DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
GEORGE OTIS SMITH, DIRECTOR

WATER-SUPPLY PAPER 368

# PROFILE SURVEYS
IN
# WENATCHEE RIVER BASIN
# WASHINGTON

PREPARED UNDER THE DIRECTION OF
R. B. MARSHALL, CHIEF GEOGRAPHER

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Prepared in cooperation with the State of Washington

WASHINGTON
GOVERNMENT PRINTING OFFICE
1914

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# ILLUSTRATIONS.

# PROFILE SURVEYS IN WENATCHEE RIVER BASIN, WASHINGTON.

Prepared under the direction of R. B. MARSHALL, Chief Geographer.

## GENERAL FEATURES OF WENATCHEE RIVER BASIN.

Wenatchee River rises in Cady Pass, in the Cascade Range, Washington, at an elevation of 4,500 feet, flows southeastward, passing through Wenatchee Lake at an elevation of 1,870 feet, and empties into Columbia River at the town of Wenatchee. With its tributaries it drains a stretch of the eastern slope of the Cascade Mountains about 40 miles long and the territory north of the Yakima River drainage basin, from which it is separated by the Wenatchee Mountains.

The river has a number of tributaries, among which may be mentioned White River, which flows into Wenatchee Lake near its head, and Chiwawa, Nason, Chumstick, Icicle, Peshastin, and Mission creeks. The upper part of the drainage area is heavily forested, but the extreme lower part consists of timberless hills and ridges, in most places covered with sagebrush.

The mean annual precipitation at Wenatchee is 16 inches, a large part of it being in the form of snow. During portions of the winter the streams are icebound.

The water is used for irrigation and the development of water power. The Great Northern Railway has built a hydroelectric plant at Leavenworth, where about 7,000 horsepower is developed to operate trains through the Cascade Tunnel.

## GAGING STATIONS.

The Survey has maintained in the basin of Wenatchee River the gaging stations shown by the following list. The stations are arranged in downstream order, the main stem of the river being determined by measuring or estimating its drainage area—that is, the headwater stream draining the largest area is considered the continuation of the main stream, and all stations from source to

mouth are presented first; stations on the tributaries, in regular order from source to mouth, follow. Relations of tributaries are indicated by indention. A dash following a date indicates that the station was being maintained June 30, 1913. A period after a date indicates discontinuance.

Wenatchee River near Chiwaukum, Wash., 1911–1912.
Wenatchee River near Leavenworth, Wash., 1910–
Wenatchee River at Dryden, Wash., 1911–
    Valley Canal at Dryden, Wash., 1911–
Wenatchee River at Sherman Spur, above Cashmere, Wash., 1904–1910.
Wenatchee River near Cashmere, Wash., 1904–1911.
Wenatchee River at Wenatchee, Wash., 1897.
    White River near Chiwaukum, Wash., –1912.
    Nason Creek near Chiwaukum, Wash., –1912.
    Chiwaukum Creek near Chiwaukum, Wash., –1911.
    Chiawa Creek near Leavenworth, Wash., –1912.
    Icicle Creek near Leavenworth, Wash., 1911–
    Peshastin Creek near Blewett, Wash., 1911.
    Peshastin Creek near Leavenworth, Wash., 1911.

## PUBLICATIONS.

Information concerning stream flow at the stations listed in the preceding table has been published by the Survey in the following reports:

Annual report: Nineteenth, pt. 4.
Water-supply papers: 16, 135, 178, 214, 252, 272, 292, 312,[1] 332,[2] 362.[2]

Water-supply papers and other publications of the United States Geological Survey containing data in regard to the water resources of the United States may be obtained or consulted as indicated below.

1. Copies may be obtained free of charge by applying to the Director of the Geological Survey, Washington, D. C., but the edition printed for free distribution is small and is soon exhausted.

2. Copies may be purchased at nominal cost from the Superintendent of Documents, Government Printing Office, Washington, D. C., who will on application furnish lists giving prices.

3. Sets of the reports may be consulted in the libraries of the principal cities in the United States.

4. Complete sets are available for consultation in the local offices of the water-resources branch of the Geological Survey, as follows:

Albany, N. Y., Room 18, Federal Building.
Atlanta, Ga., Post Office Building.
St. Paul, Minn., Old Capitol Building.
Helena, Mont., Montana National Bank Building.
Denver, Colo., 302 Chamber of Commerce Building.
Salt Lake City, Utah, Federal Building.

[1] In press June, 1914. [2] In preparation June, 1914.

Boise, Idaho, 615 Idaho Building.
Portland, Oreg., 416 Couch Building.
Tacoma, Wash., Federal Building.
San Francisco, Cal., 328 Customhouse.
Los Angeles, Cal., Federal Building.
Santa Fe, N. Mex., Capitol Building.
Honolulu, Hawaii, Kapiolani Building.

A list of the Geological Survey's publications will be sent on application to the Director of the United States Geological Survey, Washington, D. C.

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U. S. GEOLOGICAL SURVEY
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HENRY LANDES, STATE GEOLOGIST

# PLAN AND PROFILE OF WENATCHEE LAKE, WENATCHEE RIVER, AND CERTAIN TRIBUTARIES

WASHINGTON

WATER-SUPPLY PAPER 368 PLATE I A

NOTE: THE SIX SHEETS ARE ALL WITHIN CHELAN COUNTY, AND ABOVE LEAVENWORTH ARE ALSO WITHIN THE WENATCHEE NATIONAL FOREST




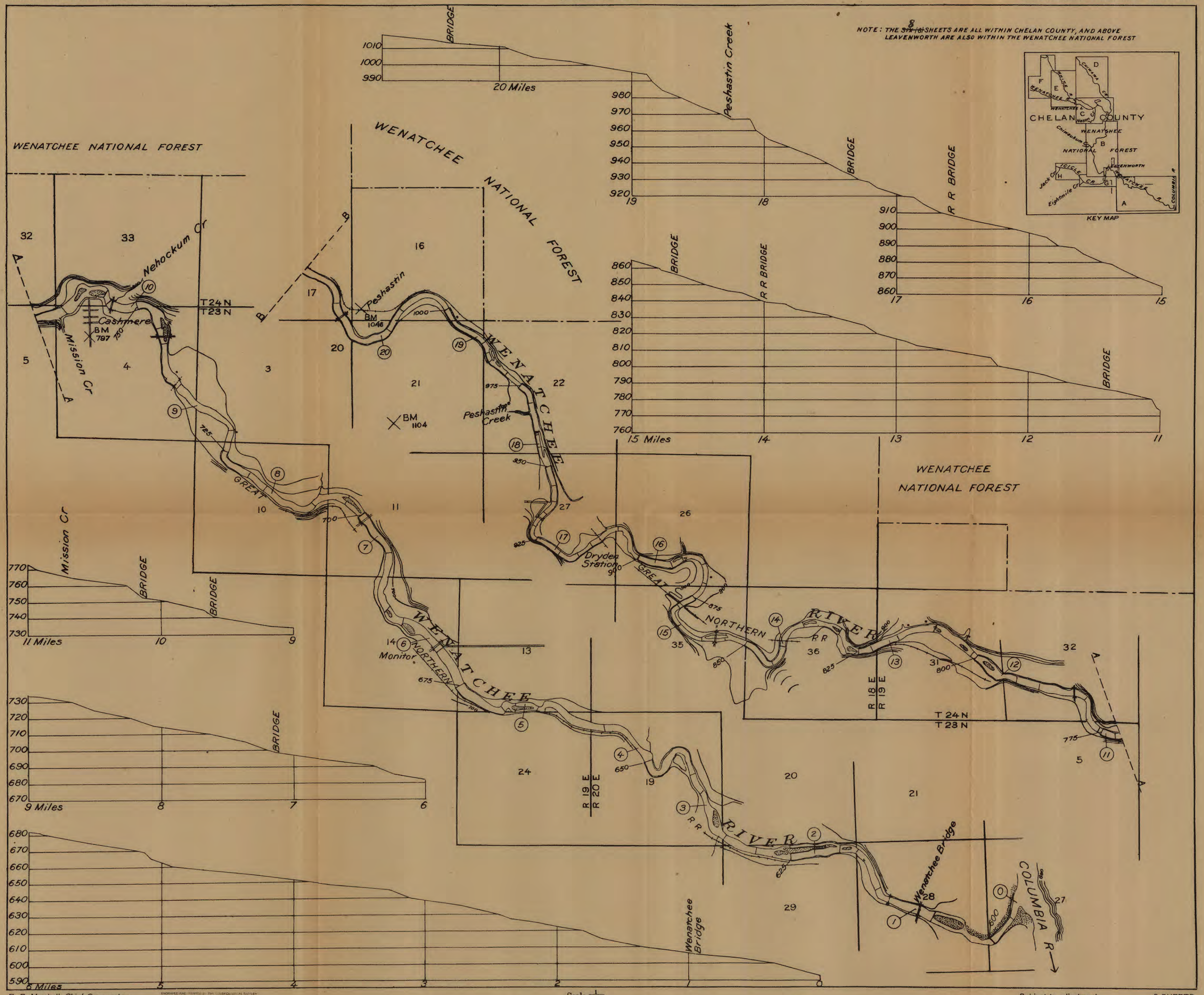


DIAGRAM OF TOWNSHIP

| | | | | | | |
|---|---|---|---|---|---|---|
| 6 | 5 | 4 | 3 | 2 | 1 | |
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| 18 | 17 | 16 | 15 | 14 | 13 | |
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Scale 1/31,680

1 0 1 2 Miles

4,000 2,000 0 4,000 8,000 Feet

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Vertical scale 1 inch = 40 feet
Contour interval on land 25 feet
Contour interval on river surface 5 feet
*Datum is mean sea level*

1914

APPROXIMATE MEAN DECLINATION 1911

TRUE NORTH
MAGNETIC NORTH
23½°

Subject to adjustment

8 SHEETS

R. B. Marshall, Chief Geographer
T. G. Gerdine, Geographer in charge
Topography by Chas. Hartmann, Jr.
Surveyed in 1911

SURVEYED IN COOPERATION WITH THE STATE OF WASHINGTON

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# PLAN AND PROFILE OF WENATCHEE LAKE, WENATCHEE RIVER, AND CERTAIN TRIBUTARIES WASHINGTON

WATER-SUPPLY PAPER 368 PLATE I B


R. B. Marshall, Chief Geographer
T. G. Gerdine, Geographer in charge
Topography by Chas. Hartmann, Jr., and T. H. Moncure
Surveyed in 1911
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8 SHEETS

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# PLAN AND PROFILE OF WENATCHEE LAKE, WENATCHEE RIVER, AND CERTAIN TRIBUTARIES WASHINGTON





KEY MAP


R. B. Marshall, Chief Geographer
T. G. Gerdine, Geographer in charge
Topography by Wm. C. Tutts and T. H. Moncure
Surveyed in 1911-1912
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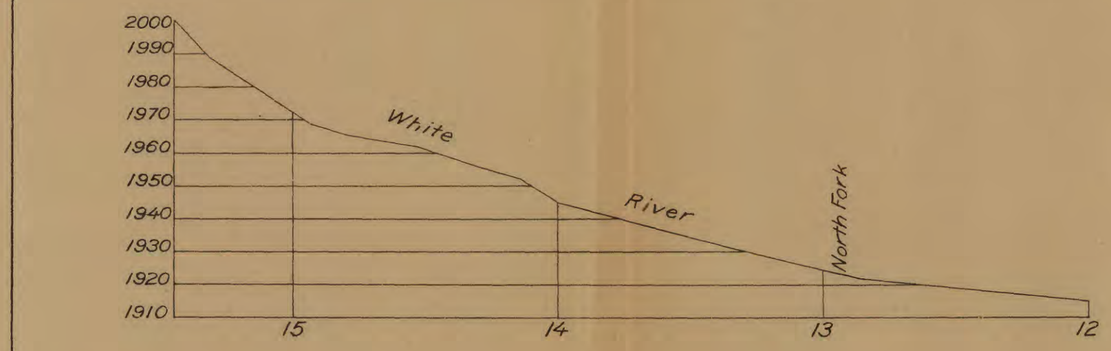
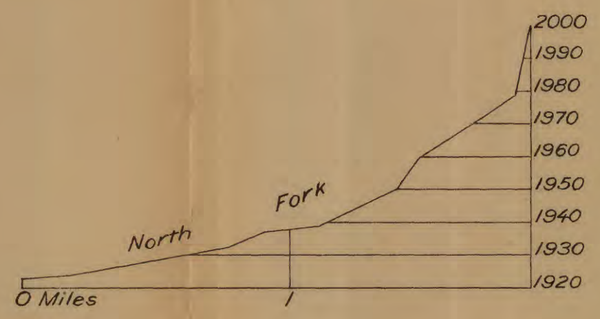
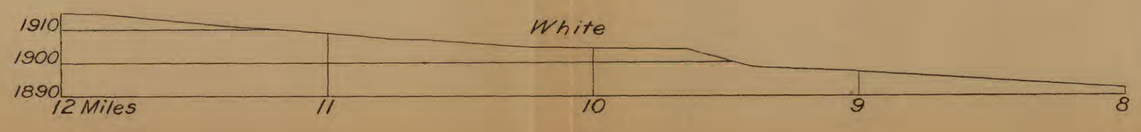
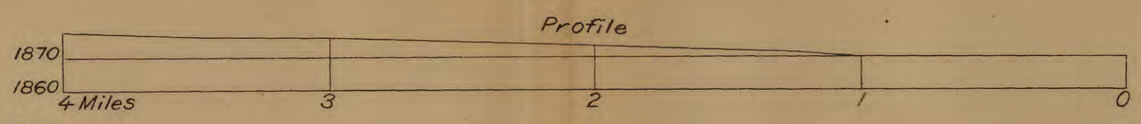
WATER-SUPPLY PAPER 368 PLATE I E

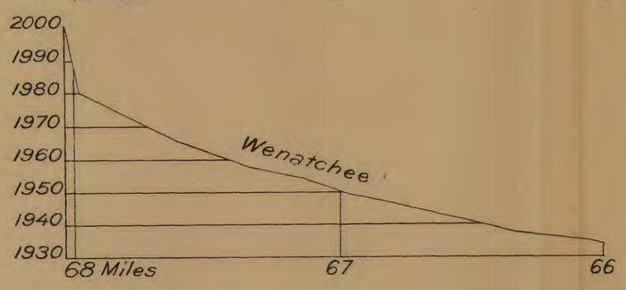


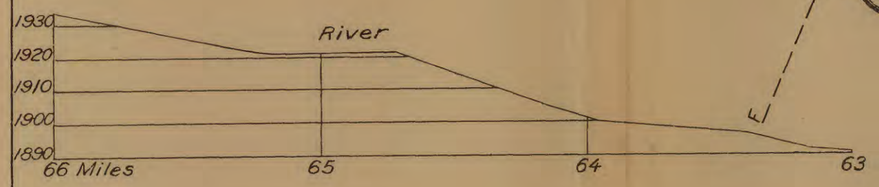



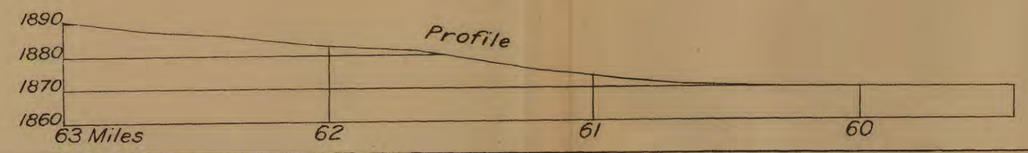



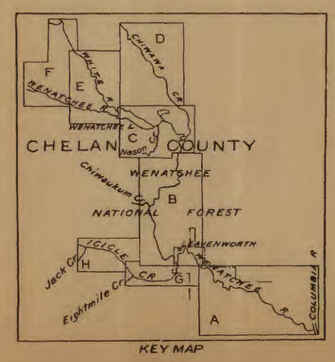


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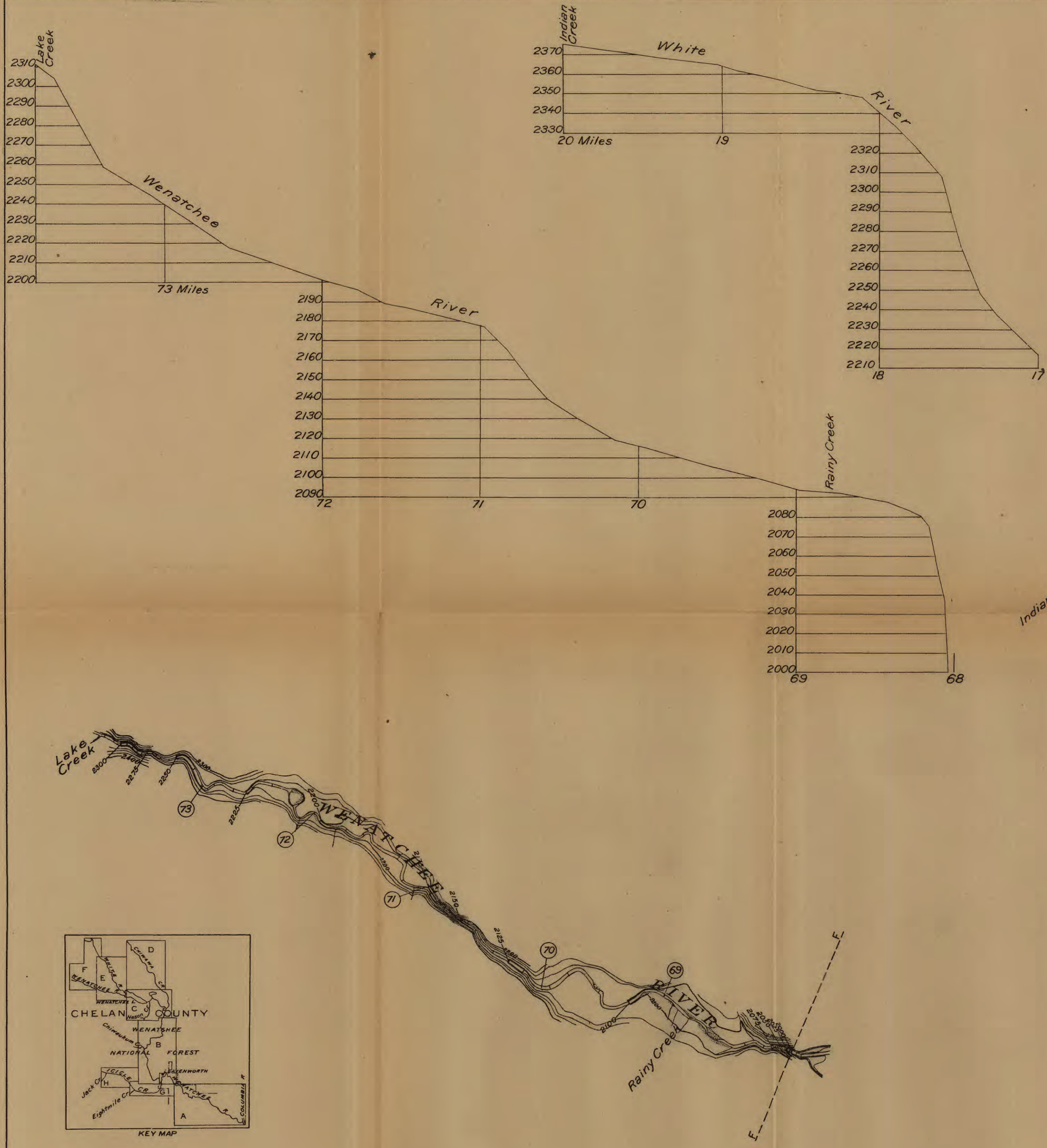


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