DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

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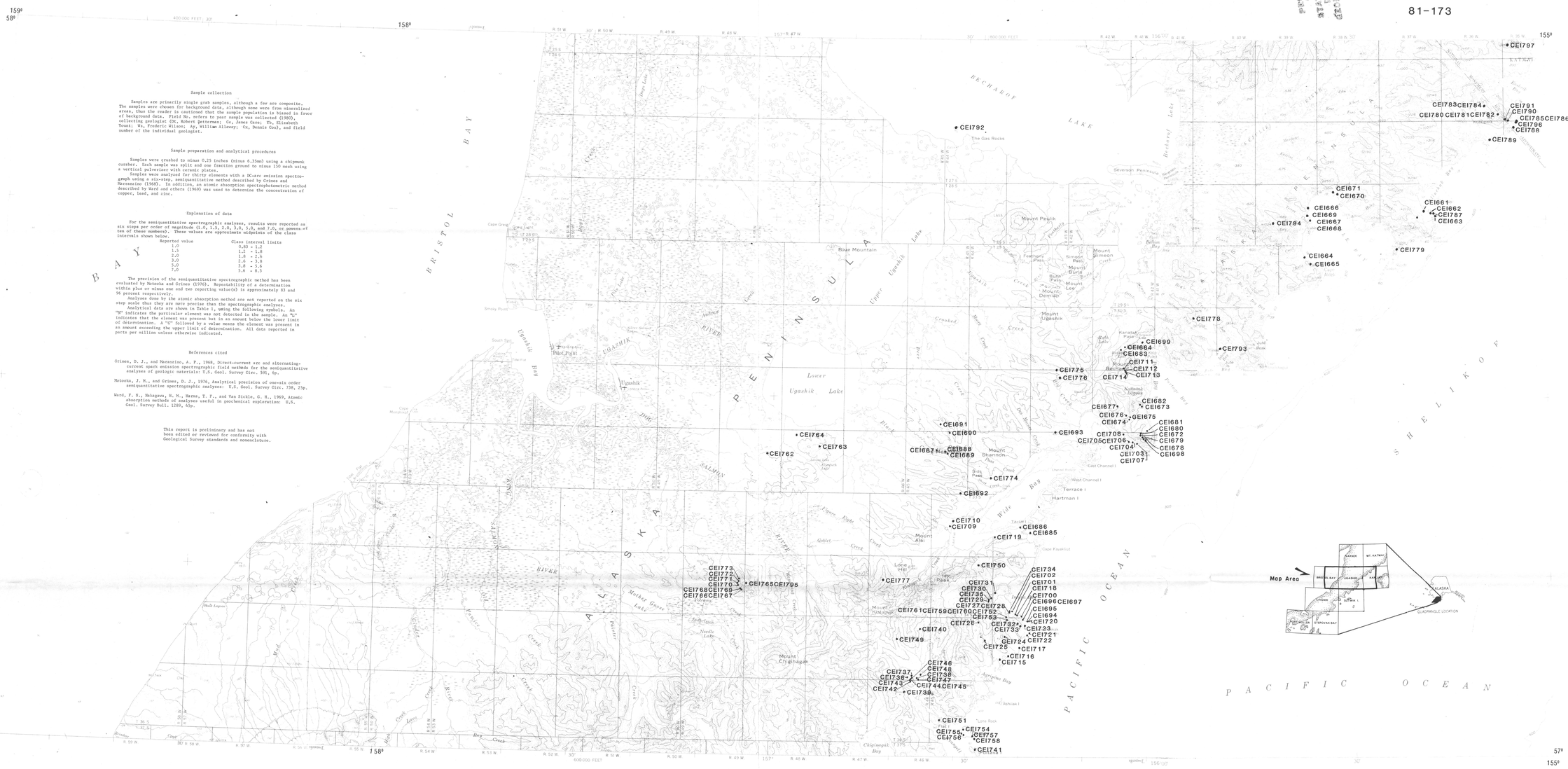
AD665

OPEN-FILE REPORT
81-173



Sample collection

Samples are primarily single grab samples, although a few are composite. The samples were chosen for background data, although some were from mineralized areas, thus the reader is cautioned that the sample population is biased in favor of background data. Field No. refers to year sample was collected (1980), collecting geologist (Dt, Robert Detterman; Cw, James Case; Yb, Elizabeth Yount; Wx, Frederic Wilson; Ay, William Allaway; Cx, Dennis Cox), and field number of the individual geologist.

Sample preparation and analytical procedures

Samples were crushed to minus 0.25 inches (minus 6.35mm) using a chipmunk crusher. Each sample was split and one fraction ground to minus 150 mesh using a vertical pulverizer with ceramic plates.

Samples were analyzed for thirty elements with a DC-arc emission spectrograph using a six-step, semiquantitative method described by Grimes and Marranzino (1968). In addition, an atomic absorption spectrophotometric method described by Ward and others (1969) was used to determine the concentration of copper, lead, and zinc.

Explanation of data

For the semiquantitative spectrographic analyses, results were reported as six steps per order of magnitude (1.0, 1.5, 2.0, 3.0, 5.0, and 7.0, or powers of ten of these numbers). These values are approximate midpoints of the class intervals shown below.

Reported value	Class interval limits
1.0	0.83 - 1.2
1.5	1.2 - 1.8
2.0	1.8 - 2.6
3.0	2.6 - 3.8
5.0	3.8 - 5.6
7.0	5.6 - 8.3

The precision of the semiquantitative spectrographic method has been evaluated by Motooka and Grimes (1976). Repeatability of a determination within plus or minus one and two reporting value(s) is approximately 83 and 96 percent respectively.

Analyses done by the atomic absorption method are not reported on the six step scale thus they are more precise than the spectrographic analyses.

Analytical data are shown in Table 1, using the following symbols. An "N" indicates the particular element was not detected in the sample. An "L" indicates that the element was present but in an amount below the lower limit of determination. A "G" followed by a value means the element was present in an amount exceeding the upper limit of determination. All data reported in parts per million unless otherwise indicated.

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. Geol. Survey Circ. 591, 6p.

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

Ward, F. N., Nakagawa, H. M., Harms, T. F., and Van Sickle, C. N., 1969, Atomic absorption methods of analyses useful in geochemical exploration: U.S. Geol. Survey Bull. 1289, 45p.

This report is preliminary and has not been edited or reviewed for conformity with Geological Survey standards and nomenclature.

Base From U.S.Geological Survey, 1963

SCALE 1:250000

CONTOUR INTERVAL 200 FEET

Semi-quantitative Spectrographic — Percent | Atomic Absorption — Parts Per Million

LAB NO.	FIELD NO.	LATITUDE	LONGITUDE	Fe%	Mg%	Ca%	Ti%	Mn	Ag	As	Au	B	Ba	Be	Bi	Cd	Co	Cr	Cu	La	Mo	Nb	Ni	Pb	Sb	Sc	Sn	Sr	V	W	Y	Zn	Zr	Th	Cu	Pb	Zn	Rock/Outcrop Description	Sample Type	Formation
CEI661	80Dt166A	57 45 50	155 18 50	3	3	.7	.15	300	N	N	N	20	500	L	N	N	30	30	50	L	N	L	10	10	N	50	N	300	300	N	30	N	70	N	70	20	60	andesite	Sample Type	Formation
CEI662	80Dt167A	57 45 38	155 18 00	3	1.5	2	.1	500	7	N	N	30	1500	L	N	N	20	15	30	N	7	L	N	30	N	30	N	200	300	N	30	N	70	N	70	20	10	dacite	background	NA
CEI663	80Dt168A	57 43 25	155 17 10	1.5	.3	1	.07	200	1	N	N	30	300	L	N	N	7	100	50	L	15	N	70	L	N	15	N	100	150	N	20	L	50	N	50	30	35	mafic dike	background	NA
CEI664	80Ce108	57 41 37	155 37 28	3	2	1.5	.3	700	N	N	N	30	500	L	N	N	50	100	50	L	N	N	30	10	N	50	N	500	200	N	30	N	50	N	50	60	15	120	limestone	mineralized	Unnamed Triassic
CEI665	80Ce109	57 41 18	155 36 35	3	1.5	1.5	.3	500	N	N	N	15	500	1	N	N	20	50	30	20	L	N	20	10	N	20	N	500	150	N	30	N	50	N	50	20	20	70	sandstone	background	Shelikof
CEI666	80Ce113	57 46 06	155 36 55	2	2	2	.3	300	L	N	N	20	500	L	N	N	30	100	50	20	N	N	30	10	N	50	N	500	200	N	30	N	50	N	50	35	15	60	lithic sandstone	background	Shelikof
CEI667	80Ce114	57 45 00	155 36 40	3	1	.5	.300	L	N	N	N	30	700	1	N	N	30	150	70	20	N	N	50	20	N	50	N	500	150	N	30	N	50	N	50	45	20	85	sandstone	background	Shelikof
CEI668	80Ce114A	57 45 00	155 36 40	2	.5	1.5	.15	300	1	N	N	30	150	70	N	N	50	20	N	50	N	N	30	10	N	30	N	300	200	N	50	L	100	N	50	20	10	mudstone	background	Shelikof
CEI669	80Ce115A	57 45 22	155 37 00	7	2	1.5	.7	500	L	N	N	10	70	30	N	N	15	10	15	N	10	N	150	N	N	15	N	70	N	N	50	L	100	N	50	20	10	sandstone	background	Skinek
CEI670	80Ce117A	57 47 08	155 32 21	1.5	.5	.7	.1	300	L	N	N	20	1500	1	N	N	7	50	30	L	N	N	20	10	N	15	N	1000	150	N	30	L	50	L	50	35	15	80	sandstone	background	? Shelikof
CEI671	80Ce118	57 47 13	155 32 54	1	.2	10	.07	150	N	N	N	5	10	7	N	N	7	5	5	N	N	N	70	N	N	N	N	50	N	N	50	L	50	N	50	20	15	30	sandstone	background	Skinek
CEI672	80Ce122	57 26 55	156 03 05	2	.5	1	.2	200	L	N	N	150	200	L	N	N	5	30	30	L	N	N	30	10	N	15	N	700	150	N	30	N	50	N	50	5	25	25	dacite	mineralized	unknown
CEI673	80Ce127	57 29 28	156 01 01	1.5	.3	1	.1	300	L	N	N	20	1500	1	N	N	15	70	50	L	N	N	50	10	N	15	N	700	150	N	30	N	50	N	50	5	25	50	dacite	background	NA
CEI674	80Ce183	57 28 19	156 04 51	2	1	1.5	.15	1000	L	N	N	30	1500	L	N	N	7	30	30	N	10	N	30	10	N	15	N	300	300	N	30	N	70	N	70	30	15	5	hornfels shale	background	NA
CEI675	80Ce187	57 28 26	156 06 50	2	1	1	.2	1000	N	N	N	20	1000	1	N	N	7	50	50	L	N	N	50	10	N	15	N	500	200	N	30	N	50	N	50	45	25	130	hornfels shale	mineralized	unknown
CEI676	80Ce189	57 28 29	156 05 30	7	2	3	.5	1000	L	N	N	10	500	L	N	N	30	300	150	30	N	N	50	15	N	70	N	300	300	N	30	L	70	N	70	L(5)	20	15	carbonate vein	mineralized	NA
CEI677	80Ce192	57 29 23	156 06 43	5	2	2	.5	1000	L	N	N	30	300	150	N	N	50	15	N	70	N	300	300	N	30	L	100	N	50	15	N	70	N	70	N	25	15	quartz monzonite	background	NA
CEI678	80Ce196	57 26 46	156 02 32	5	1.5	1	.3	1000	N	N	N	50	300	150	30	N	30	15	N	70	N	300	300	N	30	L	100	N	120	15	55	quartz diorite	background	NA
CEI679	80Ce197	57 26 48	156 02 12	5	1	2	.1	300	7	N	N	15	70	30	N	N	30	10	N	50	N	500	300	N	50	N	70	N	95	15	55	felsic intrusive	background	NA
CEI680	80Ce198	57 27 00	156 02 53	7	3	3	.3	1500	N	N	N	30	30	50	N	N	5	70	700	N	10	N	50	10	N	10	N	500	300	N	30	N	50	N	50	30	10	40	quartz diorite	background	NA
CEI681	80Ky019	57 27 22	156 02 10	7	2	3	.3	1000	L	N	N	15	300	L	N	N	30	15	20	N	N	N	50	15	N	20	N	500	200	N	30	N	50	N	50	35	15	35	diorite	mineralized	NA
CEI682	80Ky022	57 29 33	156 03 11	1.5	.3	.1	.1	200	L	N	N	30	150	70	N	N	15	10	70	N	300	300	30	N	50	N	15	50	45	15	30	N	50	N	50	20	10	30	felsic dike	background	NA
CEI683	80Ky024	57 34 07	156 06 11	1.5	.3	.1	.1	200	L	N	N	5	10	20	N	N	5	30	100	L	N	N	50	10	N	15	N	500	150	N	30	N	50	N	50	15	15	25	felsic dike	background	NA
CEI684	80Ky025	57 34 57	156 05 43	3	2	3	.3	700	N	N	N	15	300	L	N	N	5	20	15	L	N	N	30	10	N	15	N	1000	100	N	10	N	50	N	50	40	10	15	felsic dike	background	NA
CEI685	80Ky030A	57 18 30	156 14 23	2	1.5	1.5	.3	700	N	N	N	30	150	70	N	N	7	5	10	N	70	N	50	10	N	50	N	500	200	N	30	L	70	N	70	20	10	15	quartz diorite	background	NA
CEI686	80Ky034	57 19 16	156 21 52	2	1.5	1	.2	500	L	N	N	30	700	L	N	N	30	20	70	50	20	N	30	15	N	30	N	500	300	N	30	N	50	N	50	90	20	75	lithic sandstone	background	Shelikof
CEI687	80Ky037	57 23 38	156 34 37	1.5	.7	1	.1	500	N	N	N	20	700	L	N	N	10	50	20	L	N	N	30	15	N	50	N	500	200	N	30	N	50	N	50	15	15	35	siltstone	background	Shelikof
CEI688	80Ky038	57 25 40	156 33 18	2	.7	1	.15	500	N	N	N	20	700	L	N	N	10	50	20	L	N	N	30	10	N	30	N	500	200	N	30	N	50	N	50	60	20	55	felsic dike	background	NA
CEI689	80Ky039	57 25 18	156 32 36	1.5	1	.1	.1	500	L	N	N	20	500	L	N	N	10	20	50	N	20	N	30	10	N	30	N	500	200	N	30	N	50	N	50	90	20	75	lithic sandstone	background	Shelikof
CEI690	80Ky060	57 27 07	156 32 43	1.5	1	.1	.15	500	N	N	N	20	700	L	N	N	15	100	30	N	N	N	50	L	N	20	N	500	200	N	30	N	50	N	50	20	15	35	siltstone	background	Skinek
CEI691	80Ky061	57 27 50	156 34 14	2	1	2	.2	700	N	N	N	15	700	L	N	N	20	30	15	L	N	N	50	15	N	30	N	500	200	N	30	N	50	N	50	15	10	25	sandstone	background	Skinek
CEI692	80Ky211A	57 22 24	156 32 40	2	2	3	.5	700	L	N	N	30	300	L	N	N	7	10	20	N	10	N	50	15	N	30	N	500	200	N	30	N	50	N	50	15	10	25	sandstone	background	Skinek
CEI693	80Ky043	57 27 22	156 16 15	7	2	3	.5	1000	N	N	N	30	150	70	L	N	30	10	20	N	50	N	300	200	N	30	L	70	N	15	10	55	granite conglomerate clast	background	Skinek
CEI694	80Ky154	57 11 20	156 24 18	3	1.5	1.5	.3	1000	N	N	N	30	100	70	N	N	30	10	30	N	30	N	300	200	N	30	L	70	N	85	20	70	siltstone	background	Shelikof
CEI695	80Ky155	57 11 20	156 20 29	5	1.5	1.5	.3	1000	N	N	N	15	300	L	N	N	30	10	30	N	7	N	50	20	N	30	L	70	N	50	20	75	sandstone	background	Shelikof
CEI696	80Ky156A	57 11 27	156 21 09	3	1.5	10	.15	5000	N	N	N	70	1500	1	N	N	20	200	30	50	N	N	50	30	N	30	N	700	300	N	30	N	70	N	70	40	10	15	mafic sill	mineralized	NA
CEI697	80Ky158	57 11 27	156 21 09	7	3	3	.3	1000	N	N	N	20	300	L	N	N	30	10	30	N	7	N	50	30	N	30	N	500	300	N	30	N	50	N	50	30	30	80	sandstone	background	Chignik
CEI698	80Ky015A	57 26 33	156 02 26	5	2	3	.3	1500	N	N	N	20	700	L	N	N	50	50	30	N	N	N	30	70	N	70	N	700	300	N	30	N	70	N	70	30	30	90	mudstone	background	Chignik
CEI699	80Ky013A	57 34 42	156 02 55	5	2	2	.5	1000	N	N	N	30	50	70	N	N	20	10	30	N	20	N	50	15	N	30	500	50	N	75	5	30	dacite	mineralized	NA
CEI700	80Ky158	57 11 42	156 21 22	7	7	3	.5	1000	N	N	N	30	1500	L	N	N	30	200	100	20	N	N	50	20	N	50	N	300	200	N	30	N	50	N	50	100	10	85	diorite	background	NA
CEI701	80Ky159	57 11 54	156 22 18	5	1.5	.7	.7	300	L	N	N	70	700	1	N	N	20	200	50	20	N	N	50	15	N	30	N	300	200	N	30	N	50	N	50	65	15	60	sandy siltstone	background	Shelikof
CEI702	80Ky053	57 12 38	156 05 35	2	2	3	.5	700	L	N	N	15	1500	L	N	N	30	70	20	20	N	N	50	15	N	30	N	300	200	N	30	N	50	N	50	5	40	35	breccia dike	mineralized	NA
CEI703	80Ky201	57 26 14	156 03 42	7	3	5	.5	700	N	N	N	10	200	N	N	N	30	15	50	N	10	20	30	10	N	20	N	500	200	N	30	N	50	N	50	50	20	140	sandstone	mineralized	Chignik
CEI704	80Ky202	57 26 26	156 04 10	3	1	1.5	.3	500	N	N	N	10	150	30	N	N	30	10	30	N	10	N	50	10	N	30	N	300	200	N	30	N	50	N	50	10	20	40	dacite	background	NA
CEI705	80Ky203A	57 26 27	156 04 50	5	1	1.5	.5	500	N	N	N	10	300	L	N	N	10	20	30	L	N	N	30	10	N	20	N	200	150	N	30	N	50	N	50	20	10	30	pyrite vein	mineralized	NA
CEI706	80Ky203B	57 26 27	156 04 50	7	.5	.7	.7	700	.7	N	N	15	300	N	N	N	30	10	30	N	15	N	50	10	N	30	N	300	200	N	30	N	50	N	50	35	10	25	felsic intrusive	mineralized	NA
CEI707	80Ky054	57 26 13	156 03 42	G20	1.5	1.5	.2	1000	.7	1000	N	L	100	N	N	N	30	10	30	N	20	N	700	150	N	20	N	100	N	55	15	45	felsic intrusive	background	? Skinek
CEI708	80Ky057A	57 26 02	156 03 53	7	2	2	.7	1000	L	N	N	30	70	100	L	N	30	15	30	N	20	15	50	N	N	30	500	70	N	490	15	40	feldspathic sandstone	mineralized	? Skinek
CEI709	80Ky160A	57 19 17	156 32 36	7	3	1	.7	1000	L	N	N	30	200	150	L	N	50	20	30	N	50	N	300	300	N	30	L	150	N	50	20	30	sulfide-rich dike	mineralized	? Skinek
CEI710	80Ky162A	57 19 44	156 32 10	10	.7	.2	1	300	N	N	N	30	70	30	L	N	50	15	30	N	10	N	50	10	N	30	N	300	300	N	30	N	50	N	50	110	25	95	siltstone	background	? Skinek
CEI711	80Ky205	57 32 32	156 05 40	5	1.5	2	.5	500	N	N	N	10	300	N	N	N	7	10	20	N	7	L	50	N	N	30	N	300	300	N	30	N	50	N	50	20	20	80	sandstone	background	Kialagvik
CEI712	80Ky206A	57 32 23	156 05 35	5	1.5	1	.5	700	N	N	N	15	500	N	N	N	7	10	20	N	7	N	50	N	N	30	N	300	300	N	30	N	50	N	50	110	20	90	siltstone	background	Kialagvik
CEI713	80Ky206B	57 32 20	156 05 31	G20	.5	1	.3	200	N	N	N	10	200	N	N	N	10	10	30	N	10	N	50	10	N	30	N	300	300	N	30	N	50	N	50	5	20	30	quartz diorite	background	NA
CEI714	80Ky207	57 32 16	156 05 25	7	2	1.5	.7	1500	N	N	N	70	150	300	20	L	N	50	30	20	N	N	50	20	N	30	N	300	300	N	30	N	50	N	50	30	15	15	sandstone	mineralized	? Skinek
CEI715	80Ce229	57 08 09	156 24 40	5	1.5	3	.5	1000	N	N	N	15	30	50	N	N	15	10	30	N	15	10	50	N	N	30	N	300	300	N	30	N	50	N	50	20	10	70	siltstone	mineralized	? Skinek
CEI716	80Ce230	57 08 35	156 22 50	3	.7	1	.5	1000	N	N	N	15	700	L	N	N	30	30	50	N	5	L	N	20	N	50	N	300	300	N	30	N	50	N	50	75	15	40	quartz diorite	background	NA
CEI717	80Ce232A	57 09 03	156 21 40	7	2	1.5	.5	1000	N	N	N	30	30	50	N	N	5	L	N	20	N	500	100	N	30	N	100	N	10	5	20	quartz diorite	background	NA
CEI718	80Ce165	57 12 53	156 22 15	15	1.5	1	.2	700	.5	1000	N	10	200	N	N	N	15	L	N	20	N	500	100	N	30	N	100	N	40	20	95	altered zone	mineralized	NA
CEI719	80Ce139	57 18 28	156 23 43	10	3	5	.7	1000	N	N	L	150	N	N	N	N	20	50	30	N	10	N	50	20	N	30	N	100	100	N	50	200	50	N	50	25	60	60	shale	mineralized	NA
CEI720	80Ky209	57 11 20	156 20 02	5	1.5	2	.5	1500	L	N	N	30	700	1	N	N	7	L	N	20	N	500	100	N	30	N	70	N	70	30	300	300	N	30	N	50	65	20	80	mafic dike	mineralized	NA
CEI721	80Ky211	57 10 22	156 20 10	5	2	2	.5	1000	N	N	N	10	500	L	N	N	20	50	20	N	7	L	N	20	N	50	N	300	300	N	30	N	50	N	50	5	20	60	andesite	background	NA
CEI722	80Ky212	57 10 10	156 20 50	3	1.5	3	.5	1500	N	N	N	30	30	50	N	N	15	10	30	50	N	N	50	20	N	30	N	300	200	N	30	N	50	N	50	25	15	60	andesite dike	background	NA
CEI723	80Ky213	57 10 38	156 20 50	3	1.5	3	.5	700	L	N	N	30	50	50	N	N	15	L	30	50	N	500	200	N	20	N	50	N	300	200	N	30	N	70	N	70	30	15	60	granodiorite	mineralized	NA
CEI724	80Ky214	57 10 08	156 23 44	3	1.5	1.5	.2	700	N	N	N	15	700	L	N	N	15	10	30	50	N	500	100	N	30	N	100	N	40	15	40	sandstone and siltstone	mineralized	unknown
CEI725	80Ky215	57 09 40	156 27 01	5	.3	.07	.7	700	L	N	N	30	70	50	N	N	15	10	30	N	300	200	N	50	L	200	N	90	10	55	granodiorite	background	NA
CEI726	80Ky216	57 10 56	156 27 34	2	1.5	2	.2	300	N	N	N	50	1000	L	N	N	7	15	15	20	N	500	150	N	30	N	200	N	30	20	60	conglomerate	background	? Skinek
CEI727	80Ky217B	57 11 35	156 23 30	2	1	2	.3	700	N	N	N	30	300	70	N	N	15	15	20	N	5	L	N	30	N	50	N	500	200	N	30	N	50	N	50	5	10	10	granodiorite	background	NA
CEI728	80Ky217C	57 11 55	156 23 30	3	1	.7	.5	300	7	N	N	30	1500	30	N	N	7	10	15	N	5	L	N	30	N	50	N	500	200	N	30	N	50	N	50	65	20	50	andesite	background	NA
CEI729	80Ky246	57 13 01	156 26 30	3	2	2	.5	700	L	N	N	20	150	50	N	L	50	30	30	N	L	200	N	50	L	150	N	300	300	N	30	N	50	N	50	30	15	60	shale	background	unknown
CEI730	80Ky248	57 13 18	156 26 19	3	2	1	.3	200	N	N	N	30	200	100	20	N	15	10	30	N	10	N	50	10	N	30	N	300	300	N	30	L	100	N	50	65	10	60	sill	background	NA

Semi-quantitative Spectrographic — Percent | Atomic Absorption — Parts Per Million

LAB NO.	FIELD NO.	LATITUDE	LONGITUDE	Fe%	Mg%	Ca%	Ti%	Mn	Ag	Au	B	Ba	Be	Bi	Cd	Co	Cr	Cu	La	Mo	Nb	Ni	Pb	Sb	Sc	Sn	Sr	V	W	Y	Zn	Zr	Th	Cu	Pb	Zn	Rock/Outcrop Description	Sample Type	Formation
CEI731	80Ce250	57 13 46	156 25 30	7	3	3	.5	1000	L	N	N	15	200	L	N	N	50	70	100	L	N	N	30	10	N	70	N	700	500	N	30	N	100	N	65	20	60	andesite	background	Skinek
CEI732	80Ce251A	7 11 19	156 21 15	3	2	2	.3	1000	N	N	N	15	300	L	N	N	30	10	30	N	10	N	30	10	N	50	N	500	300	N	30	L	100	N	80	25	45	diorite	background	NA
CEI733	80Ce252	57 05 38	156 21 03	7	2	3	.3	1500	N	N	N	15	300	L	N	N	30	10	30	N	10	N	30	10	N	70	N	700	500	N	30	N	100	N	60	35	146	diorite	background	NA
CEI734	80Ce217A	57 11 58	156 25 35	3	2	1.5	.3	700	N	N	N	15	200	N	N	N	30	10	30	N	10	N	30	10	N	50	N	1000	300	N	15	N	100	N	45	15	45	andesite	background	NA
CEI735	80Ce260A	57 13 08	156 26 30	3	2	1.5	.3	700	N	N	N	20	500	L	N	N	30	150	50	N	N	N	50	20	N	50	N	500	300	N	30	N	70	N	50	35	85	sandstone	background	Skinek
CEI736	80Ky219	57 06 35	156 38 40	3	.7	1	.5	300	N	N	N	15	150	L	N	N	5	20	7	30	10	L	5	10	N	50	N	500	150	N	70	N	200	N	L(5)	20	15	sandstone	mineralized	unknown
CEI737	80Ky220	57 06 41	156 37 58	1.5	1	1	.5	300	N	N	N	30	700	L.5	N	N	7	30	7	50	L	L	7	30	N	20	N	500	150	N	30	N	50	N	50	5	25	25	dacite	background	NA
CEI738	80Ky221	57 06 34	156 37 20	3	2	1.5	.5	500	N	N	N	15	300	L	N	N	7	30	7	50	L	L	7	30	N	20	N	500	150	N	30	N	50	N	50	5	25	50	dacite	background	NA
CEI739	80Ky223	57 05 23	156 39 26	7	3	3	.5	700	N	N	N	15	300	L	N	N	15	70	5	N	N	L	15	10	N	30	N	700	200	N	20	N	150	N	50	5	25	25	hornfels shale	background	NA
CEI740	80Ky224	57 05 10	156 38 25	2	2	2	.5	700	N	N	N	20	200	L	N	N	50	100	30	N	N	L	50	10	N	30	N	300	300	N	30	N	70	N	70	30	15	5	hornfels shale	mineralized	unknown
CEI741	80Ka224	57 00 35	156 28 22	.1	.02	1	.1	30	.5	N	N	15	700	L	N	N	5	10	5	N	10	L	7	L	N	7	N	N	20	N	N	N	30	N	30	L(5)	20	15	sandstone	background	NA
CEI742	80Ky062	57 06 18	156 38 25	1.5	1	.7	.5	1000	N	N	N	30	700	L	N	N	5	L	5	50	N	L	5	10	N	7	N	N	20	N	N	N	30	N	30	L(5)	10	L(5)	silicified rock	background	NA
CEI743	80Ky063	57 06 23	156 38 11	2	1	.7	.3	300	N	N	N	30	300	N	N	N	5	L	5	50	N	L	5	10	N	5	N	500	100	N	100	N	200	N	30	L(5)	20	25	andesite	mineralized	NA
CEI744	80Ky063A	57 06 27	156 38 11	1.5	1	.7	.5	500	N	N	N	30	300	N	N	N	5	10	20	L	N	L	5	10	N	50	N	300	150	N	50	N	200	N	30	L(5)	10	20	andesite	mineralized	NA
CEI745	80Ky063B	57 06 27	156 38 11	1.5	1	.7	.7	500	N	N	N	30	1000	1.5	N	N	7	50	7	50	N	L	10	L	N	50	N	300	150	N	50	N	150	N	30	5	15	25	andesite	mineralized	unknown
CEI746	80Ky066	57 06 32	156 38 04	2	1.5	1	.7	500	L	N	N	20	500	1	N	N	7	70	10	50	N	N	10	10	N	30	N	300	150	N	50	N	150	N	30	5	15	35	lithic tuff	mineralized	NA
CEI747	80Ky066	57 06 35	156 37 10	2	1	.1	.7	200	L	N	N	30	200	150	30	N	N	30	30	N	N	N	30	15	N	50	N	1000	200	N	30	N	150	N	30	20	20	35	andesite	mineralized	NA
CEI748	80Ky067	57 06 45	156 36 57	1	.3	.1	.7	150	L	N	N	30	700	L	N	N	50	10	30	N	N	N	30	10	N	30	N	200	300	N	50	N