

DESCRIPTIVE DATA
SOME PLUTONIC ROCKS OF SOUTHWESTERN ALASKA

by
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SHEET 2 OF 4
Table 1

1977

MAP NUMBER	SAMPLE NUMBER(S) (1)	PLUTON NAME AND QUADRANGLE	PRINCIPAL LITHOLOGY after Streckisen, 1973	DESCRIPTION AND TEXTURAL FEATURES	MINERALOGY (2)			AGE, m.y. (3)	REMARKS
					Major	Minor	Secondary		
EARLY CRETACEOUS KVAC PLUTONS									
1	47AH86 TC 47AH90 T 53AC233 A	Nyc Russian Mission A-3 Bethel D-5	Granodiorite	Coarse-grained with K-feldspar phenocrysts up to 2 mm in size.	Andesine K-feldspar Quartz	Hornblende Magnetite Zircon Apatite Pyrite	Chlorite Carbonate	8 180 ± 50 (4)	Pluton intrudes Jurassic volcanic and sedimentary rocks. Body is elongate in a NW-SE direction and is associated with a nearby gabbro. Size 8 x 5 km.
LATE CRETACEOUS - EARLY TERTIARY PLUTONS									
2	02-1076 02-1297 02-1350 TA	Navarinum Goodnews C-4	Granite	Aphanitic groundmass with large phenocrysts of K-feldspar.	Quartz K-feldspar (?)Oligoclase Biotite	Hornblende	Chlorite	8 60.7 ± 1.6	Porphyritic intrusive with near horizontal sheeting. Associated with turfs and glassy flows. Size 3 x 5 km.
3	59AR1008 A	Shotgun Hills Taylor Mountains D-6	Quartz monzonite	Medium-grained with K-feldspar phenocrysts.	NA	NA	NA	8 67.1 ± 2.0	This pluton, mentioned by Oddy and others (1955, p. 83) as a probable stock in the mountain group known to local natives as "Mukhalinguk" or "south mountain", is delineated by Clark and others (1970, pl. 1). A potassium-argon age determination made on Clark's rock sample number 1 (1970, pl. 1 and table 1) is reported by Berry and others (1976, p. 4, see sample 69 AK 1006) as the indicated age of 66.6 ± 0.7. Size 8 x 20 km.
4	35AM100 T 35AM101 T 35AM102 T 35AM103 C 74AH72 TA	Tlichik Lake Hillingham D-6,7 Taylor Mountains A-5,7	Granite	Medium-grained, hypidiomorphic-granular texture.	Quartz Microcline Albite-Oligoclase Biotite	Clinopyroxene Magnetite Zircon Apatite	Chlorite Sericite		Intrudes chert and other sedimentary rocks in lower part of Denuk Group. Appears similar to Akuluktuk(?) body and possibly Shotgun Hills(?) body. Size 10 x 35 km.
5	35AM100 T 35AM101 T 35AM102 T 35AM103 C 74AH72 TA	Akuluktuk Goodnews C-1 Hillingham C-6	Granite	Coarse- to medium-grained, hypidiomorphic-granular texture. Quartz shows strain and undulatory extinction.	Quartz Microcline Albite-Andesite Apatite	Hornblende Zircon Apatite	Chlorite Sericite	8 69.6 ± 2.1 8 63.4 ± 1.5	Intrudes Denuk Group rocks. Body is anomalously low in magnetite and does not generate a detectable anomaly in the aeromagnetic data. Massive body, sheeted in planes essentially parallel to valley wall. Size 4 x 5 km.
6	50AR125 T 50AR126 TC 50AR127 T 50AR128 TC 74AH116 TA	Togalak Lake Goodnews C-2	Quartz monzonite	Medium-grained with plagioclase phenocrysts, xenomorphic-granular texture. Phenocrysts from less than 1 to 10 mm long.	Oligo-Labradite K-feldspar Quartz Biotite Hornblende	Pyroxene Magnetite Zircon Apatite Sphene	Chlorite Sericite	8 63.7 ± 2.0 8 69.5 ± 3.0	Massive body intruded by porphyritic diorite and porphyritic rhyolite dikes. Size 8 x 10 km.
7	02L-1381 TA	Sunday Creek Goodnews C-1	Tonalite	Medium- to coarse-grained with plagioclase phenocrysts, hypidiomorphic-granular texture.	Amphibole Oligoclase K-feldspar Quartz	Magnetite	Chlorite Sericite	8 72.5 ± 2.1	Very rich in amphibole. Size 2 x 2 km.
8	50AR117 T 50AR118 T 50AR119 T 50AR120 T 73AH1 T	Mt. Cratta Goodnews D-3	Quartz monzoniorite	Medium-grained, pandiomorphic-granular texture.	Oligo-Andesite K-feldspar Quartz Biotite Amphibole	Clinopyroxene Magnetite Apatite Zircon	Chlorite Sericite	8 71.1 ± 2.1	Intrudes Denuk Group rocks. Size 6 x 10 km.
9	02L-1561 02L-1574 02L-3154 TA	Mt. Maskey Goodnews D-1	Granodiorite	Medium-grained, hypidiomorphic-granular texture with K-feldspar phenocrysts.	Oligoclase Quartz K-feldspar Biotite	Amphibole Sericite Clinopyroxene Magnetite	Chlorite Sericite	8 64.5 ± 1.9 8 65.2 ± 2.0	Size 5 x 8 km.
10	53AH210 TC 74AH117 T	Kahalak Goodnews D-3	Quartz diorite	Coarse-grained, hypidiomorphic-granular texture. Strongly zoned plagioclase with wavy boundaries between zones.	Andesine K-feldspar Biotite	Amphibole Pyroxene	Chlorite		Intrudes Denuk Group rocks. Zinc and molybdenum mineralization within 10 km south may be related. Body appears very similar to Togalak(?) body. Size 5 x 6 km.
11	02L-1526 02L-1407 02L-3156 TA	Zone Creek Goodnews D-1	Tonalite	Fine- to medium-grained, hypidiomorphic-granular texture. Primary and secondary chlorite.	Oligoclase Quartz K-feldspar Biotite	Chlorite Hornblende	Chlorite Sericite	8 69.0 ± 2.1	Small magnetically reversed pluton. Size 2 x 3 km.
12	02L-1479a TA 02L-1479b TA	Wattanusue Goodnews D-7	Quartz diorite	Medium- to coarse-grained with cataclastic appearance in places. Slight orientation of plagioclase and mafic laths.	Oligo-Andesite K-feldspar Biotite	Amphibole/Pyrox.	Chlorite	8 71.3 ± 1.9	Associated with gold mineralization. Size 6 x 6 km.
13	045-1310 TA	Silutak Goodnews A-5	Tonalite	Medium-grained, hypidiomorphic granular texture.	Andesine Biotite Quartz	Hornblende	Chlorite Sericite	8 66.7 ± 2.0	Size 2 x 3 km.
PROBABLE EARLY TERTIARY PLUTONS									
14	54AH254 TC	Hobollina Taylor Mountains D-2	Granite	Medium- to coarse-grained, hypidiomorphic-granular texture with somewhat finer-grained biotite, which tends to be green.	Perthitic K-feldspar Quartz Biotite	Amphibole Sericite Apatite	Chlorite		Size 2 x 4 km.
15	52AH1094 TC	Hagenister Island Hagenister Island C-3,4	Quartz monzonite	Medium- to coarse-grained, hypidiomorphic-granular texture. Biotite in sheeted, red-brown pleochroism. Some biotite after green amphibole.	K-feldspar Quartz Oligoclase Biotite	Amphibole Sericite Magnetite Apatite	Sericite		Massive body locally cut by pyroxene diorite dikes. Size 4 x 5 km.
16	49AR100 49AR101 49AR102 49AR103 TC 49AR104 TC 49AR105 TC	Crooked Mountains Bethel A-2, B-1	Quartz monzoniorite	Medium-grained, porphyritic with generally subhedral grains. Plagioclase phenocrysts up to 10 mm long.	Perthitic K-feldspar Quartz Biotite K-feldspar Apatite	Amphibole Sericite Hornblende Clinopyroxene Magnetite Kaolinite	Chlorite Sericite Kaolinite		Pluton intrudes argillites, has sharp contacts and a closely associated gabbro. Size 8 x 25 km.
17	54AH252 TC	Rock Elevate A-1 Taylor Mountains D-1	Quartz monzoniorite porphyry	Large feldspar phenocrysts in a fine-grained quartzose matrix. Amphibole seems to be after pyroxene.	Oligoclase Perthitic K-feldspar Quartz Biotite	Tremolite Actinolite Pyroxene Magnetite	Chlorite		Intrudes massive coarsely crystalline limestone with abundant garnet and magnetite at contact. Size 2 x 4 km.
18	54AH256 TC	Maklung Hills Hillingham D-6	Quartz monzoniorite porphyry	Large-zoned, banded and unbanding feldspar and mafic phenocrysts in a fine-grained matrix of quartz and feldspar. Some phenocrysts have subhedral boundaries lined with inclusions of quartz.	Oligoclase K-feldspar Quartz	Biotite Hornblende	Chlorite	In process	Size 10 x 23 km.
PYROXENE-BEARING PLUTONS									
19	54AH253 TC	Kemak Hillingham C-6	Pyroxene alkali feldspar granite	Coarse-grained. Primarily perthitic feldspar grains surrounded by fine-grained quartz and feldspar. Thin section has cataclastic-like appearance.	Perthitic K-feldspar Quartz Pyroxene	Amphibole	Chlorite		Size 4 x 5 km.
20	54AH255 TC	Chakalak Hills Hillingham D-7	Pyroxene alkali-feldspar granite	As above but with more inclusions in the perthitic grains.	Perthitic K-feldspar Quartz Pyroxene	Biotite	Chlorite		Size 8 x 10 km.
21	53AH1326 TC 74AH108 TA	Walk Lake Goodnews A-2	Pyroxene monzonite	Medium-grained. Some areas of thin section suggest cataclasis. Section of feldspar has quartz-rich fine-grained xenolith with abundant biotite and pyroxene and minor feldspar.	Oligoclase K-feldspar Quartz Pyroxene Biotite	Quartz Magnetite	Chlorite		Size 3 x 5 km.
22	35AM500 T 35AM501 C	Felik Lake Hillingham D-8	Pyroxene monzonite	Medium-grained, pandiomorphic-granular texture.	Andesine K-feldspar Biotite Pyroxene	Magnetite Apatite	Chlorite		Size 4 x 4 km.
23	74AH251 TA	Kulusak Nashagak Bay D-5	Pyroxene monzonite	Medium-grained, pandiomorphic-granular texture.	K-feldspar Oligoclase Quartz Biotite	Amphibole Magnetite	Chlorite		Pluton intrudes graywackes of probable middle Jurassic age. It is the furthest south offshore pluton east of the Yotak-Tikchik fault. Size 2 x 2 km.
24	54AH210 TC	Mt. Chaufaluk Taylor Mountains A-7	Pyroxene tonalite	Porphyry. Phenocrysts of plagioclase surrounded by a fine-grained matrix of mafic and quartz. Biotite altering to chlorite.	Andes-Oligo. K-feldspar Biotite Pyroxene	Magnetite	Chlorite Sericite		Pluton intrudes argillaceous sediments. Size 3 x 4 km.
MAFIC AND ASSOCIATED PLUTONS									
25	53AH253 T 53AH254 T 53AH255 T 74AH130 C	Tokomarik Mountain Hagenister Island C-6	Trendzjeite	Medium-grained, hypidiomorphic-granular texture.	Oligoclase Quartz	Amphibole	Sericite Chlorite Clinocalsite/ zoisite		Size 2 x 2 km.
26	53AH1326 TC 02L-2352 T	Tunalik Goodnews B-7	Pyroxene tonalite	Medium-grained, hypidiomorphic-granular texture. Slight alignment of plagioclase laths. Pyroxene altering to biotite to a minor extent.	Andesine K-feldspar Biotite Pyroxene	Magnetite	Chlorite Sericite		Size 3 x 6 km.
27	49AR207 TC	Kasigluk River Bethel C-4,5	Pyroxene diorite	Coarse- to medium-grained, xenomorphic-granular texture.	Labradolite Orthopyroxene K-feldspar Apatite	Quartz Magnetite	Biotite Sericite		Pluton intrudes Jurassic volcanic and sedimentary rocks. Size 1 x 5 km in immediate outcrop area, but similar rock crops out in the valley of the Little Kasigluk River 13 km west and possibly north of the area as well.
28	74AR102 C 74AR103 C 02L-1420 TA 02L-2263 T	Crater Hill Goodnews A-7	Diorite	Coarse-grained, hypidiomorphic-granular texture. Two amphiboles with abundant inclusions.	Labradolite Orthopyroxene K-feldspar Quartz Magnetite	Amphibole	Epidote	8 162.4 ± 4.0	Has metasomitic appearance. Size 2 x 8 km.
29	50AR200 TC	Denuk Mountain Bethel C-1	Gabbro	Coarse-grained, cataclastic texture of almost entirely plagioclase phenocrysts. Several allspage planes in thin section are filled with a plagioclase microbreccia. In many phenocrysts twins are offset along minor slip planes.	Labradolite Hornblende Quartz Magnetite Tremolite	Amphibole Magnetite	Chlorite Calcite Epidote		Northwest of Mashik Lake in fault zone. Appears to intrude Denuk Group and possibly other volcanic and sedimentary rocks. Size 3 x 10 km.
30	52AR146 TC	Aeolus Mountain Hagenister Island D-3	Gabbro	Coarse- to medium-grained. Much of amphibole is greenish brown being replaced by a green amphibole. Alteration: pyroxene to amphibole to anomalous blue chlorite and carbonate.	Andesine/ Labradolite Oligoclase Amphibole	Magnetite Apatite Sphene	Clinocalsite Chlorite Carbonate		Well-developed banding on weathered surfaces, is best near contact. Many dark dikes and stringers of pink feldspar. Size 2 x 4 km.
31	52AR168 TC	Mitogak Hagenister Island D-3 Goodnews A-6	Gabbro	Coarse-grained, xenomorphic-granular texture with fine-grained plagioclase crystals. Slight alignment of grains and rock in thin section has a fractured appearance, with a filled crack cutting across it. Amphibole replacing pyroxene.	Amphibole Labradolite Orthopyroxene Quartz	Amphibole Magnetite	Chlorite		Size 2 x 6 km.
32	62AR176a TC 74AH131 T	Dowdruff Mountain Hagenister Island D-4	Gabbro	Coarse-grained, xenomorphic-granular texture.	Amphibole Labradolite Orthopyroxene Quartz	Magnetite Clinopyroxene		In process	Intrudes Denuk Group rocks. Size 3 x 5 km.
33	49AR147a T	Kethluk River sill Bethel A-5, B-4	Gabbro	Medium-grained, xenomorphic-granular texture with a few large plagioclase phenocrysts. Plagioclase is later than the mafic and cuts across them. Plagioclase shows mutual solution boundaries.	Labradolite Orthopyroxene Quartz	Magnetite	Serpentine Calcite		Large sill-like intrusive. Size 2 x 6 km.
MISCELLANEOUS PLUTONS OF UNKNOWN ASSOCIATION									
34	49AR255 TC	Kasigluk Dome Bethel C-5	Alkali feldspar granite porphyry	Porphyry with very fine-grained matrix.	Albite K-feldspar Quartz	Biotite Magnetite			Hydrothermally altered. Intrudes Jurassic volcanic and sedimentary rocks and the Kasigluk River pyroxene diorite body. Sparry texture with manganese oxide in dendritic forms. Size 4 x 4 km.
35	74AR26 TCA	Nunatak Hills Nashagak Bay D-6 Hagenister Island D-1	Granitoid felsite	Fine-grained, hypidiomorphic-granular texture.	Plagioclase K-feldspar Quartz	Magnetite		8 13.0 ± 0.5 (4)	Hypabyssal sill or dome.
36	53AH231 TC	Gechiak Goodnews B-4	Quartz-rich granitoid porphyry	Porphyry. Rounded phenocrysts of oligoclase in a very fine-grained matrix. All mafic (originally biotite?) altered to chlorite.	Quartz Oligoclase		Chlorite Sericite		Intrudes pillow basalts and cherts. Size 2 x 4 km.
37	54AR18 TC	Arrow Creek Taylor Mountains A-5	Alkali feldspar quartz syenite porphyry	Porphyry. Large feldspar phenocrysts with included and interstitial mafic and quartz.	Perthitic K-feldspar Quartz	Amphibole K-feldspar	Epidote Spinel		Size 3 x 4 km.
38	48AR165	Bek River Sill Bethel A-5	Tonalite (altered)	Medium-grained, xenomorphic-granular texture. Highly altered, abundant calcite and chlorite pseudomorphs after amphibole or pyroxene.	Andesine Quartz	Sphene	Chlorite Calcite Kaolinite Sericite		Sill-like body. Size 1 x 12 km.
39	52AR32a TC	Chagwan Mountain Hagenister Island C-6	Meta-gabbro	Coarse-grained	Albite Clinocalsite/ zoisite Amphibole				Oligoclase gabbroic rock and in turn is cut by numerous dikes. One greenstone-like rock. Probably a metasomatized gabbro. Size 1 x 2 km.

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