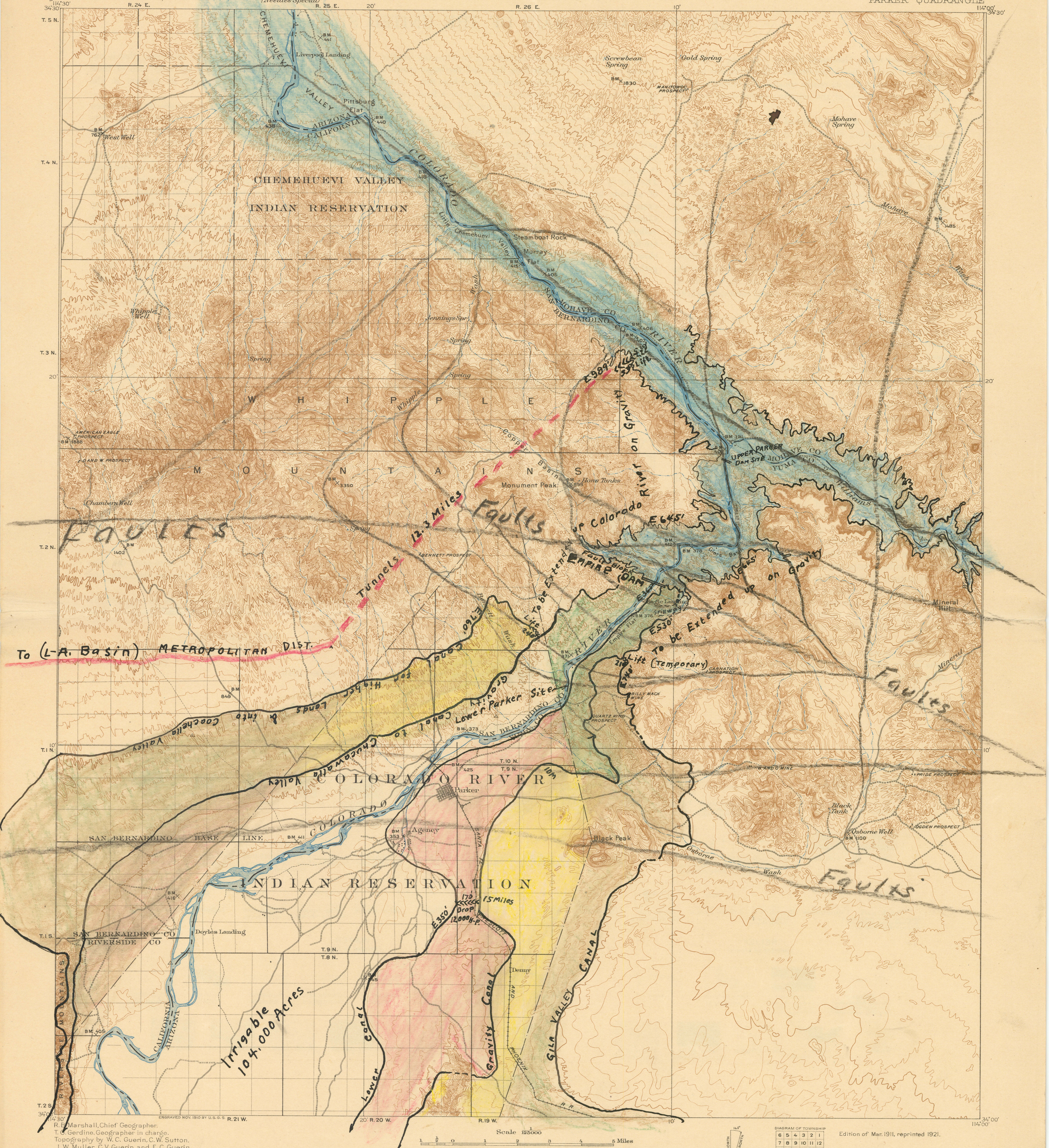
DEPARTMENT OF THE INTERIOR
ALBERT B. FALL, SECRETARY
U.S. GEOLOGICAL SURVEY
GEORGE OTIS SMITH, DIRECTOR

TOPOGRAPHY

ARIZONA - CALIFORNIA
PARKER QUADRANGLE


(Needles Special)
114°30'
34°30'
R. 24 E.
R. 25 E.
R. 26 E.
20'
10'
114°00'
T. 5 N.
T. 4 N.
T. 3 N.
T. 2 N.
T. 1 N.
T. 1 S.
T. 2 S.
Liverpool Landing
CHEMEHUEVI VALLEY
Pittsburg Flat
ARIZONA
CALIFORNIA
West Well
COLORADO
CHEMEHUEVI VALLEY
INDIAN RESERVATION
Little Chemehuevi Valley
Steamboat Rock
Murray Flat
Screwbean Spring
Gold Spring
MANITOWOC PROSPECT
Mohave Spring
Mohave Wash
Whipple Well
Jennings Spr
Spring
WHIPPLE
MOUNTAINS
Whipple
Copper Basin
AMERICAN EAGLE PROSPECT
D AND W PROSPECT
Chambers Well
Monument Peak
Hons Tanks
BENNETT PROSPECT
Bennett Wash
MOHAVE CO
SAN BERNARDINO CO
RIVER
UPPER PARKER DAM SITE
MOHAVE CO
YUMA CO
Williams
Giers Basin
Eagle Landing
Spillway
Empire Flat
CARNATION PROSPECT
BILLY MACK MINE
QUARTZ KING PROSPECT
Mineral Hill
Mineral
W AND O MINE
PRIDE PROSPECT
Black Tank
Osborne Well
OGDEN PROSPECT
Osborne Wash
Black Peak
COLORADO RIVER
INDIAN RESERVATION
Parker
Agency
SAN BERNARDINO BASE LINE
SAN BERNARDINO CO
RIVERSIDE CO
Doyles Landing
RIVERSIDE MOUNTAINS
CALIFORNIA
ARIZONA
SANTA FE
PRESCOTT AND PHOENIX R.R.
Denny
T.10 N.
T.9 N.
T.8 N.
R.21 W.
R.20 W.
R.19 W.
34°00'
Faults
Faults
Faults
Faults
To (L-A. Basin) METROPOLITAN DIST.
Tunnels 12.3 Miles
E.989'
Lift
To be Extended up Colorado River on Gravity
E645'
EMPIRE (DAM
E.530'
To be Extended up on Gravity
Lift (Temporary)
Canal for Higher Lands & into Coachella Valley
E760'
Lift 240'
Gravity Canal to Chucawalla Valley
Lower Parker Site
10M
170 15 Miles
Drop 12000 H-P.
E350'
Irrigable 104,000 Acres
Lower Canal
Gravity Canal
GILA VALLEY CANAL
ENGRAVED NOV. 1910 BY U.S.G.S.

R. B. Marshall, Chief Geographer.
T. G. Gerdine, Geographer in charge.
Topography by W. C. Guerin, C. W. Sutton, J. W. Muller, C. V. Guerin, and E. C. Guerin.
Colorado River Valley from Surveys by A. I. Oliver, A. P. Meade, J. G. Hefty, and H. T. Paterson.
Control by R. B. Robertson.
Surveyed in 1902-1903 and 1909.

Scale $\frac{1}{125000}$

1 ½ 0 1 2 3 4 5 Miles

1 ½ 0 1 2 3 4 5 Kilometers

Contour interval 50 feet.
Datum is mean sea level.

TRUE NORTH
MAGNETIC NORTH
14½°
APPROXIMATE MEAN DECLINATION 1909.

DIAGRAM OF TOWNSHIP

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

Edition of Mar. 1911, reprinted 1921.

Thomas (Elmer) Collection

THE TOPOGRAPHIC MAPS OF THE UNITED STATES

The United States Geological Survey is making a standard topographic atlas of the United States. This work has been in progress since 1882, and its results consist of published maps of more than 40 per cent of the country, exclusive of outlying possessions.

This topographic atlas is published in the form of maps or atlas sheets measuring about 16½ by 20 inches. Under the general plan adopted the country is divided into quadrangles bounded by parallels of latitude and meridians of longitude. These quadrangles are mapped on different scales, the scale selected for any quadrangle depending on its nature and its probable future development, and consequently though the standard atlas sheets are of nearly uniform size they represent areas of different sizes. On the lower margin of each sheet are printed graphic scales showing distances in feet, meters, and miles. In addition, the scale of the map is shown by a representative fraction expressing a fixed ratio between linear measurements on the map and corresponding distances on the ground. For example, the scale $\frac{1}{62,500}$ means that 1 unit on the map (such as 1 inch, 1 foot, or 1 meter) represents 62,500 similar units on the earth's surface.

The standard scales used on these maps are multiples of the fraction $\frac{1}{1,000,000}$. Quadrangles in thickly settled or industrially important regions are mapped on a scale of $\frac{1}{62,500}$, or about 1 mile to an inch, and cover areas measuring 15′ in latitude and longitude. Quadrangles in less thickly settled or industrially less important districts are mapped on a scale of $\frac{1}{125,000}$, or about 2 miles to an inch, and cover areas measuring 30′ in latitude and longitude. Reconnaissance maps of desert or sparsely inhabited regions have been made on a scale of $\frac{1}{250,000}$, or about 4 miles to an inch, covering areas measuring 1° in latitude and longitude. Maps for special purposes are made on scales larger than $\frac{1}{62,500}$.

A topographic survey of Alaska has been in progress since 1898, and nearly 35 per cent of its area has now been mapped. About 10 per cent of the Territory has been covered by reconnaissance maps on a scale of $\frac{1}{625,000}$, or about 10 miles to an inch. Most of the remaining area surveyed in Alaska has been mapped on a scale of $\frac{1}{250,000}$, but about 3,500 square miles has been mapped on a scale of $\frac{1}{62,500}$.

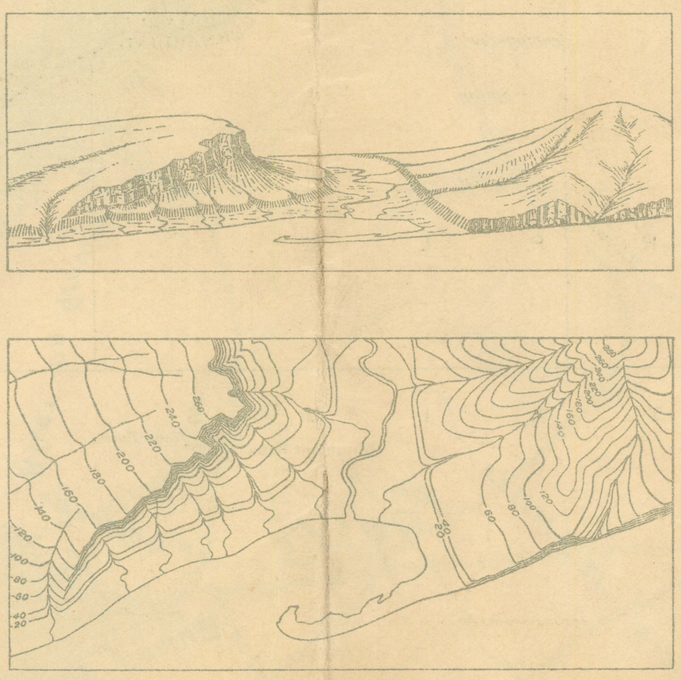
A large part of the Hawaiian Islands has been surveyed, and the resulting maps are published on a scale of $\frac{1}{62,500}$.

The features shown on these maps may be arranged in three groups—(1) water, including seas, lakes, rivers, canals, swamps, and other bodies of water; (2) relief, including mountains, hills, valleys, and other features of the land surface; (3) culture (works of man), such as towns, cities, roads, railroads, and boundaries. The conventional signs used to represent these features are shown and explained below. Variations appear on some earlier maps, and additional features are represented on some special maps.

All the water features are represented in blue, the smaller streams and canals by single blue lines and the larger streams, the lakes, and the sea by blue water lining or blue tint. Intermittent streams—those whose beds are dry for a large part of the year—are shown by lines of blue dots and dashes.

Relief is shown by contour lines in brown. A contour line represents an imaginary line on the ground (a contour) every part of which is at the same altitude above sea level. Such a line could be drawn at any altitude, but in mapping only the contours at certain regular intervals of altitude are shown. The line of the seacoast itself is a contour, the datum or zero of altitude being mean sea level. The 20-foot contour, for example, would be the shore line if the sea should rise 20 feet. Contour lines show the shapes of the hills, mountains, and valleys, as well as their altitudes. Successive contour lines that are far apart on the map indicate a gentle slope; lines that are close together indicate a steep slope; and lines that run together indicate a cliff.

The manner in which contour lines express altitude, form, and grade is shown in the figure below.



The sketch represents a river valley that lies between two hills. In the foreground is the sea, with a bay that is partly inclosed by a hooked sand bar. On each side of the valley is a terrace into which small streams have cut narrow gullies. The hill on the right has a rounded summit and gently sloping spurs separated by ravines. The spurs are truncated at their lower ends by a sea cliff. The hill at the left terminates abruptly at the valley in a steep scarp, from which it slopes gradually away and forms an inclined table-land that is traversed by a few shallow gullies. On the map each of these features is represented, directly beneath its position in the sketch, by contour lines.

The contour interval, or the vertical distance in feet between one contour and the next, is stated at the bottom of each map. This interval differs according to the topography of the area mapped; in a flat country it may be as small as 1 foot; in a mountainous region it may be as great as 250 feet. Certain contour lines, every fourth or fifth one, are made heavier than the others and are accompanied by figures showing altitude. The heights of many points—such as road corners, summits, surfaces of lakes, and bench marks—are also given on the map in figures, which show altitudes to the nearest foot only. More exact altitudes—those of bench marks—as well as the geodetic coordinates of triangulation stations, are published in bulletins that are issued free by the Geological Survey.

The lettering and works of man are shown in black. Boundaries, such as those of a State, county, city, land grant, township, or reservation, are shown by continuous or broken lines of different kinds and weights. Metaled roads are shown by double lines, one of which is accentuated. Other public roads are shown by fine double lines, private and poor roads by dashed double lines, trails by dashed single lines.

Each quadrangle is designated by the name of the principal city, town, or natural feature within it, and on the margins of the map are printed the names of adjoining quadrangles of which maps have been published. Over 2,800 quadrangles in the United States have been surveyed, and maps of them similar to the one on the other side of this sheet have been published.

The topographic map is the base on which the geology and mineral resources of a quadrangle are represented, and the maps showing these features are bound together with a descriptive text to form a folio of the Geologic Atlas of the United States.

Index maps of each State showing the topographic maps and geologic folios published by the United States Geological Survey may be obtained free. Copies of the topographic maps may be obtained for 10 cents each, or in lots of 50 or more, either of the same or of different quadrangles, for 6 cents each. The geologic folios are sold for 25 cents or more each, the price depending on the size of the folio. A circular describing the folios will be sent on request.

Applications for maps or folios should be accompanied by cash, draft, or money order (not postage stamps) and should be addressed to

THE DIRECTOR,
United States Geological Survey,
Washington, D. C.

November, 1919.

CONVENTIONAL SIGNS

CULTURE
(printed in black)

City or village
Roads and buildings
Ruins
Cliff dwelling
Metaled road *(distinguished on recent maps only)*
Private or poor road
Trail or path
Railroads and stations
Electric railroad
Tunnel
Wharves
Breakwater and jetties
Bridges
Drawbridges
Ferry *(point upstream)*
Ford
Dam
Dam with lock
Canal lock *(point upstream)*
U.S. township and section lines and located corners
State line
County line
Civil township or district line
Reservation line
Land grant line
City, village, or borough line
Small park or cemetery line
Triangulation or primary traverse monument
U.S. mineral monument
Boundary monument
Bench mark *(Temporary bench mark shown by brown cross and black figures without lettering)*
Cemeteries
Church, School *(distinguished on recent maps)*
Coke ovens
Tanks and oil reservoirs
Oil wells
Mine or quarry
Prospect
Shaft
Mine tunnel
Mine tunnel *(showing direction)*
Lighthouse or beacon
Lightship
Life-saving station

RELIEF
(printed in brown)

Figures *(showing height above mean sea level instrumentally determined)*
Contours *(Contours showing depth of water printed in blue)*
Depression contours
Levee
Wash
Cliffs *(or shown by contours)*
Mine dumps
Tailings or mining debris
Sand and sand dunes

WATER
(printed in blue)

Streams
Falls and rapids
Intermittent streams and ditches
Canals or ditches
Aqueducts or waterpipes
Aqueduct tunnels
Lake or pond
Unsurveyed stream and abandoned canal
Intermittent lake
Glacier *(Or shown by contours printed in blue)*
Spring
Well
Salt marsh
Fresh marsh
Grassy pond
Tidal flats

WOODS
(when shown, printed in green)