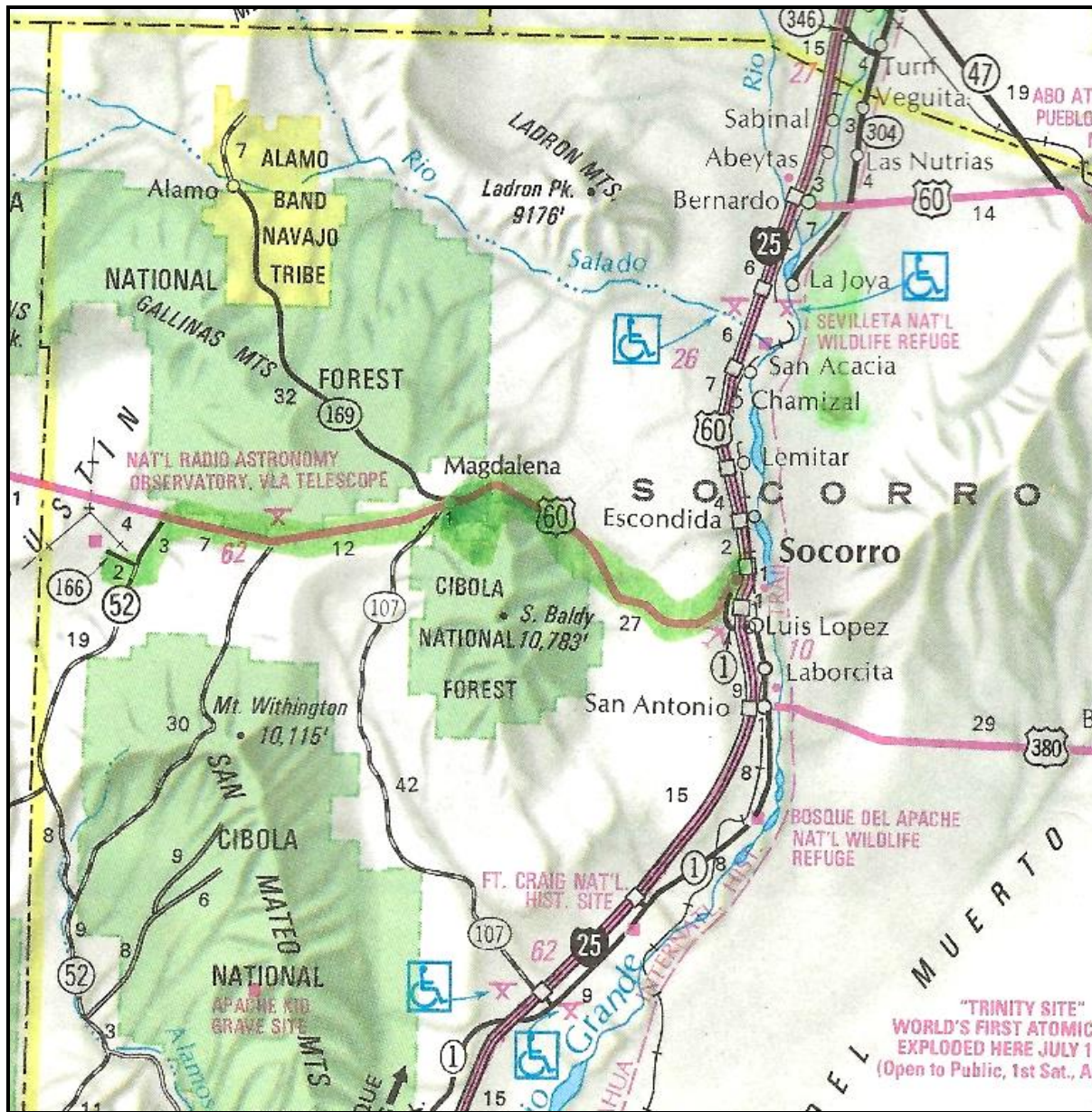


Ghost Town Tour: Kelly, NM

Sunday, June 11, 2023





Detail from the State Highway Map of New Mexico. Our tour will start at the Macey Center, NM Tech, heading through Socorro to US 60 west. Along the thirty-mile route to Magdalena, we pass the site of Park City and Billing smelter, follow the abandoned railroad branch, and go northwest around the Magdalena Mountains into historic Magdalena. In Magdalena, we turn left on Kelly Road for the three-mile drive to the Kelly church (see map page 4). After visiting Kelly ghost town, we drive US 60 to the Very Large Array visitor center. We will return the way we came, following U.S. 60 through Magdalena and back into Socorro.

Ghost Town Tour: Kelly, New Mexico June 11, 2023



Time schedule, approximate

8:15 a.m. Leave **Macey Center** parking lot in a car caravan of twenty cars winding through NM Tech campus and Socorro via Olive Lane which becomes Neel which becomes Grant which becomes US 60 (basically the same road with name changes—just stay in the same lane and follow the pavement).

The **Billing Smelter site** is on the north side of US 60 as we leave town. The former railroad spur off the Magdalena branch can be seen heading to the site.

We drive west on U S 60 thirty miles from Socorro to **Magdalena**. Note abandoned railroad grade along highway, Magdalena Mountains to west of highway.

9:00 a.m. The car caravan turns left on paved Kelly Road in **Magdalena** for the two-mile drive to the site of the **Graphic smelter/Ozark mill site**.

9:10 a.m. Road forks at **Graphic smelter/Ozark mill site**. Turn left up slow, dirt rough Kelly Road one mile to the **Kelly church**.

9:20-12:00. At **Kelly Ghost Town** site. We will break into two groups for presentations and explorations of the site. We will eat prepared lunch boxes at Kelly area.

Note: Some participants may wish to spend more time in the Kelly area and skip the next part of the tour, that to the Very Large Array.

12:00 Leave **Kelly** back down Kelly Road to U.S. 60 in **Magdalena**, turn left for pit stop at gas stations, if needed, then drive thirty minutes to the **Very Large Array** visitor center.

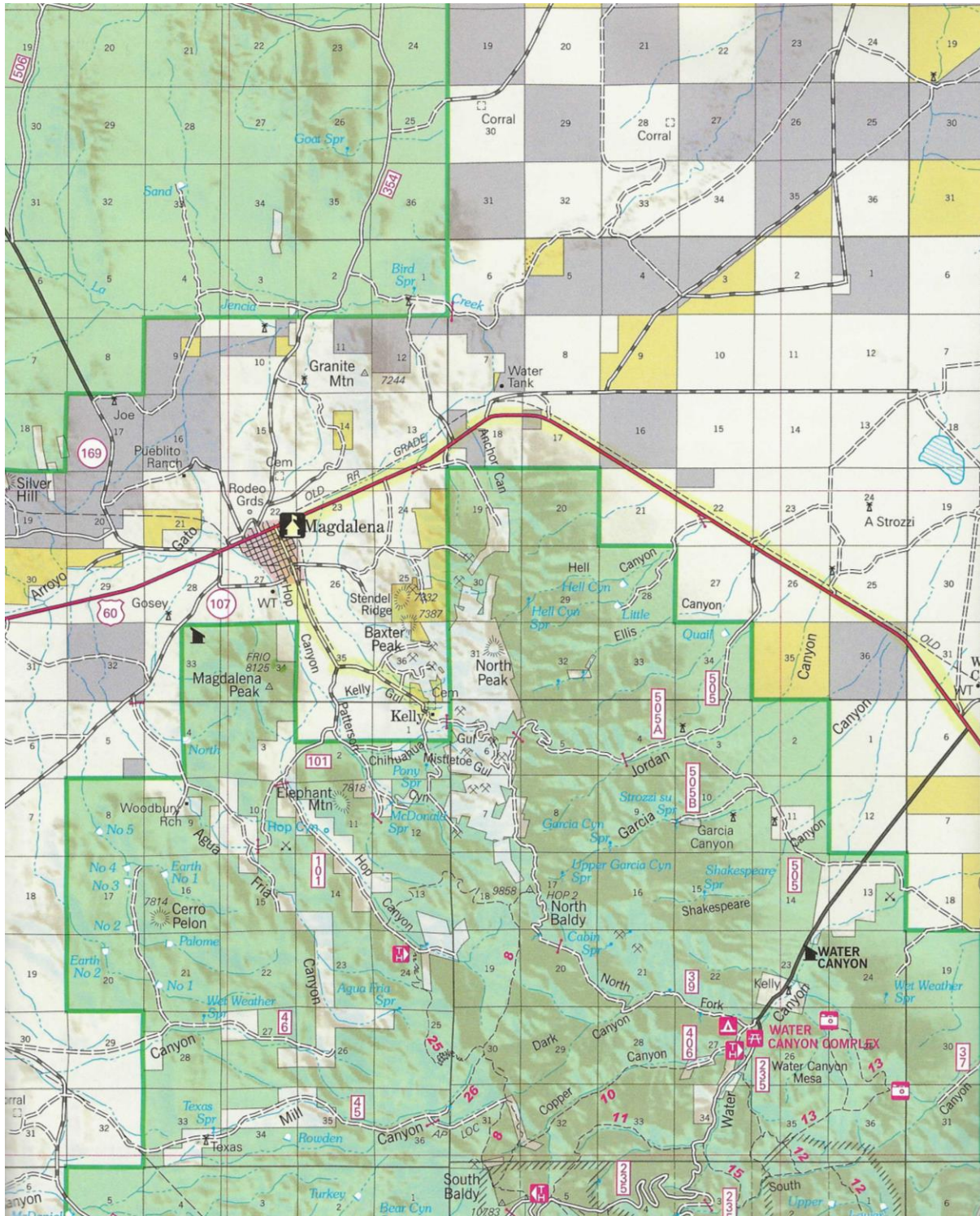
12:45 At **Very Large Array** visitor center, check-in (tour participants with the MHA will have entrance fee paid, and can enter any time after 1:00).

1:00 – 3:00 Tour participants have access to the **Very Large Array** public grounds, self-guided tours, and the visitor center programs.

Note: We will not set a return departure time, participants can leave on their own schedule. Allow an hour or so for your return drive-time via U.S. 60 to Socorro. For those who wish to stop on the way back, We will have a tour guide brochure of **Magdalena** available.



Kelly Church



Detail from the Cibola National Forest map showing the Magdalena Mining District area, Magdalena, and Kelly. We will travel U.S. 60 west to Magdalena, turn left at the Cibola National Forest office onto Kelly Road, and drive the three or so miles to Kelly church. We will walk to the Kelly ghost town sites.

Introduction to the Magdalena Mining District

- 1) How to get there: Drive from Magdalena three miles via Kelly Road to Kelly.
- 2) What you'll see: Number of ruins from the mining era related below.

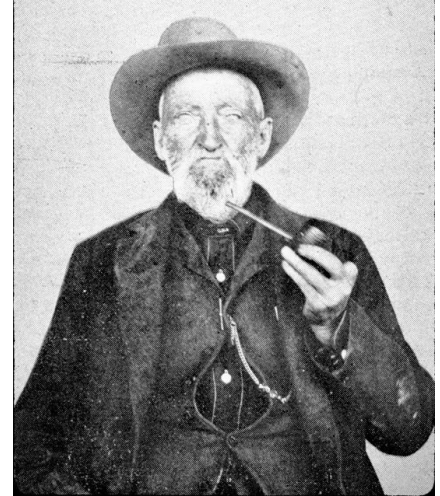
The Magdalena District has been one of the more productive mining districts in New Mexico. Located about 65 miles southwest of Albuquerque and about 28 miles west of Socorro, it comprises the northern part of the Magdalena Range. During its most productive years, from 1881 to 1930, it started as a chiefly silver-lead district with numerous smelters, then with the discovery of zinc carbonate ore, ca. 1903, and with the erection of mills to treat the complex sulphide ores, zinc became its most valuable product. Up until 1939, the district produced \$29,410,112 according to the USGS. (Loughlin and Koschman, "Magdalena District," 1942).

The primary producers have been the Kelly group and the adjacent to the north Graphic-Waldo group, but claims have been staked along the range from north to south. We know little of the first miners, nor the Spanish who followed. Early prospectors noted early workings, probably Mexican period, when they began staking claims in the 1860s. The documented historic period, 1865-1945, can be divided into several periods where one type of activity dominated. Since our tour group will visit the Kelly townsite and mine, we'll focus on it more than the other mines along the range.

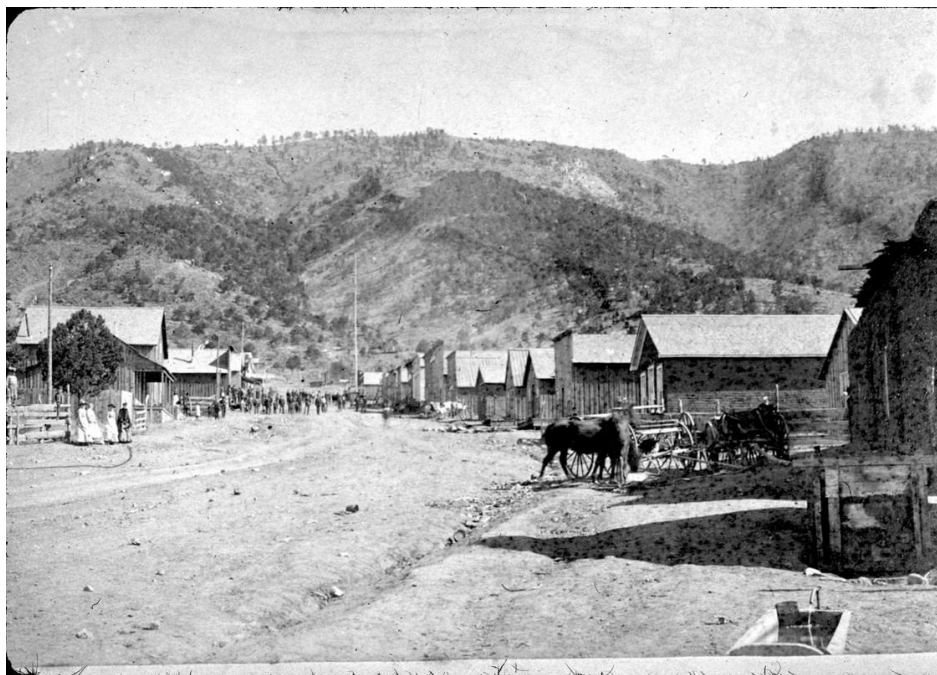


Kelly ca. 1905 from above Kelly mine workings, westslope of the Magdalena Range.

Prospector era: During the 1860s, prospectors searching for a second California, found traces of gold at numerous sites including Water Canyon east of Kelly. For the tale of discovery of silver at Kelly most sources credit J. S. "Old Hutch" Hutchison (at right) for discovering the district in 1866, then was followed by Patrick Kelley (misspelled later as Kelly), who first staked the Kelly claim. A dozen claims were staked around it, but the first excitement did not occur until in 1871, when a group of miners from Colorado arrived, organized the Spring Hill Mining District and blanketed new claims around the older ones. This group built houses or cabins and started a post office named "Socorro Mines" at South Camp in Patterson Canyon. At the Kelly mine, a cluster of cabins called Middle Camp arose around Hill Springs. Tales are told of them building eight crude adobe furnaces to work the silver lead ores and shipping the results to St. Louis for refining. Successful smelting by Col. Ethan W. Eaton lasted into the late 1870s. Nascent Kelly camp with "Eaton Street" as main street and Eaton as postmaster, and a store operated by Hutchison grew below the Kelly mine.



The Boom, 1880-1893: The Rocky Mountain West entered its silver boom phase in the late 1870s, exemplified by Leadville and Tombstone, and Kelly followed. Smelters were built near Kelly and at Socorro, with the largest complex, the Gustav Billing smelter at Socorro, acquiring the Kelly mine in 1882. The Graphic mine was sold to easterners who also operated a smelter in Socorro. Eaton installed a blast furnace at South Camp to work the lead carbonate ores – a replica of works in Leadville -- but was short lived. Success and expansive growth came with the railroad, built 1884-5 by the Santa Fe from Socorro to Magdalena. Production grew to over a million dollars in silver lead shipped per year. Kelly became a boomtown with rough edges, shootings, expulsion of Chinese, and more. The

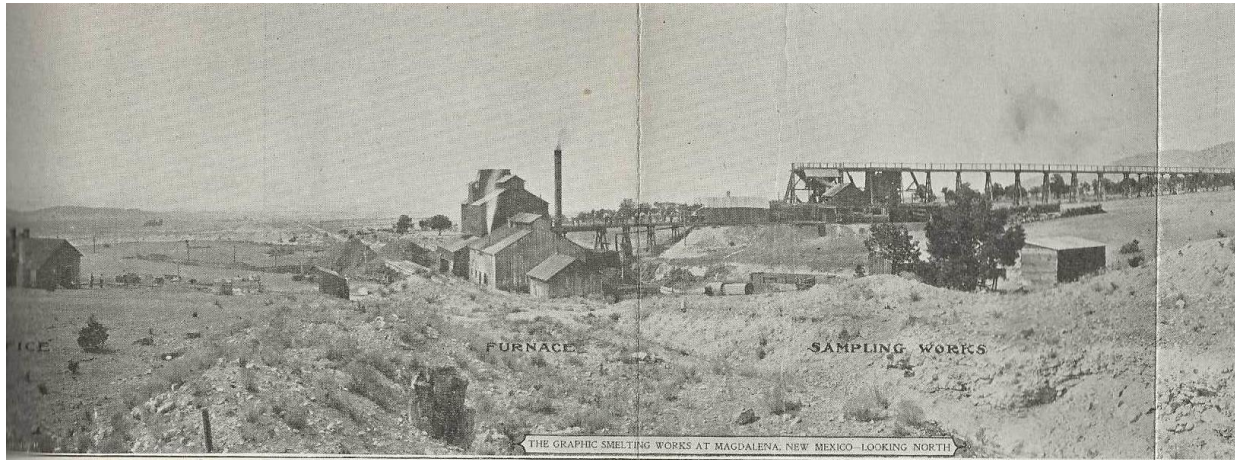


photographs of Joseph E Smith document the 1880s boomtown (at left, Eaton Avenue, ca. 1885), its businesses, mines, homes, workers, etc, while several authors have written about this period: Ashcroft, Eveleth, the Shermans, and others. Experienced miners came from Colorado or were immigrants from southern Europe as well as camps in old and New Mexico. Business directories estimate 500

population; boosters say 3,000. "Kelly" post office was established in 1883. At the Graphic-Waldo group a camp called North Camp served its miners, while South Camp with its dance halls and saloons

and boarding houses, which in the 1870s had the largest population, now moved to Kelly. The boom in the district lasted until about 1890.

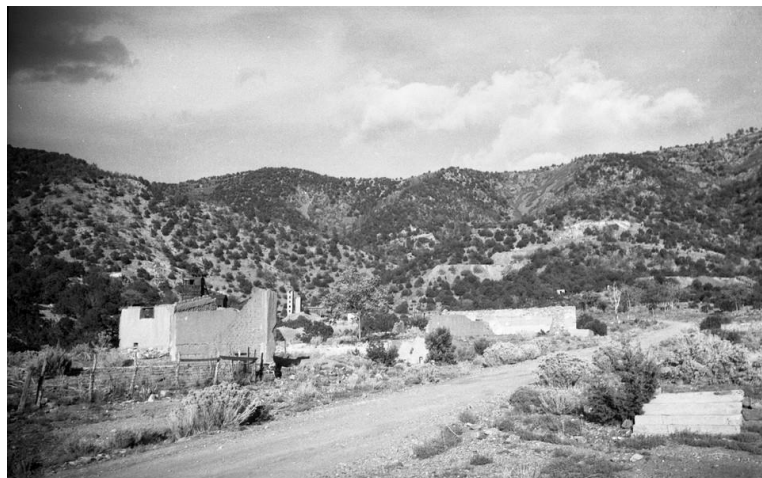
Rough Years 1893-1904: The financial panic of 1893 and the silver crash shut down the major mines, Graphic and Kelly groups, displacing workers. The camp was nearly depopulated as the smaller mines closed as well. The Billing smelter closed never to reopen. In 1896, an engineer from Indiana,



Captain Asa B. Fitch with Col. Eaton reopened some of the mines and built a large smelter a mile from Kelly (above). The Graphic smelter helped operations to continue, miners work, and the town survive. Several miners had noted zinc ores in the silver-lead deposits and by 1903 increased demand for zinc brought interest from big corporations. In 1904, Sherwin Williams paint company bought the Graphic mine and as Ozark S & M Co. began major development bringing about the next boom. At the same time the Tri-Bullion company acquired the Kelly from Mrs. Henrietta Billing.

Revival and Boom 1905-1918: With the opening of the zinc deposits the town of Kelly expanded –becoming the largest producer of zinc in the territory. New mills were built at the Kelly and for the Graphic (see below). New more permanent buildings appeared along main street, and the companies built large boarding houses and office complexes near the mines. Newspapers in Magdalena and Socorro included news about the social life of a bigger, but tamer Kelly though the 1913 Sanborn map and 1912 business directory lists a number of saloons. Also, because of the lack of a railroad to town, the major growth for the period occurred at Magdalena which became the banking as well as railroad center. The peak production years occurred during the high mineral market prices during World War I.

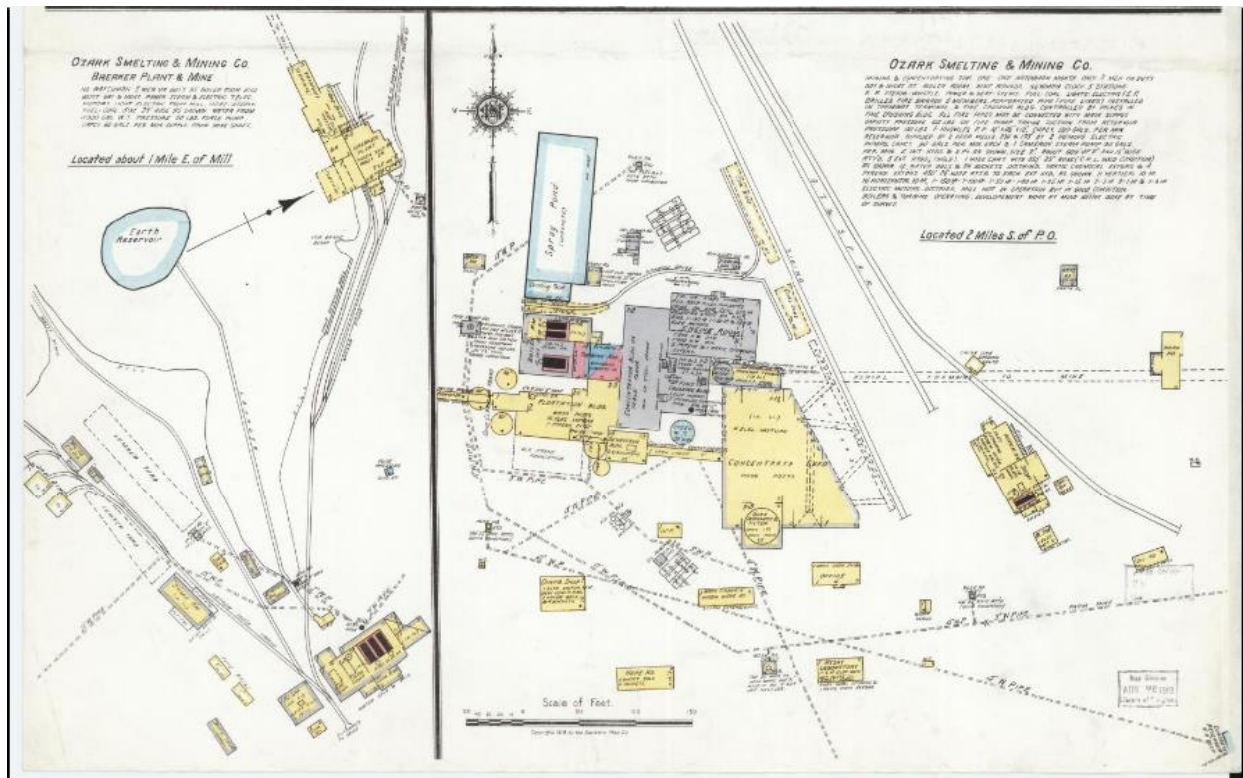
Hanging On, 1919-1945: The Empire Zinc company had acquired the Kelly mine in 1913 and continued sporadic operations during the mineral market post-war decline. The Ozark plant closed for good in 1927. Kelly survived on the number of smaller leasing operations around the district. With the financial collapse of 1929 all but a few small leases and prospects closed; the post office closed 1945. In 1953, Muriel S Wolle was first to publish on Kelly as a ghost town.





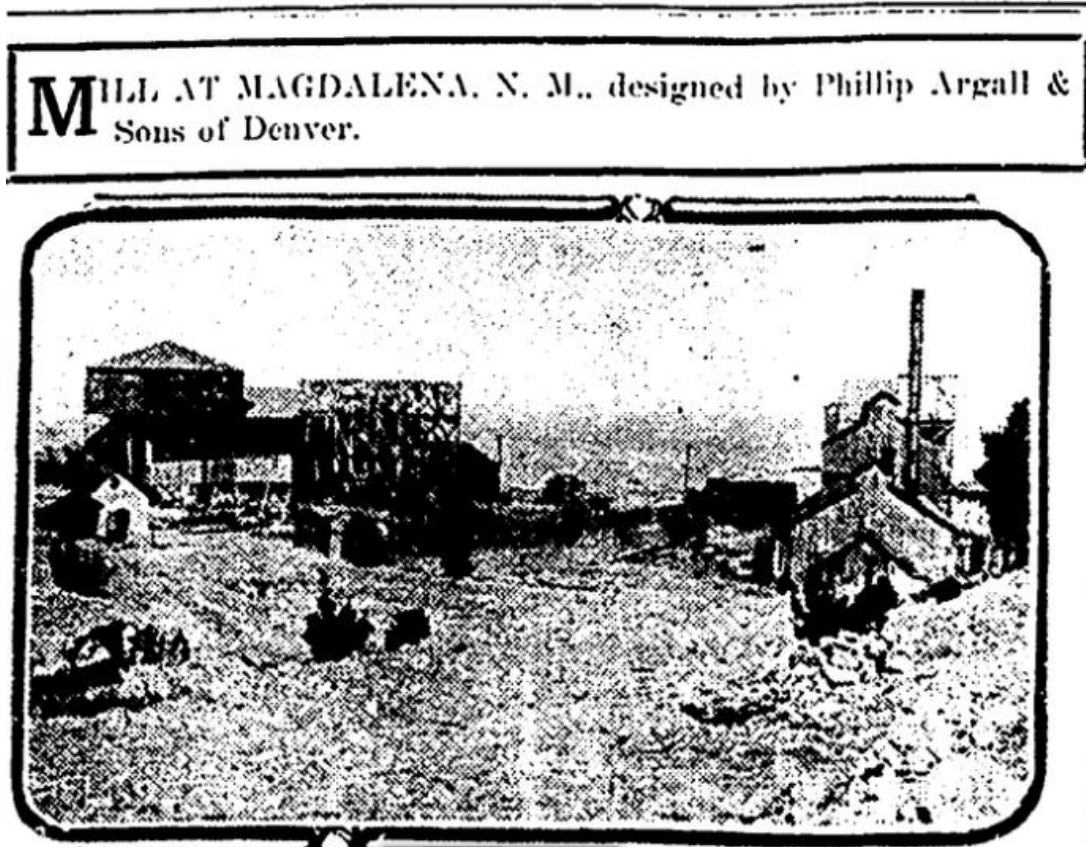
Above, Photo of Waldo tunnel, crushing plant and Ozark flotation mill in distance, ca. 1920

Below, 1919 Sanborn map of Ozark Smelting & Mining Company's Waldo tunnel and crushing plant, left, and the flotation mill, right, at end of railroad spur, the "Kelly switch," 2 miles south of Magdalena.



The Ozark Mill of the Graphic-Waldo Mine

- 1) How to get there: Drive south from Magdalena two miles on Kelly Road.
- 2) What you'll see: Foundation ruins and slag from Graphic smelter and Ozark mill.



Ozark flotation mill designed by Phillip Argall in *Denver Post* (1914) and ruins 2023.

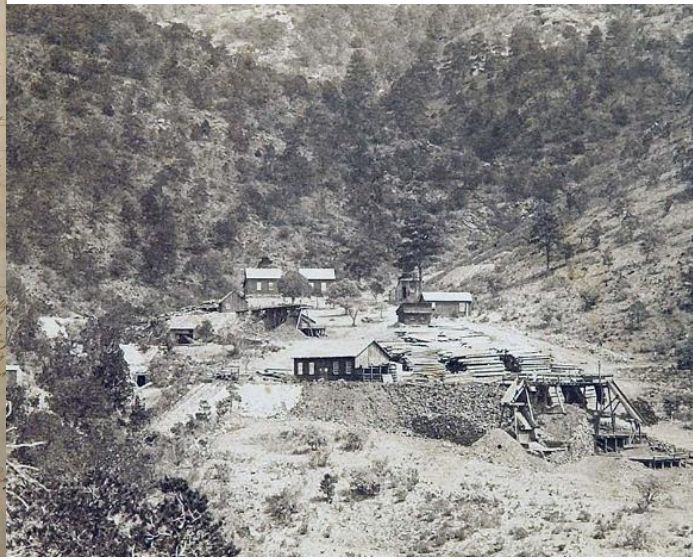
(116) Mining Claims
Mining Claim of P. H. Kelly

21st This is to certify that on the 21st day of October 1867 I located a claim in the
known as the Eastern Lode and Lode being
described in the certificate of discovery of said
Lode by the W. Jones said Lode being with
of said Lode and Lode being with
a monument of stones used to mark the
western termination of Claim No. 1 with
on said Lode and containing there within
three hundred feet to another pole of stone
used to mark the termination of said
Claim No. 2 north

Sincerely I signed to you in a place of
peace, in and for the County of Jackson, P. H. Kelly
for himself and as the owner of said Lode and Lode
Always in the County of Jackson, P. H. Kelly
is this of his own knowledge and that he
witnessed the location of said monument
of stones

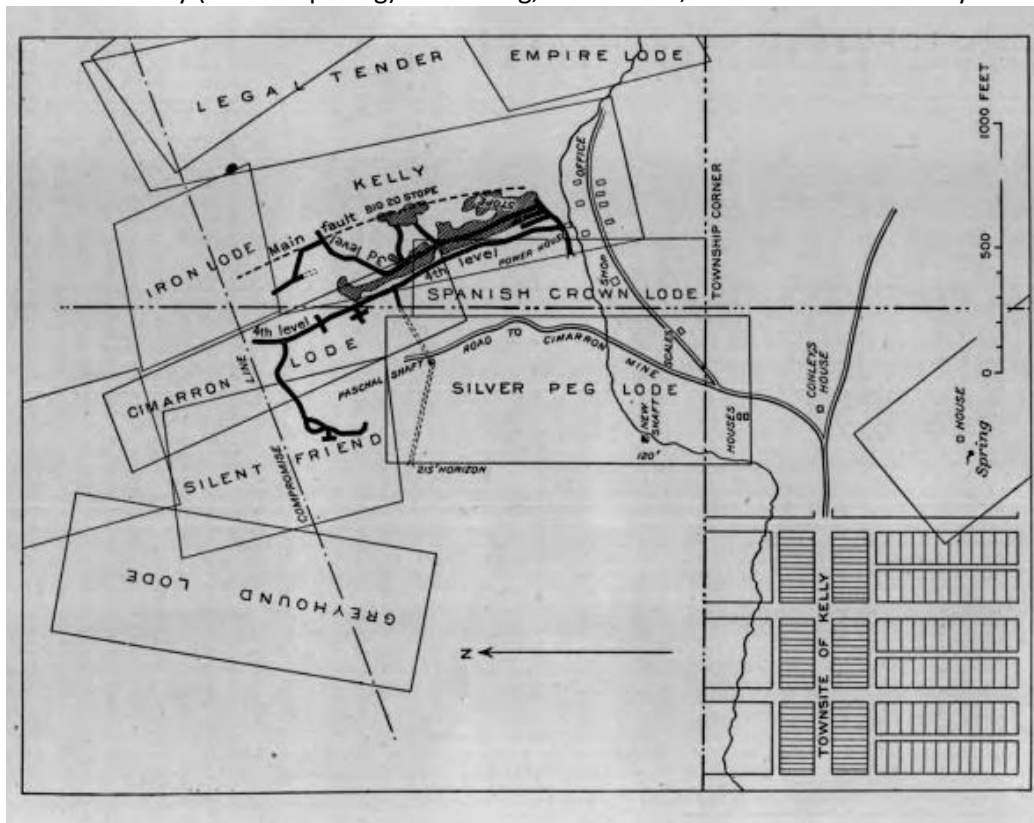
Signed and Subscribed before me
this 22nd day of Oct 1867
Brent J. Fox
Justice of the Peace

To wit: William J. Fox
Jury



Patrick H. Kelley (correct spelling) claim filing, October 22, 1867.

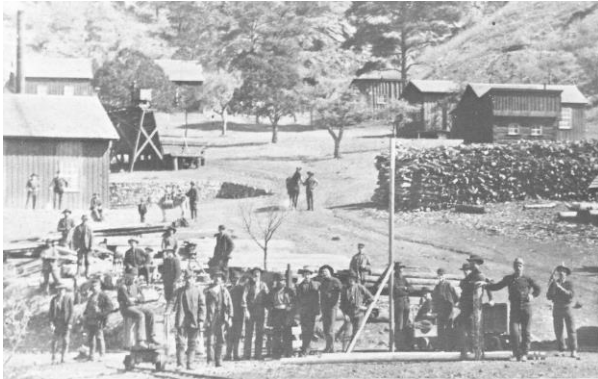
Kelly mine 1880s



USGS 1910 plat map and image of Kelly group with camp buildings in the gulch and workings into the ridge at left. The Juanita workings are into the ridge at right. The plat of Kelly townsite is inaccurate.

Introduction to Kelly Mine

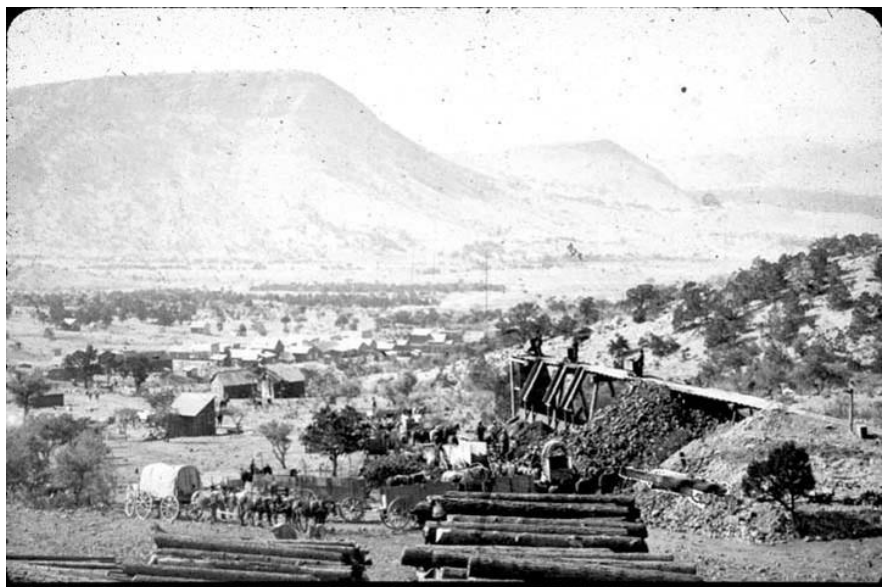
- 1) How to get there: At the end of Kelly Road into the Magdalena Mountains take passable but rough 4wd road 1300' beyond to mine site.
- 2) What you'll see: A note of caution, mine site is open and dangerous requiring extreme caution. The Traylor headframe and the zinc furnace structure are the most distinctive features at the site.

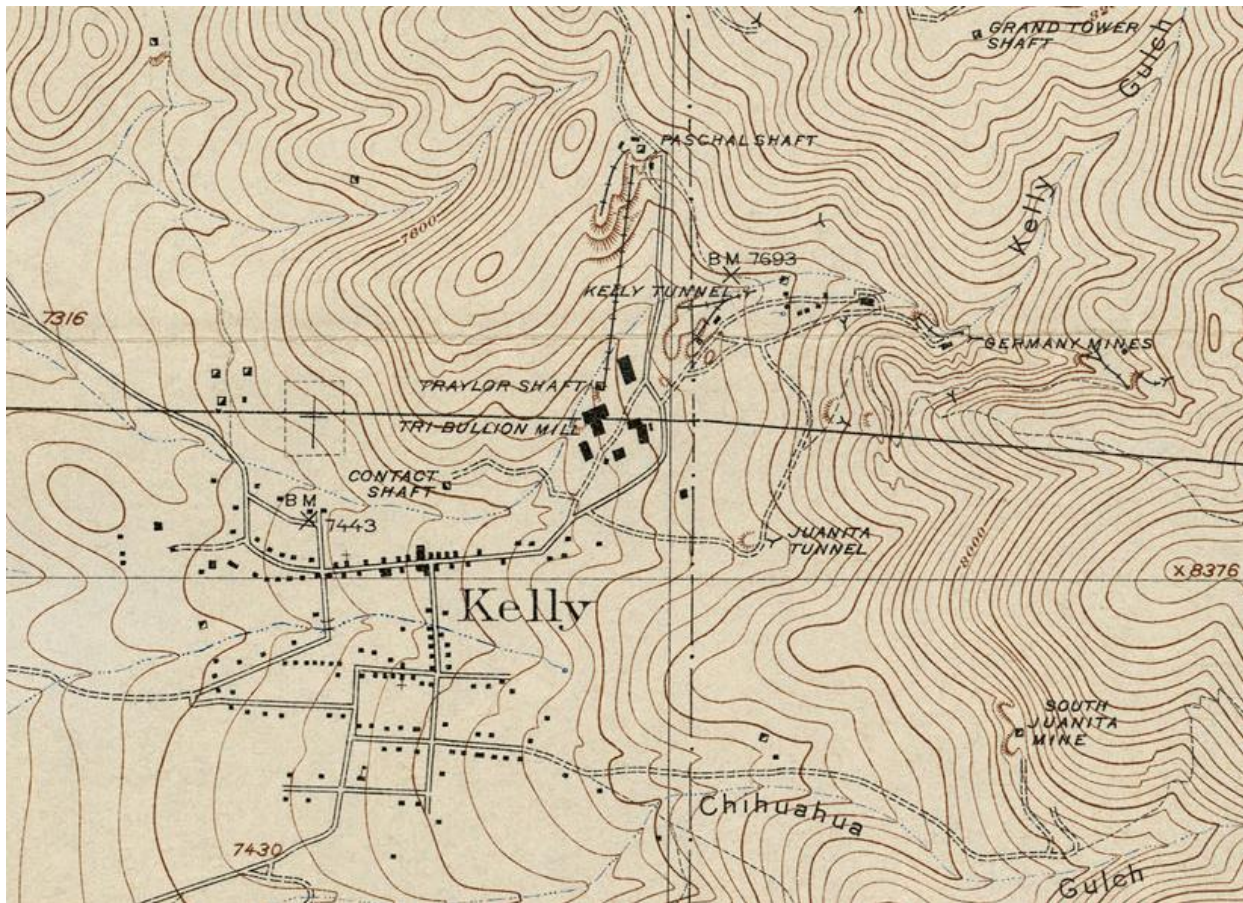


The Kelly mine has three layers of a mining landscape. The first, the 1860s-1870s, has all but vanished. Owners dug tunnels into high grade outcrops and worked their ore in adobe or Mexican blast furnaces of a ton per day output. This was a sporadic operation replaced and boomed when Gustav Billing, an experienced mine and smelter operator from Leadville, acquired the Kelly in 1882. He transplanted Leadville technology to open the mine and process the ore. His manager, J H Huber,

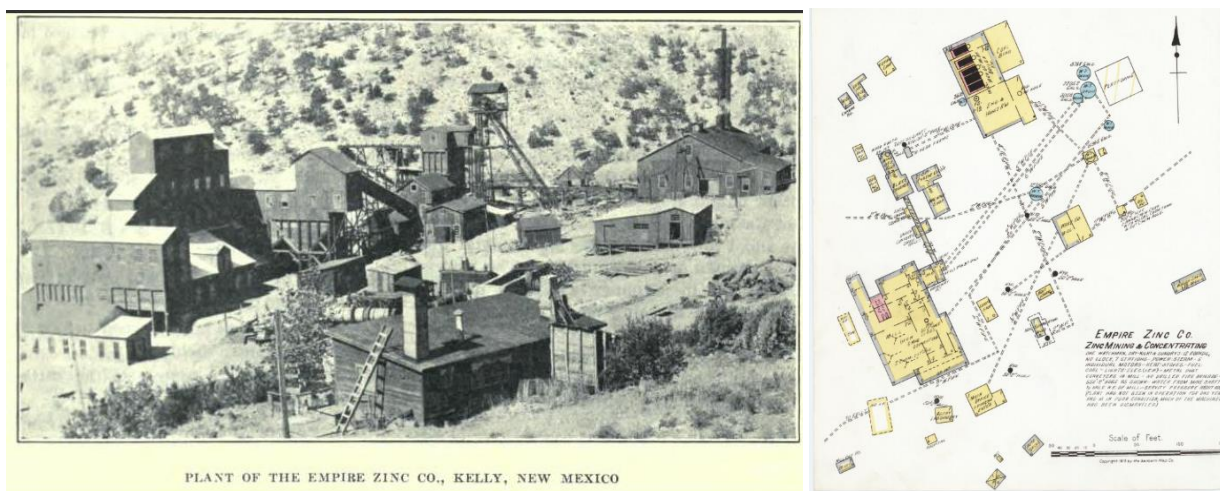
formerly of the Iron Mine, Leadville, kept a crew of fifty to one hundred and fifty miners at work through the 1880s. Shown in images of the time, the Kelly mine was worked by tunnel, the site still accessible. Mining outbuildings, assay office and blacksmith shed were near the entrance. Until the completion of the railroad, mule teams pulled wagons carrying ore to Billing's Socorro smelter. In 1885, with the completion of the Kelly spur to within a mile of the mine, a short-lived surface tram was built through Kelly camp to Kelly switch. Col. Eaton built the tram to serve his Juanita mine and the Kelly; it shows on the ca. 1884 Kelly townsite plat map. The Billing smelter produced five million dollars worth of silver lead during the years

before Billing's death. Lessees worked the mine scavaging for lead carbonates. The smelter was closed in 1893, and later removed. Billing's widow leased the mine out until the discovery of zinc ore brought the Tri-Bullion company's backers to Kelly. They paid \$300,000 for the mine and began new developments in 1905, the next evolution of the Kelly mine landscape.





"Magdalena District, NM," 1932 edition, surveyed 1910 and 1929. Tri-bullion's Kelly mine operation showing original Kelly tunnel, the Paschal shaft on the Cimarron claim, and new Traylor shaft on the Silver Peg claim. A surface tram connected the Paschal shaft with the Tri-Bullion mill.



Traylor shaft, upper center, Tri-Bullion mill and power plant from *Mining & Scientific Press* (1917) compared with Sanborn plat map of 1919. By then Empire Zinc controlled the Kelly mine.

Tri-Bullion Smelting & Development Company at Kelly Mine

ASTONISHING RICHES
THE TRI-BULLION SMELTING AND DEVELOPMENT CO.

Is the owner of developed Copper, Zinc, and Lead shipping mines, with clear title to 600 acres of mineral land in New Mexico, Arizona and Montana. The Kelly Mine in New Mexico has produced six million dollars of ore above the 200 foot level. According to the estimate of Samuel W. Traylor, Consulting Engineer, there is now blocked out in this mine alone 400,000 tons of ore, having a gross average value of \$22,000,000. The present three compartment working shaft is being sunk at the rate of 75 feet per month. During the present year there will be blocked out 1,000,000 tons of ore, having an estimated gross value of \$55,000,000, and extensive development work until the reserve ore in sight will reach five million tons. When reduction plant is completed, the net profits will reach very high figures. There are few mining companies of record which have a more brilliant future. We advise the purchase of this stock at once as a profitable investment.

"When My Ship Comes In"

ASK YOUR BROKER ABOUT -
TRI-BULLION
Smelting and Development
CO. STOCK.

IT IS a proposition of great merit. Ample working capital. Already producing. In the hands of mining men of ability and experience. Can be bought and sold on New York "Curb."

Some of the people who developed NEVADA CONSOLIDATED, in which MILLIONS WERE MADE, are behind this.

There's going to be a Big Advance in this stock. Investigate—it will pay you.

time to time, trusting that an e will come to us. I stated in ent could be made in the pur- melting and Development Com- of this stock at \$2.37 1/2. This Curb at \$3.25 per share and my filled. At the same time the nd in purchasing this stock at se same as it was a month ago. r best citizens is a local direc- tioned standing and reputation. a my friend for some ten years ends which this Company will successes of Tri-Bullion of the owned by the company are not point to a dividend in July.

The third and most evident of the Kelly mine landscape appeared between 1906 and 1909. A prominent attorney from Butte, Montana, Howard Paschall, caught up in the speculative frenzy in the first years of the twentieth century organized the Tri-Bullion Smelting & Development Company, bought mines in Montana, Arizona and the Kelly in New Mexico and began promoting them shamelessly on the "curb." (left)

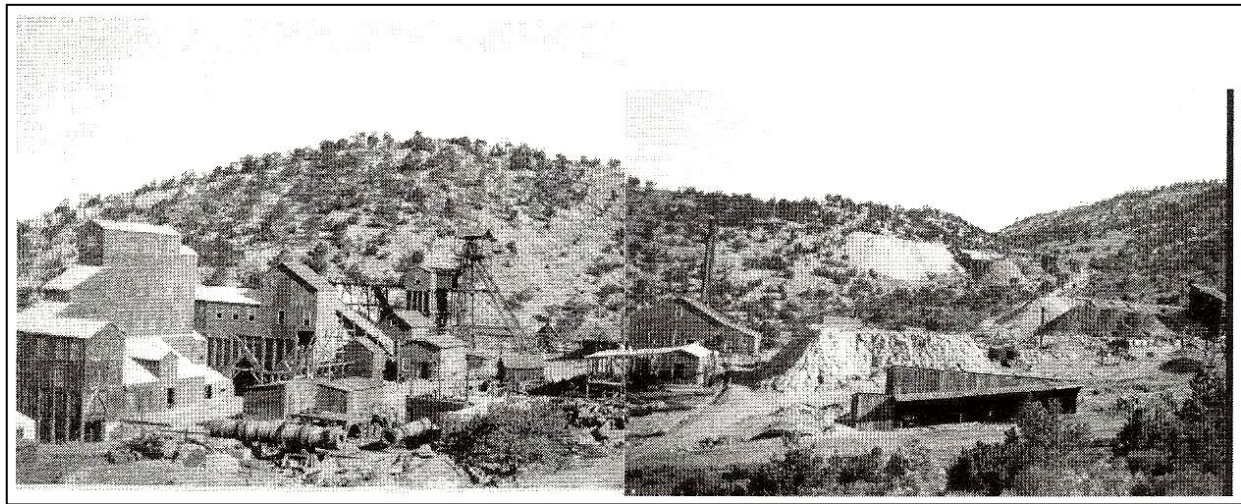
The discovery of valuable zinc carbonates made the Kelly a fortunate investment at first, and the company hired mechanical engineer Samuel W. Traylor (right) to expand the physical plant at the



Kelly mine. In 1906, his Traylor Engineering Co. of Allentown, PA built a surface plant "over the Kelly mine that has not an equal in the Southwest." Period sources describe the plant: A large 3-compartment, 15 x 4.6 shaft was sunk with two skipway compartments and a steel gallows frame, 121 feet high with twin sheeves at top. The skips were hoisted by a two-drum hoist, built by the Danville (IL) Foundry and Machine Co. The third compartment was for piping and a man-way. The 8-ton skips raised the ore from the general levels and dumped automatically into cars, which were trammed along a trestle to the adjacent concentrating plant. Within a year the Kelly mine's "Traylor Shaft" had reached 400 ft. below the major orebody of zinc, lead and copper. Traylor experimented with and organized a series of milling steps that included magentic seperation, roasting, and traitional gravity separation by Hancock jigs to work the complexes ores. Zinc concentrate was shipped to the Tri-sate region. Tri-B and the Magdalena Mining District became the state's largest zinc producer during the early twentieth century. The panic of 1907 and over extended bond debt put the Tri-Bullion in trouble, extricated by restructuring and a final wise choice to lease their operations to the rising Empire Zinc Co, a subsidiariy of the New Jersey Zinc Company. Local mining man, Cony T. Brown became manager during the prosperous 1910s.



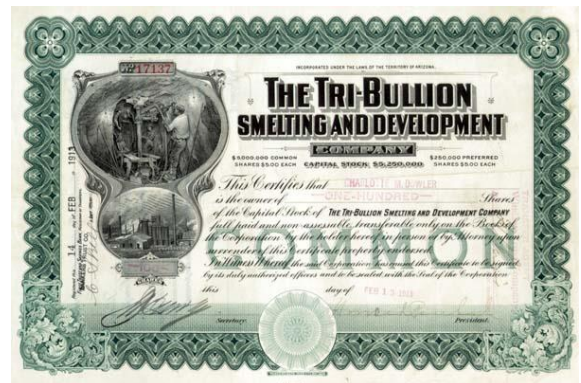
Headframe at Traylor shaft and mill and furnace ruins 2023



USGS 1916 photograph of Traylor shaft and the surrounding mill, furnace and concentrator. The Paschal shaft is on the hillside at right. Top comparison photograph from May 2023 taken from Juanita dump. Empire Zinc acquired the operation during the peak mineral prices of World War I when the Kelly district was the most productive zinc district in New Mexico.



Stock to double in value advertisement
Wall Street Journal, April 11, 1907



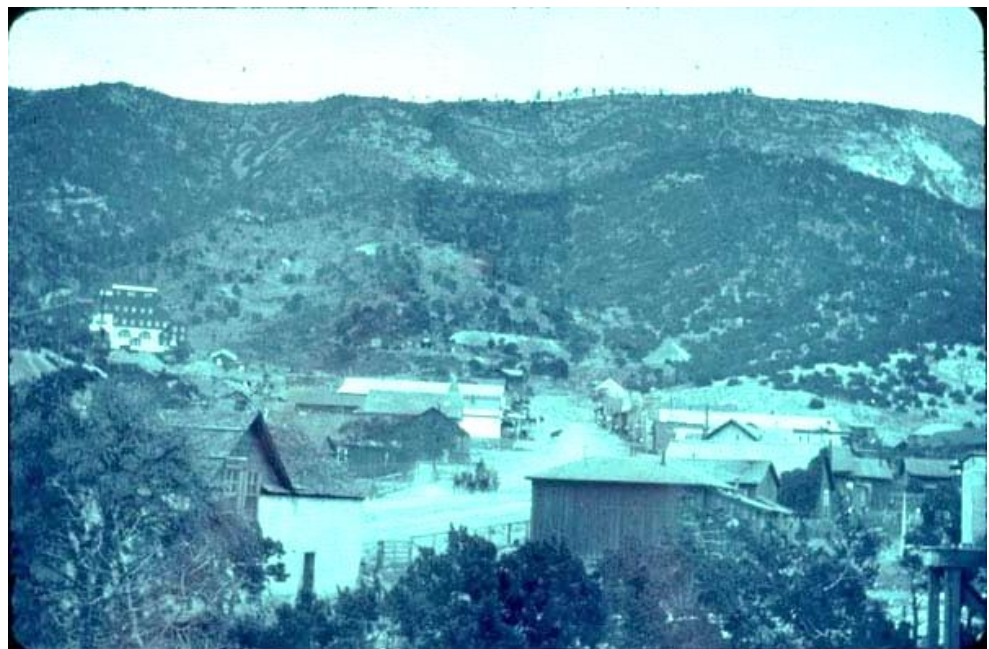
Tri-Bullion becomes Empire Zinc at Kelly Mine



Empire Zinc had purchased claims in the Kelly district as early as 1907, but not until the purchase of the Kelly mine from Tri-Bullion in 1913 did it become a major producer. The physical plant at Kelly was refitted to work the complex zinc, iron, lead sulphides, especially after a fire burnt the furnace, which was rebuilt. With the beginning of World War I in Europe in 1914, mineral markets skyrocketed in value, and the Kelly district began several years of great prosperity, with more men employed, some 500. Monthly shipments hit 2500 tons copper, 1,000 tons zinc, and 2,000 tons lead ores and concentrate. With opening of the Lynchburg mine to the south and increased work at Kelly, the Empire company built a row of dwellings for officers and expanding number of workers. A large number of experienced miners from Mexico were hired in the mines. Mutual aid societies like the Union Fraternal de Ayuda were organized in Kelly to help them acculturate to the United States (banner left). The Alianza Americano built a grand hall on Eaton Avenue. Talk of a strike in

1917 was averted by pay increases both by Philip Argall at Ozark and Cony Brrown at Empire. The company was considered a good neighbor, supplying workers a team of horses and wagon for Kelly's annual clean-up day. Then, in February 1919, Empire Zinc closed the mine during the post war slump. Without recovery, the mill was dismantled in 1922. Lessees worked the mines, and the Empire company reopened or leased the Kelly over the next two decades, but operations were small scale. World War II scrap drives removed much of the remaining evidence of the once big-time operation leaving a ghost town landscape.

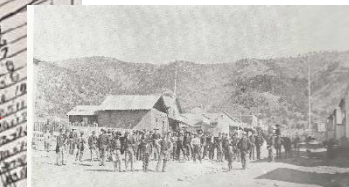
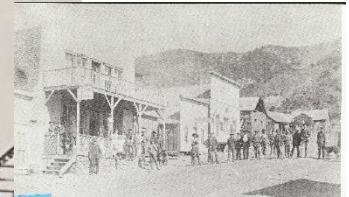
Looking up Eaton Avenue in prosperous Kelly, with Empire Zinc's Tri-Bullion mill at left, July 1915.



Photos and ca. 1884 Kelly Townsite plat by L. M. Brown, courtesy NM Bureau of Geology and Mineral Resources



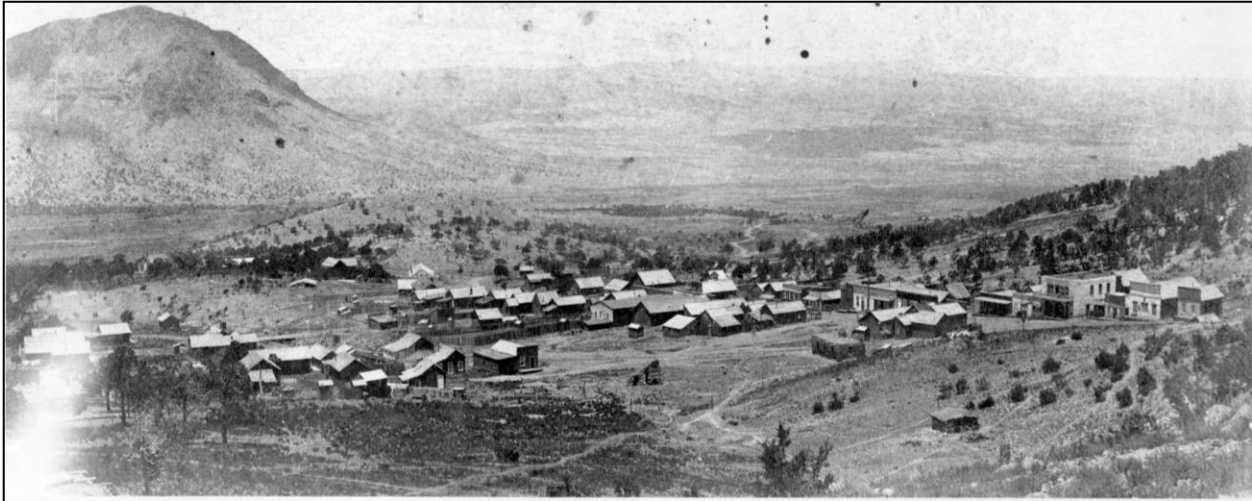
The Eaton tram road, Kelly mine to railroad



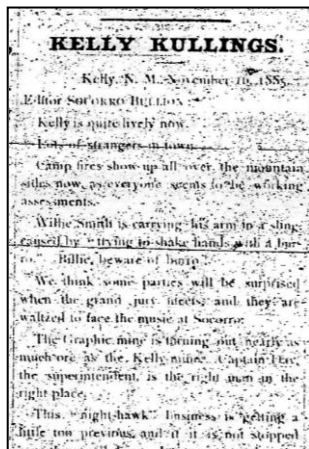
Arrows point in the general direction of photographs, or to the structure in the image.

Kelly Townsite

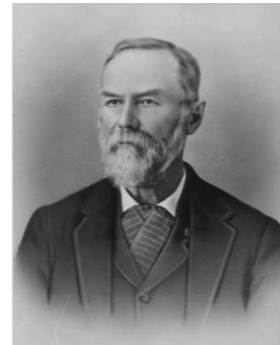
- 1) How to get there: Drive Kelly Road from Magdalena three miles to Kelly church.
- 2) What you'll see: Foundation ruins, artifacts, cemetery, and street grid of ghost town.



What began as a cluster of cabins and adobe structures called Middle Camp, near the Hill Spring, became Kelly after the sale of the Kelly mine in 1882. Col. E. W. Eaton (right) was already working the

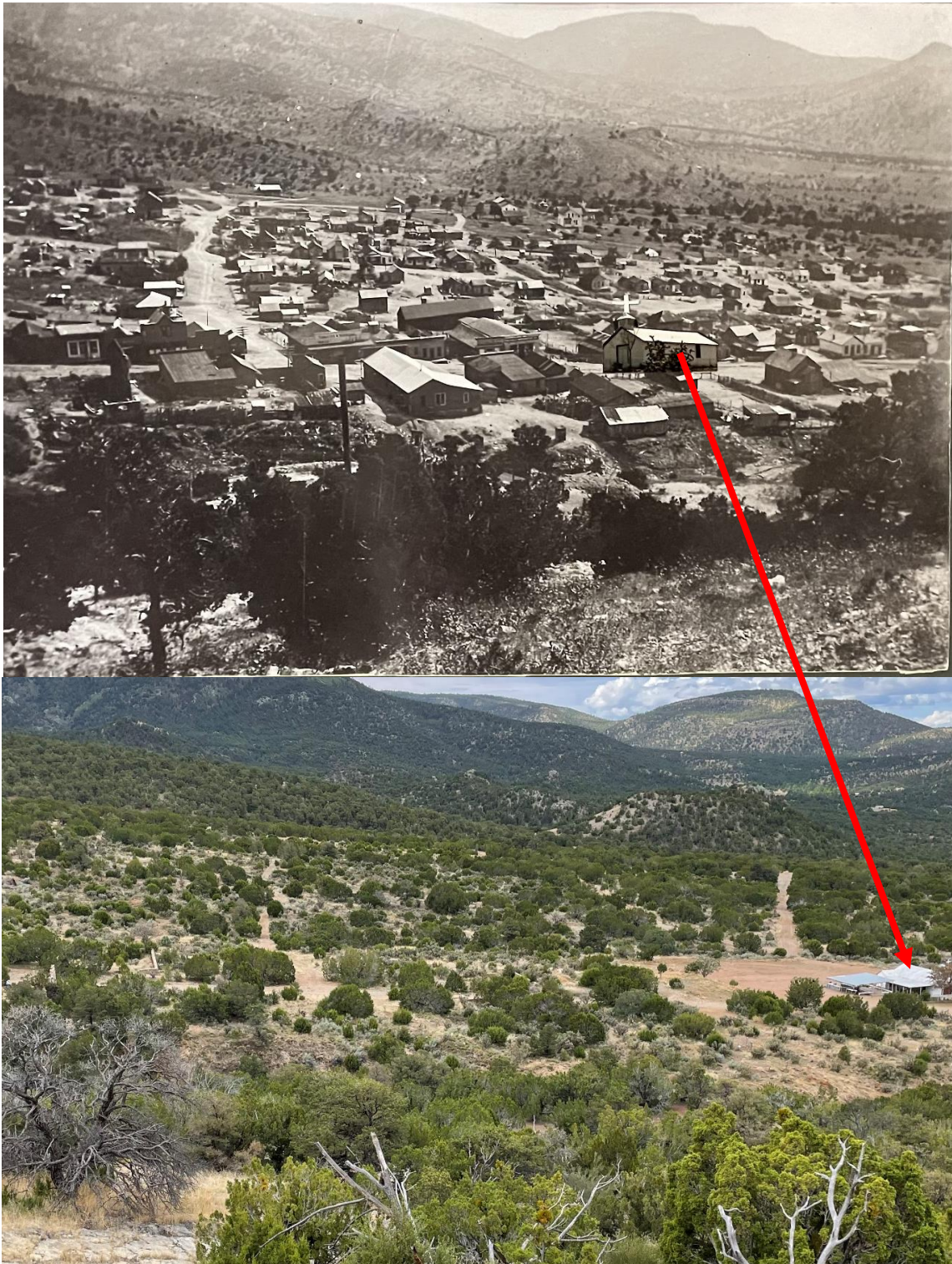


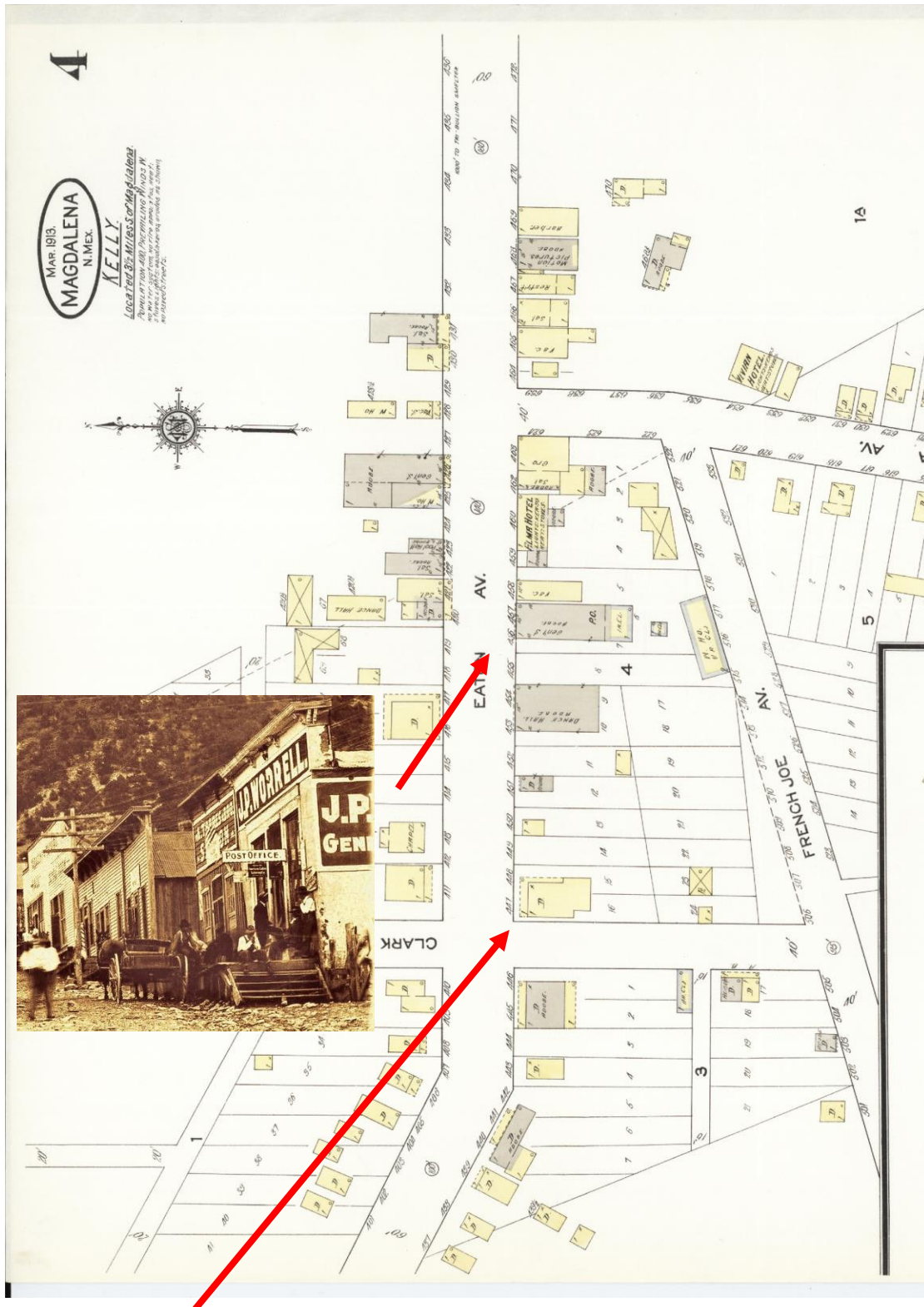
Juanita adjacent the Kelly mine, when he offered to sell lots cheap on his Spring mining claim and plat a town. Surveyor Leonard M. Brown prepared a map of the Kelly townsite, which was quickly claimed by a townsite company adjacent Eaton's lots. During 1883-1884, Kelly became a boom town of newly constructed businesses of wood or adobe. Early was H. A. Robinson who became postmaster in 1883 and built a general store on Eaton Avenue, the camp's main street (now Kelly Road). He was also a trustee for the townsite company and booster for a school house, also built in 1883. Kelly's overall shape was set for the next fifty years. Fires



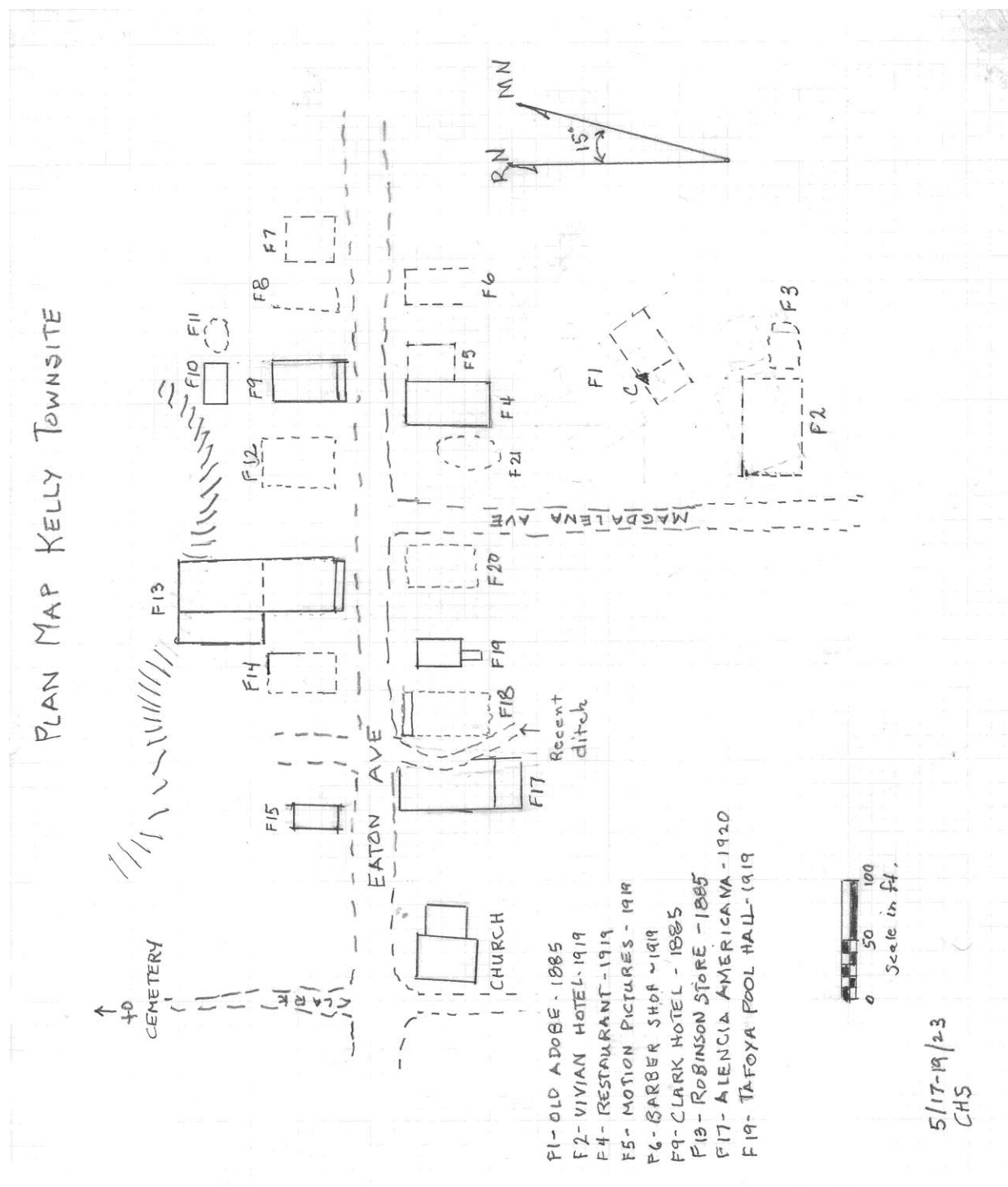
impacted growth with the 1889 blaze destroying much of the businesses on the north side of Eaton. The crash of 1893 ended the first boom, but the discovery of zinc and the building of new plants in 1907-1909 brought a revival with the town reaching its peak prosperity in the 1910s. New buildings were built and in 1918 a large meeting and dancing hall for the Alianza Americana opened on Eaton Avenue. The make-up of the community had evolved from 1885 mostly American born to southern Europeans taking over early in the twentieth century, then a large immigration from Mexico during the Mexican Revolution. A fire in 1915 took many of the buildings along the south side of Eaton. A few shops, the Kelly Mercantile, held on especially after the closures during the 1919-1921 depression, but a brief revival in the twenties ended with the Great Depression. By 1950, Kelly was a ghost town.

Kelly ca. 1907. Businesses line Eaton Avenue, left to right, east to west. Below, on May 17, 2023, only the Kelly church stands, located at the corner of Eaton and Clark avenues, while building ruins abound. (A photograph of the Kelly church is pasted onto the ca. 1907 image, corner of Clark and Eaton).





Site of Kelly church 2023 at southeast corner Clark and Eaton avenues on 1913 Sanborn map. Photograph insert shows Worrell store, Torres & Bro Saloon, and Alma Hotel before fire of 1915.



Initial archeological plan map of Kelly's main street businesses along Eaton Avenue from Clark to above Magdalena avenues. Catherine Holder Spude, 2023



The Robinson store, Eaton Avenue, during the birth years of Kelly with H A Robinson family, perhaps, at left. Multiple fires destroyed the buildings between 1889 to the 1910s leaving picturesque ruins.



There are 49 known burials in the Kelly Cemetery, as enumerated and recorded on Find-A-Grave. The earliest burial was of an infant, Adolph P. Bechaud (1888-1889). Charlotte Mary "Lottie" Odell Bechaud (1853-1941), presumably his mother, is also buried there. The second burial is that of Janiah Odell (1824-1895), one of Kelly's founders. Miner John Gallo (1864-1896) was the third person to be buried in the Cemetery, and the last who died in the nineteenth century. The Tafoya family has many family members buried at Kelly. Hughes's the saddest.



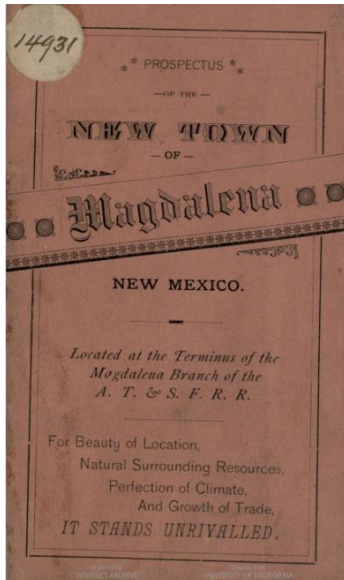


Magdalena in relation to Kelly and mines, ca. 1905, tracing 1942. NM Bureau of Geology and Mineral Resources. Below, Magdalena during the 1910s and its newspaper the *Magdalena News*.



Magdalena, Transport Center

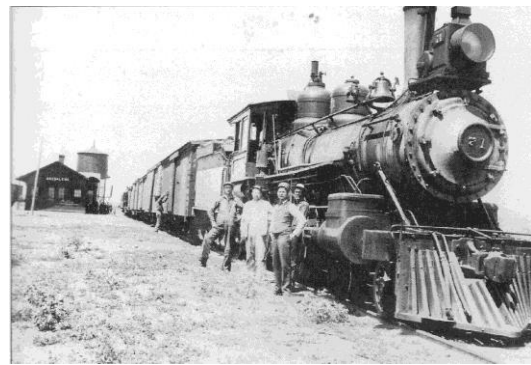
- 3) How to get there: Drive US 60 west from Socorro for 30 miles.
- 4) What you'll see: Site of rail terminal, cattle corrals, stock trail, early period buildings.



Historical Background:

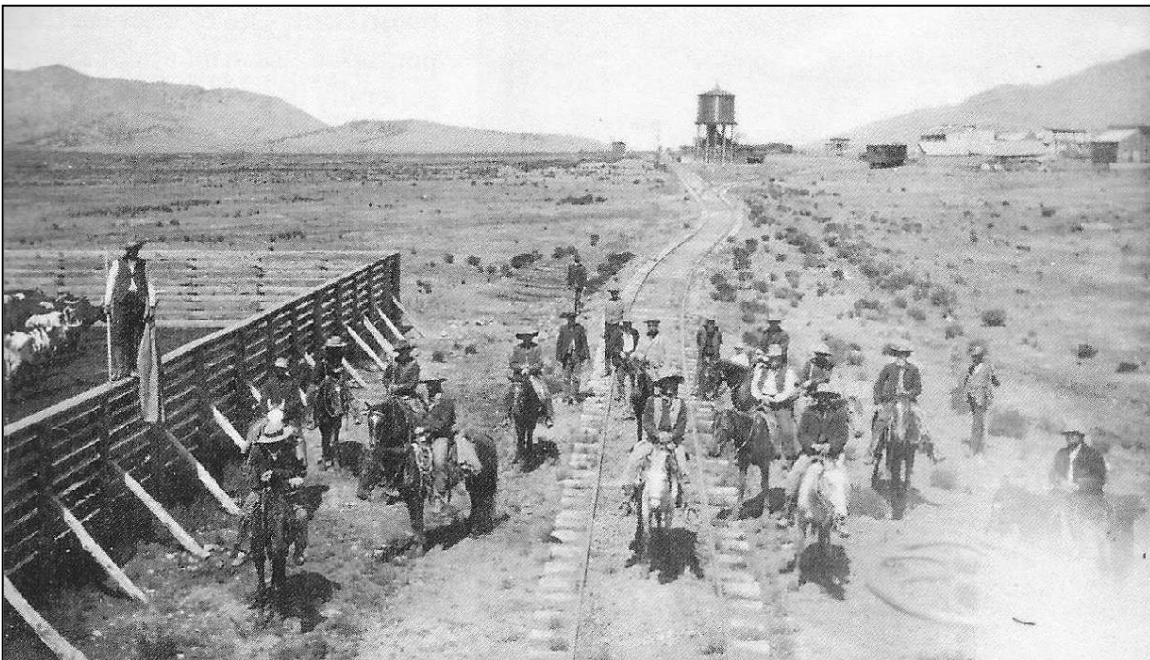
In 1884, The New Mexico Townsite Company, a subsidiary of the Santa Fe railroad, platted and auctioned off the new townsite of Magdalena, the soon to be developed transportation hub at the end of the branch railroad from Socorro and the Santa Fe mainline. A post office opened in December 1884. Completed in January 1885, the spur was extended two miles to the Kelly switch, a track to serve the Kelly mine of Gustav Billing and the Magdalena mining district. Daily shipments of ore to the Billing smelter in Socorro made the Magdalena branch one of the busiest along the Santa Fe line.

When the Graphic smelter was built at the Kelly switch, the continued shipments helped the community survive the depression years. Magdalena grew



not only as ore shipment point but as end of the cattle trail serving ranches to West into Arizona. Magdalena soon eclipsed Kelly as the regional business center.

Magdalena boomed with the expansion of production of the Kelly mines during the 1910s, with solid business blocks, banks, automobile dealers, and schools. In the age of the automobile it became Socorro County's second largest town and prospered when workers could live in the larger Magdalena and commute to work at the mines.



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Source of images and maps

Maps and photos from New Mexico Bureau of Geology and Mineral Resources archive and Socorro County Historical Society collections except where noted from period literature. Page 18 courtesy Box Car Museum, Magdalena. Sanborn fire insurance maps from the Library of Congress website. Recent photographs and text by Robert and Catherine Holder Spude. Archeological map by Catherine Holder Spude.

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Graphic mine crew and guests, 1880s