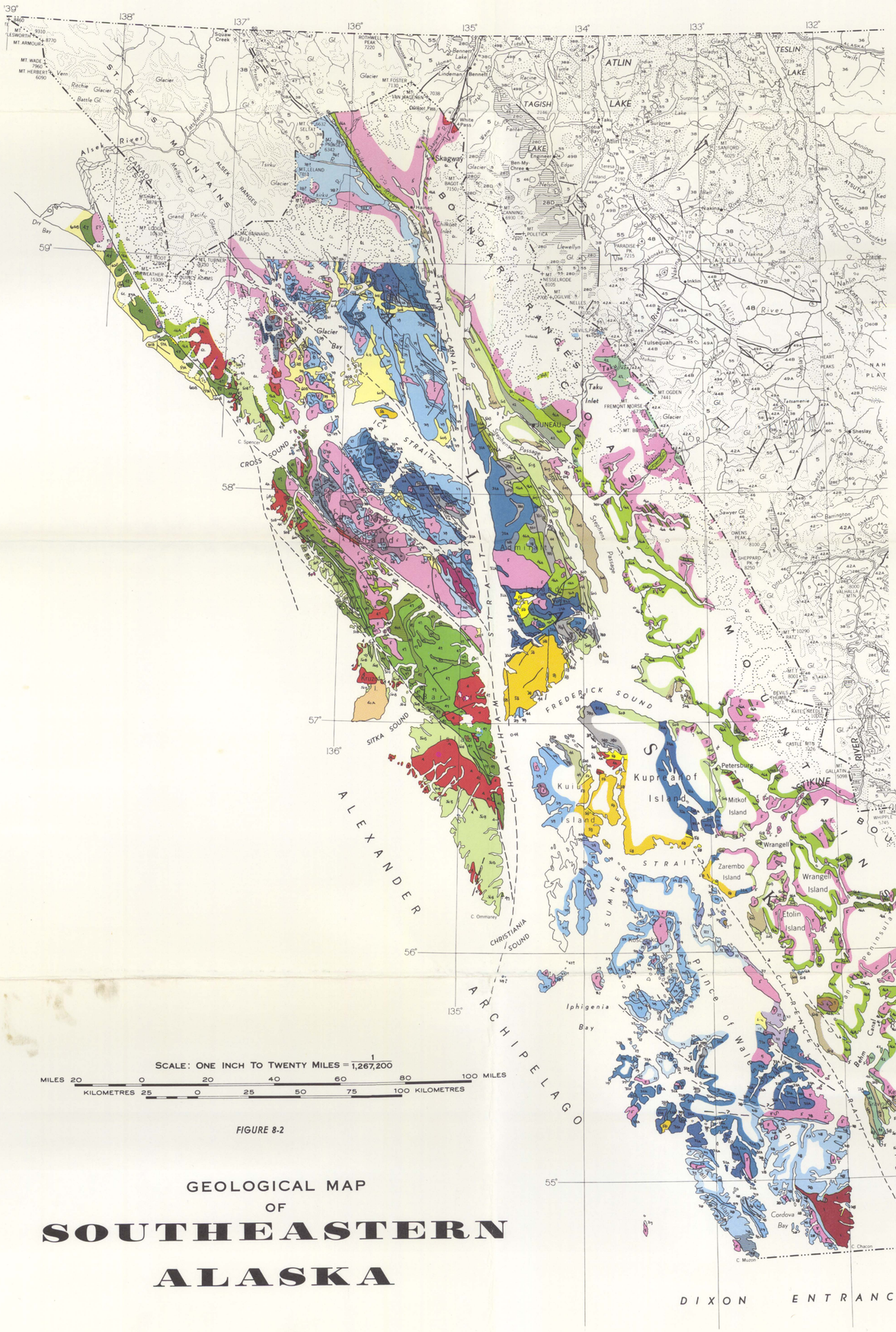
GEOLOGICAL MAP OF SOUTHEASTERN ALASKA



SCALE: ONE INCH TO TWENTY MILES = 1/1,267,200

MILES 20 0 20 40 60 80 100 MILES

KILOMETRES 25 0 25 50 75 100 KILOMETRES

FIGURE 8-2

LEGEND

FORMAT, TERMINOLOGY, UNIT NUMBERS AND COLORS SELECTED TO MATCH GEOLOGICAL SURVEY OF CANADA MAP 932A (SECOND EDITION) AS NEARLY AS POSSIBLE AND MAY NOT AGREE WITH STANDARD U.S.G.S. PRACTICE. SEE NOTES FOR SPECIFIC DIFFERENCES.

SEDIMENTARY AND VOLCANIC ROCKS

CENOZOIC

59, 60 — UPPER TERTIARY AND QUATERNARY
59A, MARINE CLASTIC SEDIMENTARY ROCKS AND MINOR VOLCANIC ROCKS OF MIOCENE (?) AND PLIOCENE AGE IN GULF OF ALASKA PROVINCE; **60A**, (EDGECUMBE VOLCANICS) RECENT; **60B**, PLEISTOCENE AND RECENT.

58 — LOWER TERTIARY
CLASTIC SEDIMENTARY ROCKS (KOOTZNAHOO FM.) AND VOLCANIC ROCKS (ADMIRALTY ISLAND VOLCANICS) OF PALEOCENE THROUGH MIOCENE AGE.

55 — CRETACEOUS AND TERTIARY
UPPER CRETACEOUS AND LOWER TERTIARY
SEDIMENTARY AND VOLCANIC ROCKS.

MESOZOIC

50 — JURASSIC AND CRETACEOUS
UPPER JURASSIC AND LOWER CRETACEOUS
50B, MARINE CLASTIC SEDIMENTARY ROCKS (SITKA GRAYWACKE, SEYMOUR CANAL FM., BERNERS FM., OF KNOPF (1911) SHELTER FM., TREADWELL FM.) AND VOLCANIC ROCKS (DOUGLAS ISLAND VOLCANICS, BROTHERS VOLCANICS).

47 — TRIASSIC OR JURASSIC
SEDIMENTARY CLASTIC AND CALCAREOUS, AND VOLCANIC ROCKS (KELP BAY GP.)

44 — TRIASSIC
UPPER TRIASSIC
MARINE SEDIMENTARY CLASTIC AND CALCAREOUS, AND VOLCANIC ROCKS (HYD FM.)

42 — TRIASSIC (UNDIVIDED)
SEDIMENTARY AND VOLCANIC ROCKS.

PALEOZOIC

46 — UPPER PALEOZOIC AND MESOZOIC
46A, SEDIMENTARY AND VOLCANIC ROCKS, NOW SCHIST, AMPHIBOLITE, AND MARBLE; INFERRED AGE DIFFERS FROM THAT OF UNIT 46 ON GSC MAP 932A.

38 — MISSISSIPPIAN, PENSYLVANIAN, AND PERMIAN
38D, MARINE SEDIMENTARY CLASTIC ROCKS (CANNERY FM.) LOWER PERMIAN CALCAREOUS ROCKS (PYBUS DOCOMITE, HOUKEEN FM.); AGE SPAN GREATER THAN THAT OF UNIT 38 ON GSC MAP 932A.

32 — DEVONIAN
MIDDLE AND UPPER DEVONIAN
32A, SEDIMENTARY CLASTIC ROCKS (CEDAR COVE FM., HOOD BAY FM., RETREAT GP., VALLENAR FM.) AND CALCAREOUS ROCKS (BLACK CAP LIMESTONE), AND VOLCANIC ROCKS (GAMBIER BAY FM., FRESHWATER BAY FM.); AGE SPAN GREATER THAN THAT OF UNIT 32 ON GSC MAP 932A.

28 — PALEOZOIC (UNDIVIDED)
SEDIMENTARY AND VOLCANIC ROCKS, NOW SCHIST, AMPHIBOLITE, AND MARBLE (WALES GP.)

29 — SILURIAN AND DEVONIAN
SEDIMENTARY CLASTIC ROCKS (TIDAL FM., RENDU FM.) AND CALCAREOUS ROCKS (PYRAMID PEAK LIMESTONE, WILLOUGHBY LIMESTONE, KENNEL CREEK LIMESTONE), AND VOLCANIC ROCKS; INCLUDES ROCKS OF KNOWN LATE SILURIAN AGE AND OF SILURIAN(?) AND DEVONIAN(?) AGE.

27 — ORDOVICIAN AND SILURIAN
UPPER ORDOVICIAN, LOWER AND MIDDLE SILURIAN
SEDIMENTARY CLASTIC ROCKS AND VOLCANIC ROCKS.

INTRUSIVE ROCKS

(INCLUDING SOME GRANITIC ROCKS OF METAMORPHIC ORIGIN)

CENOZOIC

4 — TERTIARY
4, ACIDIC AND INTERMEDIATE ROCKS, MAINLY GRANODIORITE, QUARTZ DIORITE, AND TRONDJHEMITE; **4A**, BASIC ROCKS, MAINLY GABBRO, NORITE, AND DIORITE; ALL OF INFERRED EARLY AND(OR) MIDDLE TERTIARY AGE.

MESOZOIC

3 — JURASSIC AND(OR) CRETACEOUS
UPPER JURASSIC AND(OR) CRETACEOUS
3, ACIDIC AND INTERMEDIATE ROCKS, MAINLY QUARTZ DIORITE, GRANODIORITE, AND DIORITE, **3B**, BASIC ROCKS, MAINLY GABBRO.

5 6 — MESOZOIC AND LOWER TERTIARY
(chiefly Jurassic or Cretaceous)
5, ACIDIC AND INTERMEDIATE ROCKS, MAINLY QUARTZ DIORITE, GRANODIORITE, DIORITE, GRANITE, GABBRO, AND GNEISS; **5A**, TRIASSIC; **6**, BASIC ROCKS, MAINLY GABBRO AND DIORITE.

PALEOZOIC

1 — PRE-PERMIAN
1, ACIDIC ROCKS, MAINLY GRANODIORITE, QUARTZ DIORITE, QUARTZ MONZONITE, AND DIORITE; **1A**, NEPHELINE SYENITE AND RELATED ROCKS.

7 — CRETACEOUS(?)
7E, ULTRABASIC ROCKS, SERPENTINITE, PERIDOTITE, PYROXENITE, DUNITE, AND GABBRO; AGE SPAN DIFFERENT THAN THAT OF UNIT 7 ON GSC MAP 932A.

ROCK UNIT DOMINANTLY OR ENTIRELY OF VOLCANIC ORIGIN .....

ROCK UNIT DOMINANTLY CALCAREOUS OR DOLOMITIC .....

AREAS OF INTENSE METAMORPHISM .....

FAULT (DEFINED, ASSUMED) .....

In the legend dominant rock type in each rock-unit is given where possible. Where a rock-unit is described as sedimentary, minor volcanic material may be present. Where a rock-unit is described as sedimentary and volcanic, it is dominantly sedimentary if unpatterned, and is mainly or entirely volcanic if patterned.
Where a rock-unit is named in the legend, formation is abbreviated to FM., series to S., and group to GP. The rock-unit so named is not represented wherever the corresponding number appears; for example nearly all sedimentary and volcanic rocks of Silurian and Devonian age are indicated by number 29, but by no means are all so designated correlations of the Tidal Formation.
Rock-units named in the legend are those appearing on maps used in the compilation. Where new formations have been described by revision of measured sections the new names are not used because the formational boundaries have not been traced out.
For want of space formational names that appear within groups are omitted from the legend.
Where possible highly metamorphosed rocks (mainly migmatites) have been so indicated, but in many granitic areas, such rocks have been included with granitic rocks.

GEOLOGY COMPILED BY D. A. BREW
FROM SOURCES SHOWN ON FIGURE 8-1
BASE MAP PROVIDED BY GEOLOGICAL SURVEY OF CANADA