



A BIOGRAPHY OF CONY THOMAS BROWN

The New Mexico School of Mines Best Friend and Benefactor

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Introduction

Except for one of the main buildings on the campus and the presentation of the prestigious award bearing his name, C. T. Brown is nearly forgotten in the hallowed halls of the New Mexico Institute of Mining & Technology (a/k/a “School of Mines”), now popularly called New Mexico Tech. Not so at the New Mexico Bureau of Geology & Mineral Resources (“Bureau/Bureau of Mines”) where, like no other place on campus, the traditions and memory of this man are preserved with reverence and care. There, in the museum collections of the Bureau, much of Brown’s mineral collection, along with a few extant objects and artifacts associated with his life and career, is displayed. Additionally a meager handful of Brown reports, photographs, and other documents are preserved in the Bureau’s mining archives. A few words about the elusive C. T. Brown, his many contributions to the fledgling School of Mines, and how his superb collection came to be part of the Bureau are long overdue.

From Maine to New Mexico:

To those New Mexico citizens who knew him it seemed as if C. T. Brown had always been part of the Socorro scene but he was not a Socorro native and arrived in town almost by accident. Through hard work and ingenuity he became one of the New Mexico's most respected citizens, being involved in nearly every enterprise imaginable and reliable in all of them. Without the benefit of a professional degree his fame spread throughout the

southwestern United States, Mexico and beyond. His personal friends and colleagues numbered among the most successful and prominent men of his day,¹ yet despite his gigantic stature among men and near legendary reputation in the mining industry he forever remained the New Mexico School of Mines students close friend, confidant, mentor, and perhaps best of all, their beloved “Captain Brown” (2) as he was known by his closest friends and associates (ZINC, May 1916, p 71).

Not only was he “responsible for securing valuable donations of mining and metallurgical equipment for the school laboratories...but he...obtained employment for many of the school’s graduates and assisted in their subsequent advancement as they proved themselves worthy (Porphyry, 1925, p 108).”

He was born Cony Thomas Brown in Corrina, Penobscot County, Maine on 30 November 1856 to Cephas and Eunice Spaulding Brown, the latter of whom counted among her ancestor’s passengers on the Mayflower (Anon, p 477). Cony Thomas was one of two sons, the other having died in youth. He received his early education at the North Anson Academy (1871 – 1873) in Somerset County and then the Maine Central Institute (1874-1876), specializing in mineralogy and geology. He is also said to have apprenticed, however briefly, as a tinsmith. In February 1877 he hopped a train and journeyed to far-off Ellis, Kansas over the newly-laid rails of the Union Pacific. If he was fleeing an overbearing master, Ellis must have been far enough from Maine to be satisfactory at least for the time being (Anon, p 477; Coan, p 47).³

Beyond his basic interest in the earth sciences, little up to this point would indicate that Brown had chosen, or would soon choose, a career in mining. In fact he took up a homestead and a timber claim and engaged in the farming and hardware bushiness in Trego County, Kansas initially but, “the grasshoppers and drouth [were] too much for him...[and he went] busted...” (Coan, p 47; Twitchell, 1917, p 393; Brown, 1906, p 1). The career change to mining was likely a serendipitous one and when it occurred he focused all his efforts on self-training and education. Opportunity came, when after a few years in Ellis, he teamed up with a group of men who owned mining property in New Mexico. These men must have taken note (or perhaps they already knew of him before his KS arrival?) of Brown’s enthusiasm, honesty, and attention to detail, traits that became lifelong trademarks, for they hired him barely into his 20’s, to be superintendent of operations for the Ellis Mining Company (3) in the Water Canyon district west of Socorro, New Mexico (Twitchell, p 393; Bullion, 7/1/1883, p 3). Again, by his own account, he “studied geology and technical works on mining by light of candle or campfire...prospected and mined...always keeping up the night studies (Brown, 1906, p 3).” Though inauspicious, it was a good start and Brown, traveling to Albuquerque as far south as the AT&SF rails would permit at the time, arrived in Socorro on horseback in April 1880 (Coan, p 47; Twitchell, p 393; pers. comm. Betty Thompson; Chieftain, 11/17/1966, p 2E; ZINC, December 1920, p 399).



Fig 1: C. T. Brown in his younger days, ca. 1890. Brown arrived in Socorro in April 1880 not by rail as has long been presumed – the rails of the AT&SF would not arrive until mid-year – but on horseback. NMBG&MR Photo Collection No. SH-1260; photo courtesy of Socorro County Historical Society.

The Personal Side of C. T. Brown:

Little first-hand information about C. T. Brown's personal side and character seems to have survived the ravages of time. There is no doubt, however, that he was a highly respected member of the community and well-loved by nearly everyone he met and worked with⁴. Typically he was described as "an exemplary citizen, a good and kind husband and father,⁵ and a man of the highest probity, much business ability, great energy, and [who] enjoys a most enviable reputation wherever known (Chieftain, 10/31/1903, p 4)."

Many have incorrectly assumed that since he so early fled his birthplace he forever turned his back on his eastern ancestry after moving west. But the few letters that have survived suggest he maintained a constant correspondence with his parents and other family members. He often inquired into the health of family and friends and on one occasion he learned from his mother that Will Gale (a childhood friend?) might be passing through Socorro on his way back to California (from Maine). He wrote, "If [he] passes through Socorro...have him wire us when he gets to Las Vegas [NM] that he will be in Socorro the next morning....we will meet him at the depot in case he cannot step off the train...the train remains in Socorro about five minutes...(Brown, 1891a)."

Actual visits to home were few and far between however, limited perhaps to just two. The first such seems to have taken place a few years after his Socorro arrival, to wit: "C. T. Brown, one of the best Magdalena miners, will pay a visit to his home in Maine shortly" (Albuquerque Daily Citizen, 3/8/1888, p 2). The final visit may have taken place a mere six months before he died: "State Senator C. T. Brown, who left Socorro two weeks ago, is spending time at his boyhood home in North Anson, Maine. This is Mr. Brown's first visit to his former home in more than forty (sic) years. He will visit his son, C. C. Brown at Franklin, New Jersey, before returning home next week (Chieftain, 7/21/1924, p 4)."

Physically speaking, Brown was unusually tall for his day and age (either 6' - 4" or 6' - 5") depending on the source (Frontispiece) and we must assume his voice betrayed more than a trace of his "down-east" origins. Moreover, due to his extensive travel and work for the New Jersey Zinc Co in Mexico, he doubtless spoke at least some Spanish although photographic evidence suggests he may have traveled with an interpreter (Figs 2 and 7). Abe Baca, another well-known Socorroan and nephew of Socorro's legendary Elfego Baca, though just a teenager at the time, described him as a soft spoken man possessed of a "somewhat high-pitched voice" and that when excited revealed a slight stutter or stammer. Baca also corroborated Brown's unusual height by observing "he was the tallest man I ever knew" (Abe Baca, pers. comm., 9/5/1984). He gave freely of his time and never hesitated to offer assistance or come to the aid of those in need or desirous of advice. Brown was "a lovable character, with a broad sympathy for humanity and a desire to help...Not only students...but all young men who came in contact with him realized

the inspiration that he imparted to them and the amount of work that he was always ready to give to aid them...(Gold Pan, 2/1/1925, p 2).”

Frontispiece: C. T. Brown in his later years, ca. 1922. Thought to have been taken on his farm in the Socorro area, the pose was arranged to emphasize either the height of the corn crop, Brown, or both. Note his thirty-third degree Masonic pin plainly visible suspended from his belt loop. This portrait graced a wall in the Val Verde Hotel for years and was saved by Peggy Dailey's parents. NMBM&MR Photo collection # 1504, courtesy Frank and Peggy Dailey.

Mentoring Students the World Over

Notable among the many students he assisted were Paul Stein (BS Mining Geology, 1911; E. M., 1912), Soren Ringlund (BS Mining Eng, 1912), Frank Maloit (BS, Mining Eng., 1914), and many others. Brown obviously took a personal interest in the work of these young men and, in the case of Stein and Ringlund, gave freely of his guidance and expertise for their senior thesis. He was so pleased with their work on the Magdalena Mining District that he forwarded a copy of the document to well-known geologist Arthur Thacher (E&MJ, 12/4/1920, p 1089) introduced by the following note: “I am sending you a copy of a thesis and accompanying map...Both of the boys were born in the old country and consequently have not yet acquired a very fluent use of the English language...However their report and map covers the geology of the district better than any...I have ever seen (Brown, 1912).” The sole reason the thesis exists today is that the Thacher copy eventually found its way into the exploration files of the Empire Zinc Company where it was re-discovered by the author and his colleague Robert North when they visited the New Jersey Zinc Western Field office in Tucson in 1985! The original was presumably lost when the School of Mines’ Old Main Hall was destroyed by fire in 1928.

Upon graduation Ringlund, thanks to Brown, immediately went to work for the Empire Zinc Company, first at Kelly and later at Hanover. His career was cut tragically short when, after entering the U. S. Army, he was killed July 24, 1918 just four months short of Armistice Day. Several of Ringlund’s Magdalena maps, it should be noted, were re-published courtesy of Brown, by Loughlin and Koschmann in USGS Professional Paper 200 (q. v). Paul Stein, on the other hand, enjoyed a long career in the non-ferrous smelting industry both in El Paso and Mexico and remained active into the late 1930s. Another student who benefited from Brown’s mentoring was E. D. Morton as the Kelly ore deposit was also the subject of his 1909 senior thesis.⁶

Frank Maloit (BS, ME, 1914) began his long illustrious career in the mining industry, first at the Bonney Mine at Lordsburg and then on to Kelly and Hanover, and later to the Eagle River Mine at Gilman, CO for the Empire Zinc Company – for an exemplary 43

year career with the company. His mentor, Captain Brown, was there at every step, until his death in 1925, offering encouragement, assistance and his valued professional guidance wherever needed. Maloit, in turn, visited Brown when he journeyed through Socorro (see, for ex., Chieftain, 4/27/1918, p 1). Maloit left his lasting mark on the School of Mines (and Socorro) – again most certainly with the encouragement of Brown -- when he and his classmates surveyed and laid out the “M” on Socorro Peak in late 1911 (Hayes, 1959; Eveleth, 1987; 2010). Maloit was the winner of the prestigious Brown Medal in 1913 – the final recipient for a decade (Table 1 see page 41).

In addition to those students showing particular merit at the School of Mines, Brown encouraged young protégés he encountered far afield to further their education. One example of the latter was Donald McDonald Creveling and the author owes a great debt of gratitude to the latter's daughter, Mary Gorham [Creveling] Krombholz (who showed up totally out of the blue at the Bureau of Geology in 2005 when it was located in the “Gold Building”) for the following previously undocumented chapter of Brown's career. During Brown's many sojourns into Mexico as Southwestern Representative for the Empire Zinc Co, he became acquainted with James Gorman Creveling Jr. and his son Donald. The location has long been uncertain but photographic evidence now suggests their acquaintance began at one of Empire's mines in San Luis Potosi (SLP), Mexico, most likely at Mina La Bufa (Fig 2).



Capt. C. T. Brown

Fig 2: Captain C. T. Brown at one of Empire Zinc's mines, probably Mina La Bufa, Charcas, San Luis Potosi, Mexico. Brown presented a rather dashing figure with his tall

frame decked out in leather lace-up boots, khakis, long-billed cap, and field pouch. The gentleman to Brown's right in the black hat often accompanied him on these sojourns and may have functioned as an interpreter. Note he is also in Fig. 7 on the far right (ZINC, May 1916, p 71).

The elder Creveling, a graduate cum laude, Washington University class of 1894, in St. Louis, was an accomplished mining engineer during the first four decades of the 20th century. He owned and/or managed several mining enterprises in Mexico and was involved in the construction of the Potosi Central Railroad (Ferrocarril Central de Potosi). One of his many mining adventures was the “Compania Minera La Fortuna” at Aguascalientes, Mexico (Fig 3).

Brown noted that Donald Creveling showed great promise and would likely follow his father's footsteps. But in the years immediately following WWI Donald had not yet decided when and where to pursue a professional degree. Brown suggested he rectify that problem by attending the New Mexico School of Mines at Socorro – which Donald promised to do as soon as practical. By 1920 that time had arrived but, according to his youngest daughter, Mary Gorman [Creveling] Krombholz, circumstances beyond Donald's control prevented him from going to Socorro and he enrolled instead at MIT. Regardless he wrote to Brown to say that, upon graduation from MIT (1924), he planned to enroll at NMSM in 1925 for the Engineer of Mines (ie, Master's) degree (pers. comm, Mary Krombholz, April, 2005). Alas, Brown's untimely passing intervened and with his “mentor” suddenly gone Donald elected to attend the Colorado School of Mines. The New Mexico School of Mines was, as a result, deprived of another potential star in its firmament of notable mining/mineral engineers (and there were many). Nevertheless throughout Creveling's life (d. 1974) he reminisced with his family about the invaluable guidance and many kindnesses bestowed upon both he and his father by “Captain Brown” and credited him with being the “primary role model for his career in mining” (pers. comm. Mary Krombholz, 7/25/2008).⁹

Compañía Minera La Fortuna

Sociedad Anónima
DOMICILIADA EN AGUASCALIENTES
ESTADO DE AGUASCALIENTES

TITULO
No. 779

Capital Social \$ 200.000
 DIVIDIDO EN 2.000 ACCIONES

Valor de cada acción
\$ 100.00

El Señor J. G. Creveling Jr. representa una acción de las dos mil que forman la Compañía, con arreglo a la Escritura Social constitutiva, otorgada en la Ciudad de Aguascalientes, (Estado de Aguascalientes) el día 21 de Mayo de 1902, ante el Notario Público Lic. Alberto M. Davalos.

Aguascalientes, E. de Agr., a 15 de Julio de 1902.

EL CONSEJO DE ADMINISTRACION

Presidente 1º Vocal,

[Signature]

Vicepresidente 2º Vocal,

[Signature]

Secretario y Tesorero 3º Vocal,

[Signature]

TRASPASOS

Por valor recibido traspaso este título a Sr. G. Stadelmann, según declaración hecha en el registro con fecha 13 de Enero de 1903.

Por valor recibido traspaso este título a Sr. J. G. Creveling Jr., según declaración hecha en el registro con fecha 15 de Julio de 1902.

Por valor recibido traspaso este título a Sr. [Signature], según declaración hecha en el registro con fecha de ____ de ____ de 19__.

Por valor recibido traspaso este título a Sr. [Signature], según declaración hecha en el registro con fecha de ____ de ____ de 19__.

Por valor recibido traspaso este título a Sr. [Signature], según declaración hecha en el registro con fecha de ____ de ____ de 19__.

COMPAÑIA MINERA LA FORTUNA

SOCIEDAD ANONIMA
Domiciliada en Aguascalientes
ESTADO DE AGUASCALIENTES

Capital Social
\$ 200.000
 Dividido en 2,000 acciones

TITULO NUM. 779

Valor 100 pesos

Aguascalientes, Julio 15 de 1902.

Extracto de la escritura social

1º Constituyen una sociedad anónima que se denominará: "Compañía Minera La Fortuna, Sociedad Anónima."

2º La duración de la sociedad es de veinte años, que se empiezan a contar desde la fecha de esta escritura, pudiéndose prorrogar el término por consentimiento unánime de los socios.

3º La sociedad tendrá su domicilio en la ciudad de Aguascalientes, donde funcionará su Consejo de Administración. En consecuencia, la sociedad misma y todos los que formen parte de ella en calidad de accionistas, quedarán sometidos en todo lo concerniente a sus relaciones sociales a las autoridades de esta ciudad, renunciando para todo efecto por todos los accionistas expresamente el fuero de domicilio ó cualquiera otro que pudieran tener.

4º El capital social es de doscientos mil pesos, valor que tienen las acciones, dividido en dos mil acciones de cien pesos cada una de ellas.

Extracto de los Estatutos.

Artículo 1º El Capital de la Compañía queda representado por dos mil acciones de cien pesos cada una. Todas estas acciones se harán constar por títulos expedidos a favor de cada socio, que acrediten la representación que tiene en la Compañía y estarán firmados por el Consejo de Administración y con los requisitos que establece el artículo 175 del Código de Comercio, y pueden ser cedidos en la forma que determina la misma ley.

Artículo 16 del Código de Comercio: "La cédula tiene lugar por medio de la Acta de inscripción hecha en el registro, fechada y firmada por el cedente y el cessionario, ó por sus respectivos apoderados. La sociedad podrá dar certificados de estas inscripciones á quienes lo soliciten."

Artículo 17 de los Estatutos: "En caso de pérdida ó destrucción de un título que acredite la representación de un socio en la Compañía, el interesado lo hará saber al Consejo de Administración, y si la acción podrá obtener un duplicado del mismo á su costa, expresando que tiene el carácter de duplicado."

Artículo 18. Los socios tienen todos los derechos que les concede la escritura social y los presentes Estatutos, siendo por lo mismo, dueños de todos los bienes que constituyen el capital social y de todos los que en la escritura se adquieren para la compañía.

Artículo 20. El de asistir á las Juntas generales y votar en ellas.

Artículo 21. El de solicitar la reunión de la Asamblea general para cuando extraordinaria, siendo necesario que lo pida los dueños de veinte acciones por lo menos.

Artículo 22. El de informarse por conducto de la secretaría y en el expediente del Consejo de Administración, de los asuntos y marcha de la Compañía, perdiendo estos derechos en el caso de que el socio tenga un litigio pendiente contra la sociedad. Para impetrar de los documentos de la Negociación y demás constancias que no sean sus cuentas, así como para la expedición de copias autorizadas, verificaciones y otros que fueren necesarios el acuerdo expreso del Consejo.

Artículo 23. Son deberes de los mismos accionistas: los que les impone el contrato social, y además, justificar en la Transferencia la propiedad de sus acciones para recibir dividendos y demás frutos que se les concedan, á su vez que tengan una cédula justa para cuando, que será expedida por la Junta general de accionistas.

Artículo 24. Los socios, por el solo hecho de serlo, están sujetos á lo que dispongan la escritura social, los Estatutos y los acuerdos de la Asamblea general.

Fig 3: Share certificate No. 779 of the Compania Minera La Fortuna Mining Company, Aguascalientes, Mexico. This certificate is remarkable for many reasons: it is endorsed to James Gorman (J. G.) Creveling, Jr. (Mary Krombholz' grandfather), and signed by her grandmother Frances (a/k/a "Fanny") McDonald Creveling) as secretary. J. G. later sold his interest to G. Stadelmann who began his career, as assistant mine superintendent at the Kelly mine, in the employ of Gustav Billing (of the Billing Smelting Works) at Socorro. Given Brown's long association with the Kelly mine and the Magdalena district in general the two men were certainly acquainted.⁸

Yet another of Brown's recruits was a young Peruvian named Pablo Ingunza. On an extended four-months' trip to South America with son Tom he visited the ancient cities of Peru, Bolivia, and Chile. Somewhere along the way he met Ingunza who must have indicated an interest in pursuing a mining career. When Brown returned to New Mexico he had Ingunza in tow and the latter enrolled at NMSM. He attended 1917 through 1921 and although there is no indication he obtained a degree he must have learned well from his studies: he returned to his home country to assume the duties of Chief Engineer for the Vicunita Mining Company in Morococha, Peru in which position he served for many years (Albuquerque Morning Journal, 5/31/1917; Directory, 1943, p 23, et. Seq).

Brown - The Toastmaster

Perhaps indicative of his rural Maine upbringing C. T. Brown generally maintained an unassuming nature in public and tended to avoid the limelight, preferring instead to make his contributions from the sidelines with little pomp and fanfare. When called upon, however, he could speak eloquently and knowledgeably. In that regard he often lectured his favorite audience: the students of the New Mexico School of Mines. "Hardly a year passed without one or more talks from him to the student body on some mining district or some phase of mining and geology (Porphyry, 1925, p 108)." One such presentation was described in considerable detail:

"Students of the School of Mines were favored with another very interesting and instructive lecture last Saturday evening when C. T. Brown talked to them of the geology and ore occurrences of the Magdalena district and other districts of southwestern New Mexico and Mexico. Mr. Brown's mastery of the theory of the subject upon which he spoke is supplemented by a thorough practical knowledge of them, which made his lecture peculiarly profitable to those who were fortunate enough to hear it

The geology of the Magdalena district was explained systematically, the lecture beginning with the basal granite and passing to the greenstone and from that to the different sedimentaries.¹⁰ The two systems of faults and dykes (sic) cutting the sedimentaries were given due prominence. Under the subject of ore occurrences of this district, particular stress was laid upon the fact that all commercial ore of the district occurs in the crystalline limestone. The silver pipe and outside veins in that limestone and the effects of faults and dykes upon the ore depositions cutting those horizons were fully described...The geology and ore occurrences of the districts of Santa Eulalia, Calera, La Reforma, and Flor de Tamaulipas in Mexico were described in the same clear and forcible manner.

Students of the School of Mines have been fortunate...to hear lectures by practical mining men of high standing, and they were by no means least fortunate in their opportunity to hear...Mr. Brown (Chieftain, 5/30/1908, p 1)."

A firm believer in hands-on experience, Brown often invited, at his own expense, the entire student body and various faculty members on two-day field trips to tour his mining properties at Kelly (Chieftain, 5/15/1909, p 1).

Despite his apparent shyness, he was an accomplished master of ceremonies and took the podium without hesitation when it was time to honor fellow professionals and renowned citizens. In an earlier time Brown would host such events at the family home or at his Manzaneros Street office but after 1919 he had the perfect venue for such festivities: his own Val Verde Hotel. And on March 17, 1921, Socorro's U. S. Senator Holm Bursum was the center of attention:

"St. Patrick's day...will ever be remembered as a gala day in Socorro for on...this celebrated day C. T. Brown, President of the Board of Regents...gave at the Val Verde Hotel an elaborate banquet, at which he acted as toastmaster, honoring Holm O. Bursum, New Mexico's newly made United States senator, and Gov. M. C. Mechem. Mr. Brown had invited...some 52 of his friends, among whom were a number of the most distinguished citizens of the state, including Senator Bursum, Gov. Mechem, State Game Warden Gable, Speaker of the House of Representatives Clancy, Land Commissioner N. A. Field, State Senator McDonald, Judge Ryan, Judge Barns, representatives of the bar and state government...[and] Men representing the business interests of the commonwealth, among whom were...Powell Stackhouse, B. H. Kinney, J. M. Sully, and E. M. Sawyer...' ¹¹

At the conclusion of the elaborate banquet, the host in the following few, well-chosen words, introduced the first distinguished speaker of the evening: 'We are honored by having with us tonight New Mexico's two most distinguished citizens – Senator Bursum and Governor Mechem. Thirty years ago when the Senator, then known as plain 'Olaf,' and I were rustling against adverse conditions, drinking from the same canteen – warm water, NOT moonshine! – sharing our bacon and frijoles, sleeping on the grounds under the same blanket with the heavens as a canopy, neither of us dreamed of the honors in store for him. Probably "Olaf's" recollections of those early days will be interesting to us...'

Senator Bursum then took the podium and recalled the early days when Mr. Brown:

"too was struggling the make ends meet, and that little did either of them then think that within twenty-five years he also would be classed among the eminent and prosperous men of the state..."

‘For that is what C. T. Brown, who cast his lot with the people of Socorro 40 years ago, is considered today...’(Chieftain, 3/19/1921, p 1).”

The Annual Smokers

Another very popular event sponsored by Brown (later by the Socorro business community and mining colleagues (such as Bart Kinney of the Carthage/Tokay coal mines) and now totally forgotten was the annual (sometimes bi-annual) “Smoker.” Co-sponsors were the School of Mines Athletic Association and the Mines Chapter of the American Association of Engineers. Students of today often complain that Socorro isn’t exactly the pinnacle of social life and culture but the town of the century past was much less so! Thus the annual smoker was conceived as a forum “to bring students (especially the freshman), faculty, and board [of Regents] into closer touch with each other,” and to provide a little levity to a campus life otherwise almost exclusively limited to ‘mines, minerals, and midnight oil,’ to wit:

“Out of the dark, dreary and turbulent period that makes up our freshman’s early college life, one happy memory finds its way. To use a poetical expression, it stands out against the gloomy background of trials and initiations like the few remaining hairs on a bald gentleman’s cranium. The ray of light to which we refer is the smoker and dinner given by the business men of Socorro in honor of the students at the School of Mines. It [is] the last time the Frosh [resemble] more than a trilobite in the eyes of an upper-classmen... (Porphyry, 1929, p 64).”

The date of the first Smoker is uncertain but doubtless took place early in the twentieth century, as per the following: “This affair has *long been an annual custom* with Mr. Brown and is looked forward to as being one of the most popular events in the school calendar (Gold Pan, 5/19/1920, p 7).” The event was initially held in the offices of C. T. Brown on Manzanares street but by 1920 “the student body was too large for the office to accommodate so it was held in the Val Verde dining rooms” (Gold Pan, *ibid*) ¹²



Fig 4: The Val Verde dining room during the C. T. Brown years. The dining room looks much the same today and it is interesting to note that the support beams, wood and mill-work are identical to that in Brown's old office located southwest (diagonally) across Manzanares Ave. Photo courtesy of Peggy Dailey.

Brown participated in his final “smoker” on May 16, 1924: “Brown-Kinney Annual Smoker to School of Mines: A fit conclusion to the School of Mines commencement was the annual Brown-Kinney smoker Friday night at the Val Verde with 86 guests, including the entire student body, the faculty, the board of regents, ex members of the board, and a number of specially invited men, made the affair started some years ago by Mr. Brown, a pleasant as well as profitable function to all. P. H. Argall, former member of the board of regents, acted as toastmaster, calling upon Arthur Thacher, speaker of the day, Mayor Cook, State Senator C. T. Brown, J. G. Fitch, B. H. Kinney, and President Wells of the Mines, all of whom responded in their very happiest of moods.

Mr. Brown, in a brief address, among other things, made a comparison of this large attended function to like ones held, but a few years ago, when as he put it “A baker's dozen of us gathered in my office just across the street to celebrate the closing of the years' work, partake of light refreshments, smoke our cigars, and lay our plans for the coming year” (Chieftain, 5/17/1924, p 1).

The program for these long-anticipated galas consisted of talks and presentations by special guests drawn from among the most distinguished and accomplished men of the day, and included (in addition to the above) the likes of New Mexico Congressman the Hon. Holm O. Bursum, New Mexico Governor-elect Mechem, other faculty and staff of the School as well as famous mining men such as T. A. Rickard. ¹³ Brown's great sense of humor served him well as he often performed the duties of toastmaster and “proved himself to be a very fitting master of ceremonies...able to follow a humorous strain as well as one of a [more] serious nature (Brown, 1919; Gold Pan, *ibid*, p 1).” Musical performances were often part of the program and those events co-sponsored by the School of Mines Athletic Association usually included three-round boxing and wrestling matches. These matches often took place without the benefit of boxing gloves and although the combatants were provided with “stimulants between rounds,” both were “liberally decorated with rosettes and blue ribbons...by the time the final gong sounded (Gold Pan, 1/15/1920, p 1; 11/1/1923, p 3)!” The evening concluded with a sumptuous dinner, the finest smokes money could buy (*everyone*, it seems, smoked back then) and the telling of some “racy” or “spicy” jokes and stories! “Smoker” was thus a double *entendre*, deriving equally from the clouds of cigar smoke as well as the saucy “episodes of a tang peculiar to smokers (Porphyry, 1931, p 61).”

The smokers were held at the Val Verde for a few years after Brown's death but relocated to the School of Mines Gymnasium subsequent to the 1928 event. By 1935 times changed and the Annual Smoker gave ‘way to somewhat more esoteric and less pugilistic events such as the St. Pat's, 49'ers, and Commencement dances and festivities (Porphyry, 1931, p 61; 1933, p 93; 1935, p 89-91).

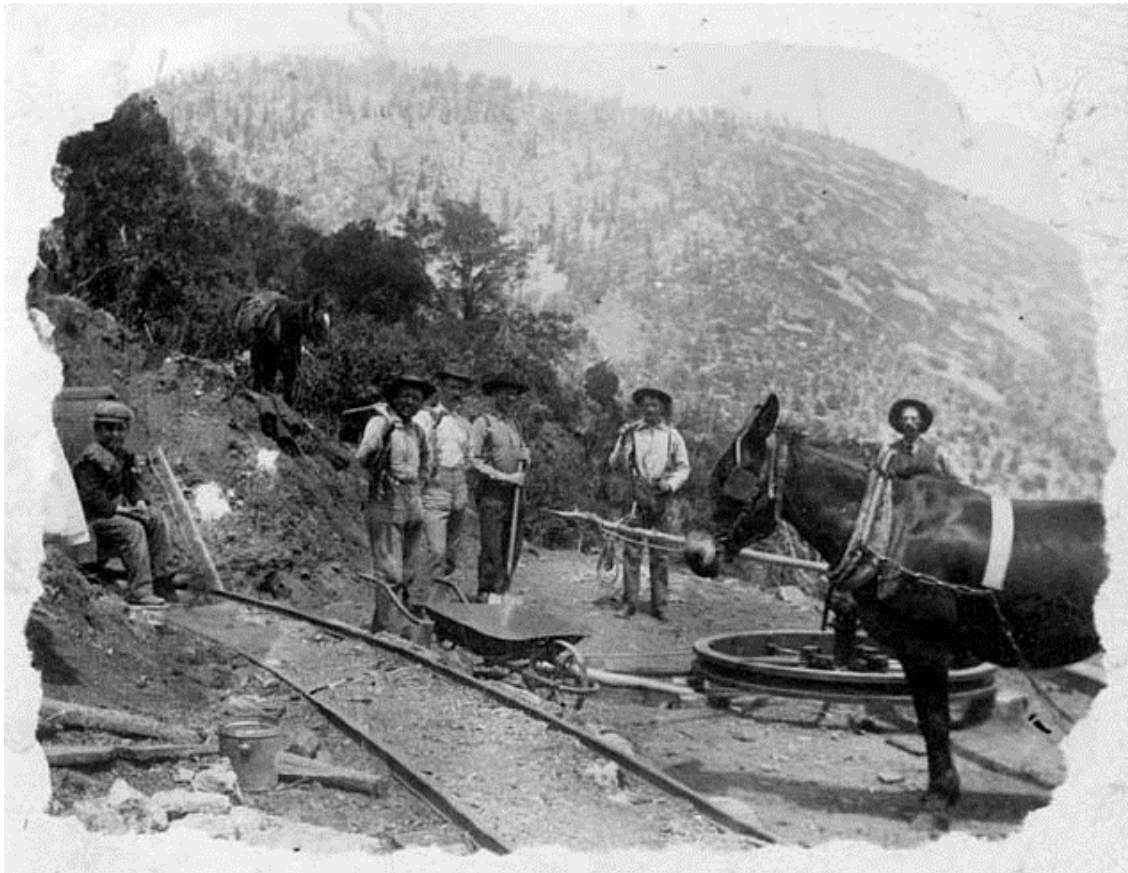
A Half Century of Mining – Almost!

Upon his arrival in Socorro in April 1880, Brown set to work immediately developing the Ellis company properties also included the “Nile” and “Magdalena Queen” at the head of Ellis Canyon in the Magdalena district. These claims may have been early locations for the later Tip Top and Key mines which he worked intermittently for many years (Bullion, 7/1/1883, p 3; Brown in Mine Development Co., 1906). Brown, already familiar with earthwork and machinery from his farming and hardware days, took to mining as if he’d been doing it all his life. Documentary evidence from his early period is scarce but his longevity in the business is indicative of his success. Mining, particularly with primitive (by today’s standards) equipment requires considerable attention to detail, careful planning, and a dedication to hard work, such that every movement of rock and machinery must be done efficiently. Sloppy, inefficient miners were quickly weeded out. As early as 1883 those in the know were taking note of his abilities. The Bullion, a Socorro mining-journal-type newspaper focusing on the developing mining industry in the region reported in one of its first issues (7/1/1883, p 3) that Brown was successfully working the Nile; a later article (1/29/1887, p 2) referred to Brown as “that excellent miner.” By the turn of the twentieth century, any mention of Brown was usually preceded by the tag line “well-known mining expert” (see, for example, Western Mining World, 12/27/1902, p 2).

The Water Canyon district, while not a significant producer of base and precious metals such as the neighboring Magdalena district to the west, was nevertheless the scene of considerable activity prior to World War I. Brown was one of the major developers in the district and held interests in many of the mineral properties. These included the Oro Fino, Gold Star, Little Tom (the latter doubtless named for his son Tom), Buckeye, and many others. Moreover, Water Canyon, during those pre air-conditioned days, was a far more pleasant place than Socorro to pass the hot summer months and Brown often took his entire family along (Brown, 1891b; Chieftain 7/16/1897, p 1; Fig. 5A and 5B).



5A



5B

Fig 5A: Open house day' at one of Brown's prospects, possibly the Gold Star & Little Tom, in the Water Canyon District, Socorro County, NM, ca. 1905. Anna K. (Mrs. C. T.) Brown is to the right of the group while C. T. rests his left arm on the rock in the background. Ten year old "Little Tom" is seated at far left. Mrs. Brown and her immediate family often moved to Water Canyon during the summer months to escape Socorro's heat in those pre air-conditioned days. Fig 5B: Same place and time: "Little Tom" still seated at far left but C. T. is now standing on the far side of mule. NMBG&MR Photo collection Nos 1515 and 1514 respectively; both courtesy Mary Louise (Brown) Dillard.

Why all this effort in such a minor mining district? Perhaps it might help to recall that this was an era (at least from September 1883 through October 1902) when narrow gold-bearing veins could be worked profitably and small lots of hand-picked (manually-sorted) ore shipped to local smelters. The great Billing Smelter at Park City on the southwest side of Socorro fired up its first furnace in September 1883 and provided a ready market for high-grade precious metal bearing ores – anywhere from a few sacks to carload lots – though mid-1894. The Graphic Smelter, having been resurrected from the long closed and previously unsuccessful New Orleans and La Joya smelter, opened for business during October 1885 (Eveleth, 1983, p 9; Bullion, 10/17/1885, p 3) and further increased the competition for such ores. Asa Fitch's Graphic smelter at Kelly switch provided a similar market from 1894 through June 1902. In 1905 Brown was probably forced to ship his ores all the way to El Paso.

One of Brown's larger developments in the Water Canyon district took place at the Buckeye, located near the present-day Water Canyon picnic area, in 1899 (Fig. 6). Brown, along with (Senator) Holm O. Bursum, Marcus Brunswick, and others, organized the Buckeye Gold and Copper Mining Company and made plans to develop the property on a commercial scale. The machinery – boilers, steam hoist, etc. – were shipped by rail to Water Canyon station on the Atchison, Topeka, and Santa Fe Railroad's Magdalena Branch, and then transported by teams and wagons to the mine site (Chieftain, 1/20/1899, p 4; 4/18/1899, p 1).



Fig. 6: C. T. Brown, perched atop machinery on the second wagon, accompanies shipment of mining equipment bound for the Buckeye Mine, Water Canyon District, Socorro County, New Mexico, 1899. The hoisting/loading facility and freight train at Water Canyon station on the AT&SF Magdalena Branch railroad are visible, left background. NMBG&MR Photo collection No. 1647, courtesy Mary Louise (Brown) Dillard.

The Great Zinc Carbonate Discovery:

Soon after the turn of the nineteenth century, Brown would take part – indirectly at least -- in one of the greatest events in New Mexico's colorful mining history: the discovery of vast amounts of zinc carbonate (smithsonite) masquerading as limestone in the Magdalena Mining district.¹⁴ The early-day lead-silver miners were unaware of the

fortunes they were discarding on their mine dumps at such properties as the Graphic, Kelly, and Juanita mines. Asa B. Fitch, a business partner of Brown's at Magdalena, made the momentous discovery.¹⁵

Fitch, another unsung pioneer of the district, arrived June 1893 and took over the managerial reigns of the Graphic mine at the worst possible time – just when the price of lead and silver began their historic nosedive which would terminate in the so-called “silver crash” of 1894. The Graphic ores were of excellent grade but the low prices prevailing at the time would not sustain their shipment costs to a distant smelter on a toll basis. Fitch convinced his Terre Haute, Indiana stock holders to take the bold and financially precarious step of constructing a 100-ton lead-silver smelter at Kelly switch. The plant, much to the relief of the investors, was a resounding success and operated from May 1896 to June 1902 during which time Fitch encouraged every miner in the Magdalena and surrounding camps to scour their mines and dumps for lead carbonate and ship it, on generous terms, to the smelter for processing. The ultimate exhaustion of these easily accessible lead carbonate ores and the closing of the smelter signaled the end to Magdalena's lead-silver mining phase. The Graphic mine still held vast amounts of sulphide ore in reserve but Fitch's company possessed neither the finances nor the metallurgical expertise to process it. They therefore determined the best course of action was to sell the property to another firm. To accomplish this Fitch found himself in need of a man not only with an excellent working knowledge of the mining industry in general, but with far-reaching professional contacts and the financial capability of assisting with the development of new ore processing techniques. C. T. Brown was exactly the man he was seeking. Brown joined Fitch as an operating and financial partner in 1902 and together they experimented with various methods of processing the iron-rich sulphide ores left in the mine.

Meanwhile, Fitch often pondered a question that had vexed him almost since the day he arrived in the district: what had become of the zinc “missing” in the ore bodies surrounding the great lead-silver stopes? Zinc was a major constituent, along with iron, lead, and to a lesser extent, copper, in the original sulphide ore bodies but it seems to have been transported elsewhere or gone missing during the long oxidation process. The big question was where? One day while touring the mine seeking additional sources of ore Fitch was intrigued by the unusual weight of some iron-stained rock surrounding the old lead stopes. He previously had this same material tested for lead with negligible results but this time, on a whim, he had it tested for zinc. The analysis returned an incredible 37-38% zinc and this discovery literally put the Graphic mine, which had almost completely depleted its lead carbonate ores, back on the map. The metal-laden hydrothermal solutions which produced the large limestone replacement ore bodies in the district had chemically altered and so perfectly replaced (“metasomatized”) the calcium carbonate in the Magdalena limestone with zinc carbonate that even the original fracture patterns and iron staining were preserved. To Asa B. Fitch, then, goes the credit for

making the great zinc replacement discovery at the Graphic mine (Fitch, 1905, p 34-35). The ever observant Brown, whom history has often, albeit erroneously, credited with the *initial* discovery (see for ex., Talmadge, 1940), did go on to make similar discoveries at neighboring Magdalena district mines (Kelly, Juanita, etc) and elsewhere in the American southwest -- the Yellow Pine district near Goodsprings, Nevada, for example (Hill, 1912, p 226; Hewett, 1931, p 70). Fitch's timely discovery vastly increased both the reserves and the marketability of the Graphic property.

Brown and Fitch sent several trial shipments of the ore to zinc smelters in Joplin, Missouri and Mineral Point, Wisconsin (Western Mining World, 2/27/1902, p 2; Loughlin and Koschmann, p 78; Chieftain, 7/4/1903, p 1). The purity and grade of the Graphic mine shipments quickly attracted attention and representatives of the larger companies were soon vying for the purchase of the property. Brown and Fitch, already financially established, were considerably enriched when the Sherwin-Williams paint company edged out their competitors and acquired the property in 1904 (Chieftain, 4/9/1904, p 1). This may have been somewhat frustrating for Brown: though working closely during his partnership with Fitch, he would eventually become southwestern representative for the Empire Zinc Company -- more on this below (Western Mining World, 6/15/1907, p 764). But Empire failed to exercise their option on the Graphic in a timely manner (apparently holding out for a better price) whereupon Sherwin-Williams jumped in and closed the deal (Fitch, 1905, p 36-38).

Sherwin-Williams originally operated under the name 'Graphic Lead and Zinc Company,' but soon changed to 'Ozark Smelting and Mining Company,' for which it is best remembered today. Empire also acted too slowly on the purchase of the Kelly property, long owned and operated by the Gustav Billing estate, when the Tri-Bullion Smelting and Development Co. of Chicago became the new owner during the same year (1904) but finally entered the Magdalena district with the purchase of the Kelly mine group from Tri-Bullion in 1913 (Mineral Resources, 1914, p 234). The result of all this was that Kelly, New Mexico, once a major lead-silver district, was born again, phoenix-like, as a premier producer of zinc.

Subsequent to the sale Brown and Fitch dissolved their partnership and went their separate ways (Chieftain, 6/4/1904, p 1), Fitch venturing west to California where he engaged in various mining-related ventures while Brown continued to make Socorro his base of operations. Brown began his long service with the Empire Zinc Co. in October 1903 (ZINC, 1920, p 399). He followed up his Graphic venture with a stint as general manager of the Germany Mining and Development Company, holders of a property adjacent to and east of the Kelly. Here Brown would establish a new tunneling record in the district in 1908 when one hundred eleven feet of advance were made in 60 shifts (this was a major accomplishment despite today's advance rates of 5-7 feet and more per shift (E&MJ, 4/4/1908, p 731). In October 1908 he entered into a lease agreement with Tri-Bullion Smelting and Development Co. to work all the remaining oxidized lead, zinc, and

copper ores down to the “Old Billings (sic) Fourth level of the Kelly mine (Tri-Bullion, 1908.”

Other Mining and Civic Activities

The list of Brown’s mining interests and activities seems endless: he was District Manager of Empire Zinc’s Cleveland and Hanover properties in Grant County, New Mexico as well as others throughout the American southwest. He was directly involved in the design and construction of the eleven mile, eighteen-inch gauge, rail tramway between the Cleveland mill near Pinos Altos and the AT&SF rail-head near Silver City (Enterprise, 12/4/1914, no p). When first constructed many of the locals laughed at “the advent of the miniature transportation system...” but...“this attitude promptly changed...when it became known that it was making a considerable saving in cost of transportation when compared with other available methods Strand, p 362). At Hanover, Brown was much involved in the development of the Zinc Valley and Nason Tunnel¹⁶ zinc deposits in the years prior to WWI. He was superintendent of the Kelly properties in Socorro County from the time Empire Zinc purchased it from Tri-Bullion until he resigned to pursue his new career as New Mexico State Senator in 1922.

As southwestern representative, ore buyer and expert examiner for the Empire Zinc Co., he routinely visited their many properties in Mexico and most likely coordinated his work between the company’s head office in Monterrey, Nuevo Leon and Socorro, NM. During these visits he was often away from Socorro for a month or more (Chieftain, 4/9/1910, p 4). Principle properties included the Mina La Bufa, Morelos, and Santa Eulalia properties in Charcas, San Luis Potosi (Fig. 3), La Penascosa at Fierro in Coahuila, and the Batamote mine in Sonora (Hursh, 1916, p 71).

Mexican ore, as had been the ores from the Magdalena, NM district some 30 years prior, was in high demand to the American plants due to its excellent grade and fluxing qualities and Brown’s reputation for impeccable honesty held him in high esteem amongst the Mexican miners and shippers who intrinsically distrusted anyone from north of the border. The responsibility borne by Empire Zinc’s reps was tremendous, as pointed out by Robert Hursh, Asst Treasurer and Secretary of the company: “It seems to me quite important to mention that when a representative of the Empire Zinc Company makes an ore contract, he practically guarantees that the ore will be sampled, weighed and assayed correctly at our smelters. It therefore follows that...you are a party to these contracts...and I wish to point out your responsibility in this connection, and to emphasize how important it is for you to assist us in maintaining the good name of the whole New Jersey Zinc Company by being very sure, through personal attention, that the weighing, sampling and assaying is accurately performed...” (Hursh, 1919, p 50-51).

In his capacity of southwestern representative and ore buyer Brown contracted for hundreds of thousands of tons of this ore which was then shipped northward by rail to

New Jersey Zinc plants at Iola, Palmerton, Mineral Point, and Collinsville. As expert examiner and all-around engineer he oversaw mine development and took part in the exploration for, and drilling of, ore body extensions and the development of new deposits and reserves. He is said, at various times, to have visited all the important zinc districts in the United States, British Columbia, Mexico, and Central and South America both for his company and his own account (Coan, p 47; ZINC, 1920, p 399). His wide-spread knowledge and expertise landed him the position of expert examiner of mining property for the National Bank in Albuquerque (Mine Development, Co., p 3)

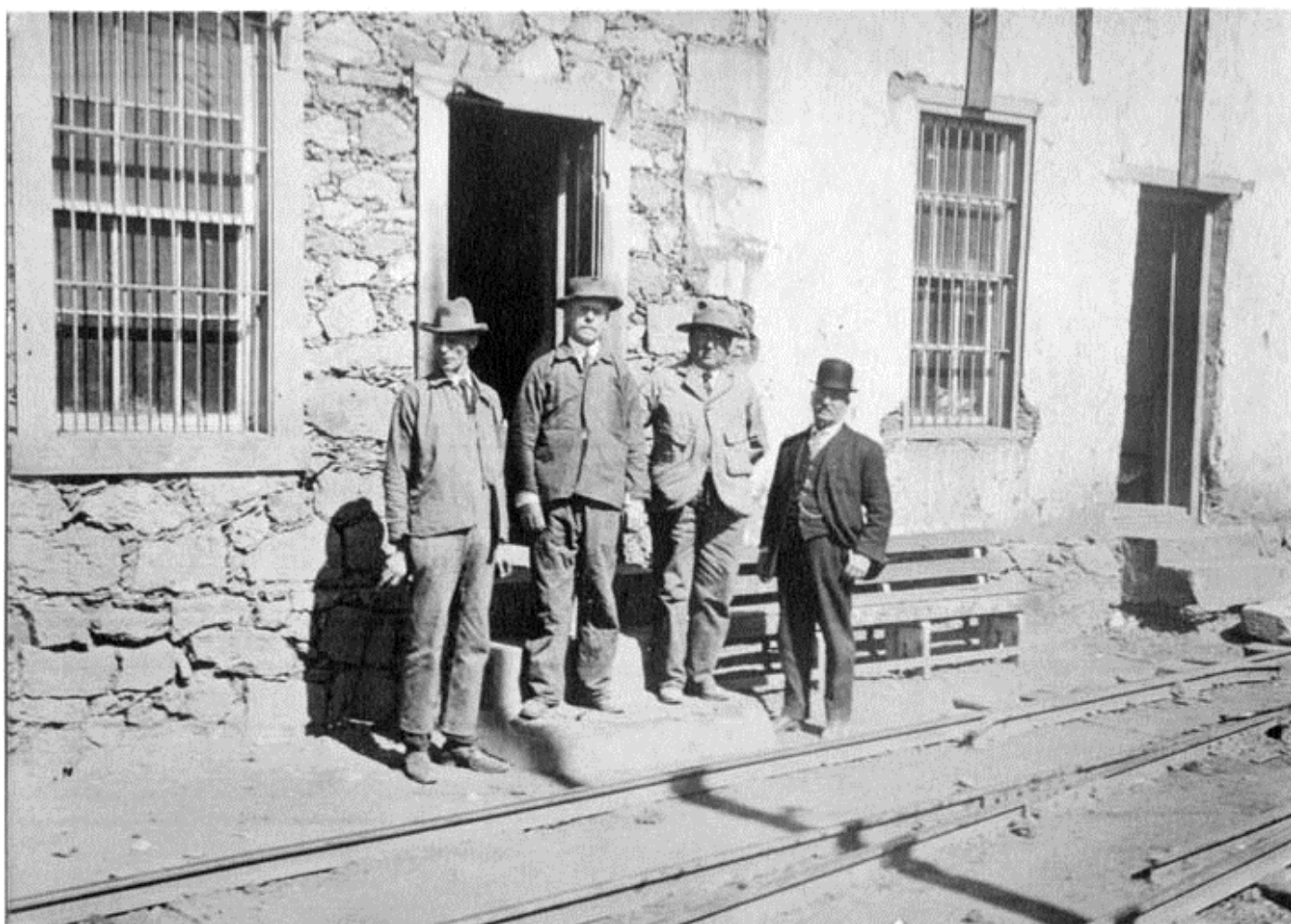


Fig 7: Brown, in his capacity as Southwestern Representative for the Empire Zinc. Co., routinely visited his company's properties in Mexico. He is pictured with mine officials likely at Mina La Bufa, San Luis Potosi. The man at far right in black bowler also appears in a half-tone (see Fig. 2) published in the New Jersey Zinc Co. Newsletter with "Captain Brown" while on a visit to these properties in 1916. NMBM&MR Photo Collection No. 1513, courtesy Mary Louise (Brown) Dillard.

Though mining would remain the core of Brown's business interests, he was involved in many other ventures in early twentieth-century New Mexico. For example he was the local agent for the Carthage Coal Co., the Columbia Bicycle Co. and Columbus Buggy Co., operated extensive coach and livery service in Socorro, provided coach and hack service to Water Canyon and other points, and even delivered mail to Kelly and Magdalena when the railroad washed out on occasion, he also held several government mail contracts at various times (Chieftain, 8/9/1895, p 1; Anon., p 478; Carruth, p 195).

Brown was among the incorporators of the Black Range Railway, that was projected to run from Magdalena to Chloride, New Mexico in the heart of the Black Range mining district, one of his few endeavors that failed to materialize. He was president and manager of the Socorro Light and Power Company (which would evolve into today's Socorro Electric Cooperative), and president of the Socorro State Bank (Twitchell, p 393). He was also the owner of the beautiful Victorian Windsor hotel, located in the center of the block north of Manzanares between 5th and 6th streets, that was destroyed by a fire which began in Henry May's adjacent livery barn when a kerosene lantern ignited the hay on Tuesday afternoon July 18, 1905 (Chieftain, 7/22/1905, p 1). Ten years later, he was president of, and heavily involved with the construction of the still surviving Val Verde Hotel which occupies the west ½ of the same block.¹⁷

Brown was a distinguished member of the Masonic Lodge and was one of the founders of the Socorro Lodge of the International Order of Odd Fellows (Bullion, 8/22/1885, p 3). At various times he served on the executive board of the International Miner's Association as the New Mexico representative. Brown was appointed by Governor Larrazolo, along with four fellow delegates to attend the dedication of the U.S. Bureau of Mines experiment station in Pittsburgh, PA from September 20 through October 1, 1919. He was accompanied by W. A. Parvis, Phillip Argall, and C. C. Clarke of Socorro, and J. M. Sully of Santa Rita (Chieftain, 9/27/1919, p 1). He was repeatedly appointed one of Socorro County's delegates to the International Mining Congress (Chieftain, 2/22/1902, p 1; 3/15/1902, p 1). Brown met with several of his mining industry colleagues in Silver City in September, 1920 to organize a "New Mexico Mining Association" preliminary to organizing the New Mexico State Chapter of the American Mining Congress. The organization was completed on October 4 with the election of officers and adoption of bylaws. Fourteen directors, including Brown, were elected (E&MJ, 9/4/1920, p 489; 10/16/1920, p 781). He was thus one of the honored delegates to the first New Mexico meeting of the American Mining Congress held in Silver City, New Mexico in October, 1921 (Fig. 8).

He often wrote articles for "ZINC" (the official publication of the New Jersey Zinc company), The [El Paso] Miner & Manufacturer, International Industrial Record and other publications (Chieftain, 3/15/ 1902, p 1; Brown, 1916, p 197-98) examined and wrote reports on multitudes of mines and prospects around the southwest both for his

own account and for others. His many contributions to U. S. Geological Survey's report on the Magdalena Mining District (pub. 1942) were widely recognized. The authors of that report, Gerald F. Loughlin and A. H. Koschmann (q. v.) "were especially indebted to the late C. T. Brown...who generously gave of [his] time and supplied many of the mine maps (Loughlin and Koschmann, p 3)." It is also appropriate to mention at this point that Brown's long association with the district was duly recognized in the naming of the Brown Fault.

Fig 8: Facing page. Brown was one of the delegates to the first meeting of the American Mining Congress held in Silver City, New Mexico, October 3, 1921. Elected Vice President, he is pictured here, center, front row, among his professional colleagues of the day. To Brown's left are John M. Sully (Chino Copper Co.), Powell Stackhouse (Carthage Coal), and Ira Wright (Mogollon), among others. NMBM&MR Photo Collection No. 1786, courtesy Hyman Kelly, Phelps Dodge Corp.

During his term on the Socorro County Board of Commissioners he was instrumental in making major improvements to the road through Blue Canyon along the old route to Magdalena. The local editor reported:

“We had the pleasure of going over the new road through Blue Canyon one day last week...To our minds this new road is the greatest public improvement in Socorro county for many a day...The road was built in part by private subscription and part by an appropriation by Socorro county, and that we have the road is due entirely to the energy of C. T. Brown, for if it had not been for Mr. Brown’s untiring energy the road would never have been built...It shortens the distance to Water Canyon...and Magdalena about four miles...and does away with the terrible piece of road at the mouth of Six Mile near Clemow...”

Brown was one of the subscribers, anteing up about a fourth of the cost (Chieftain, 12/4/1896, p 1). During his final years, he served in the New Mexico state senate (Chieftain, 1/17/1925, p 1; Regents, 1/19/1925, p 113).

Pioneer of the Middle Rio Grande Conservancy

Brown’s long and successful career in mining is fairly well documented. Not so his equally long career in farming. Beginning no later than the early 1890s he successfully engaged (in his spare time perhaps?) in agriculture and operated a ranch/farm of 160 acres upon which he “produced large crops of alfalfa, apples, pears, peaches, and grapes (anon, 1895, p 478).” Corn may doubtless be added to that list as the famous “cornfield portrait” of Brown (Frontispiece), likely taken on his Socorro farm, attests. Through his many years of first-hand observation of the wild and unruly Rio Grande he became keenly aware of the serious, even dangerous, problems associated with drainage (or lack of it) in the middle Rio Grande Valley.

The deceptively placid river possesses a long recorded history of unruly behavior – often flooding uncontrollably one year and yet bone dry from Albuquerque to San Antonio just a year or two later. The situation has been thus since time immemorial. For example, L. Bradford Prince, ex-governor of New Mexico and long-time president of the New Mexico Historical Society, reviewed the records of an expedition sent out by Don Tristan de Arellano to explore the Rio Grande in 1541 and noted “the river played the same tricks as these days...” when Arellano reported it completely dry (“in the latter part of July”) between Bernalillo and San Antonio (Daily New Mexican, 1/19/1898, p 4). Local newspapers, in more recent times, often reported identical conditions at Socorro (Chieftain, 10/21/1892, p 1; Chieftain 7/6/1894, p 1; Daily New Mexican, 10/21/1898, p 2). Raging floods were similarly reported in other years (see, for ex., Daily New

Mexican, 6/2/1884, p 4; Chieftain, 9/18/1893, p 1; 7/31/1895, p 1). BOTH conditions occurred in 1892 with the river at flood stage in May but again dry by October (Chieftain, 5/9/1892, p 1; 10/21/1892, p 1). Samuel C. Meek, one of Socorro's pioneers and a man noted for his "remarkable memory for the dates of important occurrences," recalled that in the Spring of 1871 flooded conditions were so bad that the "Rio Grande shifted its bed from between the city and the Green Ditch to its present position (Chieftain, 1/6/1912, p 3)."

Clearly something needed to be done to both conserve water for dry times and minimize flood damage during the wet. Proposals for major reclamation and irrigation projects were tossed about as early as 1888. One such called for 142 miles of canal beginning in Rio Arriba County and ending near Socorro. The proposed system would have the capacity to store "practically inexhaustible... water supplies in...immense storage reservoirs at intervals along its line" and promised the reclamation of "over 1,500,000 acres of now useless land... (Daily New Mexican, 1/21/1888, p 2)" Little beyond talk took place until the turn of the century when the US Geological Survey initiated hydrographic studies along the middle Rio Grande valley in an effort to attach scientific parameters to the seasonal chaos. P. E. Harroun, the USGS engineer in charge, soon confirmed that which Brown long suspected: the evaporative losses due to the water spreading out on the flood plain during high water was horrendous – estimated to be sufficient to irrigate 150,000 acres of farmland (Chieftain, 3/29/1902, p 4; 9/20/1902, p 3).

"C. T. Brown was one of the first residents of the Middle Rio Grande valley to realize the damage [done] by the constant filling and raising of the river channel, which necessarily raised the water table, forcing the alkali to the surface, destroying the productivity of the once fertile lands and completely submerging the lower portions of the valley (Chieftain, 10/21/1922, p1)."

The erosional damage wrought by the Rio Grande during its pre-conservancy days is difficult to appreciate today. Fayette Jones, a Civil Engineer and twice president of the School of Mines, accurately observed: "artificial control of every large stream presents economic problems that call into requisition engineering skills of a high order. The Rio Grande is no exception. The drainage basin of this stream is among the largest in the west. The average layman fails to grasp the magnitude of the tremendous amount of energy wrought by the Rio Grande's mighty working. Thousands of tons of rock are being reduced to sand and silt by it annually" (Gold Pan, June 1917, p 1; Chieftain, 6/2/1917, p 1). Whatever vegetation managed to take root along its banks during quiescent times was violently uprooted and washed away during flooding. The dead

snags further blocked the channel and increased the accumulation of silt such that high water inundated the flood plain on either side of the river thereby forming temporary pools and estuaries in which fish were trapped and left to die as the waters receded. Vintage photographs from the pioneering work of Joseph E. Smith of the late 1880s to that accompanying Jones' articles bear stark witness to the erosion: in each of the images not a single mature tree can be seen along the barren banks of the river. There was no “bosque” forest as we know it today. (Fig. 9).



Fig. 9: “View of the Rio Grande at San Acacia, looking south, showing water-logged ground above Socorro in the distance.” Photo by Fayette A. Jones, Gold Pan, June 1917, p 1.

The time for action had arrived by the early 1920s when New Mexico Governor Mechem appointed Brown to the executive board of the Rio Grande Survey Commission:

“The Commission arranged with the United States to furnish engineers from the Reclamation Service to make a thorough examination of the valley from San Marcial to White Rock Canon and perfect plans and estimates of the cost of reclaiming the valley. The Reclamation Engineers have been at work on the plans for over six months, which will be completed about the first of the year, in time to

be submitted to the next session of the State Legislature....Mr. Brown is thoroughly acquainted with all the details of the requirements, and as a member of the State Senate, will be able to assist in the passage of the necessary legislation (Chieftain, 1/21/1922, p 21)."

Brown was elected to his first term as Senator in 1922 and worked fervently to make the project a reality. Both the state legislature and A. P. Davis, Director of the United States Reclamation service in Washington, approved the entire project in early 1923 and Brown's work became reality – on paper at least -- late in the year (Chieftain, 8/19/1922, et. seq; 4/28/23, p1; 9/15/23, p 1). Not all, it should be noted, were in favor -- perhaps they rebelled at the thought of paying the conservancy tax -- and they brought suit to intervene. Brown, however, was re-elected to the Senate in 1924 and continued to foster the project. Although the district court in Albuquerque found in favor of the Conservancy the issue was not resolved until the lower court's decision was upheld by the New Mexico Supreme Court in December:

"The decisions of the supreme court left the way clear of all legal entanglements for proceeding with the conservation, reclamation, and flood control work in the valley. Thousands of acres of valley land, once productive but now waterlogged and saturated with alkali, will be reclaimed and once more made ready for farming under the present plans (Chieftain, 12/19/25, p 1)."

Sadly Brown did not live to see his dream mature to completion as he passed away "on the eve of his departure for Santa Fe to attend the seventh session of the legislature... (Porphyry, 1925, p 11)." Even on his deathbed his colleagues in the state legislature elected him "chairman of the senate committee on irrigation, drainage, reclamation, conservation and agriculture (Chieftain, 1/17/1925, p 1)."

Despite a few "warts" over the years the success of the Conservancy is obvious to all who care to examine and compare "then and now" photographs of the valley. The changes wrought are remarkable – the devastating floods of bygone years are essentially eliminated, scarce water is conserved and husbanded, and wildlife habitat has been increased several-fold. That success¹⁸ is a lasting monument to C. T. Brown, the man who "was the state's ablest champion of the cause of reclamation in the middle Rio Grande Valley (Porphyry, *ibid*)."

The School of Mines Great Benefactor

His business achievements notwithstanding, Brown is perhaps best remembered for his unfailing devotion to, and support of, the New Mexico School of Mines. Among the cruelest tricks of fate and time is the fact that little is known on campus about this figure of near-legendary proportions.¹⁹ Except for a brief note in the Gold Pan (2/1/1925, p 1), the written record is nearly silent regarding his early involvement with the school. But that brief note is revealing: “It was largely due to his efforts that the school was started and maintained.” His initial (i.e., late 1880’s through early 1890’s) contributions remain undocumented and even the minutes of the Board of Trustees (changed to “Regents” in 1913) are silent on the matter. Nevertheless the record shows he was deeply involved with the school no later than 1898 when he was first appointed to serve on the board. He was elected secretary-treasurer on 30 June 1899, and from then until his resignation from the post in May 1914, the minutes appear in Brown’s strong, scrawling hand. He was again elected secretary-treasurer of the board in May 1917, and served in that position until March 1921 when he was elected president of the board. He resigned that position only upon his election to the New Mexico state senate in November, 1922 (Regents, 1/19/1925, p 113, 114).

A “benefactor,” according to Webster, is “one who makes a charitable donation,” and Brown is often so referenced in that regard. Recurrent rumors suggest that he more than once came to the financial aid of the School of Mines -- on one occasion “to the tune of \$30,000” (pers. comm., Mary Fitch, 24 July 1992; Mary was the daughter-in-law of Socorro Attorney James G. Fitch, one of Brown’s closest associates and she likely obtained the story directly from him). Abe Baca (pers. comm., 9/5/1984) confirmed that he had often heard such stories but could not recall where or when. However he quickly added, “Mr. Brown was a big man (referring to his social stature, not his unusual height) and he was the kind of man to do something like that but never brag about it.” The closest we may come to documentation is the following:

“...and right here we believe is a fit place and time to say that the many years of untiring work of Mr. Brown, is largely due the present status of the school; he has given generously not only of his *money* (author’s emphasis), time, and energy, but of himself, all for the benefit of the Mines, which now ranks high among the technical schools of the entire United States (Chieftain, 5/17/1924, p 1).”

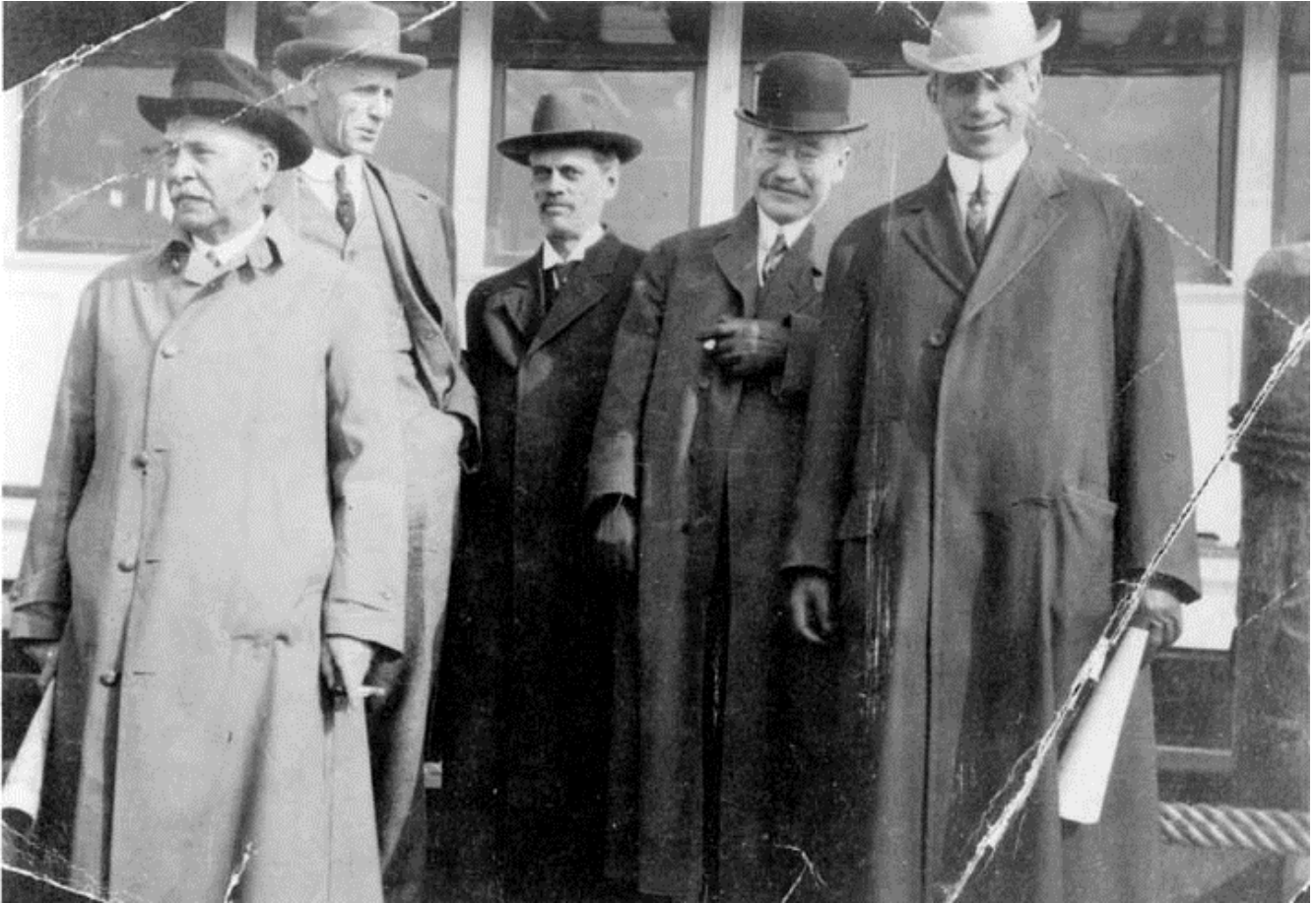


Fig 10: Brown was financially well established by this time. He traveled extensively throughout the western United States, Mexico, and South America and he often hobnobbed with the upper crust of society and the extractive minerals industry. Here he is pictured, second from left, disembarking a west coast ferry with Ed Doheny (left) and Sen. Albert Fall (fourth from left (others unidentified)). Undated [ca. 1910-1915] but Brown's relationship with these men began during their Kingston, NM days of the late 1880s when Doheny and his partner Charlie Canfield made their first big strike before heading west to establish the Union 76 Oil co. NMBM&MR Photo Collection, No. 1728, courtesy Mary Louise (Brown) Dillard.

Regardless of the nature of his contributions, financial or otherwise, the New Mexico School of Mines in 1913²⁰ recognized his many years of effort on behalf of the institute and the mining industry in general by awarding him the first honorary degree in the school's history – that of mining engineer (recipients of early honorary degrees are listed in the NMSM Catalog, 1937-38, p 87). This award likely took place during the same ceremony in which the final Brown Medal for decade was awarded to Frank Maloit (described below). Brown doubtless considered this to be one of his greatest personal achievements, the other having occurred previously when he was selected for “that High

Distinction and Great Honor...” to the...“thirty-third degree, and honorary inspector general for New Mexico... by the supreme council of the Ancient and Accepted Scottish Rite of Free Masonry for the southern jurisdiction of the United States (Chieftain, 10/31/1903, p 4).” From that time onward his 33rd degree pin is usually plainly visible in his photographs.

The Brown Medals:

Some time prior to 1900, Cony T. Brown conceived of the idea of offering (at his own expense) a special prize, in the form of a gold medal, to that student who displayed particular proficiency in assaying, metallurgy, etc. His gold medal, still awarded today, was first presented at commencement 1900:

“As an inducement to special effort, Mr. C. T. Brown of Socorro, secretary and treasurer of the board of trustees, offers a gold medal to the student showing the greatest proficiency in assaying, chemistry and metallurgy during a full years' work...Mr. Brown's public spirit is well known and deserves a hearty appreciation (Chieftain, 6/2/1900, p 1; 9/8/1900, p 4).”

The recipient of that historic first medal was Carl J. Homme of Wittenberg, Wis. and, upon its acceptance, Brown offered a few well-chosen words (which the reporter failed to record) but did state: “Mr. Homme's little speech on receiving the gold medal was a most happy one. Nobody knew that he would have anything to say, so surprise and delight were depicted on every countenance.” Likewise Mr. Homme's comments were not transcribed for posterity by the reporter. The announcement in the Chieftain (ibid) stated the medal was awarded “for the greatest proficiency shown during a full years' work in chemistry and metallurgy (Fig. 11). David J. Cloyd, a part-year student, received honorable mention” (likely because he didn't fulfill the 'full years' requirement).

The second Brown medal was presented in 1901 to wit: “The awarding of diplomas and presentation of the C.T. Brown gold medal was the last exercise on the regular commencement program...the gold medal bestowed by C. T. Brown of this city upon the student showing the greatest proficiency during at least one full years' work in assaying, chemistry, and metallurgy, was won by Ed. Chamney” (Chieftain 6/01/01, p 1). While President Fayette A. Jones made the actual presentation (**Table 1** see p 41) it appears his ego was bruised a bit by the popularity of Brown and the growing prestige of the medal because he personally offered a five-dollar gold piece for the solution of a particularly difficult geometrical puzzle. The winner of the “Jones award” was W. A. E. Hult.

Following the awards the attendants were regaled with a remarkable performance: “Capt. Jack Crawford, the poet-scout, who is visiting friends in Socorro for a few days, was next introduced and entertained the audience for a few minutes in a most happy manner with his wit, eloquence, and poetry.”

The early Brown medals are distinctive and each may have been unique. That awarded to Homme “for proficiency in metallurgy” in 1900, is a beautifully engraved gold “shield” suspended from a tie-bar by two short gold chains. The Homme medal is likely the largest ever presented in that it is 2” wide across the tie-bar, 1-5/8” at the base, and 2-5/8” in height. No purity mark was observed but based solely upon luster/color it must be at least 18 ct. This medal easily ranks among the most priceless of the Institute's artifacts and should be protected accordingly (Fig. 11).



Fig 11: By the greatest of fortune the Homme medal is preserved in the archival collections of the New Mexico Institute of Mining & Technology library. It was a presented to the “Alumni Association Archive” by the wife of Carl's son Vernon Homme, also a NMSM graduate (B. S. Mining Engineering, 1932).

A delicate situation occurred with the awarding of the third Brown medal due to the fact that the winner was Elston Everett Jones, son of NMSM president Fayette A. Jones, who prudently vacated the ceremonial duties to F. C. Lincoln, professor of Chemistry: following an address by Judge Freeman “the awarding of the gold medal... was fittingly

bestowed by Lincoln...and acknowledged by the recipient in neat and appropriate terms (Chieftain, 5/31/1902, p 1).

The fourth medal deserves special mention as it was one of the rare occasions it was personally bestowed by the medals' namesake, to wit: "W. E. Hult...has been awarded the C. T. Brown gold medal this year for the best progress in chemistry and metallurgy. Mr. Brown himself bestowed the medal yesterday morning in the library room at the School of Mines in the presence of the assembled students and members of the faculty (Chieftain, 5/30/1903, p 1). The observant reader will note that Fayette Jones was not present at this ceremony, he having served out his term in 1902 and chose to move on to other endeavors.

No mention of the Brown medal for 1904 was found but in mid-year Mr. A. B. Frenzel, rare-mineral commissioner of Colorado, toured New Mexico and offered a gold medal to be presented at the forthcoming commencement (i.e., 1905) for the best essay on rare minerals in the territory. There is no indication the Frenzel medal was subsequently awarded.

For 1907 "the gold medal offered by Mr. C. T. Brown...was awarded to Rue N. Hines, a graduate in the mine engineering course. The medal is a beautiful piece of workmanship turned out by one of the leading jewelry establishments of the west and is a prize of which any young man ought to feel proud." (Chieftain, 6/01/1907, p 1). A great tragedy is that none of the medals awarded after Homme's of 1900 through 1912 have been found or are otherwise known to exist. Quite possibly some of these may have been unique in design as per the Homme medal.

The 1909 commencement ceremony was a particularly poignant one for Captain Brown, sitting quietly, as usual, in the background:

"President E. A. Drake...awarded the medal to Daniel M. Miller...In the awarding of the medal a few feeling words concerning the appreciation due Mr. Brown for his great and self-sacrificing services to the School of Mines resulted in a spontaneous demonstration in behalf of that gentleman that would not be quieted until he arose from his chair on the platform and addressed a few very pertinent and forceful words to the members of the graduating class... (Chieftain, 5 June 1909, p 1)"

Alas, as for Homme's speech above, Brown's words to the members were not preserved. In 1910, the unpredictable occurred: "A remarkable difficulty arose over the awarding of the [Brown] medal this year, for it was found that two young men, G. [George] C. Baer and C. P. [Charles 'Carlos'] Tiffany, had made exactly the same grade in subjects on which the award is based. The matter was taken under advisement and some just and fair means will have to be devised to determine upon whom the medal is to be bestowed...

(Chieftain, 21 May 1910, p 1)” The method ultimately established by the School to resolve a tie is described in the NMSM catalog for 1910-11, p79: “In case of a tie in the grade of proficiency between two or more contestants, special specimens of ore are submitted to them for assaying until the tie is broken.”

No follow-up declaration of a winner was noted but it’s unlikely the matter was left unresolved. Most likely the medal was awarded to either Baer or Tiffany with perhaps “honorable mention” (as per the first Brown medal in 1900) being given the runner-up. Tiffany is of interest to this biography (and to the history of our Institute) because he is one of a group of “lost” NMSM alumni. Remarkably the Brown medalist for the very next year is another. That student was C. L. Harrington, who won the 1911 award for having performed “the best year's work in wet and fire assaying” (Santa Fe New Mexican, 5/20/1911 p1). The medal appears to have been presented not by the president of the School of Mines but by Aniceto C. Abeytia, president of the Board of Trustees (he had presented the diplomas since 1909). We know little about Abeytia but several accounts suggest he was a gifted toastmaster and eloquent master of ceremonies who often “elicited frequent and hearty applause”...from the attendants (Chieftain, 6/5/1909, p1).

Who were C. P. Tiffany and C. L. Harrington? They were real and actually attended/graduated from NMSM. Charles (“Carlos”) Palmer Tiffany, after graduation enlisted in the British Royal Army Services Corp and served on the WWI battle front in France. He contracted “malaria and sand fly fever” while serving in the Middle East and was honorably discharged 23 December 1918. Baer appears in the directories and other bio-data is available on him.

Charles L. Harrington came to Socorro from Roswell, NM in 1908 (Roswell Daily Record, 8/28/1908, p 4), and after winning the Brown medal in 1911 moved on to the Colorado School of Mines either to complete his degree (or perhaps earn a MS) in 1912. He later, in the early 1920s, acquired the highly acclaimed consulting business of ex-U. S. Deputy Mineral Surveyor Walter H. Wiley and was associated with that firm into the 1950s. Remarkably the various NMSM annual catalogs (which usually include alumni directories) as well as the published directories are totally silent in regard to Tiffany and Harrington.

By 1912, or perhaps before, Brown settled on a somewhat more standardized design of the now-familiar gold pan backed with the opposed rock picks and/or hammers. Only the size and gold content changed down through the years doubtless reflecting the increase in gold price. For example those awarded to James Avery Smith (1912) and Frank Maloit, Jr. (1913) “for proficiency in assaying” appear to be of medallion (quarter-dollar) size, while those awarded to George Griswold (1955) and Tim Hall (1971) are considerably smaller. The Griswold medal bears a “10K” mark on the obverse.²¹

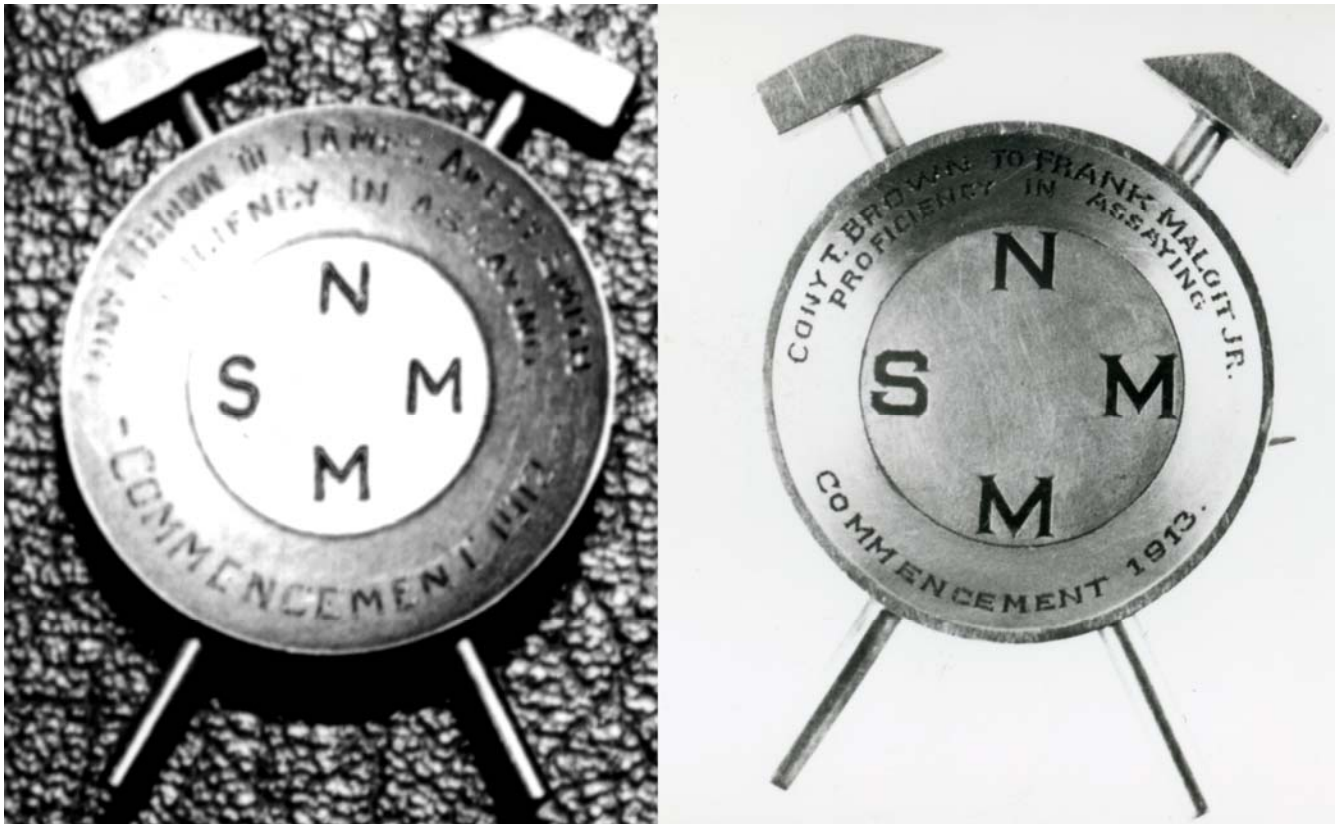


Fig 12: Brown medals awarded to James Avery Smith (left), 1912 and Frank J. Maloit (right), 1913. The medals are approximately quarter-dollar size. Photos courtesy of James's son Avery and Frank's son Robert, respectively.

Maloit appears to have been the last Brown medal recipient for a decade, viz. the following:

“For the first time in a decade or more of years (*), the New Mexico School of Mines celebrated the closing of the school year with a commencement program, it being the occasion of the graduation of... the largest number of graduates to have been issued degrees at any one time during the entire 30 years’ life of the institution...President Wells, on behalf of the donor, C. T. Brown, presented the Brown Medal to Ward Benton Hamm, he having been chosen by the faculty as the member of the class most deserving in the required qualities of conduct, science, and leadership, and best all ‘round man...(Socorro Chieftain, 5/19/1923, p 1).”

The above (*) is not absolutely correct as there was a rather brief “closing ceremony” in 1915 and a “regular” commencement ceremony was most certainly held in 1920 (Chieftain 5/29/1915, p 1; 5/22/1920, p 1) but otherwise the statement appears to be accurate. C. T. Brown continued to sponsor the medal until his untimely death in January 1925 (i.e., through commencement 1924) although he usually (but not always)

relinquished the pomp and circumstance of the actual presentation to a fellow board member, professor, or School of Mines president. It is fitting to note, however, that he personally awarded his final medal (**Table 1**) – that for 1924 – to Courtney T. Collins (Chieftain, 6/2/1900, p 1; 6/1/1901, p 1; 5/31/1902, p 1; 5/30/1903, p 1; 5/17/1924, p 1).

TABLE ONE

Recipients of the Medal during Brown's Lifetime.

Citations in the Socorro Chieftain are more reliable than the NMSM catalogs cited when available.

Year	Recipient	Presented By	Source
1900	Carl. J. Homme	Pres. F. A. Jones	Chieftain, 6/2/1900, p 1
1901	Edward Chamney	Pres. F. A. Jones	Chieftain, 6/1/1901, p 1
1902	Elston Everett Jones	Prof. F. C. Lincoln	Chieftain, 5/31/1902, p 1
1903	William E. Hult	C. T. Brown	Chieftain, 5/30/1903, p 1
1904	?	?	
1905	Samuel Cockerill	?	NMSM, 1905/1906, p 101 (*)
1906	?	?	
1907	Rue N. Hines	?	Chieftain, 6/01/1907, 1
1908	?	?	
1909	Daniel M. Miller	Pres. E. A. Drake	Chieftain, 6/5/1909, p 1
1910	G. C. Baer or C. P. Tiffany (tie**)		Chieftain, 5/21/1910, p1
1911	Charles L. Harrington	Aniceto Abeytia (***)	Santa Fe New Mexican, 5/20/1911, p1
1912	James Avery Smith	?	Chieftain, 5/8/1912, p 1
1913	Frank Maloit, Jr.	?	Pers. comm., Robert Maloit
1914			
1915			
1916			
1917			
1918			
1919			
1920			
1921			
1922			
1923	Ward Benton Hamm	Pres. E. H. Wells	Chieftain, 5/19/1923, p1
1924	Courtney T. Collins	C. T. Brown	Chieftain, 5/17/1924, p 1

(*) The NMSM catalogs are notoriously ambiguous regarding the winner and year of the award. Thus Cockerill may, in fact, have been the 1906 medalist.

(**) tie, winner to be announced – see discussion in text.

(***) Abeytia was president of the Board of Trustees, not NMSM.

Upon his passing the Board of Regents convened 10 April 1925 and made the following proclamation: "Upon motion duly recorded and carried it was decided that the giving of the Brown Medal each year, to the student ranking highest in scholarship, leadership, and general conduct (note the changes in criteria), should be kept up as a memorial to the late C. T. Brown, that it should be registered as the Brown Medal, and paid for by the school...(Regents, 1925, p 122)." Over the years the Institute has offered other awards such as the Cramer, etc, but the Brown Award remains the most prestigious and continues, more than a century after its birth, to espouse the high levels of academic achievement envisioned by its creator.²¹ Brown was further honored and remembered by the board when it recommended that the new building (Fig. 13) erected to replace the original "Old Main" structure on campus (destroyed by fire on 5 July 1928) be named Brown Hall (Regents, 11/5/1928, p 213).



Fig 13: 1935 photo of the recently-constructed Brown Hall which arose from the ashes of Old Main, destroyed by fire July 1928. Photo by John Farkas, B.S. Met. Eng, 1938; author's collection. The "new" collection was first housed in the basement (far right) and then subsequent to the Coronado Quarto-Centennial event of 1939, was transferred to the Bureau's Workman Center museum in the late 1950s (Eveleth and Lueth, 1997).

The Brown Mineral and Other Collections:

During his long and colorful mining career spanning some 45 years it was quite predictable that Brown would develop a deep and lasting interest in nature's mineralogical treasures. His extensive travels throughout the mining regions often brought him in contact with mining men who had similar interests and he was constantly seeking interesting, spectacular, and/or unusual minerals to expand his cabinet. Brown was present during the years of discovery and development of many of the mineralogically well-endowed mining camps of the western United State and Mexico and, as a result, he was able to assemble a remarkable collection. What he did not personally collect he acquired by trade and exchange, and although his collection was world-wide in scope, Magdalena and other New Mexico mining districts, due to his long association, are perhaps best represented. Specimens from Magdalena include numerous and superb examples of the zinc, copper, and lead carbonates. His collecting activities went far beyond the hobby stage, however, and his material was "used and industriously studied" by colleagues and students alike (Gold Pan, 2/1/1925, p 1). He was generous with his gifts of mineralogical materials to the School's first collection, often supervised special displays of the collection at fairs and exhibitions, and contributed material to other public displays – such as the Chamber of Commerce -- as well (Chieftain, 10/20/1900, p 4; 10/3/1908, p 1). Brown's exhibit at the 1901 territorial fair in Albuquerque of Black Range minerals was particularly notable because the district is exceptionally difficult to adequately represent:

"For some time before the date set for the opening of the territorial fair at Albuquerque, C. T. Brown of this city was busily engaged in gathering at no small expenditure of labor and money a mineral exhibit from the Black Range mining district (Fig. 14)...The exhibition came into competition with similar exhibits from several of the best known mining districts of the territory, but easily won the diploma.

This result of Mr. Brown's enterprise is sure to be profitable to the county. It cannot fail to attract the attention of those wishing to invest in mining enterprises in New Mexico, and a collection of the ores of a district is a far more convincing argument than any words of tongue or pen can possibly be.

Mr. Brown returned home satisfied that, though he is now money out of pocket, the investment will ultimately prove to be a profitable one. He kept about half of the collection. Of the other half a part will be sent to the Charleston exhibition and a part was given to the city of Albuquerque (Chieftain, 10/26/1901, p 1)."

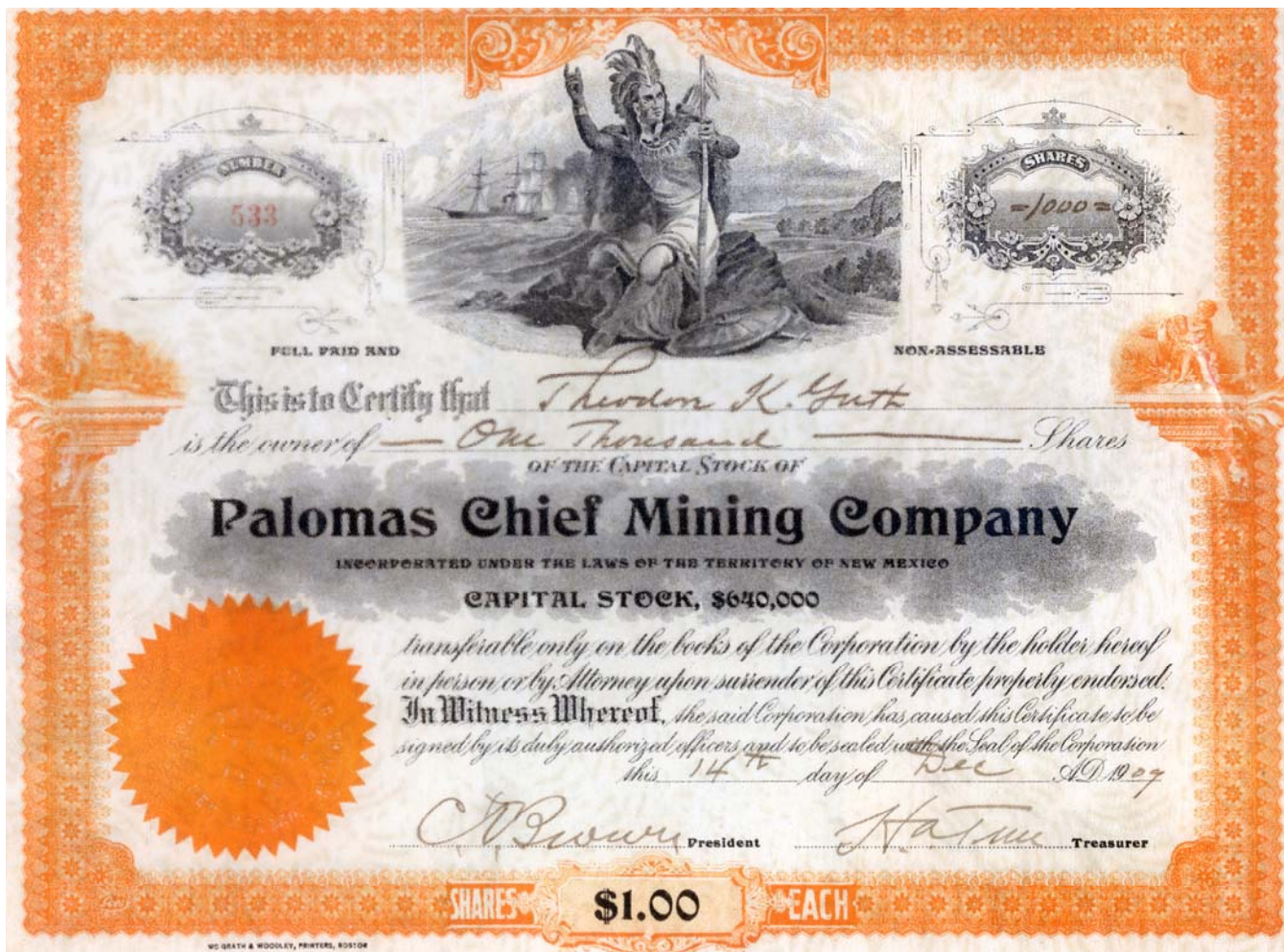


Fig 14: Brown was long interested in the Black Range mines both in behalf of the Empire Zinc Company (Lady Franklin and others) and for his own account (Brush Heap, Tall Pines Group, Palomas Chief, etc). The latter is represented by this certificate of the Palomas Chief Mining Co., eastern-most but one in the Hermosa (Palomas) Mining District south of Chloride, Sierra County, NM. Brown's partner in this venture was Harry True of the International Smelting Co., El Paso, Texas. The certificate is also endorsed to Theodore K. Guth who was the president of the Germany Mining & Development Company at Kelly – for whom Brown was general manager. Author's collection.

C. T. Brown's personal collection, as preserved in the Mineralogical Museum of the New Mexico Bureau of Geology & Mineral Resources (Bureau of Mines) at Socorro, was purchased by special arrangement with son Tom and the Brown family in 1938 (C. T.'s death in 1925 spared him the anguish of seeing the first collection destroyed in the Old Main fire); the \$200 paid was a mere fraction of the true value and doubtless a reflection of Tom and the family's philanthropy (NMSM Catalog, 1945-47, p 32; Eveleth, 1997, p 69). Portions of the collection, numbering some 1500 pieces, were on display for many years in a hallway on the upper west-side floor of Brown Hall (now completely renovated

and re-modeled) where the author first observed it soon after his arrival in September 1963. Security, unfortunately, was not what it should have been and a few of the “classics,” particularly the smaller pieces, were gone even then. Most notable of these was said to be a fist-sized cluster of chlorargyrite (“horn silver,” or silver chloride) crystals from the famous Bridal Chamber silver deposit at Lake Valley, New Mexico (pers. comm., Cy Perusek), as well as several native gold specimens from White Oaks, Rosedale, and Magdalena.²² The museum is always eager to welcome home any “lost” specimen, whether from the Brown or other collections.

Highlights of the Brown collection today include the large “flagship” blue-green smithsonite (Fig. 15), once alleged (incorrectly) to have seen duty as the “Blarney Stone” during the St. Patrick’s Day Ceremonies (Eveleth & Lueth, 1999), a brassy-yellow cadmian smithsonite, several spectacular azurites and native coppers, and a snowy-white “jackstraw” cerussite [now recognized as a smithsonite pseudomorph after cerussite] – all from the Magdalena district. The minerals of Franklin, N. J. were also well represented doubtless due to the presence, since 1915, of Brown’s son Cony C., an electrical engineer who was New Jersey Zinc’s superintendent of maintenance and power for many years (pers. comm., Mary Louise Dillard, August 2003). These and many other specimens, along with Brown’s 6th Edition of Dana’s Mineralogy, his personalized bookmark, etc., are continuously on display in the mineral museum in Socorro.

Brown’s collecting interests, it should be noted, were not limited to minerals. His personal library was said to rival that of the School of Mines itself, and he gathered many unique and historically valuable artifacts as well. Principal among the latter was alleged to be the oldest bell in North America. Cast in 1549, the bell survived the Pueblo uprising and was eventually recovered by Brown. Another precious relic occupying a position of prominence in Brown’s Manzanares Street office was a document dated 1787 that granted one Thomas Posey membership in the “Cincinnati Society.” The neatly and carefully framed document was signed by George Washington as president and John Knox as secretary of the society; respectively (Chieftain, 7/4/1900, p 4; 10/27/1900, p 1; 5/28/1904, p 3; White Oaks Eagle, 7/26/1900, no p; Gold Pan, 2/1/1925, p 1).²³



Fig.15: Brown's "flagship" specimen: this piece of gemmy blue-green smithsonite (museum No. 793) weighing over 60 pounds, measures 38X30.5X24 cm (15X12X9.5 inches) and is carefully preserved in the Bureau's mineralogical museum in Socorro, NM.

'Til The Great Judgment's Sluice-Heads Sweep:

C. T. Brown remained fully active through the closing days of 1924. History has yet to reveal the reason why he felt compelled to leave the comforts of hearth and home to journey to the mining camp of Kingston in the Black Range at a time when December's chill winds blew the hardest, but he paid the ultimate price for his transgression. He caught a severe cold while at the mines and, upon his return to Socorro, was confined to bed.²⁴ For a time it was thought he would recover, however his heart continued to weaken and he finally succumbed at 7:00pm on 15 January 1925 (Gold Pan, February 1925, p 1, 2; Chieftain, 1/17/1925, p 1; ZINC, 1925, p 63). The loss to the community, school, and the state was incalculable – the Socorro Chieftain devoted fully one-third of its front page

to his obituary: “not in years, if ever, has it become the duty of this paper to chronicle so sad an incident as the passing of State Senator C.T. Brown, 68 years of age...although it had generally been known that Mr. Brown was confined to his bed, no apprehension had been felt of a fatal outcome until Wednesday night when a sudden collapse came, and his overburdened heart became weaker and weaker until the end at the hour above mentioned, his demise having cast an almost impenetrable gloom over the entire community where he was held in the highest esteem by the people among whom he had lived, struggled, and fought the battles of life for more than thirty-five (sic) years. Always known for his remarkable energy, Mr. Brown, though suffering with intense exhaustion, retained his senses until the end, speaking pleasantly and encouragingly to those about him to the last.” The Board of Regents considered his untimely death a “public calamity,” and praised him for his many years of service...C. T. Brown left this earth with “the richest heritage possible – the memory of one who died in debt to no man, either politically, financially, or morally” (Chieftain, 1/17/1925, p 1).

“The great monument that Captain Cony T. Brown leaves behind is not of metal or stone. It is rather a memory which will always remain fresh and vivid to those who were privileged to know him. That memory pictures him as a man of few words but of many outstanding deeds; a man of abiding faith in the future of his School of Mines, his town, and his state; a man who knew not the meaning of fatigue, discouragement, and defeat; and a man to whom friendship meant more than self. He lives on as a great inspiration to the students of the School of Mines” (Porphyry, Vol. 1, p 108). It is thus both fitting and proper that the Brown mineral collection, artifacts, memorabilia and ephemera receive the best possible care, for he was, after all, “the School of Mines’ best friend and benefactor.”

Acknowledgments

The author is indebted to many individuals over the long period he has been gathering biographical and anecdotal data on Captain Brown. Among these are, first and foremost, Brown’s grand-daughter Mary Louise [Brown] Dillard (daughter of Cony Cephas) for her generous donation of photographs, artifacts and many contributions to the family history; to Avery James Smith, grandson of Socorro pioneer photographer Joseph E. Smith and son of James Avery Smith (Brown medalist of 1912) and Robert Maloit, son of Frank J. Maloit, (Brown medalist of 1913) for sharing historic photographs and anecdotes regarding their fathers; Abe Baca, Mary Fitch (daughter-in-law of Socorro attorney James G. Fitch), Peggy Dailey, and Betty Thompson for their personal recollections, whether first or second-hand; to Cyril “Cy” Perusek (NMSM, Geological Engineering, 1943) for his recollections regarding the Brown mineral collection; and to Amy Trivitt of the Bureau of Geology's Geological Information Center for her untiring genealogical expertise, newspaper research, and assistance in prepping the illustrations.

Special thanks are due Mary Gorman (Creveling) Krombholz for sharing the story of Brown's professional association with her father, Donald McDonald Creveling and grandfather, James Gorman Creveling, in Mexico. The manuscript has benefited by the critical reading and review by Betty Reynolds, Spencer Wilson, John Reiche and Bernard Kozykowski.

Footnotes

¹: Brown was among the second-wave of mining pioneers to arrive in Magdalena District -- at a time when most of the original brotherhood was still active. He knew them all: John S. Hutchason, the Patterson Brothers, Gustav Billing, E. S. Stover, E.W. Eaton, William Thornton, Valentine Shelby, Charles Longuemare, and so many others. Regretfully Brown left no known memoir or autobiography.

²: Brown's "Captain" moniker derived from his 45+ year career in the mining business and he proudly carried the title with him for much of that time. The term harks back to the early days of the Cornish "cousin jack" miners at Cornwall and Wales and refers to a person who served in various positions of authority and responsibility in a mining operation. Since Brown often functioned as superintendent, general manager, etc., the title was most appropriate.

³: Brown's early history leading up to his departure for Kansas remains to be resolved in detail as many "facts" seem to be in conflict. A BIG question is why Ellis? It now appears that some of the Ellis, KS businessmen (thus the origin of the place name "Ellis Canyon"), like Brown, hailed from Somerset County, Maine and they may have encouraged him to re-locate there. The Socorro Times (8/18/1888, p 1), for example, describes the "Dirigo group (comprised of the Dirigo, Kennebec, Apache, and ten other locations...in Ellis Canyon)...belonging to the Dirigo Company of Somerset County, Me...for whom...Mr. C. T. Brown, one of the stockholders...is in charge...A short distance south of the Dirigo...is the property of Mrs. T. H. Spaulding, of North Anson, Maine..." Spaulding, of course, was Brown's mother's maiden name, and he attended the North Anson Academy. All this is beyond circumstantial.

⁴: Brown was much like the legendary Will Rogers in that he [almost] never met a man he didn't like. In fact there were only two men with whom Brown wasn't particularly enamored: Fayette A. Jones, and to a lesser extent, Joseph E. Smith. The difficulties between the men were real but the underlying reasons are yet to be fully explored and are, by the author's choosing, with the exception of brief snippets and innuendo, considered beyond the scope of this document.

⁵: Brown married the former Anna Kornitzer, a daughter of the well-known Socorro physician Dr. Joseph Kornitzer (Bullion, 2/18/1890, p 6). Two sons were born to them: Cony Cephas (1891-1945) and Thomas Coburn (1895 – ca. 1968). Cony C. was educated in part at the New Mexico School of Mines but later earned a degree in Electrical

Engineering while working with Westinghouse Electric (apprentice program?) in Pittsburgh. He eventually followed in his father's footsteps by pursuing a career in the mining industry. At the time of his father's death he held the position of electrical engineer with the New Jersey Zinc Co. at Franklin. He married the former Felice Hilton (Chieftain, 10/4/1913, p 1) and four children were born to them, one of whom was (recently deceased) Mary Louise [Dillard], donor of the many superb Brown photographs acknowledged herein. The others were Barbara, Cony Thomas, and August Hilton.

Tom also began his career in the mining industry, obtaining his mining engineering degree from the University of Wisconsin, but later returned to Socorro where he was associated with the Socorro Electric Cooperative for many years. He married the former Jewell Hubbard and one child, Judy Ann, was born to them.

⁶: Thanks to this fortuitous re-discovery a copy of the Stein and Ringlund thesis is preserved in the Bureau Archives. The Morton thesis, "The Geological Structures and Their Influence on the Ore Deposits at Kelly, New Mexico," 6/1/1909, is referenced by Stein and Ringlund but is not otherwise known to exist.

⁷: Not used in text.

⁸: This certificate remarkably demonstrates the small world in which Brown, the Crevelings, Stadelmann, et. al. operated. Note that James Gordon Creveling Jr. (Mary Krombholz' grandfather) transferred his ownership (on the verso) to "G. Stadelmann." Stadelmann, a fellow mining engineer, was Heinrich Huber's assistant mine superintendent at the Kelly Mine at Magdalena, Socorro County, NM, during the early 1880s (Bullion, 7/1/1883, p 6). Huber and Stadelmann were employed by Gustav Billing, proprietor of both the Billing Smelting Works at Socorro and the Kelly mine. Given Brown's long association with the Kelly and other Magdalena mines, and the Billing/Rio Grande Smelting Works at Socorro to which he consigned many ore shipments, it's difficult to imagine he and Stadelmann weren't acquainted. Moving on from Magdalena Stadelmann's career path took him to Charcas, San Luis Potosi, where Brown oversaw operations at Empire's La Bufa, Morelos, and Santa Eulalia mines. Stadelmann eventually became a mining consultant in Mexico City and was involved with the Crevelings at nearby Aguascalientes, MX. (Transactions AIME, Vol 32, p 87; Mexican Mining Journal, December 1909, p 70).

⁹: Mary Gorman [Creveling] Krombholz (1935 – 2015) showed up totally out of the blue at the author's office in April 2005 when it was located in the "Gold Building." She was following up on family history and attempting to trace down C. T. Brown when she was directed to the mineral museum. When she saw Brown's name on the historic sign in

front of the Gold Building she assumed she struck pay-dirt – which she did when she found the author. She recalled her father reminiscing about Captain Brown (as all the Creveling children knew him) on so many occasions during her youth she and her siblings grew up thinking he was a family member or at least a distant relative. Her grandfather regularly corresponded with Brown and she commented “it was my father's job to retrieve and mail off the correspondence.” When she observed the half-tone photo of Brown provided by the author at Mina La Bufa (Fig 2) she remarked “your description of Brown (“lace-up boots, khakis, etc”) sounds just like that of my father in identical mining gear...like Brown, dad was a man of few words...[and] he looked so much like Brown because he was 6'3” in height and weighed under 160 pounds all his [adult] life” (pers. comm Mary Krombholz, 4/13/2005; 7/25/2008).

¹⁰: Brown, like many other mining men of his day, collectively grouped the limestones, volcanics and igneous rocks under the general terms “sedimentaries,” “eruptives,” and specific to Magdalena “greenstones.”

¹¹: The latter four men were prominent representatives of New Mexico’s mining industry: Powell Stackhouse, Manager, Carthage Coal Co., Carthage; B. H. Kinney, Manager, Kinney Coal Co. at Tokay near Carthage; J. M. Sully, General Manager of the Chino Copper Co., Santa Rita, and E. M. Sawyer, Manager of the Phelps Dodge Co., Tyrone.

¹²: C. T. Brown established an office on Manzanares Street no later than 1900, as per the “Oldest Bell” article in the Chieftain, q. v.

¹³: Philip H. Argall, (1877-1935) a son of the esteemed mining engineer and metallurgical consultant Philip B, was manager/superintendent of Ozark Mining & Smelting properties at Magdalena, president of the New Mexico School of Mines Board of Regents between 1917 and 1922, president of the Magdalena School Board from 1918 to 1922, and a director of the Bank of Magdalena. He was chairman of one of the local Liberty Loan drives, chairman of the local Red Cross, and a member of several benevolent organizations such as the Elks, Masons, and Knights of Pythias. T. A. Rickard (1864-1953) was an internationally prominent mining engineer and historian, one-time editor (1903-1905) of the Engineering & Mining Journal, owner/publisher (1905-1922) of the Mining & Scientific Press, and co-founder (with cousin Edgar and an obscure fellow mining engineer named Herbert C. Hoover) of the still thriving Mining Magazine in London (the latter of which published Herbert and Lou Henry Hoover’s monumental translation of Agricola’s “De Re Metallica” in 1912). Given the close relationships of these world-renowned mining men and women, it’s a wonder that Hoover himself wasn’t among the Socorro speakers!

¹⁴: The zinc carbonate that replaced the Magdalena limestone is a drab, yellow-brown rock accurately called “dry bone ore” and is not to be confused with the gemmy blue-green crystalline variety of smithsonite that is so highly prized and sought after by mineral aficionados.

¹⁵: Asa B. represents but one of two prominent Fitch families in Socorro at this time, the other being James G. (Gurdon) Fitch. Many Socorroans, James G’s daughter-in-law Mary Fitch among them, often confused the two men but in fact they were about as different as they could be. James G. Fitch, the well-known attorney and a life-long supporter of the Democratic cause, first arrived in Grant County, New Mexico in 1882 where he engaged in mining and ranching, was admitted to the bar in 1885 and finally moved to Socorro in 1888. He often served on the Board of Trustees/Regents for the NM School of Mines and lectured the students in Mining Law for many years. It is he for whom Fitch Hall on campus is named. Asa B. Fitch, a self-trained civil engineer and, like C. T. Brown, a life-long supporter of the Republican cause, first arrived in Socorro County in June 1893 to supervise the installation of hoisting works at the Graphic mine and ended up successfully managing the property through eleven difficult and troubling years for the mining industry. Like James G. he also served on the NM School of Mines Board of Trustees, resigning only upon his departure from New Mexico in 1904. Further clouding the issue, Asa B. named one of his sons James G. (Grimes) Fitch long before coming to Socorro. Both men made major contributions to the community of Socorro and the School of Mines and though the two Fitch families did socialize, there is no evidence they were even distantly related. Attorney James G., a fellow Thirty Third Degree Mason, and the other men were ‘big’ enough not to let their differing political leanings interfere with their professional relationships. In fact Brown and James Fitch were the closest of colleagues and often accompanied each other to the Mining Congress Meetings (ZINC, 1920, p 407).

¹⁶: Named for Dr. Frank L. Nason (1856 – 1928), an accomplished economic geologist whom Brown often accompanied on New Jersey Zinc property examinations at Hanover, Cleveland, Kelly, and throughout the SW United States. See, for example, Chieftain, 7/6/1907, p 4). Nason died as a result of injuries received in an automobile accident on September 12, 1928 (ZINC, October 1928, p 319).

¹⁷: Brown owned considerable property in this area including the Socorro Electric Co-op building, etc. His office was located diagonally across the street from the Val Verde Hotel on the corner of Manzanares and 6th (pers. comm., Peggy Dailey). The astute observer will note the mill-work and carpentry in the office are identical to that in the Val Verde. The Brown home is one block north of the Val Verde on Abeyta between 5th and

4th streets. Details of Brown's management of, and daily involvement with, his non-mining related enterprises are beyond the scope of this paper.

¹⁸: Some would say "too successful." The Bosque, once a narrow strip of cottonwoods along the river bank, has expanded to a forest over a half mile wide in places. Improperly managed and manicured it can present a serious fire hazard in times of drought.

¹⁹ The author and colleague John Reiche learned too late that Judy Brown, C. T.'s granddaughter, was destroying the family papers prior to leaving Socorro during the early 1980s. The two unsuccessfully attempted to save them but they were being burned as they approached the house and the person hired to do the deed refused to consider the incentives offered. The loss is impossible to assess but it is likely that a treasure-trove of Socorro's social and C. T. Brown's mining history went up in smoke.

²⁰: There is an inexplicable 11-year gap in microfilm coverage of Socorro Chieftain newspaper, from June 1911 to January 1921, a period during which many pivotal events in Socorro's history occurred. One such was the honorary degree bestowed upon C. T. Brown in 1913 (Albuquerque Morning Journal, 5/15/1913, p 5). Just a few dozen scattered issues (none between 1913-1915) of the 500 or more published during the period are known to exist. Significantly Brown's degree was bestowed soon after the occurrence of a poorly understood event in the School's history. The author's School of Mines file contains a copy of a postcard, ca. 1912, that shows a gutted building bearing the banner "In Memory of the School of Mines, Killed by Repeated Doses of Peanut Politics, and Administered by the First Governor of the State of New Mexico." Given the timing, this could well have been one of the occasions Brown made a "charitable donation" and saved the school. Those missing newspapers constitute nothing less than a tragedy!

²¹: Photographs of both the Smith and Maloit medals, courtesy of Avery J. Smith and Robert J. Maloit respectively, are in the C. T. Brown archival file, q. v. According to Frank Maloit's son Robert "The Brown medal awarded to my father is [shown] 2X scale in order that the inscription can be read" (pers. comm., 20 May 1987). The medal in the photo measures ~1-1/2" dia. suggesting the original is 1/2 of that or ~3/4" in dia – quarter-dollar size. The George Griswold medal is preserved in the Bureau Mining Archives, Special Collection 14, courtesy of Mrs. George B. (Carol) Griswold. The author has personally examined the medal awarded to Timothy Hall. Both are small lapel-type pins.

²²: A copy of C. T. Brown's mineral catalog is preserved in the Bureau's archives, Special Collection 7. Refer to Eveleth, 1999, for Perusek's comments on how reverently the school protected Brown's high-end material such as the flagship blue-green Kelly smithsonite. During the early 1960s several high-end pieces, some of which should NEVER have left the collection, were traded off in an ill-advised attempt to broaden the scope of the museum's holdings. The curators have only recently come to appreciate the magnitude of the loss since no inventory was made of the transaction. The traded items, many of which ended up in the possession of well-known collectors, are now so valuable that the museum cannot possibly re-purchase them.

The long-established historic sign that guides tourists to the museum is erroneous in that it states the Brown Collection was willed to the School in 1928 – when in fact it was acquired by purchase ten years later.

²³: The newspaper articles offer no indication of how Brown acquired the bell but eleven years earlier Miss Lulu B. Leeson of Socorro was said to have in her valuable collection a very similar bell (Western Liberal, 5/31/1889, p 1, clipped from the Socorro Industrial Advertiser). Brown purchased the Washington document from Mrs. Dixie E. Quinlan of Socorro, who was a great-grand-daughter of Thomas Posey. The ultimate fate of these relics is unknown.

²⁴: According to his obituary in the Gold Pan (2/1/1925, p 1) "Captain Cony T. Brown died at his home in Socorro, N. M. on Jan 15, 1925..." However, Peggy Dailey who literally grew up at the Val Verde recalls a story often told by her parents (who managed the Hotel facility) that Brown did not die at the family residence. In an attempt to provide the best possible medical attention, the family set up a specially prepared room and hospital bed for him in his beloved Val Verde Hotel, on the second floor directly off the main stairway. Indications are that pneumonia set in and he went rapidly downhill, though he "retained his senses until the end, speaking pleasantly and encouragingly to those about him to the last" (pers. comm., Peggy Dailey, July 2005; Chieftain, 1/17/1925, p 1).

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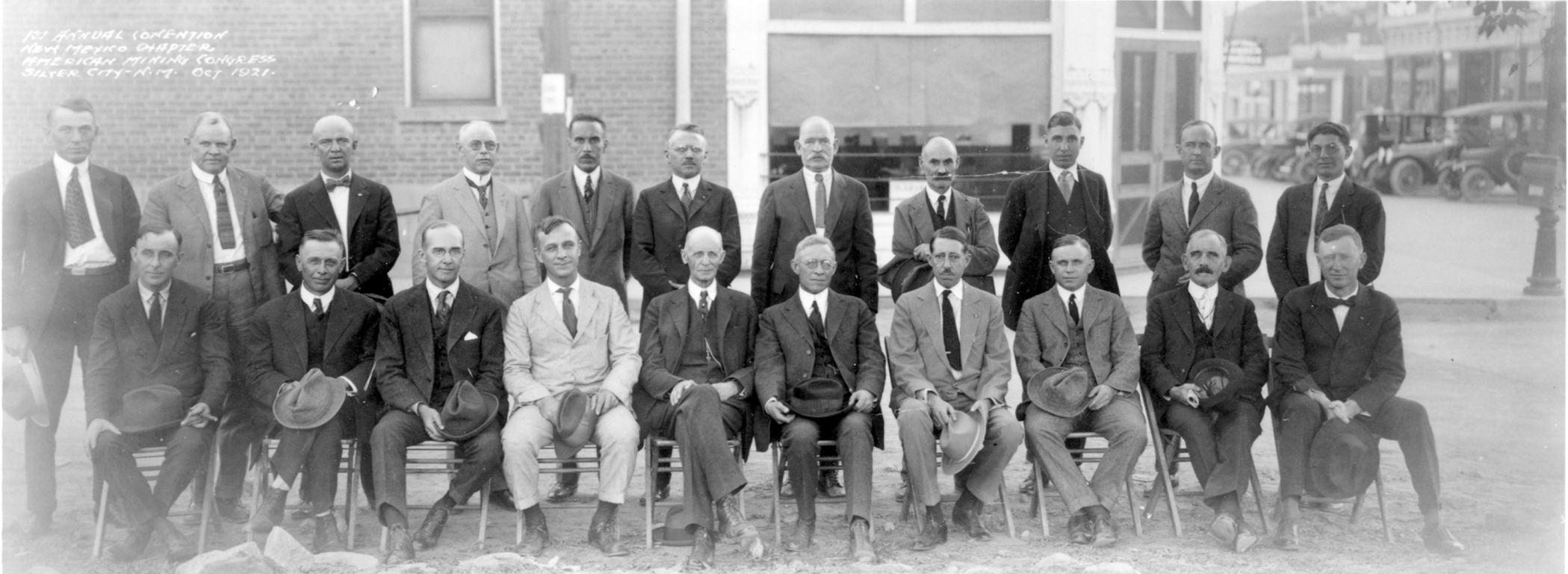
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CAPT. CONY T. BROWN