DEPARTMENT OF THE INTERIOR

U. S. GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE STATE OF ALASKA DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

OPEN-FILE REPORT 90-83

SHEET 1 of 2

Base USGS topographic series: Anchorage, Alaska 1:250,000 (1962)

LOCATION INDEX

SCALE 1:250000

5 0 5 10 15 20 25 MILES

5 0 5 10 15 20 25 KILOMETERS

CONTOUR INTERVAL 200 FEET

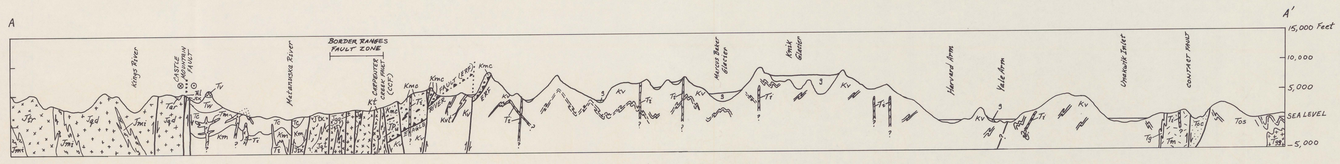
DATUM IS MEAN SEA LEVEL

DEPTH CURVES AND SOUNDINGS IN FEET--DATUM IS MEAN LOWER LOW WATER

SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER

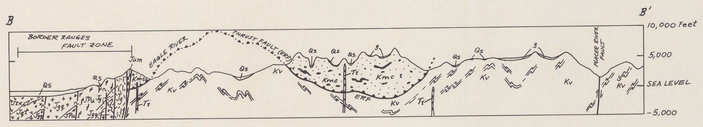
1962 MAGNETIC DECLINATION AT SOUTH EDGE OF SHEET VARIES FROM 25°30' TO 27° EAST

Compiled from Grantz (1961a, b), Barnes (1962), Clark (1972a, b), Clark and Yount (1972), Detterman and others (1974), Detterman and others (1976), Clark and others (1976), Magoon and others (1976), Csejtey and others (1978), Pessel and others (1981), Burns and others (1983), Clardy (1984), Nelson and others (1985), Little and others (1986), Pavlis (1986), Updike and Ulery (1988), Burns and others (in press), and unpublished mapping by L.E. Burns, G.H. Pessel, T.L. Pavlis, T.A. Little, R.J. Newberry, John Decker, G.R. Winkler, S.M. Karl, R.J. Miller, J.E. Case, R.T. Miyaoka, and W.H. Nelson (1981-1984)



NUMEROUS AREAS OF THIN QUATERNARY DEPOSITS (Qs) OR GLACIERS (g) NOT SHOWN

VERTICAL EXAGGERATION = 2x

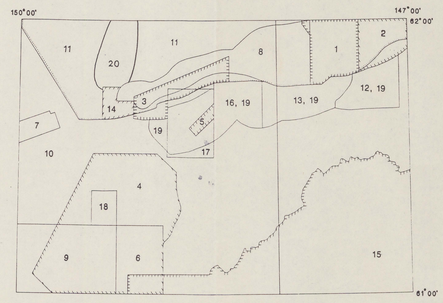


PRELIMINARY GEOLOGIC MAP, CROSS SECTIONS, AND SUMMARY GEOCHRONOLOGY OF THE ANCHORAGE QUADRANGLE, SOUTHERN ALASKA

Compiled by Gary R. Winkler

INDEX MAP SHOWING SOURCES OF GEOLOGIC DATA

1	Grantz, 1961a
2	Grantz, 1961b
3	Barnes, 1962
4	Clark, 1972a
5	Clark, 1972b
6	Clark and Yount, 1972
7	Detterman and others, 1974
8	Detterman and others, 1976
9	Clark and others, 1976
10	Magoon and others, 1976
11	Csejtey and others, 1978
12	Pessel and others, 1981
13	Burns and others, 1983
14	Clardy, 1984
15	Nelson and others, 1985
16	Little and others, 1986
17	Pavlis, 1986
18	Updike and Ulery, 1988
19	Burns and others, in press
20	R.J. Newberry and L.E. Burns, written communication, 1989



EXPLANATION

- g — Glaciers and superglacial moraine
- Approximate contact; dotted where concealed
- Thrust fault, approximately located; dotted where concealed
- U / D — High-angle fault, approximately located; dotted where concealed; U, upthrown side; D, downthrown side; bar, normal sense of dip-slip separation; arrow, reverse dip-slip sense; opposed double arrows, dextral strike-slip sense
- Shear zone; sense of offset unknown
- Anticline, approximately located, showing trace of axial surface and direction of plunge; dashed where concealed by unconsolidated deposits but position is known from well or seismic records; dotted where concealed; queried where assumed
- Syncline, approximately located, showing trace of axial surface and direction of plunge; dashed where concealed by unconsolidated deposits but position is known from well or seismic records; dotted where concealed; queried where assumed
- Monocline, approximately located, showing trace of axial surface
- Minor upright anticline (or syncline)
- 55 / 82 — Minor isoclinal fold, showing dip of axial surface and direction and amount of plunge
- 30 — Strike and dip of beds; ball indicates tops of beds known from sedimentary structures
- 70 — Strike and dip of overturned beds
- Strike of vertical beds
- 30 — Strike and dip of foliation
- Trend of felsic dike in bedrock
- 17 — Location of dated rock sample (Table 1)
- A — Location of mollusk collection
- A — A' — Line of cross section

CORRELATION OF MAP UNITS

All Areas

Unconsolidated Deposits

Quaternary	Qs	QUATERNARY

North of Border Ranges fault

Bedded Rocks

Miocene	Tkt		
Miocene and Oligocene	Tt		
Unconformity			
Eocene	Tw	Tv	TERTIARY
Unconformity			
Eocene and Paleocene	Tc, Tar		
Unconformity			
Upper and Lower Cretaceous	Km		CRETACEOUS
Unconformity			
Upper Jurassic	Jn		JURASSIC
Unconformity			
	Jc		
Disconformity			
Middle Jurassic	Jt		
Unconformity			
Lower Jurassic and Upper Triassic (?)	Jtk		
Upper Triassic (?)	Trl		TRIASSIC (?)

Intrusive Rocks

Eocene	Tim, Ti		TERTIARY
Lower Paleocene and Upper Cretaceous	TKqm, TKt		
Upper and (or) Lower Cretaceous	Kum	TJa	CRETACEOUS
Lower Cretaceous	Kt		
Upper Jurassic	Jtr		JURASSIC
Middle Jurassic	Jgd, Jqd		
Middle and Lower Jurassic	Jqt, Jgq, Jg, Jgs, Jum		

Metamorphic Rocks

Eocene (?) and Lower Cretaceous (?)	CzMzc	TERTIARY (?) AND CRETACEOUS (?)
Middle and Lower Jurassic	Jmi	JURASSIC
Jurassic?	Jps	JURASSIC OR OLDER?
Jurassic to mid-Paleozoic?	JPu	

South of Border Ranges fault

Bedded Rocks

Eocene and Paleocene	Tos, Tovs, Tos		TERTIARY
Fault			
Upper Cretaceous	Kv, Kvt		CRETACEOUS
Fault			
Cretaceous to Upper Triassic	Mzm		MESOZOIC

Intrusive Rocks

Oligocene	Tg, Tmb	TERTIARY
Oligocene?	Tgg	
Eocene	Ti	