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Analytical results of vein, rock, soil, stream-sediment, and heavy-mineral-concentrate samples from the Republic of Palau

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INTRODUCTION

The Republic of Palau, located in the western Pacific, is a former U.S. Trust Territory consisting of more than 200 islands aligned along the 350-km-long Palau trench-arc system (fig. 1). Babelthuap is the largest of these islands. In the spring of 1986, a team from the U.S. Geological Survey conducted a detailed geologic and geochemical study of the Rois Malk epithermal gold system on the island of Babelthuap. Three hundred and eighty-one samples were collected and analyzed for 31 elements by emission spectrography and for Au, Te, As, Bi, Cd, Sb, and Zn by atomic-absorption spectroscopy. This study was funded by the Office of Territorial and International Affairs, and the U.S. Geological Survey.

SAMPLE COLLECTION AND PREPARATION

Samples were collected in the spring of 1986 by W. R. Miller, J. J. Rytuba, M. A. Arnold, and T. L. Vercoutere and shipped to the U.S. Geological Survey laboratory in Denver, Colorado, for preparation and analyses. Three hundred and eighty-one samples were collected, of this 151 were vein samples, 163 channel samples, 38 soils, 16 stream sediments, and 13 heavy-mineral concentrates.

Vein and channel samples

Surface exposure of veins vary from rare nearly fresh exposure to more commonly weathered exposures. Vein samples were collected by compositing several samples across and along trend of the vein. Channel samples were collected across veins and lateritic country rocks. Channel samples were collected by continuous sampling along a one to three meter interval along road cuts, World War II Japanese fortification trenches, and backhoe trenches. Vein and channel samples were prepared by crushing and then were pulverized to minus 0.15 mm with ceramic plates.

Soil and stream-sediment samples

Soil samples consisted of approximately 0.5 kg of collected material that were generally about 15 cm below the surface. Soil development is poor with no well developed horizons. All soil samples were oven dried at 120°C for 12 hours, then crushed and pulverized to minus 0.15 mm using ceramic plates.

Stream-sediment samples consisted of 1 to 2 kg composite samples of sediments collected from small streams. These samples were oven dried at 120°C for 12 hours and sieved using a 80 mesh (0.18 mm) stainless steel sieve.

Heavy-mineral-concentrate samples

Heavy-mineral-concentrate samples were prepared by collecting a 5 to 7 kg composite sample of sediment and panning in the field to obtain the heavy-mineral concentrates. These samples were air dried and sieved to minus-18-mesh (<1.0 mm), and the magnetite was removed by using a hand magnet. The remaining concentrate was separated using bromoform (specific gravity 2.86) into a light and heavy fraction. The light fraction which contained mainly minerals such as plagioclase was discarded. The remaining heavy-mineral fraction was separated electromagnetically by using a Frantz isodynamic separator with a forward slope of 15° and a side slope of 20° at 0.6 amperes.

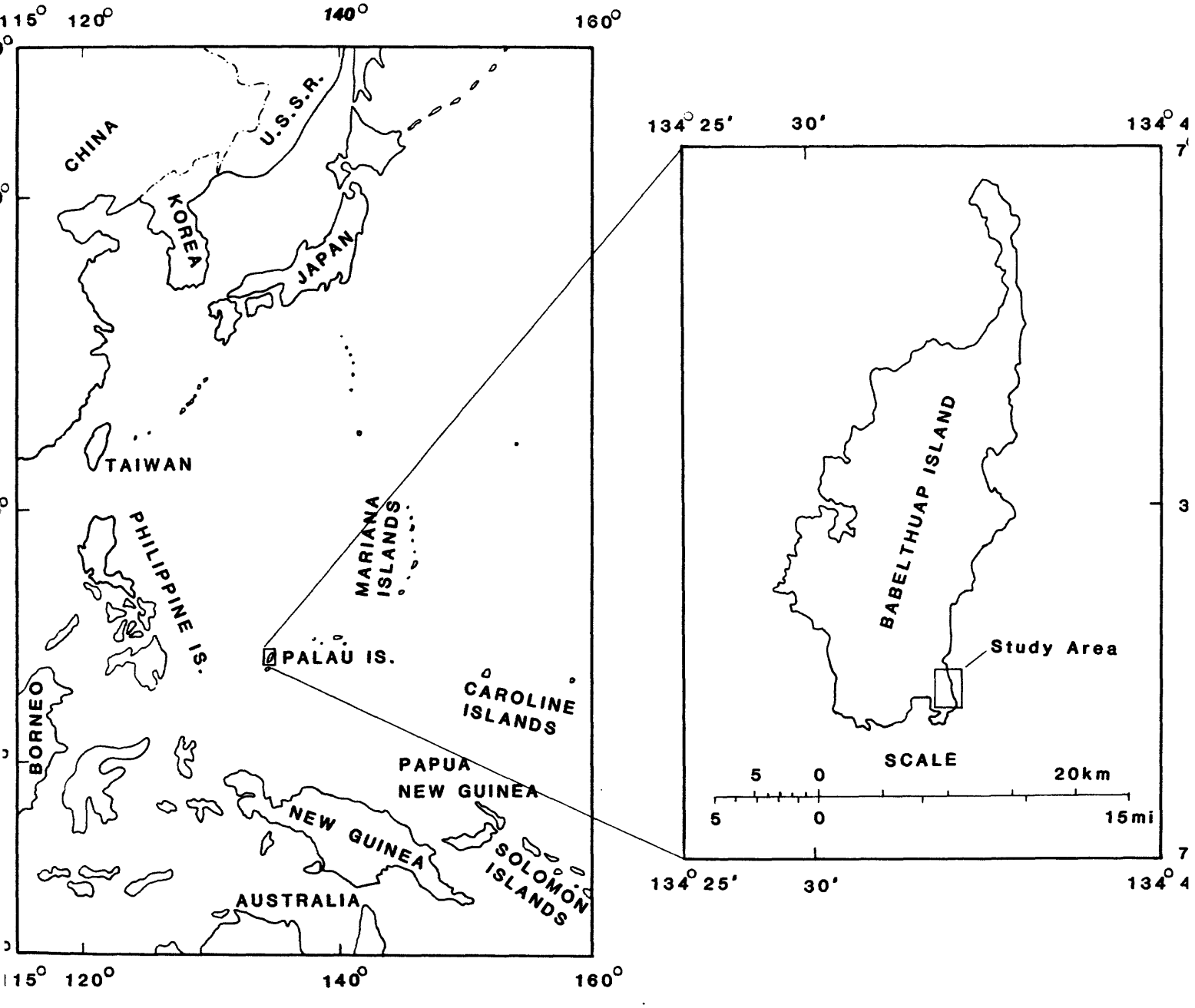

Figure 1. Index map of Palau study area.

The magnetic fraction at 0.6 amperes contained primarily pyroxenes, amphiboles, and spinel minerals and was discarded. The nonmagnetic fraction at 0.6 amperes was split. One split was hand-ground to minus 0.15 mm with an agate mortor for spectrographic analysis; the other split was saved for mineralogical studies.

ANALYTICAL PROCEDURES

Each sample was analyzed for 31 elements using a semiquantitative, direct-current arc emission spectrographic method (Grimes and Marranzino, 1968). The elements analyzed and their lower limits of determination are listed in table 1. Spectrographic results were obtained by visual comparison of spectra derived from the sample against spectra obtained from standards made from pure oxides and carbonates. Standard concentrations are geometrically spaced over any given order of magnitude of concentration as follows: 100, 50, 20, 10, and so forth. Samples whose concentrations are estimated to fall between those values are assigned values of 70, 30, 15, and so forth. The precision of the analytical method is approximately plus or minus one reporting interval at the 83 percent confidence level and plus or minus two reporting intervals at the 96 percent confidence level (Motooka and Grimes, 1976). In addition, gold, tellurium, antimony, arsenic, bismuth, cadmium, and zinc were determined in each sample, except for heavy-mineral concentrates, using atomic-absorption spectroscopy.

A brief description of these procedures follows:

Gold A 10-gram sample is roasted for one hour at 700°C, gold is then extracted with hydrobromic acid-0.5 percent bromine solution and MIBK (methyl isobutyl ketone). Flame atomic-absorption spectroscopy is used to determine gold to 0.05 ppm detection limit, samples below this limit are determined by electrothermal atomic-absorption spectroscopy using background correction to 0.001 ppm detection limit (O'Leary and Meier, 1986).

Tellurium Tellurium is extracted from a 5-gram sample with hydrobromic-2 percent bromine solution and MIBK. Ascorbic acid is used to reduce iron interference. Flame atomic-absorption spectroscopy is used to determine tellurium to 0.02 ppm detection limit (O'Leary and Meier, 1986).

Antimony, arsenic, bismuth, cadmium, and zinc The metals of interest are solubilized from a 1.0-gram sample with hydrochloric-hydrogen peroxide solution and extracted with Aliquat 336-MIBK. Flame atomic-absorption spectroscopy is used to determine these metals. Limits of detection are antimony 2 ppm, arsenic 10 ppm, bismuth 1 ppm, cadmium 0.1 ppm, and zinc 5 ppm (O'Leary and Viets, 1986).

The results of these analyses are shown in tables 2-7.

ROCK ANALYSIS STORAGE SYSTEM

Upon completion of all analytical work, the analytical results were entered into a computer-based file called Rock Analysis Storage System (RASS). This data base contains both descriptive geological information and analytical data. Any or all of this information may be retrieved and converted to a binary form (STATPAC) for computerized statistical analysis or publication (VanTrump and Miesch, 1977).

DESCRIPTION OF DATA TABLES

Tables 2-7 list the results of analyses for the samples. The data are arranged so that column 1 contains the USGS-assigned sample numbers. Columns 2 and 3 are the sample localities in UTM-N and UTM-E (Universal Transverse Mercator, zone 53). Columns in which the element headings show the letter "s" before the element symbol are emission spectrographic analyses; "aa" indicates atomic-absorption analyses. A letter "P" or "T" after the element symbol in the aa columns indicates partial or total digestion of the sample for that element. Values determined for the major elements (iron, magnesium, calcium, and titanium) are given in weight percent; all others are given in parts per million (micrograms/gram).

REFERENCES CITED

Grimes, D. J., and Marranzino, A. P., 1968, Direct-current arc and alternating-current spark emission spectrographic field methods for the semiquantitative analysis of geologic materials: U.S. Geological Survey Circular 591, 6 p.

Motooka, J. M., and Grimes, D. J., 1976, Analytical precision of one-sixth order semiquantitative spectrographic analyses: U.S. Geological Survey Circular 738, 25 p.

O'Leary, R. M., and Meier, A. L., 1986, Analytical methods used in geochemical exploration, 1984: U.S. Geological Survey Circular 948, 48 p.

O'Leary, R. M., and Viets, J. G., 1986, Determination of antimony, arsenic, bismuth, cadmium, copper, lead, molybdenum, silver, and zinc in geologic materials by atomic-absorption spectrometry using a hydrochloric acid-hydrogen peroxide digestion: Atomic Spectroscopy, 7, p. 4-8.

VanTrump, George, Jr., and Miesch, A. T., 1977, The U.S. Geological Survey RASS-STATPAC system for management and statistical reduction of geochemical data: Computers and Geosciences, v. 3, p. 475-488.

TABLE 1.--Limits of determination for the spectrographic analysis, based on a 10-mg sample

[The spectrographic limits of determination for heavy-mineral-concentrate samples are based on a 5-mg sample, and are therefore two reporting intervals higher than the limits given for rocks and stream sediments]

Elements	Lower determination limit	Upper determination limit
	Percent	
Iron (Fe)	0.05	20
Magnesium (Mg)	.02	10
Calcium (Ca)	.05	20
Titanium (Ti)	.002	1
	Parts per million	
Manganese (Mn)	10	5,000
Silver (Ag)	0.5	5,000
Arsenic (As)	200	10,000
Gold (Au)	10	500
Boron (B)	10	2,000
Barium (Ba)	20	5,000
Beryllium (Be)	1	1,000
Bismuth (Bi)	10	1,000
Cadmium (Cd)	20	500
Cobalt (Co)	5	2,000
Chromium (Cr)	10	5,000
Copper (Cu)	5	20,000
Lanthanum (La)	20	1,000
Molybdenum (Mo)	5	2,000
Niobium (Nb)	20	2,000
Nickel (Ni)	5	5,000
Lead (Pb)	10	20,000
Antimony (Sb)	100	10,000
Scandium (Sc)	5	100
Tin (Sn)	10	1,000
Strontium (Sr)	100	5,000
Vanadium (V)	10	10,000
Tungsten (W)	50	10,000
Yttrium (Y)	10	2,000
Zinc (Zn)	200	10,000
Zirconium (Zr)	10	1,000
Thorium (Th)	100	2,000

TABLE 2.--CHEMICAL DATA FOR 151 VEIN SAMPLES FROM THE ROIS MALK AREA, PALAU

[N, not detected; <, detected but below the limit of determination shown; >, determined to be greater than the value shown.]

Sample	UTM-N	UTM-E	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-BI
JR101	815,131	453,751	10.0	.15	<.05	.150	2,000	<.5	N	N	15	<20	N	10
JR103	815,131	453,751	10.0	.10	N	.070	150	N	N	N	<10	<20	N	N
PA101	814,604	454,200	7.0	.50	<.05	.200	700	<.5	N	N	N	N	N	N
PA102	814,494	454,284	5.0	.15	<.05	.200	3,000	<.5	N	N	<10	150	N	<10
PA103	814,445	454,312	7.0	<.02	N	.020	70	5.0	N	N	N	N	N	N
PA104	814,315	454,312	5.0	.07	<.05	.200	500	N	N	N	N	N	N	N
PA105	814,876	453,577	20.0	.02	<.05	.070	500	N	N	N	N	N	N	N
PA106	814,896	453,635	15.0	.07	<.05	.200	70	N	N	N	N	N	N	N
PA107	814,902	453,661	20.0	.07	<.05	.200	70	N	N	N	N	N	N	N
PA108	814,853	453,794	10.0	.10	N	.100	20	N	N	N	10	<20	N	N
PA109	814,578	454,246	7.0	.07	<.05	.100	500	7.0	N	N	<10	100	N	30
PA110	814,573	454,207	5.0	.07	<.05	.200	1,000	N	N	N	N	N	N	N
PA111	814,572	454,201	10.0	.07	<.05	.150	500	N	N	N	N	N	N	N
PA112	814,586	454,140	20.0	<.02	N	.150	150	1.5	N	N	N	N	N	10
PA113	814,572	454,132	5.0	.07	<.05	.100	50	1.0	N	<10	15	70	N	N
PA126	814,794	453,999	7.0	.07	N	.200	3,000	1.0	N	N	N	100	N	N
PA138	814,616	453,955	7.0	.07	N	.500	300	N	N	N	N	N	N	N
PA139	814,817	453,943	20.0	.07	N	.100	>5,000	2.0	N	N	N	300	<1	N
PA140	814,943	454,039	7.0	.02	<.05	.100	70	2.0	N	N	10	30	N	N
PA141	814,951	453,918	15.0	<.02	<.05	.300	700	N	N	N	N	<20	N	N
PA142	814,964	453,908	15.0	.02	<.05	.070	>5,000	N	N	N	N	300	N	N
PA143	814,969	453,907	15.0	.02	<.05	.150	150	N	N	N	N	N	<1	N
PA144	814,969	453,901	20.0	.02	<.05	.070	>5,000	.5	N	N	N	300	<1	N
PM101	815,193	454,141	15.0	.07	<.05	.200	50	N	N	N	N	<20	N	N
PM102	814,537	454,338	10.0	.05	<.05	.100	150	1.5	N	N	N	20	N	N
PM116	814,687	454,079	5.0	.02	<.05	.200	1,000	N	N	N	N	N	N	N
PM117	814,725	454,005	7.0	.07	<.05	.100	30	<.5	N	N	<10	20	N	N
PM118	814,782	453,987	7.0	.03	<.05	.070	50	N	N	N	10	N	N	N
PM119	814,711	453,990	7.0	.10	<.05	.100	30	N	N	N	<10	50	N	N
PM120	814,702	453,983	7.0	.05	<.05	.070	30	N	N	N	15	N	N	N
PM121	814,828	454,285	7.0	.15	<.05	.100	150	N	N	N	N	100	N	N
PM122	814,721	454,273	5.0	.15	<.05	.200	150	N	N	N	N	<20	N	N
PM124	814,711	454,284	5.0	.10	<.05	.150	700	N	N	N	<10	N	N	N
PM125	814,652	454,241	5.0	.15	<.05	.200	3,000	N	N	N	N	<20	N	N
PM126	814,694	454,244	20.0	.30	N	.070	150	N	N	N	N	N	N	N
PM127	814,560	454,344	5.0	.15	N	.015	2,000	5.0	N	N	10	50	N	N
PM131	814,520	454,140	7.0	.15	<.05	.070	50	7.0	N	N	15	50	N	N
PM133	814,403	454,305	7.0	.15	<.05	.030	30	N	N	N	<10	N	N	N
PM134	814,350	454,303	10.0	.20	<.05	.200	1,000	N	N	N	N	N	N	N
PM135	814,763	454,266	10.0	.20	<.05	.100	150	.5	N	N	N	30	N	<10
PM136	814,615	454,066	3.0	.10	N	.100	300	N	N	N	N	N	N	N
PM142	814,493	454,287	3.0	.10	<.05	.070	>5,000	10.0	N	N	15	500	N	N
PM143	814,492	454,290	5.0	.15	N	.300	300	N	N	N	N	N	N	N
PM144	814,490	454,292	7.0	.20	<.05	.150	700	.7	N	N	N	200	N	N
PM152	814,520	454,140	5.0	.15	<.05	.070	100	N	N	N	15	100	N	N

CHEMICAL DATA FOR 151 VEIN SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V
JR101	N	10	1,000	1,500	N	15	N	20	700	N	50	15	N	300
JR103	N	N	500	1,000	N	7	N	15	150	N	50	N	N	200
PA101	N	50	1,000	500	N	N	N	150	30	N	50	N	N	150
PA102	N	500	700	500	N	N	N	100	15	N	70	N	N	200
PA103	N	10	150	500	N	N	N	15	10	N	10	N	N	70
PA104	N	30	300	700	N	N	N	50	10	N	30	N	N	200
PA105	N	70	500	50	N	<5	N	50	10	N	20	N	N	300
PA106	N	<5	200	150	N	N	N	30	70	N	30	N	N	200
PA107	N	N	1,000	100	N	N	N	30	20	N	50	N	N	200
PA108	N	N	150	300	N	5	N	5	10	N	30	N	N	100
PA109	N	15	1,500	700	N	N	N	20	N	N	50	N	N	200
PA110	N	30	700	150	N	N	N	200	30	N	50	N	N	150
PA111	N	30	1,500	200	N	N	N	70	<10	N	50	N	N	200
PA112	N	15	700	1,500	N	N	N	50	15	N	50	N	N	150
PA113	N	<5	150	100	N	20	N	10	150	N	20	N	N	200
PA126	N	70	300	500	N	N	N	150	50	N	50	N	N	200
PA138	N	7	200	150	N	N	N	70	10	N	50	N	N	500
PA139	N	300	300	1,000	N	N	N	70	200	N	70	N	N	150
PA140	N	5	300	300	N	N	N	10	15	N	15	N	N	200
PA141	N	20	150	300	N	N	N	150	20	N	70	N	N	200
PA142	N	150	150	500	N	N	N	50	<10	N	50	N	N	100
PA143	N	15	150	700	N	N	N	50	<10	N	50	N	N	150
PA144	N	100	100	700	N	N	N	30	15	N	50	N	N	50
PM101	N	N	500	200	N	N	N	<5	20	N	30	N	N	70
PM102	N	<5	1,000	500	N	N	N	15	15	N	15	N	N	150
PM116	N	70	500	100	N	N	N	150	<10	N	50	N	N	200
PM117	N	N	150	300	N	20	N	10	15	N	15	N	N	150
PM118	N	N	500	700	N	N	N	5	10	N	20	N	N	200
PM119	N	N	150	300	N	10	N	5	15	N	20	N	N	150
PM120	N	N	200	200	N	N	N	10	10	N	30	N	N	150
PM121	N	20	700	500	N	N	N	30	20	N	20	N	N	150
PM122	N	5	300	300	N	N	N	70	10	N	30	N	N	150
PM124	N	30	500	300	N	N	N	150	20	N	30	N	N	150
PM125	N	70	700	200	N	N	N	150	10	N	50	N	N	200
PM126	N	20	1,000	500	N	N	N	30	50	N	30	N	N	100
PM127	N	10	200	300	N	N	N	15	10	N	<5	N	N	100
PM131	N	N	150	200	N	N	N	10	50	N	7	N	N	150
PM133	N	N	20	700	N	7	N	<5	N	N	20	N	N	150
PM134	N	50	500	1,500	N	N	N	150	10	N	50	N	N	200
PM135	N	<5	700	300	N	N	N	20	70	N	50	N	N	150
PM136	N	15	300	70	N	N	N	20	N	N	30	N	N	300
PM142	N	1,500	300	1,000	N	N	N	200	N	N	50	N	N	150
PM143	N	20	200	100	N	N	N	30	N	N	50	N	N	300
PM144	N	15	300	500	N	N	N	30	20	N	70	N	N	300
PM152	N	10	150	200	N	<5	N	10	50	N	10	N	N	150

CHEMICAL DATA FOR 151 VEIN SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-AS-P	AA-ZN-P	AA-CD-P	AA-BI-P	AA-SB-P	AA-AU-T	AA-TE-T
JR101	N	N	300	15	N	50	300	.6	5	8	1.450	10.40
JR103	N	N	N	<10	N	30	70	N	2	2	.230	5.14
PA101	N	N	<200	15	N	N	180	N	N	N	.100	4.38
PA102	N	10	<200	30	N	N	220	1.1	4	N	1.470	13.00
PA103	N	N	N	<10	N	20	50	N	2	10	.500	5.98
PA104	N	N	N	20	N	N	20	N	N	N	.017	2.74
PA105	N	15	200	10	N	30	65	N	N	N	.020	.36
PA106	N	<10	N	30	N	20	35	N	N	N	.036	1.50
PA107	N	N	N	20	N	N	5	N	N	N	.045	1.16
PA108	N	10	N	20	N	150	40	N	1	N	.280	2.80
PA109	N	N	<200	30	N	N	130	.2	25	N	1.970	18.60
PA110	N	N	200	30	N	N	110	N	N	N	.050	3.36
PA111	N	N	<200	15	N	N	170	.1	1	N	.060	8.10
PA112	N	N	<200	15	N	N	90	N	10	N	.150	11.40
PA113	N	N	200	15	N	10	170	N	3	N	5.800	7.70
PA126	N	N	<200	20	N	N	130	.2	N	N	.006	1.02
PA138	N	N	N	30	N	N	45	N	N	N	.005	.06
PA139	N	20	<200	10	N	20	130	.7	N	N	.070	.85
PA140	N	<10	N	10	N	20	30	N	N	N	.260	6.55
PA141	N	10	300	20	N	N	25	.5	N	N	.006	.06
PA142	N	20	500	N	N	N	35	7.9	N	N	.033	.54
PA143	N	10	200	20	N	N	170	.1	N	N	.027	.08
PA144	N	15	200	10	N	N	75	4.2	N	N	.033	.02
PM101	N	N	N	<10	N	10	10	N	2	N	.140	5.39
PM102	N	<10	<200	10	N	N	70	.1	N	N	.390	4.58
PM116	N	N	N	20	N	N	45	N	N	N	.036	2.01
PM117	N	N	N	20	N	60	40	N	1	N	.200	6.67
PM118	N	N	N	10	N	10	30	N	N	N	.060	3.78
PM119	N	N	N	15	N	50	15	N	N	N	.320	2.55
PM120	N	<10	<200	10	N	150	130	N	N	N	.130	6.02
PM121	N	N	<200	<10	N	N	85	N	N	N	.030	6.38
PM122	N	N	N	10	N	N	50	N	N	N	.140	8.24
PM124	N	N	<200	10	N	N	120	.1	N	N	.039	4.72
PM125	N	N	<200	20	N	N	170	.2	N	N	.025	2.95
PM126	N	N	<200	<10	N	N	75	N	1	N	.180	5.15
PM127	N	N	N	N	N	N	35	.3	2	N	.530	5.24
PM131	N	N	<200	10	N	N	130	N	N	N	.240	2.21
PM133	N	N	N	N	N	20	60	N	N	N	.060	2.84
PM134	N	10	200	20	N	N	190	N	N	N	.023	6.90
PM135	N	N	<200	15	N	10	100	N	2	N	1.050	15.60
PM136	N	N	N	20	N	<10	35	N	N	N	.025	3.58
PM142	N	15	200	15	N	N	240	11.0	N	N	.900	4.15
PM143	N	<10	200	30	N	N	220	.2	N	N	.016	.87
PM144	N	N	200	20	N	N	220	.1	N	N	.120	4.60
PM152	N	N	<200	<10	N	N	130	.1	N	N	.200	4.98

CHEMICAL DATA FOR 151 VEIN SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	UTM-N	UTM-E	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-BI
PM153	814,520	454,144	5.0	.15	<.05	.300	>5,000	1.5	N	N	20	1,000	N	N
PM201A	814,887	454,554	1.5	.15	.15	.070	150	.7	N	N	10	500	N	N
PM204	814,932	454,544	5.0	.50	.10	.100	300	5.0	N	N	N	N	N	N
PM205	814,911	454,572	15.0	.03	<.05	.015	150	1.0	N	N	N	N	N	N
PM216	814,692	454,252	15.0	.07	<.05	.150	70	N	N	N	N	<20	N	N
PM217	814,692	454,251	20.0	.03	<.05	.070	700	N	N	N	N	N	N	N
PM218	814,693	454,251	20.0	.05	<.05	.070	150	N	N	N	N	<20	N	N
PM219	814,694	454,252	3.0	.05	<.05	.200	1,000	1.5	N	N	N	N	N	N
PM220	814,694	454,253	10.0	.10	<.05	.150	700	<.5	N	N	N	70	N	N
PM225	814,463	454,319	5.0	.10	<.05	.100	70	2.0	N	N	N	150	N	N
PM226	814,463	454,316	5.0	.10	<.05	.150	30	N	N	N	N	100	N	N
PM227	814,462	454,313	3.0	.07	<.05	.200	300	N	N	N	N	N	N	N
PM228	814,466	454,308	5.0	.07	<.05	.200	1,000	N	N	N	N	N	N	N
PM229	814,466	454,305	7.0	.07	<.05	.300	1,000	N	N	N	N	N	N	N
PM230	814,456	454,301	3.0	.20	<.05	.300	50	N	N	N	<10	150	N	N
PM231	814,466	454,297	5.0	<.02	N	.010	200	5.0	N	N	N	N	N	10
PM242	814,484	454,319	7.0	.03	<.05	.070	30	1.5	N	N	N	50	N	N
PM244	814,432	454,311	15.0	.03	N	.050	50	7.0	N	N	10	<20	N	15
PM245	814,347	454,305	5.0	.10	<.05	.300	700	N	N	N	N	N	N	N
PM246	814,338	454,317	7.0	.05	<.05	.300	700	N	N	N	N	N	N	N
PM262	814,918	453,715	7.0	.15	.05	.200	30	N	N	N	15	50	N	N
PM263	814,657	454,186	3.0	.15	<.05	.200	1,500	N	N	N	N	N	N	N
PM264	814,538	454,339	15.0	.02	<.05	.030	70	N	N	N	N	<20	N	N
PM269	814,560	454,334	7.0	.03	<.05	.030	1,000	3.0	N	<10	10	50	N	15
PM270	814,382	454,420	7.0	.50	.05	.300	1,000	N	N	N	N	N	N	N
PM278	815,189	454,139	20.0	.10	N	.200	30	N	N	N	N	70	N	N
PM280	814,781	454,432	3.0	.20	.05	.100	300	3.0	N	N	<10	70	N	N
PM281	814,752	454,504	1.5	.70	.07	.100	500	1.5	N	N	10	200	N	N
PM282	814,943	454,039	7.0	.03	<.05	.100	100	2.0	N	N	N	70	N	N
PM283	814,714	453,982	10.0	.03	<.05	.070	20	<.5	<200	N	N	<20	N	N
PM284	814,767	454,007	10.0	.07	<.05	.050	20	N	N	N	10	70	N	N
PM285	814,765	453,995	3.0	.05	<.05	.200	20	N	N	N	N	N	N	N
PM286	814,764	453,992	10.0	.05	<.05	.150	20	N	N	N	N	30	N	N
PT100A	814,965	454,292	7.0	.03	<.05	.050	1,500	N	N	N	<10	N	N	N
PT100B	814,965	454,292	5.0	.10	<.05	.200	>5,000	1.5	N	N	10	100	N	N
PT101A	814,972	454,296	10.0	.10	<.05	.150	500	N	N	N	10	<20	N	N
PT102	815,002	454,309	7.0	.03	<.05	.050	200	N	N	N	N	N	N	N
PT103A	814,943	454,290	10.0	.10	<.05	.100	2,000	3.0	N	N	10	70	N	N
PT103B	814,943	454,290	7.0	.10	<.05	.300	150	N	N	N	15	N	N	N
PT105A	814,910	454,296	10.0	.30	.05	.100	300	2.0	N	N	15	<20	N	<10
PT105C	814,910	454,296	5.0	1.00	.05	.200	500	1.5	N	N	<10	N	N	N
PT107	814,934	454,332	5.0	.15	.50	.200	1,500	N	N	N	<10	N	N	N
PT108	814,912	454,406	7.0	.20	.10	.070	200	3.0	N	N	10	<20	N	<10
PT109	814,977	454,394	5.0	.10	<.05	.070	1,000	10.0	N	N	20	20	N	N
PT110	814,981	454,377	10.0	.07	<.05	.050	70	7.0	N	N	20	30	N	N

CHEMICAL DATA FOR 151 VEIN SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V
PM153	N	150	700	300	N	N	N	500	30	N	70	N	N	300
PM201A	N	<5	300	50	20	15	N	10	70	<100	<5	N	N	30
PM204	N	10	500	500	N	N	N	30	15	N	20	N	N	150
PM205	N	10	150	700	N	N	N	20	20	N	7	N	N	150
PM216	N	7	700	700	N	N	N	20	100	N	30	N	N	150
PM217	N	70	700	1,000	N	N	N	50	30	N	30	N	N	150
PM218	N	10	700	700	N	N	N	10	50	N	30	N	N	70
PM219	N	70	700	500	N	N	N	150	150	N	50	N	N	200
PM220	N	50	500	700	N	N	N	15	20	N	20	N	N	100
PM225	N	<5	300	500	N	N	N	10	<10	300	30	N	N	100
PM226	N	N	500	150	N	N	N	10	N	N	30	N	N	150
PM227	N	15	700	150	N	N	N	150	<10	N	50	N	N	200
PM228	N	70	1,000	200	N	N	N	100	10	N	50	N	N	200
PM229	N	100	700	150	N	N	N	150	10	N	50	N	N	200
PM230	N	N	30	50	N	N	N	7	<10	N	30	N	N	200
PM231	N	30	50	700	N	N	N	7	<10	N	7	N	N	20
PM242	N	<5	500	200	N	N	N	7	10	N	20	N	N	500
PM244	N	<5	150	1,500	N	N	N	10	10	N	20	N	N	70
PM245	N	30	500	700	N	N	N	150	<10	N	30	N	N	200
PM246	N	70	500	700	N	N	N	150	15	N	50	N	N	200
PM262	N	N	300	100	N	N	N	20	10	N	30	N	N	200
PM263	N	70	1,000	1,000	N	N	N	150	20	N	50	N	N	200
PM264	N	<5	1,000	500	N	N	N	30	<10	N	20	N	N	200
PM269	N	10	50	200	N	N	N	20	20	N	7	N	N	150
PM270	N	70	300	150	N	N	N	100	10	N	30	N	N	200
PM278	N	N	700	100	N	N	N	7	<10	N	30	N	N	150
PM280	N	7	300	1,000	N	30	N	30	500	N	15	N	N	200
PM281	150	<5	150	200	<20	10	N	30	700	N	10	N	N	70
PM282	N	N	300	200	N	5	N	7	15	N	30	N	N	300
PM283	N	N	200	500	N	15	N	<5	20	N	30	N	N	200
PM284	N	10	70	500	N	N	N	10	70	N	15	N	N	100
PM285	N	N	700	150	N	N	N	100	<10	N	30	N	N	200
PM286	N	N	700	300	N	5	N	5	15	N	15	N	N	100
PT100A	N	150	1,000	700	N	N	N	50	<10	N	30	N	N	200
PT100B	N	700	700	1,000	N	N	N	200	30	N	50	N	N	300
PT101A	N	70	2,000	2,000	N	N	N	150	50	N	70	N	N	1,000
PT102	N	10	500	300	N	N	N	30	10	N	30	N	N	200
PT103A	N	70	700	1,500	N	N	N	50	150	N	70	N	N	700
PT103B	N	20	2,000	700	N	N	N	100	20	N	100	N	N	700
PT105A	N	15	500	700	N	N	N	30	70	N	20	N	N	200
PT105C	N	10	500	500	N	N	N	50	10	N	30	N	N	200
PT107	N	100	50	200	N	N	N	150	10	N	70	N	N	300
PT108	N	10	200	500	N	N	N	30	20	N	20	N	N	200
PT109	N	100	200	500	N	N	N	20	50	N	20	N	N	100
PT110	N	N	150	300	N	5	N	5	70	N	10	N	N	70

CHEMICAL DATA FOR 151 VEIN SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-AS-P	AA-ZN-P	AA-CD-P	AA-BI-P	AA-SB-P	AA-AU-T	AA-TL-T
PM153	N	20	300	30	N	N	250	3.2	N	N	.026	4.52
PM201A	N	N	700	20	N	20	560	43.0	N	N	.140	.34
PM204	N	N	300	20	N	10	220	.1	N	N	.250	7.55
PM205	N	N	500	N	N	90	220	.5	N	N	2.700	4.74
PM216	N	N	N	15	N	N	20	N	N	N	.042	6.10
PM217	N	N	<200	N	N	20	100	N	4	N	.120	6.28
PM218	N	N	<200	N	N	<10	45	N	1	N	.045	4.03
PM219	N	<10	N	15	N	N	45	.1	N	N	.011	3.39
PM220	N	N	N	10	N	N	55	N	1	N	.026	6.22
PM225	N	15	<200	15	N	170	70	N	2	190	.740	7.45
PM226	N	<10	N	20	N	10	5	N	N	N	.260	7.62
PM227	N	15	<200	20	N	N	60	.3	N	N	.015	4.72
PM228	N	15	<200	20	N	N	140	.2	N	N	.220	6.36
PM229	N	20	<200	20	N	N	85	N	N	N	.021	6.68
PM230	N	N	N	30	N	N	15	N	N	N	.006	5.62
PM231	N	N	N	N	N	N	10	N	5	N	.090	9.60
PM242	N	<10	N	N	N	N	35	N	2	N	.150	4.20
PM244	N	15	<200	<10	N	N	145	.1	12	N	2.200	8.80
PM245	N	N	<200	20	N	N	80	N	N	N	.024	5.42
PM246	N	N	N	20	N	N	20	N	N	N	.010	2.98
PM262	N	N	N	30	N	N	20	N	N	N	.220	2.18
PM263	N	N	N	20	N	N	20	N	N	N	.020	1.76
PM264	N	N	<200	N	N	20	80	N	2	N	.150	4.74
PM269	N	N	N	N	N	<10	50	.5	8	N	5.400	10.90
PM270	N	N	<200	30	N	N	70	N	N	N	.050	1.94
PM278	N	N	N	15	N	30	10	N	2	N	.080	5.55
PM280	N	N	<200	15	N	60	270	2.1	2	N	.600	2.68
PM281	N	N	10,000	10	N	10	340	54.0	N	N	.110	1.10
PM282	N	N	N	10	N	10	45	N	N	N	.030	6.65
PM283	N	N	N	10	N	130	10	N	N	N	.430	4.37
PM284	N	N	200	<10	N	20	170	.1	N	N	1.580	5.41
PM285	N	10	N	20	N	N	30	N	N	N	.051	1.88
PM286	N	N	N	15	N	N	5	N	N	N	.024	4.12
PT100A	N	N	N	<10	N	10	65	.1	N	N	.520	4.60
PT100B	N	10	200	20	N	N	180	.2	N	N	.039	2.00
PT101A	N	<10	700	10	N	10	620	2.1	3	N	.430	8.52
PT102	N	N	200	N	N	10	130	.2	3	N	.090	11.20
PT103A	N	N	300	<10	N	N	280	2.6	3	N	.510	8.44
PT103B	N	N	300	20	N	<10	210	.6	N	N	.120	2.14
PT105A	N	N	300	10	N	30	220	.3	3	N	.660	10.60
PT105C	N	N	<200	15	N	N	100	N	1	N	.420	5.62
PT107	N	N	<200	15	N	N	100	.6	N	N	.015	1.16
PT108	N	N	300	10	N	N	210	.5	2	N	.100	6.42
PT109	N	N	<200	10	N	N	120	.4	1	N	.430	6.62
PT110	N	N	200	10	N	N	150	N	2	N	1.320	4.88

CHEMICAL DATA FOR 151 VEIN SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	UTM-N	UTM-E	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-PI
PT111	815,131	454,341	10.0	.30	.15	.200	5,000	10.0	N	N	15	70	N	10
PT112	815,237	454,297	7.0	1.00	.05	.150	700	15.0	N	N	10	N	N	N
PT114	815,159	454,380	7.0	.10	.05	.030	>5,000	20.0	N	N	15	700	N	N
PT115	815,186	454,137	20.0	.05	<.05	.100	2,000	1.5	N	N	N	20	N	N
PT116	815,156	454,105	10.0	.10	<.05	.150	1,500	N	N	N	<10	150	N	N
PT117	815,137	454,092	15.0	.07	<.05	.070	50	N	N	N	<10	<20	N	N
PT118	815,091	454,070	15.0	.03	<.05	.050	100	3.0	N	N	N	<20	N	N
PT119	815,078	454,064	5.0	.03	<.05	.070	100	2.0	N	N	15	<20	N	N
PT120B	815,061	454,055	5.0	1.00	<.05	.100	1,000	2.0	N	N	15	<20	N	N
PT121	815,041	454,045	5.0	.03	<.05	.100	70	1.0	N	N	15	30	N	N
PT122	815,041	454,045	5.0	.15	<.05	.300	70	N	N	N	10	150	N	N
PT123	815,036	454,058	10.0	<.02	<.05	.070	70	N	N	N	N	<20	N	N
PT124	815,259	454,131	5.0	.50	<.05	.500	2,000	N	N	N	15	<20	N	N
PT125	815,350	454,153	5.0	.70	.05	.300	1,000	N	N	N	15	20	N	N
PT126	815,149	453,751	10.0	.20	<.05	.150	50	20.0	N	N	15	<20	N	<10
PT127	815,107	453,752	3.0	.07	<.05	.300	300	5.0	N	N	10	N	N	N
PT130F	814,923	453,730	5.0	.10	<.05	.150	20	5.0	N	N	10	20	N	N
PT131	814,899	453,728	7.0	.10	<.05	.300	30	N	N	N	15	30	N	N
PT132	814,931	453,724	7.0	.15	<.05	.200	100	N	N	N	15	30	N	N
PT136	814,861	453,957	3.0	.30	.05	.150	300	N	N	N	<10	<20	N	N
PT137	814,908	453,971	10.0	.50	<.05	.200	1,000	N	N	N	10	<20	N	N
PT139	815,098	453,595	7.0	.07	<.05	.150	70	N	N	N	10	<20	N	N
PT140	814,810	453,938	15.0	.02	N	.030	200	1.5	N	N	N	N	N	N
PT141	814,772	453,924	10.0	.05	<.05	.100	100	N	N	N	<10	N	N	N
PT142	814,717	453,897	3.0	.07	<.05	.100	200	N	N	N	10	<20	N	N
PT143	814,719	453,882	5.0	.05	<.05	.100	2,000	10.0	N	N	10	150	N	N
PT144	814,694	453,814	7.0	.07	<.05	.150	200	N	N	N	<10	<20	N	N
PT145	814,804	453,728	5.0	.15	<.05	.070	70	N	N	N	15	N	N	<10
PT149	815,652	453,953	2.0	<.02	<.05	.200	1,000	N	N	N	N	N	N	N
PT152	814,972	454,311	7.0	.03	<.05	.300	5,000	3.0	N	N	N	<20	N	N
PT153	814,972	454,305	10.0	.15	<.05	.150	1,500	N	N	N	<10	70	N	N
PT157	815,021	454,274	7.0	.03	<.05	.070	1,000	1.5	N	N	10	100	N	N
PT177	815,024	454,292	5.0	.03	<.05	.300	1,000	N	N	N	10	N	N	N
PT190	815,000	454,296	7.0	.07	<.05	.150	>5,000	7.0	N	N	15	200	N	N
PT191	815,000	454,299	7.0	.07	<.05	.150	500	.7	N	N	15	N	N	N
PT208	815,024	454,297	7.0	.15	<.05	.300	1,000	1.5	N	N	20	50	N	N
PT210	815,024	454,300	10.0	.10	<.05	.150	700	1.5	N	N	20	70	N	N
PT222	815,028	454,325	10.0	.10	<.05	.100	500	<.5	N	N	20	20	N	N
PT228	815,030	454,339	5.0	.15	<.05	.200	1,500	3.0	N	N	20	150	N	N
PT246	814,983	454,299	10.0	.03	<.05	.300	1,500	3.0	N	N	N	<20	N	N
PT250	814,983	454,304	15.0	.10	<.05	.200	300	N	N	N	N	30	N	N
PT253	814,983	454,311	5.0	.03	<.05	.070	700	N	N	N	15	N	N	N
PT257	815,155	453,719	3.0	.10	<.05	.200	3,000	N	N	N	20	500	N	N
PT259	814,917	453,732	5.0	.15	<.05	.150	70	N	N	N	20	100	N	N
PT278	814,913	453,745	3.0	.15	<.05	.300	20	N	N	N	50	70	N	N

CHEMICAL DATA FOR 151 VEIN SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V
PT111	N	50	700	1,000	N	N	N	100	700	N	30	N	N	300
PT112	N	20	2,000	1,000	N	N	N	150	30	N	30	N	N	200
PT114	N	2,000	1,000	5,000	N	N	N	500	50	N	>100	N	<100	500
PT115	N	100	500	200	N	N	N	30	30	N	30	N	N	70
PT116	N	15	700	300	N	N	N	20	15	N	50	N	N	200
PT117	N	N	200	300	N	20	N	15	70	N	30	N	N	150
PT118	>500	70	70	3,000	N	N	N	50	30	N	10	N	N	50
PT119	N	5	50	300	N	5	N	<5	<10	N	15	N	N	150
PT120P	>500	70	300	5,000	N	7	N	50	20	N	20	N	N	150
PT121	N	20	300	200	N	15	N	30	30	N	15	N	N	150
PT122	N	N	150	200	N	N	N	<5	15	N	30	N	N	300
PT123	N	N	150	300	N	<5	N	<5	20	N	7	N	N	50
PT124	N	100	1,000	500	N	N	N	200	15	N	30	N	N	200
PT125	N	50	1,000	500	N	N	N	100	10	N	30	N	N	200
PT126	N	<5	700	3,000	N	10	N	20	50	N	30	N	N	300
PT127	N	10	200	700	N	N	N	30	100	N	30	N	N	200
PT130P	N	N	300	200	N	N	N	<5	150	N	20	N	N	500
PT131	N	N	500	500	N	N	N	15	30	N	30	N	N	300
PT132	N	5	200	500	N	N	N	20	20	N	30	N	N	200
PT136	N	15	700	500	N	10	N	30	15	N	20	N	N	200
PT137	N	50	100	700	N	N	N	50	<10	N	20	N	N	150
PT139	N	N	300	150	N	15	N	10	15	N	20	N	N	300
PT140	N	10	150	700	N	N	N	20	50	N	30	N	N	300
PT141	N	<5	500	500	N	N	N	30	30	N	30	N	N	300
PT142	N	10	700	200	N	N	N	50	20	N	30	N	N	300
PT143	N	200	300	700	N	7	N	70	50	N	30	N	N	150
PT144	N	10	300	500	N	N	N	30	30	N	50	N	N	200
PT145	N	N	150	700	N	30	N	7	15	N	30	N	N	100
PT149	N	100	200	30	N	N	N	50	N	N	30	N	N	150
PT152	N	200	1,000	2,000	N	N	N	200	50	N	70	N	N	200
PT153	N	70	1,500	2,000	N	N	N	70	20	N	70	N	N	300
PT157	N	20	1,500	700	N	N	N	100	50	N	50	N	N	300
PT177	N	50	500	200	N	N	N	150	50	N	70	N	N	200
PT190	N	300	1,000	1,000	N	N	N	300	300	N	70	N	N	300
PT191	N	50	700	700	N	N	N	100	50	N	70	N	N	500
PT208	N	150	1,000	700	N	N	N	100	70	N	70	N	N	300
PT210	N	70	1,000	700	N	N	N	50	70	N	70	N	N	200
PT222	N	20	1,000	700	N	N	N	50	70	N	70	N	N	500
PT228	N	15	200	300	N	N	N	15	700	N	70	N	N	300
PT246	N	150	3,000	1,500	N	N	N	150	70	N	70	N	N	500
PT250	N	70	2,000	3,000	N	N	N	150	50	N	100	N	N	1,000
PT253	N	70	700	500	N	N	N	70	10	N	50	N	N	150
PT257	N	70	300	200	N	N	N	50	150	N	30	N	N	200
PT259	N	N	200	500	N	N	N	15	10	N	30	N	N	200
PT278	N	N	150	150	N	N	N	10	150	N	30	N	N	300

CHEMICAL DATA FOR 151 VEIN SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-AS-P	AA-ZN-P	AA-CD-P	AA-BI-P	AA-SB-P	AA-AU-T	AA-TE-T
PT111	N	20	700	20	N	N	460	.8	6	N	3.000	6.22
PT112	N	N	<200	10	N	N	110	N	N	N	.150	3.52
PT114	N	20	500	10	N	10	350	21.0	1	N	.450	4.90
PT115	N	N	<200	10	N	20	15	N	2	N	.240	6.25
PT116	N	10	<200	10	N	20	100	.4	2	N	.180	6.90
PT117	N	N	<200	N	N	10	85	N	2	N	3.900	4.95
PT118	N	N	>10,000	10	N	10	>2,000	>100.0	N	N	3.600	4.23
PT119	N	N	200	10	N	<10	50	.2	1	N	.440	7.92
PT120B	N	N	>10,000	10	N	N	>2,000	>100.0	N	N	1.180	6.26
PT121	N	N	500	15	N	20	140	.7	1	N	.230	3.36
PT122	N	N	N	30	N	30	40	.2	N	N	.340	5.17
PT123	N	N	N	N	N	10	20	N	N	N	.120	1.16
PT124	N	15	500	30	N	N	160	.3	N	N	.017	.68
PT125	N	N	200	20	N	N	130	N	N	N	.024	1.31
PT126	N	N	N	<10	N	40	85	N	6	N	.660	10.30
PT127	N	N	N	20	N	10	50	N	3	N	.500	6.94
PT130B	N	N	N	20	N	40	55	N	1	N	3.300	2.82
PT131	N	N	N	30	N	20	10	N	1	N	.070	3.25
PT132	N	N	<200	20	N	30	100	N	1	N	.060	1.75
PT136	N	N	200	15	N	10	120	.2	1	N	1.090	9.28
PT137	N	15	200	20	N	<10	190	N	N	N	.070	3.19
PT139	N	N	N	20	N	30	15	N	1	N	1.960	3.88
PT140	N	20	200	<10	N	130	120	.1	1	N	.250	2.87
PT141	N	N	N	15	N	10	35	N	N	N	.070	3.36
PT142	N	N	<200	20	N	40	90	.1	N	N	.100	.40
PT143	N	N	N	20	N	50	35	.5	N	N	.310	3.19
PT144	N	N	N	15	N	70	30	N	N	N	.250	4.76
PT145	N	N	N	N	N	40	45	N	2	N	.700	3.93
PT149	N	<10	N	20	N	N	10	N	N	N	.015	.02
PT152	N	N	200	15	N	10	220	.1	N	N	.150	3.62
PT153	N	N	200	10	N	10	210	.2	4	N	.130	9.12
PT167	N	N	<200	10	N	N	110	.1	N	N	.180	2.34
PT177	N	N	N	20	N	N	40	N	N	N	.007	.34
PT190	N	10	500	15	N	10	460	3.1	N	N	.510	3.61
PT191	N	N	500	10	N	<10	390	.9	N	N	.180	4.12
PT208	N	<10	500	20	N	N	350	.7	N	N	.410	6.94
PT210	N	N	300	15	N	N	270	.7	2	N	.470	5.50
PT222	N	N	700	10	N	10	700	1.7	1	N	.580	8.60
PT228	N	<10	700	20	N	30	820	1.8	2	N	.960	13.00
PT246	N	N	<200	20	N	N	170	.8	3	N	.180	5.64
PT250	N	N	700	15	N	20	650	1.9	4	N	.470	8.34
PT253	N	N	<200	<10	N	20	150	.1	1	N	.140	8.76
PT257	N	N	N	20	N	N	25	.1	N	N	.240	.66
PT259	N	N	N	20	N	N	40	N	1	N	.038	2.50
PT278	N	N	N	30	N	30	5	N	N	N	.720	1.74

CHEMICAL DATA FOR 151 VEIN SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	UTM-N	UTM-E	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-BI
PT280	814,911	453,749	5.0	.15	<.05	.300	50	N	N	N	30	50	N	N
PT290	815,898	454,183	3.0	1.50	.70	.300	>5,000	N	N	N	<10	300	N	N
PT291	815,875	454,203	3.0	.20	<.05	.200	150	10.0	300	10	30	20	N	N
PT307	815,068	454,004	10.0	.20	N	.300	1,500	.5	N	N	10	<20	N	N
PT309	814,992	454,026	10.0	.20	<.05	.300	100	<.5	N	N	20	70	N	N
PT311	815,015	454,023	5.0	.10	<.05	.200	70	N	N	N	15	20	N	N
PT313	814,919	454,041	7.0	.07	<.05	.200	300	N	N	N	N	70	N	N
PT314	814,943	454,039	7.0	.03	<.05	.200	50	30.0	N	N	<10	70	N	N
PT315	814,940	454,042	5.0	.05	N	.150	1,000	.7	N	N	<10	150	N	N
PT317	814,937	454,029	15.0	.10	<.05	.200	50	N	N	N	15	70	N	N
PT318	814,940	454,014	15.0	.10	N	.200	50	N	N	N	20	<20	N	N
PT320	814,948	453,991	15.0	.07	N	.200	150	5.0	N	N	N	20	N	N
PT321	814,947	453,980	10.0	<.02	N	.300	20	N	N	N	N	N	N	N
PT322	814,948	453,965	20.0	.03	N	.070	500	N	N	N	N	<20	<1	N
PT324	814,946	453,945	20.0	.07	<.05	.070	>5,000	3.0	N	N	N	200	<1	N
PT326	814,938	453,895	15.0	.05	N	.200	150	N	N	N	N	N	<1	N

CHEMICAL DATA FOR 151 VEIN SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V
PT280	N	N	150	300	N	N	N	5	70	N	30	N	N	300
PT290	N	70	300	700	N	N	N	150	30	N	30	N	150	200
PT291	N	N	100	700	N	100	N	10	200	N	15	N	N	150
PT307	N	100	500	1,000	N	10	N	100	30	N	50	N	N	200
PT309	N	5	200	500	N	10	N	15	10	N	50	N	N	300
PT311	N	N	700	150	N	15	N	20	<10	N	30	N	N	200
PT313	N	N	500	150	N	5	N	5	50	N	30	N	N	300
PT314	N	10	300	150	N	N	N	20	15	N	20	N	N	300
PT315	N	70	300	300	N	5	N	20	30	N	50	N	N	300
PT317	N	N	500	300	N	5	N	10	15	N	50	N	N	200
PT318	N	N	150	300	N	20	N	7	10	N	50	N	N	200
PT320	N	7	100	200	N	N	N	30	<10	N	70	N	N	200
PT321	N	N	100	700	N	N	N	30	15	N	30	N	N	300
PT322	N	20	300	300	N	N	N	50	<10	N	50	N	N	150
PT324	N	300	50	300	N	N	N	50	70	N	50	N	N	150
PT326	N	20	150	500	N	N	N	30	<10	N	50	N	N	200

CHEMICAL DATA FOR 151 VEIN SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-AS-P	AA-ZN-P	AA-CD-P	AA-BI-P	AA-SB-P	AA-AU-T	AA-TE-T
PT286	N	15	N	20	N	80	N	N	1	2	.910	3.75
PT290	N	20	<200	10	N	N	200	5.4	N	N	.110	.13
PT291	N	15	N	20	N	300	70	.2	4	2	13.000	13.90
PT307	N	N	N	20	N	30	95	N	1	N	.110	5.98
PT309	N	N	500	20	N	30	310	.1	2	N	.210	5.32
PT311	N	N	N	10	N	20	20	N	1	N	.080	3.37
PT313	N	N	N	<10	N	30	10	N	2	N	.130	8.78
PT314	N	N	N	<10	N	20	10	N	1	N	.060	9.62
PT315	N	<10	<200	15	N	20	90	.5	N	N	.050	4.64
PT317	N	N	<200	20	N	80	25	N	2	N	.180	2.70
PT318	N	N	<200	20	N	50	100	N	2	N	.160	5.48
PT320	N	10	300	10	N	50	320	N	N	N	.210	1.53
PT321	N	N	N	20	N	10	25	N	2	N	.080	5.82
PT322	N	15	500	<10	N	10	400	.2	N	N	.030	.34
PT324	N	30	700	<10	N	30	630	3.5	N	N	3.500	.62
PT326	N	20	300	20	N	N	310	.1	N	N	.060	.03

TABLE 3.-- CHEMICAL DATA FOR 163 CHANNEL SAMPLES FROM THE ROIS MALK AREA, PALAU

[N, not detected; <, detected but below the limit of determination shown; >, determined to be greater than the value shown.]

Sample	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-BI	S-CD
JR100	7.0	.07	<.05	.30	300	2.0	N	N	10	N	N	N	N
JR102	5.0	.15	N	.50	200	N	N	N	N	N	N	N	N
PA127	5.0	.10	N	.30	3,000	1.0	N	N	N	100	N	N	N
PA128	5.0	.07	N	.50	300	N	N	N	N	N	N	N	N
PA129	3.0	.07	N	.50	300	N	N	N	N	N	N	N	N
PA130	5.0	.07	N	.50	150	N	N	N	N	N	N	N	N
PA131	5.0	.10	N	.30	150	N	N	N	N	N	N	N	N
PA132	5.0	.07	N	.30	100	N	N	N	N	N	N	N	N
PA133	5.0	.07	N	.30	100	N	N	N	N	N	N	N	N
PA134	7.0	.10	N	.50	200	N	N	N	N	N	N	N	N
PA135	10.0	.15	N	.30	1,500	.5	N	N	<10	150	N	N	N
PA136	10.0	.15	N	.50	500	N	N	N	<10	20	N	N	N
PA137	3.0	.07	N	.30	200	N	N	N	N	N	N	N	N
PM103	3.0	.10	<.05	.50	20	N	N	N	10	N	N	N	N
PM104	3.0	.15	<.05	.30	30	N	N	N	N	N	N	N	N
PM105	2.0	.07	<.05	.50	30	N	N	N	N	N	N	N	N
PM106	1.5	.05	N	.30	30	N	N	N	N	N	N	N	N
PM107	3.0	.07	N	.50	70	N	N	N	10	N	N	N	N
PM108	3.0	.07	<.05	.50	50	N	N	N	<10	N	N	N	N
PM109	3.0	.10	<.05	.50	150	N	N	N	N	N	N	N	N
PM110	3.0	.07	<.05	.50	70	N	N	N	10	N	N	N	N
PM111	3.0	.07	<.05	.50	70	N	N	N	<10	N	N	N	N
PM137	3.0	.07	<.05	.30	200	N	N	N	<10	N	N	N	N
PM138	3.0	.10	<.05	.30	5,000	N	N	N	10	70	N	N	N
PM139	3.0	.07	<.05	.30	300	N	N	N	<10	N	N	N	N
PM140	3.0	.10	N	.50	200	N	N	N	10	N	N	N	N
PM141	3.0	.10	<.05	.30	200	N	N	N	10	50	N	N	N
PM145	5.0	.30	<.05	.50	1,000	N	N	N	N	N	N	N	N
PM146	5.0	.20	<.05	.30	1,000	N	N	N	10	<20	N	N	N
PM147	3.0	.20	<.05	.30	1,500	N	N	N	<10	20	N	N	N
PM148	3.0	.20	<.05	.30	3,000	N	N	N	N	100	N	N	N
PM149	5.0	.30	<.05	.50	700	N	N	N	N	20	N	N	N
PM150	5.0	.50	.07	.50	1,500	N	N	N	N	50	N	N	N
PM151	5.0	.30	<.05	.30	1,000	N	N	N	N	N	N	N	N
PM154	3.0	2.00	2.00	.30	700	N	N	N	10	N	N	N	N
PM155	3.0	2.00	3.00	.30	1,000	N	N	N	<10	N	N	N	N
PM156	5.0	1.50	5.00	.30	1,000	N	N	N	N	N	N	N	N
PM157	3.0	1.50	2.00	.30	1,000	N	N	N	N	N	N	N	N
PM158	3.0	2.00	3.00	.30	1,000	N	N	N	N	N	N	N	N
PM208	7.0	.20	<.05	.50	3,000	N	N	N	N	<20	N	N	N
PM209	7.0	.15	<.05	.50	1,000	N	N	N	N	N	N	N	N
PM210	7.0	.10	<.05	.50	700	N	N	N	N	N	N	N	N
PM211	7.0	.07	<.05	.50	1,000	N	N	N	N	N	N	N	N
PM212	5.0	.10	<.05	.30	1,500	N	N	N	N	<20	N	N	N
PM213	7.0	.15	<.05	.30	3,000	N	N	N	N	100	N	N	N

CHEMICAL DATA FOR 163 CHANNEL SAMPLES FROM THE POIS WALK AREA, PALAU--Continued

Sample	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V
JR100	7	700	700	N	N	N	100	150	N	50	N	N	200
JR102	N	200	100	N	N	N	30	30	N	30	N	N	200
PA127	70	200	500	N	N	N	100	50	N	50	N	N	300
PA128	<5	300	70	N	N	N	50	<10	N	50	N	N	300
PA129	<5	300	100	N	N	N	50	N	N	30	N	N	500
PA130	<5	300	150	N	N	N	50	<10	N	30	N	N	300
PA131	<5	300	100	N	N	N	30	<10	N	30	N	N	200
PA132	N	200	70	N	N	N	30	<10	N	30	N	N	200
PA133	N	200	70	N	N	N	50	<10	N	30	N	N	150
PA134	10	300	100	N	N	N	50	10	N	50	N	N	200
PA135	100	300	700	N	N	N	50	150	N	70	N	N	300
PA136	20	700	300	N	N	N	50	50	N	50	N	N	300
PA137	N	300	70	N	N	N	50	10	N	30	N	N	200
PM103	N	150	70	N	N	N	30	<10	N	30	N	N	200
PM104	N	150	100	N	N	N	30	N	N	30	N	N	300
PM105	N	100	30	N	N	N	50	N	N	30	N	N	300
PM106	N	70	30	N	N	N	50	N	N	30	N	N	300
PM107	N	150	50	N	N	N	50	N	N	30	N	N	300
PM108	<5	150	70	N	N	N	50	N	N	30	N	N	300
PM109	5	100	100	N	N	N	100	N	N	30	N	N	300
PM110	<5	150	150	N	N	N	100	N	N	30	N	N	300
PM111	5	150	150	N	N	N	150	N	N	50	N	N	300
PM137	20	200	150	N	N	N	100	<10	N	50	N	N	200
PM138	200	200	200	N	N	N	100	N	N	50	N	N	300
PM139	7	150	70	N	N	N	70	<10	N	50	N	N	300
PM140	20	200	70	N	N	N	100	<10	N	50	N	N	300
PM141	10	200	200	N	N	N	100	<10	N	50	N	N	300
PM145	70	700	100	N	N	N	150	30	N	50	N	N	200
PM146	70	700	200	N	N	N	100	70	N	30	N	N	300
PM147	20	700	150	N	N	N	100	20	N	50	N	N	300
PM148	70	300	150	N	N	N	100	15	N	50	N	N	200
PM149	50	700	150	N	N	N	100	N	N	50	N	N	200
PM150	100	700	150	N	N	N	150	50	N	70	N	N	300
PM151	100	500	150	N	N	N	150	N	N	70	N	N	200
PM154	70	300	30	N	N	N	150	N	N	30	N	300	300
PM155	50	200	150	N	N	N	150	N	N	30	N	300	200
PM156	50	500	100	N	N	N	100	N	N	50	N	300	200
PM157	50	200	100	N	N	N	100	N	N	30	N	300	200
PM158	50	300	70	N	N	N	150	<10	N	30	N	300	200
PM208	100	2,000	150	N	N	N	200	30	N	70	N	N	200
PM209	70	1,000	150	N	N	N	200	<10	N	70	N	N	300
PM210	70	1,000	150	N	N	N	200	10	N	70	N	N	300
PM211	70	1,500	200	N	N	N	300	<10	N	70	N	N	300
PM212	70	700	150	N	N	N	150	N	N	70	N	N	300
PM213	150	1,000	200	N	N	N	300	N	N	100	N	N	300

CHEMICAL DATA FOR 163 CHANNEL SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-AS-P	AA-ZN-P	AA-CD-P	AA-BI-P	AA-SB-P	AA-AU-T	AA-TE-T
JR100	N	N	<200	30	N	N	70	.1	N	N	.009	.10
JR102	N	<10	<200	30	N	N	20	N	N	N	.015	.12
PA127	N	N	<200	30	N	N	130	N	N	N	.002	.98
PA128	N	N	N	30	N	N	30	N	N	N	.001	.02
PA129	N	N	N	30	N	N	30	N	N	N	.002	<.02
PA130	N	N	N	30	N	N	20	N	N	N	.005	<.02
PA131	N	N	N	30	N	N	15	N	N	N	.003	<.02
PA132	N	<10	N	30	N	N	10	N	N	N	.002	<.02
PA133	N	N	N	30	N	N	15	N	N	N	.002	<.02
PA134	N	N	N	30	N	N	20	N	N	N	.005	<.02
PA135	N	15	<200	20	N	N	30	.1	N	N	.610	.90
PA136	N	<10	<200	30	N	N	85	N	N	N	.160	.41
PA137	N	N	N	30	N	N	50	N	N	N	.006	.06
PM103	N	<10	N	50	N	N	N	N	N	N	.001	3.28
PM104	N	15	N	30	N	N	N	N	N	N	.001	2.88
PM105	N	<10	N	50	N	N	N	N	N	N	<.001	1.22
PM106	N	<10	N	50	N	N	N	N	N	N	.002	1.84
PM107	N	<10	N	50	N	N	5	N	N	N	.003	.79
PM108	N	<10	N	50	N	N	10	N	N	N	.001	.87
PM109	N	<10	N	50	N	N	5	N	N	N	.001	1.00
PM110	N	N	N	50	N	N	10	N	N	N	<.001	.59
PM111	N	<10	N	70	N	N	5	N	N	N	<.001	.63
PM137	N	<10	200	30	N	N	130	N	N	N	.004	.23
PM138	N	15	<200	30	N	N	150	3.6	N	N	.016	1.54
PM139	N	<10	200	50	N	N	85	N	N	N	.005	.50
PM140	N	N	<200	50	N	N	60	N	N	N	.004	.35
PM141	N	<10	<200	50	N	N	80	N	N	N	.021	1.68
PM145	N	15	200	30	N	N	85	.4	N	N	.004	.18
PM146	N	30	300	30	N	N	135	1.2	N	N	.037	2.03
PM147	N	10	200	20	N	N	125	.3	N	N	.004	1.00
PM148	N	<10	<200	30	N	N	75	.4	N	N	<.001	.95
PM149	N	<10	<200	50	N	N	50	N	N	N	<.001	.06
PM150	N	10	N	30	N	N	40	N	N	N	.001	.13
PM151	N	15	<200	30	N	N	50	N	N	N	<.001	.02
PM154	N	20	N	30	N	N	65	N	N	N	<.001	.02
PM155	N	20	N	30	N	N	50	N	N	N	<.001	.02
PM156	N	20	N	30	N	N	35	N	N	N	<.001	.02
PM157	N	15	N	20	N	N	60	N	N	N	<.001	.02
PM158	N	15	N	30	N	N	50	N	N	N	<.001	.02
PM208	N	N	<200	20	N	N	90	.3	N	N	.002	.23
PM209	N	N	<200	30	N	N	90	N	N	N	.002	.14
PM210	N	N	<200	30	N	N	65	N	N	N	.001	.10
PM211	N	<10	<200	30	N	N	100	N	N	N	.001	.03
PM212	N	<10	<200	20	N	N	100	N	N	N	<.001	.11
PM213	N	<10	<200	30	N	N	160	N	N	N	.001	.08

CHEMICAL DATA FOR 163 CHANNEL SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-BI	S-CD
PM214	7.0	.10	<.05	.30	700	N	N	N	N	<20	N	N	N
PM215	3.0	.07	<.05	.30	1,000	N	N	N	N	100	N	N	N
PM232	3.0	.10	<.05	.30	50	N	N	N	10	150	N	N	N
PM233	5.0	.10	<.05	.30	150	N	N	N	15	<20	N	N	N
PM234	3.0	.10	<.05	.50	200	N	N	N	N	N	N	N	N
PM235	5.0	.20	<.05	.50	500	N	N	N	<10	N	N	N	N
PM236	3.0	.07	<.05	.30	1,000	<.5	N	N	N	N	N	N	N
PM237	5.0	.10	<.05	.50	500	N	N	N	N	N	N	N	N
PM238	3.0	.15	.05	.30	500	N	N	N	N	N	N	N	N
PM239	3.0	.10	<.05	.30	300	N	N	N	15	50	N	N	N
PM240	5.0	.15	<.05	.30	1,500	N	N	N	<10	<20	N	N	N
PM241	3.0	.07	<.05	.30	1,000	N	N	N	N	N	N	N	N
PM248	5.0	.05	N	.30	20	N	N	N	<10	N	N	N	N
PM249	3.0	.10	N	.50	30	N	N	N	10	N	N	N	N
PM250	3.0	.10	N	.30	20	N	N	N	15	N	N	N	N
PM251	3.0	.10	N	.50	30	N	N	N	10	N	N	N	N
PM252	3.0	.10	N	.50	30	N	N	N	10	N	N	N	N
PM253	2.0	.07	<.05	.30	20	N	N	N	10	N	N	N	N
PM254	3.0	.10	N	.30	30	N	N	N	10	N	N	N	N
PM255	3.0	.03	N	.50	100	N	N	N	N	N	N	N	N
PM256	5.0	.10	N	.50	700	N	N	N	N	<20	N	N	N
PM257	5.0	.07	N	.50	150	N	N	N	N	N	N	N	N
PM258	5.0	.07	N	.50	1,000	N	N	N	N	N	N	N	N
PM259	5.0	.07	N	.50	700	N	N	N	N	N	N	N	N
PM260	5.0	.10	N	.50	150	N	N	N	N	N	N	N	N
PM265	5.0	.20	<.05	.30	30	N	N	N	15	200	N	N	N
PM266	3.0	.15	<.05	.30	30	N	N	N	15	100	N	N	N
PM267	15.0	.02	<.05	.05	50	N	N	N	N	<20	N	N	N
PM271	5.0	.03	N	.30	200	N	N	N	N	N	N	N	N
PM272	5.0	.10	N	.50	500	N	N	N	N	N	N	N	N
PM273	7.0	.20	N	.30	150	N	N	N	<10	N	N	N	N
PM274	5.0	.15	N	.30	150	N	N	N	10	20	N	N	N
PM275	5.0	.03	N	.50	200	N	N	N	N	N	N	N	N
PM276	7.0	.05	N	.30	200	N	N	N	<10	N	N	N	N
PT148	2.0	.10	.15	.15	300	N	N	N	N	N	N	N	N
PT154	7.0	.07	<.05	.30	3,000	N	N	N	15	N	N	N	N
PT155	7.0	.07	N	.30	5,000	N	N	N	10	<20	N	N	N
PT157	5.0	.03	<.05	.30	1,500	N	N	N	<10	N	N	N	N
PT159	5.0	.02	N	.30	1,000	N	N	N	<10	N	N	N	N
PT160	5.0	.05	<.05	.30	1,500	N	N	N	N	<20	N	N	N
PT161	7.0	.07	<.05	.30	3,000	N	N	N	10	<20	N	N	N
PT162	5.0	.05	<.05	.30	1,000	N	N	N	10	N	N	N	N
PT163	5.0	.10	<.05	.30	1,500	N	N	N	10	N	N	N	N
PT165	3.0	.07	N	.30	700	N	N	N	10	N	N	N	N
PT166	3.0	.10	<.05	.30	300	N	N	N	10	<20	N	N	N

CHEMICAL DATA FOR 163 CHANNEL SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V
PM214	70	700	150	N	N	N	200	<10	N	70	N	N	300
PM215	70	300	150	N	N	N	150	10	N	50	N	N	300
PM232	N	700	150	N	N	N	20	<10	N	30	N	N	300
PM233	15	200	100	N	N	N	50	<10	N	30	N	N	300
PM234	15	300	200	N	N	N	100	N	N	30	N	N	300
PM235	20	300	200	N	N	N	100	10	N	50	N	N	300
PM236	70	500	200	N	N	N	150	10	N	30	N	N	200
PM237	50	300	150	N	N	N	150	<10	N	50	N	N	300
PM238	15	50	100	N	N	N	50	<10	N	30	N	N	300
PM239	20	150	300	N	N	N	30	N	N	30	N	N	200
PM240	70	200	300	N	N	N	70	<10	N	30	N	N	300
PM241	150	150	200	N	N	N	70	<10	N	30	N	N	300
PM248	<5	300	50	N	N	N	30	<10	N	30	N	N	300
PM249	5	500	70	N	N	N	50	N	N	30	N	N	300
PM250	<5	300	50	N	N	N	50	N	N	30	N	N	300
PM251	<5	300	50	N	N	N	70	<10	N	30	N	N	300
PM252	<5	300	50	N	N	N	70	N	N	30	N	N	300
PM253	N	500	30	N	N	N	70	N	N	30	N	N	300
PM254	N	500	100	N	N	N	100	N	N	30	N	N	300
PM255	5	300	70	N	N	N	100	<10	N	30	N	N	300
PM256	7	500	100	N	N	N	150	30	N	50	N	N	300
PM257	7	200	50	N	N	N	100	N	N	50	N	N	300
PM258	70	300	100	N	N	N	150	<10	N	50	N	N	300
PM259	70	200	150	N	N	N	150	10	N	50	N	N	300
PM260	10	300	100	N	N	N	150	N	N	50	N	N	300
PM265	N	150	150	N	N	N	10	N	N	30	N	N	300
PM266	N	100	50	N	N	N	7	N	N	30	N	N	300
PM267	N	2,000	300	N	N	N	20	N	N	20	N	N	200
PM271	N	700	200	N	N	N	150	N	N	50	N	N	300
PM272	15	2,000	200	N	N	N	150	10	N	50	N	N	300
PM273	N	1,500	200	N	N	N	150	N	N	50	N	N	300
PM274	N	200	150	N	N	N	30	N	N	30	N	N	300
PM275	N	100	100	N	N	N	20	N	N	30	N	N	300
PM276	<5	100	150	N	N	N	30	<10	N	50	N	N	300
PT148	70	300	30	<20	N	N	30	N	N	15	N	N	150
PT154	150	1,000	2,000	N	N	N	200	30	N	70	N	N	500
PT155	100	1,000	2,000	N	N	N	200	70	N	70	N	N	500
PT157	70	700	300	N	N	N	150	10	N	70	N	N	300
PT159	70	500	200	N	N	N	150	<10	N	50	N	N	200
PT160	70	700	500	N	N	N	150	20	N	70	N	N	300
PT161	200	1,000	700	N	N	N	150	70	N	70	N	N	300
PT162	70	700	500	N	N	N	100	50	N	70	N	N	300
PT163	70	500	500	N	N	N	100	20	N	70	N	N	300
PT165	70	500	200	N	N	N	100	30	N	70	N	N	300
PT166	10	700	200	N	N	N	100	30	N	70	N	N	500

CHEMICAL DATA FOR 163 CHANNEL SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-AS-P	AA-ZN-P	AA-CD-P	AA-BI-P	AA-SB-P	AA-AU-T	AA-TE-T
PM214	N	N	<200	30	N	N	75	N	N	N	.001	.17
PM215	N	N	N	30	N	N	80	N	N	N	<.001	.10
PM232	N	N	N	30	N	40	20	N	N	N	.060	6.26
PM233	N	<10	N	30	N	N	25	.1	N	10	.011	3.05
PM234	N	N	N	50	N	N	15	.1	N	N	.007	2.34
PM235	N	N	N	50	N	N	65	N	N	N	.014	3.84
PM236	N	N	N	30	N	N	70	.2	N	N	.007	2.78
PM237	N	15	N	30	N	N	20	N	N	N	.006	1.48
PM238	N	N	N	30	N	N	25	N	N	N	.006	1.56
PM239	N	<10	N	20	N	N	15	N	1	N	.160	5.88
PM240	N	15	<200	30	N	N	70	.9	N	N	.008	2.36
PM241	N	N	N	30	N	N	40	N	N	N	.005	.48
PM248	N	N	N	30	N	N	5	N	N	N	.012	.59
PM249	N	N	N	30	N	N	N	N	N	N	.012	.64
PM250	N	N	N	30	N	N	N	N	N	N	.005	.42
PM251	N	N	N	30	N	N	N	N	N	N	.007	.50
PM252	N	N	N	30	N	N	N	N	N	N	.010	.78
PM253	N	N	N	30	N	N	N	N	N	N	.014	.68
PM254	N	N	N	30	N	N	15	N	N	N	.009	.46
PM255	N	N	<200	30	N	N	40	N	N	N	.008	.14
PM256	N	<10	N	30	N	N	55	N	N	N	.007	.02
PM257	N	<10	N	30	N	N	55	N	N	N	.003	.06
PM258	N	N	N	30	N	N	65	N	N	N	.004	.05
PM259	N	<10	N	30	N	N	50	N	N	N	.002	.05
PM260	N	<10	<200	30	N	N	30	N	N	N	.002	.06
PM265	N	N	N	20	N	N	5	N	N	N	.017	4.40
PM266	N	<10	N	30	N	60	15	N	N	N	.028	4.15
PM267	N	N	N	10	N	N	65	N	N	N	.220	5.70
PM271	N	N	N	30	N	N	90	N	N	N	.014	.56
PM272	N	<10	<200	30	N	N	50	N	N	N	.002	.68
PM273	N	N	<200	30	N	N	130	N	N	N	.070	1.27
PM274	N	<10	N	50	N	N	25	N	N	N	.003	1.15
PM275	N	<10	N	50	N	N	20	N	N	N	.004	.12
PM276	N	10	<200	30	N	N	110	N	N	N	.001	.10
PT148	N	N	N	15	N	N	25	N	N	N	.002	.09
PT154	N	N	200	20	N	N	230	.1	N	N	.090	4.20
PT155	N	N	200	20	N	N	100	.8	N	N	.025	1.28
PT157	N	N	<200	30	N	N	200	.1	N	N	.003	.34
PT159	N	N	<200	20	N	N	110	N	N	N	.003	.06
PT150	N	N	200	30	N	N	190	.2	N	N	.050	2.60
PT161	N	N	<200	30	N	N	160	.4	N	N	.003	.54
PT162	N	<10	<200	30	N	N	145	.6	N	N	.008	.40
PT163	N	<10	<200	30	N	N	120	.2	N	N	.007	1.55
PT165	N	<10	300	30	N	N	150	N	N	N	.002	.18
PT166	N	<10	300	30	N	N	130	N	N	N	.006	.23

CHEMICAL DATA FOR 163 CHANNEL SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-BI	S-CD
PT158	5.0	.10	N	.30	300	N	N	N	15	N	N	N	N
PT171	3.0	.10	N	.30	150	N	N	N	10	N	N	N	N
PT172	3.0	.10	N	.30	70	N	N	N	<10	N	N	N	N
PT173	5.0	.05	N	.30	1,000	N	N	N	N	<20	N	N	N
PT174	5.0	.02	N	.30	700	N	N	N	N	N	N	N	N
PT175	5.0	<.02	N	.30	700	N	N	N	N	N	N	N	N
PT176	5.0	.05	N	.30	3,000	N	N	N	<10	<20	N	N	N
PT178	5.0	.05	<.05	.30	700	N	N	N	10	N	N	N	N
PT180	5.0	.05	<.05	.30	1,000	N	N	N	10	N	N	N	N
PT181	5.0	.05	<.05	.30	1,500	N	N	N	N	<20	N	N	N
PT185	7.0	.07	N	.30	500	N	N	N	N	N	N	N	N
PT186	5.0	.07	N	.30	700	N	N	N	N	N	N	N	N
PT189	3.0	.10	<.05	.30	700	N	N	N	15	<20	N	N	N
PT194	5.0	.10	<.05	.30	300	N	N	N	10	<20	N	N	N
PT196	7.0	.05	<.05	.30	700	N	N	N	N	<20	N	N	N
PT198	7.0	.05	N	.50	1,000	N	N	N	N	N	N	N	N
PT199	7.0	.05	N	.30	1,000	N	N	N	N	N	N	N	N
PT200	7.0	.07	N	.30	500	N	N	N	N	N	N	N	N
PT202	7.0	.05	N	.30	1,000	N	N	N	10	N	N	N	N
PT203	7.0	.10	<.05	.50	150	N	N	N	20	<20	N	N	N
PT205	3.0	.10	<.05	.50	100	N	N	N	20	N	N	N	N
PT207	5.0	.15	N	.50	500	N	N	N	30	20	N	N	N
PT209	5.0	.15	<.05	.50	2,000	N	N	N	50	20	N	N	N
PT211	10.0	.15	<.05	.30	500	N	N	N	20	70	N	N	N
PT213	7.0	.07	<.05	.30	3,000	N	N	N	N	30	N	N	N
PT214	7.0	.07	<.05	.50	500	N	N	N	N	N	N	N	N
PT217	7.0	.10	<.05	.50	700	N	N	N	15	N	N	N	N
PT219	5.0	.07	N	.50	500	N	N	N	N	N	N	N	N
PT220	5.0	.05	N	.50	500	N	N	N	N	N	N	N	N
PT221	5.0	.10	N	.70	500	N	N	N	10	N	N	N	N
PT223	7.0	.10	N	.50	300	N	N	N	10	N	N	N	N
PT225	5.0	.07	<.05	.30	300	N	N	N	20	N	N	N	N
PT227	3.0	.07	N	.30	300	N	N	N	<10	N	N	N	N
PT230	5.0	.15	<.05	.50	300	<.5	N	N	30	70	N	N	N
PT231	7.0	.07	N	.30	700	N	N	N	<10	N	N	N	N
PT233	5.0	.03	<.05	.50	1,000	N	N	N	<10	N	N	N	N
PT235	5.0	.03	<.05	.50	2,000	N	N	N	N	N	N	N	N
PT236	5.0	.02	N	.50	700	<.5	N	N	N	N	N	N	N
PT238	5.0	.07	<.05	.50	1,000	N	N	N	N	N	N	N	N
PT239	5.0	.10	N	.50	700	N	N	N	10	N	N	N	N
PT241	5.0	.07	<.05	.30	2,000	N	N	N	<10	N	N	N	N
PT244	7.0	.07	<.05	.50	3,000	N	N	N	<10	N	N	N	N
PT245	5.0	.05	<.05	.30	1,500	.5	N	N	10	N	N	N	N
PT247	3.0	.10	<.05	.30	3,000	1.0	N	N	20	20	N	N	N
PT249	7.0	.07	<.05	.30	2,000	1.0	N	N	10	<20	N	N	N

CHEMICAL DATA FOR 163 CHANNEL SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V
PT168	<5	700	300	N	N	N	30	20	N	50	N	N	300
PT171	N	150	100	N	N	N	30	10	N	30	N	N	200
PT172	N	150	70	N	N	N	30	<10	N	30	N	N	200
PT173	100	700	150	N	N	N	150	<10	N	70	N	N	300
PT174	70	1,000	150	N	N	N	200	15	N	70	N	N	300
PT175	70	700	100	N	N	N	150	10	N	70	N	N	300
PT176	200	1,000	300	N	N	N	200	50	N	70	N	N	200
PT178	70	700	150	N	N	N	100	10	N	70	N	N	200
PT180	70	700	300	N	N	N	150	30	N	70	N	N	300
PT181	70	700	300	N	N	N	200	10	N	70	N	N	300
PT185	15	1,000	200	N	N	N	150	15	N	70	N	N	300
PT186	15	700	200	N	N	N	100	10	N	70	N	N	300
PT189	15	500	300	N	N	N	100	20	N	50	N	N	300
PT194	10	700	700	N	N	N	100	30	N	70	N	N	300
PT196	10	500	200	N	N	N	150	30	N	70	N	N	300
PT198	70	1,500	150	N	N	N	150	<10	N	70	N	N	300
PT199	70	700	200	N	N	N	200	<10	N	70	N	N	200
PT200	15	500	150	N	N	N	100	<10	N	70	N	N	300
PT202	70	700	150	N	N	N	150	10	N	70	N	N	300
PT203	N	700	200	N	N	N	150	10	N	70	N	N	300
PT205	N	200	150	N	N	N	100	<10	N	50	N	N	300
PT207	20	150	200	N	N	N	150	<10	N	70	N	N	300
PT209	70	700	700	N	N	N	200	300	N	70	N	N	500
PT211	50	700	500	N	N	N	100	20	N	70	N	N	700
PT213	300	1,000	500	N	N	N	150	70	N	70	N	N	300
PT214	20	700	150	N	N	N	150	10	N	70	N	N	300
PT217	70	700	200	N	N	N	150	<10	N	70	N	N	300
PT219	10	700	300	N	N	N	100	15	N	50	N	N	300
PT220	N	500	150	N	N	N	70	20	N	50	N	N	200
PT221	7	500	150	N	N	N	100	30	N	70	N	N	300
PT223	N	500	150	N	N	N	100	15	N	70	N	N	300
PT225	N	500	200	N	N	N	150	15	N	50	N	N	300
PT227	7	150	150	N	N	N	70	50	N	30	N	N	300
PT230	5	700	300	N	N	N	100	100	N	50	N	N	500
PT231	15	1,000	200	N	N	N	150	<10	N	70	N	N	300
PT233	15	700	300	N	N	N	150	<10	N	70	N	N	300
PT235	70	1,000	700	N	N	N	150	10	N	70	N	N	300
PT236	70	2,000	500	N	N	N	200	15	N	70	N	N	300
PT238	70	1,000	200	N	N	N	200	10	N	70	N	N	300
PT239	50	500	150	N	N	N	150	<10	N	70	N	N	300
PT241	70	500	300	N	N	N	150	10	N	70	N	N	300
PT244	150	700	300	N	N	N	200	<10	N	100	N	N	300
PT245	70	700	300	N	N	N	150	30	N	70	N	N	300
PT247	100	700	700	N	N	N	200	70	N	70	N	N	300
PT249	150	1,500	1,500	N	N	N	200	150	N	70	N	N	700

CHEMICAL DATA FOR 163 CHANNEL SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-AS-P	AA-ZN-P	AA-CD-P	AA-BI-P	AA-SB-P	AA-AU-T	AA-TE-T
PT168	N	<10	<200	30	N	N	80	N	N	N	.015	1.31
PT171	N	<10	N	30	N	N	25	N	N	N	.001	.12
PT172	N	<10	N	50	N	N	15	N	N	N	.005	.08
PT173	N	<10	<200	30	N	N	110	.1	N	N	.002	.02
PT174	N	N	<200	30	N	N	170	N	N	N	<.001	.02
PT175	N	<10	<200	20	N	N	120	N	N	N	.001	<.02
PT176	N	N	<200	30	N	N	60	N	N	N	<.001	<.02
PT178	N	N	N	20	N	N	85	N	N	N	.002	.22
PT180	N	<10	300	30	N	N	240	.8	N	N	.002	.48
PT181	N	<10	<200	20	N	N	200	.5	N	N	.010	1.43
PT185	N	N	<200	30	N	N	140	.1	N	N	.004	.10
PT186	N	N	<200	20	N	N	75	.1	N	N	.008	.06
PT189	N	<10	<200	30	N	N	90	N	N	N	.010	.55
PT194	N	N	300	20	N	N	300	.5	N	N	.070	1.75
PT196	N	N	500	20	N	N	230	.8	N	N	.003	.25
PT198	N	N	<200	30	N	N	110	.4	N	N	.003	.14
PT199	N	N	<200	30	N	N	110	.4	N	N	.003	.26
PT200	N	N	<200	20	N	N	120	.2	N	N	.004	.22
PT202	N	N	200	30	N	N	240	.5	N	N	.005	.34
PT203	N	<10	<200	30	N	N	40	N	N	N	.005	.14
PT205	N	<10	200	30	N	N	60	N	N	N	.006	.10
PT207	N	15	<200	30	N	N	150	.2	N	N	.005	.26
PT209	N	<10	300	30	N	N	270	.4	N	N	.036	1.75
PT211	N	<10	300	30	N	N	350	.4	N	N	.034	3.82
PT213	N	N	<200	50	N	N	50	1.1	N	N	.050	2.80
PT214	N	N	<200	30	N	N	90	.1	N	N	.012	.44
PT217	N	N	<200	30	N	N	120	.2	N	N	.010	.30
PT219	N	<10	<200	30	N	N	90	.1	N	N	.003	.52
PT220	N	N	N	30	N	N	450	.1	N	N	.005	.03
PT221	N	<10	300	30	N	N	150	.1	N	N	.003	.20
PT223	N	N	200	30	N	N	75	N	N	N	.003	.47
PT225	N	N	<200	30	N	N	60	.1	N	N	.008	.72
PT227	N	N	500	30	N	N	100	N	N	N	.009	.15
PT230	N	N	500	30	N	N	220	N	N	N	.034	1.62
PT231	N	N	200	20	N	N	100	N	N	N	.008	.44
PT233	N	N	<200	30	N	N	130	.3	N	N	.006	.14
PT235	N	N	200	30	N	N	380	1.3	N	N	.021	1.73
PT236	N	<10	700	30	N	N	80	.2	N	N	.012	.16
PT238	N	N	<200	30	N	N	100	.1	N	N	.005	.20
PT239	N	N	<200	30	N	N	25	.3	N	N	.006	.03
PT241	N	<10	<200	30	N	N	170	N	N	N	.006	.43
PT244	N	N	<200	30	N	N	40	N	N	N	.002	<.02
PT245	N	N	<200	30	N	N	170	.4	N	N	.006	.14
PT247	N	<10	<200	20	N	N	90	N	N	N	.011	.84
PT249	N	N	700	20	N	N	400	.4	N	N	.300	4.24

CHEMICAL DATA FOR 163 CHANNEL SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-BI	S-CD
PT251	7.0	.07	N	.50	1,500	N	N	N	<10	<20	N	N	N
PT252	5.0	.05	<.05	.30	1,000	N	N	N	N	N	N	N	N
PT255	10.0	.05	<.05	.50	700	N	N	N	N	N	N	N	N
PT256	5.0	.05	<.05	.50	1,000	N	N	N	N	<20	N	N	N
PT261	3.0	.07	<.05	.50	100	N	N	N	N	N	N	N	N
PT262	5.0	.05	<.05	.50	150	N	N	N	<10	N	N	N	N
PT263	5.0	.07	N	.50	150	N	N	N	<10	N	N	N	N
PT264	5.0	.07	<.05	.50	70	N	N	N	<10	N	N	N	N
PT265	5.0	.07	<.05	.70	100	N	N	N	10	N	N	N	N
PT266	3.0	.15	<.05	.30	500	.5	N	N	15	20	N	N	N
PT267	3.0	.15	<.05	.30	100	N	N	N	15	N	N	N	N
PT268	3.0	.15	N	.50	150	N	N	N	15	N	N	N	N
PT269	5.0	.15	<.05	.50	100	N	N	N	15	N	N	N	N
PT270	3.0	.15	<.05	.30	150	N	N	N	15	N	N	N	N
PT273	5.0	.15	<.05	.50	200	N	N	N	20	N	N	N	N
PT274	5.0	.15	<.05	.50	150	N	N	N	20	N	N	N	N
PT276	3.0	.15	<.05	.30	70	N	N	N	30	50	N	N	N
PT282	3.0	.10	<.05	.30	70	N	N	N	15	<20	N	N	N
PT283	7.0	.15	<.05	.30	500	N	N	N	20	N	N	N	N
PT284	5.0	.15	N	.30	150	N	N	N	15	N	N	N	N
PT285	3.0	.20	<.05	.50	200	N	N	N	10	N	N	N	N
PT286	3.0	.15	N	.30	150	N	N	N	10	N	N	N	N
PT287	7.0	.20	<.05	.50	700	N	N	N	15	50	N	N	N
PT288	3.0	.20	N	.50	150	N	N	N	<10	N	N	N	N
PT292	3.0	.30	<.05	.50	200	N	N	N	15	N	N	N	N
PT308	5.0	.15	<.05	.30	3,000	N	N	N	10	N	N	N	N
PT310	5.0	.20	N	.50	150	N	N	N	15	100	N	N	N
PT312	3.0	.15	<.05	.30	150	N	N	N	50	<20	N	N	N

CHEMICAL DATA FOR 163 CHANNEL SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PR	S-SB	S-SC	S-SN	S-SR	S-V
PT251	100	1,000	300	N	N	N	200	30	N	70	N	N	300
PT252	100	500	150	N	N	N	150	20	N	70	N	N	200
PT255	70	1,000	300	N	N	N	200	<10	N	70	N	N	300
PT256	70	700	100	N	N	N	200	<10	N	70	N	N	200
PT261	N	500	300	N	N	N	200	<10	N	50	N	N	200
PT262	5	500	300	N	N	N	200	10	N	70	N	N	300
PT263	10	700	200	N	N	N	200	<10	N	50	N	N	300
PT264	N	700	150	N	N	N	150	10	N	50	N	N	300
PT265	<5	700	300	N	N	N	200	10	N	70	N	N	300
PT266	50	500	500	N	N	N	150	15	N	50	N	N	300
PT267	5	300	200	N	N	N	100	10	N	50	N	N	300
PT268	7	200	200	N	N	N	70	15	N	30	N	N	300
PT269	5	200	200	N	N	N	70	15	N	30	N	N	500
PT270	<5	200	150	N	N	N	30	30	N	50	N	N	500
PT273	<5	300	150	N	N	N	30	30	N	50	N	N	300
PT274	<5	300	300	N	N	N	70	50	N	50	N	N	300
PT276	N	200	150	N	N	N	30	150	N	30	N	N	300
PT282	N	200	200	N	N	N	50	70	N	30	N	N	500
PT283	5	1,000	300	N	N	N	70	150	N	50	N	N	500
PT284	N	700	150	N	N	N	30	30	N	50	N	N	300
PT285	N	150	150	N	N	N	20	<10	N	30	N	N	300
PT286	<5	500	150	N	N	N	30	<10	N	30	N	N	150
PT287	15	500	200	N	N	N	30	30	N	30	N	N	300
PT288	<5	200	100	N	N	N	20	N	N	30	N	N	300
PT292	10	1,000	500	N	N	N	150	150	N	30	N	N	200
PT308	100	700	700	N	N	N	200	10	N	50	N	N	300
PT310	N	200	200	N	N	N	70	<10	N	50	N	N	300
PT312	N	500	150	N	N	N	100	15	N	30	N	N	300

CHEMICAL DATA FOR 163 CHANNEL SAMPLES FROM THE ROIS MALK AREA, PALAU--Continued

Sample	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-AS-P	AA-ZN-P	AA-CD-P	AA-BI-P	AA-SB-P	AA-AU-I	AA-TE-I
PT251	N	N	N	30	N	N	240	.1	N	N	.005	.17
PT252	N	N	<200	20	N	N	120	N	N	N	.003	.05
PT255	N	N	500	30	N	N	95	N	N	N	.004	.58
PT256	N	N	<200	30	N	N	200	.2	N	N	.003	<.02
PT261	N	<10	N	30	N	N	20	N	N	N	.006	.07
PT262	N	<10	N	30	N	N	20	N	N	N	.005	.03
PT263	N	N	N	30	N	N	30	N	N	N	.004	.05
PT264	N	N	N	30	N	N	10	N	N	N	.004	.07
PT265	N	N	N	30	N	N	10	N	N	N	.002	.08
PT266	N	N	N	30	N	N	20	N	N	N	.006	.65
PT267	N	N	N	30	N	N	5	N	N	N	.002	.06
PT268	N	N	N	30	N	N	65	N	N	N	.001	.07
PT269	N	N	<200	30	N	N	10	N	N	N	.001	.10
PT270	N	<10	<200	30	N	N	10	N	N	N	.005	.20
PT273	N	<10	<200	30	N	N	10	N	N	N	.003	.30
PT274	N	<10	<200	30	N	N	35	N	N	N	.017	.57
PT276	N	<10	N	30	N	10	25	N	N	N	.470	1.17
PT282	N	N	<200	30	N	N	20	N	N	N	.170	1.54
PT283	N	<10	<200	30	N	N	25	N	N	N	.012	.58
PT284	N	N	N	30	N	N	10	N	N	N	.006	.12
PT285	N	N	N	30	N	N	10	N	N	N	.004	.06
PT286	N	N	N	30	N	N	5	N	N	N	.002	.04
PT287	N	N	N	30	N	N	15	.1	N	N	.003	.09
PT288	N	<10	N	30	N	N	5	N	N	N	.002	<.02
PT292	N	20	<200	30	N	N	45	.1	N	N	.035	.06
PT308	N	N	<200	20	N	<10	100	.1	N	N	.019	.71
PT310	N	<10	500	30	N	N	200	N	N	N	.019	1.28
PT312	N	N	<200	30	N	20	75	.1	N	N	.007	1.37

TABLE 4.-- CHEMICAL DATA FOR AN E-W SOIL TRAVERSE ACROSS THE ROIS MALK AREA, PALAU

[N, not detected; <, detected but below the limit of determination shown; >, determined to be greater than the value shown.]

Sample	UTM-N	UTM-E	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-BI
PM163	814,518.13	454,480.31	5	.15	<.05	.3	700	N	N	N	N	N	N	N
PM164	814,517.44	454,448.63	5	.10	<.05	.3	500	N	N	N	N	N	N	N
PM165	814,524.88	454,417.63	5	.15	<.05	.3	1,500	N	N	N	N	N	N	N
PM166	814,537.81	454,393.50	5	.07	<.05	.5	1,500	N	N	N	N	N	N	N
PM167	814,547.00	454,365.44	3	.07	<.05	.3	150	N	N	N	N	N	N	N
PM168	814,559.81	454,329.81	5	.07	N	.5	200	N	N	N	N	N	N	N
PM169	814,552.44	454,288.19	5	.07	<.05	.3	1,500	N	N	N	N	<20	N	N
PM170	814,573.63	454,243.31	3	.05	<.05	.5	1,000	N	N	N	N	N	N	N
PM171	814,569.75	454,206.06	7	.10	<.05	.3	700	N	N	N	N	N	N	N
PM172	814,579.69	454,166.88	5	.20	N	.5	1,000	N	N	N	N	<20	N	N
PM173	814,574.19	454,135.81	5	.15	N	.5	1,000	N	N	N	N	N	N	N
PM174	814,639.25	454,150.50	5	.07	<.05	.5	200	N	N	N	N	N	N	N
PM175	814,670.63	454,101.31	10	.02	<.05	.5	2,000	N	N	N	N	<20	N	N
PM176	814,772.50	454,094.38	5	.10	N	.5	200	N	N	N	N	N	N	N
PM177	814,776.38	454,013.56	3	.07	N	.5	150	N	N	N	N	N	N	N
PM178	814,792.63	453,987.75	5	.10	N	.3	1,500	N	N	N	30	30	N	N
PM179	814,808.38	453,942.31	7	.05	N	.5	100	N	N	N	N	N	N	N
PM180	814,798.38	453,912.56	3	.05	N	.3	150	N	N	N	N	N	N	N
PM181	814,806.69	453,878.88	7	.07	N	.5	1,000	N	N	N	N	<20	N	N
PM182	814,852.06	453,803.50	5	.03	N	.5	200	N	N	N	N	N	N	N

CHEMICAL DATA FOR AN E-W SOIL TRAVERSE ACROSS THE ROIS MALK AREA, PALAU--Continued

Sample	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V
PM163	N	70	700	50	N	N	N	100	<10	N	50	N	N	200
PM164	N	50	700	50	N	N	N	100	10	N	50	N	N	200
PM165	N	100	500	30	<20	N	N	100	<10	N	50	N	N	200
PM166	N	70	300	70	N	N	N	150	<10	N	50	N	N	300
PM167	N	5	150	150	N	N	N	100	N	N	50	N	N	300
PM168	N	10	700	70	N	N	N	150	N	N	50	N	N	300
PM169	N	100	1,000	150	N	N	N	150	15	N	70	N	N	300
PM170	N	20	500	70	N	N	N	100	<10	N	50	N	N	300
PM171	N	30	1,000	150	N	N	N	150	10	N	50	N	N	300
PM172	N	70	700	200	N	N	N	150	N	N	50	N	N	150
PM173	N	70	500	100	N	N	N	150	<10	N	50	N	N	300
PM174	N	15	700	50	N	N	N	150	N	N	50	N	N	300
PM175	N	150	700	200	N	N	N	300	N	N	70	N	N	300
PM176	N	5	300	100	N	N	N	100	<10	N	30	N	N	200
PM177	N	N	150	70	N	N	N	50	N	N	30	N	N	150
PM178	N	N	150	300	N	N	N	50	30	N	30	N	N	500
PM179	N	<5	200	70	N	N	N	30	N	N	30	N	N	200
PM180	N	5	700	100	N	N	N	70	10	N	30	N	N	200
PM181	N	100	700	100	N	N	N	150	N	N	50	N	N	300
PM182	N	10	300	70	N	N	N	100	N	N	30	N	N	200

CHEMICAL DATA FOR AN E-W SOIL TRAVERSE ACROSS THE ROIS MALK AREA, PALAU--Continued

Sample	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-AS-P	AA-ZN-P	AA-CD-P	AA-BI-P	AA-SB-P	AA-AU-T	AA-TE-T
PM163	N	15	N	30	N	N	40	.1	N	N	.002	.29
PM164	N	15	N	30	N	N	25	N	N	N	.003	.28
PM165	N	50	N	30	N	N	30	.1	N	N	.002	.77
PM166	N	N	N	30	N	N	15	.1	N	N	.009	1.82
PM167	N	N	N	30	N	N	10	N	N	N	.012	.76
PM168	N	<10	N	30	N	N	20	N	N	N	.003	.24
PM169	N	<10	N	20	N	N	85	.1	N	N	.008	.84
PM170	N	N	N	30	N	N	60	.1	N	N	.015	1.52
PM171	N	N	N	30	N	N	40	N	N	N	.004	.34
PM172	N	N	N	30	N	N	20	N	N	N	.003	.06
PM173	N	N	N	30	N	N	25	N	N	N	.003	.21
PM174	N	N	N	30	N	N	10	N	N	N	.002	.03
PM175	N	<10	N	30	N	N	20	N	N	N	.002	.04
PM176	N	N	N	30	N	N	5	N	N	N	.006	.03
PM177	N	N	N	30	N	N	5	N	N	N	<.001	.02
PM178	N	N	N	30	N	<10	85	.2	N	N	.024	.88
PM179	N	N	N	30	N	N	15	N	N	N	.007	.03
PM180	N	N	N	30	N	N	45	.2	N	N	.110	.12
PM181	N	N	N	30	N	N	20	N	N	N	.040	.02
PM182	N	N	N	20	N	N	15	N	N	N	.003	.10

TABLE 5.-- CHEMICAL DATA FROM A DETAILED SOIL TRAVERSE, ROIS MALK AREA, PALAU

[N, not detected; <, detected but below the limit of determination shown; >, determined to be greater than the value shown.]

Sample	UTM-N	UTM-E	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-BI
PM183	814,930	453,729	20	.07	<.05	.20	3,000	N	N	N	N	100	N	N
PM184	814,927	453,728	3	.05	<.05	.30	100	N	N	N	<10	N	N	N
PM185	814,923	453,727	3	.07	<.05	.50	100	N	N	N	<10	N	N	N
PM186	814,920	453,726	2	.05	<.05	.50	20	N	N	N	10	N	N	N
PM187	814,916	453,724	5	.05	N	.50	20	N	N	N	10	N	N	N
PM188	814,913	453,723	7	.05	<.05	.50	70	N	N	N	<10	N	N	N
PM189	814,910	453,722	5	.05	<.05	.50	30	N	N	N	<10	N	N	N
PM190	814,905	453,720	5	.05	<.05	.50	70	N	N	N	<10	N	N	N
PM191	814,909	453,741	3	.02	<.05	.50	1,500	N	N	N	N	N	N	N
PM192	814,912	453,736	5	.10	<.05	.30	150	N	N	N	<10	N	N	N
PM193	814,913	453,732	5	.02	<.05	.50	100	N	N	N	N	N	N	N
PM194	814,915	453,728	5	.07	N	.50	200	N	N	N	N	N	N	N
PM195	814,918	453,720	15	.05	N	.30	30	N	N	N	<10	N	N	N
PM196	814,919	453,716	7	.05	N	.30	70	N	N	N	<10	N	N	N
PM197	814,921	453,712	5	.05	N	.30	100	N	N	N	10	N	N	N
PM198	814,922	453,708	20	.03	N	.15	150	N	N	N	N	N	N	N
PM199	814,924	453,705	10	.03	N	.15	200	N	N	N	N	N	N	N
PM200	814,926	453,700	7	.03	N	.20	150	N	N	N	N	N	N	N

CHEMICAL DATA FROM A DETAILED SOIL TRAVERSE, ROIS MALK AREA, PALAU--Continued

Sample	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V
PM183	N	100	500	150	N	N	N	150	20	N	50	N	N	150
PM184	N	N	200	70	N	N	N	50	N	N	50	N	N	200
PM185	N	<5	200	100	N	N	N	50	<10	N	30	N	N	200
PM186	N	N	300	30	N	N	N	70	N	N	30	N	N	300
PM187	N	N	300	70	N	7	N	50	N	N	30	N	N	200
PM188	N	N	700	70	N	N	N	50	<10	N	30	N	N	300
PM189	N	N	700	50	N	N	N	50	<10	N	30	N	N	300
PM190	N	N	1,000	70	N	N	N	50	<10	N	30	N	N	300
PM191	N	150	100	150	N	N	N	50	N	N	30	N	N	300
PM192	N	<5	500	100	N	N	N	30	N	N	30	N	N	300
PM193	N	N	300	100	N	N	N	70	<10	N	30	N	N	200
PM194	N	7	500	100	N	N	N	50	N	N	30	N	N	300
PM195	N	N	700	100	N	<5	N	50	15	N	30	N	N	300
PM196	N	5	2,000	70	N	<5	N	50	<10	N	30	N	N	300
PM197	N	10	300	50	N	10	N	30	N	N	20	N	N	300
PM198	N	10	2,000	100	N	20	N	30	15	N	30	N	N	500
PM199	N	15	1,000	70	N	7	N	30	N	N	20	N	N	500
PM200	N	10	700	100	N	<5	N	30	<10	N	20	N	N	500

CHEMICAL DATA FROM A DETAILED SOIL TRAVERSE, ROIS MALK AREA, PALAU--Continued

Sample	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-AS-P	AA-ZN-P	AA-CD-P	AA-BI-P	AA-SB-P	AA-AU-T	AA-TE-T
PM183	N	70	1,000	15	N	N	350	.1	N	N	.003	.18
PM184	N	<10	N	30	N	N	60	N	N	N	.004	.04
PM185	N	N	N	30	N	N	20	N	N	N	.016	.30
PM186	N	N	N	30	N	N	5	N	N	N	.008	.31
PM187	N	N	N	30	N	N	5	N	N	N	.027	.31
PM188	N	N	N	30	N	10	15	N	N	N	.014	.77
PM189	N	N	N	30	N	10	5	N	N	N	.012	.62
PM190	N	<10	N	30	N	10	10	N	N	N	.015	.62
PM191	N	<10	N	30	N	N	20	N	N	N	.012	.05
PM192	N	N	N	20	N	N	15	N	N	N	.004	.13
PM193	N	<10	N	30	N	N	25	N	N	N	.012	.12
PM194	N	<10	N	30	N	N	25	N	N	N	.007	.20
PM195	N	N	N	30	N	N	20	N	N	N	.070	.60
PM196	N	N	N	30	N	N	40	N	N	N	.018	1.00
PM197	N	N	N	30	N	10	N	N	N	N	.090	.72
PM198	N	<10	<200	15	N	20	10	N	N	N	.018	.95
PM199	N	N	<200	20	N	10	10	N	N	N	.050	.74
PM200	N	N	<200	20	N	10	240	N	N	N	.018	.74

TABLE 6.-- CHEMICAL DATA FOR 16 STREAM-SEDIMENT SAMPLES, ROIS MALK AREA, PALAU

[N, not detected; <, detected but below the limit of determination shown; >, determined to be greater than the value shown.]

Sample	UTM-N	UTM-E	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-BI
PA114	824,850	455,725	5	2.00	2.00	.5	1,000	N	N	N	10	<20	N	N
PA115	824,820	455,737	3	1.00	.30	.3	500	N	N	N	10	<20	N	N
PA117	824,875	455,787	3	1.00	.20	.5	500	N	N	N	10	<20	N	N
PA118	815,991	453,186	3	1.00	1.00	.3	500	N	N	N	N	<20	N	N
PA119	815,984	453,199	5	1.00	.30	.3	500	N	N	N	20	<20	N	N
PA120	815,986	453,150	3	1.00	.30	.3	500	N	N	N	10	<20	N	N
PA121	816,000	453,150	3	1.00	.70	.3	200	N	N	N	N	<20	N	N
PA122	816,116	452,968	3	1.00	.70	.3	300	N	N	N	N	N	N	N
PA123	816,139	452,944	3	2.00	2.00	.3	500	N	N	N	N	20	N	N
PA124	815,698	453,364	3	.70	.30	.3	500	N	N	N	10	<20	N	N
PA125	815,703	453,375	3	1.50	1.50	.3	500	N	N	N	N	20	N	N
PM161	814,725	453,674	2	.07	.05	.2	70	N	N	N	N	N	N	N
PM162	814,978	453,609	3	1.00	.70	.3	500	N	N	N	10	20	N	N
PM201	814,887	454,554	3	1.00	1.00	.2	700	N	N	N	20	<20	N	N
PM202	814,884	454,570	5	1.00	1.50	.3	700	N	N	N	20	N	N	N
PM206	815,357	454,181	3	1.50	.70	.3	700	N	N	N	10	<20	N	N

CHEMICAL DATA FOR 16 STREAM-SEDIMENT SAMPLES, ROIS MALK AREA, PALAU--Continued

Sample	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V
PA114	N	70	700	100	N	N	N	100	15	N	30	N	N	200
PA115	N	20	200	70	<20	N	N	70	10	N	30	N	N	150
PA117	N	50	200	70	N	N	N	100	<10	N	30	N	N	200
PA118	N	50	5,000	30	N	N	N	100	<10	N	30	N	N	200
PA119	N	70	700	50	N	N	N	150	<10	N	30	N	N	200
PA120	N	50	1,000	30	N	N	N	150	<10	N	30	N	N	200
PA121	N	70	1,000	50	N	N	N	100	N	N	30	N	N	300
PA122	N	50	5,000	50	N	N	N	150	N	N	30	N	N	300
PA123	N	50	5,000	30	N	N	N	150	<10	N	30	N	N	200
PA124	N	50	700	70	N	N	N	150	N	N	30	N	N	300
PA125	N	70	5,000	50	N	N	N	150	N	N	30	N	N	200
PM161	N	<5	500	30	<20	<5	N	50	20	N	20	N	N	200
PM162	N	50	1,000	100	N	N	N	100	20	N	30	N	200	200
PM201	N	50	1,000	70	N	N	N	150	30	N	30	N	N	200
PM202	N	70	1,500	100	N	N	N	150	20	N	30	N	<100	300
PM206	N	70	>5,000	70	N	N	N	200	15	N	30	N	N	200

CHEMICAL DATA FOR 16 STREAM SEDIMENT SAMPLES, ROIS MALK AREA, PALAU--Continued

Sample	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-AS-P	AA-ZN-P	AA-CD-P	AA-BI-P	AA-SB-P	AA-AU-T	AA-TE-T
PA114	N	15	N	30	N	N	65	N	N	N	.003	.14
PA115	N	<10	N	20	N	N	55	N	N	<2	.004	.30
PA117	N	10	N	30	N	N	50	N	N	<2	.004	.58
PA118	N	10	<200	20	N	N	70	N	N	<2	.002	.03
PA119	N	15	<200	30	N	N	85	N	N	N	.005	.04
PA120	N	10	N	20	N	N	80	N	N	N	.013	.04
PA121	N	10	N	30	N	N	80	N	N	<2	.003	.04
PA122	N	15	<200	20	N	N	70	N	N	N	.002	.03
PA123	N	10	N	20	N	N	75	N	N	N	.001	.02
PA124	N	15	N	20	N	N	75	N	N	N	.002	.02
PA125	N	10	N	20	N	N	85	N	N	N	.002	.03
PM161	N	<10	N	20	N	10	100	N	N	<2	.060	.50
PM162	N	10	500	30	N	N	640	5.0	N	N	.029	.16
PM201	N	15	200	20	N	--	--	--	--	--	.060	1.00
PM202	N	15	<200	30	N	N	130	N	N	N	.037	.46
PM206	N	10	<200	20	N	N	120	N	N	N	.130	.13

TABLE 7.-- CHEMICAL DATA FOR 13 HEAVY-MINERAL CONCENTRATES, ROIS MALK AREA, PALAU

[N, not detected; <, detected but below the limit of determination shown; >, determined to be greater than the value shown.]

Sample	UTM-N	UTM-E	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-BI	S-CD	S-CO	S-CR
PA118	815,991	453,186	5	3.0	7	.15	700	N	N	N	N	N	N	N	N	50	>10,000
PA119	815,984	453,199	3	5.0	7	.15	700	N	N	N	N	N	N	N	N	20	10,000
PA120	815,986	453,150	3	3.0	5	.15	500	N	N	N	N	N	N	N	N	15	10,000
PA121	816,000	453,150	3	5.0	10	.15	700	N	N	N	N	N	N	N	N	20	10,000
PA122	816,116	452,968	5	5.0	10	.15	700	N	N	N	N	N	N	N	N	50	>10,000
PA123	816,139	452,944	5	7.0	10	.15	700	N	N	N	N	N	N	N	N	50	10,000
PA124	815,698	453,364	3	5.0	10	.15	700	N	N	N	N	N	N	N	N	20	7,000
PA125	815,703	453,375	5	5.0	7	.30	700	N	N	N	N	N	N	N	N	50	>10,000
PM161	814,725	453,674	5	1.0	2	>2.00	300	50.0	N	200	N	<50	N	N	N	N	7,000
PM162	814,978	453,609	7	3.0	5	.30	500	3.0	N	N	<20	N	N	N	200	150	3,000
PM201	814,887	454,554	7	2.0	5	.30	500	500.0	N	700	N	N	N	N	100	50	1,500
PM202	814,884	454,570	3	2.0	7	.70	500	N	N	N	N	N	N	N	N	<10	7,000
PM206	815,357	454,181	7	1.5	5	.15	500	1.5	N	N	<20	N	N	N	50	100	10,000

CHEMICAL DATA FOR 13 HEAVY-MINERAL CONCENTRATES, ROIS MALK AREA, PALAU--Continued

Sample	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
PA118	30	N	N	N	150	N	N	70	N	N	300	N	N	N	N	N
PA119	50	N	N	N	150	N	N	70	N	N	200	N	N	700	N	N
PA120	30	N	N	N	150	N	N	70	N	N	200	N	N	N	N	N
PA121	50	N	N	N	100	N	N	70	N	N	200	N	N	N	N	N
PA122	300	N	N	N	150	N	N	70	N	N	200	N	N	N	<20	N
PA123	500	N	N	N	150	N	N	70	N	N	200	N	N	N	20	N
PA124	20	N	N	N	100	N	N	70	N	N	200	N	N	N	N	N
PA125	100	N	N	N	200	N	N	70	N	N	300	N	N	N	N	N
PM161	100	N	15	N	70	20	N	50	N	N	700	N	N	N	200	N
PM162	7,000	N	N	N	200	100	N	50	N	N	150	N	N	15,000	20	N
PM201	700	N	N	N	100	70	N	50	N	N	150	N	N	15,000	<20	N
PM202	30	N	N	N	70	<20	N	70	N	N	200	N	N	N	50	N
PM206	10,000	N	N	N	200	20	N	20	N	N	150	N	N	5,000	N	N