U.S. GEOLOGICAL SURVEY
OPEN FILE MAP

E X P L A N A T I O N

MESOZOIC AND QUATERNARY

QMz
Sediments and sedimentary rocks undifferentiated

Upper Cretaceous

Kiu
Ignek Formation, Upper member
Shale, sandstone, tuff.

UNCONFORMITY

Lower Cretaceous or Upper Jurassic

Kil
Ignek Formation, Lower member
Sandstone and pebbly shale.

UNCONFORMITY

Lower(?), Middle and Upper Jurassic

JK
Kingak Shale
Shale and siltstone; may include basal sandstone (JK?) in C-1 quad.

KJu
Shale, undifferentiated

Upper and Middle Triassic

TRs
Shublik Formation
Phosphatic shale, limestone and siltstone. In eastern part of C-2 quad may include some JK.

Permian and Lower Triassic

TRPs
Sadlerochit Formation
Sandstone, siltstone, shale and conglomerate.

UNCONFORMITY

Lower Pennsylvanian

PMI | PW / Ma

Lisburne Group
PPw, Wahoo Limestone, fine-grained limestone, oolitic limestone, and glauconite.
Ma, Alapah Limestone, bioclastic limestone and dolomite.

Upper Mississippian

MK
Kayak Shale and Kekiktuk Conglomerate undifferentiated
Locally absent; locally not differentiated from Lisburne Group.

UNCONFORMITY

Middle Devonian

Dn (–·6·– ; –·1·–)
Nanook Limestone
Calcilutite and dolomite, minor shale.
Marker beds: 6, base of calcilutite; 1, top of basal redweathering shale and limestone.

DISCONFORMITY?

Middle Devonian or older

DK (–·6·– ; –·3·–)
Katakturuk Dolomite
Stromatolitic, pisolitic and cross-bedded dolomite, minor shale.
Marker beds: 6, white pisolite; 3, top of yellow weathering shale.

UNCONFORMITY OR FAULT

pre-Mississippian and younger(?)

m | mi / me
Mafic rocks, undivided
Gabbro and basalt, partly layered and amygdaloidal.
me, extrusive rocks beneath MK and beneath DK.
mi, intrusive rocks with Jurassic K/Ar date in Sadlerochit Mountains.

PALEOZOIC(?)

PZnp
Neruokpuk Formation, phyllite member
Phyllite and quartzite.

PZl
Limestone
Thin-bedded, argillaceous calcilutite.
Stratigraphic position uncertain. May partly equal Dn.

Contact
In most places approximately located by photo-interpretation or distant observation. Queried where doubtful.

Fault
U on upthrown side.

Thrust fault
Queried where doubtful.

Thrust fault or unconformity

Strike and dip of beds
Arrow indicates distant observation

Location of measured section

Megafossil locality
See Table 1

K/Ar sample locality in C-2 quadrangle.
Age of plagioclase 161 ± 5 m.y. (M.A. Lanphere, written comm., 1968).
Sample provided by Standard Oil Co of Calif.

Table 1. Megafossil collections. (Microfossil collections upon which the age of the Lisburne Gp is based occur throughout the measured sections and are not shown.)

Quad	Map No.	Field sample number	Formation	Fossils	Age
C-4	1	69ARR185	DK	bryozoa, stromatoporoids	Devonian(?)
	2	69ARR184	PMI	brachiopods, bryozoa	Late Miss or Penn.
	3	69A-1-1125	Ma	corals	Late Miss
	4	69A-1-1450	PW	corals	Pennsylvanian
	5	69ADt159	TRPs	pelecypods	indeterminate
	6	69ADt161	TRs	ammonite, pelecypod	Mid. or Late Triassic
	7	69ARR27	JK	belemnite	indeterminate
	8	69ARR27	Kil	pelecypod	*n.d.
	9	69ADu23	Dn	corals	Devonian or Silurian
	10	68ARR40	PMI	gastropod	Miss. (?)
C-3	11	69ADu35	MK	plants	indeterminate
	12	68ARR12	Ma	brachiopods	Miss. (?)
	13	68A-3-900	PW	corals	Pennsylvanian
	14	69ADt34	TRPs	brachiopods, (coral)†	Perm. (and Penn.)†
	15	69ADt35	TRPs	pelecypods	indeterminate
	16	69ADt29	Kil	pelecypods	n.d.
	17	69ARR62	Kil	pelecypods	n.d.
	18	69ARR61	Kil	pelecypods	n.d.
	19	69ARR151	Kil	pelecypods	n.d.
	20	69ADt56	Kil	pelecypods	n.d.
	21	69ADt51	Kil	pelecypods	n.d.
	22	69ADt30	JK	ammonite, belemnite	Late Jurassic
	23	69ADt38	TRs	pelecypods	Middle Triassic
	24	69ADt44	TRs	pelecypods	Late Triassic
	25	69ADt43	TRs	ammonite, pelecypods	Late Triassic
	26	69ADt42	JK	pelecypods, belemnite	Middle Jurassic
	27	69ADt40	JK	ammonite	Late Jurassic
	27	69ADt41	JK	ammonite	Mid. or Late Juras.
	28	69ADt39	Kil	pelecypods	n.d.
	29	69ARR46	Kil	pelecypods	n.d.
	30	69ARR47A	Kil	pelecypods	n.d.
	31	69ADt47	TRs	pelecypod, brachiopod	Late Triassic
	32	69ADt54	TRs	pelecypods, brachiopods	Middle Triassic
	33	69ADt105	TRs, top beds	pelecypods (Monotis	Late Triassic
	33	68ATO-2-27		ochotica and Gryphaea)	
	34	69ADt103	PMI	brachiopods, bryozoa	n.d.
	35	69ADt64A	TRPs	brachiopods	indeterminate
	36	69ADt64B	TRPs	ammonite	Early Triassic
	37	69ARR57	PMI	brachiopods	Late Miss.
	38	69ARR38	TRPs	brachiopods	Late(?) Permian
	39	68ARR4	Dn	corals, conodonts	Middle Devonian
	40	69ADu28	Dn	corals	n.d.
C-2	41	69ARR204	Kil	pelecypods	n.d.
	42	69ADt144	JK	ammonite, pelecy.	Early or Mid. Juras.
	43	69ARR195	Pzl	stromatolites	indeterminate
	44	68A-4A-250	PW	corals	Pennsylvanian
	45	68ARR32	PW?	brachiopods	Permian (?)
C-1	46	69ADt106	TRs	pelecypods (M. ochotica)	Late Triassic
	46	69ADt106	JK	ammonite	Jurassic
	47	48ASa214	JK?	pelecypods (Oxytoma and Gryphaea)	Early Jurassic
	48	69ARR222	JK?	pelecypod	n.d.
	49	69ARR219	Kil?	pelecypods, worm tubes	n.d.

† reworked?

*n.d. = no data

Geology by: C.L. Whittington, E.G. Sable, A.H. Lachenbruch, 1948
I.L. Tailleur, H.N. Reiser, A.K. Armstrong, H.A. Tourtelot, 1968
H.N. Reiser, J.T. Dutro Jr., A.K Armstrong, R.L. Detterman, W.P. Brosgé, 1969

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Progress map, geology of the Sadlerochit and Shublik Mountains, Mt Michelson C-1, C-2, C-3 and C-4 quadrangles, Alaska

By
H.N. Reiser, J.T. Dutro, Jr., W.P. Brosgé, A.K. Armstrong, and R.L. Detterman

1970

This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey standards and nomenclature.