

COLUMNAR SECTION OF THE SIKSIKPUK FORMATION,
UPPER TIGLUKPUK CREEK, CHANDLER LAKE (A-4)
QUADRANGLE, NORTHCENTRAL BROOKS RANGE, ALASKA

LAT 68°14'30" N., LONG 151°56'27" W.

PDF 94-45
SHEET 4 OF 11

EXPLANATION

ROCK TYPES

- Sandstone —
Metasandstone
- Sandy siltstone
- Sandy mudstone —
Sandy metamudstone
- Siltstone —
Metasiltstone
- Silty shale —
Silty slate
- Shale — Slate
- Carbonate
- Dolostone

- Siliceous silty shale —
Siliceous silty slate
- Siliceous shale —
Siliceous slate
- Chert

STRUCTURES

- Wispy lamination
- Concretion, nodule, or pebble
— May be combined with
other symbols. Filled where
indeterminate
- Vein — May be combined
with other symbols

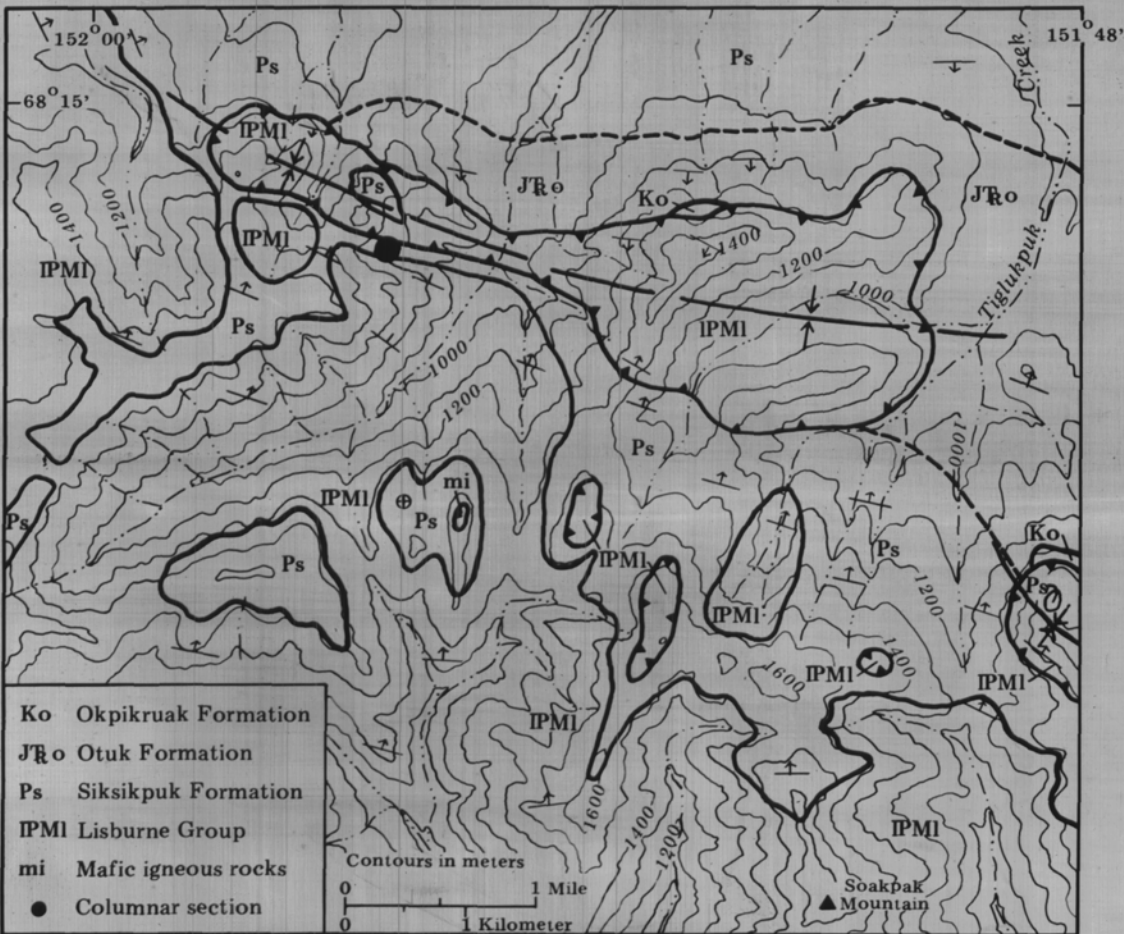
MINERALS

- Barite
- Calcite
- Dolomite
- Pyrite
- Quartz
- Siderite

FOSSILS

- Brachiopod
- Conodont
- Foraminifera
- Radiolarian
- Zoophycos
- Burrow

STRIKE N. 40°-60° W., DIP 30°-40° NE.
VERTICAL SCALE 1 INCH = 4 METERS



SERIES	STAGE	GROUP	FORMATION	INFORMAL LITHO- STRATIGRAPHIC UNIT	THICKNESS, IN METERS	LITHOLOGY	SAMPLE NUMBER	FOSSILS	DESCRIPTION
Upper Permian(?)	Guadalupian(?)			D	100		85AKA9-106		
					95		85AKA9-98		SLIGHTLY METAMORPHOSED SHALE, dark-gray to black at bottom and top of unit, weathering dark gray green; red and green gray with rare black bands in middle of unit. Contains orange-brown-weathering dolomite lenses to 10 cm thick at top and barite-carbonate concretions to 20 cm thick in middle. Barite, siderite, and quartz fill fractures; chlorite is present on slickensided surfaces. Bedding obscured by well-developed slaty cleavage and joints, except at base of unit where beds are 5 to 10 cm thick and wispy laminated. Radiolarians(?), replaced by barite, and foraminifera(?) were observed in thin section. Burrows to 0.5 cm diam are present in middle of unit. Shale forms platy to flaggy talus. Unit is folded in part, and top of section is covered with talus of Lisburne Group carbonate rocks from overlying thrust sheet
					90		84AKA9-26 84AKA9-25 85AKA9-95		
					85		84AKA9-24	Br?	
					80		84AKA9-23		
					75		84AKA9-22 84AKA9-21 84AKA9-20	Br?	
				C	70		84AKA9-19 84AKA9-18 84AKA9-17 84AKA9-16		SLIGHTLY METAMORPHOSED SILICEOUS SHALE AND MINOR INTERBEDDED SHALE. Siliceous shale is medium gray to black and medium to dark gray brown, green-gray and red- to orange-brown weathering, and silty in part; contains pyrite in upper half of unit to 1 cm diam and traces of tabular barite. Beds are 5 to 20 cm thick, wispy laminated, and burrowed; bedding surfaces are undulatory
					65		85AKA9-67 84AKA9-15 84AKA9-14		Interbedded shale is red at base but mostly gray green to black; contains lens of barite to 10 cm thick. Shaley intervals are mostly 0.5 to 3 cm thick but up to 3 m thick at base and exhibit pencil cleavage. Unit C grades(?) into overlying shale of unit D
					60		84AKA9-13		
					55				
					50		85AKA9-55 84AKA9-12	Br?	SLIGHTLY METAMORPHOSED SHALE PUNCTUATED BY SILTY SHALE. Shale is dominantly gray green, occasionally red, brown, and dark gray to black, and calcareous in part. Contains homogenous concretions of dolomite or burrowed siliceous limestone to 20 cm thick, polymineralic concretions of concentric siliceous shale, barite, and carbonate layers up to 90 cm long by 30 cm wide, and occasional veins of barite. Horizontal burrows are present to 0.5 cm diam; conodont(?) fragments and recrystallized radiolarians(?) were observed in thin sections of some of the concretions. Shale exhibits pencil cleavage
				B ₂	45		84AKA9-11	Br?	Silty shale is medium gray, weathering gray green to light brown green, and micaceous; contains traces of phosphate clasts and barite crystals. Beds are up to 40 cm thick and burrowed. Conodont(?) fragments and recrystallized foraminifera(?) were observed in thin section. Silty shale forms hackly to spiky, platy talus. Contact with overlying unit C is gradational
					40				
					35		84AKA9-10 84AKA9-9 85AKA9-35	Br?	
					30				
					25		84AKA9-8	Martinia sp. (small)	SLIGHTLY METAMORPHOSED SILTY SHALE PUNCTUATED BY SILTSTONE. Silty shale is mostly gray green and occasionally red; red intervals appear calcareous. Siltstone is mostly medium gray and weathers tan, gray green, green brown, and red brown to orange brown. Siltstone beds are dolomitic and partly calcareous, very cherty at base of unit, and micaceous at top; contain traces of glauconite and phosphate grains and rare barite crystals and vein fillings. These beds range from 20 to 50 cm thick, reaching maximum thicknesses in lower half of unit, and contain brachiopod fragments, recrystallized foraminifera(?), and horizontal and oblique burrows to 1 cm diam. Brachiopods include the small Martinia sp., characteristic of the sparse assemblage found in the type Siksikuk Formation, and Attenuatella(?) sp., both of Early Permian age (J.T. Dutro, Jr., written commun., 1985). Siltstone exhibits spaced cleavage and breaks mostly into hackly, slabby talus. Contact with overlying unit B ₂ is gradational
					20		84AKA9-7 84AKA9-6	Attenuatella? sp., Martinia sp. (small) Attenuatella? sp.	
				B ₁	15		84AKA9-5 84AKA9-4		
					10				
					5		84AKA9-3	Br?	SLIGHTLY METAMORPHOSED SANDY SILTSTONE, light-gray-green, green-brown- and red-orange-brown-weathering, very cherty, slightly dolomitic, and glauconite- and phosphate-bearing; contains pyrite nodules to 4 cm diam. Beds are 5 to 15 cm thick. Conodont fragments were observed in thin section. Burrows are present but pyritized. Contact with overlying unit B ₁ is covered with tundra and silty-shale rubble but is probably gradational
				A	0		84AKA9-2 84AKA9-1 84AKA9-0 85AKA9-0 85AKA9-0.6	Br?	SLIGHTLY METAMORPHOSED SILTSTONE, medium-gray, dark-gray-brown- and occasionally red-brown-weathering, pyritic, wispy laminated. Forms slabby talus. Contact with Siksikuk Formation is covered with rubble of overlying siltstone but is probably sharp
Upper Mississippian(?)	Lisburne								SLIGHTLY METAMORPHOSED VERY FINE TO FINE-GRAINED CARBONACEOUS CALCWACKE, medium-gray-green, tan- to dark-brown- and black-weathering, slightly cherty, and phosphate- and glauconite-bearing; contains rare pebbles (phosphate?) and pyrite nodules to 1 cm diam. Beds average 25 cm thick and form ledge. Horizontal and oblique "gutter" burrows are present, along with trace fossil Zoophycos, disarticulated brachiopods, and conodont fragments. Unit is veined with calcite
	Kuna(?)								SLIGHTLY METAMORPHOSED CARBONACEOUS SANDY MUDSTONE, dark-gray to black, medium-gray- to gray-brown-weathering, calcareous, slightly cherty, and glauconite-bearing; contains pyritic nodules to 4 cm diam. Forms slabby talus. Joints are well developed