

TONOPAH AND TIDEWATER RAILROAD AND ASSOCIATED MINING AREAS

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Table of Contents

INTRODUCTION.....	1
HISTORY.....	1
LUDLOW TO DEATH VALLEY JUNCTION.....	7
DEATH VALLEY JUNCTION TO THE LILA C MINE	33
LILA C. JUNCTION TO RYAN (DEATH VALLEY RAILROAD)	39
DEATH VALLEY JUNCTION TO BEATTY	45
Beatty to Goldfield	53
Beatty to Rhyolite.....	53
REFERENCES.....	56

INTRODUCTION

This report is part of a research project that describes the relationships between mines and railroads in the Mojave Desert and southwestern Great Basin. The collection can be accessed at <http://www.greggwilkerson.com/railroads.html>

HISTORY

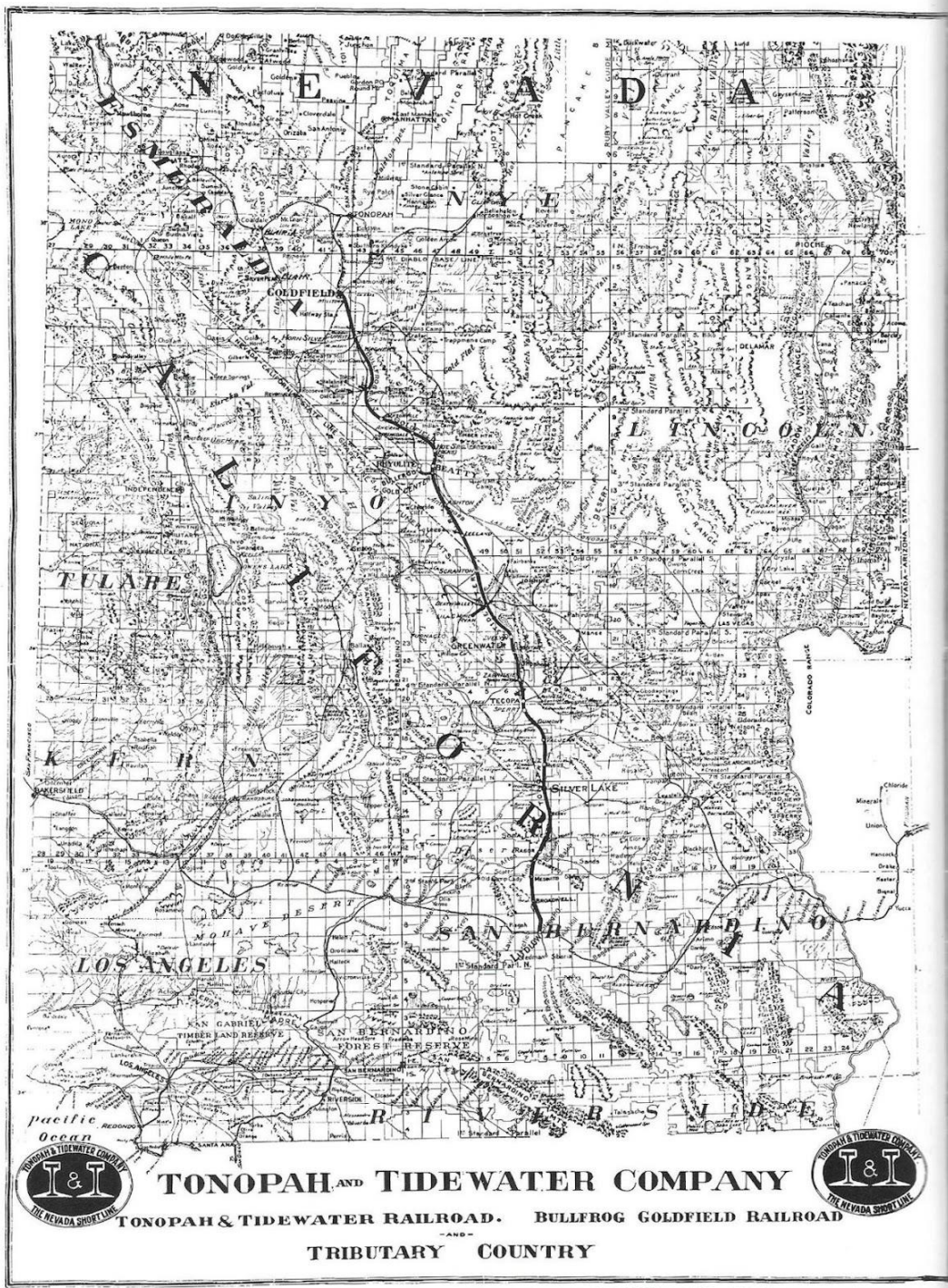
The Tonopah and Tidewater was built to connect Ludlow on the A&P line to the Lila C mine near Death Valley Junction. After reaching Death Valley Junction, the T&T was extended to Rhyolite in the Bullfrog Mining District (Chappell, 2005, p. 46; Myrick, 1963, 545-597).

The T&T was a main line connection for the China Ranch, Tecopa, Gerstley, Lila C., Ash Meadows, Carrera, and Bullfrog and Goldfield railroads.

Mining districts near the T&T were the Bullfrog, Bare Mountains, Ash Meadows, Greenwater, Resting Springs, Nopal-Tecopa, Silurian Hills, Soda Mountains, and Southern Cady Mountains.

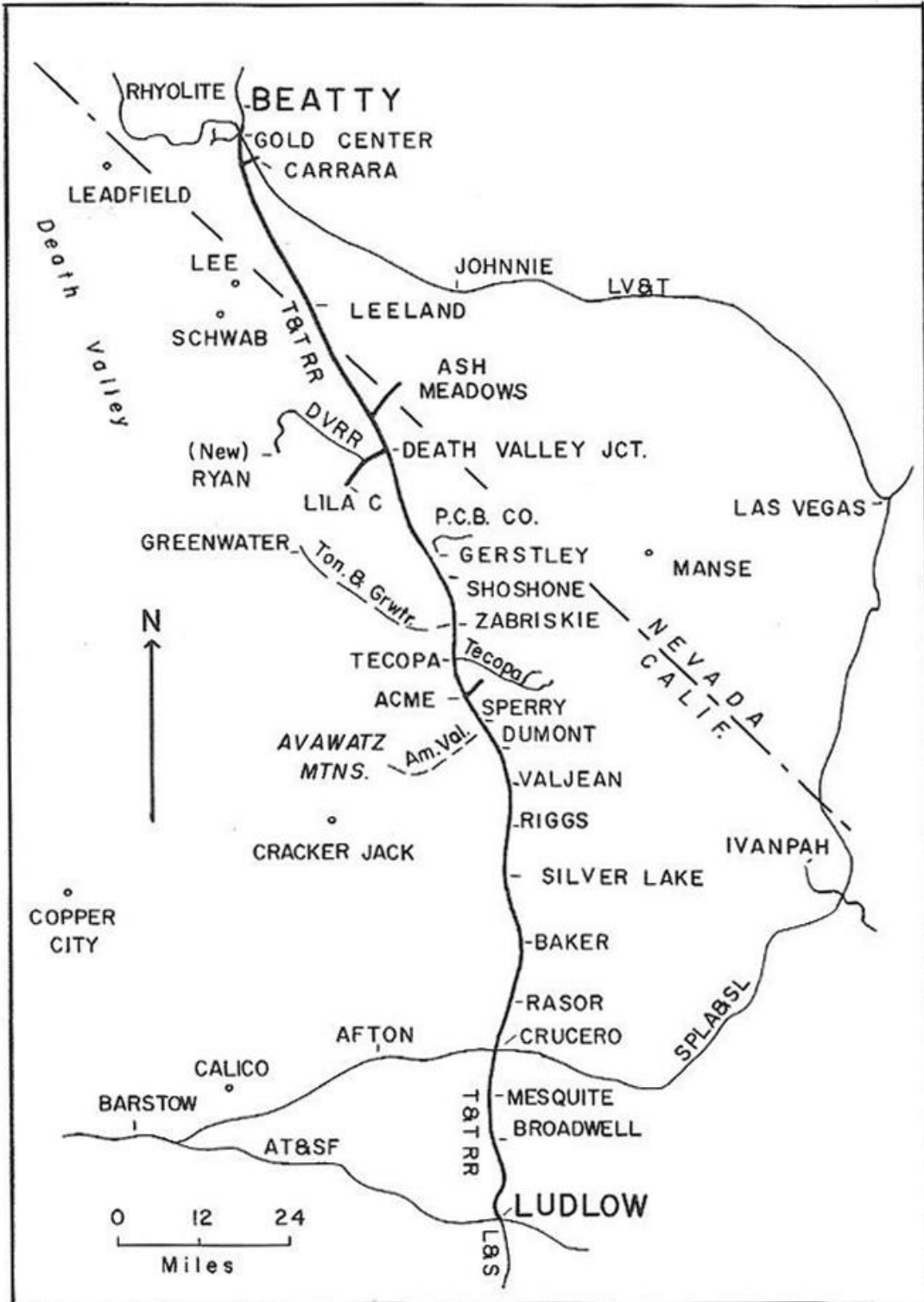
After the failure of his Tractor Road, Smith proposed building a railroad north from Senator Clark's San Pedro, Los Angeles & Salt Lake Railroad which was then under construction. Clark initially agreed to this situation, but after Smith had built a number of miles of standard gauge grade north of Las Vegas, Clark refused to let Smith connect the T&T to his Salt Lake and Las Vegas railroad. Instead, Clark began building his own railroad from Las Vegas to Beatty and Rhyolite. He would name this the Las Vegas and Tonopah Railroad (LV&T). This set up a competition to see who would first reach the new mining town of Rhyolite. Clark planned for his new railroad to service the mines at Rhyolite, Bullfrog, Tonopah and Goldfield in Nevada. In response to this double cross, Smith abandoned railroad making at the Lila C (Death Valley Junction) and built his Tonopah and Tidewater (T&T) railroad all the way from Ludlow on the Santa Fe Railroad. The T&T would go to the Lila C via Crucero and the future town of Baker, thence northward to

Gold Station south of Beatty and then west to Rhyolite. The T&T was incorporated July 19, 1904. Construction commenced at Ludlow November 19, 1905 and the line completed to Gold Center in the Bullfrog Mining District in October, 1907. The T&T never made its own track to Tonopah. The T&T absorbed the failing B&G railroad in September 1918 when its parent company the LV&T was closed by the United Railroad Administration. The Death Valley (Ryan) Railroad (part of T&T) was abandoned in 1931. The Ludlow T&T station was closed October 8, 1933 (Chappell, 2005, p. 46; Myrick, 1963, 545-597, Serpico, 2013).



POINTS OMITTED FROM MAP, PIONEER, 2', WEST OF SPRINGDALE; ELLENDALE, 45 MILES NORTHEAST OF GOLDFIELD, 30 MILES EAST OF TONOPAH; ANTELOPE SPRINGS, 30 MILES EAST OF GOLDFIELD.

Figure 15. Route of the Tonopah and Tidewater railroad. From Myrick, 1963, p. 558.



Caption: Route of the T&T railroad. From Myrick, 1963:548.



Caption: Three-quarter view of right side of engine, from front end. Ludlow, Cal., April 26, 1933. From Denver Public Library Collection Call No. OP-16330.



Caption: T&T engine No. 10 B. From the Larry Vredenburg Collection



Caption: Three-quarter view of left side of engine No 10 B, from front end. Ludlow, Cal., April 26, 1933. Denver Public Library Collection No. OP-16333.

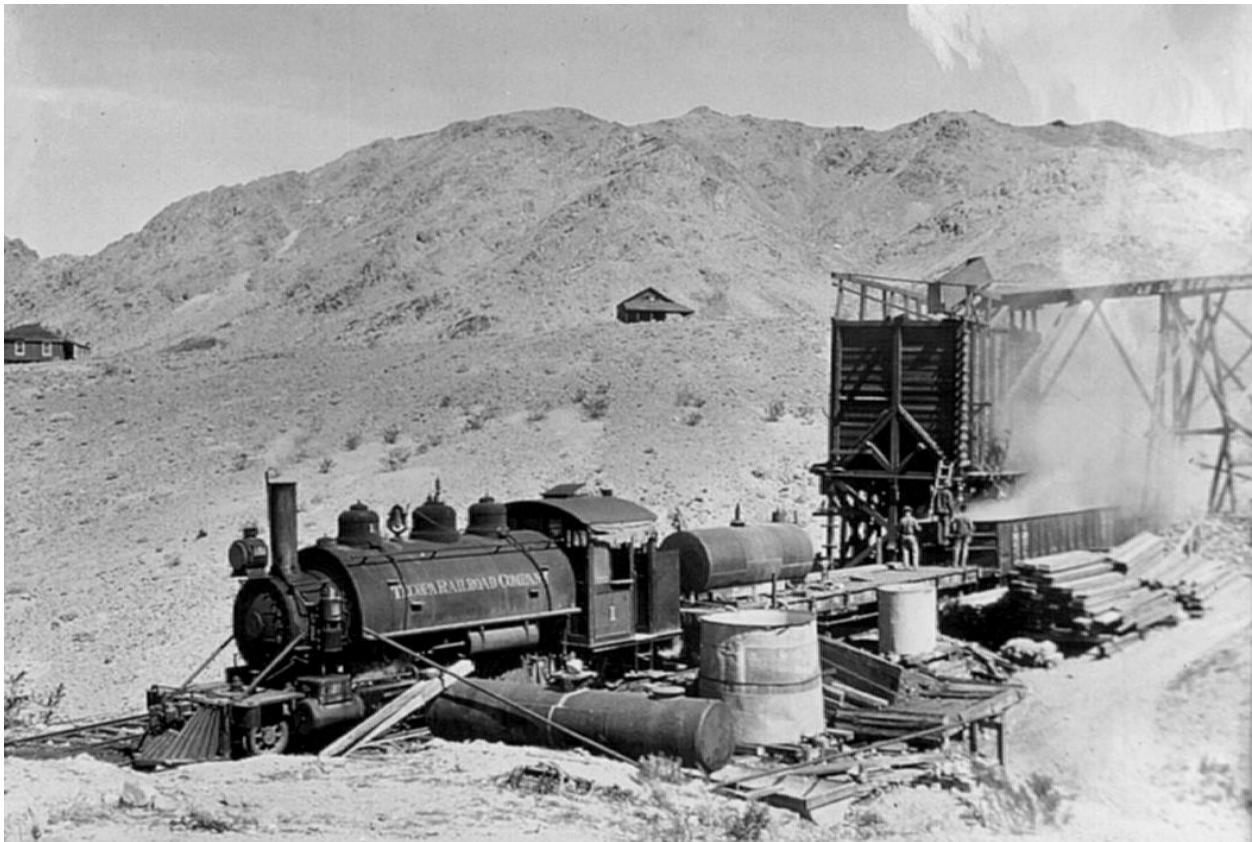


Caption: Tonopah and Tidewater railroad engine No 8. Three-quarter view of right side of engine, from front end, obstructions. Photographed: Ludlow, Cal., April 26, 1933. From Denver Public Library call number OP-16329. Also from the Larry Vredenburgh Collection.



Caption: Three-quarter view of left side of engine, from front end. Photographed: Ludlow, Cal., April 26, 1933. From the Denver Public Library Collection Call No. OP-16331.

LUDLOW TO DEATH VALLEY JUNCTION



Caption: Ore loading on the Tonopah and Tidewater Railroad. From urbaneagle.com accessed Nov. 11, 2023.



Caption: Engine and Fuel tanker. abandonedrails.com. Accessed Nov. 11, 2023. Also from Larry Vredenburgh Collection No. kda7epu2.



Caption: T&T lonely Pullman Line: Classic Trains Magazine, trains.com; accessed Nov. 11, 2012.



Caption: Tonopah and Tidewater station in Ludlow 2. From <https://pics66.com/pictures/8%20California/820%20Ludlow/Tonopah%20and%20Tidewater%20railway/index.html#img=Tonopah%20and%20Tidewater%20station%20in%20Ludlow%202.jpg> accessed Nov. 11, 2023.



Caption: Tonopah and Tidewater station in Ludlow 3;
<https://pics66.com/pictures/8%20California/820%20Ludlow/Tonopah%20and%20Tidewater%20railway/index.html#img=Tonopah%20and%20Tidewater%20station%20in%20Ludlow%203.jpg> accessed Nov. 11, 2023.



Caption: Tonopah and Tidewater station in Ludlow 4;
<https://pics66.com/pictures/8%20California/820%20Ludlow/Tonopah%20and%20Tidewater%20railway/index.html#img=Tonopah%20and%20Tidewater%20station%20in%20Ludlow%204.jpg> accessed Nov. 11, 2023.



Caption: Tonopah and Tidewater station in Ludlow 5;
<https://pics66.com/pictures/8%20California/820%20Ludlow/Tonopah%20and%20Tidewater%20railway/index.html#img=Tonopah%20and%20Tidewater%20station%20in%20Ludlow%205.jpg> accessed Nov. 11, 2023.



Caption: Tonopah and Tidewater station in Ludlow 8;
<https://pics66.com/pictures/8%20California/820%20Ludlow/Tonopah%20and%20Tidewater%20railway/index.html#img=Tonopah%20and%20Tidewater%20station%20in%20Ludlow%208.jpg> accessed Nov. 11, 2023.



Caption: Ludlow in the early 1930's. From Los Angeles Metropolitan Water District Collection



Caption: Tonopah & Tidewater engine house at Ludlow, California. T & T, and Bullfrog & Goldfield engines baking in the hot California sun. August 1909. Frank Green photo. D. L. Garcia Collection From 1981, California Southern Railroad Calendar.

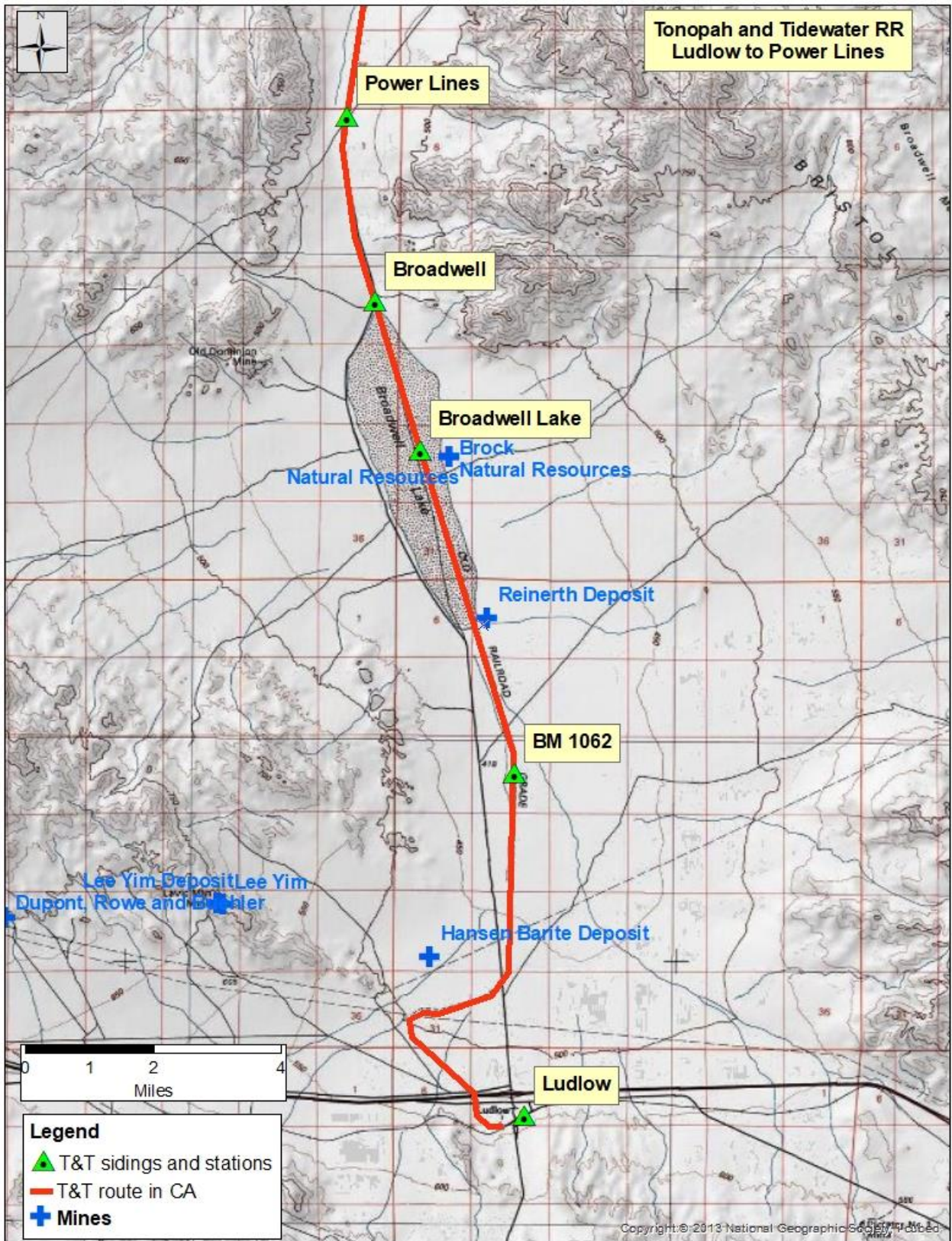


Caption: T&T box cars. From Death Valley National Park Collection No. TTR 19. Also from Larry Vredenburgh Collection.

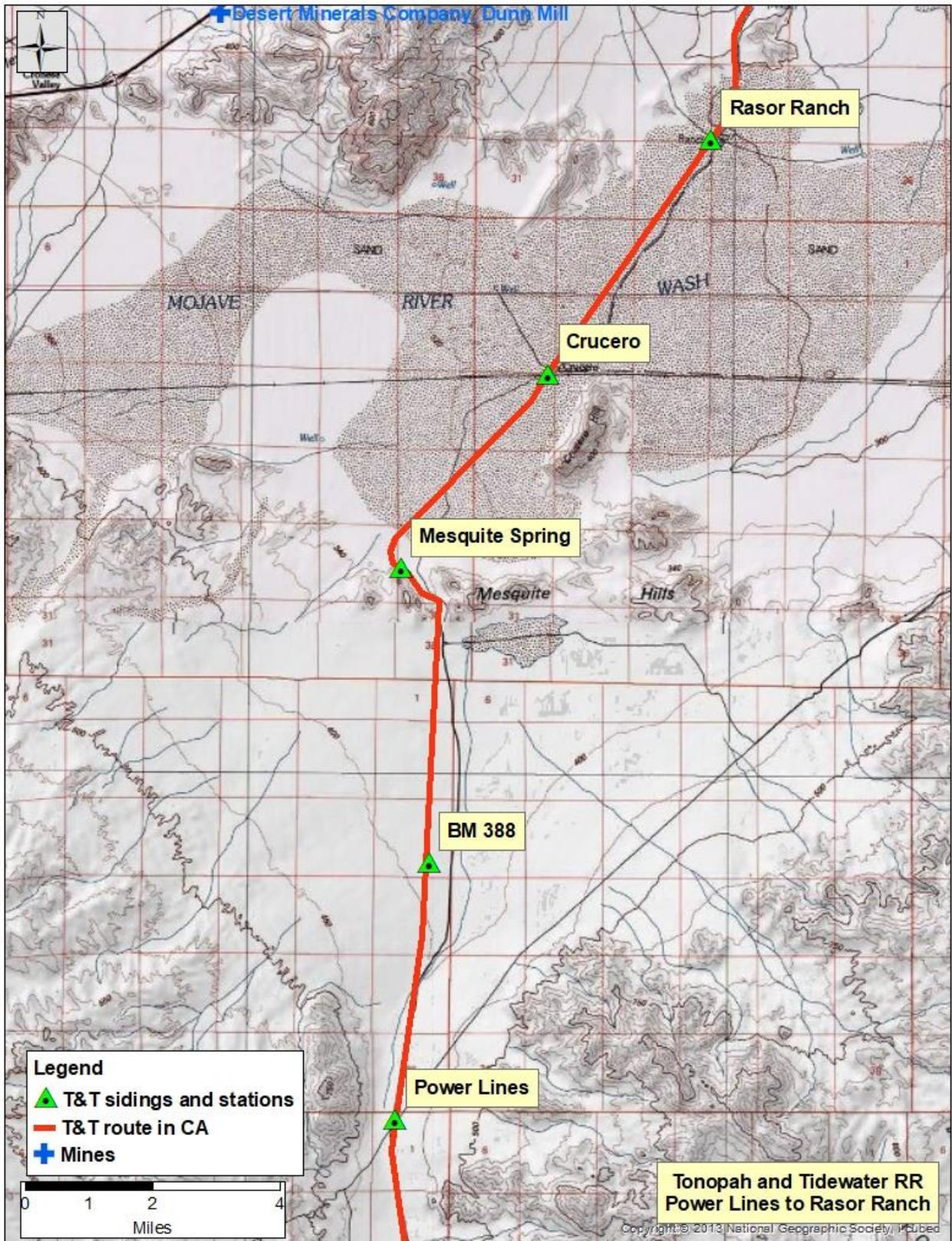
Ludlow

From **Ludlow** the T&T went north up the Broadwell Valley and across **Broadwell Dry Lake**. At the north end of Broadwell Lake was **Broadwell** siding. Here the T&T was near the Old Dominion Copper Mine in the northeastern Cady Mountains (Southern Pacific, 1964:106).

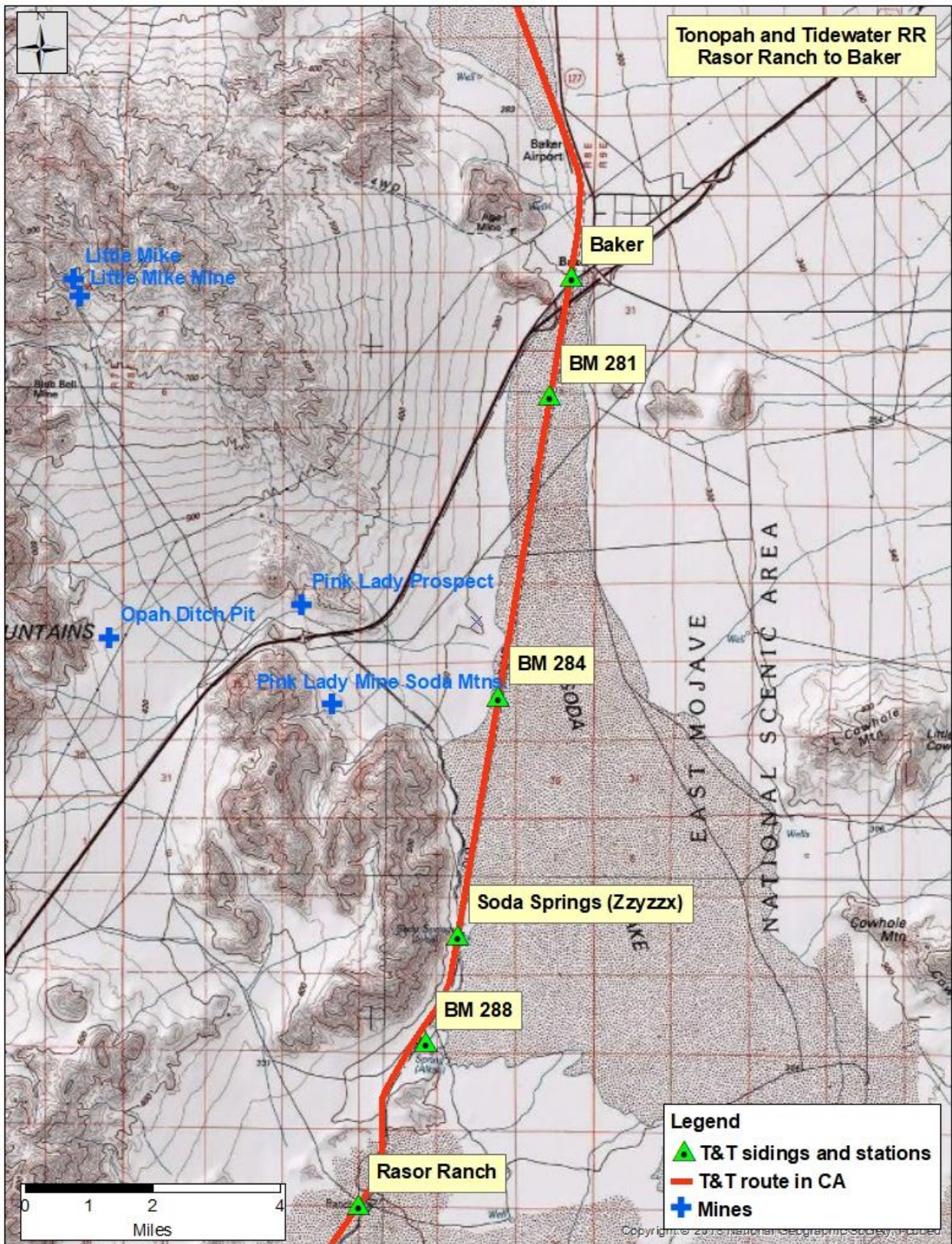
From **Broadwell** the T&T went north in a valley between the Bristol Mountains to the east and the Cady Mountains to the west. The T&T crossed the present **power lines** 3.1 miles north of Broadwell.



From the **power lines**, the T&T proceeded north past **BM 388** to **Mesquite Spring**. From Mesquite Spring, the T&T went northeast through the Mesquite Hills to a place called **Crucero**. At Crucero, the T&T crossed Clark's Los Angeles and Salt Lake Railroad (LA&SL). From **Crucero** the T&T went northeast to **Rasor Ranch** on the southeast flank of the Soda Mountains.



From **Rasor Ranch** the T&T went along the west side of Soda Lake, and past **Soda Springs** (the site of the later resort of Zzyzzx, Vredenburgh, 2022a), to the town of **Baker**. There were two plants with mine railroads that produced salts from Soda Lake. These are described in Part III of this report.



Northward from **Baker** the T&T went north across Silver Lake to **Silver Lake siding**.



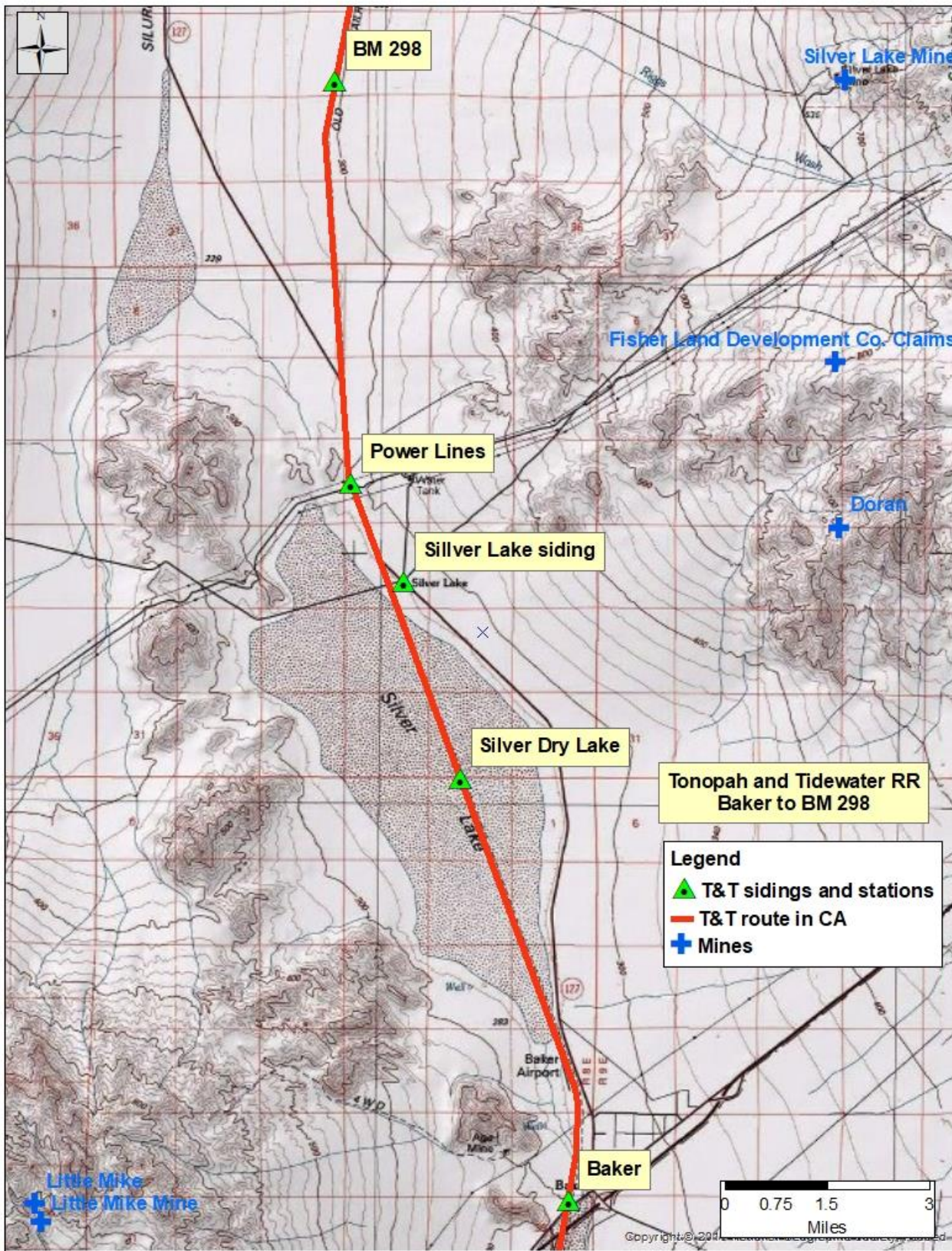
Caption. Silver Lake Station. From Steel's Photo Service No CO 141. Also from the Larry Vredenburg Collection.



Caption: Abandoned track of Tonopah & Tidewater Railway across Silver Lake playa, looking south from near Silver Lake Station. Track was lifted from grade by flood waters in January, 1916. T. 15 N., R. 8 E. San

Bernardino County California. David Grosh Thompson, September 9, 1917. From U.S. Geological Survey Library Collection ID: tdg00041.

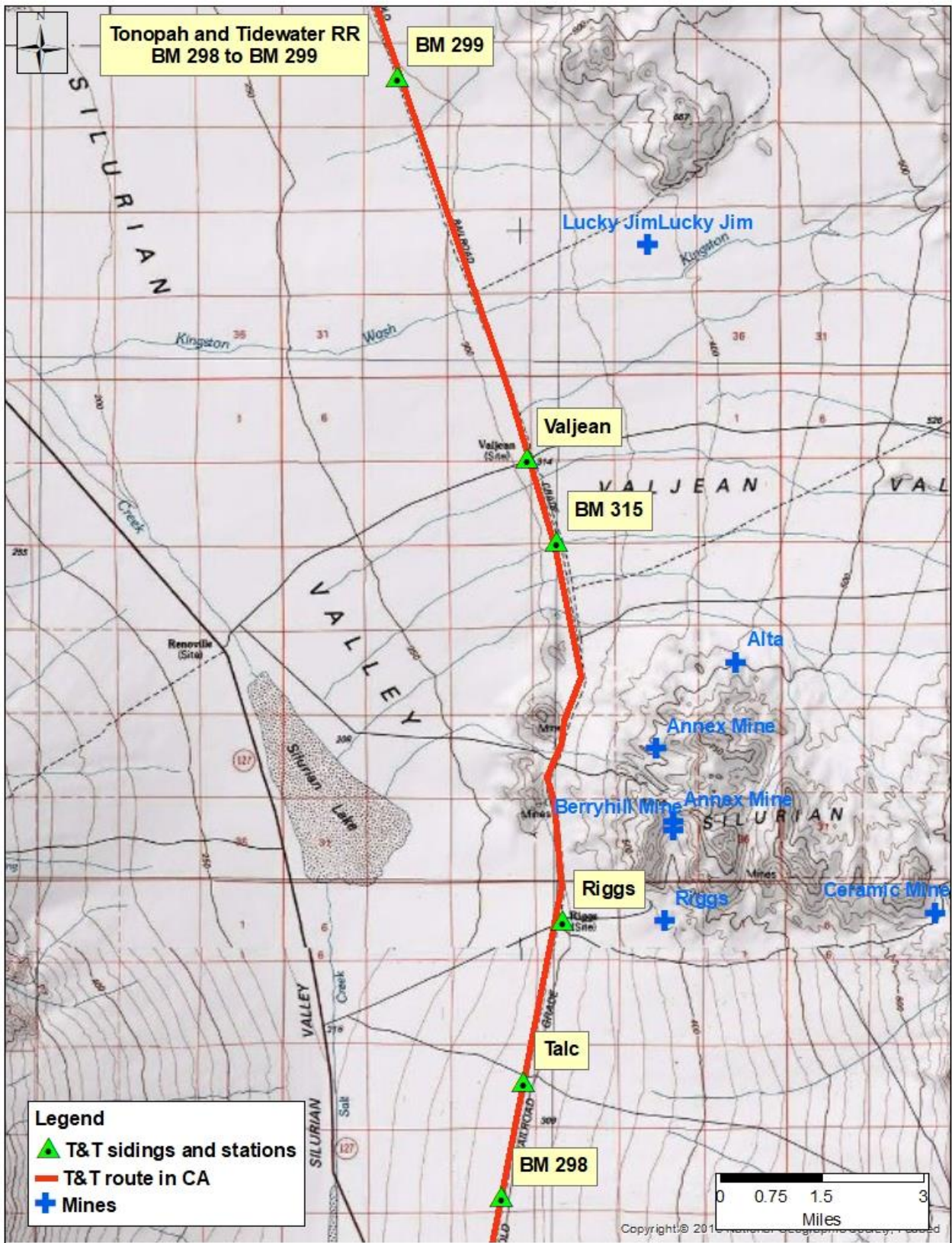
From **Silver Lake Siding** the T&T went northwest to cross present high voltage **power lines** and then north to **BM 289**. The Silver Lake Talc mine is 6 miles east of BM 289 in the Silurian Hills (Wright and others, 1953:208-209).



From **BM 289** the T&T went northeast into the Silurian Valley and then to **Talc** and **Riggs** siding. **Riggs** was near the mines in the Silurian Hills to the east: Annex, Berhyll, Riggs, and Ceramic (Wright and others, 1953, :05, 139, 200-202).

“Ten miles northeast of Silver Lake a two-mile long discontinuous outcrop of talc schist has been mined at six locations. The Amos brothers of Silver Lake, made the first shipment of talc from their mine in 1911. At this time G. E. Gould located claims here as did M. E. Stearns who organized the Western White Talc Company. In 1918 Gould sold two claims to the Robert W. Glendenning of the Pacific Coast Talc Company. The Pacific Coast Talc Company built a mill in Los Angeles. The original shaft, known as the Gould, was sunk at a point high on the most extensive talc exposure. In 1925 the shaft was intersected by the Gould tunnel driven east on the talc-bearing zone. By 1934 additional working had been developed. By 1935 85,000 tons of talc had been produced. The Sierra Talc Company purchased the holdings of Pacific Coast Talc Company in 1941, and by 1953 an additional 90,000 tons of talc had been mined” (Walker Feller, Digital Desert).

From **Riggs**, the T&T went north through the western edge of the Silurian Hills to **BM 315** and **Valjean**. Valjean siding was at a confluence of the Valjean Valley and the Silurian Valley. From there the T&T went north-northwest to **BM 299**.



From **BM 299**, the T&T went northwest to cross Kingston Wash to **Dumont** at the eastern edge of the Dumont Sand Dunes. These dunes became a popular Off Road Vehicle use area (BLM, 2023a). From Dumont, the T&T went west-northwest to the Amargosa River at **BM 262**.

From **BM 262** to T&T went north to **Sperry** on the Amargosa River 0.8 miles south of its confluence with **Sperry Junction**. Sperry was south of a road that connected to the Western Talc mine and Dunn Mill in the Alexander Hills. This mine had an ore storage complex at Dunn Siding on the Los Angeles and Salt Lake (LA&SL) railroad. From **Sperry Junction**, the T&T went north, following the Amargosa River, through the middle of the Sperry Hills to **Acme** siding.

Acme was the junction of the T&T with the China Gardens railroad that connected to China Ranch and Willow Springs. There are several nitrate mines in this area. The China Ranch Railroad is described in Part III of this report.

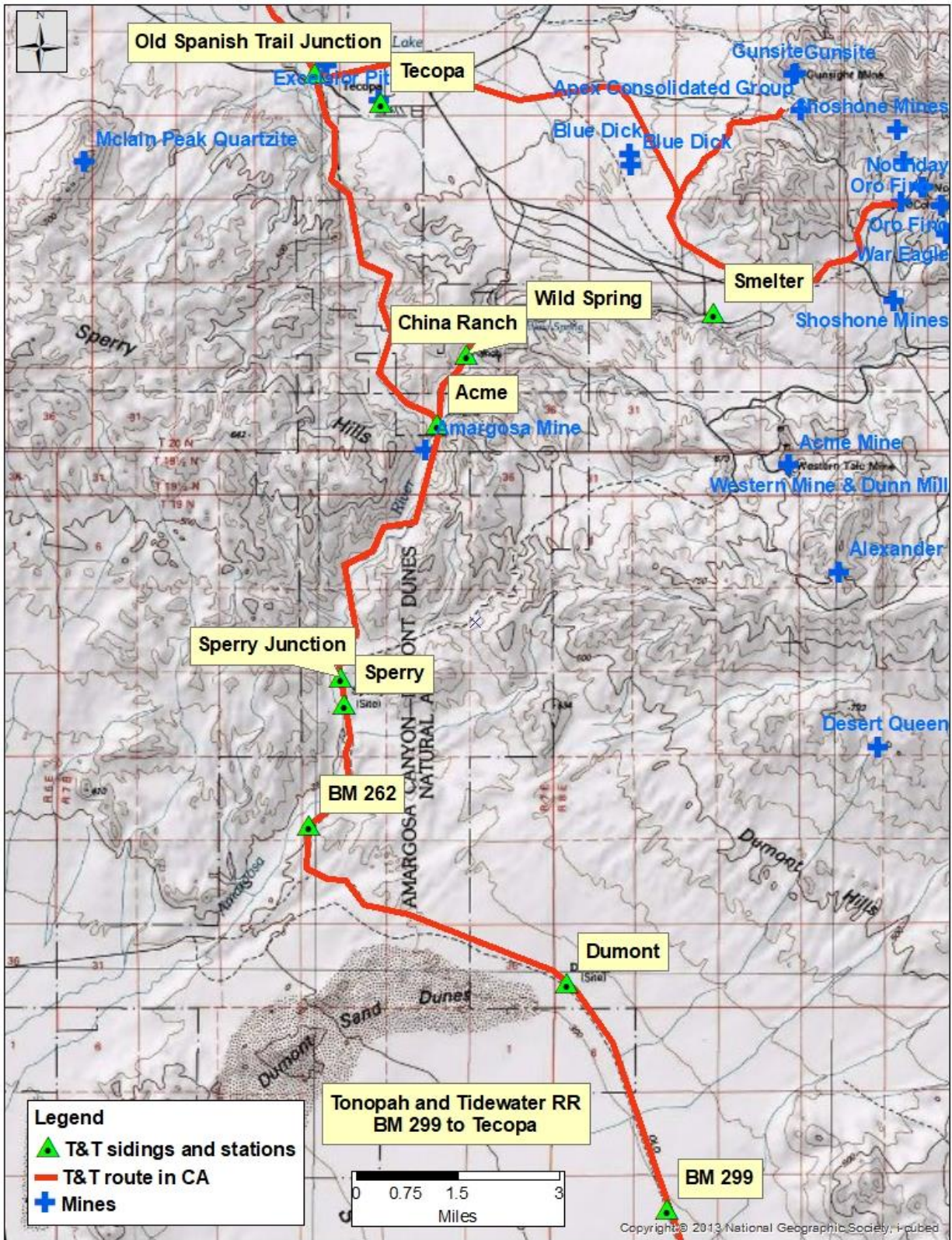
From **Acme**, the T&T went northwest and then north along the Amargosa River to **Tecopa**. This station is where the T&T crossed the Old Spanish Trail. At **Tecopa** station the Tecopa Railroad joined the T&T. Tecopa was a crossing point for the **Old Spanish Trail**.



Caption: Tonopah and Tidewater Railroad as it crossed the Amargosa River about 8 or 10 miles from Tecopa, California, circa 1915. Trestles like the one on the right were very expensive to build. - Nye County Town History Project--Crowell Collection. From <http://nyecountyhistory.com/beattybook/beatty.htm> accessed Nov. 14, 2023.

The mines in the Nopah Range east of Tecopa and in the Sperry Hills south of Tecopa were near the T&T Railroad from the time of its construction up to its closure and dismantling during WWII. Spur lines were made to Gunsight Noonday and War Eagle mines and to a smelter that served both mines. A description of the Tecopa Railroad is given in Part III of this report.

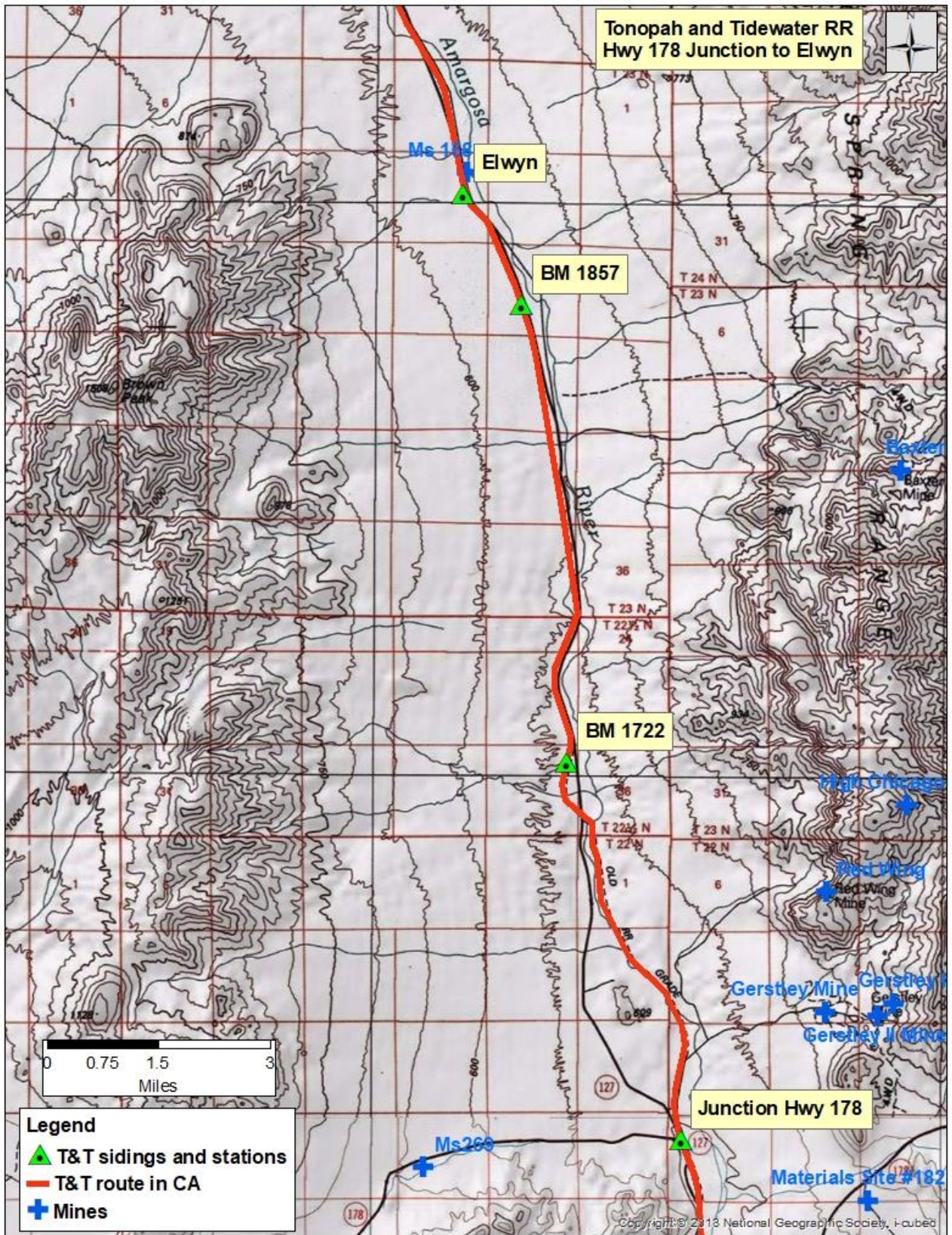
From **Tecopa**, the T&T went along the western edge of the Tecopa Hills to **Tecopa Hot Springs**. There are several resorts here that produce hot water from thermal wells for soaking.



From **Tecopa Hot Springs**, the T&T went north to **Shoshone** townsite. This town has a restored set of underground miner cabins and another hot spring resort.

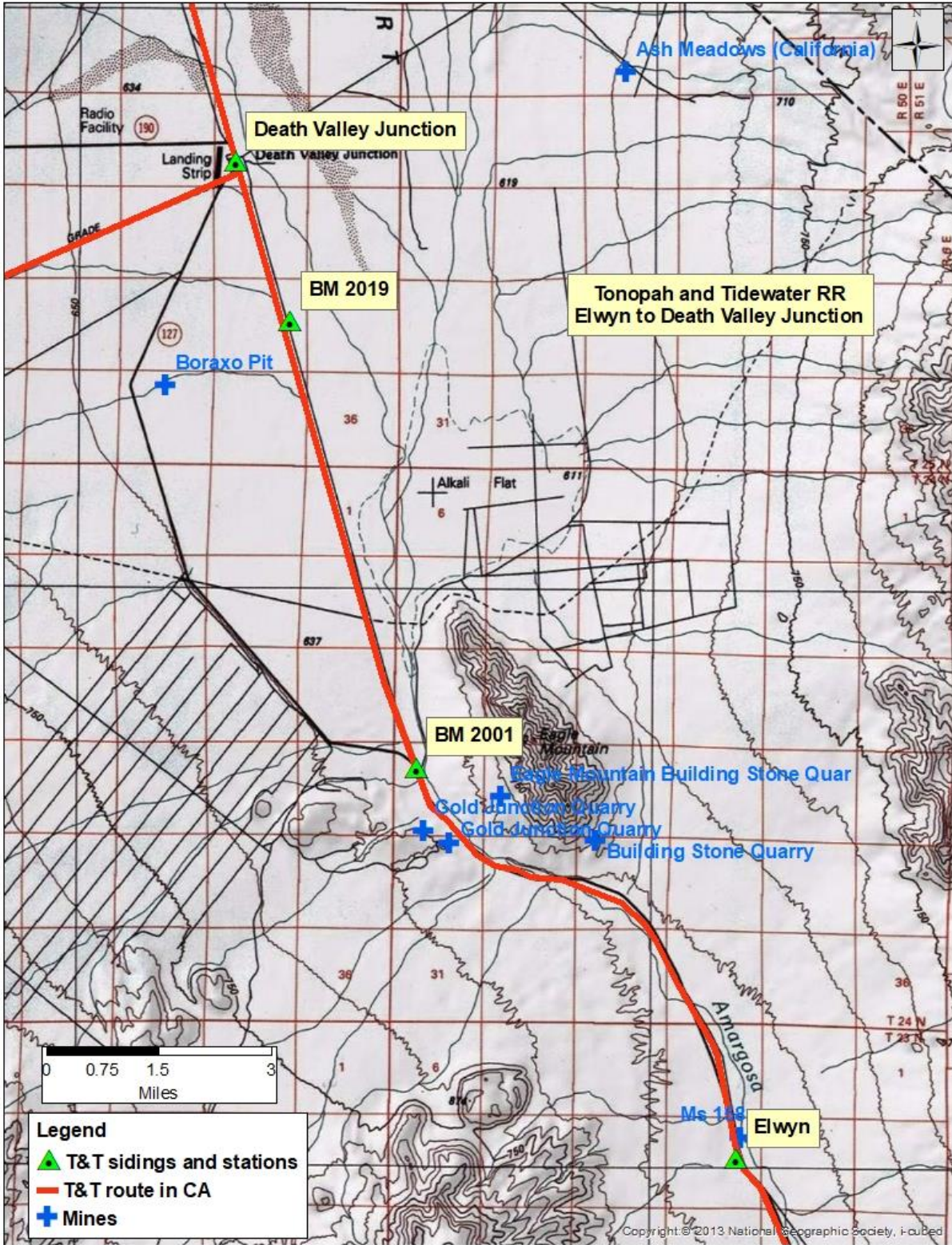
From **Shoshone**, the T&T went north along the Amargosa River to the road **junction** of Highway 127 with Highway 178.

From the **Highway 178 Junction**, the T&T went northwest along the Amargosa River to **Elwyn** siding. Between the junction and Elwyn, to the east in the Spring Mountains, were the Baxter and Red Wing lead mines, Gerstley borate mines, and High Chicago silver mine (Goodwin, 1957:452, 504, 505; Evans and others, 1976:61; Nobel, 1925; Papke and others, 1976; USBOM, 1985; CDMG, 1986; Tucker, 1922:497; and Norman and Stewart, 1951:184)



From **Elwyn** the T&T went north to the southern end of the Eagle Mountains. From there the T&T went northwest to **BM 2002** and then north-northwest to **BM 2019** and **Death Valley Junction**, headquarters

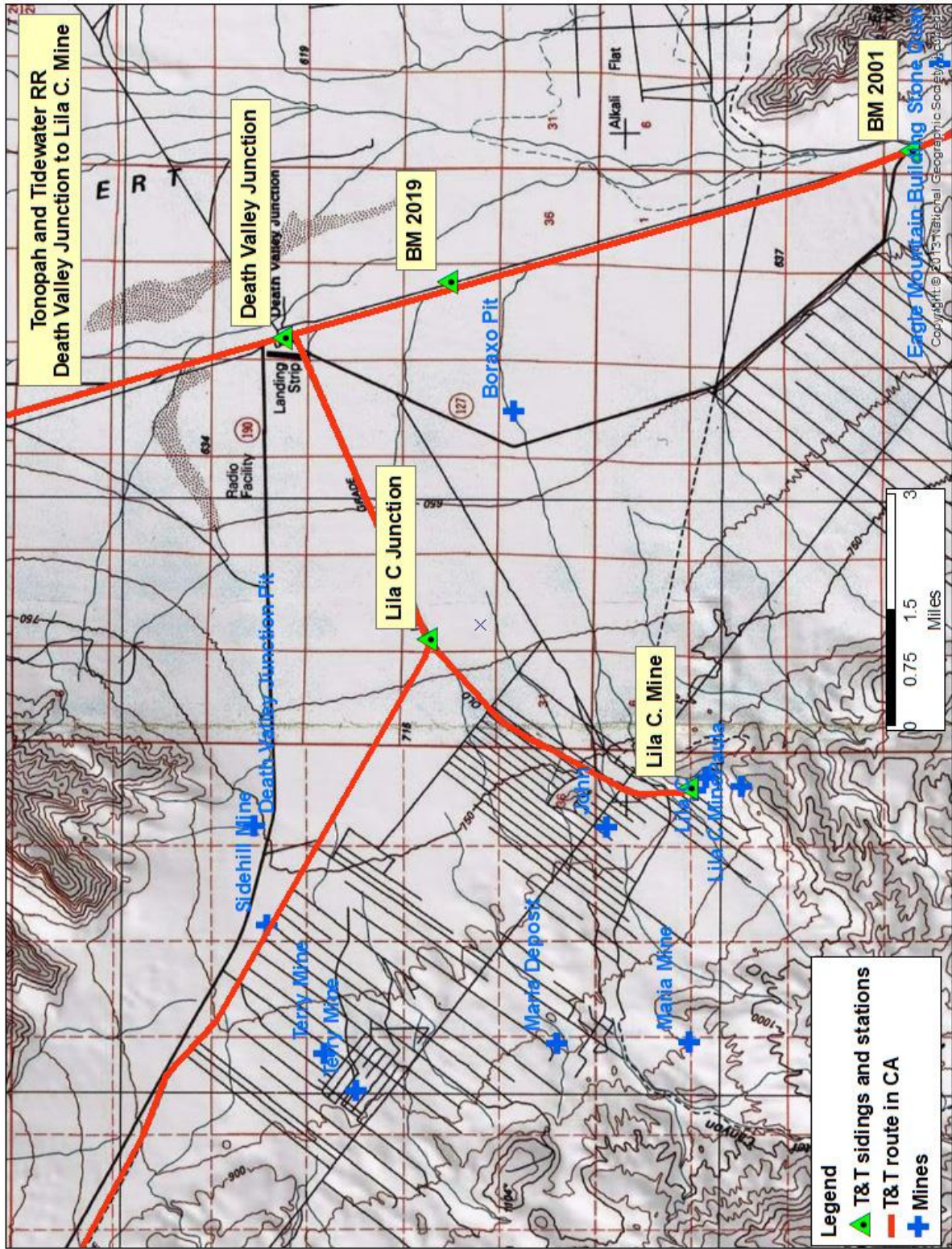
of the Pacific Coast Borax Company.



DEATH VALLEY JUNCTION TO THE LILA C MINE

From **Death Valley Junction**, the Lila C.-Ryan lines (“Death Valley Railroad”) went southwest to the **Lila C. Junction**. From there the line bifurcated. The Lila C. line continued southwest to an eastern spur of the Greenwater Range to the **Lila C. Mine**.

The mines of the Lila C. included the Terry, Paula, Maria, John and Sidehill mines (Evans and others, 1976; Barker, 1980:181-187; Norman and Stewart, 1951:221; USGS, 1973)





Caption: Pacific Coast Borax plant, Death Valley Junction. Photo by C. Marion circa 1900. From California State Mining Bureau Bulletin 11 Photo No. DM B7625a and From the Larry Vredenburg Collection No. 58e-02.



Caption: Mule train to Lila C. Mine. From Denver Public Library, call number x-61485. From the Larry Vredenburg collection.



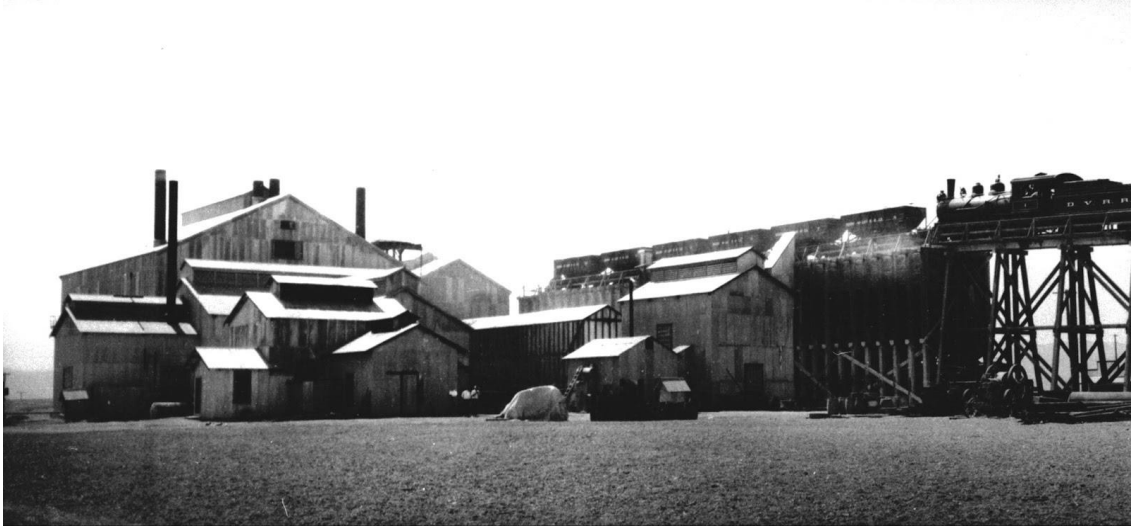
Caption: Sacking concentrates at the plant of the Pacific Coast Borax Company, Death Valley Junction. From Waring (1916), California State Mining Bureau, Report 15, Photo no. 58. and the Larry Vredenburg Collection No 56c-04.



Caption: State Lease Mine, Pacific Coast Borax, Shoshone. From California State Mining Bureau, Inyo County Report, 1926. Photo DM A7301 and the Larry Vredenburg Collection No. 57a-02.



Caption: Pacific Coast Borax Works. Photo by Marion circa 1900. From California State Mining Bureau Bulletin 11, Photo No DM B7625b and from the Larry Vredenburg Collection No. 58e-03.



Caption: Concentration mill of the Pacific Coast Borax company at Death Valley Junction, Inyo County, California. Photo by Waring, 1916, California State Mining Bureau Report No. 15 Photo No. DM 6544 and from the Larry Vredenburg Collection No. 59b0-03.

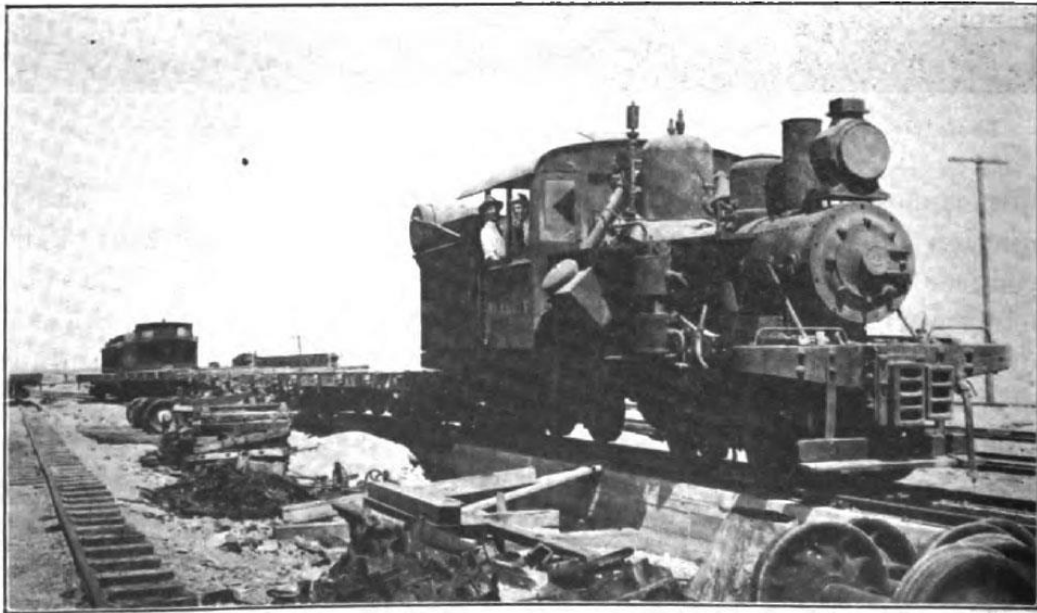


Photo No. 31. First locomotive used to haul borax out of Death Valley, at Death Valley Junction. Photo by H. Knight.



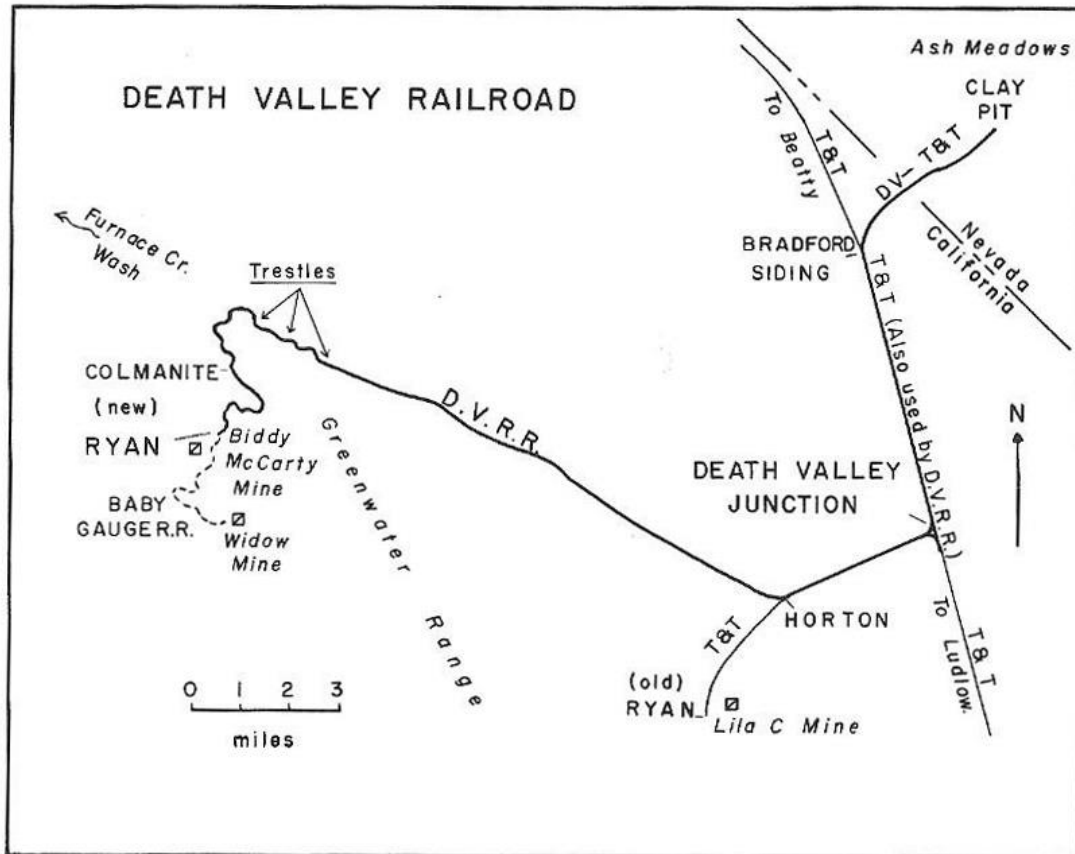
Caption: 20 mule team on its way back to the Lila C. Mine. From Denver Public Library Special Collections Call Number X-61485. Date 1920-1930.

LILA C. JUNCTION TO RYAN (DEATH VALLEY RAILROAD)

Pacific Coast Borax Company's Lila C. mine was running out of ore in 1913 and new deposits were identified at the Biddy McCarthy Mine 12 miles to the north in the Greenwater Range. The Death Valley Railroad (DV) was incorporated in January, 1914 to build and operate this segment of PCB's operations. From the **Lila C. Junction**, the DV (Ryan) line went northwest across the Amargosa Desert to a northwestern prominence of the Greenwater Range. The DV circled counterclockwise around this prominence and went south to **Ryan** on the west flank of the Greenwater Range.

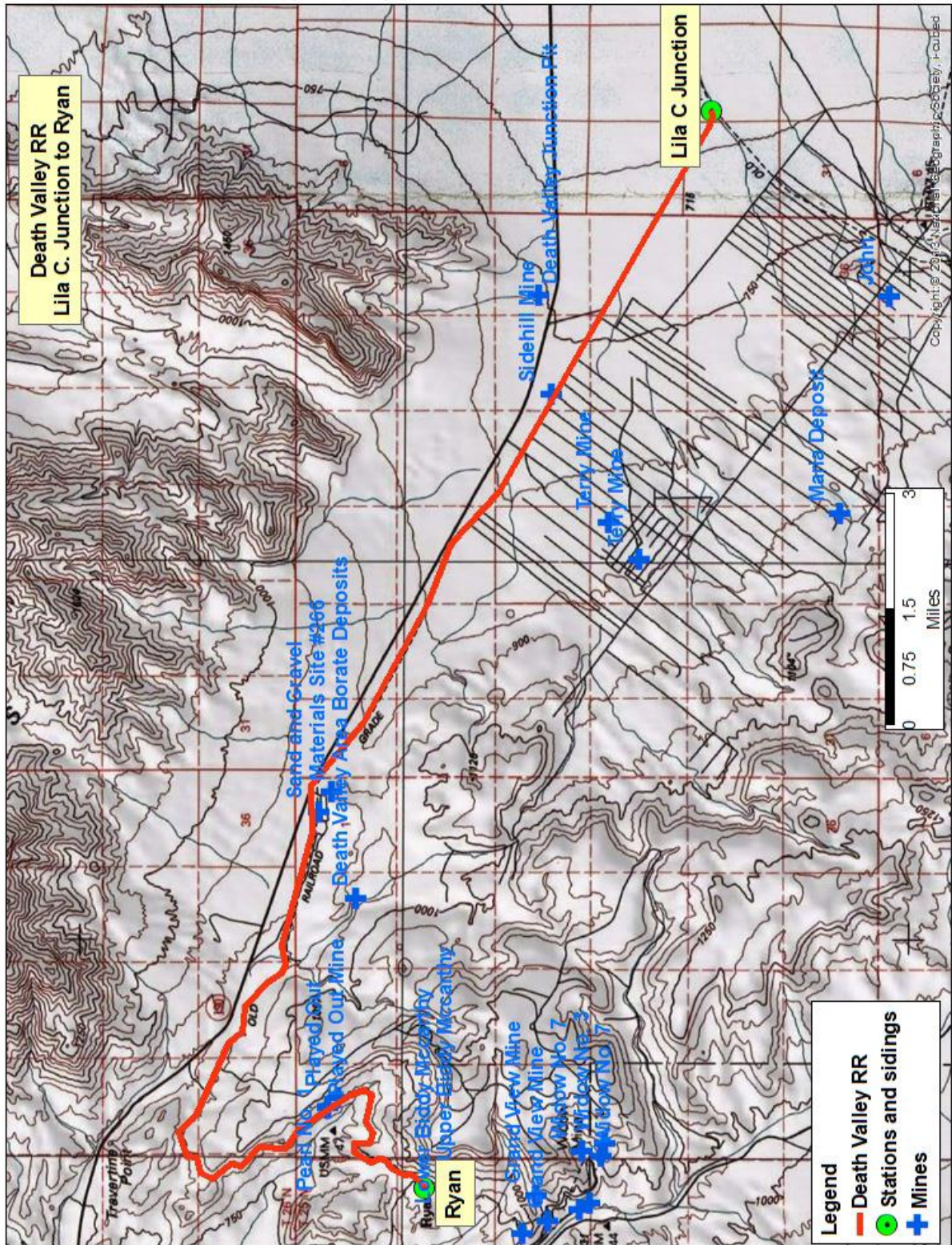
The mines at **Ryan** included the Boraxo, Grand View, Lizzie V. Oakley, Upper and Lower Biddie McCarthy, Played Out, Widow No. 3 and No. 7, White Monster and Sigma (Evans and others, 1976:23, 29,61; CDMG, 1986, USBOM, 1986; CDMG, 1970 Map Sheet 14).

An extension of the DV was built to develop clay deposits in the Amargosa Valley discovered in 1817 (MRDS, 2011; Cornwall, 1972:35; Papke, 1970:32-34). This extension is described under "Ash Meadows Railroad".



The T&T built the standard gauge line from Death Valley Junction to (old) Ryan in 1907. When the D.V.R.R. was built in 1914, a third rail was added from Horton to Death Valley Junction, thus permitting narrow gauge operation to the latter point. Later, when the T&T was abandoned from Horton to (old) Ryan, the Horton-Death Valley Junction became exclusively narrow gauge.

Caption: Map of the Death Valley Railroad. From Myrick, 1963, p. 609.



The Death Valley Railroads to Lila C. and Ryan were part of the T&T railroad. They continued to operate through 1927. It shipped borax from various deposits near the Lila C and Ryan area mines. Production ceased when the much larger and richer Kramer Borate Deposit was discovered in 1925 near the Santa Fe Railroad at the Kramer (later Boron) station (Chappell, 2005, p. 46; Wilkerson, 2022b; Myrick, 1963, 545-597; Mindat, 202



Figure 18. Ore bins at the town of Ryan. View is to the northwest down Furnace Creek. From the Larry Vredenburg collection.



Caption: Town of Ryan and railroad connecting to the Tonopah and Tidewater railroad, From California State Library, Photo Ryan 02. Also from the Larry Vredenburg Collection.



Caption: Death Valley Railroad at Ryan. From Mojave Desert Heritage and Cultural Association Collection.



Caption: Ryan townsite. From University of California at Los Angeles Collection. Also from the Larry Vredenburg Collection.



Caption: View of Ryan from Upper Biddie Mine. From Denver Public Library Special Collections Call Number X-61482. Date 1920-1930.

The Pacific Coast Borax company converted its Death Valley operations into a tourist industry for visitors to Death Valley. They transformed its headquarters at Death Valley Junction into the Amargosa Hotel and its mining camp at Ryan into the Death Valley View Hotel. They built the palatial Furnace Creek Inn at the mouth of Furnace Creek. The alfalfa field of the Greenhorn Ranch, used to feed mine mules, was converted into the Furnace Creek Ranch for horseback riding and other recreational diversions (Chappell, 2005, p. 46; Myrick, 1963, 545-597).

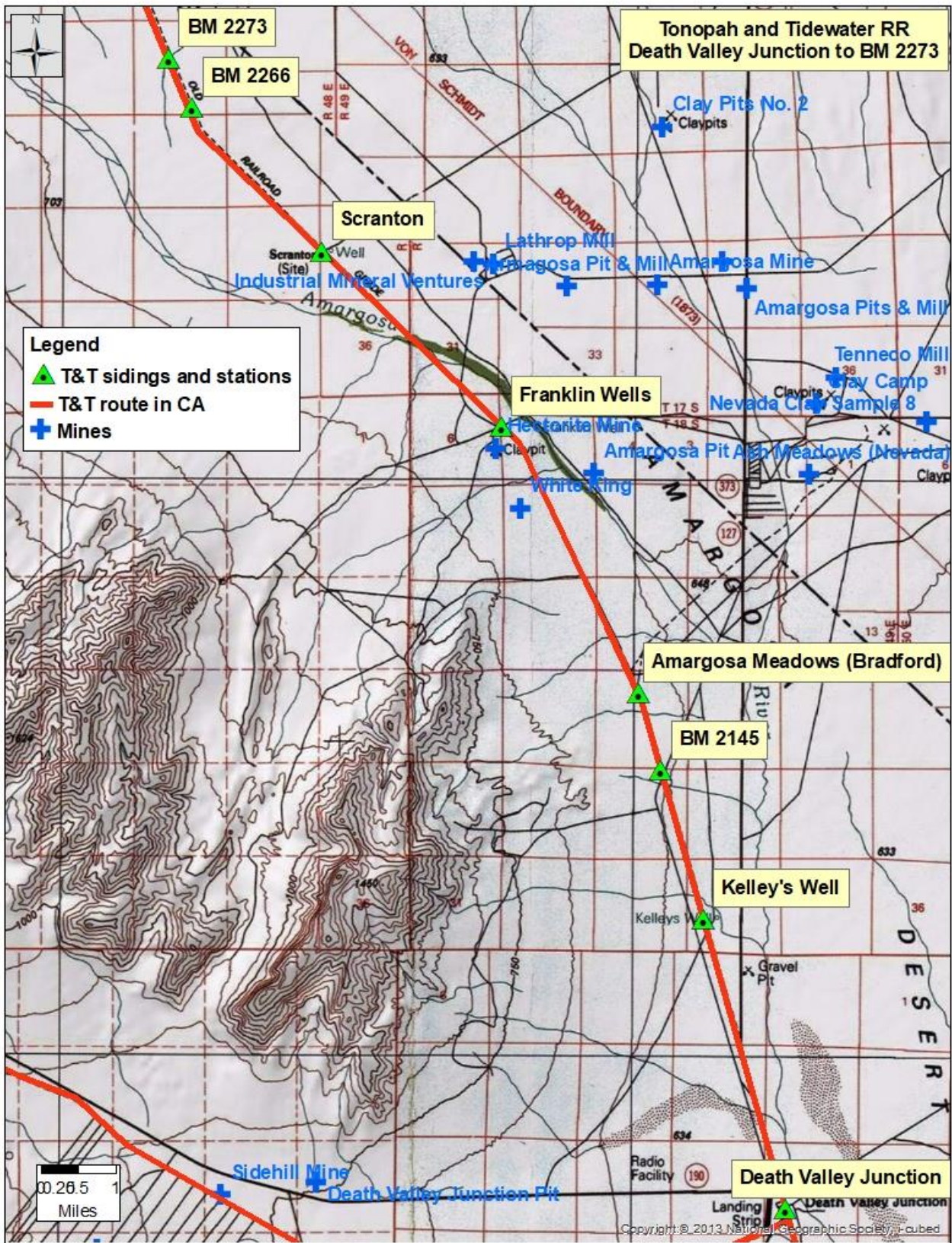
DEATH VALLEY JUNCTION TO BEATTY

From **Death Valley Junction**, the T&T Railroad continued north-northwest along the Amargosa River to **Kelley's Well**, thence to **BM 2145** and then to the **Ash Meadow** area. Here a spur line connected the T&T with several clay mines in the Amargosa floodplain. These included the Amargosa mines and mill, Ash meadows deposits, Clay Camp, Industrial Mineral Ventures, Hectorite (Southern Clay), K-B Mining, Lanthrop Mill, Los Angeles Chemical Company, Tenneco Mill and White Clay Mine (Papke, 1983; Melhase, 1926, Denny and Drews, 1965; Kral, 1951:15-17; CDMG, 1986, NDM, 1967; NDM, 1976:50; NDM, 1977:197).

The Amargosa Valley Railroad and the mines it served are described in Part III of this report.

From the **Amargosa Valley Railroad junction**, the T&T went past the **Franklin Wells Hectorite Deposit** (Wilkerson and others, 2001).

From **Franklin Wells**, the T&T went northwest, across the Amargosa River, to the Industrial Minerals Venture (IMV) clay mine (NBMG, 1990:16, MRDS, 2011, MAS No. 03202307) and then to **Scranton** siding. From that siding the T&T went northwest to **BM 2266** and **BM 2273**.

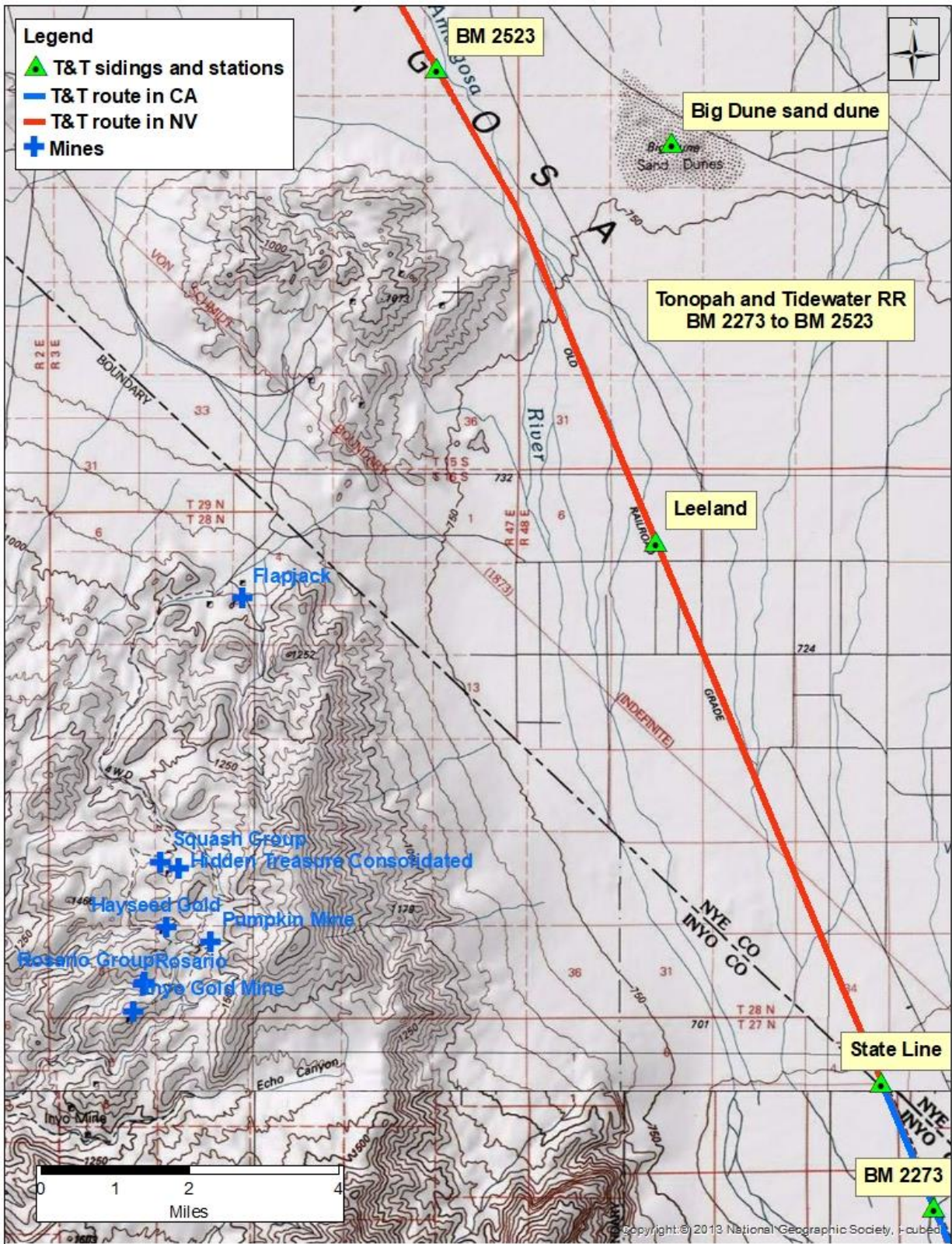


From **BM 2273**, the T&T went north one to two miles east of the Amargosa River to the California-Nevada State Line (Inyo vs Nye Counties).

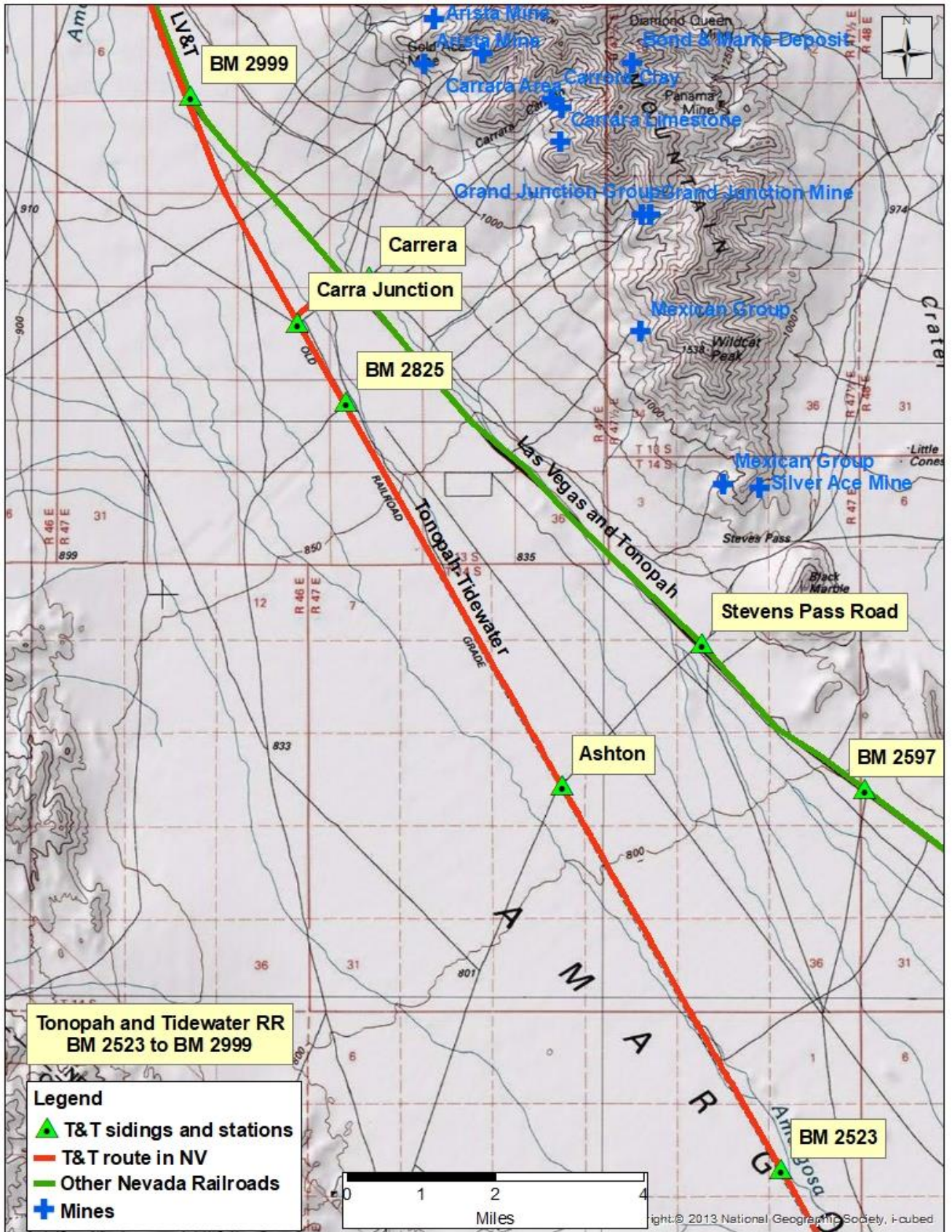
From the **State Line**, the T&T passed into Nevada and went northwest to Leeland. In the Funeral Mountains, 7 to 8 miles to the west of the State line and Leeland, are the Flapjack, Inyo Gold, Hayseed Gold, Squash Group, Echo Gilt Edge Group, Hidden Treasure, and Rosario Group mine (Norman and Stewart, 1951:16, 149-153,161-162; Goodwin, 1957:506).

From **Leeland**, the T&T went northwest to the eastern edge of the Funeral Mountains and passed the **Big Dune** sand dunes one mile to the east.

From the area of **Big Dune**, the T&T went northwest to **BM 2523**.



From **BM 2523**, the T&T went northwest to **Ashton**. At **Ashton**, the T&T crossed a road that went northeast to Stevens Pass Junction on the Las Vegas and Tonopah (LV&T) railroad. From Ashton the T&T went northwest to **Carrera** and paralleled the LV&T. From Carrera, the T&T went north-northwest to **BM 2999**. At this bench mark, the T&T merged with the LV&T.

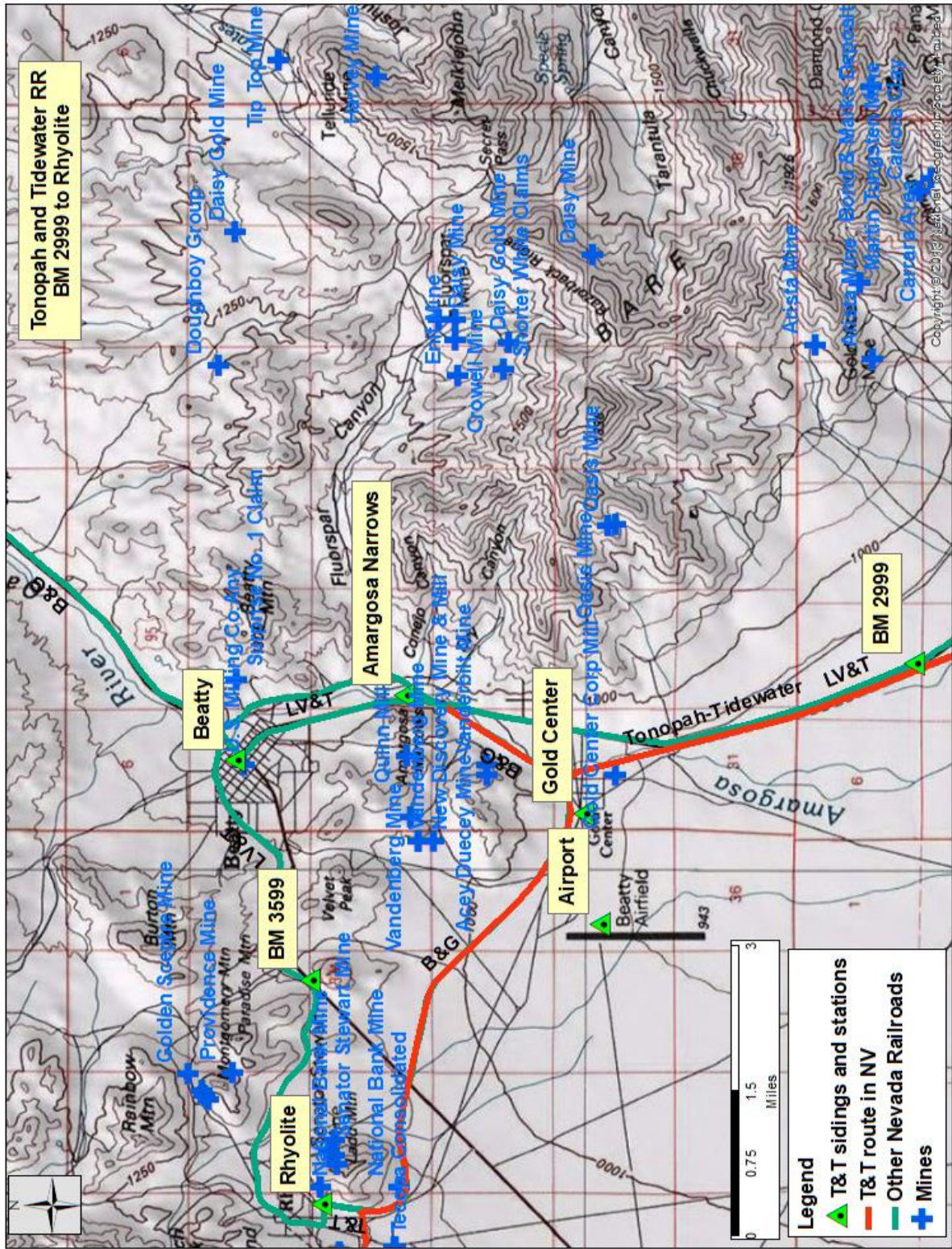


From **BM 2999** the T&T went north to **Gold Center**.

Gold Center was a junction with the Bullfrog and Goldfield (B&G) and the Las Vegas and Tonopah (LV&T) Railroads. The T&T line to Gold Center was finished on Oct. 30, 1907 (Myrick, 1963, p. 556).

From **Gold Junction** the T&T, under agreements with B&G, went north-northwest and west along the southern flank of the Bullfrog Hills (Velvet peak to the east, Ladd Mountain to the west) and then north to **Rhyolite**. The Bare Mountain Mining District is on the east side of the railway in the Bare Mountains and the Bullfrog Mining District is on the west side of the railway in the Bullfrog Hills.

The T&T never made it to Tonopah, but agreements with the B&G and the Tonopah and Goldfields Railroad (T&G) and the Las Vegas and Tonopah (LV&T) allowed for freight and passenger connections from Los Angeles and Ludlow to Beatty, Tonopah and Carson City.



Beatty to Goldfield

Mining between Beatty and Tonopah began with a discovery by Jim Butler on May 17, 1900 in the Klondike. This was soon followed by other discoveries in Goldfield (1902), Rhyolite (1904) and Bullfrog (1904). Within a few years the area became developed enough to warrant the building of railroads. Construction started at Tonopah Junction (M.P. 143) of the Carson and Colorado railroad in 1903. (Myrick, 1962, p. 236, 238).

Senator Clark's Las Vegas and Tonopah Railroad reached Beatty and Rhyolite at the end of 1906 and pressed on into Goldfield in 1907 (Myrick, 1962, p. 261).

The first claims at Goldfield were staked by Billy Marsh and Harry Stimler late in 1902 on Columbia Mountain, 30 miles due south of Tonopah. By early in 1903 a tent camp had formed on the claim, and in October 1903 the Goldfield Townsite Company platted the new town about halfway between the mines at Columbia Mountain and Malpais Mesa to the west. Goldfield experienced very rapid growth; by 1906 more than 150 buildings were going up monthly, and the town had a population of over 15,000. Despite a miners strike and a nation-wide financial panic in 1907, Goldfield continued to produce gold ore, and by 1908 Goldfield was Nevada's largest city with a population of more than 20,000 people. By 1904 the Goldfield district produced about 800 tons of ore, valued at \$2,300,000, 30% of the state's production that year. Goldfield reached a peak population of about 30,000 people in 1906 and in 1907 became the county seat. The mines continued to do well with a peak production of \$11 million attained in 1910. In 1913 heavy rains resulted in flash floods sweeping through Goldfield, and in 1923 a fire wiped out 53 square blocks of the city. These events combined with low metal prices resulted in mine closures and the gradual decline of the once great city (Minedat, 2023b).

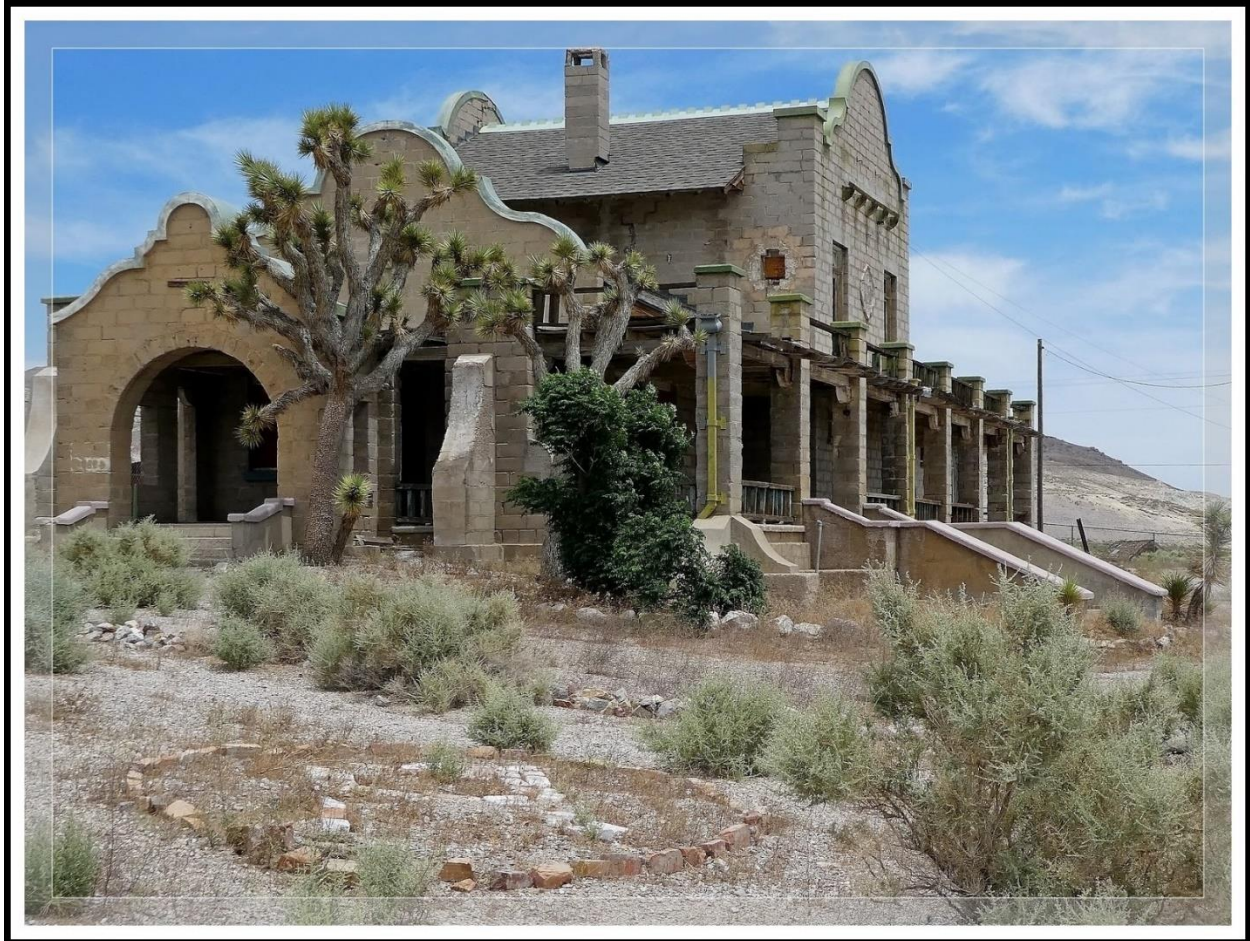
The geology of the Bullfrog Mining District (including Rhyolite) is described by Kleinhample and Ziony (1981) and Kral (1951). The major mines are the Montgomery-Shoshone, Shoshone-Polaris, Senator Stewart Mine, Original Bullfrog, Happy Holligan (Patootse), Happy Camp, Niterville Groupe, Homestake, Golden Bar, Mayflower and Tramps Consolidated.

Bare Mountain District – Located in Nye County, this district was discovered in 1905. Also known as the Fluorine district, it lies east of Beatty and includes both Bare Mountain and the northwestern end of Yucca Mountain. The original Bare Mountain district included only the northern part of Bare Mountain, near the old camp of Telluride. Most gold production is the result of modern mining activity in recent decades (Western Mining History, 2023g).

The Bare Mountain District was characterized by an abundance of fluorite. It was first mined on the west slopes of Wildcat Peak about 1861. In 1905 gold was discovered at the northeast end of Bare Mountain (Lincoln, 1923:167, Tingley, 1984, Papke, 1979.). This district included the Arista, Bond & Marks, Carrara, Carrora, , Crowell, Daisy ,Doughboy Group, Enif, Goldspar,; Grand Junction, Harvey, Kiernan Property, Lige Harris, Martin, Mary, Mother Lode, Oasis, Shorter White, Sterling, Surprise and Tip Top mines. Information about them is found in Kale (1951), Lincoln (1923), Buwalda (1922:125-126), Ahern and Corn (1981), Greybeck and Wallace (1991), Cornwall and Kleinhample (1964), Papke (1979).

Beatty to Rhyolite

Three other railroads came to Beatty en route to the rich mines of Rhyolite. The Las Vegas and Tonopah Railroad reached Beatty Oct. 22, 1906 and Rhyolite two months later. At the same time the T&T Railroad was building a line from Ludlow to Beatty. Concurrently, the Bullfrog and Goldfield Railroad was building a line south from Goldfield.



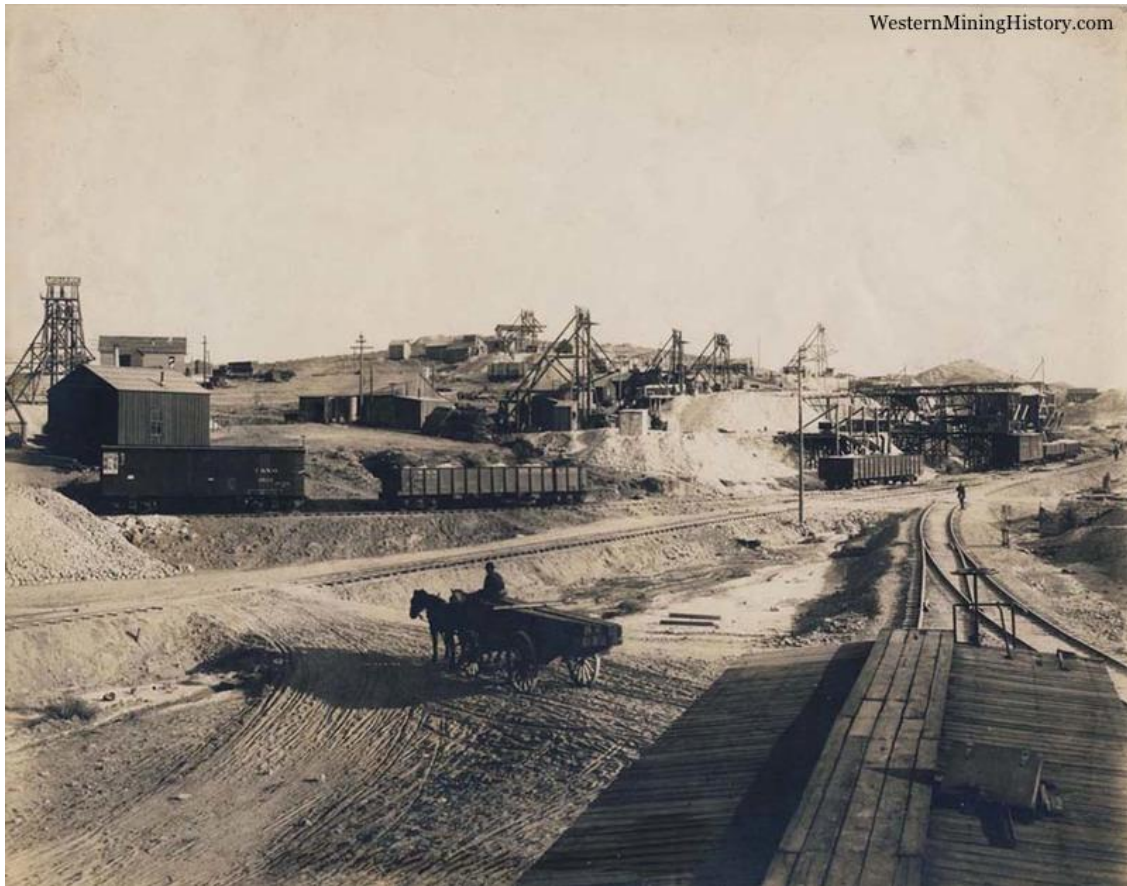
Caption: Rhyolite Station. From [Ken's Photo Gallery: Rhyolite Town Site - Summary Page](http://kensphotogallery.blogspot.com) (kensphotogallery.blogspot.com) accessed Nov. 11, 2023.



Caption: Rhyolite Depot with train circa 1907. From <https://www.legendsofamerica.com/nv-lasvegastonpahrailroad/> accessed Nov. 14, 2023.

The Bullfrog and Goldfield (B&G) railroad connected the mines of the Rhyolite district in the Bullfrog Hills north through Springdale thence northwest across Sarcobathus Flat, through the present site of Scotty's Junction, over Stonewall pass and the Cuprite Hills and through the Goldfield Hills to the town of Goldfield, Nevada.

The geology of the Bullfrog District is described by Kleinhample and Ziony (1984) and Zahl (1951). The major mines where the Montgomery-Shoshone, Shoshone-Polaris, Senator Stewart Mine, Original Bullfrog, Happy Holligan (Patootse), Happy Camp, Niterville Groupe, Homestake, Golden Bar, Mayflower and Tramps Consolidated.



Caption: Mohawk Mine at Goldfield Nevada, Western Mining History, 2023g; <https://westernmininghistory.com/4210/gold-districts-of-nevada/> accessed Dec. 12, 2023.

The T&T Railroad never made it to either the Tidewater (San Pedro), or Tonopah. Those places were served by the LA&SL, B&G, and T&G railroads.II.

REFERENCES

All references in this report are listed at <http://www.greggwilkerson.com/iv-references.html>