

# **PALYNOLOGICAL REPORT ON**

**BLAMORE-1,**

**PEDIRKA BASIN**

FOR: Central Petroleum Ltd

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## RESULTS

Palynological analysis was undertaken on 15 cuttings samples from Blamore-1.

Standard preparation techniques were used to recover palynomorphs including HF maceration, ZnBr<sub>2</sub> heavy liquid separation, 10 micron filtration and oxidation with Schulz Solution where there was sufficient organic matter. A kerogen slide and oxidised/filtered palynological slides were prepared where possible.

The palynological slide was examined and counted using semi-quantitative methods in which only a representative number of specimens of common species is counted. The kerogen slides were scanned for the presence of rare species. The zonations follow those of Helby et al., (1987) and Backhouse (1991).

### Palynological Subdivision

<u>DEPTH</u> (m)	<u>PALYNOLOGY</u> <u>ZONE</u>	<u>AGE</u>	<u>REMARKS</u>
950	<i>O. operculata</i>	Aptian	Rich well preserved assemblage consistent with Bulldog Shale. Minor Permian recycling.
975	? <i>M. australis</i>	Barremian	Not quite as rich with significant caving. The assemblage is essentially similar to that at 950m but the character is a little different and dinoflagellates less common. <i>Hoegisporis</i> is present but probably caved. Occurrences of <i>Microfosta evansii</i> is consistent with basal Bulldog Shale, however, the presence of <i>Epitricysta vinckensis</i> suggests it the assemblage is probably no younger than the <i>M. australis</i> Zone.
1299-1317	Barren	Indeterminate	Only minor organic matter was recovered and comprised mainly of inertinite and fine micrinite and minor degraded vitrinite.
1317-1332			
1332-1447			
1341			
1403	Indeterminate	?Mid Triassic	A lean assemblage dominated by <i>Falcisporites australis</i> . The apparent absence of <i>Classopollis</i> sp. as well as species such as <i>Aratrisporites</i> and striate bisaccates suggests a mid Triassic age is possible.
1505	?Stage 5	Late Permian	Very lean and poorly preserved. A fragment of <i>Dulhuntyspora</i> sp. and occurrence of <i>Striatopodocarpidites</i> sp. suggests a probable Stage 5 correlation. Caving from the Early Cretaceous sequence above was common.

<u>DEPTH</u> (m)	<u>PALYNOLOGY</u> <u>ZONE</u>	<u>AGE</u>	<u>REMARKS</u>
1592	?Stage 3b, <i>M. trisina</i>	Early Permian	Preservation very poor but diverse. Occurrences of <i>Microbaculispora tentula</i> , <i>P. sp.cf. P. pseudoreticulata</i> and <i>Quadrisporites horridus</i> and a diverse striate bisaccate assemblage is consistent with a probable Stage 3b correlation.
1848	Stage 3b, <i>M. trisina</i>	Early Permian	A moderate yield but poorly preserved assemblage. Presence of <i>M. trisina</i> and <i>Columispora sp.cf. C. peppersii</i> suggests a Stage 3b assignment.
1899	?Stage 3b, <i>M. trisina</i>	Early Permian	Low diversity assemblage similar to the two overlying samples that are all characterised by common <i>Alisporites</i> spp. The absence of younger species, a specimen of <i>M. trisina</i> (early form) and <i>Florinites eremus</i> suggests a probable correlation to the Stage 3b Zone.
2031	Indeterminate	Early Permian	Very lean, mainly inertinite with a few <i>Falcisporites</i> spp.
2097	?Stage 2, <i>?P. confluens</i>	Early Permian	Although relatively diverse, the yields and preservation were poor and key taxa were missing. The presence of <i>Striatopodocarpidites</i> spp. and apparent absences of <i>Dulhuntyispora</i> and <i>P. pseudoreticulata</i> suggests a probable Stage 2 correlation.
2112	Stage 2, <i>P. confluens</i>	Early Permian	A very poor assemblages with relatively common <i>Plicatipollenites</i> spp., common <i>Jayantispora variabilis</i> , <i>Potoneisporites novicus</i> , and occurrences of <i>Pseudoriticulatisporites confluens</i> and <i>Maculatisporites minimus</i> suggest a correlation to the <i>P. confluens</i> Zone (=Stage 2).
2115			

## Environment Subdivision

Note, UV analysis was not performed on the samples.

<u>DEPTH</u> (m)	<u>ENVIRONMENT OF DEPOSITION</u>	<u>REMARKS</u>
950 - 975	Marine	Abundant and diverse dinoflagellates and acritarchs.
1299-1317	Indeterminate	Barren
1317-1332		
1332-1447		
1341		
1403 - 1505	Non-marine	No acritarchs or algal debris observed
1592	Non-marine	?Lacustrine or swamp as a specimen of the acritarch <i>Tetraporina</i> was observed.
1848 - 1899	Non-marine	No acritarchs or algal debris observed
2031	Indeterminate	Virtually barren
2097	Non-marine	No acritarchs or algal debris observed
2112	Non-marine	?Lacustrine based on the nature of the kerogen.
2115	Non-marine	No acritarchs or algal debris observed

## REFERENCES

Backhouse, J. 1991, Permian Palynostratigraphy of the Collie Basin, Western Australia, Rev. Palaeobot., Palynol., 67:237-314.

Helby, R, Morgan, R & Partridge, A.D., 1987, A palynological zonation of the Australian Mesozoic. Mem. 4. Assoc. Austral. Paleaeont. Pp 1-94.