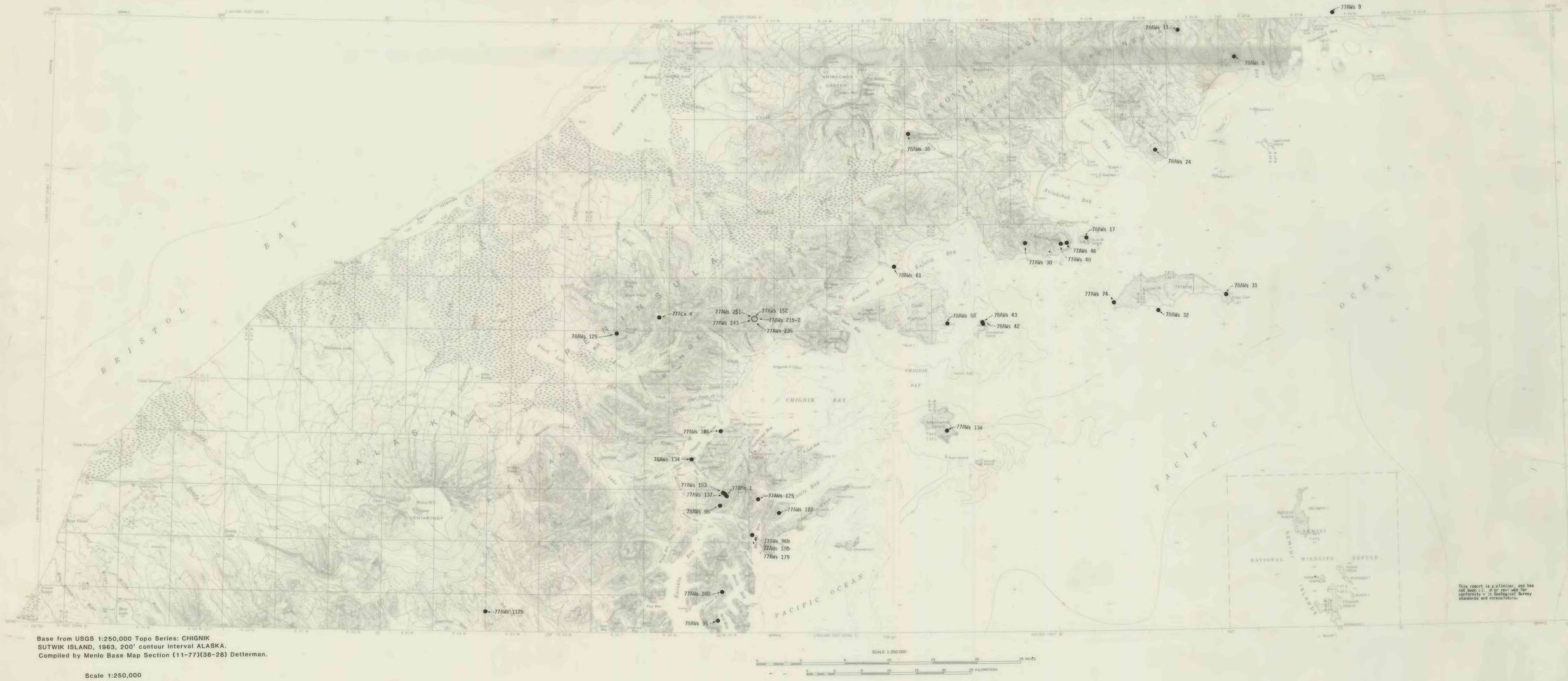
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Sample Location Map, Chignik and Sutwik Island Area, Alaska Peninsula, Alaska

OPEN FILE REPORT 80- 543

PLATE 2



Base from USGS 1:250,000 Topo Series: CHIGNIK
SUTWIK ISLAND, 1963, 200' contour interval ALASKA.
Compiled by Menlo Base Map Section (11-77)(38-28) Detterman.

Scale 1:250,000

SCALE 1:250 000

5 0 5 10 15 20 25 MILES

5 0 5 10 15 20 25 KILOMETERS

This report is preliminar, and has not been r.i. d or rev ed for conformity w th Geological Survey standards and nomenclature.

Appendix 4.--Chemical and normative data for analyzed igneous rocks

	Meshik volcanic rocks				Eocene-Oligocene intrusions				Miscellaneous igneous rocks				Late Tertiary igneous rocks									Granite cobble Chignik Formation
	78ANs-31	78ANs-32	78ANs-58	78ANs-61	77ANs-30	77ANs-40	77ANs-74	78ANs-17	78ANs-24	78ANs-42	77ANs-122	77ANs-137	77ANs-01	78ANs-98	77ANs-09	77ANs-12	77ANs-100	77ANs-112b	77ANs-125	77ANs-134	77ANs-152	77ANs-190b	77ANs-215	77ANs-186
SiO_2	55.54	52.21	57.49	61.58	59.17	50.02	59.80	47.14	54.11	58.19	64.74	66.60	55.54	49.57	56.89	51.89	67.54	49.28	57.62	62.77	59.17	57.28	62.20	68.93
Al_2O_3	18.45	15.88	16.66	16.48	17.64	18.15	15.40	17.11	17.47	17.53	16.18	16.12	17.56	16.53	17.08	17.39	15.49	18.14	18.76	16.54	17.05	18.17	16.55	16.37
Fe_2O_3	3.43	2.90	4.26	4.03	3.68	5.12	2.82	1.64	1.33	3.07	2.47	1.85	3.71	2.64	3.78	2.99	1.84	2.96	3.84	3.04	3.57	1.41	3.62	.88
FeO	3.39	4.33	2.87	1.54	2.32	6.18	1.76	7.01	4.72	3.08	2.12	2.36	5.00	7.18	3.76	6.89	2.73	7.93	4.00	2.56	3.28	5.26	2.90	1.48
MgO	4.34	7.84	3.30	1.96	2.71	4.42	2.05	7.01	5.80	3.05	1.74	1.88	3.98	5.65	4.08	5.05	1.62	6.21	2.39	2.21	3.09	3.08	2.23	.90
CaO	7.98	8.81	6.65	5.51	6.54	8.07	5.46	8.74	6.84	5.16	4.37	4.04	8.28	9.77	7.12	9.32	4.42	10.58	6.75	5.22	6.33	6.63	5.44	3.06
Na_2O	3.23	2.64	2.93	3.31	3.69	2.75	2.47	3.22	5.08	4.50	3.93	3.73	3.10	2.41	3.58	3.17	3.57	3.01	3.95	3.48	3.29	3.67	3.58	5.17
K_2O	1.21	.93	1.44	1.20	1.12	1.19	2.65	.49	.71	1.65	1.37	1.99	.61	.15	1.72	1.01	2.19	.62	1.52	1.71	1.27	1.24	1.43	1.17
TiO_2	.75	.69	.80	.59	.52	.83	.53	.96	.87	.75	.53	.65	.95	1.45	.98	1.23	.53	1.09	.77	.51	.66	.69	.59	.28
P_2O_5	.14	.16	.19	.13	.23	.21	.21	.11	.17	.26	.15	.17	.32	.15	.25	.34	.10	.34	.23	.16	.19	.28	.19	.06
MnO	.13	.14	.08	.07	.13	.21	.09	.55	.11	.10	.08	.03	.17	.15	.13	.17	.08	.18	.11	.11	.08	.14	.09	.04
H_2O^+	.33	.81	1.01	.92	1.22	2.83	2.18	3.08	1.26	1.35	.86	.97	1.68	2.07	.48	.50	.53	.27	.58	1.24	.78	2.32	.82	.74
H_2O^-	.61	1.20	1.37	2.07	.60	.56	.98	.29	.21	.12	.13	.11	.16	.41	1.10	.62	.07	.51	.10	.36	.46	.25	.20	.16
CO_2	.05	1.10	.80	.21	.69	.34	3.51	2.09	.20	.05	.08	.05	.17	1.23	.09	.12	.06	.06	.05	.16	.17	.23	.06	.23
TOTAL	98.58	99.64	99.85	99.60	100.26	100.88	99.91	99.44	98.88	98.86	98.75	100.55	101.23	99.36	101.04	100.69	100.77	101.18	100.67	100.07	99.39	100.65	99.90	99.47
NORMATIVE MINERALS:																								
Quartz	9.24	4.21	17.42	24.25	16.70	4.60	23.17			10.42	25.06	25.50	11.66	5.17	9.54	2.17	25.86		10.69	21.34	17.39	10.29	20.96	25.93
Corundum				.03							.66	.89												1.18
Orthoclase	7.15	5.69	8.80	7.36	6.77	7.24	16.79	3.08	4.32	10.02	8.28	11.76	3.60	.93	10.16	5.97	12.94	3.66	8.98	10.10	7.66	7.49	8.45	6.91
Albite	27.33	23.14	25.65	29.05	31.94	23.95	22.41	28.97	44.22	39.12	34.01	31.56	26.23	21.32	30.29	26.82	30.21	25.47	33.42	29.44	28.41	31.73	30.29	43.74
Anorthite	32.27	29.77	29.02	27.47	26.91	34.65	24.78	32.74	23.42	23.38	21.17	18.93	32.20	35.38	25.45	30.24	19.77	34.15	28.97	24.46	28.58	30.09	24.86	14.79
Diopside-wollastonite	2.67	6.02	1.60		1.15	2.15	1.17	5.26	4.32	.49			2.84	5.96	3.44	5.75	.63	6.73	1.26	.16	.92	.69	.37	
Diopside-ferrosilite	.44	1.05	.09		.08	.73	.04	1.92	1.23	.10			.88	2.20	.60	2.21	.24	2.63	.41	.03	.18	.34	.07	
Diopside-enstatite	1.98	4.40	1.31		.93	1.30	.98	3.09	2.80	.35			1.78	3.48	2.52	3.29	.36	3.81	.78	.12	.66	.34	.26	
Hypersthene-ferrosilite	1.96	3.79	.51		.53	5.59	.17	2.46	3.38	2.03	1.32	1.79	3.99	7.10	1.81	6.25	2.52	3.59	2.70	1.52	1.99	7.44	1.46	1.60
Hypersthene-enstatite	8.83	15.82	7.19	5.06	5.98	10.03	4.49	3.95	7.71	7.45	4.43	4.68	8.13	11.23	7.64	9.29	3.76	5.21	5.17	5.39	7.20	7.50	5.29	2.24
Olivine								13.81	4.52									7.94						
Magnetite	4.97	4.36	6.39	3.61	5.46	7.64	4.39	2.53	1.98	4.57	3.66	2.68	5.38	4.00	5.48	4.34	2.67	4.29	5.57	4.41	5.28	2.09	5.25	1.28
Ilmenite	1.42	1.36	1.57	1.16	1.01	1.62	1.08	1.94	1.70	1.46	1.03	1.23	1.80	2.88	1.86	2.34	1.01	2.07	1.46	.97	1.28	1.34	1.12	.53
Apatite	.32	.38	.46	.31	.54	.50	.52	.27	.40	.62	.36	.39	.74	.36	.58	.79	.23	.78	.53	.37	.45	.66	.44	.14
Hematite				1.69																				
TOTAL	98.59	100.00*	100.00*	100.00*	100.00*	100.00*	100.00*	100.01*	100.00*	100.00*	100.00*	99.42	99.22	100.00*	99.37	99.45	100.11	100.34	99.94	98.31	100.00*	100.00*	98.82	98.34

*Chemical constitutents normalized before norm calculation.

Analysts: XRF, P. Bristow, S.R. Morgan; FeO, H_2O, CO_2, M.J. Cremer, S.T. Neil.