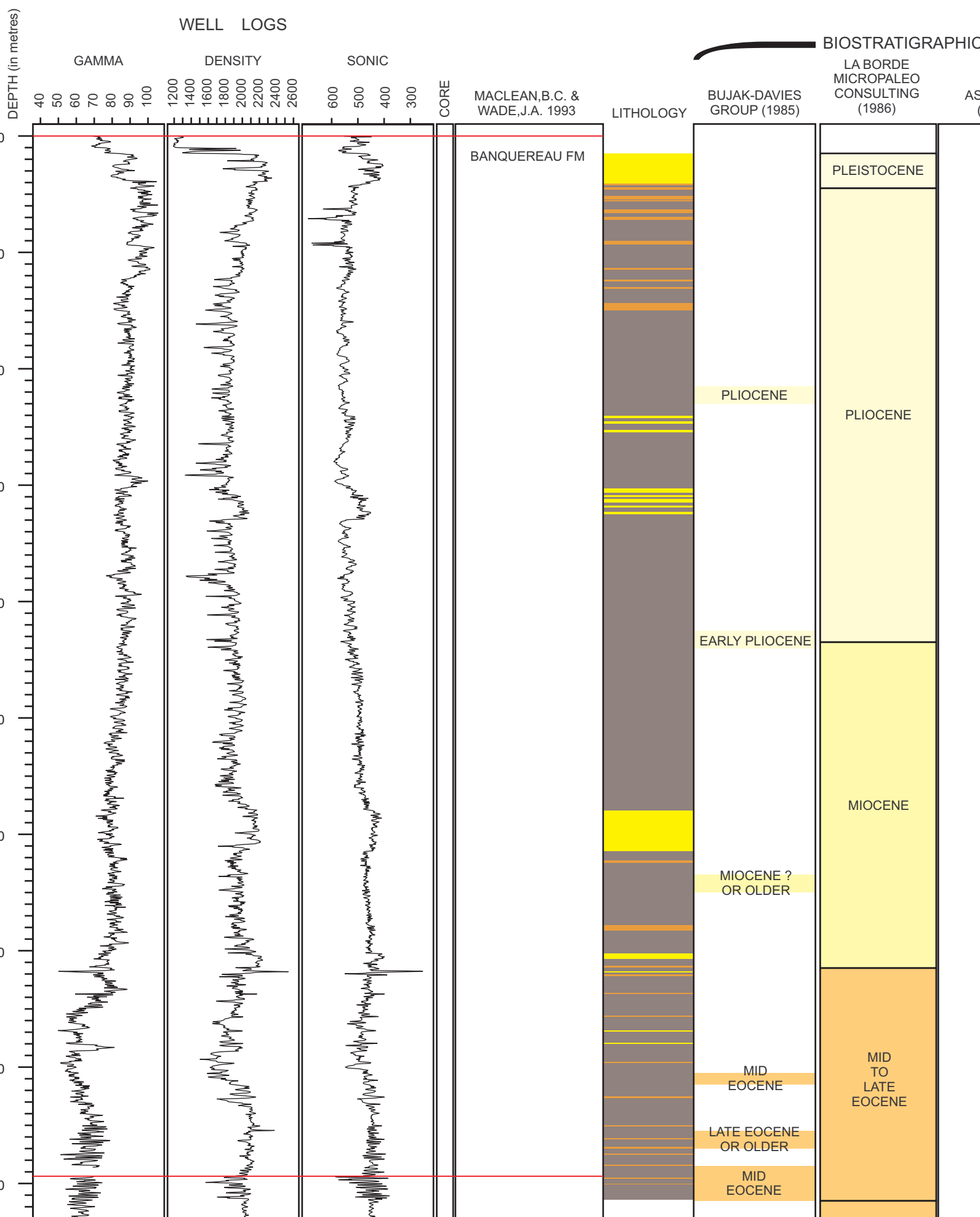


WELL LOGS



BANQUEREAU FM

LITHOLOGY

BUJAK-DAVIES GROUP (1985)

BIOSTRATIGRAPHIC

LA BORDE MICROPALÉO CONSULTING (1986)

PLEISTOCENE

PLIOCENE

PLIOCENE

EARLY PLIOCENE

MIOCENE

MIOCENE ? OR OLDER

MID EOCENE

MID TO LATE EOCENE

LATE EOCENE OR OLDER

MID EOCENE

AGES

COLI, P.  
 1989)

Biostratigraphic  
 Associates  
 (Canada), 2003









Palynology Samples

Biostratigraphy  
 (based on palynology)  
 THIS STUDY

LEGEND for LITH LOG

	Shale
	Siltstone
	Marl
	Limestone
	Conglomerate
	Sandstone
	Coal
	Cuttings
	Sidewall Core
CL =	Confidence Level
	Casing Points









PLEISTOCENE  
 or older

-  P29060 1620-1630m (CL = 1)
-  P29061 1650-1660m (CL = 3)
-  P29062 1680-1690m (CL = 2)
-  P29063 1710-1720m (CL = 2)
-  P29064 1740-1750m (CL = 2)
-  P29065 1770-1780m (CL = 2)
-  P29066 1800-1810m (CL = 2)
-  P29067 1830-1840m (CL = 2)

INDETERMINATE

- Key taxa are highlighted
- ← Reworked palynomorphs only
- ← *Batiacasphaera micropapillata*, *Habibacysta* sp., *Operculodinium centrocarpum*, *Polysphaeridium "Hirsutum"*
- ← *Pentadinium favatum* (this sample only), *Spiniferites "Antler"* (rare)
- ← *Barssidinium graminosum* (rare)
- ← *Barssidinium wrennii* (rare), *Invertocysta lacrymosa*
- ← *Melittasphaeridium choanophorum* (rare)









EARLY PLIOCENE  
 or older

-  P29068 1860-1870m (CL = 2)
-  P29069 1890-1900m (CL = 2)
-  P29070 1920-1930m (CL = 2)
-  P29071 1950-1960m (CL = 2)
-  P29072 1980-1990m (CL = 2)
-  P29073 2010-2020m (CL = 2)
-  P29074 2040-2050m (CL = 2)
-  P29075 2070-2080m (CL = 2)

PLIOCENE

- ← *Barssidinium evangelinae* (rare)
- ← *"Minisphaeridium membranosum"* (rare), *Reticulatosphaera actinocoronata* (rare), *Tuberculodinium vancampoae* (rare)








LATE MIOCENE  
 or older

-  P29076 2100-2110m (CL = 2)
-  P29077 2130-2140m (CL = 2)
-  P29078 2160-2170m (CL = 2)
-  P29079 2190-2200m (CL = 2)
-  P29080 2220-2230m (CL = 2)
-  P29081 2250-2260m (CL = 2)
-  P29082 2280-2290m (CL = 2)
-  P29083 2310-2320m (CL = 2)

LATE MIOCENE

- ← *"Svalbardella golzowense"* (rare)
- ← *Hafniasphaera* sp.
- ← *Cleistosphaeridium ancyreum*

MIDDLE EOCENE

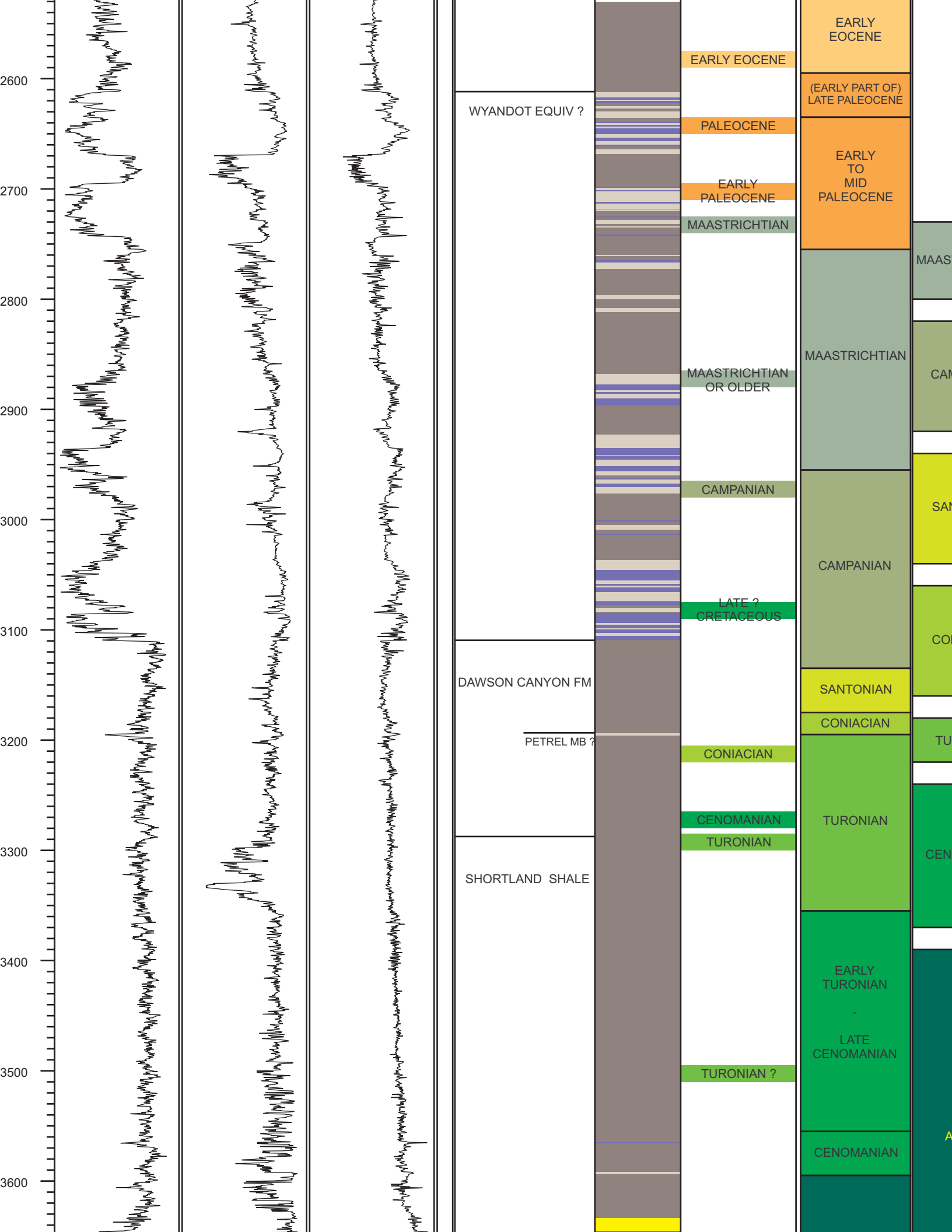
-  P29084 2340-2350m (CL = 4)
-  P29085 2370-2380m (CL = 4)
-  P29086 2400-2410m (CL = 3)
-  P29087 2430-2440m (CL = 3)
-  P29088 2460-2470m (CL = 4)
-  P29089 2490-2500m (CL = 2)
-  P29090 2520-2530m (CL = 4)

EARLY TO MID MIOCENE

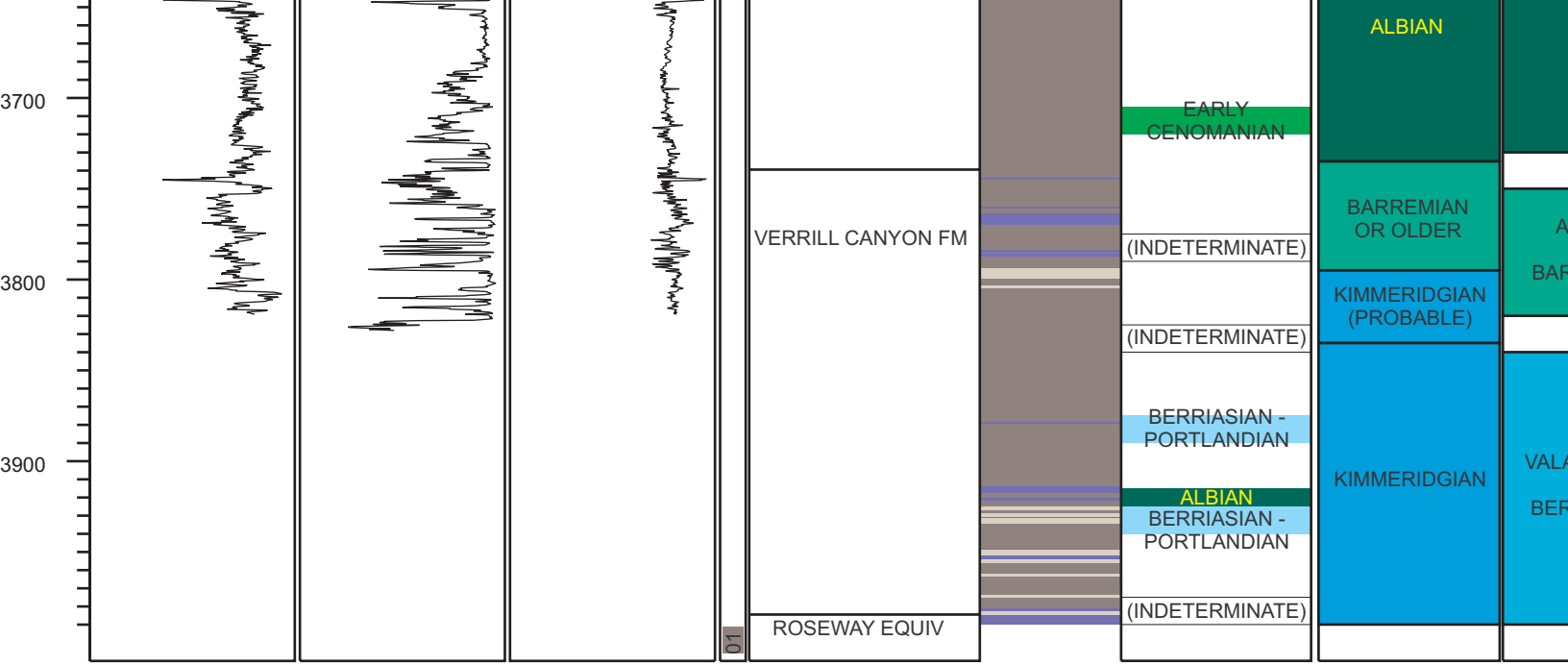
MID EOCENE  
 (BARTONIAN)

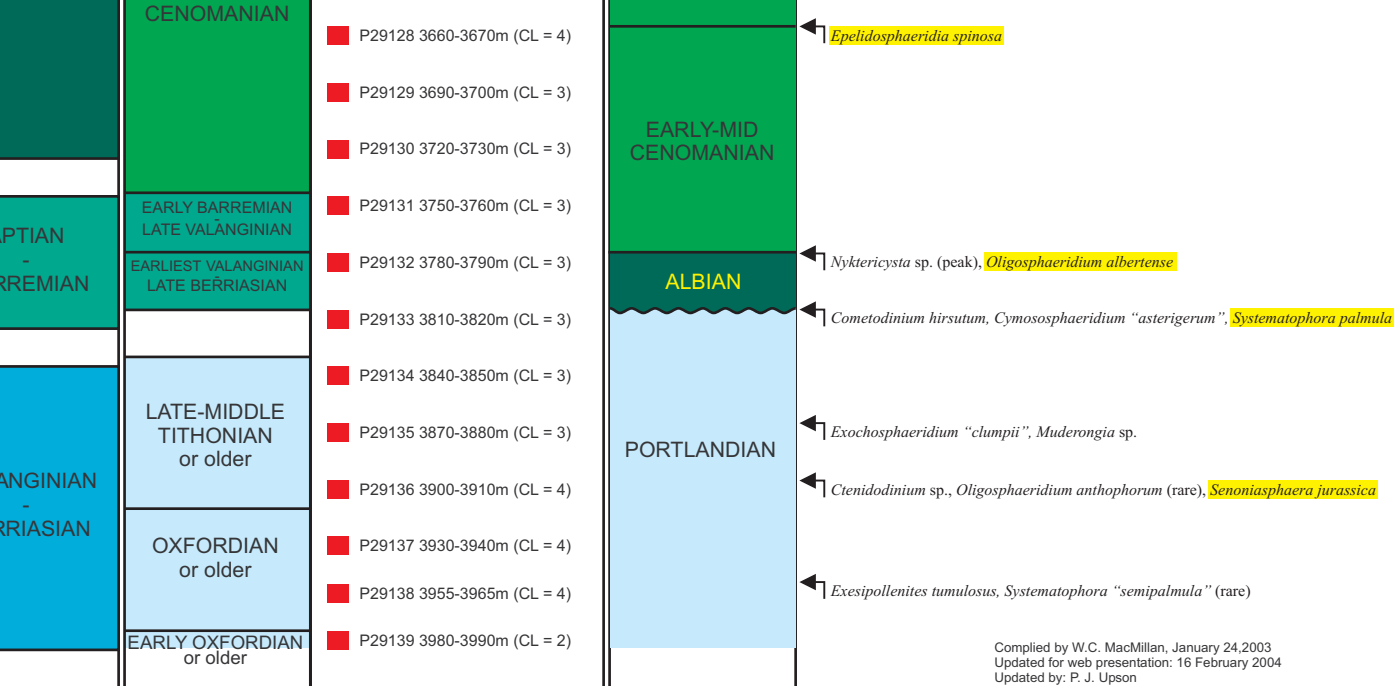
MID EOCENE  
 (LUTETIAN)

- ← *Cleistosphaeridium diversispinosum*, *Glaphyrocysta* sp., *Phthanoperidinium* sp. (rare), *Wetzeliella* sp.
- ← *Achomosphaera ramulifera*, *Glaphyrocysta "extensa"* (common), *Glaphyrocysta pastielsii* (rare), *Heteraulacacysta "stoveri"* (rare), *Lentinia "glabra"* (rare but consistent)
- ← *Adnatosphaeridium multispinosum*, *Cordosphaeridium gracile* (rare), *Deflandrea phosphoritica*, *Diphyes colligerum*
- ← *Cleistosphaeridium "elegantulum"* (rare but consistent), *Heteraulacacysta porosa* (rare)
- ← *"Axiodinium"* sp. (rare), *Diphyes ficusoides*, *Hystrichokolpoma "pseudoinsertum"*, *Wetzeliella "granulata"*
- ← *Areoligera gippingensis* (rare and inconsistent), *Baltisphaeridium "scalenefurcatum"*, *Cordosphaeridium "delimurum"*, *Pyxidinospis "reticulata"* (rare)
- ← *Areoligera "circumsenonensis"*, *Deflandrea eocenica* (rare), *Fibradinium "lophophorum"*



	MIDDLE-EARLY EOCENE or older	<ul style="list-style-type: none"> <li>P29091 2550-2560m (CL = 3)</li> <li>P29092 2580-2590m (CL = 4)</li> </ul>	EARLY EOCENE (YPRESIAN)	<ul style="list-style-type: none"> <li><i>Adnatosphaeridium "delicosum"</i> (rare), <i>Damassadinium</i> sp. (rare)</li> <li>"<i>Axiodinium</i>" sp. (peak), <i>Cleistosphaeridium polypetalum</i>, <i>Hafniasphaera hyalospinosa</i> (rare)</li> <li><i>Glaphyrocysta "semicomplexa"</i>, <i>Hystrichosphaeridium tubiferum</i> (rare)</li> </ul>
	LATE PALEOCENE	<ul style="list-style-type: none"> <li>P29093 2610-2620m (CL = 3)</li> <li>P29094 2640-2650m (CL = 3)</li> <li>P29095 2670-2680m (CL = 4)</li> </ul>	PALEOCENE (THANETIAN)	<ul style="list-style-type: none"> <li><i>Areoligera gippingensis</i> (peak), <i>Cerodinium</i> spp., <i>Glaphyrocysta intricata</i> (rare but consistent), <i>Spinidinium "lowspinosum"</i> (rare)</li> <li><i>Cordosphaeridium</i> spp. (peak)</li> </ul>
	PALEOCENE	<ul style="list-style-type: none"> <li>P29096 2700-2710m (CL = 4)</li> </ul>	PALEOCENE (DANIAN - SELANDIAN)	<ul style="list-style-type: none"> <li><i>Palaeoperidinium pyrophorum</i>, <i>Tanyosphaeridium "granulosum"</i> (rare but consistent)</li> </ul>
	PALEOCENE-MAASTRICHTIAN	<ul style="list-style-type: none"> <li>P29097 2730-2740m (CL = 4)</li> <li>P29098 2760-2770m (CL = 3)</li> <li>P29099 2790-2800m (CL = 2)</li> </ul>	MAASTRICHTIAN	<ul style="list-style-type: none"> <li><i>Florentinia</i> sp., <i>Oligosphaeridium complex</i> (rare), <i>Tanyosphaeridium xanthiopyxides</i>, <i>Trithyrodinium evittii</i>, <i>Trithyrodinium cf. suspectum</i> (rare)</li> <li><i>Spongodinium delitiense</i> (rare)</li> </ul>
MAASTRICHTIAN	LATE MAASTRICHTIAN	<ul style="list-style-type: none"> <li>P29100 2820-2830m (CL = 2)</li> <li>P29101 2850-2860m (CL = 2)</li> </ul>		<ul style="list-style-type: none"> <li><i>Coronifera oceanica</i>, <i>Isabelidinium belfastense</i>, <i>Isabelidinium glabrum</i>, <i>Phelodinium tricuspe</i></li> </ul>
CAMPANIAN	MAASTRICHTIAN LATE CAMPANIAN	<ul style="list-style-type: none"> <li>P29102 2880-2890m (CL = 2)</li> <li>P29103 2910-2920m (CL = 2)</li> </ul>		<ul style="list-style-type: none"> <li><i>Isabelidinium cooksoniae</i>, <i>Oligosphaeridium pulcherrimum</i>, <i>Palaeohystrichophora infusorioides</i> (rare and sporadic - probably reworked)</li> <li><i>Areoligera coronata</i> (rare), <i>Cymososphaeridium dictyophorum</i> (rare), <i>Disphaerogena monmouthensis</i> (rare)</li> </ul>
	LATE CAMPANIAN	<ul style="list-style-type: none"> <li>P29104 2940-2950m (CL = 2)</li> <li>P29105 2970-2980m (CL = 3)</li> <li>P29106 3000-3010m (CL = 3)</li> </ul>	CAMPANIAN	<ul style="list-style-type: none"> <li><i>Alterbidinium "fleximorphum"</i>, <i>Xenascus perforatus</i> (rare)</li> <li><i>Impletosphaeridium "choanum"</i>, diverse <i>Xenascus</i>, <i>Odontochitina costata</i> (rare but consistent), <i>Svalbardella lidiae</i>, <i>Klethriasphaeridium loffrense</i> (consistent)</li> <li><i>Litosphaeridium fenestratum</i>, <i>Palaeohystrichophora infusorioides</i> (consistent)</li> </ul>
TURONIAN	LATE-MIDDLE CAMPANIAN	<ul style="list-style-type: none"> <li>P29107 3030-3040m (CL = 4)</li> <li>P29108 3060-3070m (CL = 4)</li> <li>P29109 3090-3100m (CL = 4)</li> </ul>		<ul style="list-style-type: none"> <li><i>Asbeckiasporites wirthii</i> (rare but consistent), <i>Cyclonephelium compactum</i></li> </ul>
	EARLY CAMPANIAN	<ul style="list-style-type: none"> <li>P29110 3120-3130m (CL = 3)</li> <li>P29111 3150-3160m (CL = 3)</li> </ul>	SANTONIAN	<ul style="list-style-type: none"> <li><i>Alterbidinium acuminatum</i> (common), <i>Impletosphaeridium "capitatum"</i> (common), <i>Rugubivesiculites reductus</i>, <i>Zlavisporis</i> sp. (rare but consistent)</li> <li><i>Appendicisporites</i> spp., <i>Callaiosphaeridium asymmetricum</i> (rare), <i>Canningia reticulata</i>, <i>Nyktericysta</i> sp. (rare and sporadic), <i>Senoniasphaera protrusa</i> (rare), <i>Senoniasphaera rotundata</i>, <i>Surculosphaeridium longifurcatum</i></li> <li><i>Alisporites "biggie"</i>, <i>Chytroeisphaeridia</i> sp. (common), <i>Circulodinium brevispinosum</i> (rare), <i>Florentinia cooksoniae</i>, <i>Pervosphaeridium "granoaciculare"</i></li> </ul>
	LATE TURONIAN?	<ul style="list-style-type: none"> <li>P29112 3180-3190m (CL = 2)</li> <li>P29113 3210-3220m (CL = 3)</li> </ul>		<ul style="list-style-type: none"> <li><i>Chlamydophorella huguoniotii</i>, <i>Chlamydophorella nyei</i>, <i>Hystrichosphaeridium difficile</i></li> </ul>
	MIDDLE TURONIAN	<ul style="list-style-type: none"> <li>P29114 3240-3250m (CL = 3)</li> <li>P29115 3270-3280m (CL = 3)</li> <li>P29116 3300-3310m (CL = 3)</li> <li>P29117 3330-3340m (CL = 3)</li> </ul>		<ul style="list-style-type: none"> <li><i>Alterbidinium "granulosum"</i>, <i>Surculosphaeridium "groupifurcatum"</i></li> <li><i>Palaeoperidinium "denticulatum"</i> (rare)</li> <li><i>Cicatricosisporites</i> spp.</li> </ul>
		<ul style="list-style-type: none"> <li>P29118 3360-3370m (CL = 3)</li> <li>P29119 3390-3400m (CL = 3)</li> </ul>	TURONIAN - CONIACIAN	<ul style="list-style-type: none"> <li><i>Alterbidinium "granulosum"</i> (peak)</li> <li><i>Palaeohystrichophora "palaeoinfusa"</i> (top consistent)</li> <li><i>Adnatosphaeridium "ladder"</i>, <i>Hystrichodinium pulchrum</i> (rare but consistent), <i>Oligosphaeridium elegantulum</i> (rare)</li> <li><i>Odontochitina rhakodes</i> (rare)</li> </ul>
		<ul style="list-style-type: none"> <li>P29120 3420-3430m (CL = 3)</li> <li>P29121 3450-3460m (CL = 3)</li> <li>P29122 3480-3490m (CL = 2)</li> <li>P29123 3510-3520m (CL = 2)</li> </ul>		<ul style="list-style-type: none"> <li><i>Diphyes "cretaceum"</i>, <i>Impletosphaeridium "minisucker"</i>, <i>Kiokansium polytes</i> (rare and inconsistent), <i>Oligosphaeridium perforatum</i> (rare and inconsistent)</li> </ul>
	MIDDLE-EARLY TURONIAN	<ul style="list-style-type: none"> <li>P29124 3540-3550m (CL = 2)</li> <li>P29125 3570-3580m (CL = 3)</li> <li>P29126 3600-3610m (CL = 3)</li> <li>P29127 3630-3640m (CL = 3)</li> </ul>	LATE CENOMANIAN	<ul style="list-style-type: none"> <li><i>Cyclonephelium vannophorum</i> (good top), <i>Epelidosphaeridia spinosa</i> (rare and inconsistent)</li> <li><i>Kiokansium williamsii</i> (rare but consistent), <i>Zlavisporis "reticulatus"</i> (rare)</li> <li><i>Florentinia perforata</i>, <i>Oligosphaeridium perforatum</i> (consistent)</li> </ul>
	EARLY TURONIAN			
ALBIAN				





Compiled by W.C. MacMillan, January 24, 2003  
 Updated for web presentation: 16 February 2004  
 Updated by: P. J. Upton