

Images used for computer enhancement were 1390-20450 and 1390-20452, both taken 8/17/73, and 1406-20334, taken 9/2/73. Computer compatible tapes were processed by Pat S. Chavez, Jr., Teresa E. Grow, and Lynda Sowers, U.S. Geological Survey, Flagstaff, Arizona. Imagery is available from EROS Data Center, Sioux Falls, South Dakota 57198 (specify PAD number when ordering). More detailed descriptions of the various computer enhancement techniques used in these images are given in Albert and Steele (1976a, b) and Condit and Chavez (1978).

IMAGE TYPE	COMPUTER- ENHANCED	BANDS AND COLORS USED	PROJECTION	P40 NUMBER	TRANSPARENCY SCALE	PRINT SCALE
U.S.D.A. Alaska mosaic	No	7 BAN	Alber's Equal Area	N/A	N/A	1:1,000,000
False-color with linear stretch - east	Yes	4 Blue 5 Green 7 Red	Orthographic	E-717-57CT	1:1,070,000	1:250,000
False-color with linear stretch - west	Yes	4 Blue 5 Green 7 Red	Orthographic	E-718-45CT	1:1,051,250	1:250,000
False-color with sinusoidal stretch - east	Yes	5 Blue 6 Green 7 Red	Orthographic	E-719-57CT	1:1,070,000	1:250,000
False-color with sinusoidal stretch - west	Yes	5 Blue 6 Green 7 Red	Orthographic	E-720-45CT	1:1,051,250	1:250,000
Simulated natural color - east	Yes	4 Green 5 Red 5m Blue	Orthographic	E-721-57CT	1:1,070,000	1:250,000
Simulated natural color - west	Yes	4 Green 5 Red 5m Blue	Orthographic	E-722-45CT	1:1,051,250	1:250,000
Vertical first derivative - east	Yes	6 BAN	Orthographic	E-358-57BN	1:1,070,000	1:250,000
Vertical first derivative - west	Yes	6 BAN	Orthographic	E-359-45 BN	1:1,051,250	1:250,000

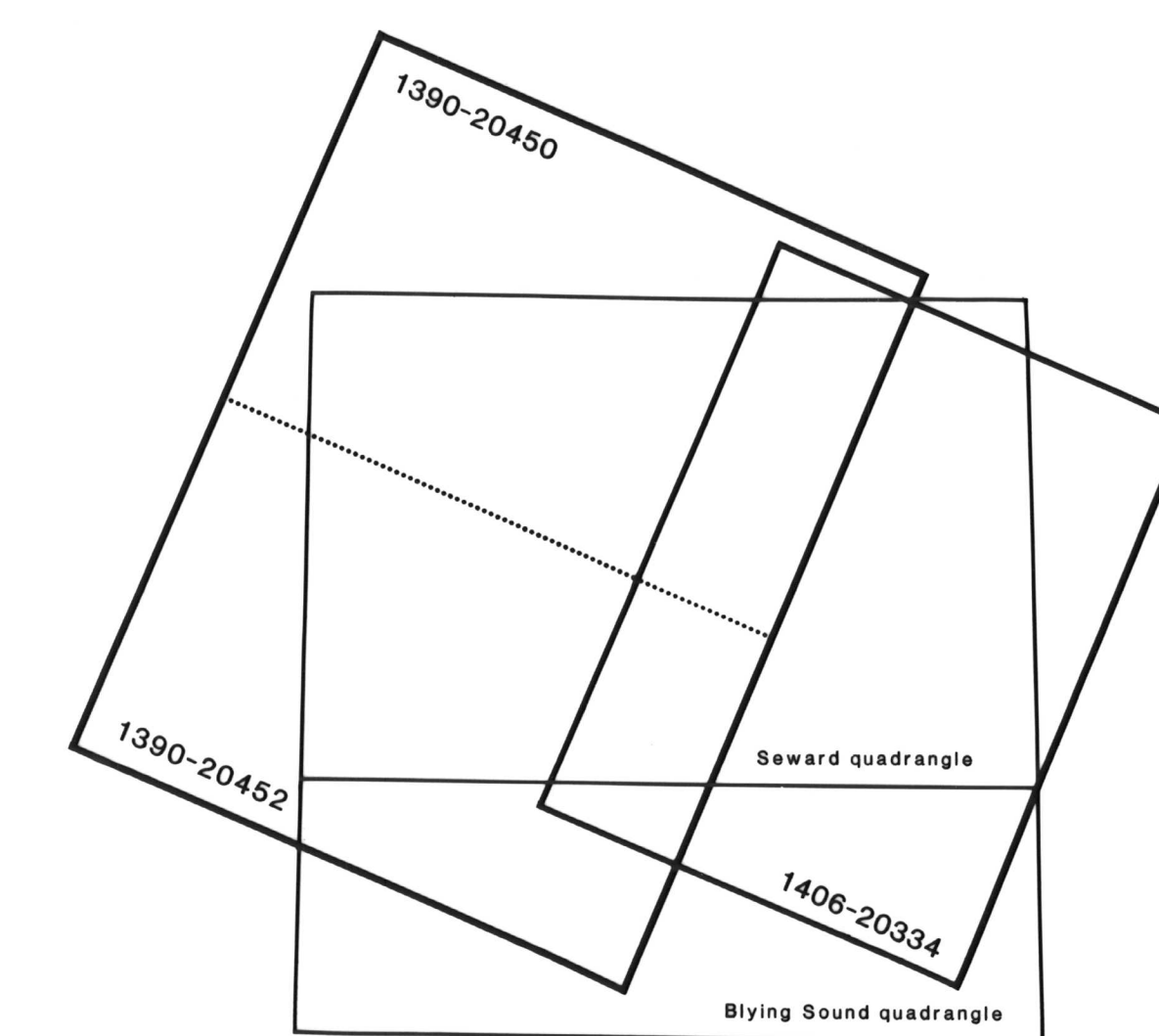


Figure 1. Map showing location of Landsat imagery used in analyses of the Seward and Blythe Sound quadrangles. Dotted line indicates boundary between mosaicked images.

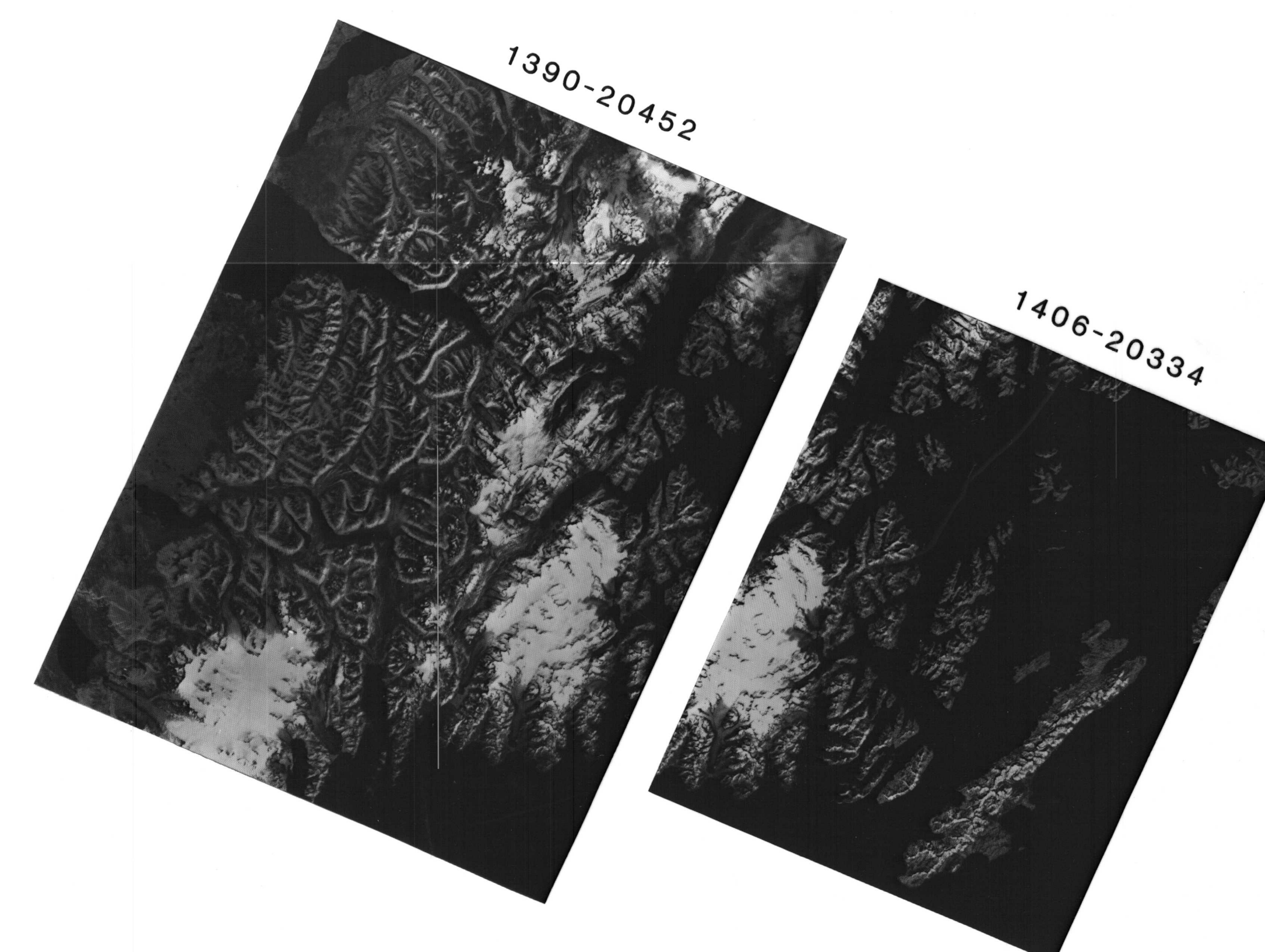
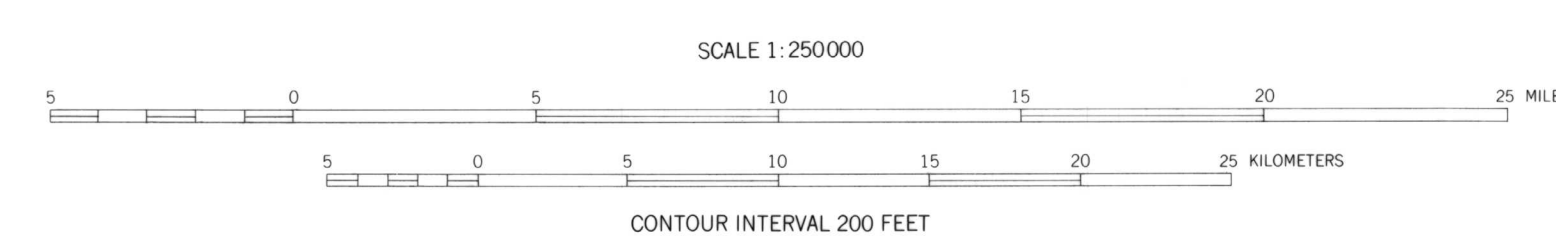


Figure 2: Example of Landsat imagery used in analyses of the Seward and Blying Sound quadrangles. Band 7.



LINEAMENT MAP

MAP SHOWING INTERPRETATION OF LANDSAT IMAGERY OF
THE SEWARD AND BLYING SOUND QUADRANGLES, ALASKA

BY

JAMES R. LE COMPTE

1979

DISCUSSION

This study is an abridged version of similar interpretative investigations previously conducted in other areas in Alaska (Albert, 1975; Albert and Steele, 1976a, b; Albert and Steele, 1977; Albert and Steele, 1978).

Landsat images were analyzed as a possible aid in the determination of the mineral resource potential of the Seward and Byling Sound quadrangles. Although numerous possible extensions of mapped faults (Tysdal and Case, 1979), color anomalies, lineaments, and circular and arcuate features were identified from the imagery, no direct correlation was noted between Landsat features observed in this study and other criteria used in evaluating the mineral resource potential of the area.

Details concerning the different types of imagery used are given in Table of Imagery Used in Analyses. The methodology and limitations of this type of study are discussed in Albert (1975) and Albert and Steele (1976a, b).

References Cited

- Albert, W.R.D., 1975, Interpretation of Earth Resources Technology Satellite imagery of the Nabesna quadrangle, Alaska. U.S. Geological Survey Miscellaneous Field Studies Map MF-6552, 2 sheets, 1:250,000.
- Albert, W.R.D., Le Conte, J.R., and Steele, W.K., 1978, Map showing interpretation of Landsat imagery of the Tazewell quadrangle, Alaska. U.S. Geological Survey Miscellaneous Field Studies Map MF-8734, 2 sheets, 1:250,000.
- Albert, W.R.D., and Steele, W.K., 1976a, Interpretation of Landsat imagery of the McIntyre quadrangle, Alaska. U.S. Geological Survey Miscellaneous Field Studies Map MF-7738, 2 sheets, 1:250,000.
- 1976b, Interpretation of Landsat imagery of the Tanacetox quadrangle, Alaska. U.S. Geological Survey Miscellaneous Field Studies Map MF-7676, 2 sheets, 1:250,000.
- Supersedes Open-File report 76-550.
- Condit, C.D., and Chavez, P.S., Jr., 1979, Basic concepts of computerized digital image processing for geologists. U.S. Geological Survey Bulletin 1462 (in press).
- Steele, W.K., and Albert, W.R.D., 1978, Interpretation of Landsat imagery of the Talkeetna quadrangle, Alaska. U.S. Geological Survey Miscellaneous Field Studies Map MF-8700, 2 sheets, 1:250,000.
- Tydelä, I.K.S., and Case, J.E., 1979, Geologic map of the Seaward and Byling Sound quadrangles, Alaska. U.S. Geological Survey Miscellaneous Field Studies Map MF-8700, 2 sheets, 1:250,000.