

Table 2. Mineralogy of the nonmicaceous, silt heavy-mineral (above) and light-mineral (S.G. <2.85) fractions (below) from the rivers of north-central Puerto Rico in population percent. Both fractions are individually normalized to 100 percent. Heavy-mineral data is in population percent; the light mineral data is in weight percent. Asterisks indicate heavy minerals determined by XRD.

SAMPLE ID	RIO DE LA PLATA				RIO CIBUCO						RIO MAVILLA					
	1	24	11	7	8	9	4	6	22	10	3	17	18	19	20	
Rutile+Anatase+																
Brookite+Leucoxene	2.5	2.5	2.7	1.8	1.9	1.7	0.7	1.5	2.5	3.5	0.7	1.6	0.3	1.3	6.0	
Ilmenite	6.6	6.9	7.6	4.4	7.4	4.8	2.7	4.0	8.2	2.7	2.5	2.6	2.4	2.7	6.8	
Sphene	0.0	1.6	0.3	0.3	0.7	0.3	1.0	0.9	0.0	0.4	0.5	0.7	2.1	0.3	0.4	
Hematite+Goethite+																
Magnetite+Maghemite+																
Siderite	7.6	9.4	12.4	6.8	6.0	10.6	5.3	12.9	12.0	6.2	7.2	6.9	9.4	5.7	12.0	
Manganese oxide+																
manganosiderite	0.0	0.0	0.0	0.0	0.7	0.8	0.7	0.0	0.3	0.8	0.2	0.3	0.0	0.0	0.4	
Pyrite	0.3	0.0	0.3	0.9	0.5	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.3	0.0	0.0	
Barite	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Zircon	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.0	0.0	
Monazite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Apatite+Vivianite	0.0	0.0	0.6	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Corundum	0.9	0.3	0.0	0.0	0.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	
Epidote	9.4	11.3	8.2	8.0	4.2	9.5	4.0	1.2	0.6	4.3	7.1	3.6	0.9	0.7	2.3	
Garnet	23.9	18.4	13.9	15.1	16.3	17.3	39.2	30.3	39.6	20.5	15.5	7.2	9.7	12.0	23.7	
Beryl+Topaz	2.2	0.6	0.0	0.3	0.0	1.4	0.0	0.9	0.0	1.2	0.0	0.3	0.3	0.3	0.4	
Amphiboles*	11.3	11.5	24.7	34.4	39.3	31.0	13.6	9.3	6.9	33.2	41.9	42.3	60.2	55.5	16.7	
Pyroxenes*	16.9	14.5	13.7	6.0	7.2	4.1	15.9	11.8	8.7	3.8	2.9	20.8	4.2	8.4	8.8	
Tourmaline*	2.6	10.0	5.2	12.0	6.6	6.8	5.3	11.1	6.0	8.6	6.9	4.8	5.0	5.6	2.9	
Olivine*	1.6	1.1	3.8	2.2	2.2	3.6	3.0	4.8	0.7	2.4	5.7	1.4	1.4	0.7	0.9	
Spinel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Magnesite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Chromite	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.8	0.0	0.0	0.0	1.0	0.4	
Gold	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0	
Cerargyrite	1.9	0.3	0.3	0.9	0.7	1.1	0.0	0.3	1.0	0.4	2.0	0.7	0.3	0.4	0.0	
Altered grains	3.8	7.2	4.5	3.9	2.6	3.1	5.0	6.1	9.1	3.1	3.0	2.9	0.9	2.3	11.3	
Other+Rock Fragments	8.2	4.1	1.2	2.7	3.5	2.8	3.3	4.9	3.8	8.1	3.7	3.3	2.3	3.0	6.6	
Quartz	48	36	61	55	62	69	64	68	68	64	59	55	61	60	66	
K-feldspar	1	2	7	16	9	9	9	10	11	8	9	14	13	14	11	
Plagioclase	51	30	29	29	28	22	27	22	21	28	32	31	26	26	23	

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	RIO DE LOS NEGROS	RIO DOS BOCAS	RIO INDIO	RIO UNIBON	RIO LAS CARRERAS	RIO MOROVIS	RIO MANATI			
SAMPLE ID	5	28	12	13	23	27	26	25	15	16
Rutile+Anatase+										
Brookite+Leucoxene	1.2	0.0	3.4	1.4	2.7	3.0	1.9	1.5	3.5	0.6
Ilmenite	3.7	3.2	5.7	6.4	3.4	0.7	6.1	4.6	16.1	11.5
Sphene	0.3	0.7	0.7	0.8	0.7	0.7	0.0	0.2	2.9	0.5
Hematite+Goethite+										
Magnetite+Maghemite+										
Siderite	7.9	10.2	9.5	4.2	11.9	19.3	9.3	21.3	12.9	15.3
Manganese oxide+										
manganosiderite	0.0	0.0	0.0	0.6	0.0	0.0	0.3	0.7	0.0	0.5
Pyrite	0.0	0.3	0.3	2.0	0.0	0.0	0.0	0.5	0.3	0.3
Barite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Zircon	0.3	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
Monazite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Apatite+Vivianite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0	0.0
Corundum	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.6	0.0
Epidote	3.1	10.5	9.4	5.0	4.1	2.0	1.9	4.4	13.9	13.1
Garnet	18.3	20.7	28.7	26.4	33.3	37.7	51.8	45.7	10.7	22.9
Beryl+Topaz	1.2	1.4	0.0	0.3	1.4	0.7	1.0	1.7	0.6	0.5
Amphiboles*	33.1	27.4	20.6	19.3	9.9	14.6	9.3	6.0	9.4	4.1
Pyroxenes*	16.8	6.7	5.4	9.6	22.0	9.7	2.8	2.6	11.6	12.6
Tourmaline*	4.5	6.3	6.8	12.3	3.3	4.0	1.1	2.4	0.9	1.7
Olivine*	1.7	4.5	1.0	2.6	1.5	0.3	0.3	0.6	0.4	0.2
Spinel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Magnesite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chromite	0.3	1.4	0.0	0.3	0.7	0.3	0.0	0.0	0.0	0.8
Gold	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cerargyrite	0.0	0.1	1.4	0.0	0.0	0.0	0.7	0.2	0.7	0.6
Altered Grains	4.6	3.5	4.1	4.5	2.7	2.3	7.1	4.4	6.8	7.7
Other+Rock Fr	2.7	3.2	3.0	3.4	2.4	4.3	6.4	2.7	7.7	7.1
Quartz	52	43	61	56	69	87	44	44	32	42
K-feldspar	9	14	11	12	7	5	16	15	21	18
Plagioclase	35	43	28	32	24	8	40	41	47	40