

# Data Repository item 2003137

TABLE DR1. MODEL PARAMETERS USED FOR ESTIMATING  
PALEOSALINITIES USING EQUATIONS 1 AND 2 IN THE TEXT

Stratigraphic range	<sup>87</sup> Sr/ <sup>86</sup> Sr		Sr (ppm)	
	Seawater (sw) <sup>†</sup>	Freshwater (fw) <sup>†</sup>	Seawater (sw) <sup>§</sup>	Freshwater (fw) <sup>#</sup>
	Kildonnan Member	0.70708	0.7105	6.37
Duntulm Fm.	0.70698	0.7095–0.7099	6.37	1.5
<i>Neomiodon</i> Bed 9		0.7092	6.37	1.5
Staffin Bay Fm	0.70690	0.7097	6.37	1.5
<i>Neomiodon</i> Bed UO 5b		0.7084	6.37	1.5
<i>Neomiodon</i> Bed UO 5c		0.7111	6.37	1.5

<sup>†</sup>Based on stratigraphic position relative to <sup>87</sup>Sr/<sup>86</sup>Sr age curve of seawater (Fig. 6).

<sup>‡</sup>Kildonnan and Duntulm compositions based on results from the freshwater clam *Unio* from each of these units. Wherever possible compositions were also determined directly from *Neomiodon* mixing lines assuming D<sub>Sr</sub> = 0.28 and a freshwater Sr/Ca = 16. The Staffin Bay composition is the average of the two *Neomiodon* compositions From Beds UO5b and 5c.

<sup>§</sup>Based on Jurassic Sr/Ca ratio of 5.4 and model Ca concentration of 552 ppm for Jurassic seawater (see text).

<sup>#</sup>Model Sr concentration based on data from modern dry climate rivers (Skougstad and Horr, 1963).