

BASE FROM U.S. GEOLOGICAL SURVEY, 1960



Geology generalized from Winkler, G.R., Miller, R.J., Grantz, Arthur, MacKevett, E.M., Jr., Silberman, M.L., Plutker, George, and Case, J.E., 1980

DESCRIPTION OF MAP SHEETS

ALL SHEETS

UNIT 1

UNIT 2

UNIT 3

UNIT 4

UNIT 5

UNIT 6

UNIT 7

UNIT 8

UNIT 9

UNIT 10

UNIT 11

UNIT 12

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UNIT 100

SYMBOLS

1. Lineament

2. Circular or arcuate feature

TABLE OF IMAGERY USED IN ANALYSES

Photo-optimally enhanced scenes used are 1692-20152, taken June 15, 1974, and 2168-20223, taken July 5, 1975. Imagery is available from EOS Data Center, Sioux Falls, SD 57198 (specify PAD number when ordering). Example of imagery is shown in Figure 2.

IMAGERY TYPE	COMPUTER-ENHANCED	BANDS AND COLORS USED	PROJECTION	PAD NUMBER	SCENE ID NUMBER	TRANSPARENCY SCALE	PRINT SCALE
U.S.D.A. Alaska mosaic	No	2 Black and white	Alber's equal area		N/A		1:1,000,000
False-color (POE) - east	No	4 Blue 5 Green Red	Saeco Cylindrical	E-1189-99CT	1692-20152	1:1,000,000	1:250,000
False-color (POE) - west	No	4 Blue 5 Green Red	Saeco Cylindrical	E-1189-99CT	2168-20223	1:1,000,000	1:250,000

POE = photo-optimally enhanced

EXPLANATION OF IMAGERY INTERPRETATION

- Lineament
- Circular or arcuate feature

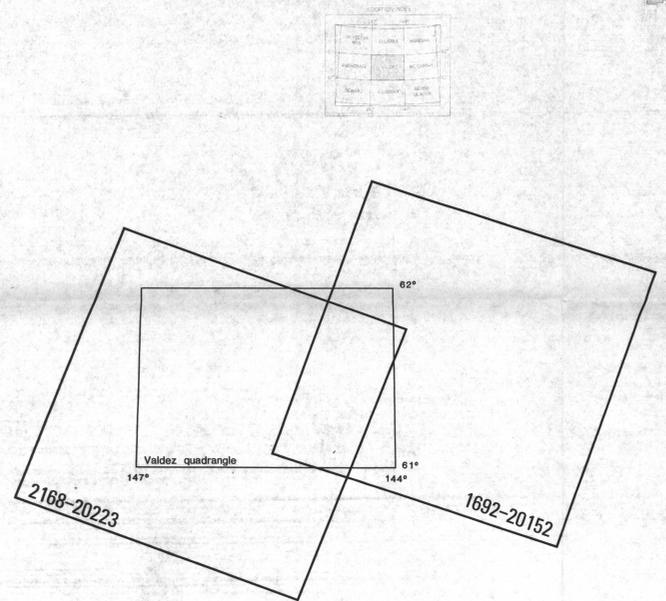


Figure 1. Map showing location of Landsat imagery used in analyses of the Valdez quadrangle.

**DISCUSSION**

This map is part of a folio of maps on the Valdez quadrangle. Landsat images 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 version of more detailed interpretative investigations conducted in other areas in Alaska (Albert, 1975; Albert and Steele, 1976a, b; Albert and others, 1976; Steele and Albert, 1978). The report is abbreviated and the methodology involved is similar to that used by Bates (1972). Details concerning the different types of imagery used are given in "Table of Imagery Used in Analyses".

Although many lineaments and several circular and arcuate features are observed from the imagery of the quadrangle, no marked spatial relation between these features and other mineralized localities or areas with mineral potential (Winkler and others, 1980a) is apparent.

However, several lineaments and one of the circular features observed from the imagery do show good spatial association with locally prominent geologic features (Winkler and others, 1980a). The circular feature (feature 1) is associated with the McCarby volcano that is partially exposed in the northeast corner of the quadrangle. A series of lineaments (features 2) correspond to segments of the trace of the Contact fault in the southwest part of the quadrangle; another lineament (feature 3) spatially coincides with the trace of an unnamed fault exposed in the east-central part of the quadrangle.

**REFERENCES CITED**

Albert, R.R.D., 1975, Interpretation of Earth Resources Technology Satellite imagery of the Valdez quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-653, 2 sheets, scale 1:250,000.

Albert, R.R.D., Le Compte, J.R., and Steele, W.C., 1976, Map showing interpretation of Landsat imagery of the Chukchi quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-878, 2 sheets, scale 1:250,000.

Albert, R.R.D., and Steele, W.C., 1976a, Interpretation of Landsat imagery of the McCarby quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-873a, 3 sheets, scale 1:250,000.

—, 1976b, Interpretation of Landsat imagery of the "nacross quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-882, 3 sheets, scale 1:250,000.

Raines, G.L., 1976, Porphyry copper exploration model for northern Sonora, Mexico: U.S. Geological Survey Journal of Research, v. 5, no. 1, p. 51-58.

Steele, W.C., and Albert, R.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.

Winkler, G.R., Miller, R.J., Grantz, Arthur, MacKevett, E.M., Jr., Silberman, M.L., Plutker, George, and Case, J.E., 1980a, Geologic map of the Valdez 1° x 3° quadrangle, southern Alaska: U.S. Geological Survey Open-File Report 80-892, scale 1:250,000.

Winkler, G.R., Miller, R.J., MacKevett, E.M., Jr., and Holloway, C.D., 1980b, Mineral deposits map and resource assessment of the Valdez 1° x 3° quadrangle, southern Alaska: U.S. Geological Survey Open-File Report 80-892, scale 1:250,000.

MAP SHOWING INTERPRETATION OF LANDSAT IMAGERY OF THE VALDEZ  
1° X 3° QUADRANGLE, SOUTHERN ALASKA

by  
James R. Le Compte

1981

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

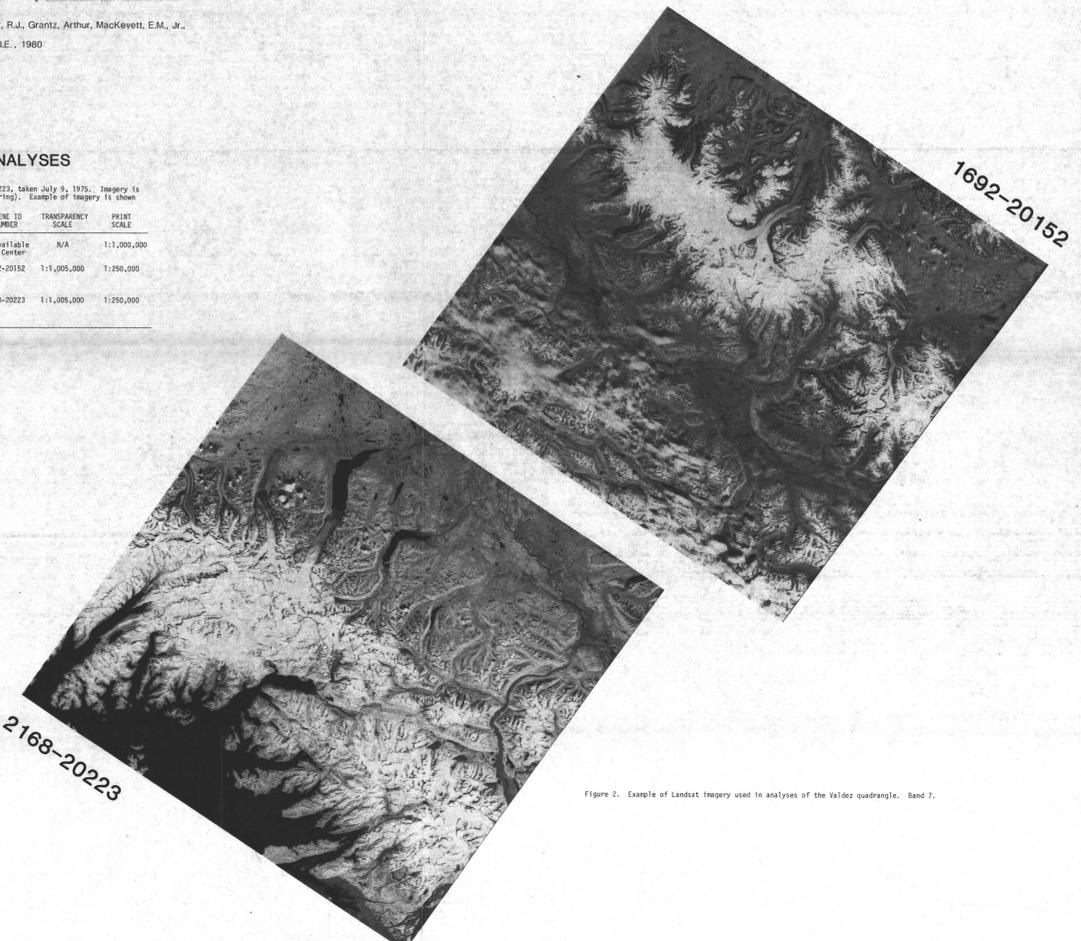


Figure 2. Example of Landsat imagery used in analyses of the Valdez quadrangle. Band 7.