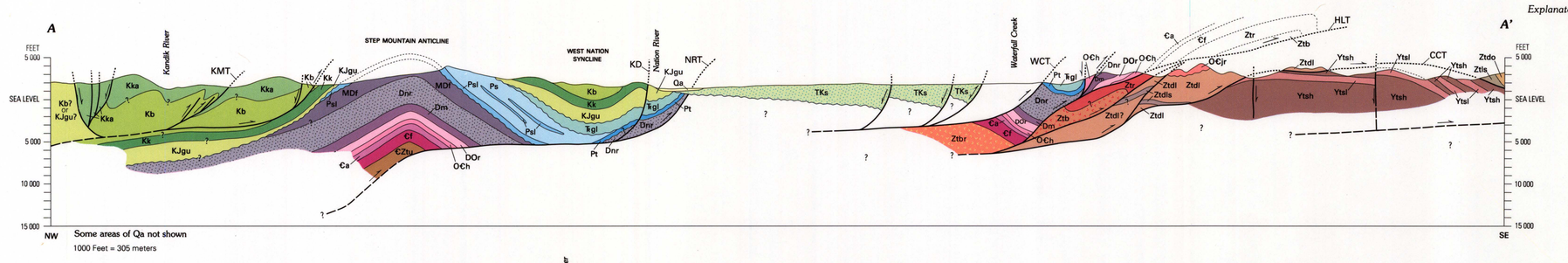
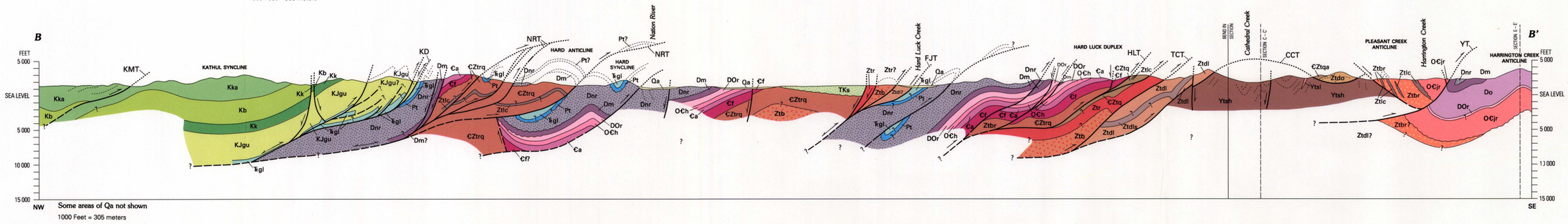
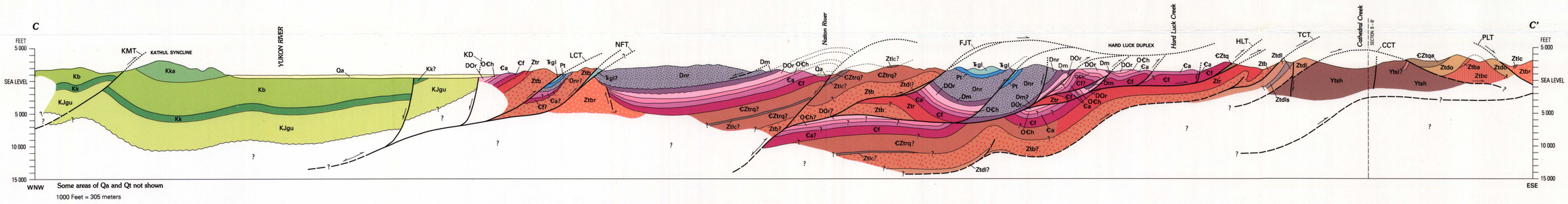
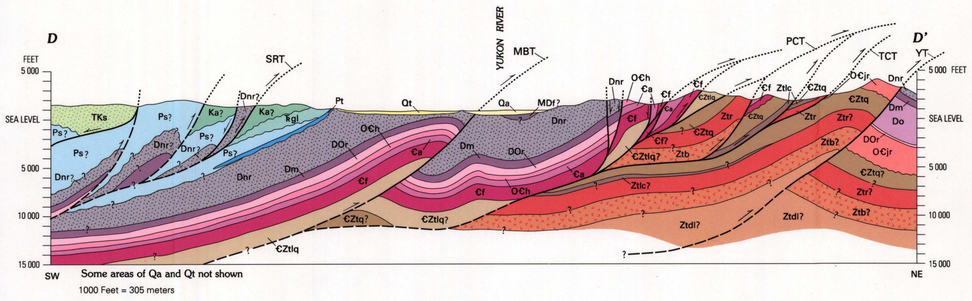
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

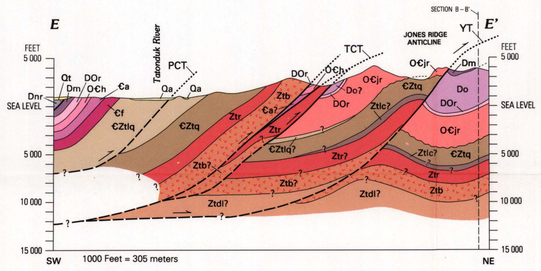
MISCELLANEOUS INVESTIGATIONS SERIES
MAP I-1942 (SHEET 2 OF 2)
Explanatory pamphlet accompanies map











LIST OF MAP UNITS USED ON CROSS SECTIONS

(See pamphlet for more detailed description)

QUATERNARY SURFICIAL DEPOSITS

- Qa — **Alluvium (Holocene)**
- Qt — **Terrace deposits (Holocene and Pleistocene)**

TERTIARY AND CRETACEOUS SEDIMENTARY ROCKS

- TKs — **Sandstone, conglomerate, mudstone (lower Tertiary and Upper Cretaceous)**

MESOZOIC SEDIMENTARY ROCKS

Kandik Group
- Kka — **Kathul Graywacke (Lower Cretaceous)**
- Kb — **Biederman Argillite (Lower Cretaceous)**
- Kk — **Keenan Quartzite (Lower Cretaceous)**
- Ka — **Argillite, undivided (Lower Cretaceous)**

Glenn Shale
- KJgu — **Upper part (Lower Cretaceous and Jurassic)**
- ₮gl — **Lower part (Upper and Middle Triassic)**

PALEOZOIC SEDIMENTARY ROCKS

- Pt — **Tahkandit Limestone (Permian)**
- Ps — **Step Conglomerate (Permian)**
- Psl — **Limestone**
- MDf — **Ford Lake Shale (Upper Mississippian to Upper Devonian)**
- Dnr — **Nation River Formation (Upper Devonian)**
- Dm — **McCann Hill Chert (Upper to Lower Devonian)**
- Do — **Ogilvie Formation of Clough (1980) (Middle and Lower Devonian)**
- DOr — **Road River Formation (Lower Devonian to Lower Ordovician)**
- O€jr — **Jones Ridge Limestone (Upper or Middle Ordovician to Lower Cambrian)**
- O€h — **Hillard Limestone (Lower Ordovician to Lower Cambrian)**
- €a — **Adams Argillite (Lower Cambrian)**
- €f — **Funnel Creek Limestone (Lower Cambrian)**

CAMBRIAN(?) AND PRECAMBRIAN SEDIMENTARY AND IGNEOUS ROCKS

Tindir Group

Upper part (Lower Cambrian? and Late Proterozoic),
- €Ztu — **Upper part, undivided**
- €Ztq — **Quartzite**
- €Ztlq — **Limestone and quartzite**
- €Ztqa — **Quartzite and argillite**
- €Ztrq — **Red beds and quartzite**
- Ztdl — **Dolomite and limestone**
- Ztdls — **Shale**
- Ztlc — **Limestone and conglomeratic rocks**
- Ztdo — **Dolomite**
- Ztls — **Limestone**
- Ztbr — **Basalt and red beds, undivided**
- Ztr — **Red beds**
- Ztb — **Basalt**
- Ztba — **Basalt and argillite**
- Ztbc — **Basalt and clastic rocks**

Lower part (Middle Proterozoic)
- Ytsh — **Shale and diamictite**
- Ytsl — **Stromatolitic limestone**

LIST OF FAULTS SHOWN ON CROSS SECTIONS

CCT	Cathedral Creek thrust	NRT	Nation River thrust
FJT	Fourth of July Creek thrust	PCT	Pass Creek thrust
HLT	Hard Luck thrust	PLT	Pleasant Creek thrust
KD	Kandik detachment	SRT	Seventymile River thrust
KMT	Kathul Mountain thrust	TCT	Three Castle Mountain thrust
LCT	Logan Creek thrust	WCT	Waterfall Creek thrust
MBT	Montauk Bluff thrust	YT	Yukon thrust
NFT	Nation Reef thrust		

SCALE 1:100 000

KILOMETERS 1 0 1 2 3 4 5 6 7 8 9 10

MILES 1 0 1 2 3 4 5

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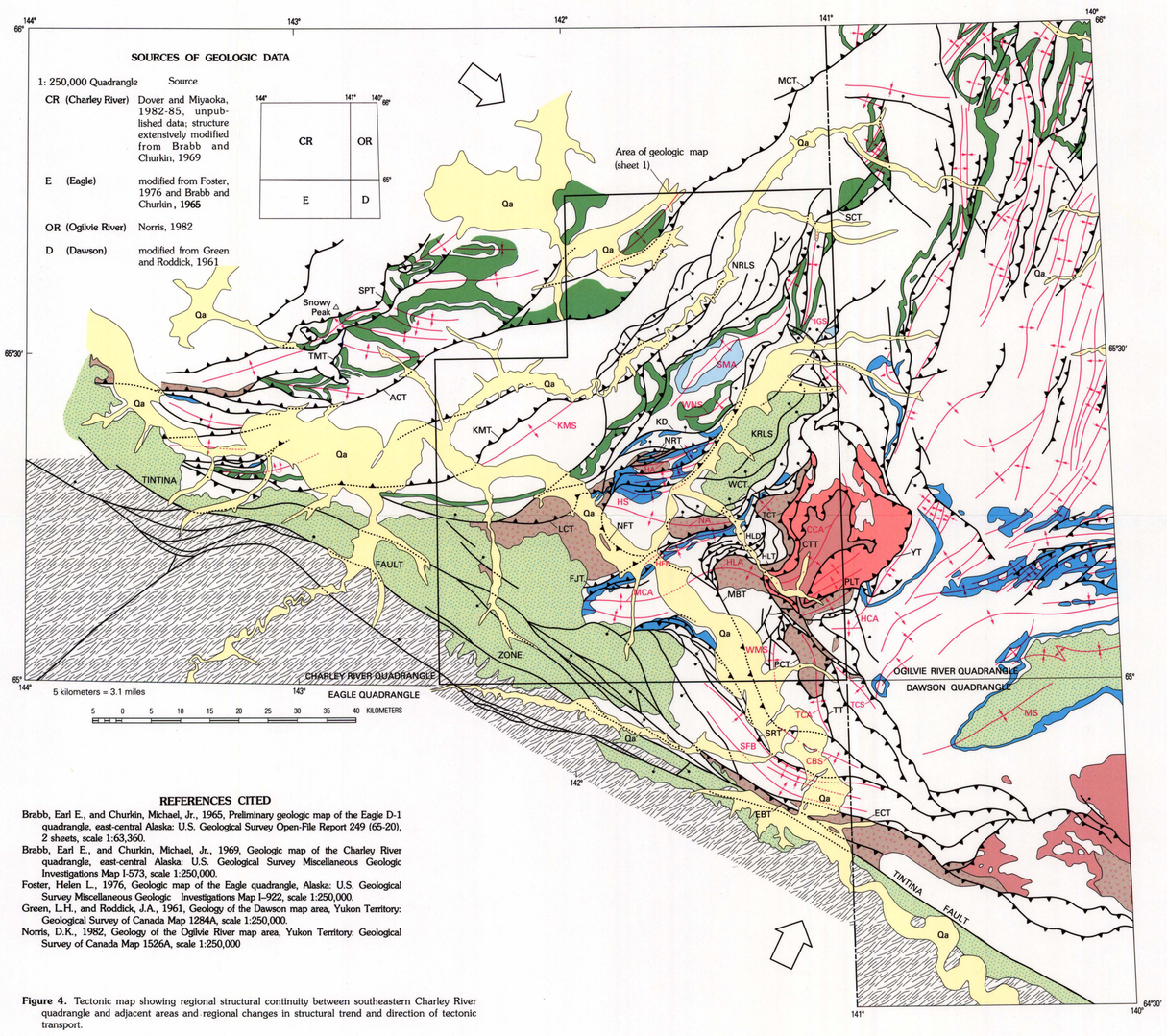

REFERENCES CITED

Brabb, Earl E., and Churkin, Michael, Jr., 1965, Preliminary geologic map of the Eagle D-1 quadrangle, east-central Alaska: U.S. Geological Survey Open-File Report 249 (65-20), 2 sheets, scale 1:63,360.

Brabb, Earl E., and Churkin, Michael, Jr., 1969, Geologic map of the Charley River quadrangle, east-central Alaska: U.S. Geological Survey Miscellaneous Geologic Investigations Map I-573, scale 1:250,000.

Foster, Helen L., 1976, Geologic map of the Eagle quadrangle, Alaska: U.S. Geological Survey Miscellaneous Geologic Investigations Map I-922, scale 1:250,000.

Green, L.H., and Roddick, J.A., 1961, Geology of the Dawson map area, Yukon Territory: Geological Survey of Canada Map 1284A, scale 1:250,000.

Norris, D.K., 1982, Geology of the Ogilvie River map area, Yukon Territory: Geological Survey of Canada Map 1526A, scale 1:250,000

Figure 4. Tectonic map showing regional structural continuity between southeastern Charley River quadrangle and adjacent areas and regional changes in structural trend and direction of tectonic transport.

EXPLANATION FOR FIGURE 4

UNITS NORTH OF TINTINA FAULT SYSTEM

- Qa — Alluvium and stream terrace deposits (Quaternary)
- Sedimentary rocks (lower Tertiary and uppermost Cretaceous)
- Sedimentary rocks, undivided (Mesozoic and Paleozoic)
- Keenan Quartzite (Lower Cretaceous)
- Lower part of Glenn Shale of Brabb (1969) (Upper and Middle Triassic) and Tahkandit Limestone (Permian), undivided
- Step Conglomerate (Permian)
- Tindir Group (Lower Cambrian? to Middle Proterozoic)
- Upper part (Lower Cambrian? and Late Proterozoic)—Basalt, red beds, and quartzite
- Upper part (Late Proterozoic)—Dolomite and limestone
- Lower part (Middle Proterozoic)—Diamictite, shale, and stromatolitic limestone

UNITS SOUTH OF TINTINA FAULT SYSTEM

- Igneous and metamorphic rocks, undivided (Mesozoic and(or) Paleozoic)
- Contact
- Fault—Dotted where concealed
- High-angle normal fault—Bar and ball on downthrown side
- Thrust fault—Sawteeth on upper plate
- Fold axis—Dotted where concealed
- Anticline
- Syncline
- Overturned anticline
- Overturned syncline
- Direction of tectonic transport

NAMED FAULTS

ACT	Andrew Creek thrust	NFT	Nation Reef thrust
CCT	Cathedral Creek thrust	NRLS	Nation River listric fault system
EBT	Eagle Bluff thrust	NRT	Nation River thrust system
ECT	Eagle Creek thrust	PCT	Pass Creek thrust
FJT	Fourth of July Creek thrust	PLT	Pleasant Creek thrust
HLT	Hard Luck thrust	SCT	Sitdown Creek thrust
HLD	Hard Luck duplex	SPT	Snowy Peak thrust
KD	Kandik detachment	SRT	Seventymile River thrust
KMT	Kathul Mountain thrust	TT	Tatonduk thrust
KRLS	Kandik River listric fault system	TMT	Threemile Creek thrust
LCT	Logan Creek thrust	TCT	Three Castle Mountain thrust
MBT	Montauk Bluff thrust	WCT	Waterfall Creek thrust
MCT	Midnight Creek thrust	YT	Yukon thrust

NAMED FOLDS

CBS	Calico Bluff syncline	MCA	Michigan Creek anticline
CCA	Cathedral Creek arch	MS	Monster syncline
HCA	Harrington Creek anticline	NA	Nation anticline
HFB	Half fold belt	SFB	Seventymile fold belt
HLA	Hard Luck anticline	SMA	Step Mountain anticline
HA	Hard anticline	TCA	Tatonduk Creek anticline
HS	Hard syncline	TCS	Tatonduk Creek syncline
IGS	Indian Grave syncline	WMS	Windfall Mountain syncline
KMS	Kathul Mountain syncline	WNS	West Nation syncline

GEOLOGIC MAP AND FOLD- AND THRUST-BELT INTERPRETATION OF THE SOUTHEASTERN PART OF THE CHARLEY RIVER QUADRANGLE, EAST-CENTRAL ALASKA

By
James H. Dover
1992