NPS Form 10-900
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United States Department of the Interior
National Park Service

National Register of Historic Places Inventory—Nomination Form

For NPS use only
received JUL 31 1987
date entered SEP 10 1987

See instructions in *How to Complete National Register Forms*
Type all entries—complete applicable sections

1. Name

historic Socorro Mines Mining Company Mill, Fannie Hill

and/or common Fannie Hill Mill and Company Town Historic District

2. Location

street & number Both sides of the one street on Fannie Hill and west to the Fannie Hill Mill ___ not for publication

city, town Mogollon x vicinity of

state New Mexico code 35 county Catron code 003

3. Classification

Category	Ownership	Status	Present Use	
x district	___ public	___ occupied	___ agriculture	___ museum
___ building(s)	x private	x unoccupied	___ commercial	___ park
___ structure	___ both	___ work in progress	___ educational	___ private residence
___ site	**Public Acquisition**	**Accessible**	___ entertainment	___ religious
___ object	n/a in process	x yes: restricted	___ government	___ scientific
	n/a being considered	___ yes: unrestricted	___ industrial	___ transportation
		___ no	___ military	x other: not in use

4. Owner of Property

name John F. Mack, Lehigh Metals Properties c/o Thomas P. Foy

street & number Box 2615

city, town Silver City n/a vicinity of state New Mexico 88061

5. Location of Legal Description

courthouse, registry of deeds, etc. Catron County Courthouse

street & number n/a

city, town Reserve state New Mexico

6. Representation in Existing Surveys

title NM Historical Bldg. Inventory has this property been determined eligible? ___ yes x no

date 1984 ___ federal x state ___ county ___ local

depository for survey records NM Historic Preservation Division

city, town Santa Fe state New Mexico

7. Description

Condition		Check one	Check one
___ excellent	X deteriorated	X unaltered	X original site
___ good	___ ruins	X altered	___ moved date _____
X fair	___ unexposed		

Describe the present and original (if known) physical appearance

The Fannie Hill Mill and Company Town District is located on Fannie Hill on the western edge of the Mogollon Mountains of southwestern New Mexico. The company town, including a manager's and workers' residences, a hospital and company store, line both sides of a single road which runs from the east end of the District to the main ridge of Fannie Hill at the middle of the District. The power plant stands on the crest of the ridge at 7050 feet. The main road proceeds west along the hill side before doubling back to the southeast; the mine headframe and mill are located below this lower arm of the road, the machine shop, assay office, general store house and blacksmiths shop just above it. Each of the twenty-nine company town buildings, built during the historic period, 1908-42, are wood frame construction with corrugated metal roofs; most have board and batten siding, a few, wood shingles or corrugated metal siding. The hospital, store, manager's house, company offices, seven single family residences, ten duplexes and two bunk houses were constructed between 1908 and 1925. The remaining five single family residences and a garage were built sometime between 1915 and the closing of the mill in 1942. Although the construction of these buildings can not be more precisely dated, few if any of them are probably less than fifty years old and they have been classified as contributing buildings. The Bungalow-style porch brackets on the manager's house are the only ornamentation in the District. The headframe and attached ore bins are steel frame construction; the powder magazine is reinforced concrete. The mill, power station and the five other industrial structures have concrete foundations, wooden frames, and corrugated metal siding and roofs. The mill was built in 1909 and all other industrial structure between 1908 and 1915. A tube mill, two Dorr classifiers, five Pachuca tanks, three Harvey-Steele tilt furnaces, two Burt pressure filters and three American or Dorrco [sic] filters remain in the concentration and cyanide process mill. None of the buildings are currently in use, most are in fair or deteriorated condition.

8. Significance

Period	Areas of Significance—Check and justify below				
___ prehistoric	___ archeology-prehistoric	X community planning	___ landscape architecture	___ religion	
___ 1400–1499	___ archeology-historic	___ conservation	___ law	___ science	
___ 1500–1599	___ agriculture	___ economics	___ literature	___ sculpture	
___ 1600–1699	___ architecture	___ education	___ military	___ social/ humanitarian	
___ 1700–1799	___ art	___ engineering	___ music	___ theater	
___ 1800–1899	___ commerce	___ exploration/settlement	___ philosophy	___ transportation	
X 1900–	___ communications	X industry, mining	___ politics/government	X other (specify) industrial arch.	
		___ invention			

Specific dates 1908-42 **Builder/Architect** E. Gybbon Spilsbury & John M. Sully

Statement of Significance (in one paragraph)

The Fannie Hill Mill and Company Town District meets National Register Criterion A as among the most prominent reminders of the role of mining in New Mexico's economy from 1908 to 1942. The mill, which was the largest producer of gold and silver in the state from 1908 to 1925 and probably also from 1934 to 1942, is one of the two best preserved historic mining mills in New Mexico. The residential portion of the Fannie Hill District is among the three best preserved company towns in the state. Several aspects of community planning, and industrial and architectural design also satisfy Criterion C. The mill is a good example of industrial design which closely shaped the architectural form to the milling function. The mining engineers, E. Gybbon Spilsbury and John M. Sully, first laid out the milling process for the greatest efficiency, and then enclosed the machinery in a utilitarian wood frame and corrugated metal building. The smaller industrial support buildings and the residences in the company town both employ standardized building plans and inexpensive, mostly-locally-available materials which typifies the utilitarian mining camp buildings designed by mining engineers during the early decades of this century. The regular lay out of buildings in the District, and the separation of the industrial structures from the company town typifies community planning as practiced by mining engineers. The handful of irregular-sited, owner-built houses are typical of developments allowed in many western company towns when the company could not respond quickly enough to an increase in its work force. Although five of these houses may have been built less than fifty years ago (i.e. 1938-42), they have been classified as contributing buildings because they represent an inherent part of the historical development of the District and they are greatly outnumbered by buildings over fifty years old. Finally, the industrial buildings with seventeen large pieces of milling machinery still in place and the company town meet Criterion D because a more detailed study of them will yield information on gold and silver mining and milling, and on the design and construction of company towns in the American West during the first decades of this century.

9. Major Bibliographical References

See continuation sheets

10. Geographical Data

Acreage of nominated property ca. 26

Quadrangle name Mogollon Quadrangle scale 1:24,000

UTM References

	Zone	Easting	Northing
A	12	704540	3698210
B	12	705110	3698060
C	12	704780	3697640
D	12	704510	3697790
E	12	704380	3698090
F			
G			
H			

Verbal boundary description and justification

The district boundary has been drawn, as shown on the district map, to include only the historic buildings and structures.

List all states and counties for properties overlapping state or county boundaries

state	code	county	code
state	code	county	code

11. Form Prepared By

name/title Chris Wilson, Consulting Architectural Historian for

organization NM Hist. Preservation Division date 6/12/87

street & number 228 E. Palace Avenue telephone (505) 266-0931

city or town Santa Fe state New Mexico

12. State Historic Preservation Officer Certification

The evaluated significance of this property within the state is:

___ national ___ state ✓ local

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

State Historic Preservation Officer signature

title State Historic Preservation Officer date 7-24-87

For NPS use only

I hereby certify that this property is included in the National Register

William B. Bushong date 9/10/87

for Keeper of the National Register

Attest: date

Chief of Registration

GPO 911-399

Topography. The Fannie Hill Mill and Company Town District, although built by the Socorro Mines Mining Company, has always been associated with Fannie Hill on which it stands; hence, the District name. Fannie Hill is located on the western edge of the Mogollon Mountains of Southwestern New Mexico (photo 1). Ten miles to the east, the fir and pine covered Mogollons rise to 10,000 feet peaks. One half mile to the south, and 400 feet lower in elevation, is Mogollon, a mining town on Silver Creek. The Fannie Hill District, which straddles the south ridge of the hill, stands at 7000 feet elevation on its eastern end, rises to 7050 in the middle and drops to 6950 on the west. Fannie Hill and Mogollon are at the heart of the Mogollon/Cooney mining region. The region is approximately three-and-one-half miles wide, east to west, and ten miles long, bounded by Whitewater Creek, the next drainage on the south, and by Mineral Creek, the next drainage to the north (and the site of Cooney, the first settlement in the area).

Building organization. The main road on Fannie Hill enters the District on the east from Mogollon, via Graveyard Gulch. It moves southwest, climbing gradually through the residential and service portion of the company town to the power plant (survey # 55 keyed to the District map) at the crest of the ridge. The road turns to the northwest there and descends gradually along the side of the hill. Just west of the Machine Shop (# 91), a secondary road turns sharply back to the southeast and winds its way back along the hill below the main road.

The service buildings and most of the residences (#s 56-84) are set back 10 feet from the south side of the main road or 30 feet from the north side of the road. They are separated approximately 20 feet from each other. A few buildings stand behind those on the south side of the road, but none behind those on the north. The seven buildings at the east end of the residential section (#s 77,78,80-84) are somewhat informally arranged, the others are regularly spaced and set back. Four additional residences are scattered along the main road at the west end of the District.

All of the industrial structures, except the power plant, are located along the secondary road. The headframe (# 93) and the mill (# 90) are located just below the secondary road. The support structures (assay office,

machine shop, general store house and blacksmith shop, #s 91,92,95,96) are spaced irregularly at the north side of the secondary road.

Residential and service buildings. The residences and support buildings such as the hospital, store and company offices are all wood frame construction with corrugated metal roofs (photos 13-18). Most have board and batten exteriors, while a few also use wood shingles or corrugated metal as siding. Double hung windows (2/2 and 4/4) predominate. A few structures have 4 light sliding wooden windows. Single doors, simple wooden porch posts and no ornamentation are the rule. Only the largest, most prominent structures--the company store, hospital and manager's house (ills 13-15)--have hipped roofs. All the others have one-room-wide, side-facing gable roofs with shed roofs over front porches and rear rooms.

The 10 duplexes have two, two room units each (ill 15,16). The second, shed-roofed rooms are located at the rear except for one example where an extremely steep site forces the second rooms of each unit to the side, off the gable end (# 87). Two long, gable-roofed buildings appear to be bunkhouses. Of the 14 single family residences (photos 17, 20), 8 clustered at the east end of town appear not to have been built by the company by virtue of their small size, piecemeal construction and/or use of wood shingles and corrugated metal siding.

Industrial structures and machinery. All of the industrial structures (#s 55, 90-97) have concrete foundations, wooden structural frames, corrugated metal siding and roofs, and either 4/4 double hung or fixed wooden frame windows. Four of the five support shops are rectangular structures with Warren Trusses (with metal rods for the vertical members). One of these shops has a moniter; the three others, ridge gablets (photo 11). The large roof trusses of the power plant, which span the building's two work bays, resemble Howe trusses with the vertical members omitted (photo 12). The mill building has a complex set of roofs over Howe, King post and hybrid trusses (photos 5,6,8).

All of the original machinery, including an overhead, traveling crane and its rails, have been removed from the power plant (photo 12). The preliminary crushing and sorting

machinery has been removed from the structure attached to the headframe, however, the metal structural supports for the ore bins and the concrete bases for the machinery remain (photo 3). The conveyor belts from the headframe to the mill have been removed, but the original housing remains (photo 4, right). The water tank (photo 4, left) and most of the major pieces of machinery remain in place in the mill, including: one of two original tube mills (photo 7), the two original Dorr Classifiers (photo 6, tank on right midway up slope), the five original Pachuca tanks (photo 8), three Harvey-Steele tilt furnaces (photo 9), two Burt pressure filters (possibly photo 10, right), three American or Dorrco [sic] filters (photo 10, left) and one large tank (photo 6, middle of bottom of building) which may have been for solution storage. Of the original mill machinery only six Wilfley concentrators and the El Oro type, zinc boxes have been removed.

Historic Integrity. All of the structures present at the peak of activity in the District about 1915 remain without significant modifications. The District appears as it did at that peak, although vegetation, especially trees in the town section, has grown up since the mill was closed in 1942. None of the buildings is now occupied or in use. Some of the houses, which have been occupied intermitently until recent years, are in fair repair (photo 14). Other buildings are in various states of deterioration caused by the elements and hastened by the scavenging of materials. No plans for preservation of structures in the District are known to the author.

The historic buildings of the Fannie Hill District are separated from the nearest other development (at Mogollon) by the surrounding rugged landscape. The District boundary has been drawn to include only the buildings. All of the industrial buildings in the District were erected between 1908 and 1911. Most of the other company-built structures--those with board and batten siding--were built at the same time, though some were completed between 1911 and 1925.

Three houses at the east end of town, one behind the company offices and one at the west end, which use a variety of materials and are irregularly sited, appear to have been built by workers sometime after 1915. No documentation has yet been uncovered to establish whether these were built

during the first phase of the mills operation, from 1908 to 1925, or during its reopening between 1934 and 1942. Although some of these five houses may be less than fifty years old, most are probably older than fifty. They are classified, therefor, as contributing structures in this District which has a large majority of properties over fifty years old. Three barns and one house which appear to date after the closing of the mill in 1942 are classified as non-contributing buildings.

Structures list. By National Register counting procedures (Bulletin 14), there are 37 contributing buildings and 1 contributing structure (the Headframe) and 4 non-contributing buildings in the District. The first number given in each listing below is the field survey number which is keyed to the District map. Buildings are one story and gable roofed with board-and-batten siding and corrugated metal roofs unless otherwise specified. Houses have single doors with transoms unless otherwise specified.

Contributing structures:

55. Power House; photo 12, 1, upper right on ridge; 1911; corrugated siding; fixed and 4/4 double hung windows (dhw); gable roof with moniter, shed roof appendages.

56. Company offices; 1910-15; 4/4 dhw, 4 light sliding windows, fair condition.

57. Mine Manager's House; photo 15, left; 1908-10; hipped roof; 4/4, 2/2, 1/1 dhw; bungalow stick brackets under wrap-around porch; fair condition.

58. Duplex; photo 15, right; 1908-1910; 4/4 dhw; single doors with transoms; front porch; fair condition.

59. Duplex; 1908-15; single doors with transoms; front porch.

60. Duplex; 1908-10; doors with transoms; no porch.

61. Garage; 1915-25; concrete floor and foundation; tongue and groove siding; one garage door opening; single door. fair condition.

62. Company Store; photo 14; 1910-15; hipped roof; 4/4 dhw; wall shelves in place.

63. Tri-plex/Bunkhouse ?; 1908-10; 4/4 dhw; 3 single doors; fair condition.

64. Duplex; 1915-25; 4/4 dhw; front porch.

65. Duplex; 1910-15; 4/4 dhw; front porch deteriorated.

66. Duplex; 1910-15; 4/4 dhw; front porch.

67. Duplex; 1910-15; 4/4 dhw; 2 single doors; no porch.

68. Duplex; 1908-15.

69. House; 1915-25; 2/2 dhw; front porch.

70. Hospital; 1909; hipped roof with hipped monitor vent; deteriorated front porch.

71. House; photo 17, rear view; 1915-25; 2/2, 4/4 dhw; front porch.

72. Bunk House; 1908-15; 4 light casement windows.

73. House; 1908-15; 4 light sliding windows; front porch.

74. Duplex; 1908-10; 4/4 dhw; no porch.

75. House; 1908-15 ?; 4/4 dhw; no porch.

76. House; 1908-15 ?; horizontal rough-sawn board and wood shingle siding; 3/3 dhw; no porch.

77. House; 1915-42; horizontal board and metal "batten" siding; 4 light sliding windows; no porch.

78. House; 1915-42; wood shingle, and board and batten siding; no porch.

80. House; 1915-25; hipped and shed roofs; 4/4 dhw.

82. House; 1915-42; wood shingle siding with end boards; 2 single doors; no porch.

85. House; 1915-42; wood shingle siding.

86. House; 1908-15.

87. Duplex; photo 3, visible through headframe; 1908-15; deteriorated front porch.

89. Powder Magazine; 1908 (?)-1915; concrete walls with horizontal strips of wood inset in walls.

90. Fannie Hill Mill; photos 1,2,4-10; 1908, additions to 1925; corrugated metal siding; concrete and stone rubble foundations; 4/4, 2/2 dhw, 4 light casement and sliding windows; roof trusses and remaining machinery discussed in general discussion.

91. Machine Shop; photo 2, upper left; 1908-10; corrugated metal siding; 4/4 dhw; Warren trusses with moniter.

92. Hoist House ?; 1910-15; corrugated metal siding; 4 light sliding windows; very deteriorated.

93. Headframe; photos 3, 2 and 6, both upper left; 1910-15; A-type, steel headframe; steel frame for ore bins due south of headframe; wood frame with corrugated metal siding housing for ore crushers to southwest; concrete foundations due north of headframe.

94. Assay Office ?; photo 2, just left of head frame and above conveyor housing; 1915-25; corrugated metal siding; Warren trusses with gablet; 4/4 dhw.

95. Blacksmith Shop ?; photo 11, 2, second from right; 1915-25; corrugated metal siding; 4/4 dhw.

96. General Store House; photo 2, extreme right; 1915-25; corrugated metal siding; 4/4 dhw; storage shelf against interior walls.

97. House; 1915-25; corrugated metal siding; 4/4 dhw.

Non-contributing structures:

81. Barn; ill.18; 1915-42 ?; loading chute: double post and rail fence.
83. Barn; 1915-42 ?; corrugated metal siding.

84. Barn; photo 19; 1915-42 ?; corrugated metal siding; 4 light sliding windows.

88. House; 1915-42 ?; vertical board and canvas siding.

Historical development. Gold and silver were first discovered in the Mogollon/Cooney region in 1870 by James Cooney, a United States Cavalry scout stationed at Ft. Bayard eighty miles to the south. He established a mining camp called Cooney on Mineral Creek (the drainage north of Mogollon) in 1876 after he was mustered out of the army. Attacks by Apache Indians prevented large scale development of the area for another decade and, in fact, cost Cooney and others their lives.

In 1887, Frank Vingo discovered the Little Fannie mine above Silver Creek and the same year built the first house in Mogollon. Additional mines were quickly discovered and Mogollon grew rapidly. Mills for processing ore were erected in the late 1880s and early 1890s in conjunction with the Little Fannie, Last Chance, Maud S and Deep Down mines, all within a mile of Mogollon. These all employed the mercury pan amalgamation process.

As Otis Young notes in his definitive study **Western Mining** (p. 288), frontier mining taken as a whole in the American West up to 1890 barely broke even. Most of the early Mogollon mine and mill operations, in fact, proved unprofitable. The pan amalgamation process yielded only about 50% of the assay value of ore. For lower quality ores, this process was simply not efficient enough to compensate for the high cost of operating at this remote, mountain location, eighty miles from the nearest railhead at Silver City to the south. The quality of ore on Fannie Hill, however, justified the erection of a fifteen stamp mill with pan amalgamation process which produced an estimated $1,000,000 to $1,250,00 in precious metals from 1889 to 1893. Only the tailings pile from this first mill remains today (photo 1, to left of the later mill and above the larger, later tailings pile).

During the 1890s, a new cyanide process revolutionized the milling of gold and silver throughout the West. Sometime between 1899 and 1903, this cyanide process, which yields approximately 90% of the assay value, was introduced at the Last Chance mine just southwest of Mogollon. The Last Chance quickly became the most profitable gold and silver mine in in the state. In 1909, the Last Chance was superseded as the states largest producer by a new cyanide processing mill on Fannie Hill.

Fannie Hill had been out of production since the mid-1890s because of litigation over control of the parent company which operated the first mill, and over control of adjacent mine claims. From 1906 to 1908, local miners Thomas J. Cooney and William J. Weatherby optioned and reconciled the competing mine claims. They also secured other resources which would be necessary to operate the mill, including water rights at a dependable year-round source higher in the Mogollons, a lumber mill in the mountains and a site for a hydroelectric generation plant on Whitewater Creek to the south. Once assembled these components were sold to a group of eastern capitalists organized as the Socorro Mines Mining Company.

Mining engineers for Socorro Mines were E. Gybbon Spilsbury, a New York based, consulting engineer, and John M. Sulley, who developed and managed the large Chino Mines copper mine at Santa Rita, New Mexico during this same period. They designed and built a hydroelectric power plant on Whitewater Creek and a transmission line across the mountains to the mill site. They ran a four-mile pipeline to the water supply, established a lime quarry and kiln, constructed two miles of narrow gauge railroads to connect the various mining properties and built many miles of mountain roads and improved existing roads for the transportation of heavy mining and milling machinery. These improvements have not been documented and are not included in this nomination. Spilsbury and Sully also designed and built the new cyanide process mill and a company town to house workers (which are the subject of this nomination). In 1911 the hydroelectric plant was replaced by a more efficient oil-burning electrical plant, built on Fannie Hill and included in the District.

Production of the Fannie Hill mill peaked from 1913 to 1915, quickly tailed off and it was closed by about 1925 as the richer veins played out and prices for silver fell. In 1934, the Fannie Hill mill was reopened when gold prices rose, but was closed for good in 1942. (As precious metal prices have allowed in recent years, a mill has been operated at the Pacific Mine west of Mogollon.)

Contemporary accounts of mining in New Mexico and more recent historical research agree that the Mogollon/Cooney

region was the leading producer of gold and silver in the state from 1890 to 1920. J.R. Finlay in the official State **Report of Appraisal of Mining Properties of New Mexico** estimated the district's total output to 1921 had been $17,000,000, but noted that "profits have been scanty; were these mines at Silver City the cost of operating would have been $1,500,000 less and the properties proportionally more valuable." The Fannie Hill mines are generally considered to have been the largest producers in the region: in addition to the million dollars of precious metals produced in the 1890s, another three to four million dollars were produced by the mill constructed in 1909.

United States census figures for Cooney and Mogollon and for the nearby farming area of Alma reflect the fortunes of local mining activity.

	Socorro Co.	Cooney	Mogollon	Alma
1880	7,875			
1890	9,595	351		368
1900	12,195		599	128
1910	14,761	189	799	364
1920	14,061		482	324
1930	9,611			
	Reserve Co.	(formed out of Socorro Co.)		
	3,282		299	128
1940	4,881		554	129
1950	3,533		45	109

The population of the Mogollon census tract, which included Fannie Hill, undoubtedly rose above 799 during the peak years of 1913-15, although it is unlikely that it ever reached the 2,000 inhabitants which local boosters regularly claimed. As the biggest producer during this period, Fannie Hill contributed to the growth of Mogollon by using its services and by improving roads into that mining town. Accounts since 1960 have placed the year round population of Mogollon at

approximately twenty, with a seasonal increase from the development of the community as a summer residence and tourist stop. No one currently lives in Fannie Hill.

The milling process. In the July 10, 1909 issue of the **Engineering and Mining Journal**, E. Gybbon Spilsbury, one of the designers of the Fannie Hill mill, described the process which was to be employed:

> The mill now being constructed will have an initial capacity of 150 tons per day, and is so arranged as to be extended from time to time as necessity may require, without interfering with its operation. The treatment will be by concentration and cyaniding. The ore is delivered to the crusher directly from the shaft. From the crusher it is conveyed by belt to a Vezin automatic sampler; and thence, also by belt, is distributed over ore bins. The rejections from the sampling mill are elevated and returned to the original ore bins. The stamps, of which there are thirty, 1050 lb. each, crush to 20 mesh, and the pulp, after dewatering, flows to six Wilfley concentrators. It is intended to make a product on these machines having a value of from $750 to $900 a ton, but not to make very clean tails.
>
> The tails from the concentrators flow into two Dorr classifiers which separate the slimes from the coarser sands. These latter are fed to two tub mills for regrinding. The oversize from the mills is returned to the Dorr classifier while the slimes are fed to the slime treatment tanks, and thence direct to two Burt pressure filters. The treatment tanks are of the Pachuca type, with air agitation. The zinc boxes are of the improved El Oro type, and the precipitates will be melted and refined in an oil-burning Harvey-Steele tilting furnace.

Concentration, the process described in Spilsbury's first paragraph, places the crushed ore in a water solution, and separates the heavy minerals (slimes) from the low grade sands. Cyaninding or the cyanide process, described in his second paragraph, combines gold-bearing sands or slimes with a sodium cyanide solution and agitates the mixture with air, causing gold and silver to dissolve into solution. The precious metals are separated by settling and filtration, and further precipitated into a cake by the introduction of Zinc.

The precipitate is dried, melted with fluxes, refined and cast into bars.

Industrial structures. The mill reveals the relentless shaping of architectural form to function which epitomized industrial design in the United States during the early years of this century. First, the industrial process was laid out for the most efficient operation--as near to the main mine shaft head as the old tailings pile allowed and located on a steep hill side to use gravity to help move ore and slurry through the plant. Multiple pieces of machinery for each stage of the process are laid out side-by-side, laterally on the hill side with the next step at a lower level. This left the north and south ends of the plant open for any later expansion required by increased production, changes in the composition of the ore (which would dictate adjustment of the milling process) or advances in milling technology.

The mill housing is an inexpensively-built wood frame covered with corrugated metal which wraps the industrial process; the building expands and contracts laterally, the roof steps up and down, reflecting directly the amount of space and the size of the machinery required for each step. The five, tall Pachuca tanks (photo 8), for instance, cause the step up in the middle of the sloping mill roof (photos 2, 6).

Standardization of plan, another characteristic of much industrial design, can be seen in the four support structures near the mill which use a standardized rectangular plan with Warren truss roofs and some shed roofed additions to provide needed additional space. When a new oil burning electrical power plant at the nearby Last Chance mine proved cost-effective in 1910, the managers of the Fannie Hill mill immediately built a similar plant to replace the three-year-old hydroelectric plant on Whitewater Creek--another example of the relentless drive for increasing efficiencies in production.

The company town. American mining engineers at the turn of the century believed that the process of rational planning which they applied to technical problems was equally applicable to human social questions, most importantly to the provision of a happy, productive work force. The company town was the major development of this attitude. In his 1909

article on the development of the Fannie Hill properties, mining engineer E. Gybbon Spilsbury specifically included "the building of a new village for the accommodation of the workmen" in his discussion of "preliminary work required to put these properties on a producing basis." The Fannie Hill company town was placed at a safe distance, on the other side of the hill from the mill, which, after all, employed poisonous cyanide. The town provided many of the needs of the workers and their families: well constructed, if modest housing, a hospital and a company store. Mogollon, one-half mile away as the crow flies, but a little over a mile by the road, accounted for other services which were often included in more remote company towns: a post office, churches, a school, entertainment and additional stores.

Most of the company buildings are constructed of lumber produced nearby in the company-owned sawmill. Much of the housing, like the industrial support structures, employes standardized plans. The basic duplex plan, for instance, was used ten times with minor adaptations to provide twenty residential units. Some duplexes in Mogollon adopt the Fannie Hill duplex plan. The utilitarian construction with no ornamentation, again, reflects the managers' practice of providing just what was needed without any frills which would reduce profits.

The owner-built residences contrast with the company housing by their mixture of materials and plans, and their irregular siting. Company managers in the West often allowed workers to build their own houses at the edges of company towns if operations were expanding quickly and the company could not provide all the housing needed.

Historic cohesiveness. The Fannie Hill mill and company town are virtually unaltered from their appearance during the peak years of 1908 to 1915. All historic buildings remain in unaltered, though generally deteriorated condition. The industrial and company town buildings were not intended to represent any high artistic values or to be individually distinguished architectural designs; instead, their very simplicity, standardization and use of a few inexpensive materials makes them a coherent group of buildings which directly reflect mining engineers' emphasis on efficiency of design and construction. The four non-contributing buildings, because they use wood frame construction with

wooden siding and corrugated roofing, generally complement the other residences.

Comparable New Mexico mills and company towns. The Fannie Hill District includes one of the three best preserved company towns in the state and one of the two most intact historic, mining mills. One of the other well preserved company towns is Madrid, a Coal mining center active from the 1890s to the 1940s (and a National Historic District), which has many more and better detailed buildings than Fannie Hill, but also more alterations of historic structure and more new construction. The other well preserved company town, Koehler, a coal mining town active 1906-24 and 1936-mid-1950s, has eight unaltered company houses. Only the Empire Zinc mill, built at Hanover during the First World War, is as well preserved as the Fannie Hill mill. Other historic, mining industrial works have disintegrated to only foundations, such as the Last Chance mill near Mogollon, or disappeared as the smelter and company town at Tyrone did when it was consumed by its own open pit copper mine. The historic interest of Fannie Hill is also enhanced by Mogollon one-half mile south, for which a separate historic district nomination has been prepared. Mogollon stands as one of the four most significant, historic mining towns in the state along with Hillsboro, White Oaks and Madrid.

Research potential. While this nomination describes the company town and mill, its machinery and operation in some detail, much additional information can be derived from the site. Field study by an industrial archeologist or a HAER/HABS team when combined with further archival research and, possibly, oral history would help answer a variety of questions: How was the cyanide process adapted and operated at this remote location? At a time when industrial construction was increasingly employing reinforced concrete and large expanses of glass, how did the underlying principles of industrial engineering adapt to make use of the local timber supply? How did the lives of miners and their families in a company town compare to other less-structured mining camps, such as nearby Mogollon? How does this precious metal mill and town compare to other extractive industries--to coal mines and towns or to lumber mills and camps? What can we learn about social engineering, as practiced by mining engineers, from the floor plans of houses and duplexes, the standardization of building plans, the

range of services provided to families, and the layout of the community--the spatial relationship of workers' residences to the manager's house and company store, and of the town to the mill and power plant? Since the company town was often a response to unionization and labor unrest, what effect did the provision of a company town have on labor-management relations at Fannie Hill? Why were owner-built houses allowed here and how did they fit into this otherwise highly-structured environment? There are only a few sources which address these and other questions relating to mining and company towns in the American West (see Bibliography References). That all of the historic buildings are present in unaltered form and most of the original machinery remains in place, makes Fannie Hill a particularly good candidate for detailed research.

Survey and boundary. In 1978, Mogollon, Fannie Hill and the surrounding mining and mill sites were studied by the Texas Tech University, History of Engineering Program. A National Register nomination covering the area was also prepared by a research assistant with that program, Donald Abbe. That nomination was returned by the Register on May 16, 1979 because, while the significance of the mining history was discussed, the architectural significance of the nominated properties was not discussed and no inventory of buildings was included. In 1984, Drusilla Claridge with the Silver City, New Mexico Museum, conducted a survey of area structures using the State's Historic Building Inventory form. She subsequently revised the Texas Tech nomination based on this inventory. In 1987, architectural historian Chris Wilson, working as a consultant to the State Historic Preservation Division, completed additional research and a field examination of the properties. In consultation with State Historic Preservation Staff, it was decided that the originally-nominated, mile-square area (which included five mines, two towns, a cemetery and a handful of scattered individual structures) was too large and under-documented to be nominated as a single district. Since funds are not currently available to redocument the entire nomination as a multiple resources nomination, it was decided to prepare two district nominations covering the town of Mogollon, and the mill and company town of Fanny Hill, which include over 95% of the structures in the original nomination.

The historic buildings of Fannie Hill are surrounded by rugged landscape and the boundary for the District was drawn to include only the buildings. A handful of buildings along the Graveyard Gulch Road, approximately one-quarter mile east of Fannie Hill, have been excluded from the District because they were not historically a part of the company town.

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United States Department of the Interior
National Park Service

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Verbal Boundary Description

The boundary of Socorro Mines Mining Company Mill, Fannie Hill is shown as the dotted line on the accompanying map entitled Fannie Hill New Mexico Historic District.

Fannie Hill, N.M. Historic District

Contributing
Non-Contributing
Boundary

Photos

0' 125'
63'