HISTORIC STRUCTURES REPORT

Part I
Historical Data

BY
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Including
Administrative Data

DIVISION OF HISTORY
Office of Archeology and Historic Preservation
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National Park Service
U.S. Department of the Interior
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This report is authorized by Resource Study Proposal JOTR-H-2 which calls for basic historical data required for the physical protection and rehabilitation of the structures associated with the Lost Horse Mine and Mill. It is hoped that the report will contribute to the general background data useful to the Monument's staff in interpreting the historic site.

The Lost Horse Mine and Mill site stands as a monument to the mining history of the region. It conveys associations which are deeply involved with the human history of the Park -- its pioneer families, its enterprising prospectors, its exploiters, and its outlaws.

It is claiming to much to say that the site is an "excellent" example of a small western gold mine. It is not that superlative. But it is a good example which still retains many of the features and much of the equipment dating back to the first days of operation. Whether, as has been claimed, it is really the best preserved mine of its type owned by the Park Service is not certain. However, these considerations are not greatly relevant. The Lost Horse Mine appears to have been a successful venture in itself among numerous enterprises which were outright failures. It was the most productive mine within the Monument boundaries. While it does not approach the importance of the ventures in the "Mother Lode" country, it is a relatively accessible site of local reknown and offers a picturesque setting for relating a colorful and intriguing chapter of the region's history.
INTRODUCTION

It was not long when the gold delirium of the California "Mother Lode" ran its course and the contagion began to spread to other areas on the periphery yet untainted by the yellow metal fever. By the second half of the nineteenth century, prospecting enthusiasm spilled into the Owen's River Valley and sparked the discovery of profitable mines like the Cerro Gordo and the Modoc. The more daring began to explore the canyons of the Death Valley country. As a result, the silver mine at Panamint developed. The finds were becoming less and less lucrative and the prospecting reached less promising land every year. But the optimism of the gold seeker is hard to stifle and by the end of the century the weather-beaten visage of a persistent prospector was frequently seen among the mountains and high desert flats which were to become Joshua Tree National Monument.
a. Name and number of structure:
   Lost Horse Mine complex
   No number assigned regarding historic structures study

b. Proposed use of structure:
   As an on-site exhibit to help interpret the gold mining history of the monument.

c. Justification for such use, as shown in the Master Plan:
   Paragraph 6 under Interpretation and Sightseeing page 10 of the approved 1964 master plan states...One of the stories to tell at this park, and one which arouses the interest of visitors, is the story of mining. It is proposed that one of the existing mines within the monument be stabilized as a historic feature to be included in the interpretive program for visitor enjoyment...The Lost Horse Mine...is the best preserved of the mines...It is suggested that this mine would be the best for stabilization.

d. Provisions for operating the structure:
   The structure should be a self guiding operation requiring only periodic protection patrols.

e. Cooperative agreements:
   No cooperative agreements will be needed.

f. Brief description of proposed construction activity:
   Immediate measures need to be undertaken to stabilize the tipple portion of the structure, safeguard the site and provide visitor safety. It is felt that this can be accomplished without the use of a cyclone fence which would detract from the historic scene and may prove to be an unnecessary expense. The money that would be spent on a temporary fence could be used to provide preliminary stabilization and protection.

   The foundation portion of the tipple needs to be strengthened to prevent the possible collapse of the structure. All timbers and equipment need to be secured for safety and protection purposes.

   Elimination of debris and treatment of all wooden portions with a preservative and fire retardant will safeguard the structure from fire.

   Open mine shafts, tunnels and tanks in the area should be fenced or covered to eliminate the safety hazard.
g. Preliminary estimate of cost of proposed construction activity:

Stabilization and fire protection  
Hazard Elimination  

$____________  
$____________

h. Photograph of the existing condition of structure:

With original memorandum in Division of History files

i. Copy of P.C.P.

None submitted pending decision of WASO and Regional Offices.
HISTORICAL DATA

Throughout the monument the remains of mines and mills lay rusting and weathering away in desolation paying mute witness, sometimes to exciting ventures but more often to dashed hopes of immediate wealth. The deflated optimism of the gold booms is sensed in the nearly 2000 prospecting holes that can be seen throughout the Monument. A few were good producers making their owners, if not a fortune, at least a comfortable living.

Some of the best ruins in the Monument are the remains of the area's most productive mine -- The Lost Horse[1]. The mine is located 3 miles southeast of the Ryan Campground and Lost Horse Well, on the east side of a small valley high in the central part of Lost Horse Mountain. The site consists of the towering remains of a 10-stamp mill and its heavily weathered tipple which sways precariously in the wind creaking with age. Above the mill are two large stone and concrete catch basins which were used to hold water for the mill. At a number of places on the hill are the mine shafts. Below the mill are two shallow concrete basins used for the later cyanide processing of the tailings. Further below in the valley beneath the mill site along the present dirt road are the ruins of several structures which suggest quarters, an office, and perhaps a storage shed. Two of the ruins still retain their wood frame construction, but have deteriorated rapidly in

1. This mine and mill site was recently acquired from Leanta Stafford Ryan of Los Angeles who is a descendent of Thomas C. Ryan an early owner of the property. The site consisted of a patented claim of 13.5 acres.
just one year as the result of vandalism. The remaining structures are suggested only by the stone foundation ruins still visible. 2

THE MINE DISCOVERED

There were cattlemen in the nineteenth century who found the high meadows of the Little San Bernardino Mountains in Southern California to be grazing areas strategically located to the developing west coast trade. One of these cattlemen was George Lang who came up from Texas in the early 1890's with his two sons, Billy and Johnny. He left Billy in Deming, New Mexico with a portion of the herd and moved west with Johnny and the remainder of his stock. He moved into the Cochella Valley with the intention of eventually moving up to Lost Horse Valley.

His son, Johnny was not long in his new home before the gold bug bit him and his mind was turned from cattle to the yellow metal. While prospecting one time he secured the claim which was to become the Lost Horse Mine and Mill.

How Johnny Lang obtained his claim is the subject of many legendary accounts which have been the grist for the journalistic

2. The five illustrations accompanying this report offer a more detailed picture of the remaining features of the site. A diagram of the ground layout is appended to show a simplified relationship between the structures.
mills for sometime. Most of the accounts seem to find their origin in the person of William F. Keys, a long time resident prospector of the Monument who came to the area about 1910. Bill Keys has his own narrative.  

According to Keys, "Dutch" Frank Diebold discovered the gold bearing seam but did not monument the claim because he was driven off the land by cowboys who threatened to "throw a line around his neck and drag him out of the country by the saddle horn." Later, Johnny Lang was spotted by Jim McHaney near the later's cow camp where the Keys Ranch is today. Lang was looking for some lost horses, when McHaney ordered Lang away, telling him he was no more wanted than the fellow over at Witch Spring, who happened to be "Dutch" Frank Diebold. McHaney told him to get with his own kind. He was alluding to the fact that both Lang and Diebold were of German descent.

Meeting one day at Witch Springs, "Dutch" Frank informed Lang of his discovery. Lang offered Diebold $1,000 for the claim if it proved out, whereupon Lang and his father went out to inspect the property. It appeared good and "Dutch" Frank took the money.

3. The story of the Lang family is supplied by Bill Keys who was interviewed by various staff members on several different occasions. His testimony on the historic sites of the Monument is recorded on tape and filed at the area. The information recorded here was taken from two interviews, Dec. 9 and 23, 1966.
Lang later returned to the claim and began to monument his property. As he worked he noticed the sombreros of some "coyote cowboys" bobbing along the horizon and suspected they might do to him as some of their ilk had already threatened. He took off for Pinyon Wells, then Witch Springs. His father had located there after bargaining the property from Jim McHaney for use as a summer watering place. Old man Lang advised his son that he had better take in some partners if he wanted to protect his claim. He did just that. In the process of locating the claim, the group lost their horses, an accident giving the name to the mine. 4

**THE MINE IN OPERATION**

There are many variations on the theme of the discovery of the Lost Horse Mine. 5 But regardless of how the mine was discovered, the partners located their claim as of December 29, 1893. The company was composed of Johnny Lang, George W. Lang, Ed Holland, and J.J. Fyke. These men did not erect a mill on the mine site

4. Keys was not living in the area when the mine was located. By his own testimony recorded on tape he did not arrive on Monument land until about 1910 which was over 15 years after the discovery of the mine. Obviously, he is relating a story told to him.

but utilized a two-stamp mill situated at Lost Horse Spring a short distance away. Allegedly, the partners were making three thousand dollars a month from the operation, but that figure seems questionably high.6

Waning fortunes may have set in by 1895. In that year the partners sold their interest to Thomas and J. D. Ryan who organized the Lost Horse Mining Company.7 Bill Keys relates that the financier of the operation was Matthew Ryan, a wealthy rancher from Montana. The mine proved fatal for him. While visiting it one day, his horse threw him and injured him mortally.

With the backing of Matthew's money, the new company had sufficient capital to industrialize the site enough to convert it to a paying proposition. It erected a 10-stamp mill and put in a water line from Lost Horse Spring which later became Ryan Wells.


7. The ownership picture of the Lost Horse property is not clear. There seems to be two claims involved -- the one already cited, and another reported by Gray, owned by Lang, Holland, and Alfred G. Tinghman of Indio, Cal. who was involved with the Southern Pacific Railroad. The mine was patented on August 7, 1897 to Thomas C. Ryan, Jepp (D.D.) Ryan, Matthew Ryan, Jr., Ethan B. Ryan, and Samuel N. Kelsey, according to "Mining, Millsite, and Reservoir Claims" MS.
In order to reach the mine site, Ryan improved the access road and rerouted it from the older and shorter route followed by Lang. The present entrance road taking off from the Salton View Road approximates the Ryan road. 

The road to the mine came out of Banning. The trip to the mine took five days with stops at White Water, Warren's Ranch, Warren's Well, and Quail Springs. A shipment was made from the mine every week with a 16-horse train consisting of two wagons, water tank and feed rack.

The Ryans made whatever fortune was to be made in the early days of the Lost Horse Mine. Of the $350,000 said to be extracted from the mine, the bulk of the yellow metal was dug out before the turn of the century. In the four years from 1896 through 1899, the company processed 9,000 ounces of gold and a respectable amount of silver, accounting for 80% of the wealth of the mine during its first 16 years of production. After that the mine was leased to a succession of people who failed to entice a profit from the mine. The original tunneling struck a fault, and further attempts to locate the seam by drifting proved hopeless.

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10. "Mineralogist," 1945, p. 137. Interview with William F. Keys. "Mining, Millsite, and Reservoir Claims." The feeling was that the mine was a profitable producer. Bill Keys said it gave free milling oxidized ore which did not foul the crusher or stamps.
In 1915, Sam Ryan joined with a Lon Migs at the mine and outfitted the site with gasoline-powered apparatus replacing the steam-powered fixtures. They never did begin operation, however. About 1923, a Dr. Ward enthusiastically tackled the mine with $5,000 in financing and a number of Avery freighting trucks with spiked wheels. He moved a considerable quantity of supplies and materials to the shaft. After all the effort, he gave up.11

In response to the rise in the price of gold during the depression, appetites were whetted once again. General Mining and Development Company in 1931 mined the ore pillars and processed the product with the ten-stamp mill. It was this company that apparently replaced the steam apparatus with gasoline engines. Supposedly the last milling done at the site was in 1936 when J. D. Ryan processed 600 tons of tailings by the cyanide process. All the work of the 1930's produced only a few hundred ounces of gold. Thereafter, the mine lay virtually dormant.12

THE STRUCTURES

In 1896, the mine was reported to have workings which included

11. Interview with William F. Keys.
12. Gray Ms. In the interview with Bill Keys, Dec. 12, 1966, he related that the cyanide processing of the tailings was done by a Mr. Phelps in 1930. It didn't pay. According to "Mining, Millsite, and Reservoir Claims," J.D. Ryan was interviewed on March 6, 1941 and stated he transferred his interest in the mine to Daniel Stafford and Sam Ryan in 1930. Together they formed the General Mining and Development Company.
an 80-foot drift adit, a 50-foot winze, 50-foot drift from the bottom of the winze, and a 235-foot vertical shaft with horse-whim. Later in 1929, the shaft was found lengthened to 500 feet deep. In 1917, one observer reported that the mine was exploring a vein of quartz from 6 inches to 5 feet in width which could be seen at several points on the surface for 800 feet. The shafts were again examined in 1957, but the quartz veins were obscured by timbering. Twenty feet east of the shaft, a four inch quartz vein is visible. Two shallow shafts 300 and 500 feet east, explore some thin veins of iron-stained quartz.13

When the Ryans erected the ten-stamp mill at the mine-site, they installed a 2" pipeline from Lost Horse Spring and raised the water to the mill some 750 feet to an earth and stone reservoir 16 x 16 x 12 feet deep. At first steam engines were used to pump the water. The boilers were fueled by wood timbered from the nearby mountain tops, an activity resulting in the denuding of the vicinity still evident today. In 1905, the equipment consisted of a three-cylinder high pressure Gould Pump directly connected to a 25-horsepower gasoline engine which replaced the steam apparatus. At this time a well was dug 70 feet deep at Lost Horse Spring and some years later two additional wells were added, 40 and 45 feet deep.14

When Bill Keys visited the site of the Lost Horse Mine in 1966, his comments were recorded by the park staff. His reminiscences about the remaining features of the mill site are interesting and form the bulk of the identifying data on the ruins. 15

He described the towering mill as the "Big House" and related how the structure was floored completely with 2 by 4s "leaving a little crack for water and stuff to go through." He identified the amalgamation room and described the amalgamation tables which are no longer there. He recalled that he still had the original bullion mold which held $45,000 worth of refined gold. He then reflected on the fact that the gold was hauled out in bricks of 200 lbs. concealed in the freight wagons and claimed that no thieves ever caught on to the ploy.

Keys noticed the remains of the steam hoist and described how a skip would bring up the ore which was then fed by gravity into the crusher. The steam hoist was a large contraption and is probably at the bottom of the mine shaft. If waste material were raised by the skip, it would be short-stopped and dumped into a truck which ran on a track (still existing) to the dump. Keys pointed out the guides that held the skip in position. He identified the remains of the steam pipe and described how a small

shunt was utilized to divert waste material away from the crusher.

When asked about the origin of the mill, Keys replied that the mill was originally located on the Colorado River and was dismantled and hauled back to this site by J. D. Ryan. He understood that while it had come from another location it was brand new at the time.

The cement and stone basins in the ground above the mill were the reservoirs for water piped up from Lost Horse Spring. The metal tanks strewn around were introduced at all stages in the history of gold processing at the site. Since they are movable and, indeed, were moved many times, there is no profit in guessing about them. Over the years they had many purposes: to hold the domestic water supply, to collect water for the horses at the corral, to hold the waste water from the mill for clarifying prior to return; to hold and mix solutions for the cyanide processing of the tailings.

Some of the remains of the later cyanide operation are visible. As Keys described it, the tailings were hoisted by cables and dumped into the remaining concrete troughs of cyanide solution. This was gradually drained off into zinc shaving boxes down below. A heavy iron winch situated on the hill above the water reservoirs might have been used in that process, although it could have been a hoisting device introduced when the mill went to gasoline power.
Old Bill Keys was shocked to discover the cabins and shacks associated with the mill almost all gone. He identified the four structures below as an assay office, cook house, and two cabins or small bunkhouses. One of these served as the residence of Johnny Lang in his later years. Keys also pointed out the site of the Corral and indicated the location of a large bunkhouse at the mine site. The small community suggested an active operation at one time. In fact, Keys related that twenty-five men manned the mine and mill while ten men were employed at the well and at the job of wood cutting.

AN OLD-TIMMER REMINISCES

The disturbing sight of the decaying ruins of the Lost Horse Mine and Mill site jarred Bill Keys' memory. He began to recall the tales associated with this historic spot. Musing over the weathered hulk that served as cookhouse and Johnny Lang's last retreat, Bill reminisced about the Texan cowboy turned eternal prospector.

Johnny Lang had a part-interest in the Lost Horse mine but was suspected by J. D. Ryan of swiping amalgams from the processing plant. Ryan hired a detective to investigate the situation and "got the goods" on Johnny. One evening, in the cookhouse, Ryan confronted Lang with the evidence and gave him two alternatives. He could take several thousand dollars for his interest
in the mine or he could go to jail. Lang sold his interest and cleared out. 16

Johnny didn't go far. He settled in what is now called Johnny Lang Canyon and lived in a cabin formerly occupied by a John Law and a man by the name of Chase. After the Lost Horse Mine went dormant he returned to the cookhouse and set up a paltry residence for himself. Keys recalled that Johnny had erected a boxed-in earth stand on which he placed his stove. His bed lay next to the stove.

Why did he come back to the mine? Bill Keys contends that Lang did in fact heist many amalgams and buried them around the millsites until an opportunity arose for him to uncover them. Before he could get them all unearthed Ryan got wind of his scheme. But at last he had returned to his valuable burying ground and began to poke around for his treasure.

Lang always claimed that the gold he was selling was produced on the arrastre he was using. Bill Keys doesn't believe a word of it. He says Johnny, or anyone else, couldn't get more than forty dollars a month out of that arrastre. Besides, Keys admits unblushingly, he bought as much as $900 of the precious metal from Lang who could never have produced that quantity.

16. References to the land records seem to indicate that Ryan had already acquired Lang's interest. Ryan may, however, have purchased Lang's rights in only one of several claims apparently
By 1925, Lang was no longer in good health. According to Keys, he couldn't make enough to keep himself fed. Still he hung around. The winter of that year destroyed him. Leaving a note on his cabin door one January day, he set off for town to replenish his supplies. Apparently weakened by starvation, he died by the roadside. Two month later, Bill Keys discovered his body and buried him in a marked grave that can be viewed today in the Monument.

Bill Keys was not about to stop with just one story. Story-telling for him and many another mining recluse, was his sustenance—a reprieve from a sentence of almost permanent loneliness. To be sure, it was a self-imposed sentence, but never meant to be absolute.

Bill related next the story of the murder of Mr. James. James was a miner at the Lost Horse who would spend his day off in the local pastime of prospecting. He lived just down the road from the millsite in a ravine where the ruins of his cabin can still be seen. His digging took him over to the vicinity of the Desert Queen Mine where he apparently struck a rich vein. Charlie Martin, who had sunk a shaft near the Lost Horse, suspected James' good fortune and, with several of his outlaw friends, discovered the location of the claim. They were assured of James' new wealth when they found some ore at his cabin.

covering the Lost Mine property. Keys' story may relate to an interest Lang retained in other relevant claims.
They were determined to eliminate James and take over his claim. One night, they climbed the hill above James' cabin. Martin walked down a ways and shouted out to James that they had been digging around the hill and made a rich strike. They wanted to know if he owned it. To lure him from his cabin, they asked him to come up and look at the find. When James emerged and climbed to a ledge (pointed out recently by Keys) Martin shot him dead.

The stories are many. Their details are hard, if not impossible to corroborate. But there are many mysteries to be unraveled and many puzzles to be solved associated with the human story of the Monument. Structures, like the Lost Horse Mine and Mill site are the tangible mementos left behind by the colorful personalities who compose the historical cast of Bill Keys' script.

CONCLUSION

The Lost Horse Mine and related structures evolved over a period of years beginning in the early 1890's. The complex was owned and operated by a succession of people and various companies. Its period of greatest productivity occurred during the last years of the 19th century, thereafter, it remained virtually dormant. The complex was a relatively successful operation and the most profitable mining enterprise on what is now Monument land.

The structural remains are a polyglot of features, each dating from different times. The 10-stamp mill, crusher, and
tipple date to the earliest year, 1894. With the passage of time, apparatus associated with the cyanide process was added and features relating to steam power were replaced by gasoline-powered machinery. The latest features seem to date from the mid-1930's.

The Lost Horse complex is not of national significance and superlative claims made about it tend to be exaggerated. Nevertheless, it is a site of local importance and one of the best remains in the Monument. It is associated with several major episodes in the human history of the park and easily captures the imagination of the visitor. It is reasonably accessible and located in an attractive setting. Very important is the fact that the property is now owned by the national government and the Park Service's capacity to develop and manage the site is not compromised by the presence of an active mining claim which is so often the problem elsewhere. There is no need to undertake a detailed reconstruction of the site. Minimum rehabilitation, clean-up, and earnest personal surveillance of the site will protect the features remaining and offer the visitor a tangible and attractive monument capable of stimulating his historical interest.
ILLUSTRATIONS

The illustrations that follow are recent photographs. No historic photographs were available at the time this report was being prepared.

Ranger John Wise, Joshua Tree National Monument, is presently negotiating with the following sources who have historic photographs and might make them available to the Park Service:

Mrs. R. K. MacLeod, (Bill Keys' daughter)
General Delivery
Smith River, California 95567

Mrs. Leanta Stafford Ryan
242 E. Center Street
Covina, California 91722
ILLUSTRATION NO. 1: Lost Horse Mine, Joshua Tree National Monument. Shown here is the mine tipple erected over the Ryan and main shaft. Also, the crusher and ten-stamp mill. Portions of the gasoline-powered machinery. Steam engine still present but not shown.

Photograph taken January, 1969 by Benjamin Levy.
ILLUSTRATION NO. 2: Lost Horse Mine, Joshua Tree National Monument. Tipple, crusher, and ten-stamp mill. Scattered corrugated iron tanks moved about throughout the years and having had a number of different uses. The cables were used to hoist the tailings into a cyanide bath when they were processed in the 1930's.

Photograph taken January, 1969 by Benjamin Levy.
ILLUSTRATION NO. 3: Lost Horse Mine, Joshua Tree National Monument. Stone and cement water reservoir. Winch possibly installed when mine operation was converted to gasoline power. To the left, part of the bracing for the tipple.

Photograph taken January, 1969 by Benjamin Levy.
ILLUSTRATION NO. 4: Lost Horse Mine, Joshua Tree National Monument. Two concrete basins used to hold the cyanide solutions when the tailings were processed in the 1930's. Cable network employed to raise the tailings into the cyanide baths. The solution was then drained into zinc shaving boxes down hill. Evidences of various tunnelings can be seen.

Photograph taken January, 1969 by Benjamin Levy.
ILLUSTRATION NO. 5: Lost Horse Mine, Joshua Tree National Monument. Structures associated with the mining operation. From left to right, beginning with the stone rubble--(1) Bunkhouse, (2) Assay Office, (3) Johnny Lang's later residence, formerly sleeping quarters, (4) Cookhouse.

Photograph taken January, 1969 by Benjamin Levy.