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Aerial Survey of Sea Otters
in the Cordova Vicinity

10 August 1983

Key Words: Sea Otter, Marine Mammal
Distribution, Abundance, Cordova
Alaska

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INTRODUCTION

The movement of significantly large numbers of sea otters into the Cordova vicinity has generated a local storm of protest concerning the ability of sea otters to greatly reduce shellfish populations. Residents of Cordova use local shellfish resources, particularly clams and dungeness crabs, for subsistence food, commercial sale, and recreational use. In 1981, two years after large numbers of sea otters began using the area immediately around Cordova, this area was closed to all taking of clams and crabs to protect low stocks (Johnson 1982). A slow decline was evident in dungeness stocks in nearshore waters of the Cordova area following a major uplift of the sea bed caused by the 1964 earthquake. However, with the mass movement of sea otters into Orca Inlet, Hawkins Cutoff, and adjacent areas, the dungeness population has suffered a severe decline (Kimker 1982, and Garshelis 1982).

Presently boats out of Cordova fishing for dungeness crab are utilizing the waters of Controller Bay and the area just west of Kanak Island. There is also a commercial razor clam fishery on Kanak Island. Concern has been expressed by fisherman's groups and the Alaska Department of Fish and Game about the possibility of sea otters moving eastward across the Copper River Flats and establishing a population center in the Controller Bay area.

The purpose of this survey was to document the present distribution and relative abundance of sea otters in the Cordova area including the Copper River Flats and the Controller Bay vicinity. Future surveys are planned to detect periodic changes in distribution and abundance.

METHODS

An aerial survey was conducted on the 10th of August 1983. The survey area included Orca Inlet; Hawkins Island Cutoff; all waters within 1/4 mile of Hawkins and Hinchinbrook Islands; Nelson Bay; the Copper River Flats; Controller Bay; and nearshore waters of Kanak Island, Wingham Island, and Kayak Island. A Cessna 185 floatplane served as the survey platform. The aircraft was flown at approximately 500 feet altitude and the pilot and observer attempted through a series of shallow banked S-turns to cover the total survey area. The pilot and observer attempted to observe all sea otters within the area. The survey was initiated at 10:45 a.m. and finished at 3:15 p.m. to take advantage of the best time to find sea otters loafing on the surface as opposed to surveying during peak feeding times. In order to maximize visual sightings the day of the survey was chosen when optimum weather conditions prevailed, i.e. clear sky and a calm water surface. Both the pilot and observer counted sea otters. The observer noted observation points on a 1:250,000 scale map and recorded numbers in a notebook.

RESULTS

In the survey area 601 sea otters were recorded. Observations were made at 64 locations, all of which are plotted on a map held on file. Approximately 60% of the sea otters observed were concentrated in Hawkins Island Cutoff and

lower Orca Inlet. A total of seven sea otters were observed along the Copper River Flats and a total of 36 sea otters were observed in the vicinity of Controller Bay.

DISCUSSION

The 601 sea otters observed represents the minimum population of the area surveyed. The total population would probably fall within a range of 700 to 900 sea otters.

The observation of sea otters on the Copper River Flats documents the various reports of fishermen that sea otters are utilizing to some degree the Copper River Flats, and supports the theory that sea otters may move eastward across the flats to the Controller Bay vicinity. The 36 sea otters observed in the Controller Bay vicinity was approximately a four fold increase from the number of sea otters reported by several observers approximately one year ago. However, due to the nature of the observations of a year ago no definite conclusion concerning the rate of increase can be made. For the present the only definite point is that there are significantly more sea otters in the Controller Bay vicinity than previously suspected. Due to the possible adverse effect upon shellfish stocks in Controller Bay vicinity by increasing numbers of sea otters this situation should be closely monitored. As a minimum effort the area should be surveyed by aircraft annually. The Controller Bay vicinity would probably be a good candidate area to conduct an

experimental control effort to primarily determine the removal rate and methods of control needed to hold the sea otter population at approximately the present level.

LITERATURE CITED

Garshelis, D. L. 1982. Sea otter predation on shellfish in Prince William Sound, Alaska. Fisheries and Wildlife, University of Minnesota. Unpubl. rept. 18 pp.

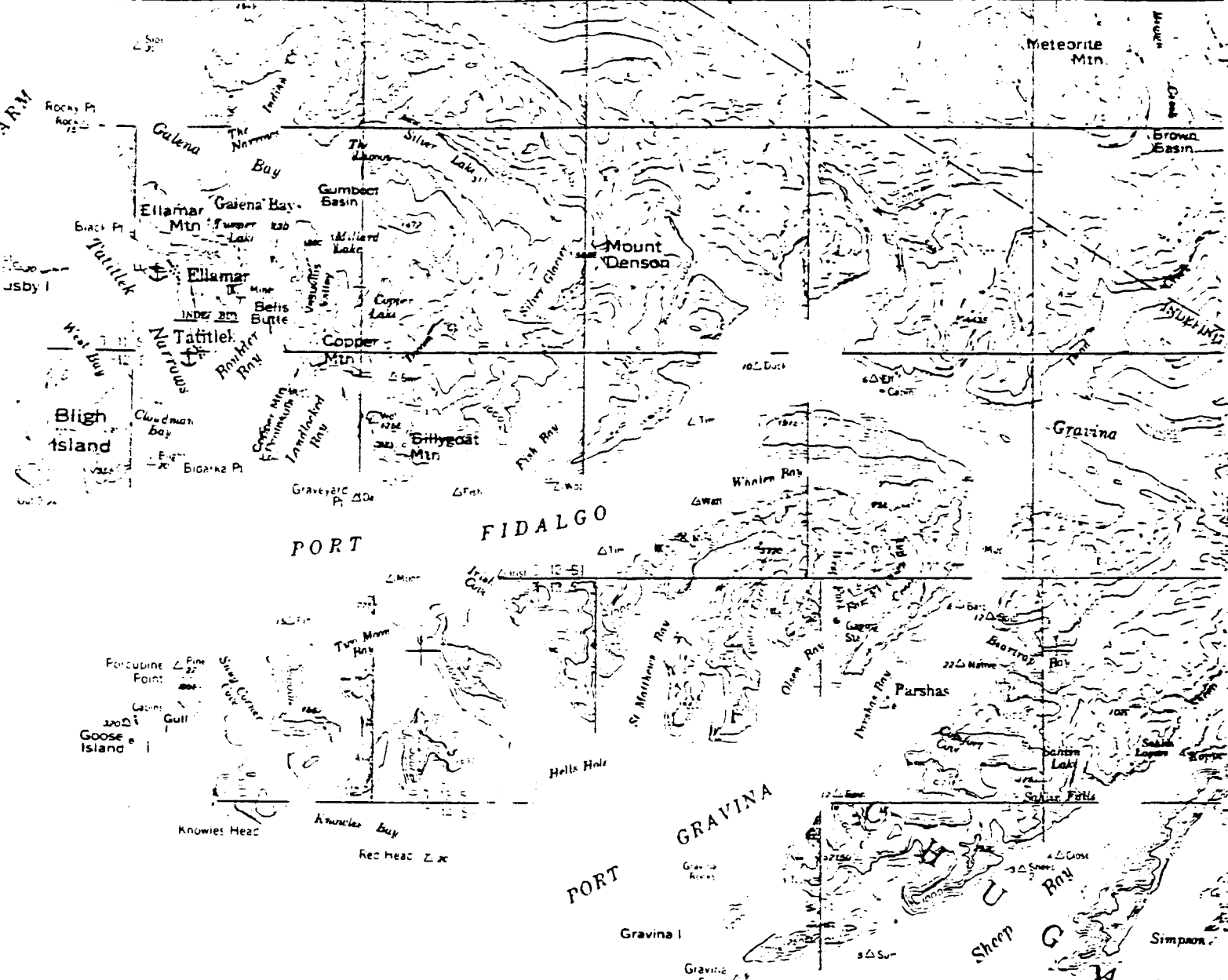
Johnson, A. M. 1982. Status of Alaska sea otter populations and the developing conflicts with fisheries. Transactions of the 47th North American Wildl. and Nat. Resources Conf. 1982. Wildlife Mgt. Insti., Washington, D. C. 15 pp.

Kimker, A. 1982. 1982 Orca Inlet dungeness crab survey. Prince William Sound management area data report 17. Alaska Dept. of Fish and Game, Div. Commercial Fisheries. Unpubl. rept. 10 pp.

SCHMIDT/nav/31Aug83/1680g

INTERIOR
VEY

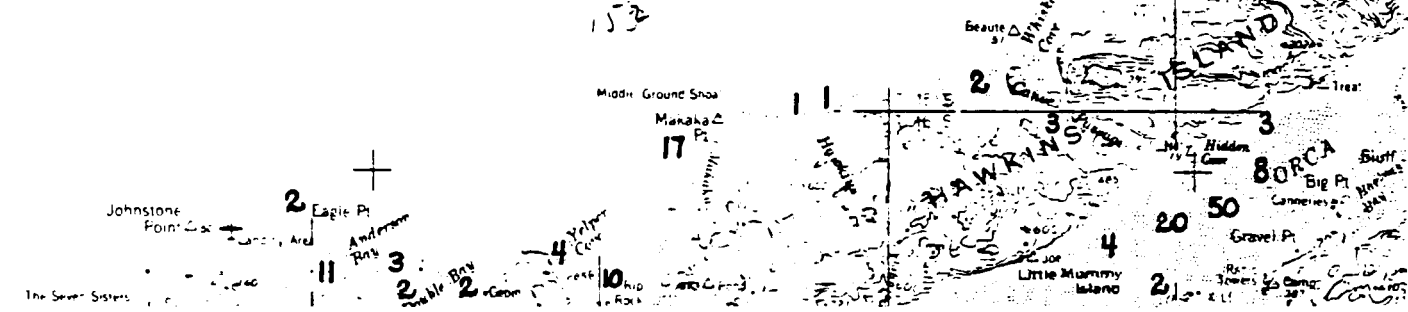
F 6 W 30 F 7 W F 8 W 14 E F 4 W

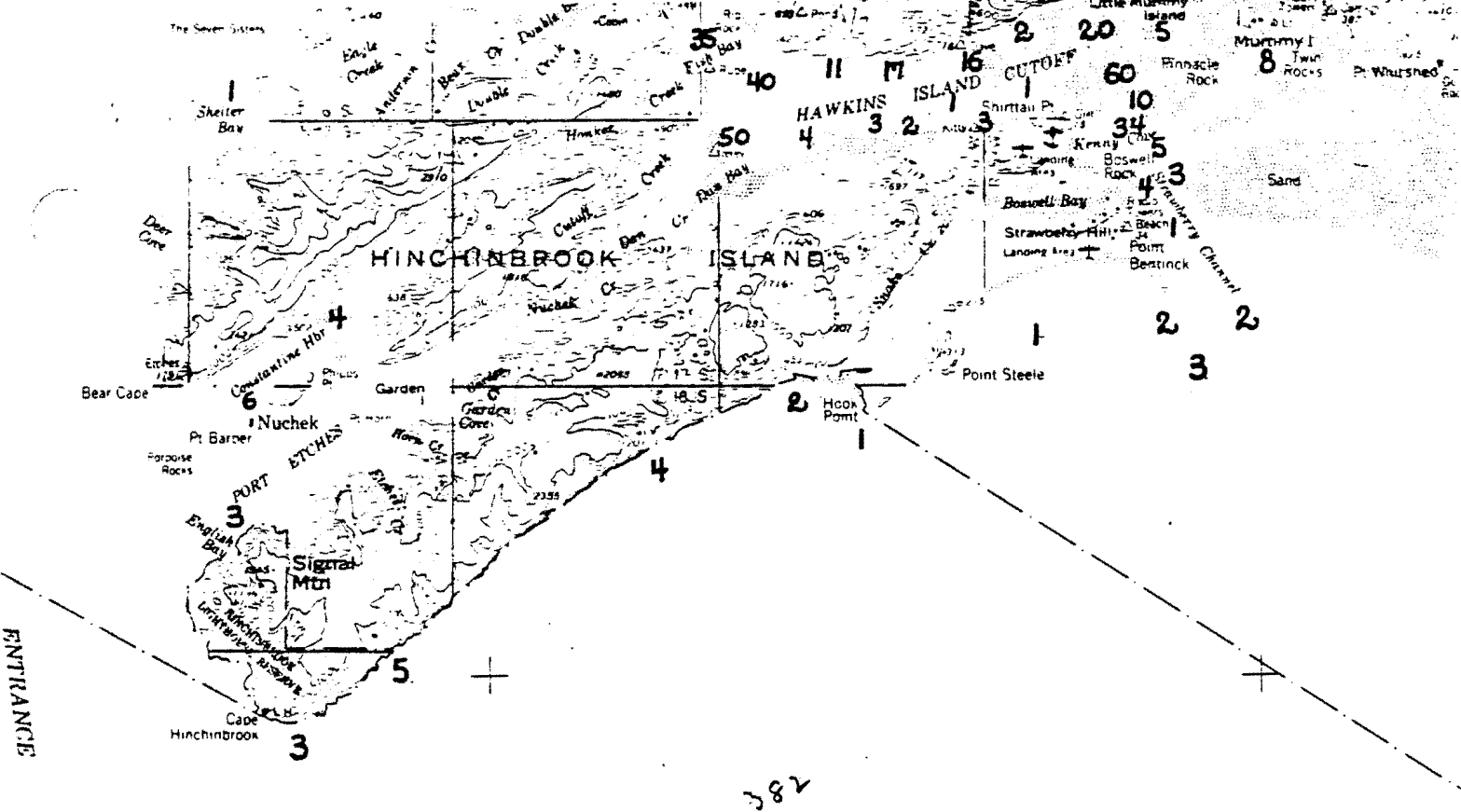


WILLIAM

SOUND

ORCA BAY





400 000 FEET 30'

146°

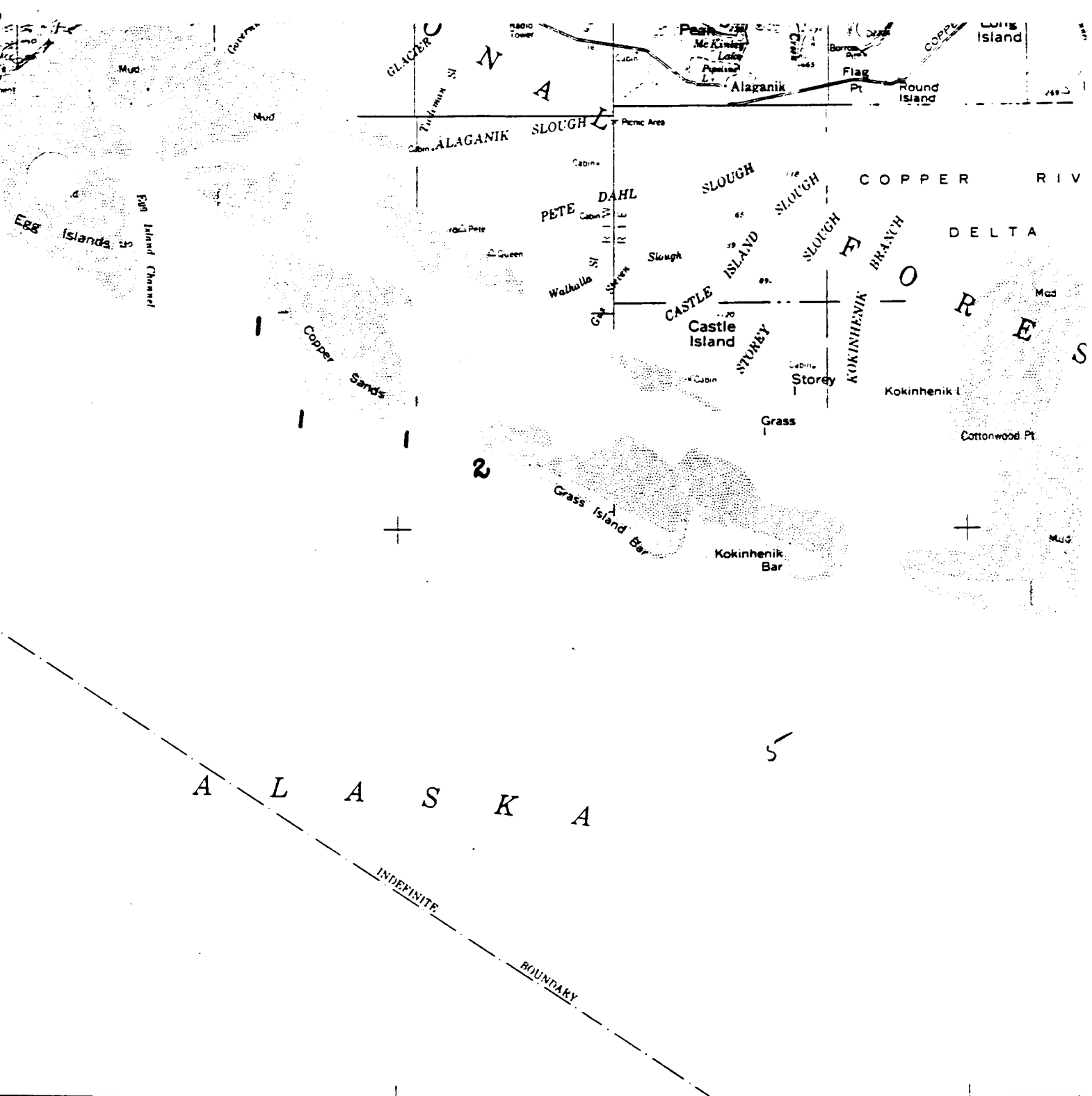
EKOLOGICAL SURVEY

1:53 360 SCALE MAPS
-RECAED

O&GS CHARTS 8502 (1964)
AND 8551 (1963)
NAL P... ES

27 N. AMERICAN ANIM
SYSTEMS ONE 3
SPOTONS

MARKED LOCATIONS
147
148



A L A S K A

INDEFINITE
BOUNDARY

30' 145°

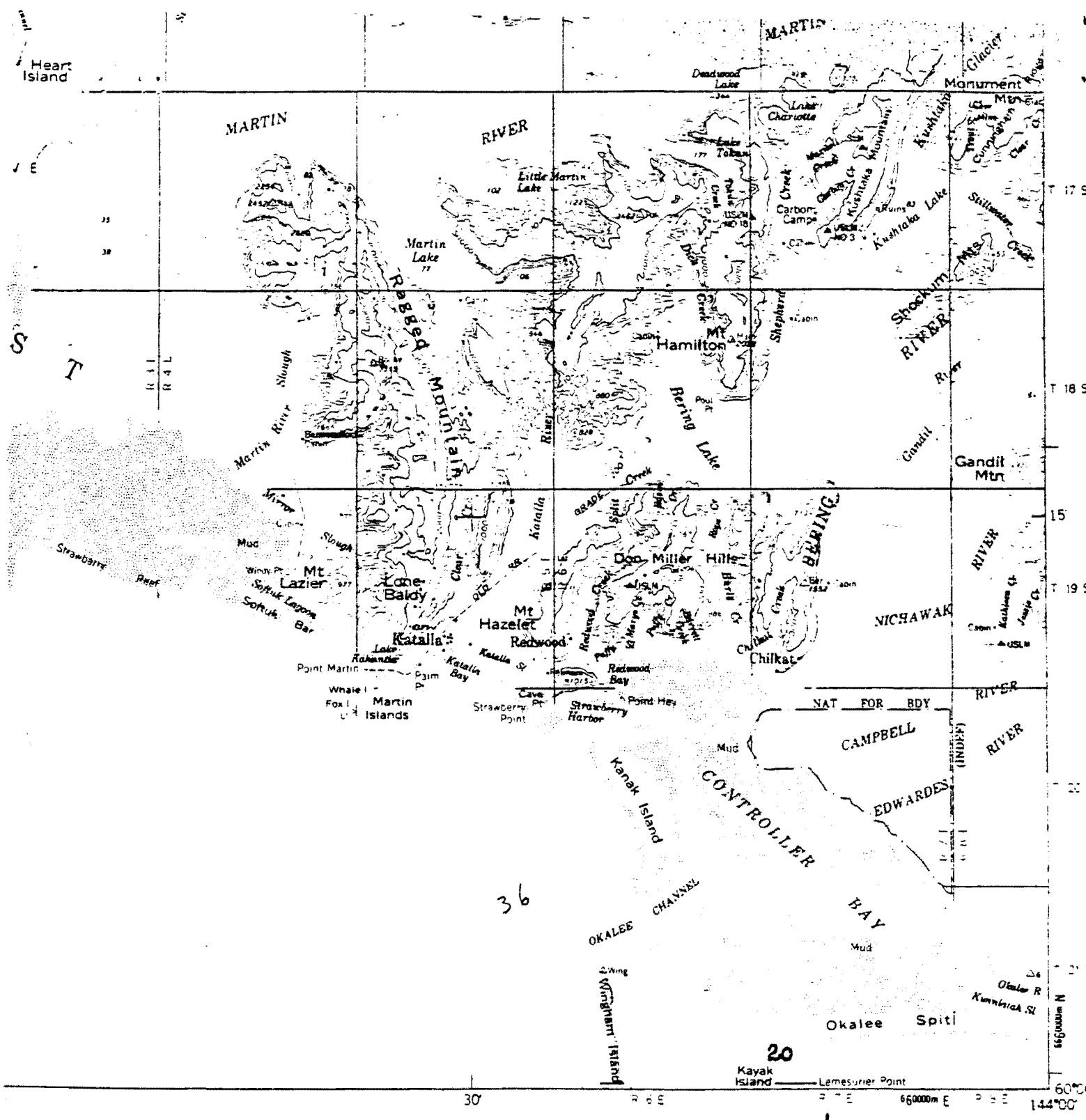
SCALE 1:250000

0 5 10 15 20 25 MILES

0 5 10 15 20 25 KILOMETERS

CONTOUR INTERVAL 200 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

DEPTH MEASUREMENTS AND SOUNDINGS IN FEET; DATUM IS MEAN LOWER LOW WATER
 DOTTED LINE IS AN APPROXIMATE LINE OF MEAN HIGH WATER
 1959 MAGNETIC DECLINATION AT THE LEFT EDGE OF SHEET VARIES FROM 26° 30' WEST TO 21° 30' EAST



LOCATION INDEX

ANCHORAGE	VALDEZ	MCCARTHY
WARD	CORDOVA	BERING

15

ROAD CLASSIFICATION

LIGHT DUTY ——— UNIMPROVED DIRT - - -
STATE ROUTE

36
382
423
152

CORDOVA, ALAS
N6000 - W14400/60X1-M

1959