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Title of article Methane-derived Authigenic Carbonates Formed by Subduction-induced Pore Water Expulsion Along the Oregon/Washington Margin"

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see Bulletin v. 98, p. 147 - 156

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SAMPLE	RIM	CORE
72-11-2	12.4	32.9
79-11-3	16.5	35.0
79-11-4	15.1	27.2
79-14-3	32.2	59.1
79-33-17	51.1	62.0

Table A. Calcium carbonate content of rims vs. cores. From Scamman (1981).

Sample	Weight % $MeCO_3$	Mole % $MgCO_3$	$\delta^{13}C$	$\delta^{18}O$
90-28-4	81.9	23'	-46.4	6.1
22-13	38.9	12	-56.1	3.7
22-6	56.8	13'	-58.7	4.7
22-5	63.8	13'		
22-4	47.1	8'		
90-3-6	76.8	8	-44.1	4.2
79-27-4	68.6	11'	-60.2	5.6
16-13	19.0	13	-48.7	3.7
79-27-1	69.4	11		
79-33-7	43.6	10'	-49.6	5.4
79-34-16	61.7	13'	-49.0	5.8
22-12	35.2	9	-66.7	4.2
68-14-2	70.0	6'	-41.3	4.0
63-9	62.3	9'	-51.8	6.1
16-2	57.6	9	-51.2	4.3
79-14-3	59.1	13'	-58.7	4.8
22-2	38.9	10	-66.3	2.8
1428-03	69.9	6	-32.5	6.2
1426-02	82.5	17	-32.6	5.4
90-32-5	68.0	51	-38.4	8.3
90-32-3	59.2	45		
1434-01	70.9	41	-37.2	8.9
22-3	26.8	6'		
8408-9DRB	34.4	7'	-10.9	-7.3
1428-01	32.1	7'	-18.7	-5.9
1427-01	16.0	18	-7.2	2.3
		Concretion		
1428-02-1	55.0	16'	-39.2	6.4
1428-02-2	58.7	18	-38.3	6.1
1428-02-3	57.7	18	-37.1	6.3
1428-02-4	53.8	16	-35.6	5.9
1428-02-5	54.7	17	-34.9	6.0
1428-02-6	51.1	16	-35.9	6.5
1428-02-7	55.4	16	-36.1	5.4
1428-02-8	56.6	17	-37.7	6.0
1428-02-9	45.9	16'	-38.6	6.8
1428-02-10	54.0	16	-37.0	6.4
1428-02-11	56.2	23	-35.5	6.3
1428-02-5	54.7	17	-34.9	6.0
1428-02-12	53.5	19	-36.5	5.9
1428-02-13	54.2	16	-35.8	6.0

Table B. Mineralogy and stable isotopes of carbonate cement. (') denotes mineralogies determined by x-ray diffraction; all others determined by trace element analysis (See Appendix 1).

SAMPLE	$MgCO_3$ (Mole %)	Sr (ppm)	Mn (ppm)	Fe (ppm)	Mineralogies present
90-28-4	23	494	84	130	MC
22-13	12	666	276	130	MC
22-6	12	786	156	60	MC
22-5	11	575	111	120	MC
22-4	8	311	316	90	MC
90-3-6	11	770	108	80	MC
79-27-4	11	702	482	40	MC
16-13	13	1195	110	30	MC, A
79-27-1	11	750	521	50	MC
79-33-7	13	925	271	40	MC
79-34-16	16	958	192	40	MC
22-12	9	490	229	120	MC
68-14-2	7	348	1176	60	MC
63-9	16	1366	373	80	MC, A
16-2	11	944	101	50	MC
79-14-3	14	1208	39	60	MC, A
22-2	10	469	98	60	MC
1428-03	6	791	175	30	MC
1426-02	17	1605	220	110	MC, A
1427-01	18	3865	945	120	MC, A
90-32-5	51	685	568	90	D
90-32-3	45	725	518	30	D
1434-01	41	1112	643	60	D, A
22-3	5	437	10550	12800	C
8408-9DRB	5	146	28120	8930	C
1428-01	6	183	17950	7570	C
		Concretion			
1428-02-1	12	1133	90	60	MC
1428-02-2	18	1042	81	160	MC
1428-02-3	18	1099	83	140	MC
1428-02-4	16	1132	71	140	MC
1428-02-5	17	1066	93	120	MC
1428-02-6	16	1148	90	170	MC
1428-02-7	16	1057	87	130	MC
1428-02-8	17	1177	76	125	MC
1428-02-9	16	1073	106	70	MC
1428-02-10	16	998	84	130	MC
1428-02-11	23	1206	95	140	MC
1428-02-5	17	1066	93	120	MC
1428-02-12	19	1123	86	130	MC
1428-02-13	16	1082	84	100	MC

Table 3a

22-6	13	742	144	45	MC
22-6	13	875	157	40	MC
22-6	8	853	161	40	MC
22-6	14	830	153	30	MC
22-6	14	855	158	60	MC
22-6	9	825	159	50	MC
22-6	12	926	173	60	MC
22-6	9	837	165	60	MC
22-6	12	846	138	50	MC
Mean	12.3	843	156	48	MC
S.D.	4.4	48.6	10.5	10.6	MC

Table 3b

Table C. Trace element compositions of carbonate cement. Mg is reported as mole %. Sr, Mn, and Fe, are reported in ppm normalized to $(Ca + Mg)CO_3$. Mineralogies are determined on the basis of the trace elements. MC = magnesian calcite, A = aragonite, D = dolomite, C = complex carbonate (see text for discussion).

SAMPLE	$MgCO_3$	$MnCO_3$	$FeCO_3$
1428-01	2.7	3.7	1.5
8408-9DRB	1.9	5.6	1.8
1423-01	4.9	2.1	2.5

Table D. Compositions of "complex" carbonates. Normalized to $(Ca + Mg + Mn + Fe)CO_3$ and given as mole %.

Sample	Carbon	Age (years b.p.)
1434-01	organic	17,030 ± 280
1434-01	carbonate	>40,000
1428-02	carbonate	>40,000
1427-01	organic	27,400 ± 1400
1427-01	carbonate	17,380 ± 370

Table E. Radiocarbon ages of carbonate and organic carbon.

ELEMENT	λ	SLIT WIDTH	TIME	INTERFERENCE ADDITION
Mg	202.6	.7	20 s	La
K	766.5	.7	20 s	La
Sr	460.7	.7	15 s	La, K
Mn	279.5	.2	15 s	La, K
Fe	248.3	.2	15 s	La, K
Ca	422.7	.7	20 s	La, K

Table F. Conditions for atomic absorption analysis. An air/acetylene flame was used for all elements. For Ca and Mg analysis, the burner head was rotated to reduce absorbance. Lanthanum was added as oxide (0.5 % in solution) and potassium was added as chloride (1.0 % in solution).