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9164 (D-350)

II  
1, 2, & 3rd Quarter

E7.6-10.0.69

CR-145741

Receiving Officer  
Building 16  
Goddard Space Flight Center  
Greenbelt, Maryland 20771

Attention: Scientific Investigation Support, Code 902.6

Contract No. NAS-53966A  
ERTS Investigation No. 375  
Item No. 2, Progress Report

A. Problems

The project is three months behind schedule. I was seriously injured in a car-motorcycle accident. I was off work for two months and have only functioned with difficulty for another month. I face another operation, at least one week in the hospital to rebuild a knee, and several weeks of recuperation. In addition I have been reassigned to a new position which requires my full time. I am being allowed approximately one man month spread over October-January to machine process and analyze LANDSAT-1 and 2 images on CCTs in Ann Arbor. However, other necessary efforts must be completed during evenings and weekends.

B. Accomplishments

During the period from March 1 through May 12 ground truth data was collected on the Arizona test site. From May 18 through July 29 ground truth data was collected on the Montana test site. All field data collection has been completed. Some verification trips may be required to field sites as results are compiled.

Ground truth data consisted of:

1. Selection of three sub sites (3 miles x 3 miles) on each major test site and location of corners and boundaries on maps.
2. Designating general boundaries for homogeneous plant communities.
3. Determining percent ground cover of live vegetation and percent composition of plants by individual species.
4. Measuring forage production.
5. Collection of reflectance data from soils and plants in the four bands corresponding to LANDSAT data using a Bendix spectrometer. Data was collected during overpass of the satellite at times corresponding to critical stages of plant growth and development (phenology).

(E76-10069) [GHCUN TRUTH DATA FROM ARIZONA  
AND MONTANA TEST SITES] Progress Report  
(Geological Survey, Reston, Va.) 3 F HC  
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6. The three Montana test sites were photographed in color at a scale of 1:19,000 and Color Infrared (CIR) at 1:80,000 scale and blown up to 1:1,050 scale. This data was used to assist in mapping vegetation types.
7. Skylab data has been received from Johnson Space Center but has not been converted to a usable form because of problems previously mentioned.
8. Field data has been reduced to a usable form and is being entered into the computer files.
9. Computer Compatible Tapes (CCTs) for all but the last date (July 29 in Montana) have been received and are being used to analyze their usefulness in mapping vegetation.
10. Computer generated gray maps in single bands and ratios of different bands are just now being prepared and analyzed. Various ratio possibilities are being tested.

C. Significant Results

None at this stage of the project.

D. Publications

None

E. Recommendations

Data received from the LANDSAT-2 satellite has shown banding problems and missing data. The EROS Data Center attributes these problems and others, such as poor image negatives and excessive time for data to be received by the user, to NASA. These are problems which make the use of LANDSAT data very difficult. I have recommended and will continue to recommend, that regional centers be set up with the necessary equipment to receive data directly from the satellite, put it into forms requested by users, and disseminate usable data to users. I have adequately documented the inadequacy of the EROS Data Center to react to users needs either within acceptable standards of quality or a reasonable time limit.

F. Total Funds Expended to Date

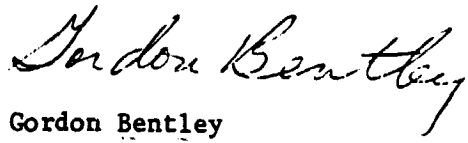
\$28,360.19 through September 30.

G. Data Used (as of 10-29-75)

<u>Account No.</u>	<u>Value of Data Allowed</u>	<u>Value of Data Ordered</u>	<u>Value of Data Received</u>
23750	2700	2407	2407
B3750	1000	800	800

H. Air Craft Data

No NASA aircraft used.



Gordon Bentley  
Principal Investigator

GB:mg

cc: USDI, Geological Survey  
Attn: EROS Program  
Mail Stop 160  
Reston, Virginia 22092