CAMERON PRAIRIE REFUGE PROTECTION (ME-09)

ME-09-MSPR-0496-2

PROGRESS REPORT No. 2

for the period

August 3, 1994 to April 1, 1996

Project Status:

No additional data have been collected since the previous progress report.

Project Description:

The Cameron Prairie Refuge Protection project is located in north-central Cameron Parish within the Cameron Prairie National Wildlife Refuge (figure 1) and encompasses 350 acres of highly organic freshwater wetlands. The Gulf Intracoastal Waterway (GIWW) borders the project area to the south and threatens to breach into the refuge. Wave action caused by boat traffic within the GIWW has eroded most of the spoil banks that protect the refuge, allowing the high-energy and salinity waters of the GIWW to enter the project area. The resulting wave energy and saltwater intrusion destroys the fragile interior freshwater wetlands. In August 1994, a 13,200-ft rock breakwater was constructed 0-50 ft from (and parallel to) the northern bank of the GIWW in 3-4 ft of water. The purpose of the breakwater was to prevent the encroachment of the GIWW into the project area by preventing the waves caused by boat traffic from overtopping and eroding the remaining spoil bank.

Monitoring Design:

On July 20, 1994, the first survey of the rock breakwater using GPS equipment was conducted. The survey mapped the position of the rock breakwater, the shoreline behind the breakwater, and the shoreline of the reference area. The completed survey will be georectified by the National Biological Service (NBS) and will be compared to future GPS data sets to facilitate interpretation and evaluation of project effectiveness. Additional surveys will be conducted every 3 yrs after the initial survey.

Color-infrared aerial photography (1:12000 scale) for the preconstruction phase of the project was flown on November 1, 1993. Wetland gain/loss rates within the project area will be determined once

the first set of postconstruction photography is flown in 1997. Additional aerial photography sets will be obtained in years 2002 and an additional year to be determined at a later date.

In March 1995, a cross-sectional survey of the breakwater was completed in order to measure sediment deposition behind the breakwater and relative position of the shoreline. Thirteen cross sections were taken every 1,000 ft along the entire breakwater for 13,200 ft. Each cross section consisted of elevations taken every 10 ft from approximately 40 ft behind the vegetated marsh edge to approximately 100 ft past the center line of the rock breakwater (figure 2). The baseline survey data will be compared to future data sets for interpretation and evaluation of the breakwaters performance in maintaining the original shoreline.

Results/Discussion:

The preconstrucion aerial photography has been georectified and ground truthed by NBS and the relative position of the breakwater to the shoreline has been added to this data set. A completed set of the cross-sectional survey data is located in the Louisiana Department of Natural Resources Abbeville field office.

References:

U.S. Fish and Wildlife Service 1991. Cameron Prairie National Wildlife Refuge Erosion Protection and Marsh Management Design Memorandum. Cameron Parish: U.S. Fish and Wildlife Service Cameron Prairie National Wildlife Refuge. 7 pp.

Cameron Prairie National Wildlife Refuge 1991. Project Information Fact Sheet. Cameron Parish: U.S. Fish and Wildlife Service Cameron Prairie National Wildlife Refuge. 7 pp.

Prepared on May 8, 1996 by Mike Miller

LDNR Monitoring Manager:	Mike Miller	Phone:(318) 893-3643
LDNR Project Manager:	Garret Broussard	Phone:(318) 893-9919
Federal Sponsor:	USFWS	Phone:(318) 598-2216
Construction Start:	January 31, 1994	
Construction End:	August 3, 1994	

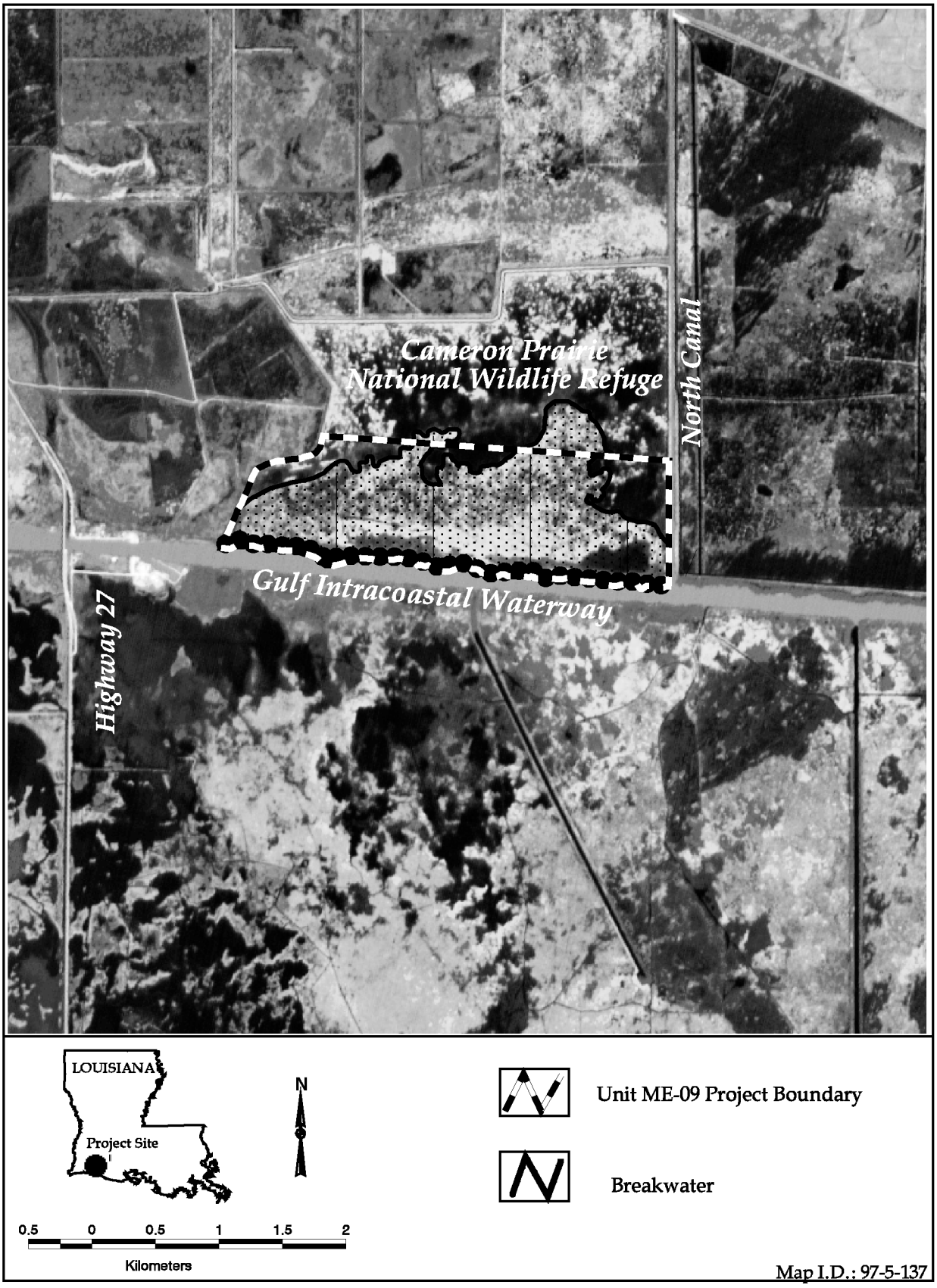

Figure 1. Cameron Prairie Refuge project location and features.

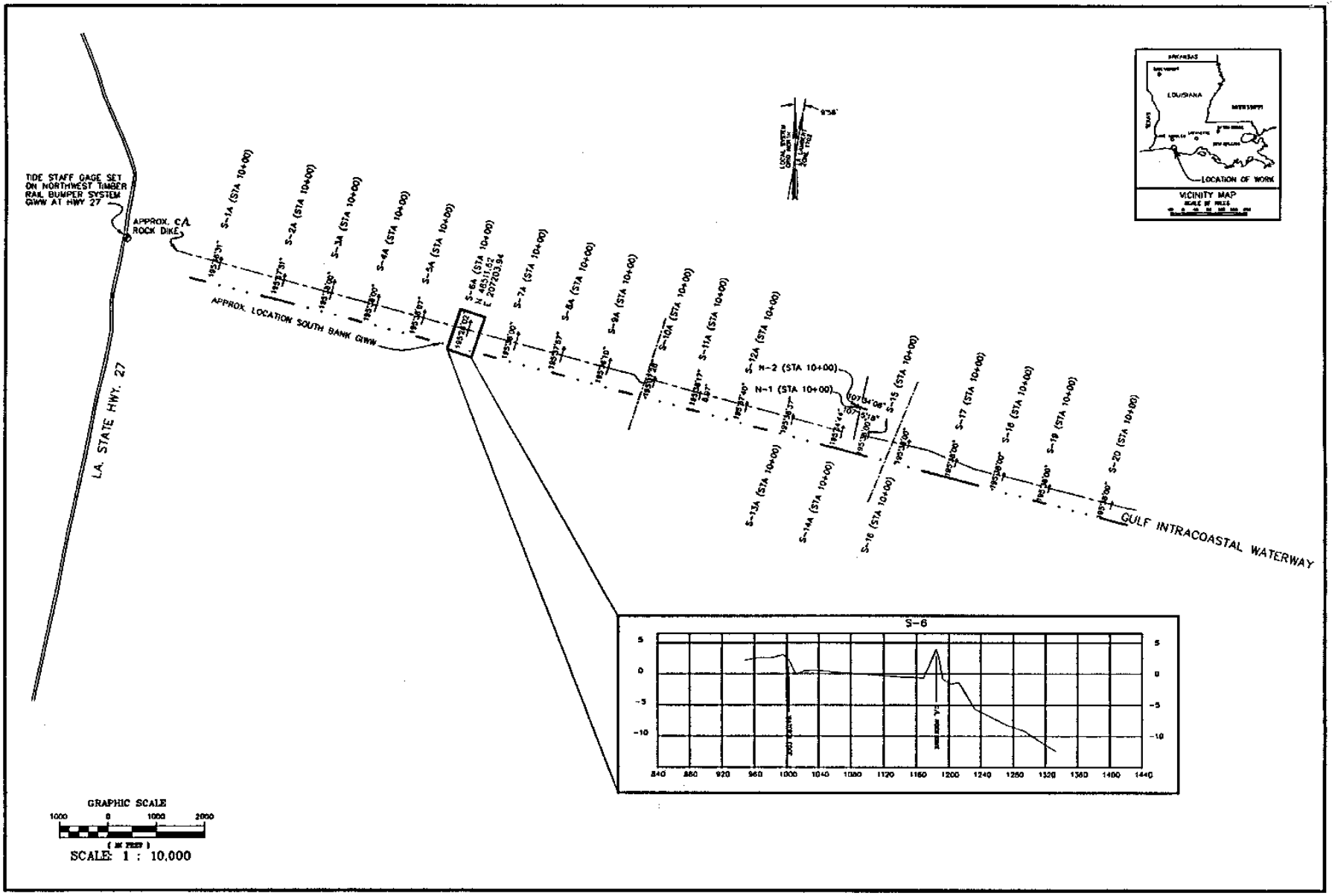

Figure 2. Cross-sectional survey locations with a typical elevational profile.