A. TITLE OF INVESTIGATION: ERTS-A Data as a Teaching and Research Tool in the Department of Geology

B. PRINCIPAL INVESTIGATOR/GSFC ID: Donald Grybeck  UN 602

C. PROBLEMS INPEDING INVESTIGATION: None

D. PROGRESS REPORT:

(a) Accomplishments during reporting period: Since the last bi-monthly report, almost all of the prints from a large data request which covered most of Alaska have arrived. This material has been trimmed, filed, and indexed on a 1:2,500,000 map. In addition, work on the mosaic of Alaska is well under way. A non-permanently cemented mosaic has been prepared of most of the state to see if indeed a uncontrolled mosaic was possible. It clearly is. Unfortunately however, there are a number of holes in the coverage as of last winter. And because of the minor adjustments needed in preparing the temporary mosaic, it appears that these holes should not be filled in later but rather that the complete coverage should be on hand to prepare the finished mosaic of the whole state. Heavy cloud cover is also disconcerting in some local areas also. ("Precision" prints would undoubtedly have been easier to fit into the mosaic but the "bulk" prints seem quite sufficient for most purposes).

Some small mosaics have also been prepared from the color prints. They are excellent if not beautiful. However, the color match on adjacent flight lines and at different times of the year is poor. A color mosaic for the whole state would undoubtedly be most spectacular but appears to be impractical with the material now available and without unusual color control.

(b) Plans for Next Reporting Period: A large data request form was recently completed to include the Spring coverage of Alaska. This should cover most of the gaps in our coverage as well as give better quality coverage of a number of areas. This request is only for Band 7 prints as the state was still snow-covered as of the 1st of May but these are quite sufficient to construct the black and white mosaic. Careful examination of new material received at the Geophysical Institute will continue this summer to upgrade the coverage. In particular, it
is hoped that more snow-free color prints can be obtained as it is clear that these are the most practical for delineating and illustrating the geology of the state. The black and white coverage is now almost sufficient to construct the mosaic of the state and this will be done as soon as the additional prints arrive.

The ERTS material will probably not be used in teaching as we have no summer classes in the Department. However, the preparation of the teaching material will continue. In particular, the preparation of 35mm slides of selected areas in conjunction with annotated overlays of these areas will continue.

E. SIGNIFICANT RESULTS: The ERTS materials continue to be used in a number of courses including "Geology of Alaska", Economic Geology and Structural Geology. In addition, specific talks about the ERTS material were given at a seminar at the Geophysical Institute, to the Geology Department, to numerous individuals, and were extensively used in a popularized talk on the "Geology of Alaska" to the local Historical Society.

F. PUBLICATIONS: None

G. RECOMMENDATIONS: None

H. REVISED STANDING ORDERS: None

I. ERTS IMAGE DESCRIPTORS FORM: None