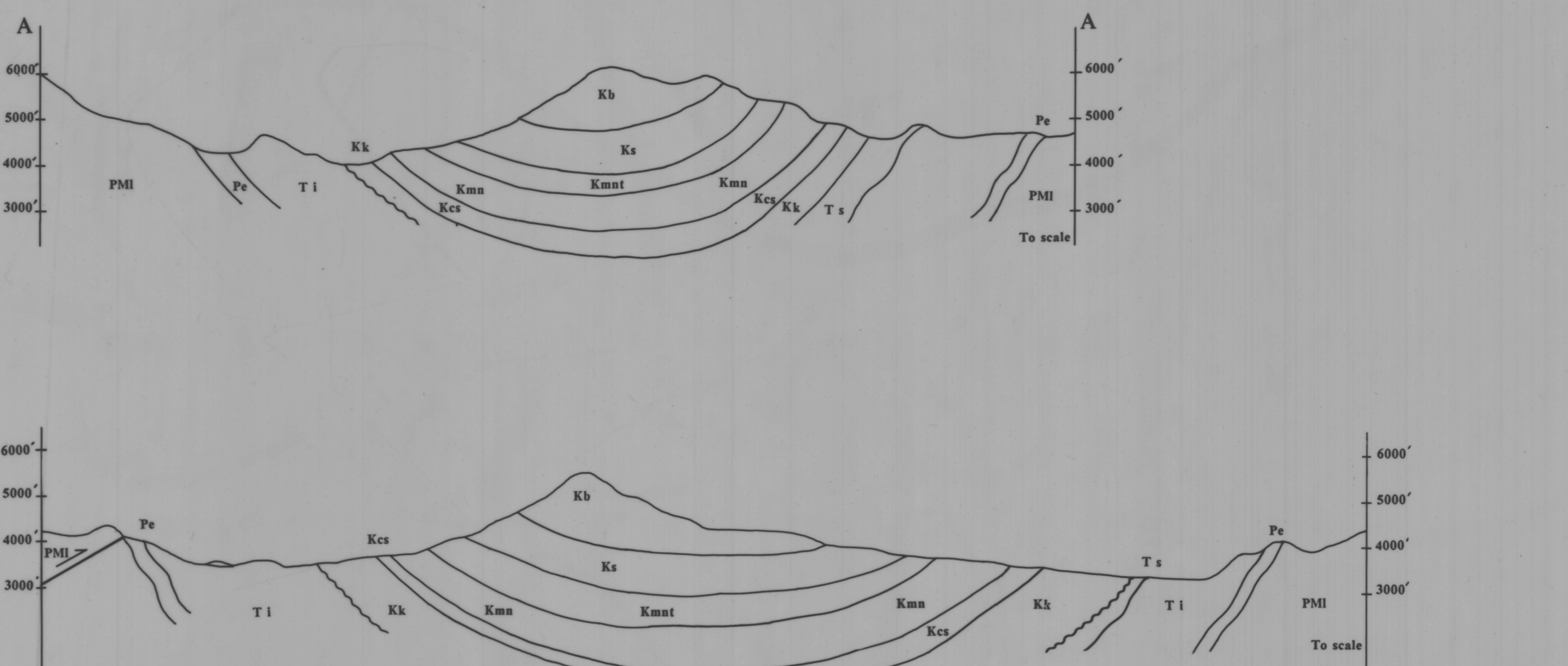
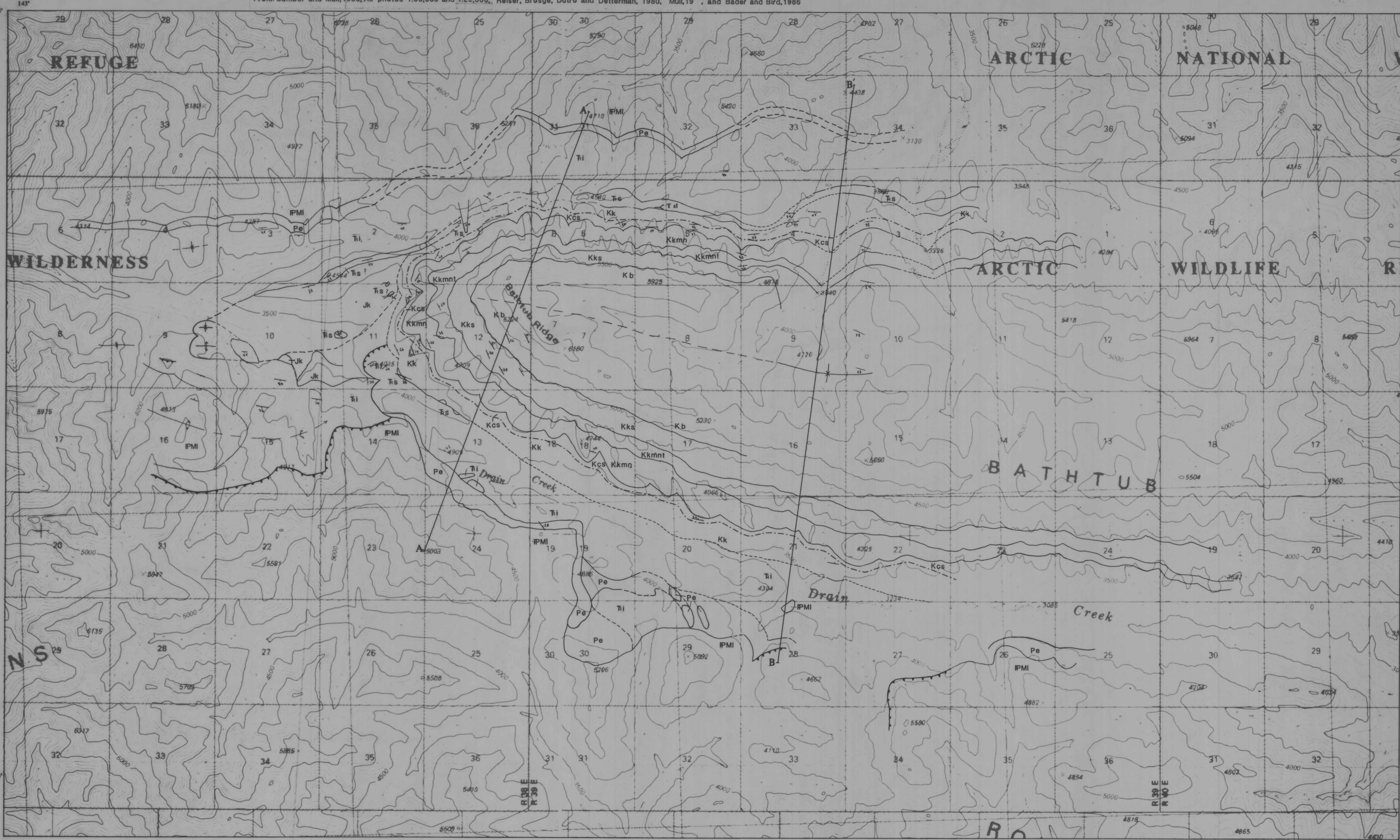


IN COOPERATION WITH THE DEPARTMENT OF GEOLOGY AND GEOPHYSICS UNIVERSITY OF ALASKA-FAIRBANKS

PRELIMINARY GEOLOGIC MAP OF BATHTUB RIDGE

Compiled by W. Camber

From: Camber and Mull, 1986, Air photos 1:63,360 and 1:25,000, Reiser, Brosge, Dutro and Dettnerman, 1980, Mull, 1980, and Bader and Bird, 1986



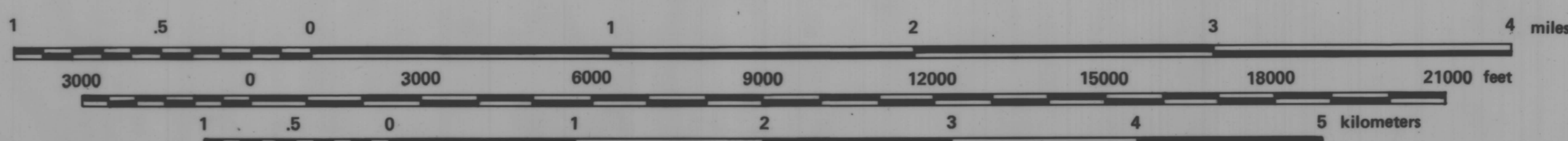
MAP SYMBOLS

- ↖ Strike and dip of beds
- Strike of the axial trace and plunge of the axis of a syncline, dashed where approximately located
- - - Strike of the axial trace of an anticline, dashed where approximately located
- Contact, solid where known, dashed where approximately located
- - - Fault, solid where known, dashed where approximately located
- Thrust fault, solid where known, dashed where approximately located
- Marker bed, representing the Coquinoid limestone, the Kemik Sandstone (?), and interbedded silty sandstone and shale

DESCRIPTION OF MAP UNITS

- Kb** Bath Tub Graywacke
Rhythmically interbedded sandstone and shale, medium gray silty to conglomeratic sandstone composed of quartz, chert, mica and volcanic, sedimentary and metamorphic rock fragments, massive beds, occasionally ripple crossbedded at the top, weathers tan with slight Fe-red staining, quartz stringers, fractures blocky, conchoidal, beds 2 cm to 8 m, sharp bottoms, graded tops, dark gray to black, silty and clay shale interbeds, 1 cm to 30 cm thick. Interpreted to be a prograding sequence of turbidites.
- Ks** Siltstone Member **
Rhythmically interbedded siltstone and shale, medium gray lithic siltstone, ripple crossbedded, slight Fe red weathering, beds 3 to 4 cm thick, sharp bases, tops grade into dark gray shale interbeds, 2 to 3 cm thick, some amalgamation, grades into overlying and underlying units, less resistant than the overlying Bath Tub Graywacke. Interpreted to represent thin bedded turbidites, Mutti and Ricci Lucchi facies G, Bouma Td-Te.
- Kmnt** Manganiferous transition shale (pebble shale member) **
Dark gray and black shale and silty shale, fissile, platy, weathers dark gray with little Fe red stain, rare silicified beds, grades upward into interbedded shale and siltstone, slight blue black weathering character at base of unit, non-resistant saddle former. Interpreted to represent a transition from deep water shale to distal turbidite deposition.
- Kmn** Manganiferous shale (pebble shale member) **
Dark gray to black shale, fissile, platy, blocky, weathers Fe red and blue black, silicified ovoid nodules 4 to 30 cm in diameter and silicified beds 2 to 3 cm thick, very resistant, forms prominent outcrops. Interpreted to represent deep water deposition, manganiferous content represented by blue black stain.
- Kcs** Black shale (clay shale member) **
Dark gray to black silty clay shale, weathers to flat thin plates or pencils, beds 2 to 3 cm thick, sharp bases, imperceptibly graded tops, occasional sand grains near bases of beds, interbeds of black clay shale, Fe-silic concretions common in isolated sections up to 4 m thick, Fe-red and Mn-blue black weathering character increases up section.
Silty sandstone, medium gray, very fine grained, plane laminated or ripple crossbedded, 6 beds, 6 to 15 cm thick, sharp bases graded tops, interbeds of black clay shale. Interpreted as turbidites.
Sandstone, (Kemik Sandstone ?) light gray, fine grained, quartzose, massive, 1.5 m thick bed, sharp base sharp top. Interpreted to be a turbidite, corresponds to the Kemik member of the Kongakut Formation.
Coquinoid limestone, light brown, crushed and packed shells (Buchia ?), weathers tan brown, 12 beds, 4 to 6 cm thick, interbeds of black clay shale.
- Kjk** Black clay shale (clay shale member)
Black clay shale, weathers to flat, thin plates 5 cm thick, contains Pentacrinus (?), siliceous concretions contain Polespods and Ammonites.
- Ts** Limestone (Shublik ?)
Light gray silty, contains brachiopods (Rhynchonellids, Halobia, Spirifer ?), zoophycus, weathers red-tan, dip slope former but poorly exposed.
- Ps** Camp sandstone (Shublik ?)
Medium gray, medium grained, quartzose, cherty and limonitic, massive, bioturbated, indistinct beds 6 cm to 1 m thick, occasional silty interbeds 3 cm thick, resistant. Black phosphatic nodules .5 to 3 cm in diameter found in poorly exposed sandstone outcrop.
- Iv** Ivishak sandstone
Medium gray, medium grained, contains quartz, chert, and limonite, massive, hard, resistant.
Tan gray, fine grained, contains quartz, chert, mica and limonite, bioturbated, locally folded, non-resistant.
- Pe** Echeoka Formation
Dark gray to black chert, massive beds 10 to 50 cm thick, resistant.
Medium gray limestone and calcareous sandstone.
Dark gray calcareous, glauconitic siltstone, weathers yellow green, bioturbated beds, 10 to 60 cm thick, contains brachiopods and bryozoans.
- PMI** Lisburne Group (undifferentiated)
Light gray to white limestone, abundantly fossiliferous, contains crinoids, brachiopods and bryozoans, thin to massively bedded, resistant.

SCALE 1:25,000



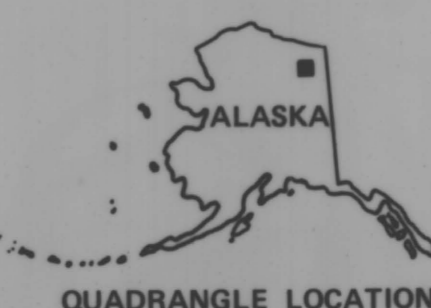
CONTOUR INTERVAL 50 FEET



This report is a preliminary publication of DGGS. The author is solely responsible for its content and will appreciate comments on the accuracy of the data as well as suggestions to improve the report.

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TRUE NORTH
APPROXIMATE MEAN
DECLINATION 1955



PRELIMINARY BEDROCK GEOLOGIC MAP OF PART OF THE DEMARCATION POINT A-3 AND A-4 QUADRANGLES, BATHTUB RIDGE, NORTHEASTERN ALASKA

by Wendy Camber and C. G. Mull, 1986

** of Kongakut Formation (Dettnerman, 1975)