Scale: 1:50
Measured Depth Log

Well Name Lamont Pass #3

State Northern Territory

Country Australia

Spud Date 5th October 2013

Surface Coordinat... GDA94 Zone 53
631148.1mE 8146460mN

Ground Elevation 89.66

Geologist

Name G Bailey

Core Information

Contractor Nitro Drilling

Rock Types

- UNKNOWN
- SIDERITE or LIMONITE
- LIMESTONE
- DOLOMITE
- CHERT
- COAL
- CLAYSTONE
- SHALE
- SHALE GRAY
- SHALE COLORED
- SILTSTONE
- SANDSTONE
- CONGLOMERATE
- BRECCIA
- TUFF
- IGNEOUS
- DOLOMITIC SILTSTONE
- CEMENT

Accessories

Fossils

- ALGAE
- AMPHIPORA
- BELEMNITE
- BIOCLASTIC
- BRACHOIPOD
- BRYOZOA
- CEPHALOPOD
- CORAL
- CRINOID
- ECHINOID
- FOSSIL
- GASTROPOD
- OOLITE
- OSTRACOD
- PELECYPOD
- PELLET
- PISOLITE
- PLANT REMAINS
- PLANT SPORES
- SCAPHOPOD
- STROMATOPOROID
- ARGILLACEOUS
- ARGILLITE GRAIN
- BENTONITE
- BITUMENOUS SUBSTANCE
- BRECCIA FRAGMENTS
- CALCAREOUS
- CARBONACEOUS FLAKES
- CHTDK
- CHTLT
- COAL - THIN BEDS
- DOLOMITIC
- FELDSPAR
- GLAUCONITE
- GYPSIFEROUS
- HEAVY MINERAL
- KAOLIN
- MARLSTONE
- MINERAL CRYSTALS
- NODULES
- PHOSPHATE PELLETS
- PYRITE
- SALT CAST
- SANDY
- SILICEOUS

Stringer

- ANHYDRITE STRINGER
- BENTONITE STRINGER
- COAL STRINGER
- DOLOMITE STRINGER
- GYPSUM STRINGER
- LIMESTONE STRINGER
- MARLSTONE (CALC) STRG
- MARLSTONE (DOL) STRG
- SANDSTONE STRINGER
- SHALE STRINGER

FISH

FORAMINIFERA

Minerals

ANHYDRITIC

FERRUGINOUS PELLET

FERRUGINOUS

SILTY

TUFFACEOUS

SILTSTONE STRINGER

Other Symbols

Oil Show

DEAD

EVEN

QUESTIONABLE

SPOTTED STAINING

Porosity

EARTHY

FENESTRAL

FRACTURE

INTERCRYSTALLINE

INTEROOLITIC

MOLDIC

ORGANIC

PINPOINT

VUGGY

Engineering

BIT

CASING

CONNECTION (LEFT)

CONNECTION (RIGHT)

CONNECTION GAS

CORE - LOST

CORE - RECOVERED

DST INTERVAL

FAULT

FORMATION TOP

GAS SHOW

MN DEPTH

NORMAL FAULT

OIL SHOW

OVERTURNED STRATA

REVERSE FAULT

SIDEWALL CORE (LEFT)

SIDEWALL CORE (RIGHT)

SLIDE

SURVEY

TRIP GAS

WIRELINE TESTED - LEFT

WIRELINE TESTED - RT

Rounding

ANGULAR

ROUNDED

SUBANG

SUBRND

Textures

BOUNDSTONE

CHALKY

CRYPTOXLN

EARTHY

FINELYXLN

GRAINSTONE

LITHOGRAPHIC

MICROXLN

MUDSTONE

PACKSTONE

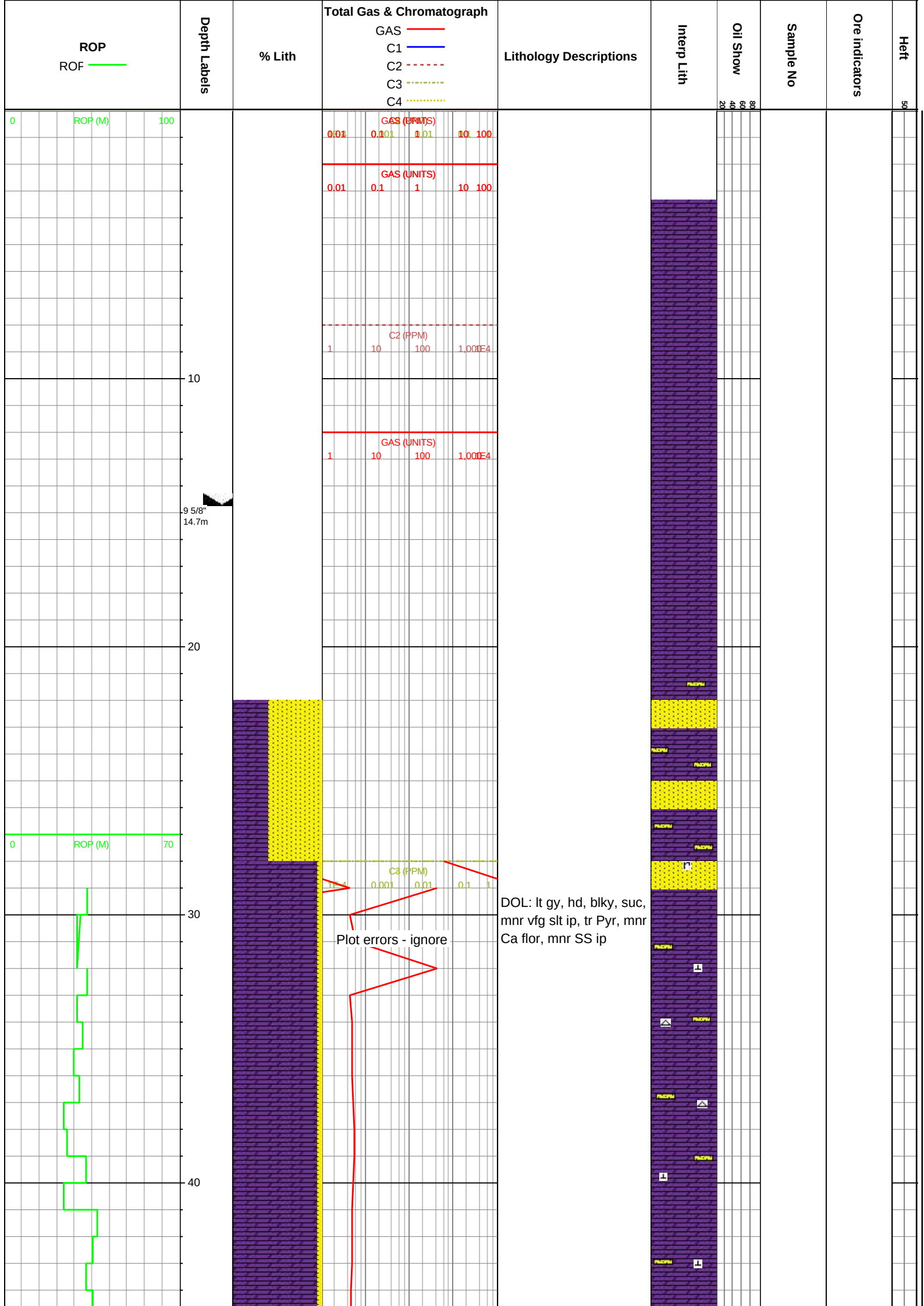
WACKESTONE

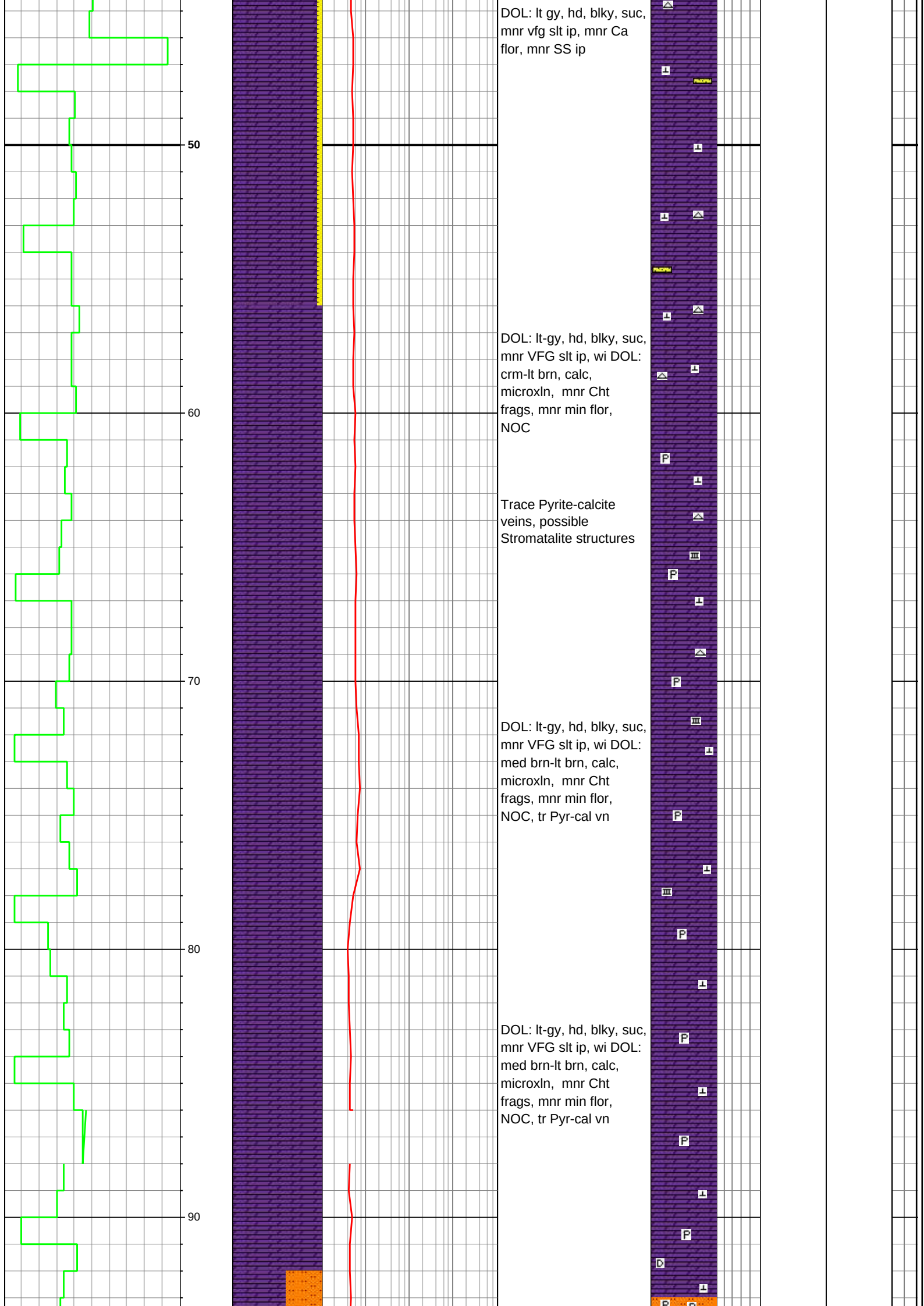
Sorting

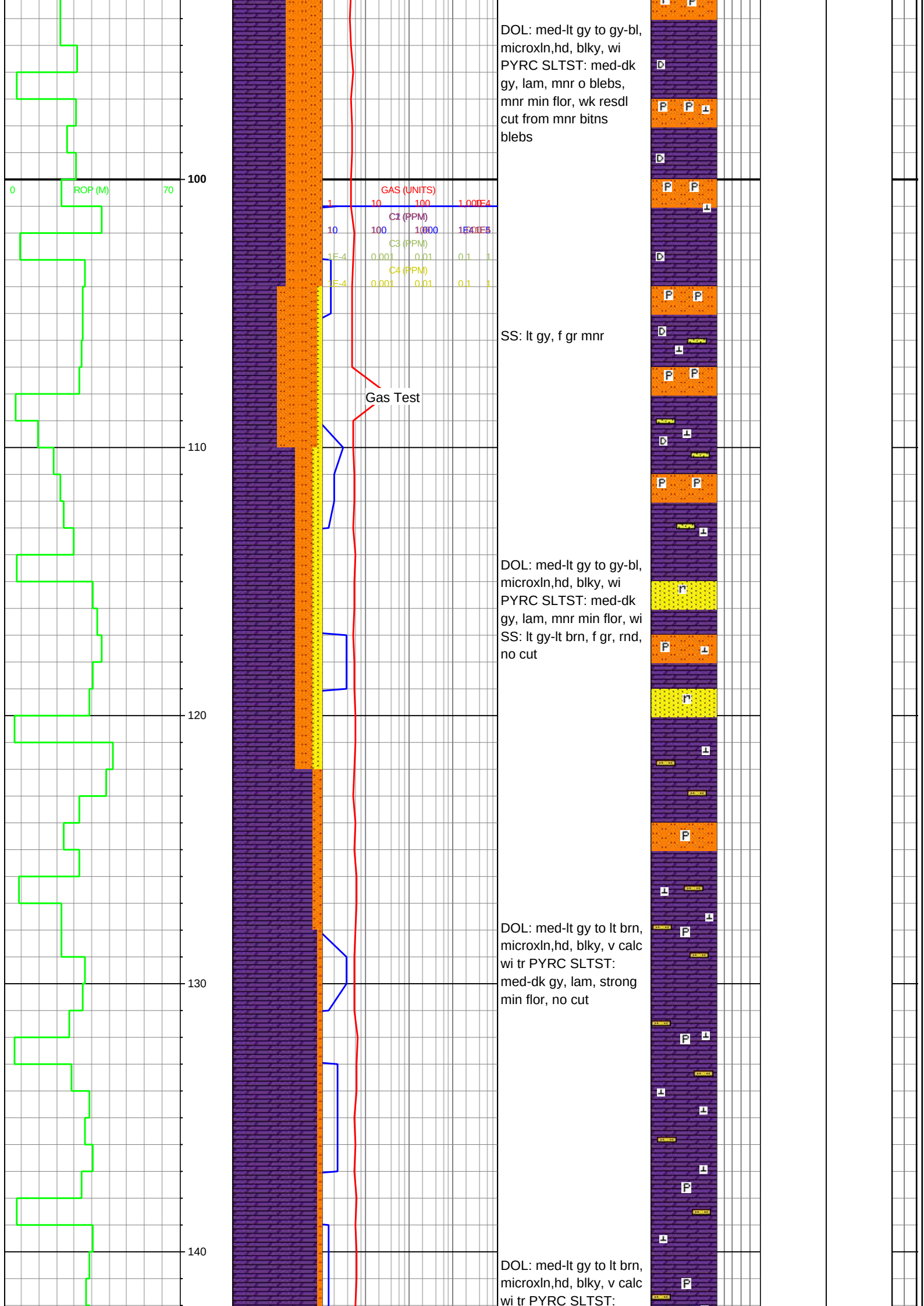
MODERATE

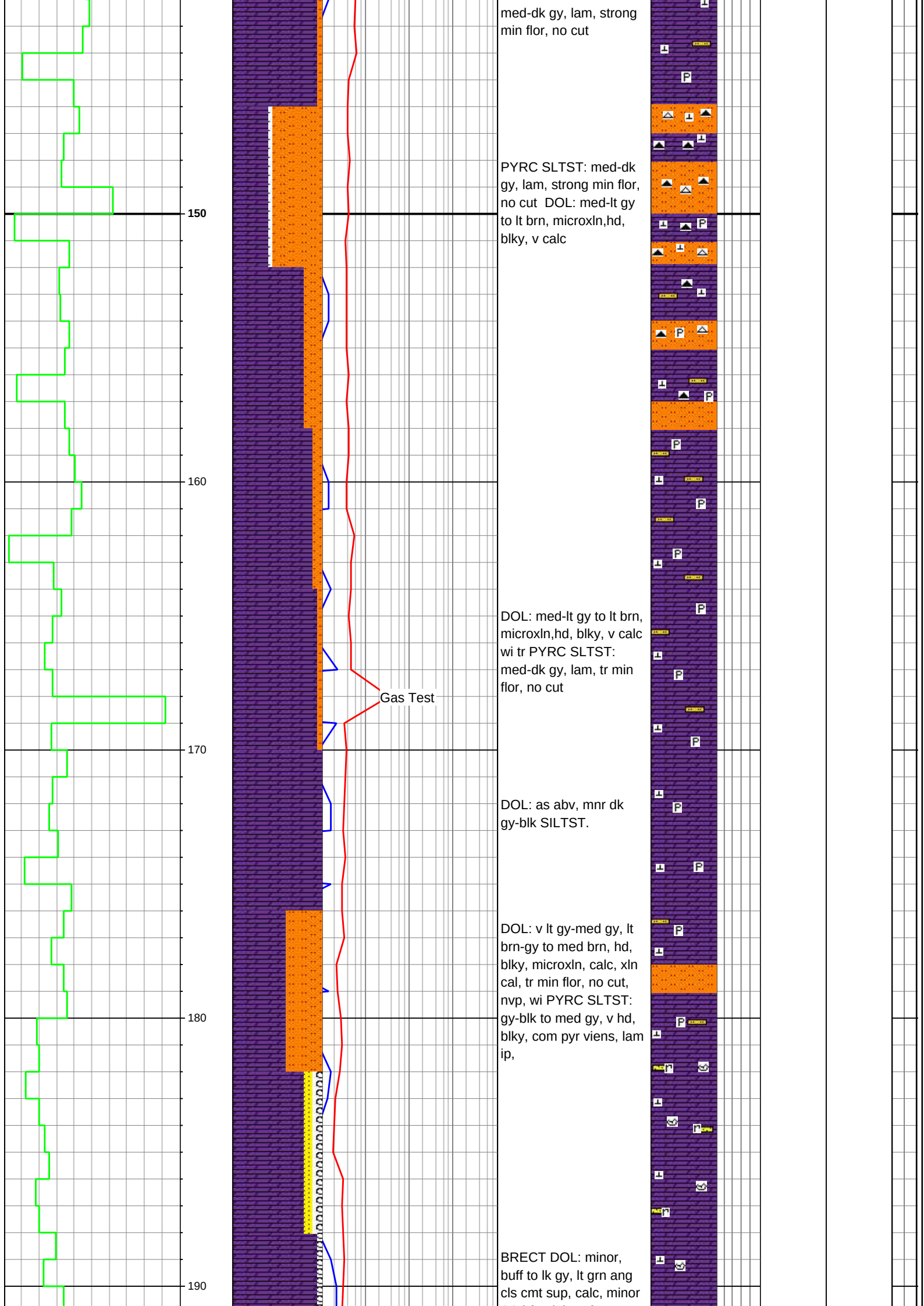
POOR

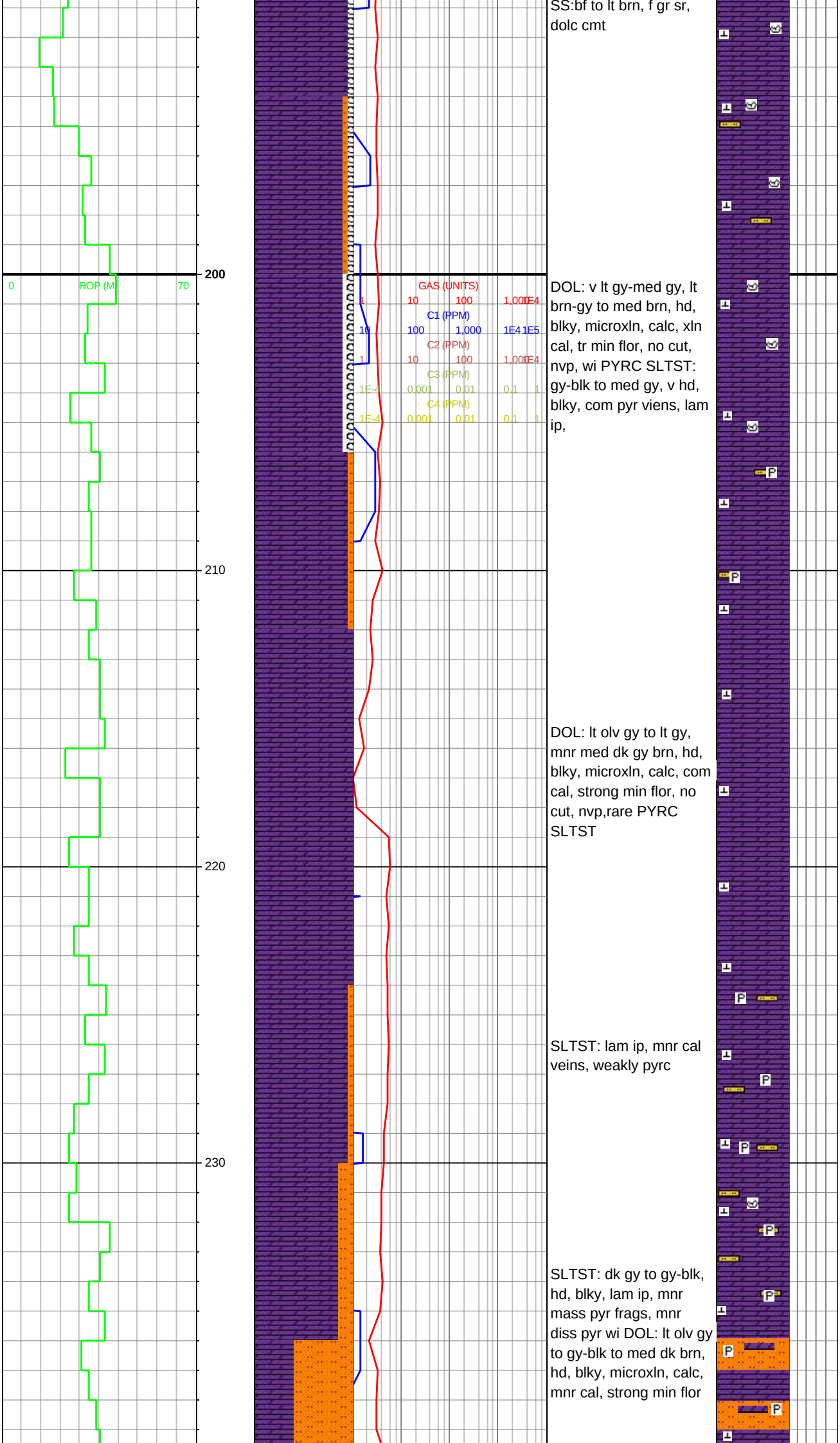
WELL

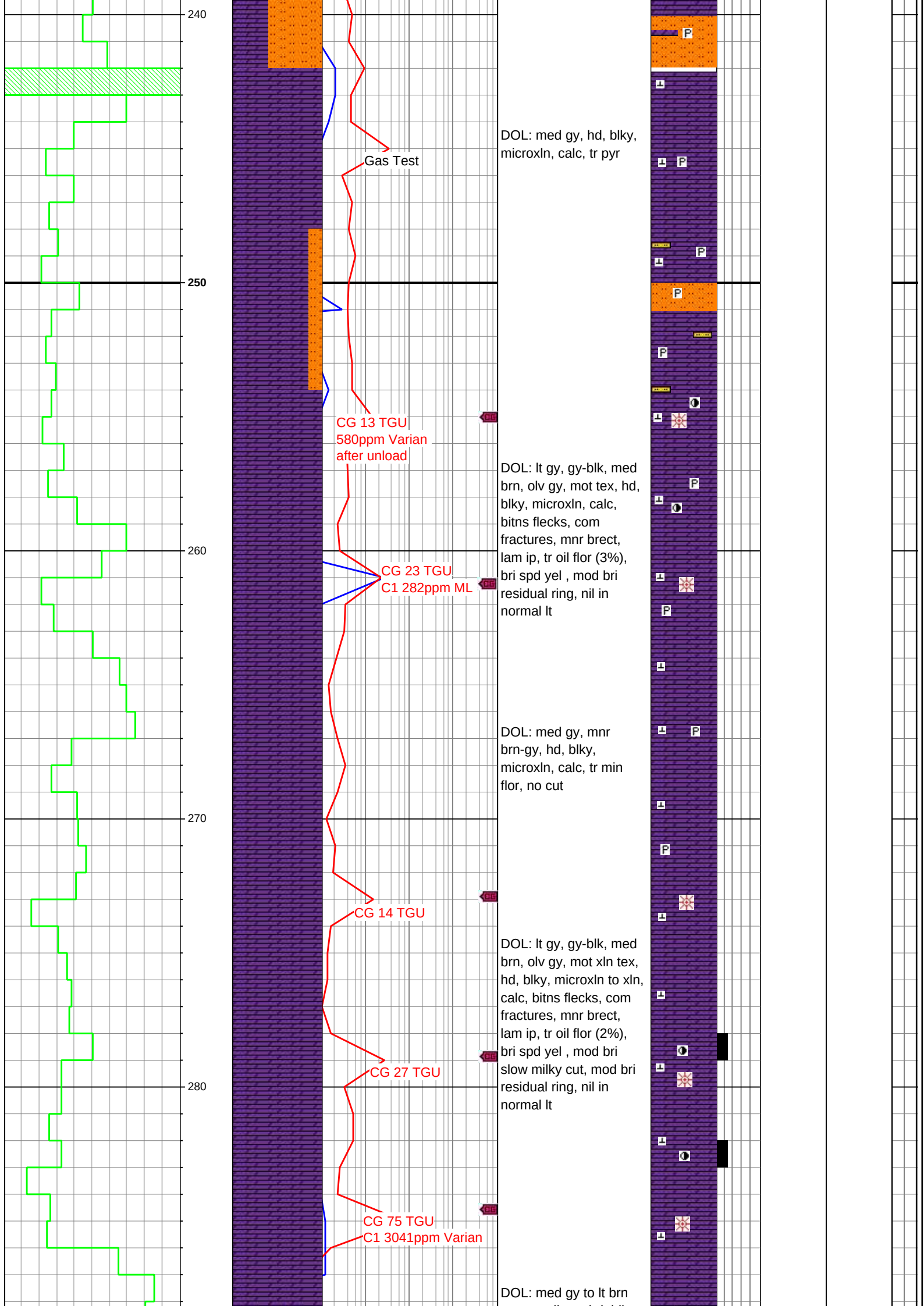

ROP
ROF
Depth Labels
% Lith
Total Gas & Chromatograph
GAS
C1
C2
C3
C4
Lithology Descriptions
Interp Lith
Oil Show
Sample No
Ore indicators
Heft
0
ROP (M)
100
GAS (UNITS)
0.01
0.1
1
10
100
C2 (PPM)
1
10
100
1,000
E4
GAS (UNITS)
1
10
100
1,000
E4
10
9 5/8"
14.7m
20
0
ROP (M)
70
C3 (PPM)
0.001
0.01
0.1
1
30
Plot errors - ignore
DOL: lt gy, hd, blky, suc, mnr vfg slt ip, tr Pyr, mnr Ca flor, mnr SS ip
40

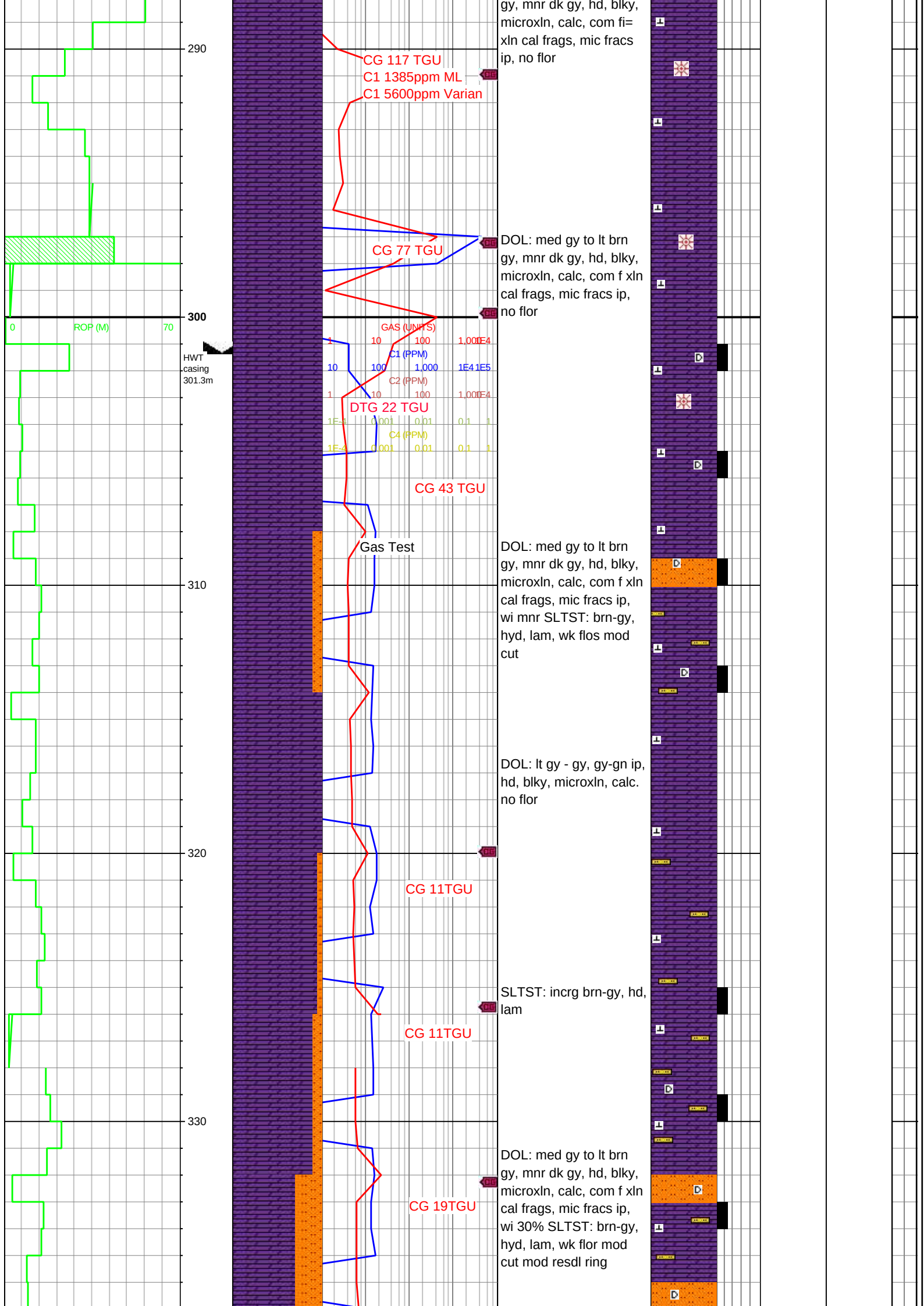

50
60
70
80
90
DOL: lt gy, hd, blky, suc, mnr vfg slt ip, mnr Ca flor, mnr SS ip
DOL: lt-gy, hd, blky, suc, mnr VFG slt ip, wi DOL: crm-lt brn, calc, microxln, mnr Cht frags, mnr min flor, NOC
Trace Pyrite-calcite veins, possible Stromatalite structures
DOL: lt-gy, hd, blky, suc, mnr VFG slt ip, wi DOL: med brn-lt brn, calc, microxln, mnr Cht frags, mnr min flor, NOC, tr Pyr-cal vn
DOL: lt-gy, hd, blky, suc, mnr VFG slt ip, wi DOL: med brn-lt brn, calc, microxln, mnr Cht frags, mnr min flor, NOC, tr Pyr-cal vn

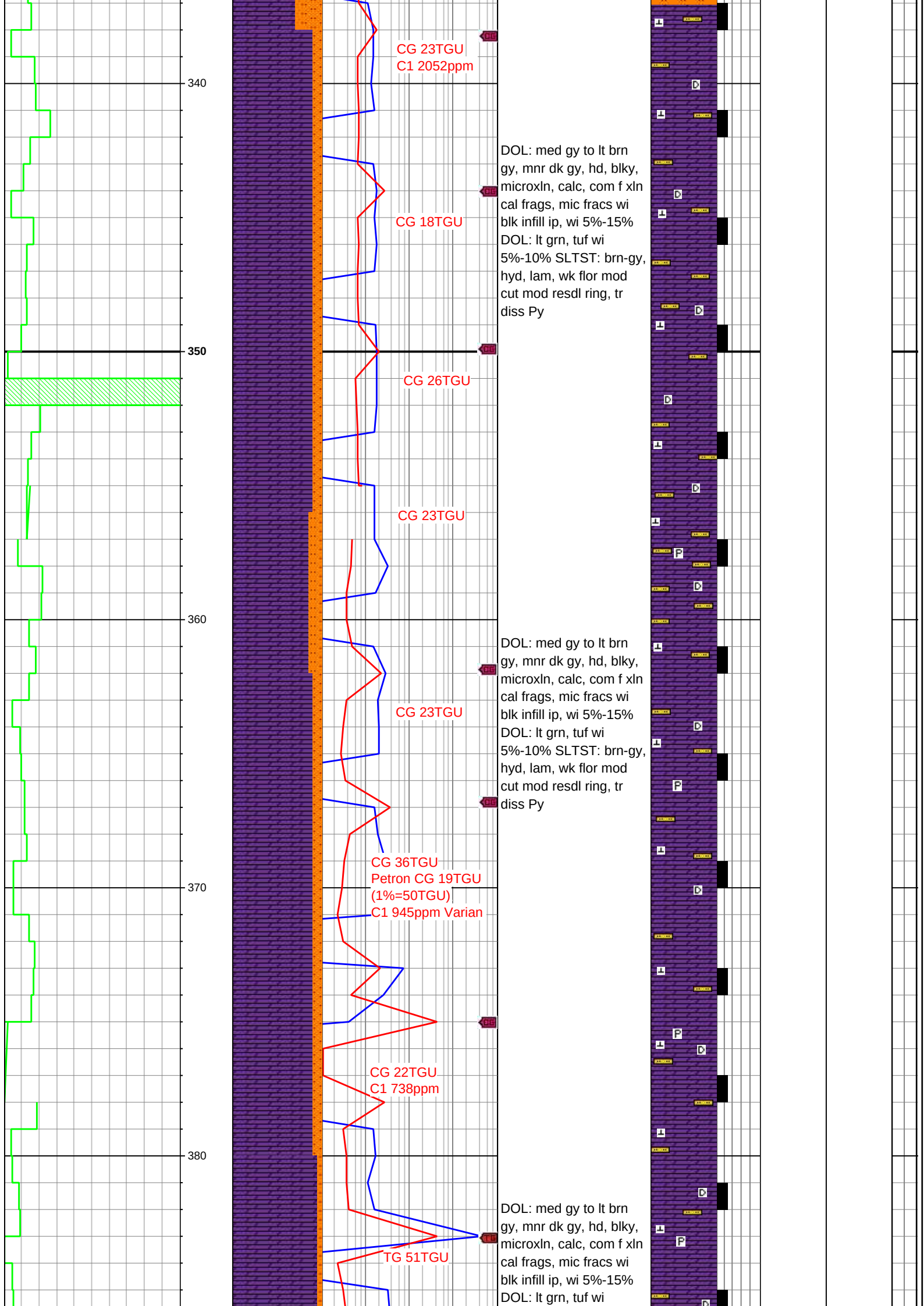

100
110
120
130
140
0
ROP (M)
70
GAS (UNITS)
1
10
100
1,000
1E4
C1 (PPM)
10
100
1000
1E4
1E5
C3 (PPM)
1E-4
0.001
0.01
0.1
1
C4 (PPM)
1E-4
0.001
0.01
0.1
1
Gas Test
DOL: med-lt gy to gy-bl, microxln,hd, blky, wi PYRC SLTST: med-dk gy, lam, mnr o blebs, mnr min flor, wk resdl cut from mnr bitns blebs
SS: lt gy, f gr mnr
DOL: med-lt gy to gy-bl, microxln,hd, blky, wi PYRC SLTST: med-dk gy, lam, mnr min flor, wi SS: lt gy-lt brn, f gr, rnd, no cut
DOL: med-lt gy to lt brn, microxln,hd, blky, v calc wi tr PYRC SLTST: med-dk gy, lam, strong min flor, no cut
DOL: med-lt gy to lt brn, microxln,hd, blky, v calc wi tr PYRC SLTST:

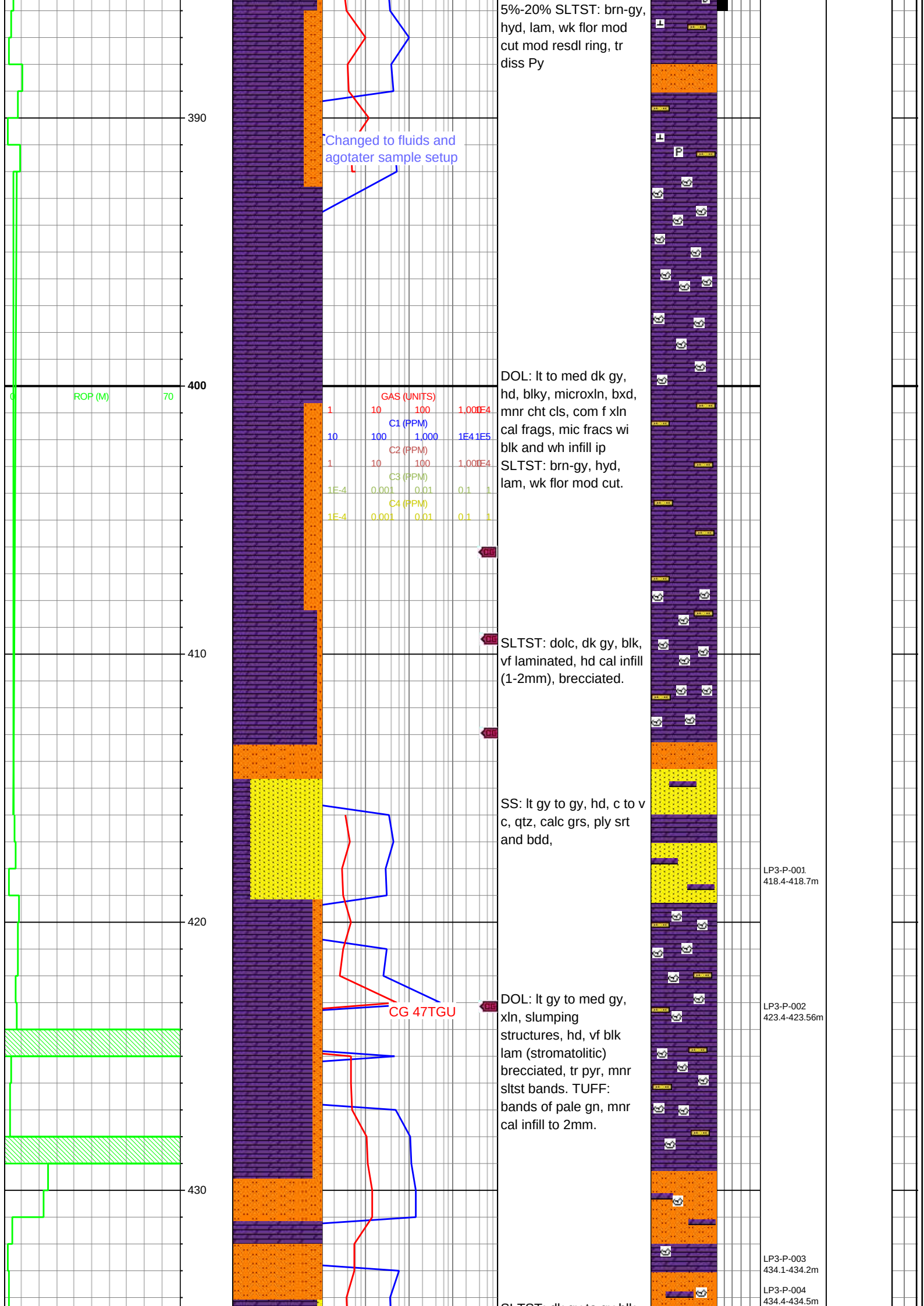

med-dk gy, lam, strong min flor, no cut
PYRC SLTST: med-dk gy, lam, strong min flor, no cut DOL: med-lt gy to lt brn, microxln,hd, blky, v calc
150
160
DOL: med-lt gy to lt brn, microxln,hd, blky, v calc wi tr PYRC SLTST: med-dk gy, lam, tr min flor, no cut
Gas Test
170
DOL: as abv, mnr dk gy-blk SILTST.
DOL: v lt gy-med gy, lt brn-gy to med brn, hd, blky, microxln, calc, xln cal, tr min flor, no cut, nvp, wi PYRC SLTST: gy-blk to med gy, v hd, blky, com pyr viens, lam ip,
180
BRECT DOL: minor, buff to lk gy, lt grn ang cls cmt sup, calc, minor
190

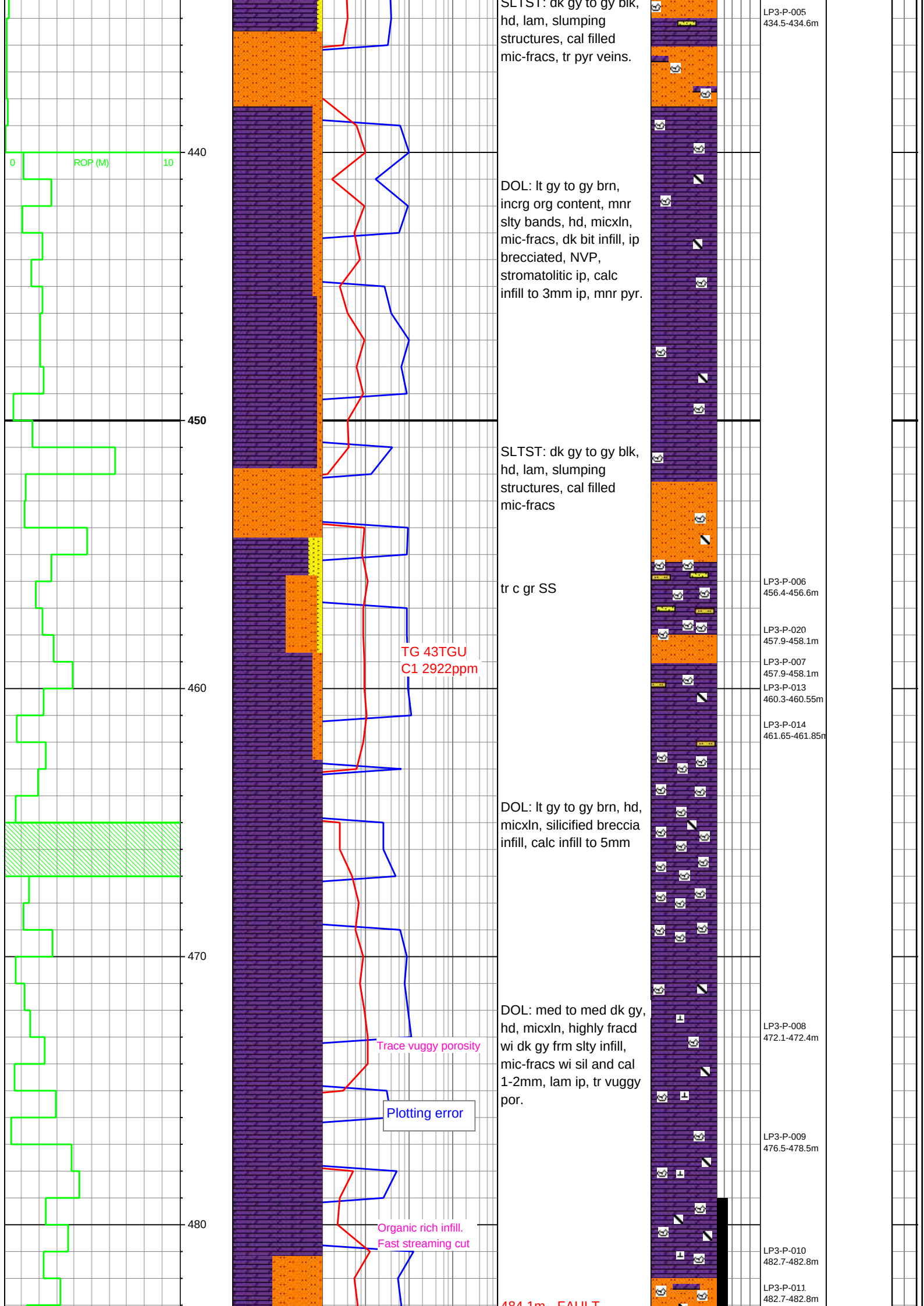

0
ROP (M
70
200
210
220
230
GAS (UNITS)
1
10
100
1,000
1E4
C1 (PPM)
10
100
1,000
1E4
1E5
C2 (PPM)
1
10
100
1,000
1E4
C3 (PPM)
1E-4
0.001
0.01
0.1
1
C4 (PPM)
1E-4
0.001
0.01
0.1
1
SS:bf to lt brn, f gr sr, dolc cmt
DOL: v lt gy-med gy, lt brn-gy to med brn, hd, blky, microxln, calc, xln cal, tr min flor, no cut, nvp, wi PYRC SLTST: gy-blk to med gy, v hd, blky, com pyr viens, lam ip,
DOL: lt olv gy to lt gy, mnr med dk gy brn, hd, blky, microxln, calc, com cal, strong min flor, no cut, nvp,rare PYRC SLTST
SLTST: lam ip, mnr cal veins, weakly pyrc
SLTST: dk gy to gy-blk, hd, blky, lam ip, mnr mass pyr frags, mnr diss pyr wi DOL: lt olv gy to gy-blk to med dk brn, hd, blky, microxln, calc, mnr cal, strong min flor

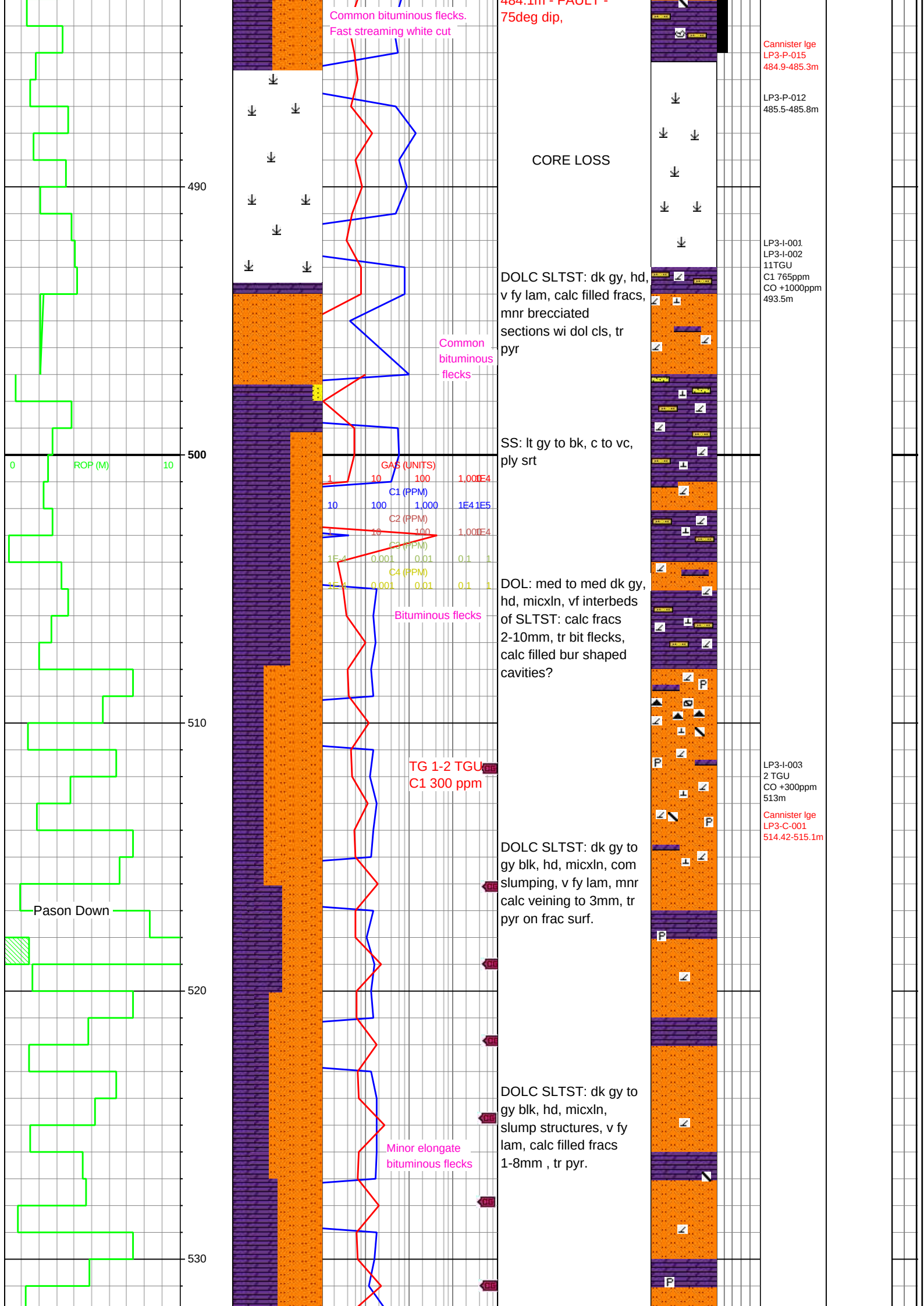

240
250
260
270
280
Gas Test
CG 13 TGU
580ppm Varian
after unload
CG 23 TGU
C1 282ppm ML
CG 14 TGU
CG 27 TGU
CG 75 TGU
C1 3041ppm Varian
DOL: med gy, hd, blky, microxln, calc, tr pyr
DOL: lt gy, gy-blk, med brn, olv gy, mot tex, hd, blky, microxln, calc, bitns flecks, com fractures, mnr brect, lam ip, tr oil flor (3%), bri spd yel , mod bri residual ring, nil in normal lt
DOL: med gy, mnr brn-gy, hd, blky, microxln, calc, tr min flor, no cut
DOL: lt gy, gy-blk, med brn, olv gy, mot xln tex, hd, blky, microxln to xln, calc, bitns flecks, com fractures, mnr brect, lam ip, tr oil flor (2%), bri spd yel , mod bri slow milky cut, mod bri residual ring, nil in normal lt
DOL: med gy to lt brn

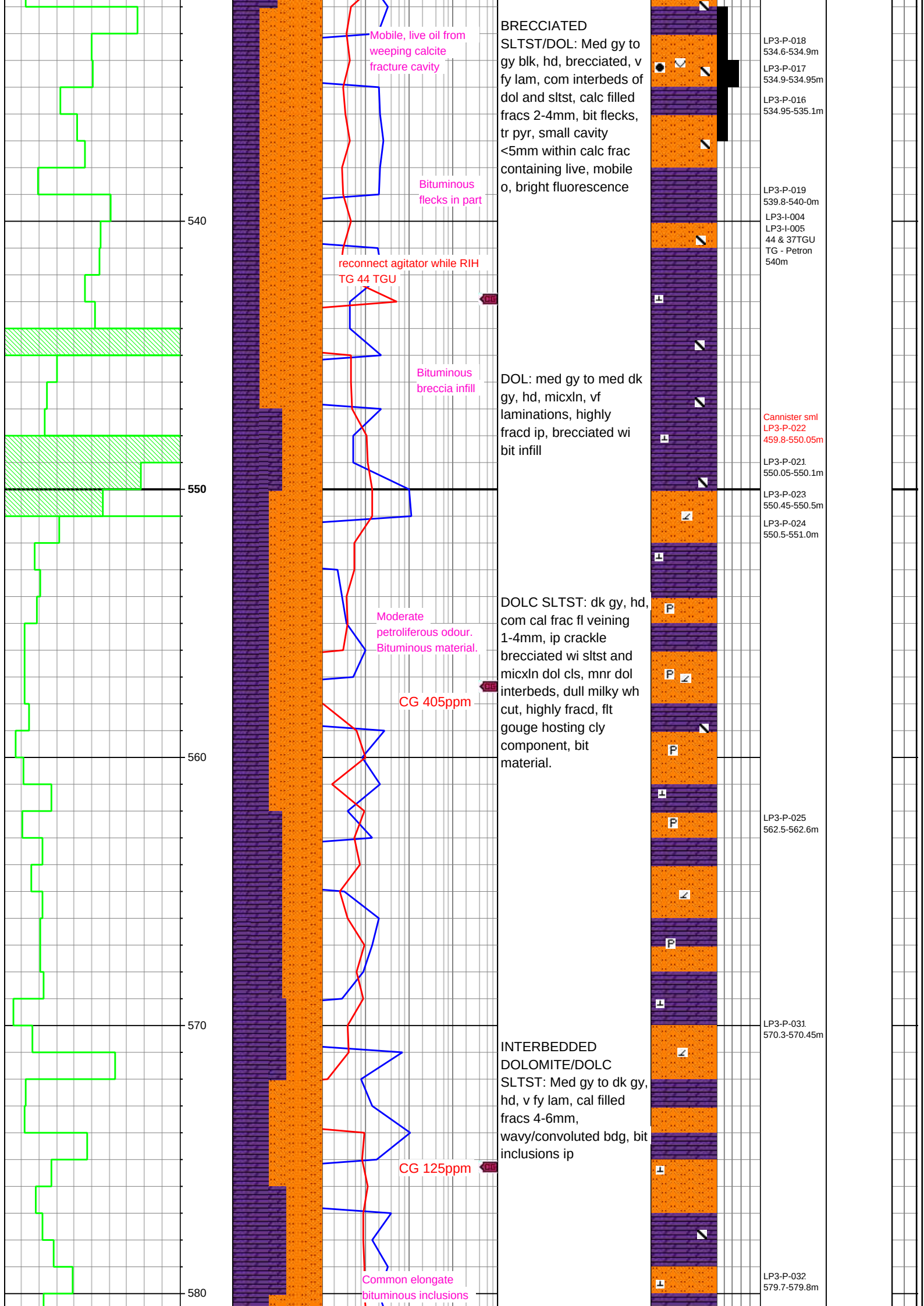

290
300
310
320
330
0
ROP (M)
70
HWT
casing
301.3m
GAS (UNITS)
1
10
100
1,000
1E4
C1 (PPM)
10
100
1,000
1E4
1E5
C2 (PPM)
1
10
100
1,000
1E4
DTG 22 TGU
1E-4
0.001
0.01
0.1
1
C4 (PPM)
1E-4
0.001
0.01
0.1
1
CG 117 TGU
C1 1385ppm ML
C1 5600ppm Varian
CG 77 TGU
CG 43 TGU
Gas Test
CG 11TGU
CG 11TGU
CG 19TGU
gy, mnr dk gy, hd, blky, microxln, calc, com fi= xln cal frags, mic fracs ip, no flor
DOL: med gy to lt brn gy, mnr dk gy, hd, blky, microxln, calc, com f xln cal frags, mic fracs ip, no flor
DOL: med gy to lt brn gy, mnr dk gy, hd, blky, microxln, calc, com f xln cal frags, mic fracs ip, wi mnr SLTST: brn-gy, hyd, lam, wk flos mod cut
DOL: lt gy - gy, gy-gn ip, hd, blky, microxln, calc. no flor
SLTST: incrg brn-gy, hd, lam
DOL: med gy to lt brn gy, mnr dk gy, hd, blky, microxln, calc, com f xln cal frags, mic fracs ip, wi 30% SLTST: brn-gy, hyd, lam, wk flor mod cut mod resdl ring

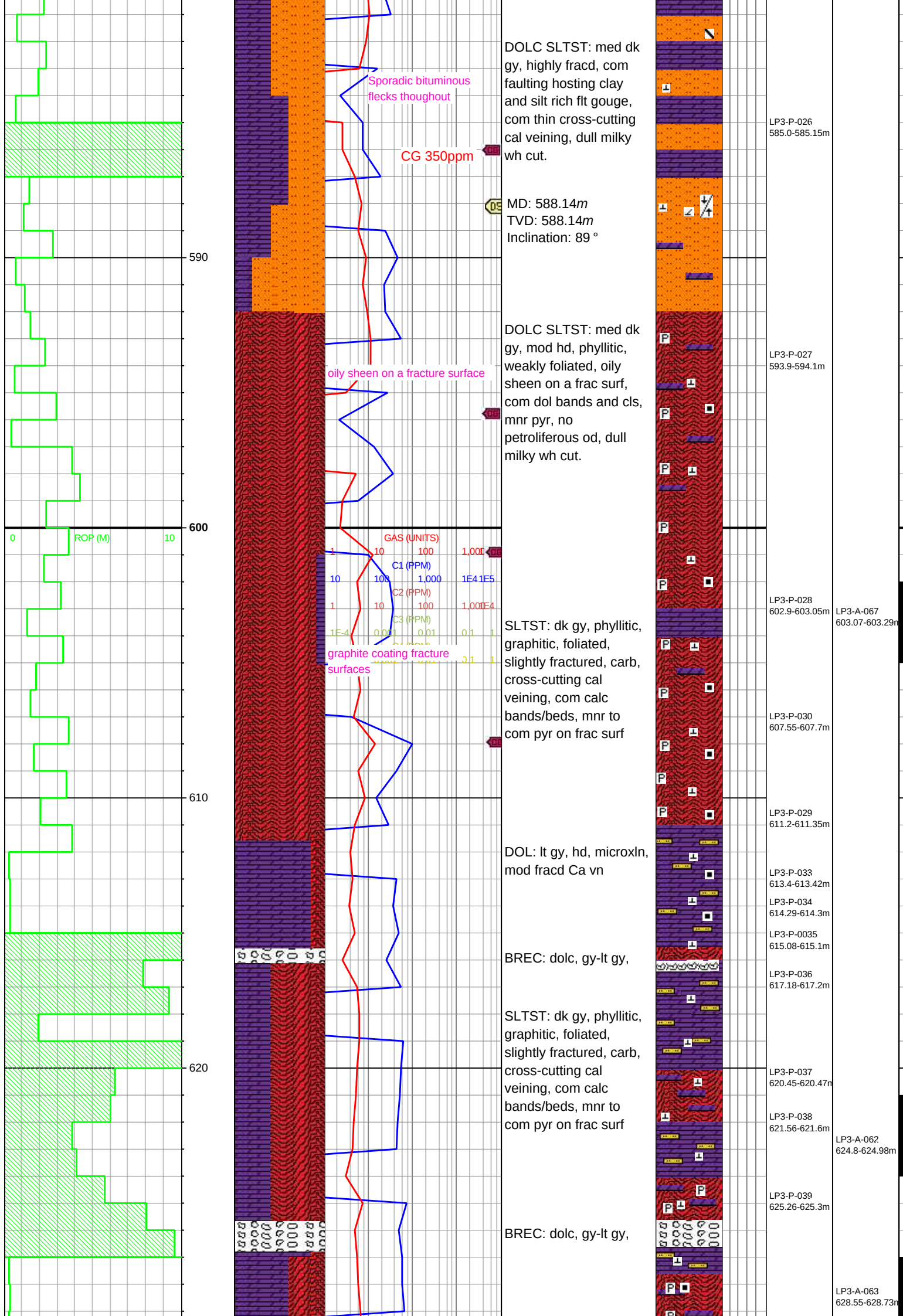

340
350
360
370
380
CG 23TGU
C1 2052ppm
CG 18TGU
CG 26TGU
CG 23TGU
CG 23TGU
CG 36TGU
Petron CG 19TGU
(1%=50TGU)
C1 945ppm Varian
CG 22TGU
C1 738ppm
TG 51TGU
DOL: med gy to lt brn gy, mnr dk gy, hd, blky, microxln, calc, com f xln cal frags, mic fracs wi blk infill ip, wi 5%-15% DOL: lt grn, tuf wi 5%-10% SLTST: brn-gy, hyd, lam, wk flor mod cut mod resdl ring, tr diss Py
DOL: med gy to lt brn gy, mnr dk gy, hd, blky, microxln, calc, com f xln cal frags, mic fracs wi blk infill ip, wi 5%-15% DOL: lt grn, tuf wi 5%-10% SLTST: brn-gy, hyd, lam, wk flor mod cut mod resdl ring, tr diss Py
DOL: med gy to lt brn gy, mnr dk gy, hd, blky, microxln, calc, com f xln cal frags, mic fracs wi blk infill ip, wi 5%-15% DOL: lt grn, tuf wi

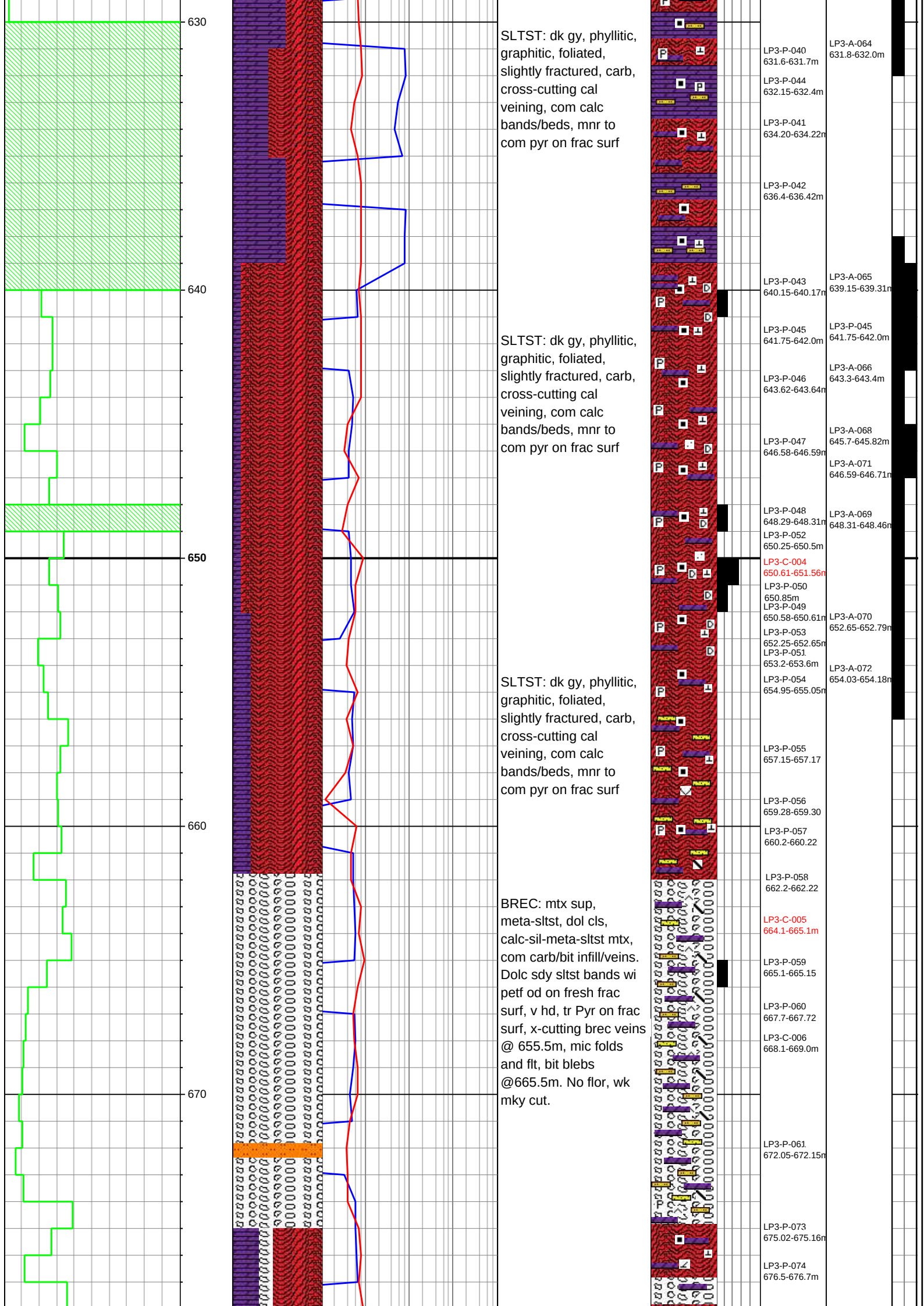

5%-20% SLTST: brn-gy, hyd, lam, wk flor mod cut mod resdl ring, tr diss Py
390
Changed to fluids and agotater sample setup
400
ROP (M)
70
GAS (UNITS)
1
10
100
1,000
1E4
C1 (PPM)
10
100
1,000
1E4
1E5
C2 (PPM)
1
10
100
1,000
1E4
C3 (PPM)
1E-4
0.001
0.01
0.1
1
C4 (PPM)
1E-4
0.001
0.01
0.1
1
DOL: lt to med dk gy, hd, blky, microxln, bxd, mnr cht cls, com f xln cal frags, mic fracs wi blk and wh infill ip
SLTST: brn-gy, hyd, lam, wk flor mod cut.
SLTST: dolc, dk gy, blk, vf laminated, hd cal infill (1-2mm), brecciated.
410
SS: lt gy to gy, hd, c to v c, qtz, calc grs, ply srt and bdd,
LP3-P-001
418.4-418.7m
420
CG 47TGU
DOL: lt gy to med gy, xln, slumping structures, hd, vf blk lam (stromatolitic) brecciated, tr pyr, mnr sltst bands. TUFF: bands of pale gn, mnr cal infill to 2mm.
LP3-P-002
423.4-423.56m
430
LP3-P-003
434.1-434.2m
LP3-P-004
434.4-434.5m

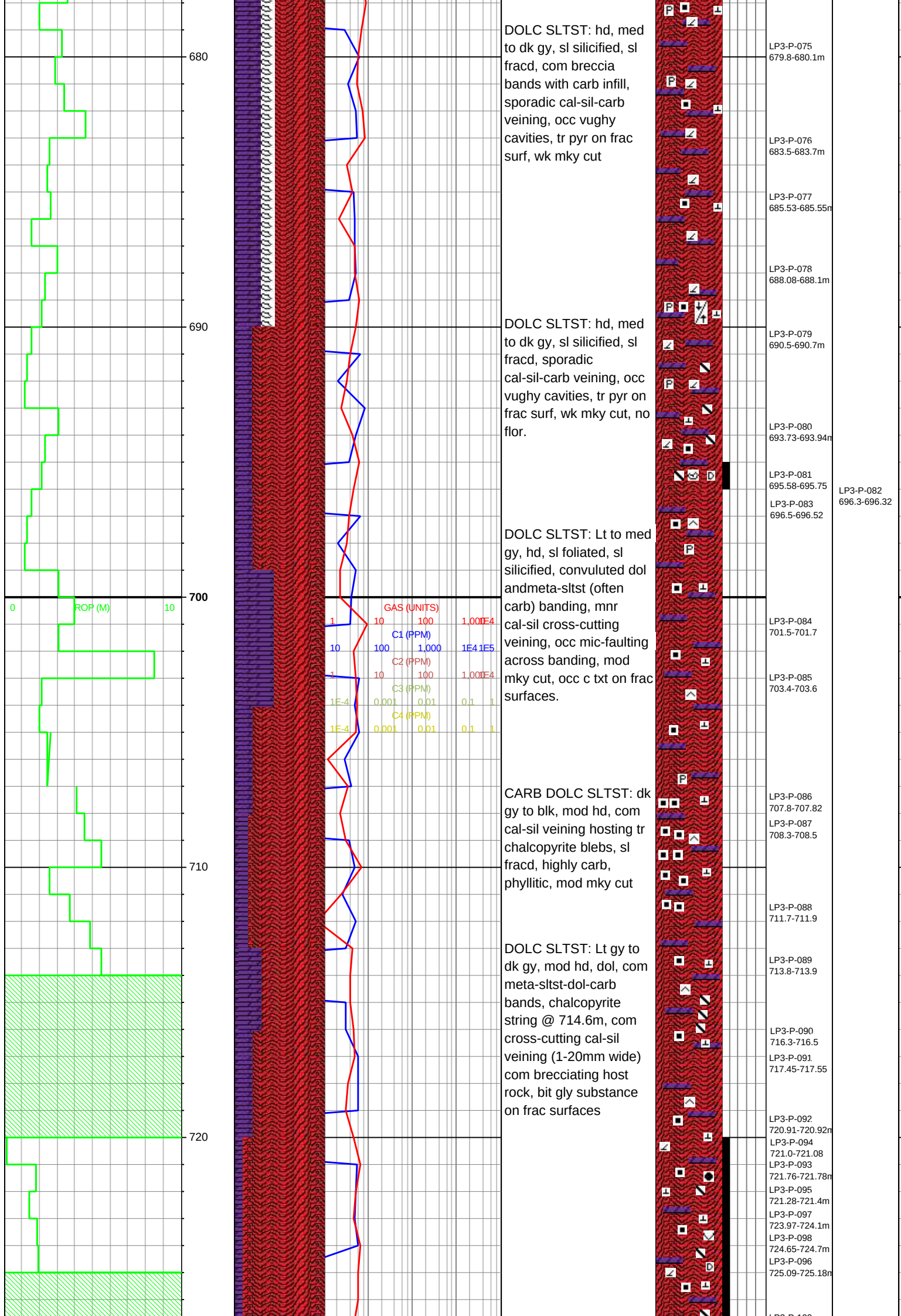

0
ROP (M)
10
440
450
460
470
480
SLTST: dk gy to gy blk, hd, lam, slumping structures, cal filled mic-fracs, tr pyr veins.
DOL: lt gy to gy brn, incrg org content, mnr slty bands, hd, micxln, mic-fracs, dk bit infill, ip brecciated, NVP, stromatolitic ip, calc infill to 3mm ip, mnr pyr.
SLTST: dk gy to gy blk, hd, lam, slumping structures, cal filled mic-fracs
tr c gr SS
TG 43TGU
C1 2922ppm
DOL: lt gy to gy brn, hd, micxln, silicified breccia infill, calc infill to 5mm
DOL: med to med dk gy, hd, micxln, highly fracd wi dk gy frm slty infill, mic-fracs wi sil and cal 1-2mm, lam ip, tr vuggy por.
Trace vuggy porosity
Plotting error
Organic rich infill.
Fast streaming cut
484.1m FAULT
LP3-P-005
434.5-434.6m
LP3-P-006
456.4-456.6m
LP3-P-020
457.9-458.1m
LP3-P-007
457.9-458.1m
LP3-P-013
460.3-460.55m
LP3-P-014
461.65-461.85m
LP3-P-008
472.1-472.4m
LP3-P-009
476.5-478.5m
LP3-P-010
482.7-482.8m
LP3-P-011
482.7-482.8m

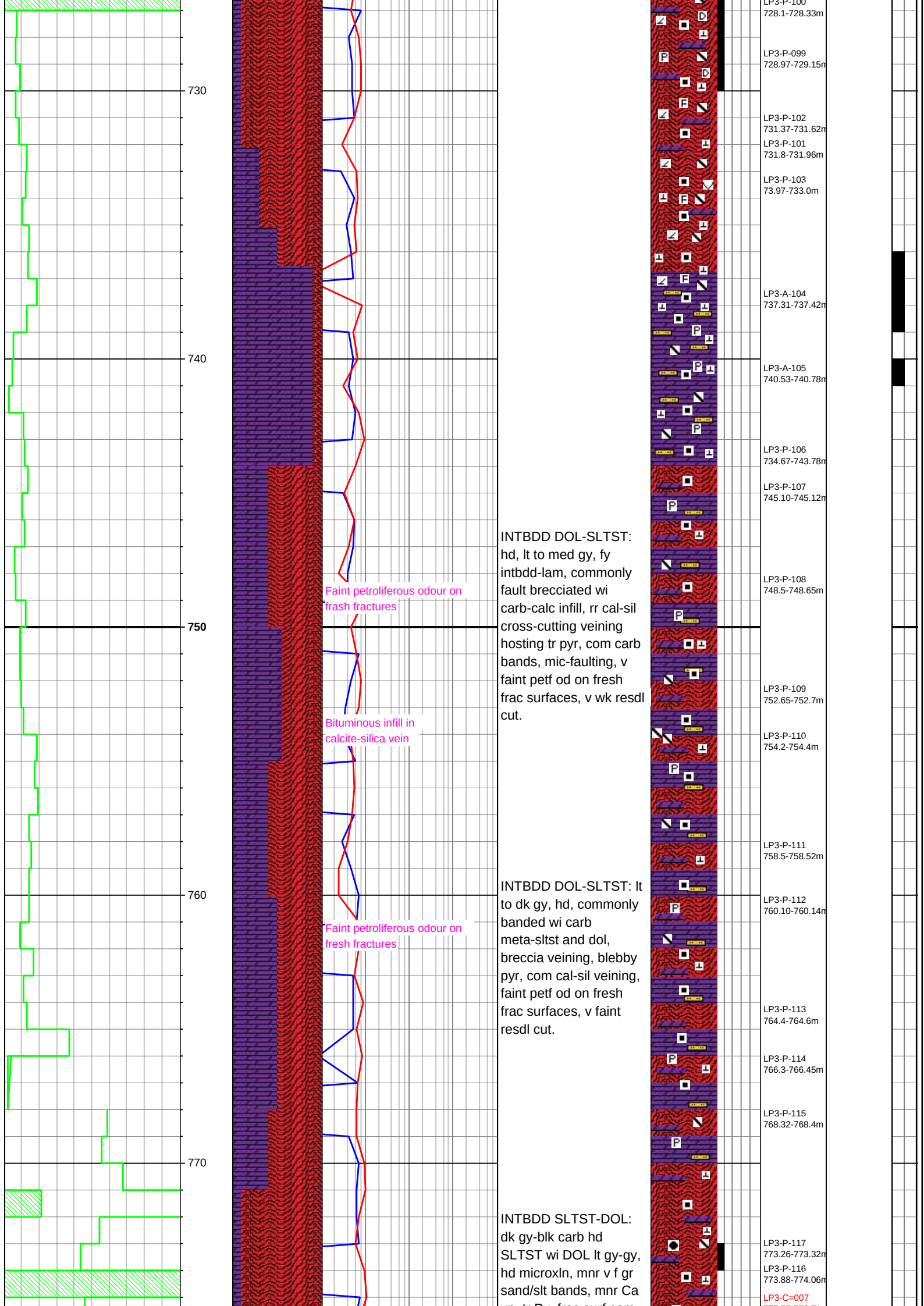

484.1m - FAULT - 75deg dip,
Common bituminous flecks. Fast streaming white cut
CORE LOSS
Cannister lge LP3-P-015 484.9-485.3m
LP3-P-012 485.5-485.8m
LP3-I-001 LP3-I-002 11TGU C1 765ppm CO +1000ppm 493.5m
DOLC SLTST: dk gy, hd, v fy lam, calc filled fracs, mnr brecciated sections wi dol cls, tr pyr
Common bituminous flecks
SS: lt gy to bk, c to vc, ply srt
490
500
510
520
530
0
ROP (M)
10
GAS (UNITS)
1
10
100
1,000
1E4
C1 (PPM)
10
100
1,000
1E4
1E5
C2 (PPM)
10
100
1,000
1E4
C3 (PPM)
0.001
0.01
0.1
1
C4 (PPM)
0.001
0.01
0.1
1
DOL: med to med dk gy, hd, micxln, vf interbeds of SLTST: calc fracs 2-10mm, tr bit flecks, calc filled bur shaped cavities?
Bituminous flecks
TG 1-2 TGU C1 300 ppm
LP3-I-003 2 TGU CO +300ppm 513m
Cannister lge LP3-C-001 514.42-515.1m
DOLC SLTST: dk gy to gy blk, hd, micxln, com slumping, v fy lam, mnr calc veining to 3mm, tr pyr on frac surf.
Pason Down
DOLC SLTST: dk gy to gy blk, hd, micxln, slump structures, v fy lam, calc filled fracs 1-8mm , tr pyr.
Minor elongate bituminous flecks

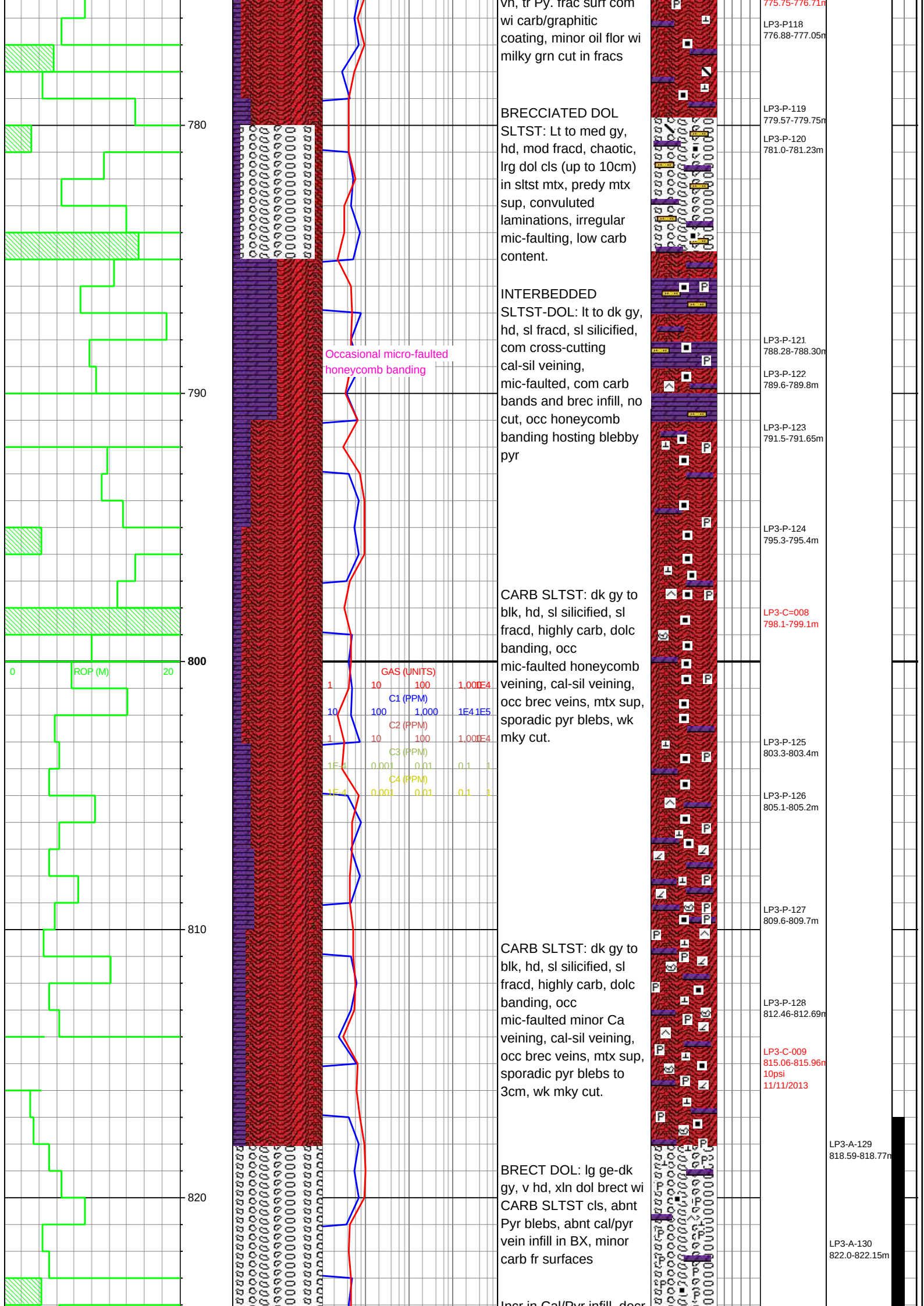

Mobile, live oil from weeping calcite fracture cavity
Bituminous flecks in part
reconnect agitator while RIH TG 44 TGU
Bituminous breccia infill
Moderate petroliferous odour. Bituminous material.
CG 405ppm
CG 125ppm
Common elongate bituminous inclusions
BRECCIATED SLTST/DOL: Med gy to gy blk, hd, brecciated, v fy lam, com interbeds of dol and sltst, calc filled fracs 2-4mm, bit flecks, tr pyr, small cavity <5mm within calc frac containing live, mobile o, bright fluorescence
DOL: med gy to med dk gy, hd, micxln, vf laminations, highly fracd ip, brecciated wi bit infill
DOLC SLTST: dk gy, hd, com cal frac fl veining 1-4mm, ip crackle brecciated wi sltst and micxln dol cls, mnr dol interbeds, dull milky wh cut, highly fracd, flt gouge hosting cly component, bit material.
INTERBEDDED DOLOMITE/DOLC SLTST: Med gy to dk gy, hd, v fy lam, cal filled fracs 4-6mm, wavy/convoluted bdg, bit inclusions ip
LP3-P-018 534.6-534.9m
LP3-P-017 534.9-534.95m
LP3-P-016 534.95-535.1m
LP3-P-019 539.8-540-0m
LP3-I-004
LP3-I-005
44 & 37TGU
TG - Petron
540m
Cannister sml
LP3-P-022
459.8-550.05m
LP3-P-021
550.05-550.1m
LP3-P-023
550.45-550.5m
LP3-P-024
550.5-551.0m
LP3-P-025
562.5-562.6m
LP3-P-031
570.3-570.45m
LP3-P-032
579.7-579.8m
540
550
560
570
580

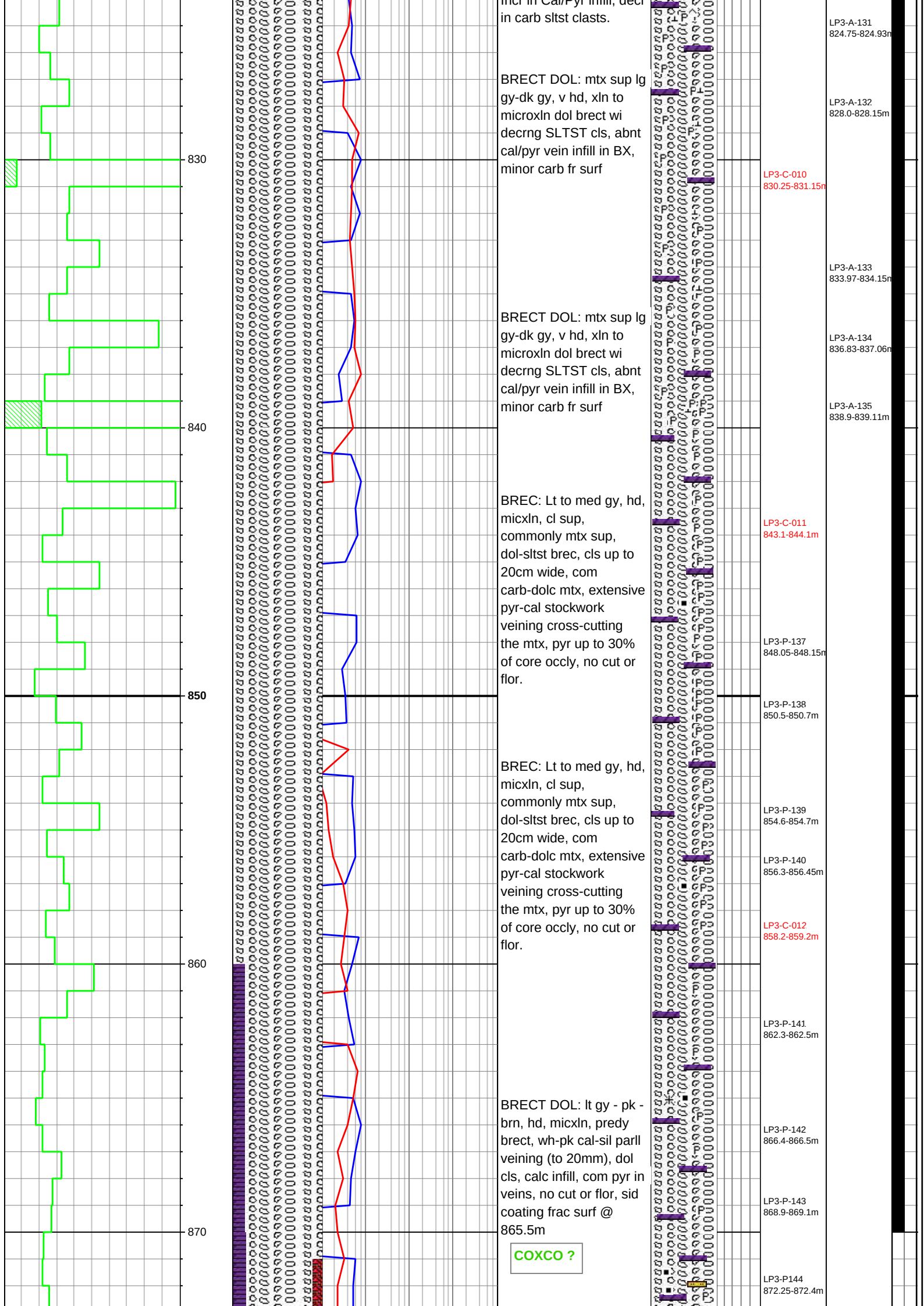

Sporadic bituminous flecks thoughout
CG 350ppm
MD: 588.14m
TVD: 588.14m
Inclination: 89 °
oily sheen on a fracture surface
graphite coating fracture surfaces
590
600
610
620
0
ROP (M)
10
GAS (UNITS)
1
10
100
1,000
C1 (PPM)
10
100
1,000
1E4
1E5
C2 (PPM)
1
10
100
1,000
1E4
C3 (PPM)
1E-4
0.001
0.01
0.1
1
DOLC SLTST: med dk gy, highly fracd, com faulting hosting clay and silt rich flt gouge, com thin cross-cutting cal veining, dull milky wh cut.
DOLC SLTST: med dk gy, mod hd, phyllitic, weakly foliated, oily sheen on a frac surf, com dol bands and cls, mnr pyr, no petroliferous od, dull milky wh cut.
SLTST: dk gy, phyllitic, graphitic, foliated, slightly fractured, carb, cross-cutting cal veining, com calc bands/beds, mnr to com pyr on frac surf
DOL: lt gy, hd, microxln, mod fracd Ca vn
BREC: dolc, gy-lt gy,
SLTST: dk gy, phyllitic, graphitic, foliated, slightly fractured, carb, cross-cutting cal veining, com calc bands/beds, mnr to com pyr on frac surf
BREC: dolc, gy-lt gy,
LP3-P-026 585.0-585.15m
LP3-P-027 593.9-594.1m
LP3-P-028 602.9-603.05m
LP3-A-067 603.07-603.29m
LP3-P-030 607.55-607.7m
LP3-P-029 611.2-611.35m
LP3-P-033 613.4-613.42m
LP3-P-034 614.29-614.3m
LP3-P-0035 615.08-615.1m
LP3-P-036 617.18-617.2m
LP3-P-037 620.45-620.47m
LP3-P-038 621.56-621.6m
LP3-A-062 624.8-624.98m
LP3-P-039 625.26-625.3m
LP3-A-063 628.55-628.73m

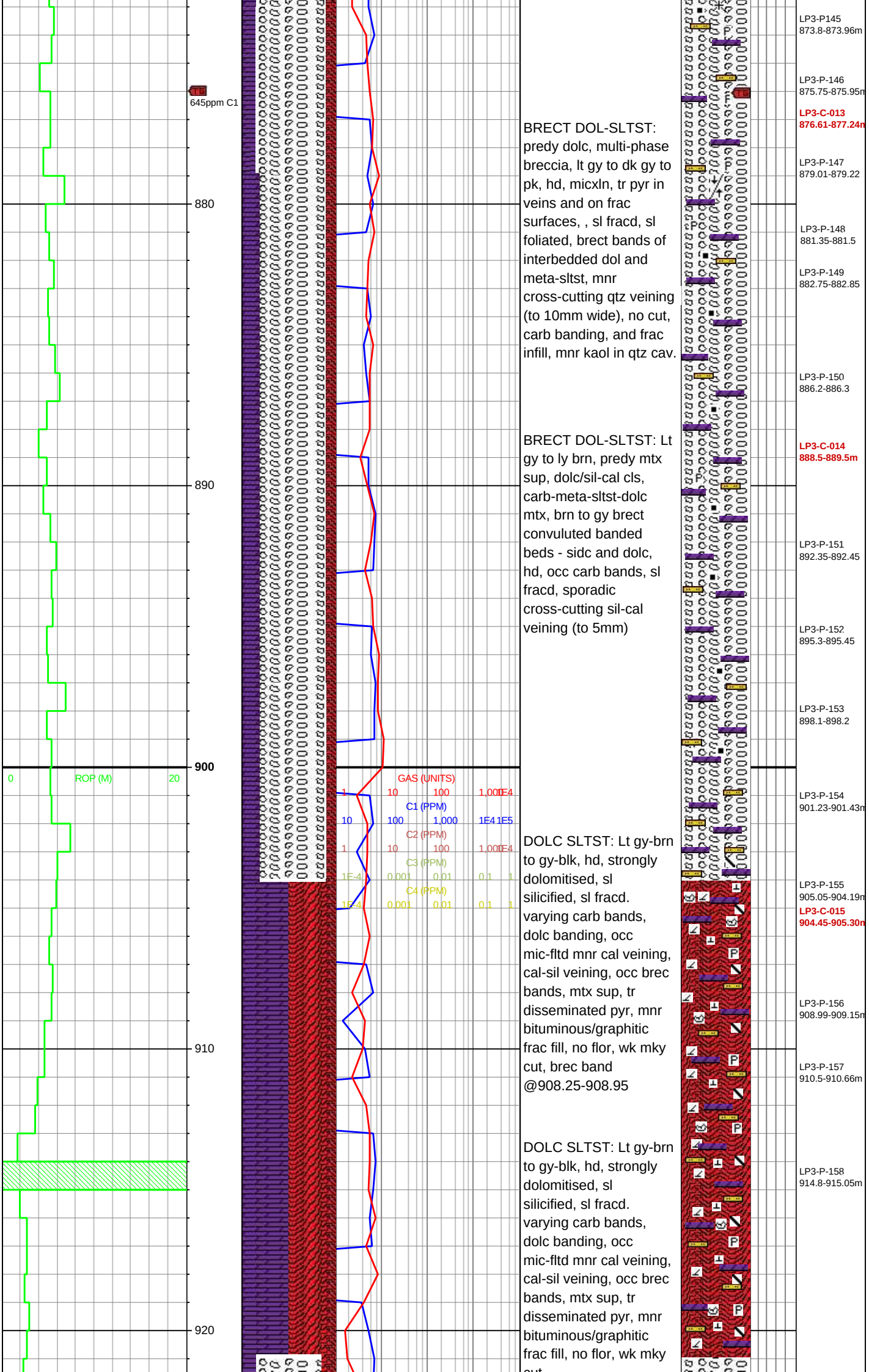

630
640
650
660
670
SLTST: dk gy, phyllitic, graphitic, foliated, slightly fractured, carb, cross-cutting cal veining, com calc bands/beds, mnr to com pyr on frac surf
SLTST: dk gy, phyllitic, graphitic, foliated, slightly fractured, carb, cross-cutting cal veining, com calc bands/beds, mnr to com pyr on frac surf
SLTST: dk gy, phyllitic, graphitic, foliated, slightly fractured, carb, cross-cutting cal veining, com calc bands/beds, mnr to com pyr on frac surf
BREC: mtx sup, meta-sltst, dol cls, calc-sil-meta-sltst mtx, com carb/bit infill/veins. Dolc sdy sltst bands wi petf od on fresh frac surf, v hd, tr Pyr on frac surf, x-cutting brec veins @ 655.5m, mic folds and flt, bit blebs @665.5m. No flor, wk mky cut.
LP3-P-040 631.6-631.7m
LP3-P-044 632.15-632.4m
LP3-P-041 634.20-634.22m
LP3-P-042 636.4-636.42m
LP3-P-043 640.15-640.17m
LP3-P-045 641.75-642.0m
LP3-P-046 643.62-643.64m
LP3-P-047 646.58-646.59m
LP3-P-048 648.29-648.31m
LP3-P-052 650.25-650.5m
LP3-C-004 650.61-651.56m
LP3-P-050 650.85m
LP3-P-049 650.58-650.61m
LP3-P-053 652.25-652.65m
LP3-P-051 653.2-653.6m
LP3-P-054 654.95-655.05m
LP3-P-055 657.15-657.17
LP3-P-056 659.28-659.30
LP3-P-057 660.2-660.22
LP3-P-058 662.2-662.22
LP3-C-005 664.1-665.1m
LP3-P-059 665.1-665.15
LP3-P-060 667.7-667.72
LP3-C-006 668.1-669.0m
LP3-P-061 672.05-672.15m
LP3-P-073 675.02-675.16m
LP3-P-074 676.5-676.7m
LP3-A-064 631.8-632.0m
LP3-A-065 639.15-639.31m
LP3-P-045 641.75-642.0m
LP3-A-066 643.3-643.4m
LP3-A-068 645.7-645.82m
LP3-A-071 646.59-646.71m
LP3-A-069 648.31-648.46m
LP3-A-070 652.65-652.79m
LP3-A-072 654.03-654.18m

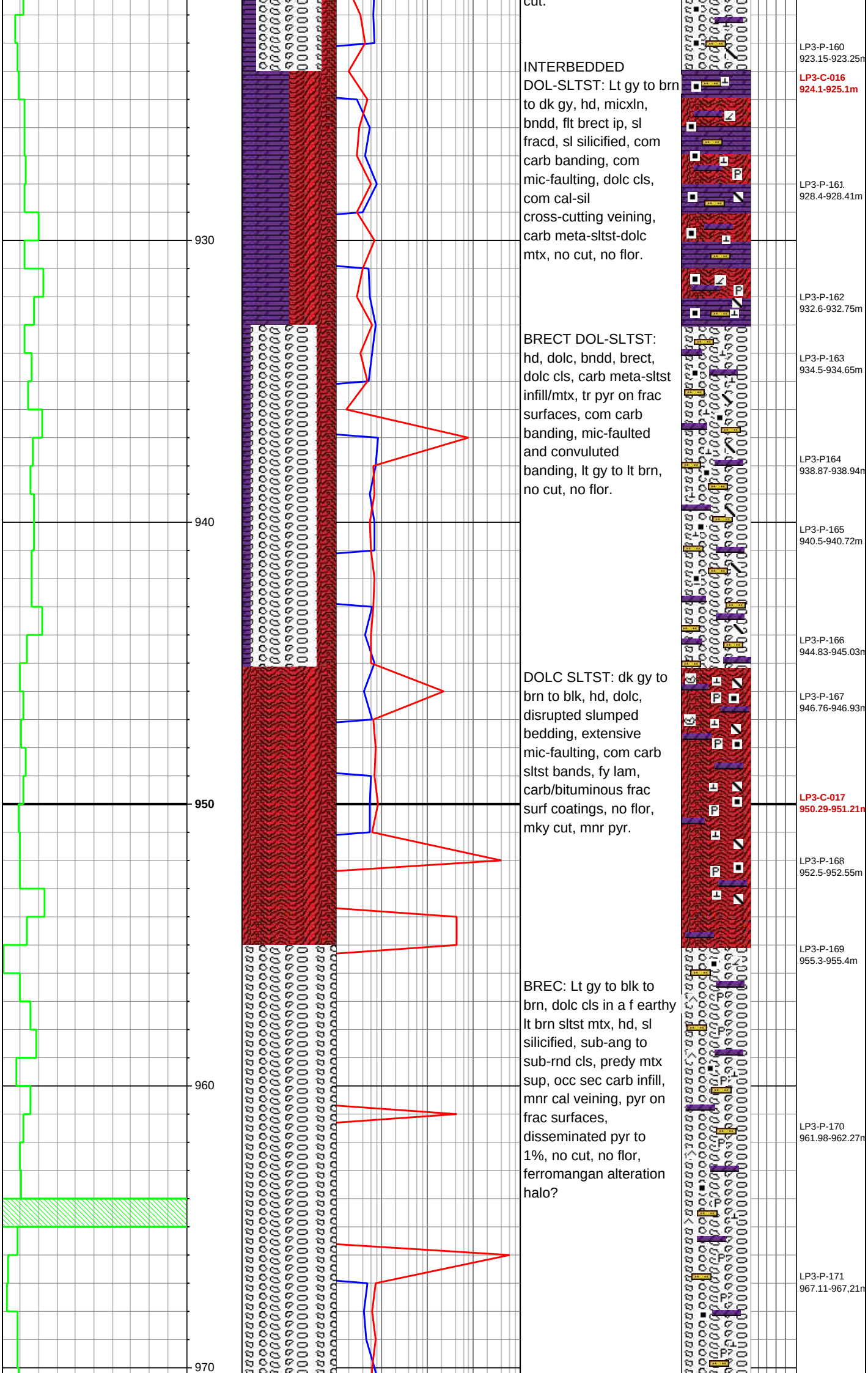

680
690
700
710
720
0
ROP (M)
10
GAS (UNITS)
1
10
100
1,000
1E4
C1 (PPM)
10
100
1,000
1E4
1E5
C2 (PPM)
1
10
100
1,000
1E4
C3 (PPM)
1E-4
0.001
0.01
0.1
1
C4 (PPM)
1E-4
0.001
0.01
0.1
1
DOLC SLTST: hd, med to dk gy, sl silicified, sl fracd, com breccia bands with carb infill, sporadic cal-sil-carb veining, occ vughy cavities, tr pyr on frac surf, wk mky cut
DOLC SLTST: hd, med to dk gy, sl silicified, sl fracd, sporadic cal-sil-carb veining, occ vughy cavities, tr pyr on frac surf, wk mky cut, no flor.
DOLC SLTST: Lt to med gy, hd, sl foliated, sl silicified, convuluted dol andmeta-sltst (often carb) banding, mnr cal-sil cross-cutting veining, occ mic-faulting across banding, mod mky cut, occ c txt on frac surfaces.
CARB DOLC SLTST: dk gy to blk, mod hd, com cal-sil veining hosting tr chalcopyrite blebs, sl fracd, highly carb, phyllitic, mod mky cut
DOLC SLTST: Lt gy to dk gy, mod hd, dol, com meta-sltst-dol-carb bands, chalcopyrite string @ 714.6m, com cross-cutting cal-sil veining (1-20mm wide) com brecciating host rock, bit gly substance on frac surfaces
LP3-P-075
679.8-680.1m
LP3-P-076
683.5-683.7m
LP3-P-077
685.53-685.55m
LP3-P-078
688.08-688.1m
LP3-P-079
690.5-690.7m
LP3-P-080
693.73-693.94m
LP3-P-081
695.58-695.75
LP3-P-083
696.5-696.52
LP3-P-082
696.3-696.32
LP3-P-084
701.5-701.7
LP3-P-085
703.4-703.6
LP3-P-086
707.8-707.82
LP3-P-087
708.3-708.5
LP3-P-088
711.7-711.9
LP3-P-089
713.8-713.9
LP3-P-090
716.3-716.5
LP3-P-091
717.45-717.55
LP3-P-092
720.91-720.92m
LP3-P-094
721.0-721.08
LP3-P-093
721.76-721.78m
LP3-P-095
721.28-721.4m
LP3-P-097
723.97-724.1m
LP3-P-098
724.65-724.7m
LP3-P-096
725.09-725.18m

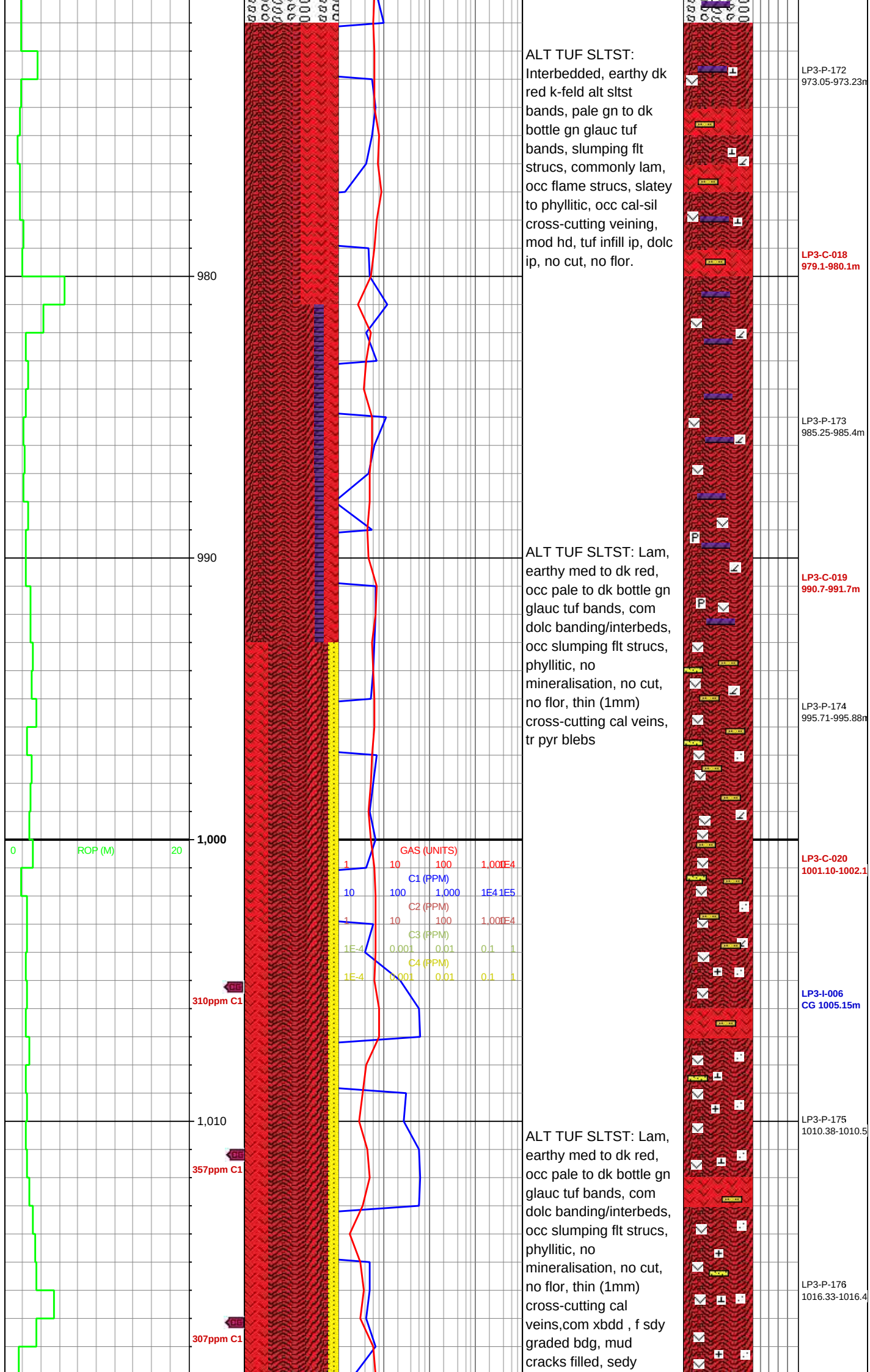

730
740
750
760
770
Faint petroliferous odour on frash fractures
Bituminous infill in calcite-silica vein
Faint petroliferous odour on fresh fractures
INTBDD DOL-SLTST: hd, lt to med gy, fy intbdd-lam, commonly fault brecciated wi carb-calc infill, rr cal-sil cross-cutting veining hosting tr pyr, com carb bands, mic-faulting, v faint petf od on fresh frac surfaces, v wk resdl cut.
INTBDD DOL-SLTST: lt to dk gy, hd, commonly banded wi carb meta-sltst and dol, breccia veining, blebby pyr, com cal-sil veining, faint petf od on fresh frac surfaces, v faint resdl cut.
INTBDD SLTST-DOL: dk gy-blk carb hd SLTST wi DOL lt gy-gy, hd microxln, mnr v f gr sand/slt bands, mnr Ca
LP3-P-100 728.1-728.33m
LP3-P-099 728.97-729.15m
LP3-P-102 731.37-731.62m
LP3-P-101 731.8-731.96m
LP3-P-103 73.97-733.0m
LP3-A-104 737.31-737.42m
LP3-A-105 740.53-740.78m
LP3-P-106 734.67-743.78m
LP3-P-107 745.10-745.12m
LP3-P-108 748.5-748.65m
LP3-P-109 752.65-752.7m
LP3-P-110 754.2-754.4m
LP3-P-111 758.5-758.52m
LP3-P-112 760.10-760.14m
LP3-P-113 764.4-764.6m
LP3-P-114 766.3-766.45m
LP3-P-115 768.32-768.4m
LP3-P-117 773.26-773.32m
LP3-P-116 773.88-774.06m
LP3-C=007

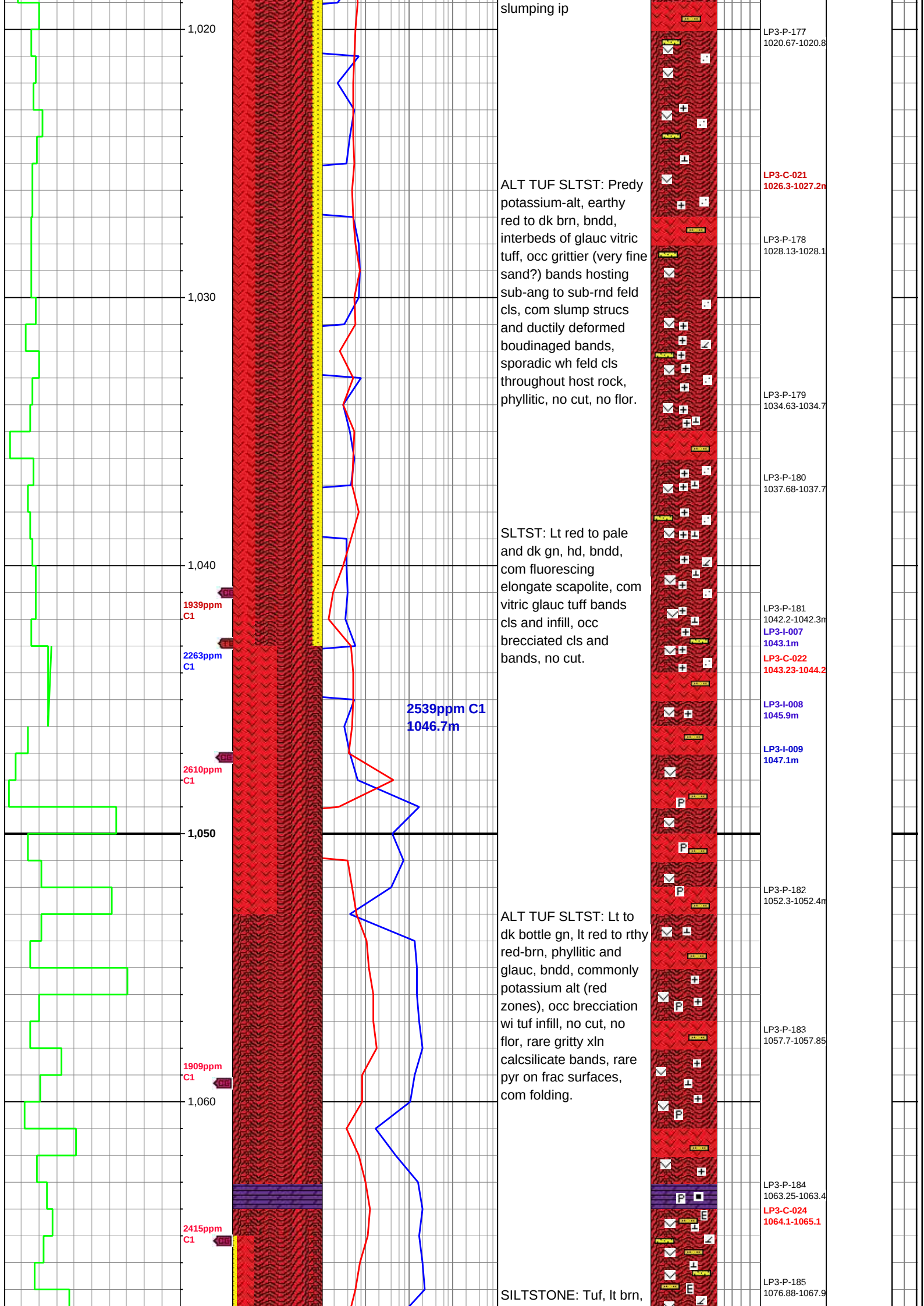

780
790
800
810
820
0
ROP (M)
20
GAS (UNITS)
1
10
100
1,000
1E4
C1 (PPM)
10
100
1,000
1E4
1E5
C2 (PPM)
1
10
100
1,000
1E4
C3 (PPM)
1E-4
0.001
0.01
0.1
1
C4 (PPM)
1E-4
0.001
0.01
0.1
1
Occasional micro-faulted honeycomb banding
vh, tr Py. frac surf com wi carb/graphitic coating, minor oil flor wi milky grn cut in fracs
BRECCIATED DOL SLTST: Lt to med gy, hd, mod fracd, chaotic, lrg dol cls (up to 10cm) in sltst mtx, predy mtx sup, convuluted laminations, irregular mic-faulting, low carb content.
INTERBEDDED SLTST-DOL: lt to dk gy, hd, sl fracd, sl silicified, com cross-cutting cal-sil veining, mic-faulted, com carb bands and brec infill, no cut, occ honeycomb banding hosting blebby pyr
CARB SLTST: dk gy to blk, hd, sl silicified, sl fracd, highly carb, dolc banding, occ mic-faulted honeycomb veining, cal-sil veining, occ brec veins, mtx sup, sporadic pyr blebs, wk mky cut.
CARB SLTST: dk gy to blk, hd, sl silicified, sl fracd, highly carb, dolc banding, occ mic-faulted minor Ca veining, cal-sil veining, occ brec veins, mtx sup, sporadic pyr blebs to 3cm, wk mky cut.
BRECT DOL: lg ge-dk gy, v hd, xln dol brect wi CARB SLTST cls, abnt Pyr blebs, abnt cal/pyr vein infill in BX, minor carb fr surfaces
775.75-776.71m
LP3-P118
776.88-777.05m
LP3-P-119
779.57-779.75m
LP3-P-120
781.0-781.23m
LP3-P-121
788.28-788.30m
LP3-P-122
789.6-789.8m
LP3-P-123
791.5-791.65m
LP3-P-124
795.3-795.4m
LP3-C=008
798.1-799.1m
LP3-P-125
803.3-803.4m
LP3-P-126
805.1-805.2m
LP3-P-127
809.6-809.7m
LP3-P-128
812.46-812.69m
LP3-C-009
815.06-815.96m
10psi
11/11/2013
LP3-A-129
818.59-818.77m
LP3-A-130
822.0-822.15m

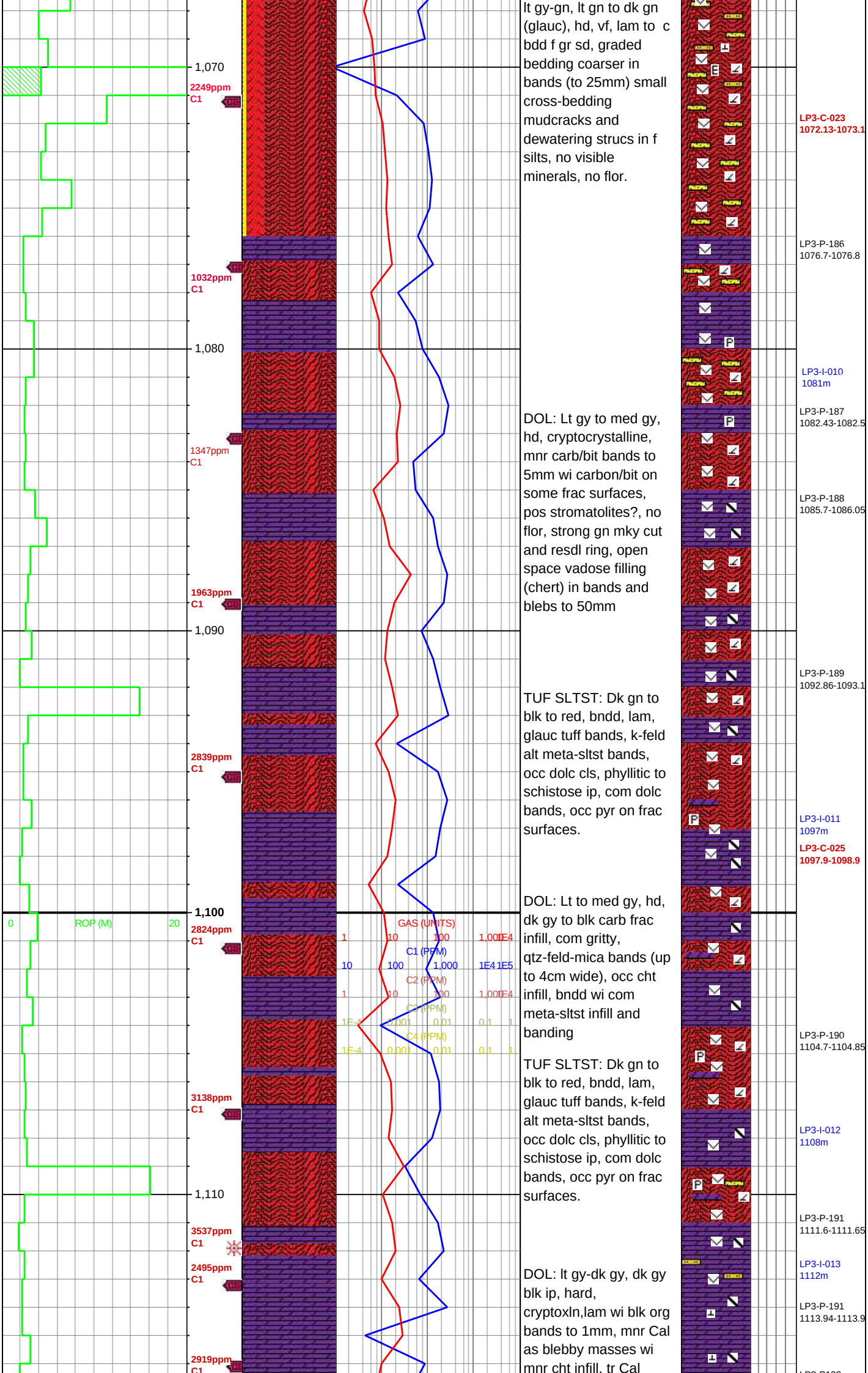

incl in Cal/Pyr infill, decl in carb sltst clasts.
BRECT DOL: mtx sup lg gy-dk gy, v hd, xln to microxln dol brect wi decrng SLTST cls, abnt cal/pyr vein infill in BX, minor carb fr surf
BRECT DOL: mtx sup lg gy-dk gy, v hd, xln to microxln dol brect wi decrng SLTST cls, abnt cal/pyr vein infill in BX, minor carb fr surf
BREC: Lt to med gy, hd, micxln, cl sup, commonly mtx sup, dol-sltst brec, cls up to 20cm wide, com carb-dolc mtx, extensive pyr-cal stockwork veining cross-cutting the mtx, pyr up to 30% of core occly, no cut or flor.
BREC: Lt to med gy, hd, micxln, cl sup, commonly mtx sup, dol-sltst brec, cls up to 20cm wide, com carb-dolc mtx, extensive pyr-cal stockwork veining cross-cutting the mtx, pyr up to 30% of core occly, no cut or flor.
BRECT DOL: lt gy - pk - brn, hd, micxln, predy brect, wh-pk cal-sil parll veining (to 20mm), dol cls, calc infill, com pyr in veins, no cut or flor, sid coating frac surf @ 865.5m
COXCO ?
830
840
850
860
870
LP3-A-131 824.75-824.93m
LP3-A-132 828.0-828.15m
LP3-C-010 830.25-831.15m
LP3-A-133 833.97-834.15m
LP3-A-134 836.83-837.06m
LP3-A-135 838.9-839.11m
LP3-C-011 843.1-844.1m
LP3-P-137 848.05-848.15m
LP3-P-138 850.5-850.7m
LP3-P-139 854.6-854.7m
LP3-P-140 856.3-856.45m
LP3-C-012 858.2-859.2m
LP3-P-141 862.3-862.5m
LP3-P-142 866.4-866.5m
LP3-P-143 868.9-869.1m
LP3P144 872.25-872.4m

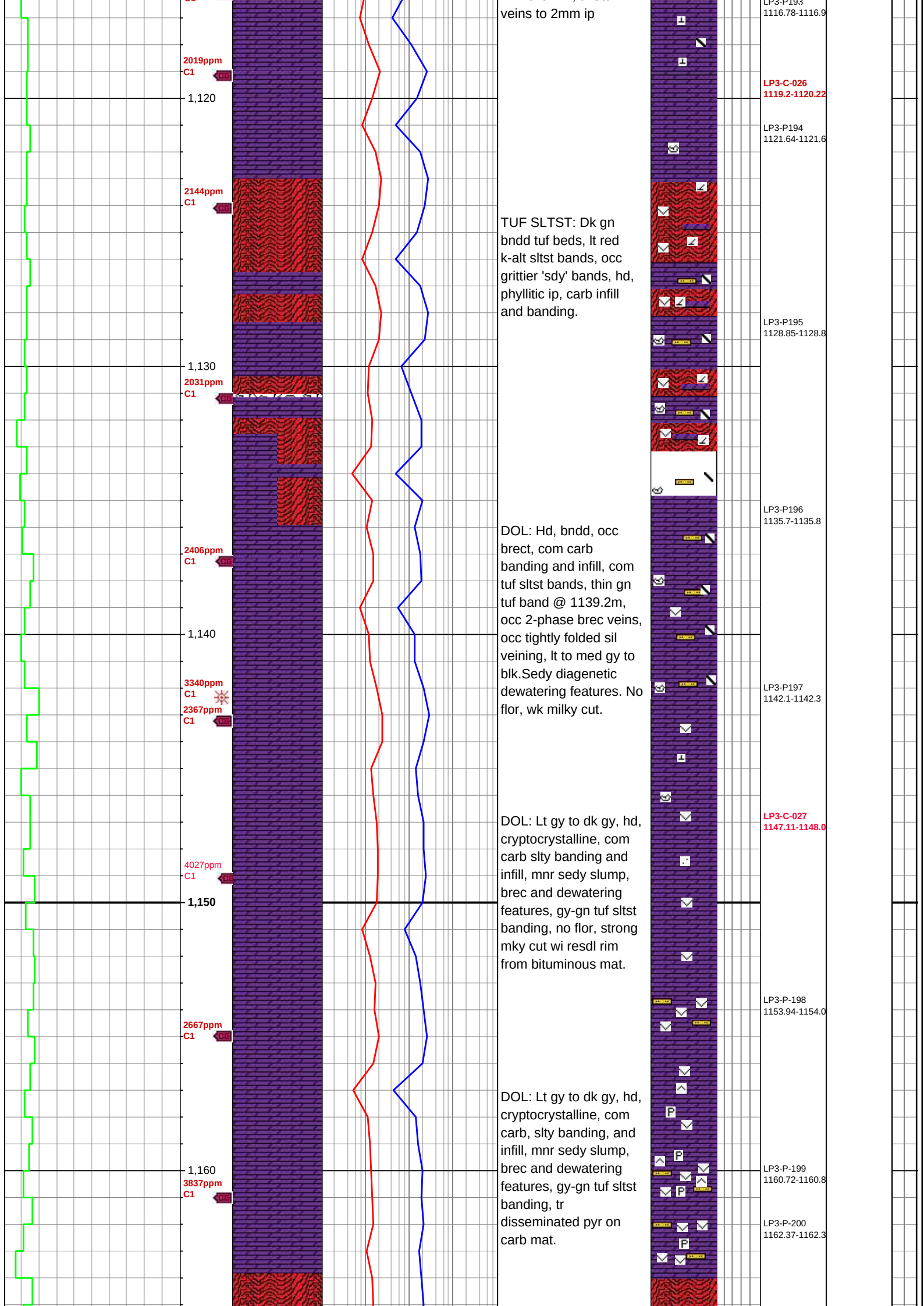

645ppm C1
880
890
900
910
920
0
ROP (M)
20
GAS (UNITS)
1
10
100
1,000
1E4
C1 (PPM)
10
100
1,000
1E4
1E5
C2 (PPM)
1
10
100
1,000
1E4
C3 (PPM)
1E-4
0.001
0.01
0.1
1
C4 (PPM)
1E-4
0.001
0.01
0.1
1
BRECT DOL-SLTST: predy dolc, multi-phase breccia, lt gy to dk gy to pk, hd, micxln, tr pyr in veins and on frac surfaces, , sl fracd, sl foliated, brect bands of interbedded dol and meta-sltst, mnr cross-cutting qtz veining (to 10mm wide), no cut, carb banding, and frac infill, mnr kaol in qtz cav.
BRECT DOL-SLTST: Lt gy to ly brn, predy mtx sup, dolc/sil-cal cls, carb-meta-sltst-dolc mtx, brn to gy brect convuluted banded beds - sidc and dolc, hd, occ carb bands, sl fracd, sporadic cross-cutting sil-cal veining (to 5mm)
DOLC SLTST: Lt gy-brn to gy-blk, hd, strongly dolomitised, sl silicified, sl fracd. varying carb bands, dolc banding, occ mic-fltd mnr cal veining, cal-sil veining, occ brec bands, mtx sup, tr disseminated pyr, mnr bituminous/graphitic frac fill, no flor, wk mky cut, brec band @908.25-908.95
DOLC SLTST: Lt gy-brn to gy-blk, hd, strongly dolomitised, sl silicified, sl fracd. varying carb bands, dolc banding, occ mic-fltd mnr cal veining, cal-sil veining, occ brec bands, mtx sup, tr disseminated pyr, mnr bituminous/graphitic frac fill, no flor, wk mky
LP3-P145
873.8-873.96m
LP3-P-146
875.75-875.95m
LP3-C-013
876.61-877.24m
LP3-P-147
879.01-879.22
LP3-P-148
881.35-881.5
LP3-P-149
882.75-882.85
LP3-P-150
886.2-886.3
LP3-C-014
888.5-889.5m
LP3-P-151
892.35-892.45
LP3-P-152
895.3-895.45
LP3-P-153
898.1-898.2
LP3-P-154
901.23-901.43m
LP3-P-155
905.05-904.19m
LP3-C-015
904.45-905.30m
LP3-P-156
908.99-909.15m
LP3-P-157
910.5-910.66m
LP3-P-158
914.8-915.05m

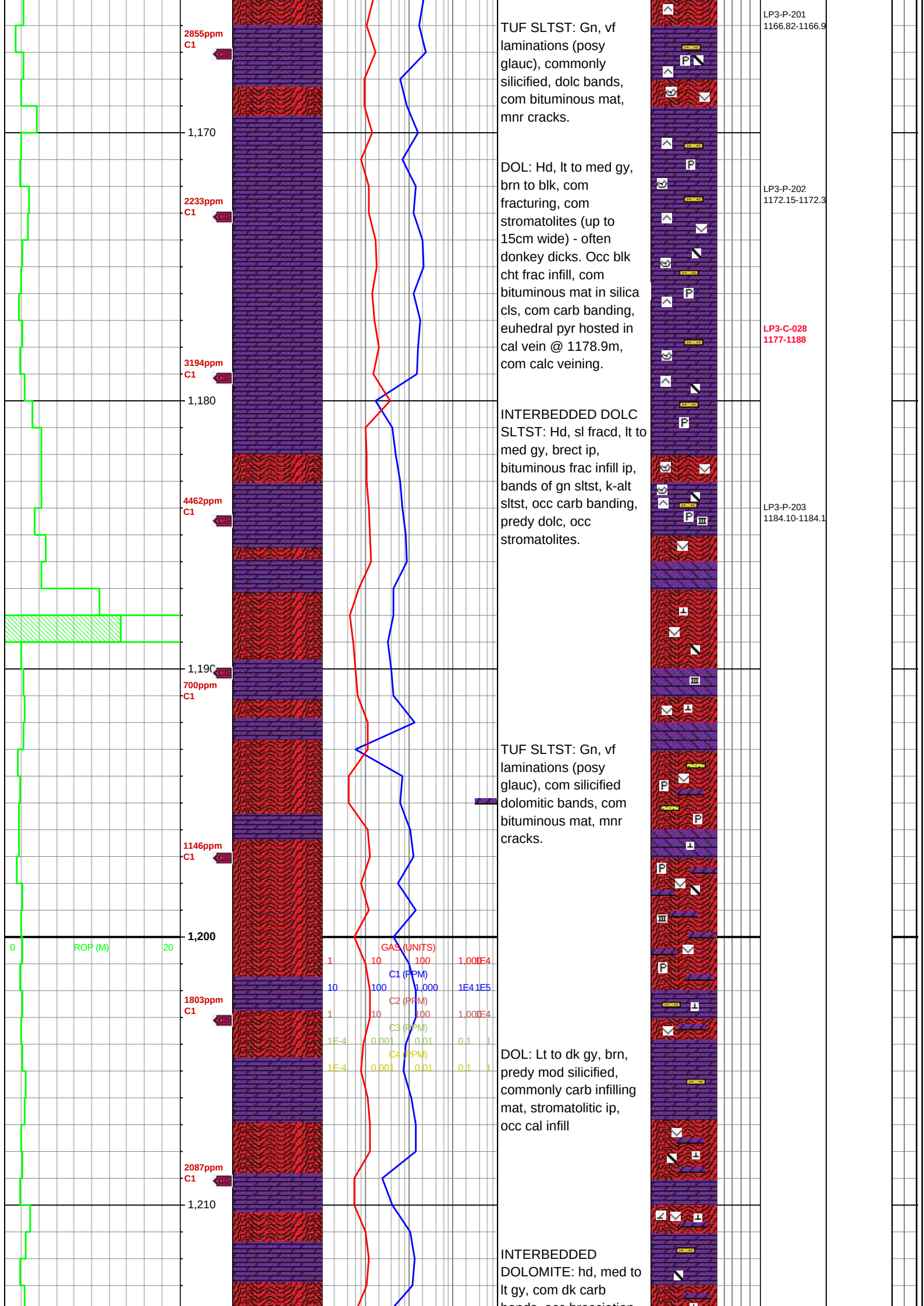

cut.
INTERBEDDED DOL-SLTST: Lt gy to brn to dk gy, hd, micxln, bndd, flt brect ip, sl fracd, sl silicified, com carb banding, com mic-faulting, dolc cls, com cal-sil cross-cutting veining, carb meta-sltst-dolc mtx, no cut, no flor.
BRECT DOL-SLTST: hd, dolc, bndd, brect, dolc cls, carb meta-sltst infill/mtx, tr pyr on frac surfaces, com carb banding, mic-faulted and convuluted banding, lt gy to lt brn, no cut, no flor.
DOLC SLTST: dk gy to brn to blk, hd, dolc, disrupted slumped bedding, extensive mic-faulting, com carb sltst bands, fy lam, carb/bituminous frac surf coatings, no flor, mky cut, mnr pyr.
BREC: Lt gy to blk to brn, dolc cls in a f earthy lt brn sltst mtx, hd, sl silicified, sub-ang to sub-rnd cls, predy mtx sup, occ sec carb infill, mnr cal veining, pyr on frac surfaces, disseminated pyr to 1%, no cut, no flor, ferromangan alteration halo?
930
940
950
960
970
LP3-P-160 923.15-923.25m
LP3-C-016 924.1-925.1m
LP3-P-161 928.4-928.41m
LP3-P-162 932.6-932.75m
LP3-P-163 934.5-934.65m
LP3-P164 938.87-938.94m
LP3-P-165 940.5-940.72m
LP3-P-166 944.83-945.03m
LP3-P-167 946.76-946.93m
LP3-C-017 950.29-951.21m
LP3-P-168 952.5-952.55m
LP3-P-169 955.3-955.4m
LP3-P-170 961.98-962.27m
LP3-P-171 967.11-967,21m

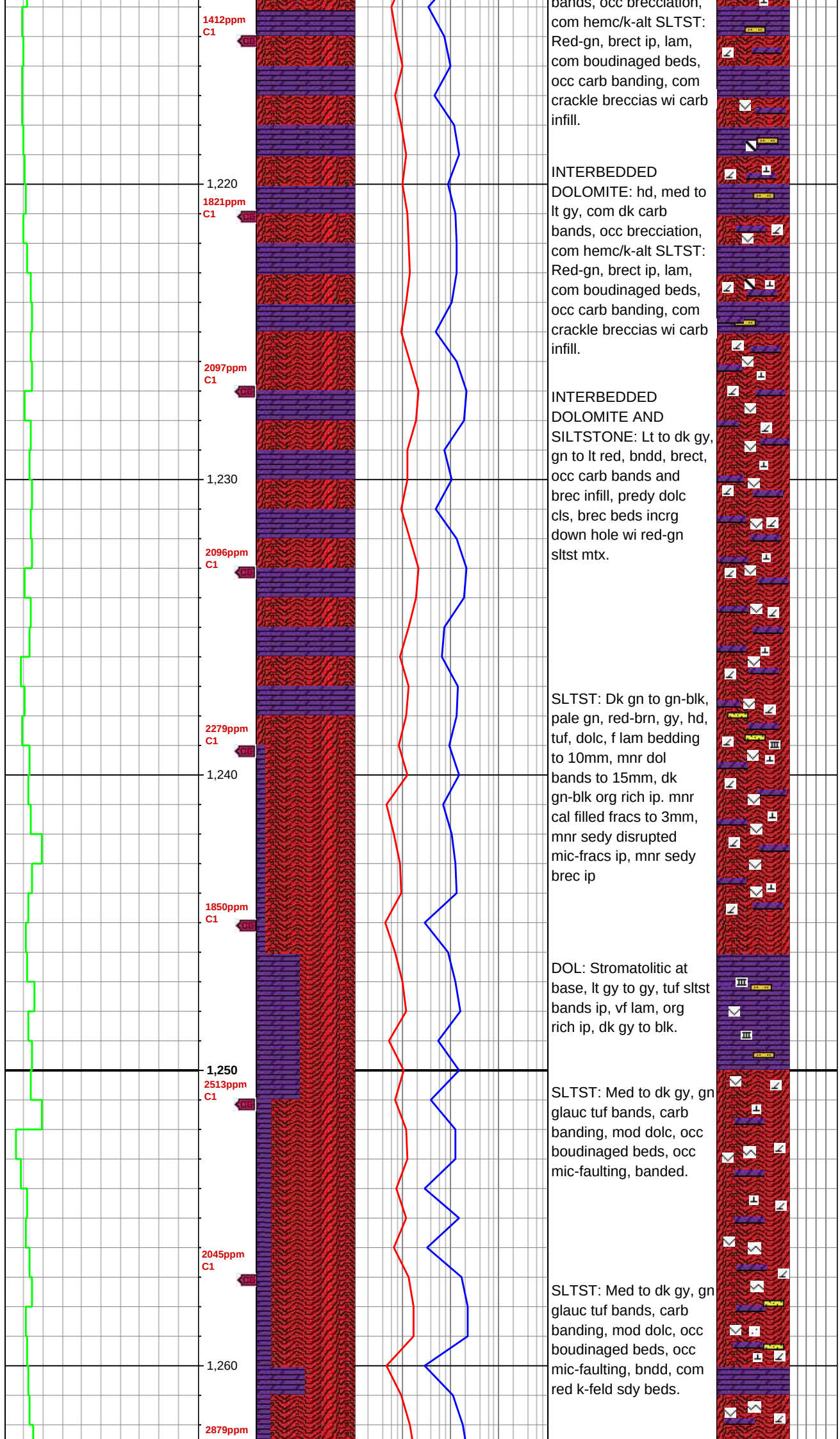

980
990
1,000
1,010
0
ROP (M)
20
GAS (UNITS)
1
10
100
1,000
1E4
C1 (PPM)
10
100
1,000
1E4
1E5
C2 (PPM)
1
10
100
1,000
1E4
C3 (PPM)
1E-4
0.001
0.01
0.1
1
C4 (PPM)
1E-4
0.001
0.01
0.1
1
310ppm C1
357ppm C1
307ppm C1
ALT TUF SLTST: Interbedded, earthy dk red k-feld alt sltst bands, pale gn to dk bottle gn glauc tuf bands, slumping flt strucs, commonly lam, occ flame strucs, slatey to phyllitic, occ cal-sil cross-cutting veining, mod hd, tuf infill ip, dolc ip, no cut, no flor.
ALT TUF SLTST: Lam, earthy med to dk red, occ pale to dk bottle gn glauc tuf bands, com dolc banding/interbeds, occ slumping flt strucs, phyllitic, no mineralisation, no cut, no flor, thin (1mm) cross-cutting cal veins, tr pyr blebs
ALT TUF SLTST: Lam, earthy med to dk red, occ pale to dk bottle gn glauc tuf bands, com dolc banding/interbeds, occ slumping flt strucs, phyllitic, no mineralisation, no cut, no flor, thin (1mm) cross-cutting cal veins,com xbdd , f sdy graded bdg, mud cracks filled, sedy
LP3-P-172
973.05-973.23m
LP3-C-018
979.1-980.1m
LP3-P-173
985.25-985.4m
LP3-C-019
990.7-991.7m
LP3-P-174
995.71-995.88m
LP3-C-020
1001.10-1002.1
LP3-I-006
CG 1005.15m
LP3-P-175
1010.38-1010.5
LP3-P-176
1016.33-1016.4


slumping ip
1,020
LP3-P-177
1020.67-1020.8
LP3-C-021
1026.3-1027.2m
ALT TUF SLTST: Predy potassium-alt, earthy red to dk brn, bndd, interbeds of glauc vitric tuff, occ grittier (very fine sand?) bands hosting sub-ang to sub-rnd feld cls, com slump strucs and ductily deformed boudinaged bands, sporadic wh feld cls throughout host rock, phyllitic, no cut, no flor.
LP3-P-178
1028.13-1028.1
1,030
LP3-P-179
1034.63-1034.7
LP3-P-180
1037.68-1037.7
1,040
1939ppm
C1
SLTST: Lt red to pale and dk gn, hd, bndd, com fluorescing elongate scapolite, com vitric glauc tuff bands cls and infill, occ brecciated cls and bands, no cut.
LP3-P-181
1042.2-1042.3m
LP3-I-007
1043.1m
2263ppm
C1
LP3-C-022
1043.23-1044.2
2539ppm C1
1046.7m
LP3-I-008
1045.9m
LP3-I-009
1047.1m
2610ppm
C1
1,050
LP3-P-182
1052.3-1052.4m
ALT TUF SLTST: Lt to dk bottle gn, lt red to rthy red-brn, phyllitic and glauc, bndd, commonly potassium alt (red zones), occ brecciation wi tuf infill, no cut, no flor, rare gritty xln calcsilicate bands, rare pyr on frac surfaces, com folding.
LP3-P-183
1057.7-1057.85
1909ppm
C1
1,060
LP3-P-184
1063.25-1063.4
LP3-C-024
1064.1-1065.1
2415ppm
C1
SILTSTONE: Tuf, lt brn,
LP3-P-185
1076.88-1067.9


1,070
2249ppm
C1
1032ppm
C1
1,080
1347ppm
C1
1963ppm
C1
1,090
2839ppm
C1
1,100
0
ROP (M)
20
2824ppm
C1
GAS (UNITS)
1
10
100
1,000
1E4
C1 (PPM)
10
100
1,000
1E4
1E5
C2 (PPM)
1
10
100
1,000
1E4
C3 (PPM)
1E-4
0.001
0.01
0.1
1
C4 (PPM)
1E-4
0.001
0.01
0.1
1
3138ppm
C1
1,110
3537ppm
C1
2495ppm
C1
2919ppm
C1
lt gy-gn, lt gn to dk gn (glauc), hd, vf, lam to c bdd f gr sd, graded bedding coarser in bands (to 25mm) small cross-bedding mudcracks and dewatering strucs in f silts, no visible minerals, no flor.
LP3-C-023
1072.13-1073.1
LP3-P-186
1076.7-1076.8
LP3-I-010
1081m
DOL: Lt gy to med gy, hd, cryptocrystalline, mnr carb/bit bands to 5mm wi carbon/bit on some frac surfaces, pos stromatolites?, no flor, strong gn mky cut and resdl ring, open space vadose filling (chert) in bands and blebs to 50mm
LP3-P-187
1082.43-1082.5
LP3-P-188
1085.7-1086.05
TUF SLTST: Dk gn to blk to red, bndd, lam, glauc tuff bands, k-feld alt meta-sltst bands, occ dolc cls, phyllitic to schistose ip, com dolc bands, occ pyr on frac surfaces.
LP3-P-189
1092.86-1093.1
LP3-I-011
1097m
LP3-C-025
1097.9-1098.9
DOL: Lt to med gy, hd, dk gy to blk carb frac infill, com gritty, qtz-feld-mica bands (up to 4cm wide), occ cht infill, bndd wi com meta-sltst infill and banding
TUF SLTST: Dk gn to blk to red, bndd, lam, glauc tuff bands, k-feld alt meta-sltst bands, occ dolc cls, phyllitic to schistose ip, com dolc bands, occ pyr on frac surfaces.
LP3-P-190
1104.7-1104.85
LP3-I-012
1108m
LP3-P-191
1111.6-1111.65
LP3-I-013
1112m
DOL: lt gy-dk gy, dk gy blk ip, hard, cryptoxln,lam wi blk org bands to 1mm, mnr Cal as blebby masses wi mnr cht infill, tr Cal
LP3-P-191
1113.94-1113.9


veins to 2mm ip
2019ppm C1
1,120
2144ppm C1
TUF SLTST: Dk gn bndd tuf beds, lt red k-alt sltst bands, occ grittier 'sdy' bands, hd, phyllitic ip, carb infill and banding.
1,130
2031ppm C1
2406ppm C1
DOL: Hd, bndd, occ brect, com carb banding and infill, com tuf sltst bands, thin gn tuf band @ 1139.2m, occ 2-phase brec veins, occ tightly folded sil veining, lt to med gy to blk.Sedy diagenetic dewatering features. No flor, wk milky cut.
1,140
3340ppm C1
2367ppm C1
4027ppm C1
DOL: Lt gy to dk gy, hd, cryptocrystalline, com carb slty banding and infill, mnr sedy slump, brec and dewatering features, gy-gn tuf sltst banding, no flor, strong mky cut wi resdl rim from bituminous mat.
1,150
2667ppm C1
DOL: Lt gy to dk gy, hd, cryptocrystalline, com carb, slty banding, and infill, mnr sedy slump, brec and dewatering features, gy-gn tuf sltst banding, tr disseminated pyr on carb mat.
1,160
3837ppm C1
LP3-P193 1116.78-1116.9
LP3-C-026 1119.2-1120.22
LP3-P194 1121.64-1121.6
LP3-P195 1128.85-1128.8
LP3-P196 1135.7-1135.8
LP3-P197 1142.1-1142.3
LP3-C-027 1147.11-1148.0
LP3-P-198 1153.94-1154.0
LP3-P-199 1160.72-1160.8
LP3-P-200 1162.37-1162.3


2855ppm
C1
1,170
2233ppm
C1
3194ppm
C1
1,180
4462ppm
C1
1,190
700ppm
C1
1146ppm
C1
1,200
0
ROP (M)
20
GAS (UNITS)
1
10
100
1,000
1E4
C1 (PPM)
10
100
1,000
1E4
1E5
C2 (PPM)
1
10
100
1,000
1E4
C3 (PPM)
1E-4
0.001
0.01
0.1
1
C4 (PPM)
1E-4
0.001
0.01
0.1
1
1803ppm
C1
2087ppm
C1
1,210
TUF SLTST: Gn, vf laminations (posy glauc), commonly silicified, dolc bands, com bituminous mat, mnr cracks.
DOL: Hd, lt to med gy, brn to blk, com fracturing, com stromatolites (up to 15cm wide) - often donkey dicks. Occ blk cht frac infill, com bituminous mat in silica cls, com carb banding, euhedral pyr hosted in cal vein @ 1178.9m, com calc veining.
INTERBEDDED DOLC SLTST: Hd, sl fracd, lt to med gy, brect ip, bituminous frac infill ip, bands of gn sltst, k-alt sltst, occ carb banding, predy dolc, occ stromatolites.
TUF SLTST: Gn, vf laminations (posy glauc), com silicified dolomitic bands, com bituminous mat, mnr cracks.
DOL: Lt to dk gy, brn, predy mod silicified, commonly carb infilling mat, stromatolitic ip, occ cal infill
INTERBEDDED DOLOMITE: hd, med to lt gy, com dk carb
LP3-P-201
1166.82-1166.9
LP3-P-202
1172.15-1172.3
LP3-C-028
1177-1188
LP3-P-203
1184.10-1184.1



bands, occ brecciation, com hemc/k-alt SLTST: Red-gn, brect ip, lam, com boudinaged beds, occ carb banding, com crackle breccias wi carb infill.

INTERBEDDED DOLOMITE: hd, med to lt gy, com dk carb bands, occ brecciation, com hemc/k-alt SLTST: Red-gn, brect ip, lam, com boudinaged beds, occ carb banding, com crackle breccias wi carb infill.

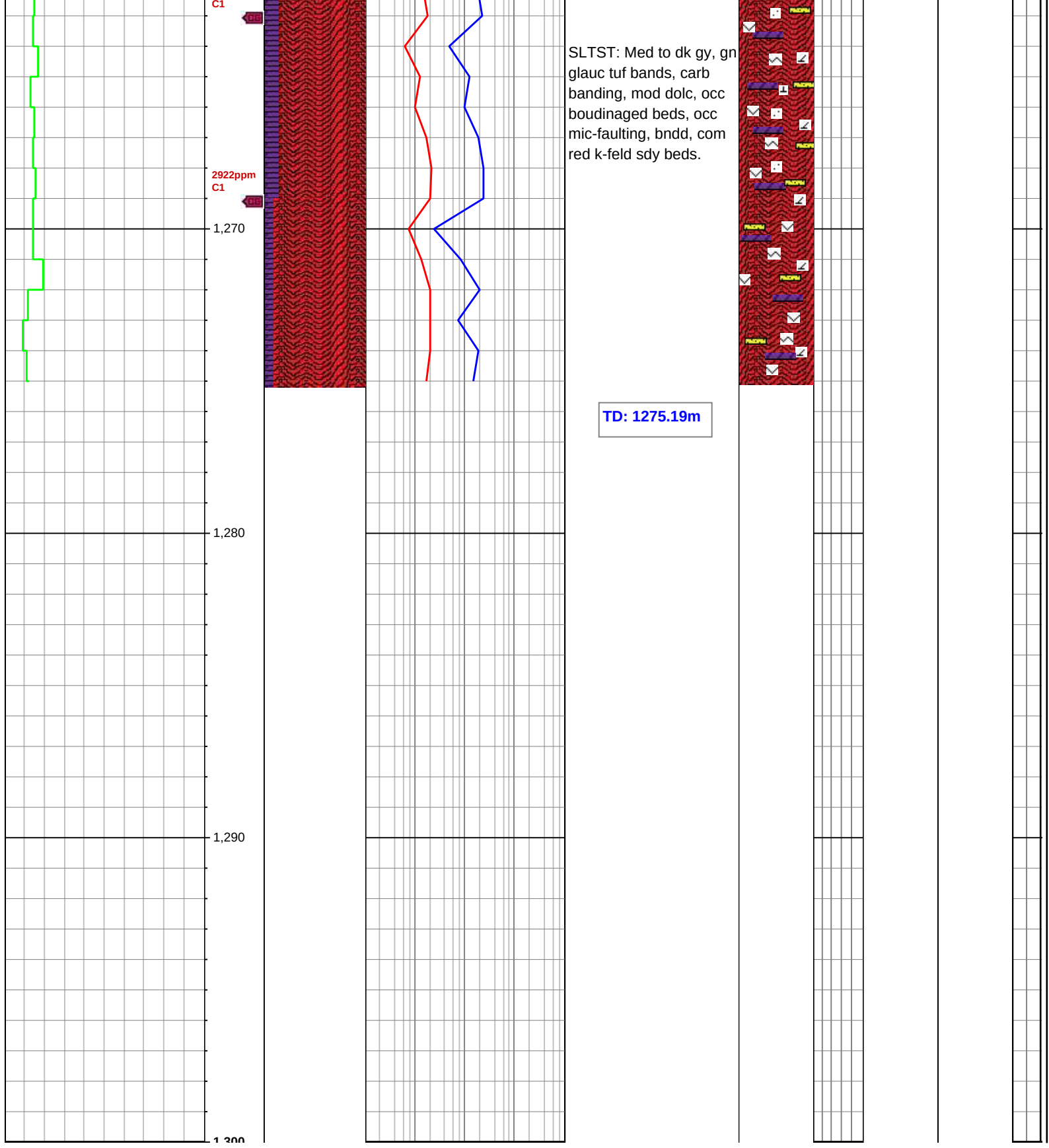
INTERBEDDED DOLOMITE AND SILTSTONE: Lt to dk gy, gn to lt red, bndd, brect, occ carb bands and brec infill, predy dolc cls, brec beds incrg down hole wi red-gn sltst mtx.

SLTST: Dk gn to gn-blk, pale gn, red-brn, gy, hd, tuf, dolc, f lam bedding to 10mm, mnr dol bands to 15mm, dk gn-blk org rich ip. mnr cal filled fracs to 3mm, mnr sedy disrupted mic-fracs ip, mnr sedy brec ip

DOL: Stromatolitic at base, lt gy to gy, tuf sltst bands ip, vf lam, org rich ip, dk gy to blk.

SLTST: Med to dk gy, gn glauc tuf bands, carb banding, mod dolc, occ boudinaged beds, occ mic-faulting, banded.

SLTST: Med to dk gy, gn glauc tuf bands, carb banding, mod dolc, occ boudinaged beds, occ mic-faulting, bndd, com red k-feld sdy beds.


C1
2922ppm
C1
1,270
1,280
1,290
1,300
SLTST: Med to dk gy, gn glauc tuf bands, carb banding, mod dolc, occ boudinaged beds, occ mic-faulting, bndd, com red k-feld sdy beds.
TD: 1275.19m