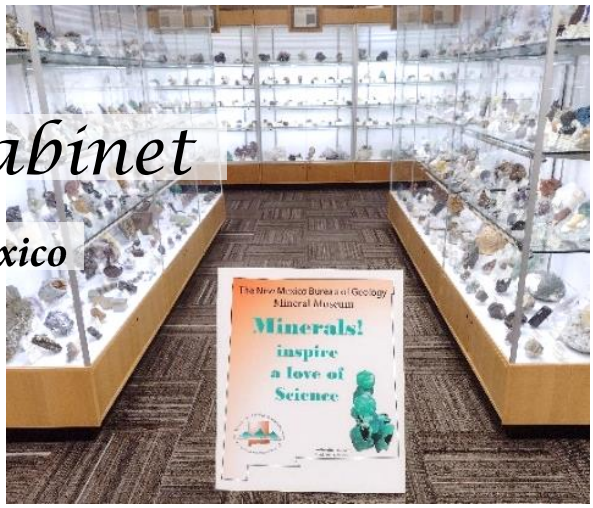
# The Mineralogical Cabinet




***Newsletter for the Friends of the New Mexico Mineral Museum, New Mexico Bureau of Geology & Mineral Resources***

Volume 9, No. 2, October 18 2024

## From the Director's Desk

Dear Friends,

The 44th New Mexico Mineral Symposium is just around the corner (November 1-3). For details, including a PDF version of the **Program with Abstracts**, go to https://geoinfo.nmt.edu/museum/nmms/home.cfml. We have a great lineup of speakers this year. Our featured speaker is Daniel Trinchillo, founder of Fine Minerals International (FMI).

*Daniel Trinchillo, featured speaker at the 2024 Socorro, New Mexico, Mineral Symposium.*

Daniel will give two presentations, both of which focus on recent major specimen discoveries. The first talk is about the reopening of the Eagle's Nest gold mine in California, renowned for world-class specimens of well-crystallized gold. On Valentine's Day 2024, an exceptional pocket of gold crystals was discovered, and we will be the first to see these specimens, in situ and extracted, in his presentation.

*Gold and quartz, Eagle's Nest Mine, Placer County, California. 16.8 cm. Fine Minerals International # 23643, James Elliott photo.*

Daniel's second talk will look at the discovery, extraction, and preparation of what many consider to be the finest mineral specimen (of any species) ever collected; the "King of Kashmir", an amazing aquamarine, quartz, and microcline from the high Himalayas of Pakistan (also see the November–December 2020 issue of The Mineralogical Record).

Among the other talks, there are two subthemes to this year's symposium. These are *silver*, and a class of hydrothermal silver deposits known as *Five-Element Deposits*; examples of which include the mines of the Black Hawk District in New Mexico; Jáchymov and other deposits of the Erzgebirge or "ore mountains" in Europe; and Cobalt, Ontario.

Once again, we will have a *Friends of the Mineral Museum* reception at the museum on Friday, November 10, from 5-7 pm. Your yearly membership fee for the *Friends of the Museum* supports museum activities including the symposium. If you are not already a member, please consider joining (https://geoinfo.nmt.edu/museum/friends/home.html) and participating in the reception.

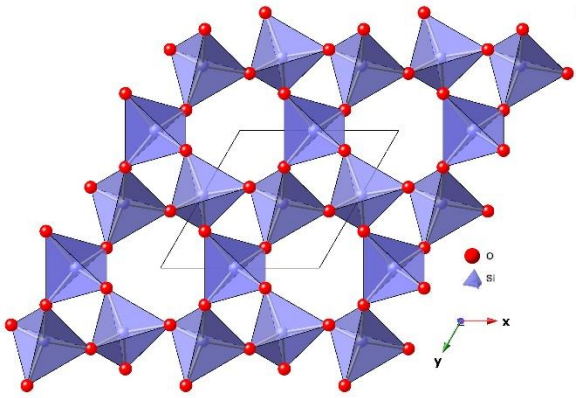
## THE MUSEUM'S EARLIEST SPECIMENS

In this issue of the *Mineralogical Cabinet* is an article by Bob Eveleth about "Captain Jack Crawford - U. S. Army Chief of Scouts, New Mexico's 'Poet Scout' and pioneer miner and prospector".
In that article Bob presents a photograph of a mineral collection that is likely one, if not the very first addition to the New Mexico School of Mines Mineral Cabinet.

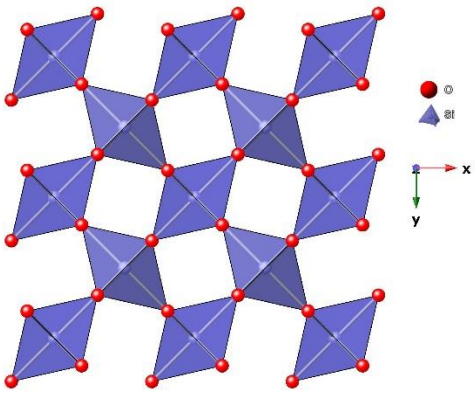

*Fig. 3 pg. 7 from "Capitan Jack Crawford - U. S. Army Chief of Scouts, New Mexico's 'Poet Scout' and pioneer miner and prospector" (see below).*

## NEW LABORATORY FOR SINGLE CRYSTAL X-RAY DIFFRACTION

Every mineral has a distinct chemical composition and atomic arrangement also known as its structure. For example, quartz, is composed of the elements silicon and oxygen. These are periodically arranged to form the specific crystal structure of this mineral (see figure below). Change the structure and you have another mineral (e.g. stishovite)




*Combined Ball-stick (atom-bond) and polyhedral rendering of the quartz, $SiO_2$, structure.*




*Combined Ball-stick (atom-bond) and polyhedral rendering of the stishovite, $SiO_2$, structure. Note the differences in the arrangement of the oxygen atoms around the silicon atoms (polyhedral geometry) and the arrangement of polyhedral between quartz and stishovite; exemplifying their different structures.*

Characterization of chemistry and structure is essential to understanding a mineral and to its identification.

In the previous *Mineralogical Cabinet* (V.9 #1) I mentioned a new instrument that we were about to acquire; a Rigaku Synergy-S single crystal X-ray diffractometer (SCXRD). The Synergy-S has been installed, comprising the second X-ray diffraction laboratory in the Bureau. Using this instrument, we can collect data on powder samples that are far too small to analyze on our Panalytical powder diffractometer. Powder diffraction data are especially good for mineral identification. More importantly, it is SCXRD data that allow for the determination of the crystal structure of minerals, like those shown in the images above.

With this new instrument, Bureau Scientists are studying the origin and distribution of critical minerals, those minerals essential to advanced technologies from electronics, like cell phones, to alternative energy sources, including solar and wind energy. They are also developing mineral-based solutions to environmental problems like the isolation of heavy metals in contaminated soils and water, and the engineering of solid waste forms for safe disposal of spent nuclear fuels.

*SCXRD laboratory Rm 143 of the Bureau building.*

## NEW OFFICIAL MUSEUM NAME

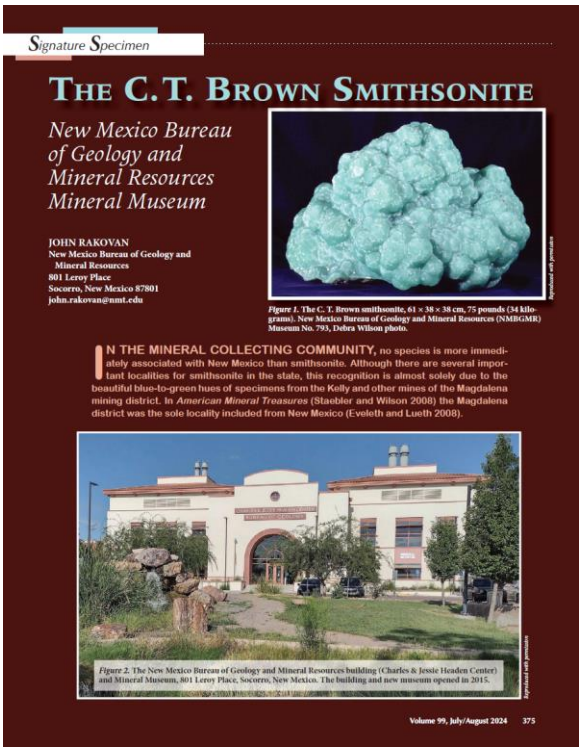
The mineralogical cabinet (from its earliest days displayed in a museum on campus) was established by the territorial legislature in 1889 (23 years before statehood) as part of the New Mexico School of Mines. In 1963 the Bureau was given the responsibility of curating the museum. Since that time it has been known simply as the mineral museum of the New Mexico Bureau of Geology and Mineral Resources (NMBGMR). As the premier collection of minerals from the state of New Mexico and one of the more recognized mineral museums in the US, we have decided to christen it with the appropriate name of ***The New Mexico Mineral Museum.***

## NEW MUSEUM HOURS

The New Mexico Mineral Museum (NMMM) has changed its hours. We are now open from 9-5 Monday through Friday and from 10-3 on Saturday. The museum is closed on Sundays and most New Mexico Tech Holidays. For closure notices see https://www.facebook.com/NMBGmineralmuseum

## SIGNATURE SPECIMENS

In the July/August 2024 issue of *Rocks & Minerals* Magazine, two of the New Mexico Mineral Museum's specimens are featured in the new column "Signature Specimen"



Signature Specimen

THE C.T. BROWN SMITHSONITE

*New Mexico Bureau of Geology and Mineral Resources Mineral Museum*

JOHN RAKOVAN
New Mexico Bureau of Geology and Mineral Resources
801 Leroy Place
Socorro, New Mexico 87801
john.rakovan@nmt.edu

*Figure 1.* The C. T. Brown smithsonite, 61 × 38 × 38 cm, 75 pounds (34 kilograms). New Mexico Bureau of Geology and Mineral Resources (NMBGMR) Museum No. 793, Debra Wilson photo.

IN THE MINERAL COLLECTING COMMUNITY, no species is more immediately associated with New Mexico than smithsonite. Although there are several important localities for smithsonite in the state, this recognition is almost solely due to the beautiful blue-to-green hues of specimens from the Kelly and other mines of the Magdalena mining district. In *American Mineral Treasures* (Staebler and Wilson 2008) the Magdalena district was the sole locality included from New Mexico (Eveleth and Lueth 2008).

*Figure 2.* The New Mexico Bureau of Geology and Mineral Resources building (Charles & Jessie Headen Center) and Mineral Museum, 801 Leroy Place, Socorro, New Mexico. The building and new museum opened in 2015.



# *Director's Choice*

### Examples of Homoepitaxy

Kelsey created a new display in the museum titled *Marvelous Minis*, to show off some of the many small but wonderful specimens that we have in the collection (see Curator's Corner below). One of these marvelous minis is a very interesting fluorite, from the Gila Fluorspar District. The main crystal on the specimen exhibits cube and cubododecahedral overgrowths on an octahedral crystal of fluorite. Although it may morphologically appear to be multiple crystals, from a structural standpoint, it is translationally continuous throughout (this is indicated by parallel edges and faces on all of the morphologically distinct cubes and cubododecahedra) and is thus a single crystal.

*Fluorite, from the Gila Fluorspar District, Grant County, New Mexico, NMBGMR#10542. The crystal is 1.3 cm across. John Rakovan photo.*

This type of overgrowth can be described as homoepitaxic*. While epitaxy is the oriented overgrowth of one phase (mineral) on another (of a different species), homoepitaxy is an oriented overgrowth of the same mineral. Semantically, every atomic layer in every crystal is homoepitaxic on the layer below. So why would one use this terminology? In this last case, it doesn't make sense to do so. But for instances like the fluorite, where there is a distinct morphologic difference among different generations of growth, that are easily noticeable, it is a term I think most appropriate. The scepter morphology, commonly found in quartz specimens, is another good example of what could be described as homoepitaxic.

** Although epitactic is sometimes used as the adjectival form of epitaxy, the editors of Acta Crystallographica and the Journal of Applied*

*Crystallography prefer epitaxic for etymological reasons.*


*Quartz scepters (amethyst caps on colorless stems) NMBGMR#20241*

The term homoepitaxy is used most frequently in the field of materials science. In this context, it is used to describe the engineered addition of crystalline layers on a substrate of the same material. Although the process does not seem to need a specific description, as mentioned above, it is significant because in engineered crystal growth, it is a fully controlled process, leading to structurally perfect and chemically clean surface layers. The most important example comes from silicon technology, where wafers are usually refined by a homoepitaxic Si deposition. In this case, the structural quality of the overgrowth is much better than that of the original substrate. Also, homoepitaxic layers can be doped (the addition of impurities) to tailor physical properties, such as electrical conductance, for particular applications independent of the substrate chemistry.

In the case of fluorite, the morphology shown above has sometimes been referred to as a "Mayan pyramid". Numerous deposits around the state, including the Highland Mary and Galena King Mines, Lorraine prospects, Cookes Peak area, etc., produce fluorites of this and related morphologies.

*Fluorite, from the Galena King Mine, Bernalillo County, New Mexico, NMBGMR#18486. 5 cm tall. Gift of Gary and Priscilla Young. Jeff Scovil photo.*

A dramatic variation on this theme is the specimen shown below.

*Fluorite, Cookes Peak, New Mexico. 5.8 cm, Philip Simmons specimen, Philip Simmons/Mike Sandersphoto. Currently on display at the NMMM.*

It is a single octahedral fluorite crystal that has overgrown only one corner of a fluorite of cubic morphology. The alignment of the crystallographic axes (more precisely, the symmetry elements) of the two indicates that the ensemble is a single crystal, hence homoepitaxic.

*Orthoclase and chlorite, St Gotthard pass area, Uri, Switzerland. 8.5 cm. Gift of Evelyn Thompson in memory of Ray Thompson NMBGMR#15533.*

Another interesting example in the museum collection is an orthoclase specimen from the St. Gotthard Pass, Uri, Switzerland. It is a tabular (percaline habit) orthoclase crystal with numerous oriented (adularia habit) overgrowths.

The final specimen shown here (two photos), to demonstrate homoepitaxy, is a classic example of galena from the Tristate District with cubic crystals overgrown by numerous cuboctahedral galena faces.

Now that you have the idea, see if you can find the example of homoepitaxy in Kelsey's Curator's Corner (below).

*Galena, Treece, Cherokee County, Kansas. Crystals 1.5 cm. NMBGMR#15535. Gift of Evelyn Thompson in memory of Ray Thompson. John Rakovan photo.*

Cheers,

*John Rakovan*

*"Minerals! Inspire a love of science"*

## *Curator's Corner*

Hello friends,

If you keep busy, the time just flies by right? This is a phenomenon I've experienced each summer I have worked as a curator. The heat arrives in May, the AC starts kicking, and you hunker down in the office and work on museum/lab projects. And just like that, summer is over. Now the heat has dissipated, folks have crawled out from under their rocks, and they are now on the move! Museum visitorship, requests for rock & mineral identification, and the number of outreach events are at an all-time high. The Mineral Symposium is fast approaching, and I am anxiously hoping there are enough breakfast burritos to keep everyone satiated. This section of the newsletter is devoted to new museum specimens and outreach, with many visuals. I hope you enjoy!

*A large Turquoise nugget from Hitman's Mines, Orogrande Dist., Otero Co., NM. Gift of Eddie DeLuca.*

*Quartz var. Smoky Japan Law Twin, Mina Tiro Estrella, Capitan Dist., Lincoln Co., NM. 7 x 5.3 x 1.2 cm.*

**NEW ACQUISITIONS**

A number of wonderful donations have come in since the last newsletter, and while I can't show all of them, please appreciate this small collection of photos. The rest of the new pieces are now on display in the museum, so please stop by if you get a chance.

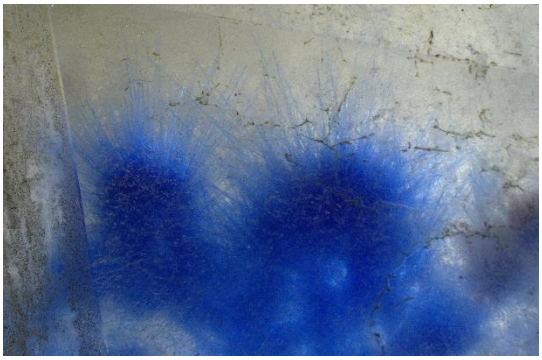
*Native Copper, Battle Mountain Dist., Lander Co., NV. 5 x 4 x 1.5 cm. Gift of James Eacret.*

*An excellent self-collected Fluorapatite in Calcite, Yates Mine, Otter Lake, Québec, Canada. Gift of Ray DeMark.*

*Two views of intergrown Microcline var. Amazonite Manebach Twins! Lakeview Claim, Lake George, Teller Co., CO. Gift of Martin Zinn III.*

*Calcite on Calcite! Eminence Quarry, Shannon Co., MO. Gift of Edward Hakesley. 3.2 x 3.2 x 3.5 cm.*

*An impressive Coppper "Skull", Centennial Mine, Calumet Township, Houghton Co., MI. Gift of Ray DeMark.*



*Look at that color! Papagoite in Quartz (specimen photo and close-up of acicular papagoite), #5 shaft, Messina Mine, Musina, Limpopo, South Africa. Gift of Nancy Attaway.*

## NEW DISPLAYS

Two new displays have been constructed since the last newsletter. "Magnificent Minis" is now up in a Waddell case, which highlights toenail and smaller-size specimens from around the world. I decided to focus on miniatures because many in the collection end up in reference due to the lack of display space (which is not much, other than the Dana display and the top shelf-front row spots in our larger cases). I adore jumping spiders, which are cute and teeny weeny, and thought they would make a good mascot for the display. Look closely! These creatures adorn the backdrop and all of the cards ☺


*View of miniatures on display in front of the jumping spider mascot backdrop.*


*Two amazing miniatures that I have been waiting to put on a shelf!*

Another brand new display is a guest exhibit set up by Mark Hay, a geologist and mineral collector from Phoenix, Arizona. Mark, along with Tony Potucek, made the grand excursion to Socorro in early October to showcase Mark's collection of Arizona, New Mexico, and Colorado specimens, as well as a small handful of those from other US states. We are delighted with this display, which will be enjoyed by many at Mineral Symposium.


*A small sample of the Arizona suite from the Mark Hay Collection.*


*Aesthetic layout of minerals from other US states, Mark Hay Collection.*

## STATUS UPDATE: MINING ARTIFACT DISPLAY IN COURTYARD

John and the Bureau's mechanic team, Brian and Greg, used their expert moving skills and a forklift to place a stamp mill from Golden, NM in the west courtyard. This particular machine was noted to be in operation in 1880s, crushing gold ore from the New Placers District, Santa Fe County, New Mexico. The mill was donated by Desiri & Al Pielhau, the current owners of the Henderson Store in Golden. The next steps are to build a protective covering for this piece and to obtain signage for these large mining implements.

*Brian uses his forklift maneuvering skills to carefully move a 140 year old stamp mill.*


*The stamp mill is nice and upright, ready to be admired. Great job guys!*

## OUTREACH NEWS

### Meet our New Publications Specialist

We are excited to introduce you to our newest Publications Store staff member, Kacey Scarborough.

Kecey is a Socorro native, born and raised. She enjoys meeting new people, the outdoors and exploring. Kecey said that she is excited for this new adventure with the Bureau.

You will likely meet Kacey during Symposium weekend or any other time you hang out in the museum or bookstore.

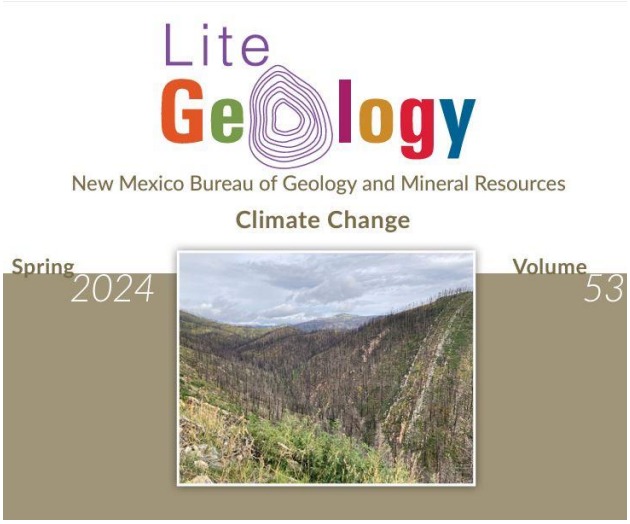
Welcome Kacey!

*Kacey Scarborough*

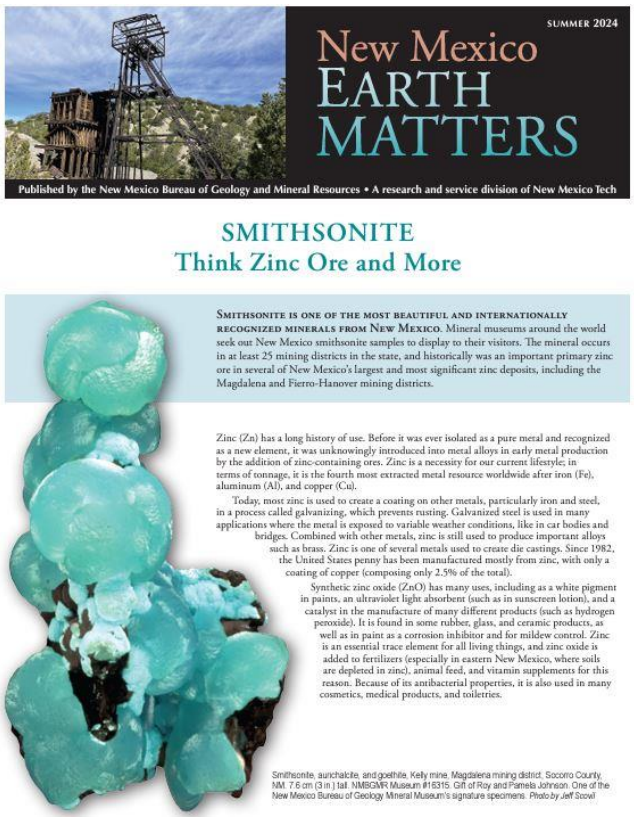
### Bureau Periodicals

Two free and easy-to-read geoscience publications are now available for download from the NMBGMR website. The current volume of "Lite Geology" includes a variety of articles, including a study of climate change in the Miocene, as well as write-ups

on geothermal energy, critical minerals, and the effects of wildfires on water quality. Something for everyone! The latest semi-annual "Earth Matters" features "Smithsonite—Think Zinc Ore and More" written by NM state mineralogist and Mineral Museum director, John Rakovan. Grab a copy hot off the internet!




Current issue of Lite Geology, available here: https://geoinfo.nmt.edu/publications/periodicals/litegeology/home.cfml




Current issue of Earth Matters, available here: https://geoinfo.nmt.edu/publications/periodicals/earthmatters/home.cfml

For updates and photos on what's happening at the museum, I try to post weekly/bi-weekly on our Facebook page:

www.facebook.com/NMBGmineralmuseum

The New Mexico Bureau of Geology ALSO has a Facebook page! Please check it out at this address:

www.facebook.com/NMBGMR

# CAPTAIN JACK CRAWFORD

## U. S. Army Chief of Scouts, New Mexico's

## 'Poet Scout' and pioneer miner and prospector

By Robert W. Eveleth
Revised March 2024

**Fig 1**: *Classic ca.1880s portrait of Captain Jack in his full Scouts' regalia and sporting not only his trusty rifle in his right hand but also a specimen of 'high-grade' ore from one of his many mines and prospects throughout central New Mexico territory in his left (Author's collection).*

*John Wallace "Captain Jack" Crawford (3/4/1847 – 2/28/1917) was one of territorial New Mexico's most colorful and admired citizens. His skill and expertise as Chief of Scouts for the U. S. Army were legendary in his own time. Popularly known as New Mexico's "Poet Scout" he was an entertaining speaker and showman delivering to spell-bound audiences fascinating narratives of his many scouting forays and hair-raising tales of valor on the wide-open untamed prairies and mountains of the Southwest. While these facets of his career have be told numerous times his mining and prospecting activities as well as his contributions to New Mexico's mineral display at the Columbian World's Fair in 1893 are all but forgotten today.*

Crawford was born in County Donegal, Ireland and came to America in 1854. He got his first taste of mining when he was employed as a young boy in the coal mines at Minersville, PA, and as a result, did not attend school. He entered the army at an early age and was wounded at Spotsylvania, PA on 12 May 1864. One of the Sisters in the hospital taught him to read and write (Dictionary of American Biography (Vol. 4, 1930, p 522-523).

He was one of the first prospectors and mine developers in the San Andres Mountains amongst other areas. According to the Dictionary, cited above, "He was for a time post trader at Fort Craig, N. Mex. (from whence his early communiqués were often datelined), and later a special agent of the Indian Bureau." Much of his time during the early 1880s was spent either at "Crawford's Camp" in the Little Burro Mountains (extreme northern end of the San Andres just south of Mocking Bird Gap) or at Good Fortune Camp southwest of Salinas Peak (Eveleth, 2002). Crawford was remembered as one of the most generous and congenial of the pioneer prospectors and New Mexico's citizens held him in very high esteem. A *Bullion* correspondent (12/1/1884, p 5) visiting Crawford's Little Burros Camp, found it vacated but the following note pinned to the tent flap: "Miners, prospectors and others passing this way will find water in the keg. If not good, one and a half miles north on trail is plenty. There is baken (sic) and flour and potatoes in the chest – help yourselves, wash nothing and tie up the tent on your departure. I have finished assessment work on 6 claims and have moved to my camp in the San Andres where two men will be at work during the year. Stanton road 7-1/2 miles south. My camp (i.e., Good Fortune Camp) fifteen miles south where you will find grub and water. Yours, Capt. Jack Crawford."

He established a ranch in 1886 on the Rio Grande near San Marcial which he considered his home for the remainder of his life, although he maintained a second residence in Brooklyn, NY. He probably established, or was one of the

founders, of Good Fortune Camp. Brad Prince, in a letter to J. R. DeMier dated February 18,1899, referred to a mine he once owned near Captain Crawford's camp and stated "the name of that camp where we stayed at night, was Good Fortune." Crawford's scouting skills and nerves of steel were often credited with opening up the San Andres mountains and other areas in New Mexico by eliminating the dangers. Crawford himself stated in his first communiqué with the Socorro *Bullion* (5/1/1883, p 3) "Less than four years ago, the writer prospected with rifle and pistol and in momentary expectation of begin attacked. Today that portion of the Black Range, San Mateos, Magdalenas, and other sections are as safe to prospect in as would be the hills of New England." Charles Longuemare, editor of the *Bullion* (1/1/1884, p 4) offered the following accolade: "Among the deserving mining men of southern New Mexico stands Capt. Jack Crawford, of Fort Craig. With rifle in hand when the frontier was constantly threatened or terrorized, he wandered from range to range and succeeded under the most adverse circumstances in securing a quantity of very valuable property, among which we note his San Andres claims…" Later (12/1/1884, p 5), a correspondent of the same paper, writing from 'Crawford's Camp' in the Little Burros (i.e., the small range of hills just south of Mocking Bird Gap) stated: "I know of no one more deserving of success than the "Poet Scout" who found most of his claims when the Natives held sway in our Territory, and when he was one of the many whose pluck and skill as a scout and guide made it possible for us who came after them to prospect in perfect safety."

His scouting skills were, upon occasion, called into action for his own account. One Joe Reynolds, a particularly dimwitted thief, committed the grievous error of stealing Crawford's "famous running mare, 'Steel Dust.'" "It was a sad day's work for naughty Joe. The Captain is the best scout in the Rocky Mountain range and when he once struck the thief's trail he never let up until he had him in custody. The knight of the saddle is now in the Socorro jail awaiting trial (*Bullion*, 12/1/1884, p 8)."

Regarding his generosity, the *Bullion* once stated (3/22/1892, p 8) "Captain Jack is an advocate of the silver dollar; he can earn more of them and give them away for the love of humanity than some of our financiers. If Captain Jack is not a wealthy man it is because he values his friends more than he does money."

Crawford's prospecting efforts in the San Andres Mountains area resulted in the location of many lode-mining claims and several millsites. These included 6 claims and 3 mill sites in the Oscura Mining district, 15 claims and a mill site in the San Andres Mining district (exact location unspecified), 8 claims in Crawford's Camp and 12 more near Good Fortune Camp (doubtless the "Crawford Prospect" as per Lasky, 1932, p 82). Crawford must have realized

early on that his poetic endeavors and entertainment career would be at least as remunerative as his mining ventures. Thus, on 28 July 1883 (Socorro County, mining record Book 10, p 409) he conveyed a one-half undivided interest in all his San Andres/Good Fortune Camp properties to Samuel K. Schwenk, of Queen's County, New York, in hopes of them eventually being developed into producing properties. Crawford also attracted the financial backing of H. R. Thurber, one of the early owners of the Copper Queen at Bisbee and together they organized a company to prospect and develop the San Andres claims (*Bullion*, 10/3/1885, p 1). Some eventually developed into producers according to scattered newspaper accounts (see, for example, Crawford prospect below) but no official production records survive. Today Captain Jack's prospects and mines in the San Andres Mtns lie within the confines of the White Sands Missile Range, originally established in 1941 as the Alamogordo Bombing and Gunnery Range, all of which is withdrawn from mineral entry. Crawford's mining activities focused on the San Andres mountains area but he owned many other properties as well. These included mines in the Black Range and a half interest in the Horn Silver in the Organ mountains purchased from the Fay Brothers for $7,000 (*Bullion*, 3/1/1884, p 9).

Early in March 1887 Crawford received an offer from a New York theatrical manager – a document which he proudly shared with the editor of the *Bullion* -- to come east and organize a Wild West show similar to that of his friend Buffalo Bill Cody, who was at the time in the process of taking his show to Europe (*Bullion*, 3/5/1887, p 1). Crawford accepted and went on to notable fame, although his showmanship did not quite measure up to that of Cody. Then again, Cody's penmanship didn't quite match up to that of the Poet-Scout! Nevertheless, a performance (Fig. 2) by Captain Jack was said by attendants to be one of life's unique and thoroughly enjoyable experiences and the territorial press is loaded with accolades heaped upon him after each appearance: 'Capt. Jack Crawford and his charming daughter, Miss Eva, delighted a large audience at the court house last night. Their recitations were full of clean humor, pathos, and patriotism, and the frequent encores they received showed how fully the audience appreciated their efforts. Capt. Jack has methods peculiar to himself alone. He is frank and impulsive…to the extreme. From the first to the close the words poured from his throat with a remarkable spontaneity. There were anecdotes, humorous and pathetic, songs, poems and recitations almost without number, and all of them original…" (New Mexican, Santa Fe, N. M. as re-published in The Bullion, 3/22/1892, p7). Later The Bullion reported "The best pleased audience which ever occupied the chairs at the opera house was that which listened to Capt. Jack Crawford…last Thursday evening…He has neither equal nor imitator – he is unique…Men of his stamp are passing away all too rapidly – and when [he]

answers roll call beyond the silent river he will leave no legitimate successor… (The Bullion, 3/29/1892, p4).

Crawford's performances were often spontaneous and un-announced as per the following: a Capt. Jack visit with friends in Socorro in June 1901 coincided with the New Mexico School of Mines commencement exercises and Crawford decided to attended. Following the presentation of diplomas and other awards the attendants were regaled with a remarkable performance when "Capt. Jack Crawford, the poet scout…was introduced and entertained the audience for a few minutes in a most happy manner with his wit, eloquence, and poetry" (Chieftain, 6/01/01, p 1). Crawford obviously knew and admired the NMSM faculty as well as the students and the admiration was mutual.

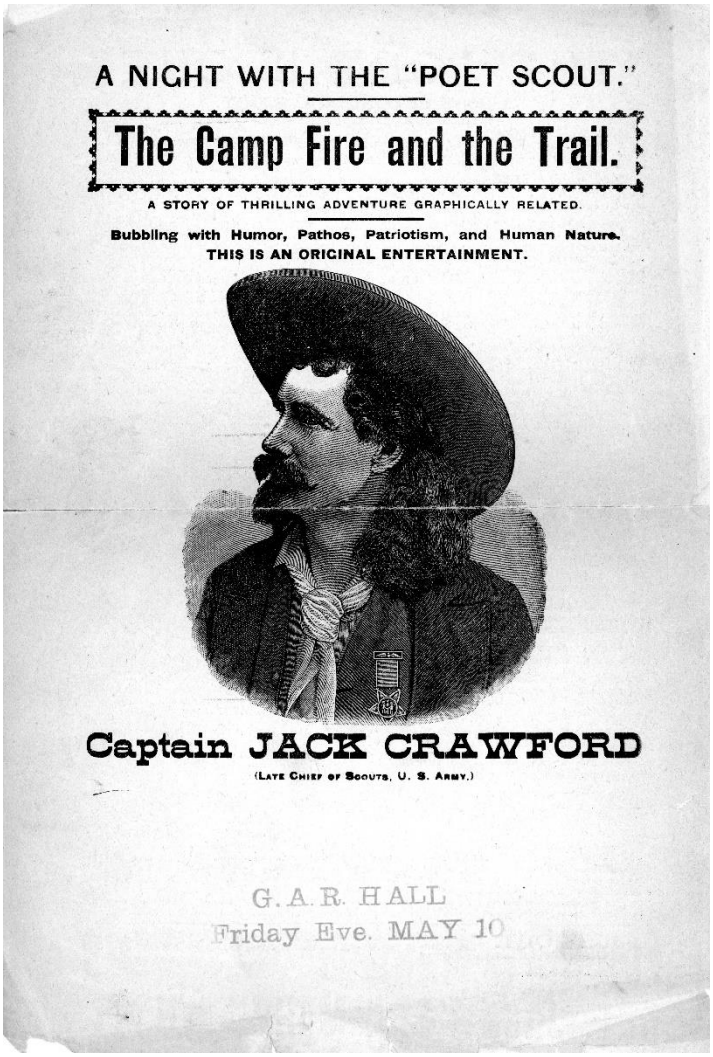



**Fig 2:** *Broadside for one of the "Poet Scout's" popular performances "The Camp Fire and the Trail" said to be a "frontier feast." These were often presented in local opera houses – Socorro's own Garcia Opera House was a favorite location (F. Stanley, p 210) -- or such venues as the meeting halls of the Grand Army of the Republic (G. A. R.). Original broadside courtesy of Charles Zimmerly.*

His scouting experiences were deeply ingrained, and all-too-vivid memories occasionally surfaced: according to the *Bullion* (1/2/1889, p 6) "Captain Jack Crawford, the Poet Scout…recently had a tussle in real with a refactory (sic)

native American actor in Cincinnati…" The editor went on to say…" we hear [he] is making money rapidly as well as making a good record in the dramatic world." Later that year he was commissioned New Mexico's representative to the New Era Exposition in St. Louis. Even at this early date he offered to advertise the ores of New Mexico's mining camps if the miners would send him representative specimens to display (*Bullion*, 8/13/1889, p 6).

Despite his lucrative and busy performance schedule, Crawford maintained his interests in his New Mexico mining properties for many years – long after all the other pioneer locators had pulled out -- and often returned to the San Andres to perform assessment work, or occasionally make a shipment to a local smelter (see, for example, *Bullion*, 1/26/1891, p 7; 2/9/1892, p 7; also, Socorro County, Book 44, p 326, 1900).

A major opportunity arose in the early 1890s when Crawford was invited to participate in one of the greatest national public events of the time: the Columbian World's Fair Exposition in Chicago. He accepted the offer and engaged it with his typical fervor and attention to detail. Citizens throughout New Mexico territory were encouraged to assemble samples and products of their various endeavors from mining and minerals to agriculture, and manufactures. The Columbian displays were to be "all-encompassing."

Miners and prospectors from all points in the territory undertook to gather impressive collections of minerals carefully selected to portray New Mexico's mineral wealth. Crawford, already a claim owner in the San Andres Mountains as noted herein, was also much involved in Black Range mining district of Sierra County. Being personally familiar with the high-grade gold and silver ores produced at the time he focused his attention on that area. A featured attraction of the New Mexico display was to be a specially built cabin constructed by Capt. Jack and to be adorned on all sides and roof with various specimens of high-grade gold, silver and other ores. The Daily New Mexican (9/2/1892, p 1) reported "Col. (sic) J. Crawford is building the Sierra county miners cabin to be put on exhibition at the World's fair. The cabin will be of different ores and timbers to be found in the county. It will be completed at home and sent in sections to the fair, and when finished by Col (sic) Crawford will be worth going to see – Kingston Shaft." Nearing completion the New Mexican (ibid) reported "The Sierra County miners cabin will be finished within a week. It will contain fifteen tons of Sierra ore and five tons from the Magdalenas… the specimens of horn silver sent from [Sierra] county will be magnificent and Mr. Troeger's and [Dr.] Haskell's gold cabinets (Fig. 3) will show what New Mexico can do as a gold

producer…Socorro County sends a magnificent mineral collection among which will be the finest lead exhibit and H. M. Robinson's splendid collection of crystals (op. cit., 4/7/1893, p4. The miners cabin "will be the most costly building, for its size, on the grounds, not only lined with gold but built of the yellow metal, and studded with glistening ores only a little less valuable to the miner. Roof, fireplace, chimney and all are covered with ores of the most costly varieties (Lordsburg Liberal, 7/21/1893, p 1)." The popularity of New Mexico's display was highly acclaimed: "It was in the Mining building that [NM] made one of the finest displays of any state (sic) in the department. The miner's cabin was visited by hundreds of thousands of people during the Fair and was always an attractive feature" (World's Columbian Exposition Illustrated, p 280, op. cit).


**Fig. 3**: *"Dr. Haskell's famous cabinet of "Black Range" minerals as it appeared at his home in the town of Chloride, NM prior to its shipment to Chicago for the Columbian World's Fair mineral display. The "horn silver" specimens mentioned above were doubtless from the legendary "Bridal Chamber" deposit in Lake Valley, NM. NMBG&MR Photo archives P-1909, gift of Raymond Schmidt, Chloride, NM.*

Another special feature of the New Mexico display was the taxidermist's ("stuffed") burro and miner which were located directly beside the cabin (Fig. 4.) It should be noted that the burro was the handiwork of an expert taxidermist but we must assume the "miner" wasn't the result of a similar fate but a carefully constructed "mannequin." Long-standing mysteries as to the final disposition of Haskell's mineral cabinet as well as the burro and miner are herein resolved: "The stuffed burro and miner seen in the exhibit at Chicago were, at the request of the Smithsonian Institute at Washington, donated to that institution (Daily New Mexican, 1/19/1894, 4)…"The Haskell collection of ores from Sierra county which the board recently purchased at the extremely low price of $300 (a mere 5% of its appraised value prior to the Fair -- Daily New Mexican, 3/20/1893, p 4) was donated to the New Mexico School of Mines at Socorro (Daily New Mexican , 10/4/1893, p4). "Messrs. Sloan and Prince were designated to pack and reship to the various owners the remainder of the private exhibits… (op. cit, Daily New Mexican, 1/19/1894, p 4)." The latter would certainly have included the Troeger mineral cabinet as well as the miners cabin.

The New Mexico School of Mines was founded in 1889 by the territorial legislature (23 years before statehood), but the first classes were not held until September of 1893. Included in the charter for the new center of Higher Education was the mission to "provide mineral and geological cabinets [collections]…with a view of promoting the best interests of the institution (NMSM 1902, pg. 9). The donation, in October of 1893, of Dr. Haskell's collection of ores from Sierra County, must represent one of the earliest if not the first addition of specimens to the mineral cabinet. Tragically this also means that this superb collection was likely lost, along with the rest of NMSM's mineral collection, in the fire that destroyed Old Main Hall in July 1928.

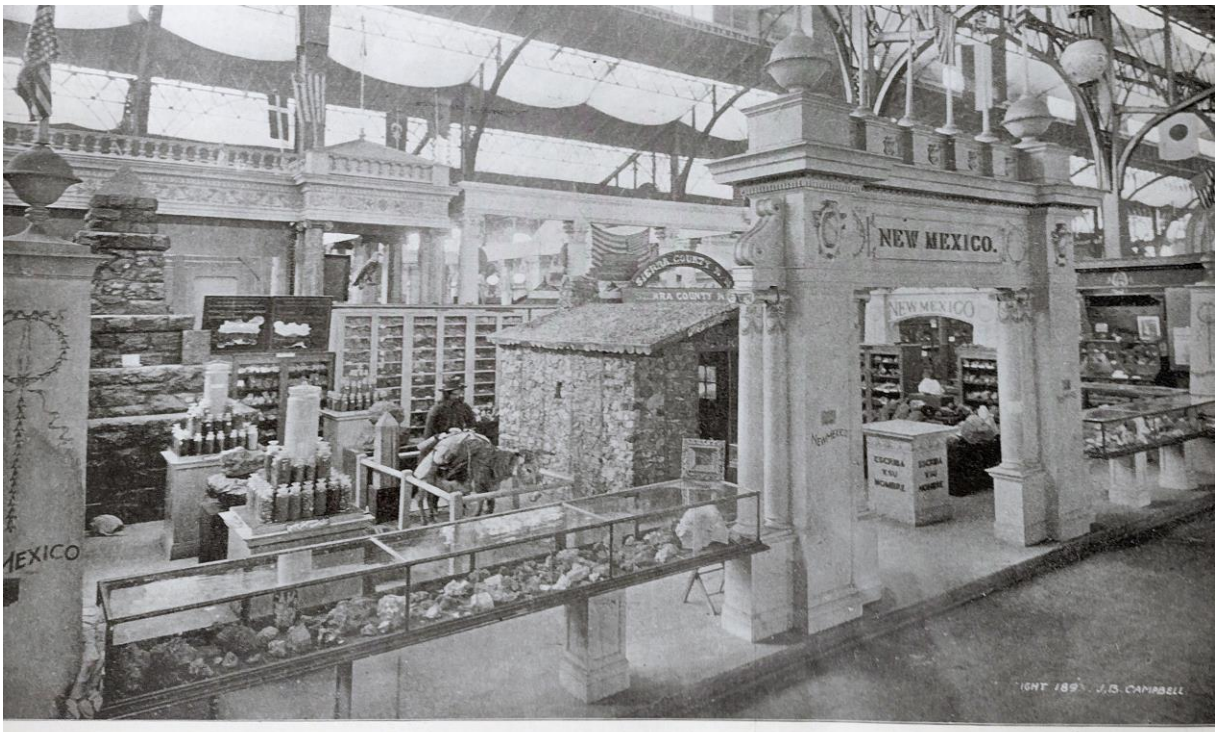



**Fig. 4:** "*Photograph of Exhibit Made By New Mexico In Mines and Mining Building At The World's Columbian Exposition." Captain Jack's Sierra County Miners Cabin as well as the miner and his burro are visible in the center of view. Note the large prismatic crystal visible just left of the burro. Also the large specimen at the far right in the front display case may have been a Magdalena smithsonite. Photograph from the Official Journal of the "World's Columbian Exposition Illustrated," Vol. 34, Dec. 1893, p 275; author's collection.*

With the close of the Exposition Crawford focused upon New Mexico to resume his mining, and prospecting, his entertaining public talks, and other business enterprises. He was soon back in the Fort Craig area and served as deputy sheriff of San Marcial during that time (Socorro *Chieftain*, 5/3/1902, p 3. Up to the time of his departure as a replacement for Buffalo Bill Cody, Crawford had invested some $15,000 in his mining ventures and developments. Before heading east, he said, "I came to New Mexico to stay, and it is probable my bones will rest here, and if my expectations are half realized I shall put many a thousand more into and on top of the ground (Bullion, 3/5/1887, p1)." He was undoubtedly correct in regard to the latter but fate intervened in the former. Lasky, (1932, p 82) describes the Crawford prospect on the northern flanks of Salinas Peak in some detail. Subsequent investigators have concluded that if the mineralization at the

Crawford prospect is continuous with similar deposits along the same strike at the Salinas mine a mile to the west (and geologic evidence appears to support that premise), the deposit could be significant. Such would be an appropriate monument to the man who probably invested more funds, labor, and time in the area than any other individual.

Crawford would eventually write several books, over 100 short stories ("The Scouts," 1978, 223), numerous poems (some of which may yet be 'uncollected' such as the occasional piece written especially for the *Bullion*) and a dozen or so songs which were set to music and published. He organized the Boy Heroes of the World, and the United American Veterans and was contributing editor to the *Missouri Mule* (Who's Who In America, 1914-15, p 547). A remarkable achievement for a fellow who was illiterate until almost twenty years of age!

Capt. Jack died in 1917 while in Long Island, New York, and is buried in the National Cemetery in Brooklyn. Odd that his remains weren't shipped back to his beloved New Mexico for interment – the National Cemetery in Santa Fe would have been a much more appropriate resting place for him. The high-browed chronicler in the "Dictionary of American Biography, quoted above, closed his Crawford entry by stating, "His work as a scout was highly praised by his commanders…*his verses, though popular in his day, can by no stretch of courtesy be called poetry* (!)" Perhaps that explains why books of poetry by Whitman and Emerson are either tossed into the re-cycle bin or at best sell for the princely sum of a few dollars while those of Crawford command hundreds!

## References cited


Bullion, newspaper, Socorro, New Mexico, 1883 – 1889; El Paso, TX, 1889 - 1894; various issues as cited.

Chieftain (a/k/a Socoro Chieftain), territorial newspaper published in Socorro, New Mexico.

Daily New Mexican, (a/k/a Santa Fe Daily New Mexican), territorial newspaper, Santa Fe, NM; various issues as cited.

"Dictionary of American Biography," Vol. 4, 1930, p 522-523; Scribner's Sons, N. Y., 673 p.

Eveleth, Robert W., "Forgotten By Most – Remembered By A Few, The Good Fortune Camp, San Andres Mountains, Sierra County, New Mexico," New Mexico Geological Society Guidebook #53, 2002, p 30 – 32.

Lasky, Samuel G, 1932, “The Ore Deposits of Socorro County, New Mexico,” New Mexico State Bureau of Mines & Mineral Resources, Socorro, New Mexico, 139p.

Lordsburg Liberal, territorial newspaper published in Lordsburg, N. M.

NMSM, official catalog of the New Mexico School of Mines, Socorro, New Mexico, 1902.

Stanley, F., (‘Father’ Francis Stanley Crocchiola), 1950, “Socorro, The Oasis,” World Press Inc., Denver, CO, 221 p.

Socorro County mining claim record books, Socorro County Courthouse, Socorro, NM.

“The Scouts,” by the Editors of TIME-LIFE BOOKS, (in the Old West Series), 1978, Alexandria, Virginia, 240 p.

“Who’s Who in America,” 1914 – 1915, Albert Nelson Marquis, Ed., Vol 8, Jan 1914, 2888p.

World’s Columbian Exposition Illustrated, Official Journal of the Columbian World’s Fair, Vol. 34, Dec.1893, Chicago, Ill. 284 p.