TABLE DR1. WHOLE ROCK MAJOR AND TRACE ELEMENT DATA OF THE OROSA SLICE AMPHIBOLITES AND CUMULATES (CAREÓN OPHIOLITE)

Sample	G-145	G-146	G-147	G-148	G-149	AR-66	G-150†	G-151†
SiO_2	50.12	49.29	47.83	46.33	46.71	48.01	45.04	46.35
Al_2O_3	14.94	15.10	15.60	16.68	15.97	14.42	17.75	24.67
Fe_2O_3	6.39	7.94	9.44	11.17	8.33	12.44	5.93	3.27
MnO	0.122	0.141	0.153	0.165	0.105	0.181	0.091	0.053
MgO	9.22	7.82	8.79	8.81	10.70	6.59	12.69	4.53
CaO	12.88	12.11	10.95	8.79	12.05	10.55	13.31	14.91
Na_2O	2.47	2.79	2.58	2.54	2.04	3.36	1.16	1.96
K_2O	0.06	0.03	0.09	0.03	0.04	0.04	0.01	< 0.01
TiO_2	0.630	0.802	0.918	1.042	1.008	1.988	0.161	0.206
P_2O_5	0.05	0.07	0.07	0.11	0.09	0.18	< 0.01	0.01
LOI§	1.97	2.74	2.56	3.15	1.88	1.67	2.68	2.97
TOTAL	98.83	98.82	98.98	98.83	98.92	99.43	98.84	98.92
Sc	45	45	34	22	34	42	24	18
V	180	224	208	166	196	365	79	75
Cr	361	226	560	267	526	148	836	417
Co	34	33	39	47	45	37	40	16
Ni	94	73	130	152	228	71	290	115
Cu	56	64	77	65	75	15	59	53
Zn	35	53	95	75	31	74	< 30	< 30
Ga	12	13	14	14	13	17	9	13
Rb	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Sr	112	147	111	98	129	160	106	271
Y	14.5	19.3	20.8	20.8	21.4	40.9	4.4	5.2
Zr	27	41	53	60	51	110	4	5
Nb	0.5	0.5	0.7	1.0	1.1	2.4	< 0.2	< 0.2
Cs	0.3	0.5	0.6	0.5	< 0.1	0.1	0.1	< 0.1
Ba	6	13	8	7	7	9	< 3	4
Hf	0.9	1.4	1.6	1.9	1.7	3.4	0.2	0.1
Ta	0.02	0.03	0.03	0.06	0.06	0.11	< 0.01	< 0.01
Pb	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Th	< 0.05	< 0.05	< 0.05	0.06	0.14	0.17	< 0.05	< 0.05
U	0.01	0.02	0.02	0.03	0.05	0.08	< 0.01	< 0.01
La	1.04	1.68	1.70	2.77	2.78	4.24	0.26	0.42
Ce	3.50	5.32	5.46	8.25	7.53	13.2	0.79	1.08
Pr	0.63	0.93	0.98	1.33	1.21	2.28	0.15	0.19
Nd	3.80	5.43	5.75	7.15	6.72	12.5	0.95	1.14
Sm	1.52	2.00	2.15	2.42	2.41	4.43	0.41	0.44
Eu	0.646	0.849	0.884	1.04	0.858	1.55	0.267	0.390
Gd	2.09	2.79	2.94	3.16	3.16	6.07	0.58	0.63
Tb	0.39	0.53	0.55	0.57	0.58	1.16	0.12	0.12
Dy	2.55	3.40	3.54	3.64	3.76	7.15	0.78	0.82
Ho	0.53	0.72	0.75	0.78	0.78	1.51	0.17	0.17
Er	1.58	2.14	2.30	2.35	2.36	4.58	0.50	0.51
Tm	0.229	0.318	0.339	0.350	0.344	0.687	0.073	0.074
Yb	1.47	1.96	2.11	2.22	2.16	4.20	0.46	0.47
Lu	0.229	0.295	0.332	0.357	0.338	0.655	0.071	0.073
Σ REE	20.193	28.347	29.774	36.383	34.997	64.252	5.581	6.527
Eu/Eu*	1.11	1.10	1.08	1.16	0.96	0.92	1.68	2.28
$(La/Sm)_N$	0.42	0.52	0.49	0.71	0.71	0.59	0.39	0.59
$(Gd/Yb)_N$	1.13	1.13	1.11	1.13	1.17	1.15	1.01	1.07
$(La/Yb)_N$	0.47	0.57	0.54	0.83	0.86	0.68	0.38	0.60

Note: Oxides are in weight percent (%). Trace and rare earth elements are in parts per million (ppm). Element concentrations expressed with the < sign are below detection limit.

†Cumulate rocks.

§Loss on ignition.

TABLE DR2. WHOLE ROCK MAJOR AND TRACE ELEMENT DATA OF THE CAREÓN SLICE DIKES (CAREÓN OPHIOLITE)

Sample	AR-67	AR-68	AR-69	AR-70	AR-71	AR-72	AR-73	AR-76	AR-81[†]
SiO_2	48.49	49.40	48.49	48.53	49.19	48.27	48.42	48.95	75.25
Al_2O_3	15.16	14.91	16.40	18.27	16.46	16.56	16.68	16.22	13.68
Fe_2O_3	9.46	10.06	9.29	7.16	8.35	8.73	8.94	8.81	1.29
MnO	0.148	0.151	0.141	0.112	0.132	0.135	0.143	0.138	0.019
MgO	9.10	7.26	7.77	7.44	8.51	8.37	7.76	8.27	0.40
CaO	9.31	9.85	9.70	10.61	11.14	10.40	10.66	10.63	2.67
Na_2O	4.34	4.82	3.22	3.34	3.10	3.10	3.43	2.99	5.22
K_2O	0.21	0.20	0.76	0.23	0.13	0.01	0.12	0.08	0.18
TiO_2	1.480	1.727	1.318	0.951	0.987	1.060	1.203	1.253	0.117
P_2O_5	0.18	0.22	0.13	0.09	0.09	0.09	0.11	0.12	0.04
LOI[§]	1.41	0.98	1.68	2.46	1.69	2.35	1.75	1.88	0.89
TOTAL	99.30	99.60	98.92	99.20	99.79	99.10	99.22	99.36	99.80
Sc	30	35	30	25	31	30	30	31	< 1
V	227	300	213	160	185	180	182	200	9
Cr	296	190	212	243	366	305	236	348	127
Co	35	34	31	29	35	33	32	35	3
Ni	156	96	121	142	136	143	122	151	< 20
Cu	54	74	70	35	62	69	63	68	13
Zn	62	61	49	50	62	65	59	66	< 30
Ga	14	15	14	13	13	13	14	14	13
Rb	3	6	16	3	2	1	2	1	2
Sr	208	304	224	197	184	153	139	169	243
Y	29.9	33.5	26.0	18.5	20.1	25.3	26.9	23.9	3.4
Zr	89	105	72	51	51	51	55	64	65
Nb	2.7	2.4	1.4	1.3	0.9	0.9	0.6	1.6	1.4
Cs	0.8	13.5	1.0	0.2	0.3	0.4	0.2	0.2	0.4
Ba	136	270	139	104	76	56	54	31	196
Hf	2.9	3.2	2.4	1.7	1.7	1.8	2.1	2.1	2.0
Ta	0.12	0.10	0.06	0.10	0.04	0.03	< 0.01	0.09	0.04
Pb	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Th	0.36	0.33	0.19	0.11	0.15	0.12	0.21	0.14	3.05
U	0.15	0.17	0.10	0.04	0.06	0.04	0.07	0.06	0.31
La	6.14	8.19	4.09	2.85	2.78	2.84	3.33	3.25	22.2
Ce	15.9	21.0	11.6	8.28	7.82	7.21	7.67	9.66	36.8
Pr	2.49	3.18	1.89	1.40	1.28	1.42	1.54	1.64	3.45
Nd	12.6	15.5	9.99	7.56	6.84	7.80	8.74	8.82	11.9
Sm	3.93	4.54	3.32	2.46	2.42	2.80	3.13	2.92	1.70
Eu	1.39	1.59	1.26	0.965	0.965	1.10	1.22	1.10	1.01
Gd	4.86	5.52	4.15	3.11	3.18	3.83	4.24	3.82	1.25
Tb	0.89	1.00	0.76	0.56	0.58	0.67	0.74	0.70	0.13
Dy	5.46	6.00	4.75	3.41	3.64	4.37	4.76	4.27	0.61
Ho	1.12	1.26	0.99	0.71	0.76	0.94	1.01	0.89	0.11
Er	3.39	3.71	2.89	2.12	2.27	2.73	2.94	2.65	0.33
Tm	0.497	0.531	0.422	0.308	0.326	0.392	0.431	0.385	0.051
Yb	3.06	3.41	2.63	1.89	2.08	2.41	2.66	2.45	0.40
Lu	0.475	0.514	0.417	0.288	0.313	0.381	0.421	0.375	0.072
Σ REE	62.152	75.935	49.159	35.911	35.254	38.893	42.832	42.930	80.013
Eu/Eu*	0.98	0.98	1.04	1.07	1.07	1.03	1.03	1.01	2.13
$(La/Sm)_N$	0.96	1.11	0.76	0.71	0.71	0.63	0.66	0.69	8.06
$(Gd/Yb)_N$	1.27	1.29	1.26	1.31	1.22	1.27	1.27	1.24	2.49
$(La/Yb)_N$	1.34	1.61	1.04	1.01	0.89	0.79	0.84	0.89	37.11

Note: Oxides are in weight percent (%). Trace and rare earth elements are in parts per million (ppm). Element concentrations expressed with the < sign are below detection limit.

[†]Leucotonalite (plagiogranite).

[§]Loss on ignition.

TABLE DR3. WHOLE ROCK MAJOR AND TRACE ELEMENT DATA OF THE CAREÓN SLICE TYPE I GABBROS (CAREÓN OPHIOLITE)

Sample	AR-74	AR-75	AR-77	AR-78	AR-79	AR-82	AR-89
SiO_2	48.65	48.40	48.99	49.22	49.21	46.63	49.67
Al_2O_3	16.67	16.80	17.53	19.03	18.53	18.31	20.46
Fe_2O_3	5.25	5.03	5.04	4.21	4.35	6.31	3.86
MnO	0.091	0.088	0.087	0.072	0.075	0.090	0.068
MgO	9.82	10.83	8.85	6.87	6.98	10.89	6.82
CaO	13.59	12.70	13.94	14.42	14.40	10.17	11.60
Na_2O	1.87	2.13	2.13	2.46	2.44	2.62	3.40
K_2O	0.11	0.15	0.06	0.05	0.02	0.08	0.15
TiO_2	0.320	0.281	0.488	0.579	0.728	0.308	0.331
P_2O_5	0.02	0.02	0.03	0.04	0.03	0.02	0.02
LOI†	2.59	2.59	2.28	2.01	1.93	3.38	2.53
TOTAL	98.98	99.02	99.43	98.96	98.72	98.81	98.93
Sc	37	37	38	36	39	16	25
V	119	109	120	111	117	64	91
Cr	632	1390	286	318	318	246	568
Co	29	31	25	20	20	41	22
Ni	178	198	114	90	96	183	127
Cu	237	59	52	36	43	48	28
Zn	405	< 30	30	< 30	< 30	37	< 30
Ga	12	10	12	13	13	11	12
Rb	3	2	< 1	< 1	< 1	< 1	2
Sr	217	213	492	575	537	231	278
Y	9.0	7.6	14.2	11.8	11.8	6.5	7.4
Zr	10	10	26	29	28	16	16
Nb	< 0.2	< 0.2	0.2	0.3	0.2	0.6	< 0.2
Cs	0.2	0.2	< 0.1	< 0.1	< 0.1	0.1	0.1
Ba	59	44	54	74	66	43	73
Hf	0.5	0.4	1.0	1.1	1.1	0.5	0.5
Ta	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01
Pb	18	< 5	< 5	< 5	< 5	< 5	< 5
Th	0.07	0.06	0.09	0.07	0.08	0.06	0.09
U	0.04	0.02	0.03	0.02	0.03	0.02	0.05
La	2.80	1.27	2.47	2.60	2.41	1.61	1.83
Ce	2.85	2.78	6.45	6.79	6.60	3.73	4.08
Pr	0.75	0.47	1.05	1.10	1.03	0.54	0.60
Nd	3.44	2.39	5.35	5.61	5.43	2.57	3.00
Sm	1.07	0.86	1.78	1.69	1.64	0.83	1.00
Eu	0.562	0.450	0.777	0.816	0.835	0.516	0.558
Gd	1.46	1.16	2.35	2.10	2.06	1.05	1.21
Tb	0.29	0.22	0.42	0.39	0.38	0.19	0.22
Dy	1.86	1.36	2.54	2.17	2.23	1.18	1.44
Ho	0.38	0.29	0.52	0.45	0.46	0.24	0.29
Er	1.13	0.84	1.53	1.30	1.32	0.72	0.82
Tm	0.161	0.120	0.216	0.182	0.181	0.105	0.114
Yb	0.98	0.75	1.30	1.13	1.12	0.66	0.71
Lu	0.151	0.108	0.199	0.171	0.171	0.105	0.110
Σ REE	17.884	13.068	26.952	26.499	25.867	14.046	15.982
Eu/Eu*	1.38	1.38	1.17	1.33	1.40	1.70	1.56
$(La/Sm)_N$	1.61	0.91	0.86	0.95	0.91	1.20	1.13
$(Gd/Yb)_N$	1.19	1.23	1.44	1.48	1.47	1.27	1.36
$(La/Yb)_N$	1.91	1.13	1.27	1.54	1.44	1.63	1.72

Note: Oxides are in weight percent (%). Trace and rare earth elements are in parts per million (ppm). Element concentrations expressed with the < sign are below detection limit.

†Loss on ignition.

TABLE DR4. WHOLE ROCK MAJOR AND TRACE ELEMENT DATA OF THE CAREÓN SLICE TYPE II GABBROS AND CUMULATES (CAREÓN OPHIOLITE)

Sample	AR-84	AR-85	AR-86	AR-87	AR-88	AR-80†	AR-83†	AR-90†
SiO_2	49.81	48.09	49.92	49.72	50.33	48.49	42.31	48.17
Al_2O_3	15.53	15.85	17.45	16.65	16.23	17.22	19.35	16.62
Fe_2O_3	8.90	8.31	5.47	5.64	5.54	9.75	5.13	9.34
MnO	0.120	0.119	0.092	0.098	0.099	0.143	0.087	0.127
MgO	8.37	9.55	9.17	9.50	9.66	5.79	14.32	6.11
CaO	9.88	10.16	12.11	12.32	11.87	9.02	10.22	10.55
Na_2O	3.57	3.06	2.82	2.61	2.75	4.11	1.55	3.06
K_2O	0.23	0.29	0.17	0.25	0.13	0.23	< 0.01	0.27
TiO_2	1.070	0.943	0.369	0.382	0.445	2.069	0.139	1.930
P_2O_5	0.10	0.08	0.04	0.04	0.04	0.60	0.02	0.24
LOI§	1.75	2.19	1.96	1.96	1.99	2.19	5.73	2.17
TOTAL	99.34	98.64	99.58	99.18	99.10	99.63	98.86	98.61
Sc	30	31	29	32	34	28	7	36
V	193	178	104	118	125	215	35	372
Cr	9	331	479	663	334	133	1270	61
Co	36	39	31	29	31	22	45	33
Ni	150	179	156	143	165	64	447	53
Cu	61	49	42	63	61	48	15	76
Zn	43	34	< 30	32	34	79	48	61
Ga	14	12	11	11	11	18	9	16
Rb	3	4	3	4	1	2	< 1	4
Sr	163	166	277	208	249	583	262	473
Y	33.4	20.9	13.5	11.8	15.3	39.7	2.4	19.0
Zr	104	53	39	35	42	212	3	66
Nb	2.2	1.5	1.2	0.9	1.3	11.2	< 0.2	3.2
Cs	0.3	0.2	0.2	0.2	0.1	0.4	0.2	0.1
Ba	85	87	70	67	50	207	16	184
Hf	3.4	1.7	1.2	1.1	1.4	5.4	0.2	1.9
Ta	0.13	0.08	0.05	0.04	0.06	0.62	< 0.01	0.21
Pb	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Th	0.87	0.40	0.40	0.33	0.53	0.60	< 0.05	0.82
U	0.34	0.19	0.14	0.10	0.17	0.35	0.01	0.29
La	6.61	4.27	5.30	3.17	4.71	26.7	1.17	10.3
Ce	14.7	10.1	12.1	7.05	10.8	63.6	2.36	21.5
Pr	2.33	1.54	1.59	0.99	1.46	8.25	0.33	2.72
Nd	12.2	7.59	7.08	4.61	6.88	34.4	1.42	11.7
Sm	3.81	2.45	1.86	1.42	1.99	7.32	0.37	2.89
Eu	1.27	0.869	0.774	0.640	0.763	2.30	0.333	1.21
Gd	4.81	3.16	2.20	1.76	2.40	7.73	0.42	3.40
Tb	0.92	0.58	0.39	0.33	0.44	1.30	0.08	0.57
Dy	5.83	3.74	2.40	2.03	2.75	7.64	0.45	3.50
Ho	1.21	0.78	0.50	0.43	0.57	1.49	0.09	0.69
Er	3.73	2.36	1.47	1.32	1.72	4.43	0.25	2.05
Tm	0.564	0.350	0.221	0.189	0.254	0.648	0.036	0.302
Yb	3.52	2.18	1.37	1.24	1.62	4.03	0.22	1.81
Lu	0.542	0.332	0.204	0.188	0.251	0.619	0.036	0.270
Σ REE	62.046	40.301	37.459	25.367	36.608	170.467	7.565	62.912
Eu/Eu*	0.91	0.96	1.18	1.24	1.07	0.94	2.60	1.19
$(La/Sm)_N$	1.07	1.08	1.76	1.38	1.46	2.25	1.95	2.20
$(Gd/Yb)_N$	1.09	1.16	1.28	1.13	1.18	1.53	1.52	1.50
$(La/Yb)_N$	1.26	1.31	2.59	1.71	1.94	4.43	3.56	3.81

Note: Oxides are in weight percent (%). Trace and rare earth elements are in parts per million (ppm). Element concentrations expressed with the < sign are below detection limit.

†Cumulate rocks.

§Loss on ignition.

Data Repository Item

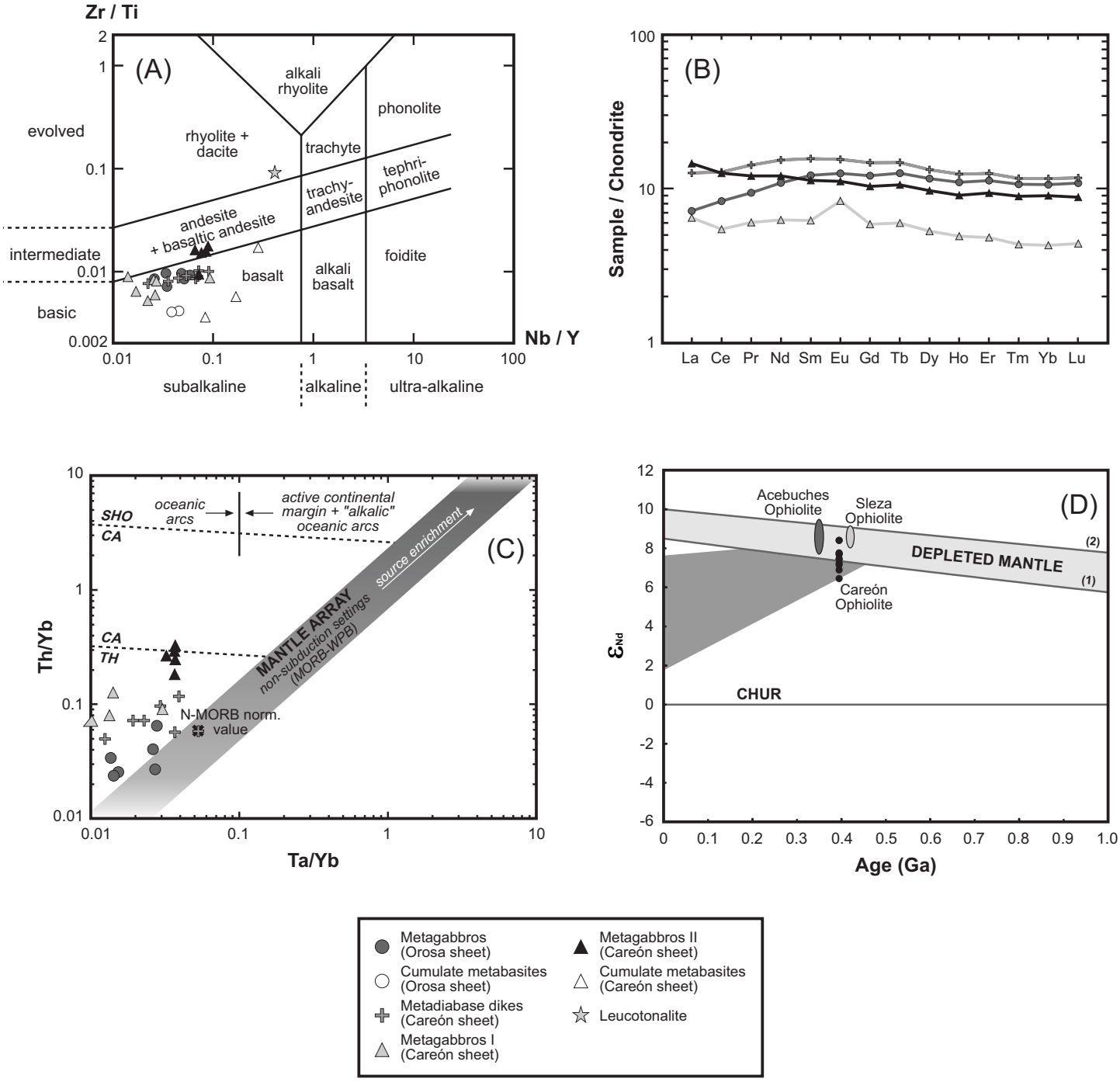

Figure DR1. Chemical diagrams for the most representative metabasites of the Careón Ophiolite. (A) Nb/Y-Zr/Ti diagram of Winchester and Floyd (1977; *Chemical Geology, 20, 325-343*) modified according to Pearce (1996; *in Wyman, D.A., ed., Short Course Notes, Geological Association of Canada, 12, 79-113*). (B) Chondrite-normalized REE patterns of the average composition of each group of metabasites. Normalizing values are from Nakamura (1974; *Geochimica et Cosmochimica Acta, 38, 757-775*). (C) Incompatible element ratio plot of Ta/Yb-Th/Yb (after Pearce, 1983; *in Hawkesworth, C.J. and Norry, M.J., eds., Shiva, Nantwich, 230-249*). (D) ε^{t}_{Nd} vs time diagram of Sm-Nd isotopic data (data from Pin et al., 2002; *Geological Society of America Special Paper, 364, 57-71*). The dark shaded area is the envelope defined by the εNd growth lines (variation of the εNd with time) of the set of samples of the Careón Ophiolite. For comparison, data from the Acebuches (Castro et al., 1996; *Journal of Petrology, 37, 235-260*) and Sleza (Crowley et al., 2002; *Geological Society of London Special Publication, 201, 157-176*) ophiolites are also shown. Depleted mantle curves 1 and 2 according to De Paolo (1981; *Nature, 291, 193-196*) and Goldstein et al. (1984; *Earth and Planetary Science Letters, 70, 221-236*), respectively.