

GEOLOGIC MAP OF ALASKA

Compiled by Helen M. Beikman



1980

STRATIFIED SEDIMENTARY SEQUENCE		CORRELATION OF MAP UNITS		EXPLANATION	
Mainly marine, includes some volcanic rocks. In part metamorphosed		Mainly marine, includes some volcanic rocks. In part metamorphosed		Mainly marine, includes some volcanic rocks. In part metamorphosed	
Quaternary	Q	Quaternary	Q	Quaternary	Q
Tertiary	Tp, Tm, Tc	Tertiary	Tp, Tm, Tc	Tertiary	Tp, Tm, Tc
Cretaceous	Cr	Cretaceous	Cr	Cretaceous	Cr
Jurassic	J	Jurassic	J	Jurassic	J
Triassic	Tr	Triassic	Tr	Triassic	Tr
Permian	P	Permian	P	Permian	P
Mississippian	M	Mississippian	M	Mississippian	M
Devonian	D	Devonian	D	Devonian	D
Silurian	S	Silurian	S	Silurian	S
Ordovician	O	Ordovician	O	Ordovician	O
Cambrian	C	Cambrian	C	Cambrian	C
Precambrian Z	Z	Precambrian Z	Z	Precambrian Z	Z
VOLCANIC ROCKS		INTRUSIVE ROCKS		ULTRAMAFIC ROCKS	
Igneous		Igneous		Igneous	
Metamorphic		Metamorphic		Metamorphic	
Sedimentary		Sedimentary		Sedimentary	
Unconformity		Unconformity		Unconformity	
Fault		Fault		Fault	
Contact		Contact		Contact	
Dashed where concealed		Dashed where concealed		Dashed where concealed	
Dotted where concealed		Dotted where concealed		Dotted where concealed	
Star in triangle to 1500 ft to present		Star in triangle to 1500 ft to present		Star in triangle to 1500 ft to present	
Star in circle to 1000 ft to present		Star in circle to 1000 ft to present		Star in circle to 1000 ft to present	
Star in square to 500 ft to present		Star in square to 500 ft to present		Star in square to 500 ft to present	
Star in diamond to 200 ft to present		Star in diamond to 200 ft to present		Star in diamond to 200 ft to present	
Star in pentagon to 100 ft to present		Star in pentagon to 100 ft to present		Star in pentagon to 100 ft to present	
Star in hexagon to 50 ft to present		Star in hexagon to 50 ft to present		Star in hexagon to 50 ft to present	
Star in heptagon to 25 ft to present		Star in heptagon to 25 ft to present		Star in heptagon to 25 ft to present	
Star in octagon to 10 ft to present		Star in octagon to 10 ft to present		Star in octagon to 10 ft to present	
Star in nonagon to 5 ft to present		Star in nonagon to 5 ft to present		Star in nonagon to 5 ft to present	
Star in decagon to 2 ft to present		Star in decagon to 2 ft to present		Star in decagon to 2 ft to present	
Star in hendecagon to 1 ft to present		Star in hendecagon to 1 ft to present		Star in hendecagon to 1 ft to present	
Star in dodecagon to 0.5 ft to present		Star in dodecagon to 0.5 ft to present		Star in dodecagon to 0.5 ft to present	
Star in tridecagon to 0.25 ft to present		Star in tridecagon to 0.25 ft to present		Star in tridecagon to 0.25 ft to present	
Star in tetradecagon to 0.1 ft to present		Star in tetradecagon to 0.1 ft to present		Star in tetradecagon to 0.1 ft to present	
Star in pentadecagon to 0.05 ft to present		Star in pentadecagon to 0.05 ft to present		Star in pentadecagon to 0.05 ft to present	
Star in hexadecagon to 0.025 ft to present		Star in hexadecagon to 0.025 ft to present		Star in hexadecagon to 0.025 ft to present	
Star in heptadecagon to 0.01 ft to present		Star in heptadecagon to 0.01 ft to present		Star in heptadecagon to 0.01 ft to present	
Star in octadecagon to 0.005 ft to present		Star in octadecagon to 0.005 ft to present		Star in octadecagon to 0.005 ft to present	
Star in enneadecagon to 0.0025 ft to present		Star in enneadecagon to 0.0025 ft to present		Star in enneadecagon to 0.0025 ft to present	
Star in icosaedron to 0.001 ft to present		Star in icosaedron to 0.001 ft to present		Star in icosaedron to 0.001 ft to present	

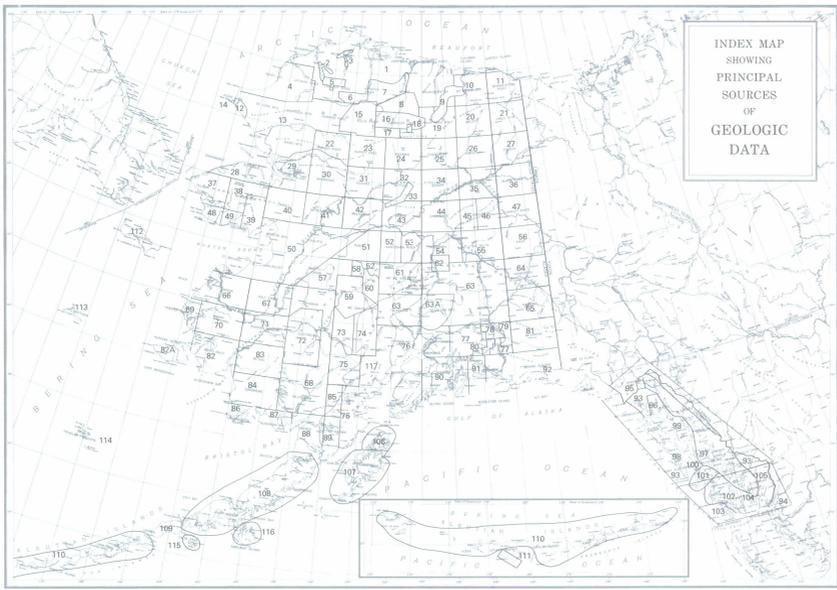
MAP SYMBOLS

- Dashed where concealed
- Dotted where concealed
- ★ Volcano—Active to within 1500 ft to present
- ★ Volcano—Active or probable center
- Bathymetric contours—Contour interval 50, 100, 200, and 400 meters

SOURCES OF GEOLOGIC DATA

Unless otherwise indicated, all publications are those of the U.S. Geological Survey. B = Bulletin, C = Circular, GC = Geologic Quadrangle Map, T = Miscellaneous Geologic Investigations Map, MF = Miscellaneous Field Studies Map, OF = Open-File Report, PP = Professional Paper. Complete bibliographic citations may be obtained from the Geologic Map Index of Alaska, 1978.

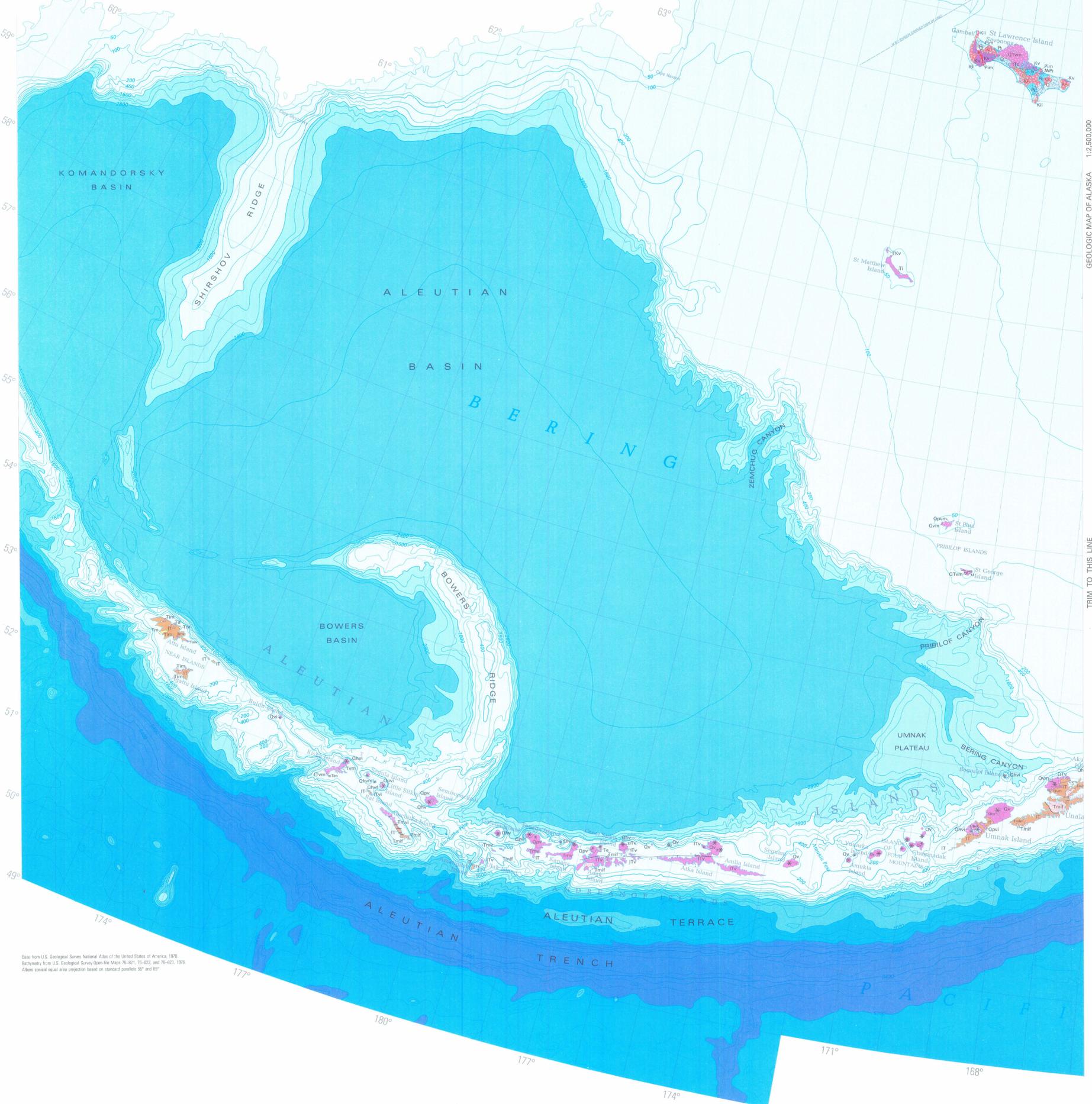
- Geology interpreted by H. M. Belkman from test well and core hole data from PP 303B (Robinson, F. M., Collins, F. R., and Bergquist, H. R.) stratigraphic sections described in PP 806 (Detenman, R. L., Reser, H. N., Brooge, W. P., and Duno, J. T., Jr., field observations by L. D. Carter, and paleontologic age determinations by L. N. Marzocch, Kristin McDougall, and J. E. Haal (written commun., 1979).
- OF 1190, 1949, Geol. Inv. N.P.R.A. Rept. 28 (Stefanovs, K., and Mangun, M. D.).
- OF 1947, Geol. Inv. N.P.R.A. Rept. 6 (Webber, E. J.).
- PP 303C, pt. 9, 1,500,000, 1960 (Chapman, R. M., and Sabbe, E. G.).
- OF, fig. 1 and 2, 1:500,000, pt. 3, 1:400,000, 1950, Geol. Inv. N.P.R.A. Rept. 36 (Whittington, C. L., and Keller, A. S.).
- OF, fig. 1, 1:500,000, 1948, Geol. Inv. N.P.R.A. Rept. 17 (Whittington, C. L., and Troyer, M. L.).
- PP 303A, pt. 52, 1:125,000, 1966 (Brooge, W. P., and Whittington, C. L.).
- PP 303E, pt. 27, 1:125,000, 1963 (Detenman, R. L., Bickel, R. S., and Coy, George).
- PP 303D, pt. 21, 1:125,000, 1961 (Keller, A. S., Morris, R. H., and Detenman, R. L.).
- OF 71-237, 1:200,000, 1971 (Reser, H. N., Brooge, W. P., Duno, J. T., Jr., and Detenman, R. L.).
- MF 610, 1:200,000, 1974 (Reser, H. N., Brooge, W. P., Duno, J. T., and Detenman, R. L.).
- PP 395, pt. 1, 1:63,360, 1967 (Campbell, R. H.).
- Unpublished compilation, 1:1,000,000, 1975 (Taffler, L. I.).
- Unpublished compilation, 1976, (Grove, Arthur).
- PP 303F, pt. 43, 1:125,000, 1964 (Chapman, R. M., Detenman, R. L., and Mangun, M. D.).
- PP 303G, pt. 50, 1:125,000, 1964 (Patton, W. W., Jr., and Taffler, L. I.).
- OF 60-21, 1:500,000, 1960 (Brooge, W. P., Reser, H. N., Patton, W. W., Jr., and Mangun, M. D.).
- PP 303A, pt. 2, 1:63,360, 1967 (Boosher, A. L., and Duno, J. T., Jr.).
- OF 77-27, 1:250,000, 1977 (Brooge, W. P., and Reser, H. N.).
- OF 71-56, 1:250,000, 1971 (Brooge, W. P., and Reser, H. N.).
- 1375, 1:250,000, 1964 (Brooge, W. P., and Reser, H. N.).
- OF 62-15, 1:250,000, 1962 (Brooge, W. P., and Reser, H. N.).
- OF 69-25, 1:250,000, 1969 (Brooge, W. P., and Reser, H. N.).
- Unpublished compilation, 1975 (Hopkins, D. M.).
- 1530, 1:250,000, 1968 (Patton, W. W., Jr., and Miller, T. P.).
- 1554, 1:250,000, 1968 (Patton, W. W., Jr., Miller, T. P., and Taffler, L. I.).
- 1459, 1:250,000, 1966 (Patton, W. W., Jr., and Miller, T. P.).
- MF 492, 1:250,000, 1972 (Patton, W. W., Jr., and Miller, T. P.).
- B 1322, fig. 2, 1:750,000, 1970 (Patton, W. W., Jr., and Miller, T. P.).
- MF 525, 1:250,000, 1973 (Patton, W. W., Jr., Reser, H. N., and Vande Warden).
- 1111-H, pt. 42, 1:500,000, 1962 (Wilkins, J. R.).
- 1601, 1:250,000, 1970 (Babbs, E. E.).
- 1685, 1:250,000, 1972 (Sainsbury, C. L.).
- Sainsbury, C. L., 1974, Geologic map of the Bendeleben quadrangle, Seward Peninsula, Alaska. A report prepared in cooperation with the U.S. Bureau of Mines, the U.S. Geological Survey, and the Magmeters, 1:250,000.
- OF 72-256, 1:250,000, 1972 (Miller, T. P., Graybeak, D. G., Elliott, R. L., and Hudson, Travis).
- 1492, 1:250,000, 1967 (Patton, W. W., Jr.).
- 1437, 1:250,000, 1966 (Patton, W. W., Jr., Miller, T. P., Chapman, R. M., and Yeend, Warren).
- OF 75-387, 1:250,000, 1975 (Chapman, R. M., Yeend, Warren, Brooge, W. P., and Reser, H. N.).
- OF 71-147, 1:250,000, 1977 (Patton, W. W., Jr., Miller, T. P., Chapman, R. M., and Yeend, Warren).
- OF 75-387, 1:250,000, 1975 (Chapman, R. M., Yeend, Warren, Brooge, W. P., and Reser, H. N.).
- OF 71-147, 1:250,000, 1977 (Patton, W. W., Jr., Miller, T. P., and Tabor, Bond).
- B 872, pt. 1, 1:500,000, 1937 (Morris, R. H.).
- Unpublished compilation, 1:1,000,000, 1975 (Dobos, W. E.).
- 1573, 1:250,000, 1969 (Babbs, E. E., and Charuk, Michael, Jr.).
- OF 72-326, 1:250,000, 1972 (Sainsbury, C. L., Hammett, R. L., and Hudson, Travis).
- OF 72-324, 1:250,000, 1972 (Sainsbury, C. L., Hudson, Travis, Evans, Rodney, and Meek, W. R.).
- PP 774-A, fig. 2, 1:250,000, 1973 (Patton, W. W., Jr.).
- Unpublished compilation, 1976 (Chapman, R. M., and Patton, W. W., Jr.).
- B 667, pt. 2, 1:250,000, 1918 (Eaiza, H. M.; modified by Chapman, R. M., and Belkman, H. M.).
- B 907, pt. 1, 2, and 3, 1940 (Capps, S. R.; modified by Chapman, R. M., and Belkman, H. M.).
- 1453, 1:250,000, 1966 (Dow, T. L., Wahrhaftig, Clyde, and Weber, Florence).
- Unpublished compilation, 1:250,000 (Weber, F. R., and Foster, H. L.).
- MF 358, 1:250,000, 1972 (Foster, H. L.).



- B 754, pt. IV, 1:250,000, 1994 (Morris, J. B., Jr., and Harrington, G. L.).
- B 788-D, pt. 5, 1:250,000, 1926 (Brown, J. S.).
- B 1071-G, pt. 2, 1:250,000, 1960 (Fernald, A. T.).
- PP 701-C, pt. 9, 1:625,000, 1911 (Books, A. H.; modified by Belkman, H. M.).
- B 1188A, pt. 1, 1:250,000, 1961 (Reed, J. C., Jr.).
- GC 804-811, 1:63,360, 1970 (Wahrhaftig, Clyde).
- Numerous maps at various scales. See MF-412.
- Unpublished compilation, 1977 (Cessey, Bela, Jr.).
- 1593, 1:250,000, 1970 (Foster, H. L.).
- MF 656-A, 1:250,000, 1975 (Reser, H. N.).
- 1469, 1:250,000, 1966 (Hoare, J. M., and Conrod, W. L.).
- Unpublished compilation (Hoare, J. M., and Conrod, W. L.).
- 1523, 1:250,000, 1968 (Hoare, J. M., and Conrod, W. L.).
- 1668, 1:250,000, 1971 (Hoare, J. M., and Conrod, W. L.).
- 1292, 1:250,000, 1959 (Hoare, J. M., and Conrod, W. L.).
- PP 288, pt. 1, 1:250,000, 1965 (Gady, W. M., Wallace, R. E., Hoare, J. M., and Webber, E. J.).
- Interpolated by H. M. Belkman.
- OF 70-471, pt. 1, 1:250,000, 1970 (Reed, B. L., and Elliott, R. L.).
- B 862, pts. 1 and 2, 1:250,000, 1935 (Capps, S. R.).
- 1103, 1:250,000, 1976 (Magson, L. B., Adkison, W. L., and Egbert, R. M.).
- Unpublished compilation (Parker, George, and MacKenzie, E. M., Jr.).
- OF 70-471, pt. 1, 1:250,000, 1970 (Reed, B. L., and Elliott, R. L.).
- B 943-C, fig. 3, 1:375,000, 1945 (Kingston, Jack, and Miller, D. J.).
- 1356, 196,000, 1962 (Coulter, H. W., and Coulter, E. B.).
- MF 728, 1:250,000, 1976 (MacKenzie, E. M., Jr.).
- 1233, 1:500,000, 1957 (Conrod, W. L.).
- GC Soc. America Mem. 116, p. 377-413, pt. 1, 1:56,000, 1968 (Hoare, J. M., Conrod, W. L., Cox, A. V., and Dalympic, G. B.).
- 1285, 1:250,000, 1969 (Hoare, J. M., and Conrod, W. L.).

- 1339, 1:250,000, 1960 (Hoare, J. M., and Conrod, W. L.).
- 1407, 1:250,000, 1964 (Detenman, R. L., and Reed, B. L.).
- 1521, 1:250,000, 1961 (Hoare, J. M., and Conrod, W. L.).
- Unpublished compilation (Hoare, J. M.).
- Interpolated by H. M. Belkman.
- B 1058-C, pt. 20, 1:250,000, 1959 (Keller, A. S., and Reser, H. N.).
- PP 560-B, p. 63, fig. 1, 1:875,000 (Parker, George, and MacKenzie, E. M., Jr.).
- 1484, 1:500,000, 1967 (Parker, George).
- Geol. Survey, Canada, Open-File Rept. 214, 1:1,000,000, 1974 (Souther, J. G., Brew, D. A., and Okulich, A. V.).
- Geol. Survey, Canada, Open-File Rept. 166, 1:1,000,000, 1973 (Hutchison, W. W., Berg, H. C., and Okulich, A. V.).
- PP 802, pt. 1, 1:63,360, 1974 (MacKenzie, E. M., Jr., Robertson, E. C., and Wadler, G. R.).
- 1305, 1:250,000, 1959 (Latham, E. H., Loney, R. A., Conrod, W. H., and Berg, H. C.).
- B 800, pt. 1, 1:500,000, 1929 (Buddington, A. F., and Chapin, Theodore).
- PP 792, pt. 1, 1:250,000, 1975 (Loney, R. A., Brew, D. A., Maffler, L. J. P., and Pomeroy, J. S.) and C 733, fig. 7, 1:2,750,000, 1976 (Parker, George, Jones, D. L., Hudson, Travis, and Berg, H. C.).
- B 1181-B, pt. 1, 1:250,000, 1965 (Latham, E. H., Pomeroy, J. S., Berg, H. C., and Loney, R. A.).
- B 1281-C, pt. 1, 1:63,360, 1967 (Maffler, L. J. P.).
- Unpublished compilation, 1974 (Overshine, A. T.).
- B 1154 (MacKenzie, E. M., Jr.) and B 1284 (Eberlein, G. D., and Charuk, Michael, Jr.).
- Unpublished compilation, 1974 (Clark, A. L.).
- B 1373, pt. 1, 1:63,360, 1973 (Berg, H. C.) and 684, 1:63,360, 1972 (Berg, H. C.).

- OF 78-23A, 1:250,000, 1978 (Berg, H. C., Elliott, R. L., Smith, J. G., and Koch, R. D.).
- B 880-C, pt. 2, 1:250,000, 1937 (Capps, S. R.).
- OF 67-161, 1:250,000, 1967 (Moore, G. W.; modified 1977 (Moore, G. W.) and 1976 (Connelly, William)).
- Geol. Soc. America Mem. 99, sheets 1 and 2, 1:250,000, 1965 (Bark, C. A.).
- Unpublished compilation (Miller, T. P.).
- B 1028 (numerous authors; modified in part from Geol. Soc. America Bull., v. 81, no. 12, p. 3883-3992, 1970 (Scholl, D. W., Green, H. C., and Marlow, M. S.) and v. 84, no. 5, table 2, p. 1560 (Marlow, D. S., Scholl, D. W., Buffington, E. D., and Alpha, T. R.) and written commun., January 1975, (Scholl, D. W.)).
- B 328-A, fig. 1, 1:650,000, 1970 (Coburn, G. V., Bates, R. G., and Wright, W. B.).
- Josef, Research, v. 2, no. 1, fig. 2, 1:1,000,000, 1974 (Cessey, Bela, Jr., and Patton, W. W., Jr.; modified by Belkman, H. M.).
- MF 642, 1:250,000, 1975 (Patton, W. W., Jr., and others).
- Unpublished compilation (Hopkins, D. M.).
- 1817, 1:63,360, 1974 (Moore, J. C.).
- 1815, 1:63,360, 1974 (Moore, J. C.).
- MF 372, 1:1,000,000, 1972 (Reed, B. L., and Lanphere, M. A.).



Base from U.S. Geological Survey National Atlas of the United States of America, 1970.
Bathymetry from U.S. Geological Survey Open-File Map 78-23, 78-22, and 78-21, 1976.
Albers conical equal area projection based on standard parallels 55° and 65°.

TRIM TO THIS LINE
GEOLOGIC MAP OF ALASKA 1:2,500,000