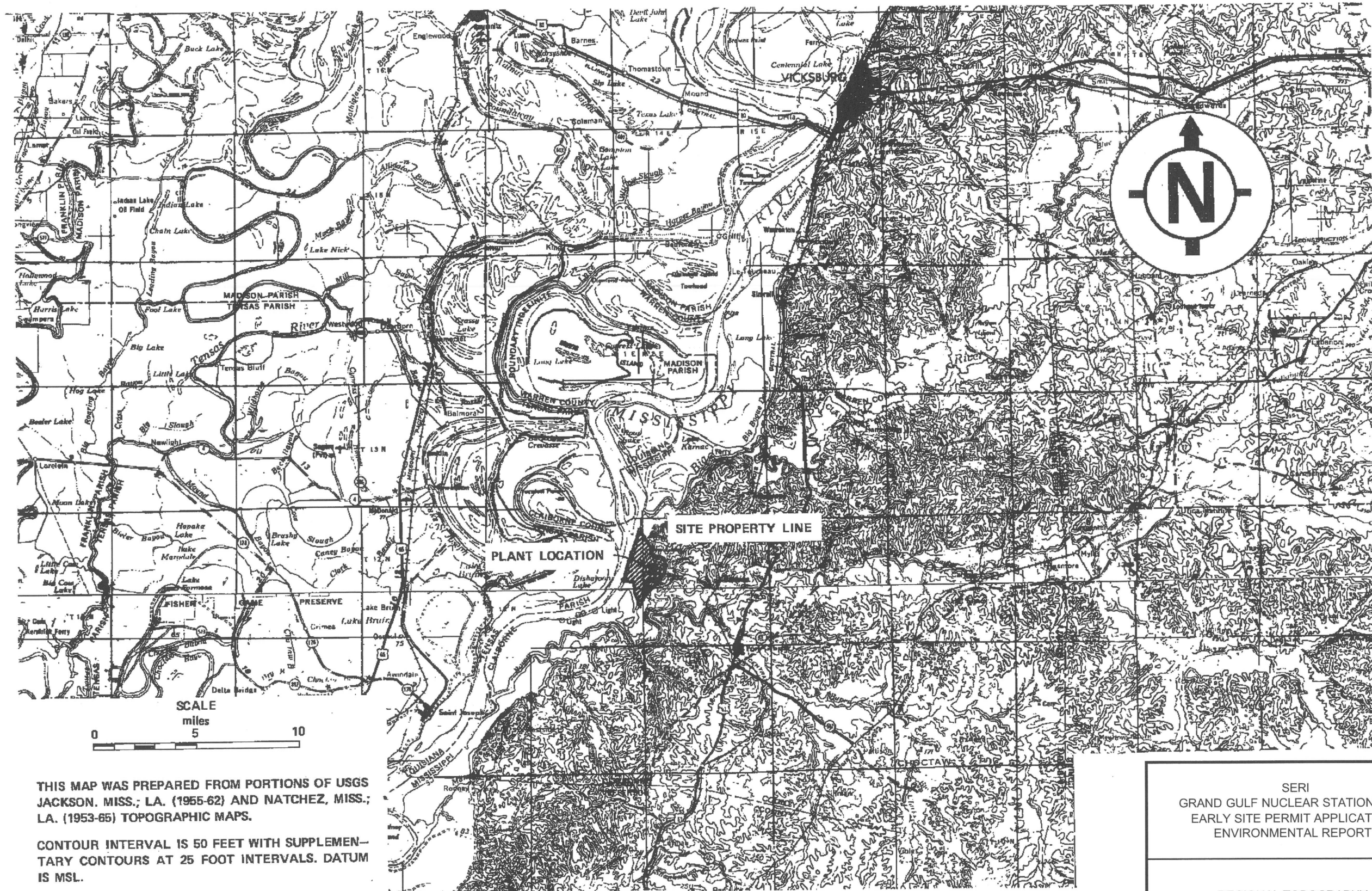




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 EARLY SITE PERMIT APPLICATION  
 ENVIRONMENTAL REPORT

SURFACE DRAINAGE PLAN  
 (UFSAR FIGURE 2.4-1)

FIGURE 2.3-1 REV. 1



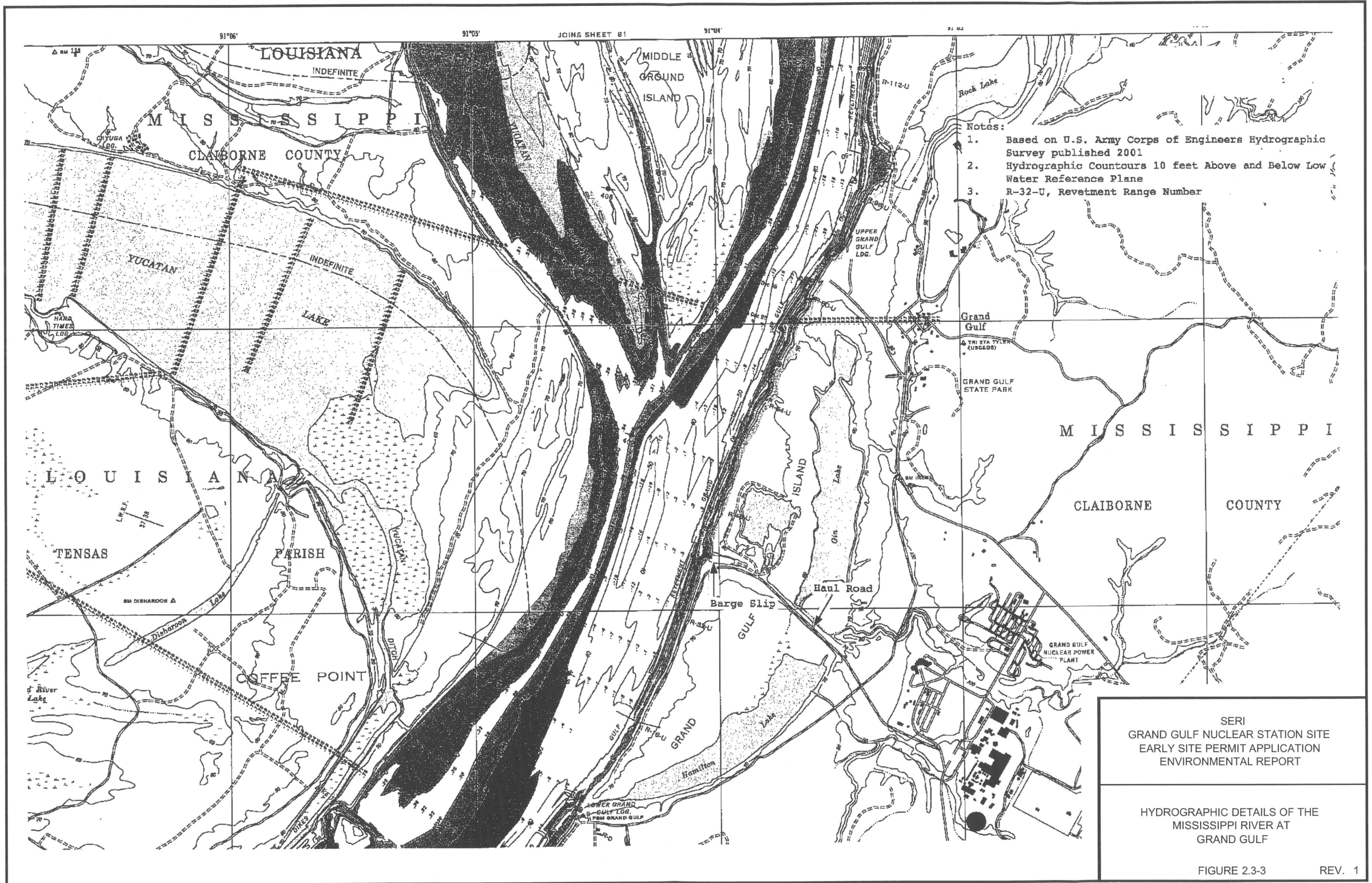
THIS MAP WAS PREPARED FROM PORTIONS OF USGS JACKSON, MISS.; LA. (1955-62) AND NATCHEZ, MISS.; LA. (1953-65) TOPOGRAPHIC MAPS.

CONTOUR INTERVAL IS 50 FEET WITH SUPPLEMENTARY CONTOURS AT 25 FOOT INTERVALS. DATUM IS MSL.

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REGIONAL TOPOGRAPHY  
 (FER FIGURE 2.4-1)

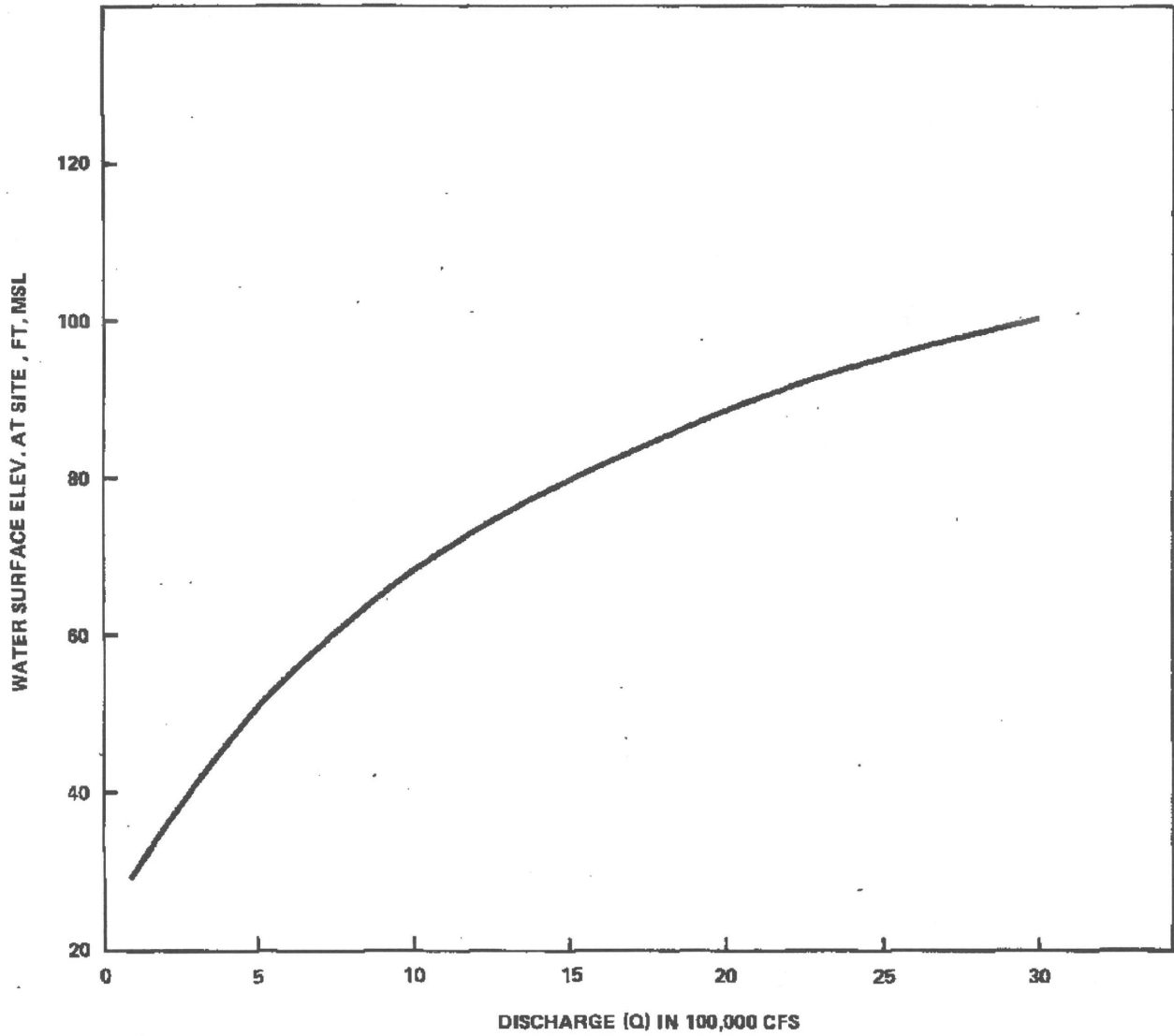




- Notes:
1. Based on U.S. Army Corps of Engineers Hydrographic Survey published 2001
  2. Hydrographic Countours 10 feet Above and Below Low Water Reference Plane
  3. R-32-U, Revetment Range Number

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HYDROGRAPHIC DETAILS OF THE  
 MISSISSIPPI RIVER AT  
 GRAND GULF



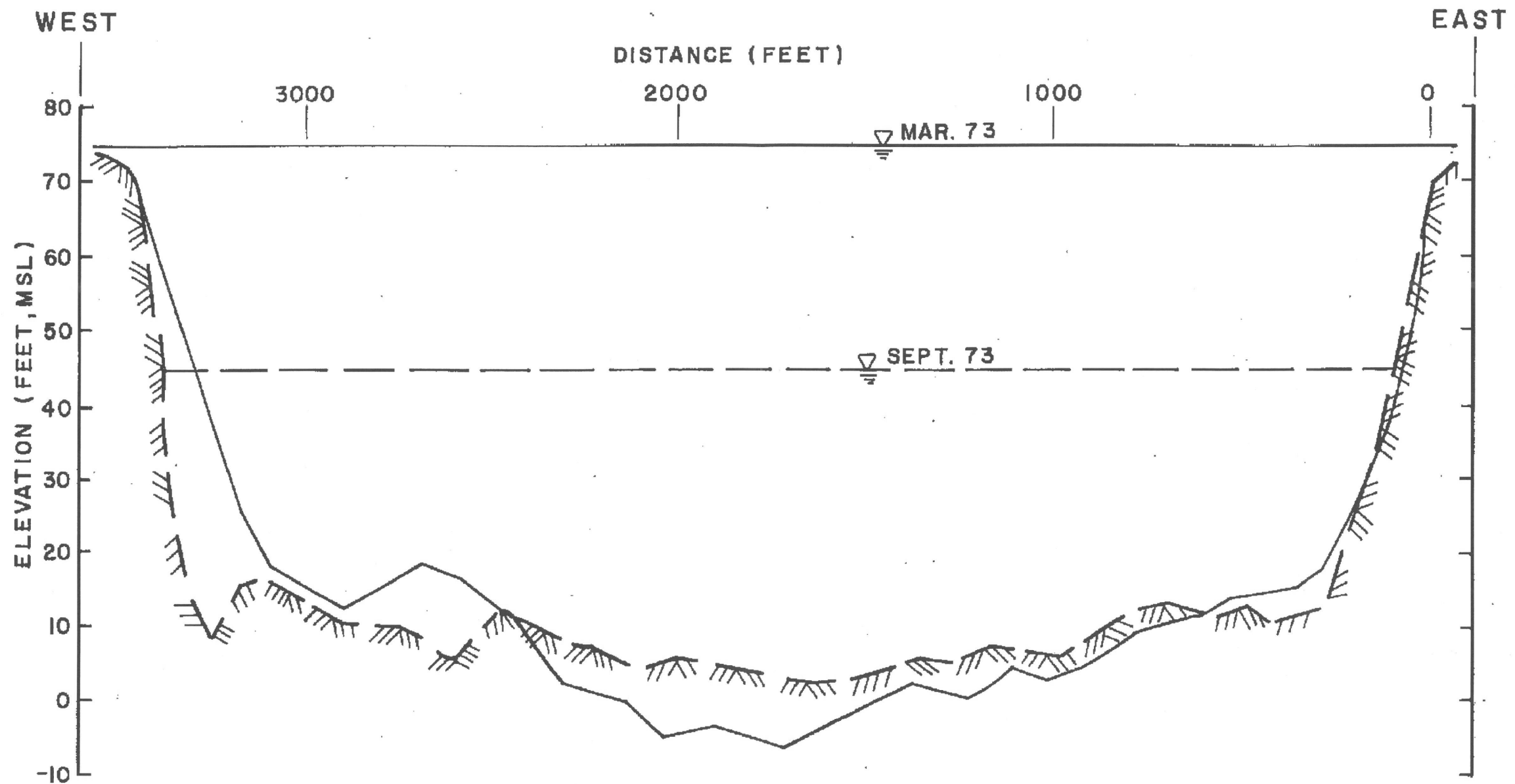
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RATING CURVE FOR THE MISSISSIPPI  
RIVER AT GRAND GULF SITE  
(FER FIGURE 2.4-5)

FIGURE 2.3-4

REV. 1





**NOTE:**

CROSS SECTIONS SHOWN LOOKING UPSTREAM.

**LEGEND:**

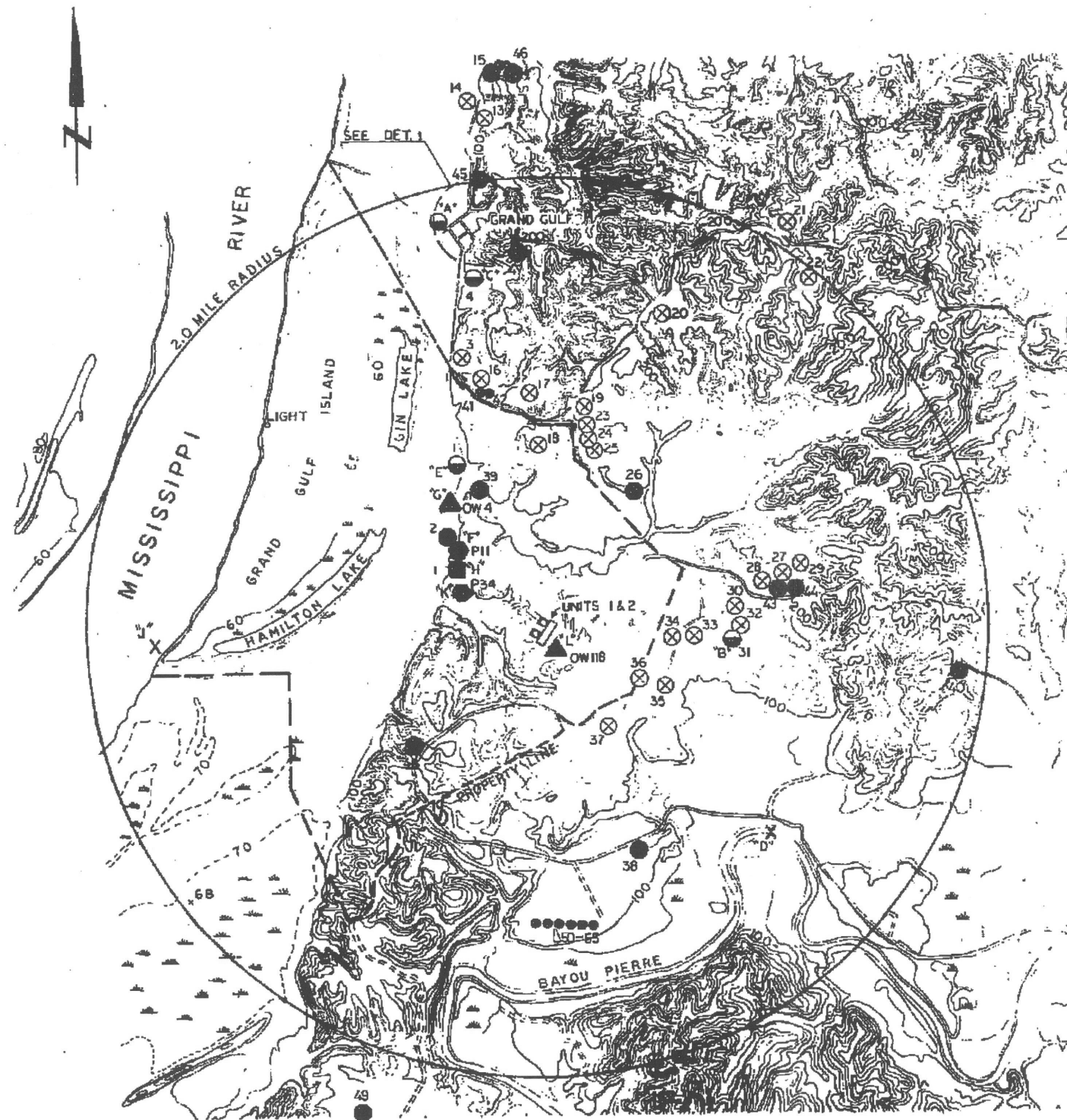
- SURVEY MARCH 19, 1973
- //// // SURVEY SEPTEMBER 24, 1973

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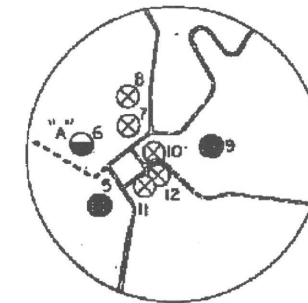
---

CHANNEL CROSS SECTIONS  
 OF THE MISSISSIPPI RIVER IN THE  
 VICINITY OF THE DISCHARGE STRUCTURE  
 (FER FIGURE 2.4-3)

FIGURE 2.3-5      REV. 1



1000 0 2000 4000  
SCALE IN FEET



GRAND GULF  
DET. 1

LEGEND

- WATER WELL - UNSAMPLED
- WATER WELL - SAMPLED
- ⊗ RAIN WATER CISTERN
- TEST WATER WELL - SAMPLED
- ▲<sup>6'</sup> OW 4 OBSERVATION WELL - SAMPLED
- <sup>4'</sup> P11 PIEZOMETER - SAMPLED
- ⊗<sup>1'</sup> X SURFACE WATER SAMPLE

NOTES

1. FOR TABULATION OF WATER USERS, SEE FER TABLE 2.4-23  
CHEMICAL ANALYSIS OF WATER SAMPLES PRESENTED IN  
TABLE 2.3-31 (FER TABLE 2.4-21).

REFERENCES

USGS QUADRANGLES: GRAND GULF MISS-LA, 1963  
SAINT JOSEPH MISS-LA, 1958  
GENERAL HIGHWAY MAP, CLAIBORNE CO.,  
MISSISSIPPI, 1967

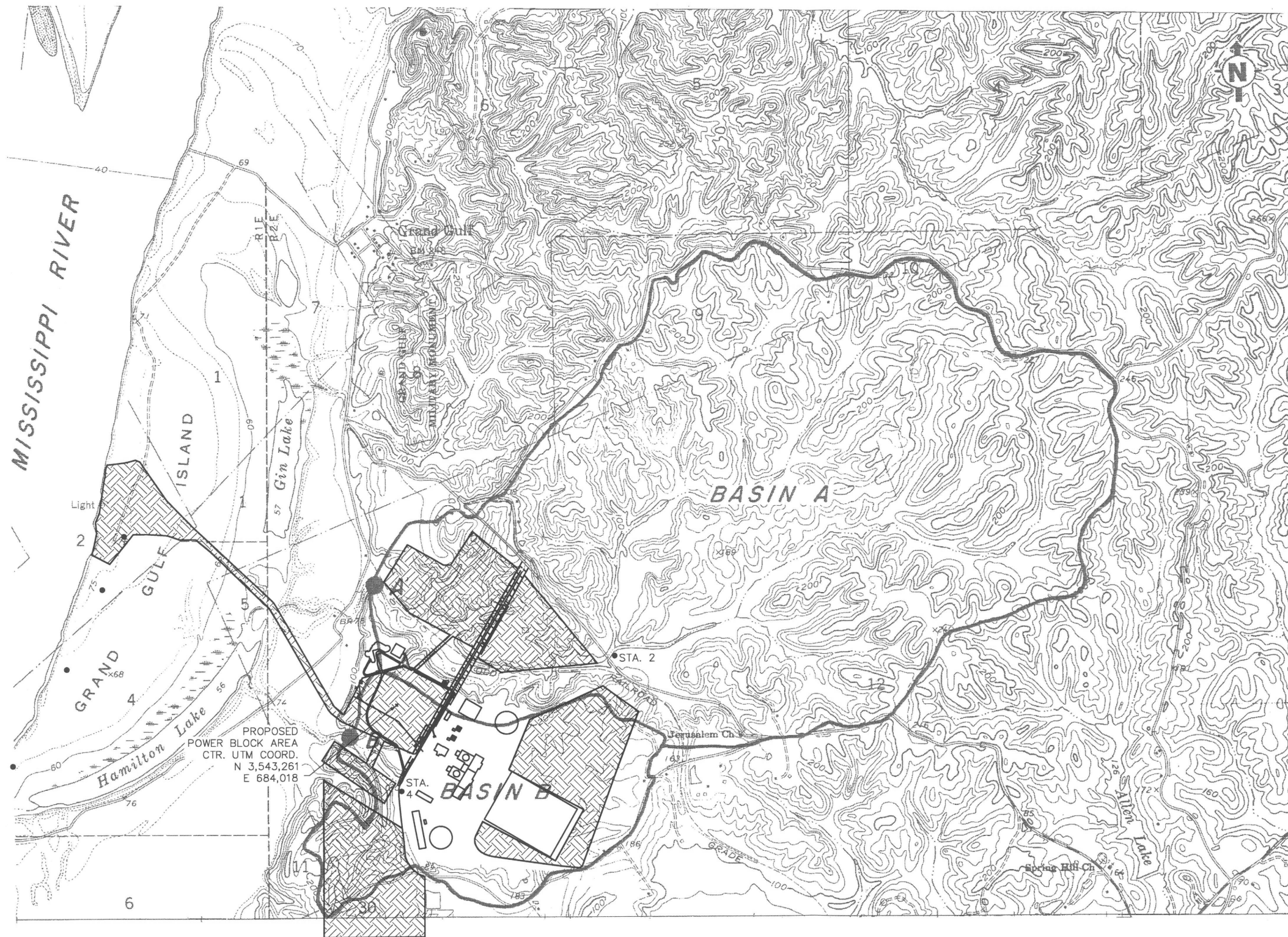
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INITIAL WATER SAMPLING LOCATIONS  
(FER FIGURE 2.4-10)

FIGURE 2.3-6

REV. 1





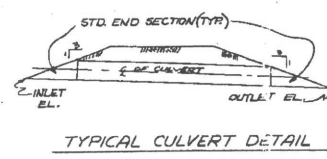
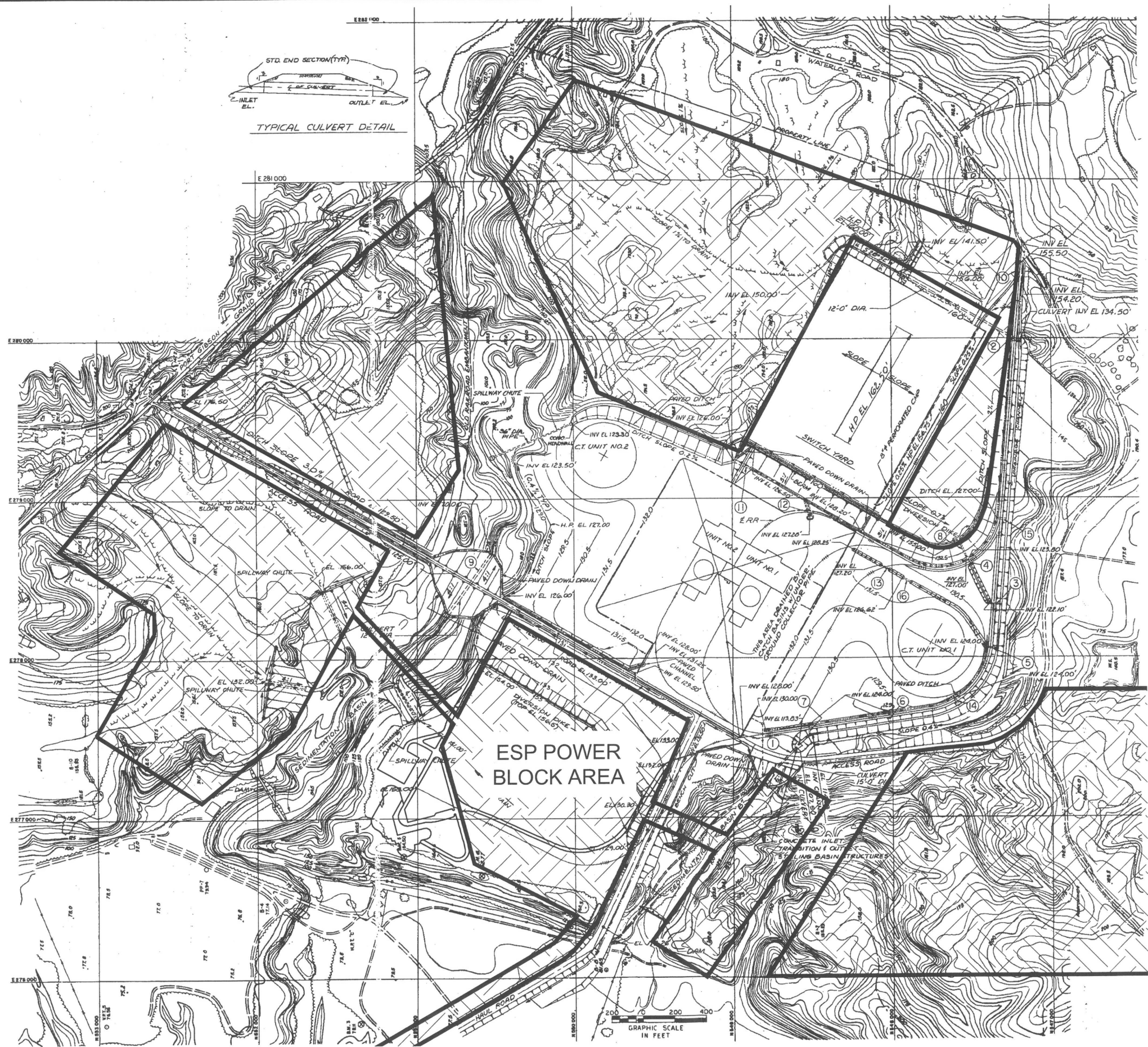
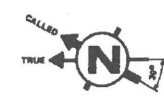
Adapted from U.S.G.S. 7.5 Minute Topographic Sheet 1963 Series

**NOTES:**  
1. GGNS UNIT 1 FACILITIES ADDED FOR REFERENCE.

**LEGEND:**  
 PROPOSED NEW FACILITY CONSTRUCTION AREAS

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LOCAL DRAINAGE BASINS (UFSAR FIGURE 2.4-8)
FIGURE 2.3-7      REV. 1





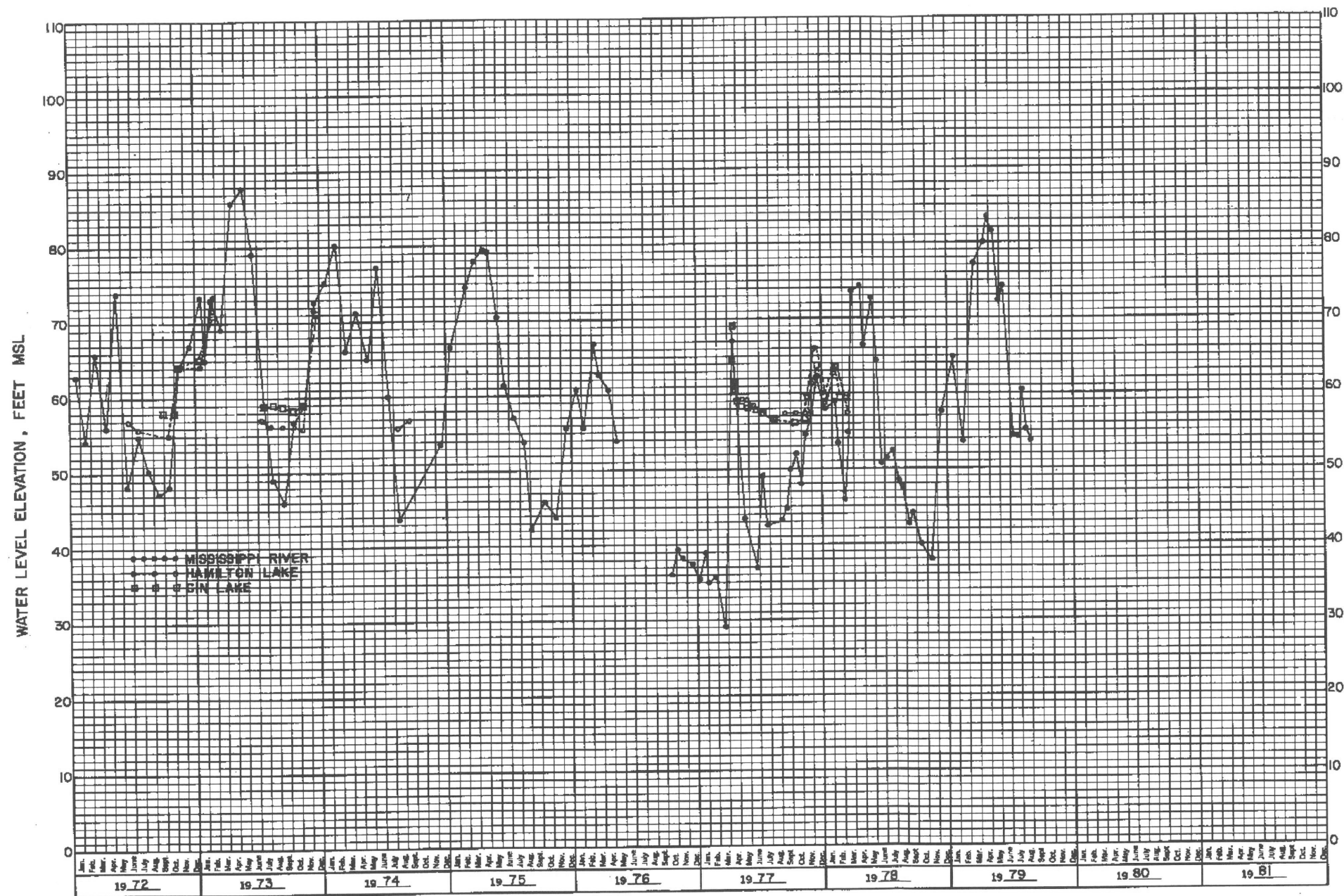
- LEGEND:**
- GRASS LINED DITCHES
  - GRASS LINED WATERWAYS
  - PAVED DITCHES (3" GUNNITE OR 4" CONCRETE)
  - SPILLWAY CHUTES (CMP WITH BASIN)
  - PAVED DOWN DRAIN
  - RAILROAD
  - CULVERTS
  - PROPOSED NEW FACILITY CONSTRUCTION AREAS.

- NOTES:**
1. STRUCTURES FOR GGNS UNIT 2 ARE FOR INFORMATION ONLY, SINCE CONSTRUCTION OF UNIT 2 WAS SUSPENDED ON 8/21/91.
  2. RAILROAD DATA AND LOCATIONS ARE FOR INFORMATION ONLY TO IDENTIFY LOCATION OF ORIGINAL RR BED. MOST OF THE RR HAS BEEN REMOVED.

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SITE DRAINAGE PLAN  
 (UFSAR FIGURE 2.4-7)





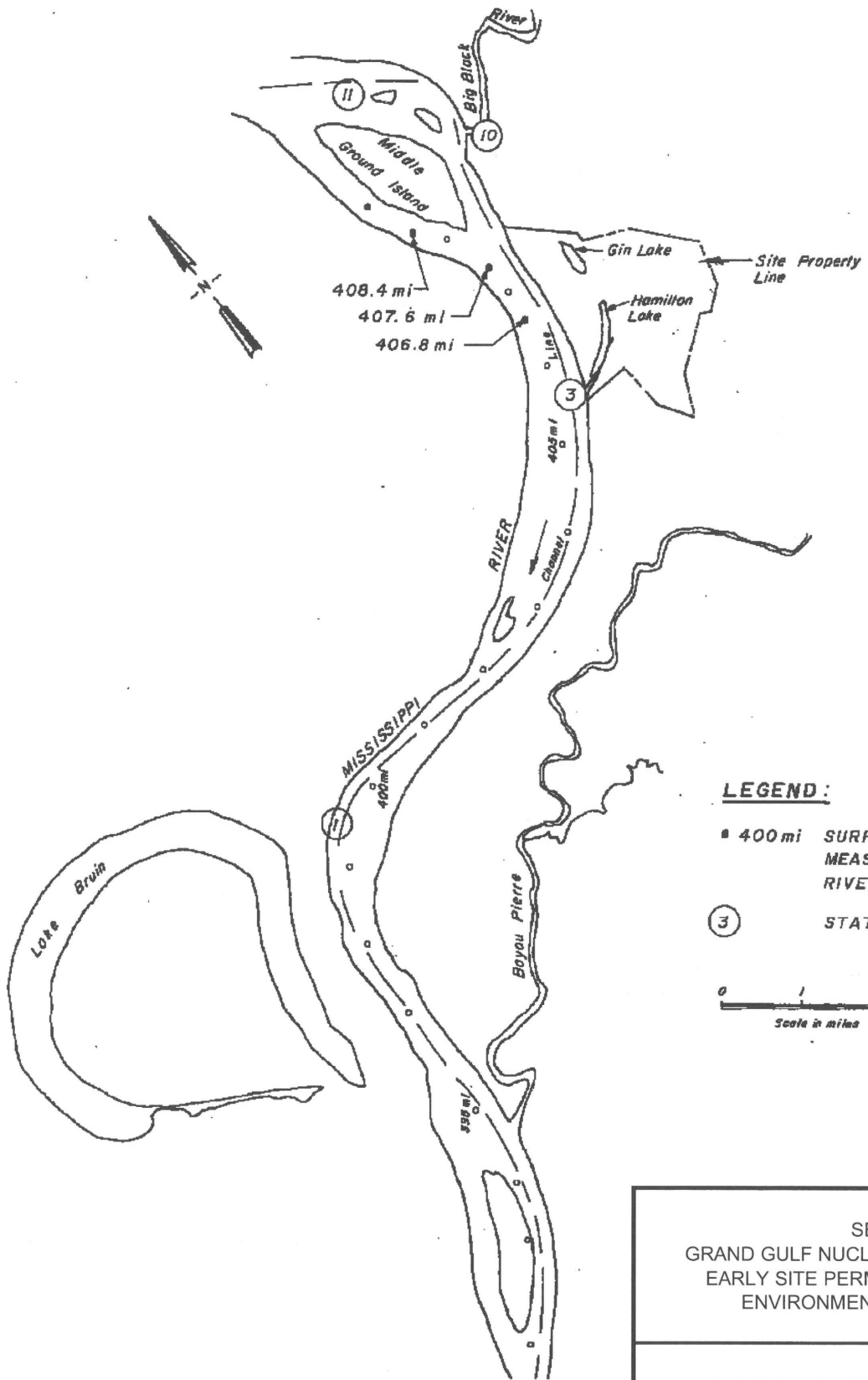
NOTES:  
 1. LOCATIONS OF MISSISSIPPI RIVER, HAMILTON & GIN LAKES ARE SHOWN IN FIGURE 2.3-20 (UFSAR FIGURE 2.4-27).

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HYDROGRAPHS OF MISSISSIPPI RIVER,  
 GIN LAKE, AND HAMILTON LAKE  
 (UFSAR FIGURE 2.4-33)

FIGURE 2.3-9      REV. 1



**LEGEND:**

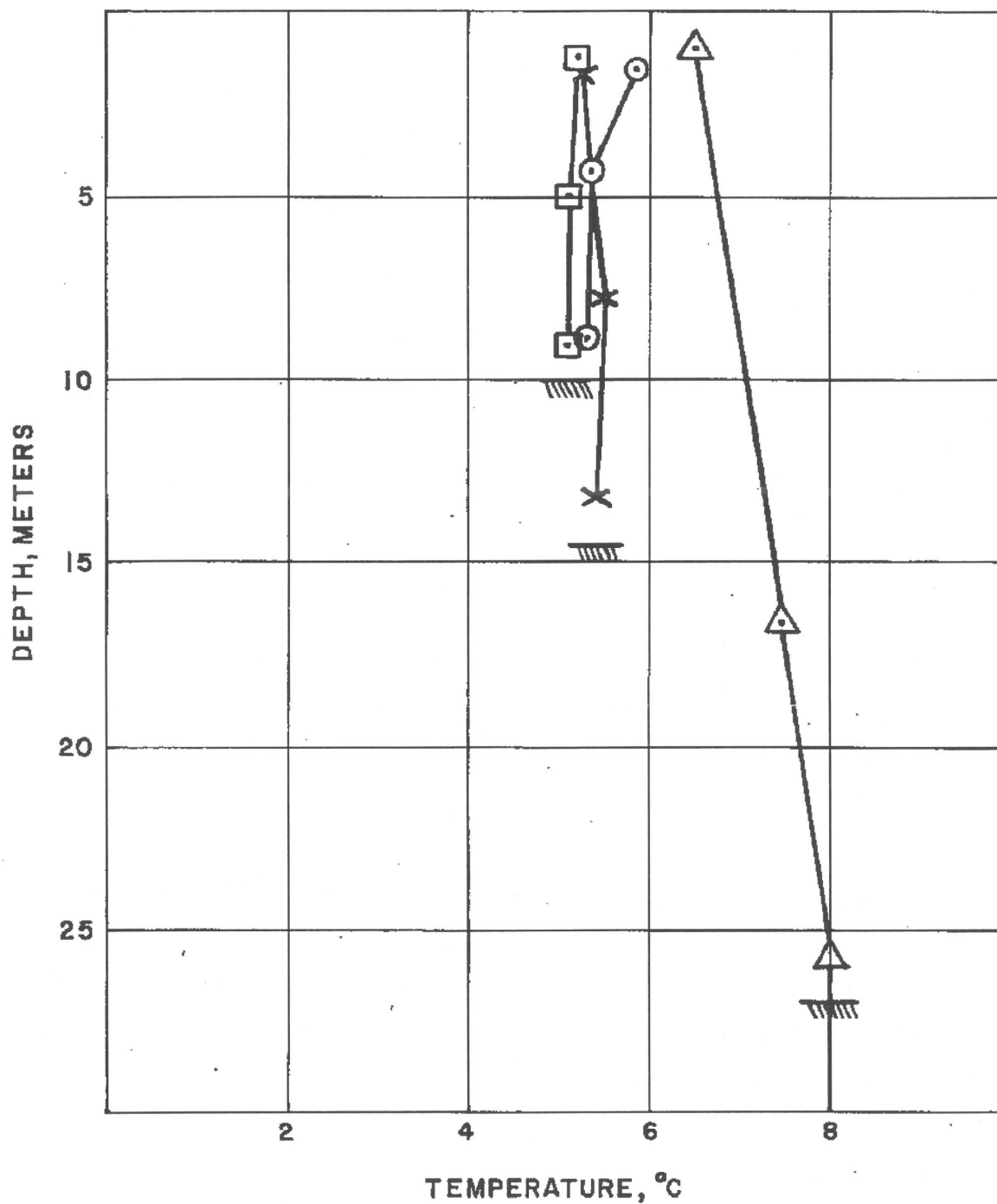
- 400 mi SURFACE VELOCITY MEASUREMENTS AND RIVER MILES
- ③ STATION NUMBER








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LOCATIONS OF INITIAL VELOCITY AND  
 TEMPERATURE MEASUREMENTS  
 (FER FIGURE 2.4-8)



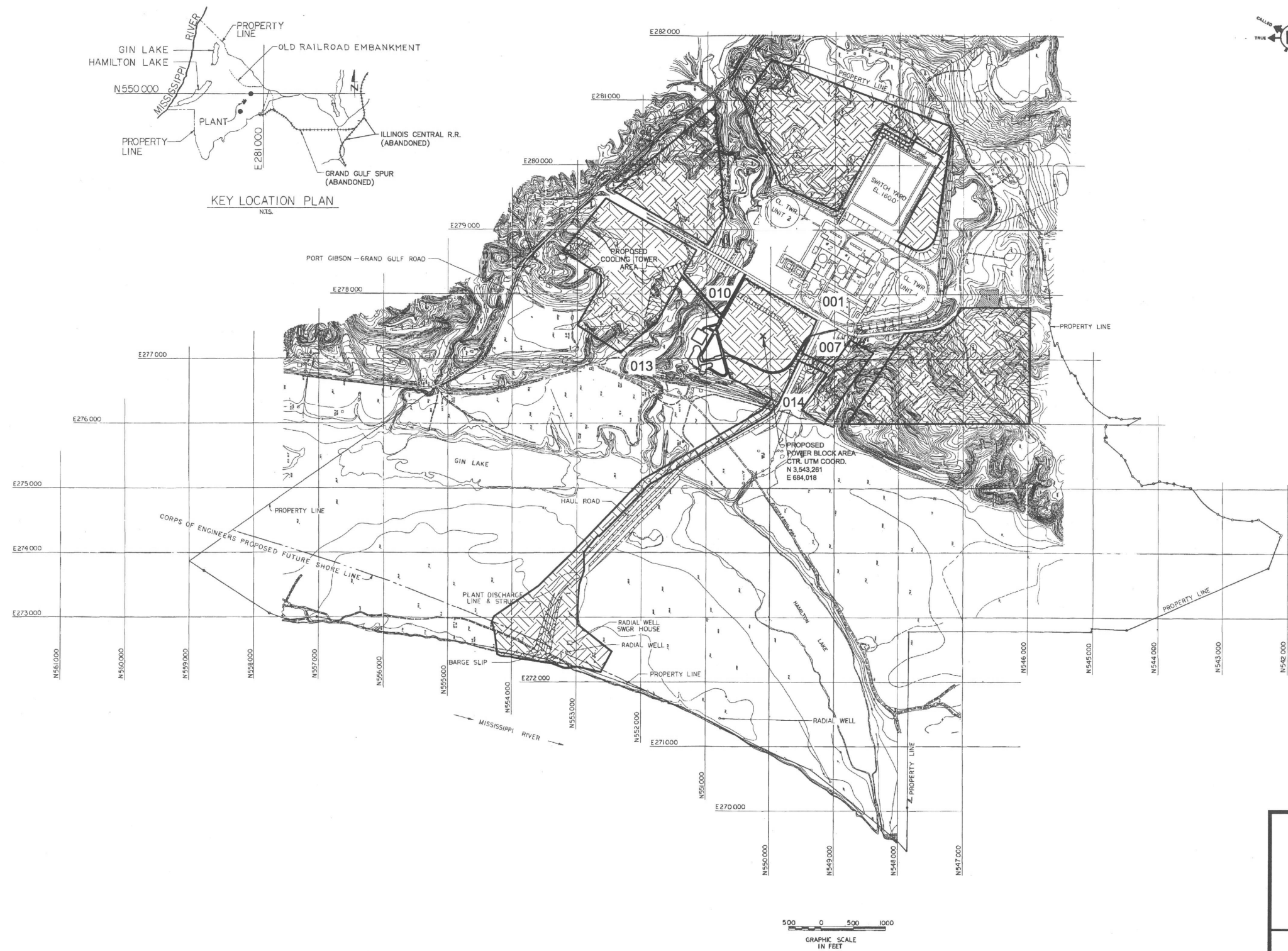


**LEGEND:**

-  STATION 1
-  STATION 3
-  STATION 10
-  STATION 11
-  APPROX. BOTTOM

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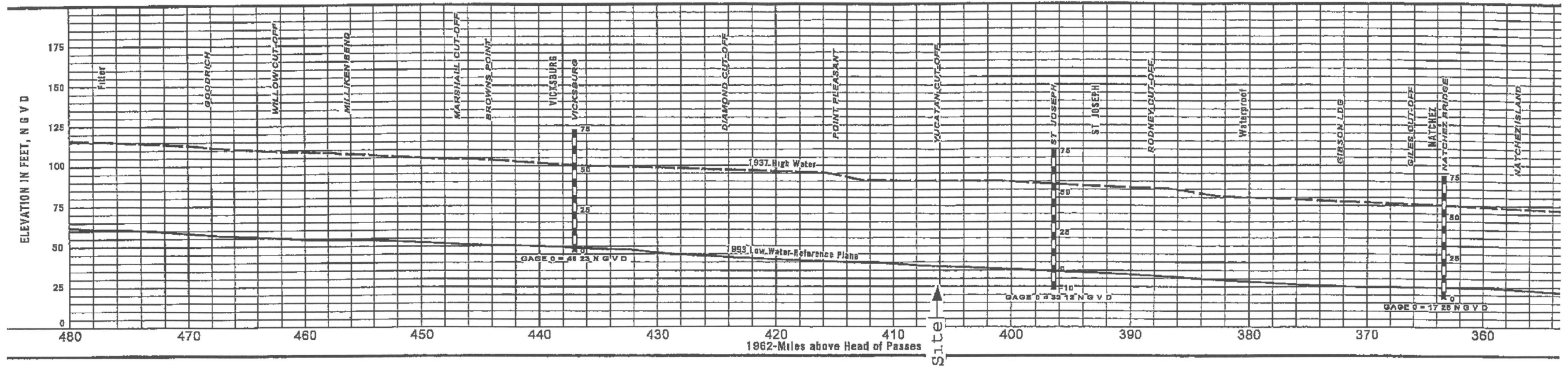
VERTICAL TEMPERATURE PROFILE  
 MISSISSIPPI RIVER  
 FEBRUARY 19, 1973  
 (FER FIGURE 2.4-7)



**LEGEND:**  
 007 - OUTFALL NO. 007 LOCATION

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APPROXIMATE LOCATIONS OF  
 GGNS NPDES OUTFALL



LEGEND

- 430 1982 Mileage above Head of Passes
- Low Water Reference Plane\*
- - - 1937 High Water

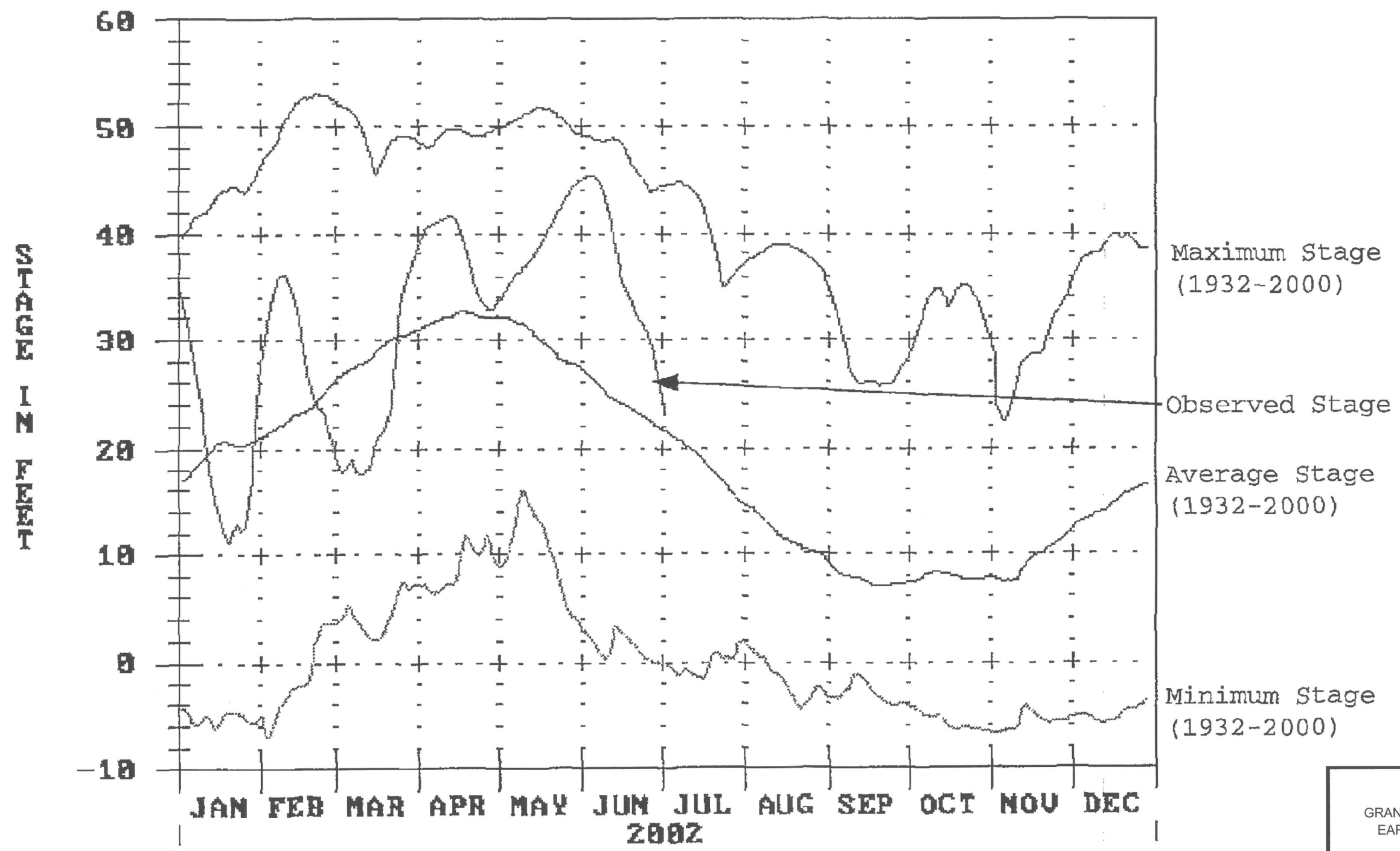
Source: Adapted from USACE, 2001

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WATER SURFACE PROFILES FOR 1937 HIGH  
 FLOW AND 1993 LOW WATER REFERENCE  
 PLANE

FIGURE 2.3-13





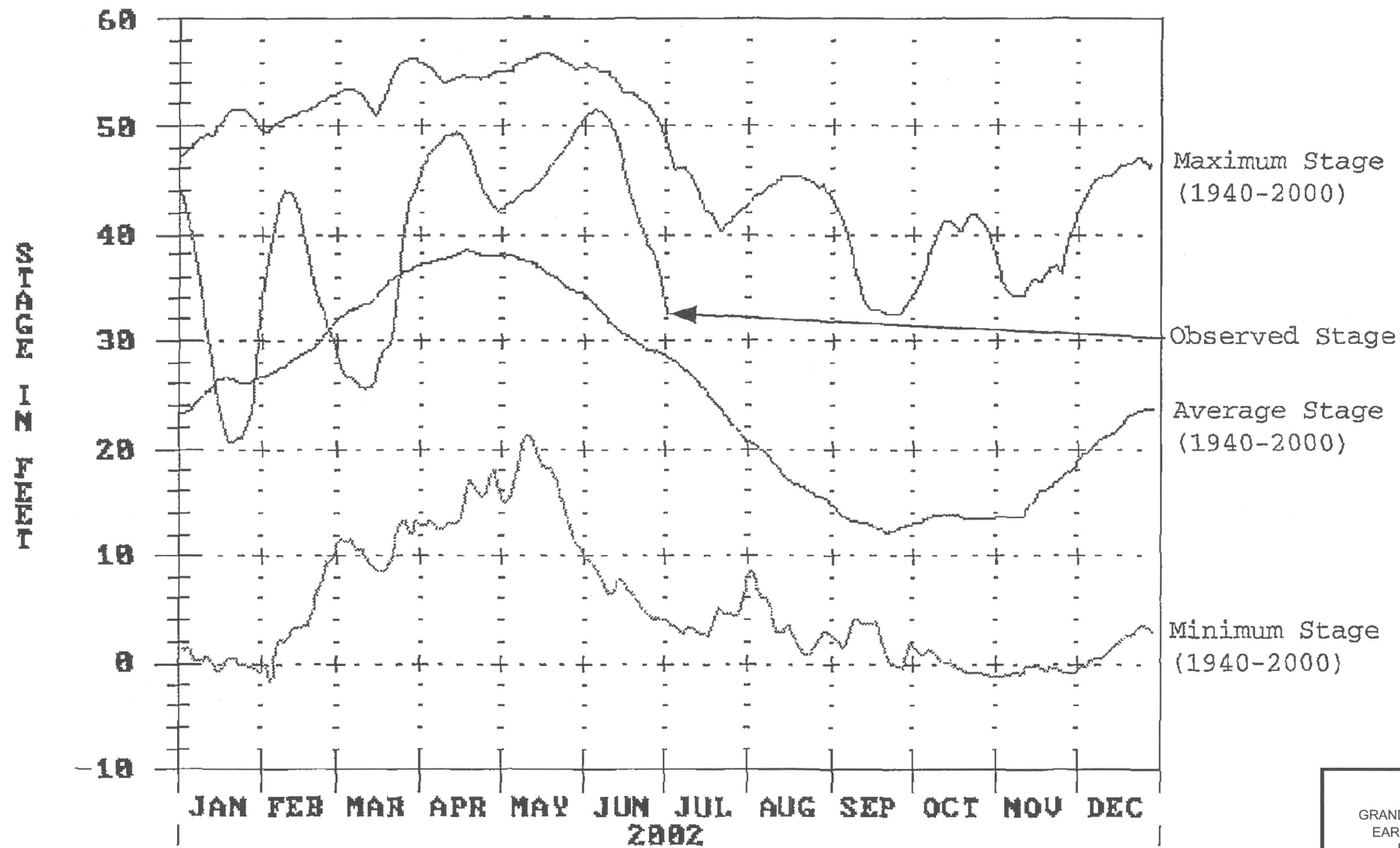
Source: Adapted from U.S. Army Corps of Engineers

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HYDROGRAPH FOR THE MISSISSIPPI  
 RIVER AT VICKSBURG, MS

FIGURE 2.3-14 REV. 1

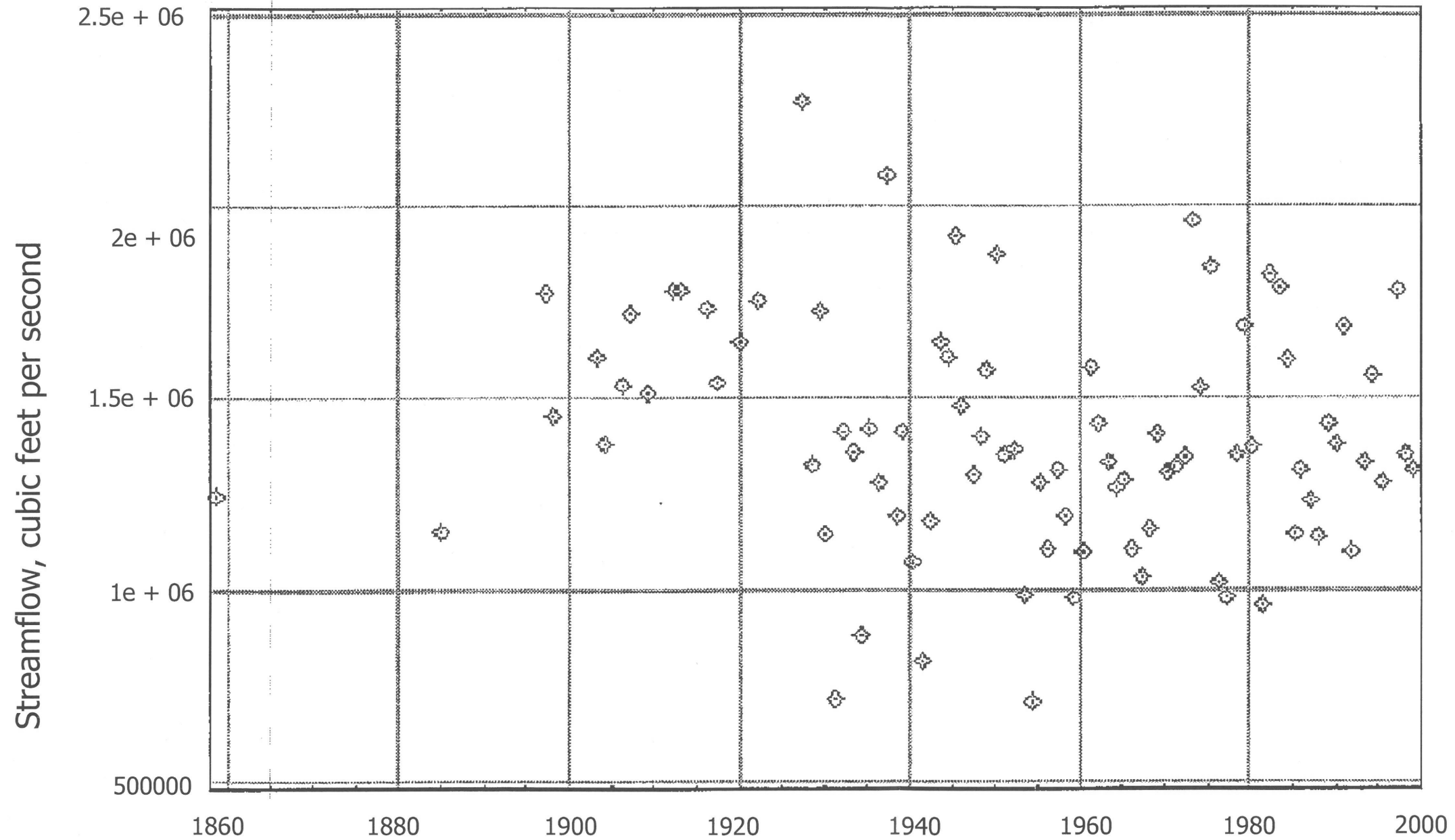


Source: Adapted from U.S. Army Corps of Engineers

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HYDROGRAPH FOR MISSISSIPPI RIVER  
 AT NATCHEZ, MS

USGS 07289000 MISSISSIPPI RIVER AT VICKSBURG, MS



DATES: 06/24/1858 to 02/13/1999

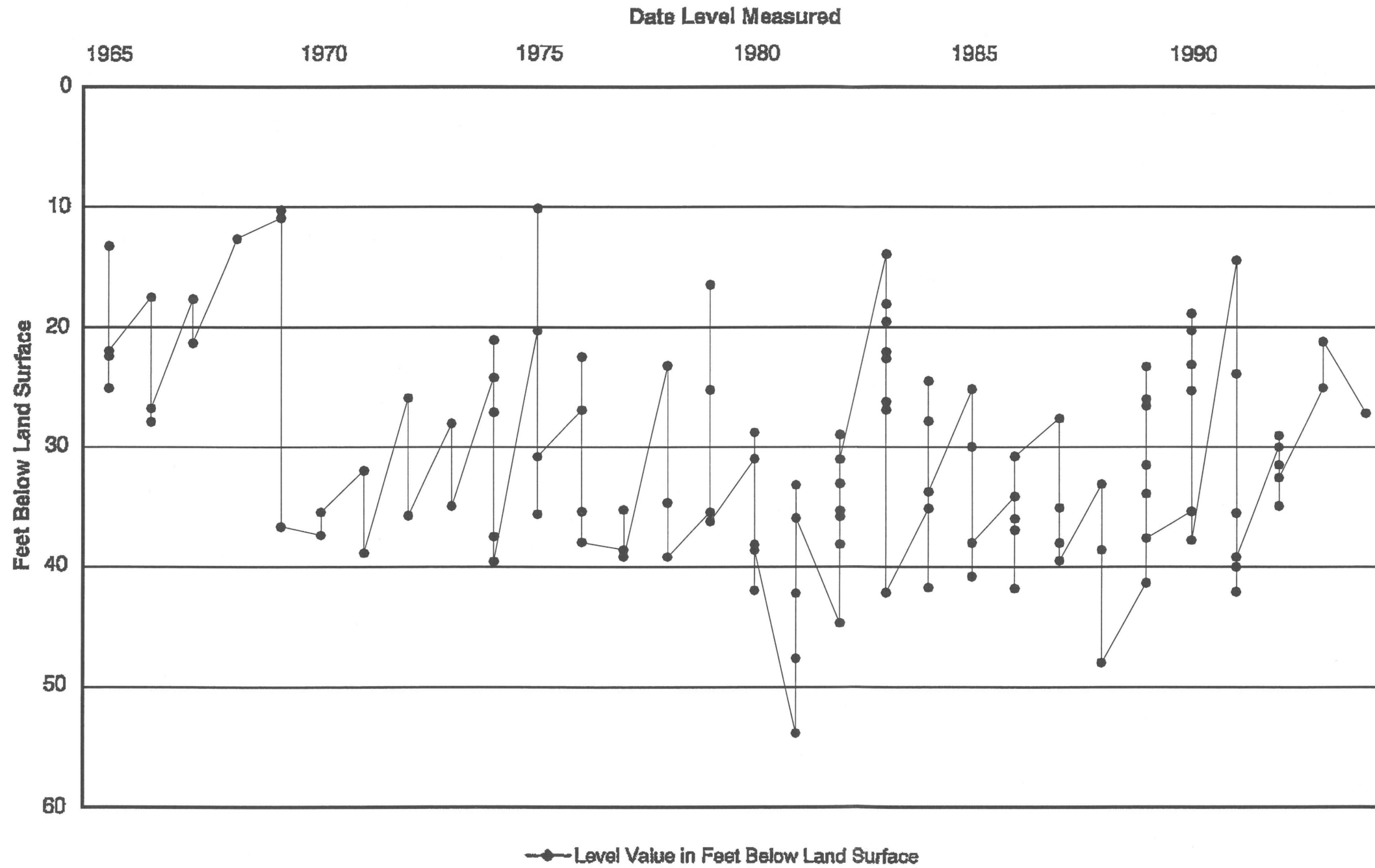
Source: U.S.G.S.

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ANNUAL MAXIMUM INSTANTANEOUS PEAK  
STREAMFLOW - MISSISSIPPI RIVER  
USGS STATION, VICKSBURG, MS



# Ground Water Levels Vicksburg Well Completed in the Mississippi River Alluvial Aquifer

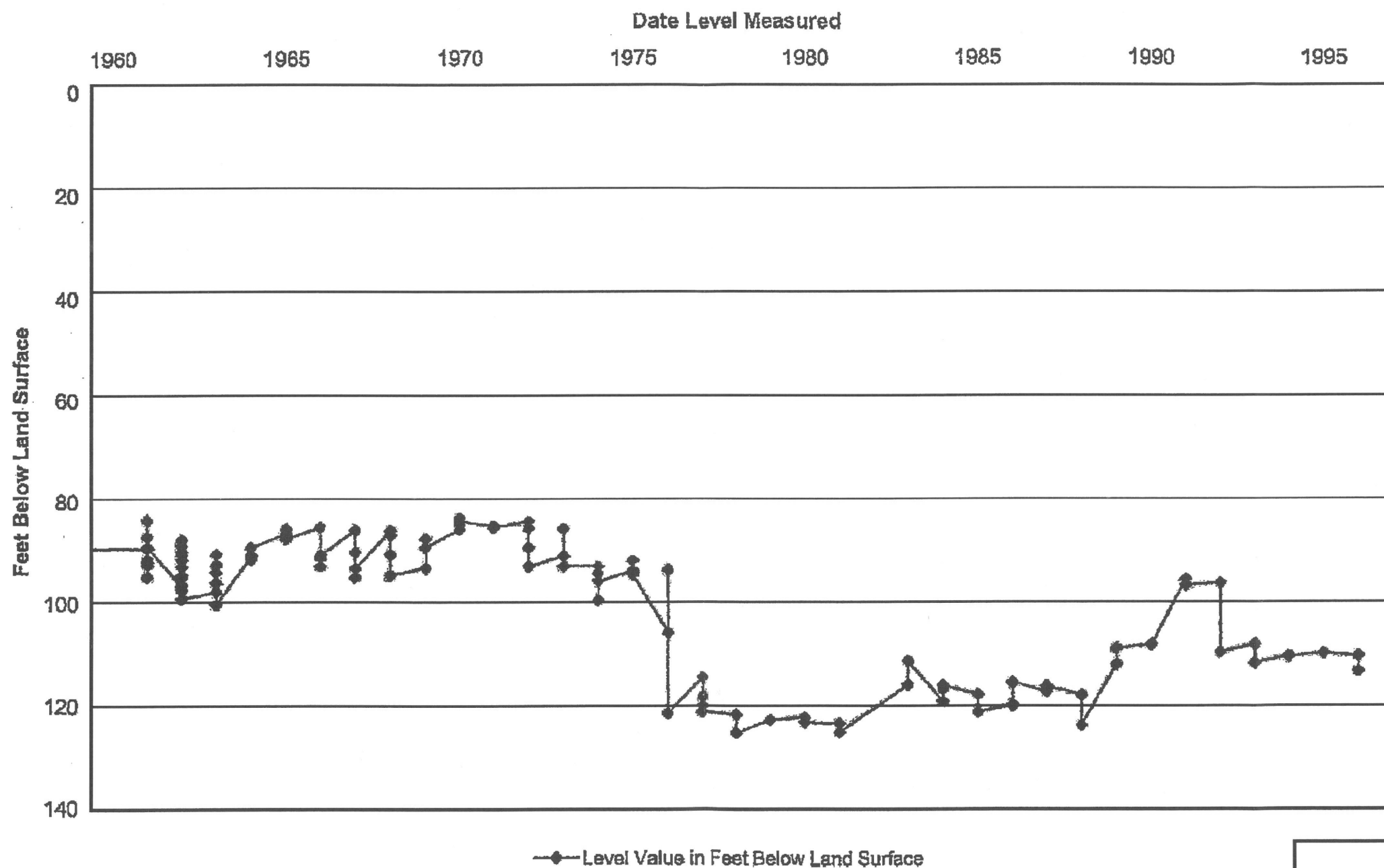


SOURCE: USGS

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HYDROGRAPH OF A WELL COMPLETED  
 IN THE MS RIVER ALLUVIAL AQUIFER,  
 VICKSBURG, MS

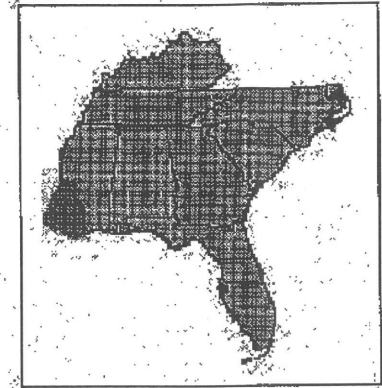
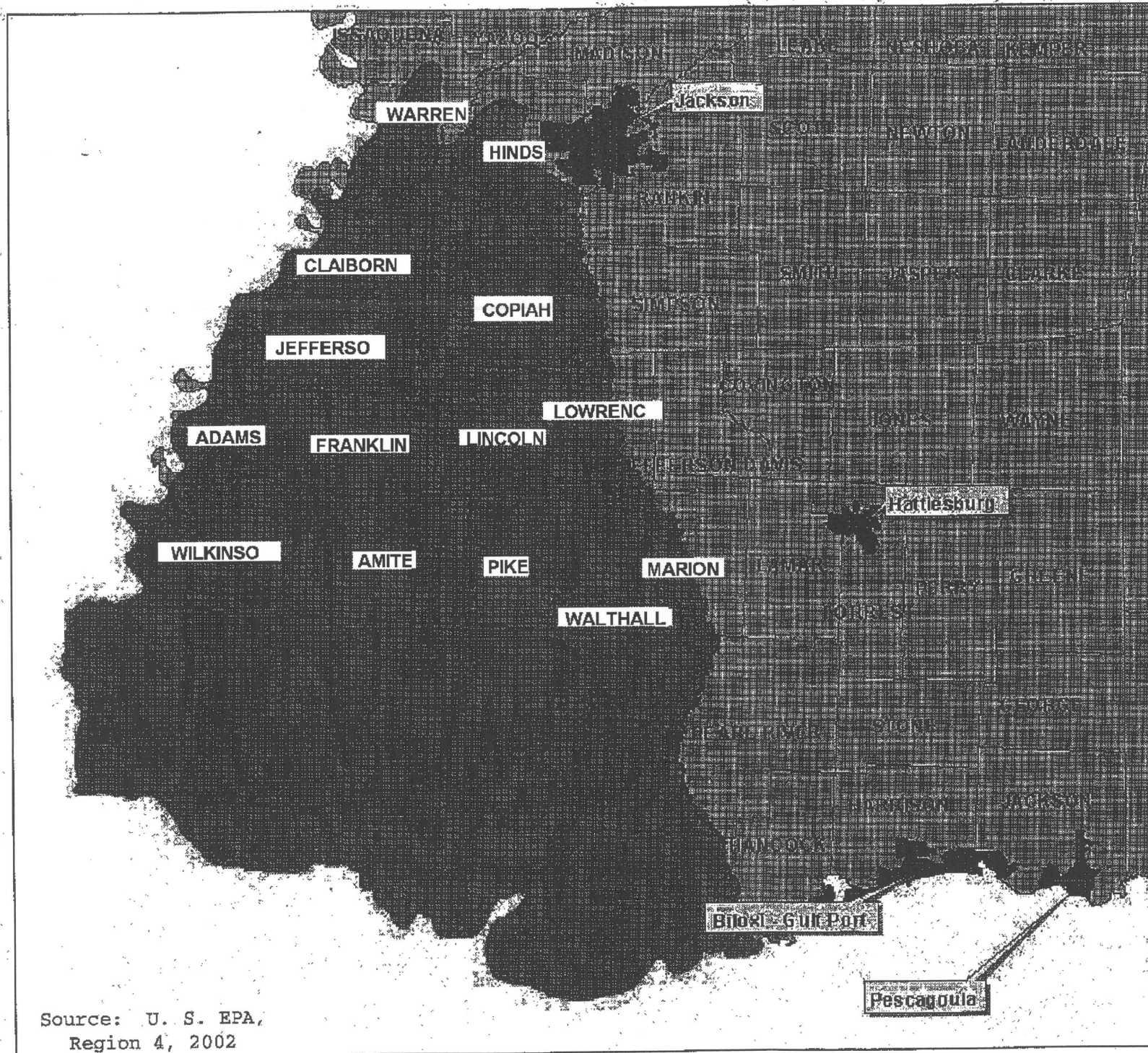
### Ground Water Levels - Port Gibson, Well Completed in the Lower Catahoula Formation



SOURCE: USGS

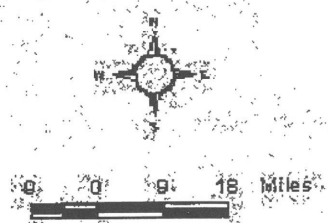
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HYDROGRAPH OF A WELL COMPLETED IN THE  
LOWER CATAHOULA FORMATION,  
PORT GIBSON, MS



**SOUTHERN HILLS  
REGIONAL AQUIFER  
SYSTEM**

- Major Cities
- Sole Source Aquifer
- Counties



Source: U. S. EPA,  
Region 4, 2002

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SOLE SOURCE AQUIFER MAP