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Atlas of Wading Bird and Seabird Nesting Colonies in Coastal Louisiana, Mississippi, and Alabama: 1983

ish and Wildlife Service
.S. Department of the Interior

Coastal Management Section
Louisiana Department of Natural Resources

Cover photographs: (Clockwise from upper left) Anhinga (Anhinga anhinga) - photograph by J.A. Spendelow; Black Skimmer (Rynchops niger) - photograph by C.E. Keller; Little Blue Heron (Egretta caerulea) and American Alligator (Alligator mississippiensis) - photograph by J.A. Spendelow.

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ATLAS OF WADING BIRD AND SEABIRD NESTING COLONIES IN COASTAL LOUISIANA, MISSISSIPPI, AND ALABAMA: 1983

by

Cherry E. Keller
Jeffrey A. Spendelow
Richard D. Greer
U.S. Fish and Wildlife Service
National Coastal Ecosystems Team
1010 Gause Blvd.
Slidell, LA 70458

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Coastal Management Section
Louisiana Department of Natural Resources
P.O. Box 44396
Baton Rouge, LA 70804

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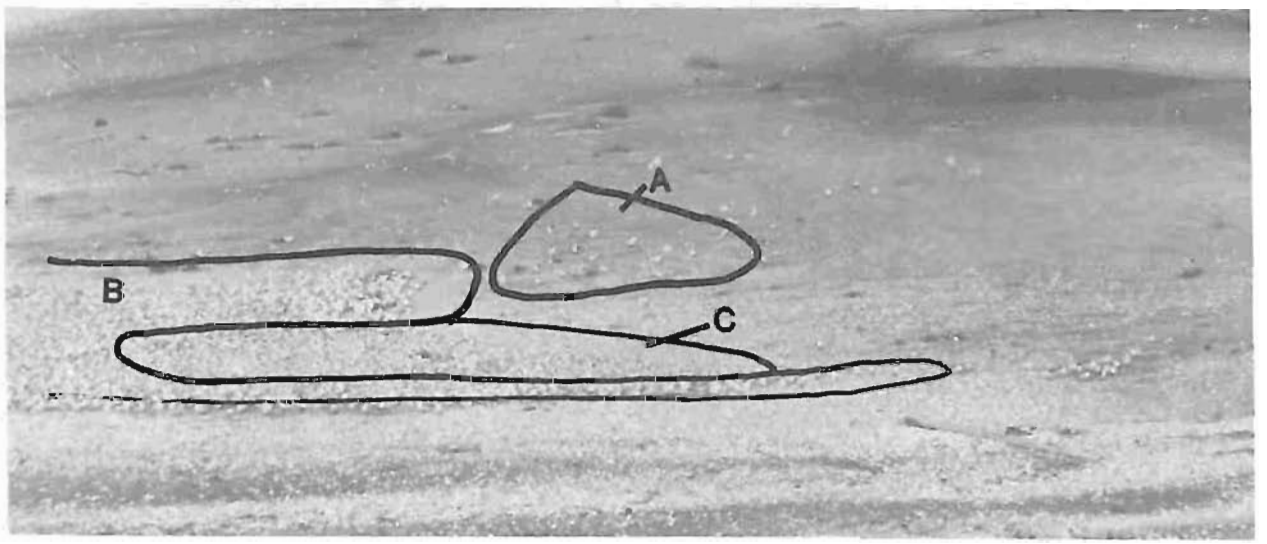
PREFACE

Aerial surveys of waterbird colonies in coastal Louisiana, Mississippi, and Alabama were conducted in May and June of 1983. The major objective of these surveys was to provide up-to-date locations of active colony sites. Historic colony sites reported in 1976 and 1978 were checked and additional areas were searched for new colonies. The location, species composition, habitat and an overall estimate of colony size were recorded for each of the 188 active colonies observed in 1983. Locations were mapped on both 1:250,000 and 1:24,000 scale maps.

Any suggestions or questions regarding this report should be directed to:

Information Transfer Specialist
National Coastal Ecosystems Team
U.S. Fish and Wildlife Service
NASA-Slidell Computer Complex
1010 Gause Blvd.
Slidell, LA 70458
(504) 255-6511; FTS 685-6511



Caspian (A), Royal (B), and Sandwich (C) Terns nesting on a natural barrier beach at Colony 603053. Caspian Terns tend to aviod bare sand and do not form dense subcolonies as do the similar sized Royal Terns or the smaller Sandwich Terns. Photograph by J.A. Spendelow.

CONTENTS

	Page
PREFACE	iii
FIGURES	v
TABLES	v
ACKNOWLEDGMENTS	vi
INTRODUCTION	1
METHODS	1
Study Area	1
Surveys	2
Data Collection	3
COMPARISON OF 1976, 1978, and 1983 COLONY LOCATIONS	4
ATLAS ORGANIZATION	5
MAPS AND TABLES	7
LITERATURE CITED	127

Adult Tricolored Heron on nest at edge of black mangrove (Avicennia) thicket. Note that the nest is below the topmost branches, but is not completely beneath the canopy. Photograph by C.E. Keller.

FIGURES

Number		Page
1	Wetland habitat types of study area	2
2	Flight routes taken during surveys	3
3	Index to USGS 1:250,000 scale maps used in this study	7
4	Locations of waterbird nesting colonies on map 588	8
5	Locations of waterbird nesting colonies on map 589	9
6	Locations of waterbird nesting colonies on map 590	10
7	Locations of waterbird nesting colonies on map 601	11
8	Locations of waterbird nesting colonies on map 602	12
9	Locations of waterbird nesting colonies on map 603	13

TABLES

Number		Page
1	Subsequent attendance of 134 colony sites first observed in 1976	4
2	Explanation of codes appearing in Tables 3 and 4	14
3	Waterbird colonies of Louisiana, Mississippi, and Alabama (present and historic sites arranged by colony number)	17
4	1983 waterbird colonies of Louisiana, Mississippi, and Alabama (arranged alphabetically by USGS quad name)	23

ACKNOWLEDGMENTS

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Adult Great Egret at nest in top of magnolia (Magnolia sp.) tree. Photograph by C.E. Keller.

INTRODUCTION

The coastal area of Louisiana, Mississippi, and Alabama supports a tremendous population of colonial waterbirds. More than 847,000 birds of 26 species have been reported nesting in the area's coastal swamps and marshes, and on barrier islands (Portnoy 1977). For several species, more than half of their entire U.S. coastal population breeds in these states (Spendelow and Patton 1984). Clearly this region is important for these birds, and their nesting sites require protection.

Nesting colonies in this area were completely censused by both ground and aerial surveys in 1976 (Portnoy 1977). In 1978, aerial surveys were used to check the status of previously located colonies, and results indicated that 25% of the 1976 sites were deserted (Portnoy 1978 and Table 1 on page 4 of this report). A 1981 survey of a small portion of the area again indicated more deserted colonies (Keller 1981). It seems most probable that these deserted colonies were the result of birds moving to new colony sites, but neither the 1978 or 1981 surveys searched for new colonies. Thus, resource managers were left with insufficient information regarding new colony locations to effectively protect these areas.

The present survey was conducted to update the status of previously recorded colony sites and to search the study area for new colonies. Our objectives were to (1) locate and map all active colonies on 1:24,000 and 1:250,000 scale maps, (2) check the status of all historic sites except for Least Tern (Sterna antillarum) sites, (3) determine the species composition of the colony, (4) estimate overall colony size, and (5) record habitat(s) used for nesting by the various species.

METHODS

STUDY AREA

The study area includes the coastal marshes, beaches, and barrier islands of Louisiana, Mississippi, and Alabama, and the inland swamp and marshlands of the Atchafalaya Basin, Lake Maurepas and Lake Salvador regions (Figure 1). This is the same area surveyed in 1976 and 1978. Subsidence, accretion, erosion, and delta formation are all active processes in the study area which result in rapid changes in the landscape of the coastal region. We relied heavily on wetland habitat maps constructed from 1978 aerial photography by Coastal Environments, Inc. (Wicker et al. 1980) for the most up-to-date illustration of the landforms. These 1:24,000 scale maps use the wetland classification system designed by Cowardin et al. (1979). In some areas such

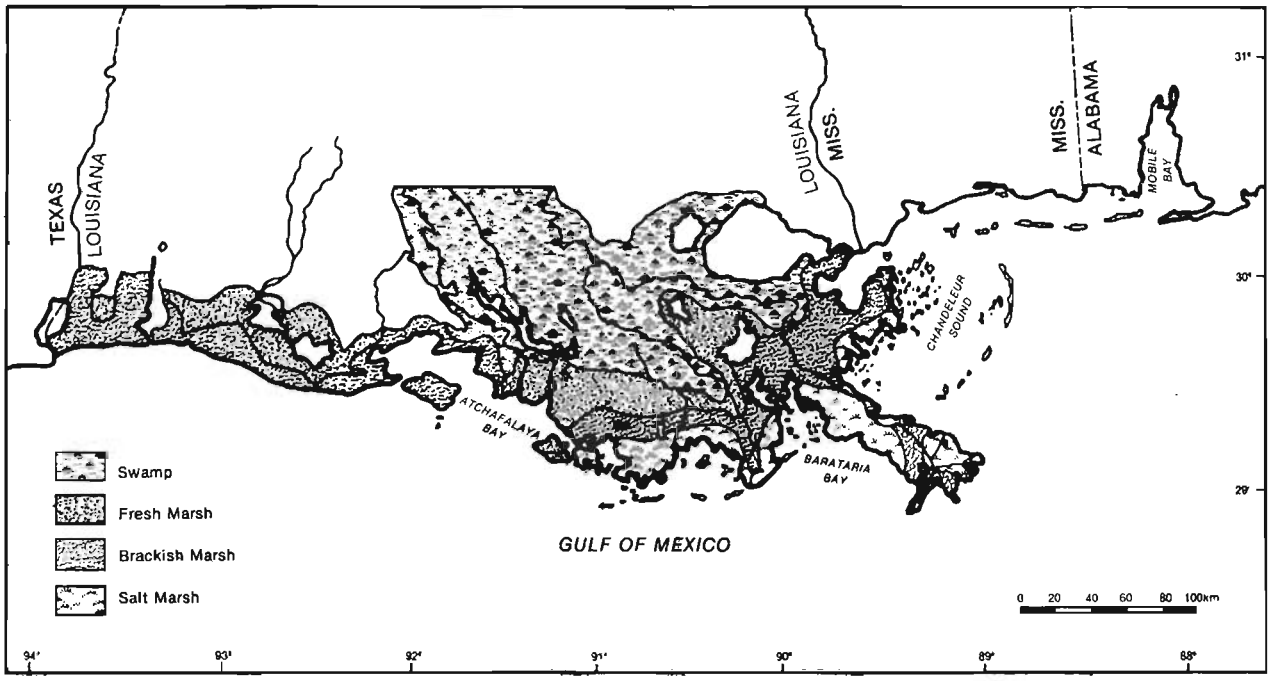


Figure 1. Wetland habitat types of study area. (Adapted from Portnoy 1977).

as the Chandeleur Islands, changes that have occurred since these maps were produced are noted. If wetland maps were not available at this scale for some inland areas, the most recent U.S. Geological Survey (USGS) topographic maps were used instead.

SURVEYS

Aerial surveys of the study area were conducted twice during the breeding season. The first set of surveys was conducted using a fixed-wing aircraft (Cessna 172) on 7 days from 2 to 17 May. At this time the wading birds (herons, egrets and ibises) and Forster's Terns (Sterna forsteri) were nesting, but the gulls, other terns, and Black Skimmers (Rynchops niger) that nest on beach areas had not yet begun. Colony sites located in 1976 and 1978 were surveyed, and additional swamp and marsh areas were intensively searched for new wading bird colonies. The use of fixed-wing aircraft at this time enabled a cost-effective search of the large expanses of marsh and swampland used by nesting wading birds.

The second set of surveys was conducted on 6 days from 2 to 14 June using a Bell Jet Ranger helicopter. Colonies discovered in May were surveyed again and beach areas were intensively searched for new colonies of the later-nesting gulls, terns, and skimmers. In June we chose different flight routes to colonies in the marsh and swamp habitats to increase our coverage of the study area. The use of a helicopter during these surveys allowed us a more detailed examination of each colony, and resulted in a more complete assessment of species composition and better estimates of colony size.

Ninty-one flight hours were logged during the study. Figure 2 illustrates the flight routes taken during the surveys. Active colonies were usually visible within 1 km of either side of the airplane, but concentrations of feeding adults or flight lines of birds often led us to colonies farther from the plane. Colonies including Great Egrets (Casmerodius albus) could be seen at greater distances than other colonies because these large white birds nest in the tree tops. Colonies of darker birds, such as Tricolored (Egretta tricolor) or Little Blue Herons (E. caerulea) nesting in shrubs were more difficult to locate. White Ibis (Eudocimus albus) colonies, where the birds were nesting in the lower branches or understory shrubs of cypress/tupelo swamp, were also difficult to see from a distance.

DATA COLLECTION

During surveys, one principal observer (JAS) described species composition, nesting habitat, and also estimated colony sizes. A second observer (CEK) assisted with species observations and estimates of colony size. Colony sizes are estimates of the number of birds visible from the aircraft. (See Table 2 on page 14 for description of size classes.) The second observer also navigated and plotted colonies on USGS 1:250,000 scale maps. A third observer (RDG) plotted colony locations on 1:24,000 scale maps which were either USGS topographic or wetland habitat maps, depending on which were available for the area.

Colonies were defined as groups of birds nesting together and separated by at least 1 km from other groups of nesting birds. Exceptions to this were made when birds inhabited islands which were less than 1 km apart, but the species composition on the two islands was substantially different. For example, a mixed group of herons nesting on one island, and Forster's Terns on another island 0.5 km away, were labeled as two separate colonies. The 1 km-distance was also used to determine if historic sites were deserted. If nesting birds were not found within a 1 km-radius of the historic location,

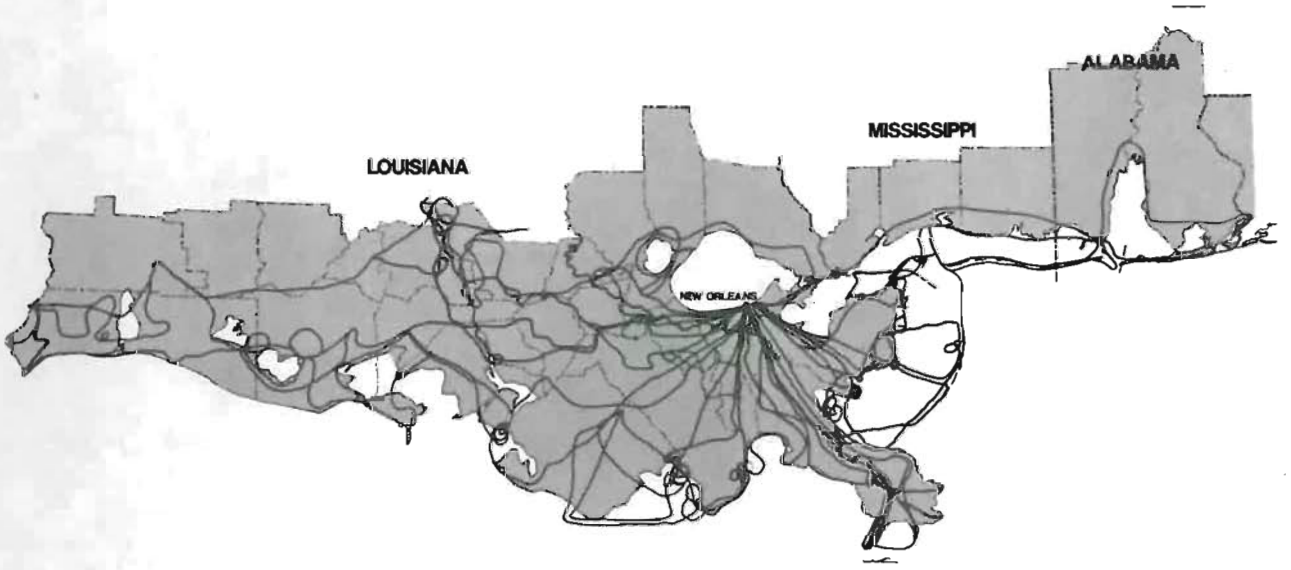


Figure 2. Flight routes taken during surveys.

the colony site was considered deserted. Historic locations were determined from Portnoy (1976, 1978), Keller (1981), and site maps drawn by John Portnoy for each colony on data forms on file at the Colonial Bird Register, Cornell Laboratory of Ornithology, Ithaca, New York.

Species considered in this report are listed in Table 2 on page 14. Though Least Terns are included, they are too small and cryptic in single-species colonies to always be detected from an aircraft. However, they could be observed after locating a colony also occupied by other birds. For this reason, historic Least Tern colonies are designated with a "0*" to indicate that although no birds were observed, the presence/absence of this species could be adequately assessed from the air.

COMPARISON OF 1976, 1978, and 1983 COLONY LOCATIONS

Nesting sites of colonial birds tend to be used year after year, but (as illustrated in Figures 4 through 9), some colony sites are deserted. In order to analyze colony stability and colony site desertion, we have chosen 134 colonies that were surveyed in all 3 years (Table 1). This excludes seven Least Tern colonies and any sites not visited in all 3 years. Sixty-seven colonies (50%) were active in all 3 years. Twenty-five colonies (19%) were deserted by 1978, 30 colonies (22%) were deserted by 1983, and 12 colonies (9%) were deserted in 1978 but recolonized by 1983.

Table 1. Subsequent attendance of 134 colony sites first observed in 1976. X = active, 0 = deserted.

Attendance history	1976	1978	1983	Number and % of colonies with each attendance history	
Stable	x	x	x	67	(50%)
Deserted in 1978	x	o	o	25	(19%)
Deserted in 1983	x	x	o	30	(22%)
Recolonized	x	o	x	12	(9%)
				134	

Considering that 102 new colonies were found in 1983, colony desertion is most likely balanced by birds shifting to new colony sites. The reasons for colony site desertion and recolonization are complex and can include habitat changes, flooding, disturbance, predation and competition (McNicholl 1975, Ogden et al. 1979; Erwin et al. 1981; Burger 1982). Disturbance, predation, and competition could not be evaluated in this study, but changes in the coastal habitat are pronounced in Louisiana and were apparent causes for shifts at some sites. For example, eight of the colonies deserted by 1983 were on coastal islands which were either completely or nearly submerged in

1983. The unusually high water levels of 1983 no doubt contributed to this problem. Habitat changes may also create new sites. Birds apparently deserted colony sites 602010, 602011, and 602012 and shifted south to newly formed islands of the building Atchafalaya delta (colonies 602080, 602081, 602082). Although we cannot confirm this without marked birds, species composition of the three deserted sites and the three new colonies are similar.

The conclusion of this is simply that colony distributions are changing and at this time we do not know what, if any, effect this shifting has on population numbers. Updates of colony distributions will have to be continued to keep accurate distribution information. The colony turnover rate (Erwin 1977) is 0.14 per year, indicating a 14% change in colony distribution every year (desertion plus establishment). We recommend, therefore, that colony surveys be repeated every 2 years to maintain accurate distribution information.

ATLAS ORGANIZATION

The atlas is arranged in three sections. First is an index map (Figure 3) and a series of photographically reduced 1:250,000 scale maps (Figures 4-9) which depict present and historic colony locations. All colony sites are assigned a six-digit number. The first three digits identify the 1:250,000 scale map (Figure 3) where the colony is located, and the last three identify the individual colony. This number system is used in all U.S. Fish and Wildlife Service colony atlases, and colonies identified in 1976 or 1978 retained their same number.

Table 2 explains the number and letter codes used in Tables 3 and 4 to describe the status of all colony sites, and the species composition and overall colony size of active colonies. Table 3 gives the status of all colony sites depicted on the 1:250,000 scale maps and is arranged numerically by colony numbers so that information regarding a colony located on any map can be easily found. Table 4 describes the size and species composition of all active sites found in 1983. The location of these colonies are depicted in the third and largest section, a series of reduced 1:24,000 scale maps. These are either 1978 wetland habitat maps or USGS topographic maps if wetland habitat maps were unavailable for the area. These maps are arranged alphabetically by quadrangle name.

Immature Great Egrets. Photograph by C.E. Keller

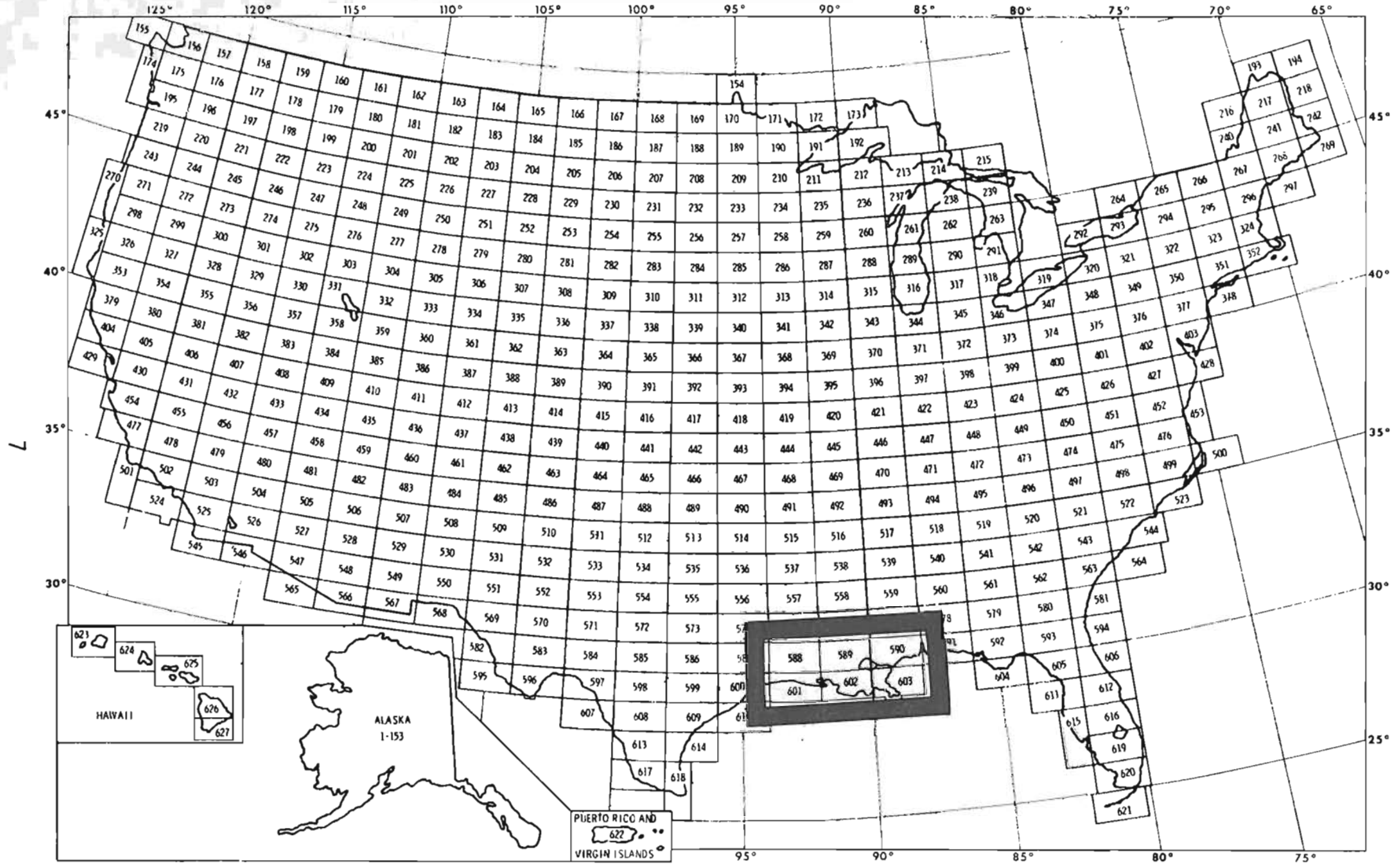


Figure 3. Index to USGS 1:250,000 scale maps used in this study.

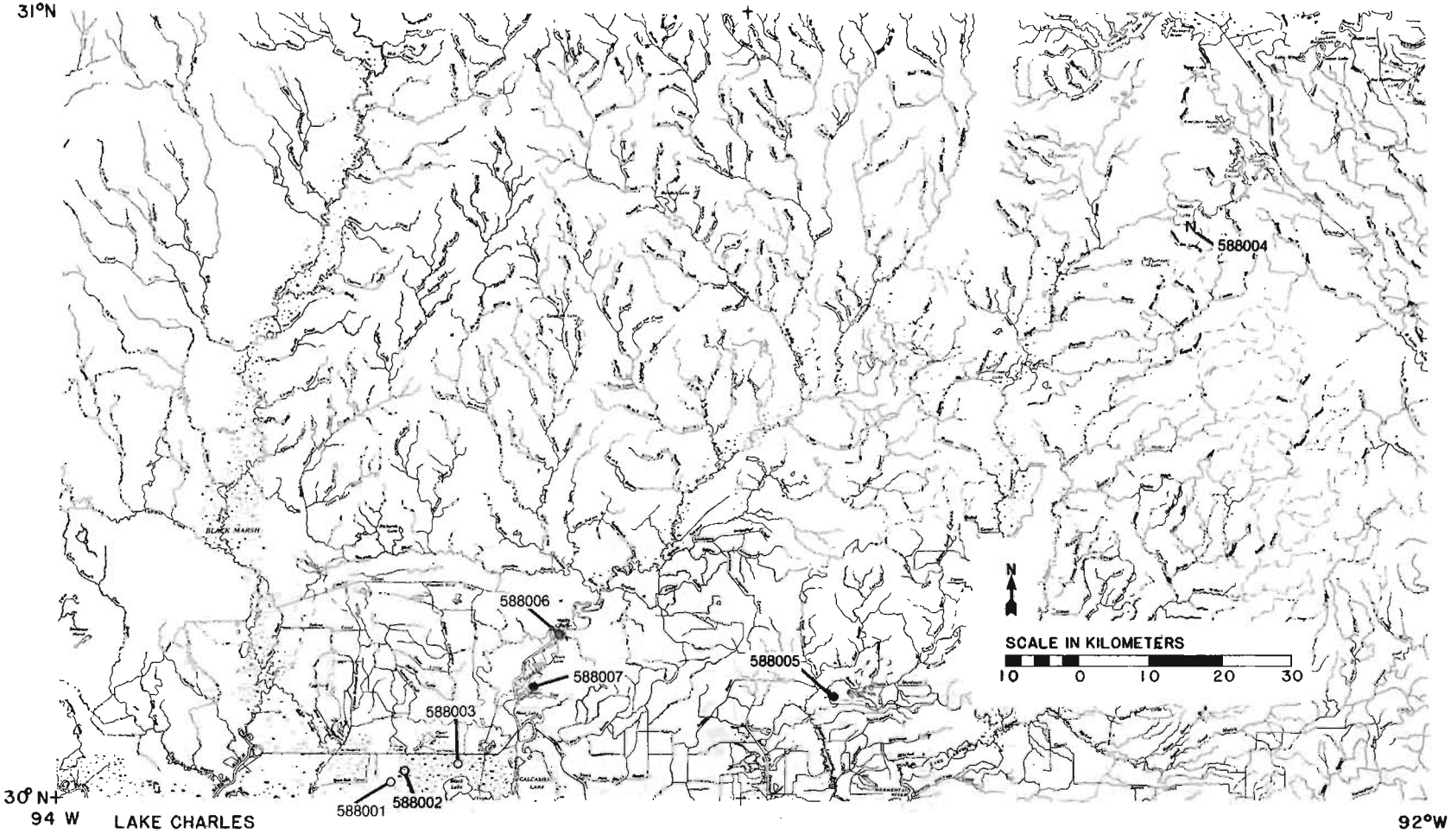


Figure 4. Locations of waterbird nesting colonies on map 588. Colonies active in 1983 (●), historic colony sites (o), and historic colonies not surveyed in 1983 (N) are indicated.

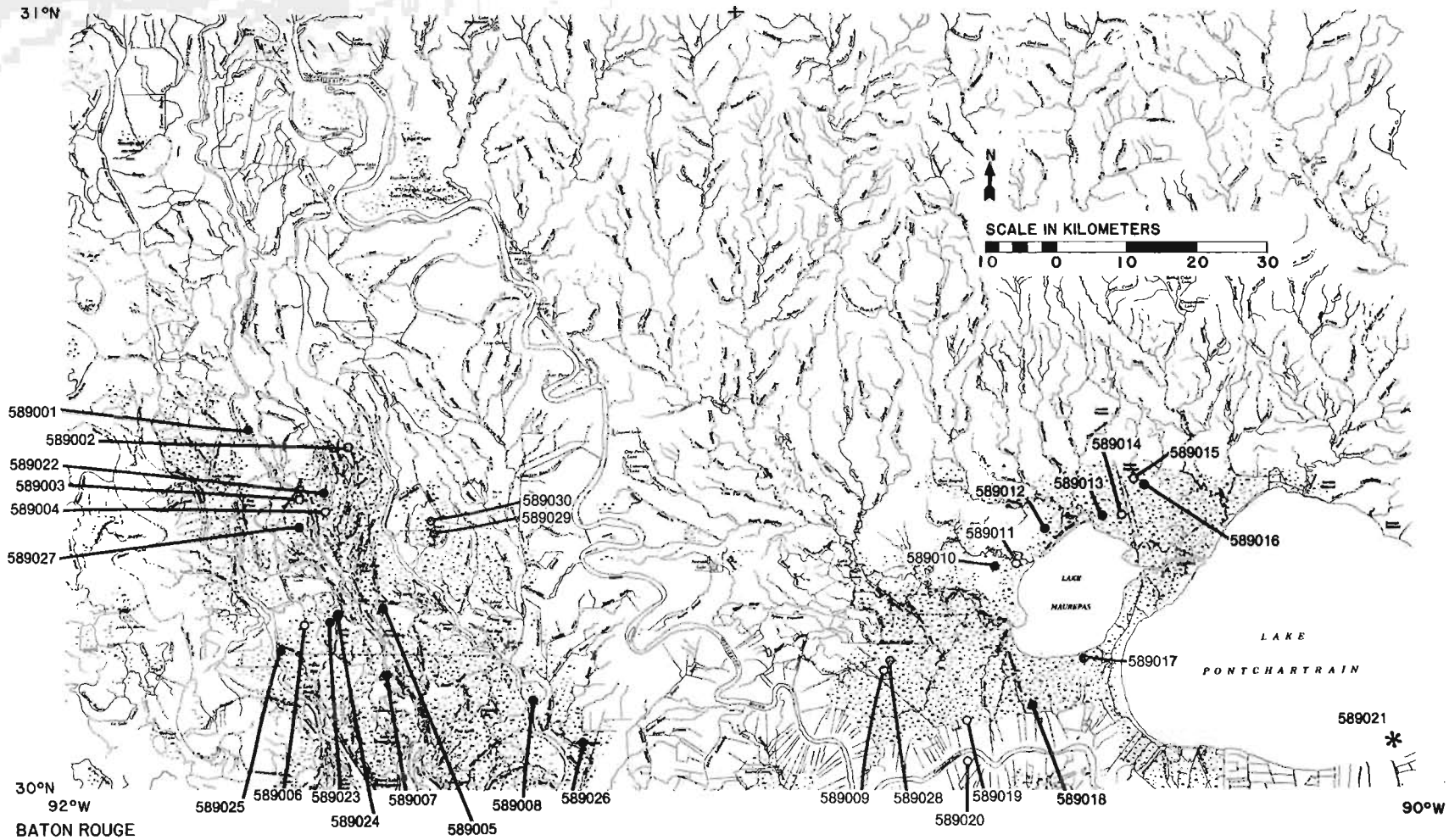


Figure 5. Locations of waterbird nesting colonies on map 589. Colonies active in 1983 (●), historic colony sites (o), and historic Least Tern colony sites (*) are indicated.

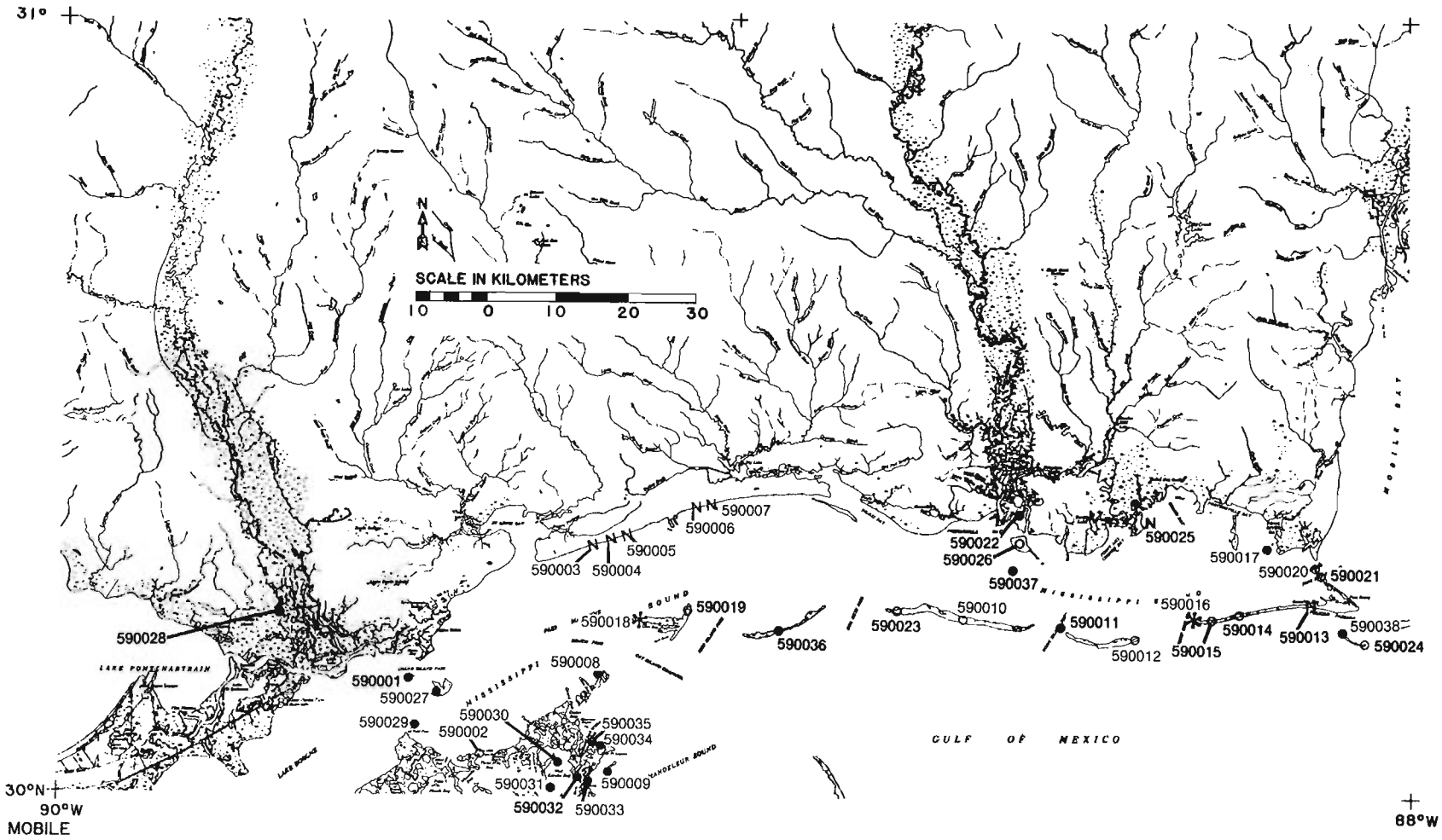


Figure 6. Locations of waterbird nesting colonies on map 590. Colonies active in 1983 (●), historic colony sites (o), historic Least Tern colony sites (*) and historic colonies not surveyed in 1983 (N) are indicated.

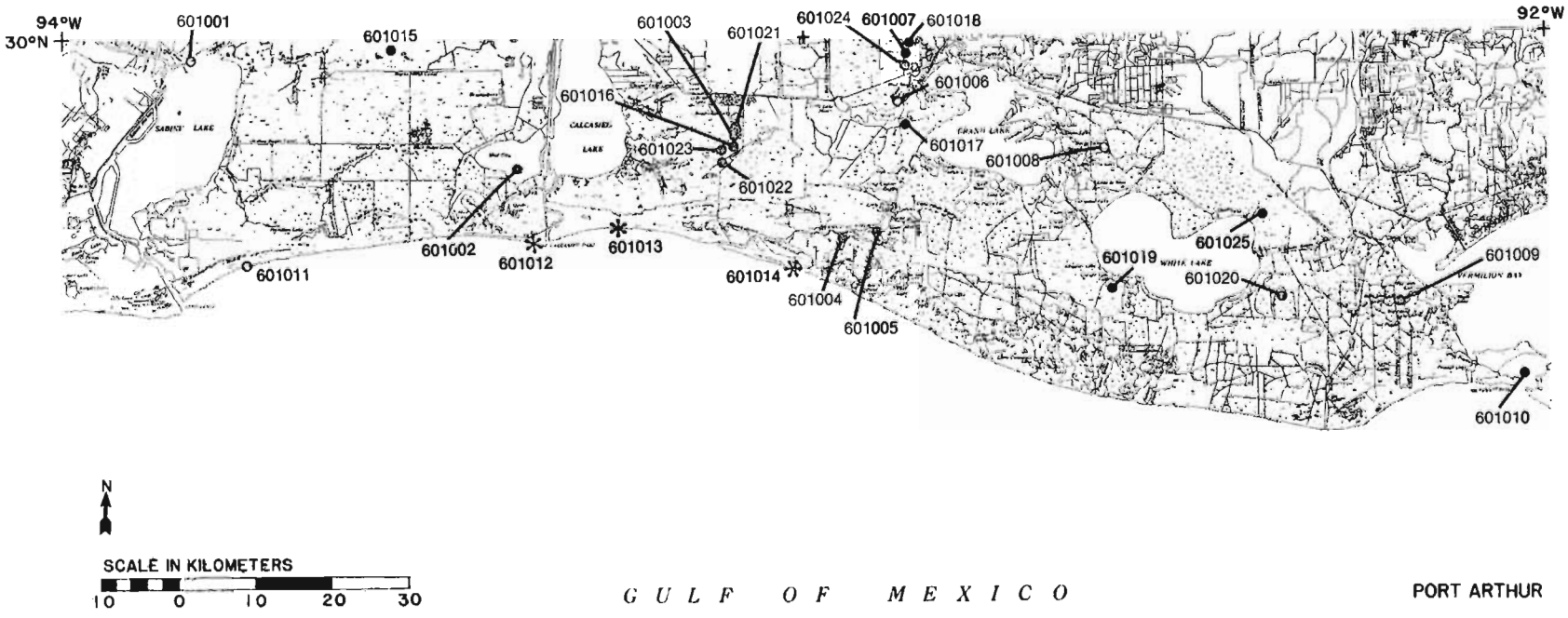


Figure 7. Locations of waterbird nesting colonies on map 601. Colonies active in 1983 (●), historic colony sites (o), and historic Least Tern colony sites (*) are indicated.

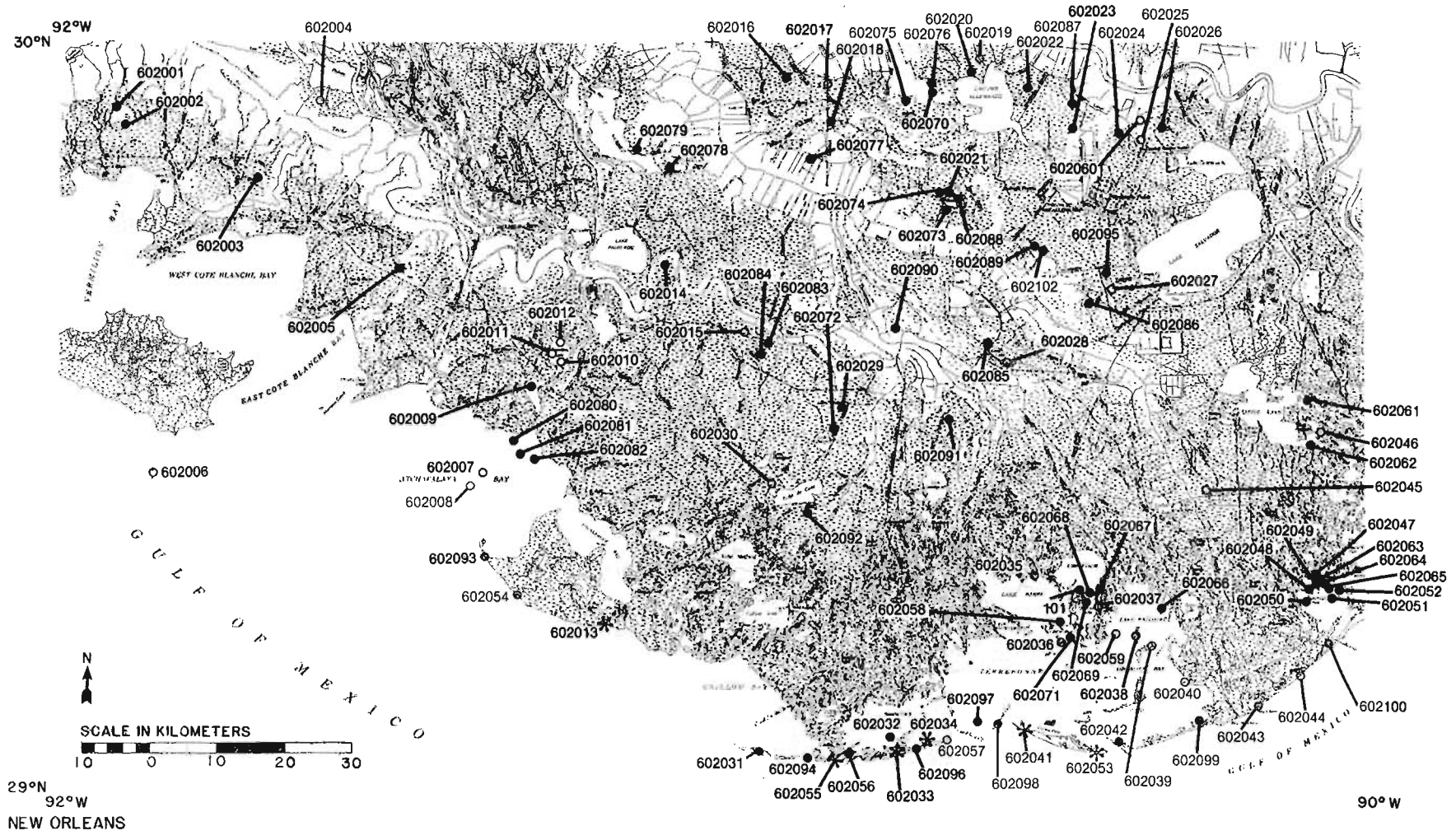


Figure 8. Locations of waterbird nesting colonies on map 602. Colonies active in 1983 (●), historic colony sites (o), and historic Least Tern colony sites (*) are indicated.

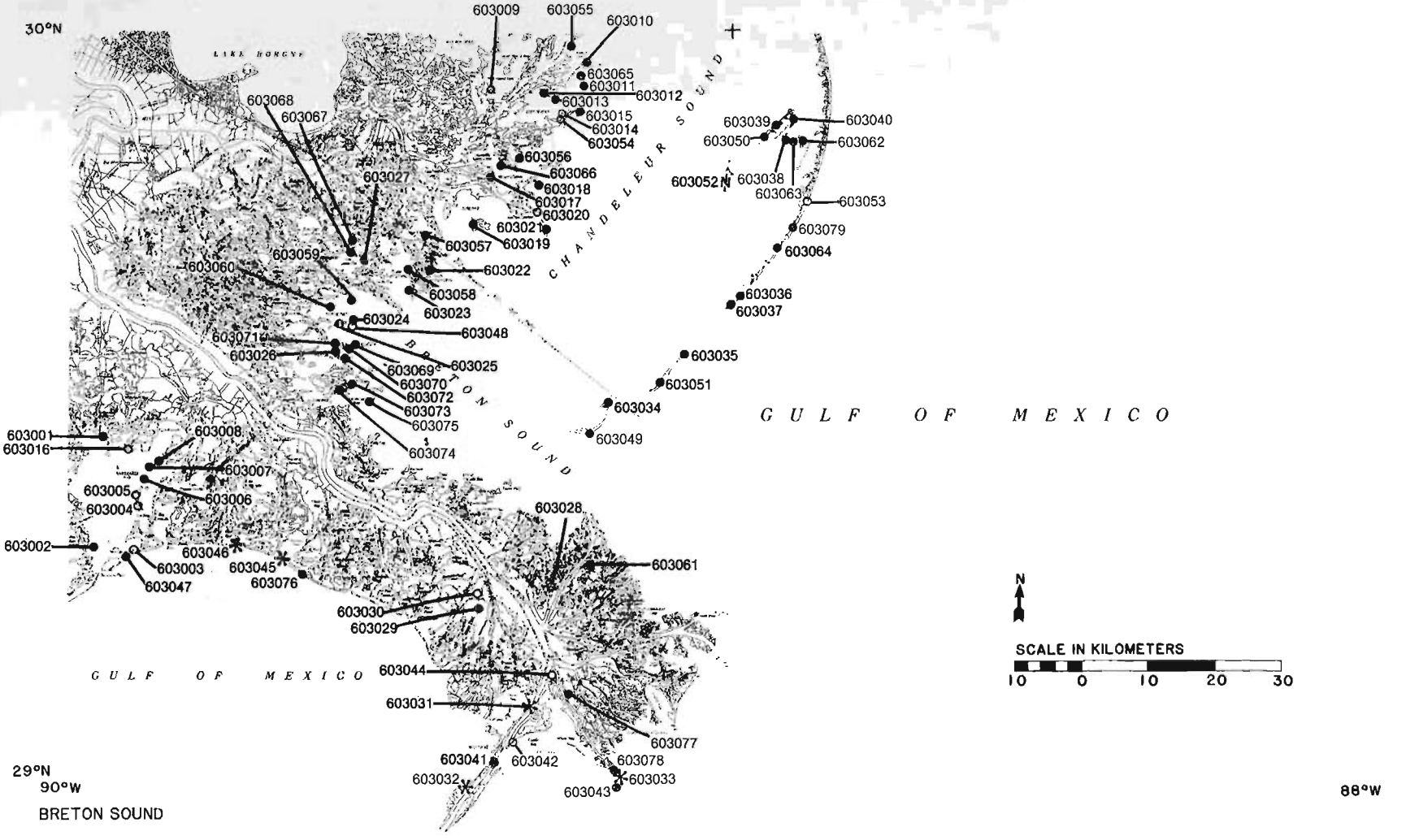


Figure 9. Locations of waterbird nesting colonies on map 603. Colonies active in 1983 (●), historic colony sites (o), historic Least Tern colony sites (*) and historic colonies not surveyed in 1983 (N) are indicated

Table 2. Explanation of codes appearing in Tables 3 and 4.

Column	Code	Explanation
COLONY NUMBER	000000	USFWS six-digit number
USGS QUAD NAME		Name of 1:24,000 scale USGS topographic map
MAP		Identification number for Coastal Environments, Inc. habitat map
LAT	0000	Latitude to nearest minute. First two digits are degrees, second two digits are minutes
LONG	0000	Longitude to nearest minute. First two digits are degrees, second two digits are minutes
SITE (GEOGRAPHIC SITE)		
	1	Mainland
	2	Inland Island
	3	Coastal Island
	4	Barrier Island
HAB (HABITAT)		Number designates habitat type of surrounding area
	1	Swamp
	2	Marsh
	3	Beach
	4	Spoil
	5	Other
	/	edge of two habitat types (e.g., 1/2 = swamp adjacent to marsh)
NEST (NESTING SUBSTRATE)		
	1	Tree
	2	Shrub
	3	Herbaceous vegetation
	4	Bare ground (sand, shell, silt, etc.)
	5	Driftage on marsh
	6	Manmade
	1/2	Trees and understory shrubs
	;	Separates different nesting substrates used by different species (e.g., 4;5. Species listed before semicolon nested on bare ground, species listed after semicolon nested on driftage)

(continued)

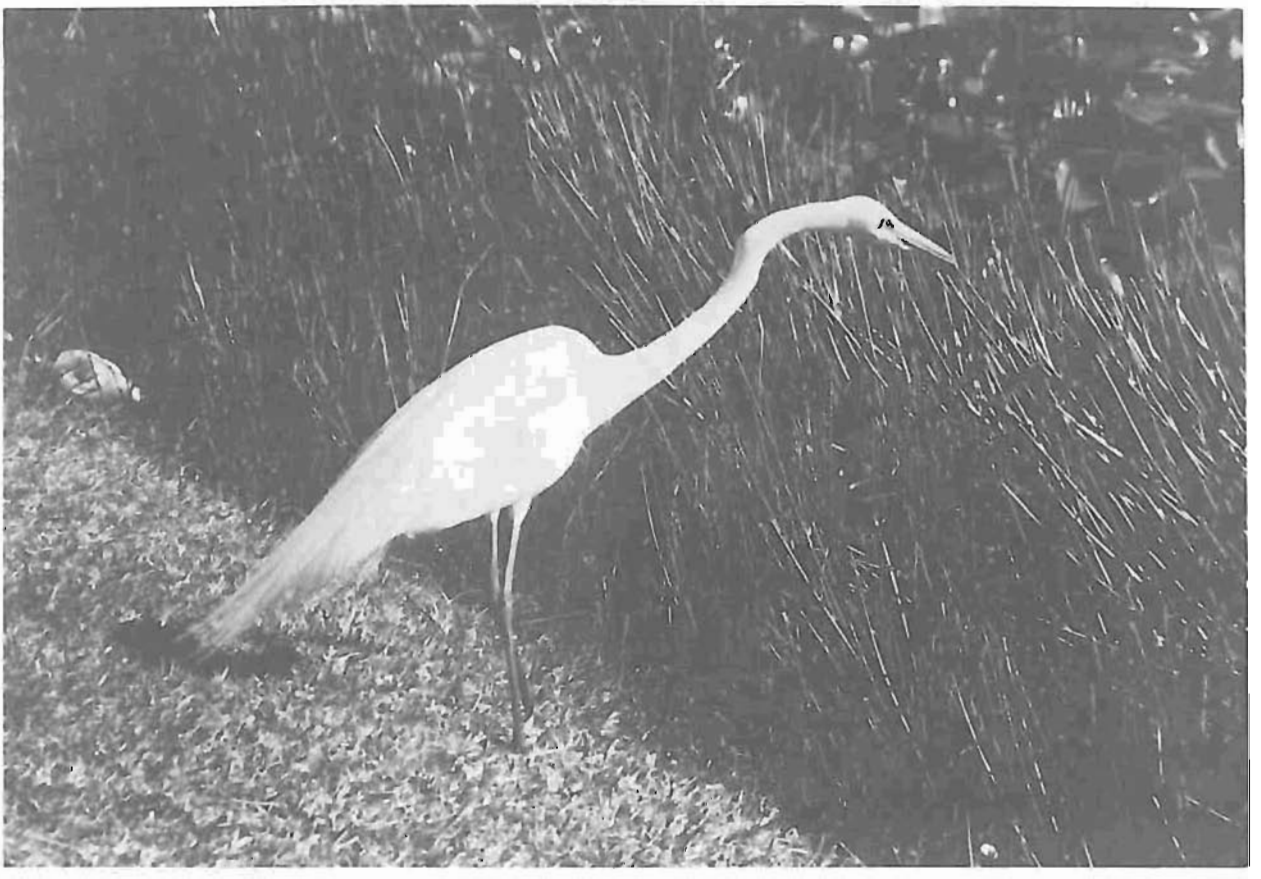
Table 2. (Continued).

Column	Code	Explanation
SURVEY DATE		Date of latest 1983 survey of the colony site
	NS	Not surveyed (colony site previously located but not surveyed in 1983)
	Rpt	Colony not visited by authors; information reported by Mary Landin, U.S. Army Corps of Engineers, Mobile, AL
SIZE CLASS		Estimate of the total number of breeding birds visible from the aircraft
	0	No nesting activity
	0*	No nesting observed, but Least Terns, which previously nested there, could have been missed during aerial search
	1	2 to 100 adult birds visible
	2	100 to 500
	3	500 to 1000
	4	1000 to 5000
	5	5000 to 10,000
	6	10,000 to 15,000
	7	Over 15,000
SPECIES COMPOSITION		
	BP	Brown Pelican (*Pelecanus occidentalis*)
	OC	Olivaceous Cormorant (*Phalacrocorax olivaceus*)
	AN	Anhinga (*Anhinga anhinga*)
	GB	Great Blue Heron (*Ardea herodias*)
	GE	Great Egret (*Casmerodius albus*)
	SE	Snowy Egret (*Egretta thula*)
	LB	Little Blue Heron (*Egretta caerulea*)
	TH	Tricolored Heron (*Egretta tricolor*)
	RE	Reddish Egret (*Egretta rufescens*)
	CE	Cattle Egret (*Bubulcus ibis*)
	GH	Green-backed Heron (*Butorides striatus*)
	BC	Black-crowned Night-Heron (*Nycticorax nycticorax*)
	YC	Yellow-crowned Night-Heron (*Nycticorax violaceus*)
	WI	White Ibis (*Eudocimus albus*)
	PI	White-faced Ibis and/or Glossy Ibis (*Plegadis* spp.)
	RS	Roseate Spoonbill (*Ajaia ajaja*)

(continued)

Table 2. (Concluded).

Column	Code	Explanation
	LG	Laughing Gull (Larus articilla)
	GT	Gull-billed Tern (Sterna nilotica)
	CS	Caspian Tern (Sterna caspia)
	RT	Royal Tern (Sterna maxima)
	SN	Sandwich Tern (Sterna sandvicensis)
	FT	Forster's Tern (Sterna forsteri)
	LT	Least Tern (Sterna antillarum)
	BS	Black Skimmer (Rynchops niger)
HISTORY		Size class of the colony in 1976, 1978, and 1983
	-	Colony not present in that year (not reported)
	NS	Colony site not surveyed in that year



Adult Great Egret. Photograph by H.R. Spendelow, Jr.

Table 3. Waterbird colonies of Louisiana, Mississippi, and Alabama (present and historic sites arranged by colony number).

COLONY NUMBER	USGS QUAD NAME	MAP	LAT	LONG	SITE	HAB	NEST	SURVEY DATE	SIZE	SPECIES COMPOSITION	HISTORY 76	78	83
588001	Cameron Farms	176D	3001	9330	1	1	1	051283	0		4	1	0
588002	Black Lake	177C	3002	9329	1	2	3	051283	0		3	0	0
588003	Black Lake	177C	3003	9324	1	1	1	051283	0		2	0	0
588004	Ville Platte	--	3044	9220	1	1	2	NS			7	NS	NS
588005	Welsh South	--	3008	9252	1	2	2	051283	4	LB,SE,GE,WI,RS	-	-	4
588006	West Lake	--	3012	9316	2	4	2	061483	2	RS,CE,SE	-	-	2
588007	West Lake	--	3009	9318	1	1	1	061483	3	GB,GE	-	-	3
589001	Maringouin NW	--	3028	9143	1	1	1	061383	6	GE,AN,SE,LB,YC,CE	4	5	6
589002	Maringouin	--	3026	9138	1	1	2	050983	0		4	0	0
589003	Butte La Rose	--	3023	9139	1	1	2	050983	0		4	5	0
589004	Cow Bayou	--	3021	9137	1	1	2	050983	0		4	0	0
589005	Lake Mongoulois	--	3014	9132	1	1	1	061383	2	GB,YC,AN	2	2	2
589006	Catahoula	--	3013	9139	1	1	2	050983	0		4	4	0
589007	Lake Mongoulois	--	3009	9131	1	1	1	061383	3	GE,AN,GB	6	4	3
589008	Pigeon	--	3007	9118	1	1	1	061383	7	GE,GB,LB,TH,AN,YC,SE,CE	7	4	7
589009	Sorrento	187B	3009	9045	1	1	1	050583	0		4	3	0
589010	Killian	161D	3017	9037	1	1/2	1	061383	3	GE,GB,AN	4	0	3
589011	Killian	161D	3017	9035	1	1	1	050583	0		2	0	0
589012	Killian	161D	3020	9032	1	1	1	061383	2	GE,GB,LB,CE,AN	2	2	2
589013	Manchac	160C	3021	9027	1	1	1	061383	2	GE,GB,AN	3	7	2
589014	Manchac	160C	3022	9026	1	1	1	050583	0		7	0	0
589015	Ponchatoula	160A	3024	9024	1	1	1	061383	0		2	0	0
589016	Ponchatoula	160A	3023	9024	1	1	1	061383	5	WI,GE,GB	3	3	5
589017	Ruddock	189A	3010	9030	1	1/2	1	061383	4	GE,GB,AN	4	3	4
589018	Reserve	188D	3006	9034	1	1	1	061383	3	GE,GB,AN	4	2	3
589019	Lutcher	188C	3006	9039	1	1	1	050583	0		3	3	0
589020	Lutcher	188C	3002	9039	1	1	2	050583	0		5	2	0
589021	Spanish Fort	190D	3003	9002	1	5	6	050583	0*		1	0*	0*
589022	Maringouin	--	3023	9137	1	1	1/2	061383	4	GE,GB,AN,YC	-	-	4
589023	Lake Mongoulois	--	3013	9137	1	1	1	061383	2	GE,GB,AN	-	-	2
589024	Lake Mongoulois	--	3014	9136	1	1	2	061383	4	LB,SE,YC,AN,TH	-	-	4
589025	Catahoula	--	3011	9141	1	1	2	061383	5	LB,SE,CE,YC,AN,TH	-	-	5
589026	Lone Star	--	3004	9114	1	1	1	061383	3	GE,GB,AN,YC	-	-	3
589027	Butte La Rose	--	3020	9139	1	1	2	061383	4	LB,SE,YC,TH,AN,GH	-	-	4
589028	Sorrento	187B	3010	9047	1	1	1	061383	4	GE,GB,AN	-	-	4
589029	Grosse Tete SW	--	3020	9127	1	1	1	061383	4	GE,GB,AN,LB,YC	-	-	4
589030	Grosse Tete SW	--	3021	9127	1	1	2	061383	3	SE,LB,YC	-	-	3
590001	Grand Island Pass	193A	3009	8928	3	2	5;4	060883	4	FT,LG;BS,GT	5	4	4
590002	Malheureux Point	193C	3003	8922	3	6	4	060883	0*		1	0*	0*
590003	Pass Christian	M7C	3020	8912	1	3	4	NS			1	NS	NS
590004	Pass Christian	M7C	3020	8911	1	3	4	NS			4	NS	NS
590005	Pass Christian	M7C	3020	8910	1	3	4	NS			4	NS	NS
590006	Gulfport South	M7D	3022	8902	1	3	4	NS			1	NS	NS
590007	Gulfport South	M7D	3023	8900	1	3	4	NS			4	NS	NS
590008	Isle Au Pitre	194A	3009	8912	3	2	4;3	060883	2	BS,LT;LG	4	4	2
590009	Door Point	194C	3002	8911	3	2	5;4	060883	2	FT;BS,GT,LT	2	1	2
590010	Horn Island West	M2A	3014	8839	4	3	4	060883	0*		1	0*	0*
590011	Horn Island East	M2B	3013	8831	3	4	4	060883	4	SN,RT,BS,LT	4	1	4
590012	Petit Bois Island	M1A	3012	8824	4	3	4	060883	0*		1	0*	0*
590013	Fort Morgan NW	--	3015	8809	4	3	4	060883	0*		3	NS	0*
590014	Petit Bois Island	M1A	3015	8812	4	3	4	060883	0*		3	0*	0*

(continued)

Table 3. Continued.

COLONY NUMBER	USGS QUAD NAME	MAP	LAT	LONG	SITE	HAB	NEST	SURVEY DATE	SIZE	SPECIES COMPOSITION	HISTORY 76	78	83
590015	Petit Bois Island	M1A	3014	8819	4	3	4	060883	0		3	1	0
590016	Petit Bois Island	M1A	3014	8820	4	3	4	060883	0*		2	0*	0*
590017	Heron Bay	--	3019	8812	3	2	2	060883	3	GE,TH,LB,CE,GB,SE	5	2	3
590018	Isle Au Pitre	194A	3014	8909	4	3	4	060883	0*		1	0*	0*
590019	Cat Island	194B	3014	8904	4	3	4	060883	0		1	0	0
590020	Heron Bay	--	3018	8808	3	4	4	060883	0		2	0	0
590021	Heron Bay	--	3017	8808	3	4	2	060883	0		2	2	0
590022	Pascagoula SE	M5D	3022	8834	1	4	4	060883	3	BS,GT,LT	1	0	3
590023	Dog Keys Pass	M3B	3014	8845	4	3	4	060883	0		1	0	0
590024	Fort Morgan	--	3012	8804	3	3	4	060883	0		-	2	0
590025	Grand Bay SW	M4C	3021	8823	3	2	4	NS			-	2	NS
590026	Pascagoula SE	M5D	3020	8835	3	4	4	060883	0		-	2	0
590027	Grand Island Pass	193A	3008	8927	3	2	4;5	060883	3	BS,GT;FT	-	-	3
590028	Rigolets	192A	3014	8940	1	1/2	1	050583	3	GB,GE,SE,TH,LB,WI,YC,AN,CE	-	-	3
590029	Malheureux Point	193C	3005	8928	3	2	2-5	060883	6	GE,SE,TH,BC;LG;BS,GT;FT	-	-	6
590030	Three Mile Bay	193D	3003	8915	3	2	3;5	060883	2	BC,SE;FT,LG	-	-	2
590031	Three Mile Bay	193D	3001	8916	3	2	2;3	060883	4	SE,TH,GE;LG	-	-	4
590032	Door Point	194C	3001	8914	1	2	5	060883	2	FT	-	-	2
590033	Door Point	194C	3001	8913	3	2	3	060883	2	LG	-	-	2
590034	Door Point	194C	3004	8912	3	2	4;5	060883	2	BS,GT;FT	-	-	2
590035	Door Point	194C	3004	8913	3	2	4	060883	2	BS,GT	-	-	2
590036	Ship Island	M3A	3013	8856	4	3	4	060883	1	BS	-	-	1
590037	Pascagoula SE	M5D	3018	8835	3	5	1	060883	2	GB	-	-	2
590038	Fort Morgan	--	3013	8807	3	3	4	060883	2	BS,GT	-	-	2
590039	Hollingers Island	--	3030	8803	3	4	4;3;5	Rpt.	5	BP,RT,SN,CS,LT,GT,BS;LG;FT	-	-	5
601001	West of Greens Bayou	216B	2958	9350	2	4	3	061483	0		7	6	0
601002	Holly Beach	214C	2951	9323	2	2	2-5	061383	7	RS,GE,TH,SE,WI,PI,LB,BC;LG;BS;FT	7	5	7
601003	Boudreaux Lake	213B	2953	9305	1	4	2	061383	4	RS,GE,SE,TH,OC,CE,BC	3	1	4
601004	Grand Cheniere	212C	2946	9256	1	4	2	061483	4	GE,OC,SE	4	4	4
601005	Grand Cheniere	212C	2946	9254	2	4	2	061483	3	RS,SE,TH,GE	2	3	3
601006	Latania Lake	212B	2956	9253	1	2	2	051283	0		4	2	0
601007	Latania Lake	212B	2959	9252	1	2	2	061383	4	WI,PI,TH,LB,BC,YC,GB,AN,OC,GH	6	4	4
601008	Grand Lake East SE	211D	2953	9235	1	2	2	051283	0		7	5	0
601009	Cheniere Au Tigre NW	225A	2941	9212	2	4	4	061483	2	BS,LT,GT	4	1	2
601010	Cheniere Au Tigre SE	225D	2936	9202	3	2	2	061483	3	GE,SE	4	3	3
601011	South of Johnsons Bayou	220A	2944	9345	1	3	4	061483	0		4	0	0
601012	Cameron	214D	2946	9321	1	3	4	061483	0*		1	0*	0*
601013	Cameron	214D	2946	9314	1	3	4	061483	0*		1	0*	0*
601014	South of Bayou Labauve	221B	2944	9301	1	3	4	061483	0*		1	0*	0*
601015	Five Lakes	215B	2959	9333	1	2	2	061483	3	OC,GE,GB,CE,AN	-	-	3
601016	Bayou Labouve	213D	2952	9306	1	4	2	061383	3	RS,TH,OC,GE	-	-	3
601017	Latania Lake	212B	2954	9253	1	2	2	061383	2	SE,LB,GH	-	-	2
601018	Latania Lake	212B	3000	9251	1	2	2	061383	7	WI,PI,GE,GB,AN,RS,BC,TH,CE,LB,GH	-	-	7
601019	Constance Bayou NE	223B	2942	9236	1	4	2	061383	1	GE,OC,BC,GH	-	-	1
601020	Pecan Island NE	224B	2941	9221	1	2	2	061383	5	RS,GE,SE,TH,CE,BC,OC,LB	-	-	5
601021	Boudreaux Lake	213B	2954	9305	1	4	2	061383	2	TH,SE,CE,OC,RS	-	-	2
601022	Bayou Labouve	213D	2951	9306	1	4	2	061383	3	RS,OC,CE,SE,TH,BC	-	-	3
601023	Bayou Labouve	213D	2951	9306	2	2	5	061383	1	FT	-	-	1
601024	Latania Lake	212B	2958	9252	1	2	2	061383	2	TH,YC,PI,GH	-	-	2
601025	Forked Island SW	210C	2947	9223	1	2	2	061483	4	CE,LB,TH,SE,GH	-	-	4

(continued)

Table 3. Continued.

COLONY NUMBER	USGS QUAD NAME	MAP	LAT	LONG	SITE	HAB	NEST	SURVEY DATE	SIZE	SPECIES COMPOSITION	HISTORY 76	78	83
602001	Delcambre	208A	2954	9155	1	1	6+2	061383	3	GE,SE,LB,CE	4	4	3
602002	Delcambre	208A	2953	9154	1	1	1/2	061383	2	GE,AN,LB,SE,CE	4	2	2
602003	Kemper	207C	2949	9142	1	1	1	061483	2	GE,GB,AN,YC	4	3	2
602004	Charenton	207B	2955	9136	1	1	1	050683	0		3	2	0
602005	North Bend	228A	2942	9129	1	1	1	061483	4	GE,GB,AN,SE,LB,YC	6	4	4
602006	Mound Point	249B	2926	9151	3	3	4	061483	0		5	4	0
602007	Point Au Fer NE	248B	2924	9122	3	4	4	061483	0		2	0	0
602008	Point Au Fer NE	248B	2923	9122	3	4	4	061483	0		4	3	0
602009	Lake Salve	228D	2932	9117	2	4	1	061483	6	GE,LB,PI,TH,YC,BC,CE,GB,AN	5	4	6
602010	Morgan City SW	229C	2934	9115	2	4	2	050683	0		5	0	0
602011	Morgan City SW	229C	2935	9115	2	4	2	050683	0		4	0	0
602012	Morgan City SW	229C	2936	9114	2	4	2	050683	0		7	6	0
602013	Oyster Bayou	251A	2913	9110	1	3	4	061483	0*		1	NS	0*
602014	Amelia	229B	2942	9104	1	1	1	060283	4	GE,GB,AN	4	4	4
602015	Bayou Cocodrie	230C	2937	9057	1	1	1	060283	0		2	1	0
602016	Madewood	--	2957	9053	1	1	1	060283	4	GE,GB,AN	4	0	4
602017	Lagan	204B	2956	9049	1	1	1	050983	0		2	0	0
602018	Lagan	204B	2954	9049	1	1	1	060283	5	GB,GE,LB,TH,SE,YC,CE	5	4	5
602019	Lac Des Allemands	--	2959	9036	1	2	2	050583	0		4	4	0
602020	Lac Des Allemands	--	2958	9036	1	1/2	2	060283	4	LB,SE,BC,TH,CE,GH	4	4	4
602021	Kraemer	--	2948	9038	2	2	2	060283	3	LB,SE,TH	7	5	3
602022	Lac Des Allemands	--	2957	9031	1	1/2	2	060283	4	LB,SE,TH,CE,BC,AN,PI,GH	7	5	4
602023	Hahnville	202A	2953	9027	1	1/2	2	060283	4	LB,SE,TH,AN,CE,GH	6	4	4
602024	Hahnville	202A	2953	9023	1	1	1	060283	4	GE,GB,AN	7	5	4
602025	Lake Cataouatche West	202D	2953	9021	1	1	2	060283	0		3	0	0
602026	Luling	202B	2953	9018	1	1/2	1	060283	2	GB,GE,AN,SE,TH	3	0	2
602027	Gheens	--	2939	9023	1	2	2	060283	0		3	4	0
602028	Bourg	231D	2935	9033	1	2	2	060283	0		5	0	0
602029	Humphreys	230D	2931	9048	2	2	2	060283	4	WI,GE,LB,SE,TH,PI	4	6	4
602030	Lake Penchant	246A	2925	9055	1	1	2	050483	0		2	NS	0
602031	Western Isles Dernieres	252C	2903	9056	4	3	2;3;4	060383	7	RS,GE,SE,TH,BC;LG;SN,RT,BS	7	7	7
602032	Eastern Isles Dernieres	253C	2904	9043	3	2	2	060383	3	GE,SE,TH,GH	4	4	3
602033	Eastern Isles Dernieres	253C	2903	9043	4	3	4	060383	0*		1	0*	0*
602034	Eastern Isles Dernieres	253C	2904	9040	4	3	4	060383	0*		1	0*	0*
602035	Lake Tambour	245D	2917	9030	3	2	5	050483	0		2	2	0
602036	Jacko Bay	254A	2912	9028	3	2	2	050483	0		5	3	0
602037	Jacko Bay	254A	2915	9025	3	2	5	060383	0		1	0	0
602038	Pelican Pass	254B	2913	9021	3	2	2;3	050483	0		7	4	0
602039	Pelican Pass	254B	2912	9019	3	2	2	050483	0		4	4	0
602040	Pelican Pass	254B	2909	9016	3	2	2	050483	0		7	4	0
602041	Cat Island Pass	253D	2904	9030	4	3	4	060383	0*		1	0*	0*
602042	Timbalier/Calumet Island	254C	2904	9023	4	3	4	060383	4	BS,RT,SN,LG	6	6	4
602043	Belle Pass	255C	2907	9010	1	3	4	060383	2	BS,LT	1	2	2
602044	Caminada Pass	255B	2909	9007	4	3	4	060383	0*		4	0*	0*
602045	Golden Meadow Farms	243A	2923	9013	1	4	2	050483	0		4	0	0
602046	Bay Dosgris	243B	2928	9004	3	2	5	050483	0		4	2	0
602047	Bay Tambour	243D	2917	9005	3	2	5;2	060383	2	FT;TH,SE,GH	2	2	2
602048	Bay Tambour	243D	2916	9005	3	2	2	060383	3	GE,SE,TH,BC	1	0	3
602049	Bay Tambour	243D	2916	9004	3	2	2;5	060383	3	GE,SE,TH,LB;FT	1	3	3
602050	Bay Tambour	243D	2915	9005	3	2	5;3	060383	2	FT;TH,GH	4	2	2
602051	Bay Tambour	243D	2915	9003	3	2	2;5	060383	2	TH,SE,GE,PI,GH;FT	5	2	2
602052	Bay Tambour	243D	2916	9002	3	2	2	060383	1	TH,SE	2	3	1

(continued)

Table 3. Continued.

COLONY NUMBER	USGS QUAD NAME	MAP	LAT	LONG	SITE	HAB	NEST	SURVEY DATE	SIZE	SPECIES COMPOSITION	HISTORY 76	78	83
602053	Timbalier Island	254C	2904	9024	4	3	4	060383	0*		1	0*	0*
602054	Point Au Fer	248D	2916	9118	1	3	4	061483	1	BS	1	0*	1
602055	Central Isles Dernieres	252D	2902	9049	4	3	4	060383	0*		2	0*	0*
602056	Central Isles Dernieres	252D	2903	9047	4	3	4	060383	2	BS,SN,LT	-	1	2
602057	Eastern Isles Dernieres	253C	2904	9038	4	3	4	060383	0		-	3	0
602058	Jacko Bay	254A	2913	9028	3	2	5;2	060383	2	FT;SE,TH	-	4	2
602059	Jacko Bay	254A	2912	9023	3	2		050483	0		-	2	0
602060	Luling	202B	2954	9025	1	1		050683	0		-	4	0
602061	Three Bayou Bay	233D	2931	9005	2	2	5	060383	2	FT	-	-	2
602062	Bay Dosgris	243B	2927	9005	3	2	5	060383	2	FT	-	-	2
602063	Bay Tambour	243D	2917	9004	3	2	5;2	060383	3	FT;TH,SE,GH	-	-	3
602064	Bay Tambour	243D	2917	9004	3	2	5;2	060383	3	FT;TH,SE,GE,BC,WI,GH	-	-	3
602065	Bay Tambour	243D	2916	9004	3	2	5;2	060383	3	FT;TH,SE,LB,PI,GH	-	-	3
602066	Pelican Pass	254B	2914	9019	3	2	5;2	060383	3	FT;SE,TH	-	-	3
602067	Lake Felicity	244C	2916	9024	3	2	5	060383	2	FT	-	-	2
602068	Lake Felicity	244C	2916	9025	3	2	5	060383	2	FT	-	-	2
602069	Lake Felicity	244C	2915	9026	3	2	5	060383	2	FT	-	-	2
602070	Lower Vacherie	--	2956	9040	1	1/2	2	060283	2	SE,LB	-	-	2
602071	Jacko Bay	254A	2912	9027	3	2	2	060383	4	SE,TH,BC,GE	-	-	4
602072	Lake Theriot	246B	2929	9048	1	2	2	060283	6	WI,TH,SE,LB	-	-	6
602073	Kraemer	--	2947	9038	1	2	2	060283	2	CE,LB,SE,TH,GH	-	-	2
602074	Kraemer	--	2948	9039	1	2	2	060283	3	LB,TH,SE,WI,CE,PI,BC,GH	-	-	3
602075	Lower Vacherie	--	2955	9042	1	1	1	060283	2	GE,GB,YC,AN	-	-	2
602076	Lower Vacherie	--	2957	9039	1	1/2	1	060283	3	GE,GB	-	-	3
602077	Thibodaux	--	2951	9051	1	2	2	060283	4	TH,SE,LB	-	-	4
602078	Grassy Lake	--	2950	9104	1	1	1	060283	1	GE,GB,AN	-	-	1
602079	Grassy Lake	--	2951	9107	1	1	1	060283	4	GE,GB,AN	-	-	4
602080	Point Au Fer NE	248B	2928	9119	3	2	2	061483	4	TH,SE,LB,WI,PI,BC,YC	-	-	4
602081	Point Au Fer NE	248B	2927	9118	3	2	2	061483	3	TH,PI,YC,SE	-	-	3
602082	Point Au Fer NE	248B	2926	9116	3	2	2	061483	7	PI,WI,LB,SE,TH,BC	-	-	7
602083	Bayou Cocodrie	230C	2936	9055	1	1/2	1	060283	3	GE,GB,AN	-	-	3
602084	Bayou Cocodrie	230C	2935	9055	1	2	2	060283	4	WI,GE,PI,SE,CE,TH,BC,LB,GH	-	-	4
602085	Bourg	231D	2936	9035	1	2	2	060283	4	WI,LB,SE,BC,PI,TH	-	-	4
602086	Gheens	--	2939	9025	1	1	2	060283	2	LB,SE	-	-	2
602087	Hahnville	202A	2955	9027	1	1/2	2	060283	2	LB,TH,SE,BC,YC,GH	-	-	2
602088	Bayou Bouef	--	2948	9037	2	2	2	060283	2	LB,CE,TH,PI,SE	-	-	2
602089	Lockport	--	2944	9030	1	1	2	061483	3	LB,SE,CE	-	-	3
602090	Houma	231C	2937	9043	1	4	2	061483	1	CE,LB,GH	-	-	1
602091	Dulac	245A	2929	9038	1	1	1	060283	4	LB,SE,GE,GB,CE,PI	-	-	4
602092	Lake Theriot	246B	2922	9051	1	2	2	060283	2	GE,SE,TH	-	-	2
602093	Point Au Fer	248D	2919	9121	1	3	4	061483	1	BS	-	-	1
602094	Central Isles Dernieres	252D	2903	9052	4	3	4	060383	4	BS,LG,SN	-	-	4
602095	Gheens	--	2941	9024	1	2	3	060283	4	WI,LB,SE,BC	-	-	4
602096	Eastern Isles Dernieres	253C	2903	9042	4	3	4	060383	2	BS	-	-	2
602097	Cat Island Pass	253D	2905	9036	3	3	4	060383	2	BS	-	-	2
602098	Cat Island Pass	253D	2905	9034	3	3	4	060383	3	BS	-	-	3
602099	Calumet Island	254D	2905	9015	4	3	4	060383	2	BS	-	-	2
602100	Caminada Pass	255B	2912	9003	3	3	2	060383	2	SE,TH,GE,GH	-	-	2
602101	Lake Felicity	244C	2916	9026	3	2	5	060383	2	FT	-	-	2
602102	Gheens	--	2943	9030	1	1	1	061483	3	GE,GB,AN	-	-	3

(continued)

Table 3. Continued.

COLONY NUMBER	USGS QUAD NAME	MAP	LAT	LONG	SITE	HAB	NEST	SURVEY DATE	SIZE	SPECIES COMPOSITION	HISTORY 76	78	83
603001	Wilkinson Bay	242A	2927	8957	3	2	5	060383	1	FT	2	2	1
603002	Barataria Pass	242C	2918	8957	3	2	2;3	060383	3	BP,GE,SE,TH;LG	7	6	3
603003	Barataria Pass	242C	2917	8954	3	3	4	060383	0		4	4	0
603004	Barataria Pass	242C	2922	8953	3	2	2;5	060383	0		7	0	0
603005	Barataria Pass	242C	2923	8953	3	2	2	060383	0		4	0	0
603006	Wilkinson Bay	242A	2924	8953	3	2	2;3;4	060383	2	TH,RE;FT,LG;BS	3	0	2
603007	Bay Batiste	242B	2925	8952	3	2	2,3,5	060383	4	SE,TH,RE,BC,FT,GH	1	2	4
603008	Bay Batiste	242B	2925	8951	3	2	5;2	060383	3	FT;SE,TH,GH,GE,BC	5	1	3
603009	Oak Mound Bayou	198B	2955	8921	3	2	5;3	060883	3	FT;LG	1	NS	3
603010	Mitchell Key	197A	2958	8912	3	2	3;5;4	060883	5	LG;FT;BS,CS,GT	4	2	5
603011	Mitchell Key	197A	2956	8912	3	2	3;6	060883	4	LG;SN,RT,BS	4	3	4
603012	Oak Mound Bayou	198B	2955	8915	3	2	5;2	060883	5	LG;WI,GE,SE,TH,BC,RE	4	4	5
603013	Mitchell Key	197A	2955	8915	3	2	3;4	060883	2	LG;BS,CS	3	2	2
603014	Mitchell Key	197A	2954	8914	3	2	2-4	060883	0		4	3	0
603015	Mitchell Key	197A	2954	8912	3	2	3;4	060883	4	LG;SN,RT,BS,GT	2	3	4
603016	Wilkinson Bay	242A	2926	8954	3	2	5	050483	0		2	0	0
603017	Morgan Harbor	198D	2948	8921	3	2	5	060883	2	FT	1	2	2
603018	Morgan Harbor	198D	2948	8916	3	2	5	060883	1	FT,LG	2	1	1
603019	Point Chicot	236B	2945	8922	3	2	5	060883	3	FT	3	2	3
603020	Morgan Harbor	198D	2946	8916	3	2	3	050483	0		3	4	0
603021	Point Chicot	236B	2944	8916	3	2	3;4	060883	4	WI,TH,SE;LG,BS,RT	4	4	4
603022	Lake Athanasio	236A	2941	8927	3	2	5;4	060883	1	FT;BS	4	NS	1
603023	Lake Athanasio	236A	2939	8928	3	2	5	060783	1	FT	5	2	1
603024	Black Bay South	235D	2937	8934	3	2	2;4;5	060783	4	SE,TH,BC,WI,CE,PI;BS;FT,LG	7	4	4
603025	Black Bay South	235D	2936	8934	3	2	2;5	050283	0		7	5	0
603026	Black Bay South	235D	2934	8935	3	2	5	060783	2	FT	3	0	2
603027	Black Bay North	235B	2941	8933	3	2	3;5	060783	3	TH,GE;LG	4	3	3
603028	Main Pass	239C	2915	8915	1	2	3	050283	0		7	4	0
603029	Pilottown	258B	2913	8922	1	2	2	060783	2	SE,GE,LB,TH	3	0	2
603030	Pilottown	258B	2914	8921	1	2	2	050283	0		2	0	0
603031	Dixon Bay	258D	2906	8917	1	4	4	060783	0*		1	0*	0*
603032	Burrwood Bayou West	261A	2858	8923	1	4	4	060783	0*		1	0*	0*
603033	South of South Pass	260A	2859	8909	1	4	4	060783	0*		2	0*	0*
603034	Breton Islands	239A	2929	8910	4	3	4	060783	4	BS,LT	3	2	4
603035	Grand Gosier Islands	237D	2934	8903	4	3	3;4	060783	4	LG;BS	5	2	4
603036	Stake Islands	238A	2939	8857	4	3	4	060783	5	SN,RT,BS	7	7	5
603037	Stake Islands	238A	2938	8858	4	3	3/4	060783	4	LG	5	0	4
603038	New Harbor Islands	196C	2951	8853	3	2	5	060883	3	LG	3	2	3
603039	New Harbor Islands	196C	2952	8854	3	2	3	060883	2	LG	2	3	2
603040	North Islands	196A	2953	8852	3	3	2;4	050283	3	GE;BP	4	4	3
603041	Dixon Bay	258D	2901	8919	1	4	4	060783	2	BS,GT	4	0	2
603042	Dixon Bay	258D	2903	8918	1	4	4	071383	0		4	4	0
603043	South of South Pass	260A	2858	8909	3	3	4	060783	3	FT	1	0	3
603044	Pass a Loutre West	259A	2908	8915	1	4	4	060783	0		2	0	0
603045	Bastian Bay	241C	2917	8940	4	3	4	060783	0*		1	0*	0*
603046	Bastian Bay	241C	2918	8944	4	3	4	060783	0*		1	0*	0*
603047	Barataria Pass	242C	2917	8954	4	3	4	060383	4	BS	1	0*	4
603048	Black Bay South	235D	2936	8934	3	3	4	050283	0		2	0	0
603049	Breton Islands	239A	2928	8912	4	3	2;4	060783	3	GE,SE,TH,BC,LB;BS	4	2	3
603050	New Harbor Islands	196C	2951	8855	3	3	4	060883	2	BS,CS	4	0	2
603051	Grand Gosier Islands	237D	2932	8905	4	3	4	060783	2	BS,CS	2	4	2
603052	Freemason Island	197D	2948	8859	3	3		NS			-	2	NS

(continued)

Table 3. Concluded.

COLONY NUMBER	USGS QUAD NAME	MAP	LAT	LONG	SITE	HAB	NEST	SURVEY DATE	SIZE	SPECIES COMPOSITION	HISTORY 76	78	83
603053	New Harbor Islands	196C	2946	8851	4	3	4	060883	0		-	1	0
603054	Mitchell Key	197A	2953	8914	3	2		060883	0		-	2	0
603055	Mitchell Key	197A	2959	8913	3	2	3;2	060883	4	LG;SE,GE,TH,BC	-	-	4
603056	Morgan Harbor	198D	2950	8918	3	2	5;2;4	060883	5	LG;GE,SE,TH,BC,PI;BS	-	-	5
603057	Lake Athanasio	236A	2944	8927	3	2	5;4	060883	3	FT;BS,GT	-	-	3
603058	Lake Athanasio	236A	2941	8928	3	2	2;3	060783	3	GE,SE,LB,RE,BC,PI;LG	-	-	3
603059	Black Bay North	235B	2938	8934	3	2	3;4;5	060783	2	SE,TH,LG;BS;FT	-	-	2
603060	Black Bay North	235B	2938	8936	3	2	3;4;5	060783	4	SE,TH,BC,WI,CE,PI;LG;FT	-	-	4
603061	Main Pass	239C	2917	8911	1	2	3	060783	4	PI,SE,GE,WI,LB,BC,TH	-	-	4
603062	New Harbor Islands	196C	2951	8852	3	2	3	060883	5	LG	-	-	5
603063	New Harbor Islands	196C	2951	8853	3	2	3;2	060883	4	LG;RE	-	-	4
603064	Stake Islands	238A	2942	8856	4	3	4	060883	2	LG,BS,CS	-	-	2
603065	Mitchell Key	197A	2957	8912	3	2	3	060883	3	LG,TH	-	-	3
603066	Morgan Harbor	198D	2949	8919	3	2	5	060883	1	FT	-	-	1
603067	Black Bay North	235B	2943	8934	3	2	3;5	060783	4	TH,SE,BC,GE;FT,LG	-	-	4
603068	Black Bay North	235B	2942	8934	3	2	5	060783	3	FT	-	-	3
603069	Black Bay South	235D	2935	8934	3	2	2;4	060783	3	TH,SE,PI;BS,LG	-	-	3
603070	Black Bay South	235D	2935	8934	3	2	5	060783	2	FT	-	-	2
603071	Black Bay South	235D	2935	8935	3	2	5	060783	1	FT	-	-	1
603072	Black Bay South	235D	2934	8934	3	2	3	060783	2	SE,GE,BC	-	-	2
603073	Black Bay South	235D	2932	8934	3	2	5	060783	1	FT	-	-	1
603074	Black Bay South	235D	2931	8935	3	2	5	060783	2	FT	-	-	2
603075	Black Bay South	235D	2930	8932	3	2	5;4	060783	2	FT;BS	-	-	2
603076	Bastian Bay	241C	2917	8939	3	3	4	060783	3	BS	-	-	3
603077	South Pass	259C	2907	8913	2	2	3	060783	4	SE,GE,WI,PI,LB,TH,BC	-	-	4
603078	South of South Pass	260A	2900	8910	3	3	4	060783	1	BS,GT	-	-	1
603079	Stake Islands	238A	2944	8853	4	3	4	060883	5	RT,SN,BS,CS,LG	-	-	5

Table 4. 1983 waterbird colonies of Louisiana, Mississippi, and Alabama (arranged alphabetically by USGS quad name).

COLONY NUMBER	USGS QUAD NAME	MAP	LAT	LONG	SITE	HAB	NEST	SURVEY DATE	SIZE	SPECIES COMPOSITION	HISTORY 76	78	83
602014	Amelia	229B	2942	9104	1	1	1	060283	4	GE,GB,AN	4	4	4
603002	Barataria Pass	242C	2918	8957	3	2	2;3	060383	3	BP,GE,SE,TH;LG	7	6	3
603047	Barataria Pass	242C	2917	8954	4	3	4	060383	4	BS	1	0*	4
603076	Bastian Bay	241C	2917	8939	3	3	4	060783	3	BS	-	-	3
603007	Bay Batiste	242B	2925	8952	3	2	2,3,5	060383	4	SE,TH,RE,BC,FT,GH	1	2	4
603008	Bay Batiste	242B	2925	8951	3	2	5;2	060383	3	FT;SE,TH,GH,GE,BC	5	1	3
602062	Bay Dosgris	243B	2927	9005	3	2	5	060383	2	FT	-	-	2
602047	Bay Tambour	243D	2917	9005	3	2	5;2	060383	2	FT;TH,SE,GH	2	2	2
602048	Bay Tambour	243D	2916	9005	3	2	2	060383	3	GE,SE,TH,BC	1	0	3
602049	Bay Tambour	243D	2916	9004	3	2	2;5	060383	3	GE,SE,TH,LB;FT	1	3	3
602050	Bay Tambour	243D	2915	9005	3	2	5;3	060383	2	FT;TH,GH	4	2	2
602051	Bay Tambour	243D	2915	9003	3	2	2;5	060383	2	TH,SE,GE,PI,GH;FT	5	2	2
602052	Bay Tambour	243D	2916	9002	3	2	2	060383	1	TH,SE	2	3	1
602063	Bay Tambour	243D	2917	9004	3	2	5;2	060383	3	FT;TH,SE,GH	-	-	3
602064	Bay Tambour	243D	2917	9004	3	2	5;2	060383	3	FT;TH,SE,GE,BC,WI,GH	-	-	3
602065	Bay Tambour	243D	2916	9004	3	2	5;2	060383	3	FT;TH,SE,LB,PI,GH	-	-	3
602088	Bayou Bouef	--	2948	9037	2	2	2	060283	2	LB,CE,TH,PI,SE	-	-	2
602083	Bayou Cocodrie	230C	2936	9055	1	1/2	1	060283	3	GE,GB,AN	-	-	3
602084	Bayou Cocodrie	230C	2935	9055	1	2	2	060283	4	WI,GE,PI,SE,CE,TH,BC,LB,GH	-	-	4
601016	Bayou Labouve	213D	2952	9306	1	4	2	061383	3	RS,TH,OC,GE	-	-	3
601022	Bayou Labouve	213D	2951	9306	1	4	2	061383	3	RS,OC,CE,SE,TH,BC	-	-	3
601023	Bayou Labouve	213D	2951	9306	2	2	5	061383	1	FT	-	-	1
602043	Belle Pass	255C	2907	9010	1	3	4	060383	2	BS,LT	1	2	2
603027	Black Bay North	235B	2941	8933	3	2	3;5	060783	3	TH,GE;LG	4	3	3
603059	Black Bay North	235B	2938	8934	3	2	3;4;5	060783	2	SE,TH,LG;BS;FT	-	-	2
603060	Black Bay North	235B	2938	8936	3	2	3;4;5	060783	4	SE,TH,BC,WI,CE,PI;LG;FT	-	-	4
603067	Black Bay North	235B	2943	8934	3	2	3;5	060783	4	TH,SE,BC,GE;FT,LG	-	-	4
603068	Black Bay North	235B	2942	8934	3	2	5	060783	3	FT	-	-	3
603024	Black Bay South	235D	2937	8934	3	2	2;4;5	060783	4	SE,TH,BC,WI,CE,PI;BS;FT,LG	7	4	4
603026	Black Bay South	235D	2934	8935	3	2	5	060783	2	FT	3	0	2
603069	Black Bay South	235D	2935	8934	3	2	2;4	060783	3	TH,SE,PI;BS,LG	-	-	3
603070	Black Bay South	235D	2935	8934	3	2	5	060783	2	FT	-	-	2
603071	Black Bay South	235D	2935	8935	3	2	5	060783	1	FT	-	-	1
603072	Black Bay South	235D	2934	8934	3	2	3	060783	2	SE,GE,BC	-	-	2
603073	Black Bay South	235D	2932	8934	3	2	5	060783	1	FT	-	-	1
603074	Black Bay South	235D	2931	8935	3	2	5	060783	2	FT	-	-	2
603075	Black Bay South	235D	2930	8932	3	2	5;4	060783	2	FT;BS	-	-	2
601003	Boudreaux Lake	213B	2953	9305	1	4	2	061383	4	RS,GE,SE,TH,OC,CE,BC	3	1	4
601021	Boudreaux Lake	213B	2954	9305	1	4	2	061383	2	TH,SE,CE,OC,RS	-	-	2
602085	Bourg	231D	2936	9035	1	2	2	060283	4	WI,LB,SE,BC,PI,TH	-	-	4
603034	Breton Islands	239A	2929	8910	4	3	4	060783	4	BS,LT	3	2	4
603049	Breton Islands	239A	2928	8912	4	3	2;4	060783	3	GE,SE,TH,BC,LB;BS	4	2	3
589027	Butte La Rose	--	3020	9139	1	1	2	061383	4	LB,SE,YC,TH,AN,GH	-	-	4
602099	Calumet Island	254D	2905	9015	4	3	4	060383	2	BS	-	-	2
602100	Caminada Pass	255B	2912	9003	3	3	2	060383	2	SE,TH,GE,GH	-	-	2
602097	Cat Island Pass	253D	2905	9036	3	3	4	060383	2	BS	-	-	2
602098	Cat Island Pass	253D	2905	9034	3	3	4	060383	3	BS	-	-	3
589025	Catahoula	--	3011	9141	1	1	2	061383	5	LB,SE,CE,YC,AN,TH	-	-	5
602056	Central Isles Dernieres	252D	2903	9047	4	3	4	060383	2	BS,SN,LT	-	1	2
602094	Central Isles Dernieres	252D	2903	9052	4	3	4	060383	4	BS,LG,SN	-	-	4
601009	Cheniere Au Tigre NW	225A	2941	9212	2	4	4	061483	2	BS,LT,GT	4	1	2
601010	Cheniere Au Tigre SE	225D	2936	9202	3	2	2	061483	3	GE,SE	4	3	3

(continued)

Table 4. Continued.

COLONY NUMBER	USGS QUAD NAME	MAP	LAT	LONG	SITE	HAB	NEST	SURVEY DATE	SIZE	SPECIES COMPOSITION	HISTORY 76	78	83
601019	Constance Bayou NE	223B	2942	9236	1	4	2	061383	1	GE,OC,BC,GH	-	-	1
602001	Delcambre	208A	2954	9155	1	1	6+2	061383	3	GE,SE,LB,CE	4	4	3
602002	Delcambre	208A	2953	9154	1	1	1/2	061383	2	GE,AN,LB,SE,CE	4	2	2
603041	Dixon Bay	258D	2901	8919	1	4	4	060783	2	BS,GT	4	0	2
590009	Door Point	194C	3002	8911	3	2	5;4	060883	2	FT;BS,GT,LT	2	1	2
590032	Door Point	194C	3001	8914	1	2	5	060883	2	FT	-	-	2
590033	Door Point	194C	3001	8913	3	2	3	060883	2	LG	-	-	2
590034	Door Point	194C	3004	8912	3	2	4;5	060883	2	BS,GT;FT	-	-	2
590035	Door Point	194C	3004	8913	3	2	4	060883	2	BS,GT	-	-	2
602091	Dulac	245A	2929	9038	1	1	1	060283	4	LB,SE,GE,GB,CE,PI	-	-	4
602032	Eastern Isles Dernieres	253C	2904	9043	3	2	2	060383	3	GE,SE,TH,GH	4	4	3
602096	Eastern Isles Dernieres	253C	2903	9042	4	3	4	060383	2	BS	-	-	2
601015	Five Lakes	215B	2959	9333	1	2	2	061483	3	OC,GE,GB,CE,AN	-	-	3
601025	Forked Island SW	210C	2947	9223	1	2	2	061483	4	CE,LB,TH,SE,GH	-	-	4
590038	Fort Morgan	--	3013	8807	3	3	4	060883	2	BS,GT	-	-	2
602086	Gheens	--	2939	9025	1	1	2	060283	2	LB,SE	-	-	2
602095	Gheens	--	2941	9024	1	2	3	060283	4	WI,LB,SE,BC	-	-	4
602102	Gheens	--	2943	9030	1	1	1	061483	3	GE,GB,AN	-	-	3
601004	Grand Cheniere	212C	2946	9256	1	4	2	061483	4	GE,OC,SE	4	4	4
601005	Grand Cheniere	212C	2946	9254	2	4	2	061483	3	RS,SE,TH,CE	2	3	3
603035	Grand Gosier Islands	237D	2934	8903	4	3	3;4	060783	4	LG;BS	5	2	4
603051	Grand Gosier Islands	237D	2932	8905	4	3	4	060783	2	BS,CS	2	4	2
590001	Grand Island Pass	193A	3009	8928	3	2	5;4	060883	4	FT,LG;BS,GT	5	4	4
590027	Grand Island Pass	193A	3008	8927	3	2	4;5	060883	3	BS,GT;FT	-	-	3
602078	Grassy Lake	--	2950	9104	1	1	1	060283	1	GE,GB,AN	-	-	1
602079	Grassy Lake	--	2951	9107	1	1	1	060283	4	GE,GB,AN	-	-	4
589029	Grosse Tete SW	--	3020	9127	1	1	1	061383	4	GE,GB,AN,LB,YC	-	-	4
589030	Grosse Tete SW	--	3021	9127	1	1	2	061383	3	SE,LB,YC	-	-	3
602023	Hahnville	202A	2953	9027	1	1/2	2	060283	4	LB,SE,TH,AN,CE,GH	6	4	4
602024	Hahnville	202A	2953	9023	1	1	1	060283	4	GE,GB,AN	7	5	4
602087	Hahnville	202A	2955	9027	1	1/2	2	060283	2	LB,TH,SE,BC,YC,GH	-	-	2
590017	Heron Bay	--	3019	8812	3	2	2	060883	3	GE,TH,LB,CE,GB,SE	5	2	3
590039	Hollingers Island	--	3030	8803	3	4	4;3;5	Rpt.	5	BP,RT,SN,CS,LT,GT,BS;LG;FT	-	-	5
601002	Holly Beach	214C	2951	9323	2	2	2-5	061383	7	RS,GE,TH,SE,WI,PI,LB,BC;LG;BS;FT	7	5	7
590011	Horn Island East	M2B	3013	8831	3	4	4	060883	4	SN,RT,BS,LT	4	1	4
602090	Houma	231C	2937	9043	1	4	2	061483	1	CE,LB,GH	-	-	1
602029	Humphreys	230D	2931	9048	2	2	2	060283	4	WI,GE,LB,SE,TH,PI	4	6	4
590008	Isle Au Pitre	194A	3009	8912	3	2	4;3	060883	2	BS,LT;LG	4	4	2
602058	Jacko Bay	254A	2913	9028	3	2	5;2	060383	2	FT;SE,TH	-	4	2
602071	Jacko Bay	254A	2912	9027	3	2	2	060383	4	SE,TH,BC,GE	-	-	4
602003	Kemper	207C	2949	9142	1	1	1	061483	2	GE,GB,AN,YC	4	3	2
589010	Killian	161D	3017	9037	1	1/2	1	061383	3	GE,GB,AN	4	0	3
589012	Killian	161D	3020	9032	1	1	1	061383	2	GE,GB,LB,CE,AN	2	2	2
602021	Kraemer	--	2948	9038	2	2	2	060283	3	LB,SE,TH	7	5	3
602073	Kraemer	--	2947	9038	1	2	2	060283	2	CE,LB,SE,TH,GH	-	-	2
602074	Kraemer	--	2948	9039	1	2	2	060283	3	LB,TH,SE,WI,CE,PI,BC,GH	-	-	3
602020	Lac Des Allemands	--	2958	9036	1	1/2	2	060283	4	LB,SE,BC,TH,CE,GH	4	4	4
602022	Lac Des Allemands	--	2957	9031	1	1/2	2	060283	4	LB,SE,TH,CE,BC,AN,PI,GH	7	5	4
602018	Lagan	204B	2954	9049	1	1	1	060283	5	GB,GE,LB,TH,SE,YC,CE	5	4	5
603022	Lake Athanasio	236A	2941	8927	3	2	5;4	060883	1	FT;BS	4	NS	1
603023	Lake Athanasio	236A	2939	8928	3	2	5	060783	1	FT	5	2	1
603057	Lake Athanasio	236A	2944	8927	3	2	5;4	060883	3	FT;BS,GT	-	-	3

(continued)

Table 4. Continued.

COLONY NUMBER	USGS QUAD NAME	MAP	LAT	LONG	SITE	HAB	NEST	SURVEY DATE	SIZE	SPECIES COMPOSITION	HISTORY 76	78	83
603058	Lake Athanasio	236A	2941	8928	3	2	2;3	060783	3	GE,SE,LB,RE,BC,PI;LG	-	-	3
602067	Lake Felicity	244C	2916	9024	3	2	5	060383	2	FT	-	-	2
602068	Lake Felicity	244C	2916	9025	3	2	5	060383	2	FT	-	-	2
602069	Lake Felicity	244C	2915	9026	3	2	5	060383	2	FT	-	-	2
602101	Lake Felicity	244C	2916	9026	3	2	5	060383	2	FT	-	-	2
589005	Lake Mongoulois	--	3014	9132	1	1	1	061383	2	GB,YC,AN	2	2	2
589007	Lake Mongoulois	--	3009	9131	1	1	1	061383	3	GE,AN,GB	6	4	3
589023	Lake Mongoulois	--	3013	9137	1	1	1	061383	2	GE,GB,AN	-	-	2
589024	Lake Mongoulois	--	3014	9136	1	1	2	061383	4	LB,SE,YC,AN,TH	-	-	4
602009	Lake Salve	228D	2932	9117	2	4	1	061483	6	GE,LB,PI,TH,YC,BC,CE,GB,AN	5	4	6
602072	Lake Theriot	246B	2929	9048	1	2	2	060283	6	WI,TH,SE,LB	-	-	6
602092	Lake Theriot	246B	2922	9051	1	2	2	060283	2	GE,SE,TH	-	-	2
601007	Latania Lake	212B	2959	9252	1	2	2	061383	4	WI,PI,TH,LB,BC,YC,GB,AN,OC,GH	6	4	4
601017	Latania Lake	212B	2954	9253	1	2	2	061383	2	SE,LB,GH	-	-	2
601018	Latania Lake	212B	3000	9251	1	2	2	061383	7	WI,PI,GE,GB,AN,RS,BC,TH,CE,LB,GH	-	-	7
601024	Latania Lake	212B	2958	9252	1	2	2	061383	2	TH,YC,PI,GH	-	-	2
602089	Lockport	--	2944	9030	1	1	2	061483	3	LB,SE,CE	-	-	3
589026	Lone Star	--	3004	9114	1	1	1	061383	3	GE,GB,AN,YC	-	-	3
602070	Lower Vacherie	--	2956	9040	1	1/2	2	060283	2	SE,LB	-	-	2
602075	Lower Vacherie	--	2955	9042	1	1	1	060283	2	GE,GB,YC,AN	-	-	2
602076	Lower Vacherie	--	2957	9039	1	1/2	1	060283	3	GE,GB	-	-	3
602026	Luling	202B	2953	9018	1	1/2	1	060283	2	GB,GE,AN,SE,TH	3	0	2
602016	Madewood	--	2957	9053	1	1	1	060283	4	GE,GB,AN	4	0	4
603061	Main Pass	239C	2917	8911	1	2	3	060783	4	PI,SE,GE,WI,LB,BC,TH	-	-	4
590029	Malheureux Point	193C	3005	8928	3	2	2-5	060883	6	GE,SE,TH,BC;LG;BS,GT;FT	-	-	6
589013	Manchac	160C	3021	9027	1	1	1	061383	2	GE,GB,AN	3	7	2
589022	Maringouin	--	3023	9137	1	1	1/2	061383	4	GE,GB,AN,YC	-	-	4
589001	Maringouin NW	--	3028	9143	1	1	1	061383	6	GE,AN,SE,LB,YC,CE	4	5	6
603010	Mitchell Key	197A	2958	8912	3	2	3;5;4	060883	5	LG;FT;BS,CS,GT	4	2	5
603011	Mitchell Key	197A	2956	8912	3	2	3;6	060883	4	LG;SN,RT,BS	4	3	4
603013	Mitchell Key	197A	2955	8915	3	2	3;4	060883	2	LG;BS,CS	3	2	2
603015	Mitchell Key	197A	2954	8912	3	2	3;4	060883	4	LG;SN,RT,BS,GT	2	3	4
603055	Mitchell Key	197A	2959	8913	3	2	3;2	060883	4	LG;SE,GE,TH,BC	-	-	4
603065	Mitchell Key	197A	2957	8912	3	2	3	060883	3	LG,TH	-	-	3
603017	Morgan Harbor	198D	2948	8921	3	2	5	060883	2	FT	1	2	2
603018	Morgan Harbor	198D	2948	8916	3	2	5	060883	1	FT,LG	2	1	1
603056	Morgan Harbor	198D	2950	8918	3	2	5;2;4	060883	5	LG;GE,SE,TH,BC,PI;BS	-	-	5
603066	Morgan Harbor	198D	2949	8919	3	2	5	060883	1	FT	-	-	1
603038	New Harbor Islands	196C	2951	8853	3	2	5	060883	3	LG	3	2	3
603039	New Harbor Islands	196C	2952	8854	3	2	3	060883	2	LG	2	3	2
603050	New Harbor Islands	196C	2951	8855	3	3	4	060883	2	BS,CS	4	0	2
603062	New Harbor Islands	196C	2951	8852	3	2	3	060883	5	LG	-	-	5
603063	New Harbor Islands	196C	2951	8853	3	2	3;2	060883	4	LG;RE	-	-	4
602005	North Bend	228A	2942	9129	1	1	1	061483	4	GE,GB,AN,SE,LB,YC	6	4	4
603040	North Islands	196A	2953	8852	3	3	2;4	050283	3	GE;BP	4	4	3
603009	Oak Mound Bayou	198B	2955	8921	3	2	5;3	060883	3	FT;LG	1	NS	3
603012	Oak Mound Bayou	198B	2955	8915	3	2	5;2	060883	5	LG;WI,GE,SE,TH,BC,RE	4	4	5
590022	Pascagoula SE	M5D	3022	8834	1	4	4	060883	3	BS,GT,LT	1	0	3
590037	Pascagoula SE	M5D	3018	8835	3	5	1	060883	2	GB	-	-	2
601020	Pecan Island NE	224B	2941	9221	1	2	2	061383	5	RS,GE,SE,TH,CE,BC,OC,LB	-	-	5
602066	Pelican Pass	254B	2914	9019	3	2	5;2	060383	3	FT;SE,TH	-	-	3
589008	Pigeon	--	3007	9118	1	1	1	061383	7	GE,GB,LB,TH,AN,YC,SE,CE	7	4	7

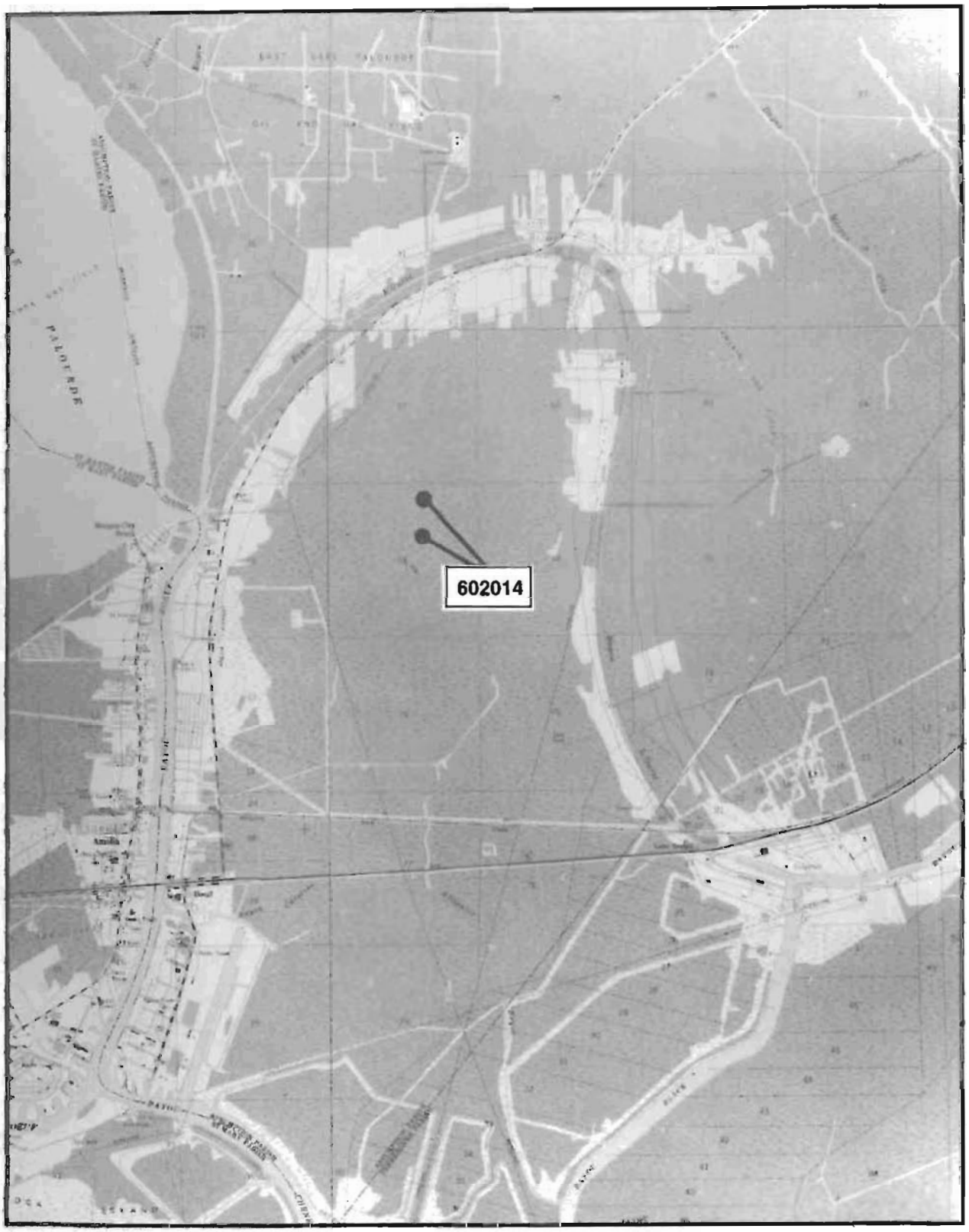
(continued)

Table 4. Concluded.

COLONY NUMBER	USGS QUAD NAME	MAP	LAT	LONG	SITE	HAB	NEST	SURVEY DATE	SIZE	SPECIES COMPOSITION	HISTORY 76	78	83
603029	Pilottown	258B	2913	8922	1	2	2	060783	2	SE,GE,LB,TH	3	0	2
602054	Point Au Fer	248D	2916	9118	1	3	4	061483	1	BS	1	0*	1
602093	Point Au Fer	248D	2919	9121	1	3	4	061483	1	BS	-	-	1
602080	Point Au Fer NE	248B	2928	9119	3	2	2	061483	4	TH,SE,LB,WI,PI,BC,YC	-	-	4
602081	Point Au Fer NE	248B	2927	9118	3	2	2	061483	3	TH,PI,YC,SE	-	-	3
602082	Point Au Fer NE	248B	2926	9116	3	2	2	061483	7	PI,WI,LB,SE,TH,BC	-	-	7
603019	Point Chicot	236B	2945	8922	3	2	5	060883	3	FT	3	2	3
603021	Point Chicot	236B	2944	8916	3	2	3;4	060883	4	WI,TH,SE;LG,BS,RT	4	4	4
589016	Ponchatoula	160A	3023	9024	1	1	1	061383	5	WI,GE,GB	3	3	5
589018	Reserve	188D	3006	9034	1	1	1	061383	3	GE,GB,AN	4	2	3
590028	Rigolets	192A	3014	8940	1	1/2	1	050583	3	GB,GE,SE,TH,LB,WI,YC,AN,CE	-	-	3
589017	Ruddock	189A	3010	9030	1	1/2	1	061383	4	GE,GB,AN	4	3	4
590036	Ship Island	M3A	3013	8856	4	3	4	060883	1	BS	-	-	1
589028	Sorrento	187B	3010	9047	1	1	1	061383	4	GE,GB,AN	-	-	4
603043	South of South Pass	260A	2858	8909	3	3	4	060783	3	FT	1	0	3
603078	South of South Pass	260A	2900	8910	3	3	4	060783	1	BS,GT	-	-	1
603077	South Pass	259C	2907	8913	2	2	3	060783	4	SE,GE,WI,PI,LB,TH,BC	-	-	4
603036	Stake Islands	238A	2939	8857	4	3	4	060783	5	SN,RT,BS	7	7	5
603037	Stake Islands	238A	2938	8858	4	3	3/4	060783	4	LG	5	0	4
603064	Stake Islands	238A	2942	8856	4	3	4	060883	2	LG,BS,CS	-	-	2
603079	Stake Islands	238A	2944	8853	4	3	4	060883	5	RT,SN,BS,CS,LG	-	-	5
602077	Thibodaux	--	2951	9051	1	2	2	060283	4	TH,SE,LB	-	-	4
602061	Three Bayou Bay	233D	2931	9005	2	2	5	060383	2	FT	-	-	2
590030	Three Mile Bay	193D	3003	8915	3	2	3;5	060883	2	BC,SE;FT,LG	-	-	2
590031	Three Mile Bay	193D	3001	8916	3	2	2;3	060883	4	SE,TH,GE;LG	-	-	4
602042	Timbalier/Calumet Island	254C	2904	9023	4	3	4	060383	4	BS,RT,SN,LG	6	6	4
588005	Welsh South	--	3008	9252	1	2	2	051283	4	LB,SE,GE,WI,RS	-	-	4
588006	West Lake	--	3012	9316	2	4	2	061483	2	RS,CE,SE	-	-	2
588007	West Lake	--	3009	9318	1	1	1	061483	3	GB,GE	-	-	3
602031	Western Isles Dernieres	252C	2903	9056	4	3	2;3;4	060383	7	RS,GE,SE,TH,BC;LG;SN,RT,BS	7	7	7
603001	Wilkinson Bay	242A	2927	8957	3	2	5	060383	1	FT	2	2	1
603006	Wilkinson Bay	242A	2924	8953	3	2	2;3;4	060383	2	TH,RE;FT,LG;BS	3	0	2

* 603036 & 037 later combined by Martin & Lester (1990) into colony # 176.

Amelia, LA



SCALE 1:24,000

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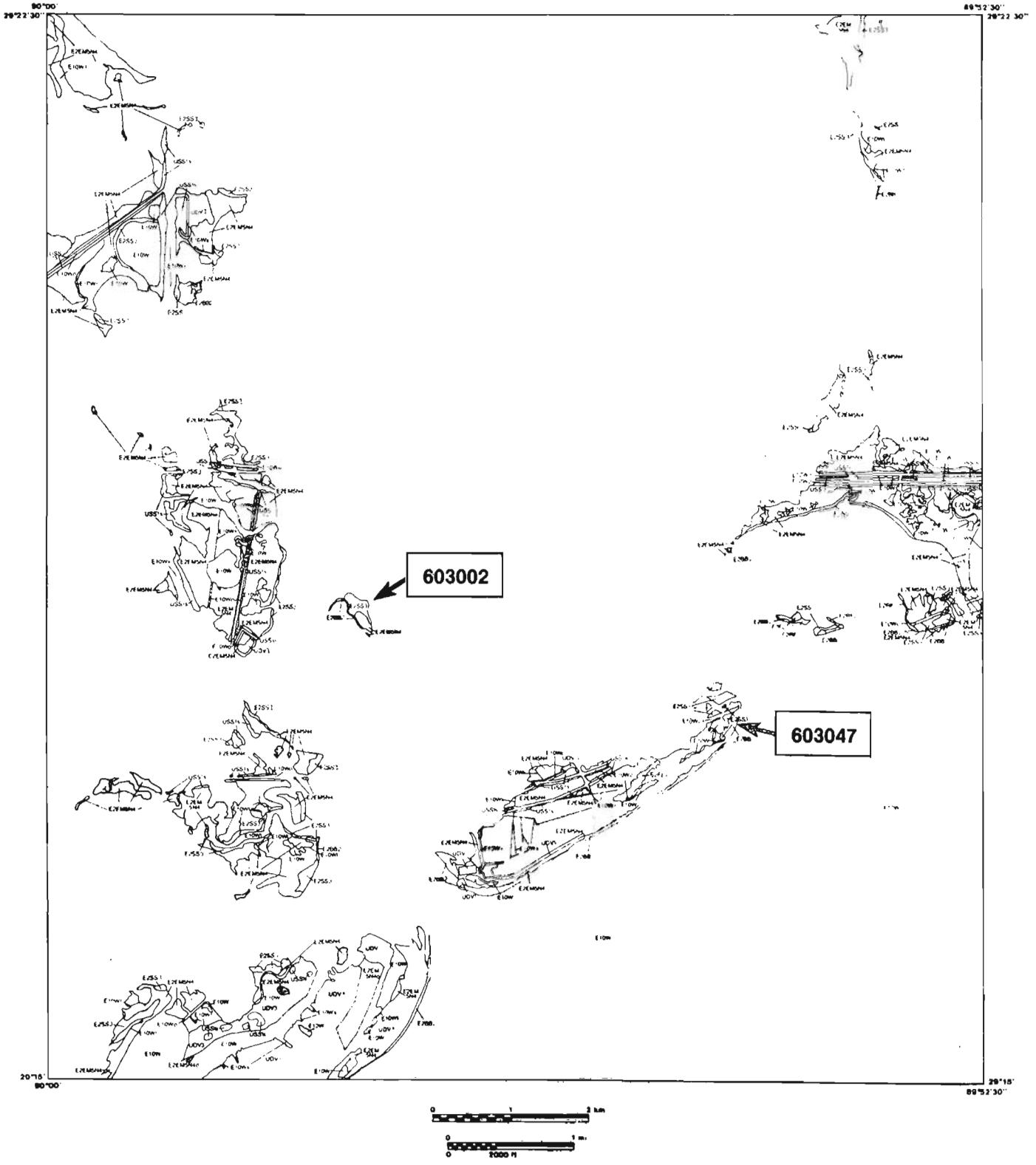
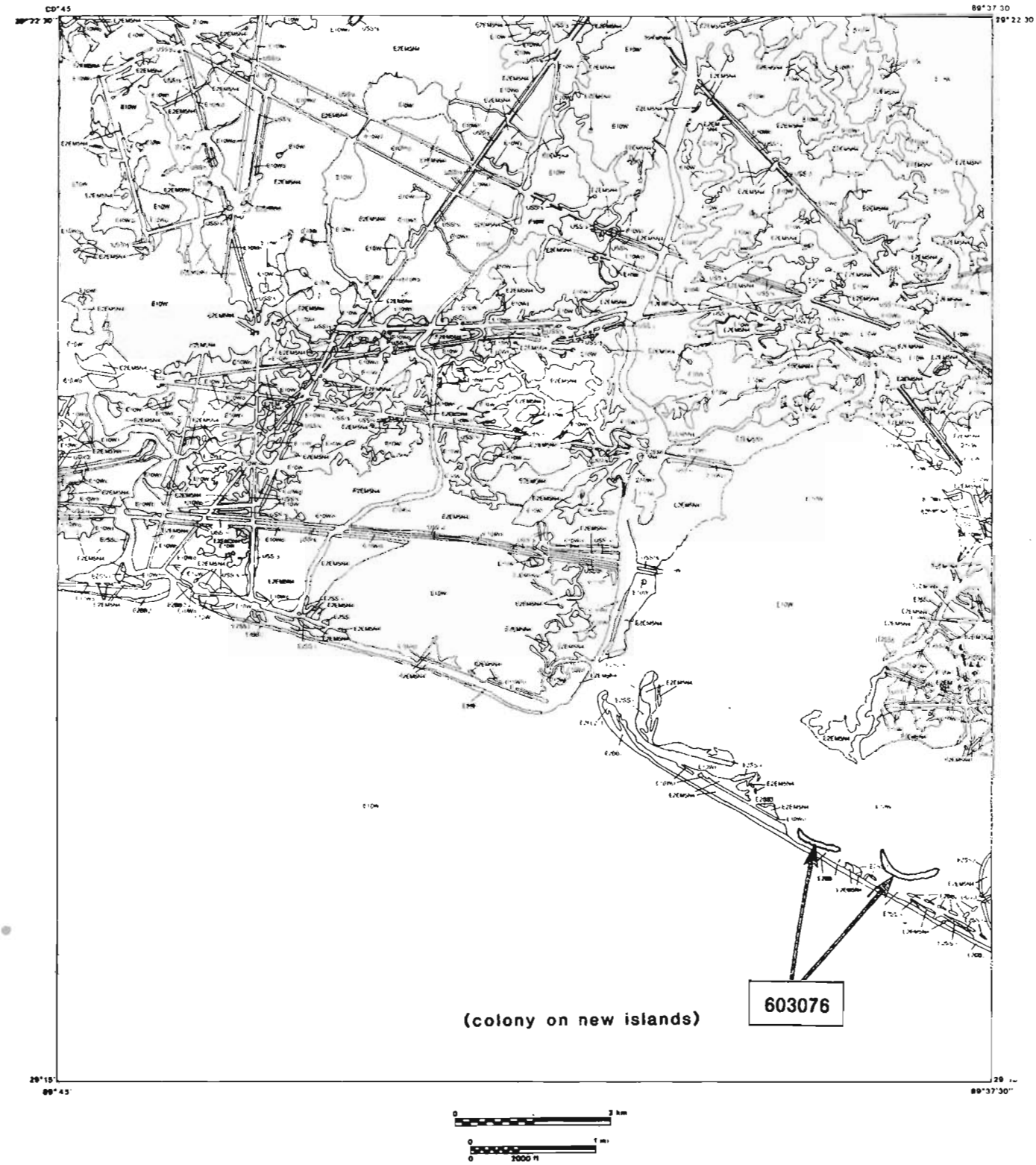
1 KILOMETER

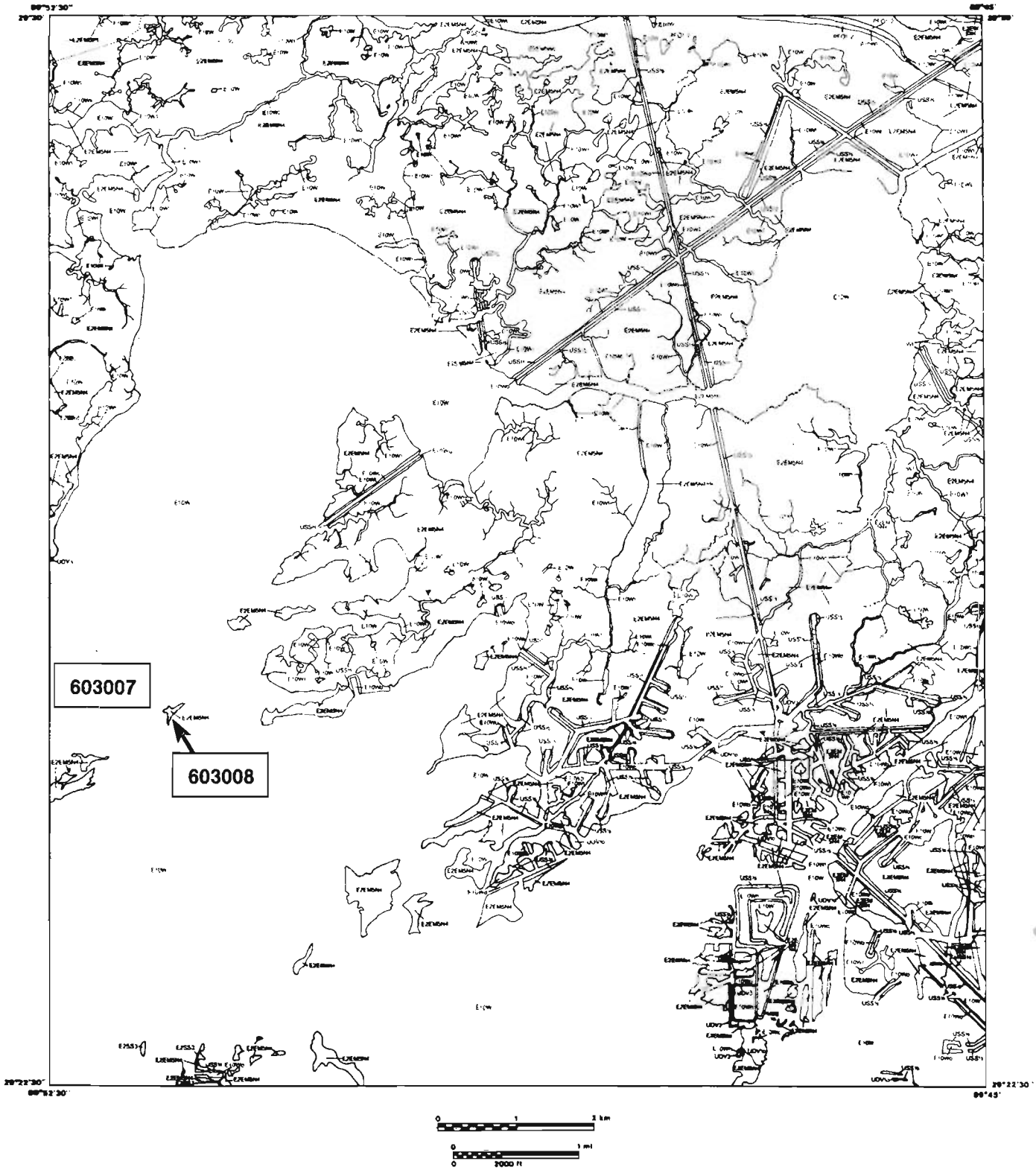
Barataria Pass, LA

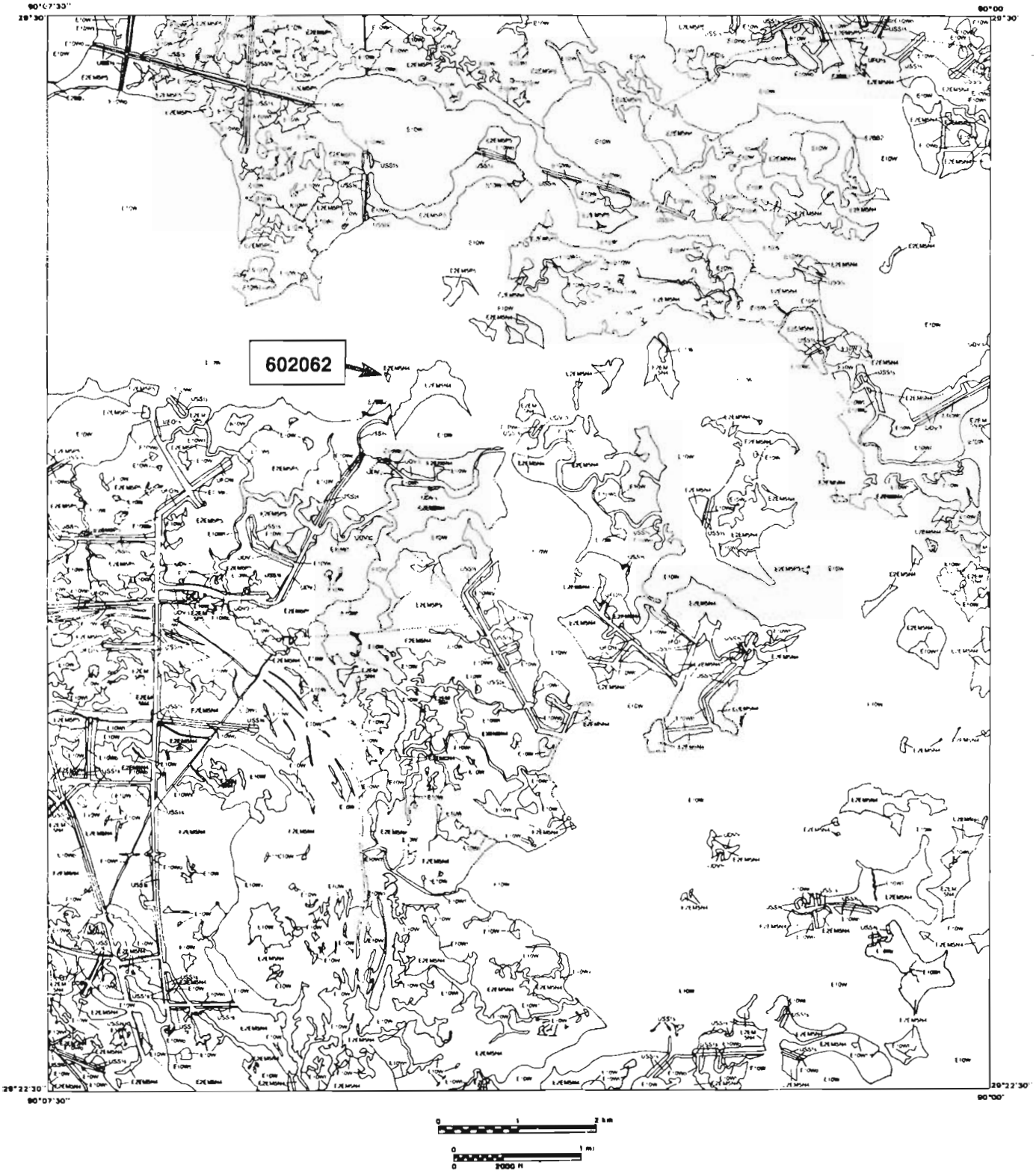


Bastian Bay, LA

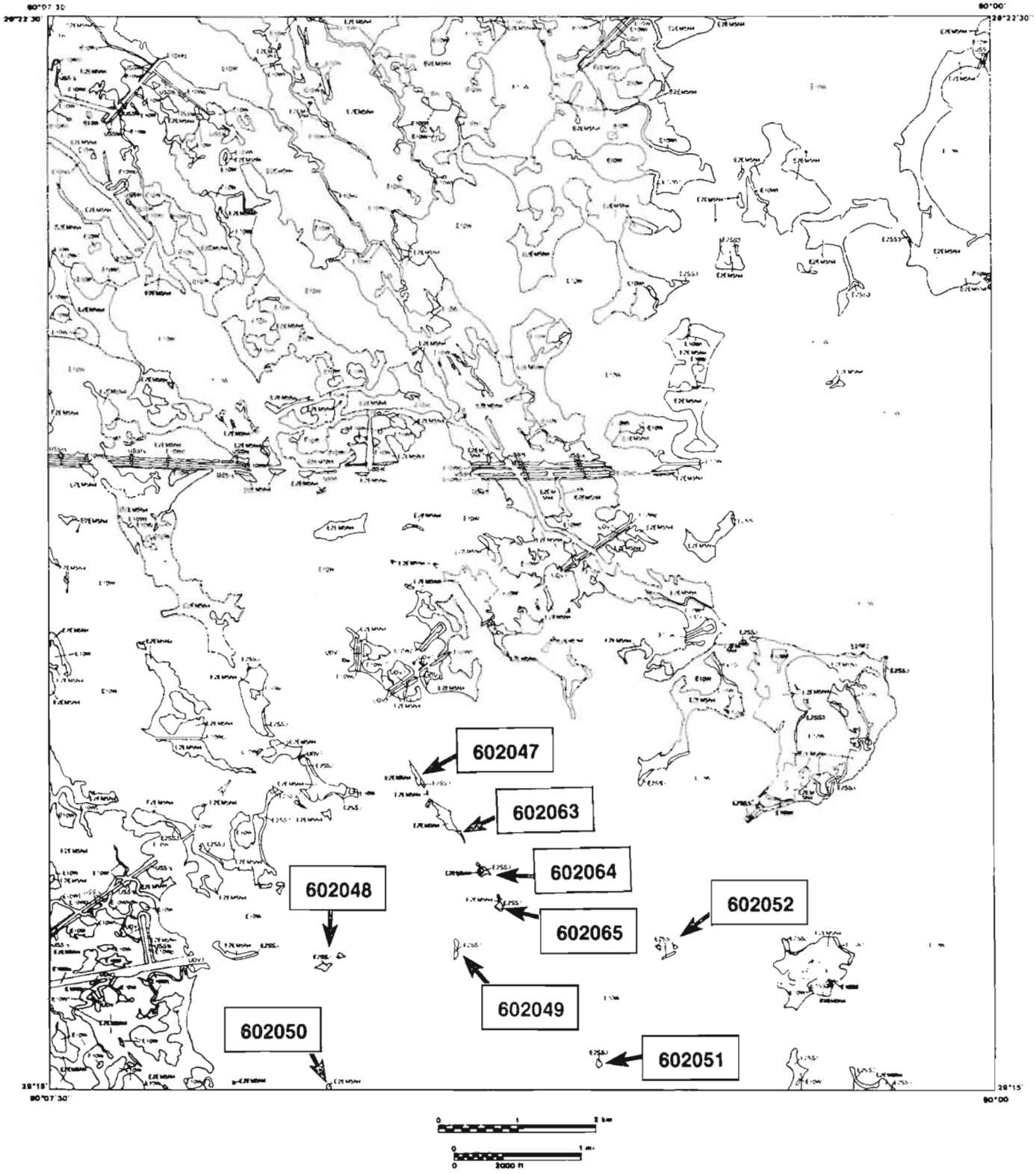


Bay Batiste, LA

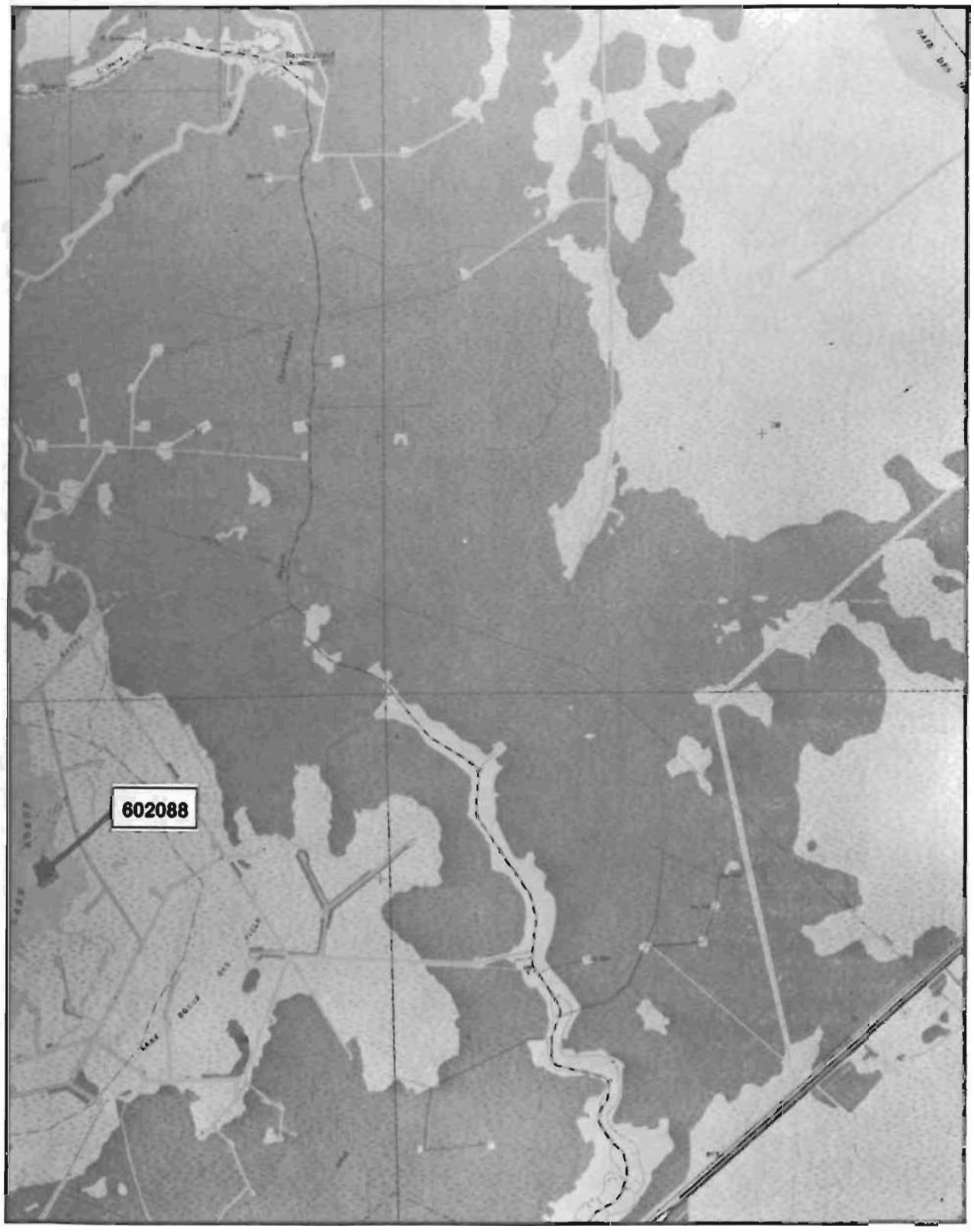



602062

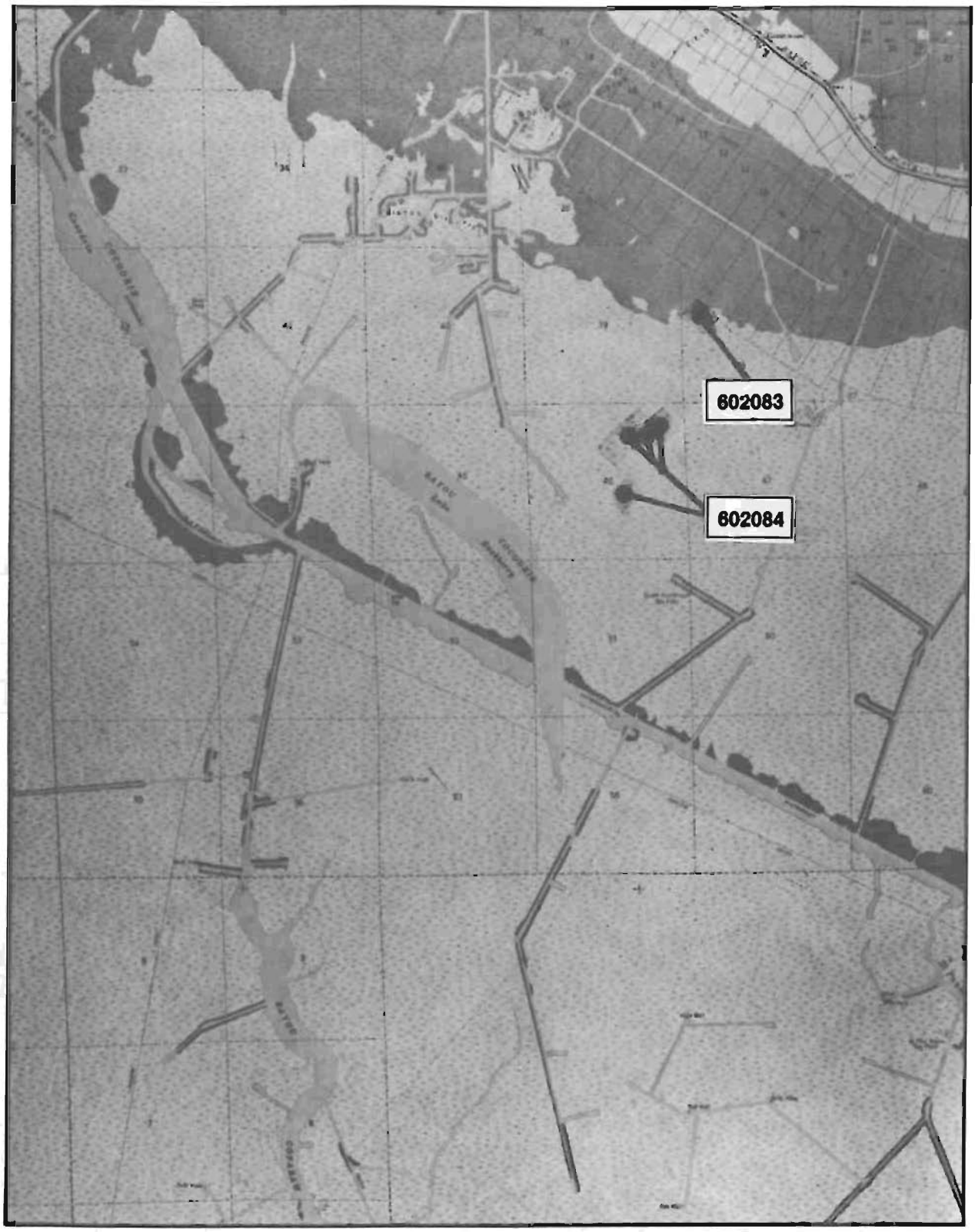
Bay Tambour, LA



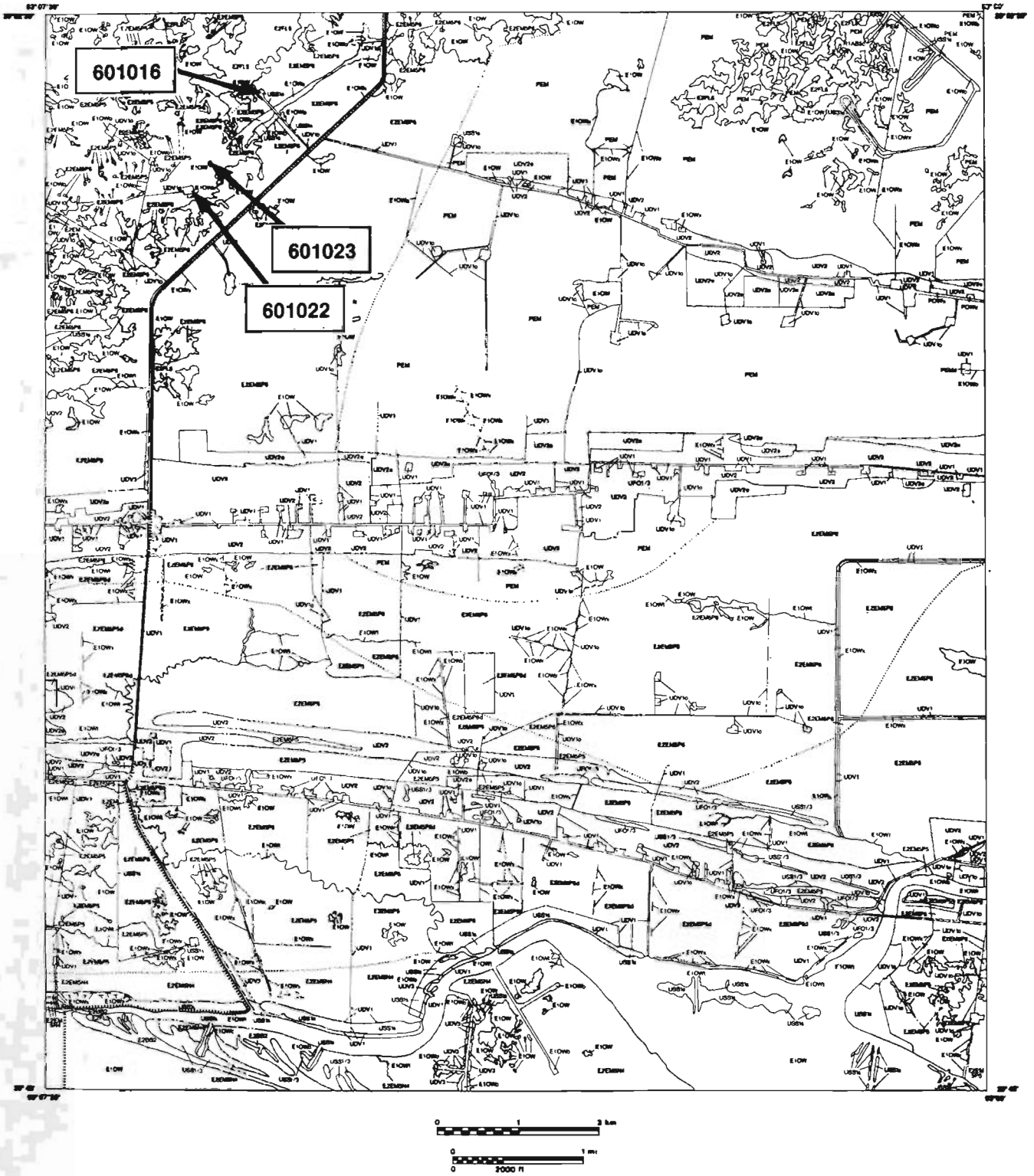
Bayou Bouef, LA



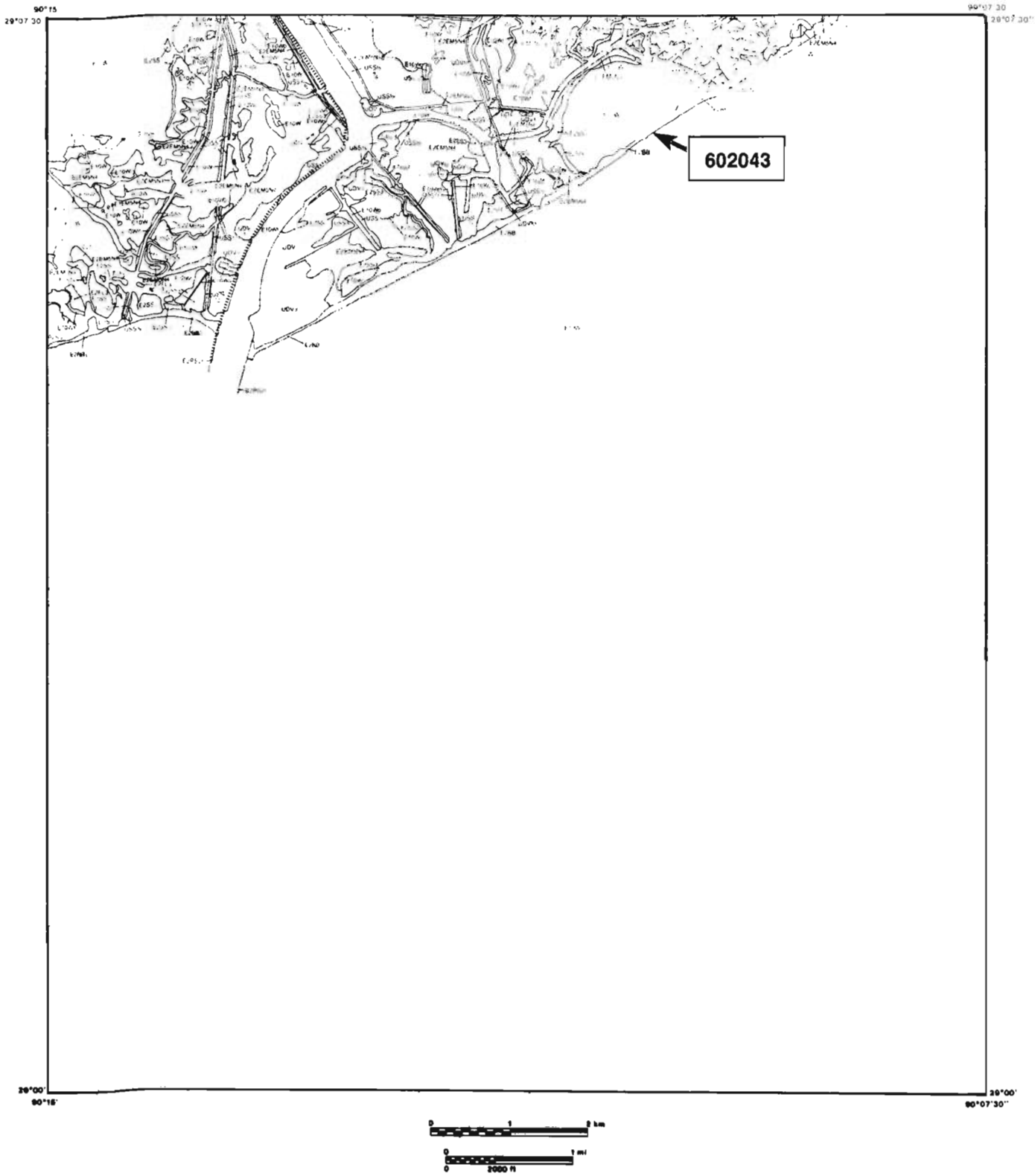
Bayou Cocodrie, LA

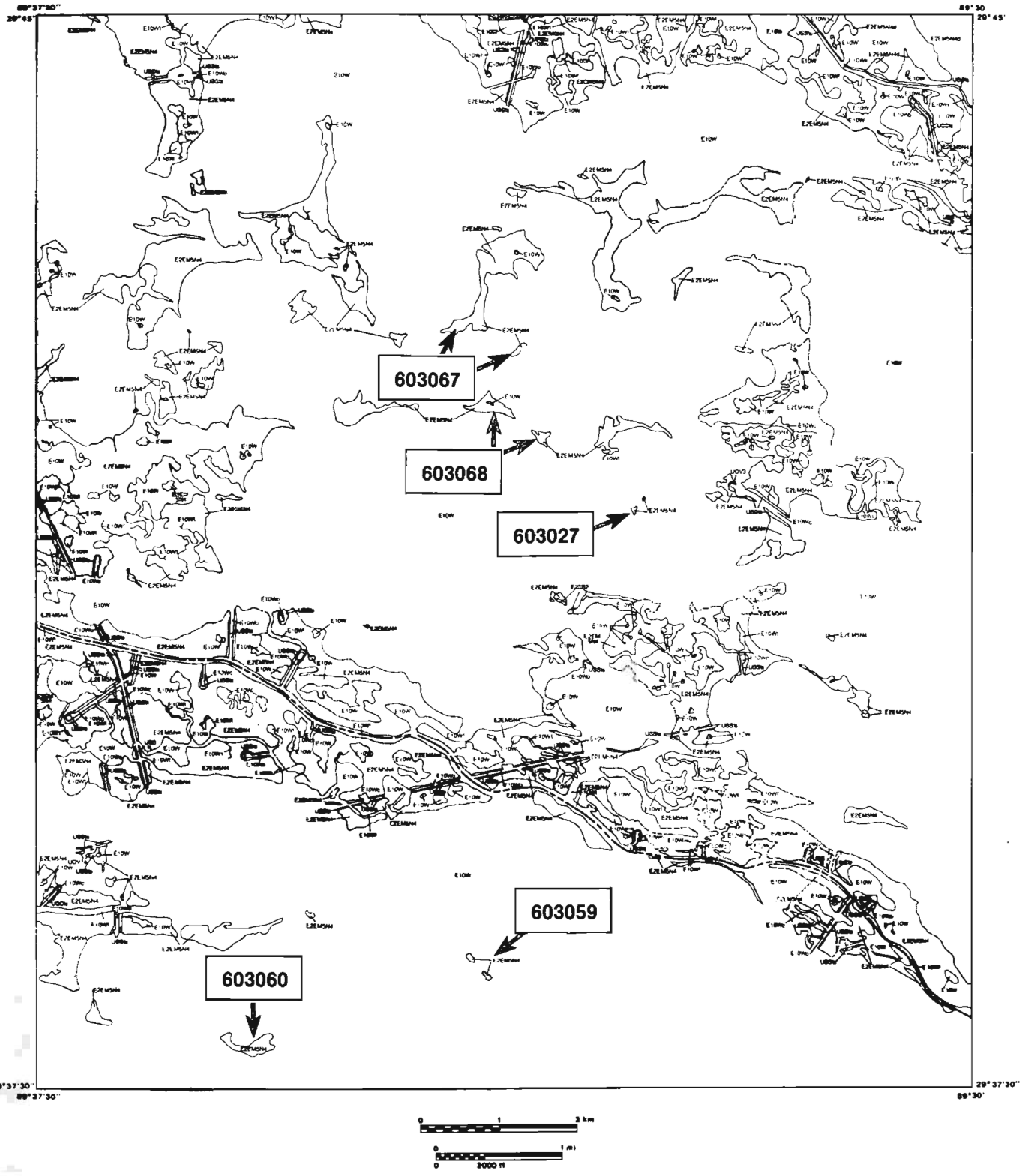


Bayou Labouve, LA



Belle Pass, LA




603067
603068
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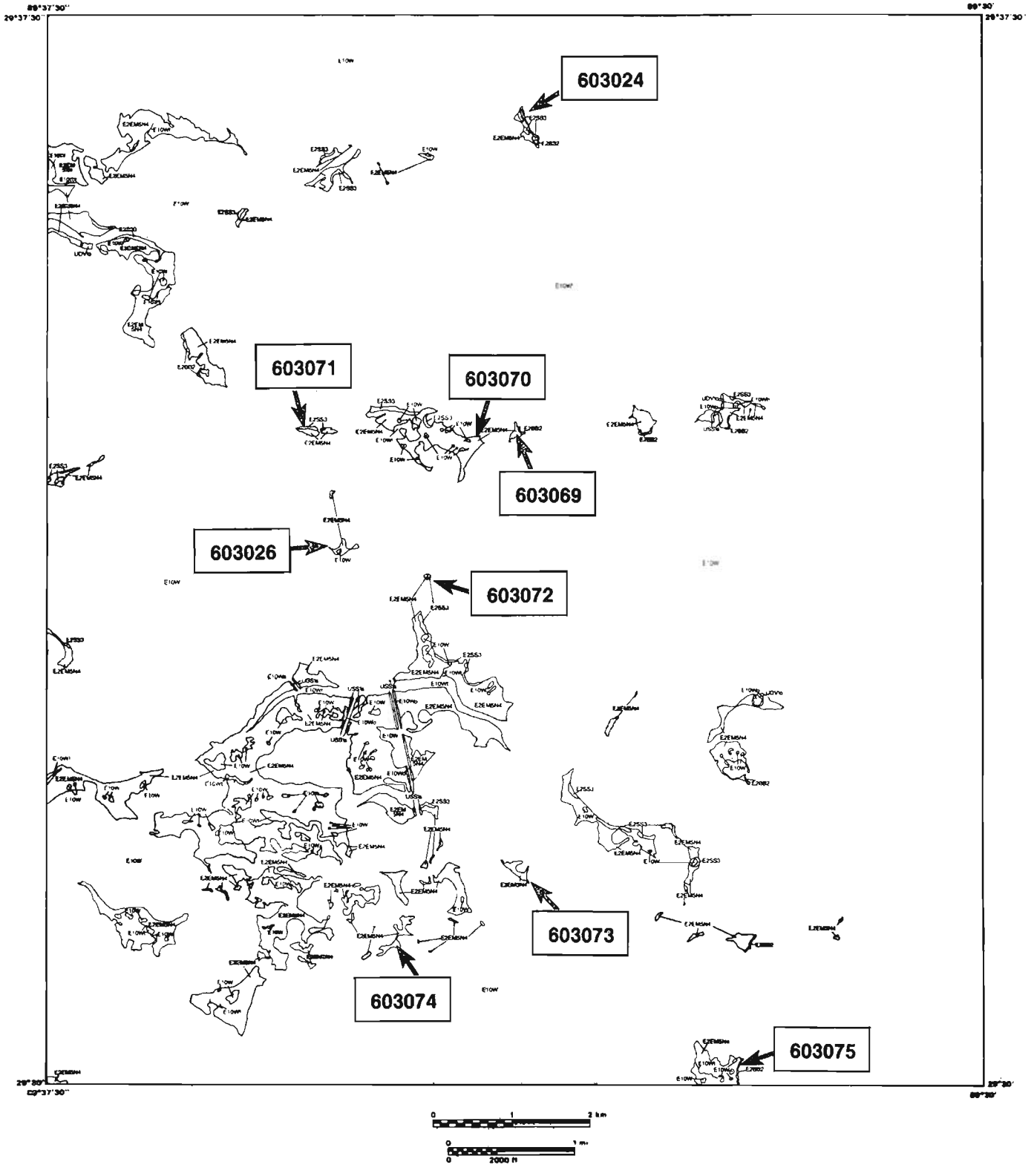
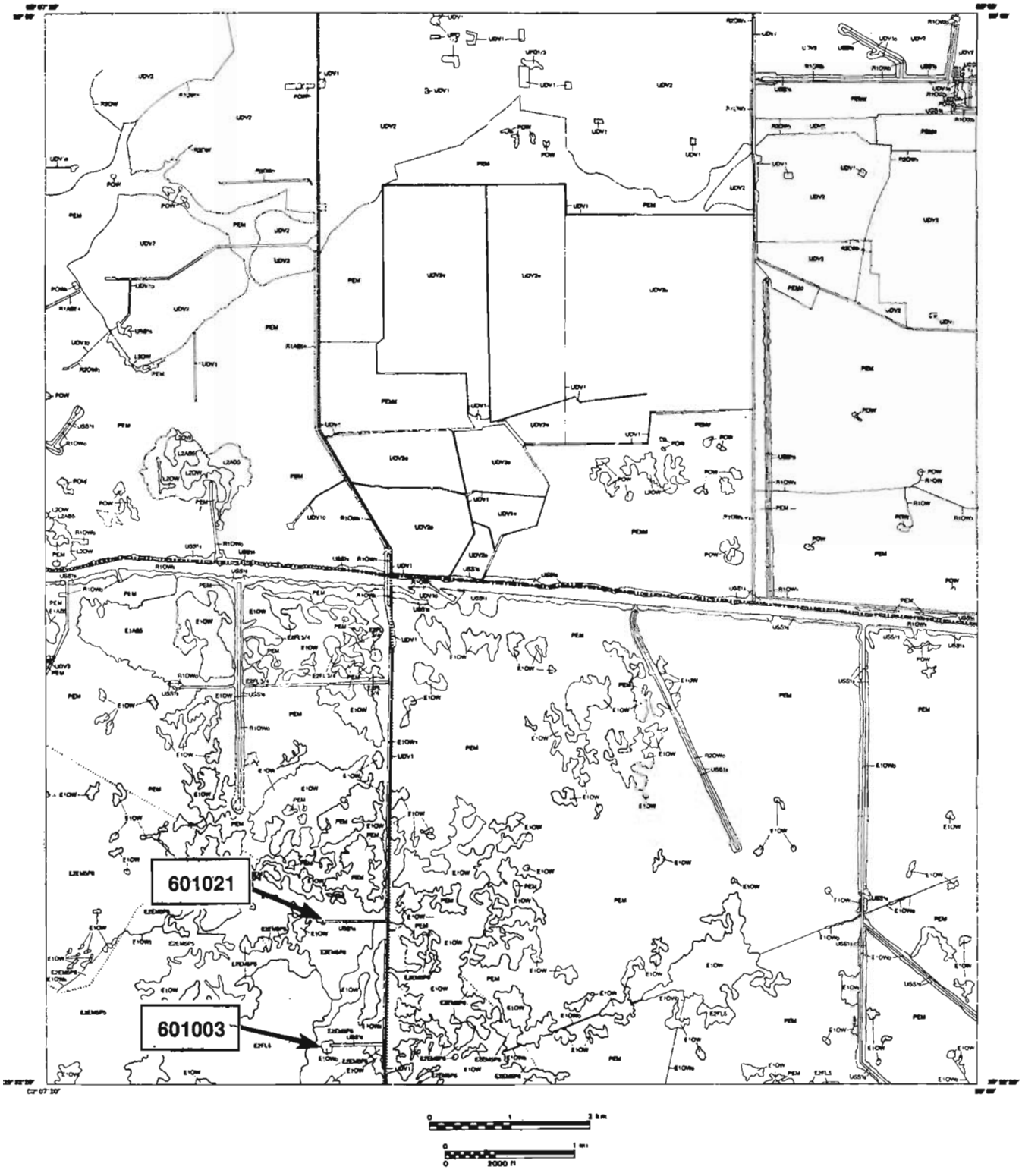
603060

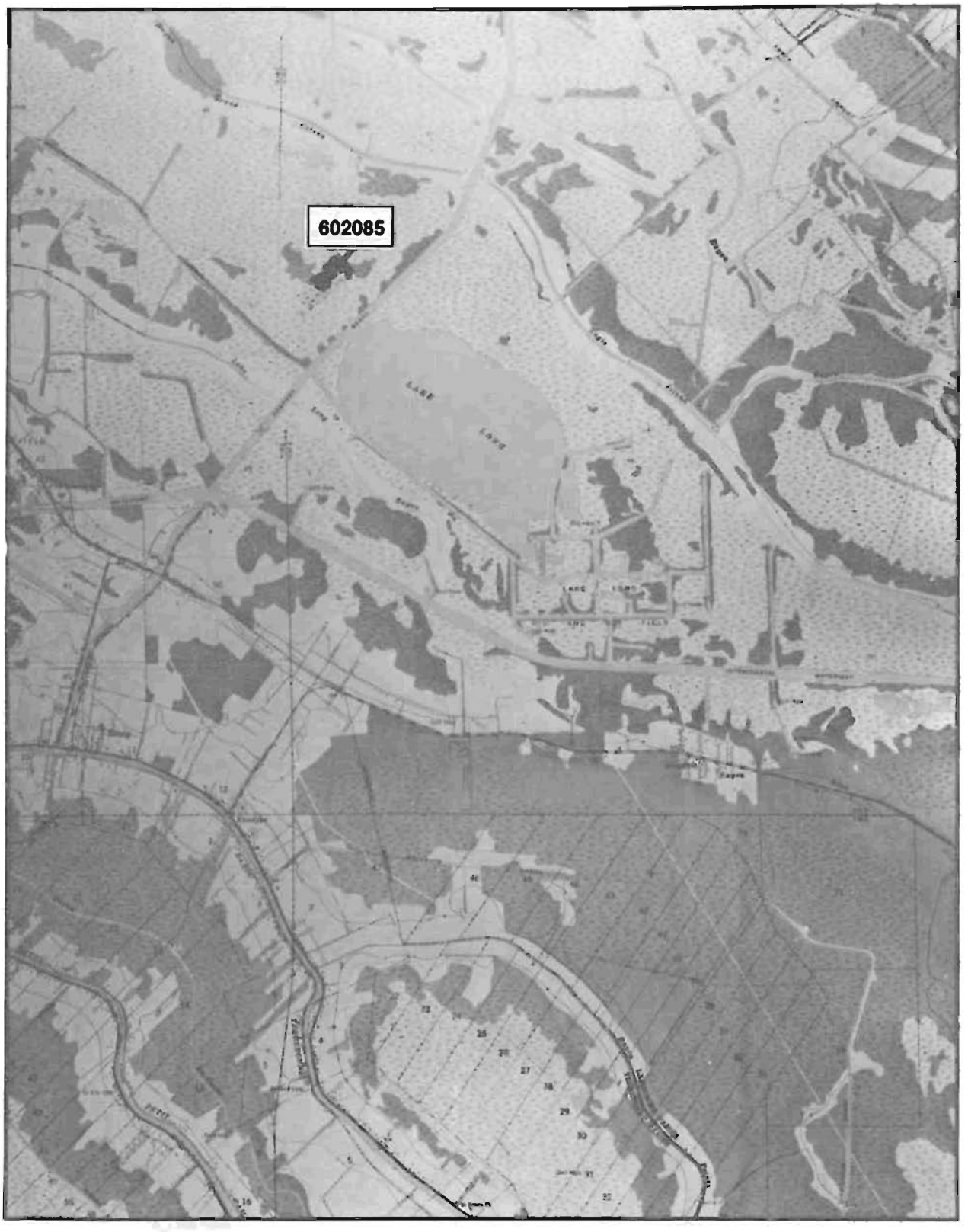
Black Bay South, LA



Boudreaux Lake, LA



Bourg, LA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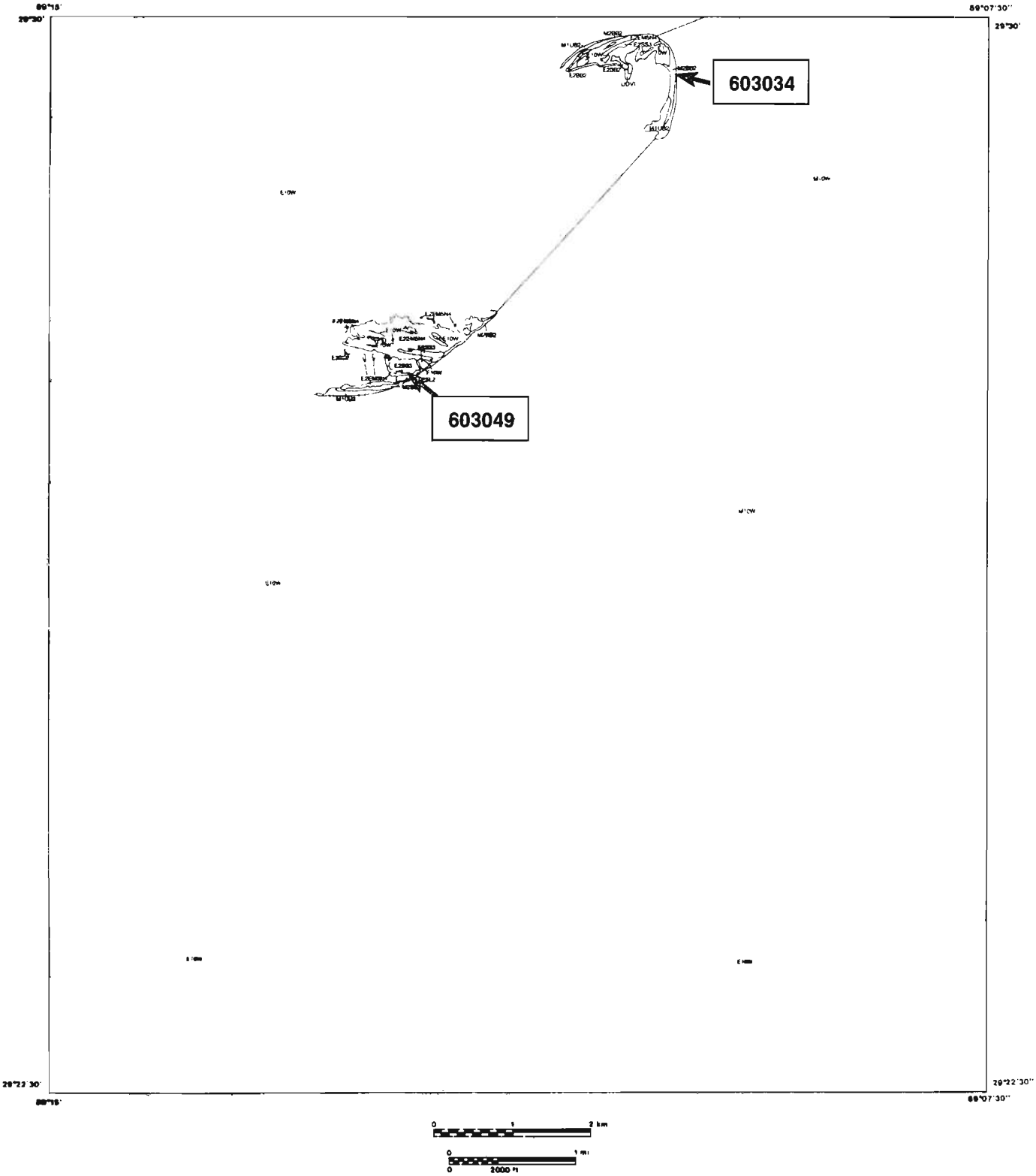
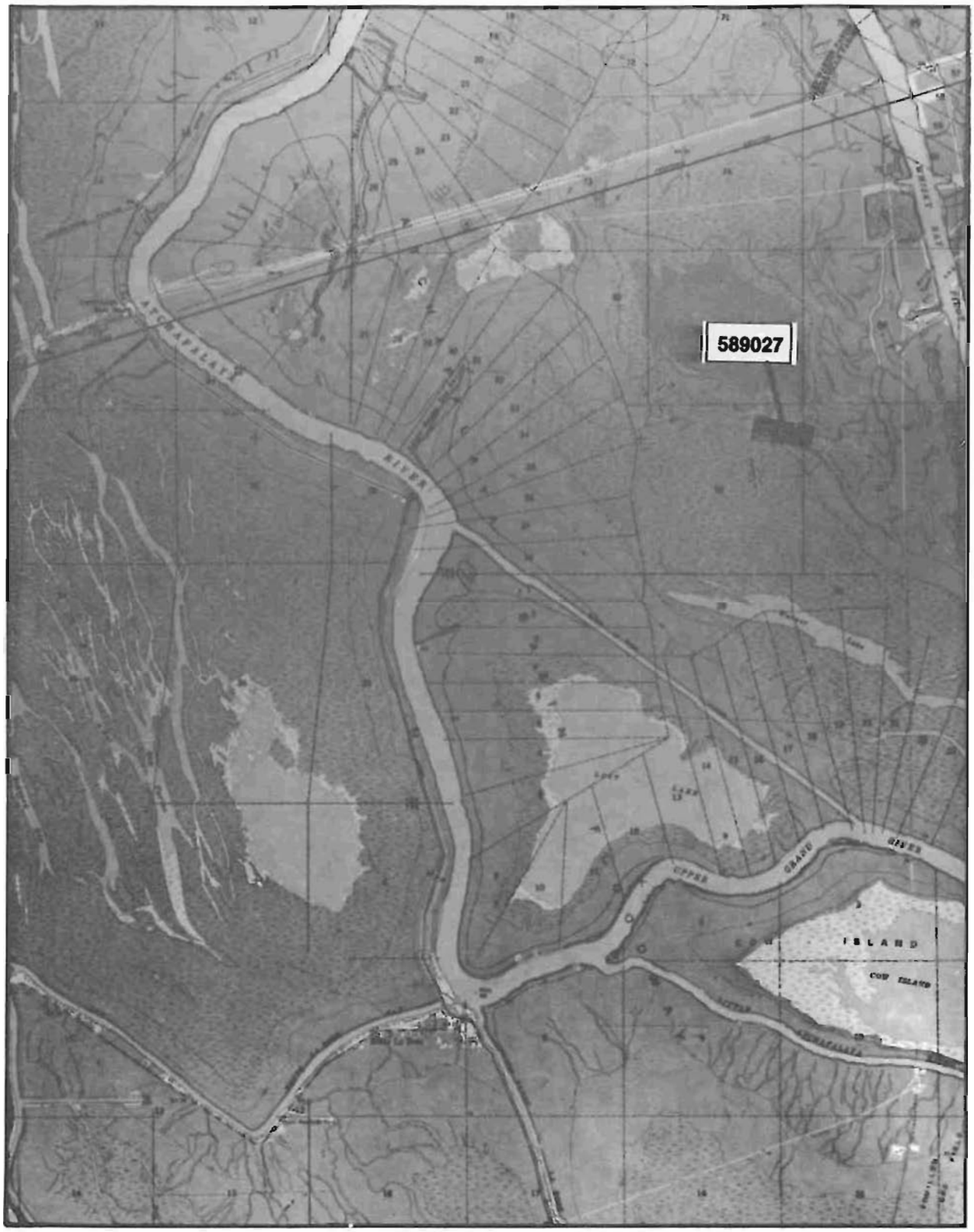
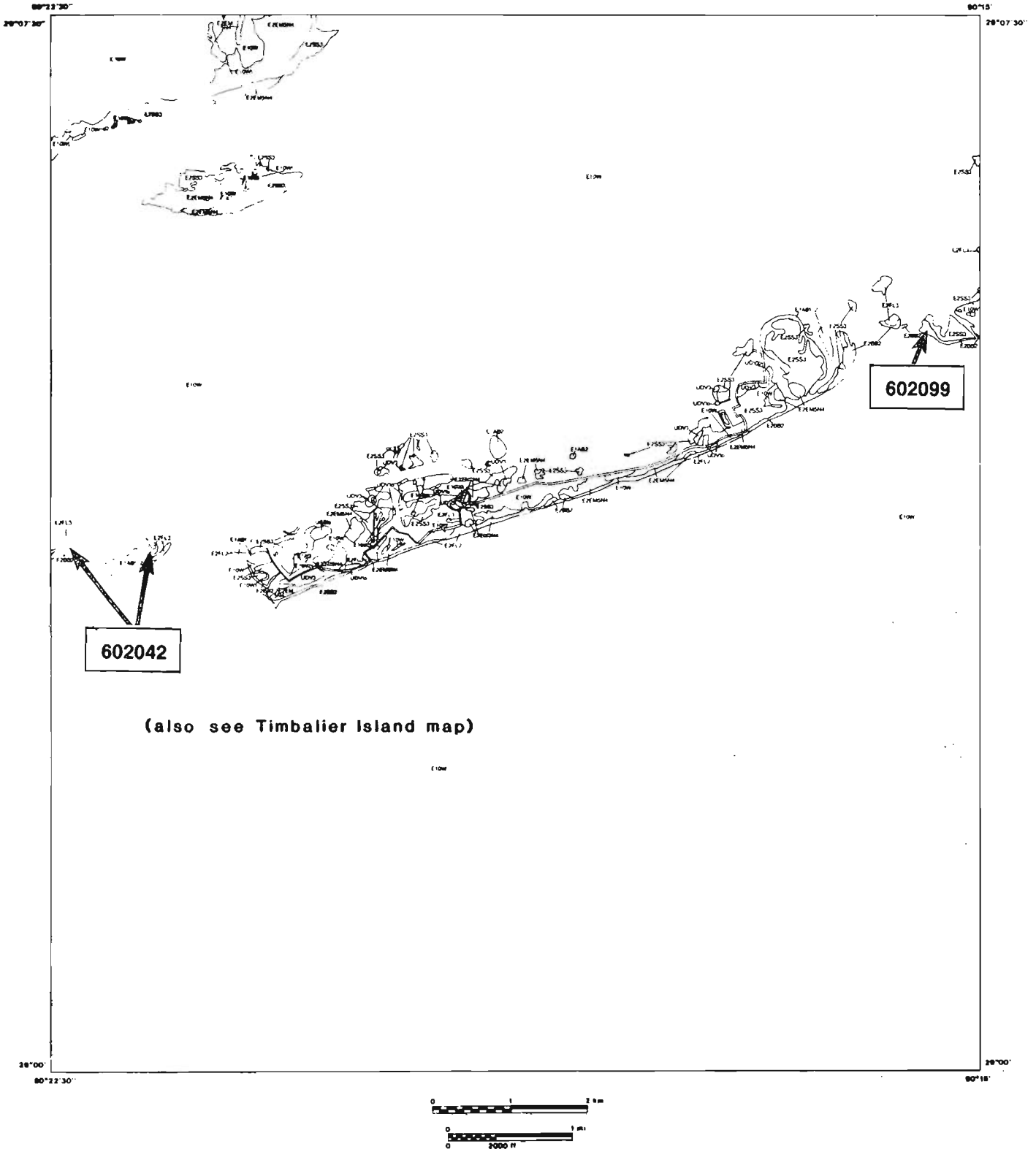
1 5 0 1 KILOMETER

Breton Islands, LA

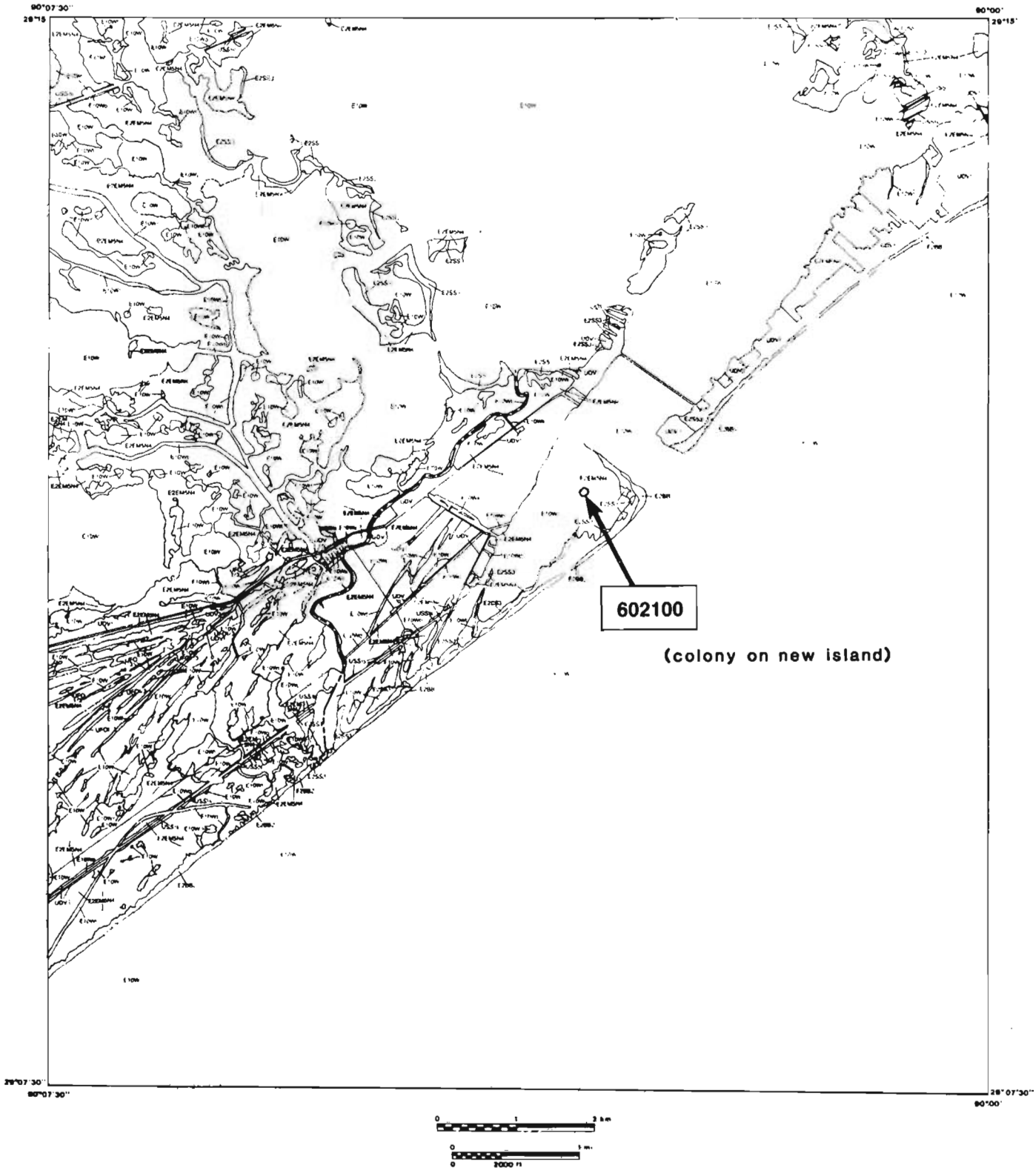


Butte La Rose, LA

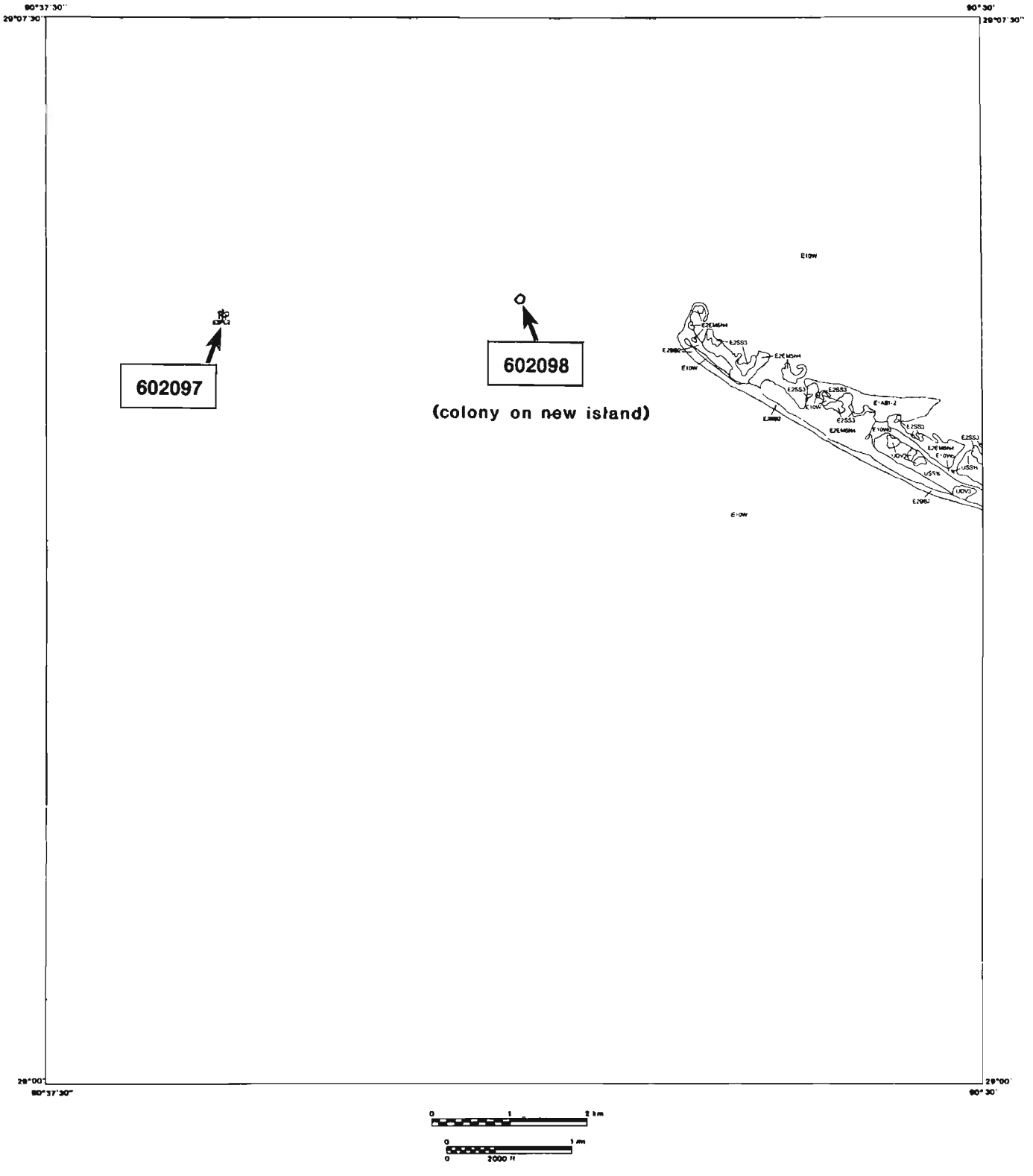



602099
602042
(also see Timbalier Island map)

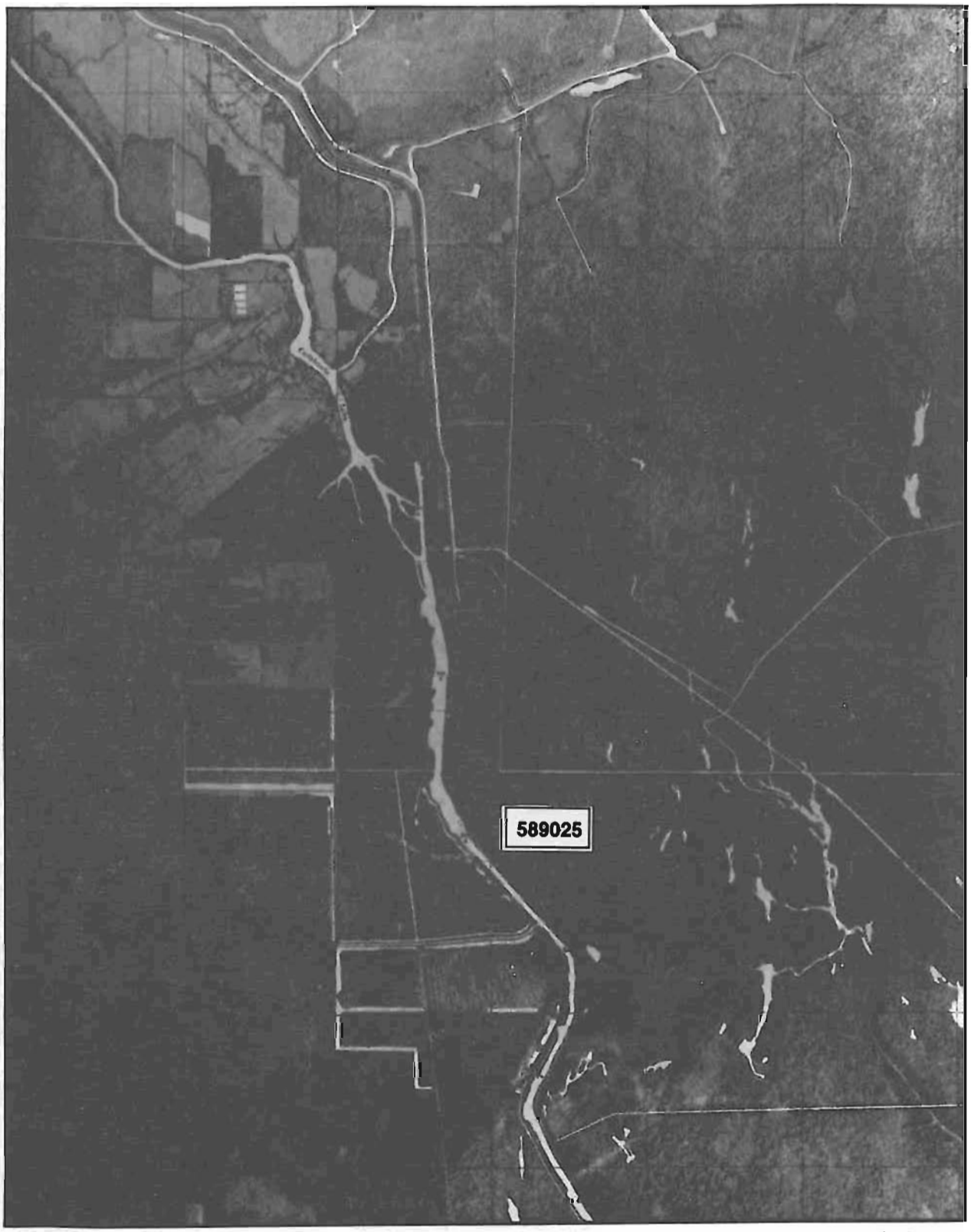
Caminada Pass, LA



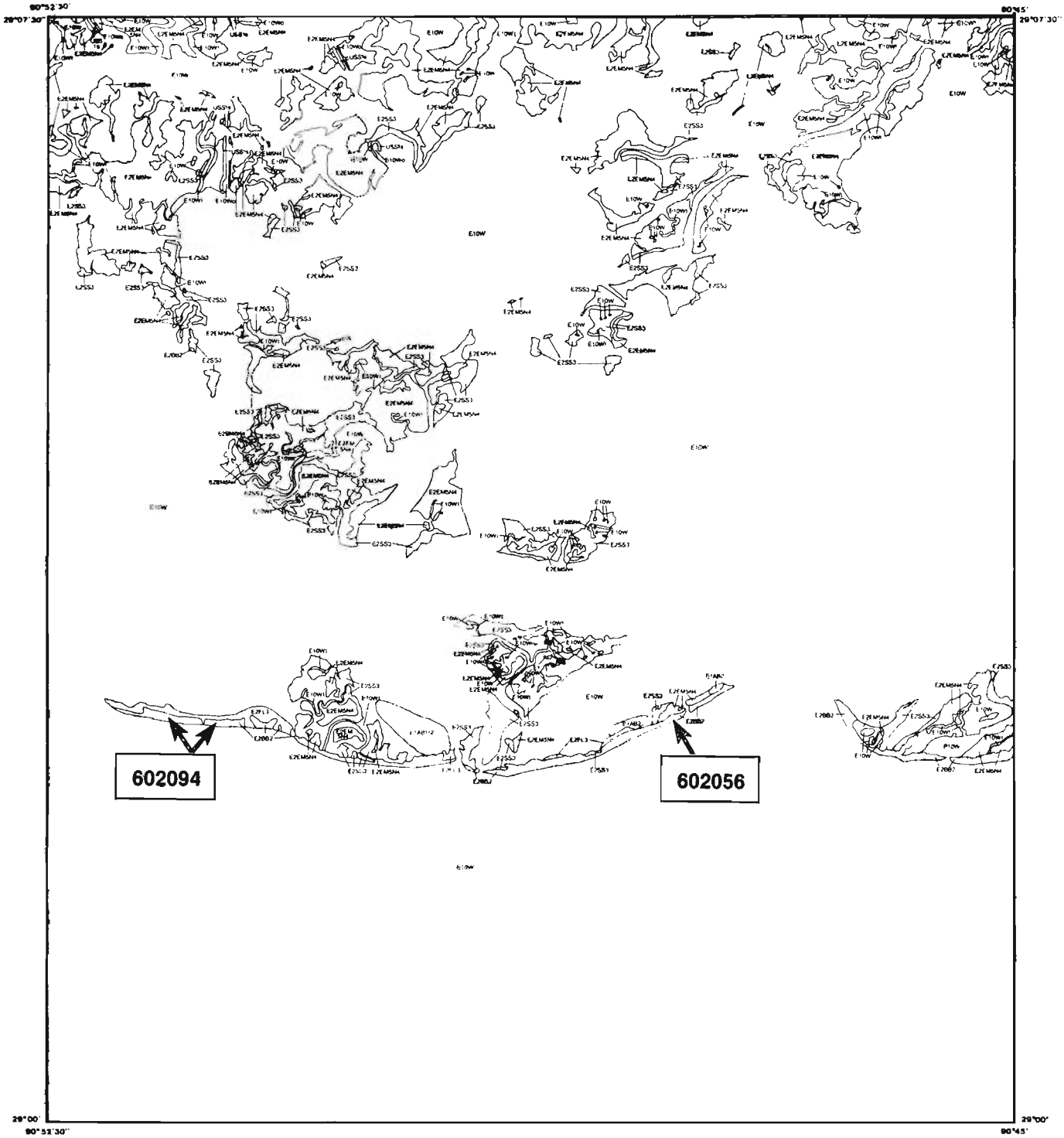
Cat Island Pass, LA



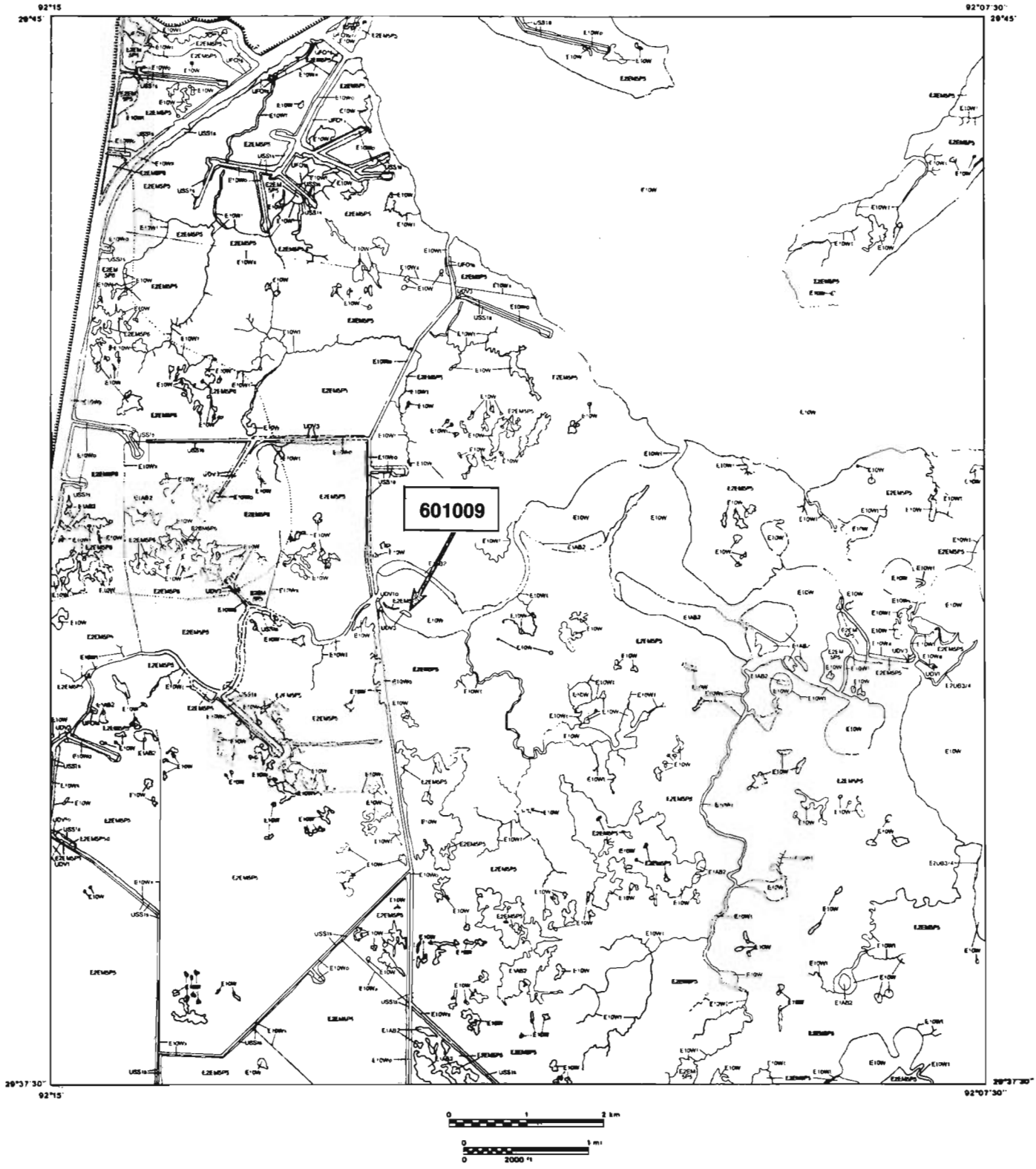
Catahoula, LA

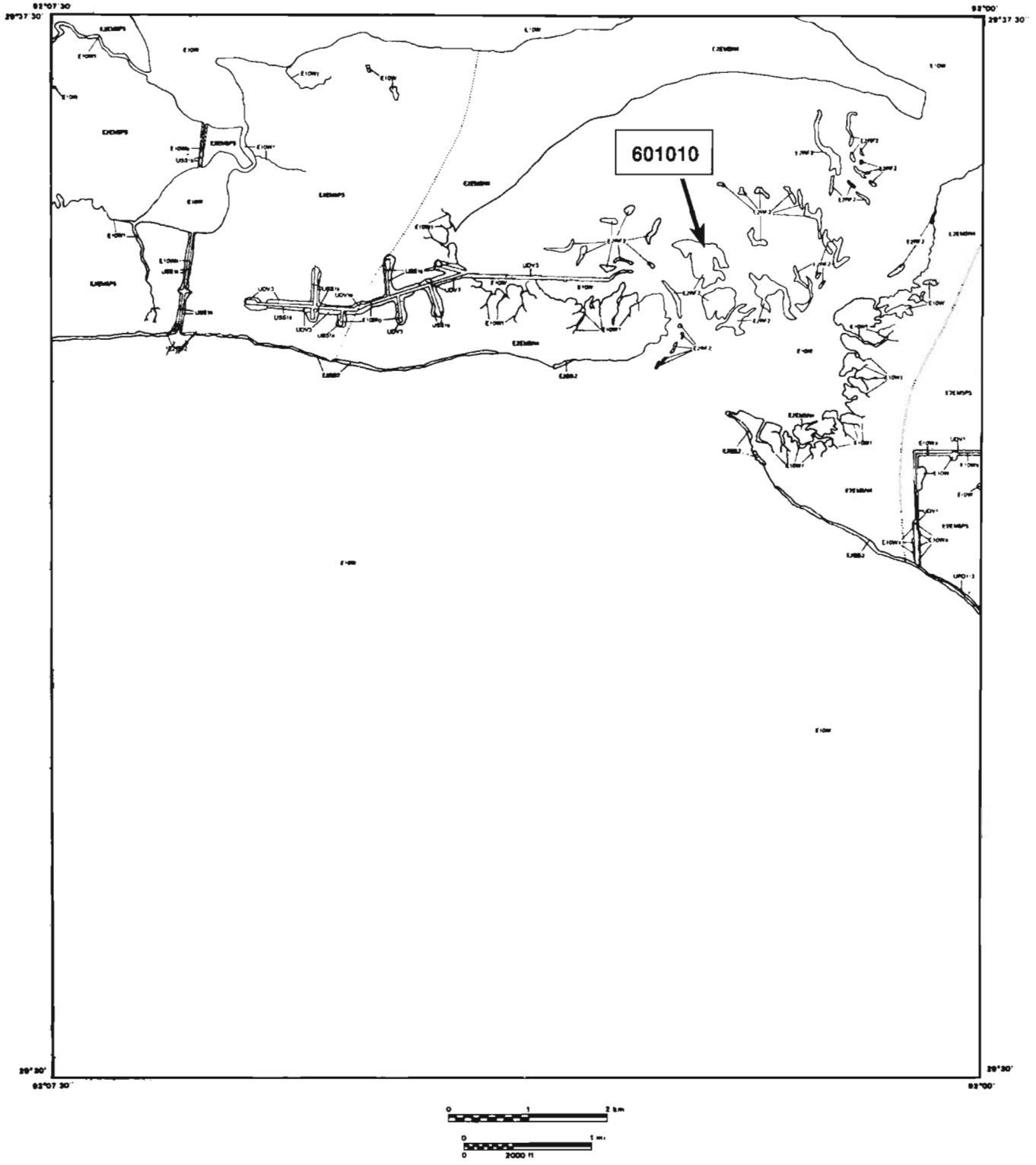


Central Isles Dernieres, LA

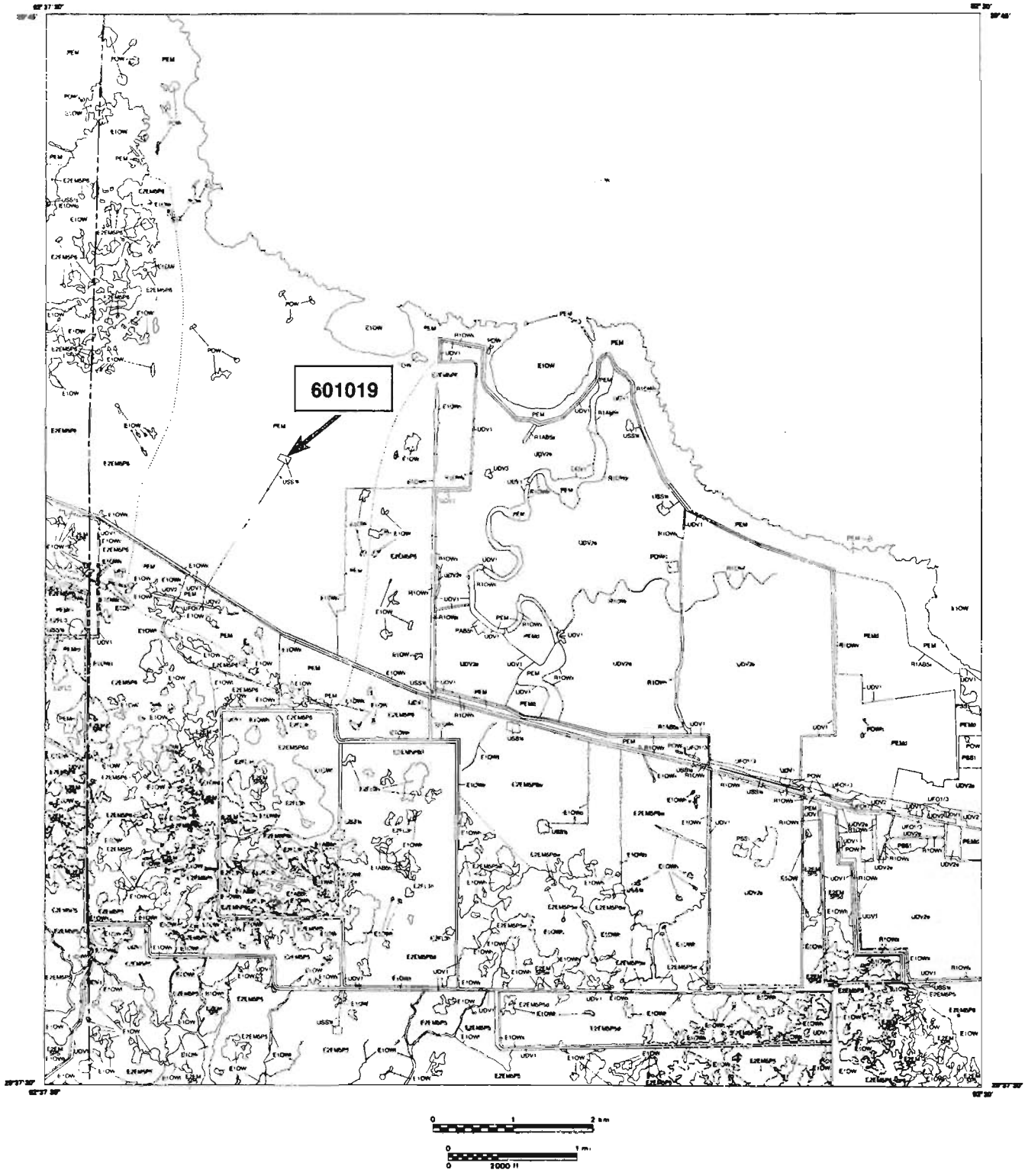


Cheniere Au Tigre NW, LA

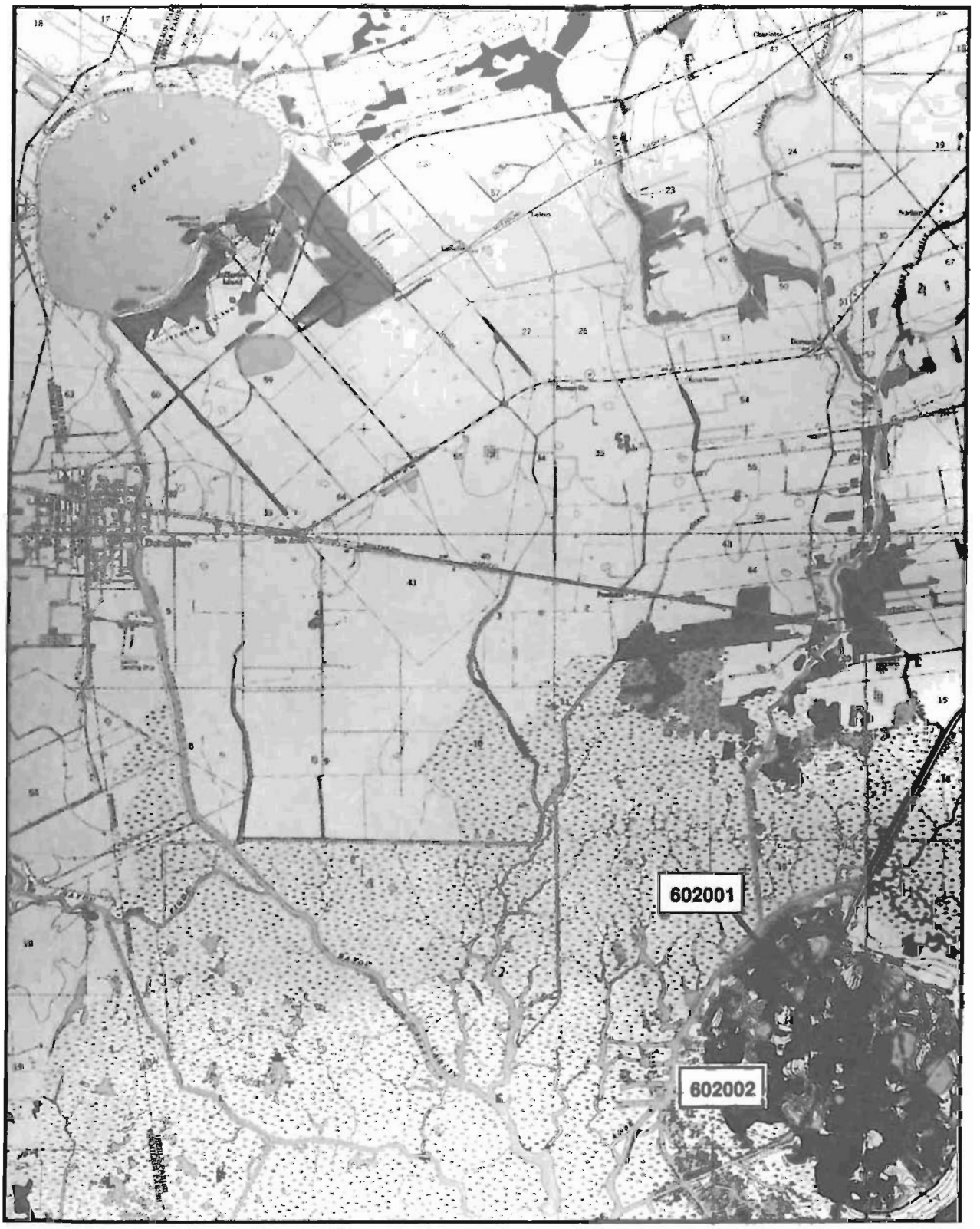



601010

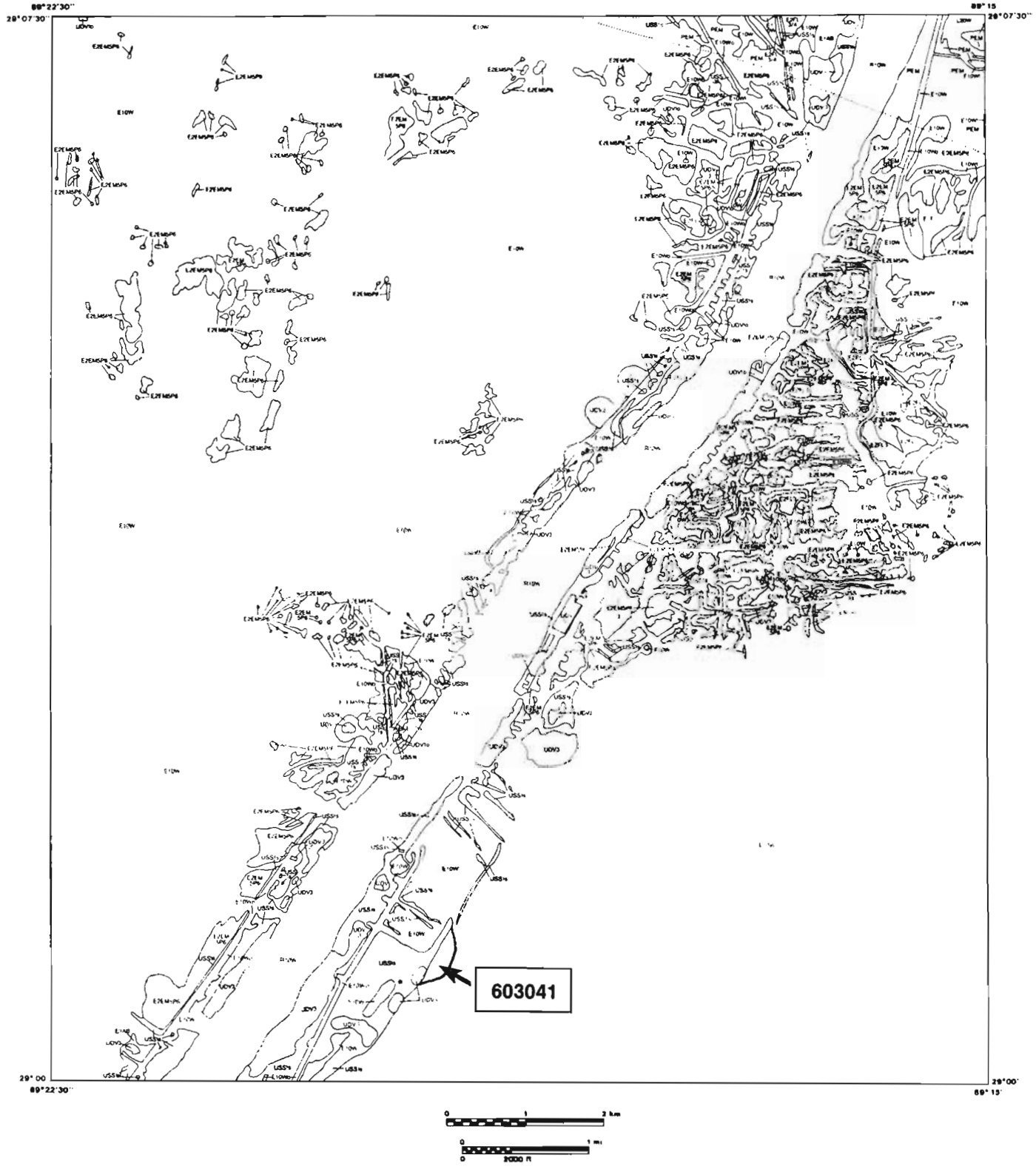
Constance Bayou NE, LA

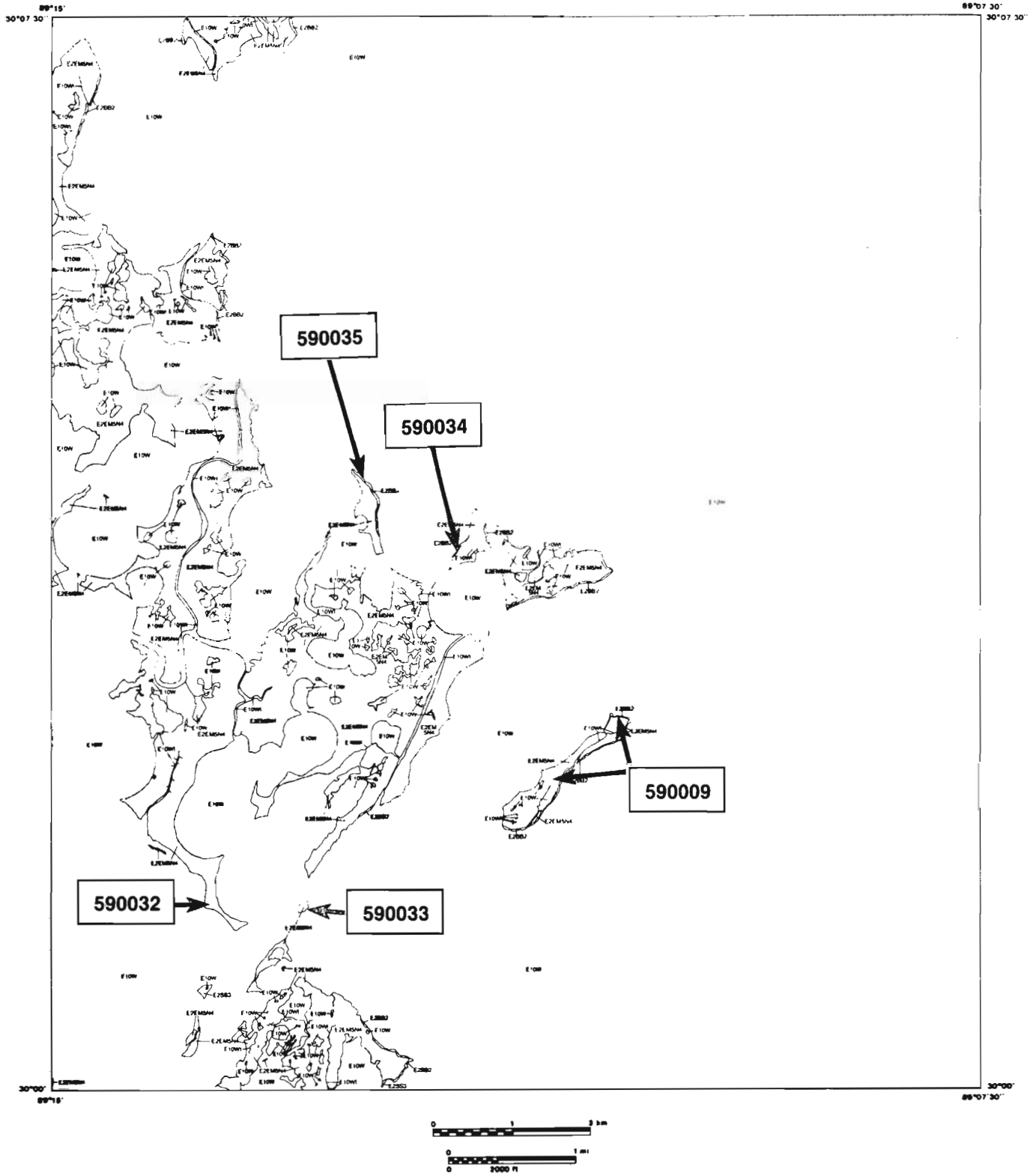


Delcambre, LA



Dixon Bay, LA




89°15'
89°07'30"
30°07'30"
30°00'
590035
590034
590009
590032
590033

Dulac, LA


602091
LAKE BOUDREAUX
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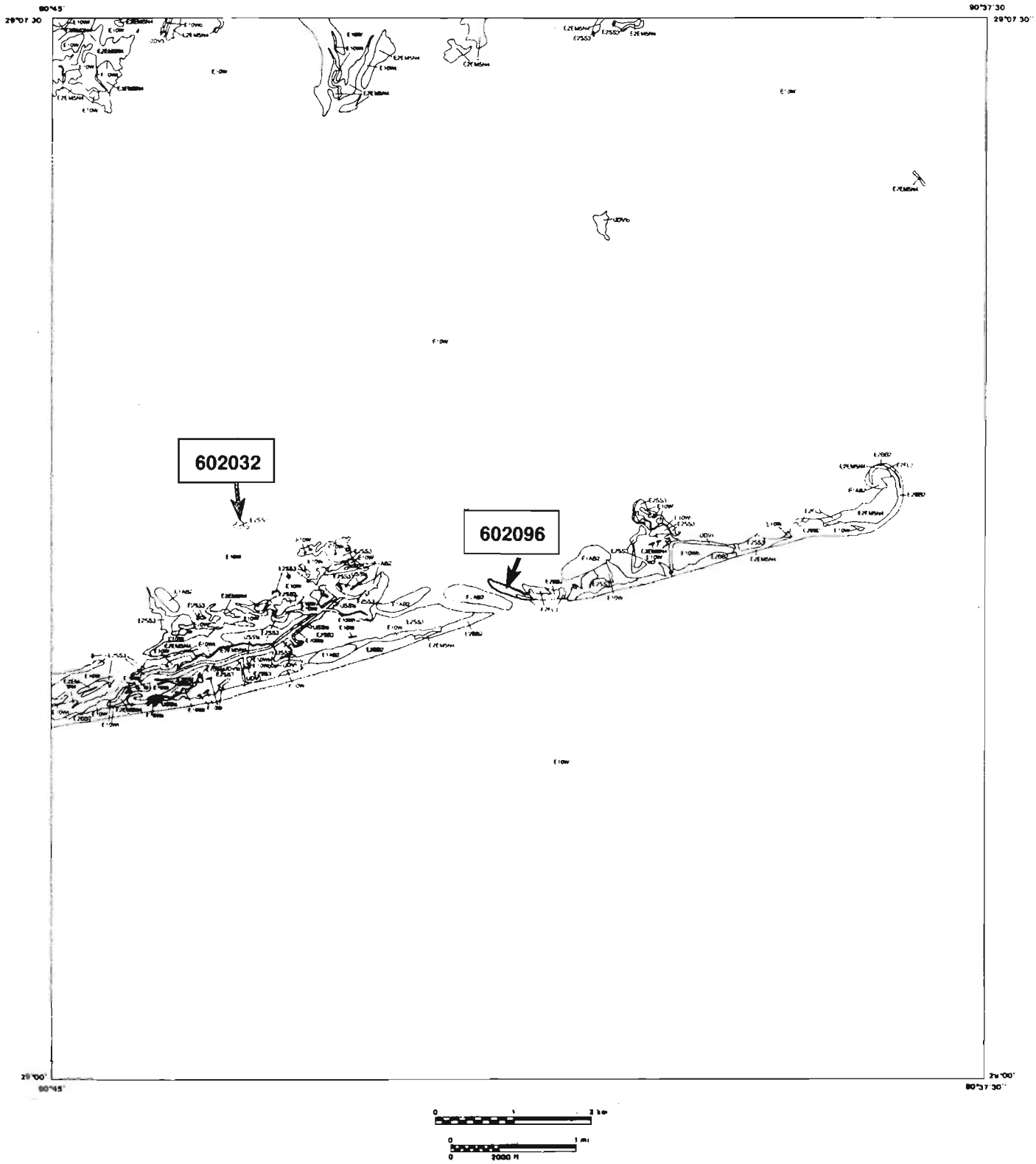
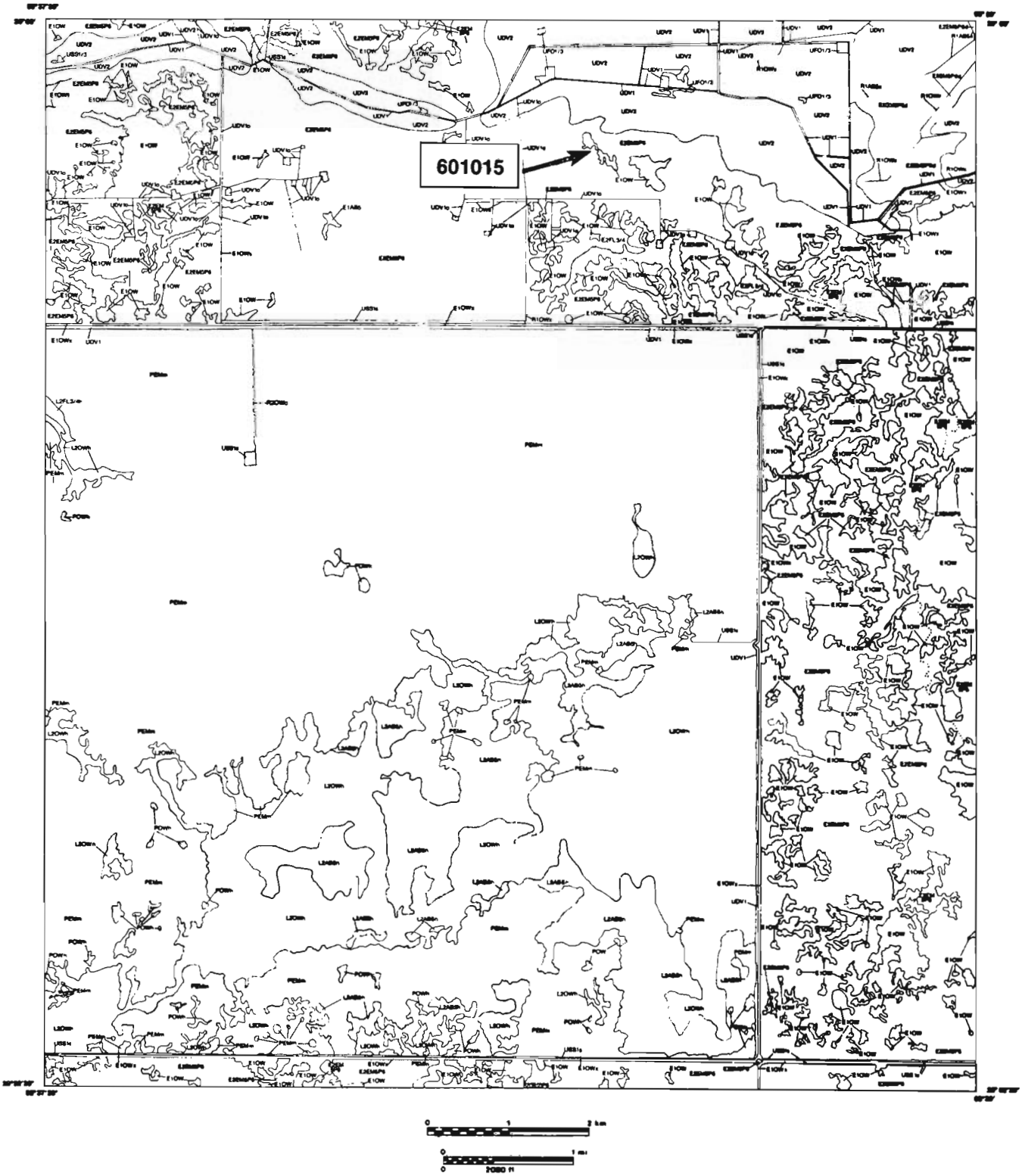
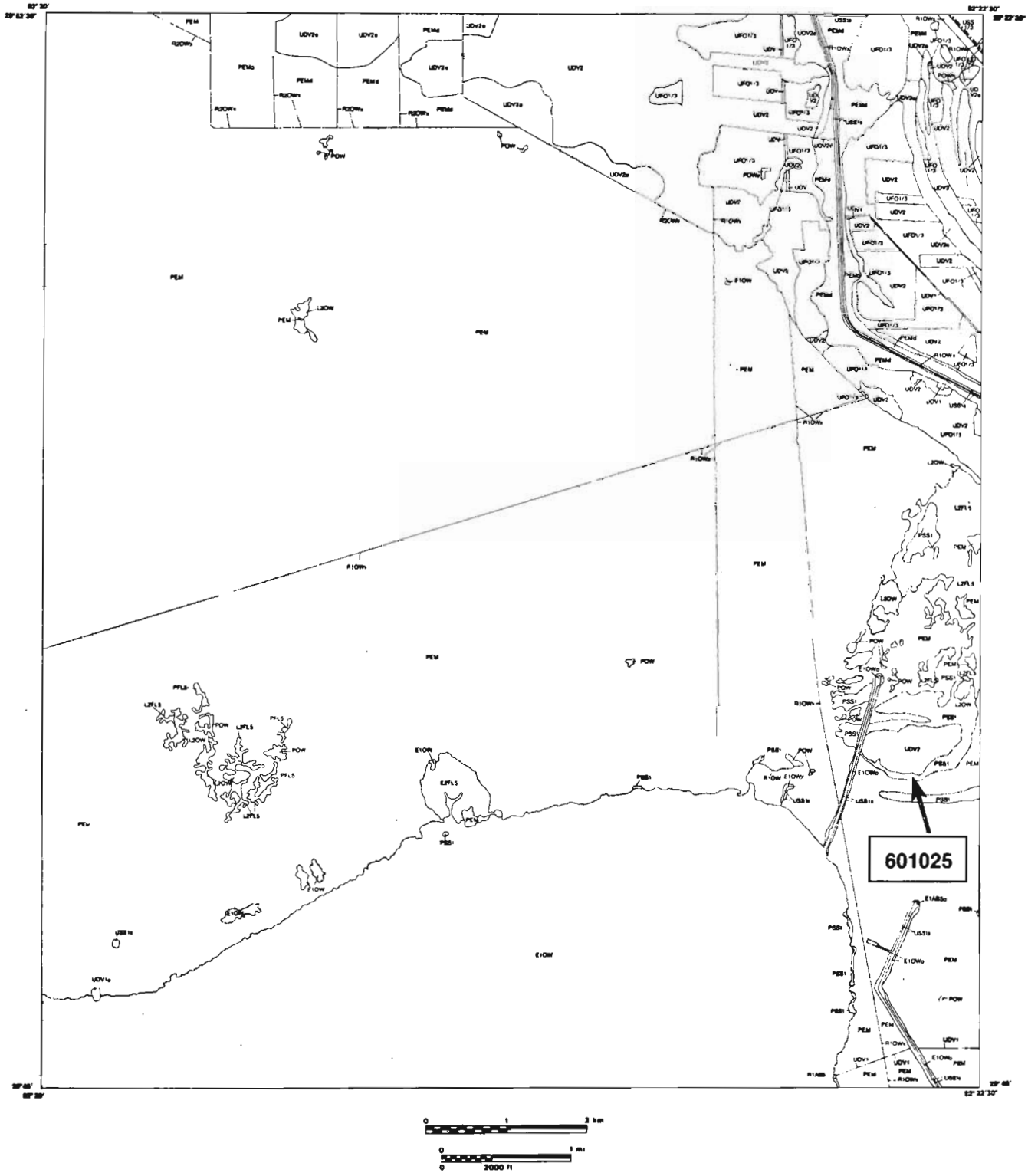
1 5 0 1 KILOMETER

Eastern Isles Dernieres, LA



Five Lakes, LA

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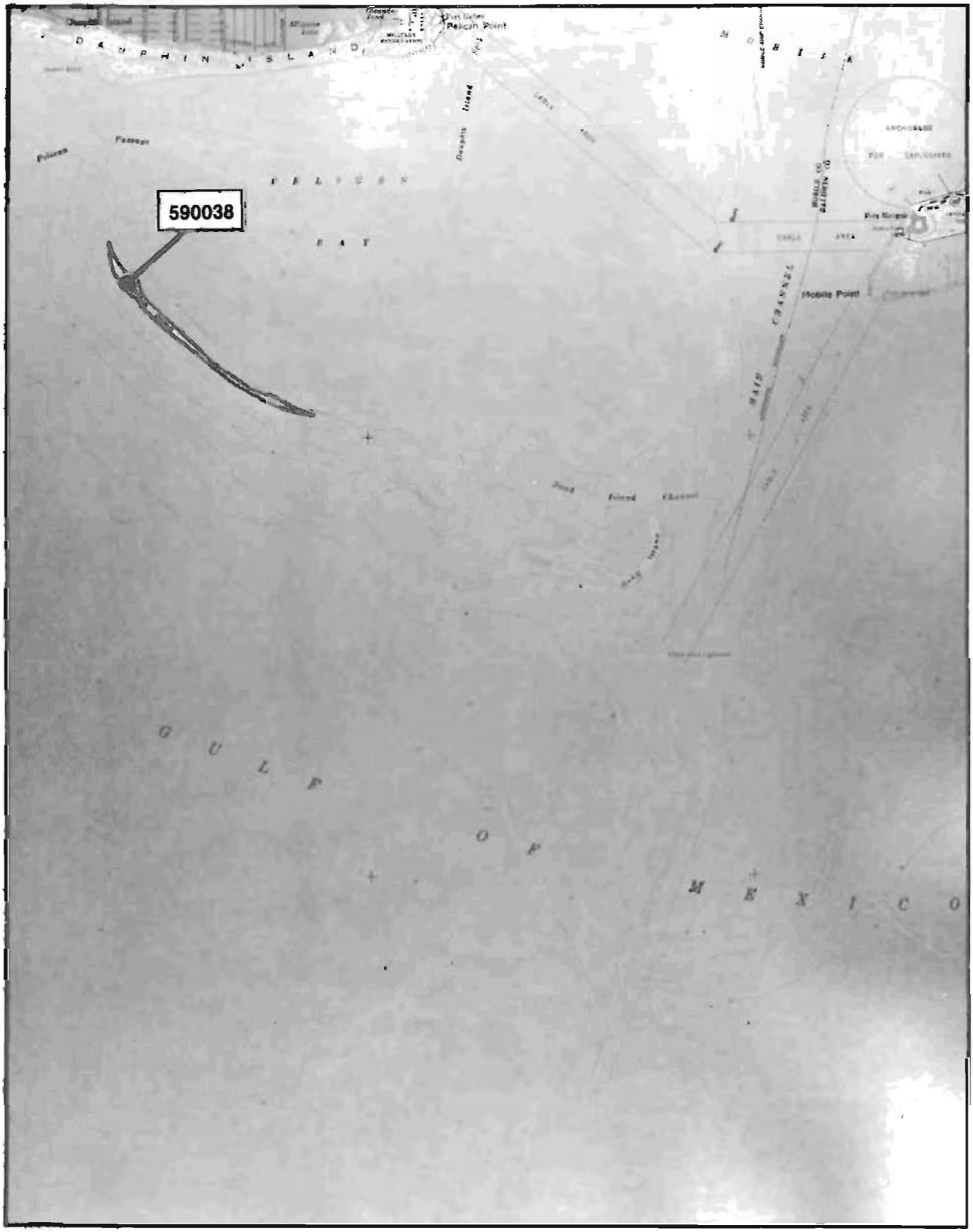
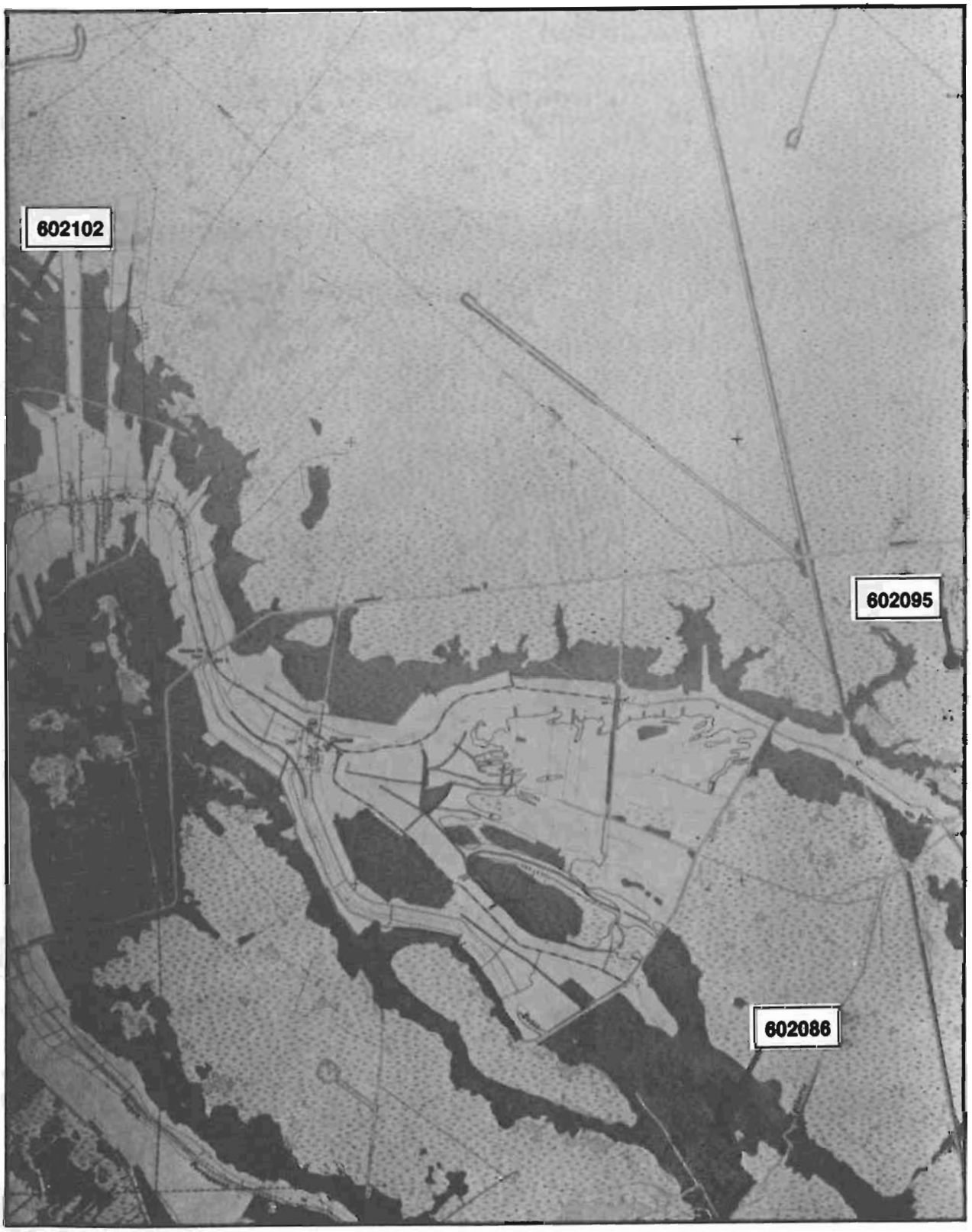
Fort Morgan, AL

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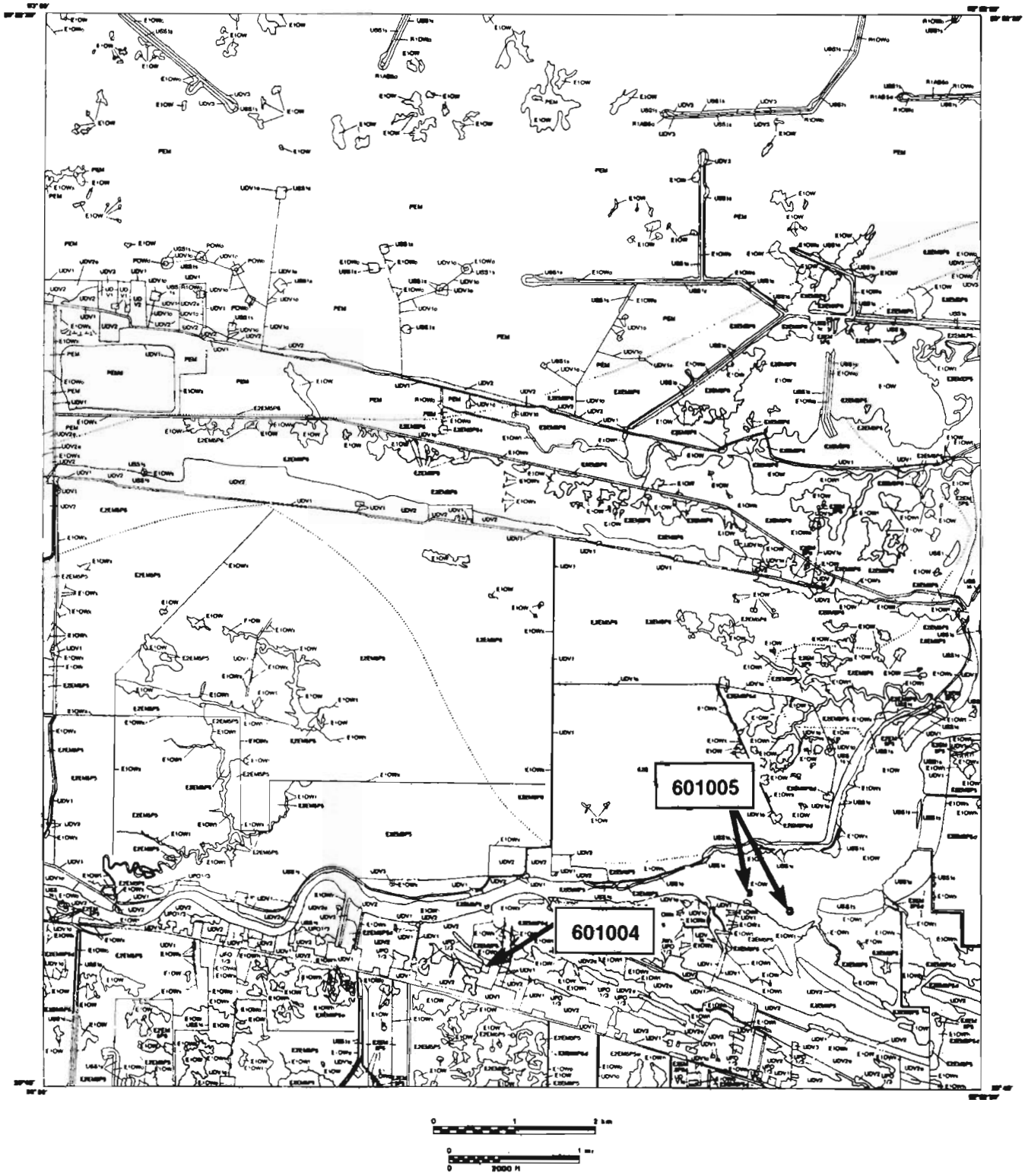
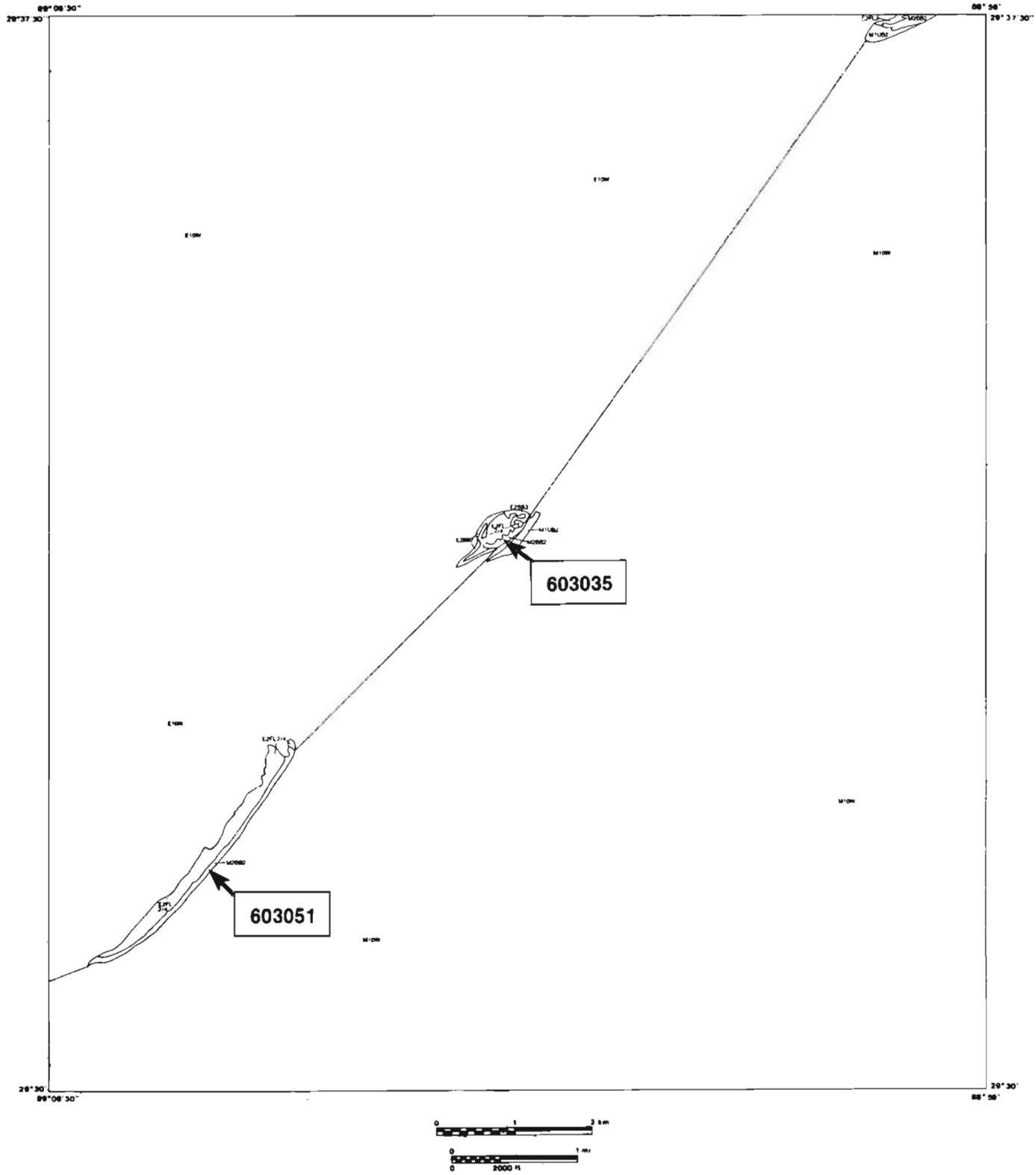
1 5 0 1 KILOMETER

Grand Cheniere, LA

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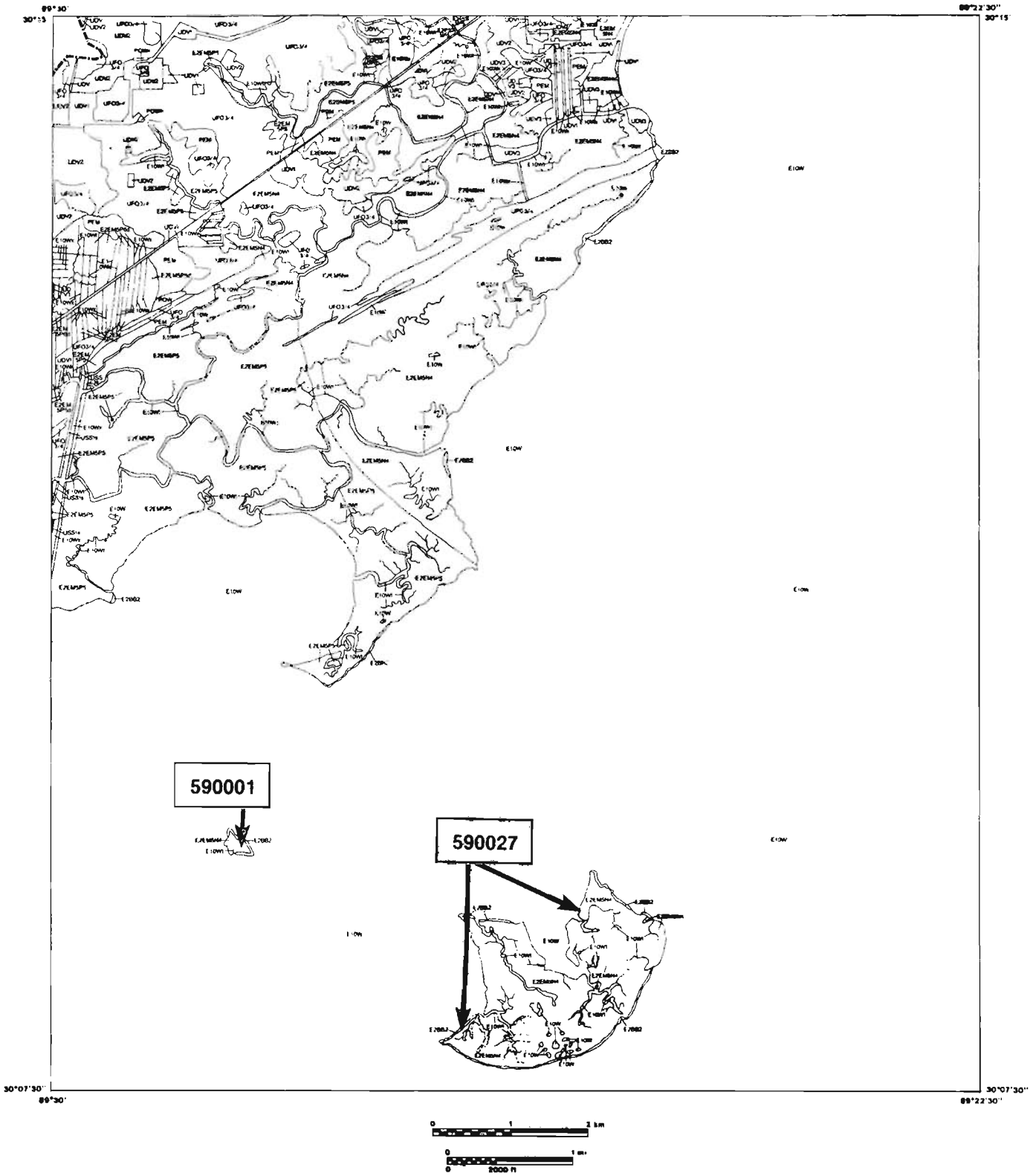
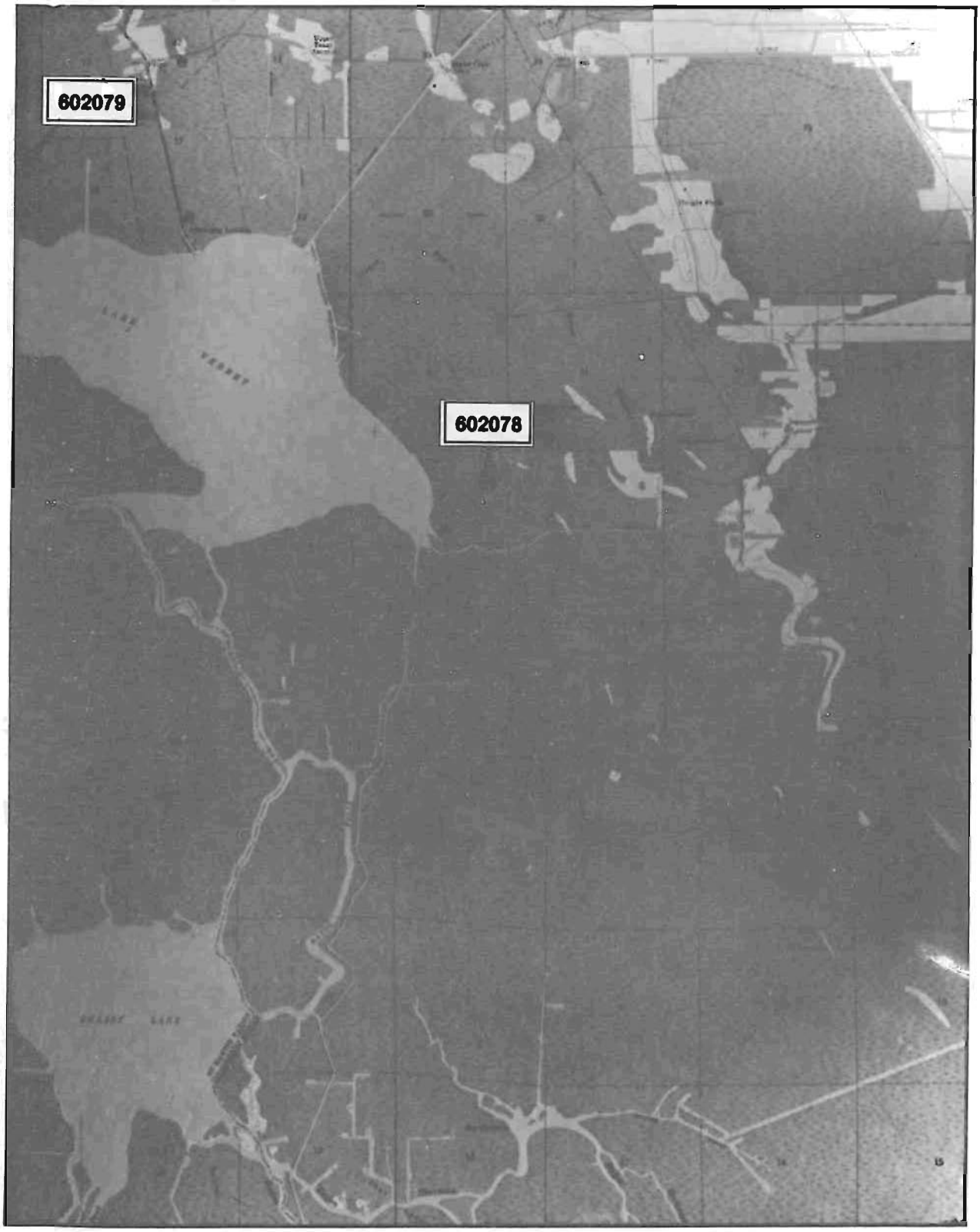
603051

Grand Island Pass, MS

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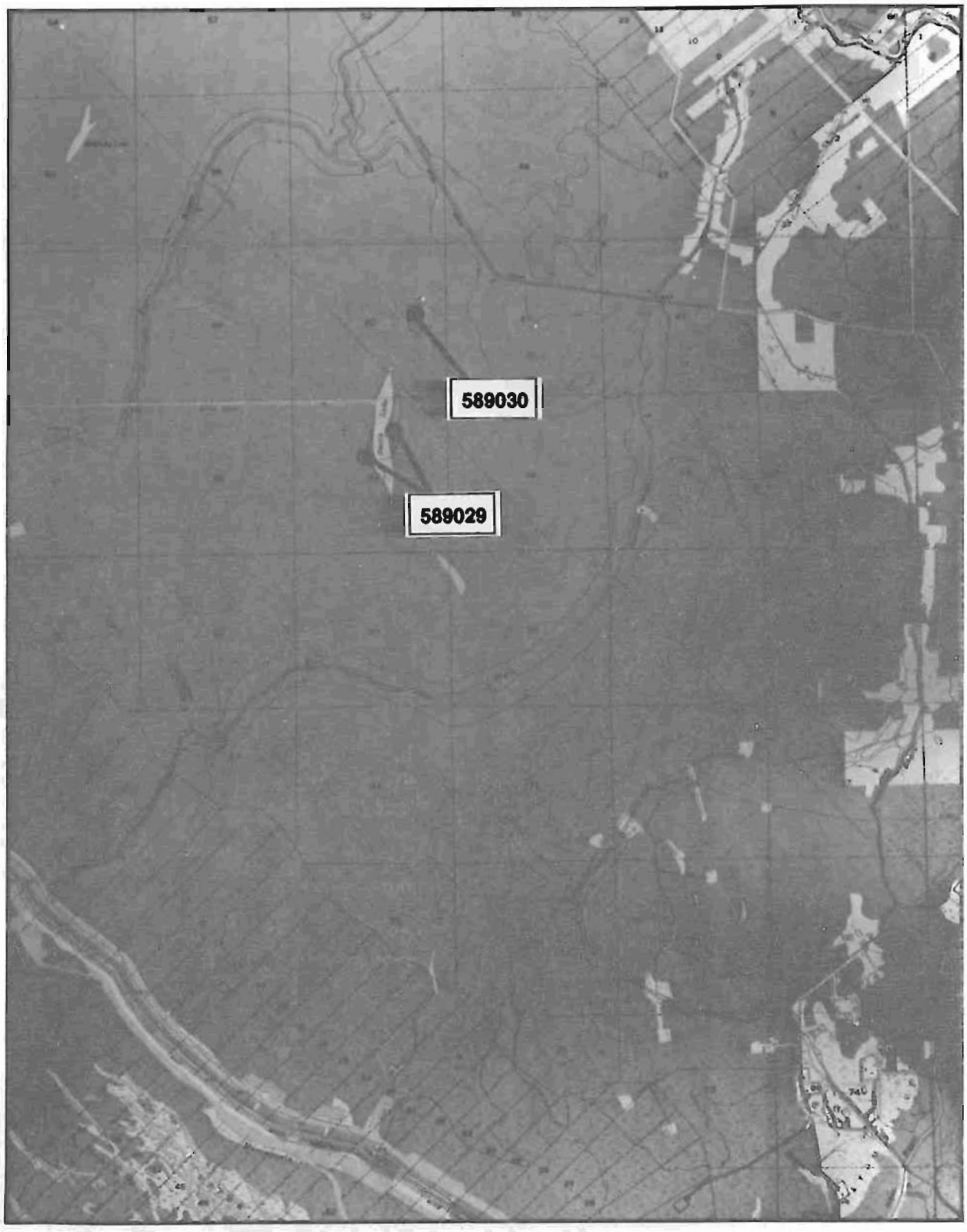
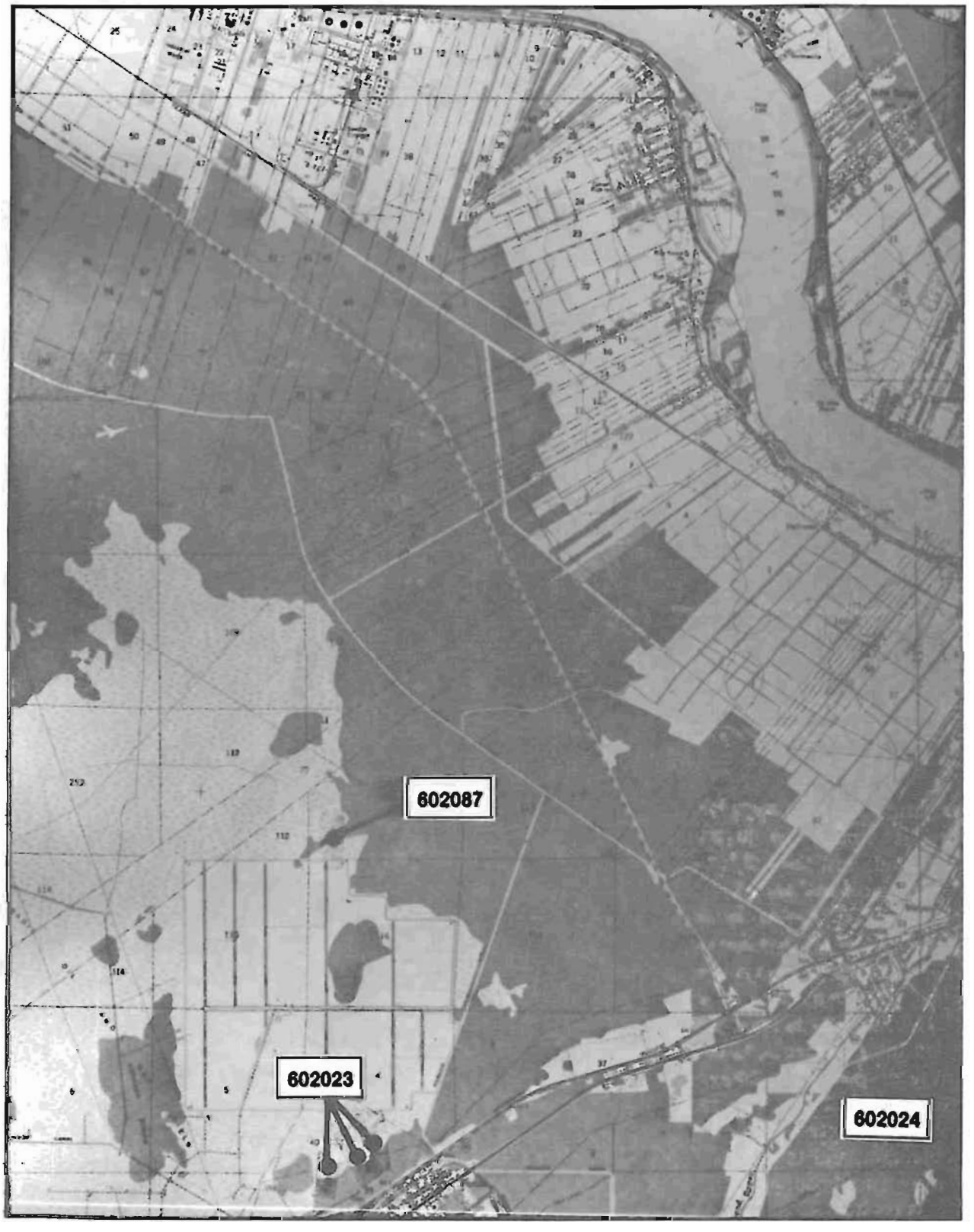
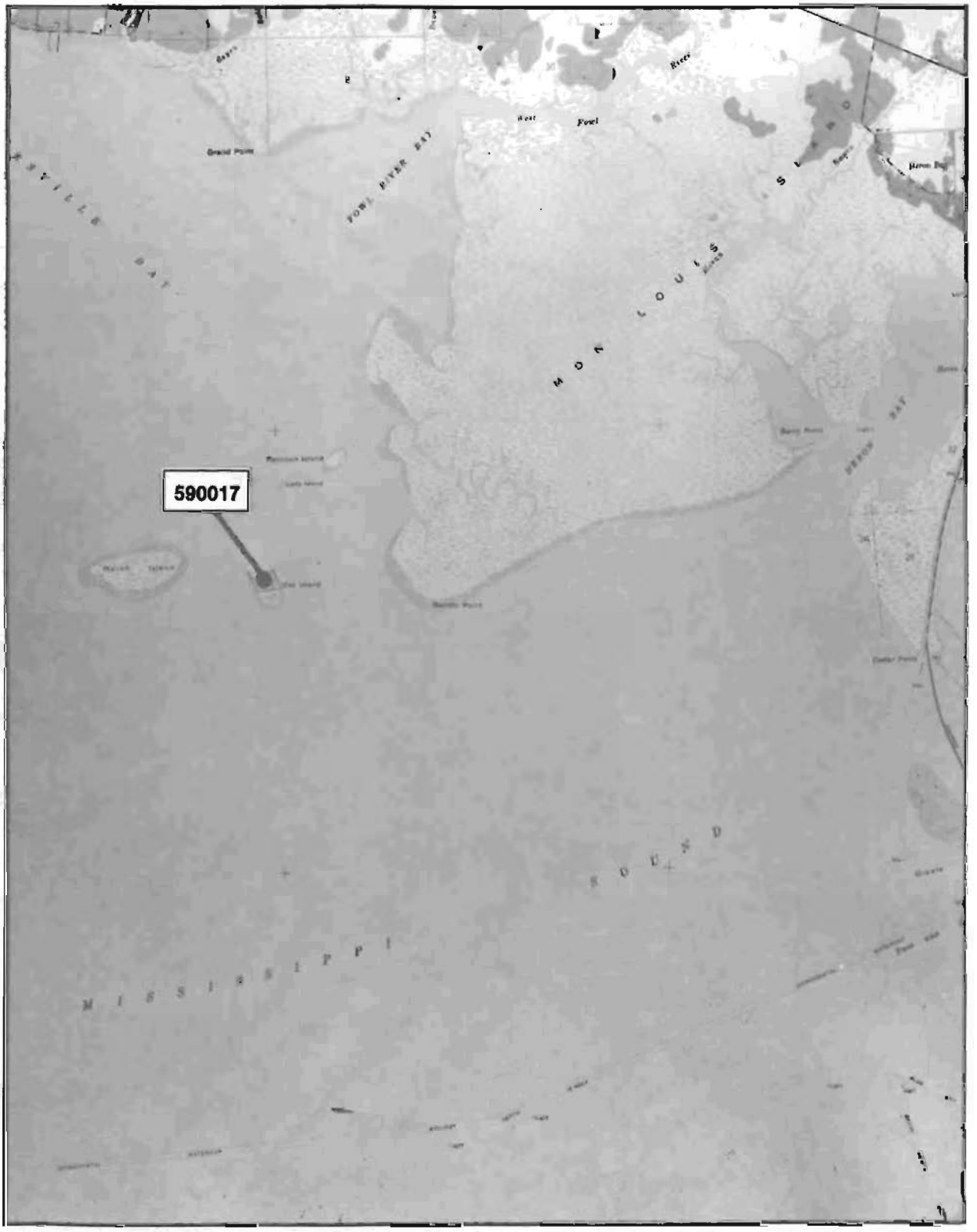
Grosse Tete SW, LA



Hahnville, LA



Heron Bay, AL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POWL RIVER BAY
MON LOUIS
MISSISSIPPI
SOUND
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1 MILE
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1 KILOMETER


590039
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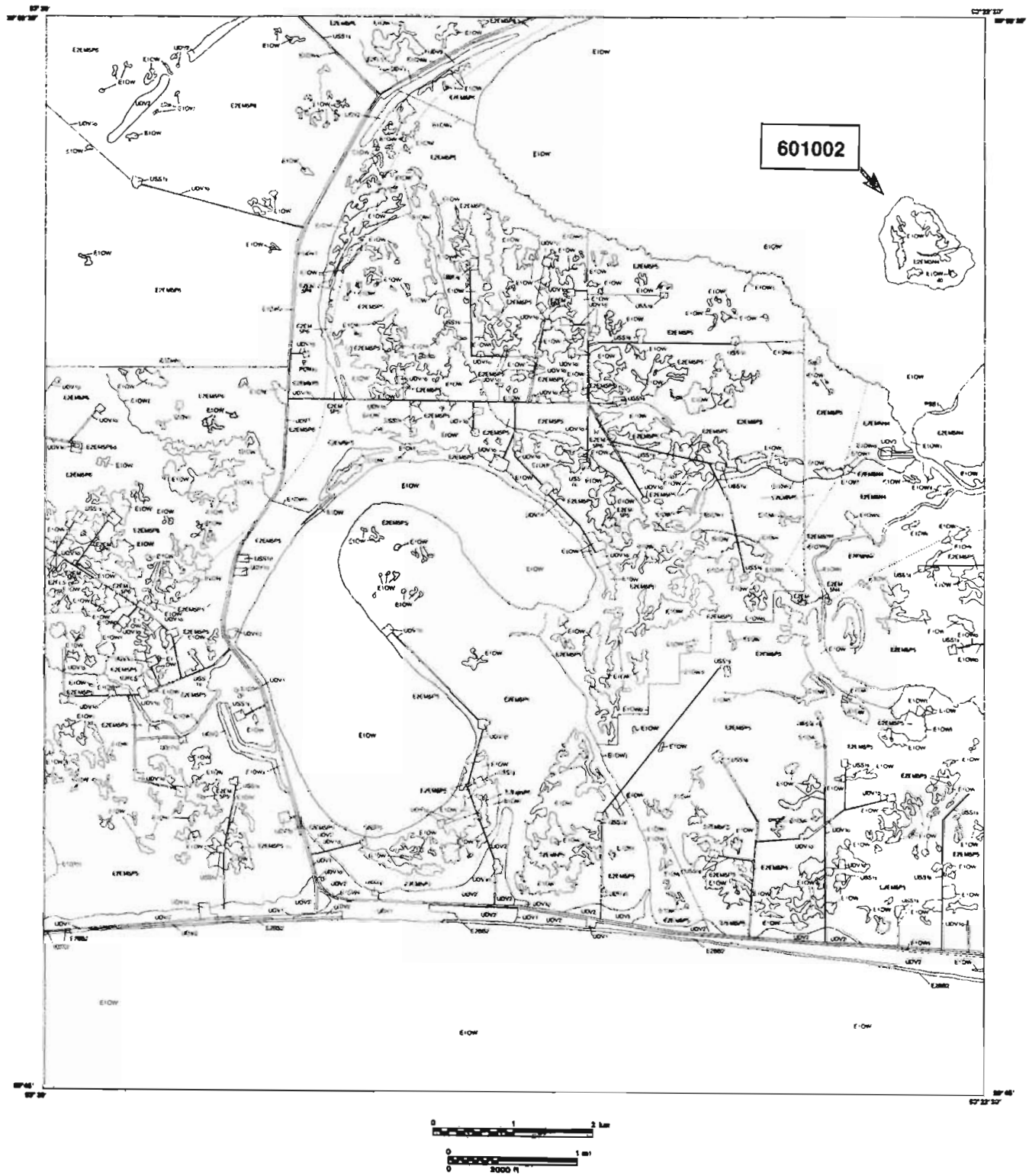
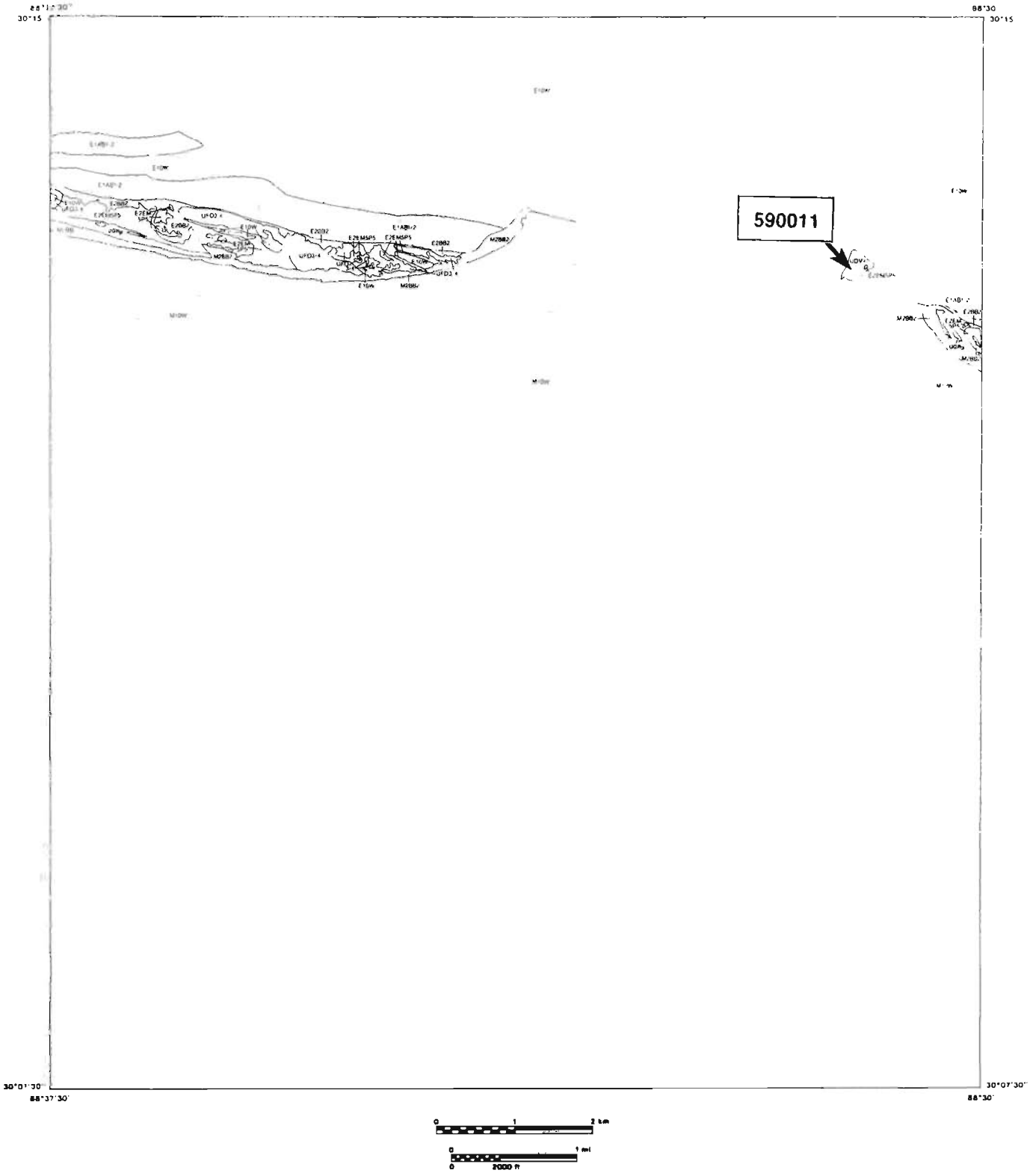
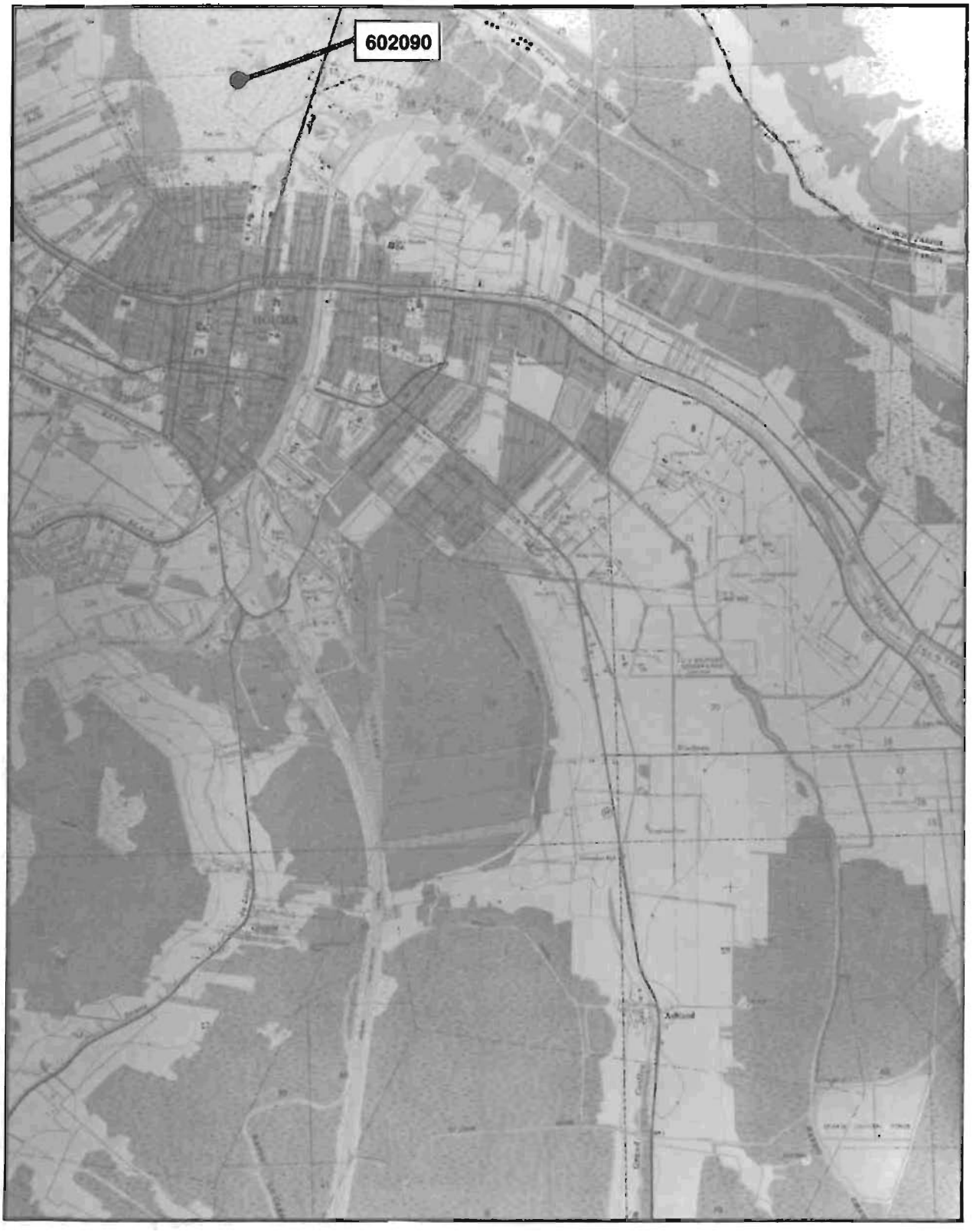
Holly Beach, LA



Horn Island East, MS



Houma, LA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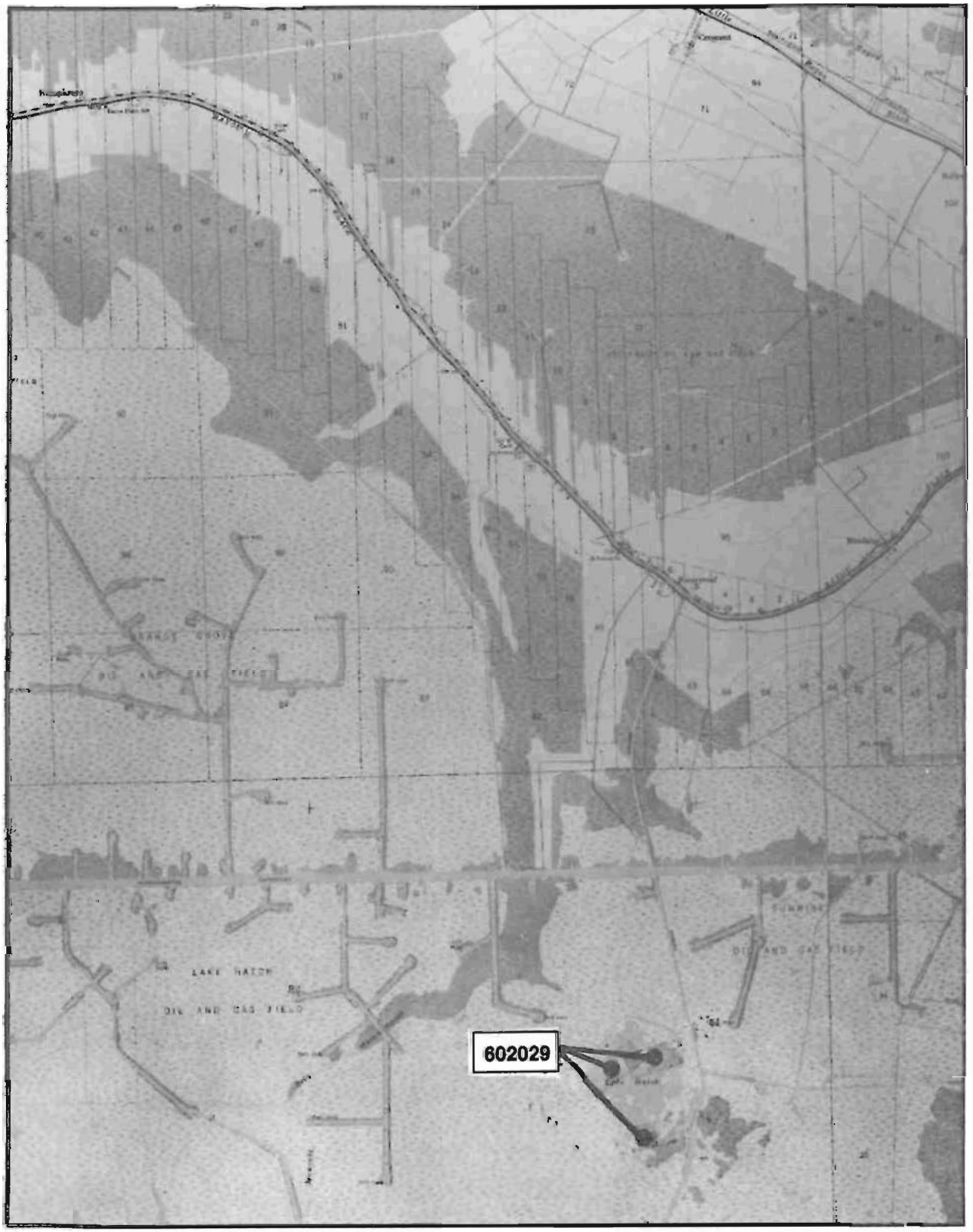
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OIL AND GAS FIELD
SUNRISE
OIL AND GAS FIELD
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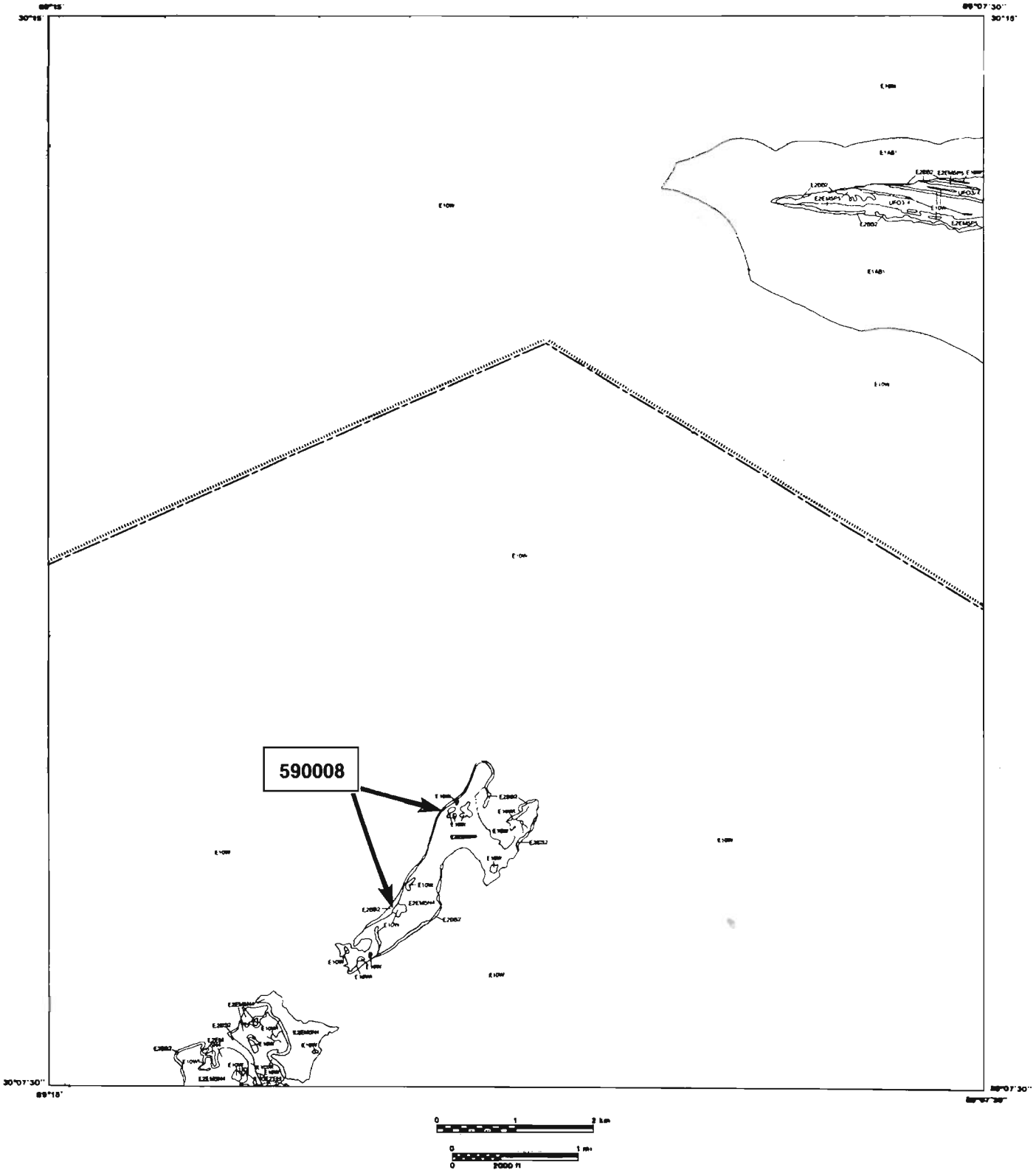
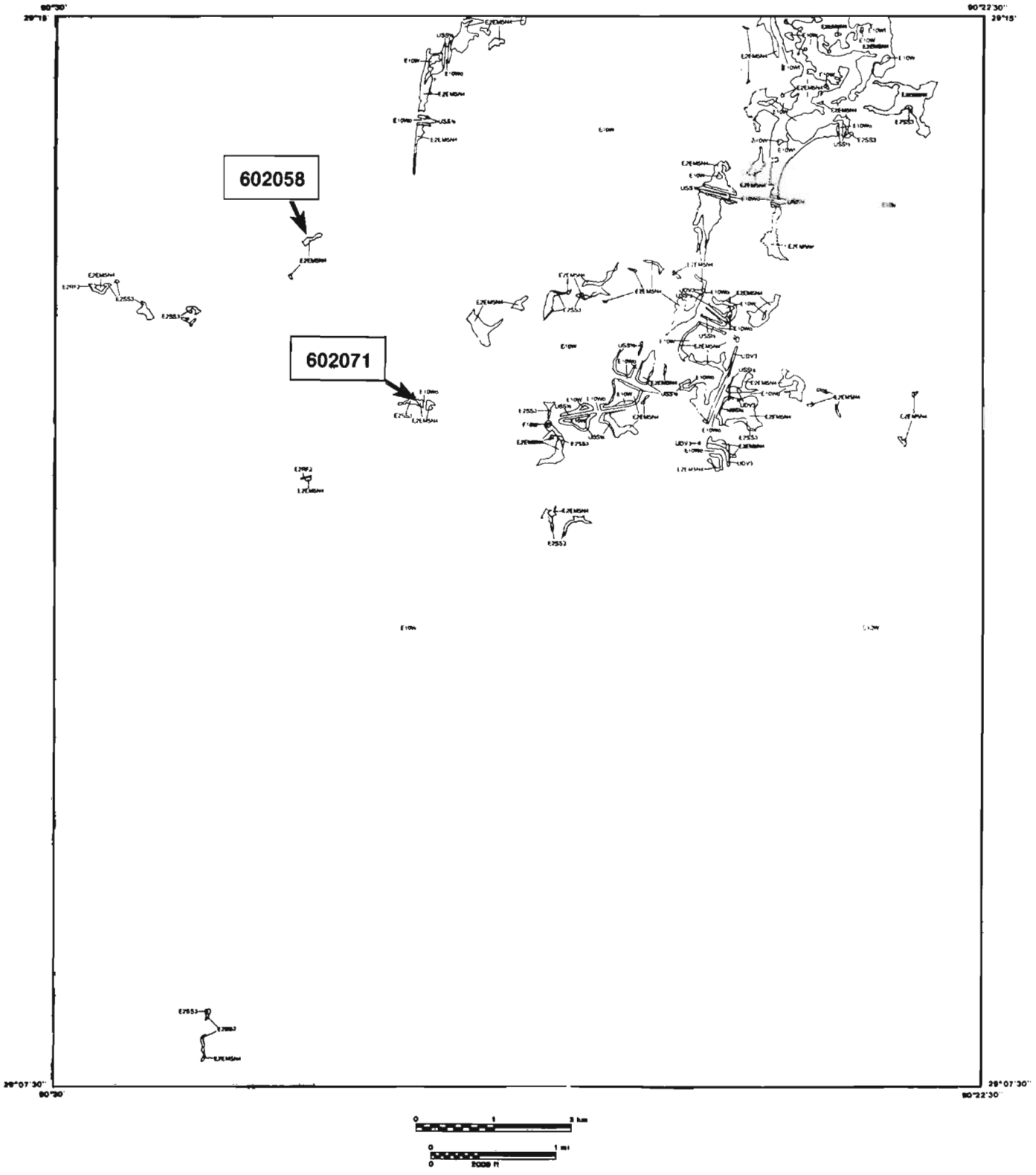
Isle Au Pitre, MS/LA

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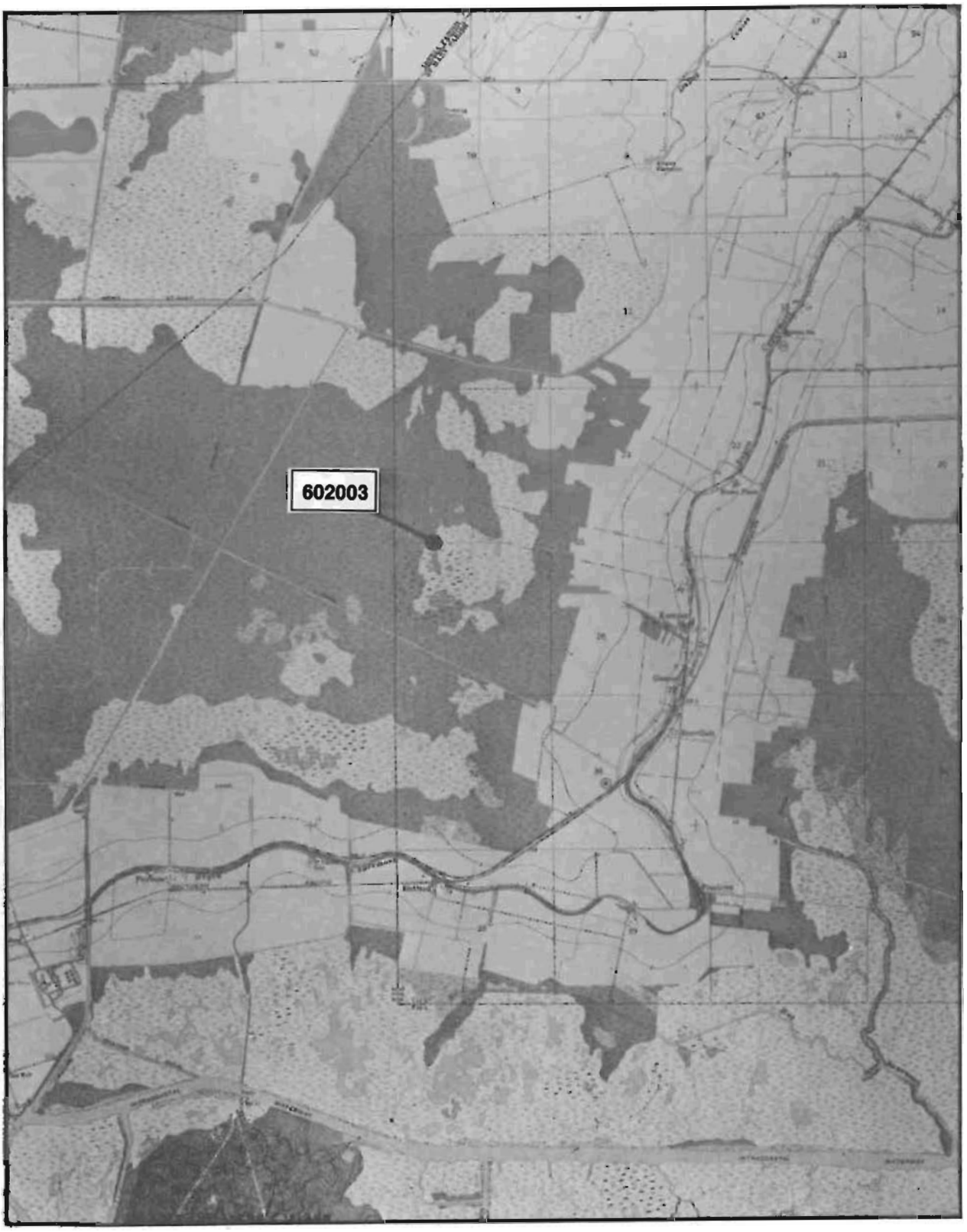
Kemper, LA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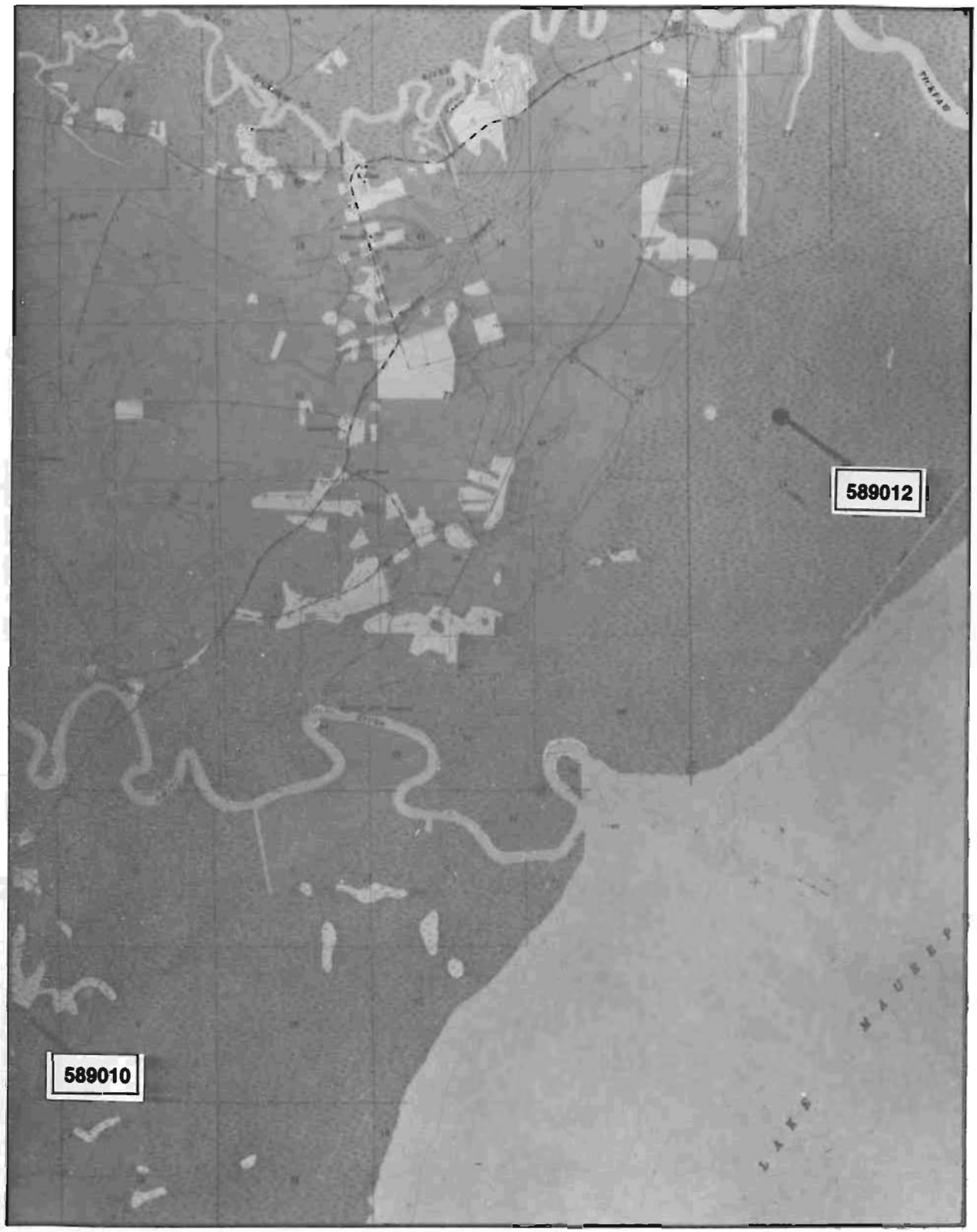
Killian, LA



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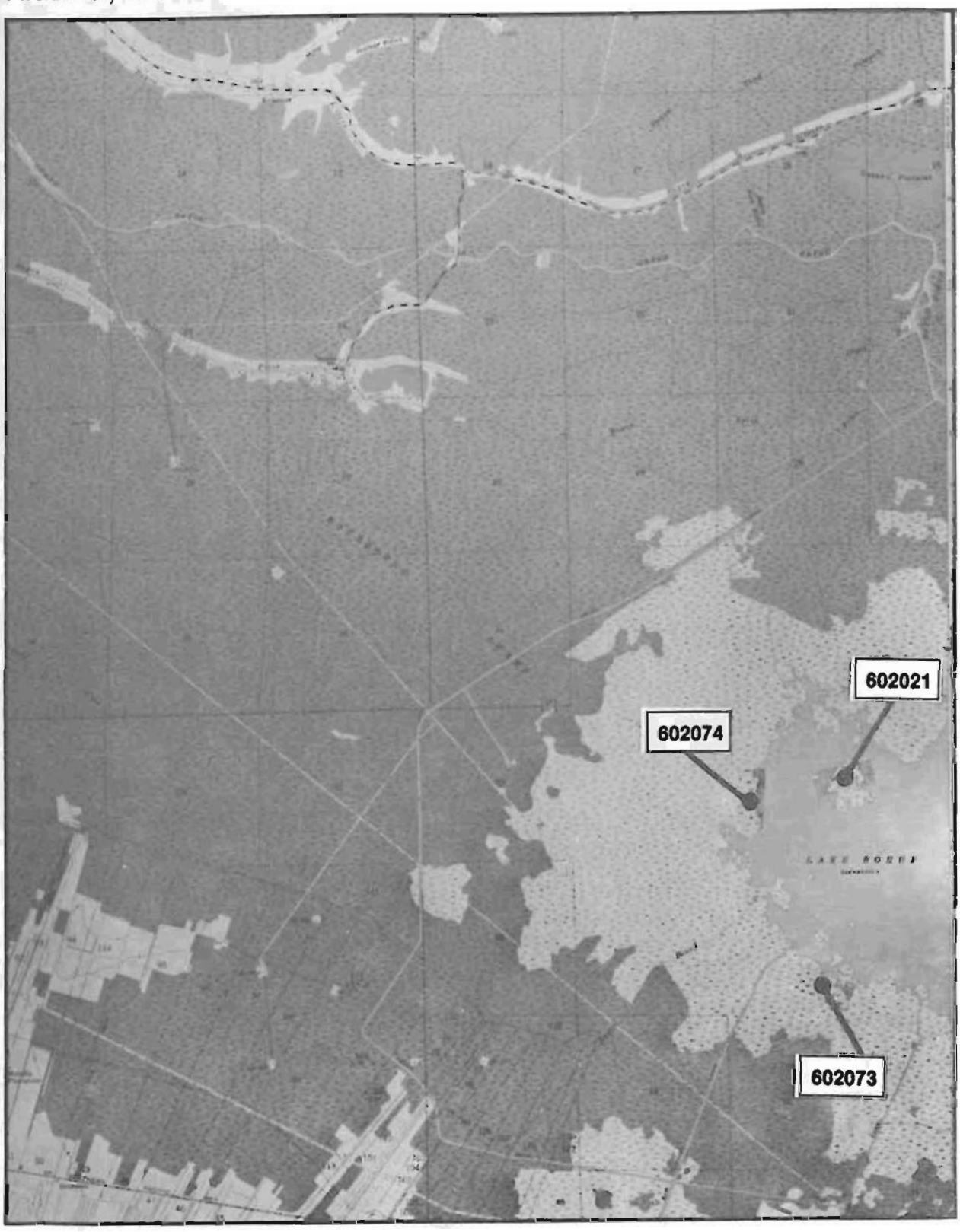
Kraemer, LA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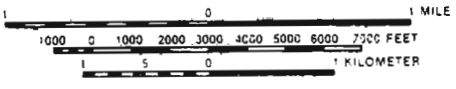
602073
LAKE BOEUF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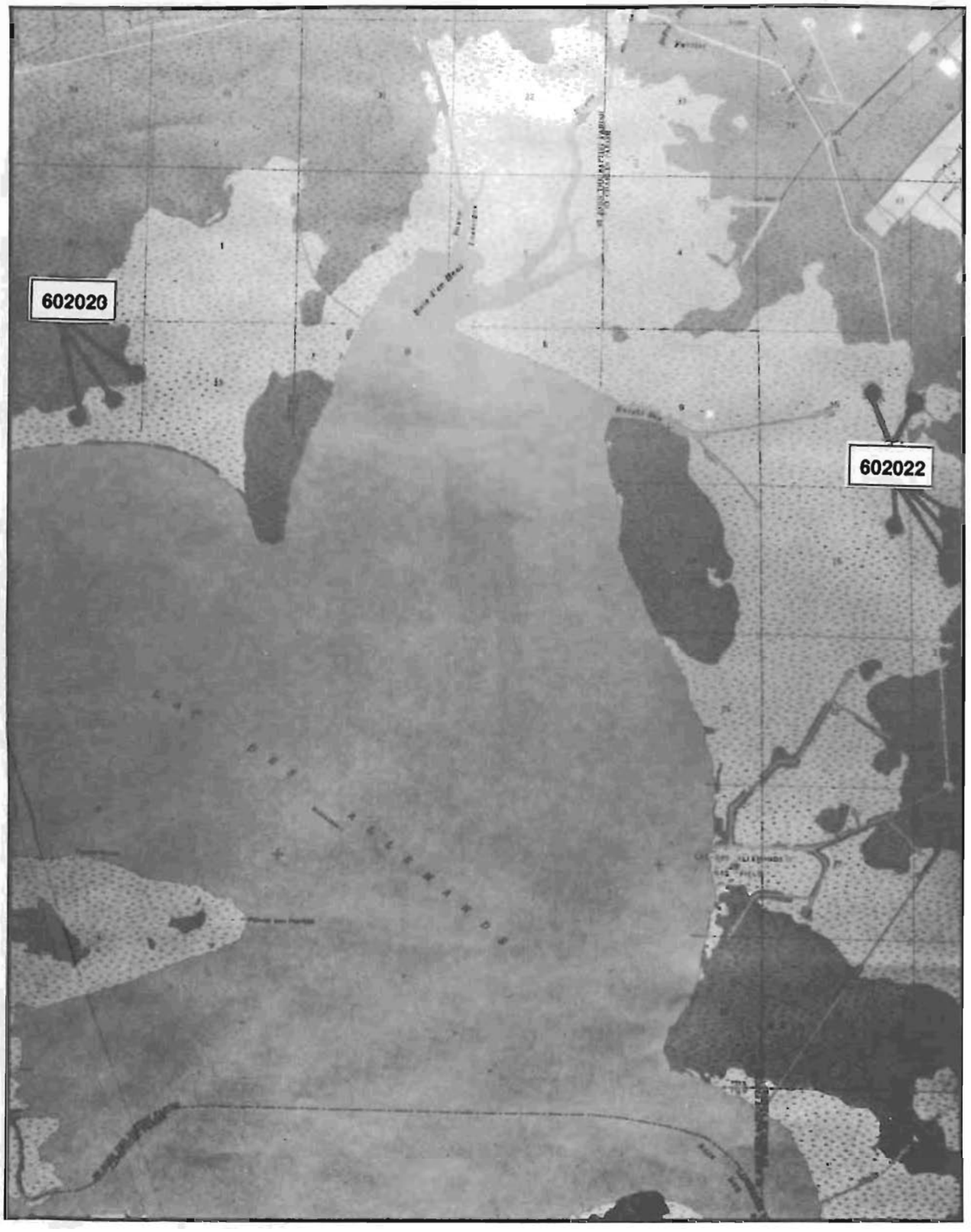

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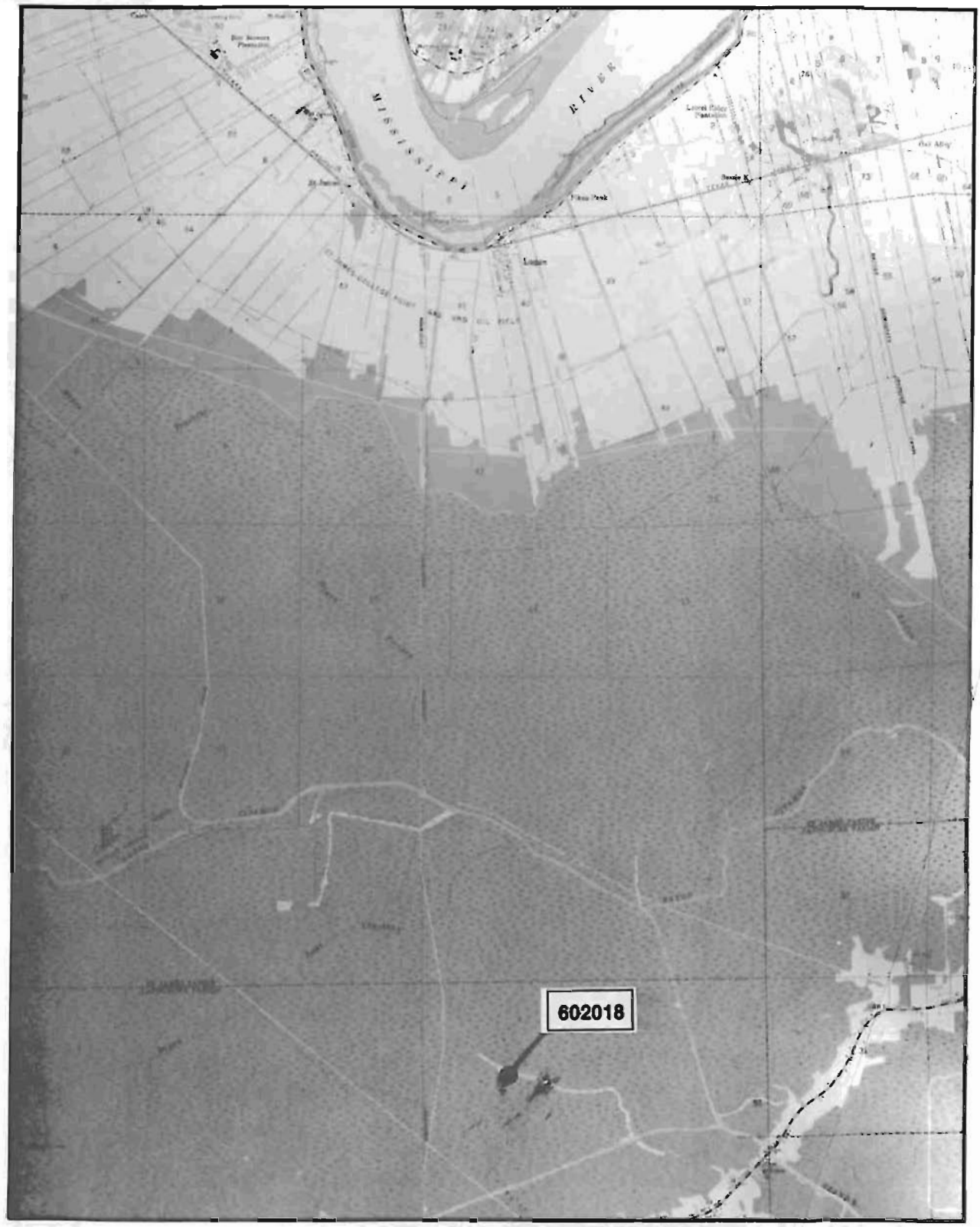
Lagan, LA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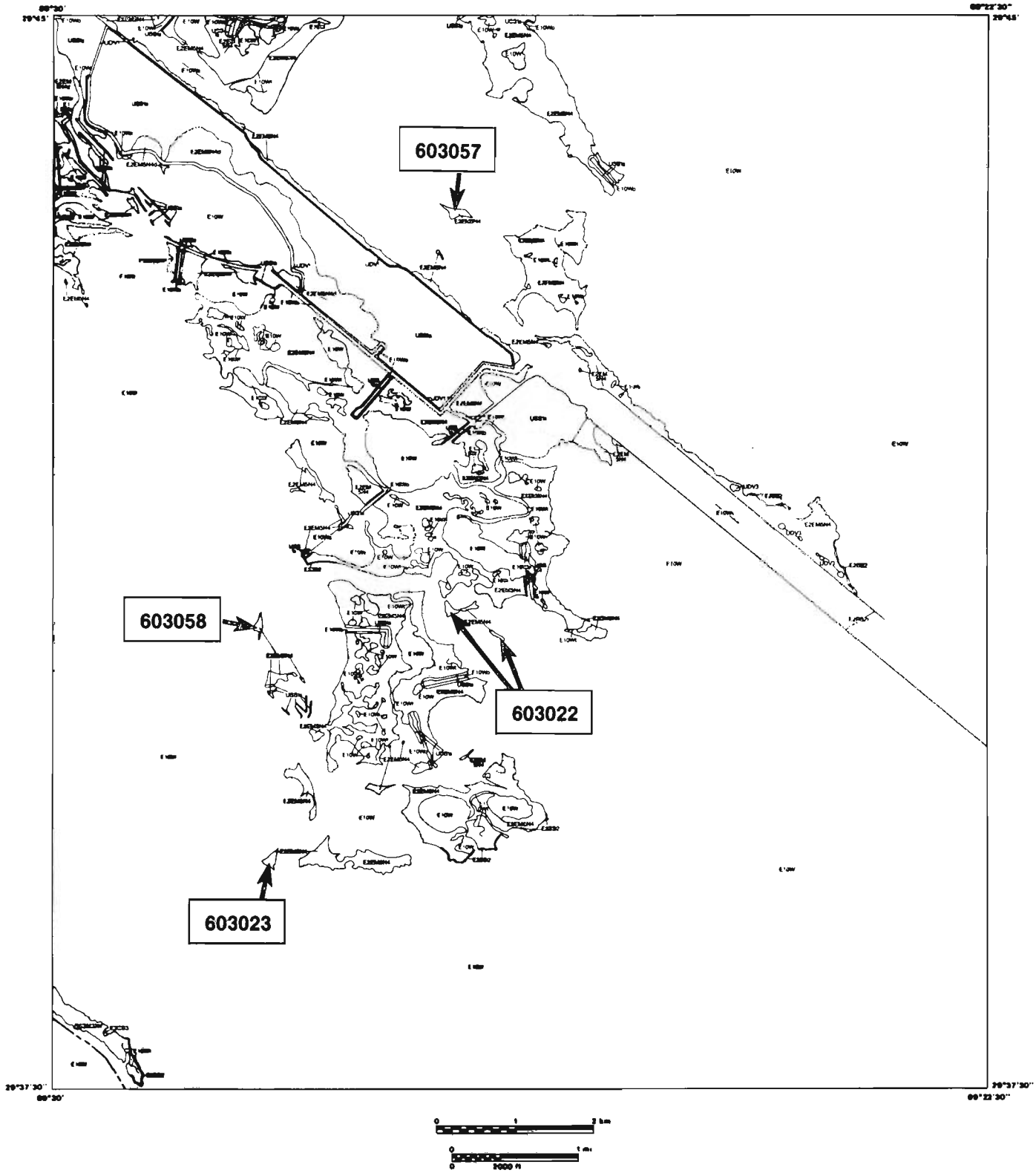
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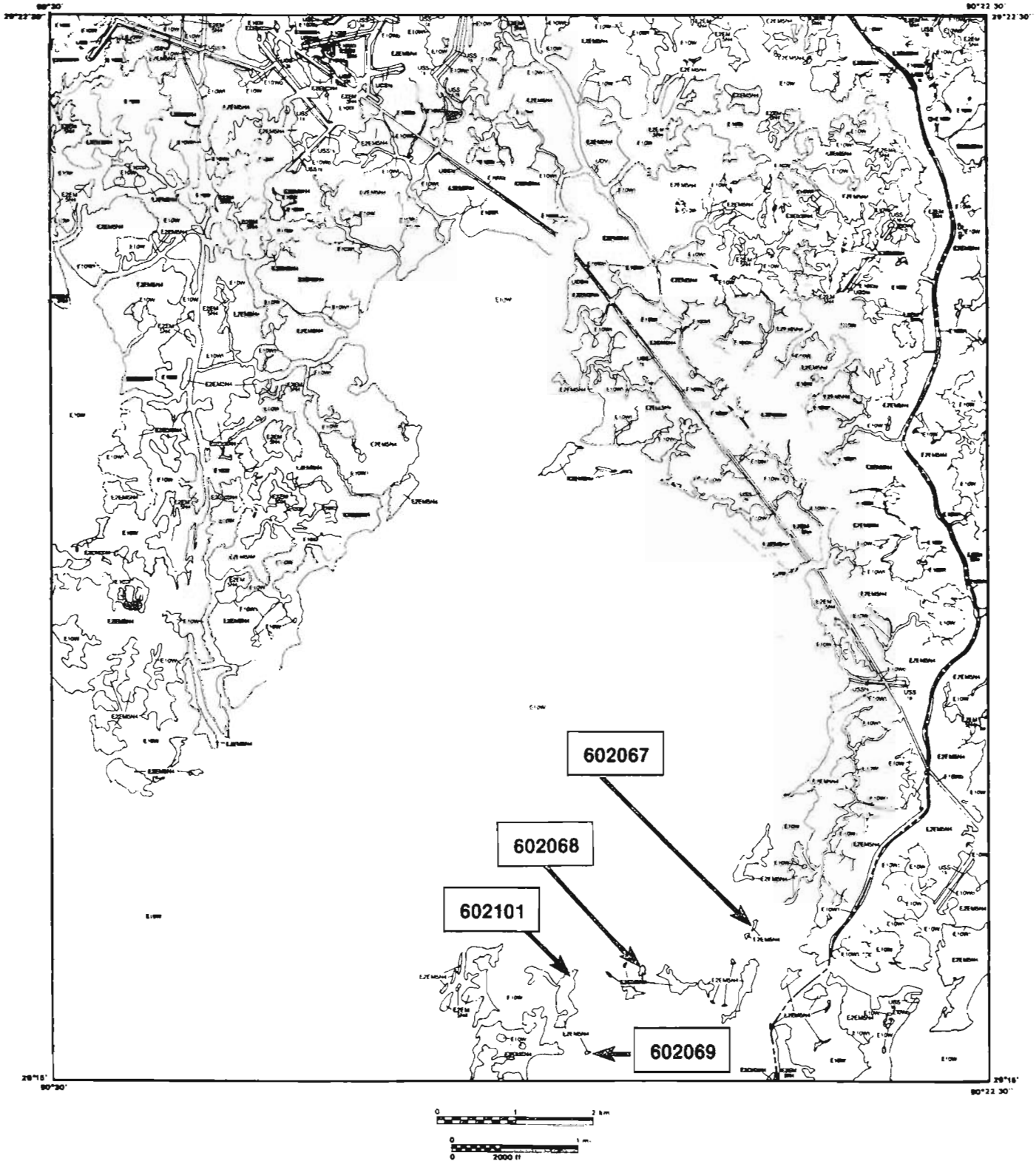
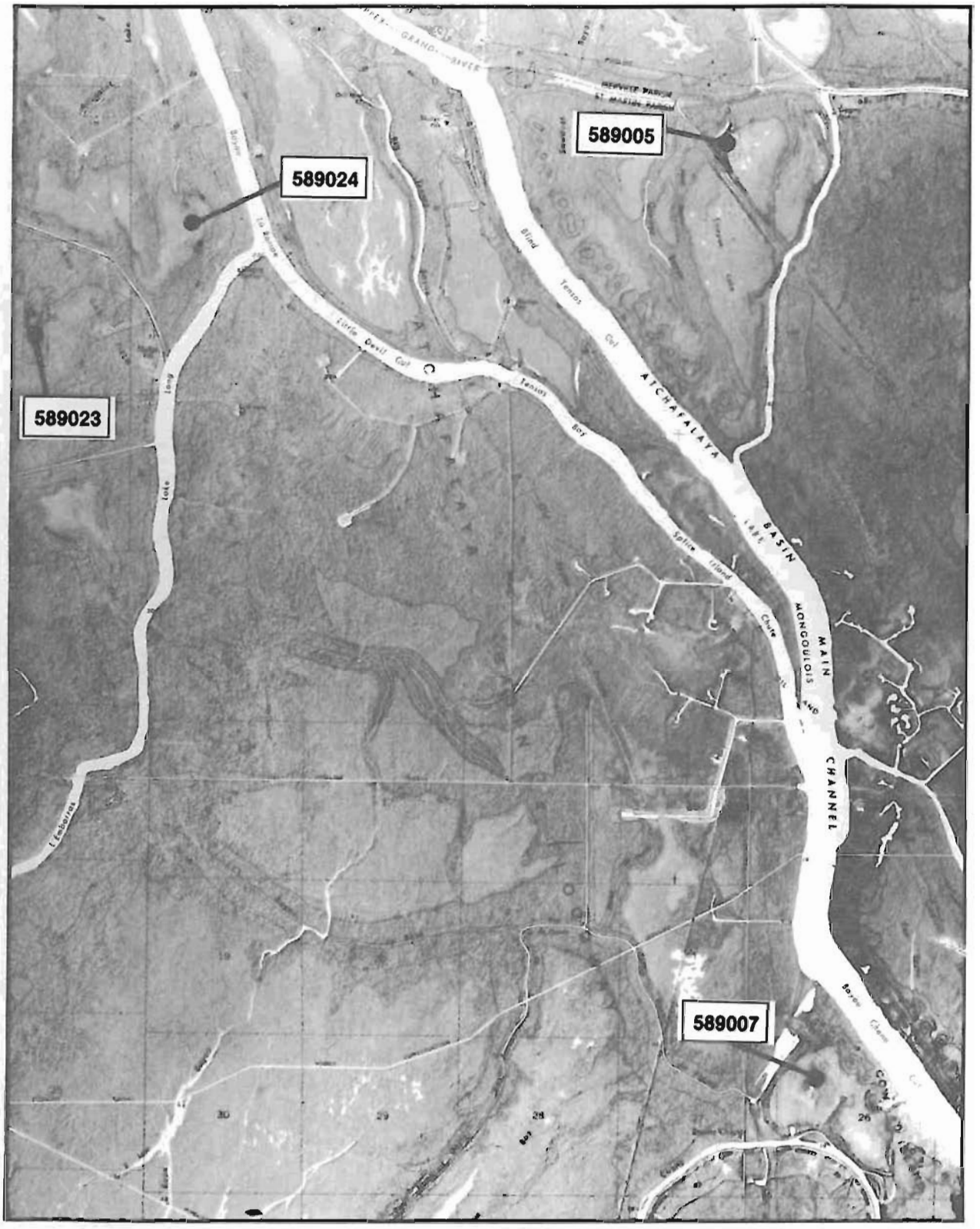
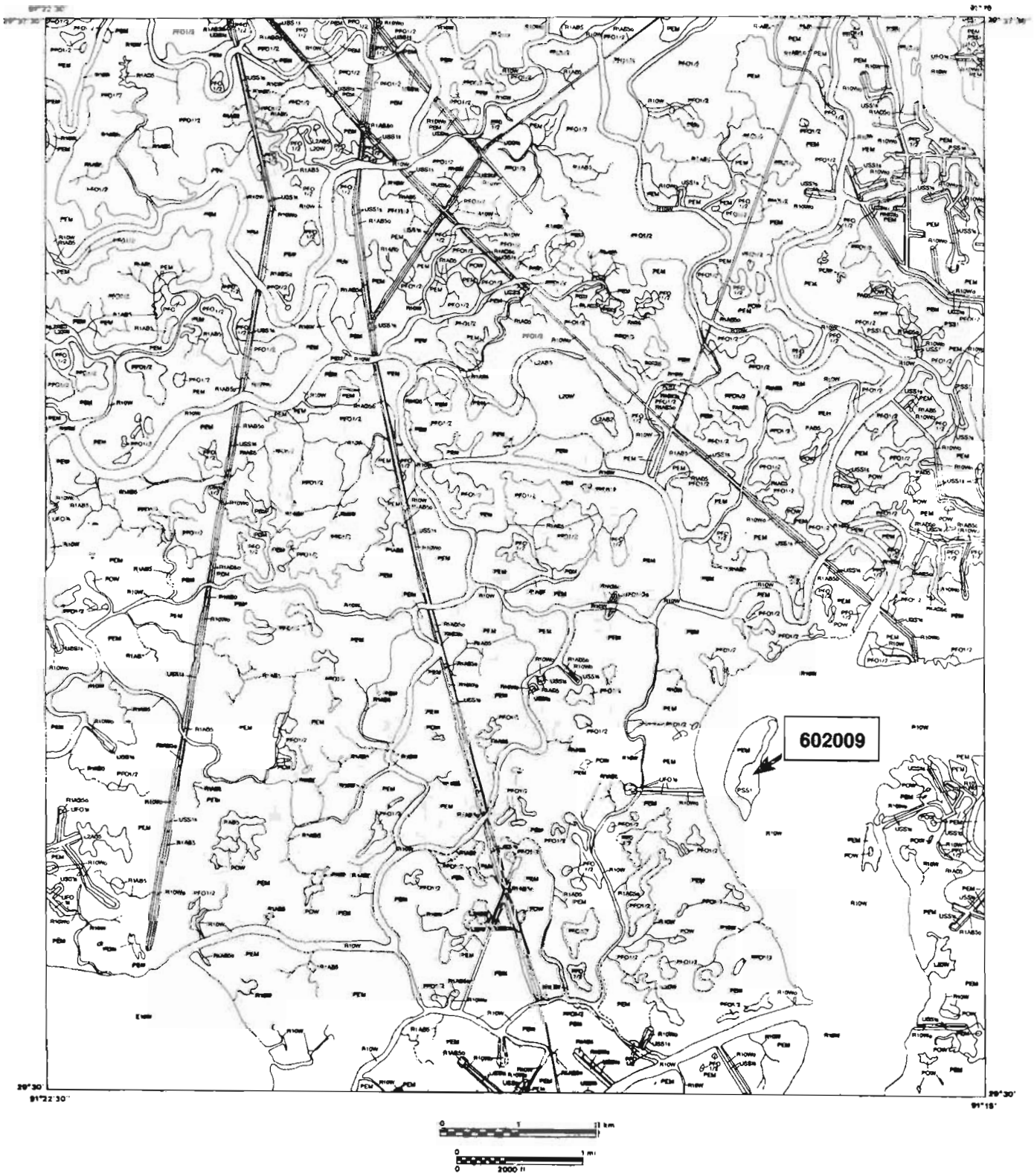
Lake Felicity, LA

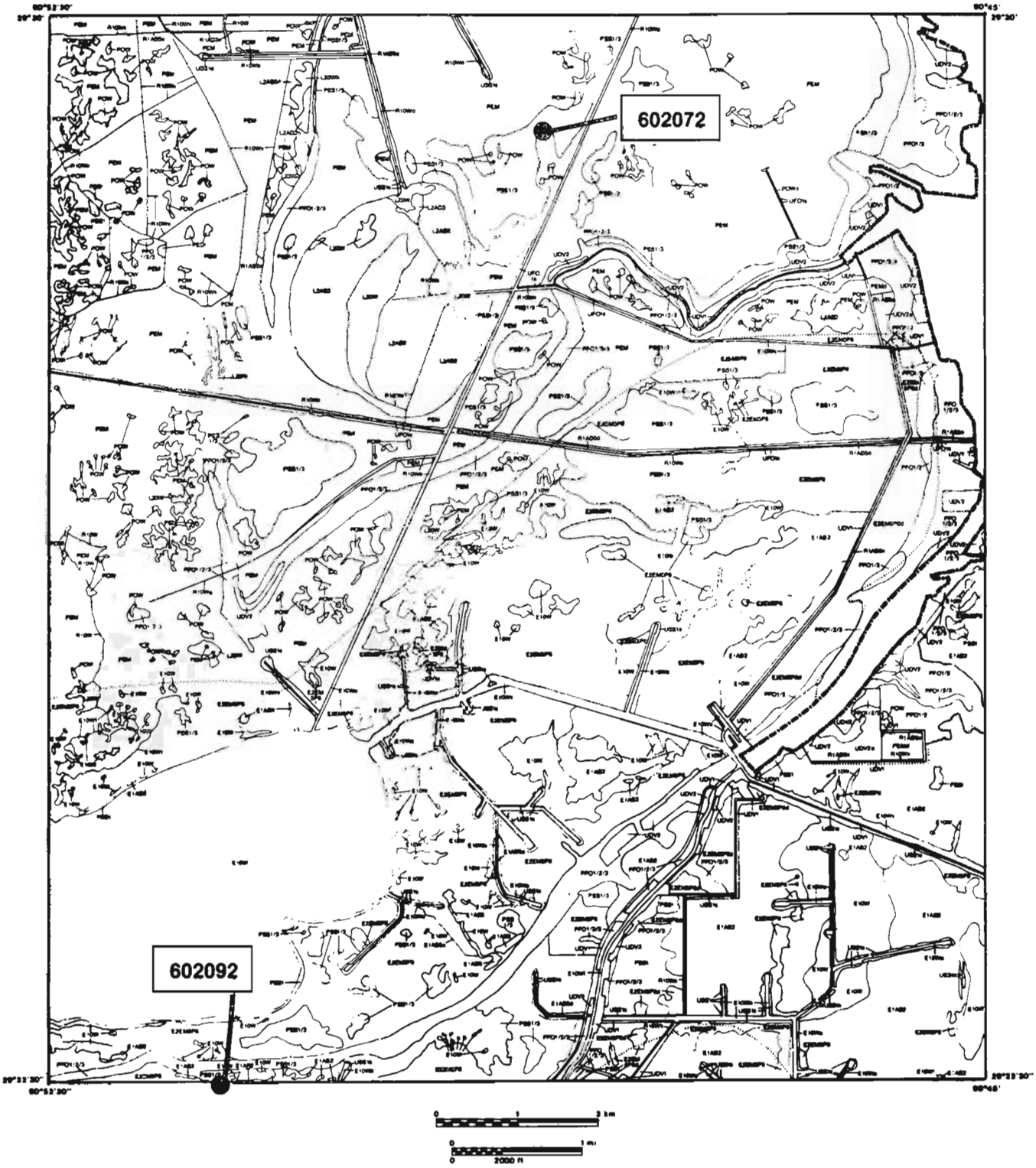


Lake Mongoulois, LA



Lake Salve, LA

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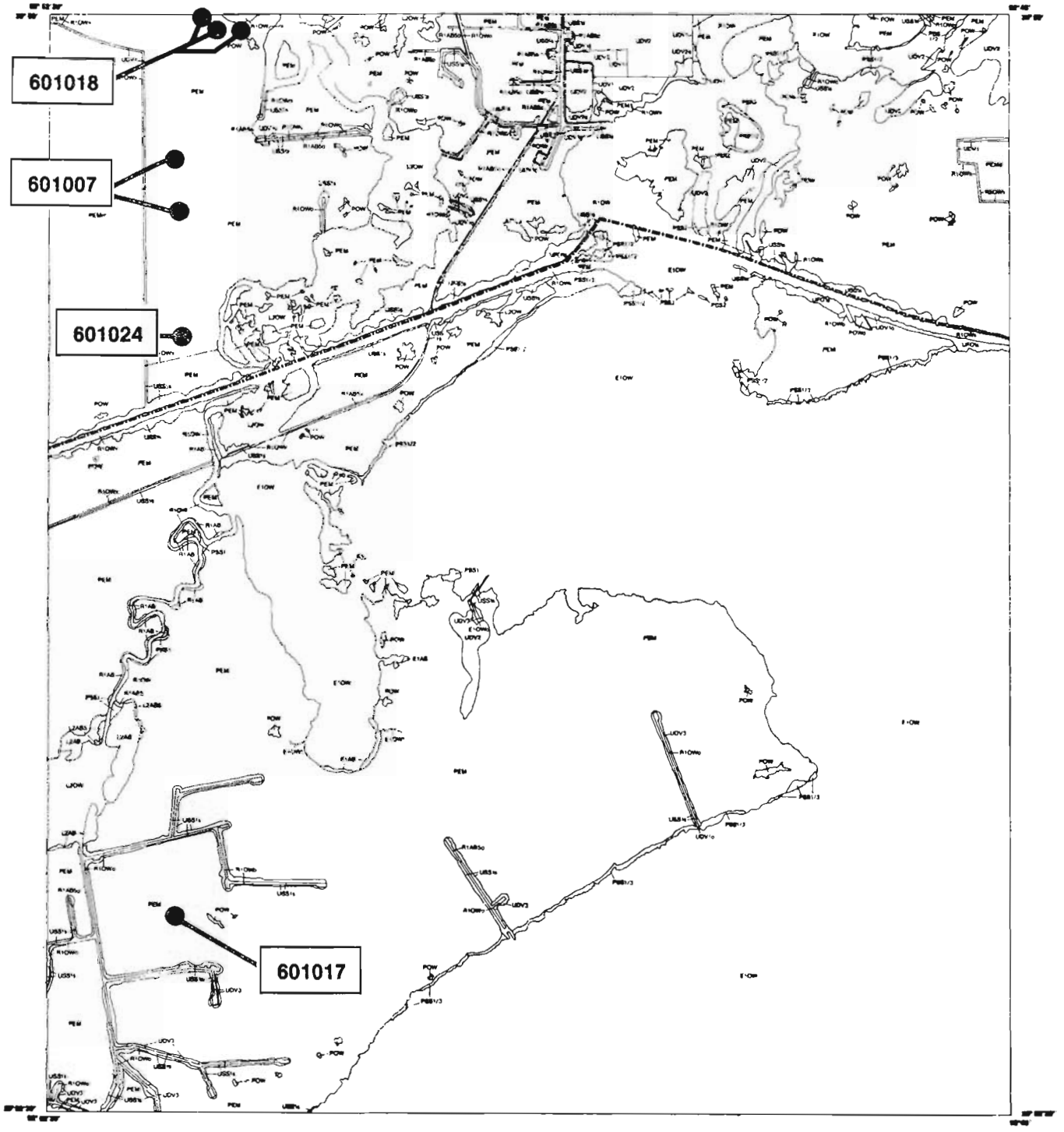
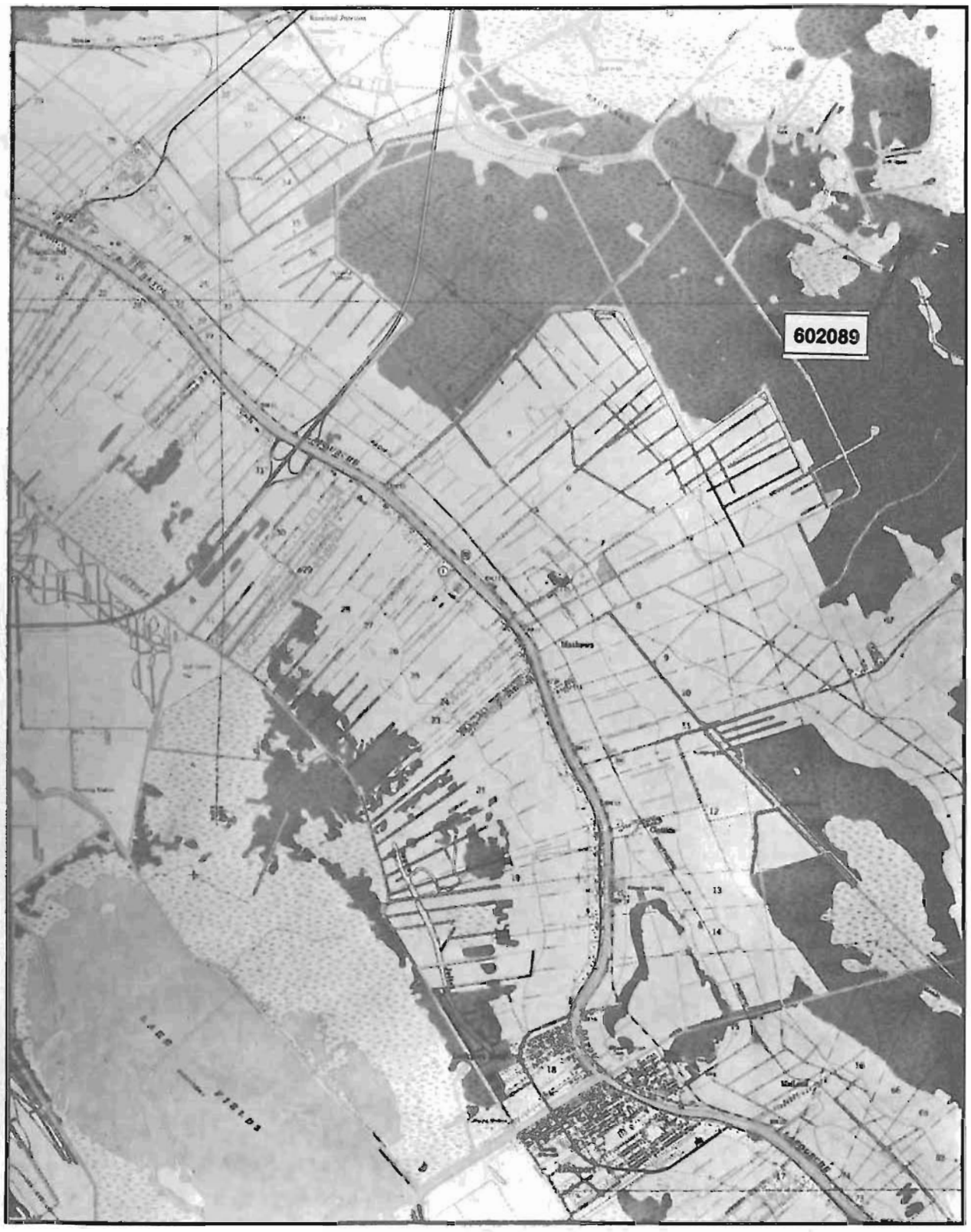
Latania Lake, LA

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LAKE FIELDS
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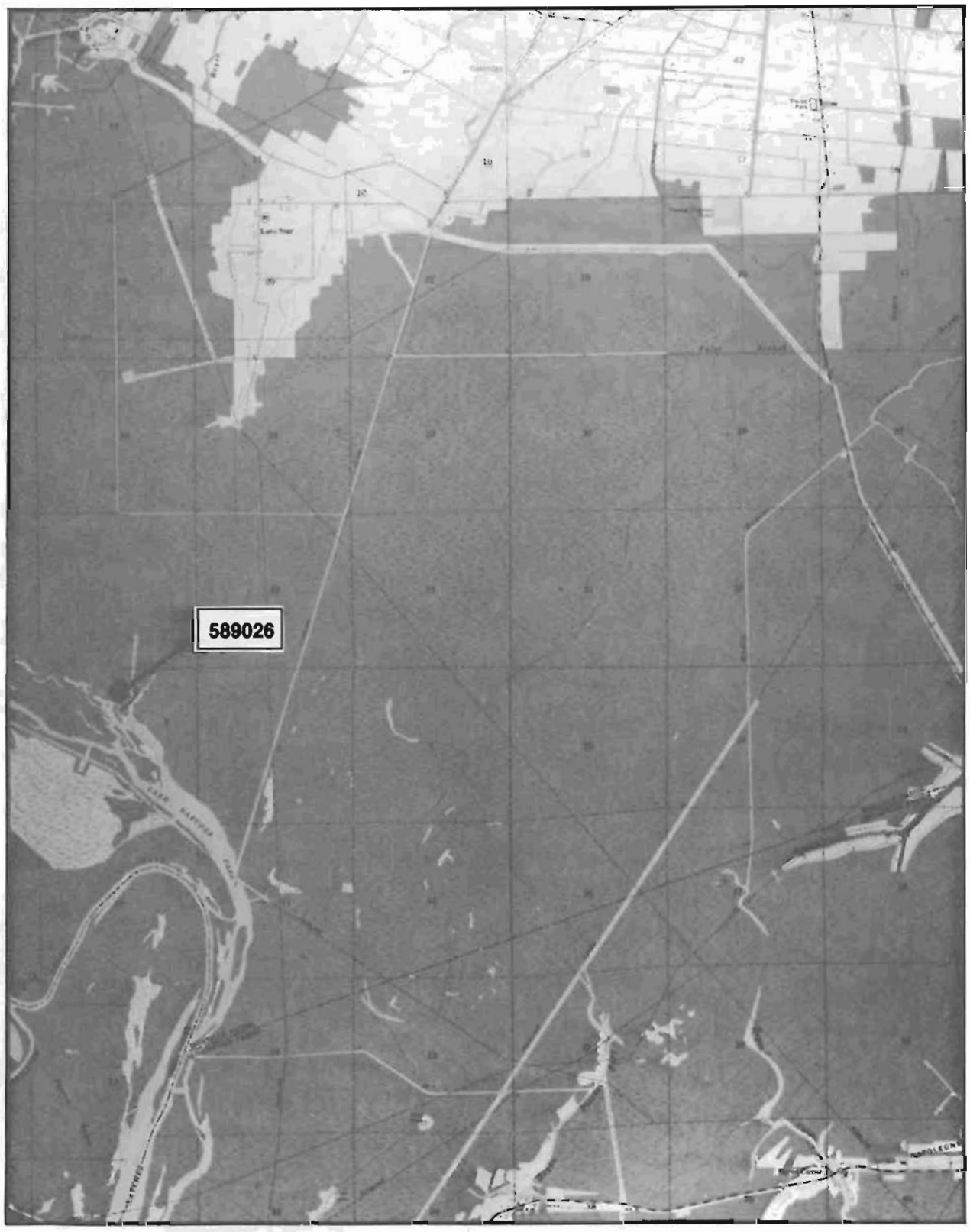
1 0 1 KILOMETER

Lone Star, LA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1 5 0
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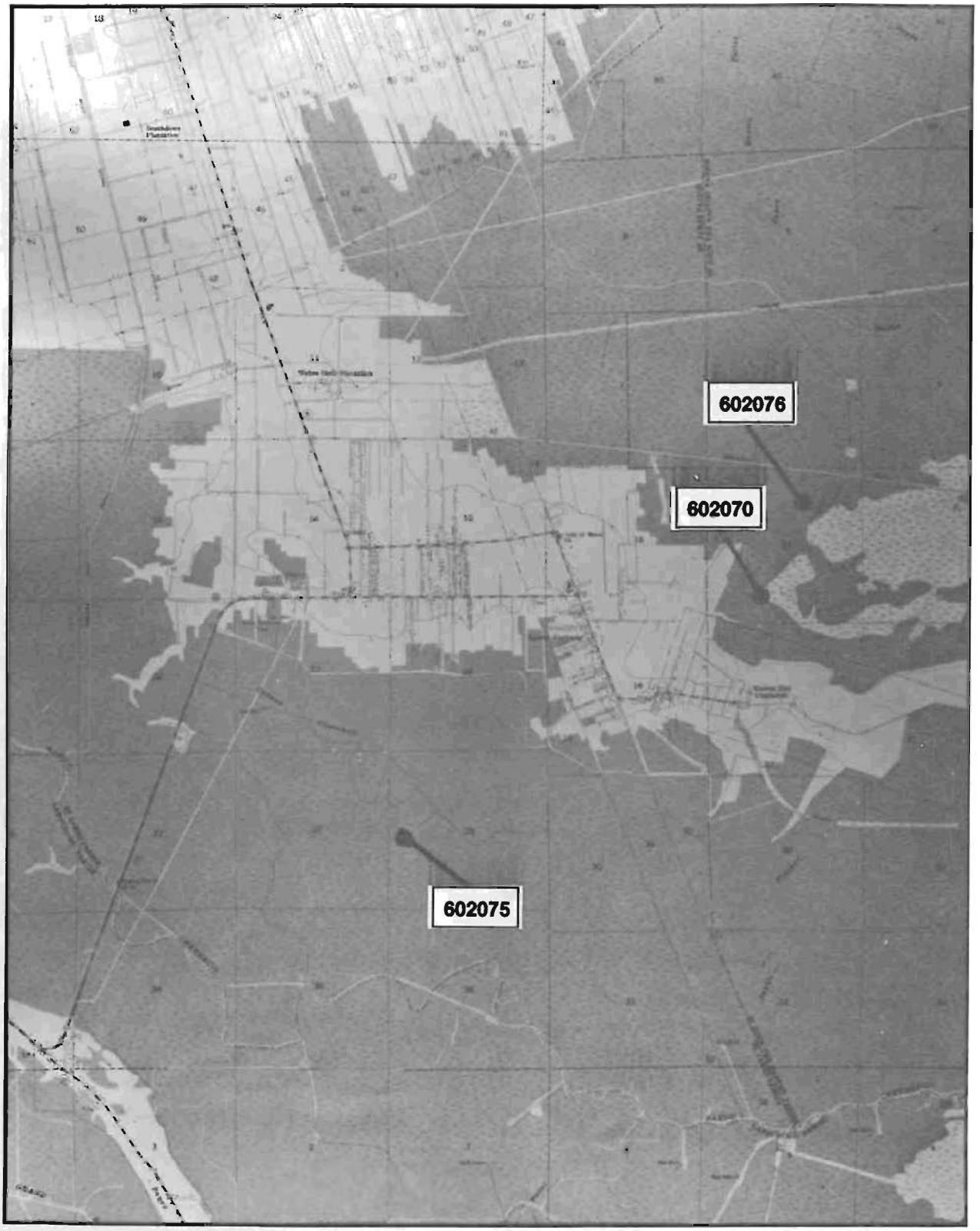
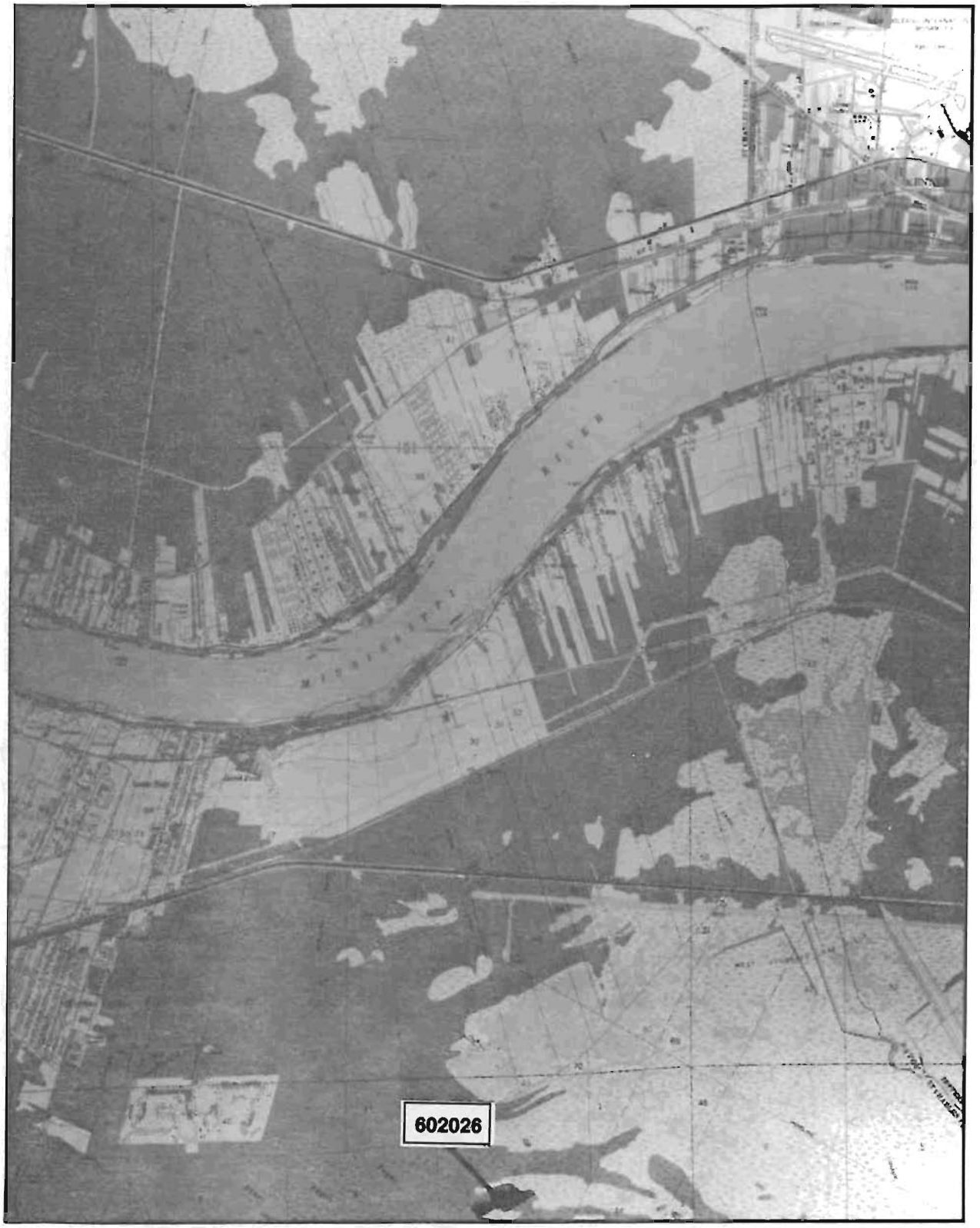
Lower Vacherie, LA



Luling, LA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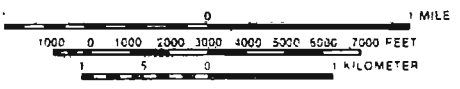
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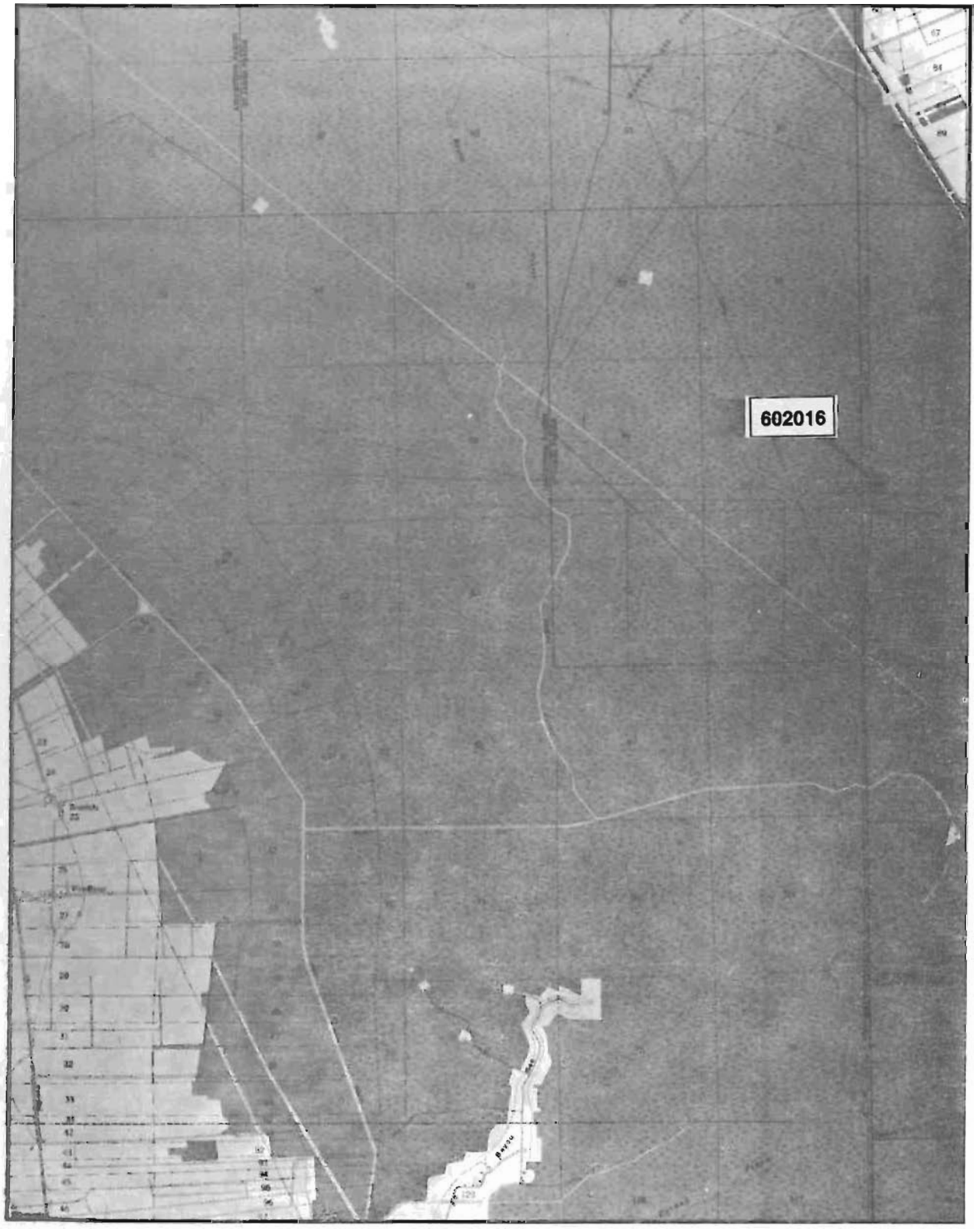
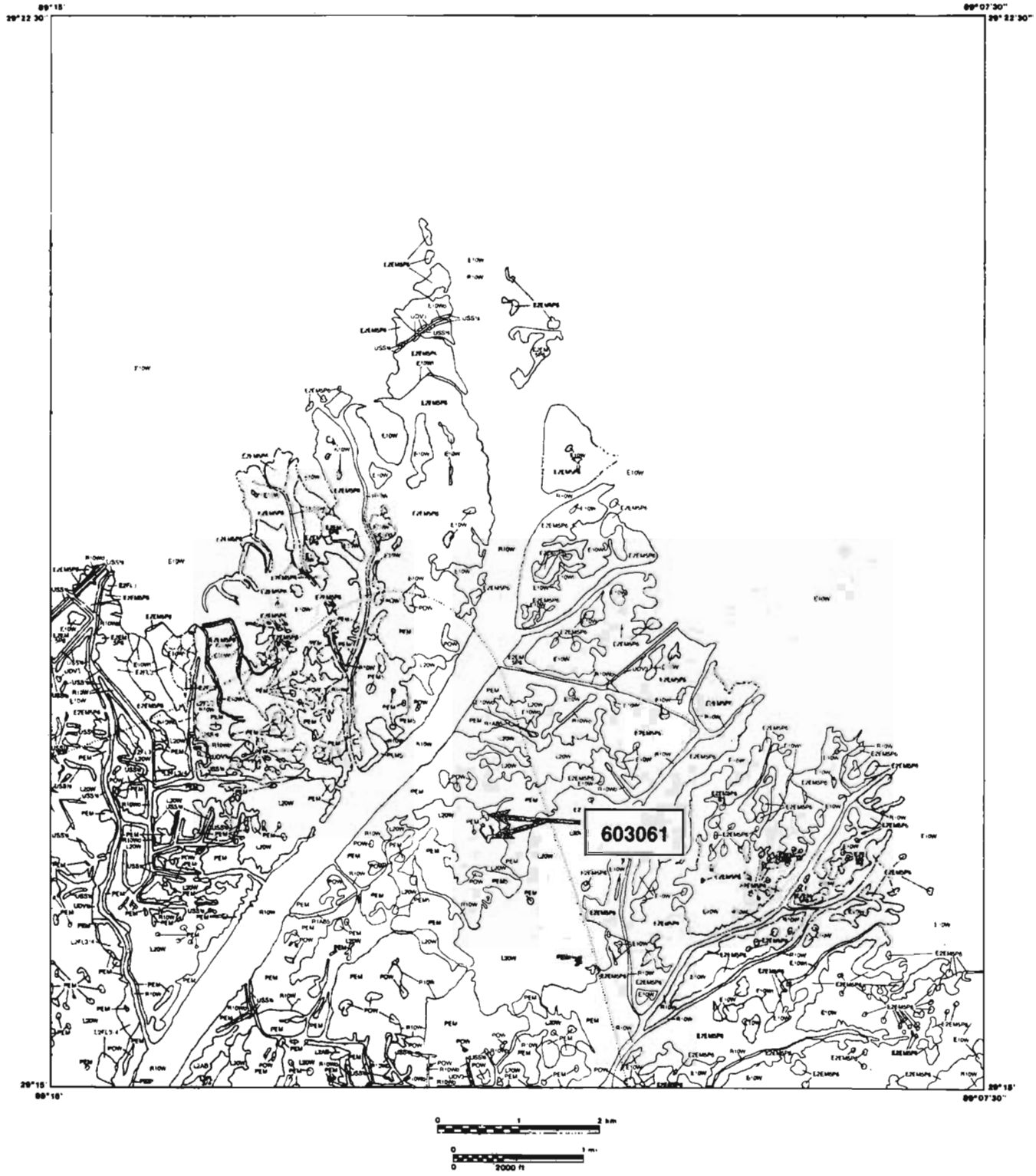
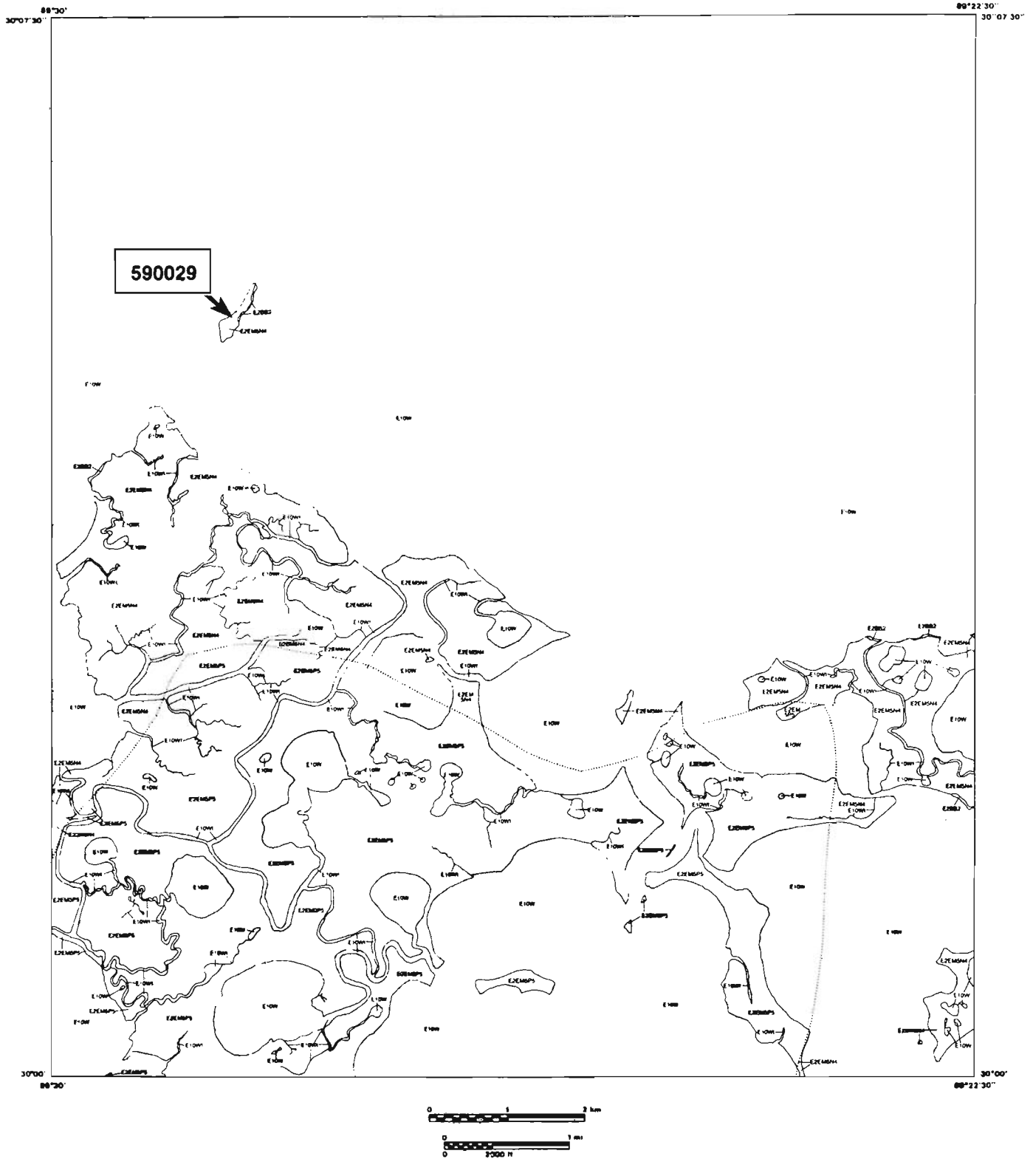
Madewood, LA



Main Pass, LA

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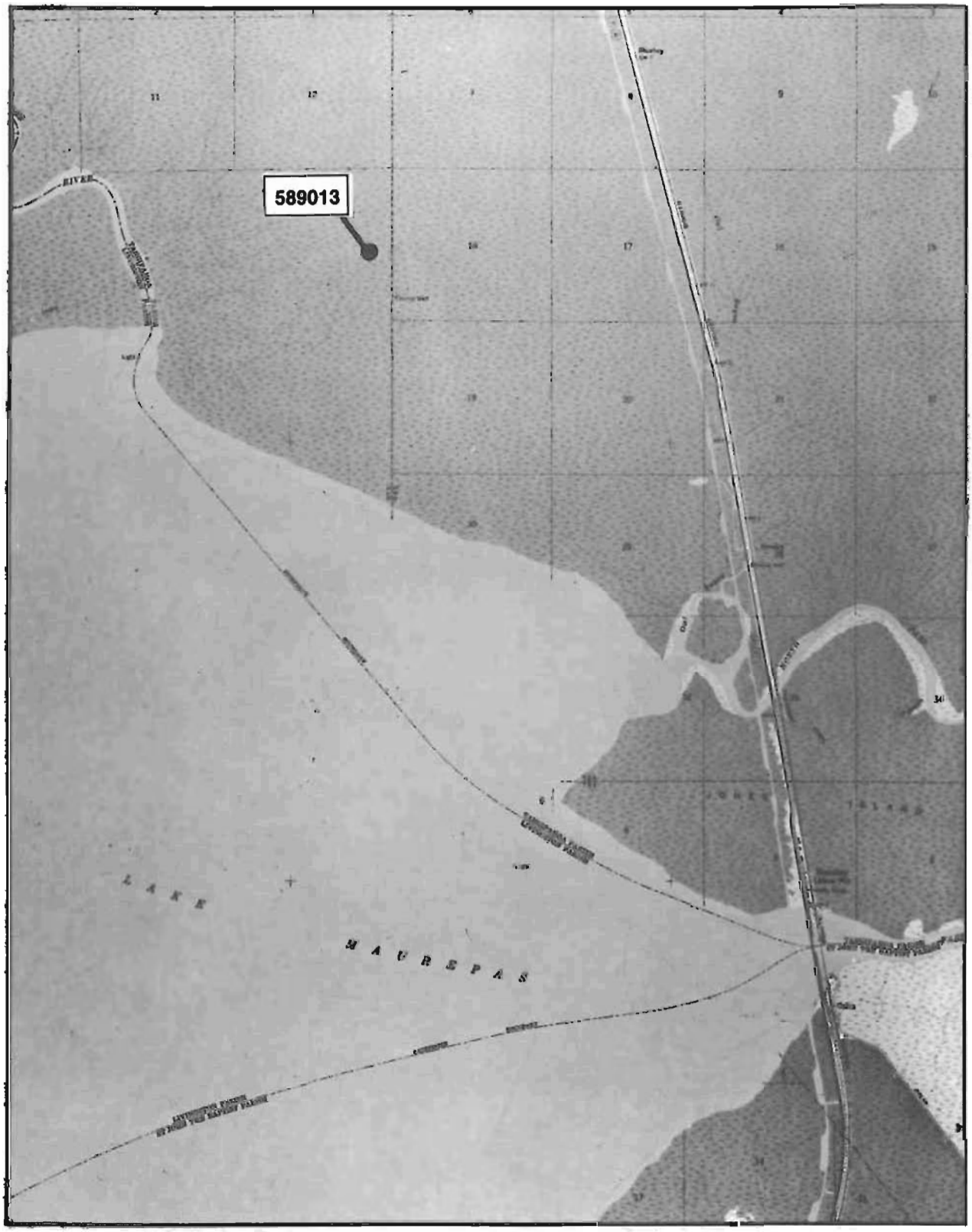
Manchac, LA


589013
LAKE MAUREPAS
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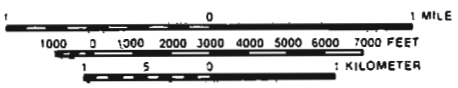
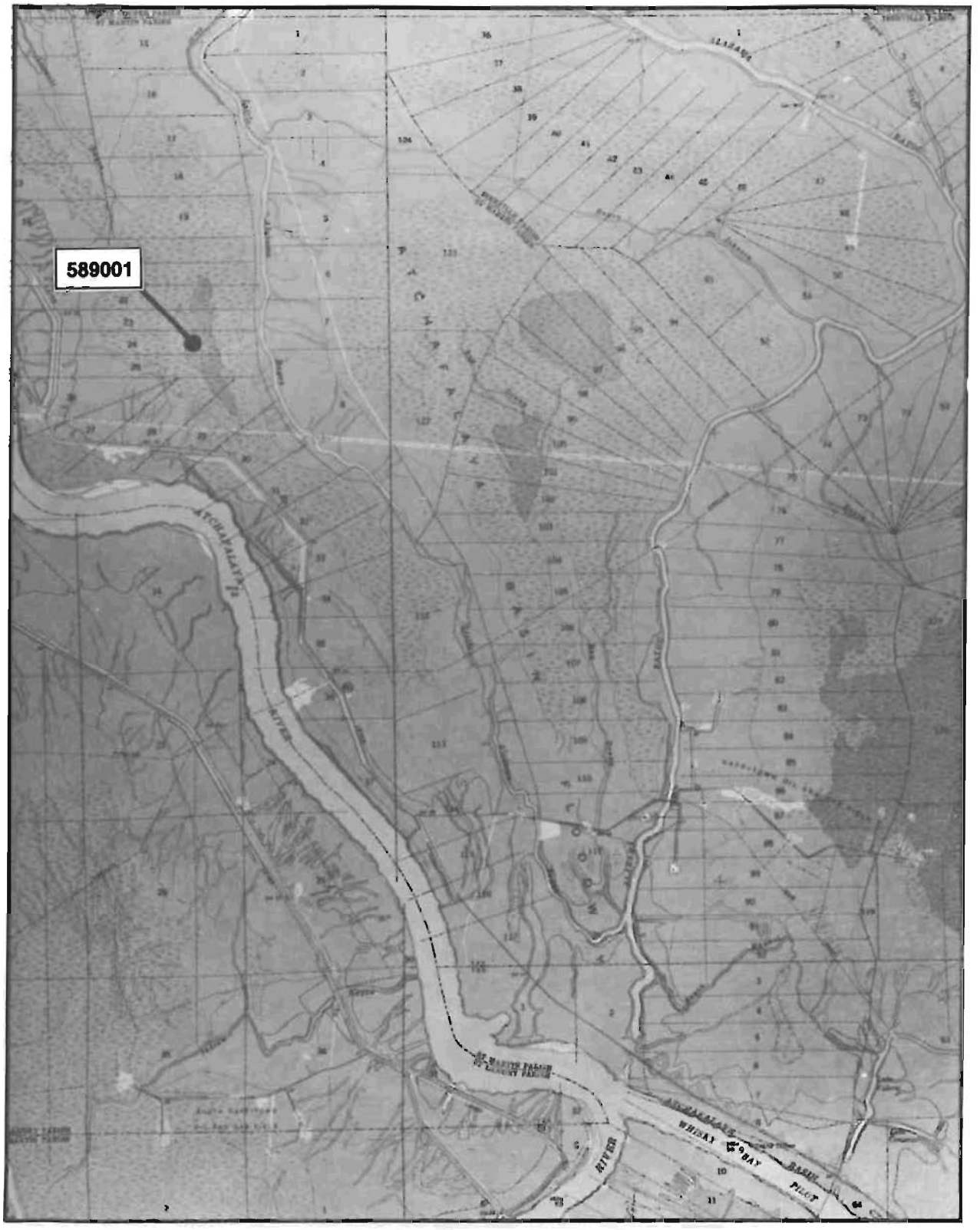
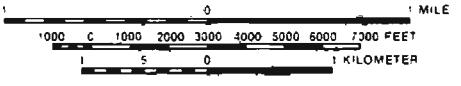
1 5 0 1 KILOMETER

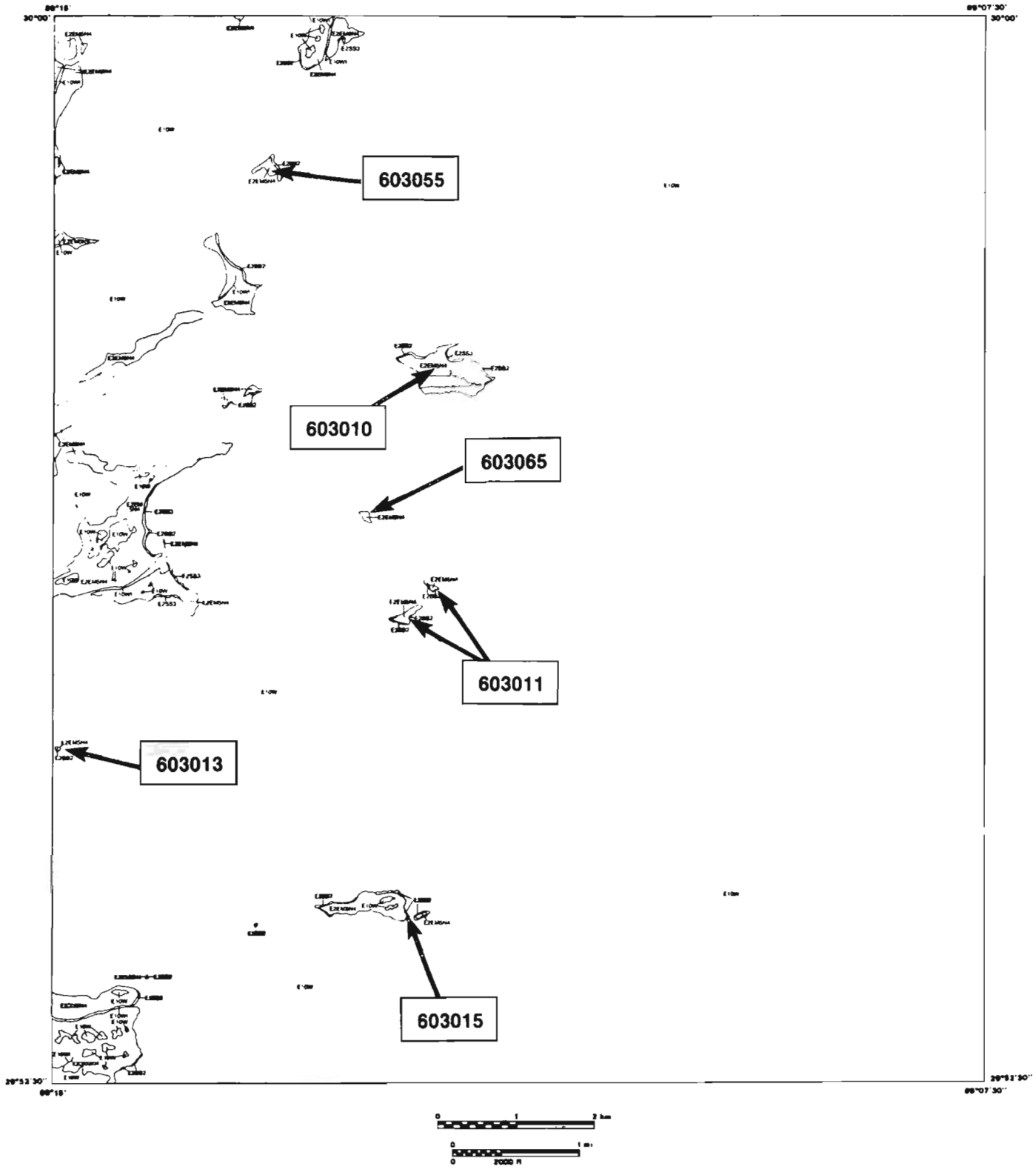
Maringouin, LA



Maringouin NW, LA



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603013
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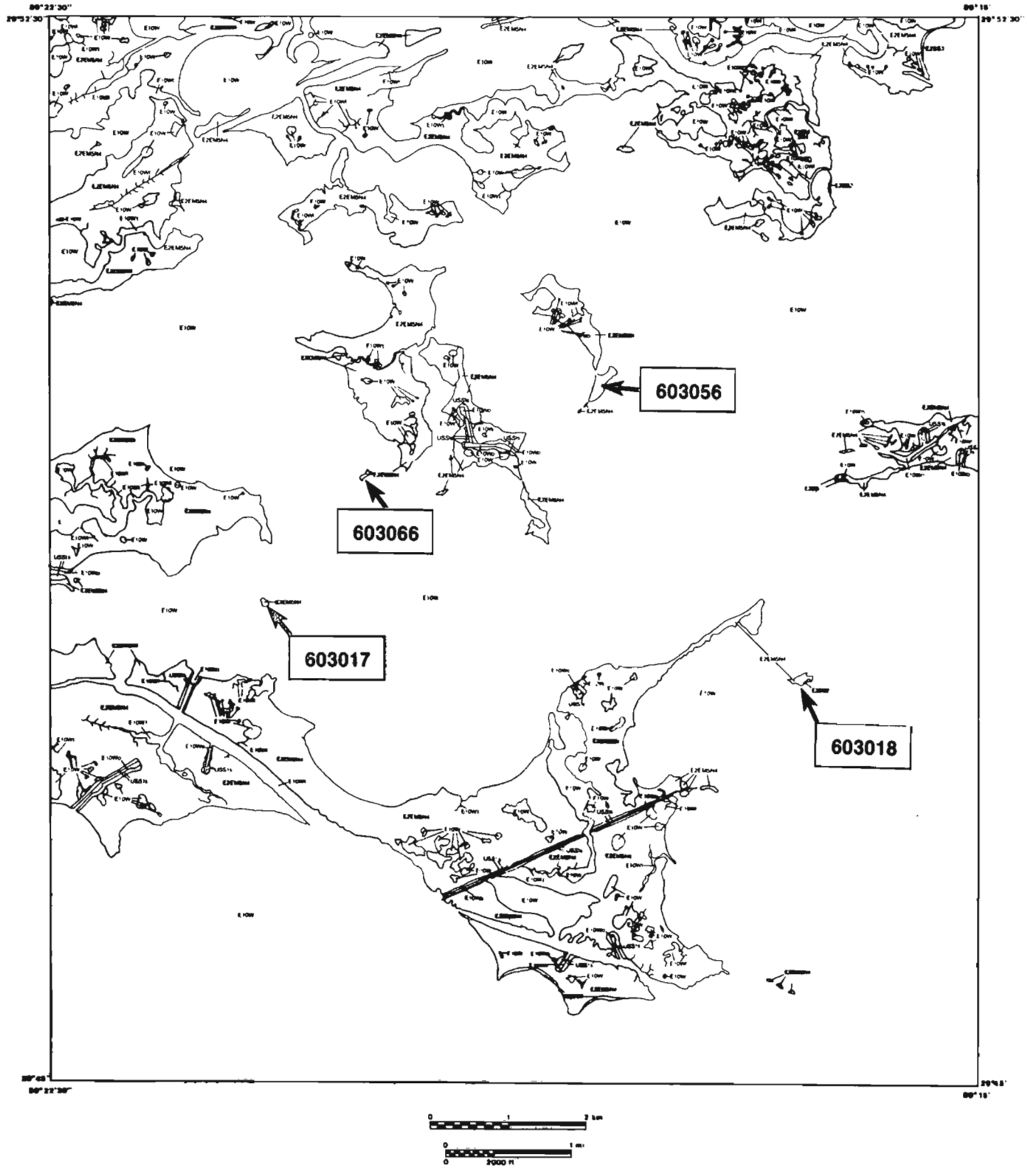
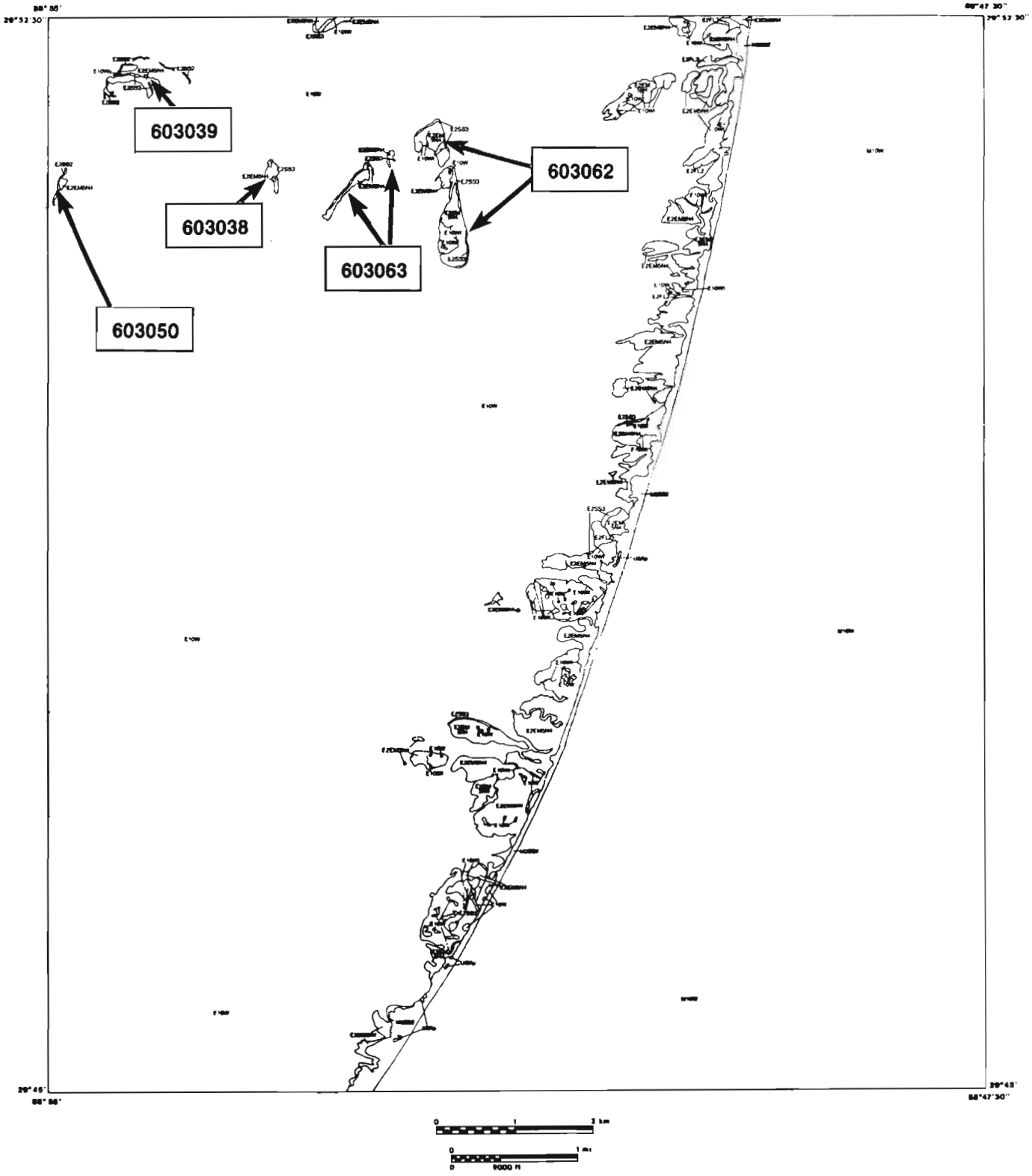
Morgan Harbor, LA

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603062
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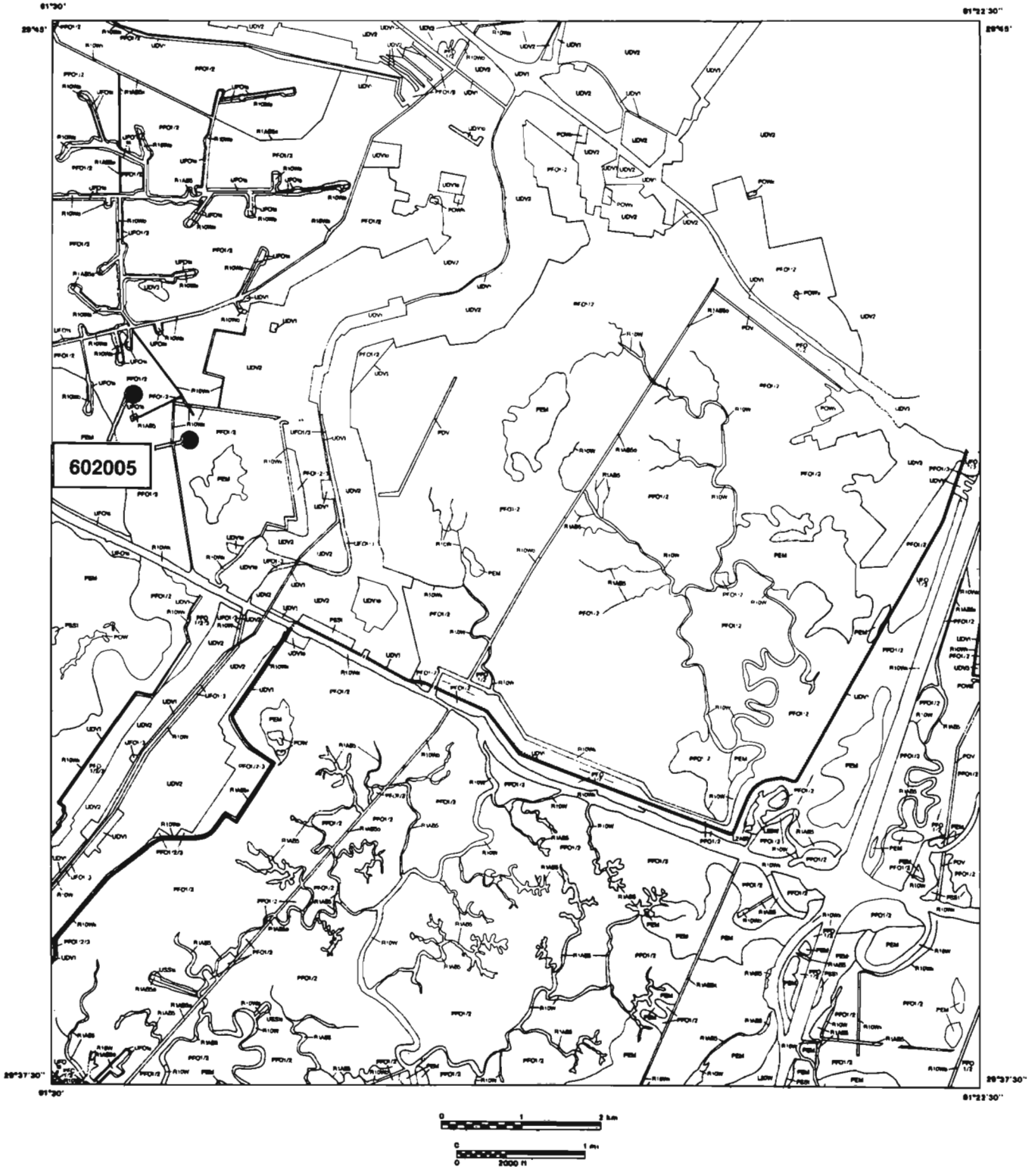
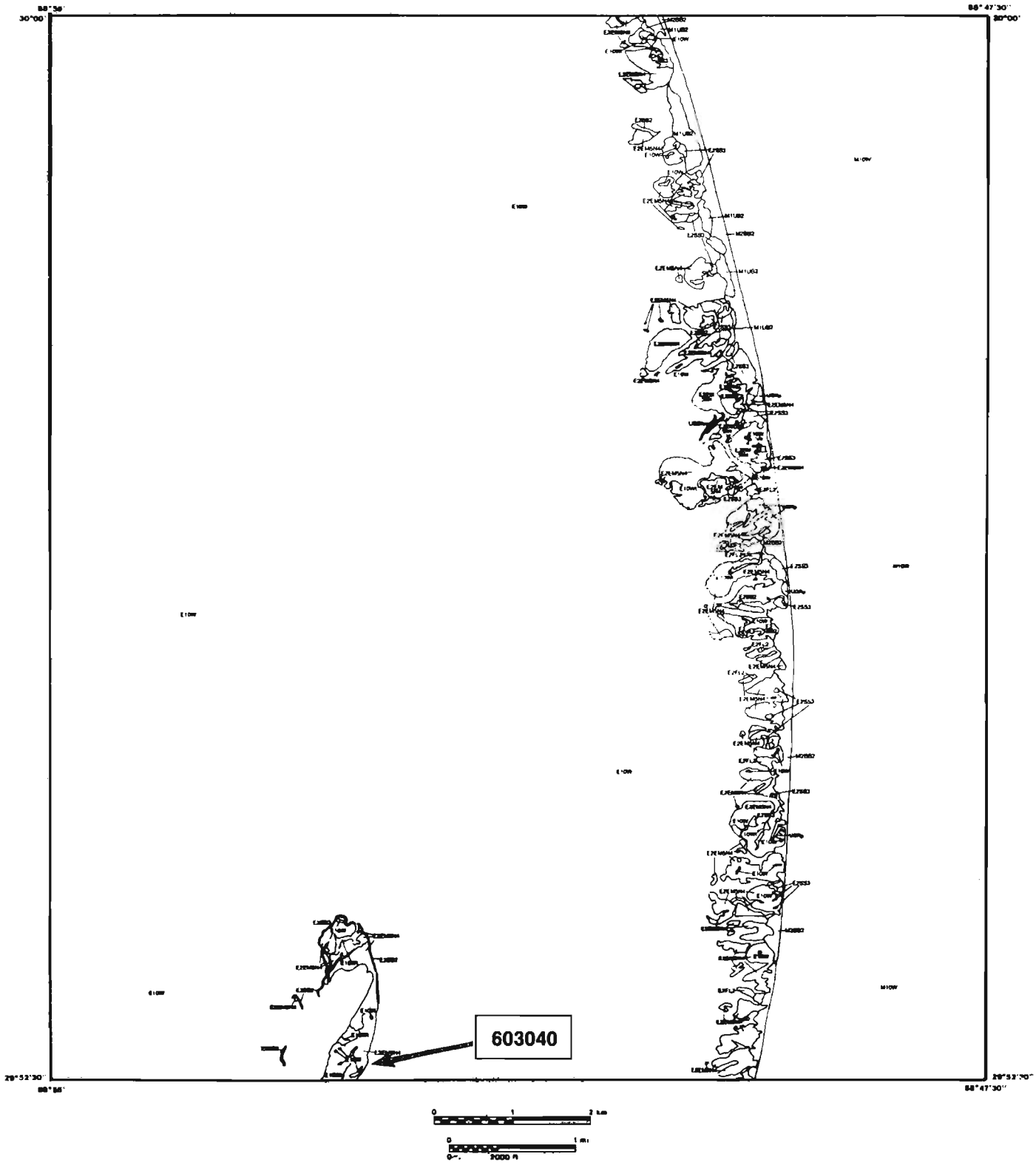
North Bend, LA

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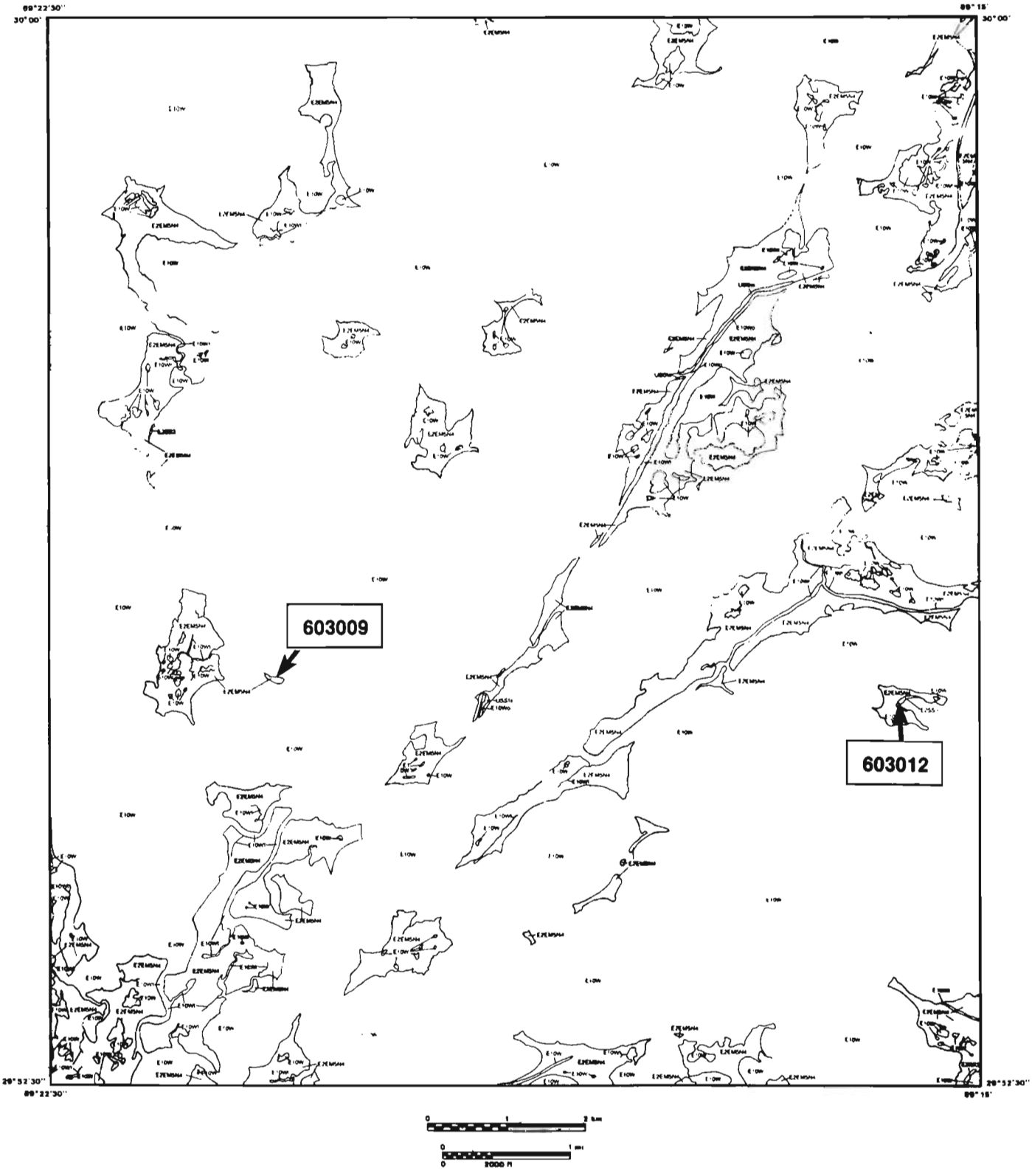
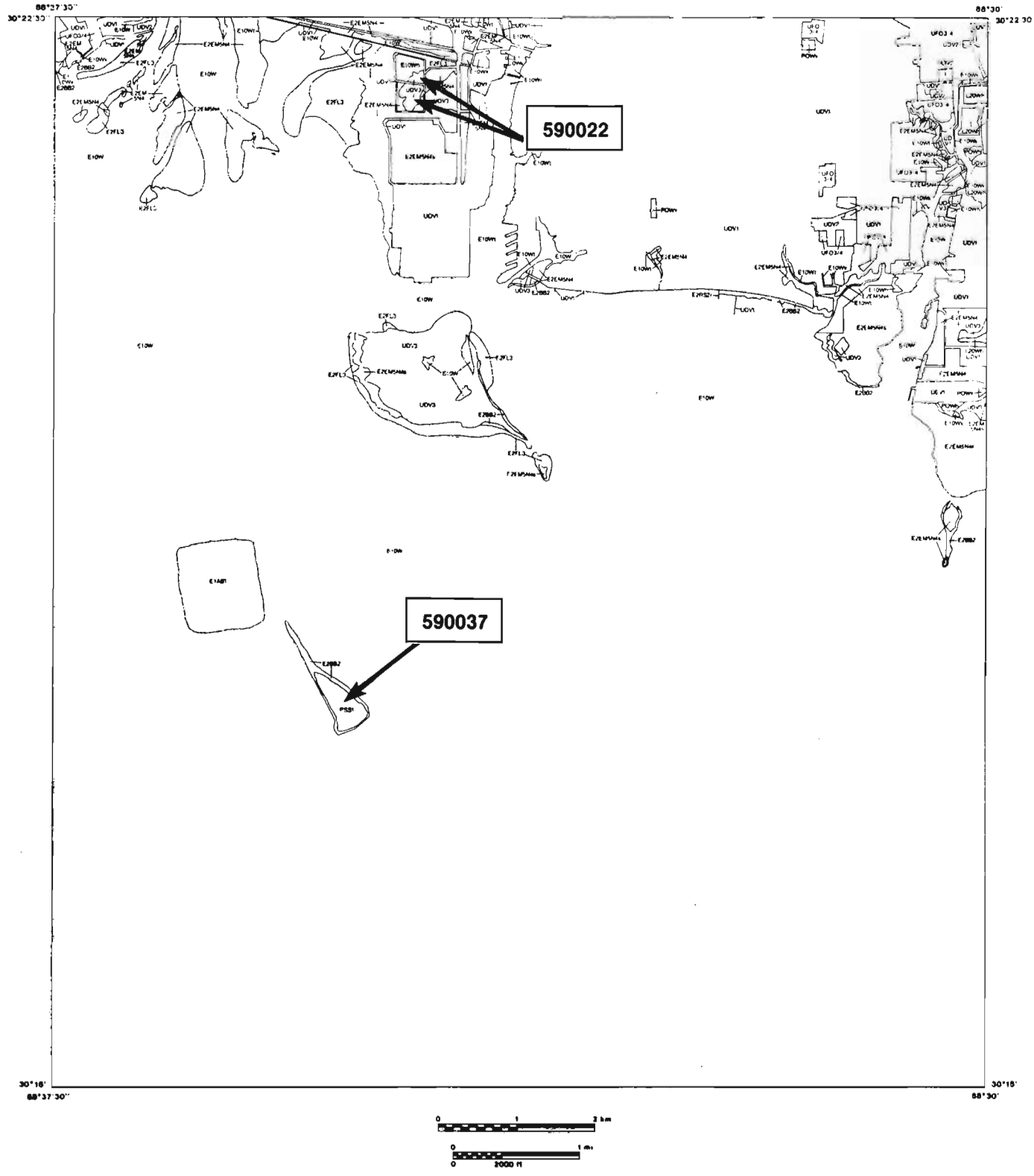
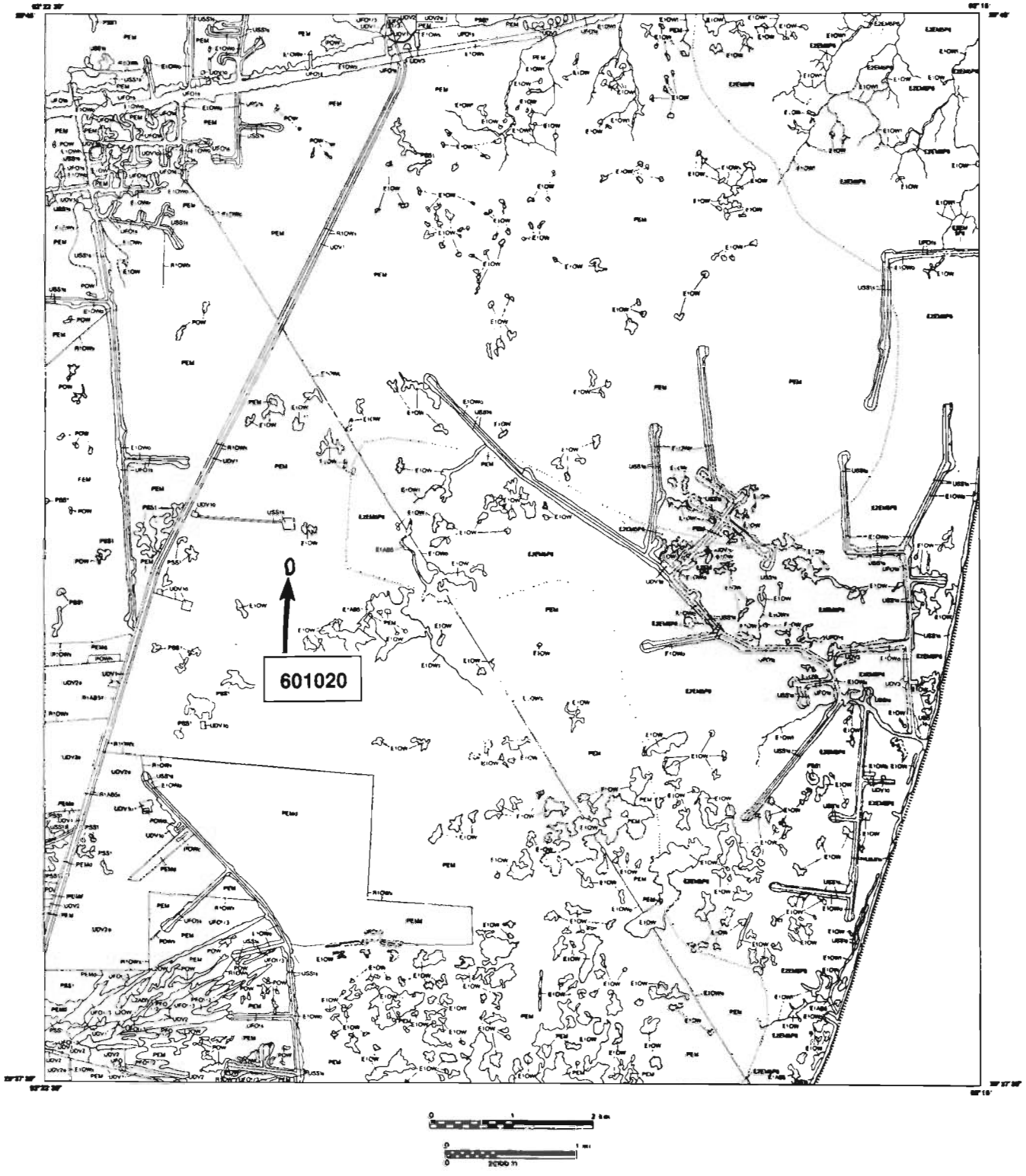
Oak Mound Bayou, LA

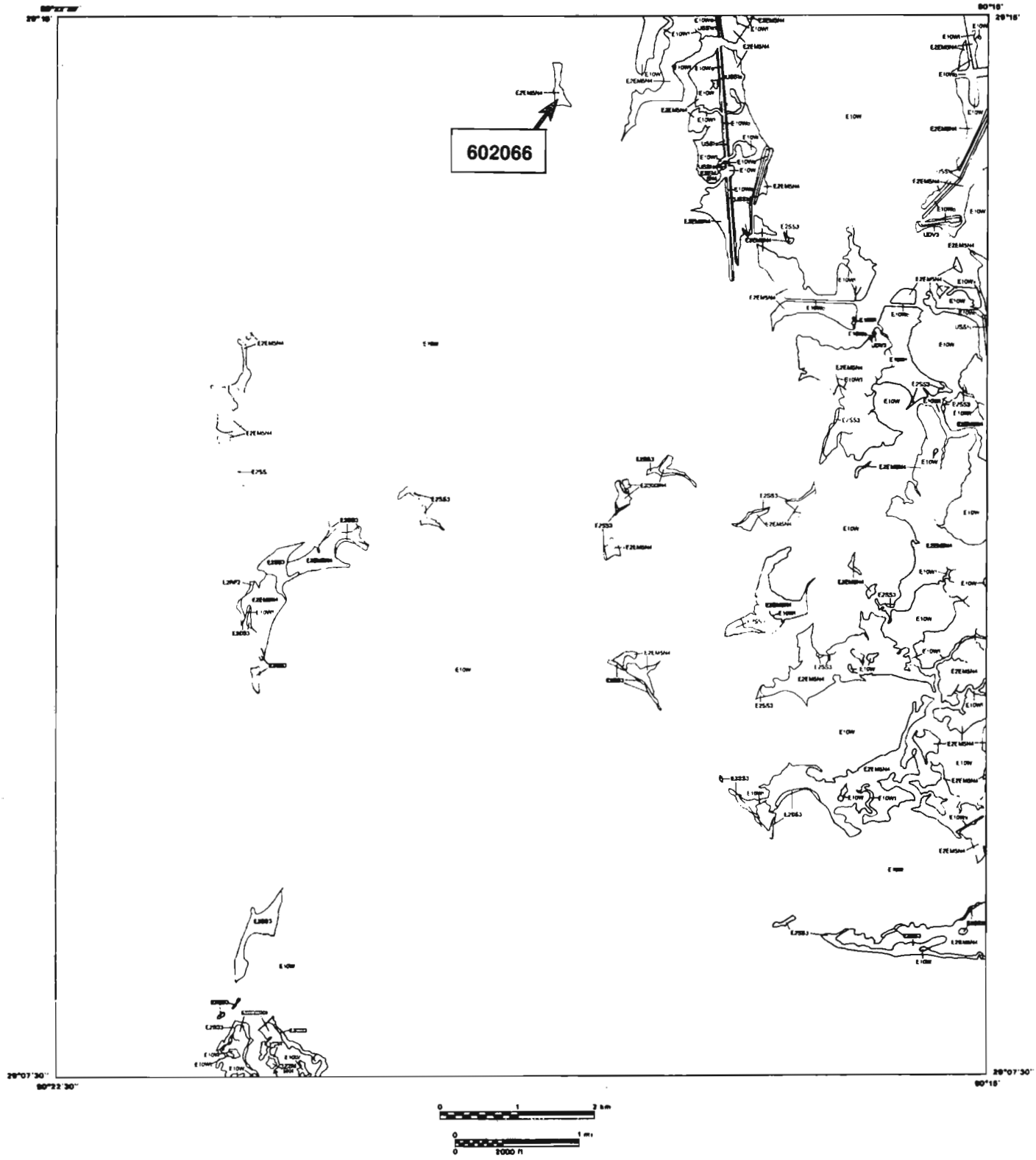



88°27'30"
30°22'30"
88°30'
30°22'30"
590022
590037
30°15'
88°37'30"
30°15'
88°30'
0 1 2 km
0 1 mi
0 2000 ft

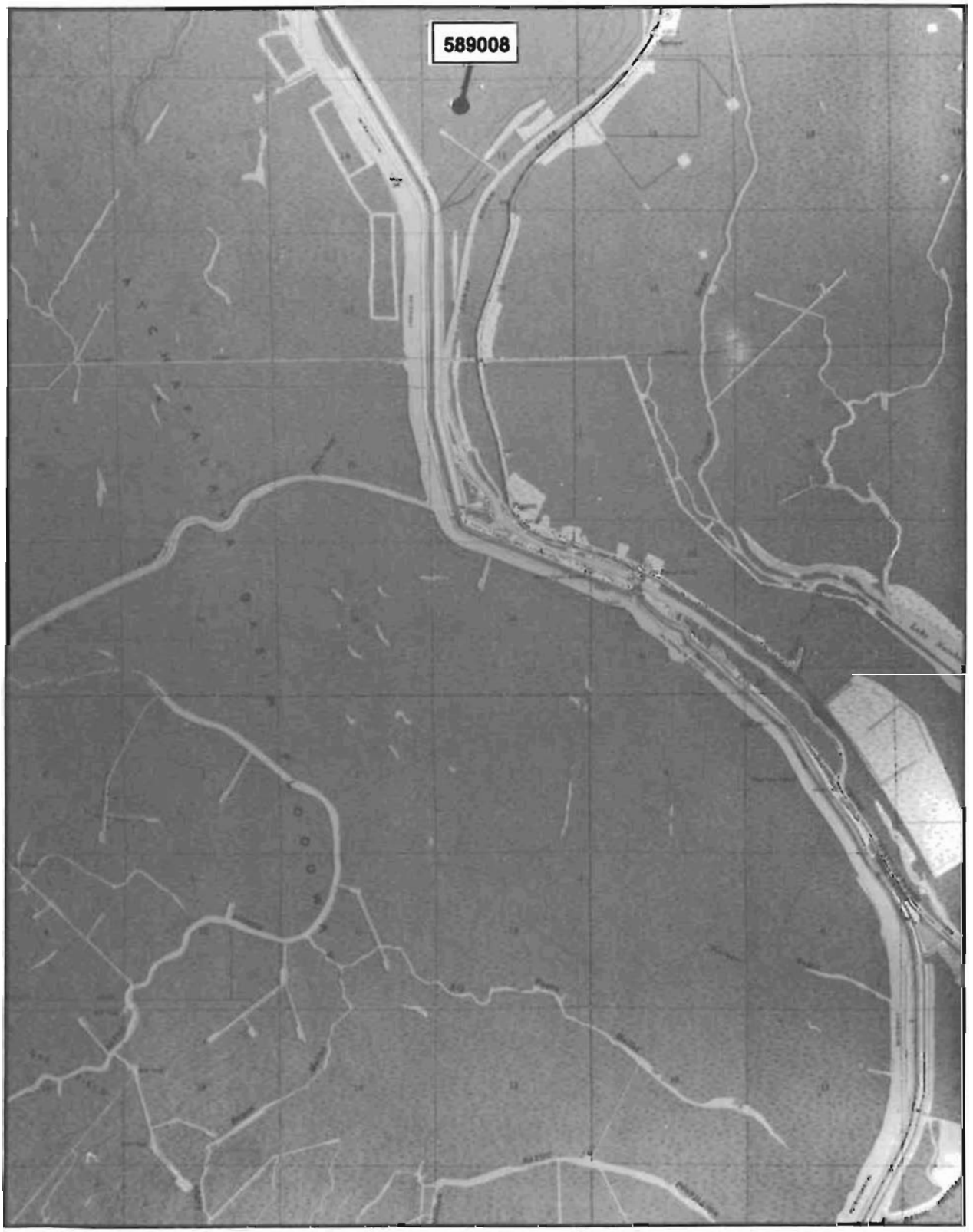
Pecan Island NE, LA



Pelican Pass, LA



Pigeon, LA


589008
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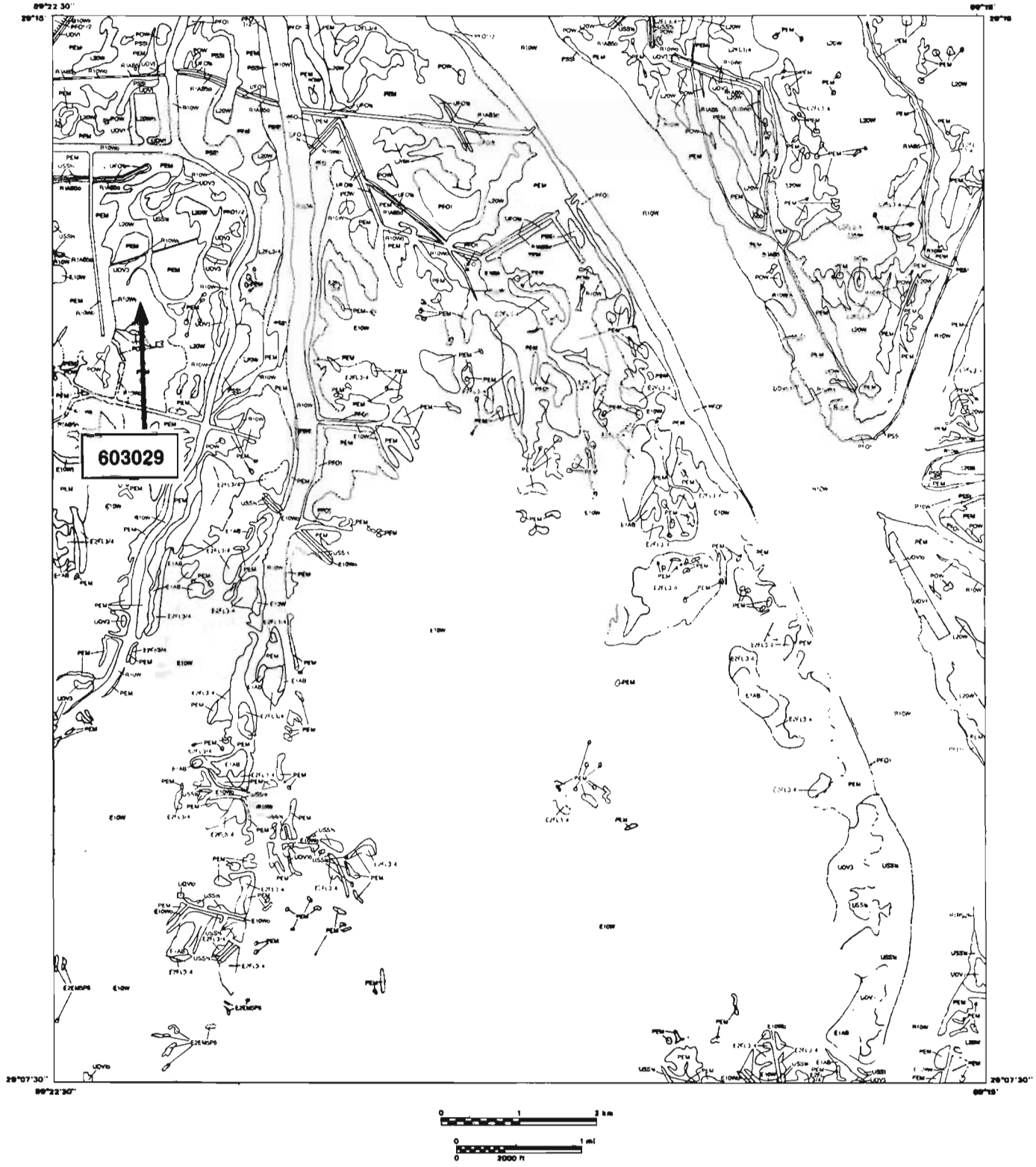
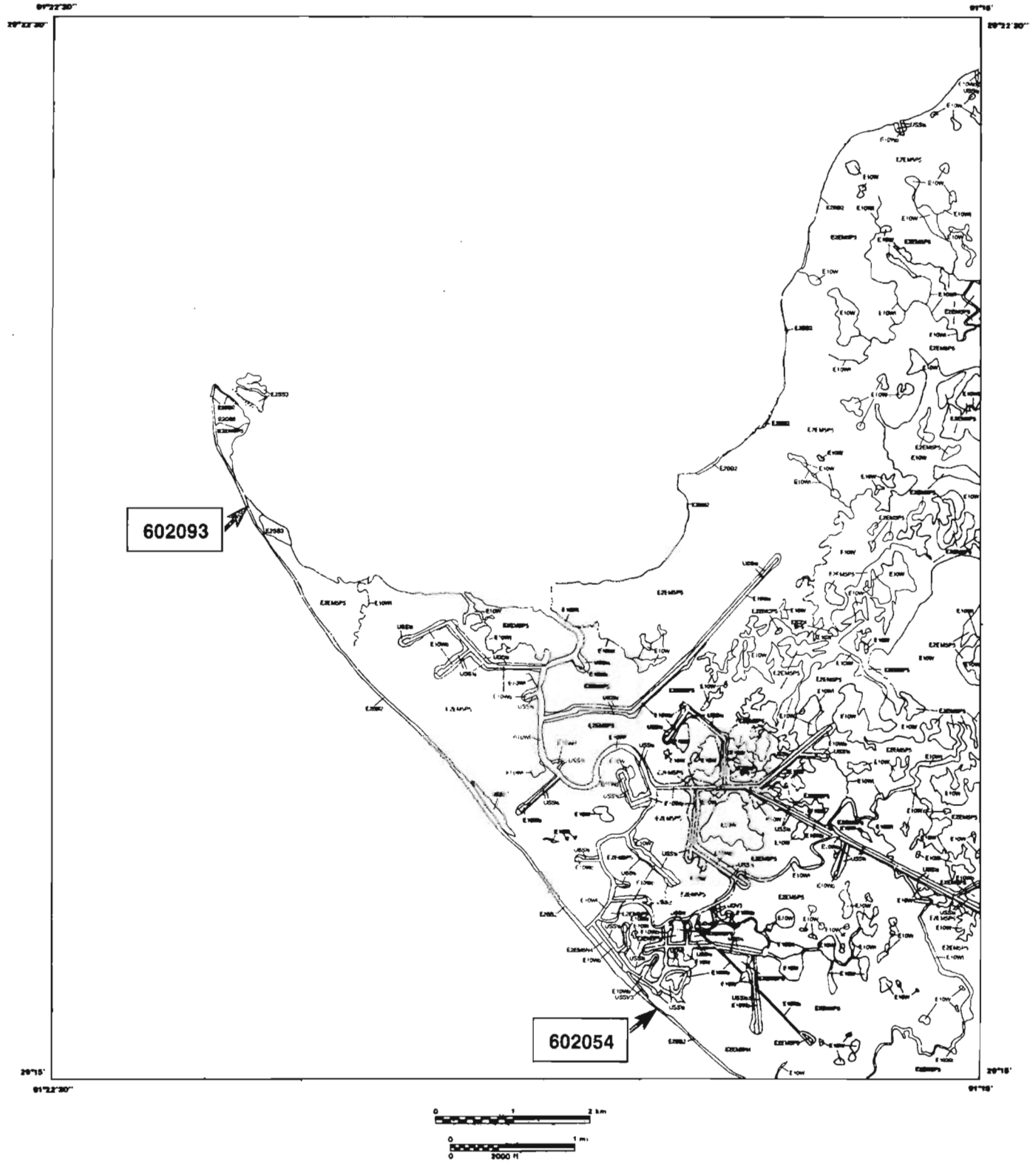
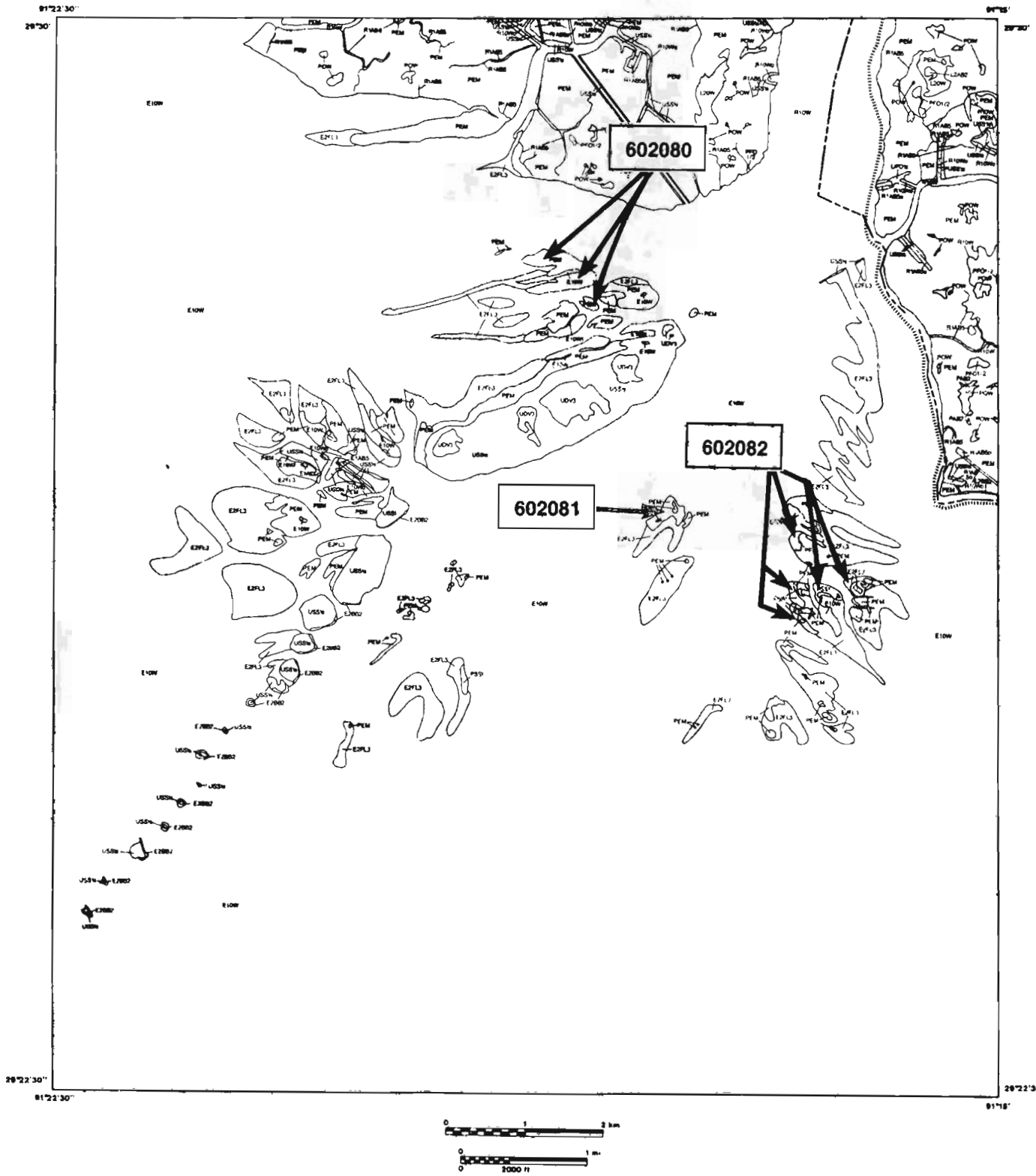
Pilottown, LA



Point Au Fer, LA

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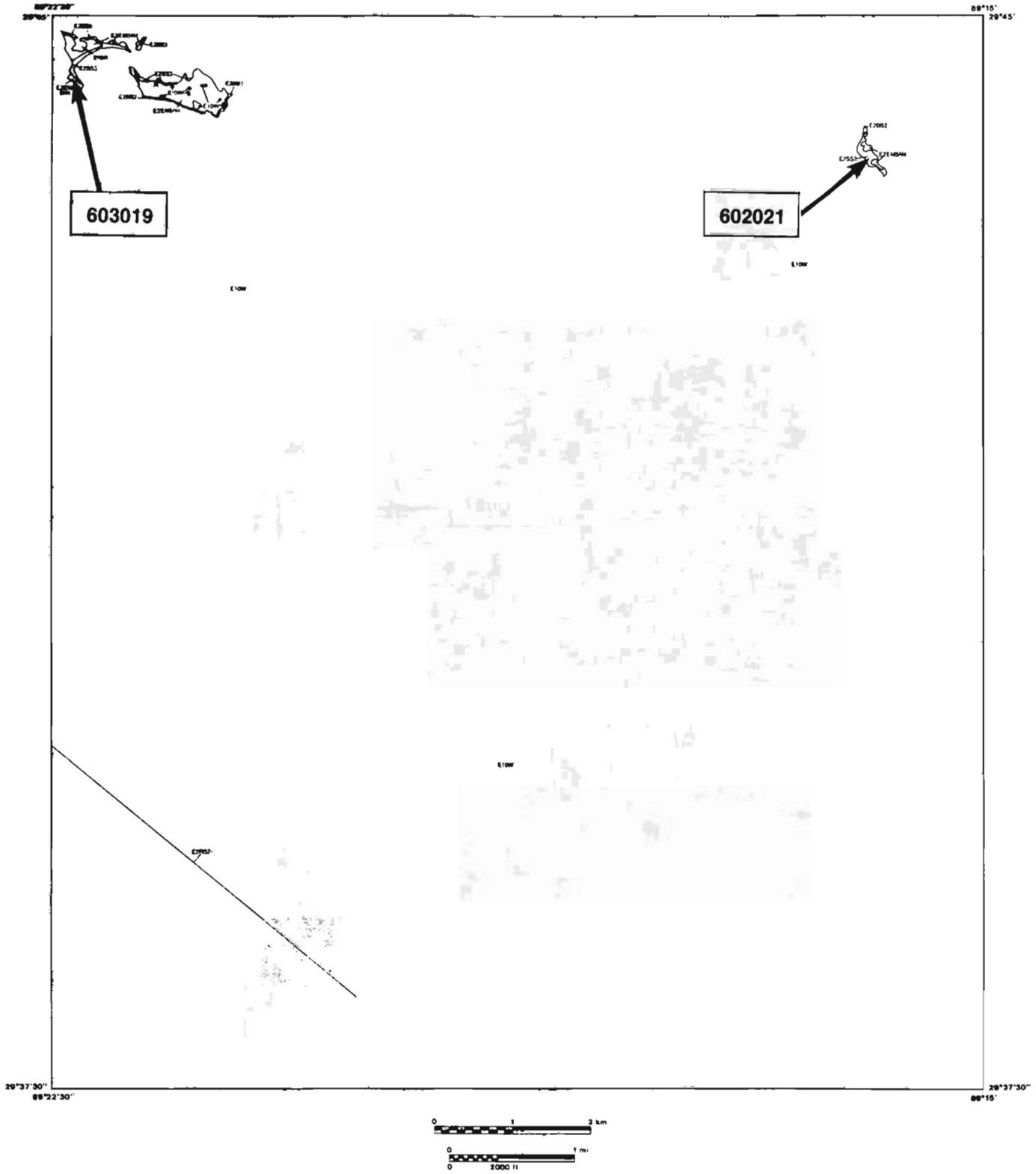
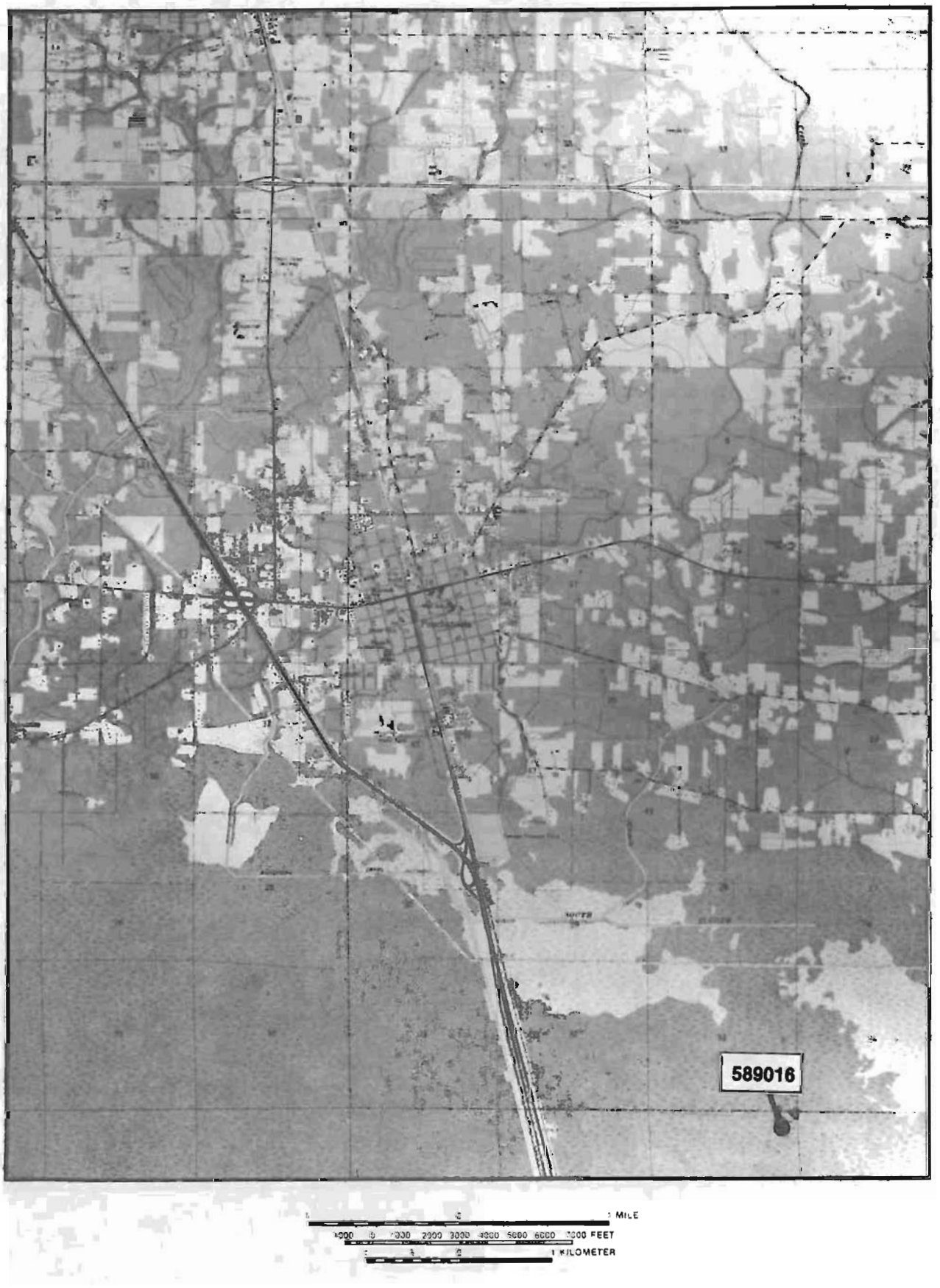
602082
602081

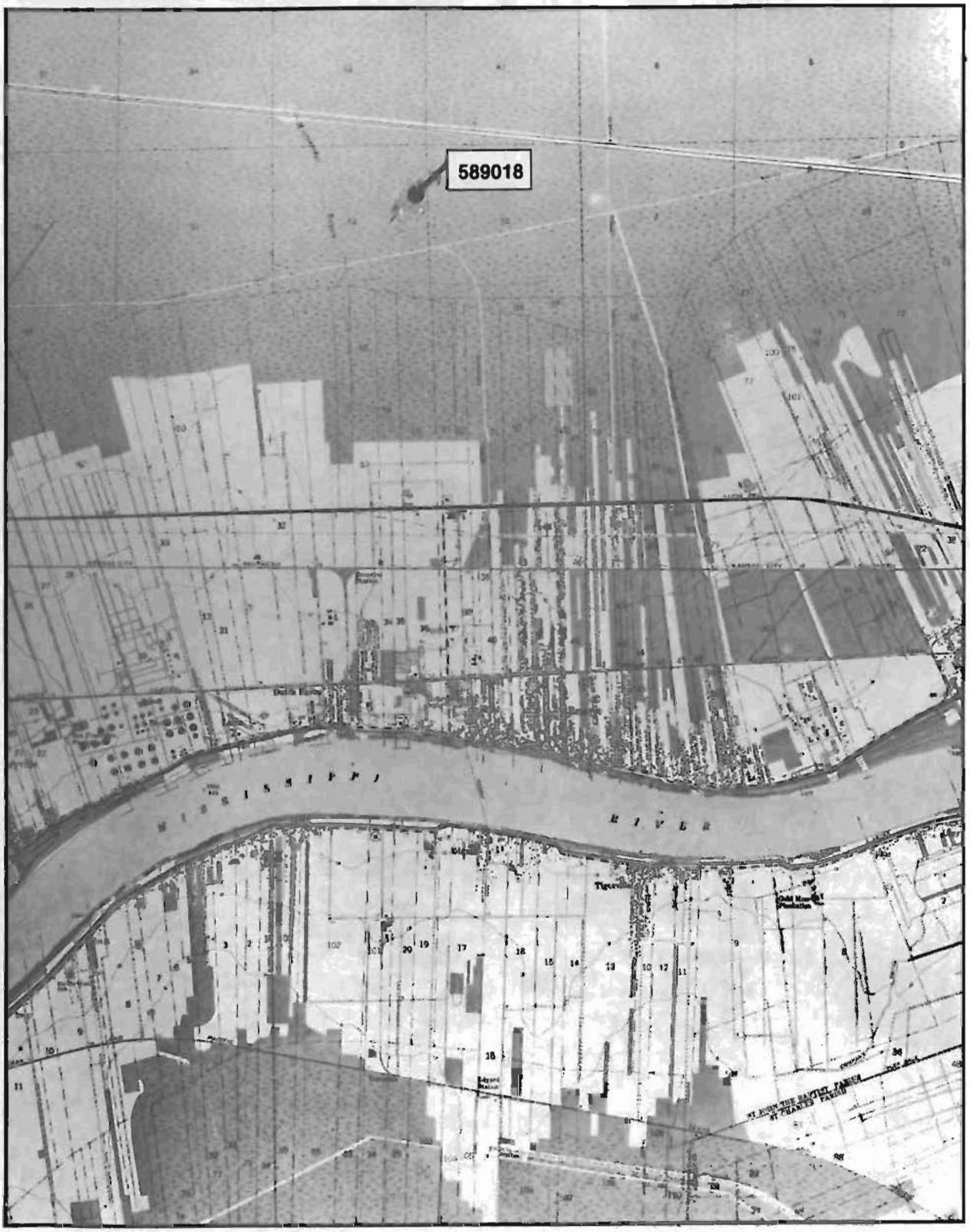
Point Chicot, LA

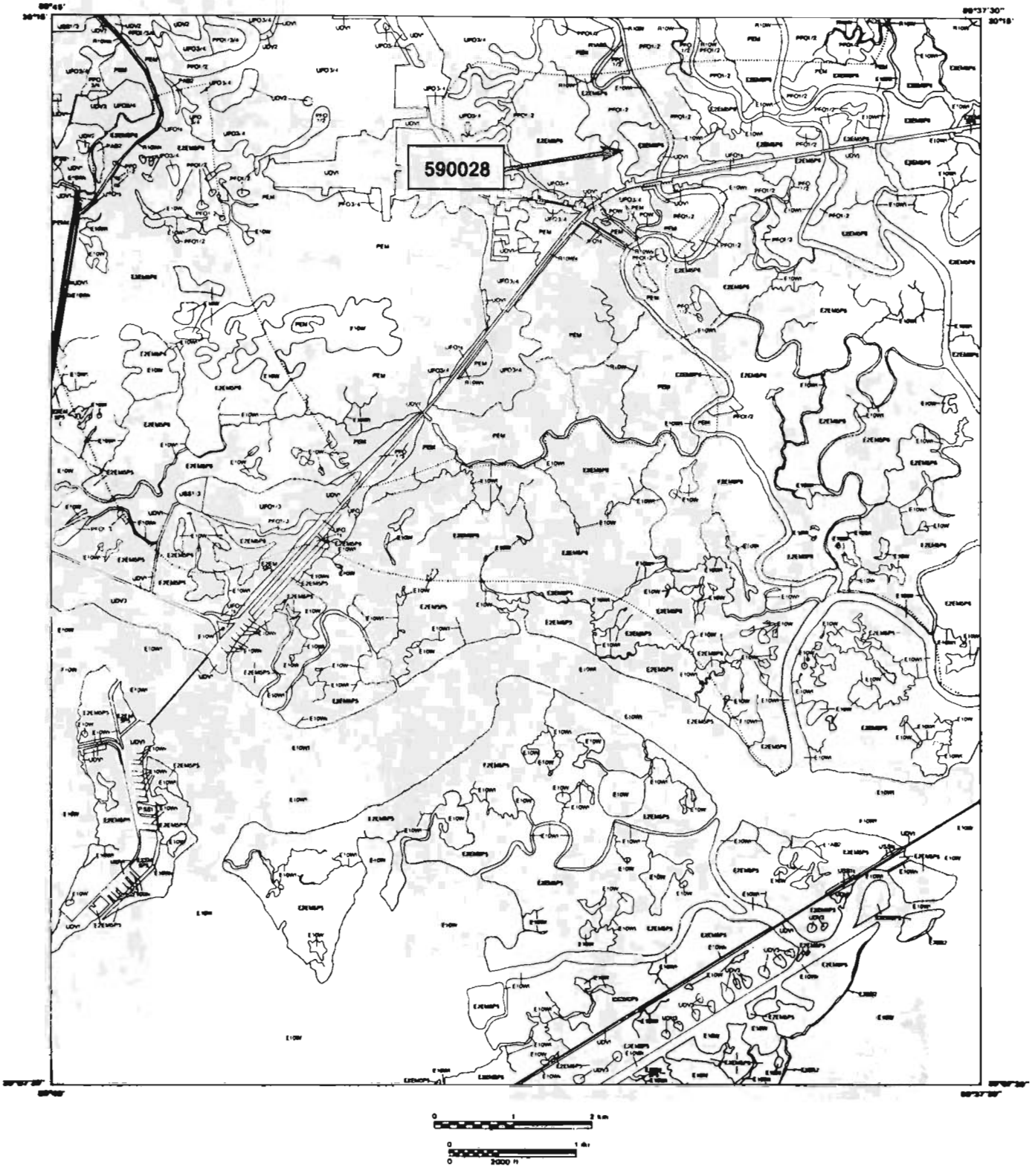


Ponchatoula, LA



Reserve, LA

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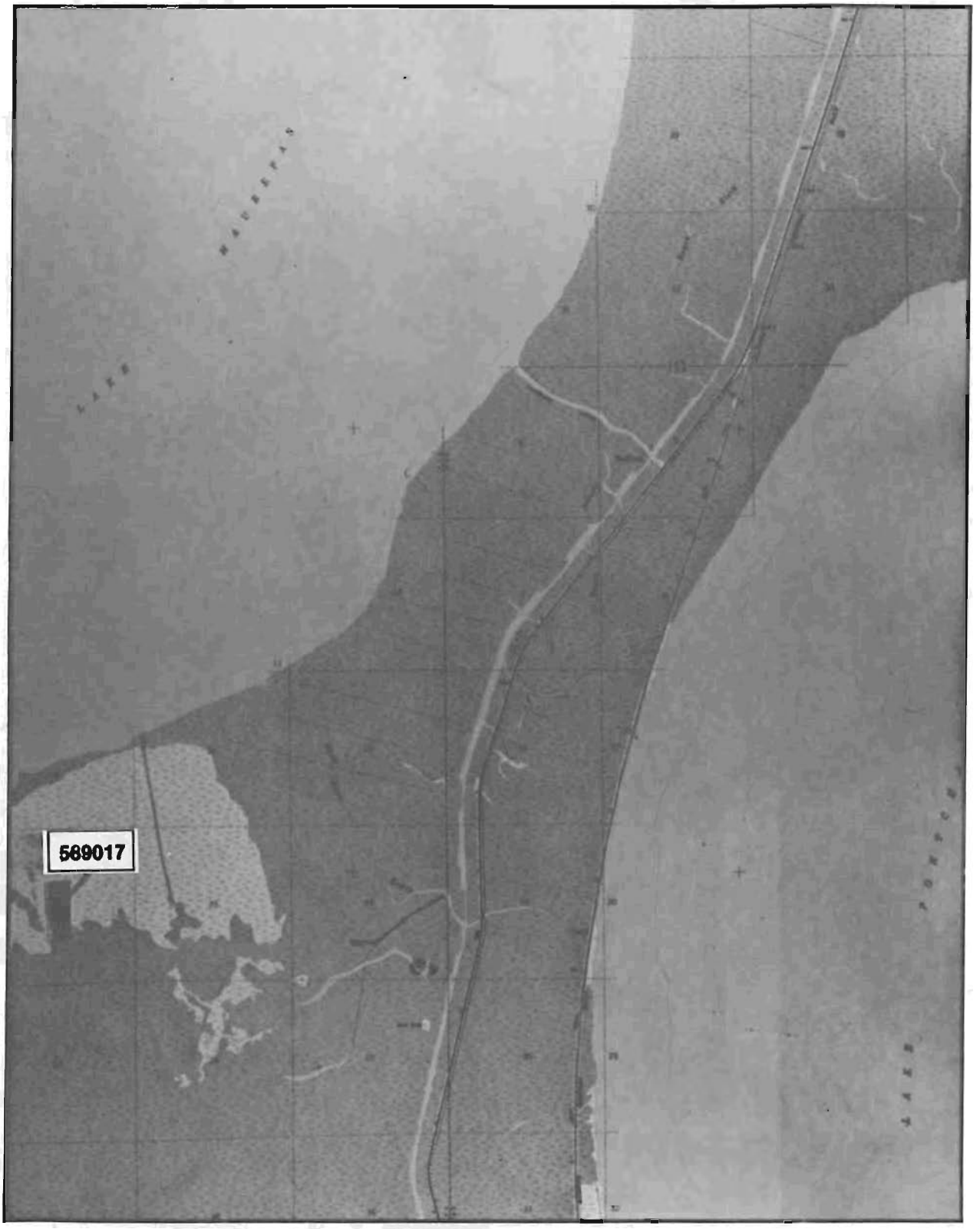
Ruddock, LA


589017
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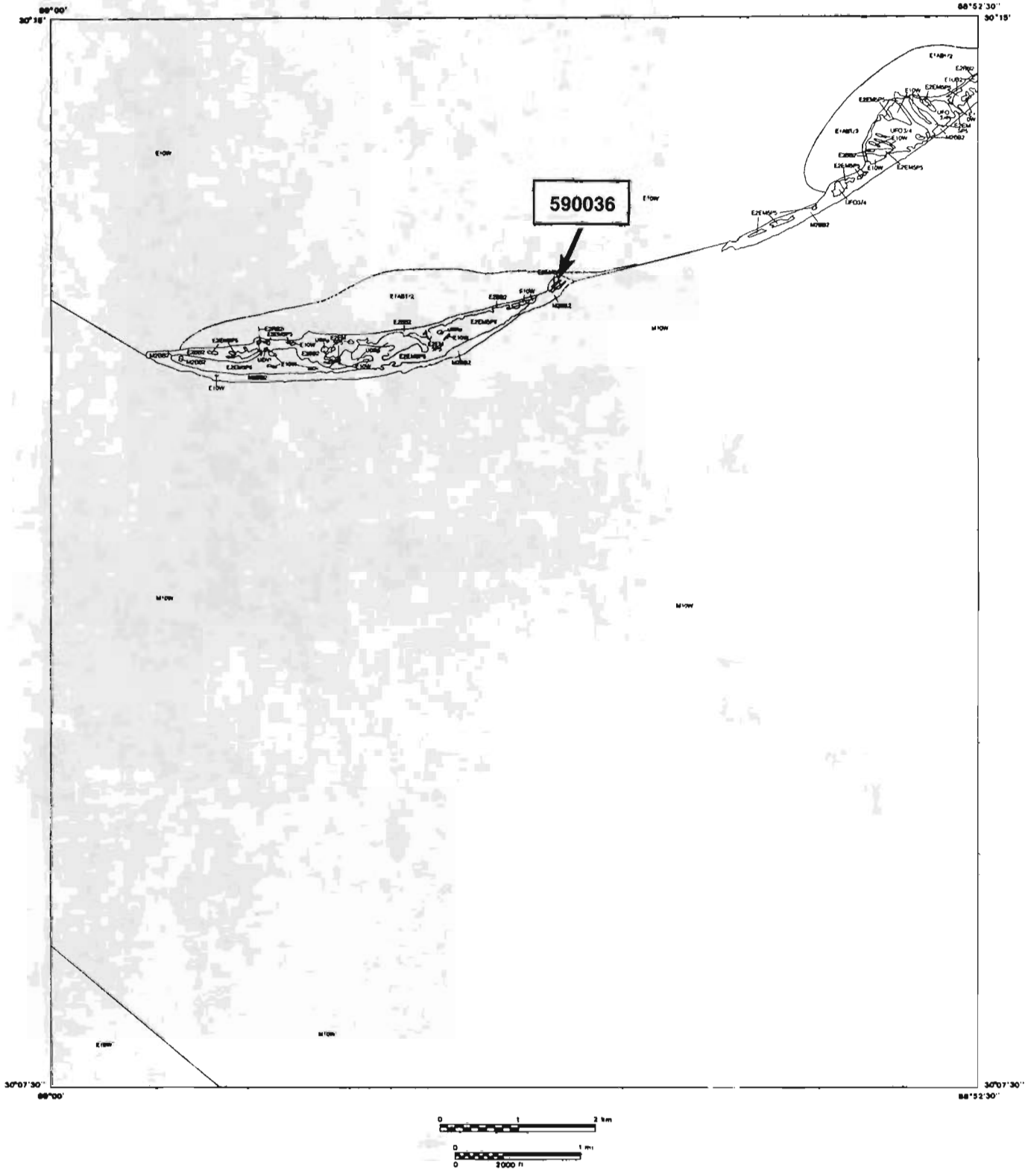
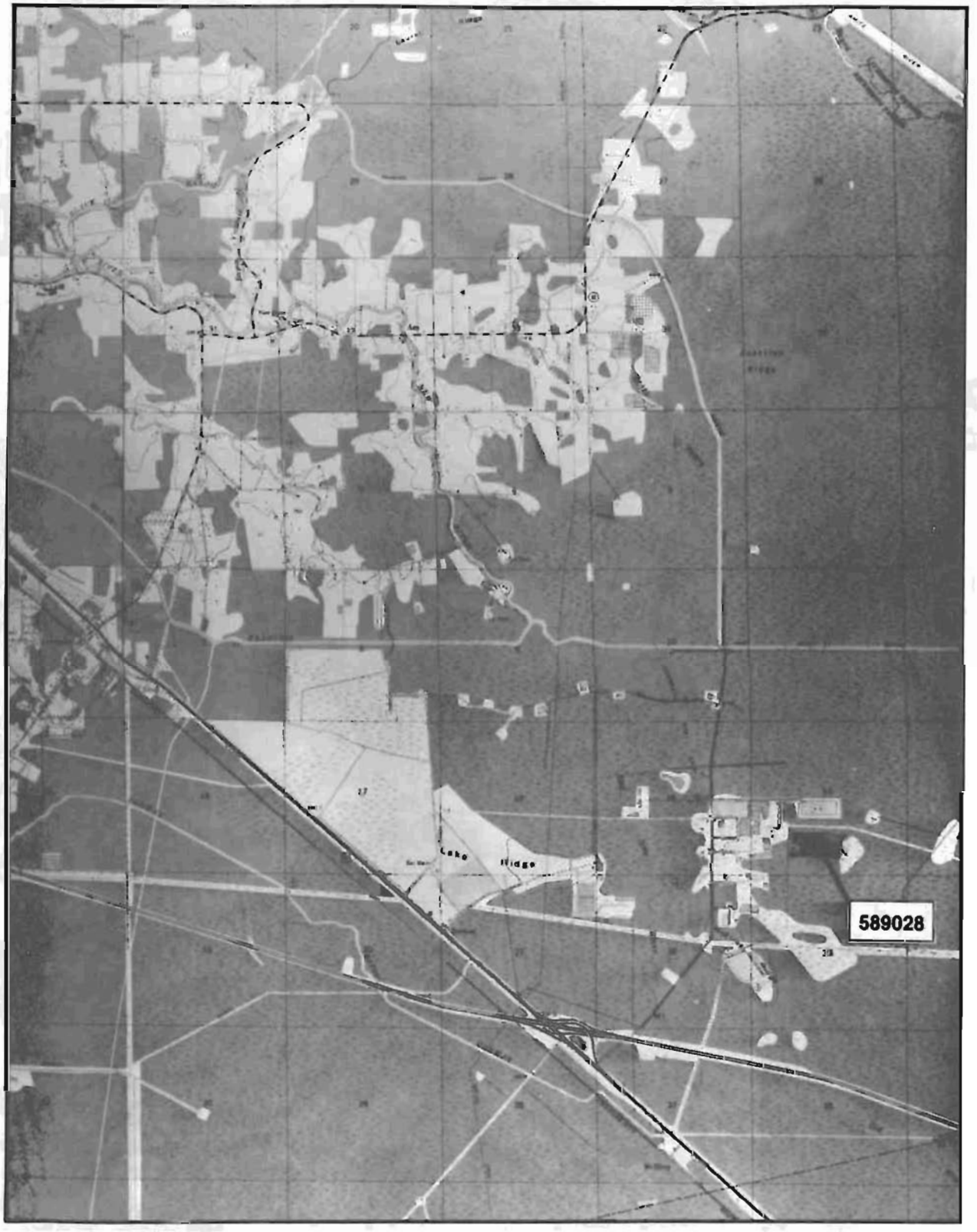
Ship Island, MS



Sorrento, LA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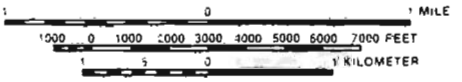
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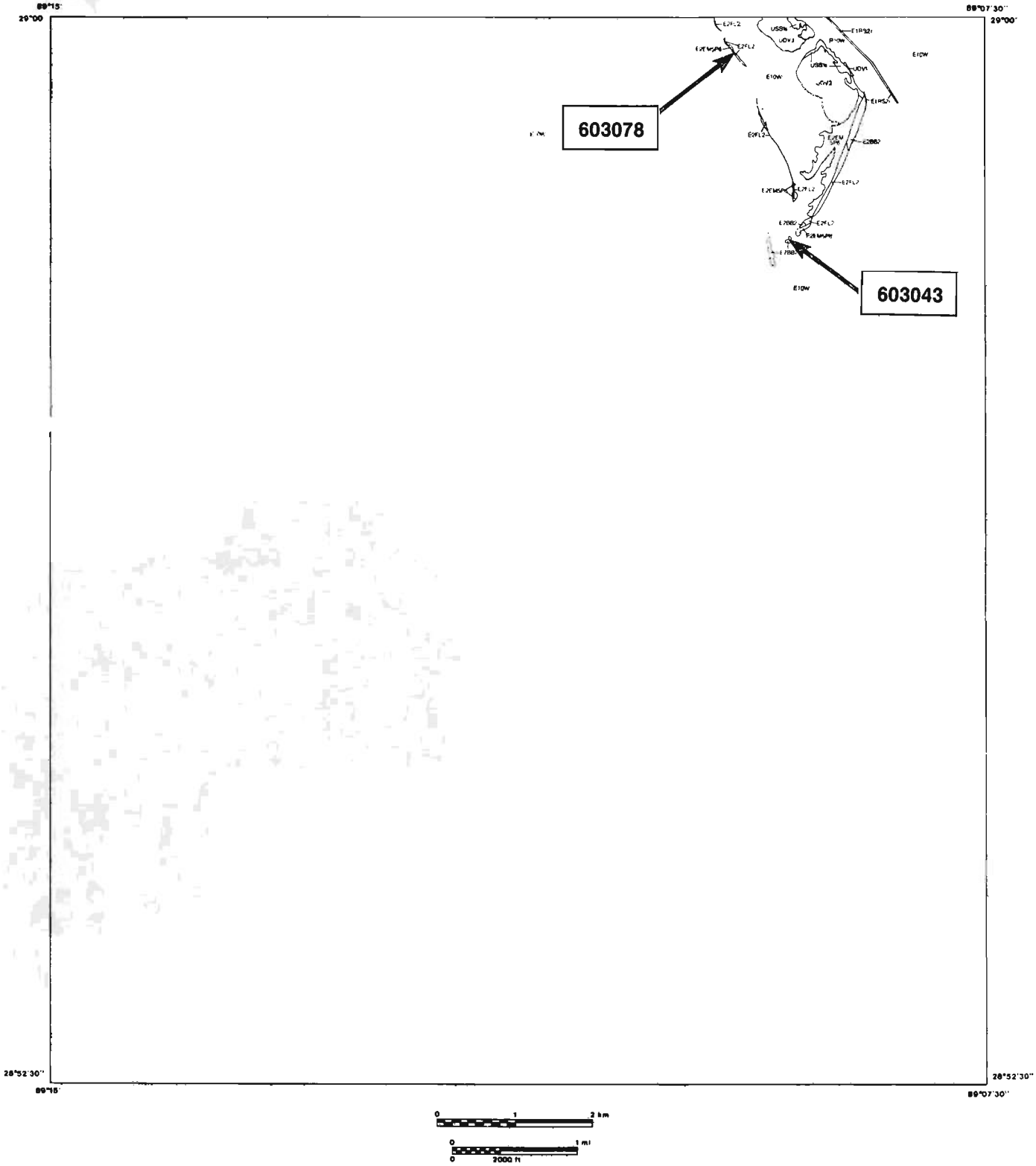
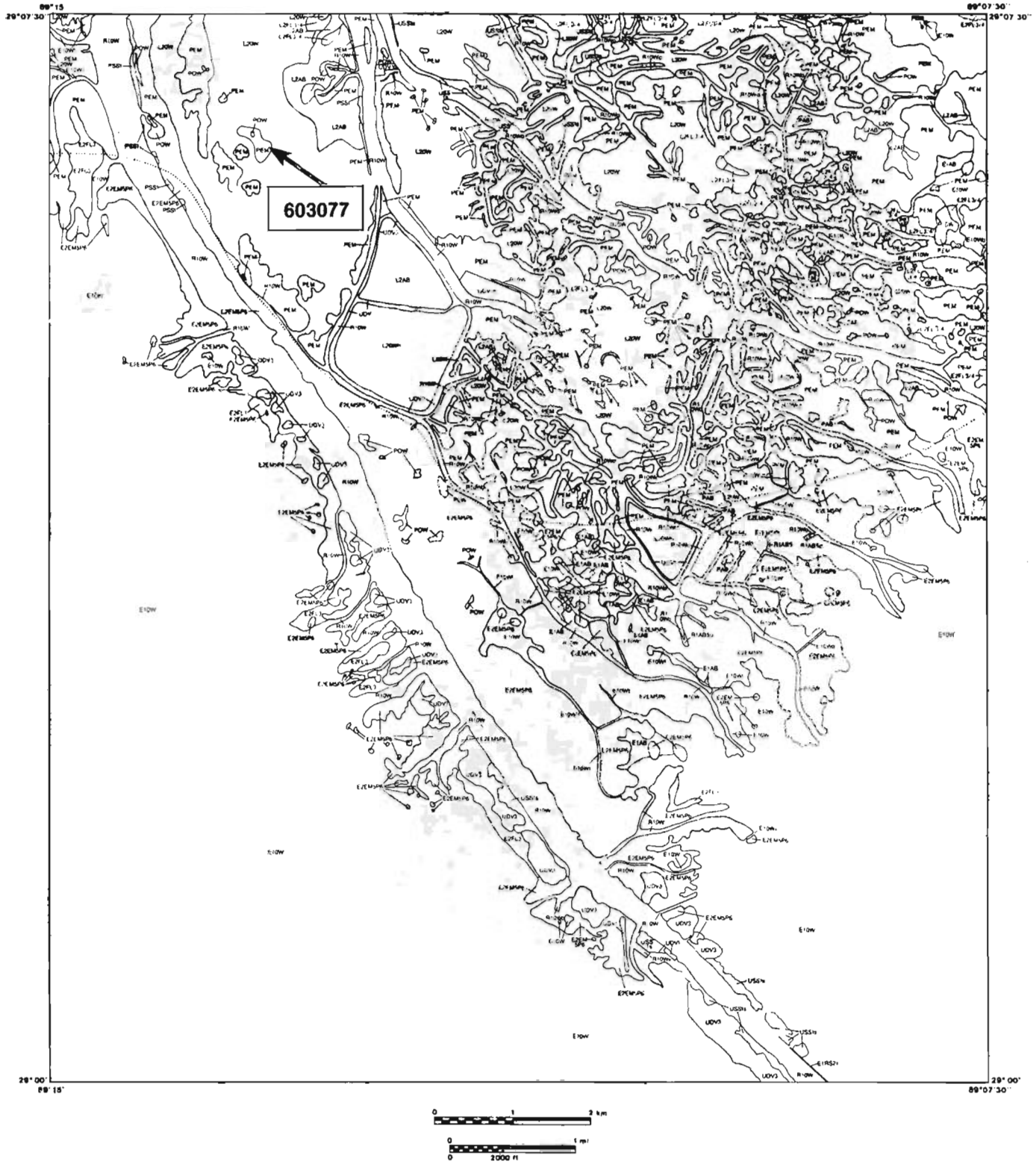
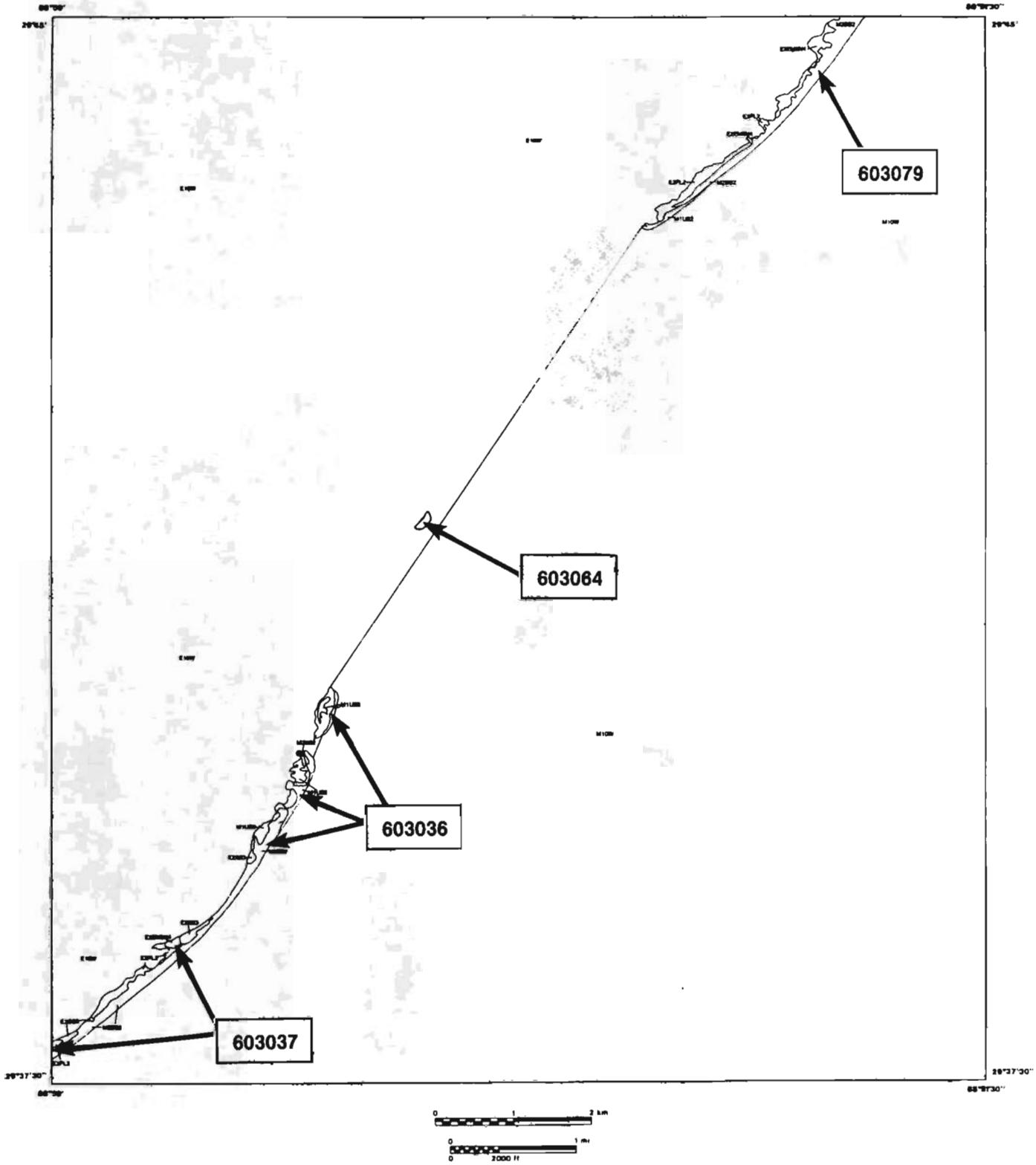
South of South Pass, LA



South Pass, LA

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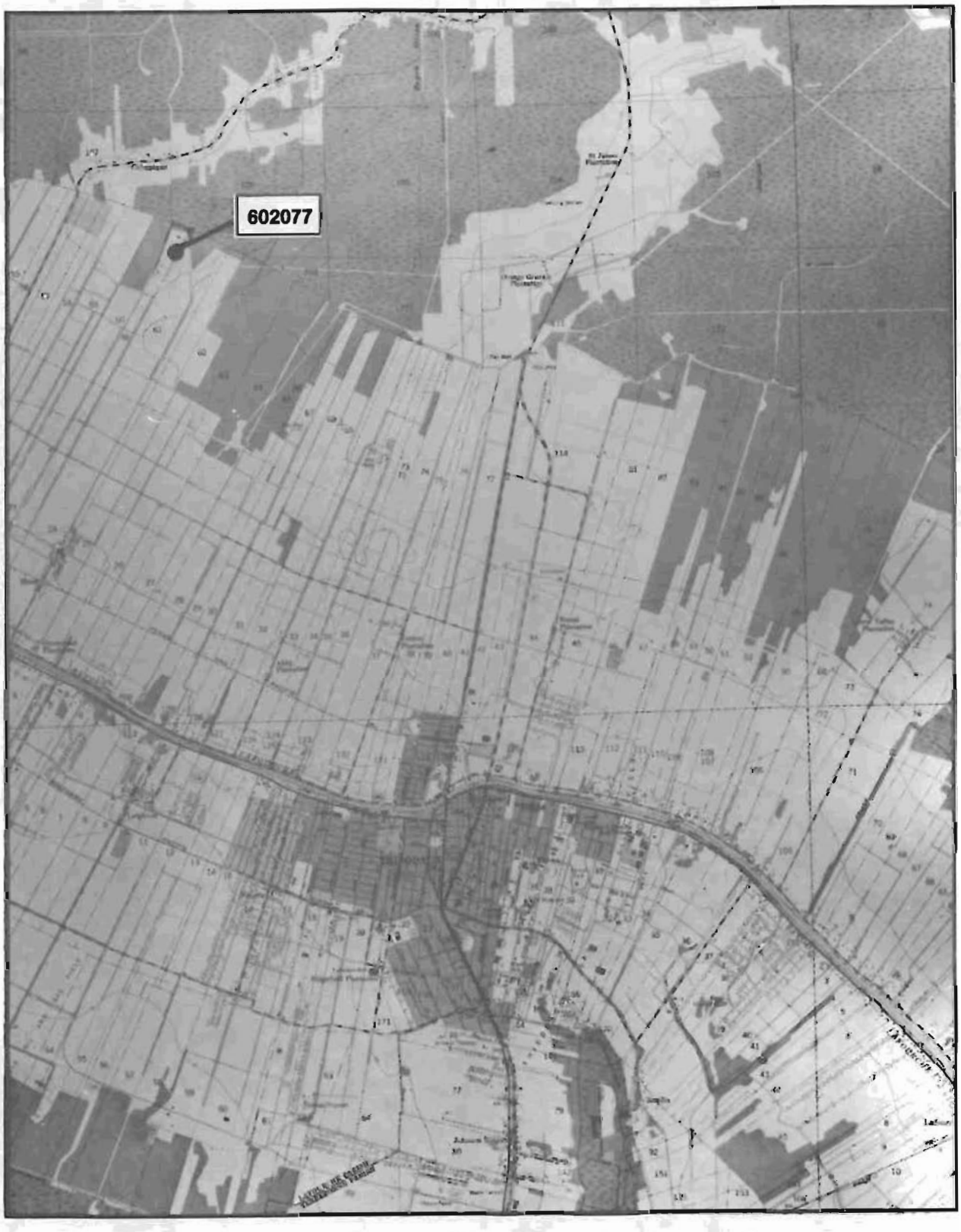
Thibodaux, LA



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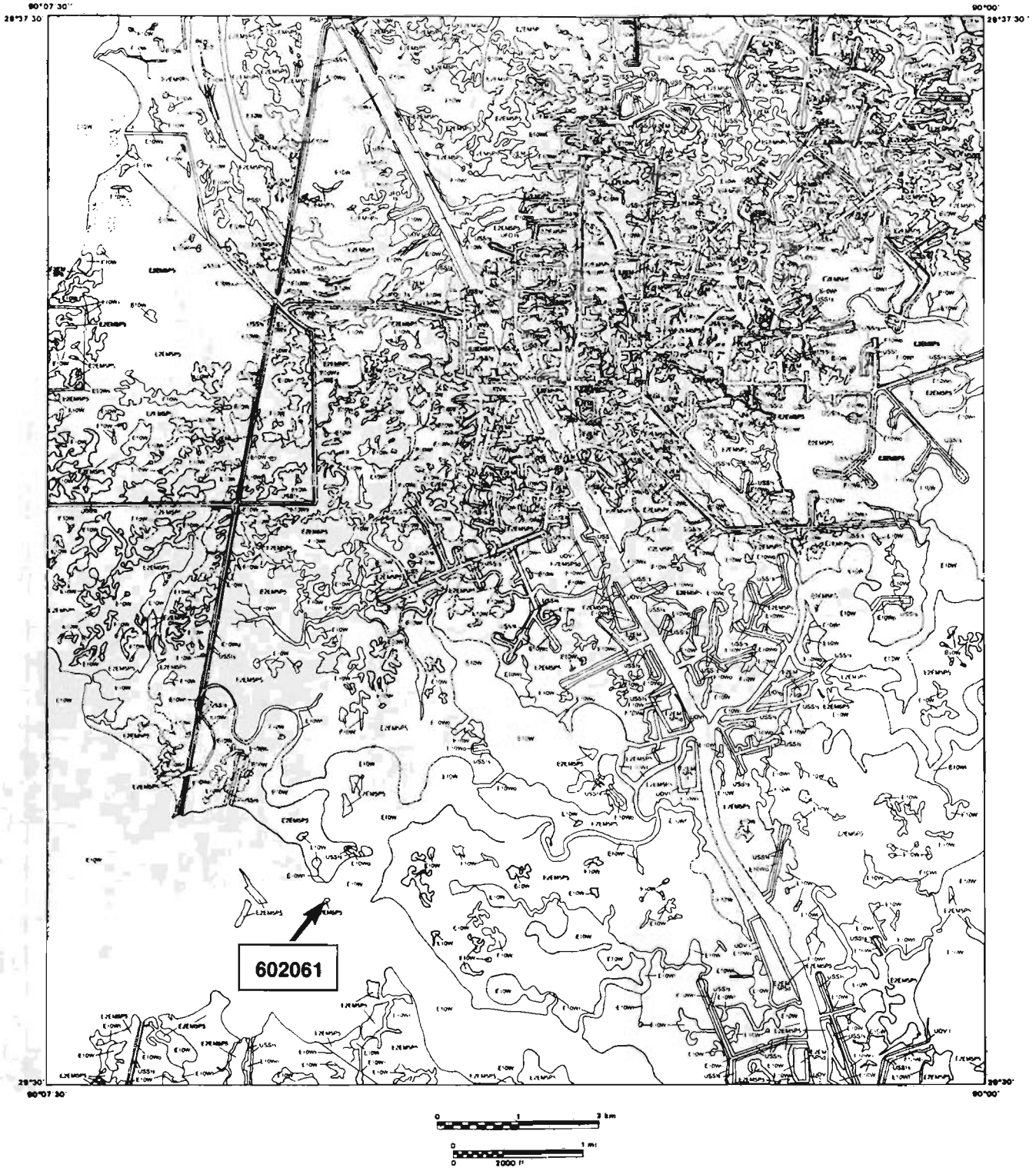

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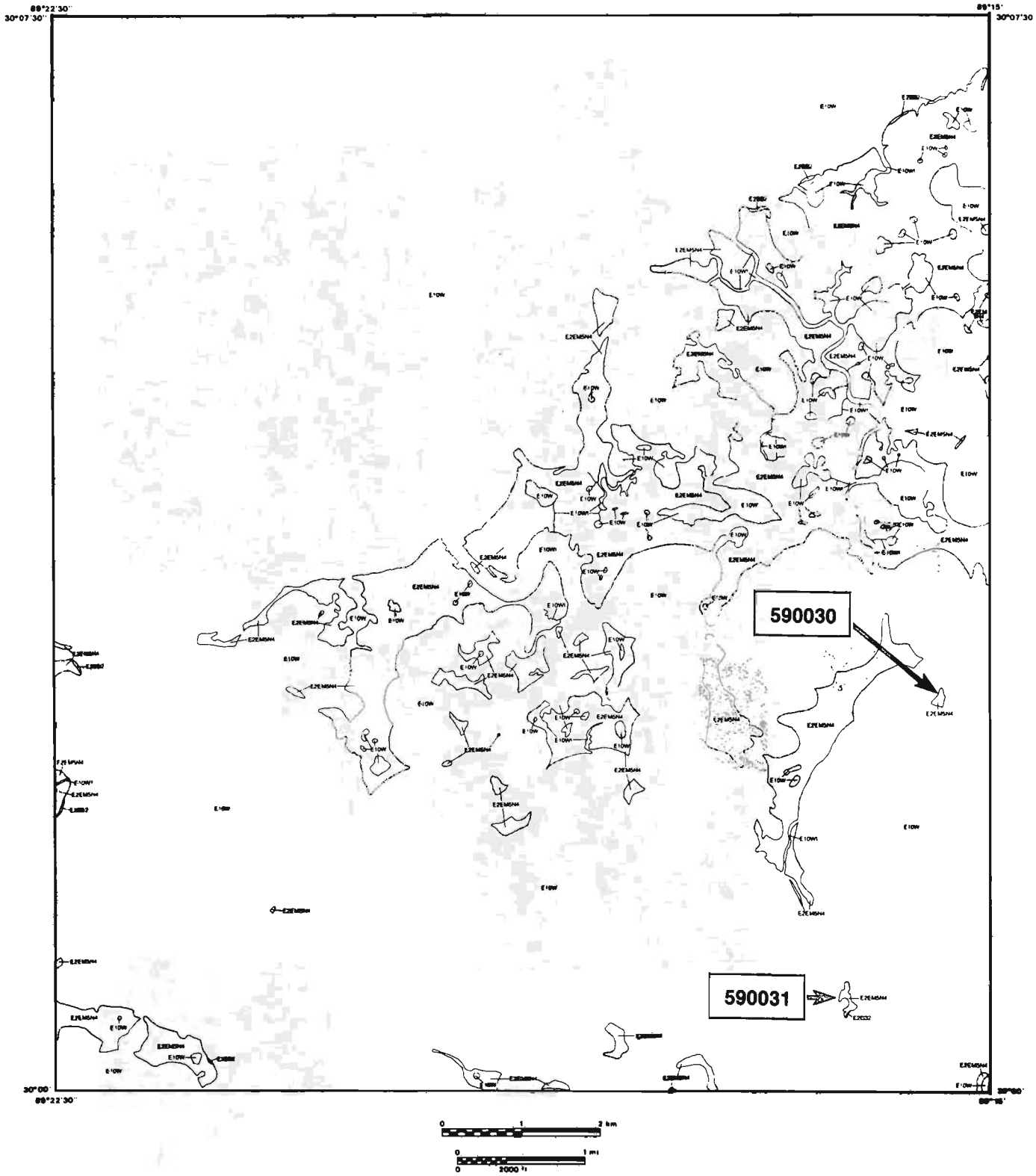

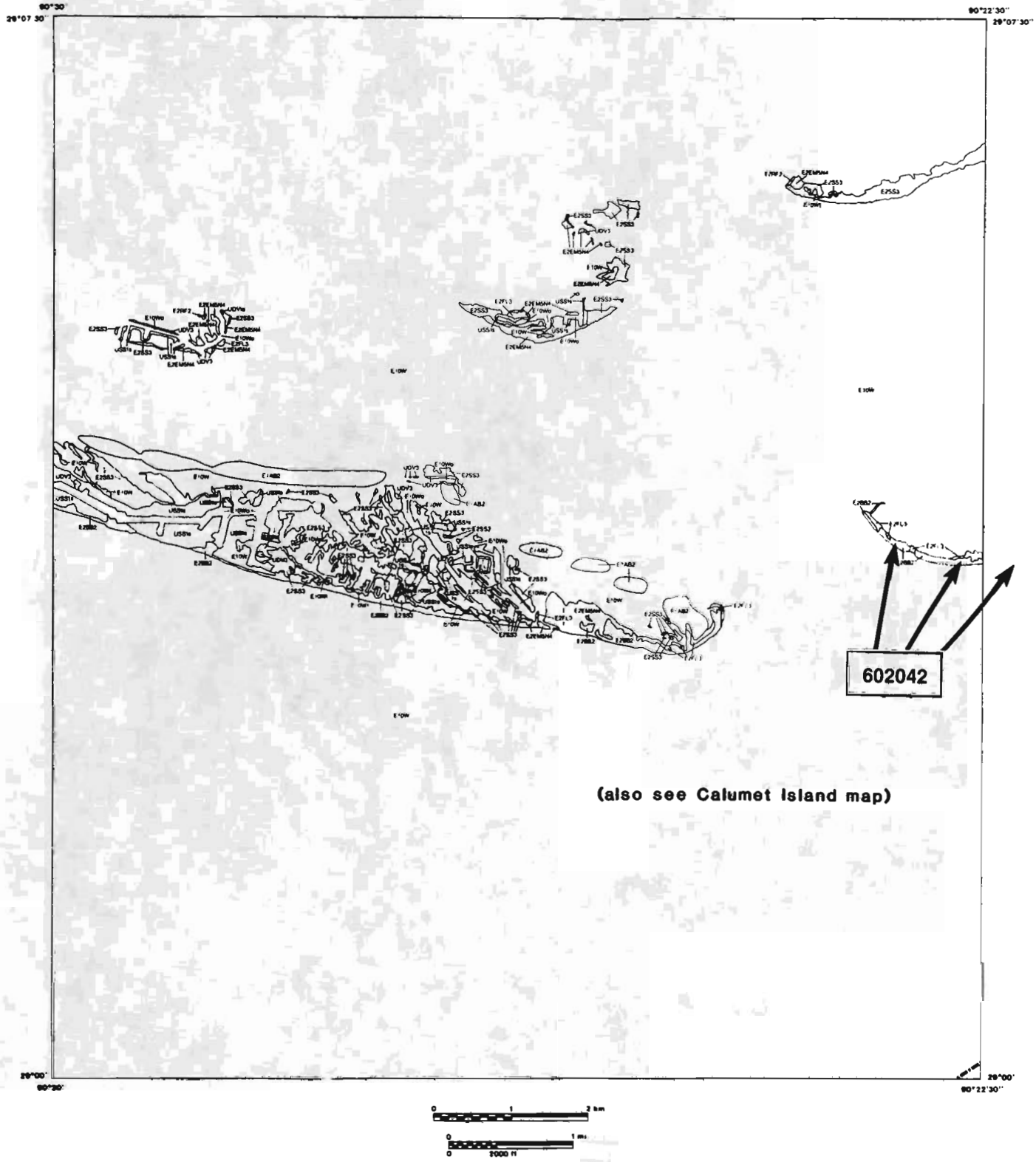
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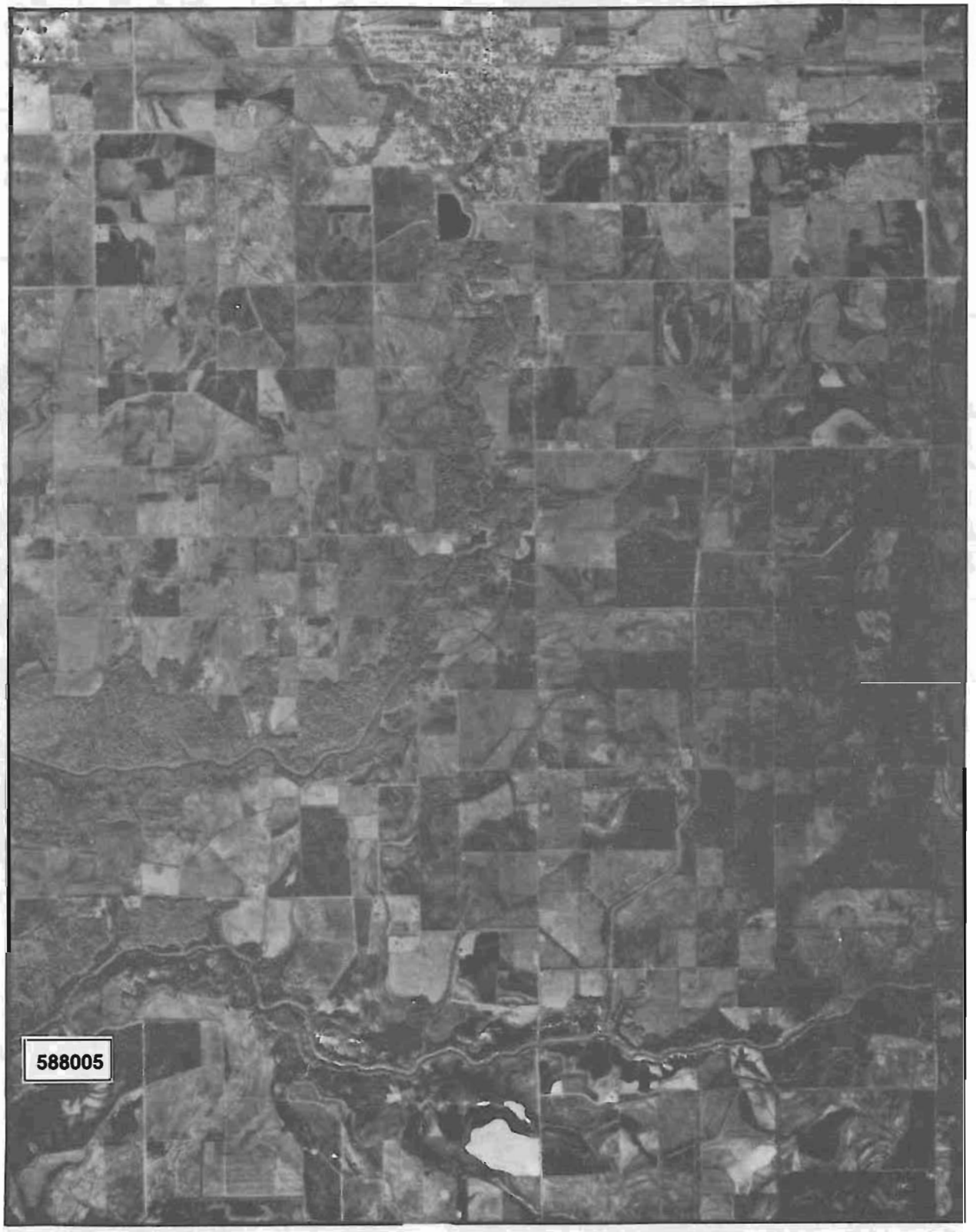
(also see Calumet Island map)

Welsh South, LA



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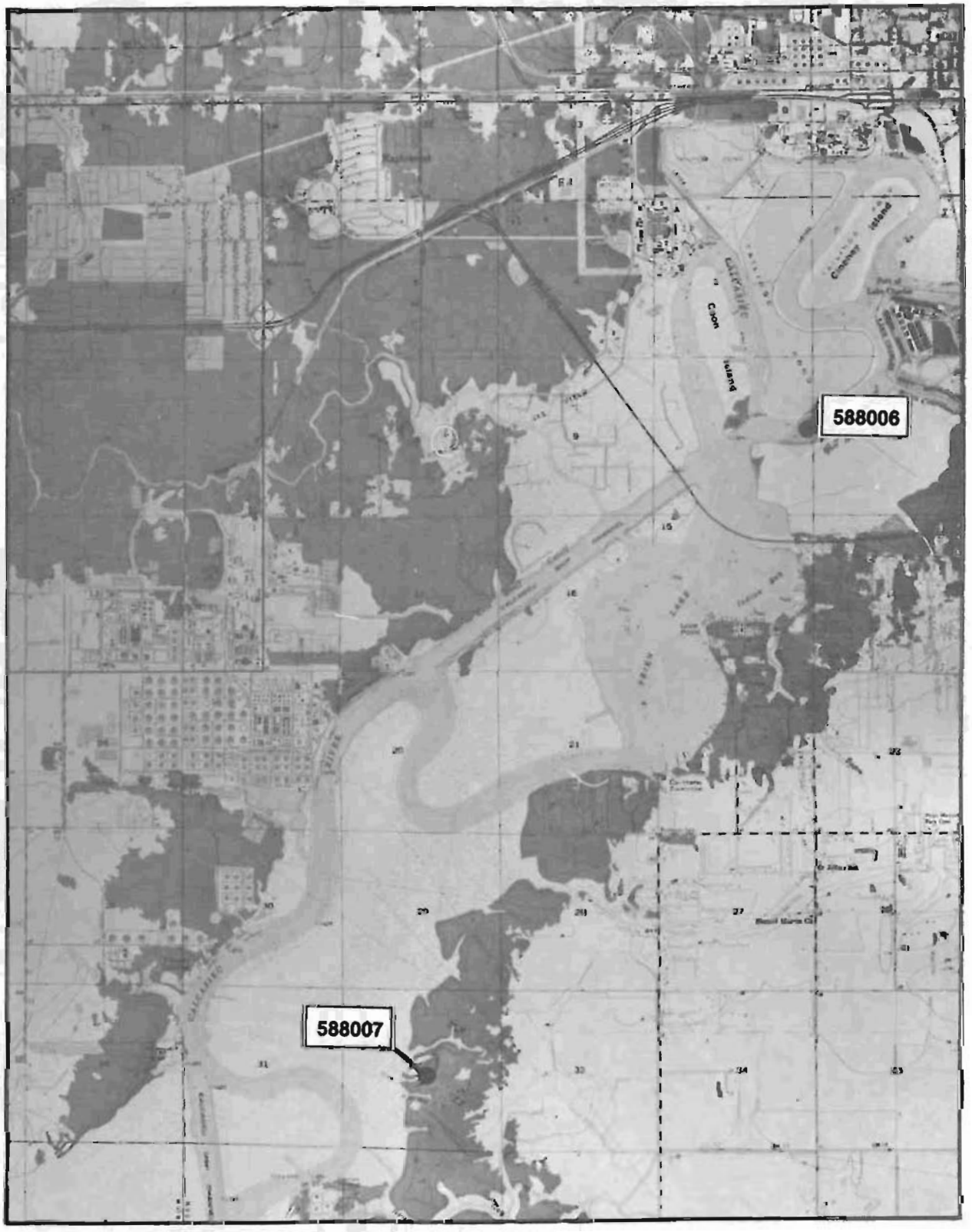
588006
588007
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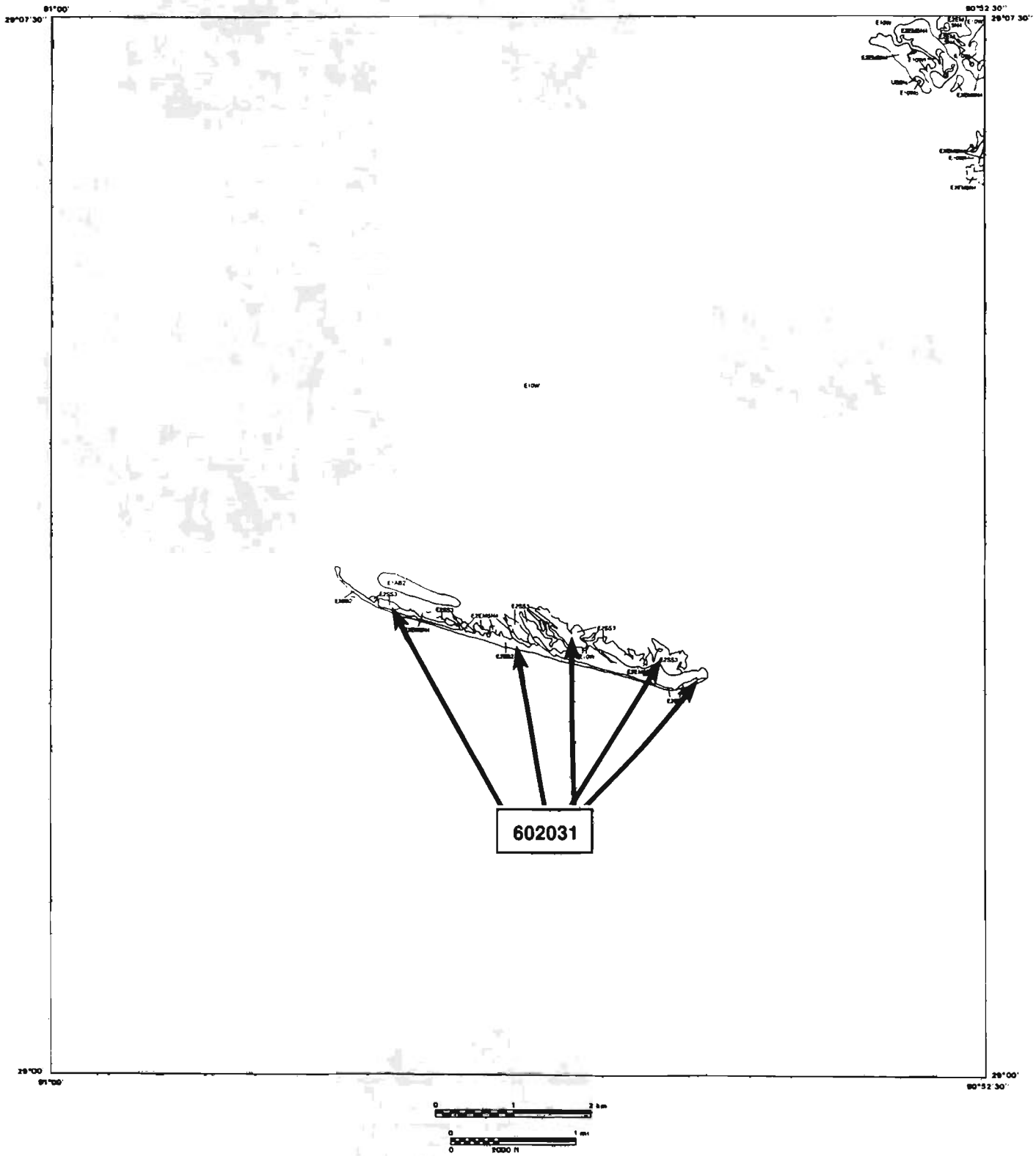
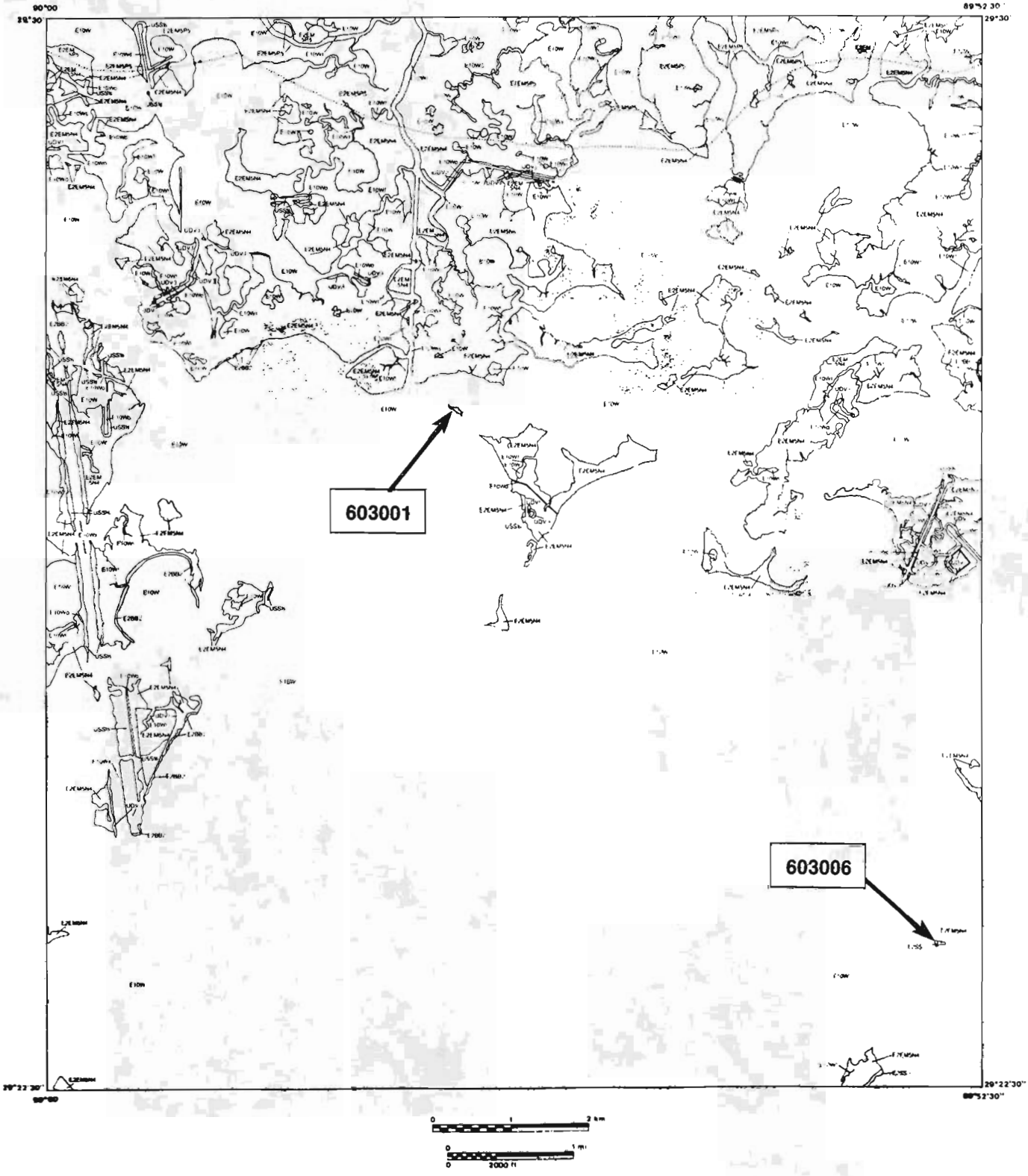
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER

Western Isles Dernieres, LA

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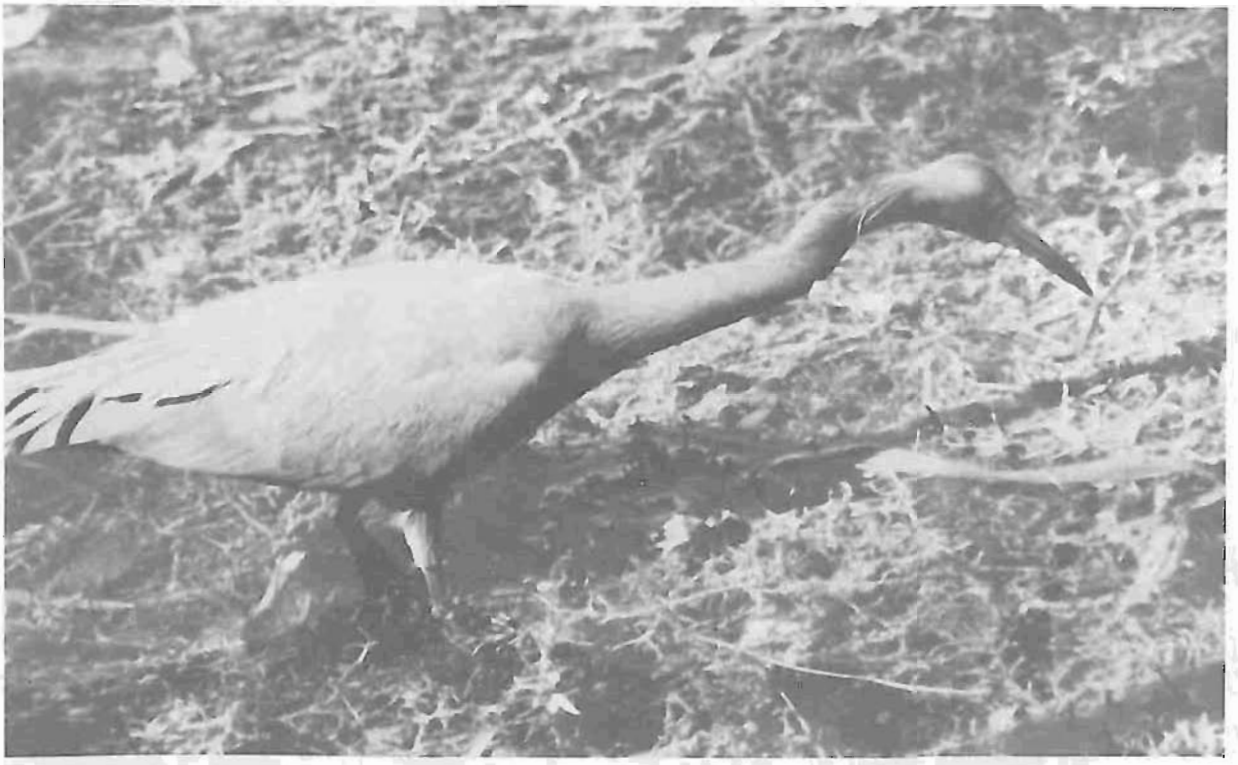

Adult Little Blue Heron. Photograph by J.A. Spendelow

Brown Pelican. Photograph by J.A. Spendelow.

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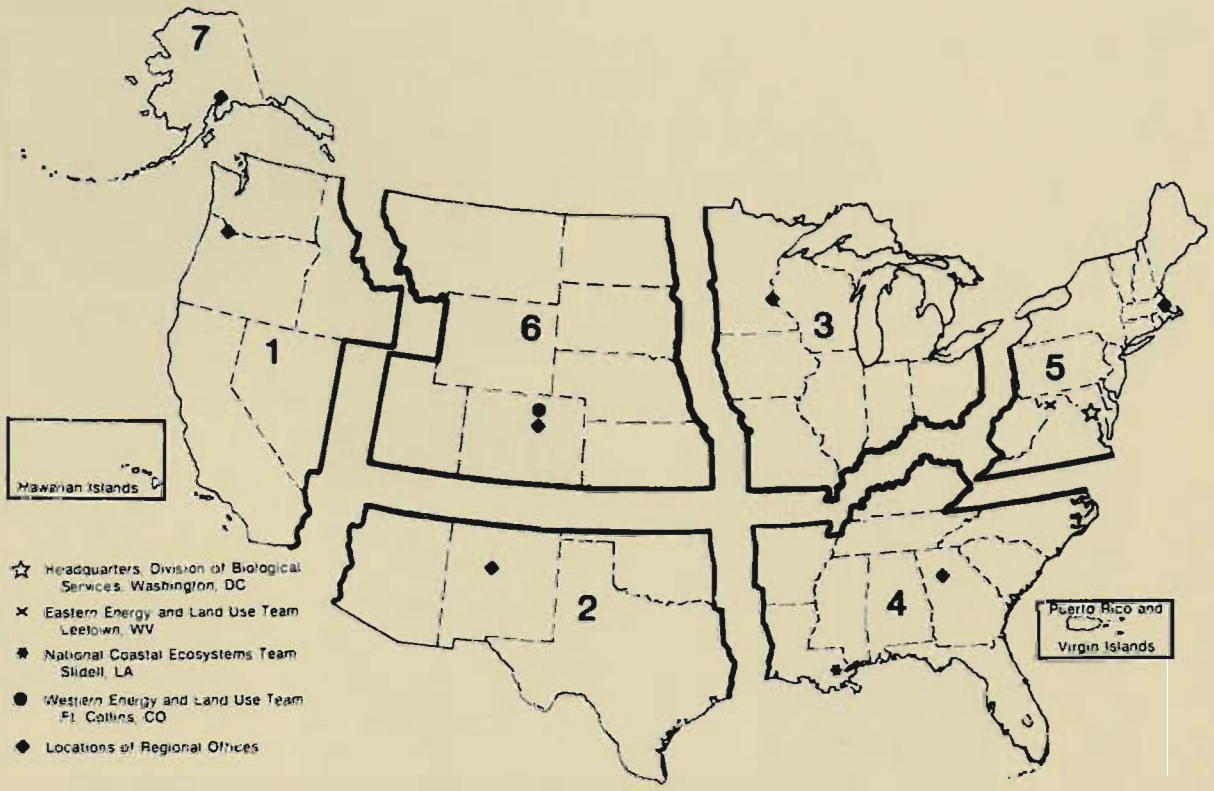

REGION 1
Regional Director
U.S. Fish and Wildlife Service
Lloyd Five Hundred Building, Suite 1692
500 N.E. Multnomah Street
Portland, Oregon 97232

REGION 2
Regional Director
U.S. Fish and Wildlife Service
P.O. Box 1306
Albuquerque, New Mexico 87103

REGION 3
Regional Director
U.S. Fish and Wildlife Service
Federal Building, Fort Snelling
Twin Cities, Minnesota 55111

REGION 4
Regional Director
U.S. Fish and Wildlife Service
Richard B. Russell Building
75 Spring Street, S.W.
Atlanta, Georgia 30303

REGION 5
Regional Director
U.S. Fish and Wildlife Service
One Gateway Center
Newton Corner, Massachusetts 02158

REGION 6
Regional Director
U.S. Fish and Wildlife Service
P.O. Box 25486
Denver Federal Center
Denver, Colorado 80225

REGION 7
Regional Director
U.S. Fish and Wildlife Service
1011 E. Tudor Road
Anchorage, Alaska 99503

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