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Title of article Genetic Interpretation of Lead-Isotopic Data from the Columbia River Basalt Group, Oregon, Washington, and Idaho

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TABLE A.--STRATIGRAPHIC CORRELATIONS OF ANALYZED SAMPLES FROM THE COLUMBIA RIVER BASALT GROUP

Member	Columbia Plateaus Province		
	West	Central	East
Saddle Mountains Basalt			
Lower Monumental Member			
Ice Harbor Member			
Basalt of Goose Island		DSTW71-104[g]	
Basalt of Martindale		DSTW71-114[g] WIN-2[e]	
Basalt of Basin City			
Buford Member			
Elephant Mountain Member	CR-62[d] WEM-1[e]	CR-122[d]	
	DSTW71-107[g]	CR-121[d]	
	SR64-209[a,b,c]		
	CR-1[d]		
Pomona Member	SR65-130[a,b,c,d]	CR-119[d]	
	MR69-24[a,d]	WPOM-1[e]	
Esquatzel Member		WSM-2[e]	
Weissenfels Ridge Member			?288[p,r]
Basalt of Slippery Creek			
Basalt of Lewiston Orchards			
Asotin Member			
Wilbur Creek Member			
Umatilla Member		CR-37[d]	23[p,r]
		WU-2[e]	
Wanapum Basalt		F-2[e]	
Priest Rapids Member	K-3[h]	CR-125[d]	DSTW71-42[g]
		TG-56[j,k]	
Roza Member	K-8[h]	CR-24[d], WR-2[e]	
	SR59-32B[a,b,c,d]	CR-31[d]	
Frenchman Springs Member	SR-62-17[a,b,c,d]	CR-20[d], WF-2[e]	(xenolith)[e]
	317,336[a,f] OFW-1[a,e]	CR-19[d]	
Eckler Mountain Member			
Basalt of Shumaker Creek			
Basalt of Dodge			
Basalt of Robinette Mountain			
Grande Ronde Basalt	WFC59-1[a,b,c,d]		
	DPL56-21[j]	CR-15[d]	ORGR-N_2[e]
	STIL62-1A[a,d]		
	BCR-1,2,[e,k,m]	CR-14[d]	
	ACW-1[k]	CR-13[d]	
	CR-25[a,d]		
	CR-12[d]		

TABLE A.--Continued.

Member	Columbia Plateaus Province		
	West	Central	East
Grande Ronde Basalt	CR-29[d]	CR-11[d]	85[p,r]
	K-11B[h]	CR-10[d]	
	DSTW78-221[e]	CR-9[d]	
		CR-8[d]	
		CR-7[d]	
	BC-10[n]		
	DSTW78-258[e]		CR-85[d]
			CR-87[d],L-41[e]
			CR-89[d]
			CR-92[d]
			CR-94[d]
			CR-98[d]
		CR-106[d]	CR-101[d]
	WEN77-127[e]	CR-66[d]	CR-104[d]
		CR-67[d]	
		CR-68[d]	L-11[e]
		CR-70[d]	
		CR-71[d]	
		CR-73[d]	
		CR-75[d]	
		CR-77[d]	
	YB-1[e]		
Picture Gorge Basalt	PG-1[h]	CR-38[d]	
		CR-41[d]	
	?1781[j]	CR-45[d]	
		CR-47[d]	
		CR-50[d]	CR-60[d]
	PG-8[h]	CR-52[d]	
	PG-10[h]	CR-54[d]	
	?1780[j]	CR-57[d]	
	PG-14[h]	CR-58[d]	
		CR-59[d]	
	PG-16[h,m]		
Imnaha Basalt		CR-80[d]	M-13[e]
		CR-82[d]	M-1[e]
			C-1[e]

References to data on samples and their exact locations are denoted as follows: a-Samples collected from flows occurring west of the Cascade Range; b-Snavely and others (1973); c-Tatsumoto and Snavely (1969); d-McDougall (1976); e-Carlson and others (1981); f-Kienle (1971); g-Swanson and others (1979); h-Osawa and Goles (1970), Nathan and Fruchter (1974); j-Hedge and others (1970); k-Davis and others (1965); m-DePaolo and Wasserburg (1976); n-Cockerham (1976); p-Price (1973); r-Wright, written commun. (1981).

TABLE B. U-Th-Pb CONCENTRATION DATA FOR SELECTED SAMPLES

	U	Th	Pb	$^{238}U/^{204}Pb$	$^{232}Th/^{238}U$
Steens Mountain Basalt*					
5	0.964	1.932	5.88	10.5	2.07
21	0.803	2.427	4.62	11.1	3.12
31	0.340	1.016	2.86	7.6	3.09
67	0.402	1.018	2.92	8.8	2.62
Columbia River Basalt Group					
BCR-1*	1.70	5.92	13.3	8.2	3.60
BCR-1§	1.72	5.99	13.56	8.1	3.60
SR64-209†	0.75	2.79	4.42	11.0	3.84
SR65-130†	0.65	2.70	3.92	10.7	4.29
SR62-17†	1.34	4.34	6.35	13.5	3.35
WRC59-1†	1.73	6.08	8.51	13.0	3.63

*Data from this study.
§Tatsumoto and others (1972).
†Tatsumoto and Snavely (1969).

TABLE C. TRACE-ELEMENT ABUNDANCES IN SELECTED IGNEOUS ROCKS--PART I. ANDESITES

Element	AGV-1† Guano Valley Lake County, Oregon	Andesites from the Cascade Range				
		Mount Shasta MS-68-6†	Mount Shasta MS-68-12†	Mount St. Helens SH-27-1†	Mount Adams A-68-23†	Glacier Peak GP-1†
SiO_2	..	55.7%	61.0%	59.8%	59.2%	61.5%
K	24,600	9,410	10,900	11,380	21,390	16,280
Rb	..	18.6	19.1	18.5	66.0	35.0
Sr	641	1,050	435	440	395	350
Ba	1,200	342	220	293	414	462
La	38	22.4	5.64	..	20.6	13.9
Ce	60	49.0	13.0	26.8	47.3	32.1
Nd	34	24.9	5.61	12.0	22.3	13.9
Sm	6.1	4.46	1.24	2.55	5.15	2.80
Eu	1.8	1.27	0.65	0.92	1.61	0.85
Gd	5.2	3.30	1.22	2.44	4.65	2.80
Dy	..	2.17	1.10	2.60	4.41	2.45
Er	..	1.13	0.66	1.37	2.67	1.66
Yb	1.7	0.93	0.61	1.21	2.52	1.46
Lu	..	0.11	0.08	0.16	0.31	0.25
U	..	1.01	..	1.03	2.94	1.82
Th	..	3.88	..	0.050	..	..
Zr	240	105	..	..	..	87.7
Hf	..	..	..	..	..	2.48

TABLE C. TRACE-ELEMENT ABUNDANCES IN SELECTED IGNEOUS ROCKS--PART II. BASALTS

Element	BCR-1† Bridal Veil Quarry, Washington	BCR-1* Bridal Veil Quarry, Washington	High-alumina olivine basalt CR-68-9†	Eclogite†§ from Franciscan Formation	Orthogneiss of the Chelan Complex C-340-3†	Normalization value
SiO_2	..	..	48.5%	..	62.7%	..
K	..	14,100	2,230	887	5,280	805
Rb	..	..	3.17	3.18	14.1	2.3
Sr	..	328	190	82	865	11.0
Ba	..	673	71.8	103	440	3.8
La	25.2	26.2	3.48	4.55	9.07	0.325
Ce	51.2	51.0	10.2	12.1	20.8	0.798
Nd	27.8	37.0	7.17	11.3	9.78	0.567
Sm	6.26	6.3	2.12	3.80	1.66	0.186
Eu	1.9	2.1	0.98	1.32	0.65	0.0692
Gd	..	6.9	2.85	4.97	1.18	0.255
Dy	6.10	..	3.25	5.60	0.62	0.305
Er	3.48	..	2.04	3.47	0.30	0.209
Yb	3.18	3.4	2.05	3.53	0.18	0.231
Lu	0.44	..	0.29	0.6	0.02	0.035
U	1.72	..	0.146	..	..	0.013
Th	5.98	..	0.423	..	..	..
Zr	192	194	95.8	..	..	5.7
Hf	5.4	..	..	..	..	0.19

*Data by ICP-AES (Church, 1981).
†Data by isotope dilution.
§Sample collected at Junction School, northern California (Lanphere and Coleman, 1970; $^{87}Sr/^{86}Sr$ = 0.7043, Church, 1972).