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

MISCELLANEOUS FIELD STUDIES
MAP MF–2144–E
Pamphlet accompanies map

EXPLANATION

- 3 — **Sample locality mentioned in text**
- 10 — **Outline of drainage basin**

Mineral resource tracts

- A — **Tract A**—Outcrops of the Devonian clastic rocks, permissive for sediment-hosted copper and sandstone-hosted lead-zinc deposits
- B — **Tract B**—Outcrops of the deep water facies of the Mississippian Alapah and Wachmuth Limestones, permissive for SEDEX Zn-Pb and associated bedded barite deposits
- C — **Tract C**—Outcrops of the platform carbonate facies of the Mississippian Lisburne Group, permissive for carbonate-hosted Zn-Pb deposits and warm-current phosphate deposits. Five large, discontinuous blocks are labeled C1–C5
- D — **Tract D**—Outcrops of the Jurassic and Triassic Otuk and Triassic Shublik Formations (undivided), permissive for upwelling phosphate deposits
- E — **Tract E**—Outcrops of the Permian Siksikpuk Formation, permissive for bedded barite deposits

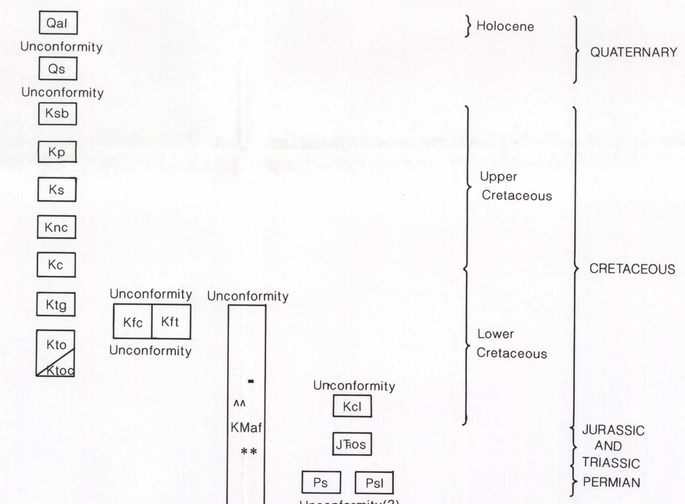
NOTE: The following correlation, list of map units, and list of symbols is for the geologic base map, shown here in gray.

LIST OF MAP UNITS

Qal	Alluvium (Holocene)
Qs	Surficial deposits (Quaternary)
Ksb	Schrader Bluff Formation (Upper Cretaceous)
Kp	Prince Creek Formation (Upper Cretaceous)
Ks	Seabee Formation (Upper Cretaceous)
Knc	Ninuluk and Chandler (part) Formations, undivided (Upper Cretaceous)
Kc	Chandler Formation (part) (Upper and Lower Cretaceous)
Ktg	Tuktu and Grandstand Formations, undivided (Lower Cretaceous)
	Fortress Mountain Formation (restricted) (Lower Cretaceous)
Kfc	Conglomerate and sandstone unit
Kft	Turbidite sandstone and conglomerate unit
Kto	Torok Formation (Lower Cretaceous)
Ktoc	Cobblestone sandstone unit
KMaf	Arctic Foothills assemblage (Lower Cretaceous to Mississippian)
Kcl	Coquinoid limestone unit (Lower Cretaceous; Valanginian)
J?ros	Otuk (Jurassic and Triassic) and Shublik (Triassic) Formations, undivided
Ps	Siksikpuk Formation of Mull and others (1987)(Permian)
Psl	Sadlerochit Group (Permian)
	Lisburne Group (Mississippian)
Maw	Alapah and Wachsmuth Limestones, undivided (Mississippian)
Mawc	Chert facies
Mk	Kayak Shale (Lower Mississippian)
MDku	Kanayut Conglomerate (upper part) (Lower Mississippian? and Upper Devonian)
Dkln	Kanayut Conglomerate (lower part) and Noatak Sandstone, undivided (Upper Devonian)
Dkn	Kanayut Conglomerate (part) and Noatak Sandstone, undivided (Upper Devonian)
Dh	Hunt Fork Shale (Upper Devonian)
Dhw	Wacke member
Dhs	Shale member

- **Contact**
- **Major folds**—Showing direction of plunge where known
- **Anticline**
- **Overturned anticline**
- **Syncline**—Dashed where inferred position of strata that formed syncline is found in upper thrust plate and since been eroded
- **Strongly asymmetrical syncline**—Double dip arrow indicates steeper dipping limb
- **Overturned syncline**
- **Thrust fault**—Sawteeth on upper plate
- **Detachment surface**—Approximately located. Sawteeth on upper plate
- **Fault**—Type uncertain; ticks indicate hanging-wall block
- 20 / 87 — **Strike and dip of bedding**—Inclined; overturned
- sz — **Shear zone**—Melange; zone of pervasively sheared and structurally mixed strata
- **Outcrops of radiolarian ribbon chert and very cherty rhythmically bedded limestone**
- **Outcrop of basalt**—Locally pillowed
- **Tectonic block of coquinoid limestone in melange**
- **Well**—Drilled for oil and gas; abandoned
- **Outcrops of shaly strata in undivided part (Dh) of Hunt Fork Shale**

CORRELATION OF MAP UNITS



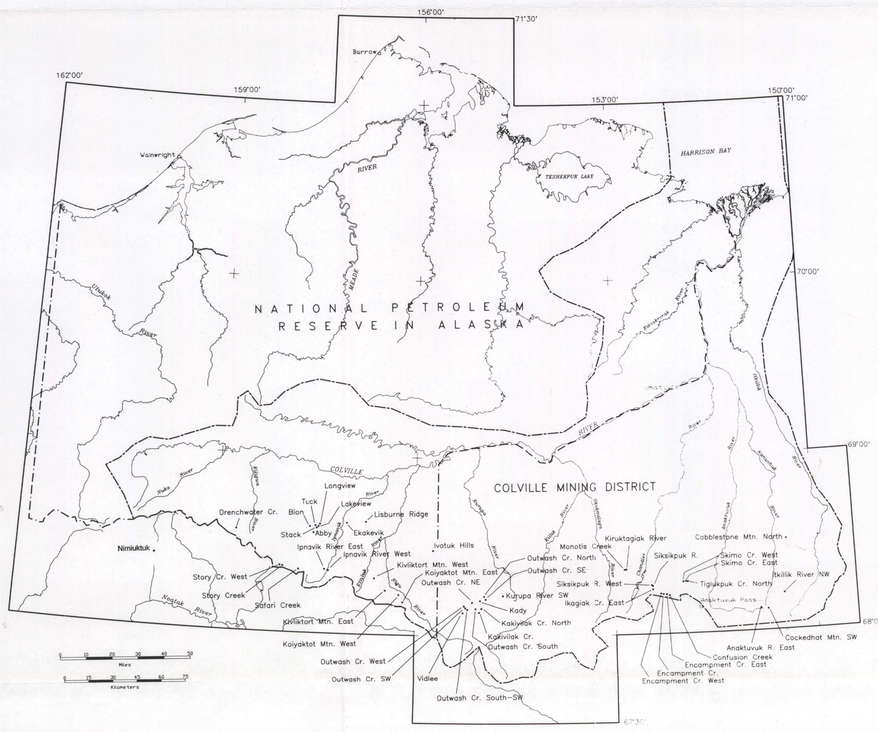
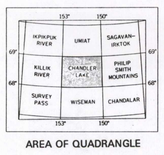


Figure 1. Index map showing the localities of mineral deposits, occurrences, and mineralized areas in the Colville mining district, Brooks Range, Alaska (modified from Meyer, 1994).

MAP A. MINERAL RESOURCE TRACTS A, D, AND E

MAP B. MINERAL RESOURCE TRACTS B AND C

Base from U.S. Geological Survey, 1953
Universal Transverse Mercator projection



AREA OF QUADRANGLE

SCALE 1:250000

CONTOUR INTERVAL 200 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

1987 MAGNETIC DECLINATION AT SOUTH EDGE OF SHEET VARIES FROM 26° TO 27°30′ EAST

Manuscript approved for publication June 29, 1995
Geology from J.S. Kelley, 1990

MAPS SHOWING MINERAL RESOURCE ASSESSMENT OF THE CHANDLER LAKE QUADRANGLE, ALASKA

By

S.E. Church, J.S. Kelley, and Diedra Bohn

1996

INTERIOR–GEOLOGICAL SURVEY, RESTON, VIRGINIA–1996

For sale by U.S. Geological Survey, Earth Science Information Center, Suite 101, 4230 University Drive, Anchorage, AK 99508, and U.S. Geological Survey, Information Services, Box 25286, Federal Center, Denver, CO 80225

ISBN 0-607-85433-2
9 780607 854336