CENTENNIAL WASH
Property of
Flood Control District of MC Library
Please Return to
2801 W. Durango
Phoenix, AZ 85009

I. Study Contractor Information

Name of Study Contractor: Harris-Toups Associates

Street Address of Study Contractor: 4131 N. 24th Street, Phx., AZ 85016

Telephone No. of Study Contractor: (602) - 264-9665

Study Contractor Project Manager to be Contacted for Additional Information:
Edward A. Adair

II. FIS Contract Information

Name of FIS Community: N/A

County: Maricopa (Approximate Studies)

State: Arizona

Private Contractor's Contract No. H-4008

Public Agency Interagency Agreement Nos.

Public Agency Project Order Nos.

III. Coordination

List the positions of the Community Officials and names of the Federal and local agencies with whom the following aspects of the FIS were coordinated:

Base Maps N/A

Surveying N/A

Hydrology and Hydraulics Chief of Hydrology Section -
Maricopa County Flood Control District

Floodway N/A

Date of Time and Cost Meeting April 6, 1976

Date of Initial CCO Meeting

Additional Remarks: (Use separate sheet)

80.1-00-8-04/76

FPML

IV. Scope of Study

Areas excluded from Study: _____

Areas of Extraterritorial Jurisdiction: _____

Water Courses Studied:

Name: Centennial Wash

Location: Western Maricopa County

Direction of Flow: To Southeast

Limits of Study: Maricopa County line to S.E. 5.8 miles

Type of Study: Approximate

Name: Copper Wash

Location: Western Maricopa County

Direction of Flow: to the South

Limits of Study: From Gila Bend Mountains to the South 10 miles.

Type of Study: Approximate

Name: Jackrabbit Wash

Location: Western Maricopa County

Direction of Flow: South

Limits of Study: From T-4-N, R-6-W, Section 25 to T-3-N, R-5-W Section 15.

Type of Study: Approximate

Additional Remarks: (Use separate sheet)

Water Courses Studied:

Name: Gila Bend Canal

Location: Southwestern Maricopa County

Direction of Flow: Canal flows to West

Limits of Study: Gila Bend to Smurr

Type of Study: Approximate

Name: Trilby Wash

Location: Central Maricopa County

Direction of Flow: South

Limits of Study: T-5-N, R-3-W, Section 27 to T-4-N, R-2-W, Section 19

Type of Study: Approximate

Name: Buckeye Dentention Dike

Location: Western Maricopa County

Direction of Flow: South

Limits of Study: From T-2-N, R-3-W, Section 36 to T-1-N, R-4-W, Section 13

Type of Study: Approximate

Additional Remarks: (Use separate sheet)

Water Courses Studied:

Name: Wash #1

Location: Central Maricopa County

Direction of Flow: Northwest

Limits of Study: From T-1-S, R-2-W, Section 20 to Gila River

Type of Study: Approximate

Name: Waterman Wash

Location: Central Maricopa County

Direction of Flow: Northwest

Limits of Study: From T-3-S, R-1-W, Section 28 to T-1-S, R-2-W, Section 30

Type of Study: Approximate

Name: Cline Creek

Location: Northern Maricopa County

Direction of Flow: Southwest

Limits of Study: From T-1-N, R-3-E, Section 35 to T-6-N, R-3-E, Section 7

Type of Study: Approximate

Additional Remarks: (Use separate sheet)

Water Courses Studied:

Name: Rodger Creek

Location: Northern Maricopa County

Direction of Flow: Southwest

Limits of Study: From T-6-N, R-3-E, Section 10 to T-6-N, R-3-E, Section 19

Type of Study: Approximate

Name: Grand Canal

Location: Central Maricopa County

Direction of Flow: Canal flows to the West

Limits of Study: City of Glendale to New River

Type of Study: Approximate

Name: Roosevelt Canal

Location: Central Maricopa County

Direction of Flow: Canal flows to the Northwest

Limits of Study: City of Phoenix to City of Tolleson

Type of Study: Approximate

Additional Remarks: (Use separate sheet)

Water Courses Studied:

Name: Rowe Wash

Location: Northern Maricopa County

Direction of Flow: West

Limits of Study: From T-6-N, R-4-E, Section 24 to Section 22

Type of Study: Approximate

Name: Wash # 6 (Ocotillo Wash)

Location: Northern Maricopa County

Direction of Flow: Southwest

Limits of Study: From T-6-N, R-4-E Section 11 to Section 15

Type of Study: Approximate

Name: Willow Springs Wash

Location: Northern Maricopa County

Direction of Flow: Southwest

Limits of Study: From T-6-N, R-4-E Section 15 to Section 16

Type of Study: Approximate

Additional Remarks: (Use separate sheet)

Water Courses Studied:

Name: Pinnacle Peak Wash

Location: Northern Maricopa County

Direction of Flow: From T-4-N, R-5-E Section 10 to Section 18

Limits of Study:

Type of Study: Approximate

Name: Kyrene Canal

Location: Southeastern Maricopa County

Direction of Flow: Canal flows to the South

Limits of Study: From Ray Road 2.1 miles to the South

Type of Study: Approximate

Name: Verde River

Location: Northeastern Maricopa County

Direction of Flow: To South

Limits of Study: From T-5-N, R-7-E Section 32 to T-4-N, R-7-E Section 5

Type of Study: Approximate

Additional Remarks: (Use separate sheet)

Water Courses Studied:

Name: Wash #9 (Tributary to Verde River)

Location: Northeastern Maricopa County

Direction of Flow: to the East

Limits of Study: From T-5-N, R-7-E Section 31 to Section 32

Type of Study: Approximate

Name: Wash #10 (Tributary to Verde River)

Location: Northeastern Maricopa County

Direction of Flow: to the East

Limits of Study: From T-4-N, R-6-E Section 1 to T-4-N, R-7-E Section 5

Type of Study: Approximate

Name: Wash #11 (Tributary to Verde River)

Location: Northeastern Maricopa County

Direction of Flow: to the East

Limits of Study: From T-4-N, R-7-E Section 6 to Section 8

Type of Study: Approximate

Additional Remarks: (Use separate sheet)

V. UNINCORPORATED COUNTY DESCRIPTION

A. Location and Population

1. South central Arizona
2. Major cities in Maricopa County; Phoenix, Tempe, Mesa.
3. Population 969,425
4. 1970 Census

B. Development

1. Residential development is expanding rapidly in the Phoenix metropolitan area. Most cities and towns have annexed large amounts of county land in anticipation of continued growth and developers are actively subdividing agricultural land both in the cities and on the surrounding county lands.

   Commercial development has followed the trend away from the city centers to neighborhood shopping centers and large shopping malls.

2. Most of the streams studied in the unincorporated county lie in undeveloped areas. However, in areas with communities nearby both agricultural and residential development has occured in the floodplains of the normally dry washes.

3. Most of the land area in Maricopa County is undeveloped but the major land use is agricultural.

C. Meterology

1. Temperature
   Summer (July) Low = 78° High = 104°
   Winter (January) Low = 38° High = 65°

2. Annual Rainfall = 7.4 inches

3. The only way snowmelt becomes a factor to flooding in Maricopa County is when the Salt River or the Gila River flow with runoff from snowmelt, flooding has occured in Maricopa County in the past when warm spring rains have melted the snow in the higher elevations of the watersheds resulting in runoff which exceeds the capacity of the reservoirs along these rivers.

4. Flooding is caused by general storms of long duration and/or by local thunderstorms of high intensity and short duration.

D. Factors Affecting Flooding

1. Topography
The natural terrain in Maricopa County consists basically of scattered rugged mountain ranges which are encompassed by alluvial fans and desert valleys.

2. Geomorphology
Throughout the county there are many desert washes. The major streams that traverse the county are the Salt River, the Gila River, the Agua Fria River and the Verde River.

3. Soils
The alluvium comprising most of the desert valleys is predominantly sand and silty sand containing varying amounts of caliche. Recent alluvium is found along the streambed channels and consists of uncemented silts, sands, gravels, cobbles and boulders.

4. Vegetation
In general, vegetation is sparse. Cacti grow throughout the area along with other desert shrubs. The vegetation tends to be thicker along the stream courses and may include some small trees. Perennial grasses form a very small portion of the vegetaion but a good cover of annual grasses occur after the winter rains.

5. Drainage Features

Bridges or culverts have been constructed at the major water courses along the principal roadways. Minor routes generally cross the water courses in dip sections.

VI. PRINCIPAL FLOOD PROBLEMS

Flooding sources for the approximate study reaches of the Maricopa County F.I.S. are as listed in Section IV of this letter report. All of these sources are located in relatively undeveloped areas and historical flooding information is not available.

VII. FLOOD PROTECTION MEASURES

None exist in the areas of these approximate studies.

VIII. HYDROLOGIC ANALYSIS

Centennial Wash:

Peak discharge frequency relationships were established by a regional analysis approach using stream guage data from gauges on Centennial Wash downstream from the study reach and on the Tiger Wash Tributary to Centennial Wash adjacent to the study reach. The results were found to be in reasonable agreement with the U.S. Corps of Engineers Discharge Drainage Area Curves from Reference 8.

Copper Wash:

Peak discharges were calculated on Copper Wash at the upper and lower ends of the study reach because there is a significant change in drainage area size from end to end. Hydrologic calculations were performed by the S.C.S. Method Part II as presented in Reference 5.

Jackrabbit Wash:

For the study reach, the drainage area size for Jackrabbit Wash 'if fairly constant. Therefore only one discharge was calculated by S.C.S. Method Part II.

Gila Bend Canal:

The Gila Bend Canal interrupts the flow of runoff from 272 square miles in the six mile reach from Gila Bend to Smurr. S.C.S. procedures were used to determine the volume of runoff from the associated watershed.

Trilby Wash:

The hydrological determinations were performed by regional analysis procedures; using CSM rates developed for Trilby Wash in the Wittman, Arizona detail Flood Insurance Study.

Buckeye Detention Dike:

Flood elevations for the Buckeye Detention Dike were based on spillway elevations taken from construction plans.

Wash Number 1:

Hydrological calculations were made according to the S.C.S. Method Part II as outlined in Reference 5.

Waterman Wash:

Hydrological determinations were made at the upper and lower ends of the study reach following S.C.S. Method Part II procedures as outlined in Reference 5.

Cline Creek and Rodger Creek:

Hydrologic calculations for both of these creeks were performed using the S.C.S. TR-20 Computer Program in conjunction with the detail Flood Insurance Study for Skunk Creek.

Grand Canal:

The portion of the canal studied has no elevated banks to pond and store floodwaters, therefore there are no flood hazards associated with the canal.

Roosevelt Canal:

The S.C.S. Method Part II procedures indicate that the volume of runoff to the Roosevelt Canal exceeds the volume of storage behind the banks.

Rowe Wash:

Hydrology was done by S.C.S. Computer Program TR-20 in conjunction with the Cave Creek Wash Flood Insurance Study.

Wash #6 (Ocotillo Wash):

Same as for Rowe Wash

Willow Springs Wash:

Same as for Rowe Wash

Pinnacle Peak Wash:

Hydrology was done by the S.C.S. Method as outlined in Reference 5.

Kyrene Canal:

After field inspection it was decided that this reach of the canal does not require hydrologic analysis.

Verde River:

Hydrological data was taken from a Log Pearson Type III study done by the U.S.G.S. in July 1976 (Reference 10).

Wash #9, #10 and #11:

Hydrology was done by the S.C.S Method Part II as outlined in reference 5.

IX HYDRAULIC ANALYSES

For the approximate studies in unincorporated Maricopa County there were two types of hydraulic analyses: channel flow and ponding behind embankments. In the case of channel flow the 7 1/2 minute quadrangle maps were used to determine the cross sections necessary to analyse the flow through the reach. Manning's Equation was used

to determine stage elevation relationships using "n" = .035. From this the top width was estimated and plotted on the quad maps; care being taken to match up with any adjoining detail studies.

In the case of ponding behind embankments where the volume of runoff exceeds the volume of storage available the elevation of the top of the embankment was plotted on the contour maps.

No floodways were computed for these approximate studies.

X OTHER STUDIES

There are no published Flood Insurance Studies or reports available that deal with the streams being studied by approximate methods in the unincorporated Maricopa County area. However, reference 6 deals with an area adjacent to the Centennial Wash study area, reference 11 deals with the area around Cline Creek and Rodger Creek and reference 12 deals with the watershed around Rowe Wash, Ocotillo Wash and Willow Springs Wash. Also, as a part of this contract, Harris Toups Associates is performing Flood Insurance Studies for several communities in Maricopa County.

XI LOCATION OF DATA

Survey, Hydrologic, Hydraulic and other pertinent data used in this study can be obtained by contacting the office of the Federal Insurance Administration, Regional Director, Flood Insurance Office, 450 Golden Gate Avenue, P.O. Box 36003, San Francisco, California 94012.

XII BIBLIOGRAPHY AND REFERENCES

1. Department of Housing and Urban Development, Federal Insurance Administration, Flood Insurance Study, Maricopa County, Arizona.

2. The Arizona Association of Counties and the League of Arizona Cities and Towns, Local Government Directory, March 1977.

3. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Local Climatological Data, Phoenix, Arizona, 1976

4. King & Brater, Handbook of Hydraulics, Fifth Edition.

5. Arizona Department of Transporation, Division of Highways, Hydrologic Design for Higway Drainage in Arizona, March 1969, as amended.

6. U.S.D.A. Soil Conservation Service, Final Environmental Impact Statement, Harquahala Valley Watershed, March 1977.

7. U.S.G.S. Quadrangle Maps of Arizona; Lone Mountain, Eagletail Mountains, Hyder N.E., Hyder S.E., Belmont Mountains, White Tank Mountains N.E., Valencia, Avondale S.W., Mobile, McDowell Peak, Fowler, Guadalupe, Fort McDowell and Cave Creek.

8. U.S. Army Corps of Engineers, Los Angeles District, Gila River Basin, New River and Phoenix City Streams, Design Memorandum Number 2, Hydrology Part 1, October 1974.

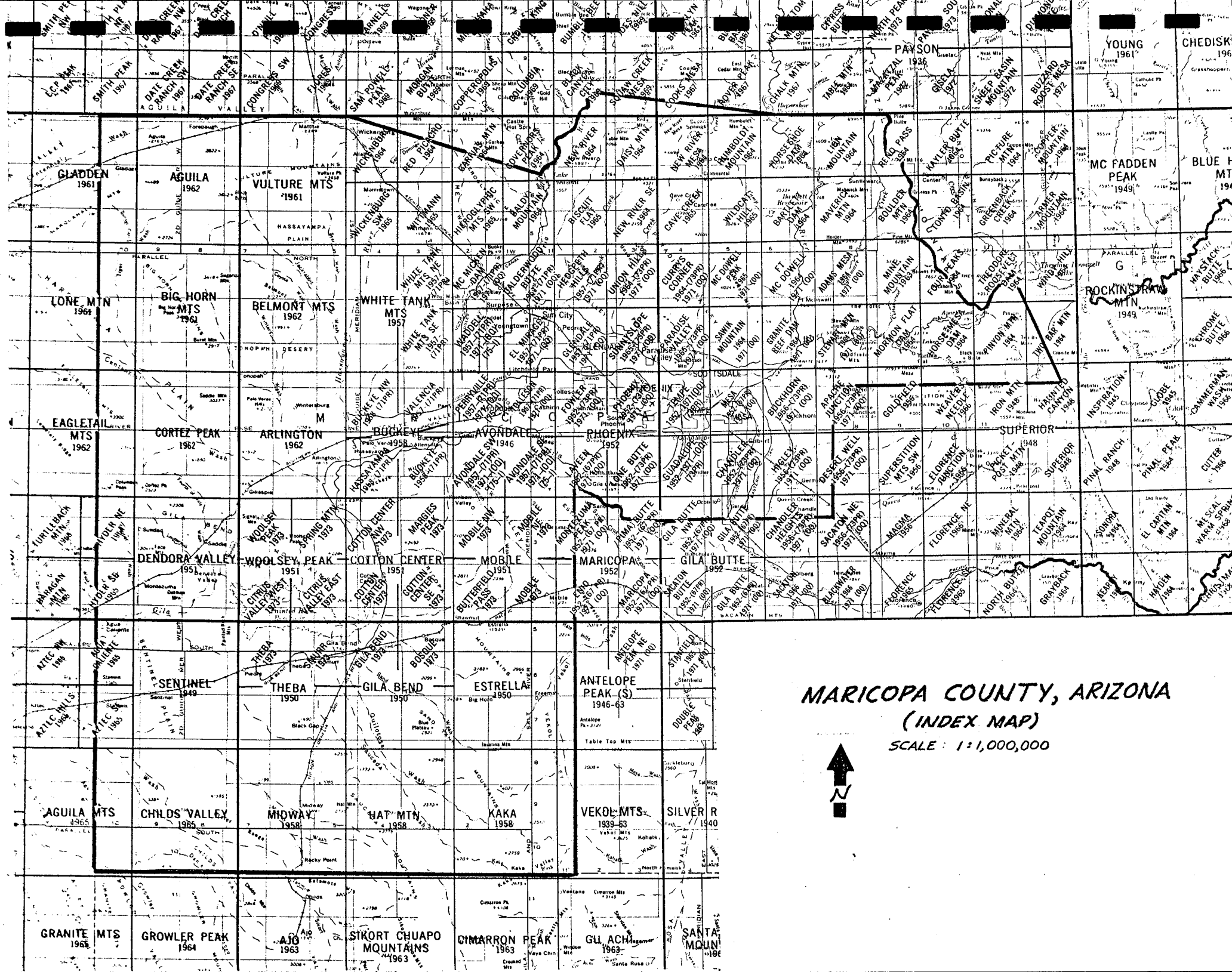
9. Maricopa County Flood Control District, Buckeye Watershed Protection and Flood Protection Project, Plans for the Construction of Floodwater Retarding Structures 2 & 3, March 1974.

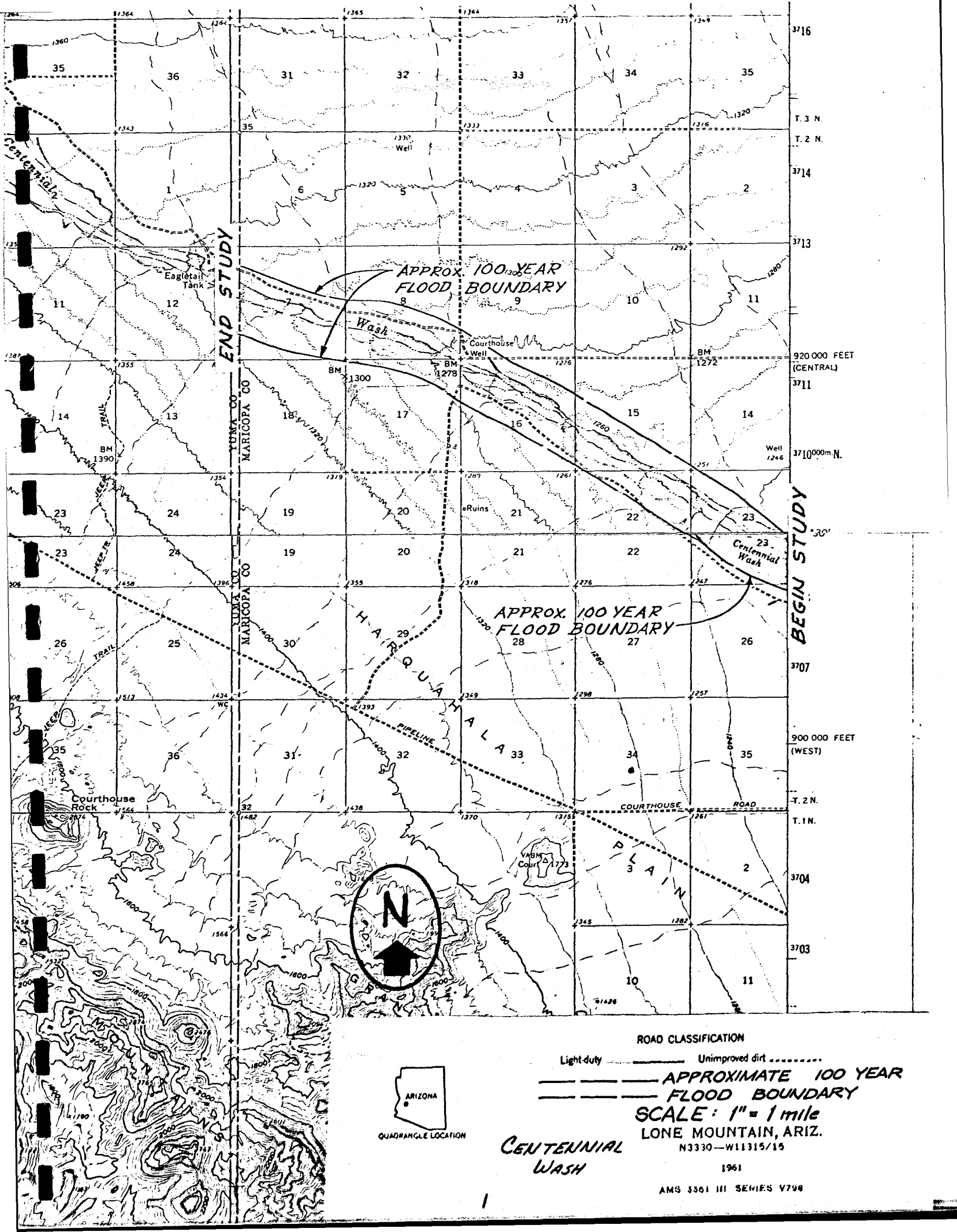
10. U.S.G.S., Log Pearson Computer Analysis of Selected Gaged Streams in Arizona, July 1976

11. U.S. Army Corps of Engineers, Los Angeles District, Floodplain Information Study for Maricopa County, Arizona, Volume III, Skunk Creek Report, March 1965

12. U.S. Army Corps of Engineers, Los Angeles District, Floodplain Information Study for Maricopa County, Arizona, Volume II, Cave Creek Report, November 1964.

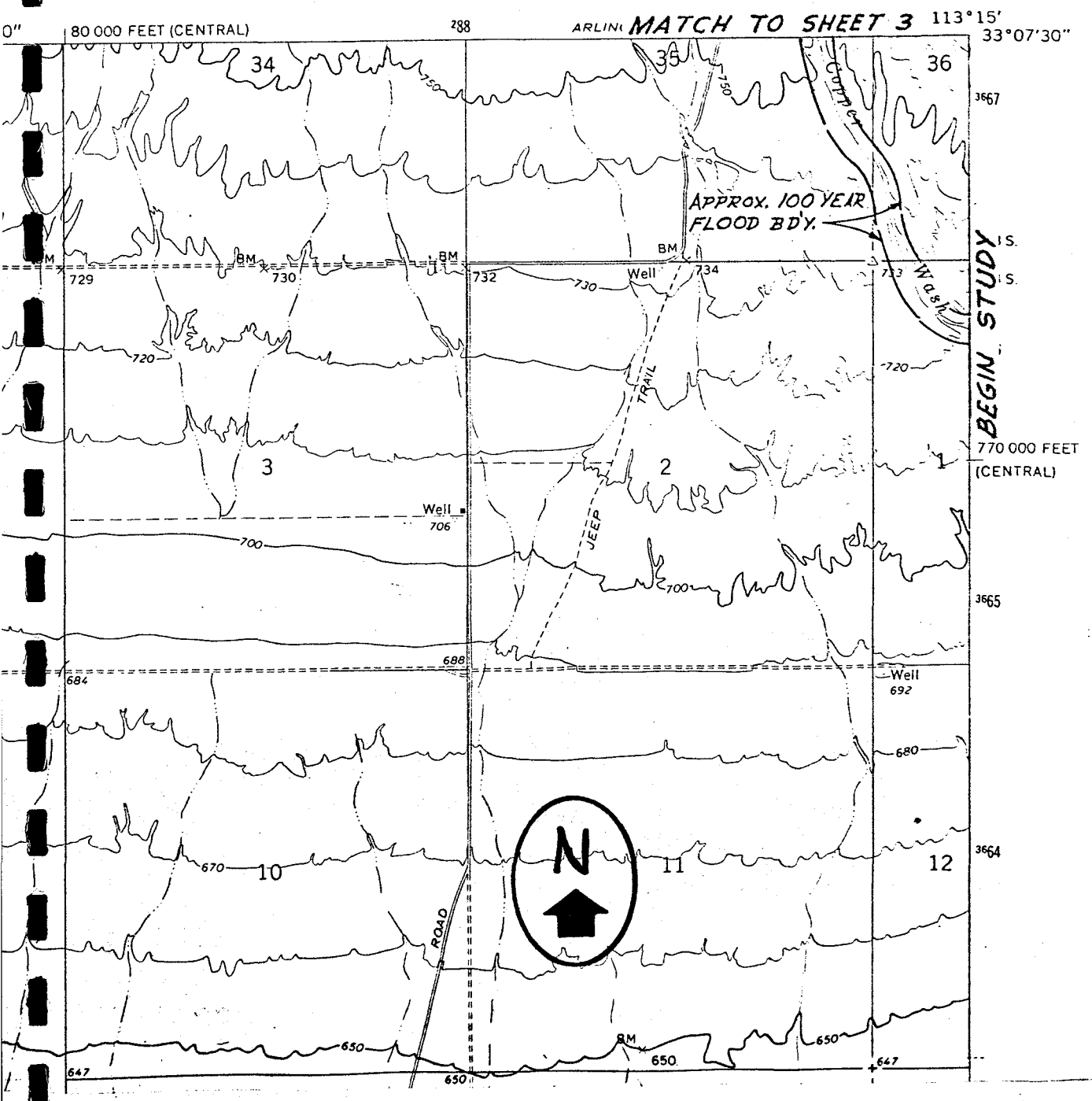
13. U.S.D.A. Soil Conservation Service, TR-20 Project Formulation - Hydrology, May 1965


MARICOPA COUNTY, ARIZONA
(INDEX MAP)
SCALE : 1:1,000,000
N
PAYSON 1936
YOUNG 1961
CHEDISKI
GLADDEN 1961
AGUILA 1962
VULTURE MTS 1961
MC FADDEN PEAK 1949
LONE MTN 1964
BIG HORN MTS 1961
BELMONT MTS 1962
WHITE TANK MTS 1957
ROCKINSTRAW MTN 1949
EAGLETAIL MTS 1962
CORTEZ PEAK 1962
ARLINGTON 1962
BUCKEYE 1958
AVONDALE 1946
PHOENIX 1952
SUPERIOR 1948
DENDORA VALLEY 1951
WOOLSEY PEAK 1951
COTTON CENTER 1951
MOBILE
MARICOPA 1952
GILA BUTTE 1952
SENTINEL 1949
THEBA 1950
GILA BEND 1950
ESTRELLA 1950
ANTELOPE PEAK (S) 1946-63
AGUILA MTS 1965
CHILDS VALLEY 1965
MIDWAY 1958
HAT MTN 1958
KAKA 1958
VEKOL MTS 1939-63
SILVER R 1940
GRANITE MTS 1965
GROWLER PEAK 1964
AJO 1963
SIKORT CHUAPO MOUNTAINS 1963
CIMARRON PEAK 1963
GU ACHI 1963
SANTA MOUN


END STUDY
BEGIN STUDY
APPROX. 100 YEAR FLOOD BOUNDARY
APPROX. 100 YEAR FLOOD BOUNDARY
Centennial Wash
Eagletail Tank
Courthouse Well
Courthouse Rock
Ruins
Well
YUMA CO
MARICOPA CO
HARQUAHALA
PIPELINE
COURTHOUSE ROAD
T. 3 N.
T. 2 N.
T. 1 N.
920 000 FEET (CENTRAL)
900 000 FEET (WEST)
ROAD CLASSIFICATION
Light-duty
Unimproved dirt
APPROXIMATE 100 YEAR FLOOD BOUNDARY
SCALE: 1" = 1 mile
LONE MOUNTAIN, ARIZ.
N3330—W11315/15
1961
AMS 3561 III SERIES V796
ARIZONA
QUADRANGLE LOCATION
CENTENNIAL WASH

HYDER SE QUADRANGLE
ARIZONA
7.5 MINUTE SERIES (TOPOGRAPHIC)

3350 II (DENDORA VALLEY) 1:62 500



ROAD CLASSIFICATION

Light-duty — Unimproved dirt

APPROX. 100 YEAR FLOOD BOUNDARY

SCALE: 1" = 2000'

HYDER SE, ARIZ.

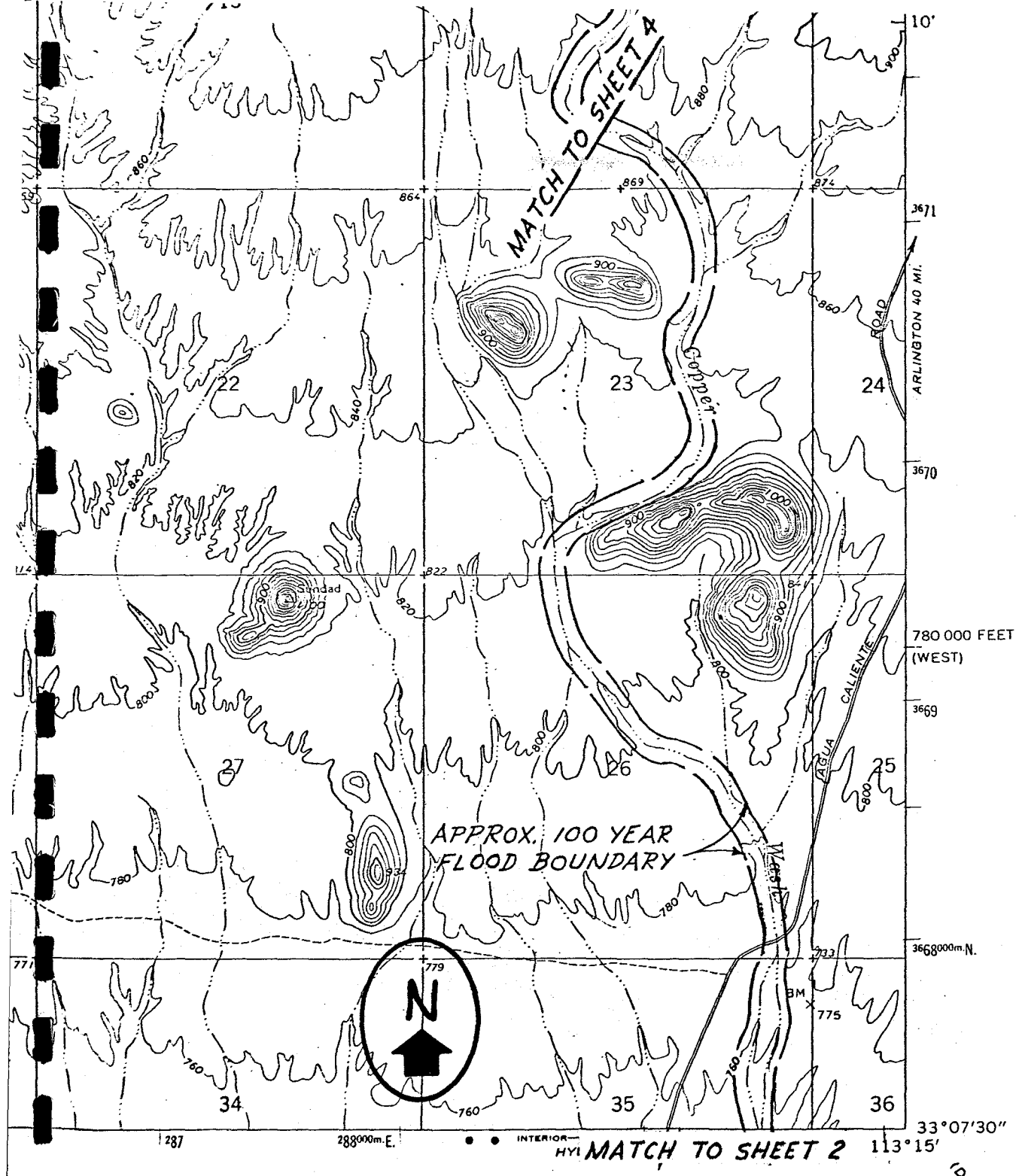
COPPER WASH

QUADRANGLE LOCATION

N3300—W11315/7.5

1965

AMS 4459 III SE—SERIES V898



(DENDORA VALLEY)
3350 II
1:62 500

ROAD CLASSIFICATION

Light-duty ..... Unimproved dirt .....

APPROXIMATE 100 YEAR FLOOD BOUNDARY

SCALE: 1" = 2000'

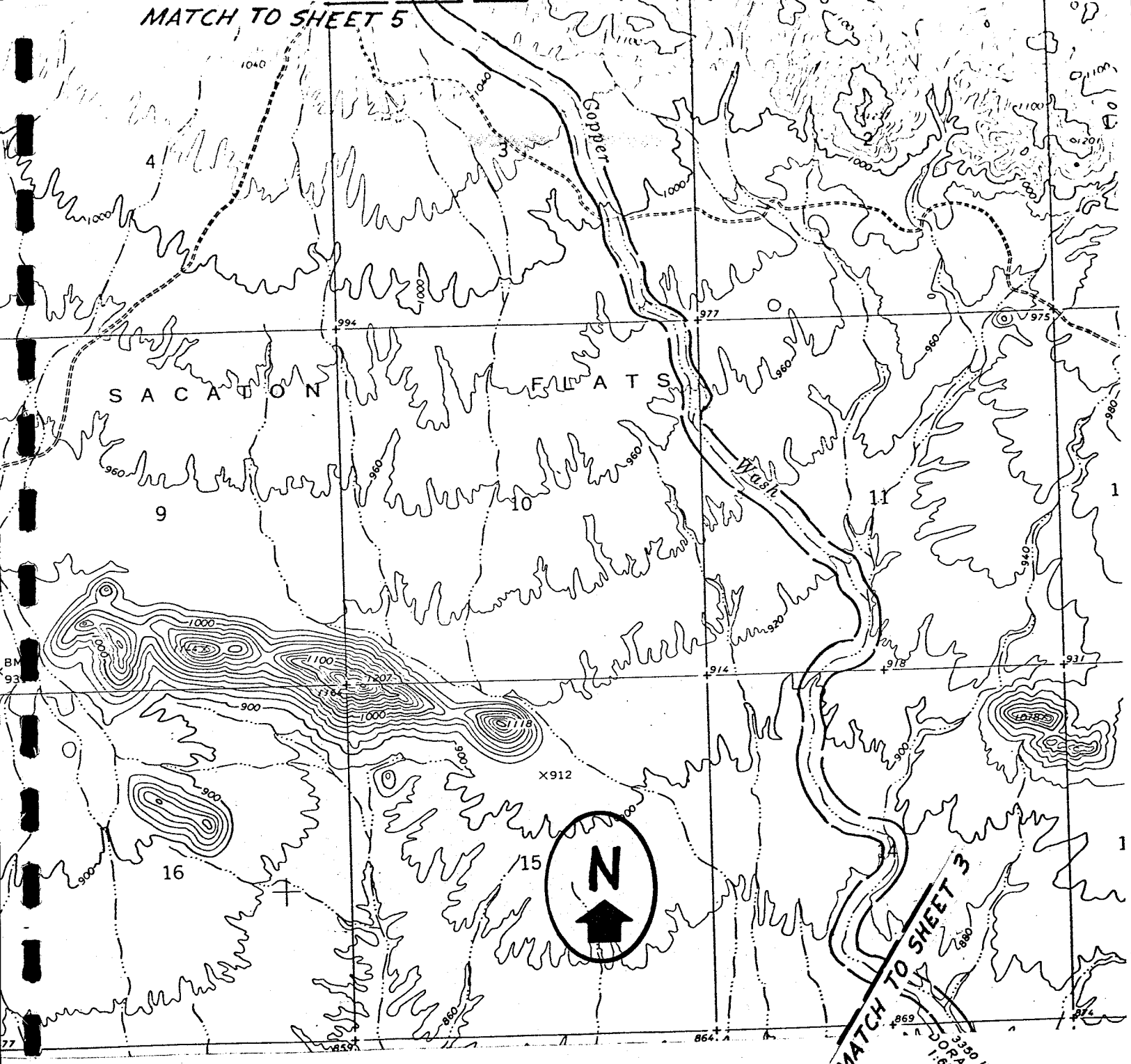
QUADRANGLE LOCATION

HYDER NE, ARIZ.

N3307.5—W11315/7.5 COPPER WASH

1964

AMS 3350 III NE—SERIES V898



ROAD CLASSIFICATION

Light-duty ..... Unimproved dirt .....

QUADRANGLE LOCATION

APPROXIMATE 100 YEAR FLOOD BOUNDARY

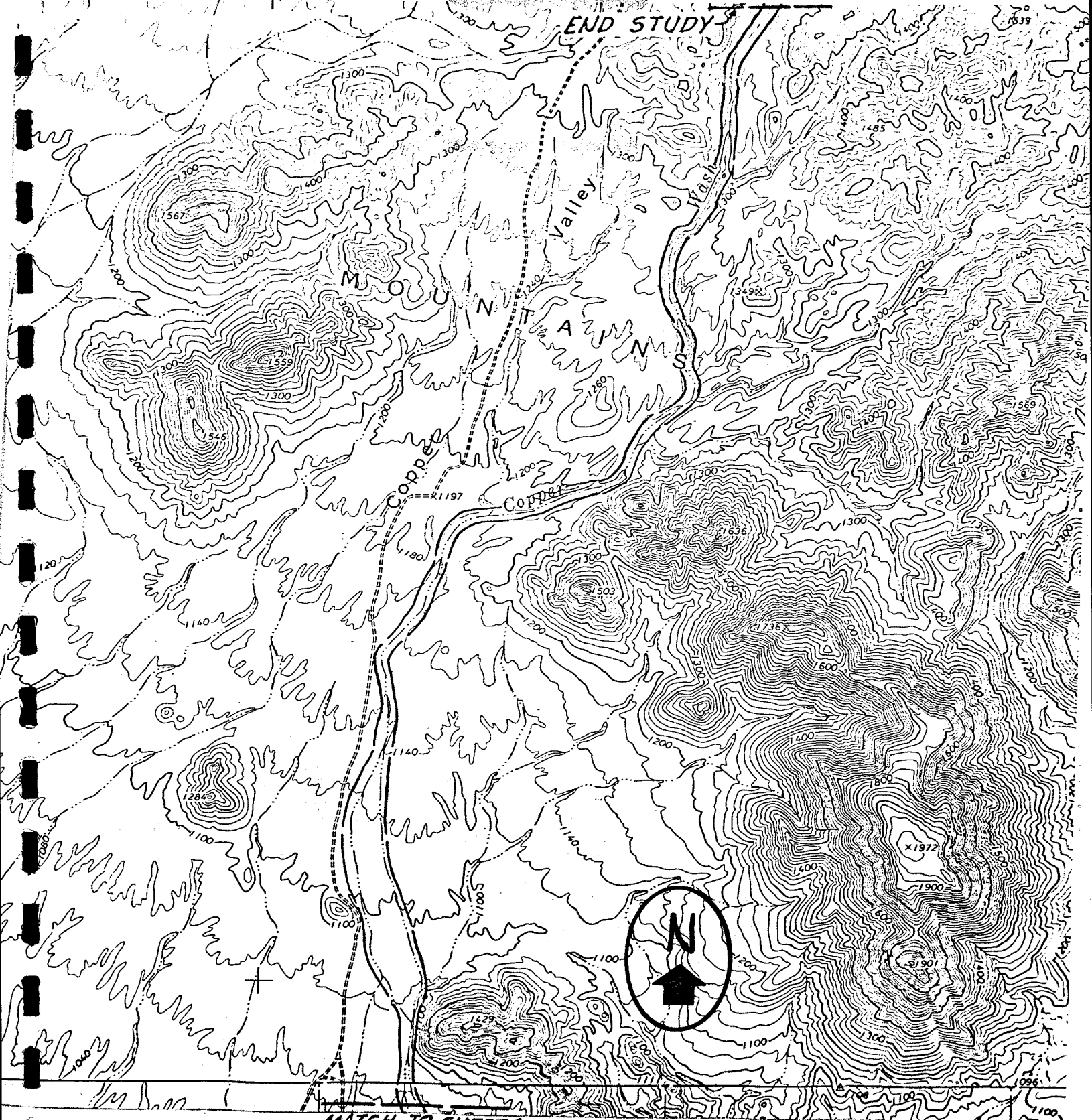
SCALE: 1" = 2000'

HYDER NE, ARIZ.

N3307.5—W11315/7.5 COPPER WASH

1964

AMS 3350 III NE—SERIES V898



MATCH TO SHEET 4 ROAD CLASSIFICATION

Light-duty ——— Unimproved dirt - - - - - -

QUADRANGLE LOCATION

APPROXIMATE 100 YEAR FLOOD BOUNDARY

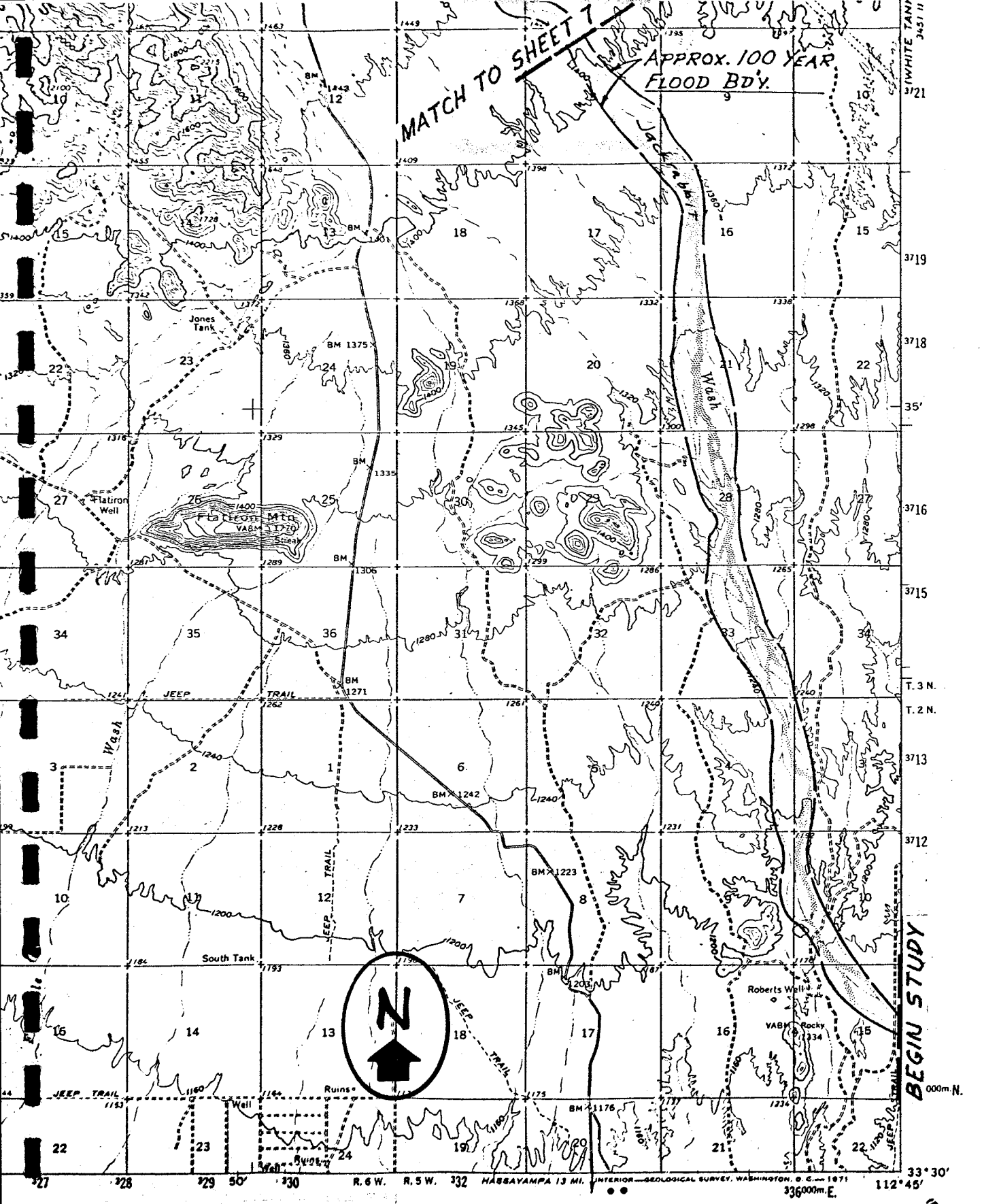
SCALE: 1"=2000'

HYDER NE, ARIZ.

N3307.5—W11315/7.5 COPPER WASH

1964

AMS 3350 III NE—SERIES V898



SCALE: 1" = 1 mile

ROAD CLASSIFICATION

Light-duty ——— Unimproved dirt .....

APPROXIMATE 100 YEAR FLOOD BOUNDARY

ARIZONA

QUADRANGLE LOCATION

BELMONT MTS., ARIZ.

N3330—W11245/15

1962

JACKRABBIT WASH

AMS 3451 III SERIES V798

END STUDY

MATCH TO SHEET 6

APPROX. 100 YEAR FLOOD BD'Y.

Coyote Wash

Jackrabbit Wash

Star Wash

Daggs Wash

Powerline Tank

Duck Tank

Mitchell Tank

Star Well

Jones Tank

Flatiron Well

Flatiron Mtn.

South Tank

T. 4 N.

T. 3 N.

(WHITE TANK MTS.)

3451 II

ROAD CLASSIFICATION

Light-duty ——— Unimproved dirt - - - - -

APPROXIMATE 100 YEAR FLOOD BOUNDARY

ARIZONA

QUADRANGLE LOCATION

BELMONT MTS., ARIZ.

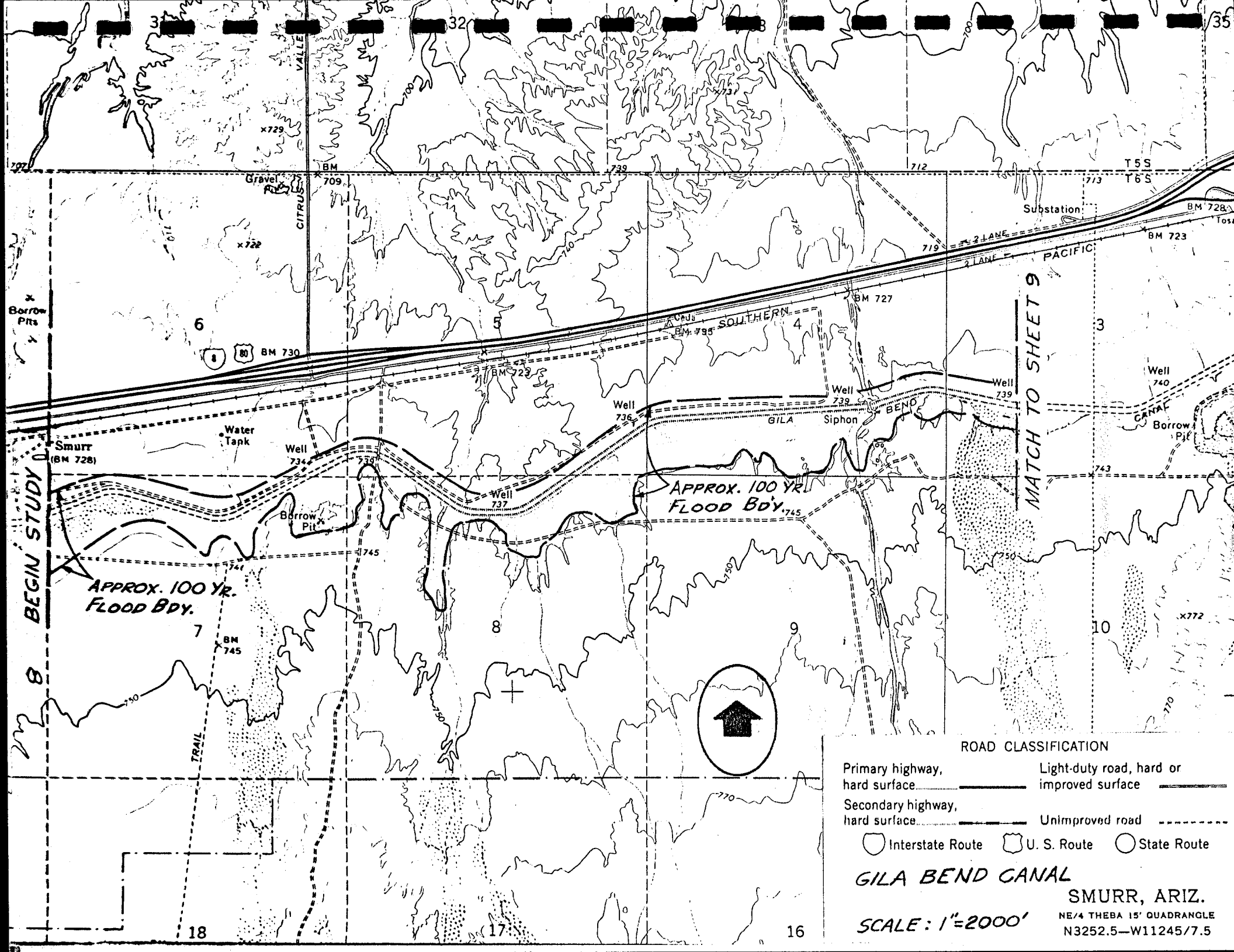
N3330—W11245/15

1962

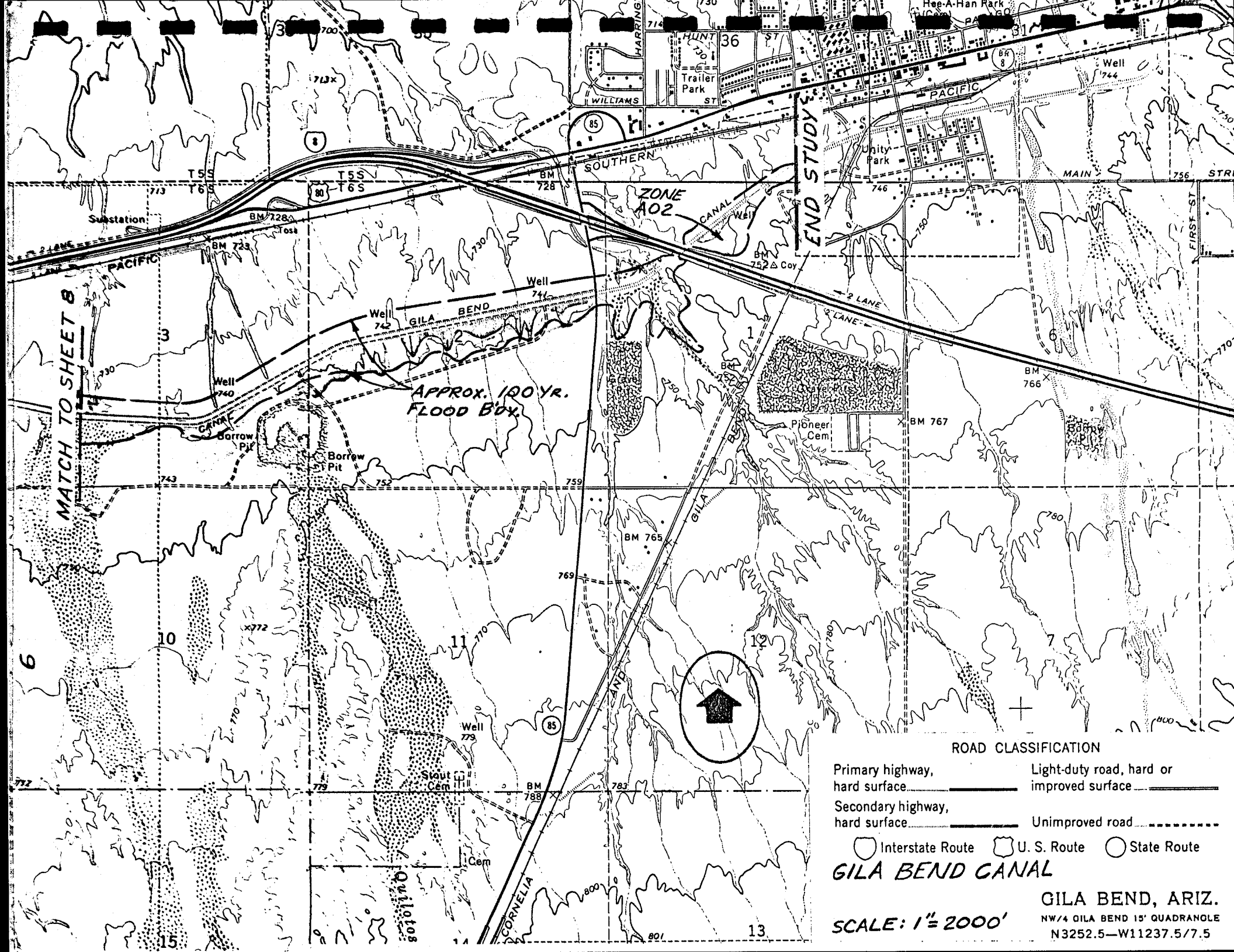
JACKRABBIT WASH

AMS 3451 III—SERIES V798

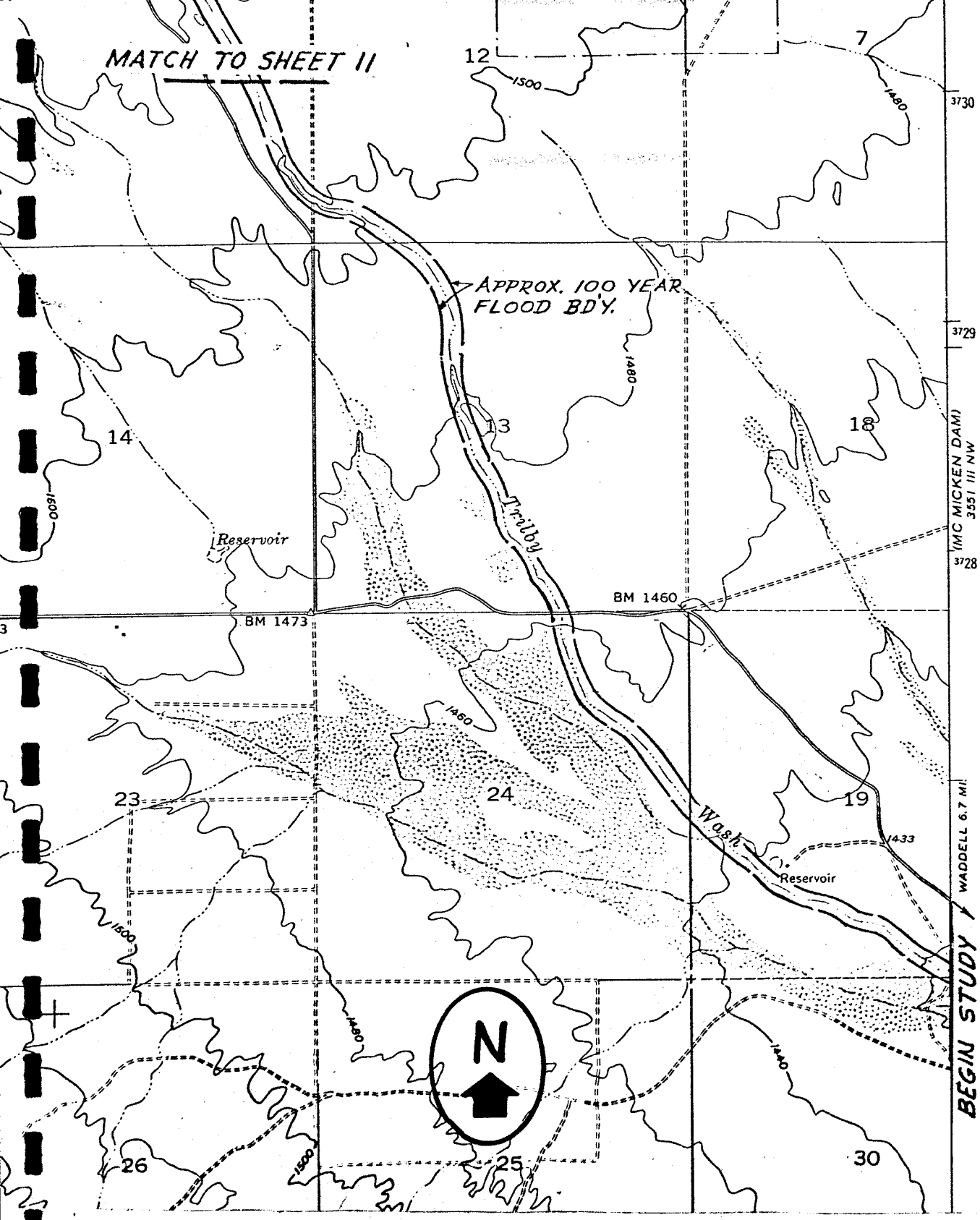
SCALE: 1" = 1 mile



BEGIN STUDY
MATCH TO SHEET 9
APPROX. 100 YR. FLOOD BDY.
APPROX. 100 YR. FLOOD BDY.
SOUTHERN PACIFIC
GILA BEND CANAL
Smurr (BM 728)
Water Tank
Borrow Pits
Borrow Pit
Borrow Pit
Gravel Pit
Substation
Siphon
Well 734
Well 736
Well 737
Well 739
Well 740
BM 730
BM 723
BM 727
BM 728
BM 745
BM 709
BM 735
CITRUS VALLEY
TRAIL
T5S
T6S
2 LANE
ROAD CLASSIFICATION
Primary highway, hard surface
Light-duty road, hard or improved surface
Secondary highway, hard surface
Unimproved road
Interstate Route
U. S. Route
State Route
GILA BEND CANAL
SMURR, ARIZ.
SCALE: 1"=2000'
NE/4 THEBA 15' QUADRANGLE
N3252.5—W11245/7.5



MATCH TO SHEET 8
ZONE A02
END STUDY
APPROX. 100 YR. FLOOD B'DY.
GILA BEND CANAL
SOUTHERN PACIFIC
Substation
Borrow Pit
Pioneer Cem
Stout Cem
Trailer Park
Unity Park
Hee-A-Han Park
Well
Coy
Tosa
Quilotos
CORNELIA
GILA BEND
HUNT ST
WILLIAMS ST
HARRING
MAIN STR
FIRST ST
2 LANE
T5S
T6S
ROAD CLASSIFICATION
Primary highway, hard surface
Light-duty road, hard or improved surface
Secondary highway, hard surface
Unimproved road
Interstate Route
U. S. Route
State Route
GILA BEND CANAL
SCALE: 1" = 2000'
GILA BEND, ARIZ.
NW/4 GILA BEND 15' QUADRANGLE
N3252.5—W11237.5/7.5



ROAD CLASSIFICATION

Light-duty ..... Unimproved dirt .....

APPROXIMATE 100 YEAR FLOOD BOUNDARY

SCALE: 1" = 2000'

WHITE TANK MTS. NE, ARIZ.

NE/4 WHITE TANK MTS. 15' QUADRANGLE

N3337.5—W11230/7.5

TRILBY WASH

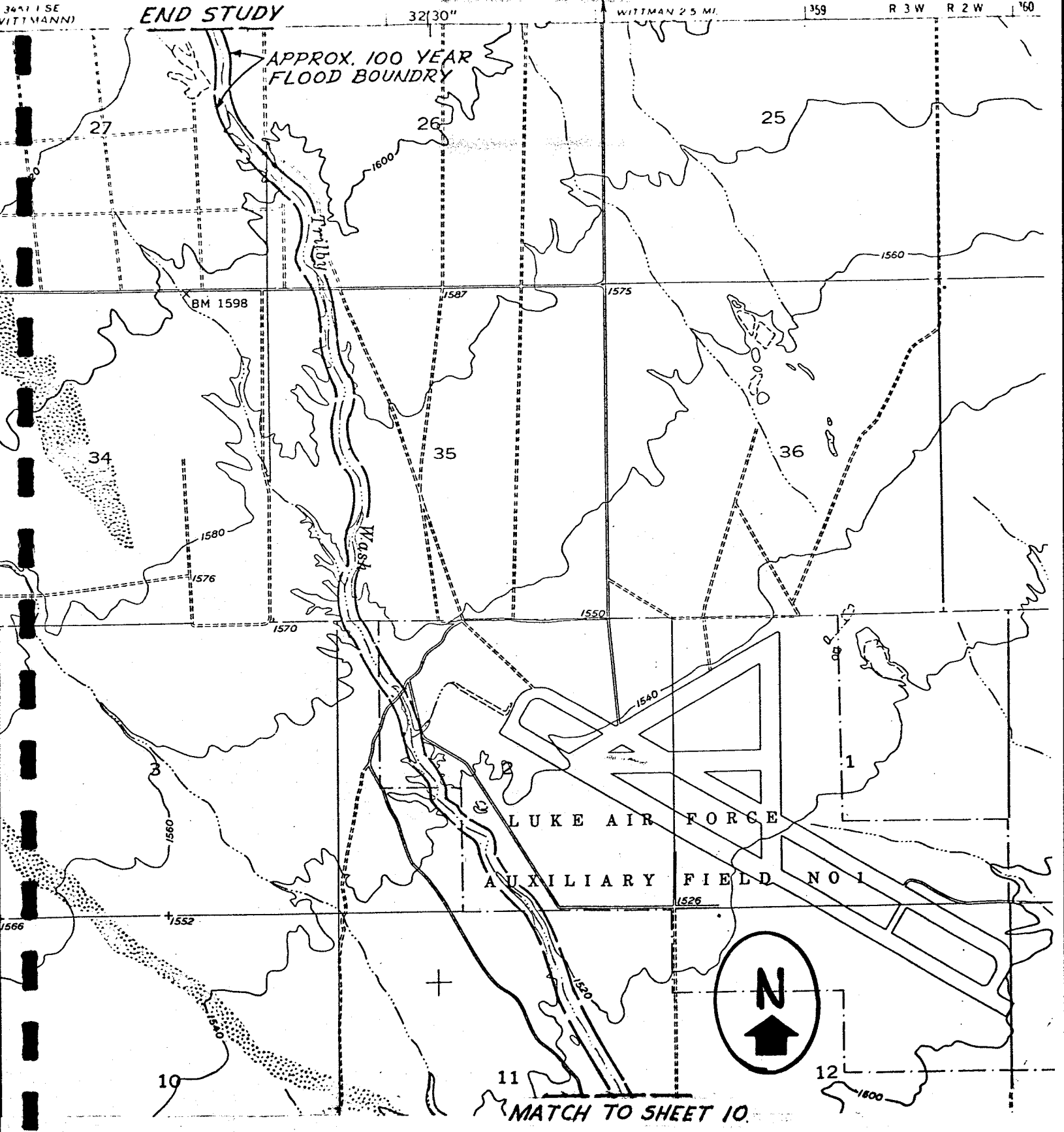
1957

PHOTOREVISED 1971

AMS 3451 II NE—SERIES V898

ARIZONA

QUADRANGLE LOCATION



ROAD CLASSIFICATION

Light-duty ——— Unimproved dirt - - - - -

— — — APPROXIMATE 100 YEAR FLOOD BOUNDARY

SCALE: 1" = 2000'

WHITE TANK MTS. NE, ARIZ.

NE/4 WHITE TANK MTS. 1/4 QUADRANGLE

N3337.5—W11230/7.5

TRILBY WASH

1957

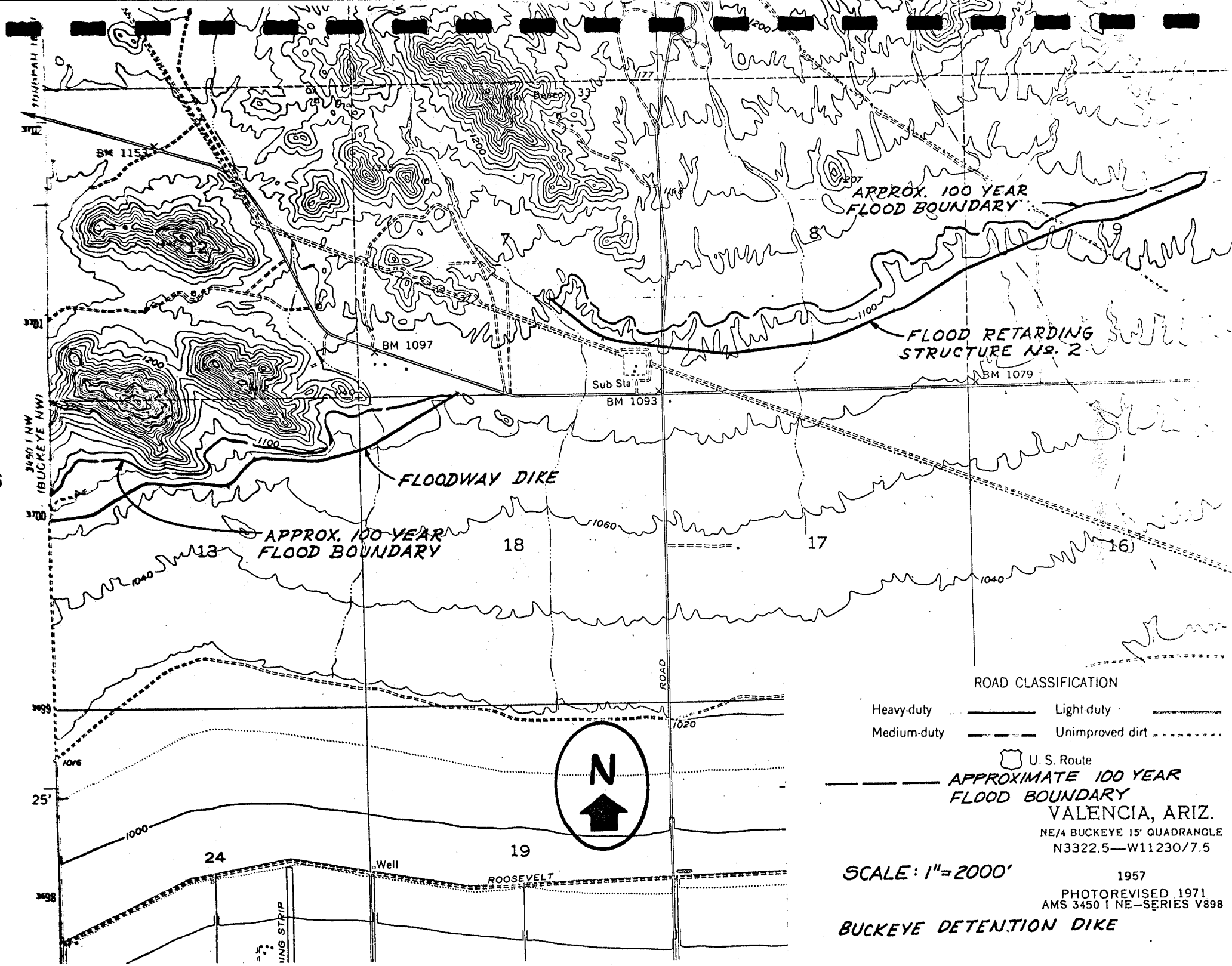
PHOTOREVISED 1971

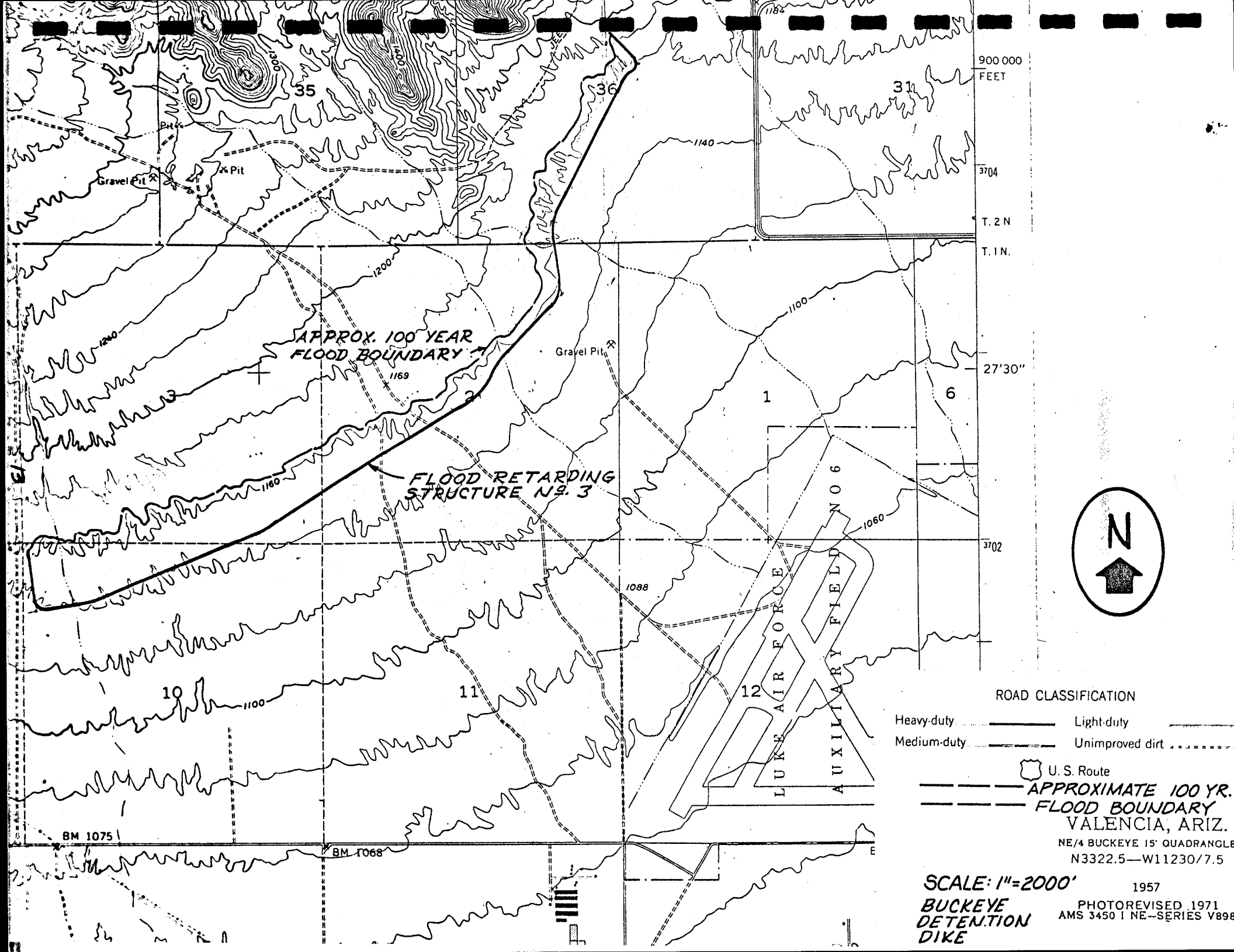
AMS 3451 II NE—SERIES V808

ARIZONA

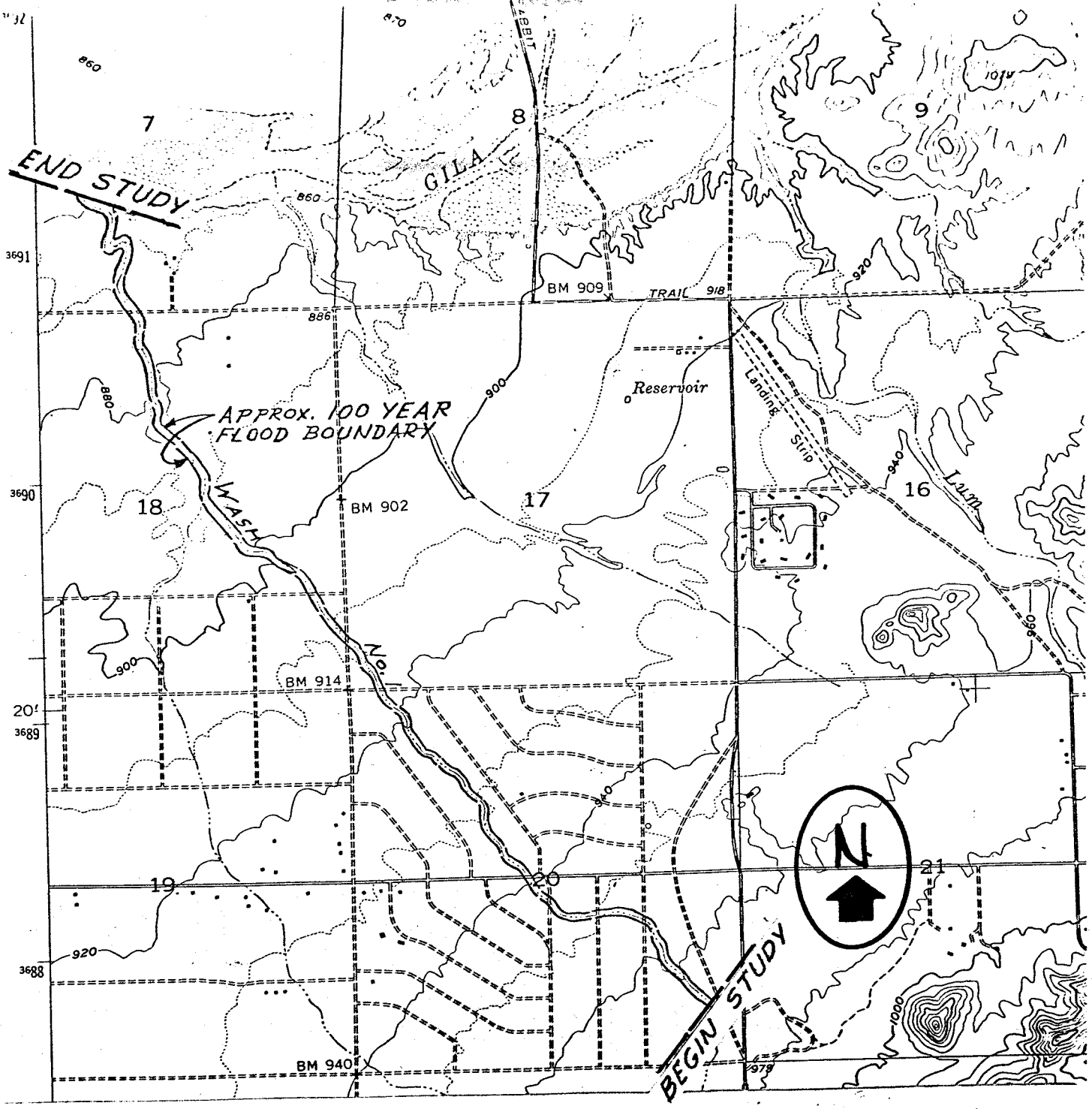
QUADRANGLE LOCATION

11


APPROX. 100 YEAR FLOOD BOUNDARY
FLOOD RETARDING STRUCTURE No. 2
FLOODWAY DIKE
APPROX. 100 YEAR FLOOD BOUNDARY
BM 1153
BM 1097
BM 1093
BM 1079
Sub Sta
Well
ROOSEVELT
ROAD
3490 I NW (BUCKEYE NW)
25'
N
ROAD CLASSIFICATION
Heavy-duty
Light-duty
Medium-duty
Unimproved dirt
U. S. Route
APPROXIMATE 100 YEAR FLOOD BOUNDARY
VALENCIA, ARIZ.
NE/4 BUCKEYE 15' QUADRANGLE
N3322.5—W11230/7.5
SCALE: 1"=2000'
1957
PHOTOREVISED 1971
AMS 3450 I NE—SERIES V898
BUCKEYE DETENTION DIKE



900 000 FEET
3704
T. 2 N
T. 1 N.
27'30"
3702
35
36
31
1
6
2
3
10
11
12
Pit
Gravel Pit
Pit
Gravel Pit
1300
1400
1184
1140
1200
1240
1100
1169
1160
1060
1088
1100
APPROX. 100 YEAR FLOOD BOUNDARY
FLOOD RETARDING STRUCTURE No. 3
LUKE AIR FORCE AUXILIARY FIELD NO 6
BM 1075
BM 1068
N
ROAD CLASSIFICATION
Heavy-duty
Light-duty
Medium-duty
Unimproved dirt
U. S. Route
APPROXIMATE 100 YR. FLOOD BOUNDARY
VALENCIA, ARIZ.
NE/4 BUCKEYE 15' QUADRANGLE
N3322.5—W11230/7.5
SCALE: 1"=2000'
1957
BUCKEYE DETENTION DIKE
PHOTOREVISED 1971
AMS 3450 I NE—SERIES V898



ROAD CLASSIFICATION

Medium-duty ——— Light-duty ———

Unimproved dirt - - - - - -

APPROX. 100 YEAR FLOOD BOUNDARY

SCALE: 1" = 2000'

AVONDALE SW, ARIZ.

SW/4 AVONDALE 15' QUADRANGLE

N3315—W11222.5/7.5

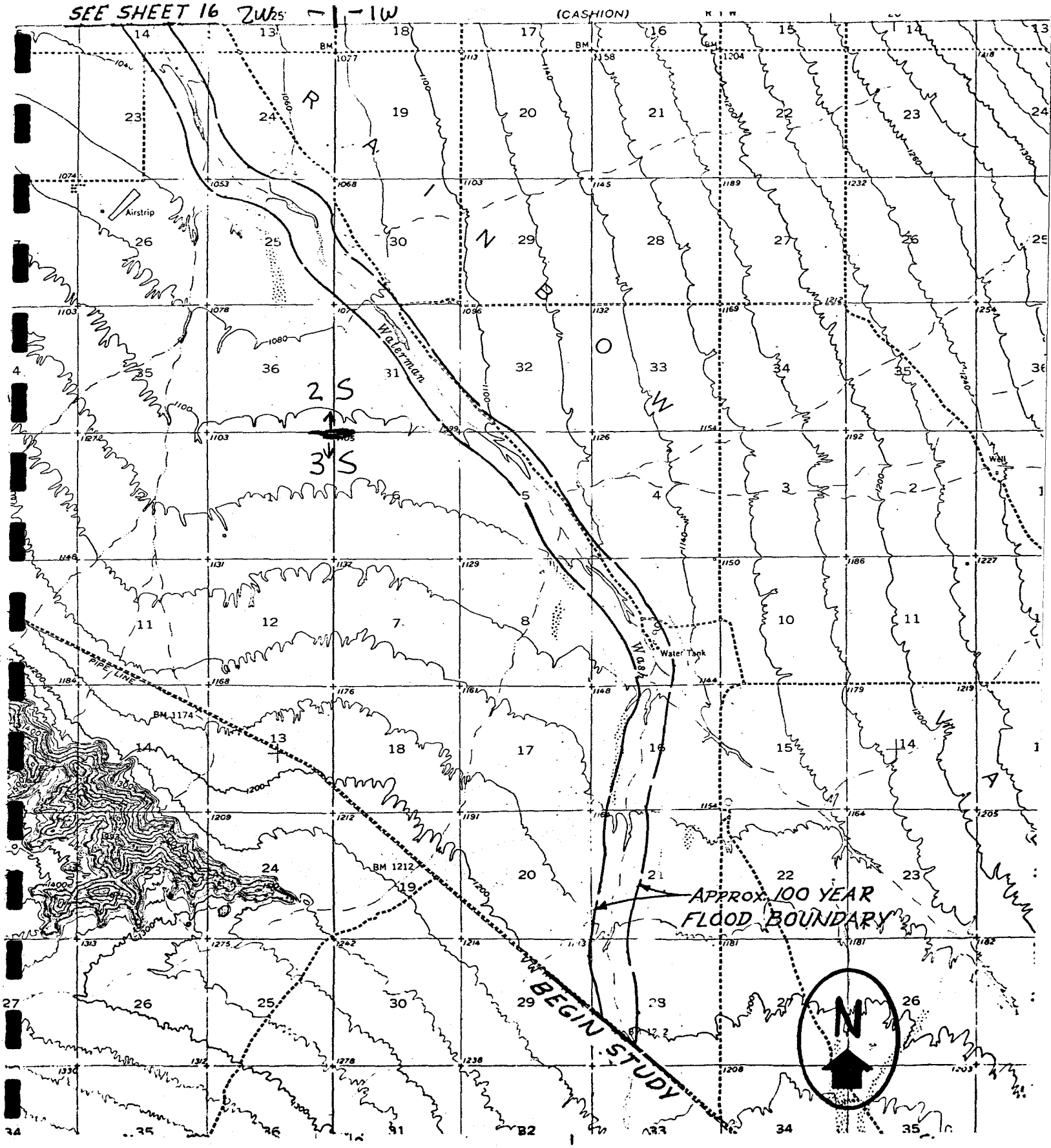
WASH No 1

1957

PHOTOREVISED 1971

AMS 3550 IV SW—SERIES V898

QUADRANGLE LOCATION



ROAD CLASSIFICATION

Heavy-duty — 4 LANE 4 LANE — Light-duty

Medium-duty — 4 LANE 4 LANE — Unimproved dirt

U. S. Route — State Route

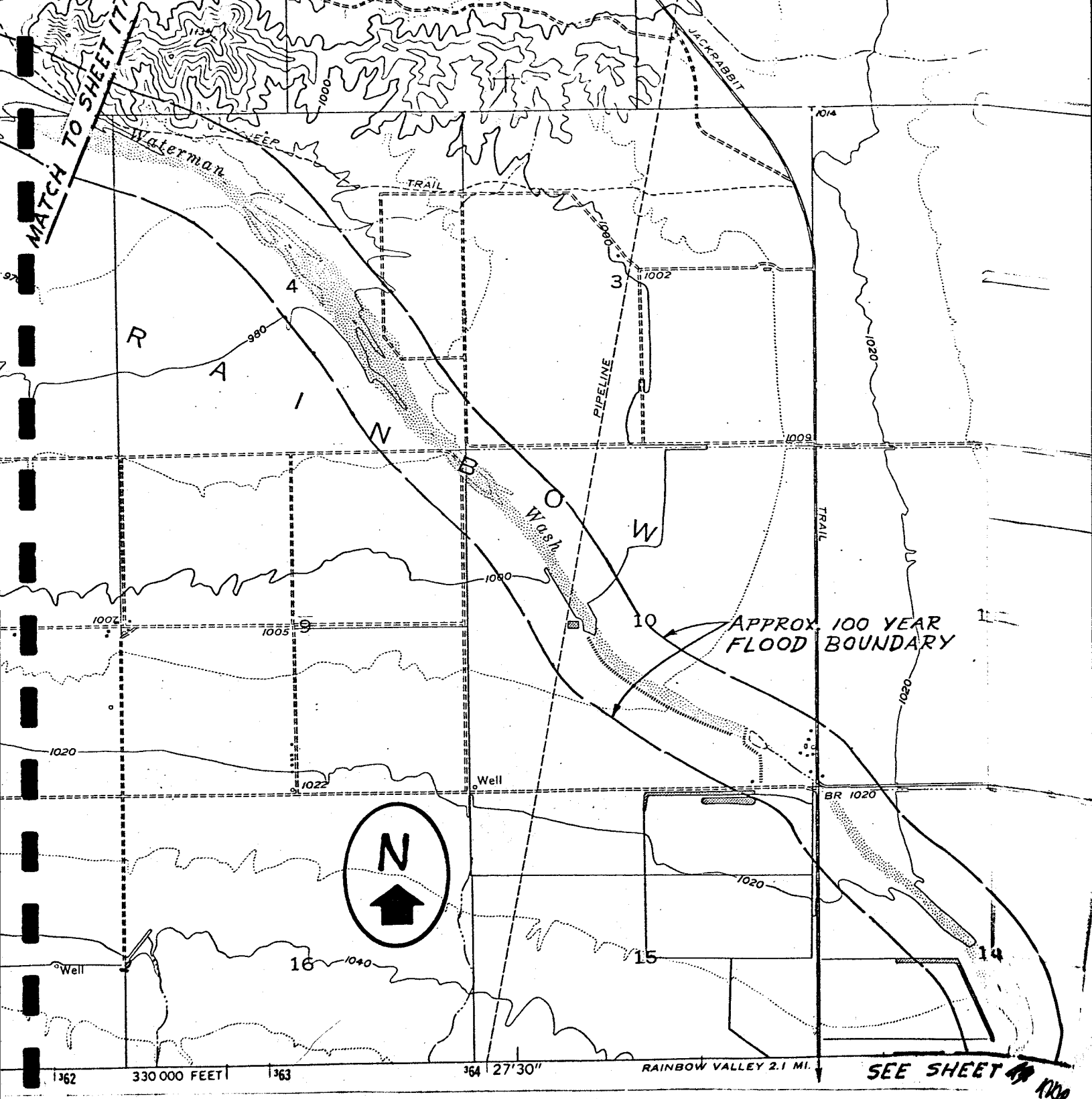
APPROX. 100 YEAR FLOOD BOUNDARY

SCALE: 1" = 1 mile

MOBILE, ARIZ.

N3300—W11215/15

15 WATERMAN WASH 1951



ROAD CLASSIFICATION

Medium-duty ——— Light-duty ———

Unimproved dirt - - - - - -

APPROX. 100 YEAR FLOOD BOUNDARY

SCALE: 1" = 2000'

I/2S - R/2W

ARIZONA

QUADRANGLE LOCATION

AVONDALE SW, ARIZ.

SW/4 AVONDALE 15' QUADRANGLE

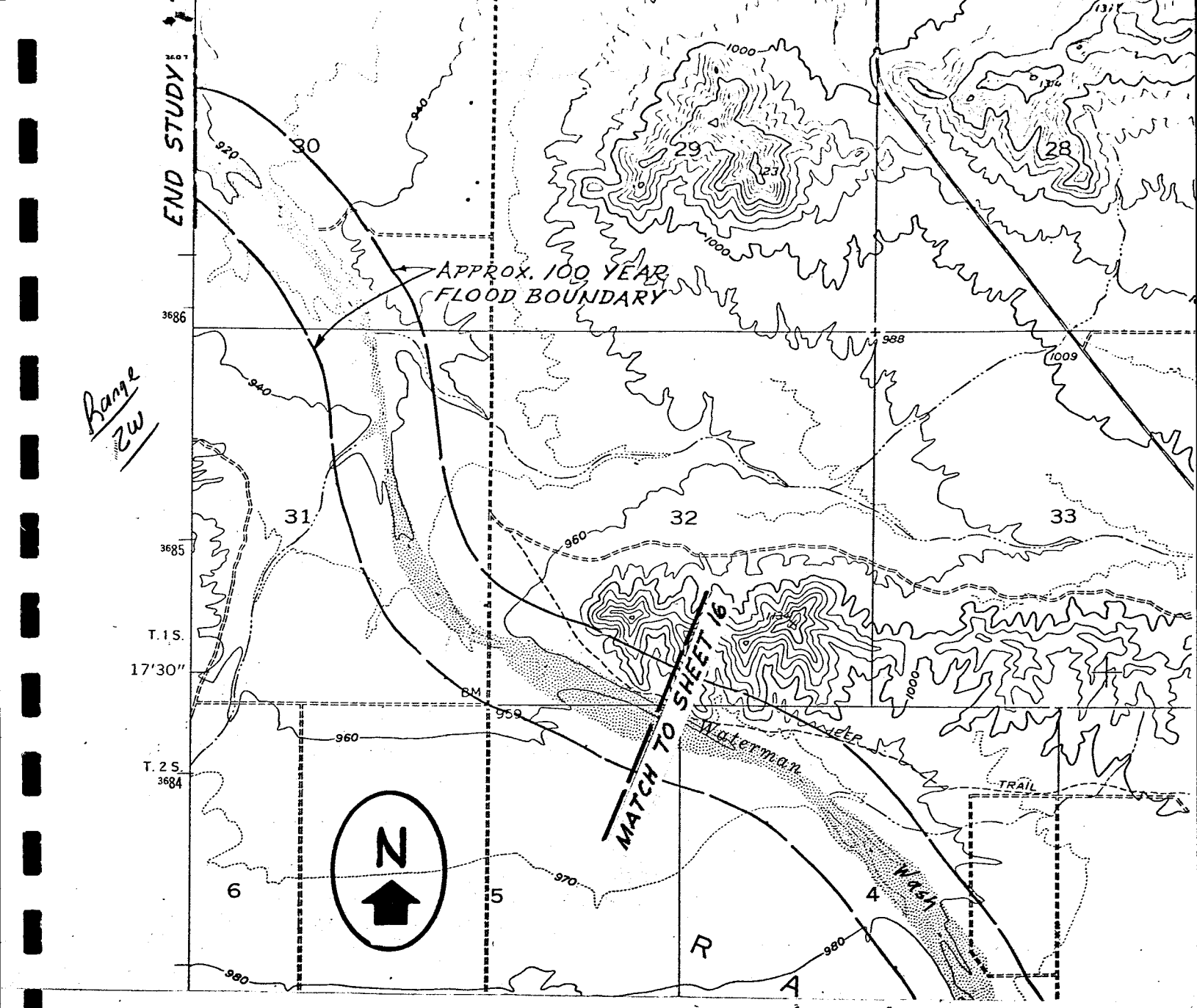
N3315—W11222.5/7.5

WATERMAN WASH

1957

PHOTOREVISED 1971

AMS 3550 IV SW—SERIES V898



ROAD CLASSIFICATION

Medium-duty ——— Light-duty ———

Unimproved dirt - - - - - -

APPROX. 100 YEAR FLOOD BOUNDARY

SCALE : 1" = 2000'

ARIZONA

QUADRANGLE LOCATION

AVONDALE SW, ARIZ.

SW/4 AVONDALE 15' QUADRANGLE

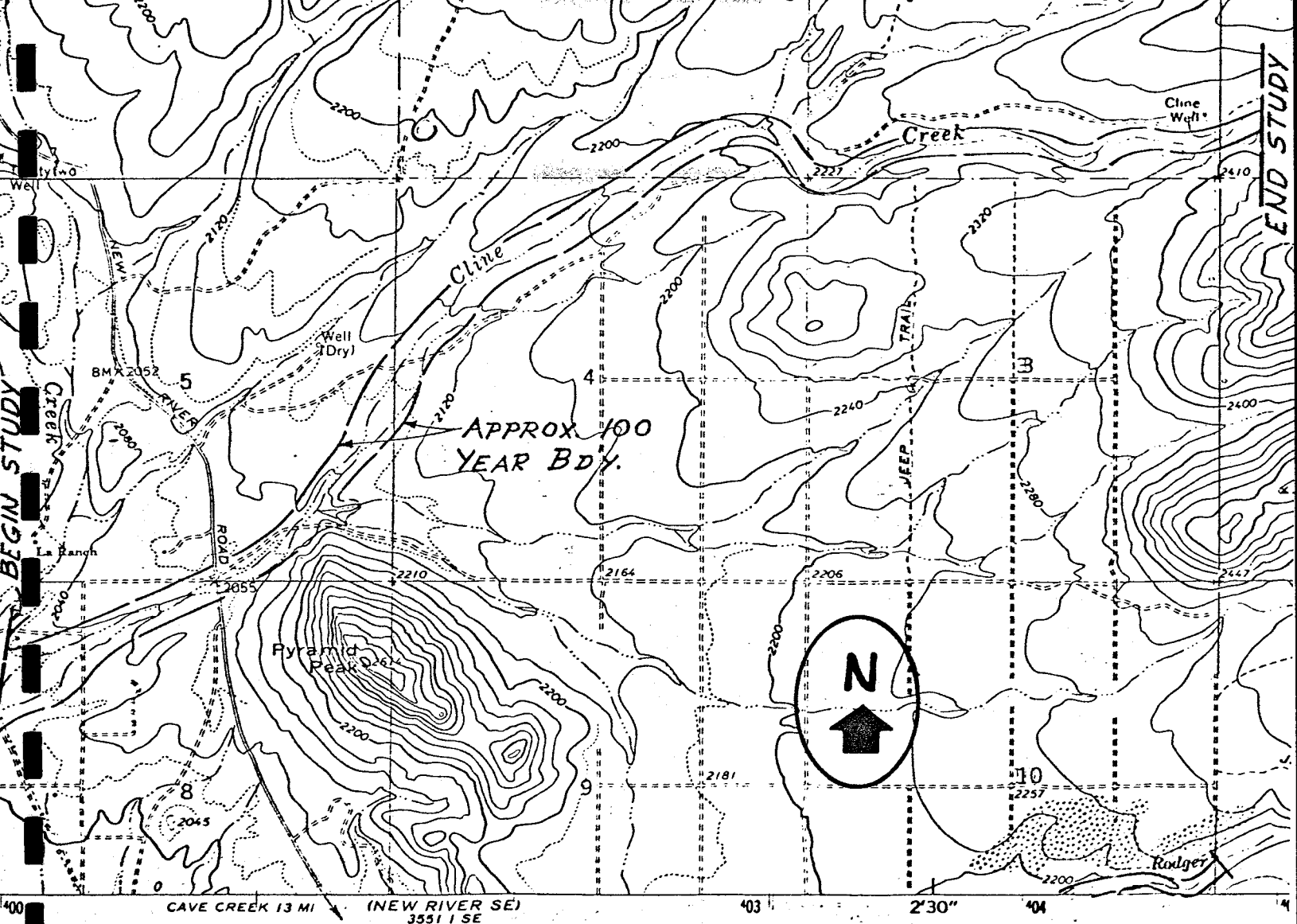
N3315—W11222.5/7.5

WATERMAN WASH

1957

PHOTOREVISED 1971

AMS 3550 IV SW—SERIES V898



ROAD CLASSIFICATION

Medium-duty ——— Light-duty ———

Unimproved dirt - - - - - -

— — — APPROXIMATE 100 YEAR
— — — FLOOD BOUNDARY

SCALE 1" = 2000'

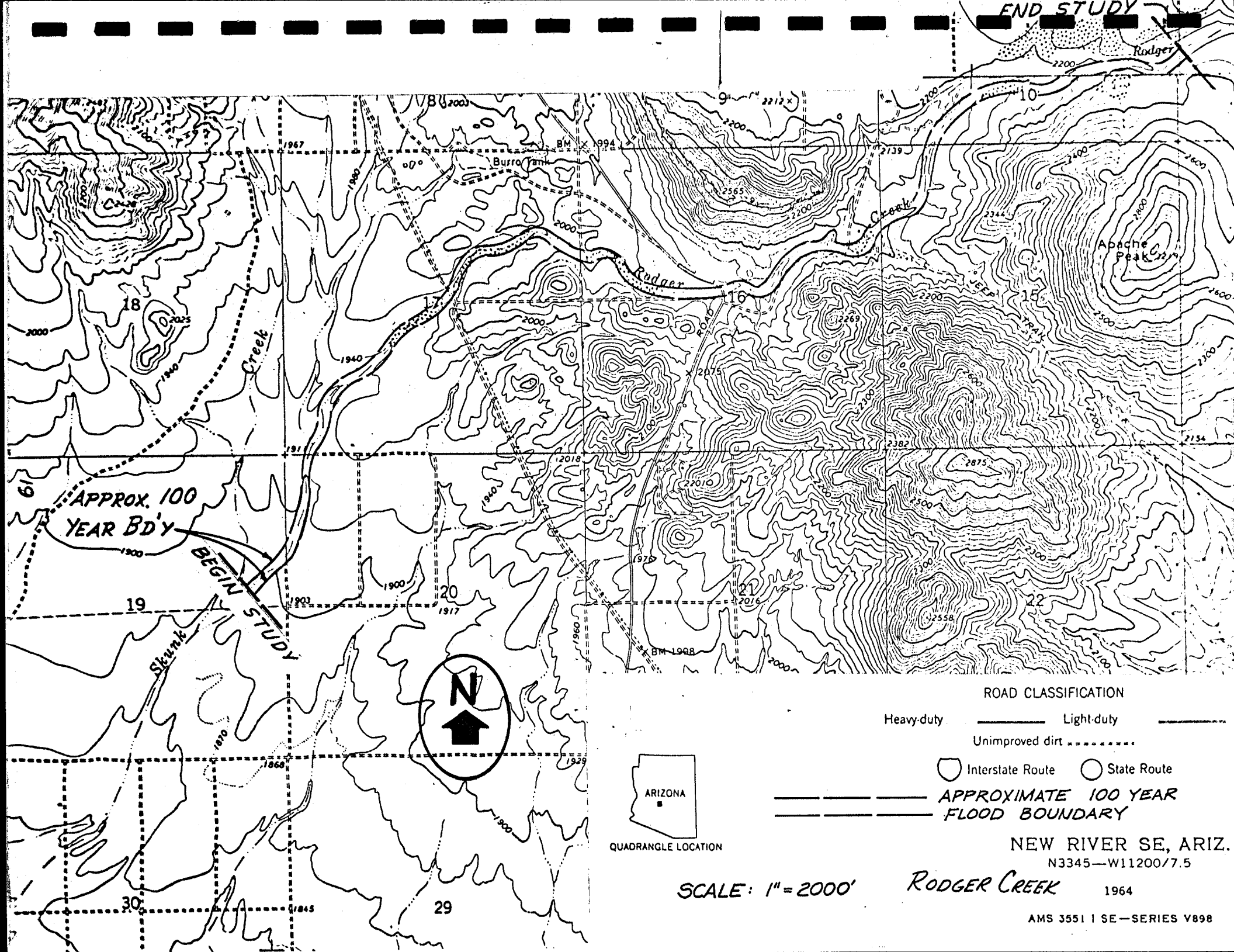
QUADRANGLE LOCATION

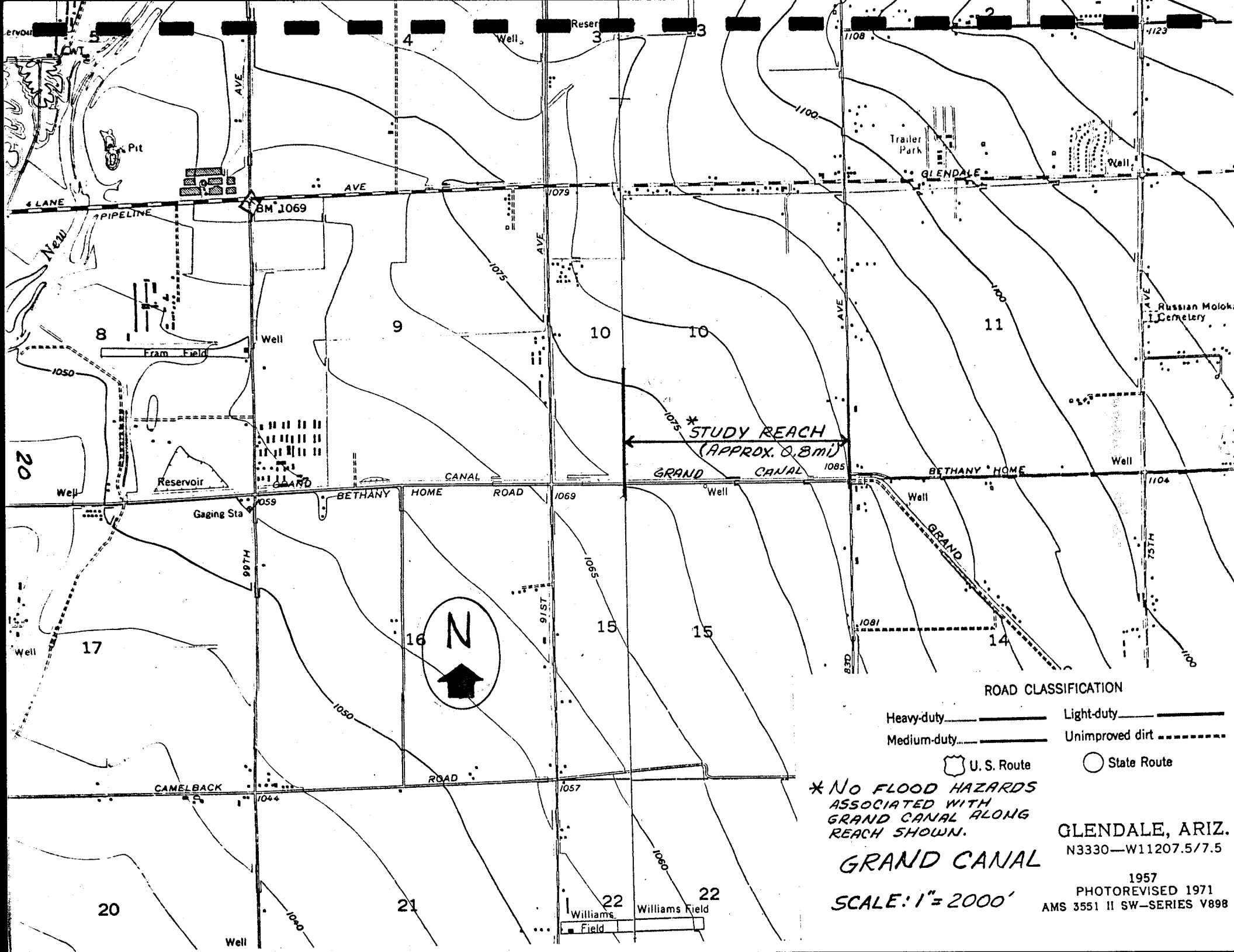
DAISY MOUNTAIN, ARIZ.

N3352.5—W11200/7.5

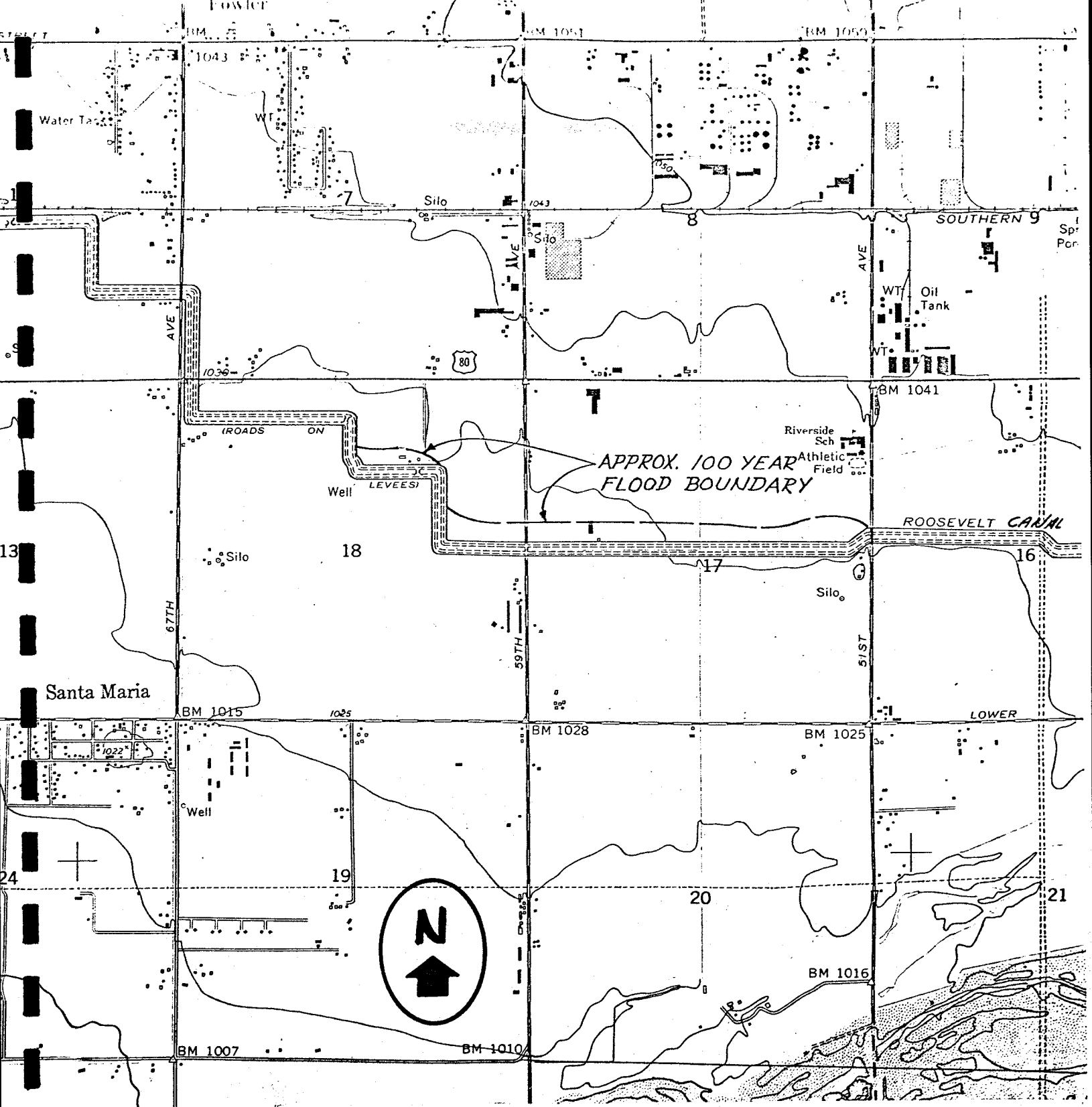
1964 CLINE CREEK

AMS 3551 I NE—SERIES V898


END STUDY
Rodger
Creek
Burro Tank
BM 1994
Apache Peak
JEEP TRAIL
ROAD
APPROX. 100 YEAR BD'Y
BEGIN STUDY
Skunk
BM 1908
N
ARIZONA
QUADRANGLE LOCATION
ROAD CLASSIFICATION
Heavy-duty
Light-duty
Unimproved dirt
Interstate Route
State Route
APPROXIMATE 100 YEAR FLOOD BOUNDARY
NEW RIVER SE, ARIZ.
N3345—W11200/7.5
SCALE: 1" = 2000'
RODGER CREEK
1964
AMS 3551 I SE—SERIES V898



Reservoir
Pit
4 LANE
PIPELINE
New
BM 1069
AVE
Well
Fram Field
Reservoir
Gaging Sta
GRAND CANAL
BETHANY HOME ROAD
99TH
91ST
75TH
CAMELBACK ROAD
Williams Field
Trailer Park
GLENDALE
Russian Moloka Cemetery
*STUDY REACH (APPROX. 0.8mi)
N
ROAD CLASSIFICATION
Heavy-duty
Medium-duty
Light-duty
Unimproved dirt
U. S. Route
State Route
*NO FLOOD HAZARDS ASSOCIATED WITH GRAND CANAL ALONG REACH SHOWN.
GRAND CANAL
SCALE: 1" = 2000'
GLENDALE, ARIZ.
N3330—W11207.5/7.5
1957
PHOTOREVISED 1971
AMS 3551 II SW—SERIES V898



ROAD CLASSIFICATION

Heavy-duty ——— Light-duty ———

Medium-duty ——— Unimproved dirt - - - - -

U. S. Route State Route

ARIZONA

QUADRANGLE LOCATION

— — — APPROXIMATE 100 YEAR FLOOD BOUNDARY

ROOSEVELT CANAL

FOWLER, ARIZ.

NW/4 PHOENIX 15' QUADRANGLE

N3322.5—W11207.5/7.5

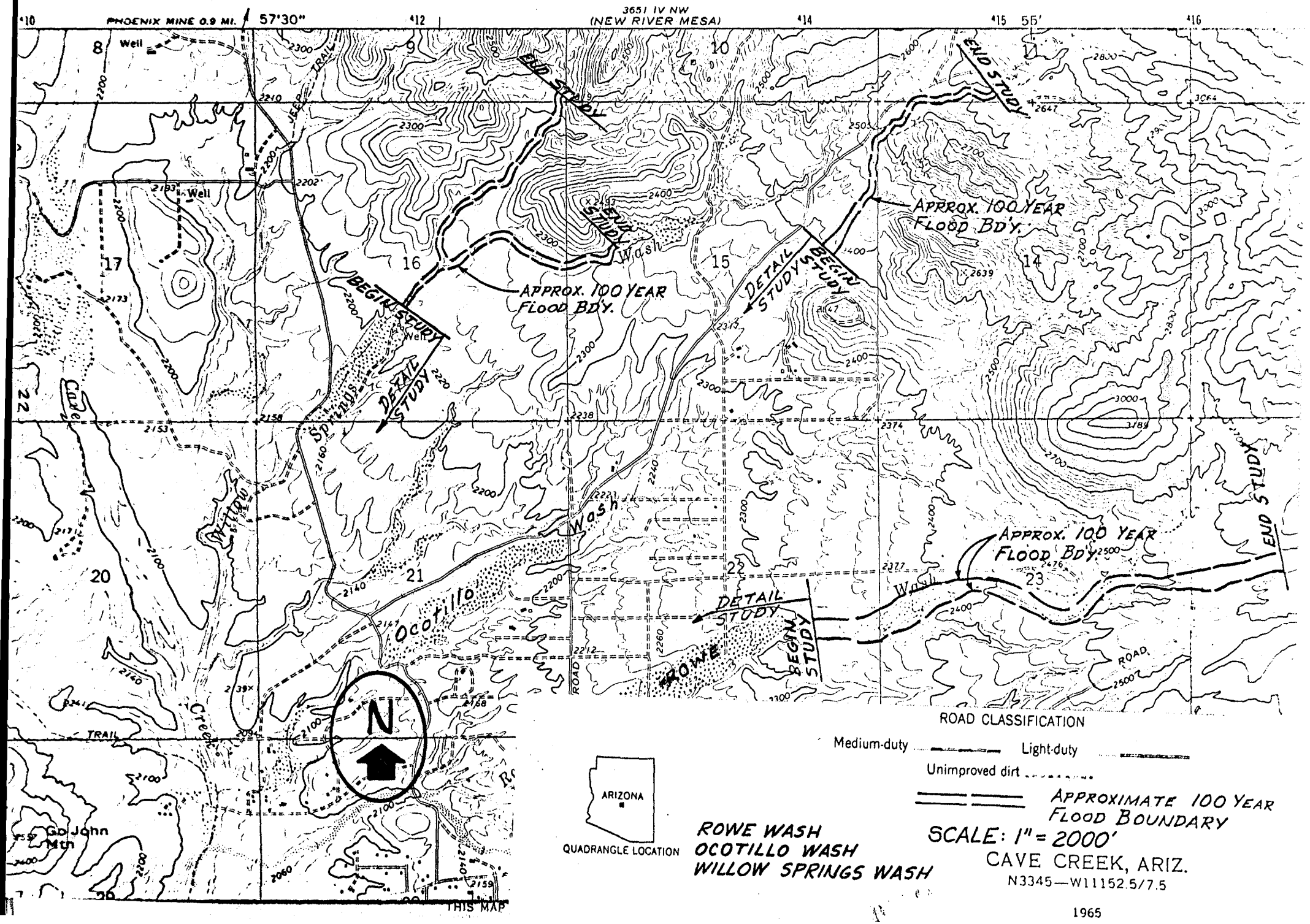
SCALE: 1"=2000'

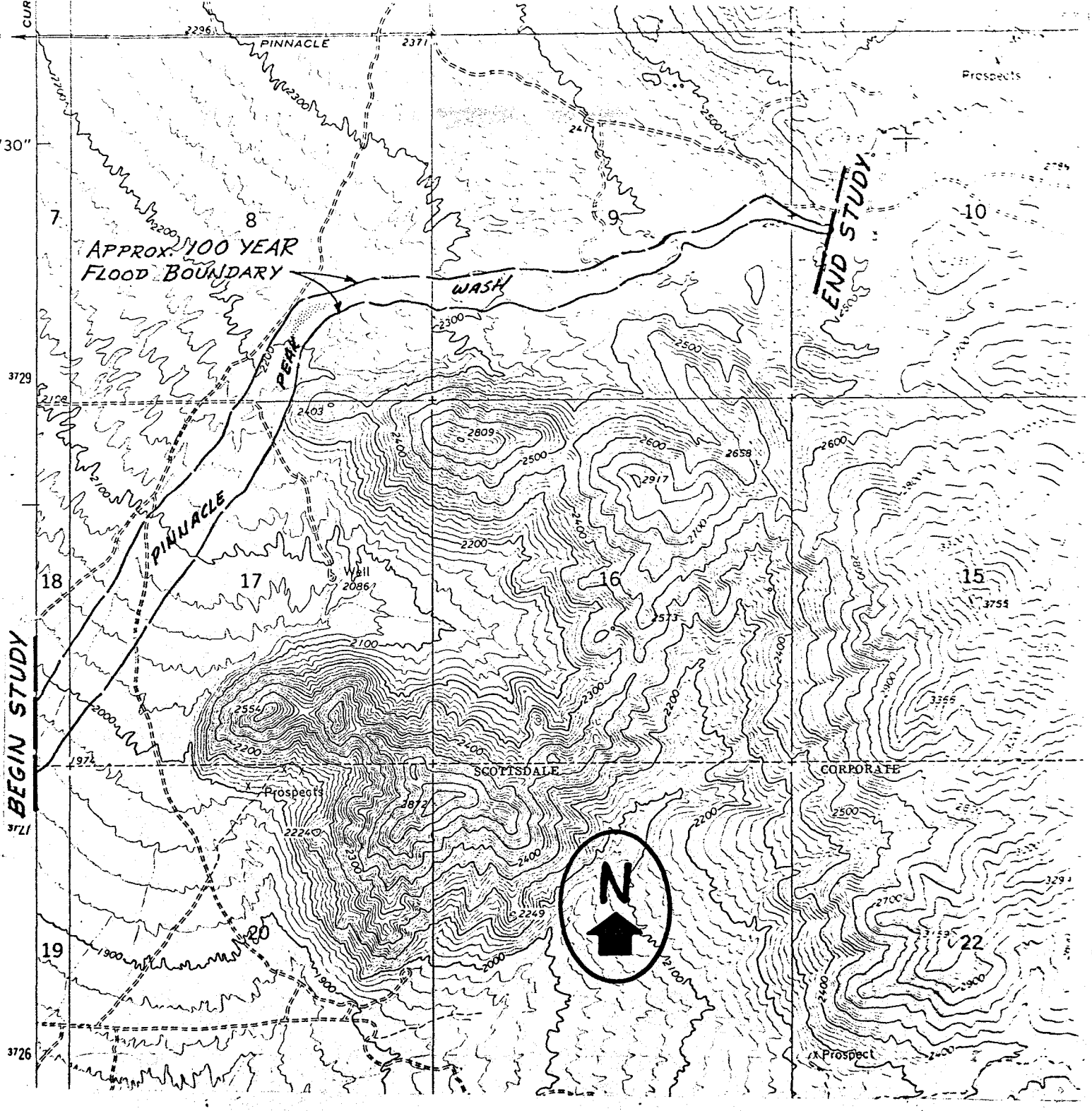
21

1952

PHOTOREVISED 1967 AND 1973

AMS 3550 I NW SERIES V898


PHOENIX MINE 0.9 MI.
57'30"
3651 IV NW
(NEW RIVER MESA)
55'
END STUDY
BEGIN STUDY
DETAIL STUDY
APPROX. 100 YEAR FLOOD BD'Y.
Wash
Springs
Willow
Ocotillo
ROWE
Cave
Creek
JEEP TRAIL
TRAIL
ROAD
Well
Go John Mtn
N
THIS MAP
ARIZONA
QUADRANGLE LOCATION
ROAD CLASSIFICATION
Medium-duty
Light-duty
Unimproved dirt
APPROXIMATE 100 YEAR FLOOD BOUNDARY
SCALE: 1" = 2000'
ROWE WASH
OCOTILLO WASH
WILLOW SPRINGS WASH
CAVE CREEK, ARIZ.
N3345—W11152.5/7.5
1965



ROAD CLASSIFICATION

Light-duty ——— Unimproved dirt - - - - -

——— APPROX. 100 YEAR FLOOD BOUNDARY

QUADRANGLE LOCATION

MC DOWELL PEAK, ARIZ.

NE/4 CAMELBACK 15' QUADRANGLE

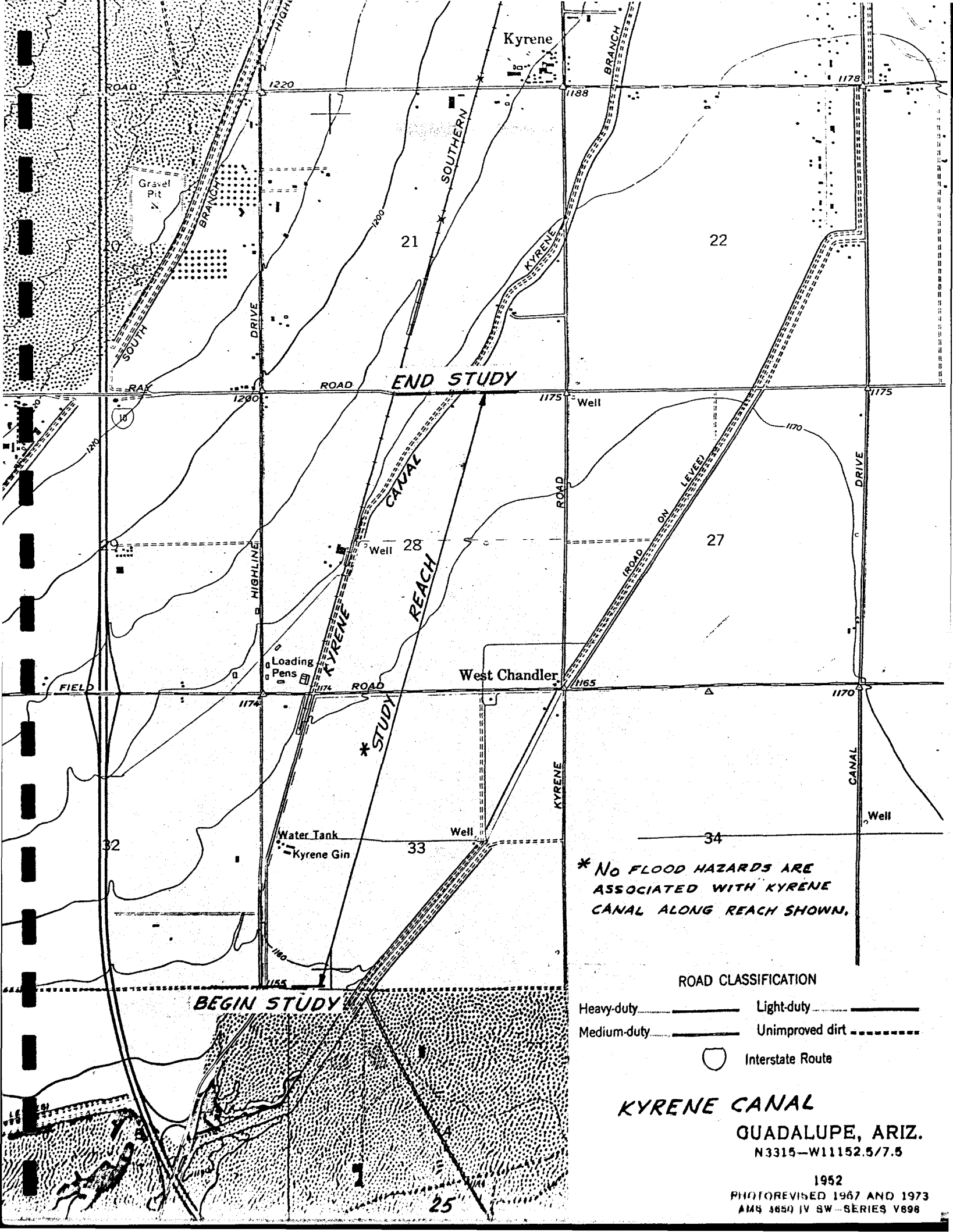
N3337.5—W11145/7.5

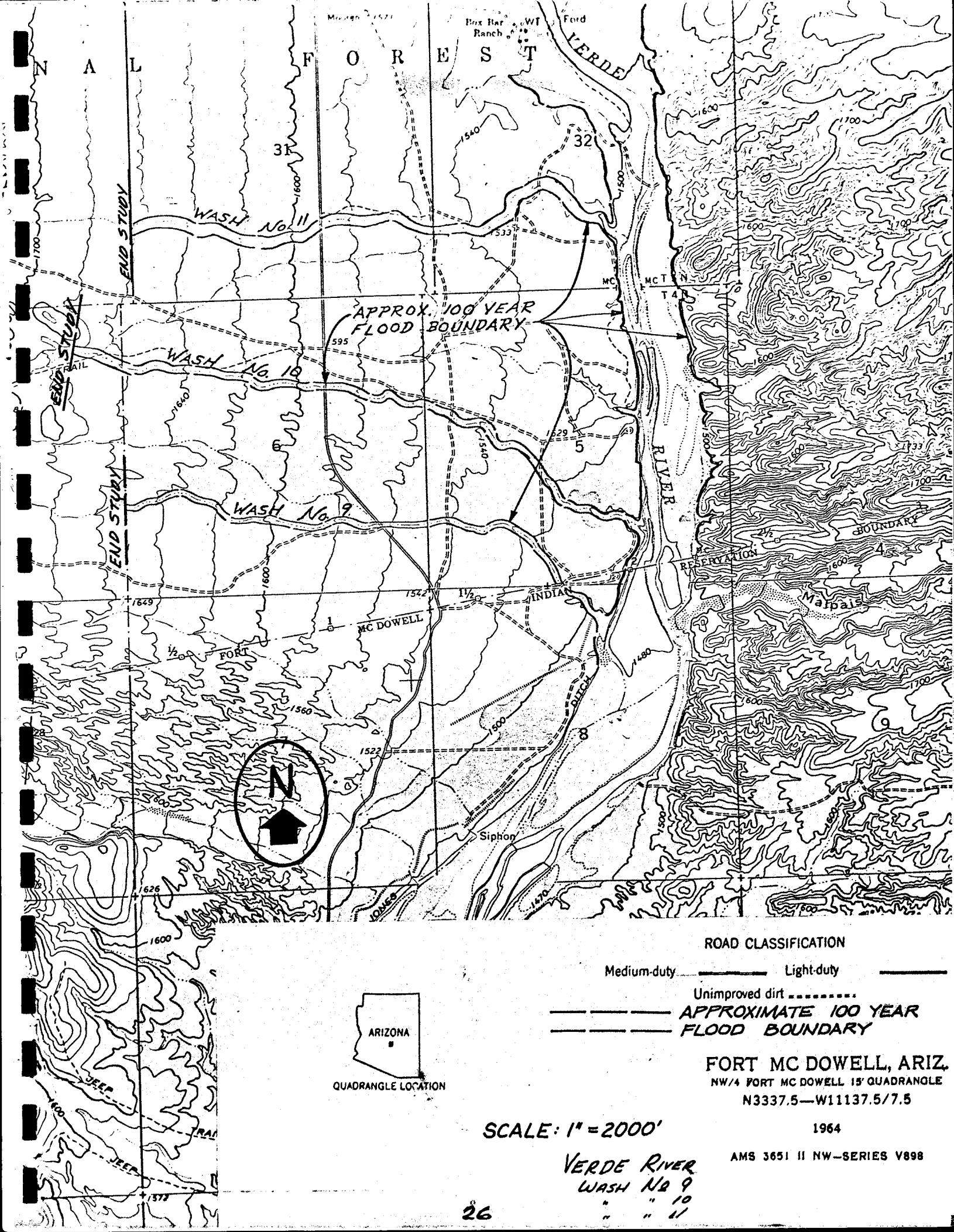
SCALE: 1" = 2000'

1965

AMS 3651 III NE—SERIES V898

PINNACLE PEAK WASH


Kyrene
ROAD
1220
1188
1178
SOUTHERN
BRANCH
Gravel Pit
SOUTH
BRANCH
DRIVE
1200
21
22
KYRENE
END STUDY
RAY
ROAD
1200
1175
Well
1175
1170
CANAL
ROAD
(ROAD ON LEVEE)
DRIVE
29
Well
28
27
HIGHLINE
KYRENE
REACH
Loading Pens
West Chandler
FIELD
ROAD
1174
1174
1165
1170
*STUDY
KYRENE
CANAL
Well
Water Tank
Kyrene Gin
Well
32
33
34
1160
1155
BEGIN STUDY
25
* No FLOOD HAZARDS ARE ASSOCIATED WITH KYRENE CANAL ALONG REACH SHOWN.
ROAD CLASSIFICATION
Heavy-duty
Light-duty
Medium-duty
Unimproved dirt
Interstate Route
KYRENE CANAL
GUADALUPE, ARIZ.
N3315—W11152.5/7.5
1952
PHOTOREVISED 1967 AND 1973
AMS 3650 IV SW—SERIES V898


N A L F O R E S T
VERDE
Box Bar Ranch
Ford
WASH No. 11
WASH No. 10
WASH No. 9
END STUDY
END STUDY
END STUDY
APPROX. 100 YEAR FLOOD BOUNDARY
RIVER
BOUNDARY
RESERVATION
Marpais
INDIAN
MC DOWELL
FORT
DITCH
Siphon
JONES
JEEP
JEEP
N
ARIZONA
QUADRANGLE LOCATION
ROAD CLASSIFICATION
Medium-duty
Light-duty
Unimproved dirt
APPROXIMATE 100 YEAR FLOOD BOUNDARY
FORT MC DOWELL, ARIZ.
NW/4 FORT MC DOWELL 15' QUADRANGLE
N3337.5—W11137.5/7.5
1964
AMS 3651 II NW—SERIES V898
SCALE: 1" = 2000'
VERDE RIVER
WASH No 9
" " 10
" " 11