



Lake Valley's famed Bridal Chamber--"A beautifully large and solid looking streak"

Robert W. Eveleth, 1986, pp. 293-296

in:

Truth or Consequences Region, Clemons, R. E.; King, W. E.; Mack, G. H.; Zidek, J.; [eds.], New Mexico Geological Society 37th Annual Fall Field Conference Guidebook, 317 p.

This is one of many related papers that were included in the 1986 NMGS Fall Field Conference Guidebook.

Annual NMGS Fall Field Conference Guidebooks

Every fall since 1950, the New Mexico Geological Society (NMGS) has held an annual [Fall Field Conference](#) that explores some region of New Mexico (or surrounding states). Always well attended, these conferences provide a guidebook to participants. Besides detailed road logs, the guidebooks contain many well written, edited, and peer-reviewed geoscience papers. These books have set the national standard for geologic guidebooks and are an essential geologic reference for anyone working in or around New Mexico.

Free Downloads

NMGS has decided to make peer-reviewed papers from our Fall Field Conference guidebooks available for free download. Non-members will have access to guidebook papers two years after publication. Members have access to all papers. This is in keeping with our mission of promoting interest, research, and cooperation regarding geology in New Mexico. However, guidebook sales represent a significant proportion of our operating budget. Therefore, only *research papers* are available for download. *Road logs, mini-papers, maps, stratigraphic charts*, and other selected content are available only in the printed guidebooks.

Copyright Information

Publications of the New Mexico Geological Society, printed and electronic, are protected by the copyright laws of the United States. No material from the NMGS website, or printed and electronic publications, may be reprinted or redistributed without NMGS permission. Contact us for permission to reprint portions of any of our publications.

One printed copy of any materials from the NMGS website or our print and electronic publications may be made for individual use without our permission. Teachers and students may make unlimited copies for educational use. Any other use of these materials requires explicit permission.

This page is intentionally left blank to maintain order of facing pages.

LAKE VALLEY'S FAMED BRIDAL CHAMBER—"A BEAUTIFULLY LARGE AND SOLID LOOKING STREAK"

ROBERT W. EVELETH

New Mexico Bureau of Mines & Mineral Resources, Socorro, NM 87801

Abstract—The famous vug known as the Bridal Chamber, discovered at Lake Valley during the early 1880's, is so well known that it has entered oral tradition and become part of New Mexico's folklore. Contrary to popular belief, the bonanza deposits did not lead to long-term profits. The Sierra Grande Company of Lake Valley in fact had its hands full contending with sudden wealth, sudden fame, and sudden failure.

INTRODUCTION

So much has been written about the famed Bridal Chamber of Lake Valley, New Mexico, it is difficult to separate fact from fanciful journalism. Each account contains at least one true fact: the Chamber was a very real discovery indeed, and without doubt one of the richest concentrations of chlorargyrite (AgCl) or cerargyrite ever discovered anywhere. In fact, it was so unbelievably rich that it attracted many of the leading scientists and famous capitalists of the day. Even the most stalwart professionals of the engineering and geological world were so influenced by its dazzling beauty and obvious wealth that much of their effort and capital were expended toward finding another. What follows is an account of the events leading up to its discovery and the ultimate effect it exerted upon the Sierra mining companies of Lake Valley.

A GRASS-ROOTS DISCOVERY

Time and again the question is asked why the discovery of New Mexico's bonanza mineral deposits lagged so far behind surrounding states and territories. The reasons are many and include such factors as the absence of navigable bodies of water and distance from population centers and coastal areas.

These are minor, however, compared to the threat to one's health posed by the predacious Apache Indians who ruled over much of New Mexico as late as the mid 1880's. Thus, it is most unlikely that George W. Lufkin, sometime cowboy, sometime prospector, was either alone or discovered the Lake Valley silver deposits totally by accident, as has been suggested more than once in the popular press (e.g. Jones 1904: 89). More likely he passed through the area in his round of duty with a group of cowboys, probably in the employ of the McEverts Ranch, noticed the dark iron- and manganese-stained outcroppings, and quietly vowed to return at the first opportunity.

Return he did during August 1878, with at least one companion, probably Chris Watson (some accounts include McEverts himself). They proceeded to sink several prospect holes and quickly discovered bonanza silver ores literally at grass roots (Fountain 1882: 19, Republican 1883b: 1, Jones 1904: 89). But as so often happened during early years of mineral discovery in the west, the discoverers were not wealthy men. When their funds were quickly depleted, they returned to Hillsboro to build another grubstake. Indian problems delayed their return to the diggings for a time, but meanwhile they were able to get John A. Miller, the post trader at Fort Bayard, interested in backing them financially. As a result, Lufkin and Watson would realize only a modest sum for their efforts, while Miller would become wealthy (Fountain 1882: 19).

Inevitably, news of the discovery leaked out and caused a rush into the new district, which from the beginning appears to have been called Lake Valley (Fig. 1) after the small lake nearby. The first camp that sprang up was named Sierra City. The principal claimants at that time (and probably indicative of some of the first residents of Sierra City) were Lufkin and Watson, as well as M.V. Cox, R.M. Sherman and Brothers, A. Barnaby II, H. Wells, and John A. Miller (Mining World 1882a: 217, 1882b: 278). Sierra City grew rapidly, but was struck by tragedy almost immediately when the notorious Victorio and his band of marauding Apaches attacked the camp and sent 16 men to permanent

rest on the hill above the lake (Republican 1883a: 1). "The brutality of the Indian raids through Arizona and New Mexico in these days would scarcely be believed now but they stain in deep scarlet the early records of these territories and are still well remembered by the early residents" (MacDonald 1909: 851).

EASTERN CAPITAL COMES TO SIERRA CITY

With a temporary return to peace, the district developed sufficiently to attract needed outside capital. J.A. Miller turned his attention toward the financial centers of Pittsburgh and New York. Two groups headed by George D. Roberts of New York and J. Whitaker White of Philadelphia were definitely interested, but were unsure because of the great risks involved: the Indians, distance to market, and guarantee that Lake Valley ores were as rich as claimed by Miller. They obtained the services of a well-known mining engineer George Daly to properly assess the situation (Fountain 1882: 20, MacDonald 1909: 851).

Daly, doubtless raised and educated in the east, had gone west to find fame and fortune in the Leadville, Colorado, area mining camps (Mining World 1881: 7). He was in fact the general manager of the Robinson Mine at Kokomo, some 15 mi north of Leadville (and now buried under Climax's tailings). Daly's report was favorable to say the least, and as a result the Lake Valley properties were purchased for \$300,000 (Mining World 1881: 10). This included a \$100,000 payment to John A. Miller, a hefty commission to Daly, and the remainder went to Lufkin, Watson, McEverts, and unspecified others.

At the time of transaction in early 1881, the only "permanent" building in Sierra City was George Lufkin's one-room cabin (Fountain 1882: 20, Jones 1904: 89, MacDonald 1909: 852). Daly would become the first general manager of the new venture and would bring Bernard MacDonald down from Leadville as his superintendent.



FIGURE 1—Lake Valley, New Mexico, shown above ca 1890 had already seen its first boom-and-bust cycle with the failure of the Sierra Grande Company and the organization of the Silver Mining Company of Lake Valley. The diminutive wooden boxcars of the A.T. & S.F.R.R. occupy one of the sidetracks above the depot; the mill was located $\frac{1}{3}$ mi farther up the track to the west (rt.). Photo Henry Schmidt, NM Bureau of Mines & Mineral Resources Collection, courtesy Richard H. Jahns.

THE SIERRA COMPANIES

The eastern financiers took a most curious course of action to develop and mine the deposits: a syndicate was formed which then organized four companies—the Sierra Grande, Sierra Plata, Sierra Bella, and Sierra Apache—each owning a specific group of mineral properties which were to be mined independently. The milling facilities, however, were operated by the Sierra Grande Company and appear to have been either jointly owned or perhaps used on a toll basis. This four-company system quickly led to a rather complex state of affairs, and it was found advantageous to consolidate the various holdings through mergers or outright purchase.

The four Sierra companies were actually preceded by the Lake Valley Mining Company, and perhaps also by the Sierra Bonanza Company. Early in 1881, Lester A. Bartlett of Washington, DC, visited Lake Valley “and subsequently aided in organizing” the Lake Valley Mining Company. This would be the first corporation with capital in the district and would later be reorganized into the Sierra Bella Company, but other than this little is known about these companies (Mining World 1882a: 217, 1882b: 278, 1882d: 35).

The Sierra Plata Company was the first to be consolidated into the Sierra Grande; this occurred almost immediately (toward the end of 1881, doubtless hastened by the discovery of the Bridal Chamber) and was followed by the Sierra Apache during 1882, and finally by the Sierra Bella in early 1886 (Burchard 1883: 342, 1884: 569, Engineering

and Mining Journal 1886a: 119). Thus, the stage was set for the totally unexpected discovery of the Bridal Chamber in mid-August 1881.

THE BRIDAL CHAMBER

Although high-grade silver ore seemed to be everywhere, Daly decided to initiate development on the sizeable outcropping on the Sierra Grande and Sierra Bella properties. The orebody in the Lincoln claim (Sierra Grande ground) was well exposed in an open cut excavated earlier, and an exploration drift was collared at this point and driven in a westerly direction to define the limits of pay ground (Fig. 2). According to MacDonald (1909: 854), this drift had attained a length of some 800 ft, all in ore, with the silver grade increasing steadily to the west, in the direction of Stanton claim (Sierra Plata ground). To faster determine the extent of the orebody and to improve ventilation, it was decided to move ahead to the property line common to the Lincoln and Stanton claims and sink a shaft. Since this was to be a joint venture of the two companies, the opening was called the “joint shaft.” (The Lincoln and Stanton claims were subsequently renamed Carolina and North Carolina, respectively, when surveyed and patented [Sawyer ca 1881, Engineering and Mining Journal 1888a: 204].)

The breakthrough was totally unexpected, and it is fortunate indeed that so many first-hand accounts describing the fabulous vug survived. MacDonald was doubtless present at the time, although the names of the actual miners have been lost to history (Jones 1904: 90 tells us that



FIGURE 2—Open cut and stope, Carolina claim, Lake Valley, New Mexico, ca 1890. This view has often been identified as the Bridal Chamber itself, when in fact it is more likely the location of Daly’s exploration drift which eventually broke into the Bridal Chamber several hundred feet away. The ore zone has subsequently been stoped out around the original drift, leaving the opening seen here. Photo Henry Schmidt, NM Bureau of Mines & Mineral Resources Collection, courtesy Richard H. Jahns.

John Leavitt had a lease on the property and was the one to discover the Bridal Chamber. Perhaps Jones meant to say that Leavitt held a shaft-sinking contract with, or was employed by, the Sierra Grande/Plata Companies). After clearing away 4 ft of soil, the shaft penetrated 20 ft of limestone before entering the ore zone. At this point the ore assayed 40 oz/t and silver content increased rapidly; finally, at 30 ft a solid mass of horn silver 4 ft thick was encountered that averaged an incredible 15,900 oz/t silver (MacDonald 1909: 855).

MacDonald tells us he "named the ore deposit cut in the 'joint shaft' the 'Bridal Chamber' because of the sparkling light reflected by the myriads of crystals of cerargyrite and calcite studding the roof of the open space over the chloride streak. The purest specimens assayed 20,000 oz/t silver and the average across the 4 ft face was 15,000 oz" (MacDonald 1909: 855). The subsequent breakthrough from the tunnel side was called the "Cat Hole" by the miners (Hague 1882b). It is one of the great ironies in New Mexico's mining lore that at almost the very hour the joint shaft broke the 4 ft streak of horn silver, George Daly along with his companions Doc Williams, Tom Hughes, and Green were killed by Chief Nané and his braves. In honor of this "gentleman kindly remembered by all the old timers," Sierra City was renamed Daly. Daly itself would be short-lived and abandoned when the area surrounding the 20 stamp mill became the newest townsite called simply Lake Valley (Republican 1883b: 1, MacDonald 1909: 855, Jones 1904: 90, Mining World 1882a: 211).

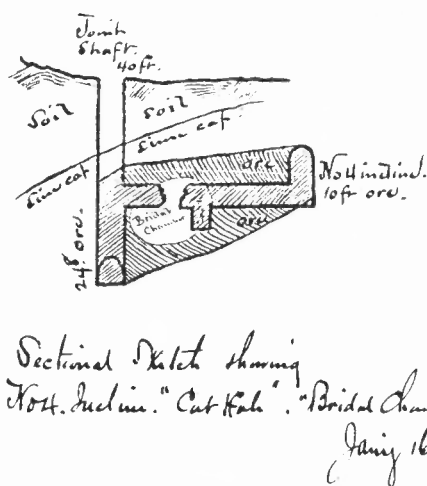
News of the fabulous strike spread rapidly and, of course, most people brushed the story aside as just another wild promotional scheme by those crazy New Mexicans. Even the *Socorro Miner*, a publication devoted to the promotion of the territory's mineral wealth, said: "Worse and worse. Those fables about the Lake Valley mines continue to grow at every report. The correspondent now declares that a great cave of almost pure silver has been discovered and that the output will be \$100,000 per day" (!) (Mining World 1882a: 217). And they had every right to be skeptical, for seldom has the earth yielded so rich a treasure in so small a space (see e.g. Sawyer in Mining World 1882b: 278, Clifford ca 1882: 6).

The Sierra Grande Company was soon inundated with inquisitive experts and professionals from all walks of life. The list of famous visiting dignitaries reads like a Who's Who of the late 19th century: the eminent mineralogist from Yale, Benjamin Silliman; the famous paleontologist Edward D. Cope; F.M. Endlich, formerly of the Smithsonian Institution; Governor Tabor of Colorado; and Governor Safford of Arizona. Even seasoned and hardened professionals, having "seen-it-all" at bonanza camps like Leadville, were not prepared for the sight confronting them in the Bridal Chamber. Robinson (1882) examined the deposit for James D. Hague (of Comstock fame) in January 1882 and reported "I have before seen nothing like it by which I could judge of its merits. Leadville never showed anything richer or more easily got at. . . ." and then almost prophetically closed by saying: "I don't believe it will stay but there is Millions in it for speculation." Gillette (1882a, b) visited the property a few days later and reported to Henry Janin that the chamber contained a "beautifully large and solid looking streak," "containing ore which is horribly rich (from 10 to 15,000 oz)." Gillette fortuitously provided Janin with an on-the-spot sketch of the chamber (to my knowledge, the only such sketch to survive), which is herein reproduced (Fig. 3).

JACKSON'S BABY

D.H. Jackson assumed the managerial duties so tragically vacated by Daly and was kept rather busy escorting the visitors (if they had the proper credentials) into the Bridal Chamber. By early 1882 the chamber was opened up into four galleries and in one of these was a large mass of chlorargyrite called "Jackson's Baby," measuring 6 ft × 4 ft × 2 ft and said to be valued at between \$60,000 and 80,000. It was here that Governor Safford was said to have offered \$50,000 for all the ore he could personally remove in 10 hours (Republican 1883: page not known, Fountain 1882: 21).

A 640 lb piece of this ore was sent for display to the National Mining Exposition at Denver. To further bolster the claim of Lake Valley's



Sectional Sketch showing
North. Inclined "Cat Hole", "Bridal Chamber" & "Joint Shaft"
Jan'y 16th 1882.

FIGURE 3—Daniel B. Gillette's on-the-spot cross-sectional view of the Joint Shaft, Bridal Chamber, and "Cat Hole" (rt. side of chamber), with Gillette's original caption included. James D. Hague papers, courtesy Huntington Library, San Marino, California.

richness, Jackson sent a telegram to Dr. George S. Haskell at the Exposition stating: "we took out a piece of horn silver today; weight over 10,000 pounds; worth over \$60,000" (probably "Jackson's Baby" alluded to above). "I took out today altogether, with only eight men in eight hours, over one hundred and thirty thousand dollars" (Mining World 1882c: 22, 23).

Amidst all the excitement no one, it appears, had the presence of mind to preserve the sight on a photographic plate, but fortunately Fountain (1882: 21) left us the following vivid description:

Instinctively one raises his candle to get a better view of the magic chambers. Here the rock is black and looks like iron slag from some huge forge; there [it] has a reddish cast, as though the internal fires to which it owes its origin have not yet cooled off; yonder the ore loses its characteristic as a rock formation and resembles a huge mass of soft quicksilver amalgam, both to the touch and to the eye; in another spot it hangs in beautiful, glistening, soft chloride crystals which feel damp in the hand, and when compressed yield to the pressure and assumed the shape of the closed palm, like dough. The latter formation is more readily smelted than any ore we ever saw before, the flame of the candle sending the virgin silver dripping down the wall like shot. We had heard and doubted this story, and were perfectly well aware of the fact that it requires 1,873 degrees Fahrenheit to fuse silver, yet we are now living witness to the fact that the flame of the candle held against the projecting crystals of chloride of silver in these mines, unaided by the blowpipe, is sufficient to fuse them in half a minute.

REORGANIZATION AND A CRASH HEARD 'ROUND THE WORLD

The effect upon the seeing-is-believing public was amazing enough, but for the Lake Valley companies it was, in the long run, devastating; the incredible vision of sudden wealth mesmerized the otherwise hard-nosed engineers, geologists, and capitalists alike. A decision was hastily made to erect a 20 stamp, pan-amalgamation mill that cost approximately \$100,000 and was notorious even in that day and age for producing 60–250 oz tailings (Engineering and Mining Journal 1883: 250, 1884: 206, MacDonald 1909: 856). Similarly, \$20,000 was expended on a 30 ton smelter which was said to be "of a pattern that would have done credit to a museum of antiquities" (Engineering and Mining Journal 1883: 205, 1885: 245). Worse, one failure followed another. The first mill was quickly replaced with a Russell Lixiviation plant which was only moderately successful. Designed and built by the Colorado Iron Works, a reputable firm, it seems that it worked fine as long as the feed was relatively high grade and easily crushed, but it should have been designed to handle larger amounts of tougher, lower-grade ores. Once again the company based its future on bonanza ores. Last but not least, the stockholders naturally demanded their share of the

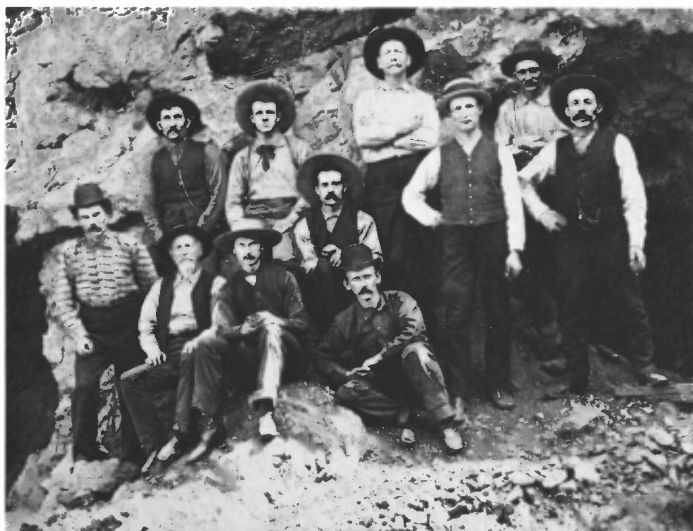


FIGURE 4—Henry Schmidt, assayer, surveyor, and self-appointed photographic chronicler of the Black Range area during the late 19th and early 20th centuries, posed a group of miners and mill hands at the “Bridal Chamber Mine” (i.e. in an open cut on the Carolina claim) around 1890. Photo courtesy Museum of New Mexico, #56218.

windfall. This resulted in paying out hundreds of thousands of dollars in dividends when in fact at least a portion of these funds should have gone into the company’s treasury to carry it through more difficult times which, as with any mining operation, were inevitable (*Engineering and Mining Journal* 1883: 205, 1884: 207, 1893: 36, *Mining World* 1885: 57).

By late 1886 it was all over for the Sierra Grande Mining Company. President John B. Mellor summed it up in his report to the stockholders saying they “were in debt, the mill was running at a loss; that several thousand dollars wages were due and must be paid; that \$10,000 in judgements had been entered up against the property; and that immediate action was necessary” (*Engineering and Mining Journal* 1886b: 255). The action taken by the few stockholders who would remit 10 cents per share was to organize the new “Silver Mining Company of Lake Valley” from the remnants of “the once famous Sierra Grande Company” (*Engineering and Mining Journal* 1888b: 462–463).

The new company was only moderately successful and even as late as January 1893 was still directing part of its efforts “in the hope of finding another bonanza like the Bridal Chamber” (*Engineering and Mining Journal* 1893: 36). But the silver crash was the coup de grace and the company ceased operations permanently in August 1893. Despite the 2.5 million ounce bonanza from the Bridal Chamber, an additional million ounces from Thirty Stope, and a total production of 5–7 million ounces in a little over eleven years (Clark, 1894: 150, MacDonald 1909: 856), the overall Lake Valley silver operations appear to have lost money.

REFERENCES

- Burchard H.C. 1883. Report of the Director of the Mint upon the statistics of the production of the precious metals in the United States (for the year 1882).—Government Printing Office, Washington, DC, 342 pp.
- Burchard H.C. 1884. Report of the Director of the Mint upon the statistics of the production of the precious metals in the United States (for the year 1883).—Government Printing Office, Washington, DC, 569 pp.
- Clark E. 1894. The silver mines of Lake Valley, New Mexico.—*American Institute of Mining Engineers, Transactions*, 29: 138–167.
- Clifford H.B. 1882 (ca). Sierra Mines, the views of Henry B. Clifford, M.E.—*The Mining Journal*, p. 6 (from an otherwise unidentified clipping in the James D. Hague Papers, Huntington Library, San Marino, California).
- Engineering and Mining Journal* 1883. The Sierra Grande Mining Company, Lake Valley, New Mexico.—New York, 14 April 1883: 205.
- Engineering and Mining Journal* 1884. Official statement and reports, The Sierra Grande, Sierra Bella, and Sierra Apache Mining Companies, Lake Valley, New Mexico.—New York, 27 September 1884: 206.
- Engineering and Mining Journal* 1885. Lake Valley mines—G.M.—New York, 3 October 1885: 245.
- Engineering and Mining Journal* 1886a. [Sierra Grande/Sierra Bella merger].—G.M.—New York, 13 February 1886: 119.
- Engineering and Mining Journal* 1886b. The Sierra Grande Mining Company, official statement.—New York, 9 October 1886: 255.
- Engineering and Mining Journal* 1888a. Silver Mining Company of Lake Valley.—New York, 17 March 1888: 204.
- Engineering and Mining Journal* 1888b. Silver Mining Company of Lake Valley.—New York, 23 June 1888: 462.
- Engineering and Mining Journal* 1893. [Output of the mines at Lake Valley].—New York, 14 January 1893: 36.
- Fountain A.J. 1882. Report of Doña Ana County: Bureau of Immigration of the Territory of New Mexico, Santa Fe, p. 21.
- Gillette D.B. 1882a. Letter report to Mr. (Henry) Janin regarding the Lake Valley Mines.—James D. Hague Papers, Huntington Library, San Marino, California, 4 pp. plus profile and ground plan, 16 January 1882.
- Gillette D.B. 1882b. Letter report (confidential section) to Henry (Janin) regarding values in the Bridal Chamber.—James D. Hague Papers, Huntington Library, San Marino, California, 2 pp., 16 January 1882, with summary of shipments between 1 May 1830 and 21 February 1881.
- Jones F.A. 1904. New Mexico mines and minerals, World’s Fair edition.—NM Printing Co., Santa Fe, 349 pp.
- MacDonald B. 1909. Discussion of the paper of Charles R. Keyes, p. 139.—*American Institute of Mining Engineers, Transactions*, 39: 850–856.
- Mining World* 1881. Philadelphia capital in New Mexico.—Las Vegas, NM, July 1881.
- Mining World* 1882a. Lake Valley District.—Las Vegas, NM, 15 May 1882.
- Mining World* 1882b. The richest mines on earth.—Las Vegas, NM, 1 August 1882.
- Mining World* 1882c. [D.H. Jackson telegram].—Las Vegas, NM, 15 September 1882.
- Mining World* 1882d. [Sierra Grande to erect smelter].—Las Vegas, NM, 1 October 1882.
- Mining World* 1885. [1884–85 dividend].—Las Vegas, NM, December 1885.
- Republican* 1883a. The Lake Valley Mines.—Las Cruces, NM, 30 June 1883.
- Republican* 1883b. Lake Valley.—Las Cruces, NM, 15 December 1883.
- Robinson S.S. 1882. Letter report to James D. Hague, esq., from Mimbres Mining Company, regarding the Lake Valley mines.—James D. Hague Papers, Huntington Library, San Marino, California, 4 pp., 10 January 1882.
- Sawyer, H.H. 1881 (ca). Map of Sierra Mines, Daly, Doña Ana County, New Mexico.—James D. Hague Papers, Huntington Library, San Marino, California.