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DEPARTMENT OF THE INTERIOR

FRANKLIN K. LANE, Secretary

UNITED STATES GEOLOGICAL SURVEY

GEORGE OTIS SMITH, Director

WATER-SUPPLY PAPER 396

PROFILE SURVEYS

IN THE

COLORADO RIVER BASIN IN WYOMING, UTAH,
COLORADO, AND NEW MEXICO

PREPARED UNDER THE DIRECTION OF

W. H. HERRON

ACTING CHIEF HYDROGRAPHER



WASHINGTON

GOVERNMENT PRINTING OFFICE

1917



DEPARTMENT OF THE INTERIOR
FRANKLIN K. LANE, Secretary

UNITED STATES GEOLOGICAL SURVEY
GEORGE OTIS SMITH, Director

Water-Supply Paper 386

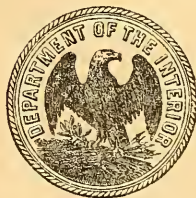
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- IX-XII. Plan and profile of Green, Duchesne, Uinta, and White rivers in the vicinity of Ouray, Utah (4 sheets, A-D).
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PROFILE SURVEYS IN THE COLORADO RIVER BASIN IN WYOMING, UTAH, COLORADO, AND NEW MEXICO.

Prepared under the direction of W. H. THEARON, Acting Chief Hydrographer.

INTRODUCTION.

In connection with studies of the utilization of rivers the United States Geological Survey has from time to time made surveys and profiles of some of the more important streams of the country and published the results in its series of water-supply papers. In some parts of the country these surveys were made chiefly to determine the location of power sites on streams adapted to the development of power by low or medium heads of 20 to 100 feet; in others the purpose of the surveys was more closely related to the possibility of storing water at certain points and diverting it for use in irrigation.

The earlier surveys, such as those of Green River above Fontenelle, Wyo., made in 1909 (Pls. I-V) were of a reconnaissance type and as a rule show no contours along the banks. The later surveys are typified by that of the Gila in the vicinity of Cliff and Redrock, N. Mex., made in 1915 (Pls. XLI-XLVIII) and show conditions in much greater detail. These later surveys were made by means of plane table and stadia. Elevations are based on heights derived from primary or precise levels of the United States Geological Survey. The maps are made in the field and show not only the outlines of river banks, the islands, the positions of rapids, falls, shoals, and existing dams, and the crossings of all ferries and roads, but the contours of banks to an elevation high enough to indicate the possibility of using the stream.

SURVEYS IN THE COLORADO RIVER BASIN.

The results of surveys in the Colorado River basin here presented include some of the earliest as well as some of the latest river surveys. The streams to which these surveys relate are fully described in Water-Supply Paper 395 (Colorado River and its utilization, by E. C. La Rue), and the plates herewith should be studied in connection with that report.

Studies on the headwaters are represented by 21 plates (I-XXI) showing plans and profiles of the Green and its tributaries above the junction with the Grand, studies on the Grand by 16 plates (XXII-XXXVII) showing plans and profiles above the junction with the Green and 3 plates (XXXVIII-XL) showing plans and profiles along the Gunnison. The surveys of the Green below Gunnison Butte, Utah (Pls. XIII-XXI), were made by the United States Reclamation Service and are published through the cooperation of that bureau. The only work on tributaries below the junction of the Grand and Green is represented by the profiles of the Gila in the vicinity of Cliff and Redrock, N. Mex. (Pls. XLI-XLIII).

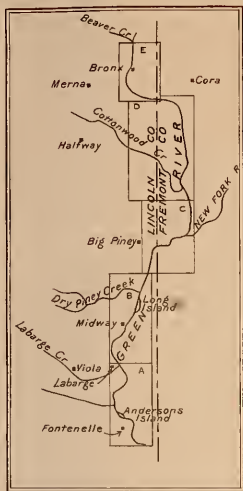


CONTOUR MAP AND PROFILE OF
GREEN RIVER
ABOVE FONTENELLE, WYOMING

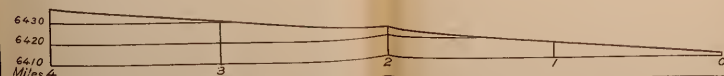
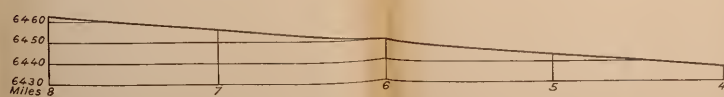
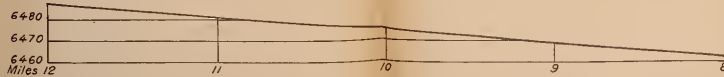
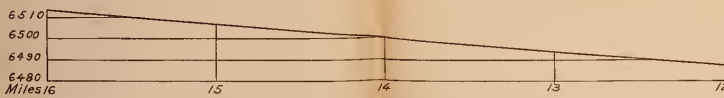
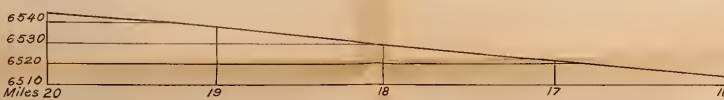
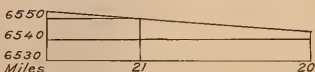
U. S. GEOLOGICAL SURVEY

SHEET A

WATER-SUPPLY PAPER 396 PLATE 1

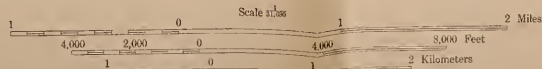


KEY MAP

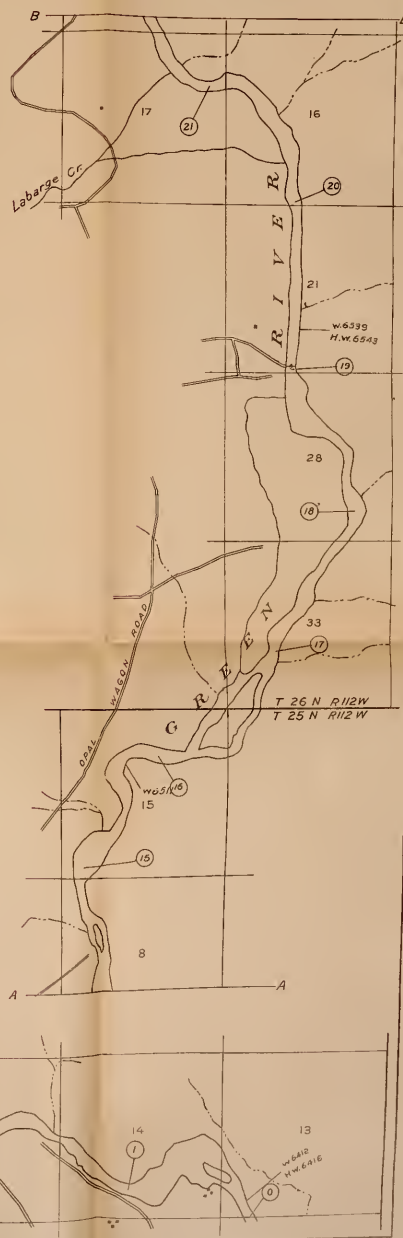


R. B. Marshall, Chief Geographer
E. C. Barnard, Geographer in charge
Topography by Chas. A. Leonard
based on General Land Office plat
Surveyed in 1910

| DIAGONAL DISTANCE | VERTICAL DISTANCE |
|-------------------|-------------------|
| 8.5 | 0.2 |
| 7.8 | 0.1 |
| 7.1 | 0.1 |
| 6.4 | 0.1 |
| 5.7 | 0.1 |
| 5.0 | 0.1 |
| 4.3 | 0.1 |
| 3.6 | 0.1 |
| 2.9 | 0.1 |
| 2.2 | 0.1 |
| 1.5 | 0.1 |
| 0.8 | 0.1 |



Vertical scale 1 inch = 40 feet
Datum of mean sea level
1918



Subject to adjustment

5 SHEETS

APPROXIMATE MEAN
DECLINATION 1918

RECONNAISSANCE
PLAN AND PROFILE OF
GREEN RIVER
ABOVE FONTENELLE, WYOMING

U. S. GEOLOGICAL SURVEY

SHEET B

WATER-SUPPLY PAPER 396 PLATE II



R. B. Minkski, Chief Geographer
E. C. Barnard, Geographer in charge
Topography by Chas. A. Leonard
based on General Land Office plats
Surveyed in 1899

DIAGRAM OF

| | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |



Vertical scale 1 inch = 40 feet
Datum is mean sea level
1916

Subject to adjustment 5 SHEETS

House Doc. 84th Cong., 2d Sess.

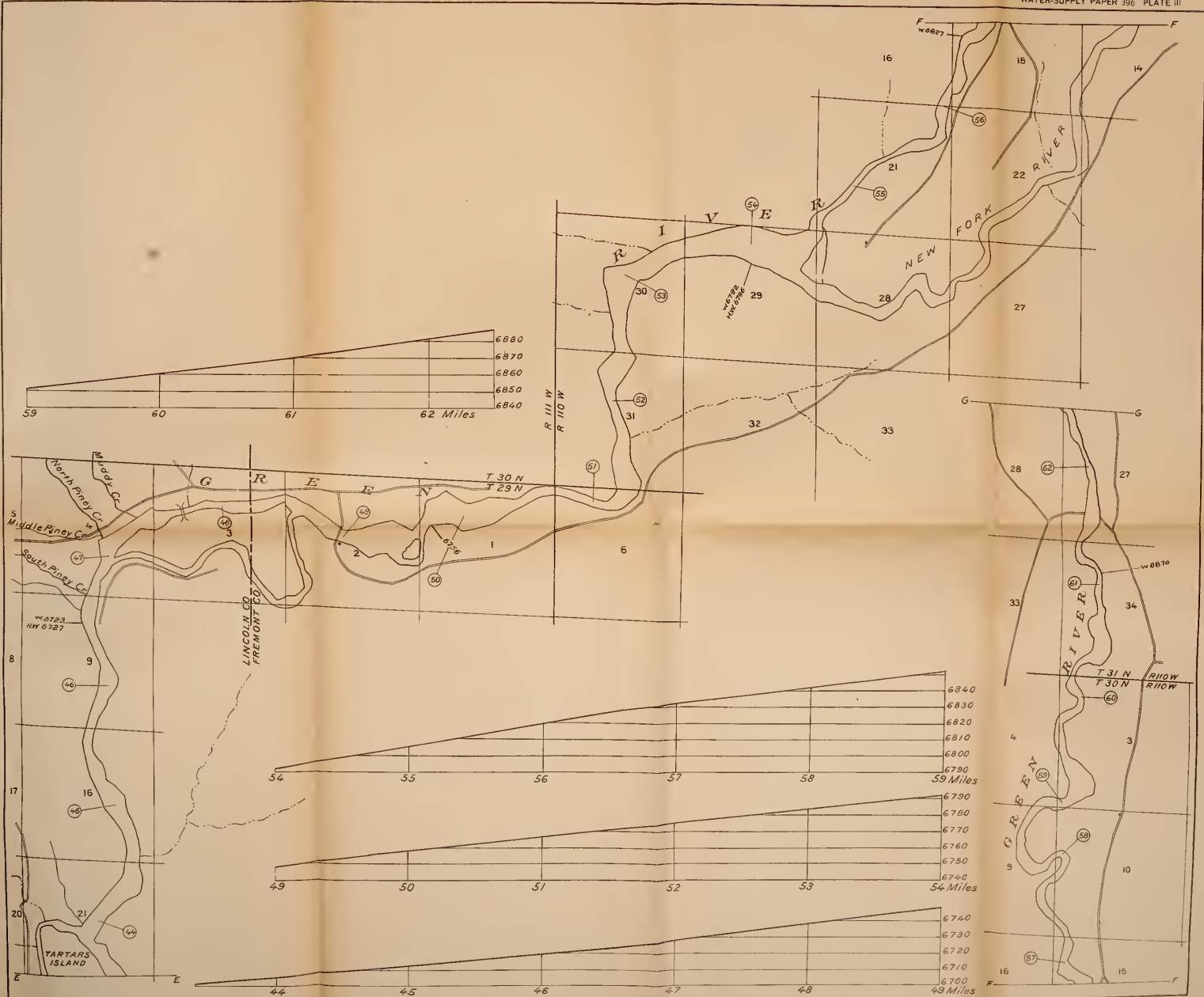


RECONNAISSANCE
PLAN AND PROFILE OF
GREEN RIVER
ABOVE FONTENELLE, WYOMING

U. S. GEOLOGICAL SURVEY

SHEET C

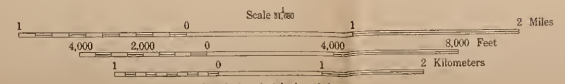
WATER-SUPPLY PAPER 396 PLATE III



R. B. Marshall, Chief Geographer
E. C. Barnard, Geographer in charge
Topography by Chas. A. Leonard
based on General Land Office plats
Surveyed in 1909

DIAGRAM OF TOWNSHIP

| | | | | | |
|----|----|----|----|----|----|
| 6 | 5 | 3 | 2 | 1 | |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 |



Vertical scale 1 inch = 40 feet
Datum is mean sea level
1916

17°
TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN
DECLINATION 1909

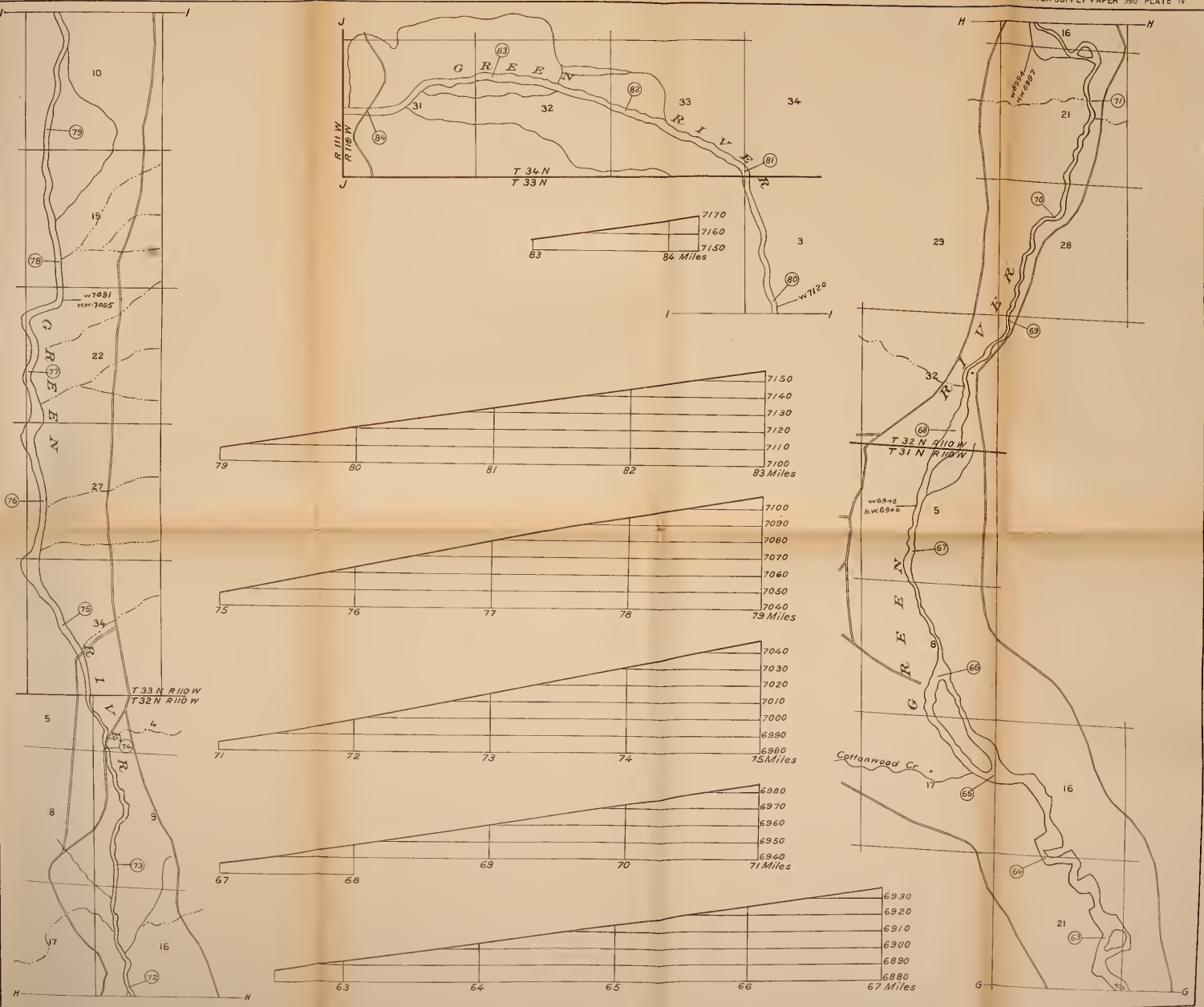
Subject to adjustment 5 SHEETS
House Doc. : 64th Cong. 1st. Sess.

RECONNAISSANCE
PLAN AND PROFILE OF
GREEN RIVER
ABOVE FONTENELLE, WYOMING

U. S. GEOLOGICAL SURVEY

SHEET D

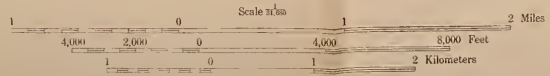
WATER-SUPPLY PAPER 396 PLATE IV



R. B. Marshall, Chief Geographer
E. C. Barnard, Geographer in charge
Topography by Chas. A. Leonard
based on General Land Office plats
Surveyed in 1909

DIAGRAM OF TOWNSHIP

| | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |



Vertical scale 1 inch = 60 feet
Datum is mean sea level
1918

17°
TRUE NORTH
MAGNETIC NORTH

APPROXIMATE MEAN
DECLINATION 1919

Subject to adjustment 5 SHEETS

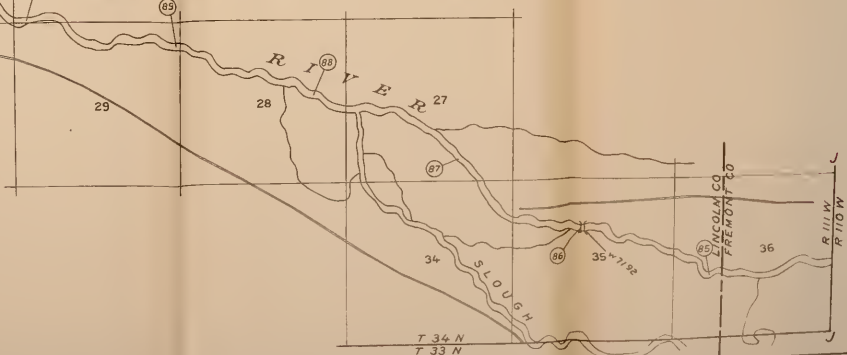
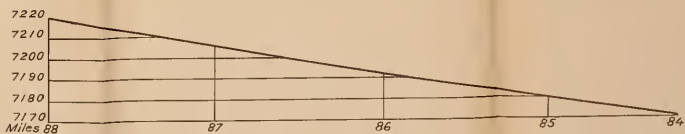
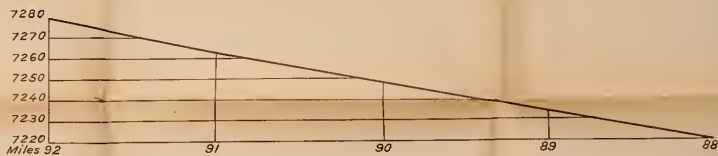
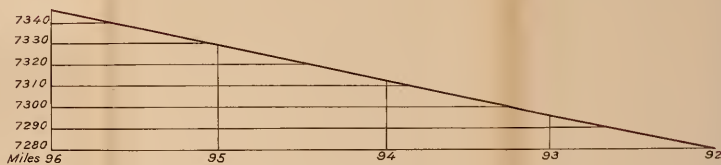
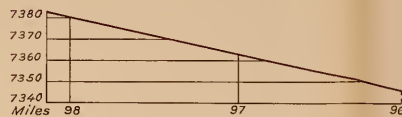
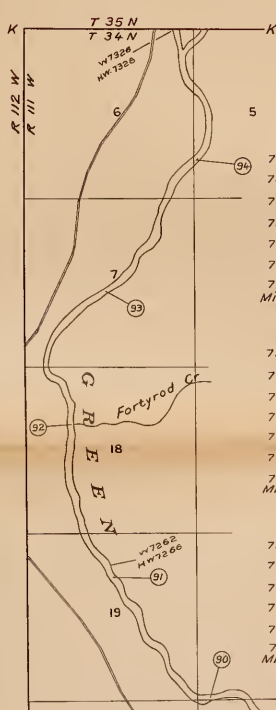
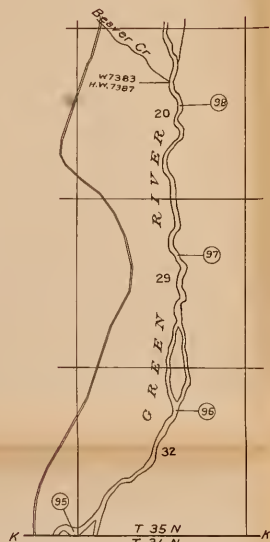
House Doc. 64th Cong., 2d Sess.

RECONNAISSANCE
PLAN AND PROFILE OF
GREEN RIVER
ABOVE FONTENELLE, WYOMING

SHEET E

WATER-SUPPLY PAPER 396 PLATE V

U. S. GEOLOGICAL SURVEY



Subject to adjustment

5 SHEETS

R. B. Marshall, Chief Geographer
E. C. Barnard, Geographer in charge
Topography by Chas. A. Leonard
based on General Land Office plats
Surveyed in 1909

DIAGRAM OF TOWNSHIP

| | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 |



Vertical scale 1 inch = 40 feet
Datum is mean sea level.
1916

APPROXIMATE MEAN
ELEVATION IN 1908

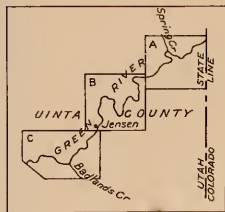
House Doc. 64th Cong. 2d Sess.

RECONNAISSANCE
PLAN AND PROFILE OF
GREEN RIVER
COLORADO STATE LINE TO HORSESHOE BEND, UTAH

U. S. GEOLOGICAL SURVEY

SHEET A

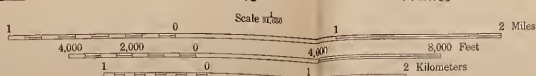
WATER-SUPPLY PAPER 396 PLATE VI



R. B. Marshall, Chief Geographer
E. C. Barnard, Geographer in charge
Topography by Stanley Hargen
based on General Land Office plats
Surveyed in 1909

DIAGRAM OF TOWNSHIP

| | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 |



Vertical scale 1 inch = 40 feet
Datum at mean sea level
1916

APPROXIMATE MEAN
DECLINATION 1909

Subject to adjustment 3 SHEETS
House Doc. ; 64th Cong., 1st Sess.

RECONNAISSANCE
PLAN AND PROFILE OF
GREEN RIVER
COLORADO STATE LINE TO HORSESHOE BEND, UTAH

U. S. GEOLOGICAL SURVEY

SHEET B

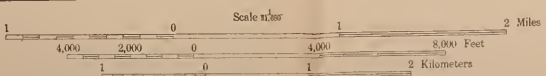
WATER-SUPPLY PAPER 396 PLATE VII



R. B. Marshall, Chief Geographer
E. C. Bairard, Geographer in charge
Topography by Stanley Hergen
Based on General Land Office plats
Surveyed in 1909

DIAGRAM OF TOWNSHIP

| | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 |



Vertical scale 1 inch = 40 feet
Datum is mean sea level
1916

APPROXIMATE MEAN
DECLINATION 1916-17

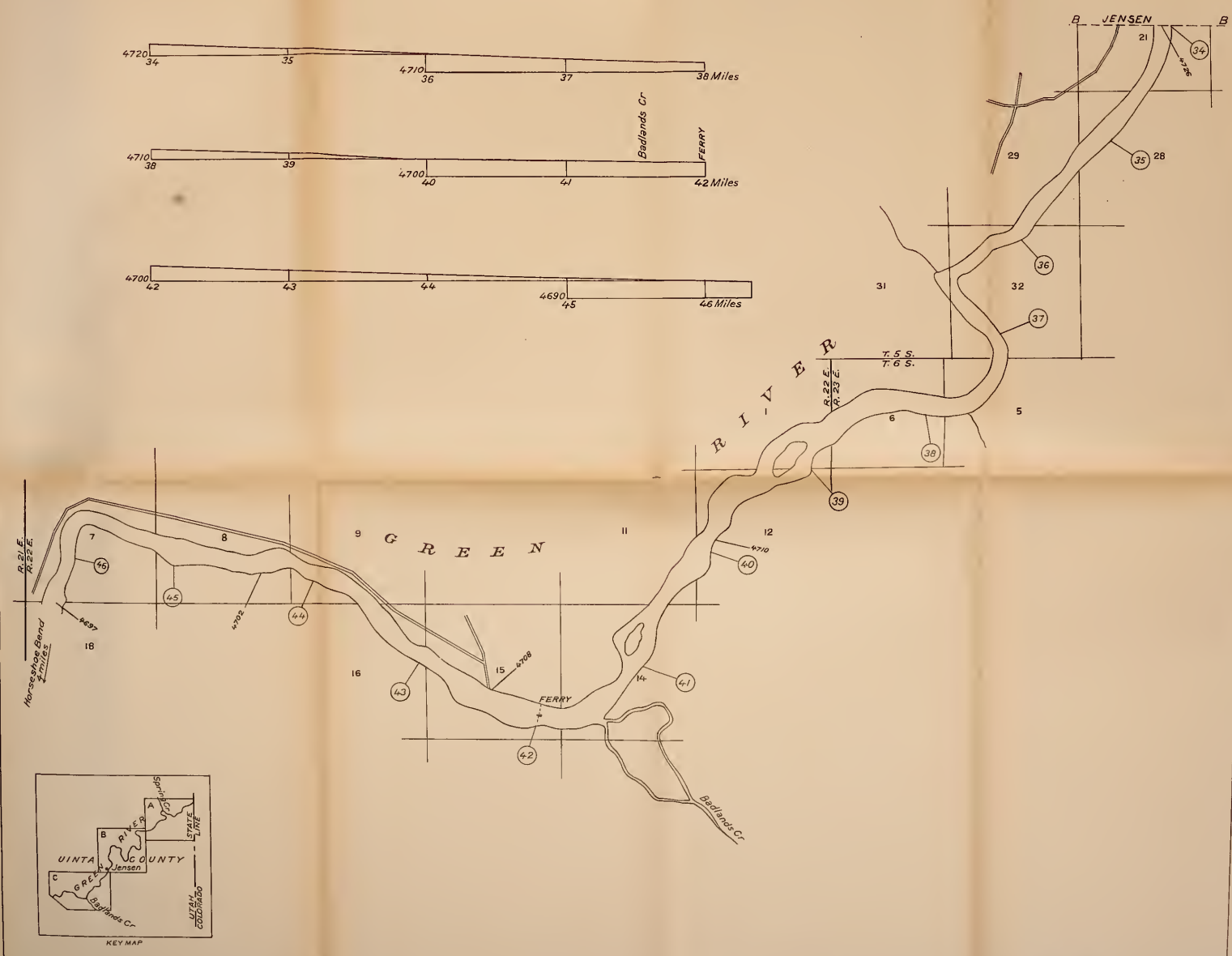
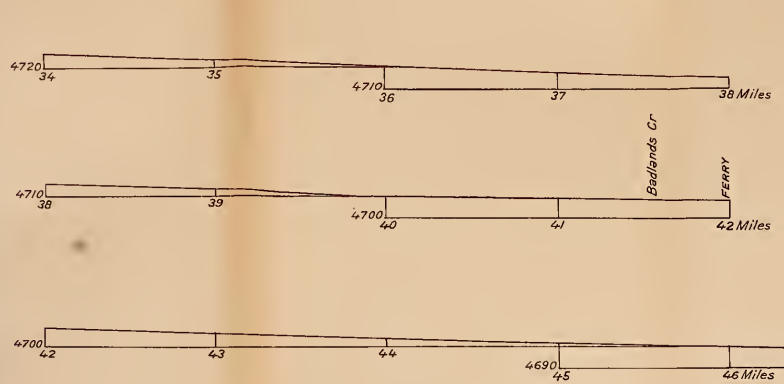
Subject to adjustment 3 SHEETS
House Doc. : 64th Cong., 1st. Sess.

RECONNAISSANCE
 PLAN AND PROFILE OF
 GREEN RIVER
 COLORADO STATE LINE TO HORSESHOE BEND, UTAH

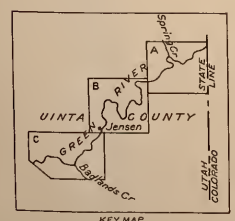
SHEET C

WATER-SUPPLY PAPER 396 PLATE VII

U. S. GEOLOGICAL SURVEY



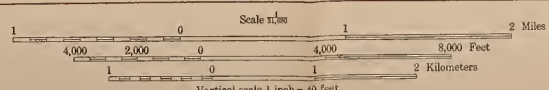
Horseshoe Bend
 1/2 miles



R. B. Marshall, Chief Geographer
 E. C. Barnard, Geographer in charge
 Topography by Stanley Hagen
 based on General Land Office plats
 Surveyed in 1909

DIAGRAM OF TOWNSHIP

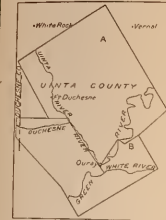
| | | | |
|----|----|----|----|
| 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | 32 |



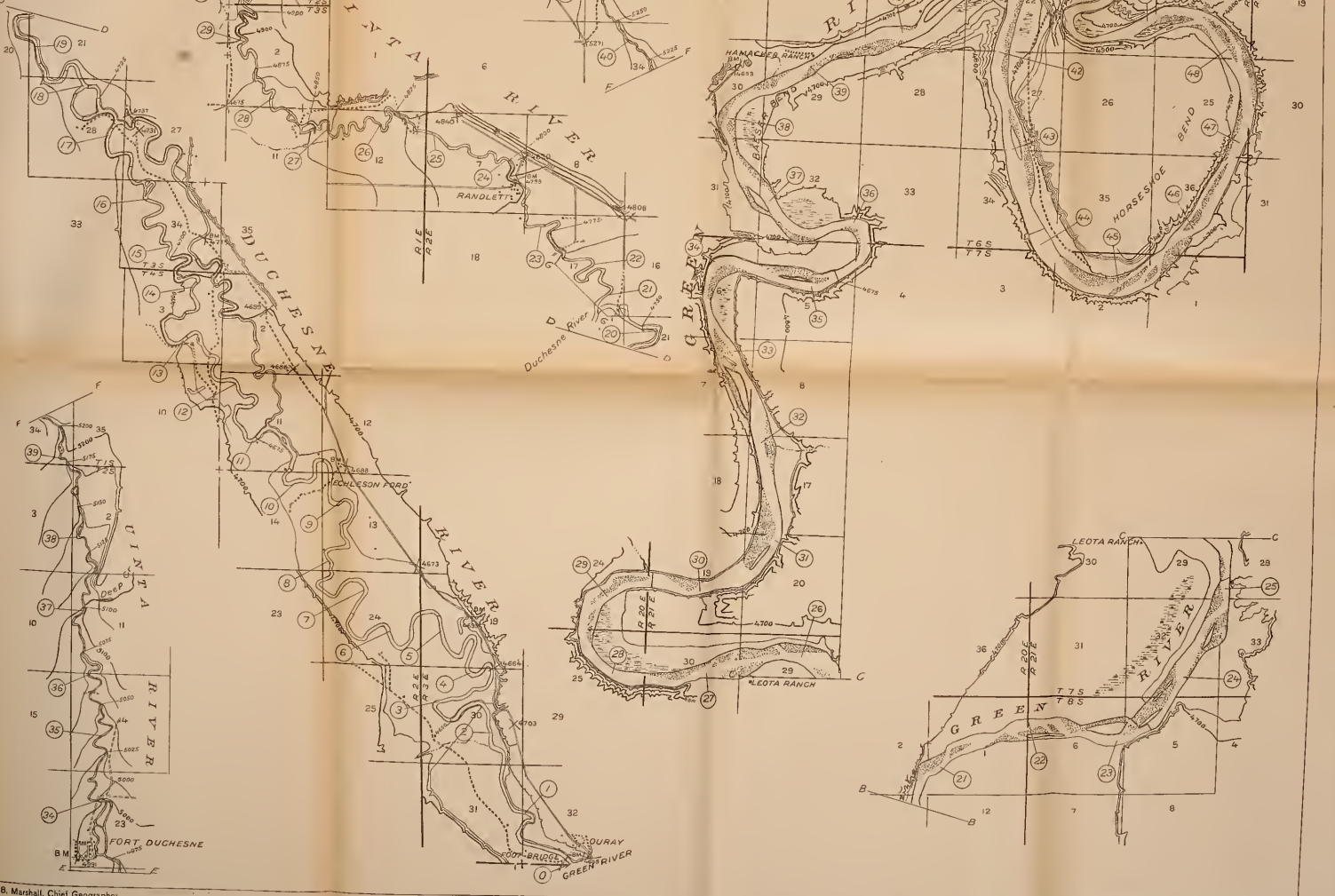
Vertical scale 1 inch = 40 feet
 Datum at mean sea level
 1916

16°
 TRUE NORTH
 MAGNETIC NORTH
 APPROXIMATE MEAN
 DECLINATION 1909

Subject to adjustment
 3 SHEETS
 House Doc. : 64th Cong., 1st. Sess.



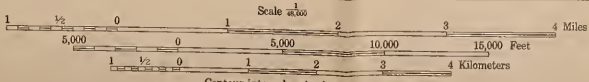
KEY MAP OF PLAN SHEETS



R. B. Marshall, Chief Geographer
Geo. R. Davis, Geographer in charge
Topography by Cornelius Schnur
Surveyed in 1913-1914

DIAGRAM OF TOWNSHIP

| | | | | | |
|----|----|----|----|----|----|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 17 | 16 | 15 | 14 | 13 | 12 |
| 28 | 27 | 26 | 25 | 24 | 23 |
| 39 | 38 | 37 | 36 | 35 | 34 |
| 50 | 49 | 48 | 47 | 46 | 45 |



Contour interval on land 25 feet
Contour interval on river surface 5 feet
Datum is mean sea level

17°
TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN
DECLINATION 1914

Subject to adjustment

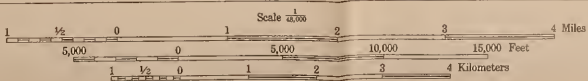
4 SHEETS
(2 plans, 2 profiles)
House Doc. ; 64th Cong., 1st. Sess.



R. B. Marshall, Chief Geographer
Geo. R. Davis, Geographer in charge
Topography by Cornelius Schuur
Surveyed in 1913-1914

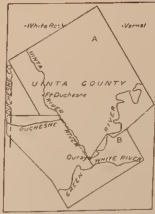
DIAGRAM OF TOWNSHIP

| | | | | |
|----|----|----|----|----|
| 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | 32 | 33 |
| 34 | 35 | 36 | 37 | 38 |

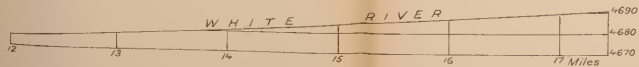
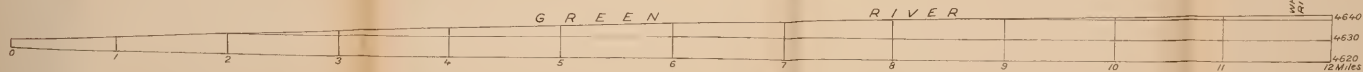
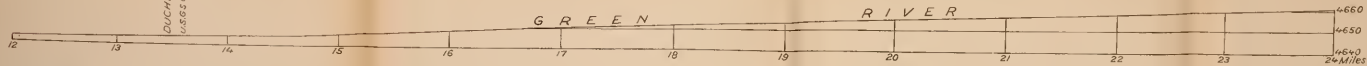
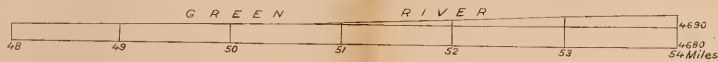
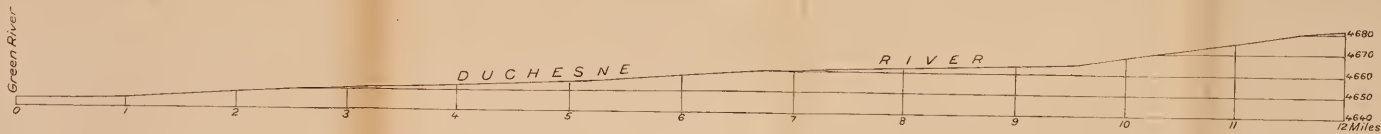
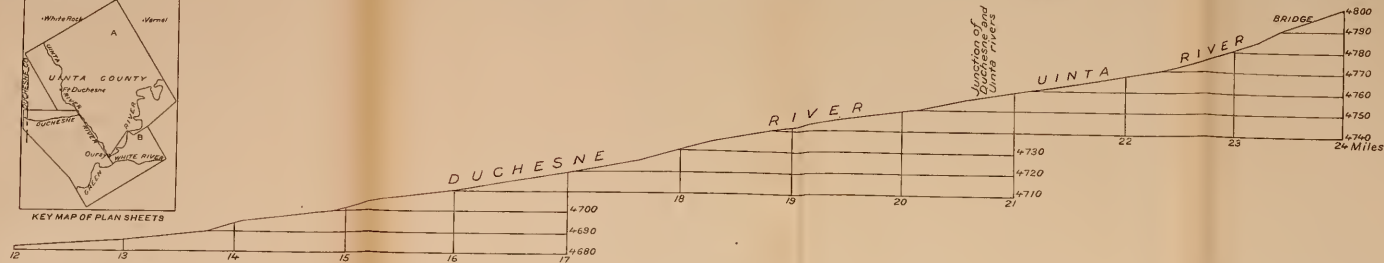
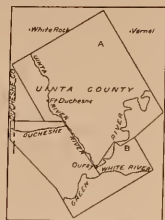


Contour interval on land 25 feet
Contour interval on river surface 5 feet
Datum is mean sea level
1916

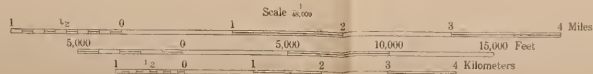
APPROXIMATE MEAN
DECLINATION 1916



Subject to adjustment
4 SHEETS
(2 plans, 2 profiles)
No. 10 Doc. : 64th Cong., 1st Sess.



R. B. Mankill, Chief Geographer
Geo. R. Davis, Geographer in charge
Topography by Cornelius Schuur
Surveyed in 1913, 1914



Vertical scale 1 inch = 40 feet
Datum is mean sea level
1916

Subject to adjustment

4 SHEETS
(2 plans, 2 profiles)

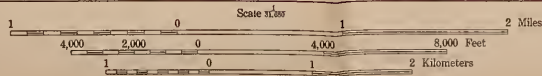
House Doc. : 64th Cong., 1st. Sess



KEY MAP OF PLAN SHEETS

Topography by U. S. Reclamation Service
Surveyed in 1914

MADE BY THE REPT. OF THE U. S. GEOLOGICAL SURVEY



Contour interval on land and river surface 25 feet
Datum to mean sea level
1916

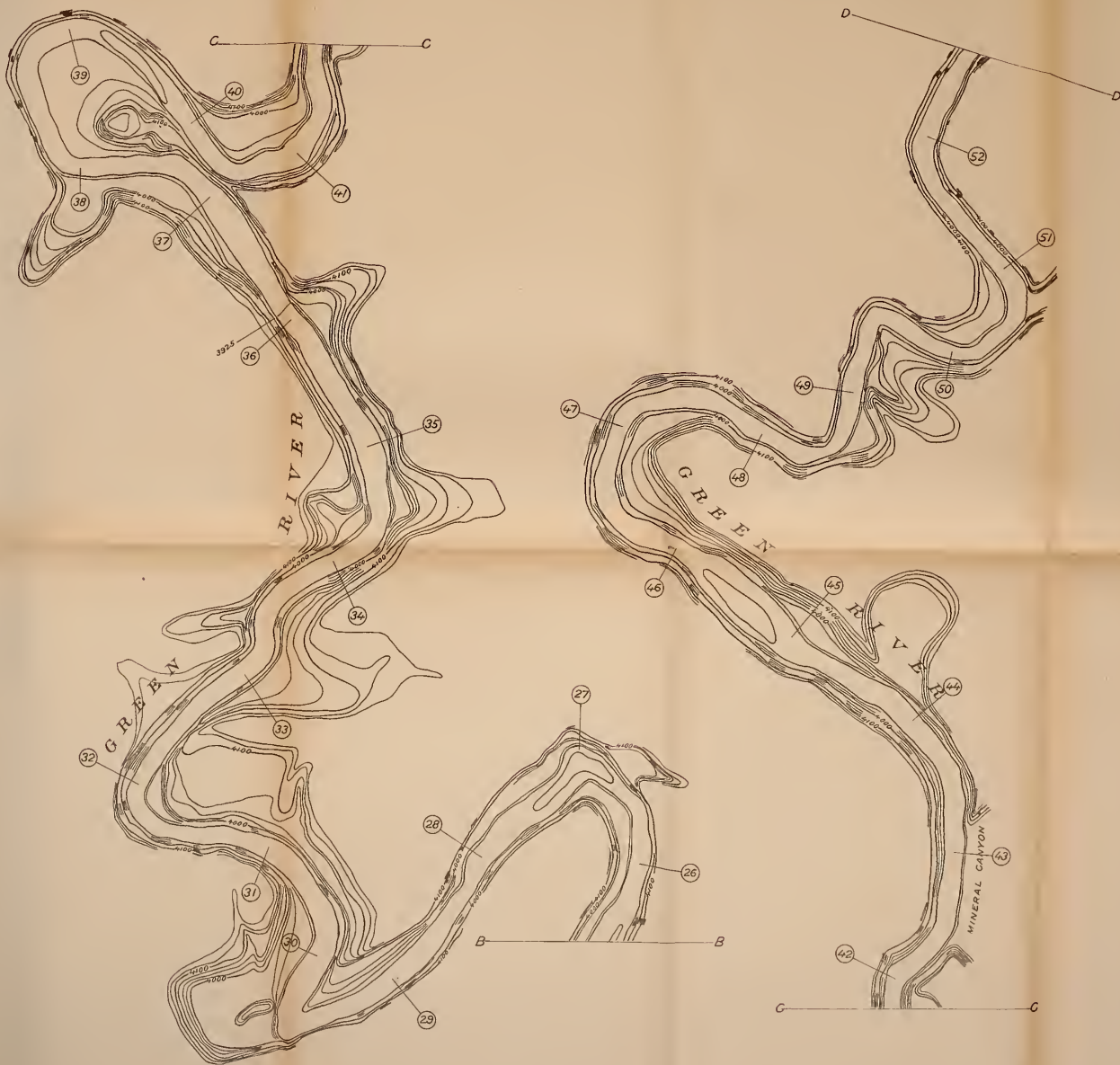
16°
TRUE NORTH
MAGNETIC NORTH

APPROXIMATE MEAN
DECLINATION 1916

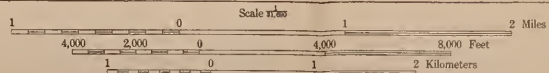
Subject to adjustment

9 SHEETS
(6 plans, 3 profiles)

House Doc. ; 64th Cong., 1st Sess.



Topography by U. S. Reclamation Service
Surveyed in 1914



Contour interval on land and river surface 25 feet
Datum to river base level
1916

167
TRUE NORTH
MAGNETIC NORTH
APPROXIMATE YEAR
DECLINATION 1914

Subject to adjustment

9 SHEETS
(6 plans, 3 profiles)

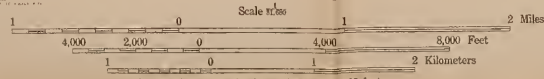
House Doc. : 64th Cong., 1st Sess.



Topography by U. S. Reclamation Service
Surveyed in 1914

DIAGRAM OF TOWNSHIP

| | | | | | | |
|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| 36 | 37 | 38 | 39 | 40 | 41 | 42 |

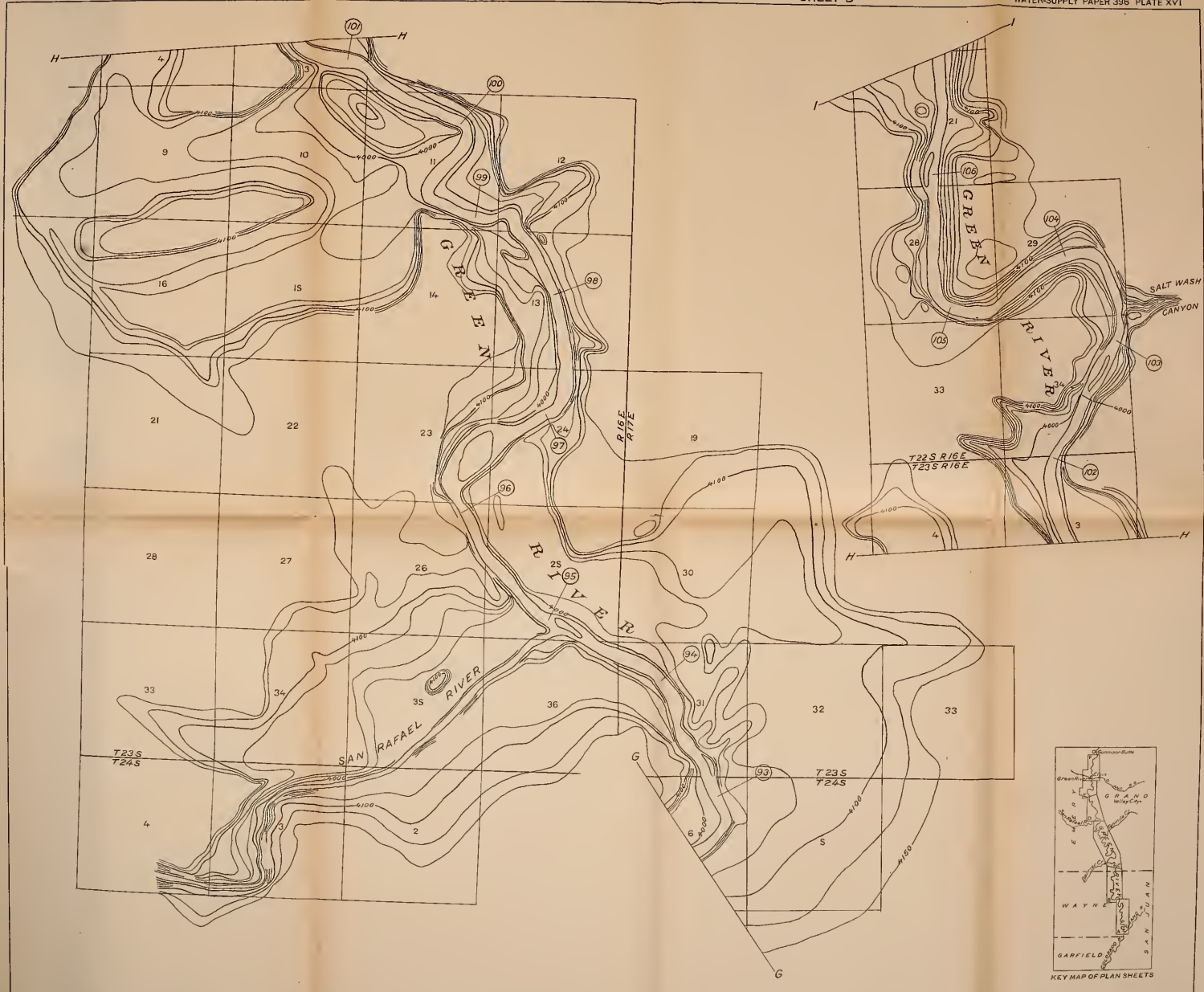


Subject to adjustment

9 SHEETS
(6 plans, 3 profiles)

House Doc. : 64th Cong., 1st Sess.

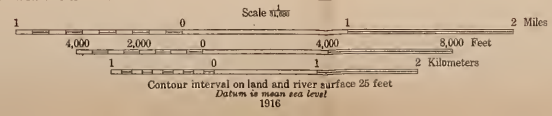
APPROXIMATE MEAN
DECLINATION 1916



Topography by U. S. Reclamation Service
Surveyed in 1914

DIAGRAM OF TOWNSHIP

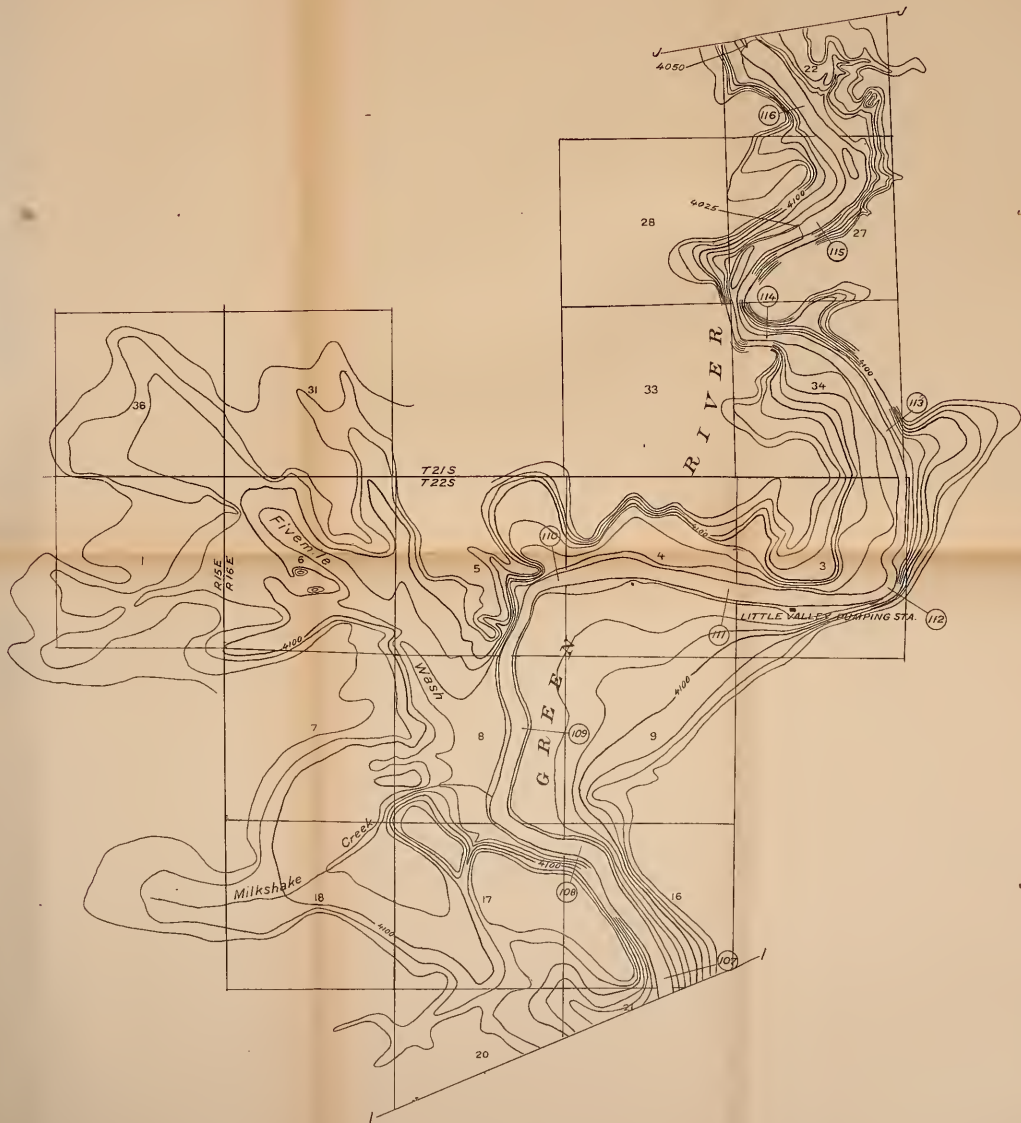
| | | | | | |
|----|----|----|----|----|----|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 6 | 5 | 4 | 3 | 2 |
| 8 | 7 | 6 | 5 | 4 | 3 |
| 9 | 8 | 7 | 6 | 5 | 4 |
| 10 | 9 | 8 | 7 | 6 | 5 |
| 11 | 10 | 9 | 8 | 7 | 6 |
| 12 | 11 | 10 | 9 | 8 | 7 |
| 13 | 12 | 11 | 10 | 9 | 8 |
| 14 | 13 | 12 | 11 | 10 | 9 |
| 15 | 14 | 13 | 12 | 11 | 10 |
| 16 | 15 | 14 | 13 | 12 | 11 |
| 17 | 16 | 15 | 14 | 13 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 18 | 17 | 16 | 15 | 14 |
| 20 | 19 | 18 | 17 | 16 | 15 |
| 21 | 20 | 19 | 18 | 17 | 16 |
| 22 | 21 | 20 | 19 | 18 | 17 |
| 23 | 22 | 21 | 20 | 19 | 18 |
| 24 | 23 | 22 | 21 | 20 | 19 |
| 25 | 24 | 23 | 22 | 21 | 20 |
| 26 | 25 | 24 | 23 | 22 | 21 |
| 27 | 26 | 25 | 24 | 23 | 22 |
| 28 | 27 | 26 | 25 | 24 | 23 |
| 29 | 28 | 27 | 26 | 25 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 30 | 29 | 28 | 27 | 26 |
| 32 | 31 | 30 | 29 | 28 | 27 |
| 33 | 32 | 31 | 30 | 29 | 28 |
| 34 | 33 | 32 | 31 | 30 | 29 |
| 35 | 34 | 33 | 32 | 31 | 30 |
| 36 | 35 | 34 | 33 | 32 | 31 |



Subject to adjustment

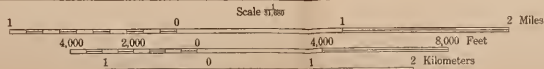
9 SHEETS
(6 plans, 3 profiles)

House Doc. : 64th Cong., 1st Sess.



Topography by U. S. Reclamation Service
Surveyed in 1914

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

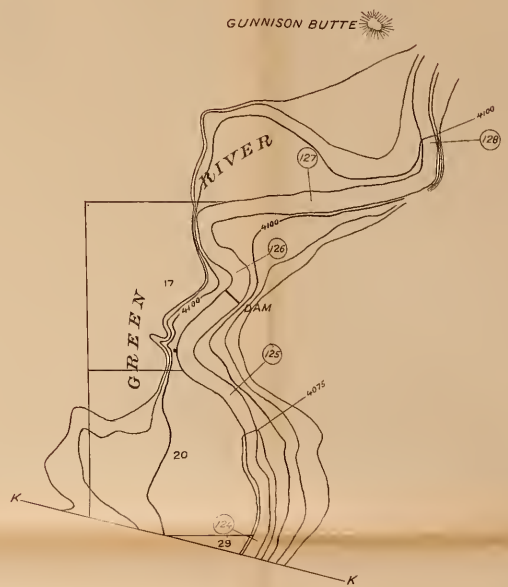


Contour interval on land and river surface 25 feet
Datum is mean sea level
1916

16'
APPROXIMATE MEAN
DECLINATION 1914

Subject to adjustment

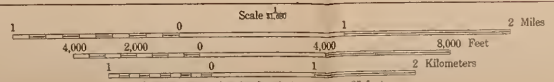
9 SHEETS
(6 plans, 3 profiles)
House Occ. : 64th Cong., 1st. Sess.



Topography by U. S. Reclamation Service
Surveyed in 1914

DIAGRAM OF TOWNSHIP

| | | | | | | | | |
|----|----|----|----|----|----|----|----|----|
| 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 |
| 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 |



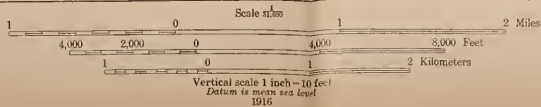
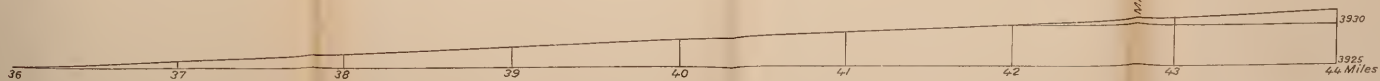
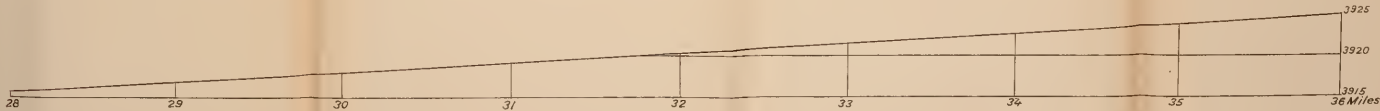
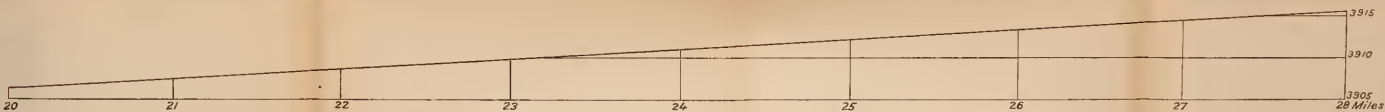
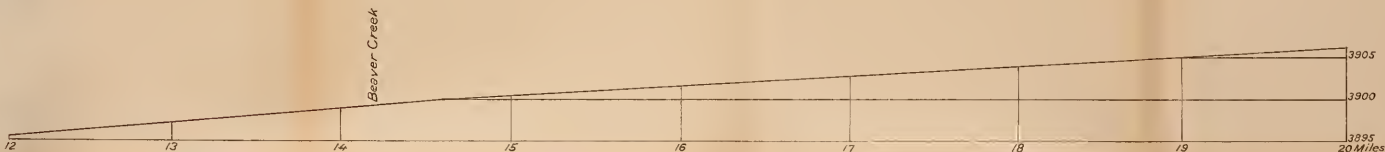
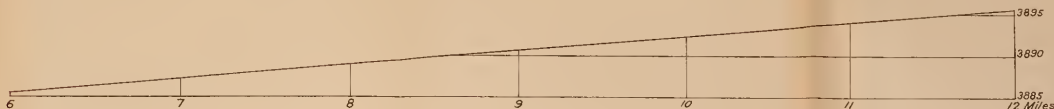
Contour interval on land and river surface 25 feet
Datum is mean sea level
1916

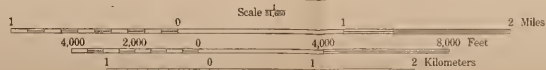
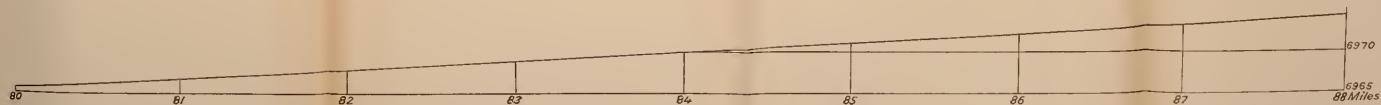
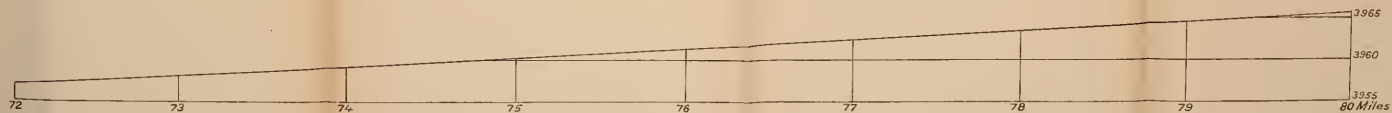
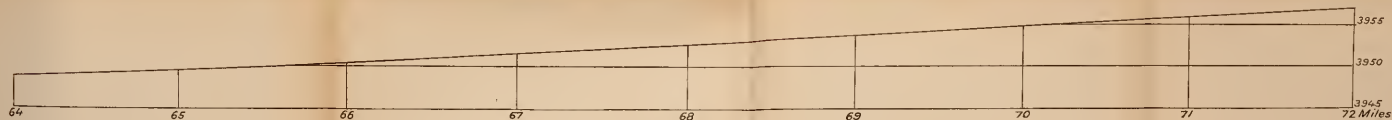
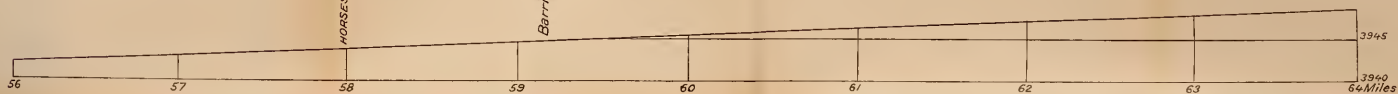
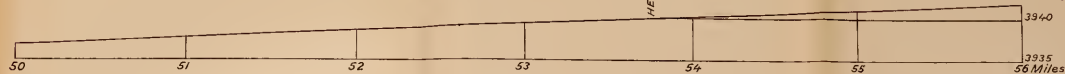
APPROXIMATE MEAN
DECLINATION 1914
MAGNETIC NORTH
16°
TRUE NORTH

Subject to adjustment

9 SHEETS
(6 plans, 3 profiles)

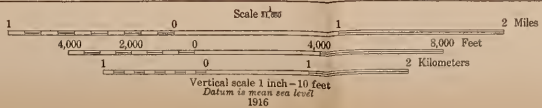
House Doc. : 64th Cong., 1st Sess.







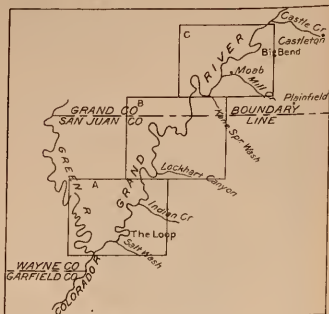
Topography by U. S. Reclamation Service
Surveyed in 1914.



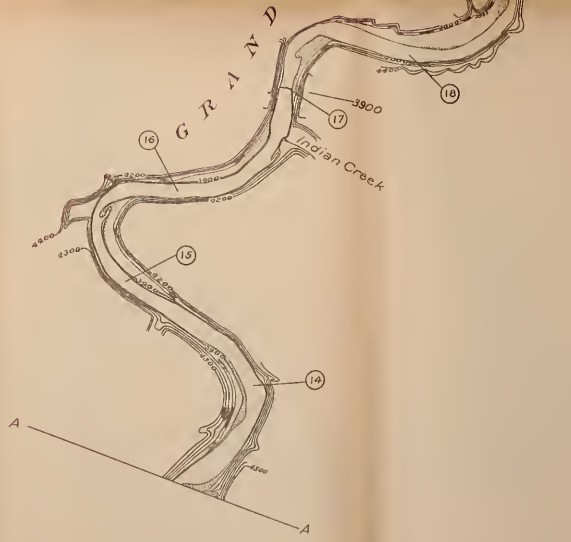
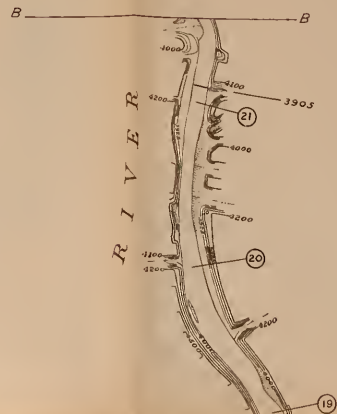
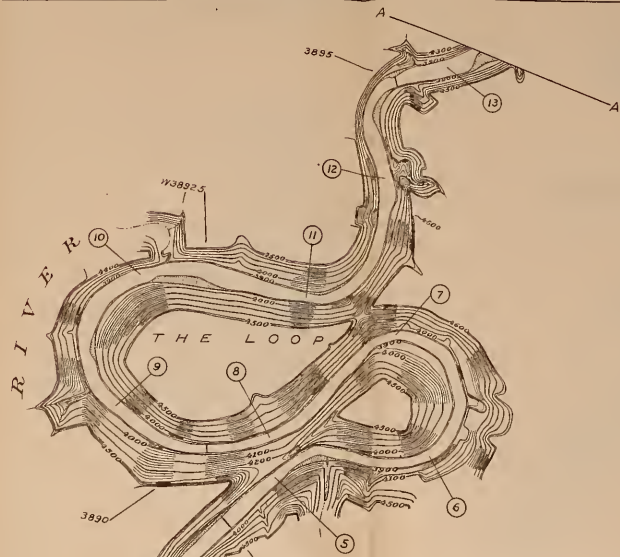
Subject to adjustment

9 SHEETS
(6 plans, 3 profiles)

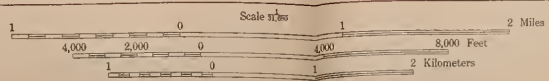
House Doc. : 64th Cong., 1st Sess.



KEY MAP SHOWING LOCATION OF SHEETS



R. B. Marshall, Chief Geographer
Sledge Tatum, Geographer in charge
Topography by R. C. Sartz
Surveyed in 1912

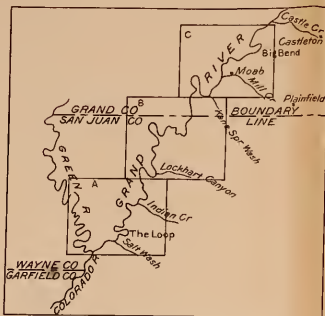


Contour interval on land 25 feet
Contour interval on river surface 5 feet
Datum is mean sea level
1916

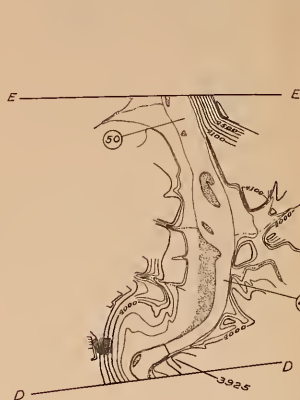
Subject to adjustment

152°
APPROXIMATE MEAN
DECLINATION 1912

5 SHEETS
(3 plans, 2 profiles)
House Doc. 64th Cong., 1st. Sess.



KEY MAP SHOWING LOCATION OF SHEETS

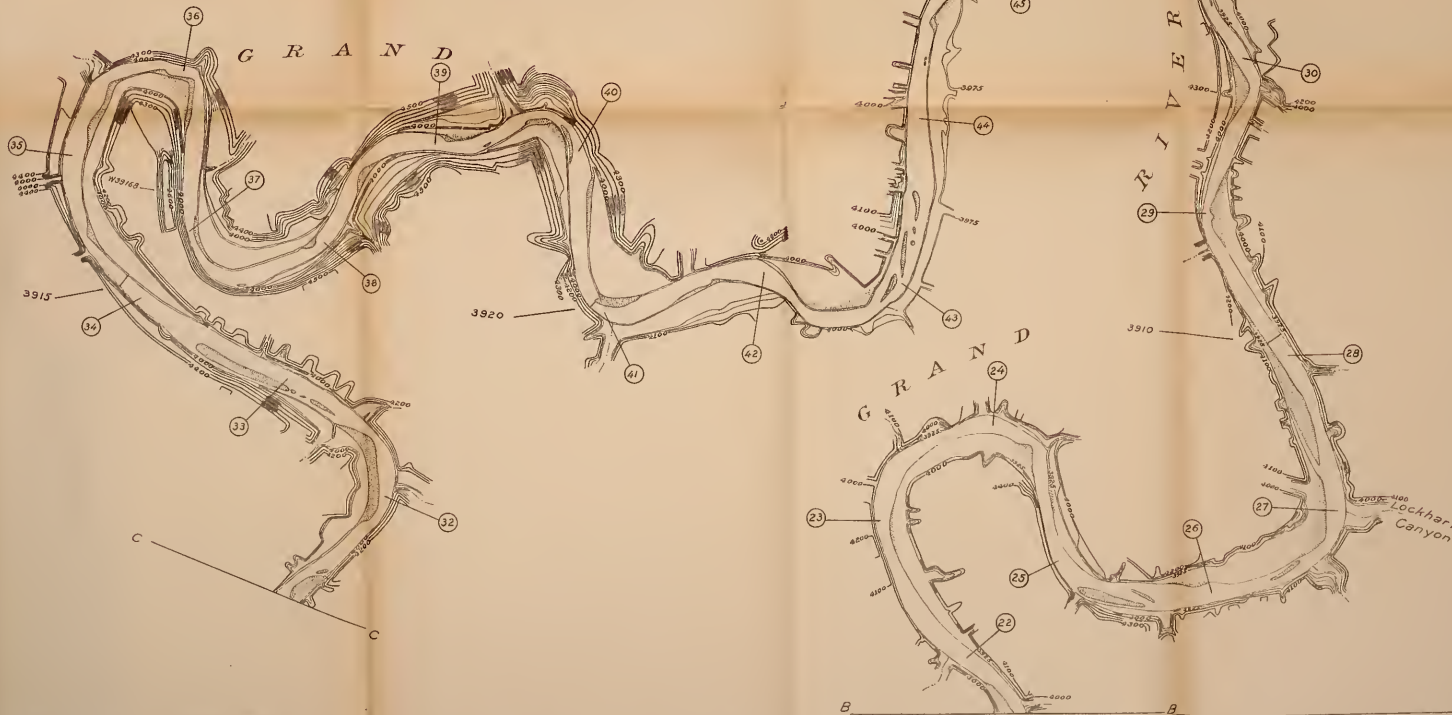


GRAND CO
SAN JUAN CO

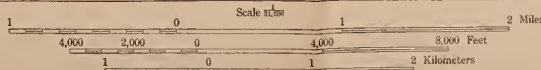
GRAND RIVER

GRAND RIVER

GRAND RIVER



R. B. Minshall, Chief Geographer
Sledge Tatum, Geographer in charge
Topography by R. C. Seitz
Surveyed in 1912



Contour interval on land 25 feet
Contour interval on river surface 5 feet
Datum is mean sea level
1916

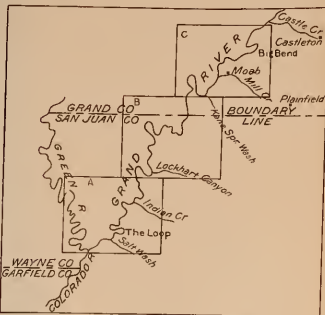
Subject to adjustment

153°
TRUE NORTH
MAGNETIC NORTH

House Doc. ; eath Cong., 1st. Sess.

5 SHEETS
(3 plan, 2 profiles)

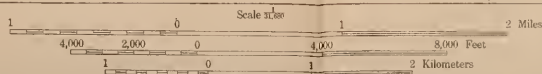
APPROXIMATE MEAN
DECLINATION 1916



KEY MAP SHOWING LOCATION OF SHEETS



R. B. Marshall, Chief Geographer
 Sledge Tatum, Geographer in charge
 Topography by R. C. Seitz
 Surveyed in 1912



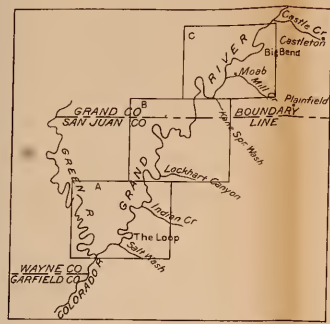
Contour interval on land 25 feet
 Contour interval on river surface 5 feet
 Datum is mean sea level
 1916

Subject to adjustment

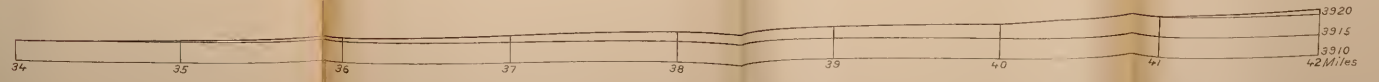
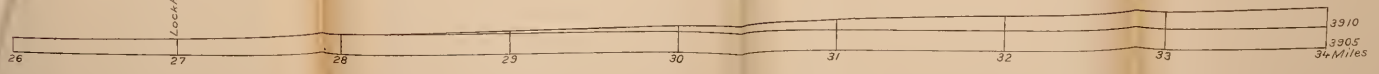
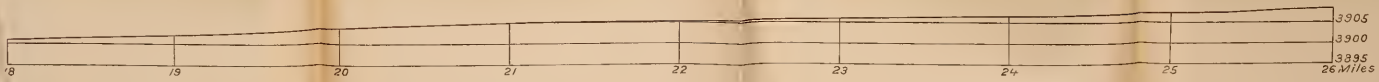
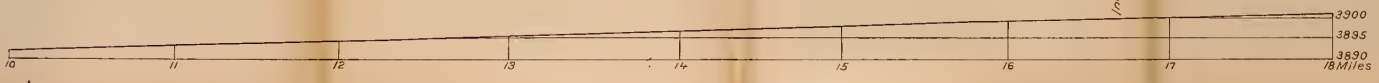
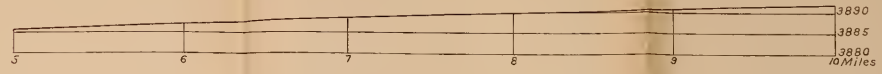
15'
 1" = 100'
 APPROXIMATE MEAN
 DECLINATION IN 1912

5 SHEETS
(3 plans, 2 profiles)

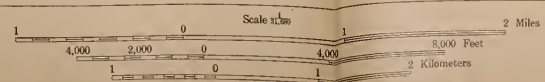
House Doc. : 64th Cong., 1st. Sess.



KEY MAP SHOWING LOCATION OF SHEETS



R. B. Marshall, Chief Geographer
Sledge Tatum, Geographer in charge
Topography by R. C. Seitz
Surveyed in 1912

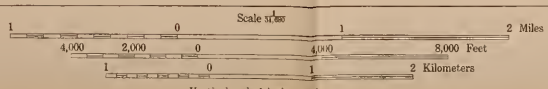
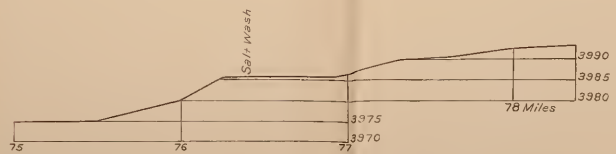
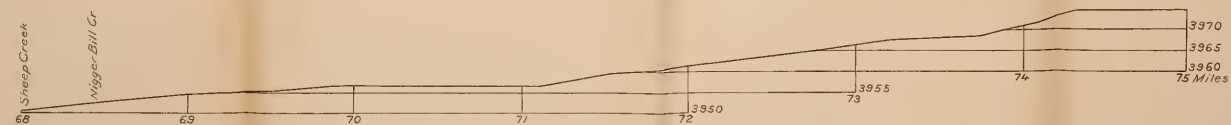
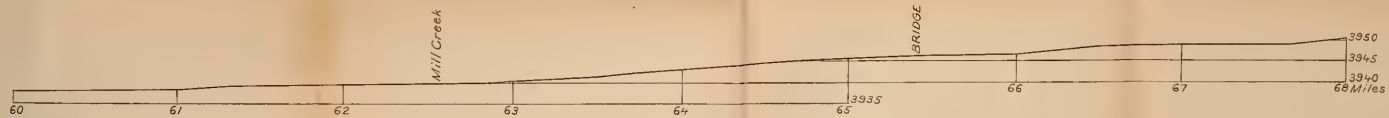
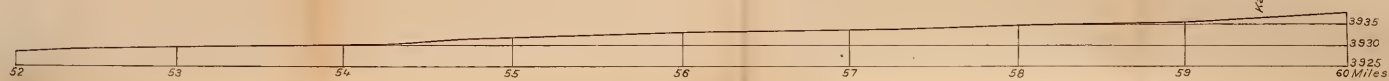
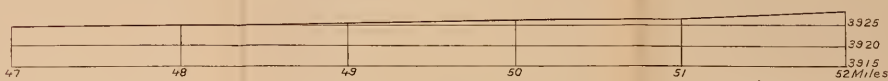
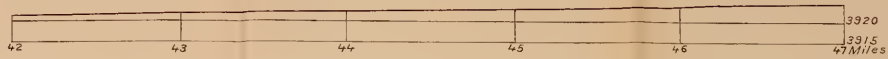
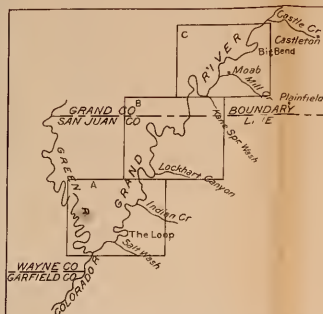


Vertical scale 1 inch = 20 feet
Datum is mean sea level
1916

Subject to adjustment

5 SHEETS
(3 plans, 2 profiles)





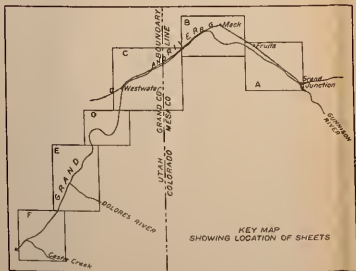
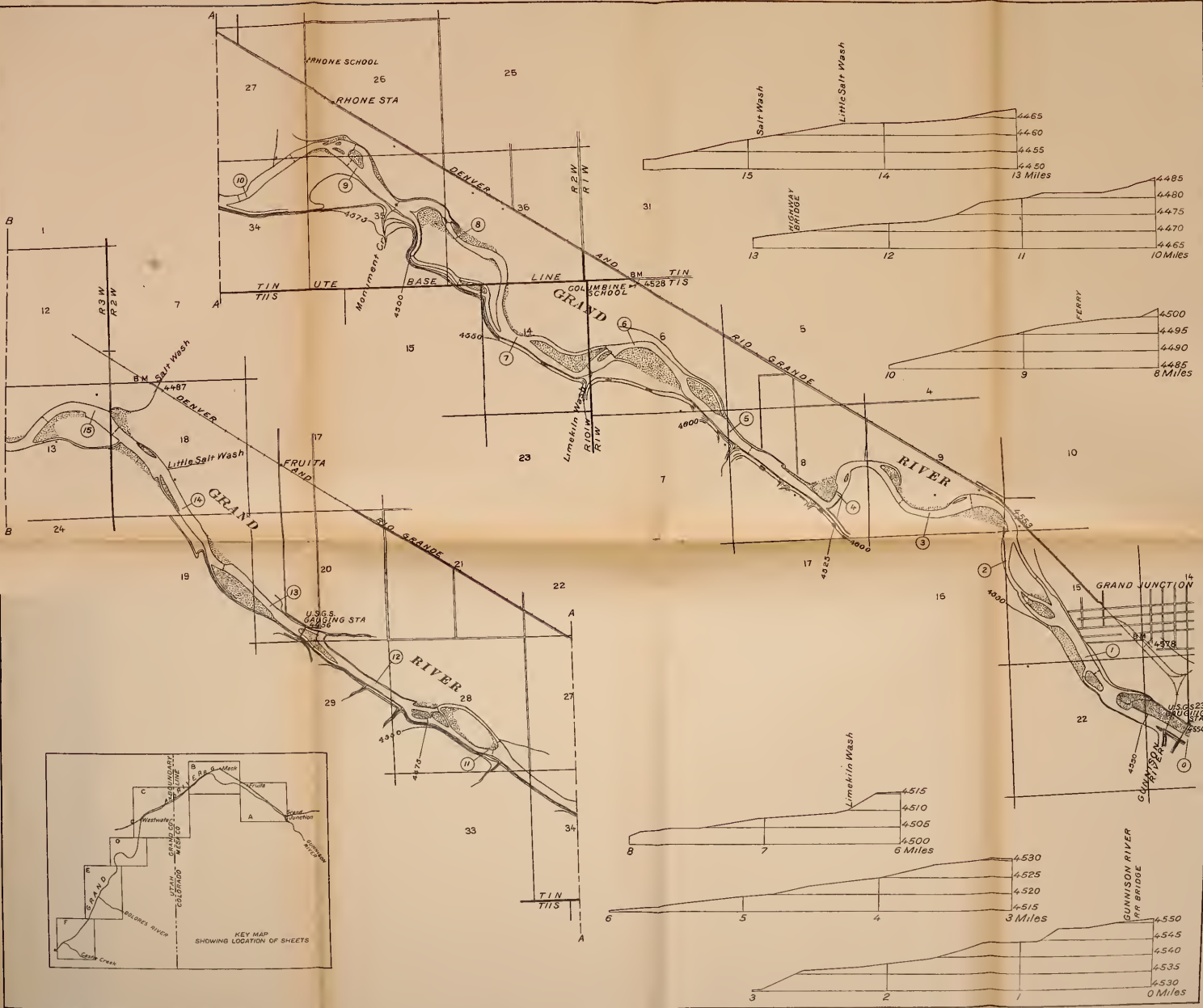
Subject to adjustment

5 SHEETS
 (3 plans, 2 profiles)

R. B. Marshall, Chief Geographer
 Sledge Talum, Geographer in charge
 Topography by R. C. Seitz
 Surveyed in 1911

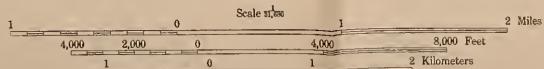


Very faint text or a caption at the bottom of the page, likely describing the illustration above. The text is illegible due to its low contrast and blurriness.



R. B. Marshall, Chief Geographer
 Sledge Tetum, Geographer in charge
 Topography by R. C. Setz
 Surveyed in 1911

APPROXIMATE MEAN
 DECLINATION 1911



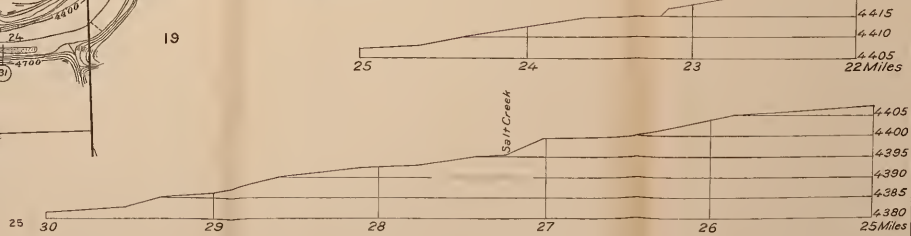
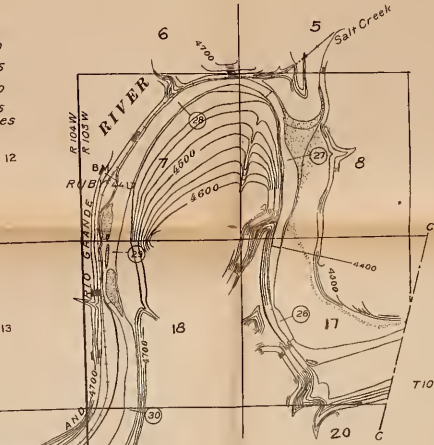
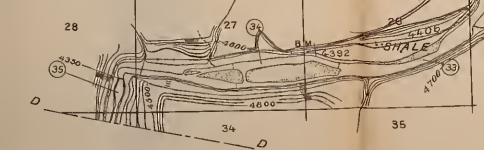
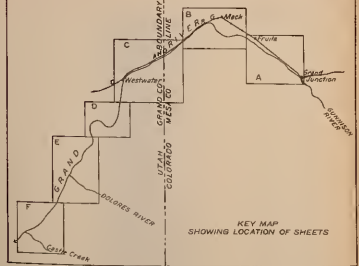
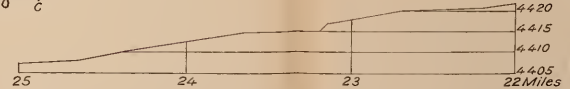
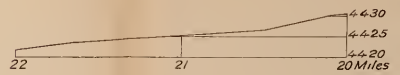
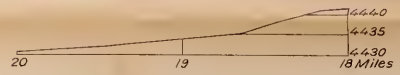
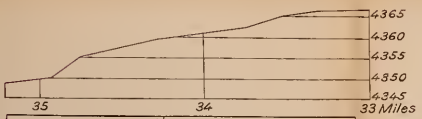
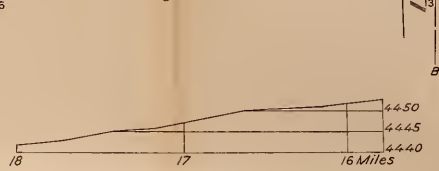
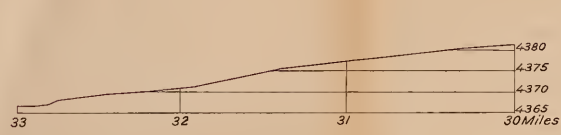
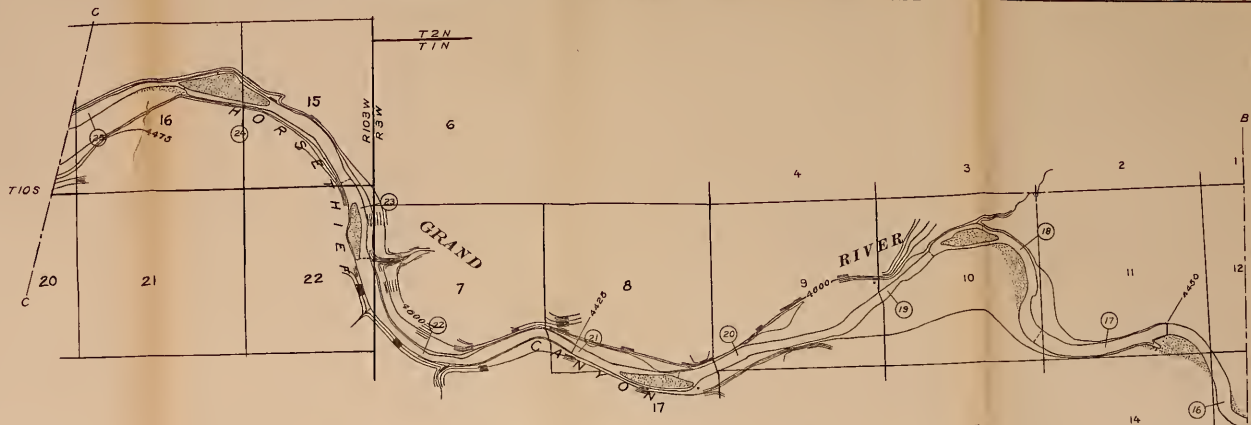
Vertical scale 1 inch = 20 feet
 Contour interval on land 25 feet
 Contour interval on river surface 5 feet
 Datum is mean sea level

DIAGRAM OF TOWNSHIP

| | | | | | |
|----|----|----|----|----|----|
| 12 | 13 | 14 | 15 | 16 | 17 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 18 | 17 | 16 | 15 | 14 |
| 20 | 19 | 18 | 17 | 16 | 15 |
| 21 | 20 | 19 | 18 | 17 | 16 |
| 22 | 21 | 20 | 19 | 18 | 17 |

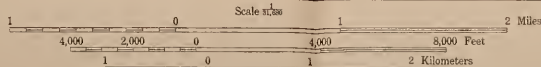
Subject to adjustment 6 SHEETS

House Doc. 64th Cong., 2d Sess.



R. B. Marshall, Chief Geographer
Sledge Tatum, Geographer in charge
Topography by R. C. Seitz
Surveyed in 1911

APPROXIMATE MEAN
DECLINATION 1911



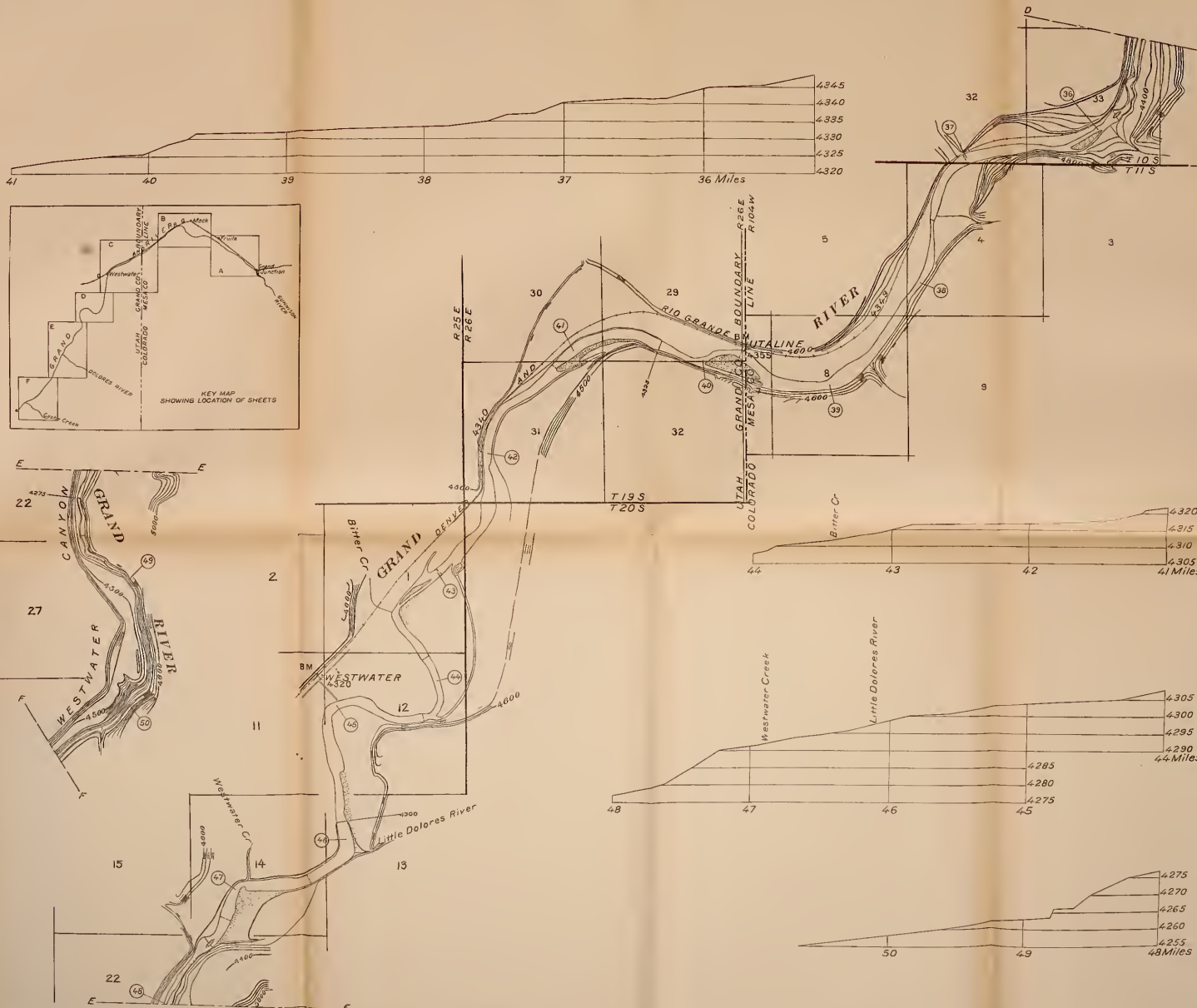
Vertical scale 1 inch = 20 feet
Contour interval on land 25 feet
Contour interval on river surface 5 feet
Datum is mean sea level
1916

DIAGRAM OF TYPING

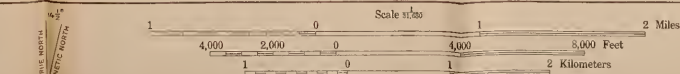
| | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 |
| 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 |
| 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |

Subject to adjustment 6 SHEETS

House Doc. 64th Cong., 2d Sess.



R. B. Marshall, Chief Geographer
 Sledge Tatum, Geographer in charge
 Topography by R. C. Seitz
 Surveyed in 1911



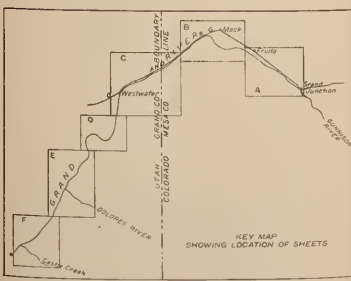
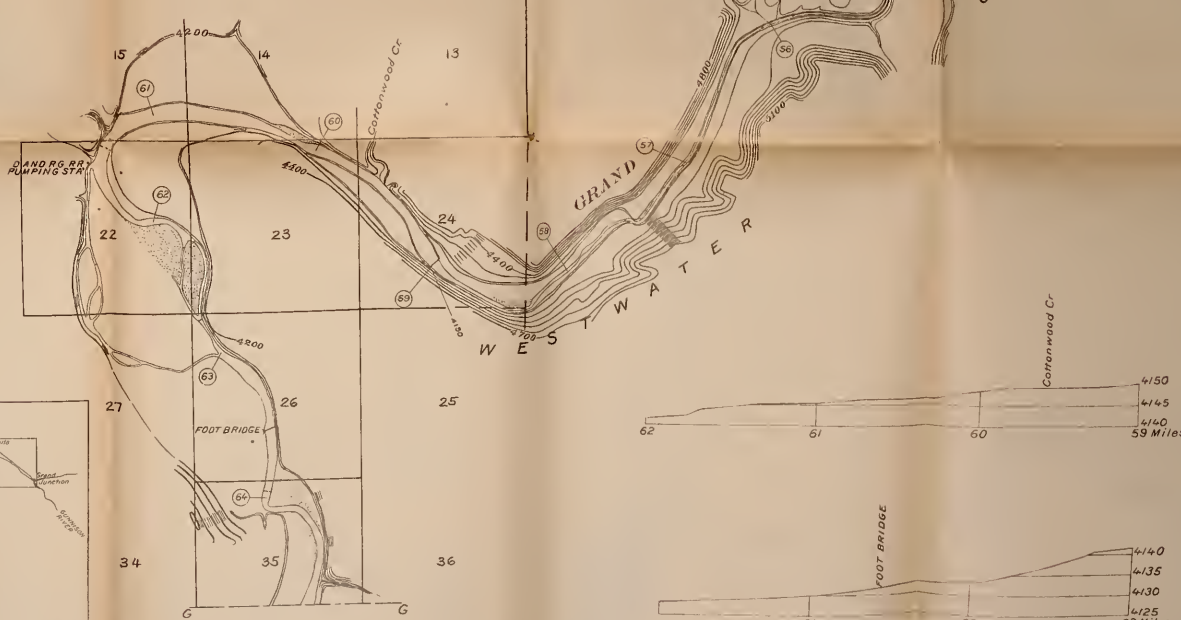
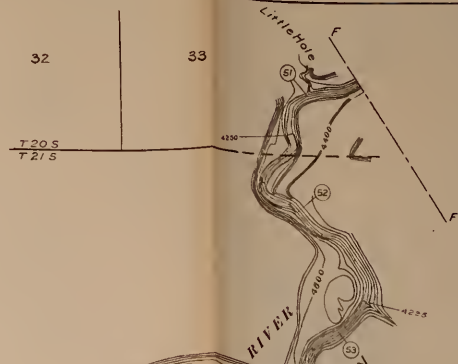
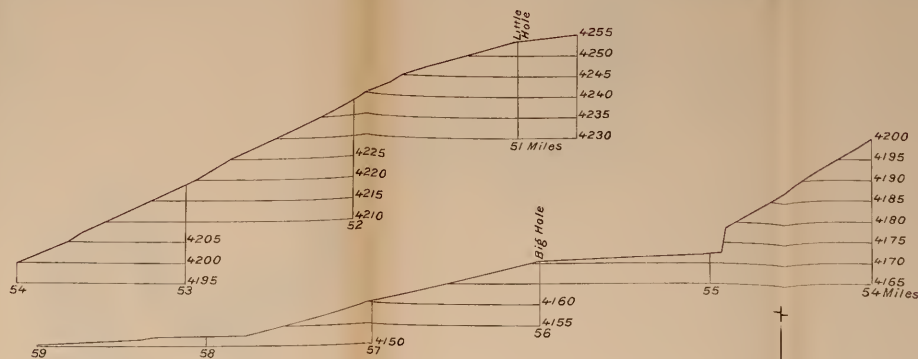
Vertical scale 1 inch = 20 feet
 Contour interval on land 25 feet
 Contour interval on river surface 5 feet
 Datum is mean sea level
 1916

DIAGRAM OF TOWNSHIP

| | | | |
|----|----|----|----|
| 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | 32 |
| 33 | 34 | 35 | 36 |

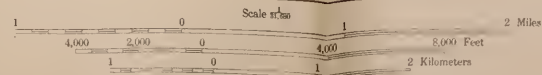
Subject to adjustment 6 SHEETS

House Doc. 64th Cong., 2d Sess.



R. B. Marshall, Chief Geographer
Sledge Tatum, Geographer in charge
Topography by R. C. Seitz
Surveyed in 1911

APPROXIMATE MEAN
DECLINATION 1911



Vertical scale 1 inch = 20 feet
Contour interval on land 25 feet
Contour interval on river surface 5 feet
(datum: 100 feet sea level)
1916

LIST OF CORRECTIONS

| | |
|----|-----|
| 1 | 0.1 |
| 2 | 0.1 |
| 3 | 0.1 |
| 4 | 0.1 |
| 5 | 0.1 |
| 6 | 0.1 |
| 7 | 0.1 |
| 8 | 0.1 |
| 9 | 0.1 |
| 10 | 0.1 |
| 11 | 0.1 |
| 12 | 0.1 |
| 13 | 0.1 |
| 14 | 0.1 |
| 15 | 0.1 |
| 16 | 0.1 |
| 17 | 0.1 |
| 18 | 0.1 |
| 19 | 0.1 |
| 20 | 0.1 |
| 21 | 0.1 |
| 22 | 0.1 |
| 23 | 0.1 |
| 24 | 0.1 |
| 25 | 0.1 |
| 26 | 0.1 |
| 27 | 0.1 |
| 28 | 0.1 |
| 29 | 0.1 |
| 30 | 0.1 |
| 31 | 0.1 |
| 32 | 0.1 |
| 33 | 0.1 |
| 34 | 0.1 |
| 35 | 0.1 |
| 36 | 0.1 |

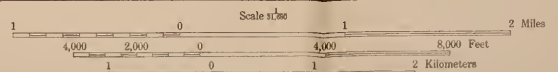
Subject to adjustment 6 SHEETS

House Doc. 84th Cong., 2d Sess.



R. B. Marshall, Chief Geographer
 Sledge Tatum, Geographer in charge
 Topography by R. C. Seitz
 Surveyed in 1911

153
 TRUE NORTH
 MAGNETIC NORTH
 APPROXIMATE MEAN
 DECLINATION 1911



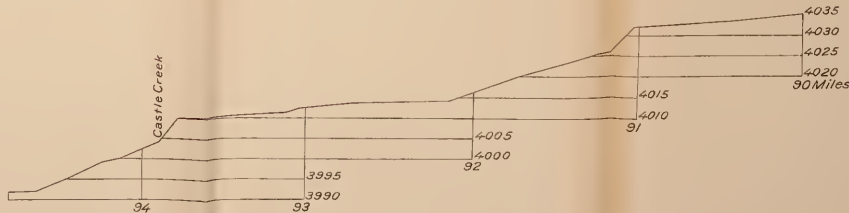
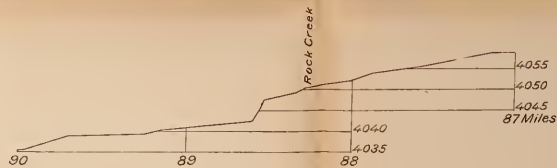
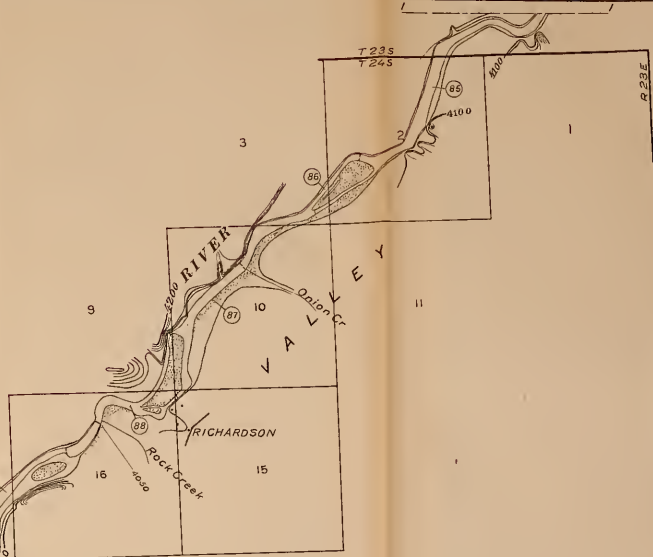
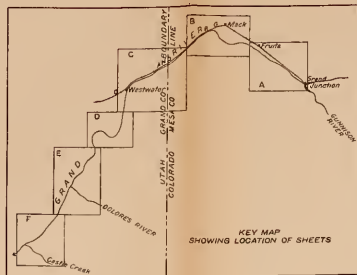
Vertical scale 1 inch = 20 feet
 Contour interval on land 25 feet
 Contour interval on river surface 5 feet
 Datum is mean sea level
 1916

DIAGRAM OF TOWNSHIP

| | | | |
|----|----|----|----|
| 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | 32 |
| 33 | 34 | 35 | 36 |

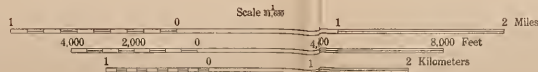
Subject to adjustment 6 SHEETS

House Dep. 64th Cong., 2d Sess.



R. B. Marshall, Chief Geographer
 Sledge Tatum, Geographer in charge
 Topography by R. C. Seitz
 Surveyed in 1911

TRUE NORTH
 1916
 MAGNETIC NORTH



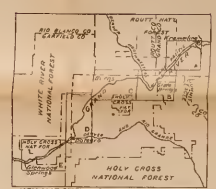
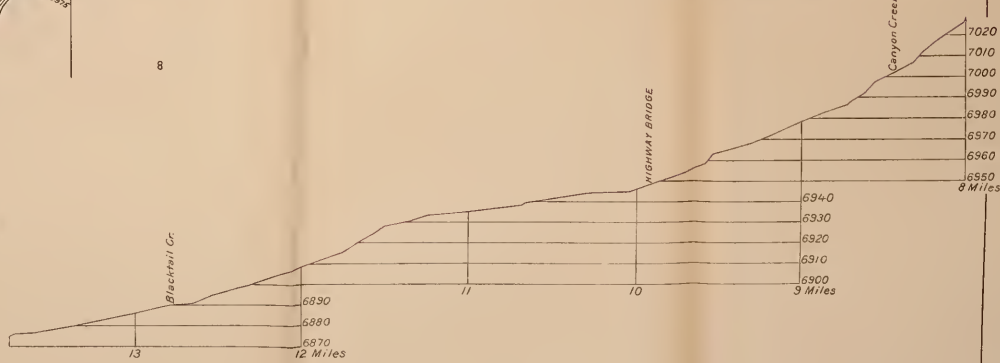
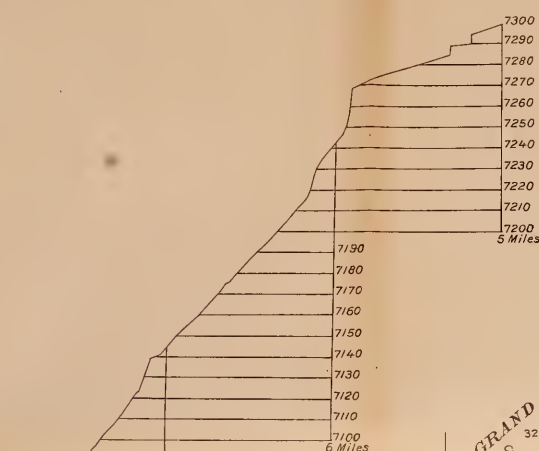
Vertical scale 1 inch = 20 feet
 Contour interval on land 25 feet
 Contour interval on river surface 1 foot
 Datum is mean sea level
 1916

DIAGRAM OF TOWNSHIP

| | | | | | |
|----|----|----|----|----|----|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 17 | 6 | 5 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 20 | 23 | 24 | 25 | 26 | 27 |
| 21 | 22 | 23 | 24 | 25 | 26 |

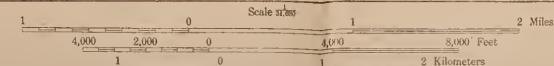
Subject to adjustment 6 SHEETS

House Doc. 64th Cong., 2d Sess.



R. B. Marshall, Chief Geographer
 Sledge Takum, Geographer in charge
 Topography by R. C. Seitz
 Surveyed in 1911

132°
 TRUE NORTH
 12
 MAGNETIC NORTH
 APPROXIMATE MERRILL DECLINATION 1911

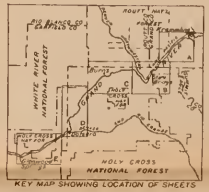


Vertical scale 1 inch = 40 feet
 Contour interval on land 25 feet
 Contour interval on river surface 5 feet
 Datum is mean sea level
 1916

DIAGRAM OF TONNAGE

| | | |
|----|----|----|
| 5 | 5 | 1 |
| 3 | 9 | 1 |
| 18 | 9 | 10 |
| 18 | 10 | 2 |
| 26 | 10 | 10 |
| 26 | 10 | 10 |
| 26 | 10 | 10 |

Subject to adjustment
 5 SHEETS
 House Doc. 64th Cong., 1st Sess.



R. B. Marshall, Chief Geographer
Sledge Tatum, Geographer in charge
Topography by R. C. Seitz
Surveyed in 1911

132°
TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN
DECLINATION 1911

Scale miles 0 1 2 Miles
4,000 2,000 0 4,000 8,000 Feet
1 0 1 2 Kilometers

Vertical scale 1 inch = 40 feet
Contour interval on land 25 feet
Contour interval on river surface 5 feet
Datum is mean sea level
1916

DIAGRAM OF WORK
10 10 10
7 0 0 1
10 10 10 10 10
10 10 10 10 10
10 10 10 10 10
10 10 10 10 10

Subject to adjustment 5 SHEETS

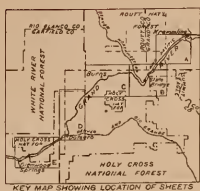
House Doc., 64th Cong., 1st. Sess

PLAN AND PROFILE OF
GRAND RIVER
 KREMMLING TO GLENWOOD SPRINGS, COLORADO

SHEET D

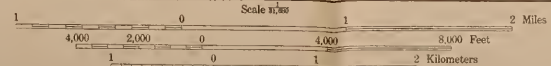
WATER-SUPPLY PAPER 396 PLATE XXXVI

U. S. GEOLOGICAL SURVEY



R. B. Marshall, Chief Geographer
 Sledge Tatum, Geographer in charge
 Topography by R. C. Sirtz
 Surveyed in 1912

132°
 TRUE NORTH
 MAGNETIC NORTH
 APPROXIMATE MAGNETIC DECLINATION IN 1912



Vertical scale 1 inch = 40 feet
 Contour interval on land 25 feet
 Contour interval on river surface 5 feet
 Datum is mean sea level
 1915

DIAGRAM OF TYPING

| | | | | | |
|----|----|----|----|----|----|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 |

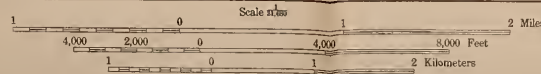
Subject to adjustment 5 SHEETS

House Doc. , 64th Cong., 1st Sess.



R. B. Marshall, Chief Geographer
Sledge Tatam, Geographer in charge
Topography by R. C. Seitz
Surveyed in 1911

133°
TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN
DECLINATION 1911



Vertical scale 1 inch = 40 feet
Contour interval on land 25 feet
Contour interval on river surface 5 feet
Datum is mean sea level
1916

DIAGRAM OF TOWNSHIP

| | | | |
|----|----|----|----|
| 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | 32 |
| 33 | 34 | 35 | 36 |

Subject to adjustment 5 SHEETS

RECONNAISSANCE
PLAN AND PROFILE OF
GUNNISON RIVER
CIMARRON CREEK TO GUNNISON, COLORADO

U. S. GEOLOGICAL SURVEY

SHEET A

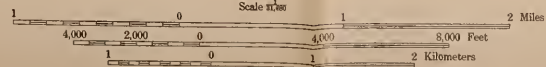
WATER-SUPPLY PAPER 396 PLATE XXXVIII



R. B. Marshall, Chief Geographer
E. C. Bernard, Geographer in charge
Topography by Stanley Hargan,
based on General Land Office plats
Surveyed in 1909

DIAGRAM OF TOWNSHIP

| | | | | |
|---|----|----|----|----|
| 8 | 5 | 2 | 2 | 1 |
| 7 | 6 | 10 | 11 | 7 |
| 6 | 10 | 15 | 14 | 10 |
| 5 | 12 | 17 | 16 | 13 |
| 4 | 12 | 17 | 16 | 13 |
| 3 | 12 | 17 | 16 | 13 |
| 2 | 12 | 17 | 16 | 13 |
| 1 | 12 | 17 | 16 | 13 |



Vertical scale 1 inch = 40 feet
Datum to mean sea level
1918

TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN
DECLINATION 1909

Subject to adjustment 3 SHEETS

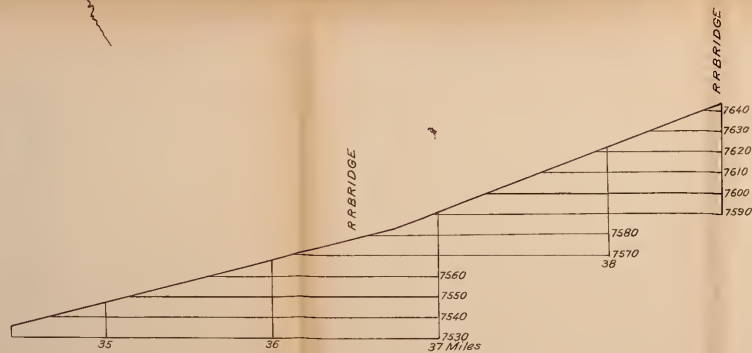
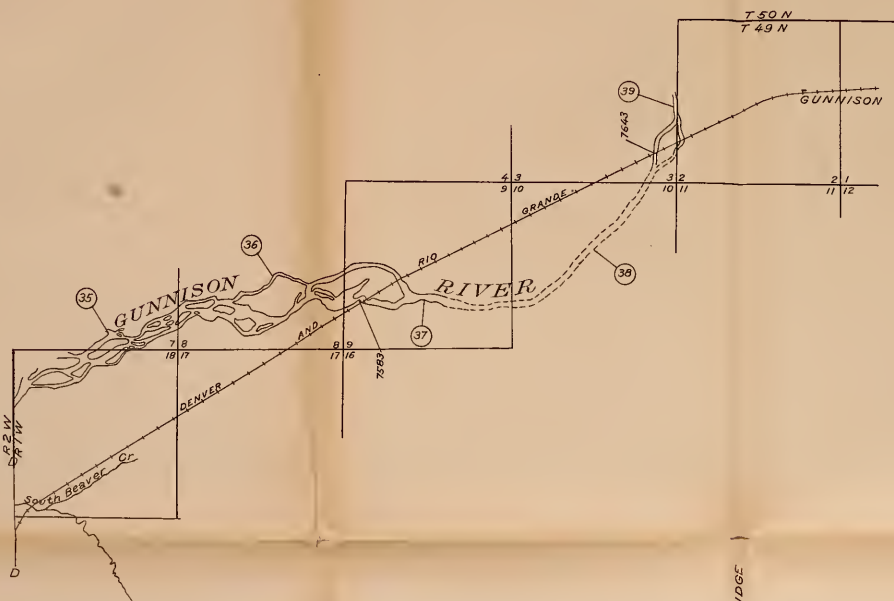
House Doc. : 66th Cong., 1st. Sess.

RECONNAISSANCE
 PLAN AND PROFILE OF
 GUNNISON RIVER
 CIMARRON CREEK TO GUNNISON, COLORADO

SHEET C

WATER-SUPPLY PAPER 396 PLATE XL

U. S. GEOLOGICAL SURVEY



R B Marshall, Chief Geographer
 E C Barnard, Geographer in charge
 Topography by Stanley Hagen,
 based on General Land Office plats
 Surveyed in 1909

DIAGRAM OF TOWNSHIP

| | | | | | |
|----|----|----|----|----|----|
| 8 | 5 | 4 | 3 | 2 | |
| 1 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 26 | 25 | 24 | 23 | 22 | 21 |
| 34 | 33 | 32 | 31 | 30 | 29 |

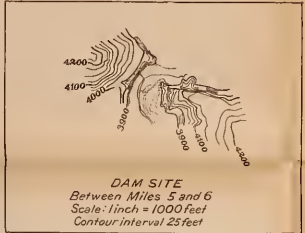


APPROXIMATE MEAN
 DECLINATION 1909

Subject to adjustment

3 SHEETS

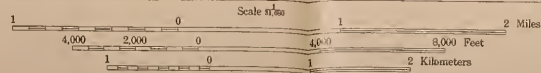
House Doc. 64th Cong., 2d Sess.



R. B. Marshall, Chief Geographer
Sledge T-stum, Geographer in charge
Topography by R. C. Seitz and C. R. Fisher
Surveyed in 1915

DIAGRAM OF TOWNSHIP

| | | | | | | |
|----|----|----|----|----|----|----|
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |



Contour interval on land 25 feet
Contour interval on river surface 5 feet
Datum is mean sea level

1916

TRUE NORTH
10°
MAGNETIC NORTH

APPROXIMATE MEAN
DECLINATION 1915

Subject to adjustment

3 SHEETS
(2 plans, 1 profile)

House Doc : 64th Cong., 1st. Sess

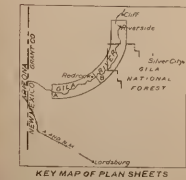
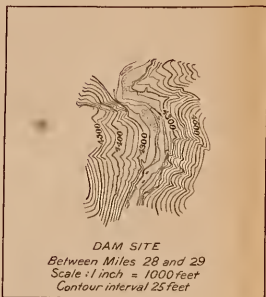
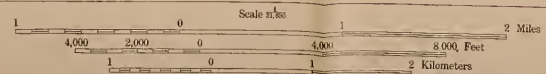


DIAGRAM OF TOWERS

| | | | | |
|----|----|----|----|----|
| 16 | 9 | 4 | 2 | 1 |
| 3 | 8 | 10 | 11 | 2 |
| 8 | 17 | 16 | 15 | 14 |
| 2 | 22 | 21 | 20 | 19 |
| 30 | 29 | 28 | 27 | 26 |
| 21 | 33 | 32 | 31 | 30 |

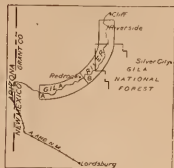


Contour interval on land 25 feet
Contour interval on river surface 5 feet
Datum is mean sea level

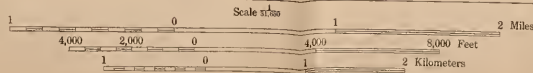


Subject to adjustment
3 SHEETS
(2 plans, 1 profile)
House Doc. : 64th Cong., 1st. Sess.

R. B. Marshall, Chief Geographer
St. George Tatum, Geographer in charge
Topography by R. C. Seitz and C. R. Fisher
Surveyed in 1915



R. B. Marshall, Chief Geographer
Sledge Tatum, Geographer in charge
Topography by R. C. Seitz and C. R. Fisher
Surveyed in 1915



Subject to adjustment

3 SHEETS
(2 plans, 1 profile)



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