

Many of these map units are combinations of units shown separately on the older map. The Devonian and Devonian(?) age that was assigned to the metamorphic rocks by Brosgé and Reiser (1964) is herein revised to early Paleozoic or older. Unconsolidated sedimentary deposits (Quaternary)

DESCRIPTION OF MAP UNITS

This map is generalized from Brosgé and Reiser (1964).

FOSSILIFEROUS PARTLY METAMORPHOSED SEDIMENTARY Quartz pebble conglomerate (Cretaceous) Lisburne Group (Pennsylvanian and Mississippian) and Kayak Shale (Mississippian)--Limestone, dolomite, shale and conglomerate Hunt Fork Shale (Upper Devonian)--Slate and Purple and green slate and phyllite (Devonian) Purple and green andesitic volcanic sheared Chloritic siltstone and grit (Devonian)--Schistose; in part graywacke Limestone and siltstone (Upper Devonian)--Schistose; includes some green slate locally Skajit Limestone (Upper and Middle Devonian, Upper Silurian) -- Limestone, dolomite, and

> METAMORPHIC, INTRUSIVE AND VOLCANIC ROCKS Vesicular olivine basalt flows (Tertiary?) Migmatite--Intercalated mica schist and granite; granite with mafic inclusions Granitic rocks--K/Ar dates of biotite are 101 m.y. and 125 m.y. (Brosgé and Reiser, 1964); of hornblende, 486 m.y. (M. L. Silberman and D. L. Turner, written commun., 1977)

Mafic rocks and chert--Pillow basalt, andesite, minor chert; diorite; diabase and gabbro. Chert (ch) differentiated where abundant Greenstone and greenschist--Includes pillowed

part of the quadrangle

Phyllite and schistose wacke Quartz muscovite schist Garnet mica schist--Mostly hornfels facies Biotite staurolite schist--Hornfels facies Calcareous schist, marble and tactite (t) Undifferentiated calcareous schist (csm) and feldspathic chloritic schist (fcs) Feldspathic chloritic schist--Includes metadiorite sills and pyritic quartzite Chloritized amphibole schist--Local remnant glaucophane

flows in Hunt Fork Shale (Dhf) in northeast

Hornblende schist--Mostly hornfels facies

GEOLOGIC SYMBOLS CONTACT--Dashed where approximate; dotted where concealed NORMAL FAULT -- Dashed where inferred, queried where doubtful; dotted where concealed; U, upthrown side; D, downthrown side

where concealed. Sawteeth on upper plate

Previous studies in the Nabesna, McCarthy, and Tanacross quadrangles.(Albert, 1975; Albert and Steele, 1976a, b) have revealed the common occurrence of two or more major orthogonal sets of lineaments. These orthogonal sets correspond to a planetary fracture pattern (also observed on the Moon, Mercury, and Mars), which is discussed at length in Hodger Cay, and Ponjaming (1976) and briefly povious by Albert and Steele (1976a) discussed at length in Hodgson, Gay, and Benjamins (1976) and briefly reviewed by Albert and Steele (1976a). In the Chandalar quadrangle, only one major orthogonal set of lineaments was observed (fig. 4), approximately N. 68° W. and N. 25° E., that was not previously observed elsewhere in Alaska. Lineaments with these trends are not only orthogonal, but also are widespread throughout the quadrangle (fig. 3). Another major lineament direction, which has also been observed elsewhere, is approximately N. 64° E. Lineaments in this group, however, have no orthogonal complement and are clustered in the northwestern part of the quadrangle (fig. 3). A similar group of lineaments occurs in conjunction with the Denali fault system in the Talkegra quad-A similar group of lineaments occurs in conjunction with the Denali fault system in the Talkeetna quad-Eleven regionally significant lineauments were identified on the basis of length and association with known geologic, geophysical, and geochemical data. They are designated by letter symbols on figure 5 and main map of sheet 1 and are described in table 2. In our opinion, these are the lineaments most strongly related to geologic and mineralogical phenomena in the quadrangle. Lineaments D, E, F, J, and K are of special significance. Major northeast-trending lineaments D and J are nearly parallel and seem to form a zone that bounds geophysical, geochemical, geologic, and mimeralogical entities. This zone parallels the Castle Mountain and Iditarod faults and the northeast-trending part of the Denali fault, all three of which are right lateral, and the Porcupine lineament (King, 1969). The D-J lineament zone forms a distinct northwestern boundary of the major gold occurrences in the Chandalar quadrangle and approximately corresponds to the southern limit of con tact metamorphic and porphyry copper deposits. The northeastward continuation of the zone (fig. 5) suggests that such copper deposits may extend into the southeastern Philip Smith Mountains and southwestern Arctic quad-Several prominent geochemical anomalies occur within a zone defined by lineaments E and F. In addition, the intersection of lineament K and this zone corresponds to a particularly noteworthy area of geochemical anomalies for zinc, barium, nickel, cobalt, antimony, and yttrium. The intersections of other major lineaments and the E-F zone also are areas of geochemical anomalies, although these anomalies are not so prominent as are

those associated with the intersection of lineament K. Lineament zones D-J and E-F and limeament K seem to form boundaries for numerous geologic units (Brosgé and Reiser, 1964). Most greenschist-facies units are confined to an area bounded by these three lineament features, whereas many bedded sedimentary, volcanic, and lower grade metamorphic rocks are largely excluded Because of these strong correlatioms with mineralization, geochemical anomalies, geophysical anomalies and geology, areas where these lineament zones and major lineaments intersect within mineralogically favorable rock types, such as the quartz-mica schiist unit (DeYoung, 1978), are likely targets for mineral occurrence investigations. In addition, these correlations suggest that the Your Creek area in T. 35 N., R. 2 W., where zone D-J and Lineaments G (which passes through the major gold district near Little Squaw Peak) and K intersect, may be worthy of further exploratiion despite the absence of quartz-mica schist. Numerous short lineaments (less than 10 km), together with the relatively few long lineaments visible on the horizontal, diagonal, and vertical ffirst derivative images, were analyzed as a group using a diffraction grating (Ronchi ruling) with a spacing of eight lines per millimeter (Offield, 1975). The various trends are shown in a chart (fig. 6). Because the short lineaments greatly outnumber the long lineaments (main map of sheet l) in the first derivative images, the diffraction grating measurements assess the trends and intensities of the shorter lineaments without any significant effect from the longer ones. The general structural grain of the Chandalar quadrangle--approximately N. 60° E. (W. P. Brosgé, oral commun., 1977)--is reflected in both figures 4 and 6. Another promiment structural direction evident in figure 6, approximately N. 60° W.

has not been observed in the field. Goetz and others (1975) note the occurrence of "ringing" effects, which can be seen as an apparent conjugate jointing pattern trending approximately 20° to the direction of the filter, in images on which spatial filterimg techniques have been used to enhance structural features. Although the techniques used in our study are somewhat different, the possibility that computer-generated artifact caused the strong peak at approximately N. 60° W. and the weak-moderate peak at approximately N. 5° E. was considered. All three peaks, however, can be seen on at least two of the three first derivative images. We believe, therefore, that the peak at N. 60° W. probably reflects a real structural phenomenon that is masked Numerous mapped faults can be seen in the imagery, although most would not be identified as such without the aid of a geologic map (Brosgé and Reiser, 1964). Once identified, however, a number of these faults seem to have traces considerably longer than mapped (fig. 7). Three conjectural fault extensions, X, Y, and Z, Feature X coincides with the termination of an aeromagnetic high (Cady, 1978), two porphyry copper deposits (DeYoung, 1978), and an area of majjor molybdenum and copper geochemical anomalies (Marsh and others, 1978c). The configuration of the two mapped faults intersecting with feature X (southeast corner of T. 33 N., R. 5 W.) coincides with a similarly shapped area of significant copper geochemical anomalies (Marsh and others, 1978c). Feature X also coincides with the southern boundary of the copper belt in the Brooks Range (Clark Feature Y is cross shaped and coincides with a similarly shaped aeromagnetic low. Cady (1978) describes another similar aeromagnetic low in the quartz-mica schist unit near the Little Squaw Peak gold district as reflecting a set of shear zones with trends parallel to gold-bearing veins. Feature Y and its associated aeromagnetic low occur in an area of extensive quartz-mica schist and may be worthy of further exploration. Feature Z is about 110 km long and follows the southern boundary of a strong, aeromagnetic high interpreted by Cady (1978) as being related to the quartz-mica schist unit. Two significantly different types of circular and arcuate features occur in the Chandalar quadrangle and surrounding area (sheet 2). One type (ffeatures 1 through 9) includes relatively small, commonly concentric,

of which are discussed in table 3) occur in the Chandalar quadrangle and surrounding area (fig. 8). These features are reminiscent of, although mostly larger than, similar features observed in the Nabesna and McCarthy Steele, 1976a). Except for feature 10, there is no evidence to indicate a relation of this kind for the features in the Chandalar quadrangle and surrounding area. Iron-oxide colored areas Four iron-oxide colored areas were identified in the eastern part of the quadrangle on the simulated natural color scene (sheet 2). All four occur within the quartz-mica schist unit. No iron-oxide colored areas could be identified on the westerm simulated natural color scene, mostly because the images were acquired

during late summer when much of the vege tation has turned to gold and red.

circular, and arcuate features, most of which can be ascribed to local geologic phenomena (table 3). The other type (features 10 through 12) includes relatively large circular and arcuate features that are not readily attributable to known geologic or geophysical phenomena. Numerous features of the second type (only three

Clark, A. L., Berg, H. C., Cobb, E. H., Eberlein, G. D., MacKevett, E. M., Jr., and Miller, T. P., 1974,
Metal provinces of Alaska: U.S. Geological Survey Miscellaneous Investigations Series Map I-834, scale Cobb, E. H., 1964, Iron occurrences in Alaska: U.S. Geological Survey Mineral Investigations Resources Map DeYoung, J. H., Jr., 1978, Mineral resources map of the Chandalar quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-878B, 2 sheets, scale 1:250,000. (in press) Decker, John, and Karl, Susan, 1977a, Preliminary aeromagnetic map of central Alaska: U.S. Geological Survey Open-File Report 77-168E, scale 1:1,000,000. ----1977b, Preliminary aeromagnetic map of the Brooks Range and Arctic Slope, Alaska: U.S. Geological Survey Open-File Report 77-166E, scale 1:1,000,000. Douglas, R. J. W., ed., 1970, Geology and economic minerals of Canada maps and charts: Geological Survey of

Dutro, J. T., Jr., Brosgé, W. P., Lanphere, M. A., and Reiser, H. N., 1976, Geologic significance of Doonerak structural high, central Brooks Range, Alaska: American Association of Petroleum Geologists Bulletin, v. 60, no. 6, p. 952-961. Goetz, A. F. H., Billingsley, F. C., Gillespie, A. R., Abrams, M. J., Squires, R. L., Shoemaker, E. M., Luchitta, Ivo, and Elston, D. P., 1975, Application of ERTS images and image processing to regional problems and geologic mapping in northern Arizona: National Aeronautics and Space Administration Technical Report 32-1597, 188 p. Grantz, Arthur, Holmes, M. L., and Kososki, B. A., 1975, Geologic framework of the Alaskan continental terrace in the Chukchi and Beaufort Seas, *in* Yorath, C. J., Parker, E. R., and Glass, D. J., eds., Canada's continental margins: Canada Society of Petroleum Geologists, Memoir 4, Calgary, Alberta, Canada, p. Grybeck, Donald, 1977a, Map showing geochemical anomalies in the Brooks Range, Alaska: U.S. Geological Survey Open-File Report 77-166-C, scale 1:1,000,000. ----1977b, Map showing known mineral deposits of the Brooks Range, Alaska: U.S. Geological Survey Open-File Report 77-166-D, scale 1:1,000,000. Hodgson, R. A., Gay, S. P., and Benjamins, J. Y., eds., 1976, International conference on the new basement tectonics: Utah Geological Society Proceedings, 1st, Salt Lake City, 1974, p. 11-26.

King, P. B., 1969, Tectonic map of North America: U.S. Geological Survey, 2 sheets, scale 1:5,000,000. Lathram, E. H., and Raynolds, R. G. H., 1977, Tectonic deductions from Alaskan space imagery, *in* Woll, P. W., and Fischer, W. A., eds., Proceedings of the first annual William T. Pecora Memorial Symposium, October 1975, Sioux Falls, South Dakota: U.S. Geological Survey Professional Paper 1015, p. 179-191. Marsh, S. P., Detra, D. E., and Smith, C. E., 1978a, Geochemical and generalized geologic map showing distri-bution and abundance of antimony and niobium in stream sediment in the Chandalar quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-878H, 1 sheet, scale 1:250,000. (in press) -----1978b, Geochemical and generalized geologic map showing distribution and abundance of barium, arsenic, boron, and vanadium in stream sediment in the Chandalar quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-878G, 1 sheet, scale 1:250,000. (in press) ---1978c, Geochemical and generalized geologic map showing distribution and abundance of copper, molybdenum, and lead in stream sediment in the Chandalar quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-878D, 1 sheet, scale 1:250,000. (in press) ----1978d, Geochemical and generalized geologic map showing distribution and abundance of nickel, cobalt, lanthanum, and yttrium in stream sediment in the Chandalar quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-878F, 1 sheet, scale 1:250,000. (in press) ----1978e, Geochemical and generalized geologic map showing distribution and abundance of zinc in stream sediment in the Chandalar quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-878E, 1 sheet, scale 1:250,000. (in press)

Offield, T. W., 1975, Line-grating diffraction in image analysis: Enhanced detection of linear structures,

Steele, W. C., 1976, Computer program designed to aid in the analysis of linear features derived from Landsat

Colorado Front Range: Modern Geology, v. 5, p. 101-107.

data: U.S. Geological Survey Open-File Report 76-605, 39 p. Steele, W. C., and Albert, N. R. D., 1978, Interpretation of Landsat imagery of the Talkeetna quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-870C, 2 sheets, scale 1:250,000. 1772-20565

Figure 1.-- Map showing the coverage of Landsat scenes used in this study.

Dotted line indicates boundary between computer-mosaicked scenes.

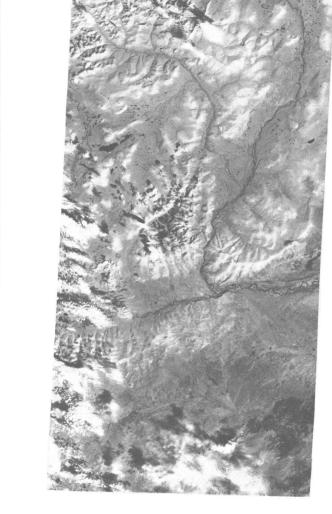


Figure 2.-- Example of Landsat imagery used in this study. Band 6.

TABLE 1.--Landsat imagery used in study.

False-color with linear 4 Blue 2208-20425 8-18-75 Orthographic E-619-53CT 1:1,058,000 1:250,000

False-color with linear 4 Blue 1772-20565 9- 3-74 Orthographic E-618-64CT 1:1,060,450 1:250,000 stretch - west 5 Green 1773-21020 9- 4-74 7 Red

False-color with sinu- 5 Green 2208-20425 8-18-75 Orthographic E-621-53CT 1:1,058,000 1:250,000

False-color with sinu- 5 Green 1772-20565 9- 3-74 Orthographic E-620-64CT 1:1,060,450 1:250,000 soidal stretch - west 6 Blue 1773-21020 9- 4-74

Vertical first 6 Black 2208-20425 8-18-75 Orthographic E-318-53BN 1:1,062,950 1:250,000 derivaltive - east and white

Vertical first 6 Black 1772-20565 9- 3-74 Orthographic E-317-64BN 1:1,060,450 1:250,000 derivaltive - west and white 1773-21020 9- 4-74

Horizonital first 6 Black 2208-20425 8-18-75 Orthographic E-320-53BN 1:1,058,000 1:250,000

Horizontal first 6 Black 1772-20565 9- 3-74 Orthographic E-319-64BN 1:1,060,450 1:250,000 derivative - west and white 1773-21020 9- 4-74

Diagonal first 6 Black 2208-20425 8-18-75 Orthographic E-322-53BN 1:1,062,950 1:250,000

Diagonal first 6 Black 1772-20565 9- 3-74 Orthographic E-321-64BN 1:1,060,450 1:250,000 derivative - west and white 1773-21020 9- 4-74

TABLE 2.--Regionally significant lineaments observed in the Chandalar quadrangle. [Superscript numbers designate references at end of table.]

N. 80° E.. Corresponds to parts of two thrust fault con-480 tacts in Wiseman quadrangle² and northern responds to part margin of Doonerak structural high³. Ter-of axis of major

eastern Brooks

Marks major offset

Brooks Range to northwest. Bisects

Corresponds to part of thrust fault in Ambler Approximately coin- Corresponds to None observed.

River quadrangle², to short segment of thrust cides with northern southern margin

ing high salient in trending high in

nificant northeast- approximate

Coincident with boundary between lower Paleo-zoic-Precambrian rocks and Mesozoic rocks Bettles and Tanana significant significant of Brooks Range. 1

Corresponds to parts of fault in Wiseman and Parallels contours in Coincides with Corresponds to Corresponds

of Brooks Range.

Chandalar quadrangle. 15 Delimits easternmost trending high in northeast bound- in Umiat quadextension of abundant outcrops of Devonian(?) the Teshekpuk and ary of northwest- rangle.23

1. DeYoung (1978) 2. Clark and others (1974)

5. Brosgé and Reiser (1964)

9. Decker and Karl (1977a)

. Decker and Karl (1977b)

4. Marsh, Detra, and Smith (1978d)

2. Grantz, Holmes, and Kososki (1975)

fault that bounds a number of small mafic in- edge of west-trend- of major east

trusions in Wiseman quadrangle², and to ing high salient in trending high i northern limit of Yukon Flats Basin⁴. With E Chandalar quadran- Chandalar quadran-

thrust fault contact in Wiseman quadrangle, trending low in

Corresponds to southeast-trending salient of Permian sedimentary rocks in Chandler Lake quadrangle.² Terminates several faults in Lookout Ridge quadrangle.² Corresponds to southeast extent.⁹

Bettles quadrangle. Parallels northeast-trending segments of Castle Mountain, Denali, and Iditarod faults. Parallels Porcupine

Corresponds to east-trending fault in Coleen None observed.

and to a fault in Arctic quadrangle.² eastern B Coincides with southern margin of Doonerak Range.

4 Green 1773-21020 9- 4-74

2208-20425 8-18-75 Orthographic E-623-53CT 1:1,058,000 1:250,000

Correlation with Correlation with Correlation with

Passes nearby None observed.

and Sn mineral

Coincides with Passes through Passes through series of lows center of area of areas of B⁶,

mines in Chanda- and Co

corresponds to C intersects

with areas of high values of Cu and Mo in Chandalar quad-rangle⁷.

aries of four

major areas of Zn anomalies in Survey Pass

Forms northern boundary of

east-trending zone of high Cu, Mo⁷, and Zn⁸ in Chandalar

southern bound-aries of four

aries of four major areas of Sn, Mo, Pb, and Zn in Survey Pass quadrangle¹⁸, and forms southern boundary of east-trending zone of high Cu, Mo⁷, and Zn⁸ in Chandalar quadrangle

lar quadrangle (see C, K, and

with zone between E and

boundary between zone between

Fe and Sn, W, Au, E and F.

Pb, and Zn prov-inces in Eastern Alaska where Yukon River crosses Alaska-Canada bor der¹², and may be associated with

Creek) and Au in

trending high in of significant Au to area of Chandalar quadrangle related dalar quadranof granitic rocks

Parallels contours Coincides with Corresponds to Corresponds in southeastern major northeast- northern boundary (along with Corresponds to Co

marble, and tactite. 16

northern margin

ing high in Ambler

Truncates inferred

northeast-trending belt of granitic

quadrangles and northeast-trend- Corresponds to with small but pro- ing high and low northwestern bound-

nounced low in in Bettles and ary in major Sn,
Nulato quadrangle. Tanana quadrangles. 19 W, Au, Pb, Zn
province in inte-

several signifi- middle of Au cant north-north- mines area near east-trending little Squaw

east-trending little Squaw F, passes
highs in Chanda- Peak in Chandalar through areas
lar quadrangle. 16 quadrangle. 11 of significant

Au province in

Mountains quad- placer mines in Cu in Chanda-rangle.²⁰ Chandalar quad- lar quadran-

Chandalar quad- morphic and por- tween areas rangle, and cor- phyry Cu deposits of significant

southeastern part major northeast- southern limit (with D) to

inferred axis rangle. 1

Corresponds to axis Corresponds to Passes through

of broad northwest- approximate

Umiat quadrangles trending high in

ures in contours in Umiat quadrangles

tains, and Umiat boundaries between quadrangles. Trunhighs and lows in

east-trending highs and lows in Christian, Fort Yukon, and Charley River quadrangles.

cates several north- Teshekpuk quad-

rangle and through gle. 7

in Chandalar quad- Cu or Ag anom-

Romanof Moun-

with zone

Coincides with Cu and Mo anom-

gravimetric data¹ aeromagnetic data known

Synthetic 1772-20565 9- 3-74 Orthographic E-622-64CT 1:1,060,450 1:250,000

U.S.D.A. Alaska mosaic 7 Black Not appli-

derivaltive - east and white

derivaltive - east and white

Subparallels main structure of Brooks

Corresponds to part of a fault contact in

and Iditarod faults, tends to parallel main structural trend in Wiseman and Chandalar quadrangles, and seems to terminate several faults in Wiseman quadrangle.^{2,4} Joins a

parallels Porcupine lineament4, and coin cides with contacts between various Devonian

major lineament that extends to southern

fault and to Rocky Mountain Trench fault

Terminates several east-trending faults in

lineament. Delineates northern extent of numerous folds and faults in Late Jurassion nd Cretaceous rocks in western Koyukuk

of nearly all greenschist facies rocks in Chandalar quadrangle. 15

quadrangle², to segment of thrust fault in

Jurassic to mid-Cretaceous granitic plutoni of contact between lower Paleozoic and (or)

Precambrian metasedimentary rocks and Middle to Upper Devonian sedimentary rocks in

Wiseman quadrangle². With F forms southern limit of nearly all greenschist facies

Corresponds to southeastern limit of major thrust-fault pattern in Davidson Mountains.4

Basin in Melozitna, Tanana, and Bettles quadrangles²,⁴. Corresponds to segment of

Kaltag fault in Norton Bay and Unalakleet quadrangles², ⁴. Seems to truncate numerous

nding lineament in Melozitna quadrang

to Precambrian metamorphic rocks of Yukon-

Tanana complex.⁴ Extends through Iliamna volcano in Lake Clark quadrangle.²¹ Coincides

with narrowing of outrop pattern of upper Paleozoic and lower Mesozoic sedimentary rocks in eastern Brooks Range.² Corresponds

Denali, and Castle Mountain faults without

Arctic quadrangles² and is part of major lineament.⁹ Parallels northeast-trending

Iditarod faults.4 Parallels Porcupine line

of nearly all greenschist facies in Chanda-

Corresponds to approximate eastern boundary

volcanic rocks in southern Brooks Range. 2

Terminates a number of folds developed in

*See figure 5 amd map (sheet 1) for locations.

References for Table 2

Dutro, Brosgé, Lanphere, and Reiser (1976)

. Beikman and Lathram (1976)

5. Marsh, Detra, and Smith (1978a)

6. Marsh, Detra, and Smith (1978b) 7. Marsh, Detra, and Smith (1978c) 8. Marsh, Detra, and Smith (1978e)

upper Mesozoic sedimentary rocks in central Brooks Range.⁴ Corresponds to northward

of Paleozoic or older metamorphic rocks in

segments of Castle Mountain, Denali, and

to major lineament identified by others

limits westernmost extent of lower Paleozoic None observed

forms southern limit of nearly all greenschist gle.

rocks in Chandalar quadrangle.

facies in Chandalar quadrangle. 1

N. 20° E. None observed.

Chandalar and Wiseman quadrangles², to approx

British Columbia-Alberta border9, to Tintina

Devonian units in Wiseman quadrangle.

Computer-enhanced imagery

FOLIO OF THE CHANDALAR QUADRANGLE, ALASKA MISCELLANEOUS FIELD STUDIES MAP MF-878J SHEET 1 OF 2

ALBERT, LE COMPTE, STEELE-INTERPRETATION OF LANDSAT IMAGERY

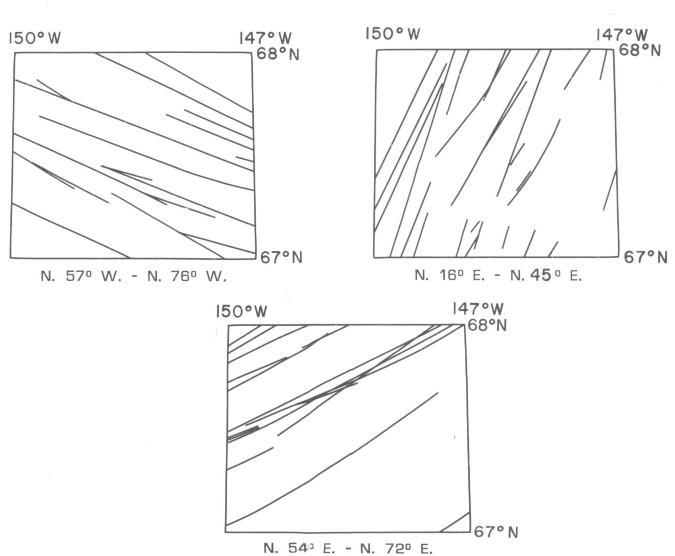


Figure 3. -- Maps of the Chandalar quadrangle showing the distribution of the three, most prominent sets of lineament trends observed on Landsat imagery.

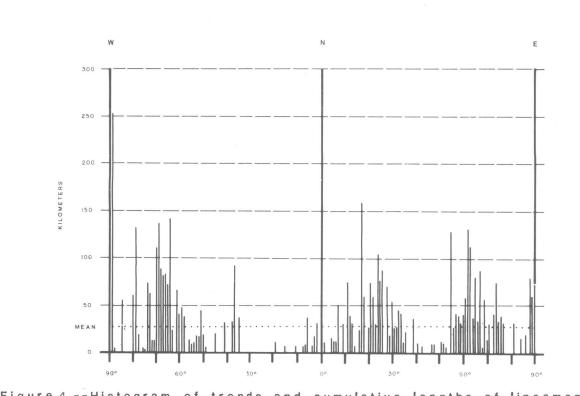


Figure 4.--Histogram of trends and cumulative lengths of lineaments observed on Landsat imagery of the Chandalar quadrangle.

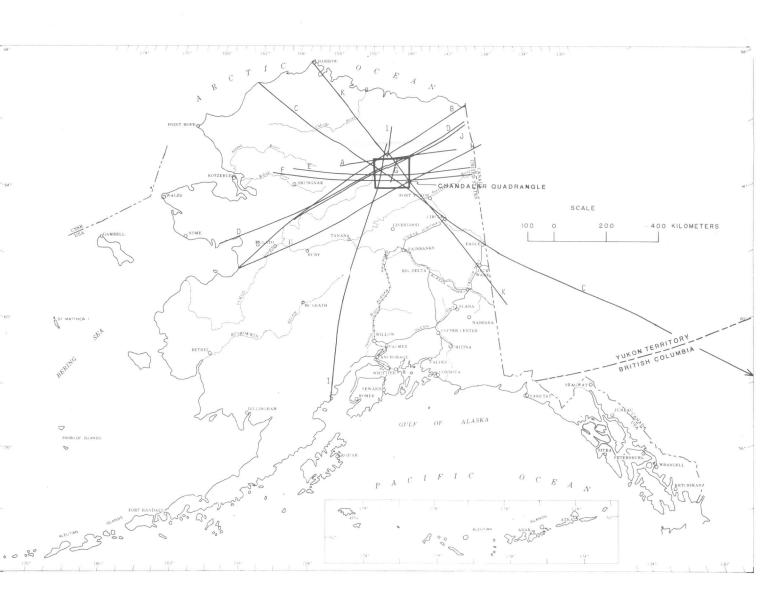


Figure 5.-- Index map of Alaska showing the location of the Chandalar quadrangle and lineaments outside the quadrangle that are described in table 2.

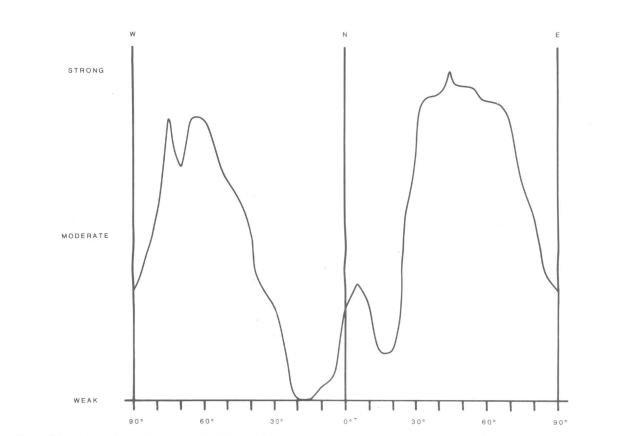
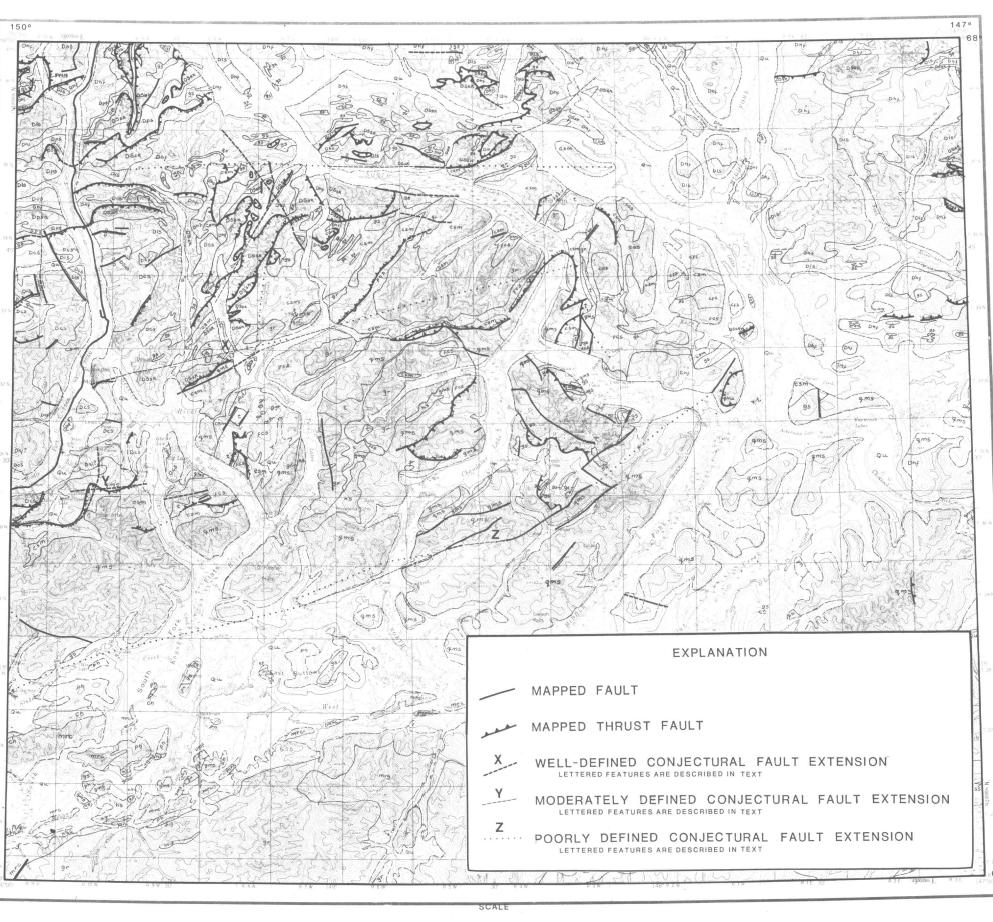


Figure 6.--Chart showing relative intensity and trends of lineaments less than 10 km long as determined by use of a diffraction grating on Landsat imagery of the Chandalar quadrangle. Relative intensities are subjective.



5 0 5 10 15 20 25 KILOMETERS