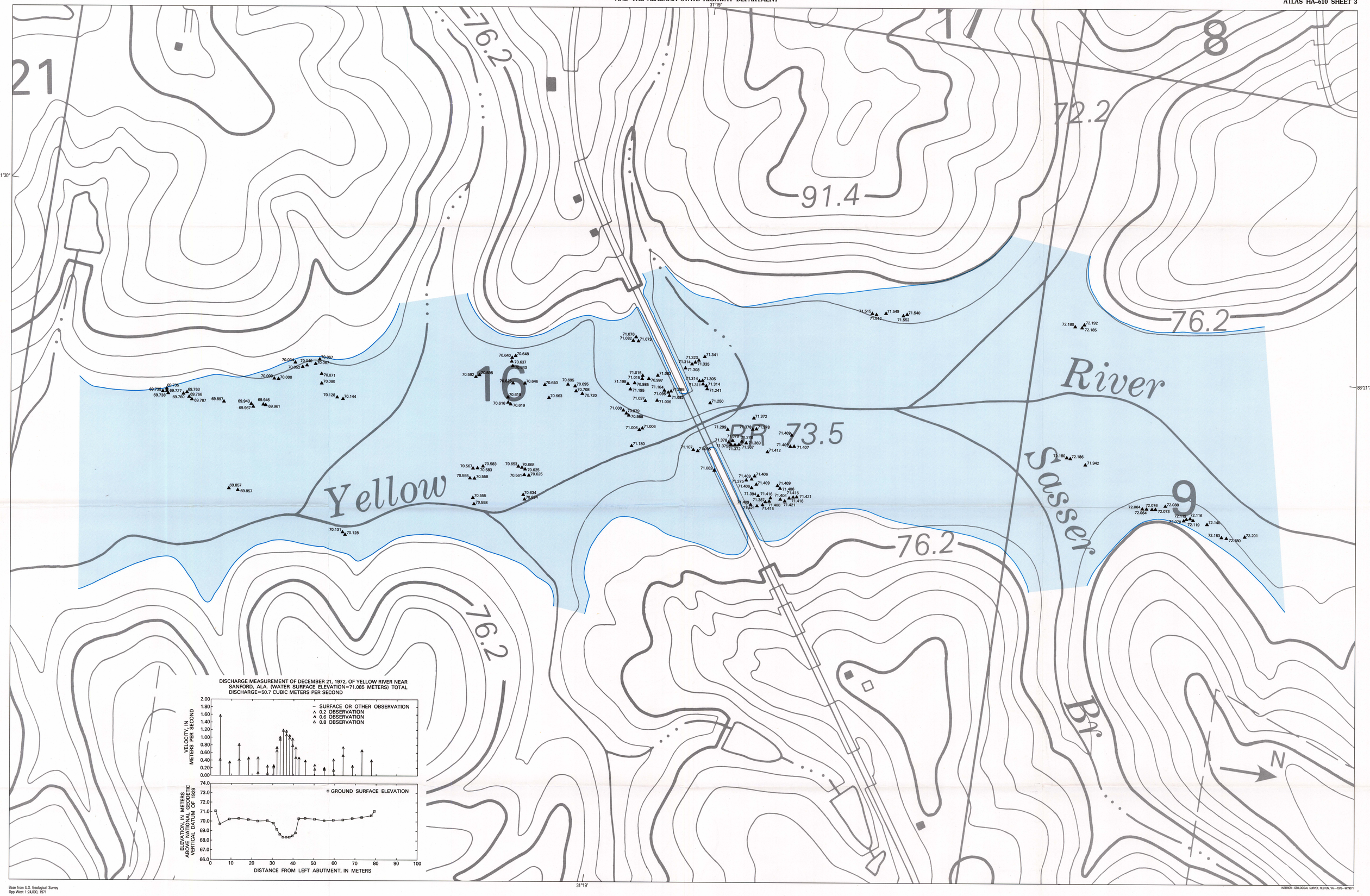
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Prepared in cooperation with the
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
AND THE ALABAMA STATE HIGHWAY DEPARTMENT

HYDROLOGIC INVESTIGATIONS
ATLAS HA–610 SHEET 3



Base from U.S. Geological Survey
Opp West 1:24,000, 1971

SCALE 1:2 000
0 10 20 30 40 50 100 150 200 250 300 350 400 450 500 METERS
CONTOUR INTERVAL ABOUT 3 METERS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

EXPLANATION
69.735 Elevation of water surface
Flood boundary March 12, 1973
Manning Roughness Coefficient
Dense woods, swamps 0.10–0.15

EXAMPLE: If water depth is less than 0.6 meter, $n=0.15$. If water depth is greater than 1.0 meter, $n=0.10$ (assume linear variation of n for water depths between 0.6 and 1.0 meter).

BACKWATER AT BRIDGES AND DENSELY WOODED FLOOD PLAINS, YELLOW RIVER NEAR SANFORD, ALABAMA

By
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