

E72-10104  
CR-128153

Type I Progress Report

ERTS-I

- a. A test and evaluation of ERTS-A data applications to a present-status inventory of the post-1890 A.D. episode of accelerated erosion, and to monitoring future erosional changes, with specific reference to the Arizona Regional Ecological Test Site.

ERTS-A Proposal No. SR 182.

- b. GSFC ID No. of P.I.: IN 050.
- c. No significant results can be reported on this project, because no ERTS-I imagery has been received.
- d. In lieu of ERTS imagery, preliminary planning of photo-interpretive and field-study procedures was undertaken. This was accomplished by two one-day conferences between the P.I. and his principal assistant, Maurice Cooley, while Cooley was in Denver (on two separate trips) for other USGS business. Morrison and Cooley studied several stereo-pairs of Kodak Aeroneg positive color transparencies (1:120,000 scale, taken with the NASA RB-57F aircraft) that are representative of key parts of the project area in order to determine the minimum dimensions of arroyos and gullies, sand dunes, and areas of sheet erosion that can be differentiated on this photography. As explained in the project proposal, the post-1890 erosion features will be mapped using RB-57 airphotos of selected study areas to provide standards for comparison of the degrees of differentiation which can be made with ERTS-I imagery. Twelve flight lines of U-2 multispectral photography in southern Arizona were also indexed and preliminary evaluation made.

As soon as ERTS-I imagery is received, we will make: 1) a preliminary inspection of ERTS images under magnification, and for selected frames, will use an additive color viewer (I<sup>2</sup>S Miniaddcol); 2) commence detailed study and mapping of the post-1890 erosion features using 1:500,000- or 1:250,000-scale enlargements (B&W, color-composite, and/or color-IR-composite) of selected frames and spectral bands; and 3) compare the information interpreted from the ERTS imagery and plotted on the above maps with that obtainable from available RB-57 and U-2 photography.

- e. through k. Not applicable.

(E72-10104)	1 TEST AND EVALUATION OF	N72-32357
ERTS-A DATA APPLICATIONS TO A PRESENT	STATUS INVENTORY OF THE POST-1890 AD	
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INVENTORY OF THE POST-1890 A.D. EPISODE OF ACCELERATED EROSION, AND  
TO MONITORING FUTURE EROSIONAL CHANGES, WITH SPECIFIC REFERENCE TO  
THE ARIZONA REGIONAL ECOLOGICAL TEST SITE

SR 182

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