

DEPARTMENT OF MINES AND ENERGY  
SOUTH AUSTRALIA

REPT BK NO. 91/56  
DME NO 437/89  
DISK NO F02860

EARLY OLIGOCENE AGE FOR LIMESTONE FROM FRED'S LANDING,  
SOUTH OF TAILEM BEND, S.A.

Dr Neville Pledge from the South Australian Museum forwarded limestone for dating. A rare fossil whale tooth had been found in the sample.

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Biostratigraphy Branch

LOCALITY: Fred's Landing boat ramp, 1 km south of Tailem Bend  
adjacent the River Murray

SAMPLE DATA:

Depth: Base of river cliff  
Type of sample: Outcrop  
Lithology: Pale green, slightly glauconitic and  
ferruginous stained, marly fine-grained  
limestone  
Submitter: Dr. N. Pledge  
Mapsheet: BARKER 6727 Mobilong

STRATIGRAPHIC INFORMATION:

Stratigraphic unit: Ettrick Formation equivalent  
Geological Province: Murray Basin  
Rock sample (RS) no.: 6727 RS 173

FORAMINIFERAL FAUNA:

Key Species: *Guembelitra triseriata*,  
*Chiloguembelina cubensis*

Associated Species: *Sherbornina atkinsoni*, *Gyroidinoides*  
sp. cf. *allani*, *Bolivinosia*  
*cubensis*, *Globigerina ciperoensis*,  
*Globigerina ouchitatensis*.

RESULTS:

Age: Early Oligocene, equivalent to Ruwarung to Aldinga Member of Port Willunga Formation in St Vincent Basin.

Palaeoenvironment: The relatively rich planktonic foraminiferal fauna suggests a relatively open marine environment.

Other Comments: The planktonic foraminifera are relatively more abundant than in the type section of the Early Oligocene in the St Vincent Basin (Beecroft, pers. comm.). In general terms, the fauna of the Murray Basin tend to indicate a more restricted marine environment (mainly shallower) than the St Vincent Basin. Recent drilling has encountered similar age fine-grained limestone adjacent Lake Alexandrina and southeast along the Coorong but all subcrop.

While the limestone at Fred's Landing falls within the current concept of Ettrick Formation in terms of lithology, the distinctly older age suggests that this this limestone may form part of a different sedimentary event than formed the Ettrick Formation to the northeast during the mid-Late Oligocene.



10 MAY 1991

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NOT RECORDED