



Scale 1:500 Metric

Well Name: **WOMBAT 3**
Location: **GIPPSLAND BASIN, VIC.**
Licence Number: **PEP 157** Region: **ONSHORE VIC.**
Spud Date: **23 SEPT 2004** Drilling Completed: **24 OCT 2004**
Surface Coordinates: **LATITUDE : 38 21 28 S**
LONGITUDE : 147 08 57 E
Bottom Hole
Coordinates:
Ground Elevation (m): **19 m ASL** K.B. Elevation (m): **22.65 m A**
Logged Interval (m): **20 m To: 2178 m** Total Depth (m): **2178 m**
Formation:
Type of Drilling Fluid: **SPUD MUD - KCL POLYMER - WATER - PHPA POLYMER**
Printed by MUD.LOG from WellSight Systems Inc. 1-800-447-1534 www.wellsight.com

OPERATOR

Company: **LAKES OIL NL**
Address: **Level 11
500 COLLINS STREET, MELBOURNE, VIC. 3000**

GEOLOGIST

Name: **DAVE HORNER**
Company: **ECL**
Address:

ROCK TYPES

	Anhy
	Bent
	Brec
	Cht
	Clyst
	Coal

	Congl
	Dol
	Gyp
	Igne
	Lmst
	Meta

	Mrlst
	Salt
	Shale
	Shcol
	Shgy
	Sltst

	Ss
	Till
	Blank

ACCESSORIES

MINERAL
Anhy
Arggrn
Arg
Bent
Bit
Brecfrag
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
CryxIn
Earthy
FinexIn
Grainst
Lithogr
MicroIn
Mudst
Packst
Wackest

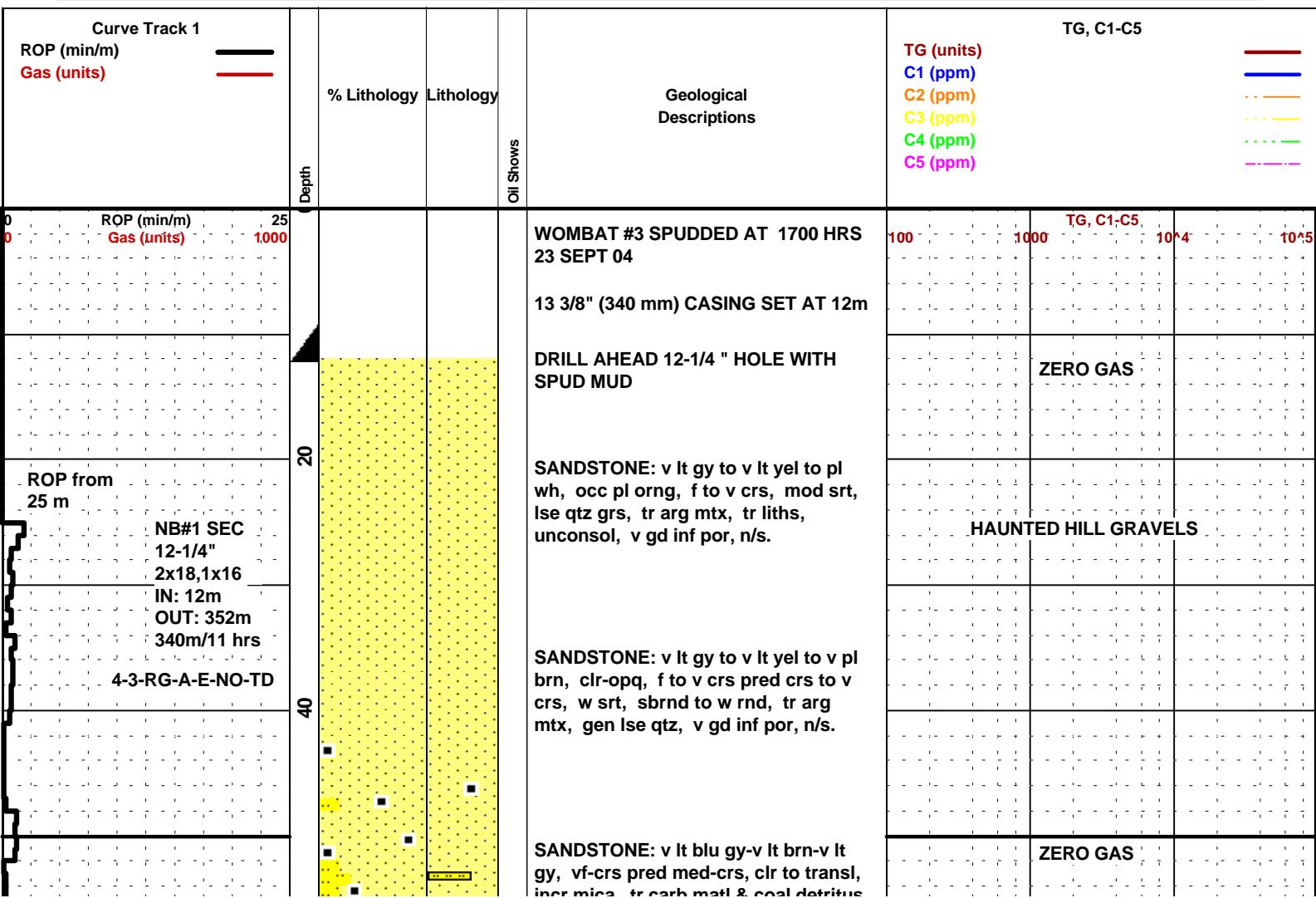
OTHER SYMBOLS

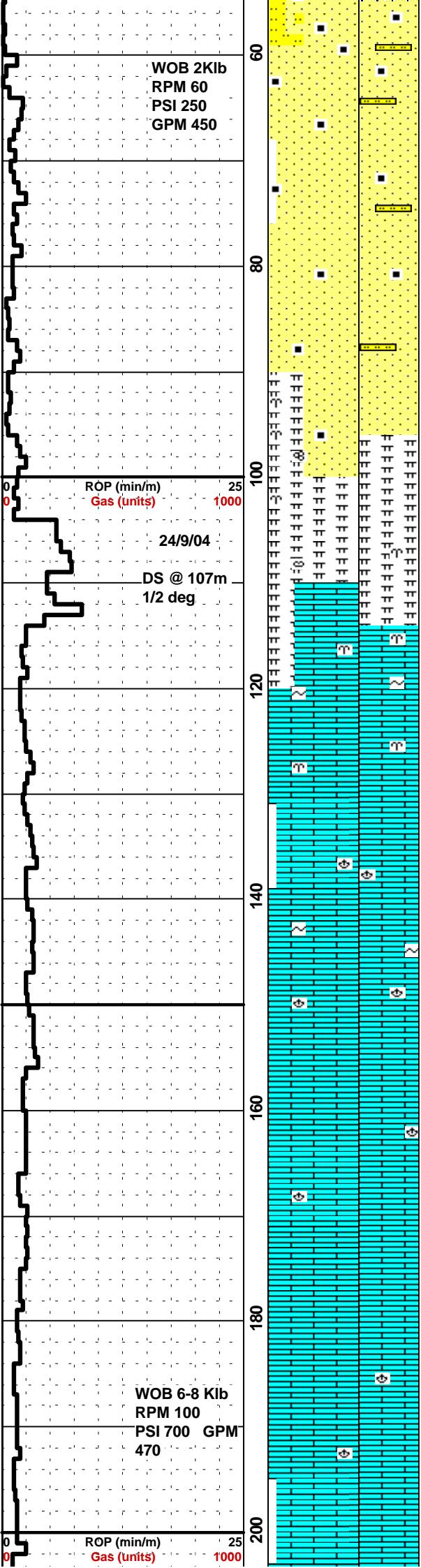
POROSITY TYPE
Earthy
Fenest
Fracture
Inter
Moldic
Organic
Pinpoint
Vuggy

SORTING
Well
Moderate
Poor
ROUNDING
Rounded
Subrnd
Subang
Angular

OIL SHOWS
Even
Spotted
Ques
Dead
INTERVALS
None
Core
Dst

EVENTS
Rft
Sidewall
Csg
Dst-top
Dst-bot





incl mica, tr carb mtl & coal detritus, gd inf po, n/s.

MW: 9.0, FV: 45, PV/YP: 5/30, Gel:14/19, WL:18.2, FC: 3, Sol:4.7, pH: 9.5, Cl: 700

SANDSTONE: v lt blu gy-v pl brn-pl wh, f-v crs pred med-crs, pr std, sbrnd-w rnd, clr-transl-opq, occ frsty, tr liths, tr carb mtl/spks, gd inf por, n/s.

SANDSTONE: v lt gy-pl wh-v pl brn, clr-transl-opq, occ frsty, f-v crs pred med-crs lse grains, tr silt mtx, gd inf por, n/s.

JEMMY'S POINT FORMATION

MARL: ylsh gy, lt gy, cream, f-pred m, dom fos frags incl bry, ech spines, forams & gast, lse, mod arg, tr crs SS grns, rr dk gn to bk glauc, n/s.

TAMBO RIVER FORMATION

100 1000 10^4 10^5
TG, C1-C5

ZERO GAS

GIPPSLAND LIMESTONE

CALCARENITE: lt gy, med gy, tr lt bn, vf to pred med, fri, com fos frags a/a, com dk gn to bk glauc, pr vis por, n/s.

CALCARENITE: a/a, lt gy, med gy, gnsh gy, becmg more calcilutitic, n/s.

CALCARENITE: lt gy, fg, abnd f fos frags, sl arg, tr v f-rr crs qtz grns, tr-com glauc, fri, v pr vis por, n/s.

ZERO GAS

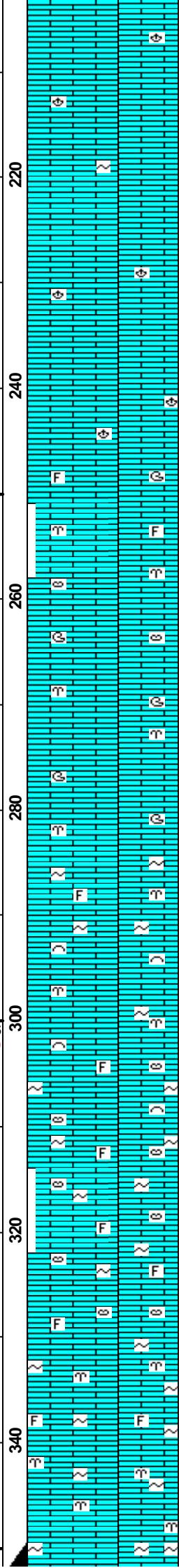
CALCARENITE: a/a, rr glauc, n/s.

CALCARENITE: lt gy, lt yl gy, fg, abnd fos frags with abnd bry, sl argil, rr glauc, fri, pr vis por, n/s.

CALCARENITE: lt gy, lt yl gy, fg, com fos frags, sl argil, rr glauc, fri, pr vis por, n/s.

100 1000 10^4 10^5
TG, C1-C5

DS @ 200m
1/4deg



CALCARENITE: It gy, fg, com fos frags, sl argil, rr glauc, fri, pr vis por, n/s.

ZERO GAS

CALCARENITE: It gy, fg, com fos frags, sl argil, rr glauc, fri, pr vis por, n/s.

ZERO GAS

CALCARENITE: It gy-med gy-lt brn, vf-med, tr arg mtx, calc cmt, com-abnt fos frags incl ech, bryoz, crin, incr tr gn glauc, fri-frm, rr f-v crs qtz gr, pr-fr inf por, n/s.

MW: 9.5, FV: 48, PV/YP: 8/31,
Gel:14/18, WL:18.4, FC: 3, Sol:8.3,
pH: 9.5, Cl: 800

CALCARENITE: It gy-lt yel gy-v lt crm brn, f-med grs, com-abnt foss frags incl ech, bryoz, sli arg mtx, tr calc cmt, tr vf-crs qtz ss grs, tr-com grn glauc, fri-frm, pr inf por, n/s.

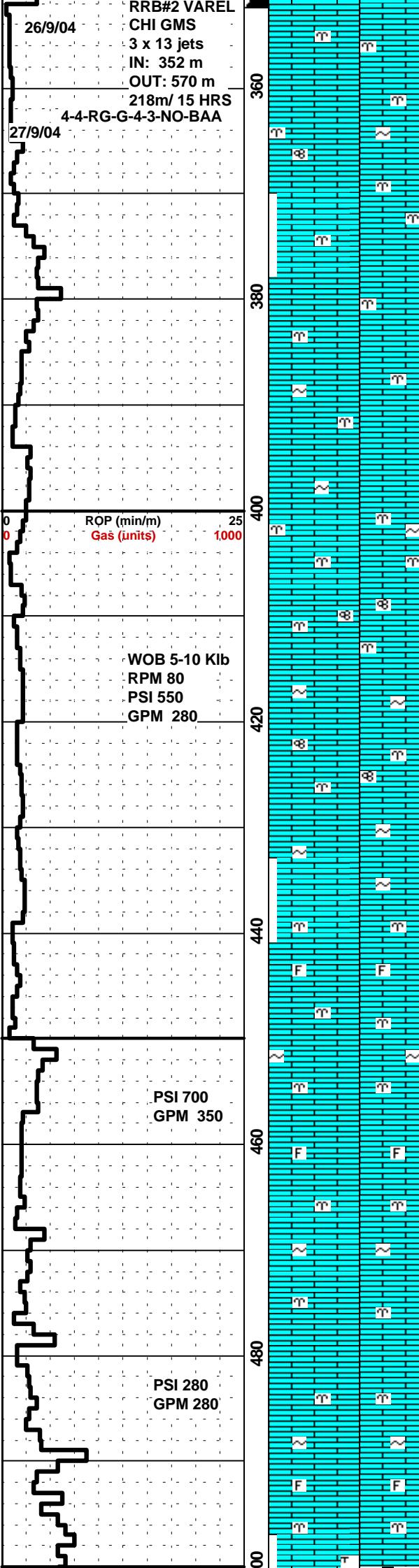
100 1000 10^4 10^4 10^5
TG, C1-C5
ZERO GAS

CALCARENITE: It gy-lt yel gy-v lt crm brn, vf-med grs, com foss frags & bioclasts, incr arg mtx, tr calc cmt, tr qtz grs, tr-com grn glauc, fri-frm, pr inf por, n/s.

CALCARENITE: It gy-lt yel gy-v lt brn, vf-med grs, incr arg mtl mtx, tr calc cmt, com foss frags & bioclast mtl, com grn glauc, fri-frm, pr inf por, n/s.

CARBIDE LAG CHECK
HOLE IN GAUGE

DRILL TO 352 m. SET 9-5/8 " CSG.



DRILL AHEAD 8-1/2" HOLE

5 METRE SAMPLES FROM 355 m.

MUD UP WITH KCL/POLYMER MIX

CALCARENITE: It gy, fg, com fos frags, sl to mod arg, tr glauc, fri, v pr vis por, n/s.

MW: 9.1, FV: 59, PV/YP: 12/29,
Gel: 8/13, WL: 6.0, FC: 1, Sol: 2.9,
pH: 9.5, Cl: 31 500

CALCARENITE: It gy, fg, abnt f fos frags with com bryozoa, sl to mod arg & calcilutitic, tr glauc, fri, v pr vis por, n/s.

CALCARENITE: It gy, fg, v calcilutitic & calcisilicic, mod arg, com fos frags incl bry & forams, tr glauc, fri to mod hd, v pr vis por, n/s.

MW: 9.1, FV: 59, PV/YP: 12/29,
Gel: 8/13, WL: 6.0, FC: 1, Sol: 2.9,
pH: 9.5, Cl: 31 500

CALCARENITE: It gy, fg, mod to com arg, com fos frags, tr glauc, com disp, fri to occ hd, nil to v pr vis por, n/s.

CALCARENITE: It gy to occ med gy, fg, mod to com calcilutite & calcisilicic, mod to com arg, com fos frags, tr glauc, com disp, fri to occ hd, nil to v pr vis por, n/s.

Shakers blinding 480-500m Poor sample quality.

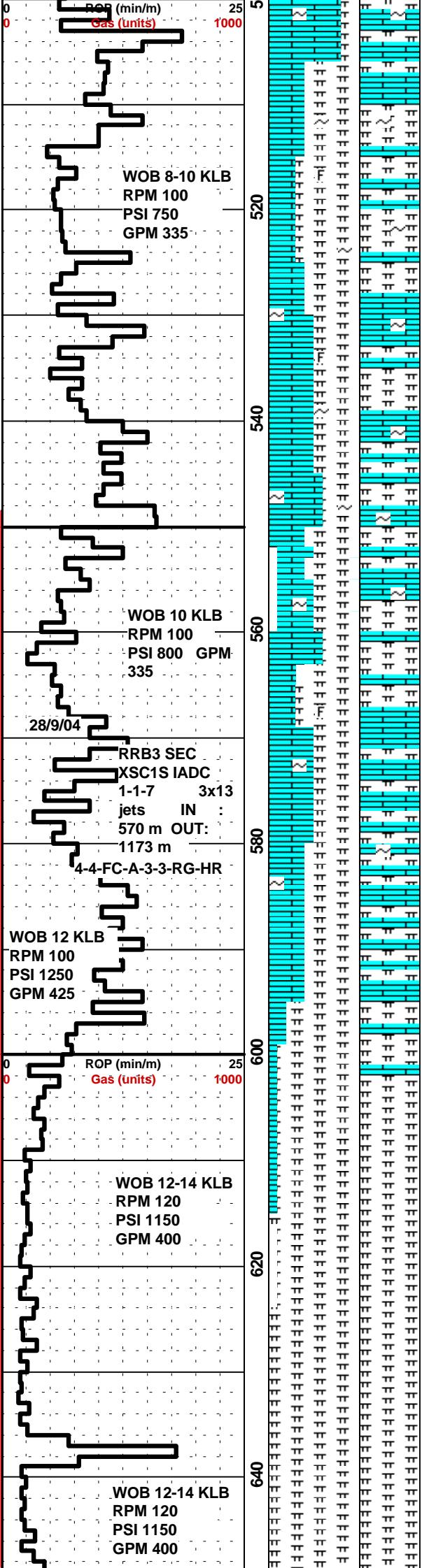
MW: 9.1, FV: 59, PV/YP: 12/29,
Gel: 8/13, WL: 6.0, FC: 1, Sol: 2.9,
pH: 9.5, Cl: 31 500

ZERO GAS

TG, C1-C5
1000 10⁴
ZERO GAS

ZERO GAS

ZERO GAS



MARL: It gy-gy wh-lt yel gy, v sft, amorph-blky, disp, grdg calc Clyst i/p, washing out, pr inf por, n/s.

Poor sample at shakers 510-525

MARL: v It gy-gy wh-pl brn gy, arg grdg Calc Clyst i/p, amorph-blky, v sft-sft, disp, tr lith frags, tr glauc spks, tr bioclasts, washing out, pr inf por, n/s.

LIMESTONE: It gy-lt olv gy-lt brn gy, arg-calcislt, blky, frm-mod hd, tr bioclasts & lith frags, tr-com micrite, tr mica spks, tr glauc, grdg to MARL a/a ip, pr-v pr inf por, n/s.

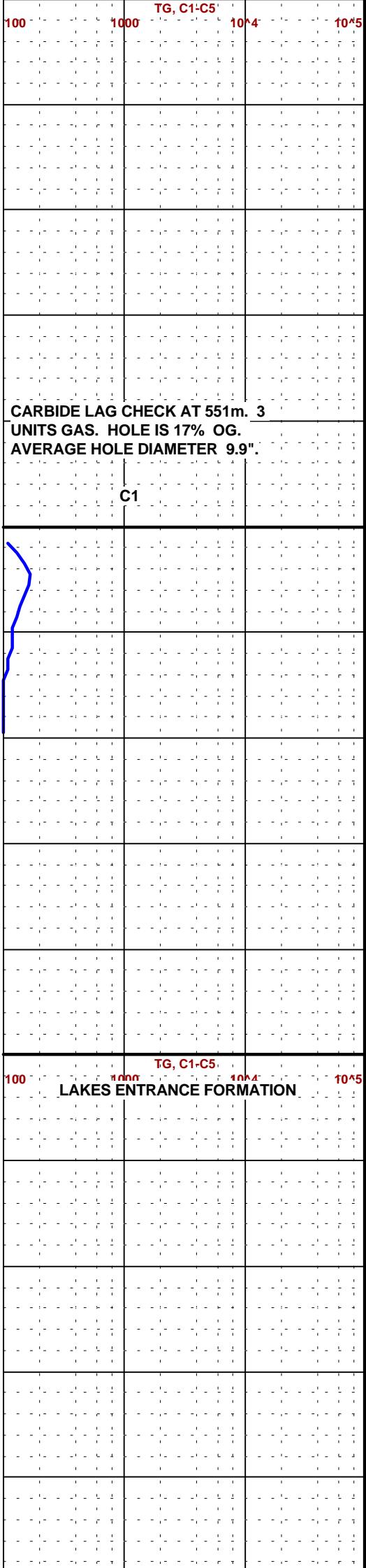
MARL: It gy-med gy-lt blu gy, sft-frm, v disp i/p, amorph-sbblky, tr foss frags, tr micas, tr glauc, grdg i/p calc Clyst, v pr inf por, n/s.

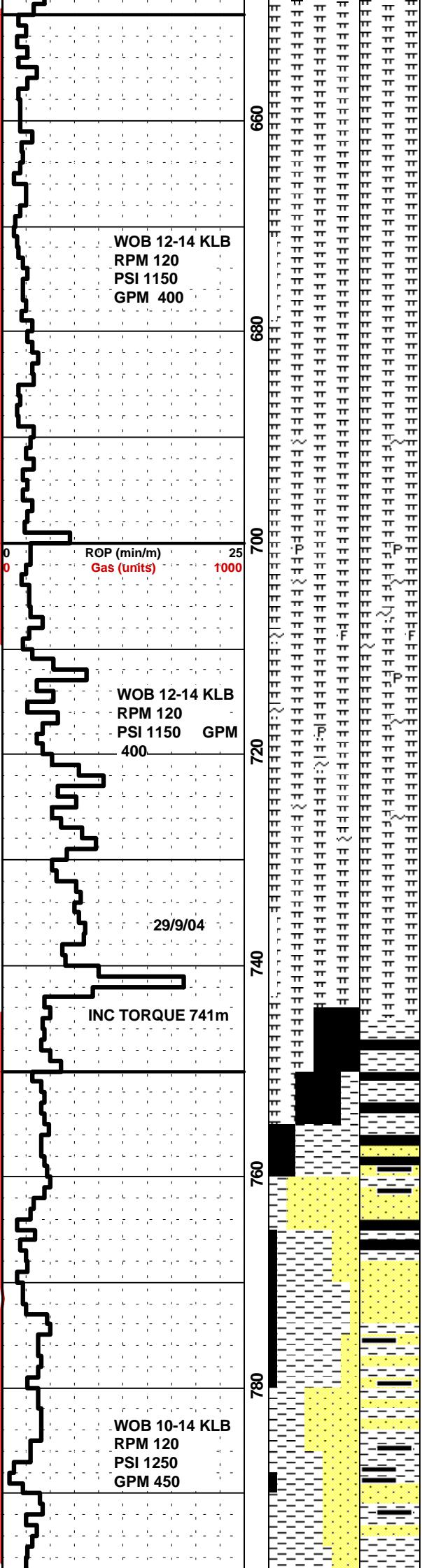
LIMESTONE: It gy-lt olv gy-lt brn gy, arg-calcislt, blky, frm-mod hd, tr bioclasts & lith frags, tr-com micrite, tr mica spks, tr glauc, grdg to MARL a/a ip, pr-v pr inf por, n/s.

MW: 9.1, FV:62, PV/YP: 13/29,
Gel: 10/14, WL: 6.0, FC: 1, Sol: 2.8,
pH: 9.5, CI: 32 400

MARL: gen a/a, bcmg dom It olv gy-lt grn gy w/depth, sft-occ frm.

MARL: gen a/a bcmg dom It olv gy-lt grn gy w/depth, sft-occ frm.





MARL: It-med grn gy-v lt brn gy-v pl gy, calc, tr foss frags & glauc, grdg to calc Clyst i/p, amorph-sbblky, sft-frm, disp i/p.

MW: 9.1, FV:62, PV/YP: 13/29,
Gel: 10/14, WL: 6.0, FC: 1, Sol: 2.8,
pH: 9.5, CI: 32 400

MARL: It-med grn gy-v lt brn gy-v pl gy, calc, tr foss frags & glauc, grdg to calc Clyst i/p, amorph-sbblky, sft-frm, disp i/p.

C1

MARL: It-med grn gy-v lt brn gy-v pl gy, incr pl grn gy w/depth, calc, tr foss frags & glauc grs, tr dissem pyr, grdg to calc Clyst i/p, amorph-sbblky, sft-frm, disp i/p.

MARL: gen a/a incr grn gy w/depth, incr tr glau grs, tr dissem pyr, tr cryptoxln dol.

MARL: It gy-v pl grn gy-lt brn gy, v calc, foss frags, com micrite, rr lt brn crpto-micxln dol, tr glauc, sft-frm, disp i/p, non fiss, v pr inf por, n/s.

MARL: off wh to med gn gy, lt to med bn gy, v calc, com forams & other fos frags, com gnsh bk glauc, com med bn cryptoxln dol, firm, sbblky, n/s.

ZERO GAS

100 1000 TG, C1-C5 10^4 10^5

LATROBE GROUP

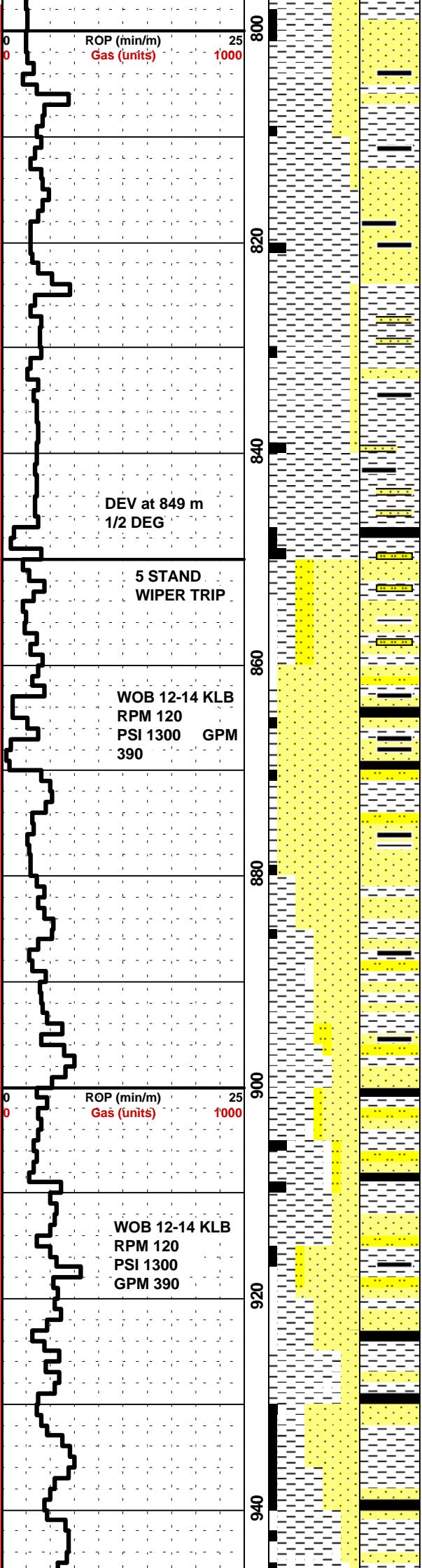
C1 ONLY

SILTY CLAYSTONE: m to dk bn, occ very silty, sl calc, v carb gradg to COAL, sft, disp, sbblky.

SANDSTONE: lt bn, off wh, f to pred crs, pr srted, subrnd, pred lse, tr wh cy mtx, gd inf por, no oil fluor.

MW: 9.5, FV:69, PV/YP: 18/36,
Gel: 6/11, WL: 5.8, FC: 1, Sol: 4.5,
pH: 8.8, CI: 30 500

SILTY CLAYSTONE: off wh, lt bn, dk bn, sli to v carb, abdt lse vf to crs qtz



grains grdg to SS, com bk Coal
detritus, sft, non fis.

SANDSTONE: It to med bn, vf to pred crs, sa to rnd, p srted, gen lse, abdt bn cy mtx supporting grains, gen lse crs qtz grains, tr wk sil cmt, com Coal detritus, v pr vis por, no oil fluor.

SILTY CLAYSTONE: med bn gy, dk bn, sli to v carb, abdt disp vf to crs qtz grains grdg to SS, com bk Coal detritus, sft, non fis.

SANDSTONE: It bn gy,vf to crs, sbang-w rnd, pr srted, tr-com brn arg/silt mtx washing out, tr wk sil cmt, tr Coal detritus, It bn to pl yel to milky wh to trnsl-opq-occ frsty qtz grains, tr liths, gen lse, pr-gd inf por, no oil fluor

MW: 10.1, FV:65, PV/YP: 24/33,
Gel: 6/12, WL: 5.6, FC: 1, Sol: 8.2,
pH: 9.2, CI: 26 000

SANDSTONE: It bn, vf to crs, trnsl-opq & rr frsty qtz grains, sbrnd-w rnd, v pr-pr srted, com-abnt arg/silt mtx washing out, tr wk calc cmt, gen lse grs, v pr inf por, no oil fluor.

CLAYSTONE: med dk brn-brn, silty, v carb grdg to Coal, sft-frm, amorph, nonfiss, tr vf-f qtz grs.

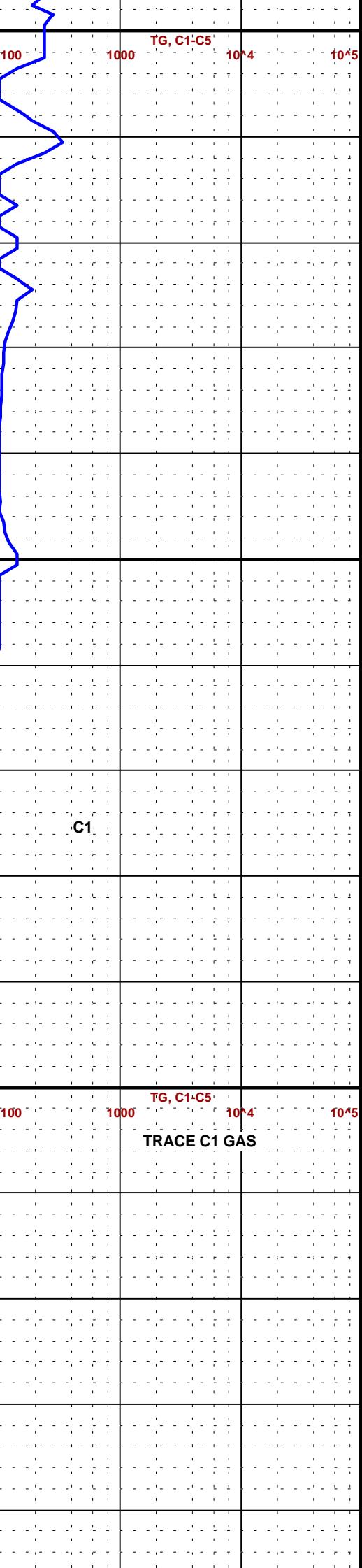
COAL: blk to dk bn, dull to earthy, sbblk, mod to v arg, tr to com py, firm, nonfiss.

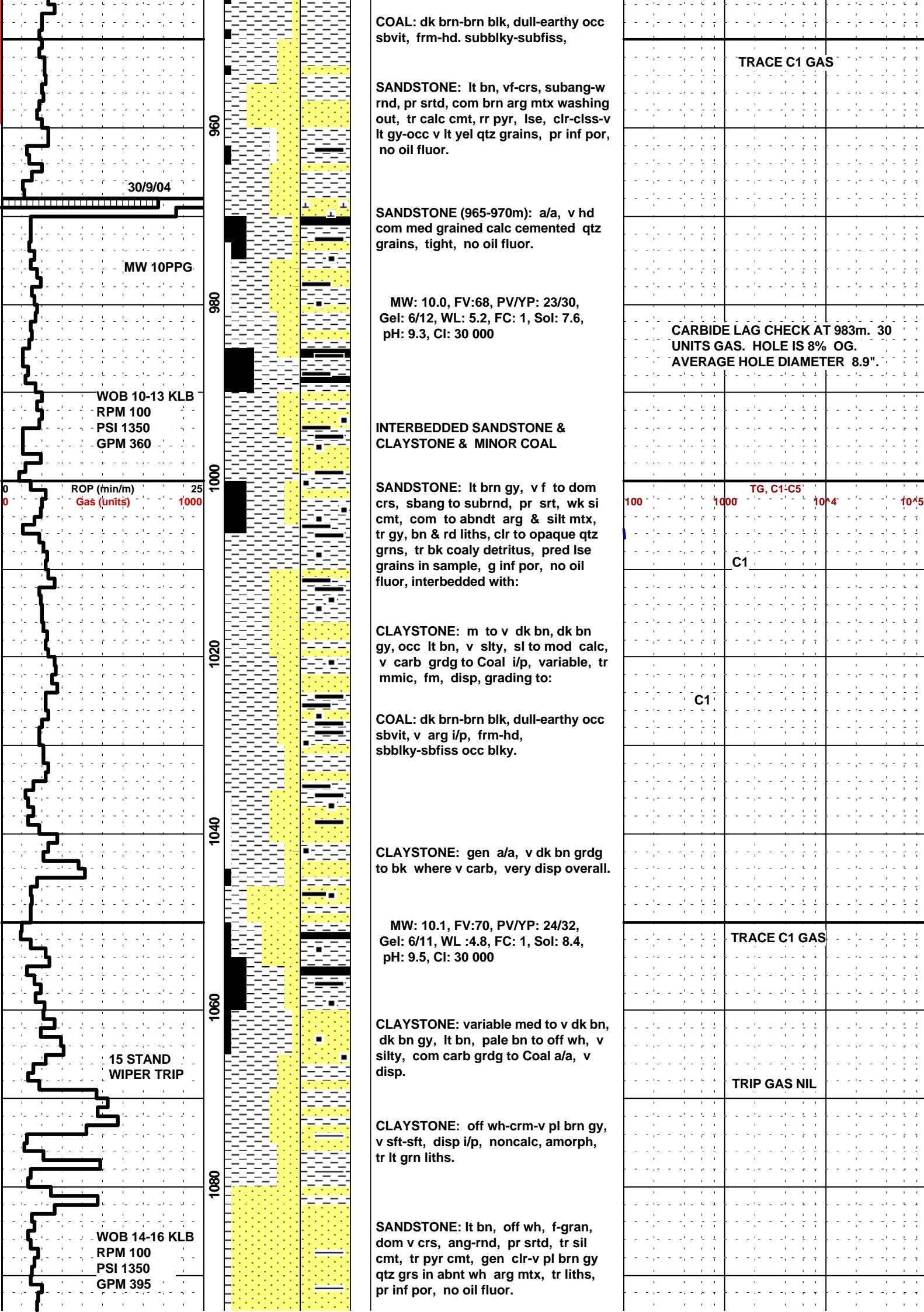
MW: 10.0, FV:68, PV/YP: 23/30,
Gel: 6/12, WL: 5.2, FC: 1, Sol: 7.6,
pH: 9.3, CI: 30 000

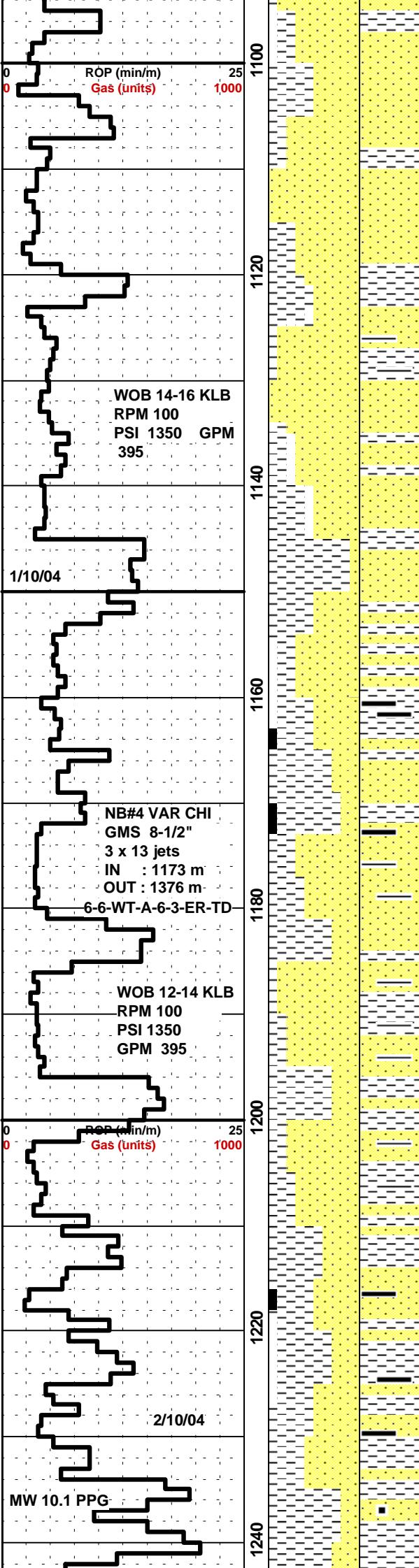
CLAYSTONE: It brn-med dk brn, silty, v carb, sft-frm, amorph, nonfiss, grdg to arg sft brn Coal a/a.

SANDSTONE: It bn, vf-crs, sbang-w rnd, pr srted, com brn arg mtx washing out, tr calc cmt, rr pyr, lse, clc-clss-v It gy-occ v It yel qtz grns, pr inf por, no oil fluor.

CLAYSTONE: It brn-med dk brn, silty, v carb, sft-frm, amorph, nonfiss, grdg to arg sft brn Coal.







CLAYSTONE: off wh-crm-v pl brn gy,
v sft-sft, disp i/p, noncalc, amorph,
tr lt qrn lths.

SANDSTONE: It bn to lt gy, f-gran dom v crs, sbang-w rnd, pr srtd, com wh arg mtx washing out, lse clss-v lt gy, trnsl-opq qtz grains, tr sil cmt, tr liths, pr-fr inf por, no oil fluor.

MW: 10.0, FV:78, PV/YP: 26/33,
Gel: 6/12, WL :4.8, FC: 1, Sol: 8.2,
pH: 9.5, CI: 30 000

SANDSTONE: off wh-v lt gy, f-gran dom v crs, sbang-w rnd, pr srtd, com wh arg mtx washing out, lse trnsl-opq qtz grains, tr sil cmt, tr liths, pr-fr inf por, no oil fluor.

CLAYSTONE: off wh-crm-v pl brn gy,
v sft-sft, disp i/p, noncalc, amorph,
tr lt grn liths

SANDSTONE: vt bn gy, vf to dom v
crs, ang to subrnd, pr to mod srtd,
wk si cmt, abndt off wh arg mtx, gen
mtx supt, cl to trnsl qtz grains, rr gn
liths, tr bk Coal detritus, fri, fr to vg
inf, per, no oil fluor.

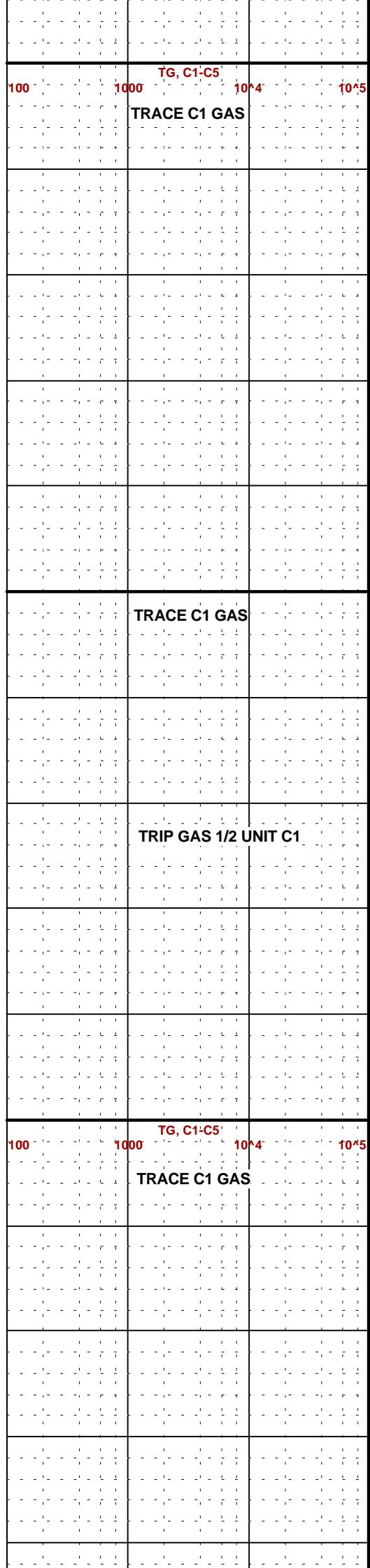
CLAYSTONE: off wh to lt bn, tr med bn, uniform, occ carb, tr bk Coal detritus, firm, v disp, shblky.

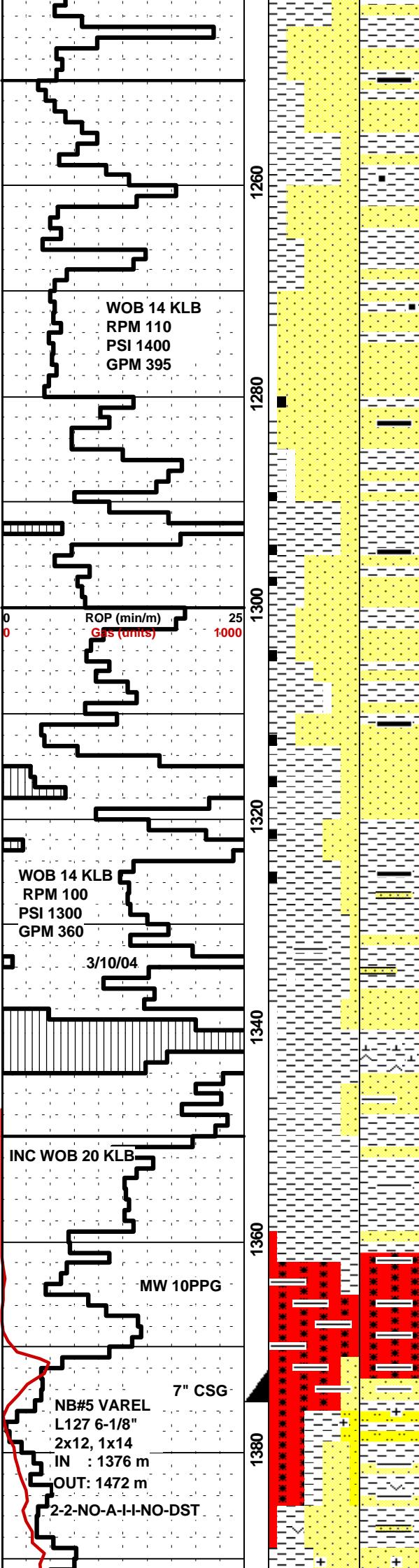
SANDSTONE: v lt gy-v pl blu gy,
clr-trnsln-opq, f-v crs dom v crs,
ang-w rnd, pr-mod srt, tr wk sil cmt,
tr pyr nod, com-abnt wh arg mtx, tr
liths. lse, pr-fr inf por, no oil fluor.

CLAYSTONE: off wh-crm-v lt gy brn,
sft-frm, disp-occ stky, amorph, occ v
carb, tr coal, tr silt incl, non calc,
non fiss.

SANDSTONE: v lt gy-v pl blu gy,
clr-trnsl-opq, f-v crs dom v crs,
ang-w rnd, pr-mod str, tr wk sl cmt,
tr pyr nod, com-abnt wh arg mtx, tr
liths, lse pr-fr inf por, no oil fluor.

MW: 10.1, FV: 84, PV/YP: 25/34,
Gel :7/13, WL :4.6, FC: 1, Sol: 8.4,
pH: 9.5, Cl: 32.000





INTERBEDDED SANDSTONE & CLAYSTONE:

SANDSTONE: v lt gy to v lt bnsh gy, v f to dom vc, ang to subrnd, pr to mod srtd, wk si cmt, tr py cmt, abndt wh arg mtx, rr gy gn liths, tr bk Coal detritus, fri, fair to gd inf por, no oil fluor.

CLAYSTONE: off wh to lt bn, occ med to dark bn, sl arg, v carb i/p, tr bk Coal, firm, very dispersive, sbblky.

SANDSTONE: v lt gy to v lt bnsh gy, v f to dom vc, ang to subrnd, pr srtd, wk si cmt, com wh arg mtx, rr gy gn liths, ptchy tr to occ com py, gen lse with clr, trnsl & frost grains, fair to gd inf por, no oil fluor.

CLAYSTONE: a/a.

MW: 10.1, FV: 84, PV/YP: 25/34, Gel :7/13, WL :4.6, FC: 1, Sol: 8.4, pH: 9.5, Cl: 32 000

3m SAMPLES FROM 1305m

SANDSTONE: cliss-v lt gy-v lt brn gy-occ lt blu gy, clr-trnsl-occ frstd, f-v crs dom v crs, sbang-w rnd, pr-mod srtd, tr wk sil cmt, tr str pyr cmt, com wh-crm-gy arg mtx, gen lse qtz grs, tr blk coal detritus, fr-gd inf por, no oil fluor

CLAYSTONE: off wh-crm -lt gy-med gy, v sli calc i/p, tr blk carb spks/mlt, tr mica, sft, disp, amorph-sbblky

MW: 10.0, FV: 81, PV/YP: 27/40, Gel :8/15, WL :4.2, FC: 1, Sol: 7.9, pH: 9.5, Cl: 32 000

CLAYSTONE: a/a, tr to 5% clr calc (1338-1341m), tr to 10% fract clr to off wh qtzite frags.

CLAYSTONE: lt gy, med gy, off wh, sl arg, sft, v disp, amorph to sbblky.

VOLCANICS: from 1361 m, med bri grn-pl grn gy-occ red brn, arg grn (chlor) mtx, weld text, abnt xtal grths, tr calc/silt veins, gen wthd to disp clay in samples, pr inf por

SANDSTONE: clr-pl grn gy-lt grn, vf-crs dom f, ang-subrnd, mod srtd, abnt off wh-grn arg mtx, tr felds, tr chlor, com volc liths, fri-lse, fr inf por, no oil fluor

FIT at 1379m = EMW 11.72 PPG

Drill ahead underbalanced with 8.4 lb/gal clean Strzelecki water

DRILL AHEAD WITH WATER 8.4 PPG

SANDSTONE: lt grn gy-pl gy, vf-med,

TRACE C1 GAS

CARBIDE LAG CHECK AT 1258m. 2 UNITS GAS. HOLE IS 9% OG. AVERAGE HOLE DIAMETER 8.9"

CARBIDE LAG CHECK AT 1276m. 4 UNITS GAS. HOLE IS 9% OG. AVERAGE HOLE DIAMETER 8.9"

TG, C1-C5.
100 **1000** **10⁻⁴** **10⁻⁵**
TRACE C1 GAS

GOLDEN BEACH FORMATION

C1 TRACE ONLY

C1

VOLCANICS

C2

STRZELECKI GROUP

TRIP GAS 53 TGU

CG after rig repair 500 TGU

CG 370 TGU

