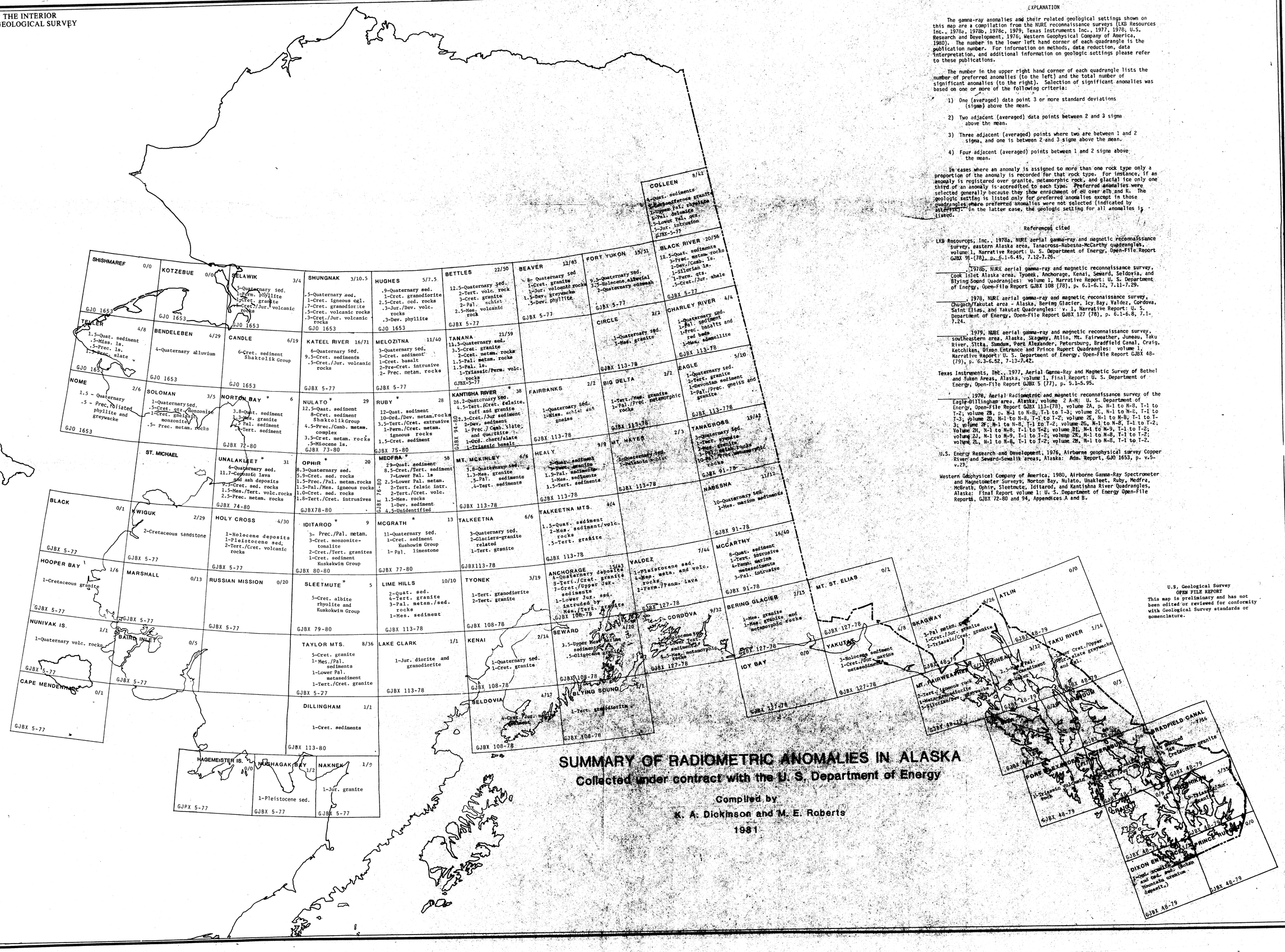
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY



SUMMARY OF RADIOMETRIC ANOMALIES IN ALASKA

Collected under contract with the U. S. Department of Energy

Compiled by
K. A. Dickinson and M. E. Roberts

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EXPLANATION

The gamma-ray anomalies and their related geological settings shown on this map are a compilation from the NURE reconnaissance surveys (LKB Resources Inc., 1978a, 1978b, 1978c, 1979; Texas Instruments Inc., 1977, 1978; U.S. Research and Development, 1976; Western Geophysical Company of America, 1980). The number in the lower left hand corner of each quadrangle is the publication number. For information on methods, data reduction, data interpretation, and additional information on geologic settings please refer to these publications.

The number in the upper right hand corner of each quadrangle lists the number of preferred anomalies (to the left) and the total number of significant anomalies (to the right). Selection of significant anomalies was based on one or more of the following criteria:

1) One (averaged) data point 3 or more standard deviations (sigma) above the mean.

2) Two adjacent (averaged) data points between 2 and 3 sigma above the mean.

3) Three adjacent (averaged) points where two are between 1 and 2 sigma, and one is between 2 and 3 sigma above the mean.

4) Four adjacent (averaged) points between 1 and 2 sigma above the mean.

In cases where an anomaly is assigned to more than one rock type only a proportion of the anomaly is recorded for that rock type. For instance, if an anomaly is registered over granite, metamorphic rock, and glacial ice only one third of an anomaly is accredited to each type. Preferred anomalies were selected generally because they show enrichment of eU over eTh and K. The geologic setting is listed only for preferred anomalies except in those quadrangles where preferred anomalies were not selected (indicated by asterisk). In the latter case, the geologic setting for all anomalies is listed.

References cited

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Texas Instruments, Inc., 1977, Aerial Gamma-Ray and Magnetic Survey of Bethel and Yukon Areas, Alaska, volume 1, Final Report: U. S. Department of Energy, Open-File Report GJBX 5 (77), p. 5.1-5.95.

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U.S. Energy Research and Development, 1976, Airborne geophysical survey Copper River and Seward-Seward areas, Alaska: Adm. Report, GJO 1653, p. v.5-v.27.

Western Geophysical Company of America, 1980, Airborne Gamma-Ray Spectrometer and Magnetometer Surveys, Norton Bay, Nulato, Unakleet, Ruby, Medfra, McGrath, Ophir, Sleetmute, Iditarod, and Kantishna River Quadrangles, Alaska: Final Report volume 1: U. S. Department of Energy Open-File Reports, GJBX 72-80 and 94, Appendices A and B.

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