

GFE RESOURCES LTD



APPENDIX 9A

HOT SHOT PALYNOLOGY

(by Roger Morgan)

HOWMAINS-1

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RECEIVED

3 OCT 1994

6746

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Howmains-1 Hot Shot Palynology

Onshore Otway Basin Victoria

Three samples were analysed as below. Samples were met at 8.30am at Adelaide Airport and processed and examined in the Geology Department at the University of Adelaide. Results were phoned at 10.30am with a written report at 12 noon.

1900-10m(cutts) : mixed Late Cretaceous, mostly *apoxyexinus* to *mawsonii* Zones
: Santonian-Turonian : nearshore marine ; usually Sherbrook Group.

1930-40m(cutts) : mixed Late Cretaceous but with rare Early Cretaceous elements (consistent *C. paradoxa* and *C. striatus*, very rare *F. asymmetricus*, *T. trioreticulosus*) therefore considered *paradoxa* Zone with heavy Late Cretaceous caving. Early Cretaceous reworking into the Late Cretaceous is possible but considered unlikely. Therefore probably Eumeralla Formation.

1940-50m(cutts) : Mixed late Cretaceous with Early Cretaceous elements (consistent *C. paradoxa*, *C. striatus* with frequent *C. australiensis*, very rare *B. holodictyus*) therefore considered *paradoxa* Zone with Late Cretaceous caving. Therefore probably Eumeralla Formation.

In summary, penetration of the top Eumeralla Formation appear to have occurred between 1900 and 1940m.

Raw data is presented as an Appendix.

Cretaceous Regional Framework is presented as Figure 1

Roger Morgan

19.7.94

OTW.RPHOWMAI



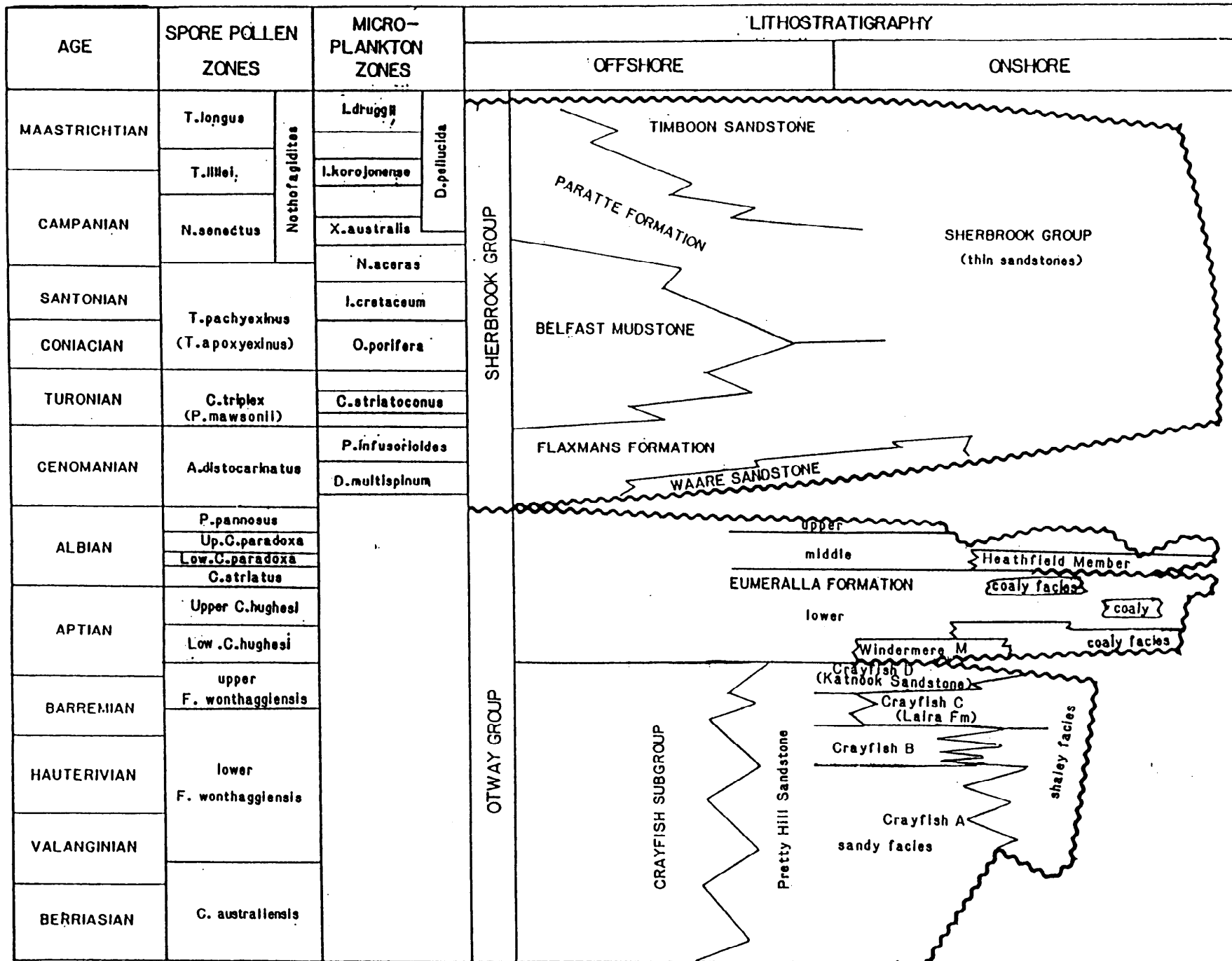


FIGURE 1. CRETACEOUS REGIONAL FRAMEWORK, OTWAY BASIN

HOWMAINS #1

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C L I E N T: GAS & FUEL

W E L L: HOWMAINS #1

F I E L D / A R E A: ONSHORE OTWAY BASIN, VICTORIA

A N A L Y S T: ROGER MORGAN

D A T E : AUGUST 1994

N O T E S: ALL DEPTHS IN METRES. ALL FIGURES ARE PERCENTAGES.

X MEANS THAT SPECIES IS VERY RARE AND OCCURRED OUTSIDE GRAIN
COUNT.

- RANGE CHART OF OCCURRENCES BY ALPHABETICAL (grouped)

1900-10 CUTTS	3	1	BOTRYOCOCCUS
1930-40 CUTTS	2	2	SCHIZOSPORIS RETICULATUS
1940-50 CUTTS	1	3	ALISOCYSTA CIRCONTABULATA
	X	4	AMPHIDIADEMA DENTICULATA
	.	5	CIRCULODINIUM DEFLANDREI
	1	6	CRIBROPERIDIUM EDWARDSII
	.	7	CRIBROPERIDIUM SPP
	1	8	EXOCHOSPHAERIDIUM PHRAGMITES
	X	9	HETEROSPHAERIDIUM CONJUNCTUM
	.	10	HETEROSPHAERIDIUM HETEROCANTHUM
	1	11	HETEROSPHAERIDIUM SOLIDA
	4	12	IMPLETOSPHERIDIUM SP
	3	13	ISABELIDIINIUM
	4	14	ISABELIDIINIUM BELFASTENSE ROTUNDATA
	5	15	ISABELIDIINIUM COOKSNIAE
	.	16	ISABELIDIINIUM CRETACEUM
	X	17	ISABELIDIINIUM KOROJONENSE
	X	18	ISABELIDIINIUM RECTANGULARIS
	.	19	KIOKANSIUM POLYPES
	1	20	NELSONIELLA ACERAS
	1	21	ODONTOCHITINA CRIBROFOIDA
	X	22	ODONTOCHITINA OPERCULATA
	X		
	1		

1900-10 CUTTS	1930-40 CUTTS	1940-50 CUTTS		
	X	.	23	OLIGOSPHAERIDIUM COMPLEX
	.	.	24	OLIGOSPHAERIDIUM PULCHERRIMUM
X	.	.	25	PALAEOHYSTRICHOPIHORA INFUSORIOIDES
.	.	1	26	PALAEOPERIDIUM CRETACEUM
.	1	3	27	SPINIFERITES FURCATUS RAMOSUS
.	X	.	28	TRITHYRODINIUM MARSHALLII
.	X	.	29	TRITHYRODINIUM THICK RETICULATA
.	X	.	30	TRITHYRODINIUM THICK VERRUCATE
.	X	.	31	XENIKOON AUSTRALIS
X	.	.	32	AEQUITRIRADITES VERRUCOSUS
.	.	2	33	AMOSOPOLLIS CRUCIFORMIS
1	X	.	34	ARAUCARIACITES AUSTRALIS
1	.	.	35	BALMEISPORITES HOLODICTYUS
1	.	.	36	BIRETRISPORITES
.	1	.	37	CALLIALASPORITES DAMPIERI
2	1	1	38	CALLIALASPORITES TURBATUS
.	X	1	39	CERATOSPORITES EQUALIS
8	2	2	40	CICATRICOSISPORITES AUSTRALIENSIS
X	X	.	41	CICATRICOSISPORITES LUDBROOKIAE
.	1	.	42	CINGUTRILETES CLAVUS
X	.	.	43	CLAVIFERA TRIPLEX
.	.	X	44	CONTIGNISPORITES COOKSONIAE

1900-10 CUTTS	1930-40 CUTTS	1940-50 CUTTS		
.	X	X	45	COPTOSPORA PARADOXA
3	1	1	46	COROLLINA TOROSUS
.	X	X	47	CRYBELOSPORITES STRIATUS
3	12	6	48	CYATHIDITES AUSTRALIS
12	12	12	49	CYATHIDITES MINOR
1	1	.	50	CYCADOPITES FOLLICULARIS
4	8	13	51	FALCISPORITES GRANDIS
27	22	35	52	FALCISPORITES SIMILIS
.	X	.	53	FORAMINISPORIS ASYMMETRICUS
.	X	.	54	FORAMINISPORIS WONTHAGGIENSIS
1	X	X	55	GLEICHENIIDITES
.	X	.	56	KLUKISPORITES SCABERIS
10	8	7	57	MICROCACHRYIDITES ANTARCTICUS
7	22	4	58	OSMUNDACIDITES WELLMANII
.	.	X	59	PEROTRILETES MAJUS
.	.	X	60	PHYLLOCLADIDITES MAWSONII
1	1	1	61	PUDOSPORITES MICROSACCATUS
2	1	1	62	PETITRILETES AUSTRICLAVATIDITES
.	.	X	63	PETITRILETES EMINULUS
.	.	X	64	PERMORNING - PERMIAN
1	.	.	65	TRICOLPORITES APOXYEXINUS
.	X	.	66	TRILOBOSPORITES TRIORETICULOSUS

1900-10 CUTTS .
1930-40 CUTTS X X
1940-50 CUTTS X X

1900-10 CUTTS
1930-40 CUTTS
1940-50 CUTTS

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67
68
69
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TRIPOROLÈTES RADIATUS

TRIPOROLETES RETICULATUS

VITREISPORITES PALLIDUS