Appendix F: Photographs, in Furer, L.C., and Amoco Oil Co., Data compilation of the 1972 field party, southeast Brooks Range and Fort Yukon, Alaska; Vol 2

Furer, L.C., and Amoco Oil Co.

GMC DATA REPORT 465F

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2019
State of Alaska
Department of Natural Resources
Division of Geological & Geophysical Surveys
GEOLOGIC MATERIALS CENTER

APPENDIX F 1972

PHOTOGRAPHS

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PHOTOGRAPHS - 1972 FT. YUKON FIELD PARTY

EASTERN BROOKS RANGE

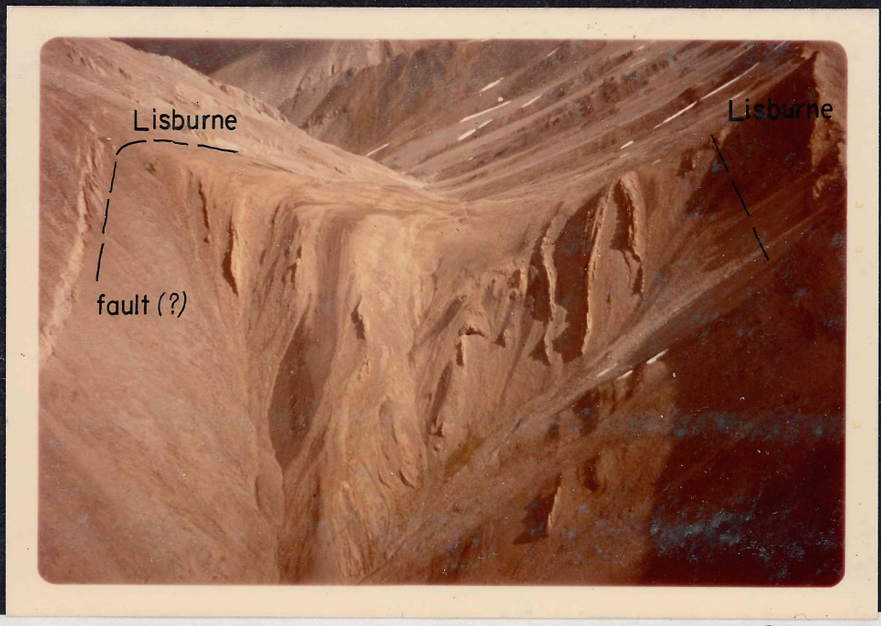
1. Massive limestone west of Buffalo Mountain (67 55' N, 146 33'W) mapped as Skajit by USGS. Sample from Dl unit at contact with Skajit is Ordovician (sample 6245), thus Skajit is probably older than Devonian.

2. The Total Eclipse section (69 00'N, 143 20'W) looking west. Dip is to the south. Approximately 300 feet of Devonian near-shore clastic overlie the Neruokpuk angularly. The contact with the overlying Kayak is porrly exposed but probably concordant. Just two miles to the north the Devonian clastics are missing.

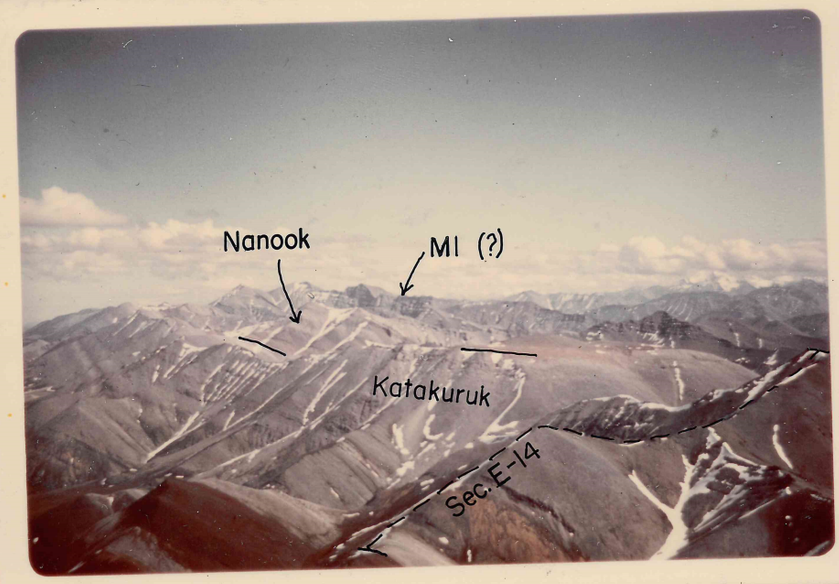
3. Mississippian on Neruokpuk section (17-55-37E). This outcrop is only two miles north of Total Eclipse section. Here the Kayak is lying on Neruokpuk cherts with angular unconformity. There is a 16 foot basal conglomerate in the base at the Kayak.Picture by Ormiston. View looking southwest.

4. West Wind River section (8-15S-21E). This is one of the southernmost exposures of Kayak-Lisburne in the eastern Brooks Range. It is difficult to distinguish the Kayak from upper Devonian clastics at this locality.

5. Lisburne measured at July Ninth section (68 58'N, 143 24'W). A complete section is exposed at this locality.

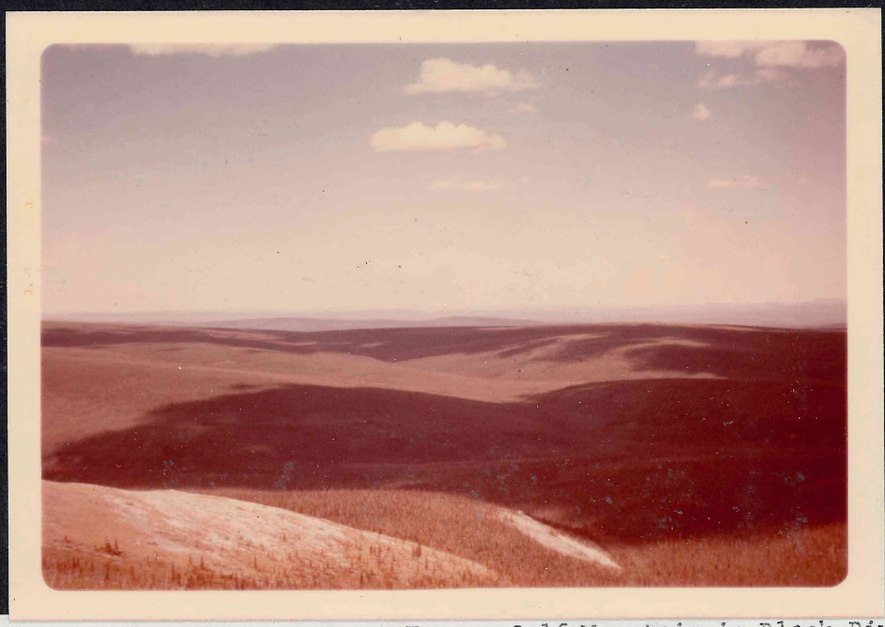


6. Tight folding in Permian between fault blocks at Lisburne near the Savinkviayak River Section (21-8S-19E). Looking west. Lisburne is dipping south.



7. Devonian carbonates in Shablik Mountains (2N-27E). Picture looking east and dip is to the south. Union Section E-14 measured on ridge in foreground.

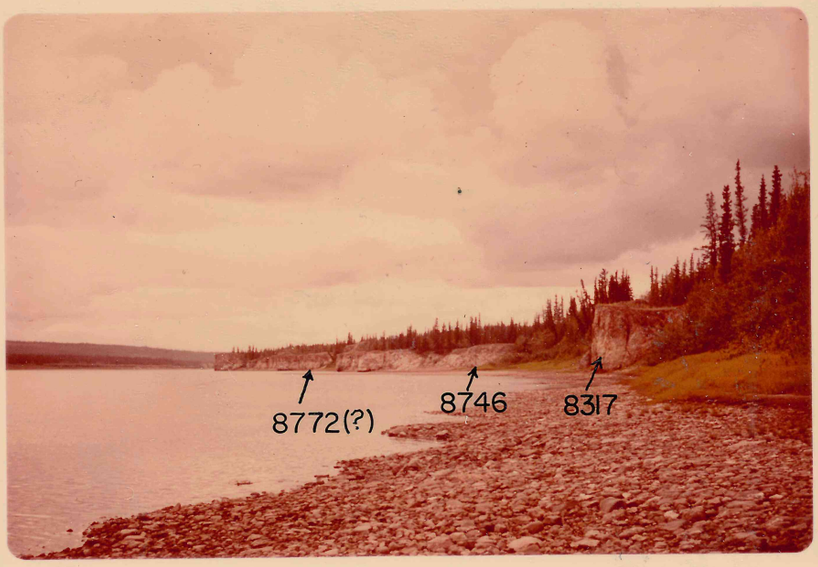
PORCUPINE RIVER AREA



1. Poor sandstone outcrops at Frozen Calf Mountain in Black River Quad (23N-21E). These may be the same sandstones that outcrop at the mouth of the Coleen River. Age is unknown but probably are either Ordovicain or Mississippian. Picture by C. Conrad (1960).

2. Mouth of Coleen section (12-26N-23E). Looking west and dip is to the south. These sandstones appear to underlie a carbonate section that is exposed just downstream from this locality. Line of measured section is shown.

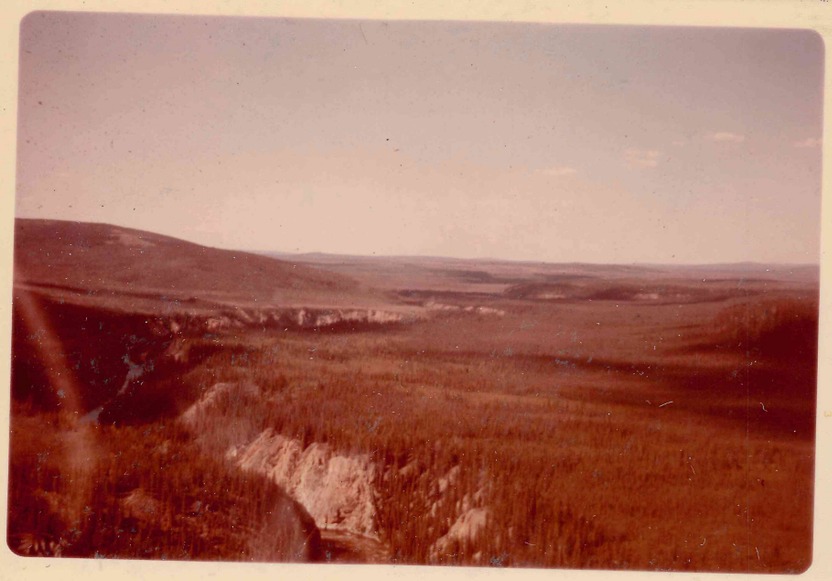
3. Deacon Rock section looking north (25N-22E). These are structurally complex sandy carbonates within the Ordovician part of the section.



4. Upper part of Deacon Rock section. This is the Silurian carbonate part of the section. The Salmontrout reef carbonates are in the far background of this picture.

5. Early Devonian Salmontrout limestone in the top of the Deacon Rock section. This rock contains abundant corals and crinoids.

6. Oil seep at 1971 Station (11-25N-21E) near north bank of Porcupine River. Water samples from river around this seep have tested traces of oil. The seep is noticeable at low water conditions. The carbonate on the bank at the seep is Middle Ordovician (sample 8351-52). Picture by A. Taylor.



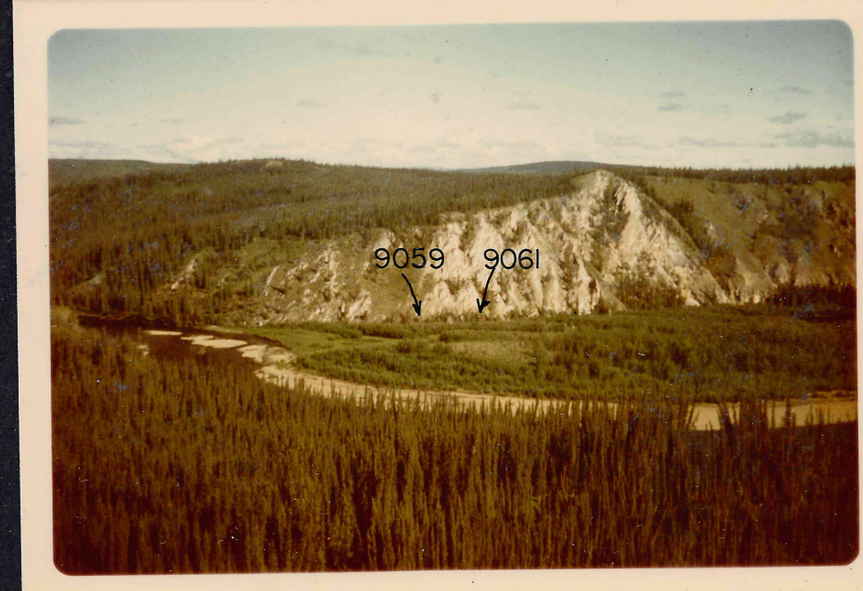
7. The Salmontrout River section that was measured by boat in 1971. Notice the youthful rejuvenated nature of the stream. This suggests Pliestocene to post-Pliestocene uplift of the Porcupine Area.

8. Mississippian sandstone north of the Porcupine River at Station 77 (25N-19E). This nearshore sequence contains both abundant crinoids and wood fragments.

9. Carbonate outcrops at sample localities 8321-22 (24N-21E). These carbonates are very poorly exposed and contain abundant corals and brachiopods. Picture by F. Hankinson.

10. Early Devonian limestones at Nelsen Bluff (21N-23E). A thin interval of logoonal carbonates equivalent to a part of the Salmontrout limestone is exposed in the crest of an anticline at this locality.

11. Additional exposure of Nelsen Bluff just north and downstream from the outcrop above . These limestones are slightly younger Early Devonian than those above and would be equivalent to the Ogilvie Formation. They are crinoidal packstones.

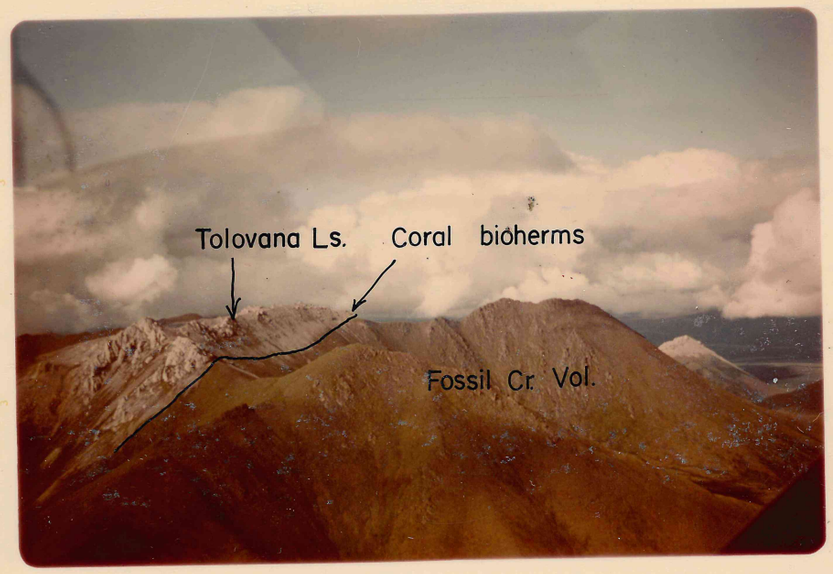


12. One part of the Steamboat Mountain section (16N-30E) looking north. These carbonates have been mapped as Pre Cambrian. However, fossils from nearby part of section are Ordivician. Picture by A. Taylor.

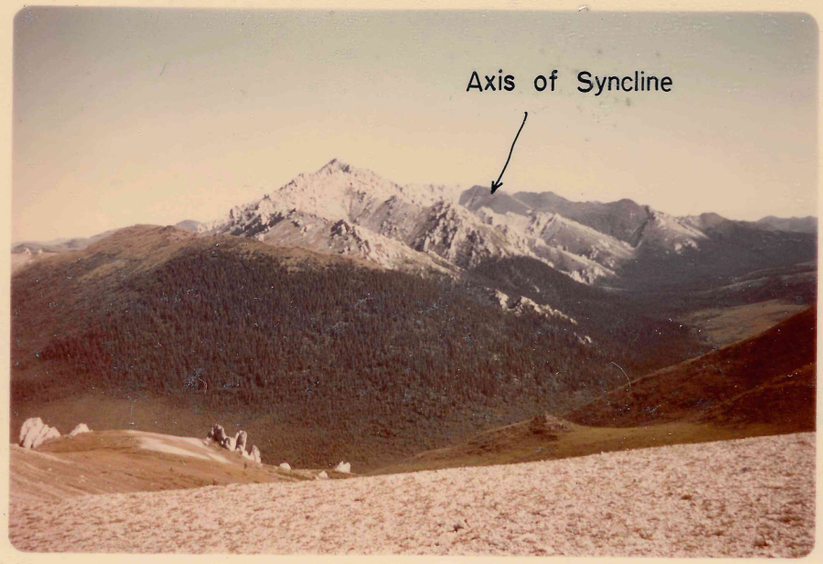
13. Probably Jurassic shales northeast of Bear Mountain (15N-26E). This outcrop, if Jurassic, suggests that the conglomerates are sandstones at Bear Mountain might be Cretaceous or younger rather than Paleozoic as mapped by the USGS.

YUKON RIVER AND SOUTH OF FT. YUKON BASIN

1. Outcrop on Willow Creek in White Mountains (sample locality 8394). This thin-bedded shale and limestone sequence has been metamorphosed by the igneous intrusive in the left side of the photo. The age is most likely Cambro-Ordovician.



2. Viewing of southeast side of White Mountain looking northeast. This picture shows the contact between the Fossil Creek Volcanics and the Tolvana Limestone.

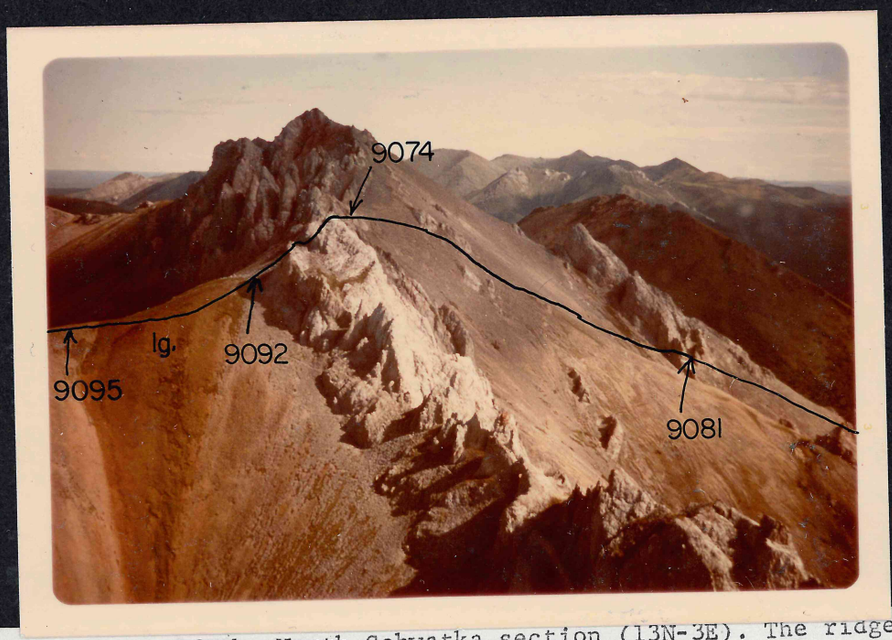


3. View of the core of the White Mountains looking northeast. The core is composed of Tolovana Limestone preserved in a synclinorium with older Fossil Creek Volcanics on the southeast and northwest flanks. The contact to the northwest may be a fault.

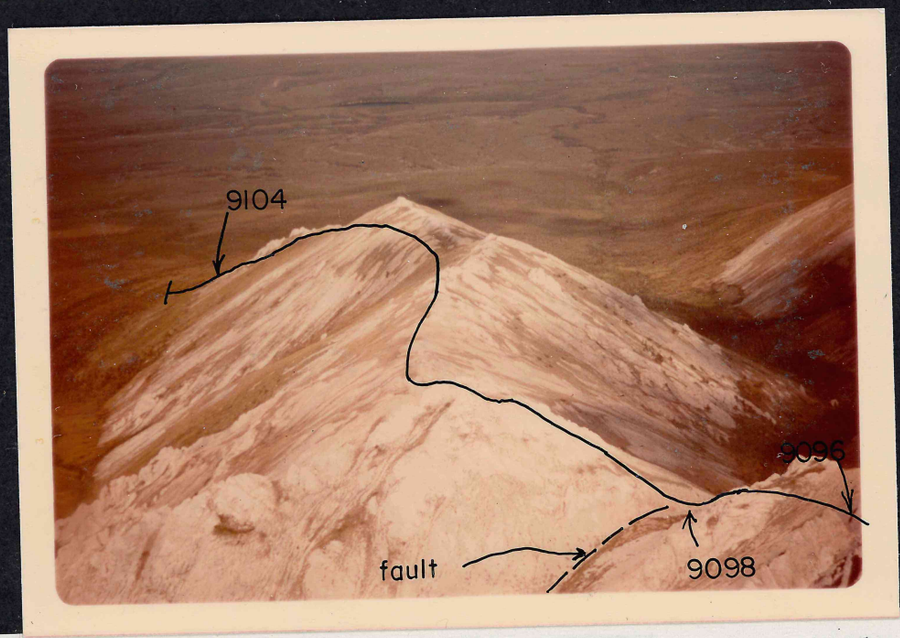
4. South Windy Gap section on northwest flank of White Mountains (9N-1E). View looking southeast. Fossil Creek Volcanics at top of ridge to left and in foreground(?). Line of measured section is shown. Picture by A. Taylor.

5. Close-up of South Windy Gap section. Note the tightly folded synclines within the upper part of the Tolovana Limestone. There may be a fault contact between the Tolovana and the volcanics in the right side of the photo. Picture by A. Taylor.

6. View looking north from sample locality 8403 (Devonian limestone) just northwest of Mount Schwatka. The Ft. Yukon Basin is in the background.



7. Lower part of the North Schwatka section (13N-3E). The ridge and backslope is Middle Devonian reefal limestone. An igneous sill intrudes the section in the saddle. The section dips south and is overturned. Line of measured section is shown.



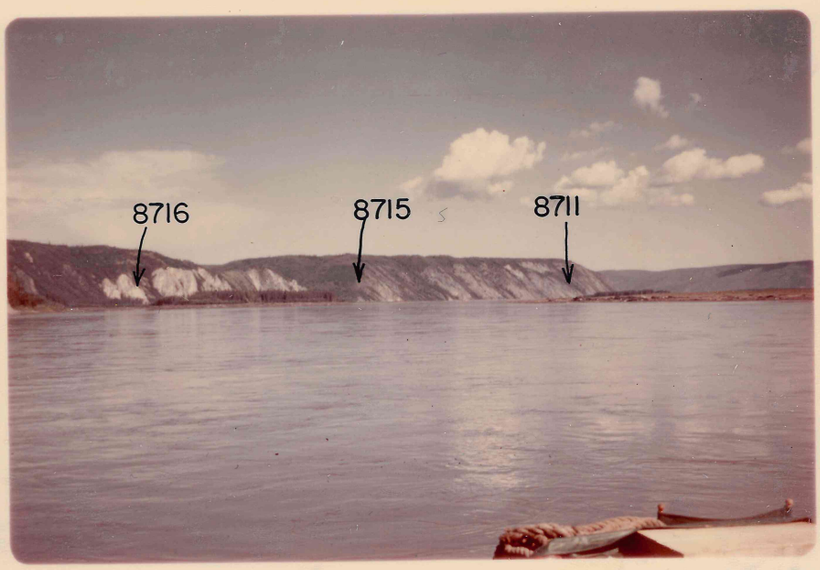
8. Upper part of North Schwatka section looking north from ridge just to the left of photo above. The Middle Devonian limestone is faulted and a partial section repeated. The north end of the spur may be Late Devonian. Line of measured section is shown.

9. Circle Volcanics at sample locality 8341 (11N-18E) just southeast of Circle. The rock is fine-grained diorite and the layered appearance is segregation within a sill. The radiometric age is Early Cretaceous.

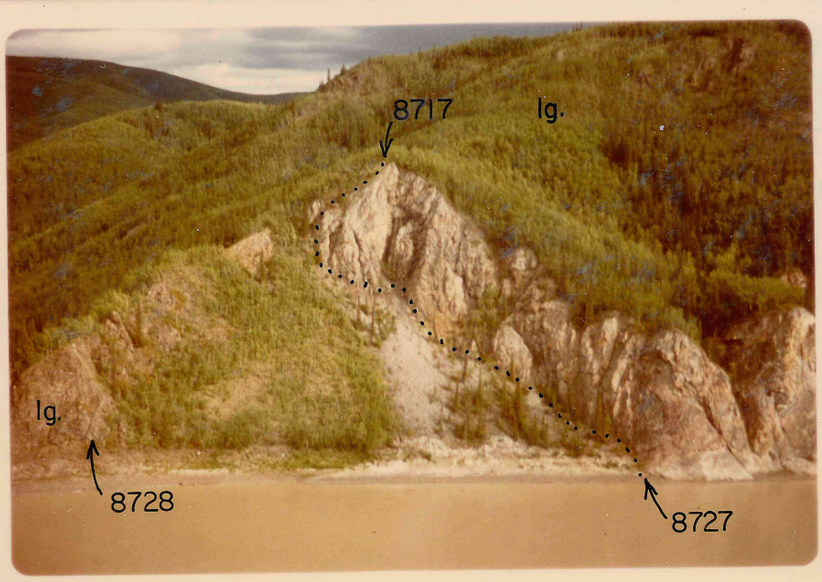
10. Fred Hankinson showing contact between Permian(?) graywackes (foreground) and Tertiary sandstones at sample locality 8409 (10N-11W). The Tertiary sandstones contain abundant plant leaves and petrified wood.

11. Tertiary leaf impressions in sandstones at sample locality 8409. The impressions are very well preserved.

12. Igneous stocks in 10N-1W (Livengood Quad.). These intrusives have mineralized the surrounding sedimentary rocks, as suggested by the bright coloration surrounding the intrusions.



13. Tacoma Bluff section (7N-20E) on west bank of Yukon River. Beds from 8711 to 8715 are apparently within an overturned anticline(?). It is not known if the light colored carbonates on the left are in normal sequence with the shale sequence. The carbonates look like Woodchopper limestone and the shales like Road River Formation. Picture by C. Conrad.



14. Woodchopper Limestone section (6N-21E) on north bank of Yukon River. Section dips into the bank. It is not clear if the igneous rocks are flows or sills. The limestone in time-equivalent to part of the Slamontrout Limestone. Line of measured section is shown.

15. Siltstone and shale of the Biederman "Argillite" at the type section at Biederman Bluff section (32-7N-25E). Turbidites with sharp base grading upward into black shale and deformational "plastic" flow within the cycle. Picture by A. Taylor.

16. Ripple laminations in a sandstone-siltstone sequence in the Biederman "Argillite" at the type section. Picture by A.Taylor.