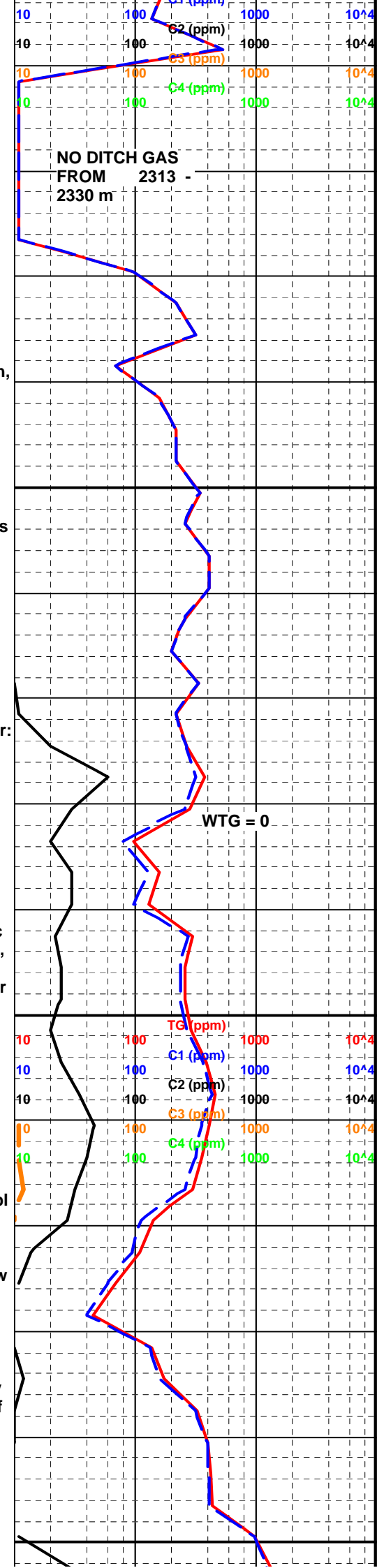
SANDSTONE: clr-v lt gy-v lt blu-occ v pl yel wh, f-m dom m, ang-subrnd, w-v w srtd, hi spher, incr tr arg mtx washing out, tr liths, tr sil/sid cmt, fr inf por, no show

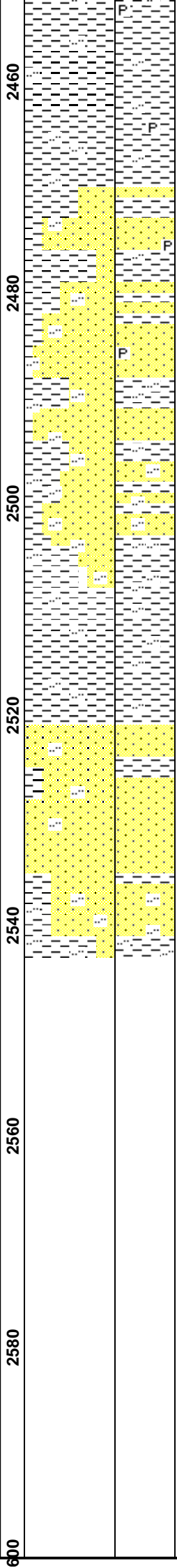
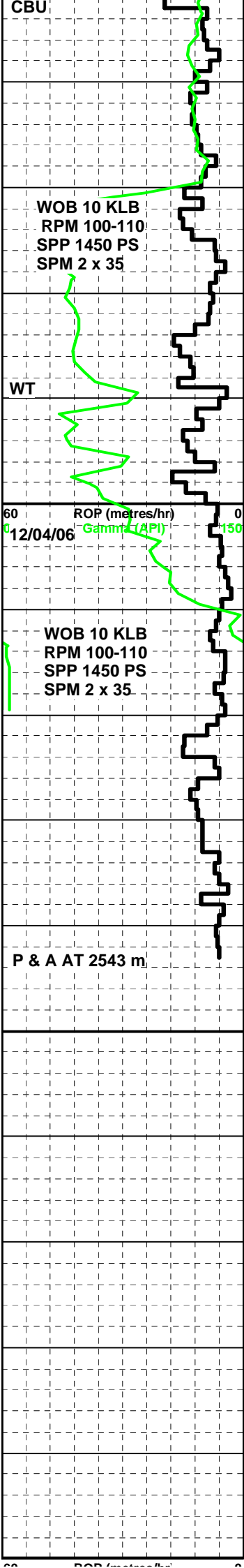
CO2 = 0.22 %

SANDSTONE: clr-v lt gy-lt blu-occ pl yel brn, vf-m dom m, lse w/tr sid cmt, w-v w srtd, ang-rnd dom subang lse grs w/ arg mtx washing out, var f gr aggs w/calc dol mod-w cmt, com lith frags, pr inf por, no show

SILTSTONE: m gy-dk gy-occ brn gy & grn gy, frm-occ hd, v aren i/p w/vf qtz, com carb lam, tr lith frags, non calc, grdng silty Clayst

CO2 = 0.25 %





CLAYSTONE: med dk gy-dk gy, silty i/p, frm-hd, brittle, bcmg more comp w/depth, carb, micmica, non calc

CO2 = 0.50 %

SANDSTONE: clr to lt-gy lt-yel wh v lt-bl mod- vw-sort, subang dis agg qtz snd, evidence of weak mic cyst, calcite cmt, tr mic & pyr,glau, no show

CO2 = 0.34 %

SANDSTONE: clr to lt-gy lt-yel wh v lt-bl mod- vw-sort, subang dis agg qtz snd, evidence of weak mic cyst, calcite cmt, tr mic & pyr,glau, no show

SANDSTONE: clr-off wh, vf-f aggs w sil & tr dol cmt, grdg aren Siltst i/p, subrnd, w srtd, tr carb specs, liths, micas, pr-tite inf por, no show

CO2 = 0.08 %

SILTSTONE: gy-med dk gy-occ gy blk, frm-hd, blkly-subfiss, com carb mtl & lam, tr mica, non calc w/rr dol vein, bcmg more arg & grdg silty Claystone, incr indur w/depth

SANDSTONE: clr-v lt blu-off wh, transl-occ opq v crs gr, f-v crs dom m-crs, ang-subrnd dom subang w/occ frac gr, pr srtd, gen qtz grs w/ sil cmt, nil-rr arg/silt mtx, fr inf por, no show

CO2 = 0.08 %

MW = 9.7 PPG, FV = 40

SILTSTONE: gy-med dk gy-occ gy blk, gen a/a carb, mica, frm-hd

SCHLUMBERGER WIRELINE LOGS :
RUN #1 : HALS-BHC-PEX
RUN #2 : CSAT-GR

