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UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

~~SOIL AND WATER CONSERVATION RESEARCH DIVISION~~

~~NO GRANDE SOIL AND WATER RESEARCH CENTER~~

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Mark For: T-4105B

July 2, 1973

Mr. Ryborn R. Kirby, Code TF6
Principal Investigations Management Office
National Aeronautics and Space Administration
L. B. Johnson Space Center
Houston, TX 77058

Dear Ryborn:

This letter summarizes the primary activities that have been conducted
for our EREP project to date.

Weslaco's EREP technical proposal was submitted to NASA April 23, 1971,
and a discussion on the EREP proposal for negotiations was conducted at
Houston on March 22, 1972, with C. L. Wiegand and H. W. Gausman in attend-
ance. The EREP proposal was approved July 19, 1972, pending further
negotiations. October 10 to 12, 1972, R. W. Leamer and H. W. Gausman
attended the EREP Investigations Meeting and conferred with R. R. Kirby
et al. Negotiations were completed in the spring of 1973 and contract
(No. T-4105B) became effective March 16, 1973, with only the soil salinity
detection aspects of the proposal being funded.

As stated in the March 19, 1972, "State of Readiness Letter," computer
programs have been developed to analyze aircraft MSS and ERTS-1 computer
compatible tapes (CCT) that are ready for use on EREP MSS (S-192) data.
Our data analysts have also investigated the format anticipated for S-192
digital data. Photointerpretation aids are on hand.

The aircraft support flights (Mission 238) for the EREP coverage on
May 30, were made with the C-130B aircraft in the afternoon of May 29.
Two lines in Cameron County and one line in Starr County were flown. All
visible channels on the 24-channel MSS were working good, the Recon IV
thermal scanner was operating, and cameras were operated to simulate those
on SKYLAB as closely as possible. In general, there was little trouble
with cloud shadows. Some Mission 238 scanner imagery, flight logs, etc.
were received about June 20, 1973. Mission 238 CCT will be requested after
seeing how EREP data looks.

The EREP coverage obtained on May 30 of the Starr County flight line was
as follows: 190A operated properly on track 20, 190B and S191 were not
operated, and S192 was not aligned adequately (unacceptable data) and the
thirteenth channel (thermal) did not operate.

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An EREP data taking session was scheduled for June 14, but cloud cover was excessive. Aircraft coverage was not requested because conditions had not changed greatly since May 30.

We continue to respond to many questionnaires and inquiries from NASA, Houston, and are actively participating in an evaluation of the Visicorder products as an aid to processing CCT.

Sincerely,

Craig Wiegand
Craig L. Wiegand, P.I. 356
"Soil Salinity Detection"

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