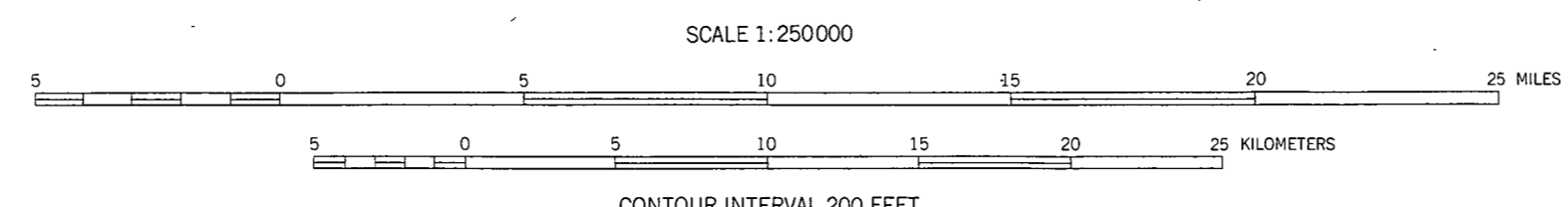


BASE FROM U.S. GEOLOGICAL SURVEY, 1953, 1959

Generalized geology after Patton, W.W., Jr., Moll, E.J.,  
Dutro, J.T., Jr., Silberman, M.L., and Chapman, R.M., 1980



**CORRELATION OF MAP UNITS**

**DESCRIPTION OF MAP UNITS**

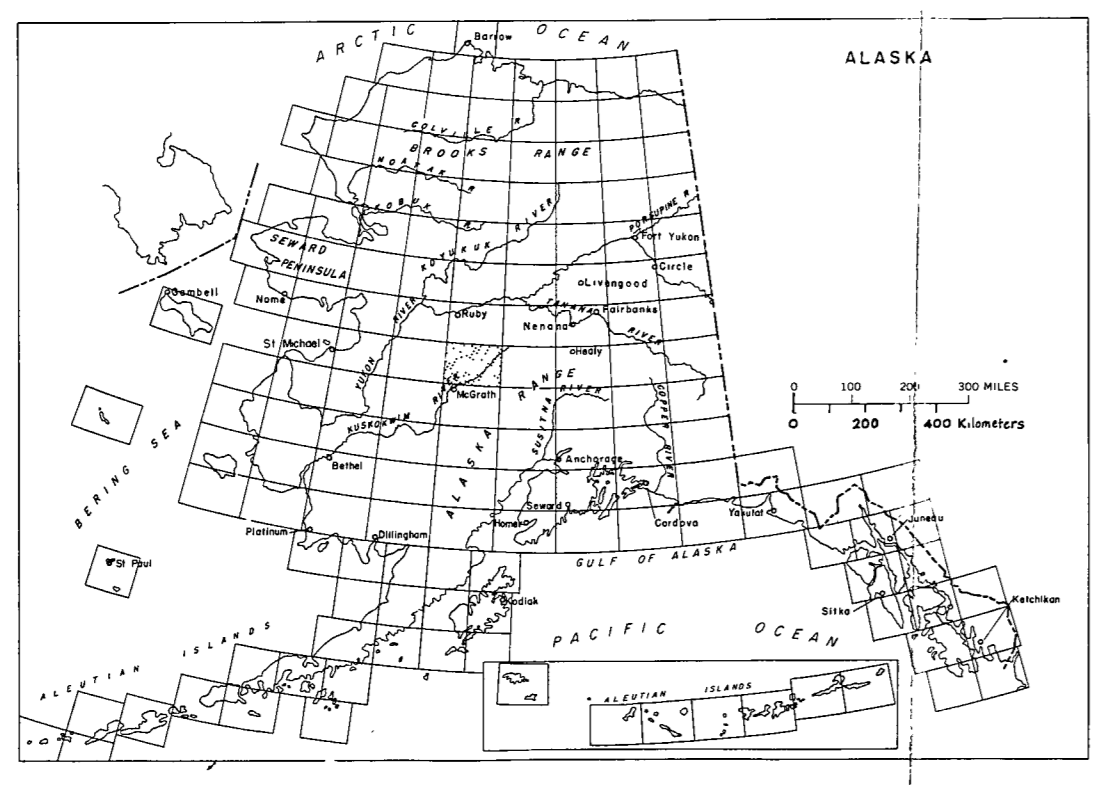
- Qu UNDIFFERENTIATED SURFICIAL DEPOSITS
- Ts1c VOLCANIC ROCKS OF THE MOUNTAIN RIVER AREA—chiefly trachyandesite, basaltic andesite, and basalt flows, tuff, and breccia
- Ts1b MAFIC TO INTERMEDIATE VOLCANIC-RHYOLITE COMPLEXES—altered basalt, andesite, and trachyandesite flows and hypobasal intrusive bodies, Tso-Su11 bodies of monzonite, quartz monzonite, and granodiorite
- Tg GRANITE
- Tm MONZONITE
- Tv VOLCANIC ROCKS OF NIXON FORK-UPPER SULLOON RIVER AREA—rhyolite, andesite, and trachyandesite with, dike, flow, and plug
- Ts VOLCANIC ROCKS OF THE SITSCHU MOUNTAINS—rhyolite and dacite flows and domes
- Kd GABBRO
- Kw UNDIFFERENTIATED SHALE, SILTSTONE, AND SANDSTONE
- Kic MINOR SHALE, SILTSTONE, AND SANDSTONE
- Kss MARINE SANDSTONE, SILTSTONE, AND SHALE
- Kqc QUARTZ-CARBONATE SANDSTONE AND PEREBLY MUDSTONE
- Kvg VOLCANIC GABBRO AND CONGLOMERATE
- Jbt CHERT, TUFF, CRYSTAL AND LITHIC TUFFS, AND VOLCANIC BRECCIA
- Jbs SANDSTONE, SANDY LIMESTONE, SPICULITE, AND CONGLOMERATE
- Jpc CHERT AND LIMESTONE—chiefly radiolarian chert. Jpc1—limestone.
- Dol1 SHALY LIMESTONE
- Dol2 LIMESTONE AND DOLOMITE
- Jc CHERT AND PHYLITE
- Rpqa QUARTZITE, GILT, AND ARGILLITE
- Rpka SHEARED GILT, QUARTZITE, AND QUARTZ-AMICA SCHIST
- Rpka METAVOLCANIC ROCKS—metarhyolite and dacite
- Rpka GALE-SCHIST
- Rpka PELITIC SCHIST

**GEOLOGIC SYMBOLS**

- Contact - Includes approximately located inferred, and faulted
- Fault - Shaded where approximately located, short dashes where inferred, dots where concealed, U, upthrown side; D, downthrown side
- Anticline - Showing direction of plunge
- Syncline - Showing direction of plunge
- Strike and dip of beds. May include overturned beds
- Strike of vertical beds
- Horizontal beds
- Strike and dip of bank based on photointerpretation or distant observation
- Strike and dip of foliation
- Zone of hornfels

EXPLANATION OF IMAGERY INTERPRETATION

— Lineament



LINEAMENT MAP

DISCUSSION

These maps are part of a series of maps on the Medfra quadrangle. Landsat imagery of the quadrangle were analyzed for lineaments and circular and arcuate features as a possible aid in the mineral resource assessment of the area. This study is a modified revision of more detailed interpretative investigations conducted in other areas in Alaska (Albert, 1975; Albert and Steele, 1976a; b; Albert and others, 1978; Steele and Albert, 1978); the report is abbreviated and the methodology involved is similar to that used by Albert (1978). Details concerning the different types of imagery used are given in Table of Imagery Used in Analyses. Although many lineaments and circular and arcuate features are observed from the imagery, no marked spatial relation between these features and known mineral deposits (Schwab and others, 1981) is apparent. However, numerous lineaments and circular and arcuate features observed from the imagery do show good spatial correlation with known geologic features (Patton and others, 1980). For example, feature 1 (lineament map, sheet 1) correlates well with a segment of the trace of the Nixon Fork fault in the central part of the quadrangle, and features 2, 6, 10, 12, 14, and 16 (circular and arcuate features map, sheet 2) show good spatial correlation with areas underlain by prominent exposures of intrusive (volcanic or plutonic) rocks and/or hornfels throughout the quadrangle. Features 7, 11, and 17 (circular and arcuate features map, sheet 2) mark localities characterized by locally prominent fold structures (synclines) in the western half of the quadrangle.

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—, 1976b, Interpretation of Landsat imagery of the Tanacross quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-876, 3 sheets, scale 1:250,000. Supersedes Open-File Report 76-850.

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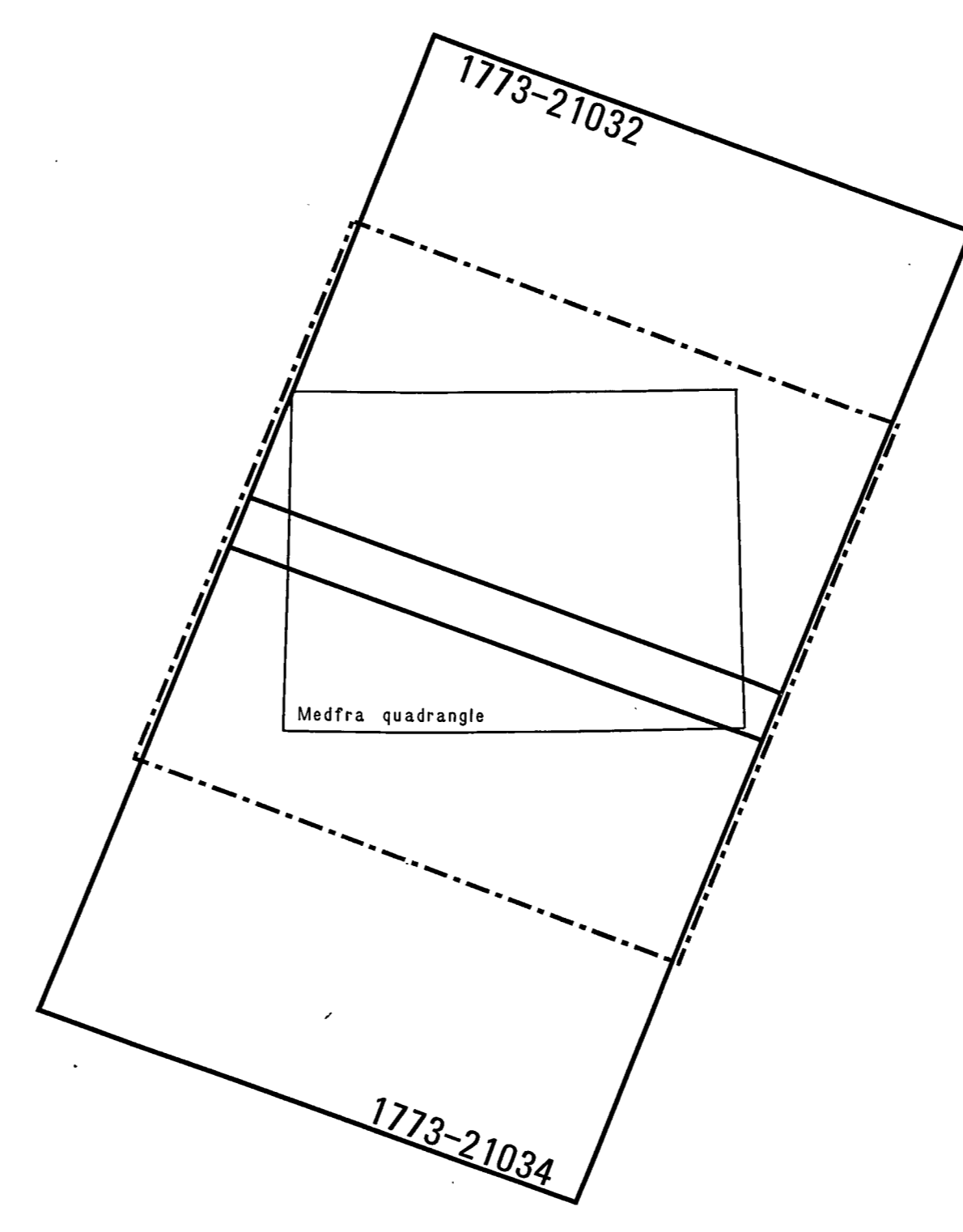


Figure 1. Map showing location of Landsat imagery used in analyses of the Medfra quadrangle. Dashed line indicates boundaries of mosaic (simulated natural color) image.

TABLE OF IMAGERY USED IN ANALYSES

Scenes used for computer enhancement are 1773-21032 and 1773-21034, both taken September 4, 1974. Computer-compatible tapes were processed by Pat S. Chavez, Jr. and Ellen Sanchez, U.S. Geological Survey, Flagstaff, Arizona. For a description of this type of enhancement, see Albert and Steele (1976a, b) and Condit and Chavez (1976). All imagery listed below is available from EROS Data Center, Sioux Falls, South Dakota 57105 (specify PAN number when ordering).

IMAGE TYPE	COMPUTER-ENHANCED	BANDS AND COLORS USED	PROJECTION	PAN NUMBER	SCENE ID NUMBER	TRANSPARENCY SCALE	PRINT SCALE
R.G.M. Reynolds Alaska mosaic	No	7 BW	Albers' Equal-Area		This item not available from EROS Data Center	1:1,000,000	
False-color (PDS) - south	No	4 Blue 5 Green 7 Red	Space Synthetic	E-1200-99CT	1773-21034	1:1,005,000	1:250,000
False-color (PDS) - north	No	4 Blue 5 Green 7 Red	Space Synthetic	E-1201-99CT	1773-21032	1:1,005,000	1:250,000
Simulated natural color	Yes	4 Green 5 Red Sym Blue	Orthographic	E-1202-99CT	Composite (1773-21032, 1773-21034)	1:1,075,000	1:250,000

PDE = photo-optimally enhanced

This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature.

MAPS SHOWING INTERPRETATION OF LANDSAT IMAGERY OF THE MEDFRA QUADRANGLE, ALASKA

by  
James R. Le Compe  
1981