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PROGRESS REPORT FIRST QUARTER 1977

APPLICATION OF REMOTE SENSING TECHNIQUES
FOR THE STUDY AND EVALUATION OF
NATURAL RESOURCES IN PERU

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APPLICATION OF REMOTE SENSING
TECHNIQUES FOR THE STUDY AND EVALUATION OF
NATURAL RESOURCES IN PERU Progress Report
(Instituto Geofisico del Peru)
HC A02/MF A01

1.- INTRODUCTION

During the reporting period, Dr. José Pomalaza, IGP Expert and Mr. Fritz Du Bois, PERCEP Peruvian Coordinator, travelled to the CCRS, Ottawa Canada.

Prime objective is to start implementing Project PERCEP and to arrange for travel to Canada of the ONERN and IGP participants. In the experimental field, achievements were attained both in digital imagery processing and in photographic work. In fact, after recognition computer programming, already developed was successfully applied, we were able to produce a thematic map of the San José de Saramuro area (first lower course at Marañon River). At the same time LANDSAT pictures have proved to be useful for a tridimensional view of selected areas and photogrammetric restitution for relief mapping is being considered as an immediate forward step in this work.

2.- PROJECT PERCEP ACTIVITIES

Dr. José Pomalaza, IGP expert of Project PERCEP (and Mr. Frits Dubois, General Coordinator) departed from Lima to the CCRS in Canada on February 26, 1977, to initiate and coordinate with CIDA and CCRS for the on site training of Peruvian Personnel at CCRS in accordance with the specific proposals presented to them.

3.- TECHNOLOGICAL DEVELOPMENTS

Both computerized and photographic technological capabilities were improved and definite results were achieved during the reported period.

3.1 - The covariance matrixes and the classification threshold has been adjusted and made compatible with our Maximum Likelihood classification programs.

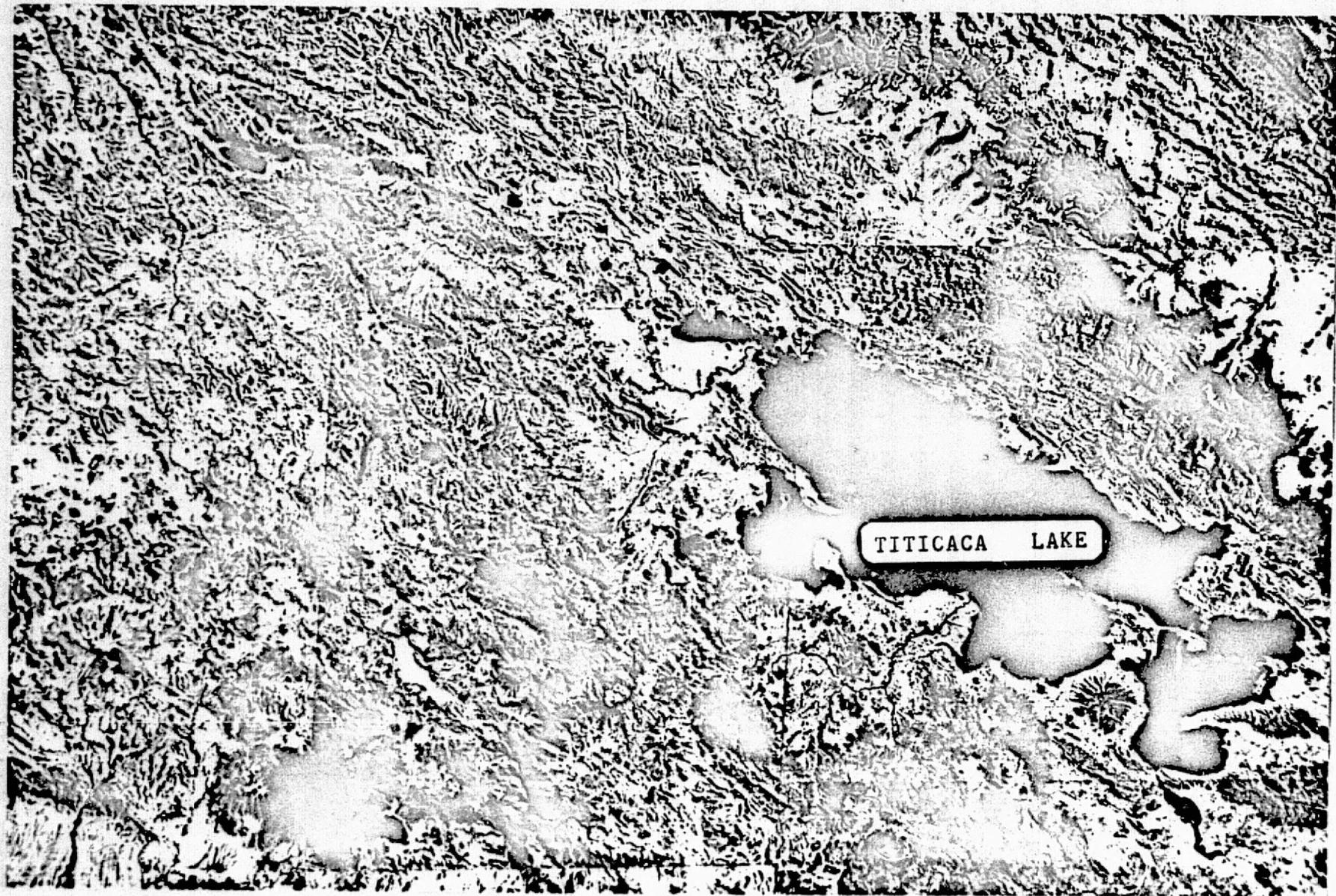
Results of such optimization shows satisfactorily fine details like the sandbanks at the sides of the rivers within a clear "not classified areas"

3.2 - Using bulk production of LANDSAT pictures and following standard photographic procedures a limited mosaic of the Titicaca Lake (Array of nine photographs) were assembled. Cartographic and hydrological applications are foreseen. Immediate follow-on steps will be the Titicaca basin and drainage pattern determination. A special technic was developed to assemble the photographs with minimum error for which a systematic array was used.

3.3 - Adjacent pictures presenting overlapping were successfully inserted in a photogrametric machine (for restitution) and the proper tridimensional model was presented. Photo restitution work is in progress.

We anticipate production of a relief map at 1:250,000 scale of a 20 x 150 km mountainous area in the vicinity of Titicaca Lake.

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MOSAIC OF THE TITICACA LAKE ZONE