

Data Repository item 2003120

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TABLE DR1. WHOLE-ROCK GEOCHEMISTRY

Sample	SiO <sub>2</sub>	TiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	MnO	MgO	CaO
Group 1—Initial serpentinization/Relict peridotites							
98RKSD-3A	40.350	0.101	1.741	8.815	0.135	34.461	2.239
98RKSD-5A	40.105	0.104	1.891	7.563	0.116	36.518	1.122
98RKSD-8A	39.342	0.127	2.616	9.601	0.121	33.659	2.546
98RKSD-9A	40.679	0.116	2.583	8.108	0.153	33.939	3.296
98RKSD-10A	40.432	0.121	2.224	7.996	0.148	33.649	3.501
98RKSD-11A	41.418	0.131	2.455	6.566	0.124	34.136	4.495
98RKSD-13A	41.476	0.129	2.509	7.974	0.181	35.071	4.928
Group 2—Serpentinites							
98RKSD-1A	42.777	0.077	0.900	7.341	0.128	36.617	0.002
98RKSD-12A	38.006	0.092	1.587	11.232	0.109	36.168	0.110
98RKSD-17A	39.505	0.103	2.401	9.438	0.115	35.5	0.031
98RKJC-3A	41.81	0.065	0.605	8.04	0.045	36.309	0.006
98RKJC-4A	42.354	0.067	0.45	6.898	0.078	36.838	0.101
98RKJC-5A	41.197	0.084	1.395	6.701	0.073	36.378	0.531
98RKJC-6A	42.605	0.064	0.304	7.65	0.083	36.939	0.042
98RKJC-7A	40.344	0.138	2.992	8.38	0.114	34.994	b.d.
98RKJC-8A	41.099	0.126	2.123	7.445	0.098	36.419	0.26
98RKJC-9A	38.561	0.113	1.957	10.15	0.06	36.324	0.03
98RKJC-10A	38.937	0.145	2.608	8.383	0.107	35.599	b.d.
98RKJC-11A	41.408	0.127	2.63	6.95	0.105	36.275	0.08
98RKJC-12A	41.235	0.145	3.288	8.34	0.12	33.592	0.117
98RKJC-13A	40.732	0.141	2.905	8.673	0.134	34.42	0.01
00RKJC-109	40.66	0.026	1.13	6.65	0.088	37.98	0.32
Group 3—Talc-dominated							
98RKJC-2B	49.578	0.166	5.484	7.221	0.092	26.876	1.057
00RKJC-101	57.39	0.034	1.43	4.87	0.032	29.81	b.d.
00RKJC-102	56.61	0.014	0.54	5.74	0.035	30.71	b.d.
00RKJC-103	58.02	0.018	1.10	5.43	0.050	29.31	1.42
Group 4—Tremolite-dominated							
98RKJC-7B	50.672	0.256	3.608	6.214	0.128	23.94	9.031
00RKJC-105	42.47	0.588	10.51	9.35	0.300	23.08	6.89
00RKJC-107	48.57	0.199	4.32	6.59	0.186	24.17	9.15

Note: Major and minor elements are reported as elemental oxides in weight percent. "b.d." indicates the concentration of that element was below detection during analysis.

TABLE DR1. WHOLE-ROCK GEOCHEMISTRY (CONTINUED)

Sample	Na <sub>2</sub> O	K <sub>2</sub> O	P <sub>2</sub> O <sub>5</sub>	LOI	TOTAL
Group 1—Initial serpentinization/Relict peridotites					
98RKSD-3A	0.230	0.001	0.012	11.37	99.455
98RKSD-5A	0.441	b.d.	0.011	12.21	100.081
98RKSD-8A	0.093	b.d.	0.008	11.12	99.233
98RKSD-9A	0.105	b.d.	0.004	10.59	99.573
98RKSD-10A	0.106	b.d.	0.006	10.69	98.873
98RKSD-11A	0.120	b.d.	0.005	9.21	98.66
98RKSD-13A	0.145	b.d.	0.006	5.64	98.059
Group 2—Serpentinites					
98RKSD-1A	0.513	0.005	0.004	11.7	100.064
98RKSD-12A	0.50	b.d.	0.012	11.91	99.726
98RKSD-17A	0.073	b.d.	0.008	11.72	98.894
98RKJC-3A	0.078	b.d.	0.007	12.16	99.125
98RKJC-4A	0.098	b.d.	0.008	12.39	99.282
98RKJC-5A	0.058	b.d.	0.008	12.79	99.215
98RKJC-6A	0.138	b.d.	0.007	12.12	99.952
98RKJC-7A	0.052	b.d.	0.005	12.46	99.479
98RKJC-8A	0.188	0.004	0.007	12.67	100.439
98RKJC-9A	0.114	b.d.	0.008	12.35	99.667
98RKJC-10A	0.036	b.d.	0.005	12.21	98.03
98RKJC-11A	0.053	b.d.	0.008	12.01	99.646
98RKJC-12A	0.257	0.206	0.017	12.11	99.427
98RKJC-13A	0.119	0.004	0.005	12.24	99.383
00RKJC-109	0.09	0.01	0.01	13.22	100.17
Group 3—Talc-dominated					
98RKJC-2B	0.112	b.d.	0.008	6.64	97.234
00RKJC-101	0.05	b.d.	0.05	5.23	98.90
00RKJC-102	0.07	b.d.	0.02	5.87	99.57
00RKJC-103	0.10	0.05	0.02	4.99	100.49
Group 4—Tremolite-dominated					
98RKJC-7B	0.168	0.01	0.038	5.00	99.07
00RKJC-105	0.23	0.07	0.09	6.86	100.44
00RKJC-107	0.27	0.06	0.04	5.18	98.74

Note: Major and minor elements are reported as elemental oxides in weight percent. "b.d." indicates the concentration of that element was below detection during analysis.

TABLE DR2. REPRESENTATIVE ELECTRON MICROPROBE ANALYSES OF SAMPLE 98RKSD-9A

Phase	Olivine <sup>†</sup>	Clinopyroxene <sup>†</sup>	Orthopyroxene <sup>†</sup>	Serpentine	Chlorite	Cr-rich Chlorite	Diopside	
Number of analyses	5	5	3	6	4	2	4	
Measured Oxides	SiO <sub>2</sub>	40.59	50.69	51.65	42.08	30.18	22.74	54.60
	TiO <sub>2</sub>	b.d.	0.07	0.035	b.d.	b.d.	0.033	b.d.
	Al <sub>2</sub> O <sub>3</sub>	b.d.	5.27	6.93	2.16	21.51	15.70	0.04
	Cr <sub>2</sub> O <sub>3</sub>	0.0042	0.83	0.66	0.13	0.27	9.26	0.01
	FeO	10.20	2.08	5.84	3.10	4.73	14.07	1.20
	NiO	0.37	b.d.	0.084	0.05	0.02	0.053	0.01
	MgO	48.30	17.34	29.99	37.83	31.24	25.39	17.78
	CaO	0.0033	21.55	2.72	0.43	0.02	0.009	25.65
	Na <sub>2</sub> O	0.028	0.65	0.11	0.02	0.03	0.039	0.04
	K <sub>2</sub> O	0.017	b.d.	0.002	0.02	0.02	0.038	b.d.
	Total	99.54	98.48	98.02	85.82	88.02	87.33	99.34
Calculated Cations	Si	1.00	1.88	0.92	2.00	5.66	4.75	1.99
	Ti	n/a	0.0034	0.0005	n/a	n/a	0.0052	n/a
	Al	n/a	0.21	0.15	0.12	4.75	3.87	0.0019
	Cr	0.0001	0.020	0.0093	0.0050	0.04	1.53	0.0003
	Fe	0.21	0.062	0.087	0.12	0.74	2.46	0.036
	Ni	0.0074	n/a	0.0012	0.0020	0.0035	0.0089	0.0002
	Mg	1.78	0.93	0.79	2.67	8.73	7.91	0.97
	Ca	0.0009	0.87	0.052	0.022	0.0039	0.0020	1.0037
	Na	0.0013	0.043	0.0038	0.0022	0.0099	0.016	0.0029
	K	0.0005	n/a	n/a	0.0011	0.0053	0.010	n/a
	Total	3.00	4.02	2.014	4.94	19.95	20.62	4.005
Mg/[Mg+Fe] <sup>‡</sup>	0.89	0.94	0.90	0.96	0.92	0.76	0.96	
Ca/[Ca+Mg+Fe] <sup>‡</sup>	n/a	0.47	0.06	n/a	n/a	n/a	0.50	

Note: All analyses were made using the University of South Carolina Cameca SX-50 using an acceleration voltage of 15 keV and a Faraday cup current of 40 nA. The following oxygen normalizations were used: 4 for olivine, 6 for clinopyroxene (and diopside), 3 for orthopyroxene 7 for serpentine, and 28 for chlorite. "b.d." indicates that element was below detection limits; "n/a" indicates that field does not apply.

<sup>†</sup>Relict peridotite phase; all other phases are metamorphic.

<sup>‡</sup>Calculated on the assumption that all Fe is ferrous.

TABLE DR3. REPRESENTATIVE ELECTRON MICROPROBE ANALYSES OF SAMPLE 98RKSD-13A

Phase	Olivine <sup>†</sup>	Clinopyroxene <sup>†</sup>	Orthopyroxene <sup>†</sup>	Serpentine	Chlorite	Cr-rich Chlorite	Diopside	
Number of analyses	6	8	6	9	2	2	4	
Measured Oxides	SiO <sub>2</sub>	40.25	51.02	53.94	41.48	31.55	19.16	54.03
	TiO <sub>2</sub>	b.d.	0.12	b.d.	b.d.	b.d.	0.23	b.d.
	Al <sub>2</sub> O <sub>3</sub>	0.21	5.34	5.21	1.75	17.15	12.14	0.06
	Cr <sub>2</sub> O <sub>3</sub>	0.01	0.68	0.43	0.01	0.51	12.17	b.d.
	FeO	10.20	2.17	6.68	2.75	3.72	21.81	1.21
	NiO	0.36	0.01	0.07	0.14	0.03	0.04	0.01
	MgO	47.97	16.14	31.47	37.85	32.22	21.40	17.85
	CaO	0.01	21.87	1.08	0.07	b.d.	0.05	25.21
	Na <sub>2</sub> O	0.02	0.80	0.06	0.02	0.02	0.04	0.03
	K <sub>2</sub> O	0.01	b.d.	b.d.	0.01	0.01	b.d.	b.d.
	Total	99.04	98.16	98.93	84.08	85.20	87.03	98.39
Calculated Cations	Si	1.00	1.88	0.94	2.00	6.08	4.64	1.99
	Ti	n/a	0.0034	n/a	n/a	n/a	0.060	n/a
	Al	0.0062	0.23	0.11	0.099	3.90	3.39	0.0028
	Cr	0.0001	0.020	0.0059	0.0006	0.078	1.96	n/a
	Fe	0.21	0.067	0.098	0.11	0.60	2.81	0.037
	Ni	0.0072	0.0003	0.0010	0.0053	0.0042	0.0068	0.0002
	Mg	1.77	0.89	0.82	2.72	9.26	7.73	0.98
	Ca	0.0003	0.86	0.020	0.0034	n/a	0.0058	1.00
	Na	0.0008	0.058	0.0019	0.0021	0.0064	0.016	0.0019
	K	0.0004	n/a	n/a	0.0008	0.0017	n/a	n/a
Total	3.00	4.01	2.00	4.94	19.93	20.62	4.01	
Mg/[Mg+Fe] <sup>‡</sup>	0.89	0.93	0.89	0.96	0.73	0.94	0.96	
Ca/[Ca+Mg+Fe] <sup>‡</sup>	n/a	0.48	0.02	n/a	n/a	n/a	0.49	

Note: All analyses were made using the University of South Carolina Cameca SX-50 using an acceleration voltage of 15 keV and a Faraday cup current of 40 nA. The following oxygen normalizations were used: 4 for olivine, 6 for clinopyroxene (and diopside), 3 for orthopyroxene 7 for serpentine, and 28 for chlorite. "b.d." indicates that element was below detection limits; "n/a" indicates that field does not apply.

<sup>†</sup>Relict peridotite phase; all other phases are metamorphic.

<sup>‡</sup>Calculated on the assumption that all Fe is ferrous.

TABLE DR4. REPRESENTATIVE ELECTRON  
MICROPROBE ANALYSES OF SAMPLES 98RKSD-17A  
AND 00RKJC-109

Sample	98RKSD-17a	00RKJC-109	
Phase	Serpentine	Serpentine	
Number of analyses	7	9	
Measured Oxides	SiO <sub>2</sub>	44.02	43.46
	TiO <sub>2</sub>	0.04	b.d.
	Al <sub>2</sub> O <sub>3</sub>	0.41	0.83
	Cr <sub>2</sub> O <sub>3</sub>	0.06	0.20
	FeO	2.96	5.53
	NiO	0.10	0.13
	MgO	38.90	37.26
	CaO	0.03	0.05
	Na <sub>2</sub> O	0.03	0.01
	K <sub>2</sub> O	0.01	0.01
	Total	86.55	87.47
Calculated Cations	Si	2.061	2.042
	Ti	0.0013	n/a
	Al	0.023	0.046
	Cr	0.0023	0.0073
	Fe	0.12	0.22
	Ni	0.0038	0.0047
	Mg	2.71	2.61
	Ca	0.0016	0.0026
	Na	0.0025	0.0011
	K	0.0007	0.0004
Total	4.93	4.93	
Mg/[Mg+Fe] <sup>†</sup>	0.96	0.92	

Note: All analyses were made using the University of South Carolina Cameca SX-50 using an acceleration voltage of 15 keV and a Faraday cup current of 40 nA. An oxygen normalization of 7 was used for serpentine. "b.d." indicates that element was below detection limits; "n/a" indicates that field does not apply.

<sup>†</sup>Calculated on the assumption that all Fe is ferrous.

TABLE DR5. REPRESENTATIVE ELECTRON MICROPROBE ANALYSES OF SAMPLE  
00RKJC-102

Phase	Cr-spinel <sup>†</sup>	Serpentine	Talc	Chlorite
Number of analyses	4	7	9	3
Measured Oxides				
SiO <sub>2</sub>	0.21	41.51	62.36	35.28
TiO <sub>2</sub>	b.d.	b.d.	b.d.	b.d.
Al <sub>2</sub> O <sub>3</sub>	23.77	1.81	0.06	11.92
Cr <sub>2</sub> O <sub>3</sub>	42.15	0.99	0.02	3.73
FeO	23.01	11.12	4.19	4.49
NiO	0.06	0.11	0.12	0.15
MgO	10.50	33.19	28.34	32.80
CaO	0.01	b.d.	0.01	0.01
Na <sub>2</sub> O	0.02	0.01	0.01	0.02
K <sub>2</sub> O	b.d.	b.d.	0.01	0.01
Total	99.74	88.74	95.13	88.41
Calculated Cations				
Si	0.007	1.99	4.02	6.64
Ti	n/a	n/a	n/a	n/a
Al	0.88	0.10	0.0047	2.64
Cr	1.05	0.038	0.0012	0.56
Fe	0.60	0.44	0.23	0.71
Ni	0.0014	0.0044	0.0061	0.023
Mg	0.49	2.37	2.72	9.19
Ca	0.0004	n/a	0.0005	0.0026
Na	0.0013	0.0006	0.0016	0.0077
K	n/a	n/a	0.0005	0.0029
Total	3.03	2.95	6.98	19.78
Mg/[Mg+Fe] <sup>‡</sup>	n/a	0.84	0.92	0.93
Cr/[Cr+Al]	0.54	n/a	n/a	n/a

Note: All analyses were made using the University of South Carolina Cameca SX-50 using an acceleration voltage of 15 keV and a Faraday cup current of 40 nA. The following oxygen normalizations were used: 4 for spinel, 7 for serpentine, 11 for talc, and 28 for chlorite. "b.d." indicates that element was below detection limits; "n/a" indicates that field does not apply.

<sup>†</sup>Relict peridotite phase; all other phases are metamorphic.

<sup>‡</sup>Calculated on the assumption that all Fe is ferrous.

TABLE DR6. REPRESENTATIVE ELECTRON MICROPROBE ANALYSES OF SAMPLE 00RKJC-103

Phase	Talc	Chlorite	Cr-rich Chlorite	Tremolite
Number of analyses	7	2	2	7
SiO <sub>2</sub>	62.52	34.16	32.56	58.16
TiO <sub>2</sub>	b.d.	b.d.	b.d.	b.d.
Al <sub>2</sub> O <sub>3</sub>	0.07	13.91	13.10	0.11
Cr <sub>2</sub> O <sub>3</sub>	0.02	0.68	3.36	0.09
FeO	4.12	7.75	10.20	5.65
NiO	0.23	0.17	0.17	0.07
MgO	27.86	31.09	27.68	20.74
CaO	0.01	0.02	0.07	12.64
Na <sub>2</sub> O	0.01	0.01	0.03	0.02
K <sub>2</sub> O	0.01	0.01	0.01	0.01
Total	94.86	87.81	87.19	97.50
Si	4.037	6.52	6.41	8.064
Ti	n/a	N/a	n/a	n/a
Al	0.0053	3.13	3.038	0.018
Cr	0.0010	0.10	0.52	0.010
Fe	0.22	1.24	1.68	0.66
Ni	0.012	0.026	0.028	0.0081
Mg	2.68	8.84	8.12	4.28
Ca	0.0006	0.0033	0.015	1.88
Na	0.0015	0.0033	0.0099	0.0062
K	0.0007	0.0024	0.0035	0.0014
Total	6.96	19.86	19.82	14.93
Mg/(Mg+Fe) <sup>†</sup>	0.92	0.88	0.83	0.87

Note: All analyses were made using the University of South Carolina Cameca SX-50 using an acceleration voltage of 15 keV and a Faraday cup current of 40 nA. The following oxygen normalizations were used: 23 for tremolite, 28 for chlorite, and 11 for talc. "b.d." indicates that element was below detection limits; "n/a" indicates that field does not apply.

<sup>†</sup>Calculated on the assumption that all Fe is ferrous.



TABLE DR7. REPRESENTATIVE ELECTRON MICROPROBE ANALYSES OF SAMPLE 00RKJC-105

Phase	Tremolite	Barroisite	Chlorite	Cr-rich Chlorite	Titanite	Clinozoisite	
Number of analyses	8	3	5	2	5	6	
Measured Oxides	SiO <sub>2</sub>	54.60	46.79	29.12	28.54	30.02	37.76
	TiO <sub>2</sub>	0.54	0.49	b.d.	b.d.	39.24	0.02
	Al <sub>2</sub> O <sub>3</sub>	1.84	10.86	20.70	19.90	1.39	29.76
	Cr <sub>2</sub> O <sub>3</sub>	0.07	0.06	0.27	2.25	b.d.	0.34
	FeO	6.01	13.48	11.61	11.98	0.58	4.19
	NiO	0.06	0.01	0.24	0.20	0.01	0.01
	MgO	20.35	12.87	24.73	24.48	0.22	0.38
	CaO	12.20	9.54	0.09	b.d.	28.00	22.62
	Na <sub>2</sub> O	0.20	1.98	0.03	0.02	0.05	0.01
	K <sub>2</sub> O	0.02	0.21	0.03	0.03	b.d.	b.d.
	Total	95.89	96.28	86.82	87.41	99.52	95.08
Calculated Cations	Si	7.75	6.88	5.74	5.64	0.98	3.01
	Ti	0.057	0.054	n/a	n/a	0.97	0.0009
	Al	0.31	1.88	4.81	4.64	0.054	2.79
	Cr	0.0081	0.0074	0.042	0.35	n/a	0.022
	Fe	0.71	1.66	1.91	1.98	0.016	0.28
	Ni	0.0070	0.0009	0.038	0.032	0.0002	0.0003
	Mg	4.30	2.82	7.26	7.21	0.011	0.046
	Ca	1.86	1.50	0.019	0.0002	0.98	1.93
	Na	0.056	0.56	0.012	0.0096	0.0029	0.0009
	K	0.0043	0.039	0.0063	0.0071	n/a	n/a
	Total	15.06	15.40	19.84	19.87	3.01	8.08
Mg/[Mg+Fe] <sup>†</sup>	0.86	0.63	0.79	0.78	n/a	n/a	
Fe/[Al+Fe] <sup>‡</sup>	n/a	n/a	n/a	n/a	n/a	0.91	

Note: All analyses were made using the University of South Carolina Cameca SX-50 using an acceleration voltage of 15 keV and a Faraday cup current of 40 nA. The following oxygen normalizations were used: 23 for tremolite and barroisite, 28 for chlorite, 5 for titanite, and 12.5 for clinozoisite. "b.d." indicates that element was below detection limits; "n/a" indicates that field does not apply.

<sup>†</sup>Calculated on the assumption that all Fe is ferrous.

<sup>‡</sup>Calculated on the assumption that all Fe is ferric.

TABLE DR8. REPRESENTATIVE ELECTRON MICROPROBE ANALYSES OF SAMPLE 00RKJC-107

Phase	Tremolite	Barroisite	Chlorite	Cr-rich Chlorite	Titanite	
Number of analyses	8	5	3	4	7	
Measured Oxides	SiO <sub>2</sub>	56.87	48.25	31.85	31.97	30.26
	TiO <sub>2</sub>	b.d.	0.25	b.d.	b.d.	36.65
	Al <sub>2</sub> O <sub>3</sub>	0.65	9.96	17.03	16.34	1.61
	Cr <sub>2</sub> O <sub>3</sub>	0.06	0.08	0.35	1.74	0.02
	FeO	5.68	11.17	9.65	7.69	0.50
	NiO	0.09	0.03	0.29	0.24	b.d.
	MgO	21.03	14.54	28.02	30.28	0.40
	CaO	11.93	10.90	0.13	0.05	27.48
	Na <sub>2</sub> O	0.15	1.65	0.02	0.01	0.05
	K <sub>2</sub> O	b.d.	0.17	0.02	0.03	b.d.
Total	96.47	97.01	87.35	88.34	96.96	
Calculated Cations	Si	7.97	6.98	6.17	6.10	1.02
	Ti	n/a	0.027	n/a	n/a	0.92
	Al	0.11	1.70	3.89	3.68	0.064
	Cr	0.0070	0.0091	0.053	0.26	0.0006
	Fe	0.66	1.35	1.56	1.23	0.014
	Ni	0.0098	0.0038	0.045	0.037	n/a
	Mg	4.39	3.13	8.09	8.61	0.020
	Ca	1.79	1.69	0.026	0.0096	0.99
	Na	0.041	0.46	0.0071	0.0041	0.0031
	K	n/a	0.032	0.0059	0.0078	n/a
Total	14.98	15.38	19.85	19.94	3.03	
Mg/[Mg+Fe] <sup>†</sup>	0.87	0.70	0.84	0.88	n/a	

Note: All analyses were made using the University of South Carolina Cameca SX-50 using an acceleration voltage of 15 keV and a Faraday cup current of 40 nA. The following oxygen normalizations were used: 23 for tremolite and barroisite, 28 for chlorite, and 5 for titanite. "b.d." indicates that element was below detection limits; "n/a" indicates that field does not apply.

<sup>†</sup>Calculated on the assumption that all Fe is ferrous.

TABLE DR9. SILICATE OXYGEN ISOTOPE RATIOS

Group	Sample	Mineral	d <sup>18</sup> O (‰)	Location <sup>†</sup>
Vein	98RKJC-8B	Serpentine	8.301	CT
		Serpentine	8.583	CT
		Serpentine	8.296	CT
Vein	98RKJC-8C	Serpentine	8.167	CT
		Serpentine	8.374	CT
Vein	98RKJC-9B	Serpentine	8.224	CT
		Serpentine	8.204	CT
Vein	98RKJC-10B	Serpentine	8.060	CT
		Serpentine	7.964	CT
Vein	98RKJC-11B	Serpentine	8.348	CT
		Serpentine	8.314	CT
Vein	98RKJC-12D	Serpentine	8.117	CT
		Serpentine	8.138	CT
Group 1	98RKSD-8A	Olivine	6.274	CT
		Olivine	6.306	CT
		Clinopyroxene	5.929	CT
		Clinopyroxene	6.004	CT
Group 1	98RKSD-9A	Olivine	5.312	CT
		Olivine	5.337	CT
		Clinopyroxene	5.708	CT
		Clinopyroxene	5.735	CT
Group 2	98RKSD-12A	Serpentine	6.389	CT
		Serpentine	6.346	CT
Group 2	98RKSD-17A	Serpentine	7.117	CT
		Serpentine	7.270	CT
		Serpentine	6.522	USC
Group 2	98RKJC-4A	Serpentine	7.854	CT
		Serpentine	7.827	CT
Group 2	98RKJC-12A	Serpentine	8.028	CT
		Serpentine	7.641	CT
		Serpentine	7.735	CT
		Serpentine	7.942	CT
Group 2	00RKJC-109	Serpentine	8.165	CT
		Serpentine	8.188	CT
		Serpentine	7.648	USC
Group 3	00RKJC-101	Talc	10.120	CT
		Talc	10.087	CT
		Talc	9.744	USC
Group 3	00RKJC-102	Talc	9.806	CT
		Talc	9.775	CT
		Talc	8.783	USC
Group 3	00RKJC-103	Talc	9.561	CT
		Talc	9.578	CT
Group 4	00RKJC-105	Tremolite	8.623	CT
		Tremolite	8.629	CT
		Tremolite	7.975	USC
Group 4	00RKJC-107	Tremolite	9.072	USC
		Tremolite	8.467	CT
		Tremolite	8.421	CT
		Tremolite	8.745	CT

Note: Oxygen isotope compositions are relative to V-SMOW.

<sup>†</sup>The "location" heading refers to the location where the analysis was collected: CT, California Institute of Technology; USC, University of South Carolina; USC silicate data is suspect in that the laser extraction line was plagued with problems due to contamination of the BrF<sub>5</sub> reagent by quantities of HF, which caused severe analytical difficulties.

TABLE DR10. CARBONATE ISOTOPE RATIOS

Sample	Mineral	$\delta^{18}\text{O}$	Precision	$\delta^{13}\text{C}$	Precision
98RKJC-2C	calcite	12.516	0.010	-11.939	0.005
	calcite	12.555	0.008	-12.023	0.009
	calcite	12.467	0.007	-11.875	0.016
98RKJC-6B	calcite	12.852	0.007	-10.895	0.009
	calcite	13.440	0.004	-11.043	0.014
	calcite	13.037	0.007	-10.952	0.011
98RKJC-8B	calcite	12.973	0.003	-11.771	0.014
	calcite	12.580	0.008	-11.703	0.005
	calcite	12.990	0.005	-11.418	0.007
98RKJC-8C	calcite	12.589	0.008	-11.823	0.010
	calcite	12.960	0.007	-11.942	0.008
	calcite	13.613	0.004	-11.560	0.011
98RKJC-10B	calcite	15.161	0.006	-10.304	0.006
	calcite	19.102	0.007	-8.220	0.008
	calcite	12.219	0.007	-11.748	0.015
98RKJC-11B	calcite	12.298	0.007	-11.263	0.020
	calcite	12.981	0.007	-11.247	0.030
	calcite	12.255	0.008	-11.693	0.022
98RKJC-12D	calcite	12.749	0.003	-11.753	0.012
	calcite	12.702	0.005	-11.518	0.006
	calcite	11.847	0.005	-12.070	0.010
98RKJC-13B	calcite	12.733	0.004	-11.479	0.010
	calcite	12.696	0.007	-12.018	0.012
	calcite	12.908	0.006	-12.074	0.014
98RKJC-13B	calcite	12.734	0.008	-12.144	0.010
	calcite	13.017	0.008	-11.870	0.020
	calcite	13.028	0.009	-11.878	0.010
98RKJC-13B	calcite	20.722	0.003	-6.486	0.007
	calcite	13.740	0.008	-11.203	0.015
	calcite	13.137	0.006	-11.672	0.012
98RKJC-13B	calcite	13.707	0.005	-11.127	0.012
	calcite	13.576	0.011	-11.047	0.017

Note: Analyses collected using the University of South Carolina VG/Micromass Optima mass spectrometer. Oxygen analyses are relative to V-SMOW, carbon analyses are relative to V-PDB.