

Figure 1. Modal quartz-feldspar ratios of orthogneiss from the Survey Pass quadrangle, Alaska.

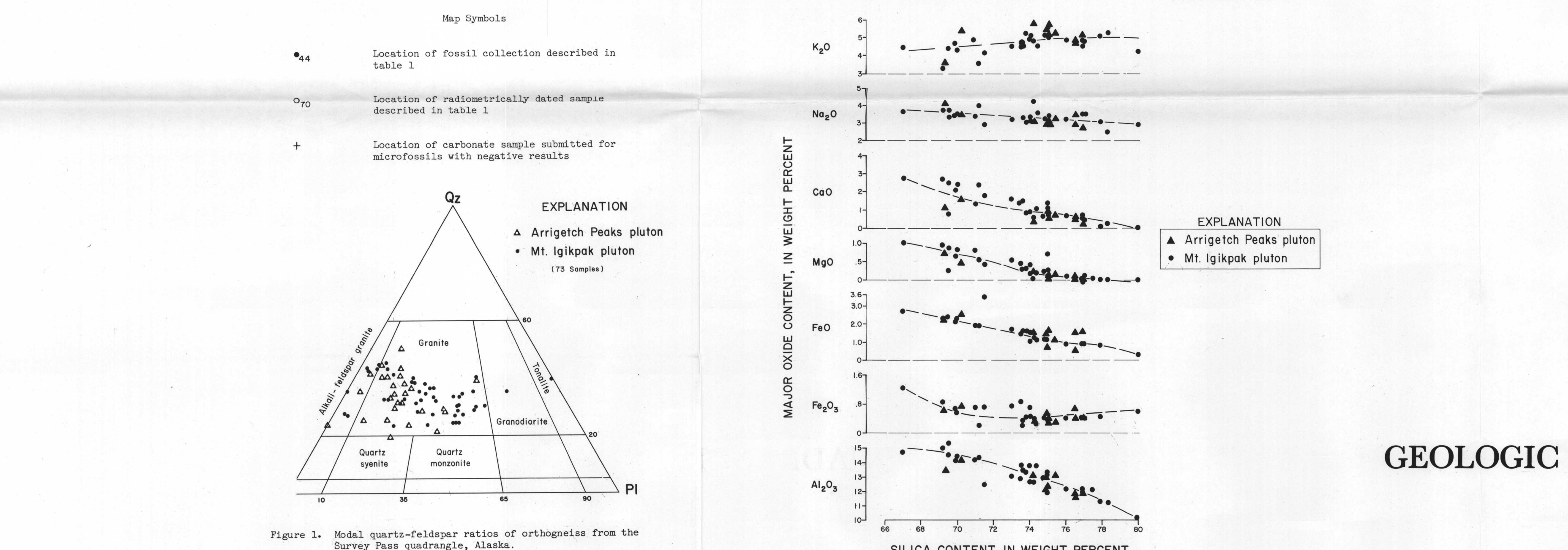


Figure 2. Variation of major oxides with silica for orthogneiss from the Survey Pass quadrangle, Alaska.

Table 1. Location and age of fossil collections and summary of radiometric ages in the Survey Pass quadrangle, Alaska.

Map Field No.	Fossil group(s)	Age	Map symbol	Location	Identification	Remarks
1	77AN68A	Mollusks	DK	T. 30 N. R. 14 E.	J. T. Detro, Jr.	Subtidal
2	78AN14A	Brachiopods	DK	T. 30 N. R. 14 E.	J. T. Detro, Jr.	Subtidal
3	78AN18A	Conodonts	MK	T. 30 N. R. 14 E.	A. Harris	Host rock reached 200°-250°C
4	78AN130B	Plants	DM	T. 30 N. R. 14 E.	J. T. Detro, Jr.	Non-marine
5	78AN12C	Conodonts	Line	T. 30 N. R. 14 E.	A. Harris	Host rock reached 300°-400°C
6	78AN23B	Do.	MK	T. 30 N. R. 14 E.	A. Harris	Host rock reached 400°C
7	78AN65A	Brachiopods	DMS	T. 29 N. R. 13 E.	J. T. Detro, Jr.	Subtidal
8	78AN181A	Conodonts	MK	T. 29 N. R. 13 E.	A. Harris	Host rock reached 420°C
9	78AN29A	Do.	MK	T. 29 N. R. 14 E.	A. Harris	Host rock reached 200°-250°C
10	78AN70A	Bryozoa	MK	T. 29 N. R. 15 E.	J. T. Detro, Jr.	Subtidal
11	78AN71B	Schizothere	DM	T. 29 N. R. 15 E.	J. T. Detro, Jr.	Subtidal
12	78AN13A	Do.	DMS	T. 29 N. R. 15 E.	J. T. Detro, Jr.	Subtidal
13	78AN22A	Do.	DMS	T. 29 N. R. 17 E.	J. T. Detro, Jr.	Do.
14	78AN143A	Schizothere	MK	T. 29 N. R. 18 E.	J. T. Detro, Jr.	Do.
15	78AN142B	Conodonts	MK	T. 29 N. R. 18 E.	A. Harris	Host rock reached 250°-300°C
16	78AN141B	Do.	MK	T. 29 N. R. 18 E.	A. Harris	Host rock reached 250°C
17	78AN140A	Schizothere	MK	T. 29 N. R. 18 E.	J. T. Detro, Jr.	Subtidal
18	78AN145A	Conodonts	Line	T. 29 N. R. 18 E.	A. Harris	Host rock reached 400°C
19	78AN146B	Conodonts	MK	T. 29 N. R. 18 E.	A. Harris	Do.
20	78AN247	Brachiopods	MK	T. 29 N. R. 19 E.	J. T. Detro, Jr.	Do.
21	78AN19	Do.	MK	T. 29 N. R. 19 E.	J. T. Detro, Jr.	Do.
22	78AN249C	Plants	DK	T. 29 N. R. 20 E.	J. T. Detro, Jr.	Non-marine
23	78AN250B	Brachiopods	DK	T. 29 N. R. 20 E.	J. T. Detro, Jr.	Tidal to subtidal
24	53AP200	Coral(?)	DMS	T. 29 N. R. 20 E.	Broegge and Pessel	Do.
25	53AP202	Brachiopods	DMS	T. 29 N. R. 20 E.	Broegge and Pessel	Subtidal
26	53AP204	Brachiopods	DMS	T. 29 N. R. 20 E.	Broegge and Pessel	Do.
27	53AP207	Do.	DMS	T. 29 N. R. 20 E.	Broegge and Pessel	Do.
28	53AP208	Pelecypods	DMS	T. 29 N. R. 20 E.	Broegge and Pessel	Tidal to subtidal
29	78AN225A	Schizothere	DMS	T. 28 N. R. 15 E.	J. T. Detro, Jr.	Do.
30	78AN228B	Brachiopods	DMS	T. 28 N. R. 15 E.	J. T. Detro, Jr.	Subtidal
31	78AN228B	Schizothere	DMS	T. 28 N. R. 15 E.	J. T. Detro, Jr.	Subtidal
32	78AN227B	Schizothere	DMS	T. 28 N. R. 15 E.	J. T. Detro, Jr.	Do.
33	78AN234B	Schizothere	DMS	T. 28 N. R. 16 E.	J. T. Detro, Jr.	Do.
34	78AN288B	Brachiopods	DMS	T. 28 N. R. 16 E.	J. T. Detro, Jr.	Subtidal
35	78AN233B	Schizothere	DMS	T. 28 N. R. 16 E.	J. T. Detro, Jr.	Subtidal
36	78AN219B	Schizothere	DMS	T. 28 N. R. 18 E.	J. T. Detro, Jr.	Tidal to subtidal
37	78AN247B	Do.	DMS	T. 28 N. R. 18 E.	J. T. Detro, Jr.	Do.
38	78AN129B	Schizothere	DMS	T. 28 N. R. 18 E.	J. T. Detro, Jr.	Subtidal
39	78AN245B	Schizothere	DMS	T. 28 N. R. 18 E.	J. T. Detro, Jr.	Do.
40	24AS16	Brachiopods	DK(?)	T. 28 N. R. 20 E.	Broegge and Pessel	Subtidal(?)
41	78AN158B	Do.	DMS	T. 28 N. R. 20 E.	J. Detro, Jr.	Subtidal
42	78AN243B	Schizothere	DMS	T. 28 N. R. 20 E.	J. T. Detro, Jr.	Subtidal
43	78AN212C	Schizothere	DMS	T. 28 N. R. 21 E.	J. T. Detro, Jr.	Subtidal
44	78AN126A	Brachiopods	DMS	T. 28 N. R. 21 E.	J. T. Detro, Jr.	Do.
45	78AN125A	Schizothere	DMS	T. 28 N. R. 21 E.	J. T. Detro, Jr.	Subtidal
46	78AN129B	Brachiopods	DMS	T. 28 N. R. 21 E.	J. T. Detro, Jr.	Subtidal
47	62AB351	Do.	DMS	T. 28 N. R. 21 E.	Broegge and Pessel	Do.
48	78AN205A	Conodonts	DMS	T. 28 N. R. 21 E.	A. Harris	Host rock reached 300°-400°C
49	78AN125A	Brachiopods	DMS	T. 28 N. R. 21 E.	J. T. Detro, Jr.	Subtidal
50	78AN122B	Do.	DMS	T. 28 N. R. 21 E.	J. T. Detro, Jr.	Do.
51	78AN158	Schizothere	DMS	T. 28 N. R. 21 E.	J. T. Detro, Jr.	Debris
52	78AN202A	Conodonts	DMS	T. 28 N. R. 21 E.	A. Harris	Host rock reached 300°-400°C
53	78AN34A	Do.	DMS	T. 28 N. R. 21 E.	A. Harris	Do.

Summary of radiometric ages

Map Field No.	Method	Mineral	Age (m.y.)	Unit	References
64	78AN211	K-Ar	96±3	Psyg	Turner, Forbes, and Myfield (1978)
65	78AN219	Hb-Sr	Whole rock 207'	Dgr	M. L. Silberman and D. G. Brookins (written commun., 1979)
66	78AN221	Hb-Sr	Do.	Dgr	Do.
67	78AN222	Hb-Sr	Do.	Dgr	Do.
68	78AN223	K-Ar	96±3	Dgr	Turner, Forbes, and Myfield (1978)
69	78AN228	Hb-Sr	Whole rock 326'	Dgr	M. L. Silberman and D. G. Brookins (written commun., 1979)
70	62AB3192	K-Ar	86±4	Dgr	Broegge and Pessel (1977)
71	78AN240	Hb-Sr	Whole rock 372'	Dgr	M. L. Silberman and D. G. Brookins (written commun., 1979)
72	62AB264	K-Ar	86±4	Dgr	Broegge and Pessel (1977)
73	78AN229	Hb-Sr	Whole rock 350'	Dgr	M. L. Silberman and D. G. Brookins (written commun., 1979)
74	78AN210A	K-Ar	95±3	Dgr	Turner, Forbes, Brookins, Helton, and Grybeck (1979)
75	78AN10B	K-Ar	131±3	DMSO	Turner, Forbes, Myfield (1978)
76	73AP2	K-Ar	131±3	DMSO	Do.
77	73AT20.2	K-Ar	131±3	DMSO	Do.
78	72F10AC2	K-Ar	287±7	Psyg	Do.
82	73AP45.2	K-Ar	168±8	Psyg	Do.
83	73AT15.2	K-Ar	102±1	Dgr	Do.
84	73AP58	K-Ar	106±3	Psyg	Do.
85	75ANW	K-Ar	100±3	Psyg	Do.
86	73AP3	K-Ar	110±3	DMSO	Do.
87	78AN11B	Hb-Sr	Whole rock 214'	Dgr(?)	M. L. Silberman and D. G. Brookins (written commun., 1979)
88	78AN12	Hb-Sr	Do.	Dgr(?)	Do.
89	78AN12	Hb-Sr	Do.	Dgr(?)	Do.

1. These six points lie along an isochron whose slope yields an age of 371±25 m.y. and an initial strontium isotope ratio of 0.7142±0.001. Individual ages calculated assuming ⁸⁷Rb/⁸⁶Rb = 0.7114 (Silberman and others, 1979).

2. U-Pb data lie along a discordia chord whose upper (crystallization) intercept is 360±10 m.y. The chord is defined by plagioclase and zircon-bearing samples from the Wessman, Survey Pass, and Ambler River quadrangles (Dillon and others, 1980).

3. These four points lie along an isochron whose slope yields an age of 214±4 m.y. and an initial strontium isotope ratio of 0.7140±0.001. Individual ages calculated assuming ⁸⁷Rb/⁸⁶Rb = 0.7114 (M. L. Silberman and D. G. Brookins, written commun., 1979).

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GEOLOGIC MAP OF THE SURVEY PASS QUADRANGLE, BROOKS RANGE, ALASKA

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