

**TABLE 1. NEODYMIUM AND CARBON ISOTOPE DATA FOR CONODONTS AND LIMESTONES**

Sample *	Position †	Sm (cm)	Nd (ppm)	Sm/Nd (atom)	$^{147}\text{Sm}/^{144}\text{Nd}$ (measured)	$^{143}\text{Nd}/^{144}\text{Nd}$ (measured)	$T_{\text{DM2}}^{\$}$ (Ga)	CAI #	$\delta^{13}\text{C}^{**}$ (PDB)	$\varepsilon_{\text{Nd}}^{††}$ (454 Ma)
<b>Iapetus ocean (AFR conodonts)</b>										
1. SD 65-18 §§	Mohawkian	130.1	407.7	0.31	0.1930	0.512598 (12)	1.3	1.5	—	-0.6 ± 0.2
2. SAL-93 7-5 (35)	25 M ↑	58.9	279.6	0.20	0.1273	0.512315 (49)	1.4	3.5	1.3	-2.3 ± 1.0
3. SAL-93 7-6 (35)	180 M ↑	35.7	179.3	0.19	0.1206	0.512159 (48)	1.6	3.5	1.5	-4.9 ± 0.9
								Average		-2.6 ± 2.2
<b>Taconic aquafacies (AFR conodonts)</b>										
4. SAL-92 UF-9	143 M ↑	28.9	98.2	0.28	0.1737	0.512267 (22)	1.7	4.5-5	2.0	-5.9 ± 0.4
5. SAL 91 MB-1 (30)	100 M ↓	18.7	78.8	0.23	0.1434	0.512012 (26)	1.9	5	2.3	-9.1 ± 0.5
								Average		-7.5 ± 2.3
<b>Middlecontinent aquafacies (MFR conodonts)</b>										
6. SAL-91NL-17	38 M ↑	18.6	87.6	0.20	0.1281	0.511838 (12)	2.1	1-1.5	-0.4	-11.6 ± 0.2
7. SAL-92 HO-3 (6)	10 D ↓	32.9	169.0	0.19	0.1175	0.511779 (22)	2.2	1-1.5	-2.3	-12.1 ± 0.4
8. P-287 (40)	248 D ↑	18.0	89.3	0.19	0.1221	0.511681 (31)	2.3	1-1.5	-0.3	-14.4 ± 0.6
9. SAL-92 HO1-C (6) ##	18 M ↓	37.5	176.8	0.20	0.1281	0.511679 (29)	2.4	1-1.5	-0.3	-14.7 ± 0.6
10. SAL-92 HO1-P (6) ##	18 M ↓	309.6	1417	0.21	0.1321	0.511689 (12)	2.4	1-1.5	repeat	-14.8 ± 0.2
11. SAL-92 HO-2 (4)	10 D ↑	71.4	333.1	0.21	0.1296	0.511667 (14)	2.4	1-1.5	-1.8	-15.1 ± 0.3
12. SAL-92 CB-6 (9)	532 D ↑	19.0	97.1	0.19	0.1184	0.511564 (55)	2.5	3.5-4	0.42	-16.4 ± 1.1
13. SAL-92 SP-8 (4)	86 M ↓	73.2	384.6	0.18	0.1150	0.511529 (34)	2.5	1-1.5	-2.3	-16.9 ± 0.7

14. SAL-93 24-7 (2)	***	340 D ↑	90.6	513.4	0.17	0.1067	0.511400 (20)	2.7	1-1.5	1.1	-18.9 ± 0.4
15. SAL-92 B50-8 (7)	***	87 D ↑	45.9	229.9	0.19	0.1207	0.511431 (12)	2.7	1.5-2	0.7	-19.2 ± 0.2
									Average		-15.5 ± 2.6
<b>Southern aquafacies (MFR conodonts)</b>											
16. SAL-92 ST-8 (36)		34 M ↑	33.2	121.7	0.26	0.1648	0.512180 (29)	1.8	1.5	1.4	-7.1 ± 0.6
17. SAL-92 FF-7 (19)		206 D ↑	12.3	53.2	0.22	0.1397	0.512044 (29)	1.9	1-1.5	0.9	-8.3 ± 0.6
									Average		-7.7 ± 0.8
<b>Other (MFR conodonts)</b>											
18. SAL-91 HA-27 (1300)		92 M ↑	31.8	131.5	0.20	0.1460	0.511875 (17)	2.2	2.5-3	2.4	-12.0 ± 0.3

\* Sample name followed by bentonite thickness (cm) in parentheses. † Distance of sample above (↑) or below (↓) the Millbrig (M) or Deicke (D) K-bentonites. §  $T_{DM2} = 1/\lambda \ln [ ({}^{143}\text{Nd}/{}^{144}\text{Nd})_{\text{sample at } 454 \text{ Ma}} - 0.512528 ] / (0.1163 - 0.2137) + 1$ ; λ is the decay constant for  ${}^{147}\text{Sm} = 6.54 \times 10^{-12} \text{ yr}^{-1}$ . # CAI = conodont color alteration index; conodonts become progressively darker with increasing burial temperature; CAI = 1–5. \*\*  $\delta^{13}\text{C} = R_{\text{sample}} / R_{\text{standard}} - 1 \times 10^3$ , where  $R = {}^{13}\text{C}/{}^{12}\text{C}$  and the standard is PDB (Peedee belemnite). ¶¶  $\varepsilon_{\text{Nd}} (454 \text{ Ma}) = [ ({}^{143}\text{Nd}/{}^{144}\text{Nd})_{(\text{sample})(t=454 \text{ Ma})} / ({}^{143}\text{Nd}/{}^{144}\text{Nd})_{\text{CHUR } (t=454 \text{ Ma})} - 1 ] \times 10^4$  where CHUR is chondritic uniform reservoir = 0.512638. §§ Conodonts (SD 65–18) from *B. gerdæ* Subzone of the *A. tvaerensis* Zone collected from a middle Mohawkian Ordovician continental-margin (slope-rise) deposit in Scotland — part of eastern Laurentia in the Mohawkian. §§ C = coniform elements with no basal body material. P = pectiniform elements with basal body material. \*\*\* Tentative correlation based on conodont biostratigraphy (Leslie, 1995).