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Although the history of Bisbee, Arizona is often written about, one would readily find that events which took place after the beginning of World War II are often neglected in historical works. If this period is broached, it is typically granted merely a few paragraphs. It is the goal of this paper to enlighten the reader of the history of Bisbee during this often ignored time period, reflecting that this stage of the town's past is as equally fascinating as the mining boom years which have been so well documented. This work will begin by examining how Bisbeeites and the local mines contributed to the war effort during World War II. Next, the essay will show the changes which occurred after the war within the community, including the heavy promotion of Bisbee as a tourist destination. The paper will then delve into the history of post World War II mining in Bisbee, including the opening of the Lavender Pit and the important role of the United States government in this massive mining project. Additionally, this work will cover the shutting down of the mining operations in Bisbee, including how the town transformed once the closure took place. Lastly, some of the historically significant Bisbee mineral discoveries which occurred in the last several decades will be discussed, reflecting how the area continues to be a mineralogically important locality.

The 1940's would prove to be a decade which brought dramatic change to the United States. It was during this time, the world witnessed World War II and it seemed that no matter which city you were from, somehow this great conflict was linked to your community. This includes the mining town of Bisbee, Arizona, in which the sons of this

great copper camp made significant contributions to the war on and off the battlefield. One such person was Bisbee native, Chester C. Smith who was the lieutenant commander on the submarine USS Swordfish. Smith and his crew would leave their marks in naval history, as the Swordfish would be the “first United States submarine to sink a Japanese ship,” on December 16, 1941, endure the first depth charge and “made the first submerged approach in battle” during World War II.¹ Besides those individuals who were in the heat of combat, other Bisbee natives found their expertise in science to aid the war effort. Such was the case for physicist, John W. Trischka who was born in the mining camp and worked on the “United States atomic bomb program... the Manhattan Project.”² In addition to Bisbeeites contributing to the war, a U.S. Coast Guard PF-46 the USS Bisbee, named after the mining camp, patrolled the Pacific Ocean during this period of global conflict. The vessel was a part of the Seventh Fleet and would go on to receive two battle stars during World War II.³

Back in Arizona, the miners who worked to extract metals from Bisbee’s soil also played a vital role in the battle. During the early years of the conflict there was a copper shortage. With this mineral being used in war related materials, it was vital that the nation’s mines produce as much copper as possible. This demand enabled the mining companies in Bisbee, such as Phelps Dodge, to return to mining localities which had been closed because of the low grade of ore in these mines. In 1942 alone, the “reopening and rehabilitation” of Phelps Dodge’s properties such as the Junction and Czar-Holbrook

¹ "USS Swordfish (SS-193)," *Wikipedia, The Free Encyclopedia*, http://en.wikipedia.org/w/index.php?title=USS_Swordfish_%28SS-193%29&oldid=33514460 (accessed March 21, 2006); “USS Swordfish Made First Underwater Attack of War Against the Japs,” *Lowell Sun* (Lowell, Massachusetts), 6 July 1945.

² “John W. Trischka; Physicist Worked on Manhattan Project,” *Syracuse Herald Journal* (Syracuse, New York), 31 March 1993.

³ “USS Bisbee, PF-46,” *United States Coast Guard*, http://www.uscg.mil/HQ/G-CP/HISTORY/WEB CUTTERS/PF46_Bisbee.html (accessed 20 March 2006).

produced 1,535,804 pounds of salable copper, in addition to the company's "regular mining operations."⁴ In fact, the extraction of these natural resources was of such great importance that "experienced miners" were excused from "army service and sent to work in essential mines." This included those mines located in Bisbee where a number of "soldier miners" from throughout the U.S. were sent. Because of the influx of miners being sent to the town, the government provided two-hundred furnished "trailer-houses" for the men. These "soldier-miners" were exempt from having to go into combat as long as they continued to produce the metals needed for the war. However, once a person quit or was fired from their job at the mine they "faced immediate induction into military service."⁵

During 1945, the war finally came to an end and the conclusion of combat would prove to bring a new era to American society. Americans now witnessed the end of rations and the beginning of tax cuts, which enabled them to purchase products they had longed to acquire during the restrictive war years.⁶ Bisbee native, Richard Graeme vividly remembers this period of time in the mining camp. Graeme was born in 1941 and recalled the postwar years brought many changes to his parent's home. This included such acquisitions as a refrigerator and the installation of a telephone. Television came to Bisbee during the early 1950s as well and a few of his neighbors soon joined the many Americans who enjoyed this new form of entertainment. Besides the material changes in the mining camp, Graeme stated that comments made by veterans of World War II gave

⁴ C.E. Mills, "Phelps Dodge Copper Queen Branch: Notations From Annual Reports Years 1909 Through 1950," 55.

⁵ Richard Graeme, Bisbee, Arizona native and mining historian, interviewed by author, 18 March 2006; Lynn R. Bailey, *Bisbee: Queen of the Copper Camps*, 3rd ed. (Tucson: Westernlore Press, 2002), 259.

⁶ John A. Garraty and Mark C. Carnes, *The American Nation: A History of the United States Since 1865*, Vol. 2, 10th ed (New York: Addison Wesley Longman, Inc., 2000), 804.

him the impression they returned home changed men. Such was the case one Fourth of July when he spoke to a man who had just completed participating in Bisbee's annual coaster race. Graeme was one of a few young boys who approached the man and asked him if he was frightened to race down the twists and turns of Tombstone Canyon at such a high speed. The participant replied "I've been facing Jap machine guns for four years; a ride down the canyon doesn't scare me anymore."⁷

Another visible difference during the postwar years was the prominent advertising of Bisbee being a tourist destination. Before World War II, Bisbee was rarely mentioned as a place for one to visit, rather it was promoted as an industrial center. Now the town, as well as the state of Arizona, was promoted as a place where one could have a true taste of Western life and venture across the border into Mexico. Articles appeared in newspapers nationwide informing their readers of package tours and places to stay in Bisbee.⁸ Additionally, Bisbee proprietors placed advertisements in newspapers like the one shown in figure one, hoping to encourage visitors to stay at their properties.⁹ As the years passed, Bisbee continued to be not only a popular tourist destination, but a place to relocate. In 1954, the *Bisbee Daily Review* stated that the town was "bursting at the seams with newcomers" and credited such things as the abundance of sunshine and moderate climate for their arrival to the area.¹⁰

⁷ Graeme interview, 18 March 2006.

⁸ "Here's An Interesting Spot to Check On Your Road Map," *Times Herald* (Olean, New York), 10 December 1949; "Arizona Package Tours Introduced," *Chicago Daily Tribune*, 11 September 1949; "New Lodge Will Open on Jan. 1 in Warren, Ariz.," *Chicago Daily Tribune*, 16 December 1945.

⁹ "Mule Mt. Guest Ranch," *New York Times*, 26 October 1947.

¹⁰ "Area Here is Tourist Parade," *Bisbee Daily Review*, 7 August 1954.



Figure 1: An October 26, 1947 advertisement for the Mule Mountain Guest Ranch which appeared in the *New York Times*. This ad is but one example of how Bisbee was now being promoted as a tourist destination during the years following World War II.

While tourism dollars were undoubtedly a welcome new addition to the local economy, the primary source of income for Bisbee continued to be the mining industry. Although the town was well known for being a copper camp, mining companies were able to extract other important metals from Bisbee's mineral deposits including lead and zinc. In fact, during 1945 the mines in Bisbee were part of a handful of localities in the nation which showed an increase in its production of these metals, while other mines output were declining.¹¹ While the town continued to be an important copper mining center, the amount of this metal extracted from the mines in the postwar years was dramatically less than the decades before World War II. For example, during the depression era from 1931 to 1935 the Phelps Dodge Corporation's Copper Queen Branch averaged 32,413 tons of copper ore produced each year. This is in stark contrast to the years of 1946 through 1950 in which an average of but 12,358 tons of copper ore were retrieved per year. The worst year of extraction within this period was 1946, which

¹¹ "Mine Output of Lead is 1,440 Tons Less in June," *Joplin Globe* (Joplin, Missouri), 26 August 1945; "Mine Output of Zinc is Off 3 Per Cent in June," *Joplin Globe* (Joplin Missouri), 23 September 1945.

witnessed a mere 3,580 tons produced. Bisbee had not seen such low yielding of the metal since 1887.¹²

However, it must be noted that one reason 1946 proved to be such a dismal period for Phelps Dodge's copper production was due to a strike that occurred at Bisbee and the smelter operations in nearby Douglas, Arizona. The walkout took place from March 20 until June 28, with the primary demand of the strikers being a raise in pay. Yet, it seemed the company's hands were somewhat tied in giving the employees the increase they demanded. This was due to price controls set in place by the federal government during the war which had not yet been lifted.¹³ Once these restrictions were removed, the price of copper increased and Phelps Dodge was able to give their workers a raise of 18 ½ cents per hour. To satisfy their employees the company made the raise retroactive to March 15. Additionally, the mining company provided a 9 ½ cents per hour increase which was retroactive to October 30, 1945 for those employees who still remained at the company. This new pay scale was reported to have had jobseekers flocking to Bisbee, hoping to gain employment. However, while operations returned to normal, Phelps Dodge felt the impact of the walkout in its pocketbook, as the three month strike was estimated to have cost the company \$314,743.28 in lost revenue.¹⁴

Although Phelps Dodge was the main mining company in Bisbee during this period, the Shattuck Denn Mining Corporation also controlled land in the area. Like its counterpart, the strike of 1946 also had a negative impact on the Shattuck Denn's copper

¹² Mills, VI, VIII. (The first 15 pages of Mills' work do not have page numbers. Therefore the author of this paper has used roman numerals to aid the reader in differentiating these pages from those which have regular numbering.); George F. Leaming, *The Story of Mining in Bisbee* (Marana, Arizona: Free Geos Library, 1998), 24.

¹³ Mills, 64; Leaming, 24.

¹⁴ "Phelps Dodge Copper Mines Gain Momentum," *Los Angeles Times*, 29 July 1946; Mills, 64.

output. The company generally had the ore they extracted processed at the Phelps Dodge smelter in Douglas and because of the strike there, this was unable to be performed.

Therefore, the Shattuck Denn had to completely shutdown operations in Bisbee at the Denn Mine during March 1946 and ultimately the company would not reopen the site. However, on January 31, 1947, the company sent out a notice to their stockholders of a proposed sale of its Denn Mine properties in Bisbee to Phelps Dodge in the amount of \$300,000.00.¹⁵ The sale of the property went through on March 8, 1947 and by April 1; Phelps Dodge had begun production in its newly acquired properties.¹⁶ The Shattuck Denn Mining Corporation would retain their mill and repair shops in Bisbee.¹⁷ However, by 1949 a recession had stuck the copper industry with the price of copper dropping from 23 cents to 18 cents.¹⁸ The primary factor for the decline in price was attributed to an increase of “foreign produced copper,” and the domestic demand for the metal being quite low.¹⁹ This dramatic reduction in the value of copper resulted in the Shattuck Denn having to discontinue its mill operation. With their primary source of income now closed, the company began to sell of their remaining properties in Bisbee and was nearly finished with the task by 1950.²⁰

The copper recession in 1949 also had a devastating impact on numerous copper mining operations in the United States. This is clearly seen in the well known copper

¹⁵ Norman E. LaMond, “Proxy Statement: Special Meeting of Stockholders March 7, 1947,” (New York: Shattuck Denn Mining Corporation, January 31, 1947), 1, 4.

¹⁶ Mills, 65.

¹⁷ “Shattuck Denn Mining Corporation: Annual Report for the year 1947,” (New York: Shattuck Denn Mining Corporation, 1947), 3.

¹⁸ “Phelps Dodge Mill Closing,” *Nevada State Journal* (Reno, Nevada), 1 June 1949.

¹⁹ “Mining: Copper Industry Faces Trouble in All States,” *Reno Evening Gazette* (Reno, Nevada), 4 August 1949; “Production of Copper at Mines Slashed as Demand Stays Low,” *Wall Street Journal*, 6 June 1949.

²⁰ “Shattuck Denn Mining Corporation: Annual Report for the year 1950,” (New York: Shattuck Denn Mining Corporation, 1950) 3.

region of Michigan in which “all copper mines” in the state were “shutdown.” Other prominent copper mining areas such as Montana and Nevada, also witnessed closing or a drastic reduction in operations.²¹

In Bisbee, the Shattuck Denn was not the only company in the town which felt the impact of the recession. During the first few months of 1949, Phelps Dodge did its best to continue operations in the financially oppressive environment. However, as the price of copper continued to decline, the company was forced to take action and by April, in an effort to “economize and reduce costs,” extraction of ores was limited to forty hours per week.²² Unfortunately as the weeks passed, the copper economy did not rise which had devastating results on the Phelps Dodge properties in Bisbee. On June 5, 1949, Phelps Dodge was forced to suspend work at the Copper Queen Mill, which was soon thereafter permanently closed. The next day, production of copper was completely ceased but lead and zinc continued to be mined.²³ Additionally by June 17, the company announced the smelter in Douglas would shut down “one of its two furnaces” since it was not receiving the amount of ore it normally did from the mines in Bisbee. Harry M. Lavender who was general manager and a vice-president of Phelps Dodge stated this was due to the cost of copper production in the area being “greater than the market price for the metal.”²⁴

Clearly, when a company is forced to take such measures, employee layoffs and

²¹ “Mining: Copper Industry Faces Trouble in All States,” *Reno Evening Gazette* (Reno, Nevada), 4 August 1949.

²² “Arizona—Operations are Curtailed. Protest Indian Ruling on Prospects,” *Engineering and Mining Journal*, Vol. 150, No. 8, (August 1949). The copy of this article was taken out of a vintage scrap book held in the Graeme-Larkin private collection, which contains numerous articles about Phelps Dodge. Because the articles were cut out of the sources often page numbers, volume numbers or publication information is not available. For this particular source, the page number, the company which published the journal and specific day of the month it was published is unavailable. Mills, 69.

²³ Phelps Dodge Mill Closing,” *Nevada State Journal* (Reno, Nevada), 1 June 1949; “Mining: Copper Industry Faces Trouble in All States,” *Reno Evening Gazette* (Reno, Nevada), 4 August 1949; Graeme interview, 18 March 2006; “Production of Copper at Mines Slashed as Demand Stays Low,” *Wall Street Journal*, 6 June 1949.

²⁴ “Phelps Dodge Cuts Work at Arizona Copper Smelter,” *Wall Street Journal*, 17 June 1949.

dismissals are inevitable and Phelps Dodge had to reduce its work force by over fifty percent during this year.²⁵

The closure of Phelps Dodge's operations in Bisbee along with reductions and ceasing of other copper workings in the state, was a major blow to the mining industry in Arizona.²⁶ By 1950 copper prices finally began to rise, primarily due to the beginning of the Korean War, which created a demand for the metal. Cleveland Dodge vice-president of Phelps Dodge announced that copper mining operations would once again resume in Bisbee before June.²⁷ However, the extraction of lead and zinc from the company's Bisbee mines would cease by mid 1950, as those ores which could be extracted working within the market price of these metals became exhausted.²⁸

With the United States Military involvement in the Korean War, the government "took steps to increase domestic copper production." Under President Harry Truman, the Defense Production Administration (DPA) was formed with the duty of accelerating "arms production and [regulating] its impact on the civilian economy."²⁹ The agency would control "such raw materials as petroleum, solid fuels, power, minerals and metals." Before the creation of the DPA, numerous bureaus of the government controlled these areas, but now the new administration would oversee them all. The DPA would also go

²⁵ Mills, 70.

²⁶ "Copper Operation Closed," *Mining Congress Journal* (July 1949), 72. This article is from Graeme-Larkin collection scrap book. The volume number of the journal's issue and specific day of the month it was released is not available.

²⁷ Mills, XII; Leaming, 24; "Copper Queen Production," *Mining Congress Journal* (April 1950). This article is from Graeme-Larkin collection scrap book. The volume number of the journal's issue, page number and specific day of the month it was released is not available.

²⁸ "Phelps Dodge Will Resume Copper Mining at Bisbee," *Mining World*, May 1950. This article is from Graeme-Larkin collection scrap book. The page number of this article is unavailable.

²⁹ Leaming, 25; "Overall Setup for Controls is Established," *Washington Post*, 4 January 1951.

on to supervise other government agencies such as the National Production Authority (NPA).³⁰

Much like during World War II, the government realized the crucial role copper played in war related materials. Therefore, one of the objectives of the DPA was to boost the nation's output of strategic metals. One such tactic was to offer mining companies incentives like "accelerated tax amortization[s]" for the development of such things as "new mines, mills, smelters and refineries."³¹ Understandably, those in the mining industry were enticed by the government's offers of fast tax write-offs to begin new projects.

Phelps Dodge was among the mining companies who found the government's proposal quite attractive. As early as December 1950, even before the DPA became an official agency of the government, newspapers stated that Phelps Dodge was going to begin a new open pit mine in Bisbee "if negotiations with the federal government [were] completed."³² In the meantime, Phelps Dodge began excavation in the area known as the Bisbee East ore body. This was the area in which the company hoped to create the open pit mine to extract the low grade ore which was present beneath the soil.³³ During this period test drilling and engineering studies were performed. Additionally, preliminary plans were developed for such necessities as the dump site, a concentrator, personnel and

³⁰ "Forms Agency to Rule Over Output in U.S.," *Chicago Daily Tribune*, 4 January 1951; "Truman Combines Production Offices," *Los Angeles Times*, 4 January 1951; "Wilson Heads Super-Defense Organization," *Washington Post*, 15 December 1950.

³¹ "Nevada Mining Firms Benefit by Tax Setup," *Nevada State Journal* (Reno, Nevada), 29 August 1951.

³² "Phelps Dodge Plans New Mine Operation," *Los Angeles Times*, 7 December 1950; "New Mine," *Reno Evening Gazette*, 6 December 1950.

³³ "Phelps Dodge May Develop Copper Mine Near Bisbee, Arizona," *Wall Street Journal*, 7 December 1950; "Investors' Guide: Phelps Dodge," *Chicago Tribune*, 22 December 1950.

pit shops.³⁴ Moreover, the company looked toward other items it would need for the project such as the “acquisition of drilling equipment, electric shovels and haulage equipment.”³⁵

Another major component of preparing for the open pit was the moving of homes that were located over the Bisbee East ore body, as hundreds of individuals lived in the area in which Phelps Dodge wished to begin their new project.³⁶ Therefore beginning in January 1951, houses and businesses that were situated in the community of Johnson Addition and a portion of those in the settlement of Lowell were moved, with Phelps Dodge undertaking the expense of the massive project. Within the town of Lowell were sections known as Upper Lowell and Jiggerville which were relocated. However, the entire town of Lowell did not need moved and a small part of the community was left untouched.³⁷ A view of Jiggerville may be seen in figure two. Between 250 and 300 residences were moved and placed in the new “town sites of Bakerville, Galena and Saginaw...where water lines, power lines and sewage lines were established” for the latest communities. A view of Galena and Bakerville is shown in figure three. Additionally, twenty businesses were relocated to “other points in Lowell, Bakerville and Warren.” One of the structures moved was the “former Shattuck Denn office building.” The *Bisbee Daily Review* remarked that the “large brick structure was moved without cracking a single brick.” It took merely three months to complete the mass relocation. In

³⁴ “Phelps Dodge May Develop Copper Mine Near Bisbee, Arizona,” *Wall Street Journal*, 7 December 1950; Mills, 72.

³⁵ “Phelps Dodge Drilling New Ore Body,” *Mining Record*, 4 January 1951. This article is from Graeme-Larkin collection scrap book. The page number of this article is unavailable.

³⁶ “Phelps Dodge Corp.,” *Engineering and Mining Journal* (July 1951). This article is from Graeme-Larkin collection scrap book. The page number, and volume number of the journal is unavailable.

³⁷ “History,” *Arizona Days and Ways, Arizona Republic*, 8 August 1954 (This is a supplement to the *Arizona Republic Newspaper*); Graeme interview, 18 March 2006.

addition to moving homes, approximately seventy-five new residences were also constructed in Bisbee during this period.³⁸

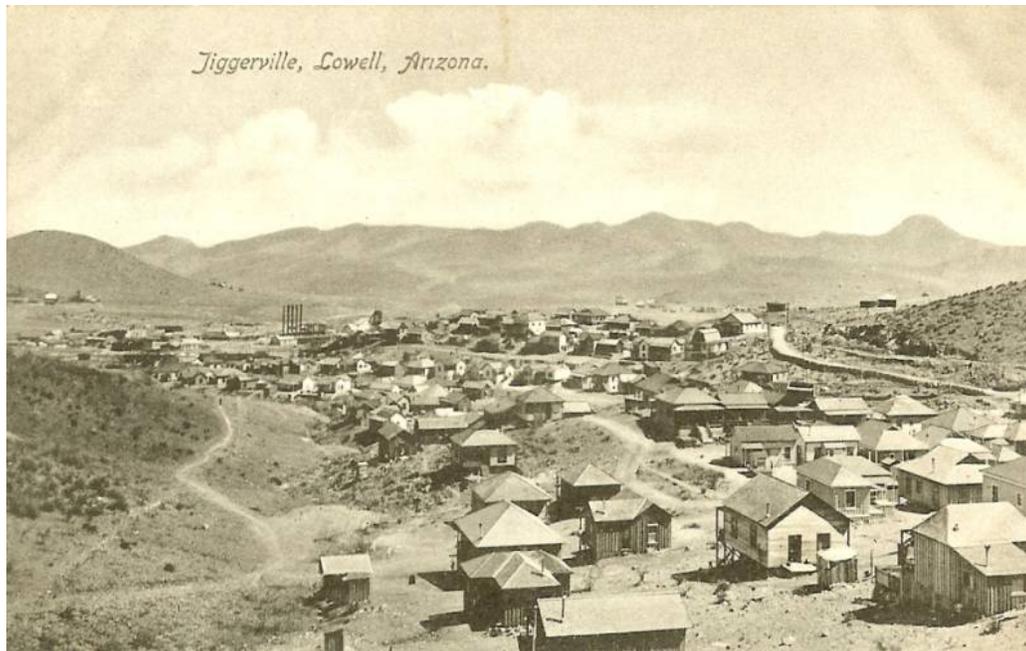


Figure 2: A postcard view of Jiggerville, a part of Lowell, Arizona, circa 1940's. This portion of the town is one of many sections in which homes were relocated to make way for the open pit Phelps Dodge hoped to begin. The name for this section of Lowell was derived from the word jigger which is a Cornish term meaning boss. This area was labeled Jiggerville because of the numerous foremen who lived in the neighborhood. Graeme-Larkin private collection.

³⁸ "Phelps Dodge Corp.," *Engineering and Mining Journal* (July 1951). This article is from Graeme-Larkin collection scrap book. The page number, and volume number of the journal is unavailable; "History," *Arizona Days and Ways*, *Arizona Republic*, 8 August 1954 (This is a supplement to the *Arizona Republic Newspaper*); "Community is Moved for Pit," *Bisbee Daily Review*, 7 August 1954.

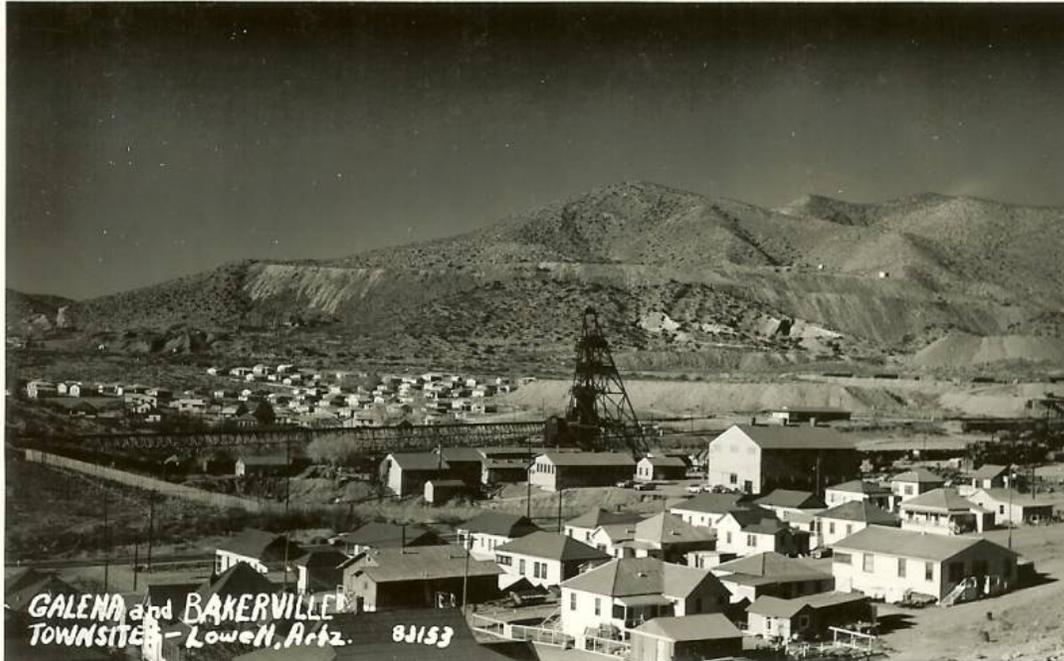


Figure 3: A postcard image of the town sites of Galena and Bakerville, circa 1950's. These are two of the areas in which many of the homes from Johnson Addition and Lowell were moved. Galena is the area shown in the distant part of the photo and Bakerville is visible in the foreground of the image. Graeme-Larkin Collection.

Of course such an immense relocation project could have not been accomplished if the community did not cooperate and believe in the development of the new mine site. According to a newspaper article in the *Arizona Republic*, the Bisbee Chamber of Commerce “voted unanimously” to aid in the moving program. Most importantly, those individuals that would have been directly impacted by the new mine were invited to “a mass meeting.” At this gathering, those persons present gave a “unanimous pledge of cooperation” for the project.³⁹ Along with the homes and establishments that were moved, rerouting of transportation systems also took place. This included removing the tracks for the Southern Pacific Railroad and terminating the rail line in Lowell, as well as the rerouting of U.S. highway 80. The new location of the highway enabled motorists to

³⁹ “History,” *Arizona Days and Ways*, *Arizona Republic*, 8 August 1954 (This is a supplement to the *Arizona Republic Newspaper*).

travel along the side of the mine site and a “turn-out observation point” was also constructed so one may stop and observe the operations of the open pit in action.⁴⁰ The relocation of this highway would go on to make news again a few years later. During 1956, in a most uncommon move, the state of Arizona filed a “suit to condemn surface [mining] rights” for the new section of road that traveled along the side of the pit. This was the first time the state had taken such a measure against any major mining company in Arizona. Apparently government officials worried Phelps Dodge “might dig up the road” if it was believed ore was present beneath the soil on which the highway laid.⁴¹

In addition to excavating untouched terrain, the open pit project would also extend to the Bisbee West ore body. This area was previously mined for low grade ore and resulted in the creation of the Sacramento Pit, which was one of Arizona’s first open pit mines. The stripping of the area which would become the Sacramento Pit began in 1917 and by 1929 the operations at the site ceased, with an estimated 20,000,000 tons of ore having been extracted from the location. When mining was completed in the locality, this early open pit mine was reported to be roughly a “quarter mile wide at the surface, a half mile long and 400 feet deep.” While this was clearly a large mining operation it was estimated that the new open pit mining project would be approximately “seven times the size of the Sacramento pit.”⁴²

It was predicted the new open pit would have a life expectancy of ten to twelve years, as the Bisbee East ore body was believed to contain “41,000,000 tons of

⁴⁰ “Bisbee Comes Back as Copper Center,” *New York Times*, 12 November 1951; “Community is Moved for Pit,” *Bisbee Daily Review*, 7 August 1954; Graeme interview, 18 March 2006.

⁴¹ Untitled article, *Engineering and Mining Journal* (September 1956). This article is from Graeme-Larkin collection scrap book. The page number, and volume number of the journal is unavailable.

⁴² “Old Arizona, A Country Full of Scenic Marvels,” *Chicago Daily Tribune*, 10 December 1939; “Sacramento Pit was First Open Pit Mine in Arizona,” *Bisbee Daily Review*, 2 August 1978; “Phelps Dodge Pushing Work at Bisbee,” *Western Mineral Survey*, 29 June 1951. This article is from Graeme-Larkin collection scrap book. The page number of this article is unavailable.

concentrating ore [and] 31,000,000 tons of material [which could] be leached.”⁴³ The ore within the new pit was believed to contain approximately one percent copper, which was typically coated on pyrite. This roughly amounted to twenty pounds of copper per one ton of ore which was mined. Years earlier, it would have been unthinkable to attempt to extract such a small percentage of copper from ore. However, the advancements in mining technology such as bulk earthmoving techniques and metallurgical developments, particularly the “flotation method,” made such a feat possible.⁴⁴ In fact due to the small amount of copper present within the rock of the Bisbee East ore body, it was “necessary to drill, blast and dispose of more than twice as much waste as there [was] ore during the anticipated life of the open pit.”⁴⁵ It was the hope of Phelps Dodge that “initial work” to start the project would begin in early 1951, with an estimated price tag for development for the open pit being between \$25,000,000 and \$30,000,000.⁴⁶ However, the pit was not expected to begin full scale production until 1954 or 1955.⁴⁷

By August 28, 1951, President Truman created yet another agency to work toward obtaining metals for the war. This new bureau called the Defense Materials Procurement Agency (DMPA) appears to have been a subordinate branch of the recently formed DPA,

⁴³ “Dickering with Uncle Sam,” *Wall Street Journal*, 12 March 1951; “Start New Pit at Bisbee,” *Mining Congress Journal* (April 1951). This article is from Graeme-Larkin collection scrap book. The page number of this article and the volume number of the issue is unavailable.

⁴⁴ “Celebrating the Opening of the Phelps Dodge Lavender Pit at Bisbee and Douglas, Arizona: Saturday August 7th, 1954,” (Bisbee Chamber of Commerce and Douglas Chamber of Commerce, 1954), 4; “The Lavender Pit Mine,” *Bisbee Daily Review*, 7 August 1954; Graeme interview, 18 March 2006.

⁴⁵ “Celebrating the Opening of the Phelps Dodge Lavender Pit at Bisbee and Douglas, Arizona: Saturday August 7th, 1954,” (Bisbee Chamber of Commerce and Douglas Chamber of Commerce, 1954), 3.

⁴⁶ “Phelps Dodge May Develop New Open pit [sic] Mine,” *Mining World*, January 1951. This article is from Graeme-Larkin collection scrap book. The page number of this article is unavailable. “Phelps Dodge May Develop Copper Mine Near Bisbee, Arizona,” *Wall Street Journal*, 7 December 1950.

⁴⁷ “Phelps Dodge to Open Bisbee Ore In Mine Program,” *Mining Record*, 29 March 1951. This article is from Graeme-Larkin collection scrap book. The page number of this article is unavailable.

and was in charge of such tasks as purchasing defense materials and encouraging companies to develop new projects in which war related materials could be retrieved.⁴⁸

Also during the latter half of 1951, it was reported the DMPA through the DPA had granted emergency certification for the open pit mining project in Bisbee, making it the first site eligible to receive “accelerated tax amortization.” According to the articles, Phelps Dodge’s copper mining development was the largest project taken on by the DPA and the company would receive a rapid tax write-off of seventy-five percent on their initial investment. Clearly this was an offer too good to refuse, as the company made a primary investment of \$12,401,000 in which \$9,301,000 was eligible for the rapid tax write-off.⁴⁹ In addition to the tax amortization arrangement with the government, Phelps Dodge also made another deal with the DMPA. Under the terms of this agreement, the company would have to mine out the Bisbee East ore body, build a leach plant and a concentrator, as well as expand the smelter in Douglas. In return, the government would purchase “up to 112,500 tons” of copper from the “first 150,000 tons produced” by the mine, at a cost of twenty-two cents per pound. The contract between the two entities did include an escalator clause, which would enable the price for the copper the government agreed to purchase to increase or decrease, depending on the market value of the metal. Additionally, Phelps Dodge only had to sell the government the copper if the company

⁴⁸ “New Agency Will Buy Strategic Materials,” *New York Times*, 29 August 1951; “Procurement Unit Created by Truman,” *Washington Post*, 29 August 1951.

⁴⁹ “Nevada Mining Firms Benefit by Tax Setup,” *Nevada State Journal* (Reno, Nevada), 29 August 1951; “High Cost Mining of Copper Pushed,” *New York Times*, 2 December 1951; Untitled article, *Mining World*, September 1951. This article is from Graeme-Larkin collection scrap book. The page number of this article is unavailable.

could not find another purchaser within the United States who wished to buy the metal for a higher price.⁵⁰

The agreements made with the DPA, DMPA and Phelps Dodge were undoubtedly cause for celebration in Bisbee, as this meant that there would be ample work for miners living in the area for years to come. However, during the same time period the negotiations between the government and Phelps Dodge were reached, the International Union of Mine, Mill and Smelter Workers called a strike that impacted numerous mines throughout the country, including Bisbee. On August 28, 1951, the *New York Times* reported walkouts took place in mining operations located in approximately fifteen states, with ninety-five percent of the country's facilities from "mine[s] to final production line" being involved.⁵¹ Clearly during a time of war, a strike was the last thing the government wanted, as prolonged walkouts could have had a devastating impact on war related materials. Recognizing the serious nature of the mass strike, on September 5 "Judge Alfred P. Murrah of the 10th U.S. circuit court of appeals" issued a "temporary restraining order under the Taft-Hartley law," forcing the picketers back to their jobs. The request for the action was submitted by the "Justice Department on behalf of President Truman."⁵² Although the newspaper reports did not state under what section of the Taft-Hartley law Murrah was acting, it was most likely the portion which stated strikes that

⁵⁰ "DMPA, Phelps Dodge Pact Provides for Firm to Boost Copper Production," *Wall Street Journal*, 27 September 1951; "Copper Pact is Signed: U.S. Agency and Phelps Dodge Agree on Expansion Plan," *New York Times*, 27 September 1951; "New Growth for the Red Metal: The Lavender Pit," *Engineering and Mining Journal*, Vol. 154, no.7 (July 1953), 111; "Phelps Dodge Has Come to Terms for Labor Agreement," *Mining Record*, 4 October 1951.

⁵¹ "Strike Chokes off Copper, Lead, Zinc," *New York Times*, 28 August 1951.

⁵² "Copper Miners Return to Work: Federal Court Order Ends Strike," *Nevada State Journal* (Reno, Nevada), 7 September 1951; "Pact Set by Union and Phelps Dodge," *New York Times*, 28 September 1951.

affect “national health and safety [were] subject to regulation.”⁵³ Because the output of metals such as copper were vital to the war effort, a lack of such material could be viewed as a risk to national safety.

By late September, Phelps Dodge and the International Union of Mine, Mill and Smelter Workers reached an agreement in which the hourly wage was increased for employees at the company’s mines, including those in Bisbee.⁵⁴ However, the DPA reported due to strikes which had taken place combined with other factors such as “low import levels [that] copper levels [were] almost dangerously short.” In fact, copper was viewed as being the most “critical of all important production metals from both the immediate and long-range outlook.”⁵⁵

As the months passed, news about Bisbee shifted from strikes to the development of the new open pit which now had been given a name. On March 12, 1952, Harrison M. Lavender, vice-president and general manager of Phelps Dodge died of leukemia at his house in La Jolla, California. Reportedly, Lavender had known about his condition for two years, but continued to be a driving force within Phelps Dodge. So much in fact, that he was credited with the idea of excavating the Bisbee East ore body and making the plan for the open pit become a reality. Because of this, it apparently seemed quite fitting to Phelps Dodge that the new mining project be called the Lavender Pit, in honor of the late Harrison Lavender.⁵⁶

⁵³ “1947: Labor and Employment,” *Microsoft Encarta Reference Library 2005*, CD-ROM, Microsoft, 2004.

⁵⁴ “Phelps, Union Reach Accord on New Pact,” *Chicago Daily Tribune*, 28 September 1951; “Phelps Dodge Has Come to Terms for Labor Agreement,” *Mining Record*, 4 October 1951. This article is from Graeme-Larkin collection scrap book. The page number of this article is unavailable.

⁵⁵ “Strategic Metals Reported in Bad Way,” *Washington Post*, 29 October 1951.

⁵⁶ “The Lavender Pit in Brief,” *Bisbee Daily Review*, 7 August 1954; Carlos Schwantes, *Vision and Enterprise: Exploring the History of Phelps Dodge Corporation* (Tucson: University of Arizona Press, 2000), 231; Westbrook Pegler, “Unique Story,” *Austin Daily Herald* (Austin, Minnesota), 27 March 1952;

During 1952, development of the Lavender Pit continued. The construction of a new warehouse, change room, pit office and pit shops were completed. Additionally, such necessities as ore bins and a pump house were nearly completed. Work was also done to remove waste material. The image in figure four shows the first blast that took place as part as development of the Lavender Pit. Typically, the material created by such a blast would be removed in an effort to gain access to the desired ore. By the end of the year, approximately 17,000,000 tons of waste had been removed from the mine site.⁵⁷



Figure 4: A photograph of the first blast taking place in what was Johnson Addition, to prepare for the excavation of the Lavender Pit, circa 1950's. To the left of the image, one can clearly see the remnants of vacant concrete buildings. These structures apparently could not be moved like hundreds of others which were in order to make way for the development of the new mining project. Graeme-Larkin collection.

It would take years of development for the Lavender Pit to reach production but by July 1954, that day was clearly in sight. At this point over 45,000,000 tons of waste rock had been removed and the pit was already “more than two thirds of a mile long.”

“Celebrating the Opening of the Phelps Dodge Lavender Pit at Bisbee and Douglas, Arizona: Saturday August 7th, 1954,” (Bisbee Chamber of Commerce and Douglas Chamber of Commerce, 1954), 1.

⁵⁷ Untitled article, *Mining World*, 15 April 1953.

The *New York Times* reported that by the time the pit would close it would be deep enough to “hide Manhattan’s seventy-story R.C.A. Building.” Additionally, Phelps Dodge began to do such tasks as send small amounts of copper ore to the new concentrator in an effort to “tune-up” the plant during July.⁵⁸

Finally on August 7, 1954, after years of waiting and preparation, the Lavender Pit was officially opened. This was a huge day for Bisbee, as well as city of Douglas which housed the Phelps Dodge smelter. To honor the opening of the new mine site, a celebration was held taking place in both communities. Individuals were invited to a barbecue and attend tours of the smelter in Douglas and of the mill and pit in Bisbee. Additionally, a dedication ceremony took place in which people such as Robert G. Page, president of the Phelps Dodge Corporation and Howard Pyle, the governor of Arizona addressed the attendees. The conclusion of the celebration was a blast that took place in the mine site at 5:00 P.M., which marked the official opening of the Lavender Pit. It was estimated that 5,000 individuals watched the explosion, as it “shook the earth and released additional tonnage of copper-bearing ore.”⁵⁹ With the opening of the new mining locality, the Lavender Pit officially became the “largest open pit copper project to come into production since World War II.”⁶⁰

The start of full production at the Lavender pit was not only a cause for celebration in the Bisbee area, but in the state of Arizona. On August 8, 1954, the Phoenix newspaper the *Arizona Republic* had a supplement to its paper which was

⁵⁸ “\$25,000,000 Phelps Dodge Mine to Start Producing Copper Soon,” *New York Times*, 26 July 1954.

⁵⁹ “Celebrating the Opening of the Phelps Dodge Lavender Pit at Bisbee and Douglas, Arizona: Saturday August 7th, 1954,” (Bisbee Chamber of Commerce and Douglas Chamber of Commerce, 1954), 2-3; “\$25 Million Lavender Pit Copper Mine is Dedicated,” *Bisbee Daily Review*, 8 August 1954.

⁶⁰ “Lavender Pit Operation Epitomizes Efficiency,” *Engineering and Mining Journal*, Vol. 155, no. 9, (September 1954), 144.

devoted to the beginning of the new mining operation. As one looks over the supplement, it becomes quite clear to the reader its theme is that of progress. Each page of the publication reflects the open pit and all of the mining operations in Bisbee in a positive light. Additionally, numerous advertisements are located within the supplement stating that the Lavender Pit would bring economic prosperity not only to Bisbee but the state of Arizona and the Southwestern United States.⁶¹ One such ad may be seen in figure five.

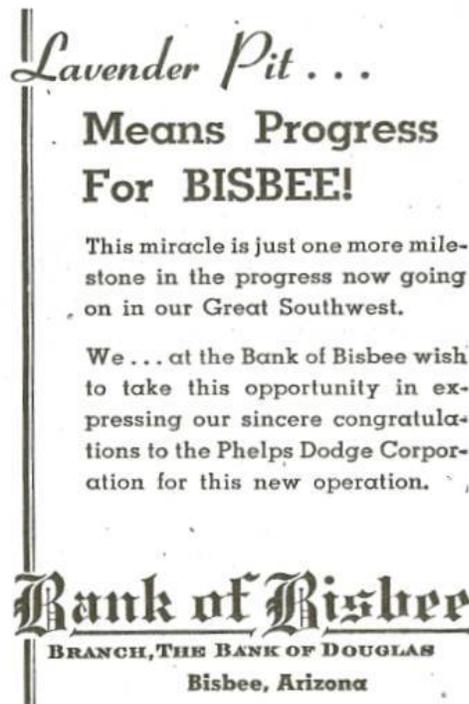


Figure 5: An advertisement for the Bank of Bisbee that appeared in a supplement issue of the *Arizona Republic* newspaper. Looking at the ad one can see that the pit was thought to be a step toward prosperity in the community and in the Southwestern United States.

⁶¹ "History," *Arizona Days and Ways, Arizona Republic*, 8 August 1954 (This is a supplement to the *Arizona Republic Newspaper*).

As one may imagine, an operation such as the Lavender pit required an immense amount of work in order to extract the copper from the ore which was mined. Along the banks or “benches” of the pit, sixty foot holes were drilled, spaced approximately fourteen feet apart. These holes were then loaded with four hundred fifty pounds of explosives and detonated simultaneously. After the blast, “about 2,100 tons of material [were] broken” per hole. The blasts resulted in the rock being small enough to be handled by an electric shovel. These shovels then loaded the material into trucks in which the ore is taken to the “course crusher” and the waste rock is transported to a dump. Once at the crusher the size of the ore is reduced and sent to the fine crushing plant where the size of the material was decreased further. The ore was then mixed with water and subjected to yet further crushing, which enabled the nearly microscopic “particles of copper minerals” to be separated from the waste material. The pulp which resulted from that procedure was sent through the flotation process. This required the material to be mixed with “small amounts of chemicals” and was “stirred vigorously by paddles” which created “a froth.” The process resulted in the copper floating to the top of the chemicals, with the waste material sinking to the bottom. The concentrate which was created was then transported via railroad cars to the smelter in Douglas.⁶²

Once at the smelter the concentrates were mixed in with such things as lime and silica and were sent “through roasters at a red heat,” which removed excess sulphur. The product of this process was then fused together with a substance called “matte” which resulted in the copper bearing material sinking to the bottom, while the excess waste, now

⁶² “Celebrating the Opening of the Phelps Dodge Lavender Pit at Bisbee and Douglas, Arizona: Saturday August 7th, 1954,” (Bisbee Chamber of Commerce and Douglas Chamber of Commerce, 1954), 5-7; “Lavender Pit Operation Epitomizes Efficiency,” *Engineering and Mining Journal*, Vol. 155, no. 9, (September 1954), 144.

called slag, rose to the top. Molten matte was then “poured into a converter” and subjected to additional “metallurgical treatment.” The molten material was then treated to remove oxygen present in the liquid metal. Finally, the liquefied copper was poured into molds and cooled with water, creating a bar of anode copper.⁶³

After understanding what a tremendous amount of work went into extracting copper from the Lavender Pit, it is simple for one to see that such a project would undoubtedly boost the local economy by providing additional jobs within the town. It was estimated that the opening of the new mine site created approximately six hundred jobs in Bisbee and perhaps more importantly enabled the communities of Bisbee and Douglas to face the “future with new confidence.”⁶⁴

Over the next several years, mining continued in both the Lavender Pit and underground in Bisbee. Yet, the news about the operations in the area typically dealt with strikes. Several often protracted walkouts were held at the Phelps Dodge properties in Bisbee throughout the 1950’s and 1960’s.⁶⁵ A photograph of one such strike is shown in figure six. However, these strikes not only had an impact on the mining company’s copper production, but often on a large segment of Bisbee’s population. This was especially true during a strike which took place in 1967, in which 42,000 copper employees walked out at numerous mines within the United States. It was noted within the press that this strike had a particularly hard impact on small copper mining

⁶³ “Celebrating the Opening of the Phelps Dodge Lavender Pit at Bisbee and Douglas, Arizona: Saturday August 7th, 1954,” (Bisbee Chamber of Commerce and Douglas Chamber of Commerce, 1954), 5-8.

⁶⁴ “History,” *Arizona Days and Ways*, *Arizona Republic*, 8 August 1954 (This is a supplement to the *Arizona Republic Newspaper*).

⁶⁵ Graeme interview, 18 March 2006; “Trouble Brews on New Front In Copper Strike,” *Reno Evening Gazette* (Reno, Nevada), 2 September 1954; “Accord Reached in Copper Strike,” *New York Times* 2 August 1955; “Mine-Mill Union Widens Walkouts,” *New York Times*, 21 August 1959; “Phelps Dodge Hit Anew,” *New York Times*, 13 February 1960.

communities, including Bisbee where the United Steelworkers of America called for a walkout.⁶⁶ The picketing in the district began in July and forced Phelps Dodge's mining operations in the town to cease. It was estimated that the mining community of ten thousand residents was losing one million dollars per month in wages because of the strike. Those who stood by the union desired such things as a raise in pay and enhanced retirement packages. With their normal source of income absent, the strikers were forced to live on scant amounts of money. The union gave the picketers up to twenty-five dollars per week and paid for their utility bills. Additionally, "for those living in the many company houses," Phelps Dodge suspended the collection of rent for these properties and extended thirty five dollars per week credit in their mercantile establishment. Yet most of those on strike were forced to leave town and seek temporary work elsewhere.



Figure 6: A photograph of picketers at the Junction Mine in Bisbee circa 1960's. If one looks at the end of the right side of the image a sign which reads "strike" is visible. Graeme-Larkin collection.

⁶⁶ "West Feeling Pinch of Copper Walkout," *Washington Post*, 20 August 1967.

Independently owned businesses also felt the impact of the strike. It was stated that business owners practically gave up on the receipt of “installment plan payments,” or receiving any cash from their customers. Therefore, establishments in Bisbee began to conduct their dealings with patrons on a credit basis until the strike was settled. However, it was noted that a number of individuals who owed local stores money had “skipped town.” The local bank noted that countless individuals were becoming deeply in debt, but stated they would work with individuals to help them pay off the money they owed. While businesses did their best to continue to supply customers with the items they needed, by February of 1968 some establishments found they simply could not keep their heads above the water in the financially sinking town. A wide variety of stores were forced to close and those establishments which remained open found their sales to be dramatically decreased. In April 1968 mining in Bisbee would once again resume, but the financial impact of the walkout was felt by individuals for months and years to come.⁶⁷

It was also during 1968 that Phelps Dodge could foresee the operations of the Lavender Pit coming to an end. Walter Lawson, a vice-president of the company stated mining in the Bisbee district did not have a “long life” remaining. While the pit was believed to be able to continue to operate until 1974, it was already noted for being a low copper producer, with “about 18,000 tons of ore” being extracted per day. During the same period, other mining localities in Southern Arizona proved to be heavier producers, such as the mine at Ajo that was able to remove approximately 35,000 tons of ore per day. Additionally, while exploration underground carried on, “no important discoveries

⁶⁷ Graeme interview, 18 March 2006; “Strike Poses Unreal Problems for One-Payroll Arizona Town,” *Los Angeles Times*, 17 December 1967; “Long Copper Strike Has a Heavy Impact in Montana,” *New York Times*, 10 February 1968.

were made” thus hardening the impact of the blow to the mining community. As one may imagine this was devastating news to the town, where 1,000 residents were employed by Phelps Dodge with the company providing millions of dollars annually in wages plus health care and housing to their workers.⁶⁸

As time drew closer to the anticipated closure of the Lavender Pit, an announcement came from Phelps Dodge that the underground operations within the community would also come to an end. While these mining localities still bared a significant amount of ore, factors such as rising production costs made it financially unfeasible to continue to extract copper from these mines. Understandably, this was not the type of news the citizens of Bisbee wanted to hear and individuals looked toward the future with uncertainty and fear.⁶⁹ Workshops were held in the town and the local newspapers were said to have run editorials on how residents could plan for the future.⁷⁰

In late November 1974, Phelps Dodge announced the Lavender Pit and concentrator would officially close on December 14 due to “falling copper prices and rising costs.” A photo of the pit during this time period may be seen in figure seven. The closure meant approximately three hundred employees of Phelps Dodge would be directly impacted. Quite a few of those people who worked in the pit had been mining for decades and chose to take an early retirement. However, most individuals who were to be laid off were offered jobs at other mining locations owned by Phelps Dodge, such as properties in Morenci, Arizona and Metcalf, Arizona, with the mining company paying

⁶⁸ “Lavender Pit Mine Closing is Forecasted,” *Bisbee Daily Review*, 21 September 1968; Graeme interview, 18 March 2006.

⁶⁹ “Phelps Dodge Expects All Bisbee Mining to End This Year,” *Bisbee Daily Review*, 17 January 1974.

⁷⁰ “A Dying Copper Town Now Wants to Mine, and Purify, Its Past,” *New York Times*, 4 February 1973.

for the moving expenses of those who were being transferred. For the people who would not be rehired, unemployment benefits were paid to them by the company “in addition to any state unemployment compensation” one may have been qualified to receive.⁷¹



Figure 7: A view of the Lavender Pit in February 1974. As one looks at the aerial photo, the immense size of the mining operation is revealed. Photo by Peter Kresan. Graeme-Larkin Collection.

⁷¹ “Phelps Dodge to Halt Mining at its Lavender Facility,” *New York Times*, 30 November 1974; “Pit Mining Ends Dec. 14, 300 Jobs Affected; Underground to Continue,” *Bisbee Daily Review*, 28 November 1974.

After the closing of the Lavender Pit on December 14, the *Bisbee Daily Review* reported the incident much like a dear friend who had departed. The paper stated “In the wee hours of Saturday, a mine died in Bisbee.” The paper went on to compare the life of a mine to that of a human, reflecting that a new generation of mining operations will now take the place of the older generation, a sort of passing of the torch. The article in the *Review* then went on to give the details of the last few moments of work which took place in the pit, with the last sentence describing the final diesel truck returning to its parking spot. Using a rather poetic style of prose, the end of the article stated, “As the driver killed the engine, a strange silence settled over the vastness of the pit as 20 years of production came to an end—a silence that will never be broken for the Lavender Pit mine was dead, dead, dead.”⁷²

Unfortunately for Bisbee, the closing of the pit would not be the only “death” to take place in the town within the next several months. On May 14, 1975, Phelps Dodge announced that termination of underground mining in the community would take place on Friday, June 13th. The closing of the underground workings was labeled a “black day” by the local press, with the future of the town seeming rather uncertain. A photograph taken of a miner on the last day of Bisbee’s underground mining operations is shown in figure eight. According to the *Bisbee Daily Review*, this closure would impact about six hundred employees. However, approximately two hundred thirty individuals would be retained to work at the local leaching plant and to do exploratory work within the Shattuck mine. Like during the closure of the Lavender Pit, numerous employees had the opportunity to be transferred to other Phelps Dodge mining operations if they so desired.

⁷² “Saturday Came and the Lavender Pit Mine is Dead, Dead, Dead,” *Bisbee Daily Review*, 19 December 1974.

Additionally, many individuals opted to take an early retirement, as when the Lavender Pit closed.⁷³



Figure 8: A photograph of a miner on the final day of Bisbee’s underground operations. The man is standing next to an ore train which has “Farewell Amigos” written on its side. The words help reflect the immense sadness many workers felt, as each of the miners’ lives was about to drastically change with the end of mining in Bisbee. Graeme-Larkin Collection.

It took millions of years for the mineral deposits in the town to form and a mere ninety-five years to mine the resources out. By the time the underground workings closed in Bisbee, an astonishing eight billion pounds of copper had been extracted from the area’s terrain, with “nearly 2,000 miles of underground workings” hidden beneath town’s soil. The true worth of the essential metals that flowed from Bisbee to American industrial complex during this near century of operation is incalculable. However, it is

⁷³ “600 Employes [sic] to be Affected as 95 Years of Mining Ends,” *Bisbee Daily Review*, 15 May 1975; “Friday the 13th to be a Black Day for Bisbee as mines Close,” *Bisbee Daily Review*, 12 June 1975; “Copper Queen Branch in Bisbee Closing After 95 Years of Mining,” *Pay Dirt*, no. 431, 26 May 1975, 5.

obvious that Bisbee made a significant contribution to the country in so many ways, but as with all mines the end came.⁷⁴

With the mining economy of the town now extracted from the community like the ore the land once held, leaders of Bisbee looked toward ways to bring additional tourism dollars into the town. Although full scale mining operations may have ceased in the community, the town looked toward its mining history as an attraction for visitors. In 1975, the local chamber of commerce began to offer bus tours of the immense Lavender Pit to visitors. Additionally, the town hoped to open the famed Copper Queen Mine, located just outside of downtown Bisbee, for tours. Volunteers began to work in the mine doing such tasks as removing waste material and placing new timber in the mine. By 1976, the tunnel was ready for visitors with five hundred people taking the tour of the Queen Mine the first day it opened for business. This attraction continues to operate in Bisbee today, with it being one of the top destinations for tourists who visit the old mining camp.⁷⁵

Although such attractions undoubtedly aided the community's economy, post-mining Bisbee seemed to steadily decline. Long gone were the days when the town was considered "Queen of the Copper Camps" and once the mines closed, the population decreased by 2,000 inhabitants.⁷⁶ With the town's economy in such a depressive state, the local real estate market also dramatically declined and it was not uncommon for one to see a house which sold for "a few hundred" dollars.⁷⁷

⁷⁴ "A Dying Copper Town Now Wants to Mine, and Purify, Its Past," *New York Times*, 4 February 1973; Copper Queen Branch in Bisbee Closing After 95 Years of Mining," *Pay Dirt*, no. 431, 26 May 1975, 6; Richard Graeme, "Bisbee!" *Mineralogical Record*, Vol. 12, no. 5 (September-October 1981), 259.

⁷⁵ "Town Refuses to Die," *News Journal*, (Mansfield, Ohio), 9 April 1976.

⁷⁶ *Ibid.*

⁷⁷ "Bisbee, Ariz., Or, Going Where the Action Was," *New York Times*, 10 March 1979; "Forgotten Arizona Town Girds to Resist Tourism," *New York Times*, 20 February 1984.

While the town may have been drained of its principal source of income it still possessed a rustic charm, with homes clinging onto the sides of the mountains and a wonderful climate. All of these factors seemed to play an immense role in the future of Bisbee. As the combination of the depressed financial state of the town and the community's beauty lured new residents to the old mining camp. However, the type of individuals who flocked to Bisbee were not quite what the long time residents had hoped for or expected. It was hippies, the infamous members of the 1960's and 1970's counterculture who moved to the area. Many of these individuals came to the town to escape the high cost of living in other parts of the country. Once in Bisbee hippies began to buy property, open businesses and run for elected positions within the local government. However, not all residents welcomed the new members of the community. One article written in the *New York Times* about the post-mining transformation of Bisbee said of the newcomers, "A new plague moved in. Worse than the Wobblies, some of the old Bisbeeites said. Hippies."⁷⁸ Yet, with time these types of feelings would soften but not completely disappear. The old residents of the town seemed to come to accept those individuals who they considered hippies to be decent residents, as long as they held jobs. For those individuals who chose not to work, a continued disdain for them was well known. Additionally, it was noted that as time passed that the so-called hippie population of the town expressed the same loathing for "yuppies" which moved to the town that they endured years ago.⁷⁹

Even today, while most people would tell you such ill feelings have faded with time, there are individuals who believe long time Bisbee residents continue to butt heads

⁷⁸ Ibid.

⁷⁹ "Bisbee—The Town Too Dumb to Die," *Los Angeles Times*, 17 August 1979; "In Arizona Mining Town, It's Yuppies vs. Hippies," *New York Times*, 9 September 1985.

with newcomers. This became clear during a recent recall election, in which a long time resident won the pending seat on the city council, despite having died a hand full of days before. With the living opponent having lost, a person stated on a local website, "There is a class war going on here between the 'old time Bisbee' people and the people who have moved here."⁸⁰

Yet despite the personal differences between Bisbee's old and new residents, often one could witness each segment of the population reach a common ground when it came to the area's beautiful minerals. Besides being famous for the rich copper that was hidden beneath the town's soil, Bisbee was and continues to be a world renowned mineral locality. In fact the town became so legendary that one rock hound compared her first trip to Bisbee to a pilgrimage to Mecca.⁸¹

Phelps Dodge clearly understood the importance of such minerals and the revenue one could earn through the collecting of specimens from Bisbee. This was exemplified in the late 1960's when excavation of the Lavender Pit opened an area called the Holbrook Extension. This mine proved to be rich with fabulous deposits of numerous minerals and Phelps Dodge assigned some of their employees to collect specimens from the area. By doing this, thousands of minerals were extracted from the area, which were then donated or sold to museums, as well as put up for sale at the company's store.⁸² Additionally, deposits of turquoise were also discovered within the Lavender Pit. However, the turquoise was generally treated like waste material and was taken to the mine dumps. Yet, Phelps Dodge did grant leases to individuals giving them the right to

⁸⁰ "Candidates for Kasun's Seat Await Decision," *Bisbee Daily Review*, 16 March 2006; "Jeff Makes a Valiant Effort," *BisbeeForum.com*, <http://bisbeeforum.com/bb.htm> (accessed 15 March 2006).

⁸¹ June Culp Zeitner, "A Pilgrimage to Bisbee," *The Mineralogist*, Vol. 21, no. 10 (October 1953), 339; Graeme interview, 18 March 2006.

⁸² Graeme interview, 18 March 2006.

collect the turquoise from the waste areas, enabling a myriad of pieces of this mineral to be sold to the public.⁸³

Although some individuals may argue that the best minerals from the area were collected prior to World War II, a number of both scientifically important and beautiful specimens emerged after this time. One such example is a discovery made by Richard Graeme in 1959. At the age of seventeen Graeme found a mineral in an ore car, when he noticed a green material that appeared to be different from others he had seen over the years. The young mineral collector held on to the specimen until the 1970's when he loaned the strange piece to Sydney Williams and Phillip Matter III for scientific study. Williams and Matter concluded that Graeme had collected a brand new mineral and decades later in January 1975, it was confirmed as a new species by the International Commission on Mineral Nomenclature. This type of mineral would go on to be named graemite after the collector who discovered the sample. A picture of graemite may be seen in figure nine. Yet, graemite would not be the only new variety of specimen to be found in Bisbee, others such as kettnerite and henryite were also discovered in the past few decades.⁸⁴

⁸³ Graeme interview, 18 March 2006.

⁸⁴ Ibid; S.A. Williams and Phillip Matter III, "Graemite: A New Bisbee Mineral," *Mineralogical Record*, Vol. 6, No. 1 (January-February 1975), 32; Richard Graeme, "Bisbee Revisited: An Update on the Mineralogy of this Famous Locality," *Mineralogical Record*, Vol. 24, no. 6 (November-December 1993), 430, 432.



Figure 9: A photograph of the graemite discovered by Richard Graeme in Bisbee during 1959. The graemite is the green material which is shaped like the number seven on the specimen. Graeme collection.

In addition to new types of minerals being found in Bisbee, some of the world's finest examples of specimens have been discovered in the area since the beginning of World War II. This includes a 1986 find made by Douglas and Richard Graeme IV, the twin sons of previously mentioned Richard Graeme. When Douglas and Richard were seventeen they collected in Bisbee's Southwest mine what is considered to be the world's finest cuprite. When the cuprite was first displayed for public viewing at the famed Tucson Mineral Show in February of 1987, it had individuals staring and marveling at the beautiful piece. An article in premiere publication of the mineral world, the *Mineralogical Record*, said of the display "If a special award for 'Most Exciting Specimen at the Show' were given, Douglas and Richard Graeme's Bisbee cuprite would have won by acclaim." A photo of the cuprite may be seen in figure ten. In addition to this specimen, numerous other minerals have been collected within the past several

decades in Bisbee which are considered the worlds finest, including atacamite and claringbullite.⁸⁵

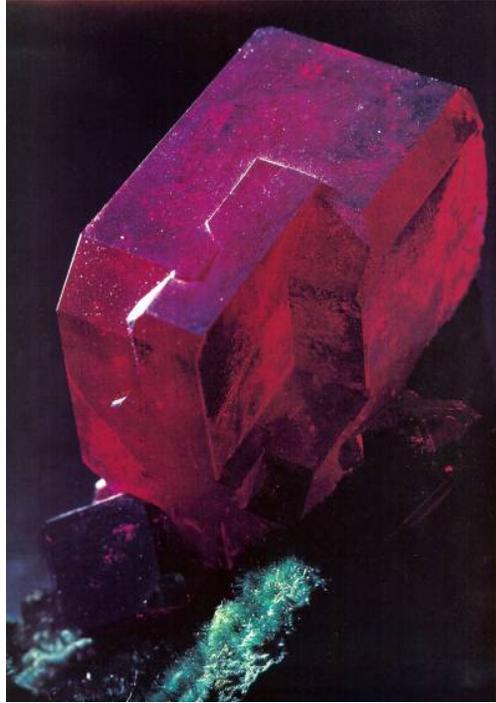


Figure 10: A photograph of the cuprite collected by Douglas and Richard Graeme IV in Bisbee during 1986. This specimen is considered by many to be the finest example of cuprite in the world. Graeme collection.

Over the past 65 years Bisbee witnessed a great amount of change occur within its boundaries. The start of the Lavender Pit dramatically altered the aesthetics of the landscape but ensured that those who lived in town would have a bright economic future for years to come. However with the closure of mining operations in the town, came an end to an era which was the life blood of the area for nearly a century. Nevertheless, the settlement refused to disappear into the desert sands like so many former mining camps in the American West. Instead of dying, the community was reborn with the influx of members of the counterculture into the area, who brought with them a new period of

⁸⁵ Graeme interview, 18 March 2006; Wendell E. Wilson, "What's New in Minerals," *Mineralogical Record*, Vol. 18, no. 3 (May-June 1987), 425.

Bisbee history. Yet, even if one day in the future the town becomes deserted, the geological wonders of Bisbee will remind individuals of its past through the fine minerals which were collected there, giving the old mining camp the immortality it deserves.

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