



1949

# The Economic and Social History of Bingham Canyon, Utah, Considered With Special Reference to Mormon-Gentile Synthesis

George M. Addy

*Brigham Young University - Provo*

Follow this and additional works at: <https://scholarsarchive.byu.edu/etd>

 Part of the [Economics Commons](#), [Mormon Studies Commons](#), and the [Social History Commons](#)

---

## BYU ScholarsArchive Citation

Addy, George M., "The Economic and Social History of Bingham Canyon, Utah, Considered With Special Reference to Mormon-Gentile Synthesis" (1949). *All Theses and Dissertations*. 4460.

<https://scholarsarchive.byu.edu/etd/4460>

This Thesis is brought to you for free and open access by BYU ScholarsArchive. It has been accepted for inclusion in All Theses and Dissertations by an authorized administrator of BYU ScholarsArchive. For more information, please contact [scholarsarchive@byu.edu](mailto:scholarsarchive@byu.edu), [ellen\\_amatangelo@byu.edu](mailto:ellen_amatangelo@byu.edu).

THE ECONOMIC AND SOCIAL HISTORY  
OF BINGHAM CANYON, UTAH  
CONSIDERED WITH SPECIAL REFERENCE  
TO MORMON-GENTILE SYNTHESIS

By

George M. Addy

19254

A Thesis Submitted to the Department of History

Brigham Young University

Provo, Utah

December, 1949

19254

BYU  
LIBRARY  
PROVO, UTAH

## PREFACE

Not as a matter of form but with sincere appreciation the author wishes to render acknowledgement to the following: To the members of the Thesis Committee, Dr. R. D. Poll, Dr. Brigham <sup>D.</sup>W. Madsen, and Dr. R. B. Swensen, for much help and sound advice; to Miss Caroline Stucki for the typing and correction of manuscript; to the librarians and staffs of the Brigham Young University Library, University of Utah Library, and L. D. S. Church Historian's Office; and to the many people of Bingham, more particularly the officials of the National Tunnel and Mines Company, who have given freely of their time and information.

The writer's interest in Bingham dates from his early youth which he spent entirely in that town, and it is his hope that this study may shed some light upon the development of this most interesting locale.

G. M. A.

## TABLE OF CONTENTS

<u>Chapter</u>	<u>Page</u>
CHAPTER I. Geography and Topography of the Bingham District . . . . .	1
CHAPTER II. Beginning of Mining Activity, 1863-1864. . . . .	9
CHAPTER III. Period of Lead-Silver Mining, 1865-1893. . . . .	26
CHAPTER IV. Inauguration of Copper Mining, 1869-1914 . . . . .	40
CHAPTER V. Copper Mining, 1914-1940 . . . . .	62
CHAPTER VI. The Period of Mormon-Gentile Synthesis, 1863-1900 . . . . .	75
CHAPTER VII. Immigration to Bingham, 1900-1940. . . . .	90
CHAPTER VIII. The Rise of Organized Labor. . . . .	106
CHAPTER IX. Development of Bingham City. . . . .	123
CHAPTER X. Conclusions. . . . .	136
BIBLIOGRAPHY . . . . .	i

### LIST OF PLATES

- PLATE I. Winnamuck Smelter in 1874.
- PLATE II. Upper. Bingham in 1900.  
Lower. Bingham in 1914.
- PLATE III. Upper. Bingham about 1912.  
Lower. Highland Boy about 1912.
- PLATE IV. West Side of Utah Copper Mine, 1907.
- PLATE V. Upper. East Side of Utah Copper Mine, 1908.  
Lower. East Side of Utah Copper Mine, 1915.
- PLATE VI. Upper. Bingham Street Scene about 1912.  
Lower. Yampa Smelter.
- PLATE VII. Workings of Highland Boy Mine.

## APPENDICES

- APPENDIX I. Chart showing production of gold, silver, copper, lead and zinc in Bingham, 1863-1940.
- APPENDIX II. Graph showing total production and gross value of Bingham ores, 1863-1940.
- APPENDIX III. Map of the Bingham Mining District.
- APPENDIX IV. Glossary of Mining Terms.

## CHAPTER I

The Oquirrh Mountains, in which the Bingham Mining District is situated, are located in northwest Utah about thirty miles west of Salt Lake City. They are a north-south range running roughly parallel to the Wasatch Mountains and located about thirty miles to the west of the latter. The northern extremity of the range is on the shore of Great Salt Lake at Black Rock; the southern terminus is about thirty miles distant at Five Mile Pass near the town of Fairfield.

Connor Peak, the highest point of the range, is found about twelve miles north of the southern extremity of the range. It forms a central mass from which low spurs run to the east and west. These spurs separate Salt Lake Valley from Utah Valley on the east and Tooele Valley from Rush Valley on the west. Taking these spurs into account the Oquirrhs are about fifteen miles wide, but the average width of the range proper is six to eight miles.

A short distance north of Connor Peak the range is split by two connected canyons running east and west. The pass between the two canyons, Butterfield on the east and Middle Canyon on the west, is the lowest in the entire range. Taken together with Connor Peak they form a natural division which from early times has separated mining activity in the Oquirrhs into two parts: that on the north centering around



Bingham and its environs and that in the south clustering around the camps of Ophir and Mercur.

This paper will be confined to the northern portion of the range though it might be noted that the topographical descriptions of the Bingham district apply in a general way to the southern district also. The northern Oquirrhs contain a number of sizeable canyons running either east or west from a central ridge seven thousand to eight thousand feet in altitude. Bingham Canyon, one of the largest of these, is located on the eastern slope of the range and drains into Salt Lake Valley.

Bingham Canyon runs in a southwesterly direction for some four and a half miles from its mouth. At that point it divides into two principal forks, one turning to the south, the other continuing the original bearing of the canyon. The south fork (sometimes called the main fork) turns south for a distance of a mile and a half and then gradually circles north again for a distance of a mile and a quarter. The northerly fork, or Carr Fork as it is called, has a length of about two and one-eighth miles before it splits into a number of gulches at the foot of West Mountain, the principal peak of the district. The south fork ends of the east shoulder of the same mountain. All this will be seen illustrated in some detail on the accompanying map.

There are a number of important tributary canyons, or gulches as they are termed, which drain into the main canyon.



These gulches and their rough locations proceeding up from the mouth of the canyon are:

1. West side of Main Canyon: Dry Fork, Freeman Gulch, Markham Gulch, Dixon Gulch.
2. East side of Main Canyon: Damphool Gulch, Winnamuck Gulch, Ely Gulch.
3. West side of East Fork: Copper Center Gulch.
4. East side of Main Fork: Bear Gulch.
5. West side of Carr Fork: Cottonwood Gulch, Sap Gulch.
6. East side of Carr Fork: Muddy Fork, Log Fork.

There are a number of canyons on the easterly side of the mountains which do not form a part of the Bingham drainage system. They are, nevertheless, a part of the Bingham Mining District. They are: Midas Creek, Keystone Gulch, Copper Gulch, and Yosemite Gulch. All drain almost directly to the east.

The physical features of the district, as described, have been considerably modified by the operations of the Kennecott Copper Company (Utah Copper). This company in the course of their open pit operations have completely obliterated some of the localities mentioned and covered others with hundreds of thousands of tons of waste rock. For instance, Copper Center Gulch and the mountain which contained it are completely gone. Muddy Fork is partially gone, while Freeman Gulch, Markham Gulch, Dixon Gulch, Damphool Gulch, Winnamuck Gulch, Ely Gulch, Cottonwood Gulch, Sap Gulch, and Log Fork have been largely covered. However, for the greater span of

Bingham's history these geographical locations were intact and the scene of active underground mining.

The areas discussed form the West Mountain Mining District, within which the principal part of the mining activity of the northern Oquirrhs has taken place. The region described includes an area about six miles long and four miles wide, the long boundary running roughly southwest and northeast.

Within the boundaries of the district four main centers of population and trade have grown up. Bingham, proper, the largest and oldest is located in the main canyon centering around the branching of Carr and East Forks. Copperfield, or upper Bingham, is at the head of East Fork. Highland Boy is located at the head of Carr Fork. Lark is situated on the east slope of the range adjacent to the gulches previously mentioned in that region. None of these towns have had corporate existence except Bingham, and all the others with the exception of Lark are dependent upon Bingham for commercial and social purposes.

The topography of the Oquirrh range and of the Bingham District differ in several important respects from that of the Wasatch Mountains. Generally they are lower, averaging nine thousand to ten thousand feet in contrast with the ten thousand to twelve thousand feet of the Wasatch peaks. The Oquirrhs are comparatively smooth in relief, being quite rounded and having uniform slopes. The slopes are steep, however, and the canyons are heavy grade and quite narrow.

Very little running water is to be found in the district except in the spring when the heavy winter snows and the steep grades combine to make a quick and heavy runoff with consequent erosion and later drouth. Much of the precipitation is absorbed by the ground which, being of a very porous nature, allows a great quantity of water to go underground. This condition has had a decided effect on the mining techniques of the district.

The heavy snows to which the Oquirrhs are subject have had two further effects. First, they have made the region liable to snow slides which have destroyed many lives and much property over the years. Secondly, the increased moisture has enabled the growth of a superior stand of timber and grass. It was this fact which first brought attention to the Bingham area.

Two further effects of topography should be noted. These are, first, that the narrow canyon has forced Bingham to assume a definitely linear pattern and has restricted its growth to the extent of producing severe overcrowding. Second, Bingham is built at the junction of canyons which form a kind of natural funnel for the concentration of both wind and water. As a result there have been a number of serious floods, and occasional fires fanned by the winds have been quite serious affairs.

No discussion of the Bingham region would be complete without some mention of the geology of the region and how, through the mining industry, geology has affected the history



of the region. However, it is not the purpose of this study to make any detailed observations upon the matter. Indeed such a study would probably be beyond the interest of the reader and certainly beyond the ability of the writer. To those interested in such matters the writer recommends J. M. Boutwell's Economic Geology of the Bingham Mining District, Utah, which is probably the best single work in the field. Numerous other studies have been made, most of them of a specialized nature.

The present discussion will be confined, therefore, to the mention of a few generally accepted facts concerning the character of the ore deposits in Bingham which have had a direct effect upon its history. The salient facts in the matter may be summarized as follows. First, the mineralization in the Bingham district is spread over a wide area. This fact made it possible for a large number of companies to operate during the early stages of Bingham's development, and latterly has made feasible the consolidation of numerous properties into very large groups operated by great corporations.

Secondly, the ore bodies of Bingham were and are large, though of low grade generally, making possible long continued operations and high production of metals. The first factor has given Bingham a longer lease on life than most mining camps enjoy. The second has tended to make Bingham a "rich man's camp" as the miners term it. It was almost impossible to develop a low grade ore body without a

fairly large holding and a reasonable amount of capital. Therefore, from the earliest times mining enterprise has been in the hands of corporations or firms rather than in the hands of individuals. This trend has continued to develop till at the present time the largest part of Bingham production is in the hands of a very few mining companies.

Thirdly, the ore bodies of Bingham have a quality which might be termed by a layman as versatility. That is, the deposits are not confined to ores of one mineral as is the case in some mining districts. Ores of lead, silver, zinc, copper, and gold are known in the Bingham district in commercial quantities. This condition has enabled the mining industry to survive a number of drops in the market price of various metals, and it has permitted the industry to survive the exhaustion of some types of ores.

Fourthly, the ores of Bingham exhibit the characteristic of changing in nature according to their depth from the surface. This is especially true in regard to the lead ores. Near the surface a zone of oxidized ores of lead, of gold, and to a lesser extent, of copper, were found during the early days. The oxidized lead ores termed "carbonate" by the early miners, formed the most important body of ores in the earliest period. As the ore bodies were penetrated deeper the zone of oxidation was passed and a zone of sulphide of lead (or sulphuret, according to earlier terminology) and galena ores was encountered. These in turn gave way to more complex ores

situated still deeper. This succession of ore types is particularly significant in that the economic history of Bingham is clearly definable into a number of periods according to the type of ore mined. These periods are defined and treated at some length in subsequent chapters, but they may be roughly indicated here:

1865-1882--First period of lead-silver mining  
1885-1893--Second period of lead-silver mining  
1896-\_\_\_\_--Period of copper mining

It may be seen, then, that through the varying type, richness, and distribution of the ore bodies, geological factors have had a considerable effect on the economic history of Bingham.



## CHAPTER II

The Oquirrh Mountains and the Bingham District assume no importance in history till the year 1847. Before that year the sole inhabitants of Bingham Canyon and the region around it were Indians. The numerous flint arrowheads, spear points, scrapers, and other implements which have been found indicate that there was a considerable Indian population in the canyon. However, as far as the writer is aware no archaeological investigations of a serious nature have been undertaken in the vicinity. Therefore, no reliable information concerning the Indian population of the Bingham area is available. In addition, it must be pointed out that subsequent mining operations have so disturbed the original contours and soil as to make archaeological investigation impractical.

There is no evidence known to the writer to indicate that any white man visited the mountains before 1847. It is perfectly possible that some Mexican slave trader or wandering mountain man visited the area. We know that Jedediah Smith, Bridger, Provot, and others of their stamp were familiar with the vicinity of the Great Salt Lake. Perhaps their curiosity took them to the Oquirrhs. Curiosity would be the only reason for their going since the lack of year round streams made the range a poor place for beaver. In any case, it is only with

the coming of a settled population able to exploit the less obvious resources of the Oquirrhs that Bingham Canyon takes on any historical role.

With the coming of the Mormons the situation changed. The timber and grass of the Oquirrhs attracted the pioneers since they were in pressing need of these resources, and the mountains were close to the site of the original settlement. There is a rather strong presumption that the Oquirrhs were explored quite soon after the arrival of the pioneers. The factors of natural curiosity, proximity, attraction of resources, and the vigorous exploration policy followed by Brigham Young support this idea.

We know that within the next two years the Oquirrhs had permanent settlers when the Bingham brothers, Thomas and Sanford, settled at the mouth of the principal canyon leading into Salt Lake Valley, giving the canyon their name. There is some doubt as to the exact date of settlement though it was probably in the spring of 1848. The biography of Thomas Bingham Jr. has this to say: "In the spring of '48 or '49 Uncle Sanford Bingham and his brothers took a herd of dry cattle [Sic] into the canyon south of Salt Lake and west of Jordan. The canyon was named Bingham after the Bingham brothers."<sup>1</sup>

The Bingham brothers stayed in the canyon only about a year, leaving within that time to settle in Cache Valley. With their departure we lose track of any specific inhabitants of the

---

<sup>1</sup>Brigham Young University, Mormon Diaries MSS, Vol. V, p. 5.

region. It seems likely that the area, having been found to be valuable for grazing once, might be so used again within a short period; but there is no direct evidence to show that anyone again lived in Bingham Canyon till 1863.

There is, however, evidence of an indirect nature to show that Bingham Canyon was at least visited to graze stock and to cut wood. The first item of this evidence is found in the report of the expeditions sent out by the United States government during 1849-50 in charge of Captain Howard Stansbury to explore and map the Great Salt Lake Valley. Stansbury, in his narrative of events speaks of the difficulties Lieutenant Gunnison of his command had in running a base line between Great Salt Lake and Utah Lake. He mentions in particular the hardships found in procuring and hauling wood from the canyons for the erection of triangulation stations. Since the base line was on the west side of the Jordan for a considerable distance, it seems possible that some of this wood came from the Oquirrh Mountains which were the closest supply.<sup>1</sup> Collateral evidence is found in the map which Captain Stansbury made which shows Bingham Canyon essentially correct in its main features though it does not give the name of the canyon.<sup>2</sup>

---

<sup>1</sup>Howard Stansbury, Exploration and Survey of the Valley of the Great Salt Lake of Utah (Washington, D. C.: Robert Armstrong, Public Printer, 1853), p. 121.

<sup>2</sup>Map of the Great Salt Lake and Adjacent Country in the Territory of Utah (New York: Ackerman, lithographers, 1853), Brigham Young University Map Collection.



The other hint we have concerning events in Bingham between 1848 and 1863 concerns the Gardner family, which settled on the Jordan River and operated lumber and grist mills in that region. The diary of Robert Gardner states that he settled on the Jordan in 1853 and there, in conjunction with his brother, Archibald, he ran both types of enterprises. It may be that some of the saw logs came from the Oquirrhhs. Neither Robert nor Archibald Gardner make any mention in their diaries of Bingham Canyon or of activities there. However, in Archibald Gardner's account book the name Markham appears a number of times in connection with various transactions, some of them in lumber. Since the name Markham is applied to one of the main branches of Bingham Canyon there appears to be a possibility that the canyon was named after the man and that Markham if not Gardner was interested in the timber there.<sup>1</sup> There are other items of evidence to support this view. One is that when the Bingham Mining District was organized in 1863, Archibald Gardner was elected recorder of the district.<sup>2</sup> Probably this indicates a degree of familiarity with the country. More certain is the fact that the first claim notice filed in the district in the name of the Jordan Silver Mining Company mentions in its description the phrase "beginning at the stake situated one hundred feet north east of Gardner's shanty." Thus there was at least a semipermanent residence by 1863, and probably for a considerable period before that date.<sup>3</sup>

---

<sup>1</sup>Diaries of Archibald Gardner and Robert Gardner, Brigham Young University, Mormon Diaries MSS, Vol. X, p. 31.

<sup>2</sup>Articles of Organization of the West Mountain Mining District, County Recorder's Office, Salt Lake County.

<sup>3</sup>Claim Notice for the Jordan Silver Mining Company, County Recorder's Office, Salt Lake County.

This may be taken to indicate that from 1847 to 1863 Bingham Canyon and the surrounding regions were at least regularly visited and that they were very likely quite closely scrutinized in the course of logging and stockgrazing. The question then arises of why, during a period of sixteen years, when the west was in a fever of mining excitement with the rushes to California and the opening of the Comstock, the mineral wealth of Bingham and of Utah generally was not exploited nor even reported. The answer seems to be either that the mineral was not found, or that the news of the finding was suppressed.

Confining the study strictly to Bingham, we see that pointing to the first alternative is the presumption that neither the Bingham nor the Gardners nor any man likely to be employed by them was a professional miner or prospector used to recognizing ores. As such, they were not likely to find traces of mineral or to have the skill to exploit such mineral if found. On the other hand, there exists a definite tradition in the Bingham family that ore was found but the news suppressed.<sup>1</sup> Further, it seems that the indications of ore at Bingham were extremely plain and that ore was found at grassroots depth. Under these conditions, it is not hard to discover ore by accident. Thirdly, it appears that the Bingham, at least, were not so unfamiliar with mining as has been thought. Thomas Bingham Jr. says in his biography, "In the summer of 1875 father found a ledge of silver quartz close to the Sugar Pine Mill. The winter

---

<sup>1</sup>Salt Lake Tribune, March 19, 1948. Presumably quoting one of the Bingham descendants in an interview concerning the erection of a monument commemorating that family.



following we went there to work and sunk a shaft."<sup>1</sup> Since the Bingham had done nothing in the interval except farm and operate saw and shingle mills, some prior familiarity with mining is probable.

With respect to the Gardner family evidence of a similar nature may be pointed out. Archibald Gardner was elected recorder of the West Mountain Mining District, which may indicate a certain amount of knowledge of mining. Rather more significant is the fact that the first claim in Bingham was staked out within a few hundred feet of a cabin belonging to the Gardners on ground that they must have passed over constantly. There is, then, a rather strong probability that mineral was found in the Bingham area before 1863. Indeed, it may have been found as early as 1848.

This leads to the question: Why was the news of mineral discovery suppressed? The answer to this is found in the complex of Mormon-Gentile relationships of the period and particularly in the attitude of the Mormon Church toward mining.

The Mormons in their eastern homes had been so hounded and harried that they wished to get away from all interference from the outside. To that end they migrated to a remote and desolate location in what was then called the Great American Desert. Once there they did not wish to have their attempts to build an ideal state thwarted by incursions of the people they had travelled so far to escape. Furthermore, Mormon doctrine

---

<sup>1</sup>Biographies of Thomas Bingham Sr. and Thomas Bingham Jr., Brigham Young University, Mormon Biographies MSS, Vol. V, p. 19. The discovery took place in Cache County.



forsees a state to be set up apart, a "Zion" to serve as a refuge for the righteous and as a nucleus for the development of the kingdom of God on earth in times to come. On grounds of experience and principle the Mormon folk desired to be left alone and apart to develop in their own way.

It was recognized as early as 1849, during the California gold rush, that the developing mining frontier in the west might interfere with this desire. From the gold rush on, the face of the Latter-Day Saint Church was set solidly against mining activity which might distract the saints from their farms or which might bring large groups of non-Mormons into the territory. The church had no objection to the mining of iron or coal, which would aid the industry of the territory, but precious metal mining was severely frowned upon. A sermon delivered by Brigham Young to a newly arrived group of emigrants in 1849 will illustrate the point:

Do not any of you suffer the thought to enter your minds that you must go to the gold mines in search of riches. That is no place for the saints. Some have gone there and returned; they keep coming and going but their garments are spotted almost universally. It is scarcely possible for a man to go there and come back to this place with his garments pure. Don't any of you imagine to yourselves that you can go to the gold mines to get anything to help yourselves with. You must live here; this is the gathering place of the saints.<sup>1</sup>

Notable is the suggestion that mining camp life is apt to corrupt ones morals, a contention which the history of the mining camps of the period amply supports. But also, it was the conviction of the church authorities that it was necessary,

---

<sup>1</sup>Quoted in Edward W. Tullidge, The History of Salt Lake City (Salt Lake City: Edward W. Tullidge, 1880), p. 699.

particularly in the early years of settlement, to stick to agriculture which would provide not only sorely needed foodstuffs but would make for a stable and lasting society.

Because of this discouragement mining activity in Utah, except for iron and coal mining, was practically nil from 1847 to the 1860's.<sup>1</sup>

In 1862, an entirely new factor was introduced into the situation in Utah when Colonel P. E. Connor and his command arrived in Salt Lake Valley. The occasion of Connor's coming arose out of the Civil War. The small regular army force which had been stationed in Utah was withdrawn at the beginning of the war for service in the east. This left the vital overland route to California and Nevada unprotected from the raids of the Indians or from possible Confederate action. This latter contingency was not impossible in the view of some Unionists who were none too sure of the loyalty of the Mormons. In view of these circumstances, troops raised in California as state volunteers were transferred to Utah to replace the troops sent east.

The commander of the newly arrived troops, Patrick Edward Connor, was an immigrant Irishman who had served in the Mexican War with distinction; and who had afterwards settled in California where he had had considerable financial and political success. It is important to this study to note that Connor came from a mining region in California, that he had been somewhat interested

---

<sup>1</sup>A small amount of lead was mined near Beaver, Utah, during the Utah War.

in mining ventures there, and that he, to all appearances, brought that interest to Utah with him. The same could be said of Connor's men who, in all probability, included a number of enthusiastic and experienced prospectors. Moreover, the California men were not subject to the influence of the Latter-Day Saint Church which had set itself so definitely against mining.

The first years of the California volunteers' residence in Utah were occupied by the building of Camp Douglas and by Indian fighting. However, by 1863, they had leisure and could look about them a little. From somewhere Connor got reports of mineral to be found in the territory, or so he said in his correspondence.<sup>1</sup> As a result of one of these reports the first mining claim to be made in Utah was staked out in Bingham Canyon.

There are several versions concerning the location of the first mining claim at Bingham. Two early authorities, John R. Murphy<sup>2</sup> and E. D. Buel,<sup>3</sup> both agree that the discovery was made by a Captain A. Heitz and a party of soldiers from Camp Douglas who discovered argentiferous ore in September of 1863. No further details of the discovery of the ore are forthcoming. Stenhouse has a different version, stating that the

<sup>1</sup>United States War Department, War of the Rebellion (Washington: Government Printing Office, 1897), Vol. L, Pt. II, p. 656.

<sup>2</sup>John R. Murphy, Mineral Resources of the Territory of Utah (Salt Lake City: James Dwyer, 1872), p. lv.

<sup>3</sup>T. B. H. Stenhouse, The Rocky Mountain Saints (Salt Lake City: Shepard Book Co., 1904), p. 718.



first discovery was made by Mrs. Robert K. Reid, wife of the post surgeon at Camp Douglas, while a party of officers and ladies were on a picnic party at Bingham Canyon, where some of the remounts from the camp were being grazed.<sup>1</sup>

Tullidge introduces a different story when he ascribes the original discovery to George B. Ogilvie. He says, "Ogilvie, in logging in the canyon found a piece of ore which he sent to Colonel Connor, who had it assayed. Finding it was good ore, Connor organized a party of officers and ladies of his camp and went over and located the mine--the Jordan."<sup>2</sup> It is evident that Tullidge's version is not inharmonious with Stenhouse's story since Mrs. Reid may have been one of the picnic party mentioned in both cases. However, Stenhouse and Tullidge are at utter variance with Murphy and Buel. Still another aspect of the matter has been brought forth by the researches of Edgar M. Ledyard. Says he: "According to Mr. Henry Bryam Beakstead (who was working in the canyon at the time) a nephew of Mr. (Samuel) Egbert, it was John Egbert, a son of Samuel Egbert, who discovered the galena ore in Bingham Canyon while dragging logs there in September, 1863."<sup>3</sup>

The location notices of the district do little to clear up the problem. Two claim notices were made out on September 17, 1863.

<sup>1</sup>Ibid., p. 713. It is interesting to note that Stenhouse gives two versions in the same work. He first gives the Reid version, apparently as his own view, and then includes a special section on mining by E. D. Buel which gives the Heitz version.

<sup>2</sup>Tullidge, op. cit., p. 697.

<sup>3</sup>Quoted in Fred Rodgers, Soldiers of the Overland (San Francisco: Grabhorn Press, 1938), p. 213.

One, taken out in the name of the Jordan Silver Mining Company, listed discoverer's shares in favor of George B. Ogilvie. Other shareholders included P. E. Connor, Archibald Gardner, Robert K. Reid, Henry Bexted, who may be the Henry B. Beakstead mentioned by Ledyard, and Samuel Egbert, who also figures in one version of the discovery. The other notice covers a claim contiguous with that of the Jordan Silver Mining Company, probably lying on the same vein. Discoverer's shares in this claim were given to Mrs. Robert K. Reid, whose husband was among the shareholders of the other claim. Other shareholders included Arthur Heitz, who may be the A. Heitz mentioned by Buel and Murphy, and Mrs. P. E. Connor.<sup>1</sup>

It appears fruitless to speculate concerning the first recorded discovery of mineral at Bingham. The various authorities cited, Buel, Murphy, Stenhouse, Tullidge, and Ledyard, were all in a good position to know the facts, yet disagree among themselves. Buel and Murphy were prominent early day mining men. Stenhouse and Tullidge were leading journalists supposedly in touch with events. Ledyard is an official of the American Smelting and Refining Company who has made an extensive study of this particular problem. The documents available differ, as did the people on the scene, who were after all in the best position to judge. Apparently the differences were amicable since we find the Connor and Reid families divided in their holding of shares and Heitz becoming a stockholder in his presumed

---

<sup>1</sup>Claim Notice for Jordan Silver Mining Company and Unnamed Claim of Mrs. Robert K. Reid, County Recorder's Office, Salt Lake County.



rival's company. The writer is inclined to the view that a simultaneous or nearly simultaneous discovery by two or more parties was probable. In any case the discovery of mineral (which possibly had been found years before) was not so important as the fact that now a group of people was interested in mining who had the determination to begin mineral exploitation.

The same day that the first claim notices were filed a miners' meeting was held at the Jordan Ward House, where the West Mountain Mining District was defined and rules for the governing of that district set up. The limits of the district were as follows:

This district shall include that portion of territory situated in the territory of Utah, and bounded as follows, commencing at the confluence of the River Jordan, with Great Salt Lake, and running thence in a southwesterly direction along the east bank of the said river Jordan to its point of exit from lake Utah, thence along the west margin of said lake Utah to the 40th degree north latitude (Greenwich) to the 114th degree of west longitude (Greenwich) thence along said 114th degree of west longitude to the 41st degree of north latitude (Greenwich) thence along said 41st degree of north latitude to Great Salt Lake, thence along the margin of said lake to the place of beginning.<sup>1</sup>

This description embraces the entire Oquirrh range. However, within a few years the district was divided into a number of others. The West Mountain Mining District now embraces the area immediately around Bingham.

The news that mining activity had begun in Bingham apparently caused no official excitement in the Mormon Church for the Deseret News takes note of it almost a year later and then

---

<sup>1</sup>By-Laws of the West Mountain Mining District, County Recorder's Office, Salt Lake County.



only in an oblique manner.<sup>1</sup> However, of those active in mining at Bingham, Gardner, Bexted, and Egbert, at least, were almost certainly Mormons. It would appear that though the leadership of the Latter-Day Saint Church was indifferent to mining, the rank and file were by no means so uninterested in a chance for riches.

Desiring to encourage further mining enterprise, Connor wrote War Department headquarters on October 23, 1863, as follows:

Having reason to believe that the Territory is full of mineral wealth, I have instructed commanders of posts and detachments to permit men in their commands to prospect the country in the vicinity of their respective posts, whenever such course would not interfere with the military duties, and to furnish every proper facility for the discovery and opening of mines of gold silver and other minerals.... Already within a distance of twenty-five to fifty miles of this city, in the east and west mountains mines have been discovered yielding, with imperfect tests, rich indications of silver, and largely charged with lead and copper ores . . . . If I be not mistaken in these anticipations, I have no reason to doubt that the Mormon question will at an early date be finally settled by peaceable means without the increased expenditure of a dollar by the government, or, still more important, without the loss of a single soldier in conflict.<sup>2</sup>

This last statement of Connor's seems to indicate the Gentiles in Utah had quite as much political hope connected with mining development as Mormons had political fear. The discovery of ore coupled with this action of Connor's may have provoked some response from the Saints for Connor issued a circular on March 1, 1864, in response to:

---

<sup>1</sup>Deseret News, November 30, 1864.

<sup>2</sup>United States War Department, op. cit., Vol. I, Pt. II, p. 656

. . . . numerous letters of complaint and inquiry from parties within and without the territory, the former alleging that certain residents of Utah Territory have indulged in threats and menaces against miners and others desirous of prospecting for precious metals, and the latter asking what, if any, protection will be accorded to those coming hither to develop the mineral resources of the country. . . . .

The circular goes on to give a very strong warning to offenders, and states that they will be punished to the "utmost extent of Martial Law."<sup>1</sup>

This brought forth an indignant editorial in the Deseret News denying any interference with prospectors and at the same time condemning Connor's action in these words: "Had we been informed that the government wished to employ troops in Utah at mining much trouble and expense might have been saved, for we presume anyone would have cheerfully given information of the lead veins of the West Mountains."<sup>2</sup> Whether or not any incidents of the type Connor mentioned actually took place is a question which probably cannot be answered. Connor was stirring troubled waters it is true, but Gentiles in remote parts of the territory were often pretty thoroughly scared, if nothing else.

These interchanges indicate the development of an interesting social attitude in Utah. The Gentiles determined to carry forward the development of mining not only for profit but also as a counterweight to Mormon political control. The Saints were equally determined to halt such growth. Particularly,

---

<sup>1</sup>United States War Department, op. cit., Vol. I, Pt. II, p. 748.

<sup>2</sup>Deseret News, June 22, 1864.



were they concerned with keeping members of the church from going to the mining towns. To this end, the Deseret News during the '60's decried the possibility of finding rich mines in Utah, and feelingly described the general profitlessness and profligacy of mining.<sup>1</sup> It is perhaps significant that Gentile sources referred to the silver deposits of the West Mountains while Mormon sources called them "the lead veins." In the inception and later modification of these attitudes toward mining Bingham played an important role.

To return to specific events in Bingham, after the beginning of mining there was a decided spurt in activity. On September 18, 1863, the Vidette claim was filed; January 24, 1864, the Galena was located; February 6, the Empire; in May, the Kingston and the Julia Dean; and in July, the Silver Hill.<sup>2</sup> Unfortunately, all this activity met with little success. The grade of the ore was good in most cases, but the difficulties encountered in smelting were very great chiefly because of the inexperience of the metallurgists of the time in dealing with a new type of ore. In addition, the scarcity and poor quality of charcoal and most other materials handicapped the early metallurgist. Even if a cheap product could have been produced, the expense of shipping it to market in the east would have been prohibitive. To illustrate, it is estimated that the cost of the Jordan Tunnel, driven by the West Jordan Silver Mining Company,

---

<sup>1</sup>Deseret News, November 30, 1863; June 14, 1865; May 24, 1866, etc.

<sup>2</sup>John Mason Boutwell, Economic Geology of the Bingham Mining District, Utah (Washington: U. S. Government Printing Office, 1905), p. 83.

was sixty dollars per foot, an enormous cost for those days. One hundred dollars a keg for powder and shovels at \$2.50 apiece were common prices.<sup>1</sup>

A district meeting was held in 1865 to consider ways and means of overcoming these conditions, but it did little except to extend the period during which claims could be held without assessment work.

Under these circumstances the versatility of the mineralization which has been mentioned came to the rescue. In 1864, placer gold was found in the canyon. Bancroft ascribes its discovery to a party of Californians returning from Montana to pass the winter. Presumably, the Californians were attracted to Bingham by the previous mineral discoveries there. Mining of moderately profitable gravel began in the spring of 1865, and continued as the chief moneymaking activity of the camp for the next five years.<sup>2</sup>

In the meantime location of lode mines proceeded apace. Mining men in Utah observed with interest the building of the transcontinental railroad and waited impatiently for its coming. They were convinced that if it would overcome their previous difficulties of transportation and marketing, they could overcome their own technical shortcomings. Up to 1865, numerous claims were made in Bingham. The most important were the Spanish, the Winnamuck, the Yosemite, and the Franklin. All

---

<sup>1</sup>Ibid.

<sup>2</sup>Hubert Howe Bancroft, History of Utah (San Francisco: The History Company, 1889), p. 740.

of these became important producers later.<sup>1</sup>

The mining industry at Bingham, except for placer mining can be said to have been in a period of waiting from 1863 till 1865. The location of the ores was known. It was necessary only to wait for the development of smelting and transportation facilities in order to bring great activity to Bingham.

---

<sup>1</sup>U. S. Bureau of the Census, Tenth Census of the United States (Washington: U. S. Government Printing Office, 1880), XVII, Appendix I, p. 408.

### CHAPTER III

As the period from 1863 to 1865 in the history of Bingham was typified by development and waiting, the years from 1865 to 1896 were a time of active mining of lead carbonate and oxidized gold ores. The years after the discovery of ore in Bingham Canyon had been full of hardship for the early miners. Difficulties in transportation, refining and marketing had forced them to hold in abeyance their plans for extensive lode mining and to concentrate in the meantime on the production of placer gold. Hopes for future development were focused on the completion of the transcontinental railway and its branches which would connect Bingham with the world.

In 1869, the connection of the Union Pacific and Central Pacific Railroads was accomplished at Promontory Point near Ogden. Within a short time the construction of the Utah Central Railroad running south to Salt Lake City was begun. In 1870, this road was completed to Salt Lake and Sandy. Thus a rail point within practical freighting distance of Bingham was provided.

The stimulation provided by the railroad possibly influenced the construction of the first efficient smelter in Utah, which was erected in 1870. The plant was located seven miles south of Salt Lake City in a strategic position in regard



to the Alta and Bingham mines.<sup>1</sup> Very probably much of the early production of the Bingham mines was treated at this smelter.

The early 1870's was a period of great mining excitement in Utah. In 1871 the Emma mine, an extremely rich silver property located in Little Cottonwood Canyon in the Wasatch Mountains, was sold to an English syndicate for a fabulous price; and in the process created an equally fabulous international scandal involving the U. S. minister to England. In 1872 the great Ontario strike was made at Parley's Park, causing a town to spring up there and incidently adding to the fortunes of the Hearst family. In 1875 the Horn Silver Mine, located at Frisco near Milford, caused a flurry of railroad building and enriched several eastern financiers in the process. The excitement was topped the next year by the discovery of the Silver Reef district at Leeds, in Washington County. All of these strikes were of noteworthy richness and attracted much attention within and without the state.<sup>1</sup>

Bingham had a considerable share in this boom, and as early as 1865 had been the scene of considerable expansion of holdings on lead-silver strikes. Between 1865 and 1870 a number of such claims had been made in the Bingham District. The Lead Mine, the Last Chance, Queen, Hidden Treasure, Orphan Boy, No-You-Don't, Rough and Ready, Eagle Bird, and Northern Light

---

<sup>1</sup>U. S. Bureau of the Census, Tenth Census of the United States (Washington: U. S. Government Printing Office, 1880), XVII, Appendix I, p. 406.

<sup>2</sup>Ibid.

being the principal ones.<sup>1</sup> These mines, together with the ones previously located, viz., the Jordan, Old Telegraph, Utah, the Spanish, Winnamuck, Yosemite, and Franklin, became the principal producers in the years 1863 to 1880.<sup>2</sup> The extent of mining activity in Bingham may be judged from the fact that between 1863 and 1880, six thousand five hundred claims were made in the district of which seven hundred were held and sixty-three patented.<sup>3</sup> The largest part of this activity took place during the 1870's.

It appears that the largest part of the mining activity was confined to Bingham Canyon proper between 1863 and 1880, lead-silver ores being the chief product. After 1880 lead-silver mining was largely transferred to Butterfield Canyon and the eastern part of the district. The central part of the district turned to the mining of oxidized gold ores.<sup>4</sup>

Among the principal producers during the first period was the old Jordan claim, the original discovery site, located in 1863. This location was originally made by P. E. Connor and some others, and was worked by them as the West Jordan Silver Mining Company till about 1865, though no great production was made. In 1870 the claim was sold to J. W. Kerr, Isaac Morris,

---

<sup>1</sup>Boutwell, op. cit., p. 408.

<sup>2</sup>U. S. Bureau of the Census, op. cit., p. 408.

<sup>3</sup>U. S. Bureau of the Census, op. cit., p. 407.

<sup>4</sup>Boutwell, op. cit., p. 408.

and others.<sup>1</sup> This syndicate operated the mine and erected the one stack Galena Smelter.<sup>2</sup> The mine either got into some difficulties or showed great promise for in 1873 Kerr and his partners sold out to the firm of Carson and Buzzo.<sup>3</sup> This firm erected a flume eleven miles long to bring water power to the mine and made various other improvements all to no avail for this concern in its turn failed and sold out in 1875 to the Galena Silver Mining Company. This company erected a five stack smelter on the Jordan River and began to carry on operations on an extensive basis. However, in 1877 the property went into the hands of the Jordan Mining and Smelting Company, which was reorganized in 1879 as the Jordan Mining and Milling Company. Throughout these changes of ownership the mine continued to produce.<sup>4</sup>

Another significant producer during the 1870's was the Utah Mine. This claim was located in upper Bingham Canyon a short distance from the old Jordan. Its location date is not known, but it is spoken of as an old soldier claim; which places it in the period of Connor's activity in Bingham during 1863-1865. In 1871 the property came into the hands of Buel and Bateman who erected a smelter that year. Such was the success of the property that an English syndicate became interested in the mine and

---

<sup>1</sup>Boutwell, op. cit., p. 83.

<sup>2</sup>U. S. Bureau of the Census, op. cit., p. 408.

<sup>3</sup>Ibid. The census report gives no date for this transaction, but gives the firm name as Carson and Buzzo. Boutwell gives the date but calls the firm Carson and Buzzel. Since the census is a source closer to the time under consideration, I have used the name given there.

<sup>4</sup>U. S. Bureau of the Census, op. cit., p. 408.



purchased it within the year for a reputedly high price.<sup>1</sup>

Some records of the Utah Smelter, which was operated by the English company, have very fortunately survived to the present day; and from them it is possible to gain an interesting insight into smelter operation in Utah in the early days:

#### SMELTING COSTS

Flux.....	\$ 6.96	per ton	
Charcoal.....	15.80	" "	
Labor.....	4.27	" "	
Calcination.....	5.30	" "	
Mining and Incidentals.....	<u>6.00</u>	" "	
Total Cost	\$38.33	" "	
Gross Returns	\$43.85	" "	
Net Profit	\$ 5.52	" "	

Another set of interesting collateral figures come from the accounts of the Winnamuck Smelter operated during the same period:

#### COST OF MATERIALS

Charcoal.....	\$ 0.30	per bushel
Iron Flux.....	25.00	per ton
Lime.....	7.00	per ton

#### FURNACE CHARGE

13 parts	.....	Ore
4 "	.....	Iron Flux
5 "	.....	Lime
6 "	.....	Charcoal
2 "	.....	Old Slag

Total losses in smelting were 6.4 per cent of the lead and 5.8 per cent of the silver. The total cost of mining and smelting was \$44.00 per ton. Cost of freight and supplies was

---

<sup>1</sup>U. S. Bureau of the Census, op. cit., p. 409.



\$45.73 per ton. Total cost \$89.73.<sup>1</sup> The low cost of labor and the high cost of transportation and supplies are worthy of note as indicating the general conditions of the mining and smelting industry at the time. Especially were smelter operators irked by the high cost of charcoal for use in their furnaces. The later development of coke burning furnaces and the production of good local coke lowered Utah smelting costs considerably.

The English syndicate mentioned continued to operate the Utah claim till 1873 when the carbonate ore ran out and pyrites were struck. In 1874 John Longmaid constructed the first concentration works in Utah for the purpose of treating these ores. The nature of the plant is unknown though it probably consisted of a stamp mill and a jigging plant. The works failed to treat the ore properly and in 1876 they were dismantled and moved to the Old Telegraph mine. Operations at the Utah mine were curtailed, and in 1879 the property was sold to T. R. Jones.<sup>2</sup>

The Winnamuck, another producer of this time, was discovered in 1867 by some "Mormon Farmers." They uncovered ore of some value and sold out the same year to Bristol and Dagget for \$15,000.00. This firm held the property till 1871 when they commenced active operations by building a smelter in the canyon. The smelter was such a success that Bristol and Dagget were able to sell the works in 1872 to some English investors for three million dollars and fifty thousand shares of stock in the new

---

<sup>1</sup>Boutwell, op. cit., p. 89.

<sup>2</sup>U. S. Bureau of the Census, op. cit., p. 408.

company. The expectations of the new company were not fulfilled, however, for in 1875 the carbonate ore ran out and the smelter was perforce abandoned.

The mine was then sold to a Dutch concern and operated during 1876 by them. Again operations did not pay, and in 1877 the mine was leased to local men.<sup>1</sup>

Further development of the Bingham District was brought about by the New York and Utah Milling Company which built a leaching plant for lead treatment at Revere Switch in 1880. A roasting plant was added for primary treatment of the ores. Unfortunately, no information remains concerning the success or failure of the plant.<sup>2</sup>

Perhaps the most rewarding producer of the period was the Old Telegraph mine located in Bear Gulch. The mine consisted of the Nez. Perce, Chief, Montreal, and No-You-Don't claims, all dating from the period 1865-70. The claims were at first worked separately, the Nez Perce, No-You-Don't, and Chief being operated by Windsor and Randall from 1873-1877, the Montreal being operated by another company during the same period. Both operations produced very well, especially in 1876, 1877, and 1878. In 1877 litigation between the two operators arose over the boundary between the No-You-Don't and Montreal claims. The issue was ultimately settled by consolidation of the two companies in 1878. In that same year the superintendent of the newly formed Old Telegraph Mining Company was hauled into court by his employers.

---

<sup>1</sup>U. S. Bureau of the Census, op. cit., p. 412.

<sup>2</sup>U. S. Bureau of the Census, op. cit., p. 413.

It appears that the superintendent had issued false reports of a very gloomy nature concerning the state of the mine, thus driving the price of the stock of the mine down. He then proceeded to buy up the stock through dummies. The superintendent was acquitted by the lower courts. However, the decision was reversed on appeal. The case was finally settled out of court, the superintendent paying two hundred thousand dollars in damages.

Later, in 1878, a French corporation became interested in the mine and at last purchased for the sum of 17,000,000 francs. The French engineers apparently overestimated the quantity and quality of the ore reserves and underestimated the cost of production because the French enterprise was on the rocks by the latter part of 1879.<sup>1</sup>

The main producer in Muddy Fork was the Stewart mine. This company was incorporated in 1878 for six hundred thousand dollars in sixty thousand shares. A ten stamp mill was erected the same year. In 1879-80 the concern was mining a large body of low grade oxidized gold ore employing sixty-four men on a ten hour shift at a wage of \$2.50 to \$3.00 per day.<sup>2</sup> In the period between 1882 and 1896 the Stewart mine, as a gold producer became the most important operation in Bingham Canyon. It will be recalled that this was during the period of depression in lead and silver mining.<sup>3</sup>

---

<sup>1</sup>U. S. Bureau of the Census, op. cit., p. 415.

<sup>2</sup>U. S. Bureau of the Census, op. cit., p. 417.

<sup>3</sup>Boutwell, op. cit., p. 82.



There were, in addition to these major producers, about ninety active lead-silver and gold mines in the Bingham area in 1880 not counting non-producing prospects.<sup>1</sup>

The production of copper was of secondary importance during this period. The principal claims were the What Cheer, Hickman, Murphy, Kingston, and Washington. All were located on the so-called "copper belt" on what is now the Utah Copper Mine. Interestingly enough, the author of the special article on Bingham which appears in the tenth census mentions the large copper stains on the sides of the canyon and the alluvial copper deposits in the creeks.<sup>2</sup> Twenty years later these same signs attracted the attention of Enos A. Wall to the huge low grade copper deposit that was finally to become the Utah Copper Mine.

Placer activity, also, was of relatively minor importance during this period. The principal activity had been during 1867 and 1868. Much work had been done in 1872-1873, also, but very little thereafter.<sup>3</sup>

The methods of mining in vogue in Bingham at this time were those common to all western underground mining of the period, modified to some extent by conditions peculiar to Bingham. Development generally took the form of a series of tunnels driven along the strike, at different levels on the outcrop, with crosscuts to prove horizontal extent and inclines on the dip to prove extent in depth. Some mines also used inclined

---

<sup>1</sup>U. S. Bureau of the Census, op. cit., p. 406 et seq.

<sup>2</sup>U. S. Bureau of the Census, op. cit., p. 419.

<sup>3</sup>Ibid.



shafts sunk from the surface and lateral drifts driven at regular intervals in descent. Stopeing methods varied considerably according to the character of the ground, the square set, caving and fissure mining being the methods most commonly used.<sup>1</sup>

The methods of reduction varied according to the type of ore. Carbonate lead-silver was treated by direct smelting or by prior roasting when mixed with sulphide ores. There were no facilities for recovering zinc. Treatment of complex ores was of course impossible (because of technical failings) as was the treatment of low-grade ores. Concentration of lead-silver ores was confined to crushing, stamping and treatment in riffles, tie boxes, and jigs. Treatment of gold ores generally consisted of amalgamation on riffles following stamping.<sup>2</sup>

A prime factor in the development of Bingham at this time was the completion of the long anticipated railroad which brought to Bingham the cheap transportation it had so long needed. This road, The Bingham and Camp Floyd Railroad, was projected to run to Bingham, Camp Floyd, Stockton, Ophir, and Tooele; but it progressed only as far as Bingham which it reached in December, 1873.<sup>3</sup> The company was incorporated in 1872 with a capital stock of three hundred thousand dollars which was soon sold out. Officers were C. W. Schofield, President; B. W. Mann, Vice-President; W. B. Welles, Secretary; and G. W. Goss,

---

<sup>1</sup>Boutwell, op. cit., p. 87.

<sup>2</sup>Boutwell, op. cit., p. 91.

<sup>3</sup>U. S. Bureau of the Census, op. cit., p. 408.

Superintendent. The valley terminus of the road was at Sandy Station on the east side of the Jordan apparently near the present city of Sandy. The road was standard gauge with a third rail from there to Jordan. West of that point it was narrow gauge. The line was possessed of three engines, one hundred freight cars, and four passenger cars in 1874.<sup>1</sup> The western terminal of the line was at Bingham in lower Bingham near the present terminal of the Denver and Rio Grande Railroad. From the terminal three miles of gravity tramway were built, with connections to the principal mines, to bring the ore down. The cars were returned by mules. The freight rates in 1880 from Bingham to Sandy ranged from \$1.25 to \$3.00 per ton.<sup>2</sup> The Bingham and Camp Floyd Railroad continued to function till 1883 when it was purchased by the Denver and Rio Grande Railroad Company. It was changed to standard gauge in 1890. It now connects at Midvale.<sup>3</sup>

Generally speaking then, the period was one of development and progress in mining at Bingham. The railroad was brought to the camp, three smelters had been operated in Bingham Canyon and a number of others run on Bingham ore, a number of well paying properties had been developed. However, the industry was not

---

<sup>1</sup>Utah Mining Gazette, March 21, 1874.

<sup>2</sup>U. S. Bureau of the Census, op. cit., p. 408.

<sup>3</sup>Burt Sylvanus Butler, The Ore Deposits of Utah, United States Geological Survey, Professional Paper No. 111 (Washington, D. C.: U. S. Government Printing Office, 1905), p. 119.

without its troubles as we have seen from the record of individual mines. Perhaps the most important of these problems had to do with changing grade and character of the ore. Nearly all the ores found near the surface at Bingham are more or less oxidized. In the case of lead-silver ores this condition produces an ore known generally as lead carbonate. This type of ore is easily mined and smelted and it is rich. Since this type of ore was present in large quantities at Bingham, early mining proceeded under optimum conditions as far as grade and type of ore were concerned. But as the technical facilities for mining grew better and more and more ore was produced this situation changed. The ore showed a tendency to decline in grade and more important to change from the easily reduced oxide to a very refractory sulphide of lead as the mines increased in depth. This ore, though rich, was not amenable to the rather primitive smelting methods of the day. Thus as the mines were worked deeper they were confronted with increasing problems and often they were forced to close.

However, this circumstance was offset to an extent by a number of other developments. First of all, there was constant uncovering of new deposits of the easily worked ores. Secondly, the relatively high prices of silver at that time tended to offset the declining grade of ores; and finally, new techniques of smelting were being developed which ultimately made it possible to exploit the sulphide ores.

As the lead-silver mines of Bingham Canyon proper became increasingly involved in these difficulties during the 1880's,



the center of lead-silver mining was, in large part, transferred to the eastern slope of the Oquirrh range to Yosemite Gulch, Keystone Gulch, and the adjacent area where new discoveries of ore were made.<sup>1</sup>

The principal new producers in this area were the Lead mine, Brooklyn, and the Yosemite. A number of other properties were active. These properties began to take hold about 1885, and their new production made possible the continued mining of the lead-silver ores for the next eight or nine years. Unfortunately, aside from some scattered mention in later sources, no detail concerning the operation or ownership of these mines remain.<sup>2</sup>

The development of Bingham mining was further advanced when in 1888 a drop in smelter rates brought about by certain technical improvements took place. This circumstance made possible the exploitation of the galena ore bodies which had hitherto been uneconomical to mine. As a result, mining took a renewed lease on life and remained the chief occupation of the camp till 1893.

This period in the history of Bingham saw the inauguration of an important movement in the economic history of the town. The increasing depth of the mines, difficulties with drainage, the alternating character and fluctuating values of the ores among other factors tended to force the small independent producer to the wall. A man who was working a small claim could not find

---

<sup>1</sup>Boutwell, op. cit.

<sup>2</sup>United States Geological Survey, Mineral Resources of the United States, 1886 (Washington, D. C.: Government Printing Office, 1887), p. 104.

the money to provide machinery and other needed items or to give the financial stability necessary to meet the problems of an erratic market. As a result, beginning in the 1890's we find the consolidation of many claims into large holdings worked by joint stock companies becoming the typical, indeed almost the only, form of mining organization. The movement was begun by the consolidation of the Jordan and Galena claims in 1890, and has been carried on ever since.<sup>1</sup>

We find, then, in Bingham Canyon between 1865 and 1893, a period of very active operation in which lead-silver ores were the main product of the district with secondary importance being given to the production of gold from placer mines and from oxidized deposits. We find the district facing and surmounting the many problems found in achieving cheap transportation and in overcoming problems connected with the efficient mining and treatment of its ores. In this period also, it is noteworthy that the great extent and variety of Bingham's ores stood her in good stead through the various stages of her history. It remains to be seen how certain later events changed the production emphasis of the Bingham District and turned it into an entirely new course.

---

<sup>1</sup>Boutwell, op. cit., p. 146.

## CHAPTER IV

We have previously traced the development of Bingham from its inception and passed through the epoch of lead-silver mining including the transition from carbonate ores to other lead ores. There remains to be considered another transition involving the production of oxidized ores and the third and final epoch extending to the present time, that of copper mining.

It is well to bear in mind the fact that in spite of an excellent production record from 1865 onward, Bingham was in the 1890's in serious difficulties. An indication of the situation is found in the production statistics; by 1890 lead production had dropped to 17,202,000 pounds valued at \$774,000.00 whereas the production for 1875 had been 26,000,000 pounds valued at \$1,586,000.00.<sup>1</sup>

Several problems weighed on the minds of mine managers during this period. One was a trend toward dropping lead prices. Another was the tendency of Bingham ores to change in character with increasing depth, the oxidized zone ores changing to lower grade sulphide and galena ores.

Fortunately, other minerals existed in conjunction with the lead ores, and they offered an avenue of escape increasingly exploited. As was previously mentioned, oxidized gold ores were

---

<sup>1</sup>B. S. Butler, Ore Deposits of Utah (Washington: U. S. Government Printing Office, 1920), p. 345.



mined to a considerable extent, but their production was of secondary importance never amounting to more than \$103,000.00 per annum. Of far more importance was silver production which averaged \$500,000 per year and which, in some years, amounted to nearly \$1,500,000.00.<sup>1</sup>

It is in this connection that the year 1893 assumes significance in the history of Bingham. In that year Bingham, and silver producing camps generally, suffered from the repeal of the Bland-Allison Silver Purchase Act and the closing of the British Indian Mints to free coinage. This resulted in bringing about a declining price of silver which immediately affected production in Bingham causing a drop which reached a low of \$121,081.00 in 1899. Since the ores are mixed in the Bingham District, there was a consequent drop in lead production.<sup>2</sup>

It is probable that but for the very fortunate variety of mineralization found in the Bingham area the district would have assumed a minor position in the mineral industry or might have become a ghost town within a short period. In this situation attention was forced to the consideration of the large bodies of copper and gold ores which had hitherto been largely ignored. Their successful exploitation inaugurated a new era in Bingham mining.

The first area exploited in the attempt to find new income for Bingham was in mining of oxidized gold ores. Production of eight thousand ounces of gold in 1894 jumped to

---

<sup>1</sup>Ibid.

<sup>2</sup>Ibid.

eleven thousand in 1895 and ran between seven thousand two hundred and ten thousand ounces till 1900. The principal producers were the Stewart mine and the Old Jordan.

However, the most significant operation was conducted at the Highland Boy mine at the head of Carr Fork.<sup>1</sup>

The Highland Boy was located in 1873 by J. W. Campbell. Gold ore ranging from thirty to forty dollars per ton was found, and lead ore of some value was also found. It is, however, impossible to follow the history of the mine in any detail till 1896. Early in that year the Highland Boy was leased under option by Samuel Newhouse, who employed as his manager Thomas Weir.<sup>2</sup>

It was proposed to exploit the rich gold ores lying in the oxidized zone of the claim by treating these ores by the cyanidation process after stamp milling. A stamp mill and cyanide plant were accordingly constructed and production got under way. By the fall of 1896, however, the enterprise was in serious difficulties. The copper present in the gold ore made recovery under the cyanide process extremely difficult and required enormous amounts of cyanide. In addition, the grade of ore was not all that could be desired.<sup>3</sup> The story has it that by December Newhouse's back was to the wall and that he left for

---

<sup>1</sup>Boutwell, op. cit., p. 84.

<sup>2</sup>Boutwell, op. cit., p. 110. Boutwell gives Weir as leasee, but other sources, notably Rickard's, History of American Mining, and local tradition credit Newhouse with ownership.

<sup>3</sup>Ibid.

Denver to try to raise money to fill his delinquent payroll. While there he received word that copper ore had been discovered in paying quantities. It has been said, and it is very possibly true, that copper sulphide ore had been found in a winze off the fourth level sometime previously but that the winze had been covered and the information suppressed since the finding of sulphide ore was regarded as the death blow to a mine depending on oxide ores. Later, when the situation grew desperate the winze was uncovered and the ore exploited.<sup>1</sup>

Whatever the case, in December of 1896 the first shipment of copper ore was made from the Highland Boy, thus inaugurating the great epoch of Bingham copper production.<sup>2</sup> This was not the first discovery of copper ore in Bingham, nor the first attempt made to exploit it, but it was a fortuitous discovery of rich ore at a time when improved reduction techniques and an expanding market made exploitation possible.

The reaction to this discovery was immediate and profound. In 1897 the Highland Boy Mining Company was absorbed by the Utah Consolidated Mining Company, Limited, a British corporation, which bought a controlling interest. More elaborate production facilities were introduced, the cyanide mill was abandoned, and an aerial tramway constructed from the mine to a railway terminal.<sup>3</sup>

---

<sup>1</sup>T. A. Rickard, The Utah Copper Enterprise (San Francisco: The Mining and Scientific Press, 1919), p. 91.

<sup>2</sup>Boutwell, op. cit., p. 84.

<sup>3</sup>Ibid.



Because of the Utah Consolidated's activity copper production rose very rapidly reaching 500,000 pounds in 1896; 1,419,010 pounds in 1897; 2,283,791 pounds in 1898; and 4,145,038 pounds in 1899.<sup>1</sup> In 1899 the Utah Consolidated constructed a 350 ton smelter at Sandy.<sup>2</sup> As soon as this plant came into production a further rise in production took place. In 1901 copper production reached 14,422,361 pounds.<sup>3</sup>

The success of the Highland Boy venture stimulated further activity in copper mining at Bingham during the late nineties. By 1901 various properties were in an active stage. The Bingham Copper and Gold Mining was working in the old Dalton and Lark mines. This company built a smelter at Jordan and completed the Dalton and Lark Railroad for the purpose of connecting the mine with the Denver and Rio Grande Railroad at Dalton Junction.<sup>4</sup>

In the same year the United States Mining Company was constructing a copper and lead smelter at Midvale to treat its ores from Bingham where it had acquired control of the Old Jordan, Old Telegraph, Nez Perce and contingent claims. Production was lead primarily, but diligent search for copper ores was soon undertaken.<sup>5</sup> Substantial amounts of copper ore were found in 1903 principally on the commercial claim.<sup>6</sup>

<sup>1</sup>Boutwell, op. cit., p. 110.

<sup>2</sup>Boutwell, op. cit., p. 85.

<sup>3</sup>Boutwell, op. cit., p. 110.

<sup>4</sup>United States Geological Survey, Mineral Resources of the United States, 1901 (Washington: Government Printing Office, 1902), p. 172.

<sup>5</sup>Ibid.

<sup>6</sup>United States Geological Survey, Mineral Resources of the United States (Washington: Government Printing Office, 1904), p.215.

In 1901 also, the American Smelting and Refining Company built a custom smelter for the treatment of lead ores at Murray which in the course of time treated much Bingham ore.<sup>1</sup>

In 1902 these properties became increasingly active and new producers entered upon the scene. The Boston Consolidated Mining Company acquired a number of claims in Carr Fork and by 1902 had developed large bodies of ore at depth. However, no smelter was built for some time.<sup>2</sup>

At Lark the Columbia Copper Corporation had undertaken successful concentration of copper ores in a pilot plant and was considering the construction of a large concentrator. By the next year this company had been absorbed into the Ohio Copper Company and large scale operations commenced.<sup>3</sup>

In 1903 the Tintic Mining and Development Company commenced operations on the Yampa Claim in Carr Fork. A 250 ton smelter was built in that year together with an aerial tramway and the necessary surface installations.<sup>4</sup>

By 1906 these producers had been joined by a number of others: the New England Gold and Copper Company, the Bingham Central Mining Company, the Bingham and New Haven Copper and Gold

---

<sup>1</sup>United States Geological Survey, Mineral Resources of the United States, 1901 (Washington: Government Printing Office, 1902), p. 172.

<sup>2</sup>United States Geological Survey, Mineral Resources of the United States, 1902 (Washington: Government Printing Office, 1903), p. 178.

<sup>3</sup>United States Geological Survey, Mineral Resources of the United States, 1903 (Washington: Government Printing Office, 1904), p. 215.

<sup>4</sup>Ibid.



Mining Company, and the Utah Apex Mining Company being the principal ones.<sup>1</sup> All in all, there were some forty to fifty producing mines in Bingham during the period under consideration.

The most significant event of the period remains to be considered. That is the beginning of the Utah Copper operation in 1903.<sup>2</sup>

The inception of the Utah Copper enterprise extends back some little time in the history of Bingham. Since the early days the presence of copper stains and alluvial copper precipitates had been remarked and the presence of a large body of low grade ore, more or less vaguely defined, had been known. Under the mining methods of early days it was, of course, impossible to mine ore of such a low grade. Various attempts were made to follow up high grade sulphide streaks in the porphyry which formed the bulk of the deposit, but the scattered nature of the ore and the high cost of the selective mining necessary made operations unprofitable.

The concept of mining the entire disseminated ore body evidently originated with Enos A. Wall who appeared on the scene in the eighties. Wall, an experienced mine operator, came to Bingham in 1887 where the various indications of copper mineralization attracted his attention. He took some samples showing the

---

<sup>1</sup>United States Geological Survey, Mineral Resources of the United States, 1906 (Washington: Government Printing Office, 1907), p. 353.

<sup>2</sup>United States Geological Survey, Mineral Resources of the United States, 1903 (Washington: Government Printing Office, 1904), p. 215.



average grade of ore to be about three per cent copper and conducted some crude panning tests which showed a thirty to forty per cent concentration to be possible. Wall's interest was aroused, he went to the recorder's office, and upon finding the many claims of the ore body were open he relocated them. From 1887 to 1896 Wall continued his interest in the matter, consolidating and extending his claims and doing development work. Wall finally came to hold about 400 acres of mineral ground situated directly over the ore body.

In 1896 Joseph R. DeLamar, who had had previous dealings with Wall at Mercur, became interested in the property and took a six months option on three-fourths of the property for \$375,000.00. DeLamar's engineer, H. A. Cohen, made an examination and ran a test on seventy-six tons of ore, discovering that a sixty to seventy per cent concentrate averaging twenty-eight to thirty-three per cent copper could be made. However, it appears that Cohen's report on the property was unfavorable for DeLamar allowed his option to drop.

Shortly after this time Cohen was replaced on DeLamar's staff by Victor Clement who evidently was able to reinterest DeLamar for in 1896 DeLamar secured another option for one-fourth interest at \$50,000.00 and on a second quarter at \$250,000.00. This time the examination was undertaken by two young engineers in DeLamar's employ at Mercur, R. C. Gemmel and D. C. Jackling. In 1899 Clement purchased for DeLamar a one-quarter outright interest for \$50,000.00 and a one year option on an additional quarter at \$250,000.00 and a three-quarter interest for \$1,250,000.00. On this understanding exploratory work began.

Jackling's report showed 12,385,000 tons of ore developed with an average copper content of two per cent. An estimated tonnage of twenty-five million was advanced. Concentration tests indicated that a 71.70 per cent recovery was possible with an average copper content of 21.75 per cent yielding \$55.07 per ton. The results of the test were still under consideration when DeLamar and Clement had a quarrel for some reason. As a result Clement was replaced by H. A. Cohen who evidently vetoed the Wall properties again because DeLamar dropped his option retaining only the one-quarter interest. His expenditure had been \$46,000.00 altogether.

For a time after this the property went begging. In 1900 it was offered to the Guggenheims and to Marcus Daly and refused. In 1902 it was offered to John Hays Hammond, to the General Electric Company, and to the Tharsis Copper and Sulphur Company; all of them refused it. In 1903 an attempt to interest W. A. Clark failed.

In the meantime Jackling had left the employ of DeLamar and entered that of the United States Reduction and Refining Company in Colorado. In 1902 Jackling was able to secure the backing of Charles MacNeil, Spencer Penrose, and Charles A. Tutt of the United States Reduction and Refining Company, and he approached Wall for an option. He was refused. While he was on his errand in Salt Lake (where Wall resided) Jackling met H. A. Cohen and somehow induced the latter to go to Wall on Jackling's behalf. Cohen went to Wall and "spoke of having



New York friends that would be willing to find money for the Bingham undertaking if a reasonable option could be given."<sup>1</sup> Wall agreed to sell half of his holdings for \$400,000.00, but imposed certain conditions of equipment and development. Cohen enlisted the aid of W. S. McCornick, a Salt Lake banker, and the two succeeded in bringing Wall to terms. Wall agreed to an option of one-half of his undivided interest and \$350,000.00 cash. He further agreed to the organization of a joint stock company, Wall retaining the right to nominate one member of the governing board. Cohen then delivered the option to Jackling who took it to MacNeil.

MacNeil, Spencer Penrose, and R. A. F. Penrose then came to Bingham and proceeded to negotiate a new option. Wall was to get \$385,000.00 for fifty-five per cent of the property. The MacNeil-Penrose group were to purchase DeLamar's quarter leaving Wall with a twenty per cent holding in shares and bonds. The whole was based on a six months option with right of extension at five thousand dollars per month. This right was used for seven months so Wall was paid \$420,000.00 in all. DeLamar sold out for \$125,000.00

On June 4, 1903, the Utah Copper Company was organized and issued shares. Some months later a reorganization and reissue took place. Various bond issues were subsequently made and underwritten by the Guggenheim Exploration Corporation and by

---

<sup>1</sup>T. A. Rickard, A History of American Mining (New York: McGraw-Hill Book Company, 1932), p. 148.



Hayden, Stone and Company of New York. By 1910 the company had a capital of twenty-five million dollars and was well situated financially.<sup>1</sup>

The active operation of the Utah Copper property began in 1903 and consisted of extensive development of the ore body by ordinary underground methods and by churn drilling. The construction of a seven hundred ton concentration mill was begun at the junction of Dry Fork and Bingham Canyon.<sup>2</sup> By 1905 the three thousand ton concentrator at Magna was begun and operations were being conducted on a large scale.<sup>3</sup>

In the meantime a new producer of very considerable proportions had appeared on the scene. About 1904 the Boston Consolidated Mining Company had commenced operations on a group of claims lying to the southeast of the Utah Copper properties and situated upon the same ore body. The Boston Con property also contained a considerable amount of sulphide ore of good grade.<sup>4</sup> The Boston Con was organized by Samuel Newhouse who had sold his interest in the Highland Boy and who had since then become interested in various other enterprises in Utah. Operations were commenced first in mining of sulphide ores by usual underground methods. By 1906 a four thousand ton concentrator was

---

<sup>1</sup>Rickard, op. cit., pp. 136-150.

<sup>2</sup>United States Geological Survey, Mineral Resources of the United States, 1904, (Washington: Government Printing Office, 1905), p. 237.

<sup>3</sup>United States Geological Survey, Mineral Resources of the United States, 1905, (Washington: Government Printing Office, 1906), p. 354.

<sup>4</sup>Statement given in a personal interview with Mr. George E. Addy, June 10, 1949.

being constructed at Arthur for treating of the low grade ores developed in the course of the other mining.

One of the most interesting aspects of the early operation of the Utah Copper and the Boston Con properties is the question of the mining methods used. A type of block caving system was used exclusively in the operation of both concerns from 1903 to 1906. This system worked as well as expected but due to the character of the ground proved to be more costly than anticipated and dangerous in the bargain.<sup>1</sup>

The method which was ultimately substituted for caving was that of surface stripping, the most immediately noticeable characteristic of low grade mining at Bingham. It appears that Jackling had anticipated strip mining from the first but had used underground methods in order to get into immediate production without spending a year or two stripping useless capping rock. The example of strip mining with steam shovels had already been set in the iron mining of the Mesabi District and knowledge of this method was quite widespread. But it was though impossible to use the process at Bingham because of the steepness of the hills.<sup>2</sup> However, it was determined to try the method, and once the ore was proved and the concentrators ready stripping was commenced. The Utah Copper put a shovel into operation in

---

<sup>1</sup>Statement given in a personal interview with Mr. George E. Addy, June 10, 1949.

<sup>2</sup>T. A. Rickard, The Utah Copper Enterprise (San Francisco: The Mining and Scientific Press, 1919), p. 47.



August, 1906. However, the caving system was continued for some time longer because it was about a year before stripping operations became productive.

The Boston Consolidated Company's engineers were evidently thinking along the same lines. The stripping operations of that company were inaugurated June 24, 1906. However, underground mining was carried on in that property for some time also.<sup>1</sup>

The next important step in the development of porphyry copper mining at Bingham was taken in 1901 when the Utah Copper and Boston Consolidated holdings were consolidated through an exchange of stock, Utah Copper increasing its capitalization from 750,000 shares to 2,500,000.<sup>2</sup> The new company soon began the construction of the Bingham and Garfield Railroad for the purpose of transporting ore between the mines and the mills. This would insure ore delivery which had not been altogether satisfactory over the Denver and Rio Grande. The Arthur plant of the Boston Consolidated was shut down and remodeled to bring its capacity up to eight thousand tons and various alterations were made throughout the Boston Consolidated property.<sup>3</sup>

The production of the Utah Copper and Boston Consolidated properties resulted in a marked rise in copper production in Bingham after the turn of the century. Gross production values

---

<sup>1</sup>United States Geological Survey, Mineral Resources of the United States, 1907 (Washington: Government Printing Office, 1908), pp. 456-591.

<sup>2</sup>Engineering and Mining Journal, January 7, 1911.

<sup>3</sup>Ibid.



of copper in Bingham were \$1,100,444.00 in 1896. In 1910 they were \$15,735,090.00.<sup>1</sup>

The principal underground mines previously mentioned continued to be active and profitable producers during the time the Utah Copper was coming to the fore. In 1906, however, the mining industry at Bingham was dealt a setback when smelter operations in Salt Lake Valley were enjoined pending settlement of litigation concerning crop damage done by smelter smoke.<sup>2</sup> As a result, mining operations were curtailed during part of 1907. The situation was finally solved by the moving of some smelters and by installation of facilities for the removal of harmful elements from the smoke of others.<sup>3</sup>

In 1907 also a large concentrator was put in operation at Lark by the Ohio Copper Company, and mining of low grade ores by the caving system undertaken.<sup>4</sup>

One of the most interesting developments in Bingham during this period was the arrival of one of the most colorful figures in American mining, F. Augustus Heinze. In 1906 Heinze acquired control of the Bingham Consolidated and Ohio Copper properties, thus inaugurating a decade during which he was one of the dominant

---

<sup>1</sup>Boutwell, op. cit., p. 110.

<sup>2</sup>United States Geological Survey, Mineral Resources of the United States, 1906 (Washington: Government Printing Office, 1907), p. 405.

<sup>3</sup>United States Geological Survey, Mineral Resources of the United States, 1907 (Washington: Government Printing Office, 1908), p. 458.

<sup>4</sup>Ibid.

figures of Utah mining. Heinze was noted not for technical contributions to mining or for the opening of new mines, but for his adventurous sailings on the seas of high finance. When he arrived on the Utah scene, Heinze was a past master of this art having participated in the "Copper Wars" in Butte during the previous few years. There, against no less an antagonist than Marcus Daly he had fought what amounted to a drawn battle. In Utah Heinze proceeded to follow the same lines of action to the no small dismay of many men in mining circles in Utah. Heinze's classic coup in Utah concerns the smelter which paid dividends for ten years without treating a pound of ore.

Soon after his arrival in Utah, Heinze had been instrumental in bringing about the organization of the Silver King Coalition Mining Company. As a reward for his efforts in this regard Heinze was given an exclusive contract to smelt Silver King ores, provided that he build and maintain a smelter in Utah. Heinze then let out his contract to smelt the ores in question for a lower rate than in his contract with the Silver King, thus turning a neat profit without any expenditure whatsoever. As soon as this became known the Silver King hailed Heinze into the courts, pointing out that the terms of the contract required Heinze to maintain a smelter in Utah. Whereupon Heinze acquired the Majestic smelter near Milford, Utah, a plant that had been last operated in the 1870's, and was situated forty miles from the nearest railroad connection. This smelter was put in nominal working order and Heinze announced his willingness to treat all

ores shipped to him. The suit of the Silver King was quashed and Heinze continued to collect on the differential between his two contracts.<sup>1</sup>

This episode is not directly connected with Bingham, but it serves to illustrate the methods not only of Heinze but of many of the mining magnates of that day. Heinze did not do much manipulating in Bingham confining his operations to the alleged "milking" of his two properties there to provide funds for his operations elsewhere.<sup>2</sup>

The period from 1896 to 1914 was one of great prosperity for Bingham. High metal prices, cheap labor, low costs and the discovery of new ore bodies and technical processes made an era of sustained high production and revenue.

The leading producer after 1911 was the Utah Copper Company, which, when consolidated with the Boston Consolidated Company, far outclassed in quantity of production any other mine in the district. Indeed, as early as this the prosperity began to acquire the reputation it has held ever since of producing fabulous tonnages of ore. For instance, in 1911 the total production of the Utah Copper Company was 4,680,801 tons of ore which when treated yielded 98,436,244 pounds of copper.<sup>3</sup> In this year also the Bingham and Garfield Railroad, begun earlier by the

---

<sup>1</sup>Goodwin's Weekly, January 7, 1913.

<sup>2</sup>Goodwin's Weekly, February 8, 1913.

<sup>3</sup>United States Geological Survey, Mineral Resources of the United States, 1911 (Washington: Government Printing Office, 1912), p. 765.



company, was completed thus insuring the delivery of larger tonnages to the milling plant. This road ran from Garfield to Bingham with connections over the Western Pacific tracks to Salt Lake City with a total trackage of about twenty miles. Its principal business was hauling ore but it also provided passenger, freight and express service from Salt Lake City. It was a wholly owned subsidiary of the Utah Copper Company.<sup>1</sup>

Another leading producer in the district was the Ohio Copper Company which in spite of the activities of Mr. Heinze operated throughout the period from 1907 to 1914 producing about 250,000 to 300,000 tons annually.<sup>2</sup> The operation was handicapped, however, by having to transport its entire output through the five mile Mascott tunnel. The handicap was caused not by the length or difficulty of the trip but by high charges levied for the use of the tunnel which was owned by the Bingham Mines Company. Heinze owned a controlling interest in both companies, and he was able to force payment by the Ohio Copper Company. He evidently thought it expedient to milk one company into the other rather than to milk them both at the same time. The Ohio Copper Company did, however, pioneer an underground caving system of considerable technical importance.

The Utah Consolidated's Highland Boy mine continued to hold an important place among the underground mines of the district. The production of this property during this period was chiefly

---

<sup>1</sup>Ibid.

<sup>2</sup>Ibid.

comparatively high grade sulphide copper ores, and up to 1907 the mine had been the largest and cheapest producer in Utah.<sup>1</sup> Production amounted to roughly 250,000 tons per year during the period, and the mine consistently paid dividends.<sup>2</sup>

The Utah Apex property continued to be prominent during this period producing chiefly lead-silver ores from a group of consolidated claims situated in Carr Fork. For a time the company operated the Markham Mill in conjunction with the Utah Development Company. However, in 1909 this mill was sold and the construction of another exclusively owned by the Apex Company begun.<sup>3</sup> The expansion of the property continued apace, and by 1914 gross earnings were \$894,456.00.<sup>4</sup>

The United States Company carried on their operations in the East Fork with marked success, the property being a very steady and profitable producer with an output approximating 150,000 tons of copper ore and 50,000 tons of lead ore per year. This concern is responsible for some outstanding developments in the smelting of Bingham ores particularly the introduction of

---

<sup>1</sup>United States Geological Survey, Mineral Resources of the United States, 1906 (Washington: Government Printing Office, 1907), p. 354.

<sup>2</sup>United States Geological Survey, Mineral Resources of the United States, 1896-1914 (Washington: Government Printing Office, 1898-1915), Passim.

<sup>3</sup>United States Geological Survey, Mineral Resources of the United States, 1909 (Washington: Government Printing Office, 1911), p. 477.

<sup>4</sup>United States Geological Survey, Mineral Resources of the United States, 1914 (Washington: Government Printing Office, 1916), p. 743.



the Huff electrostatic zinc separation process at their smelter in Midvale in 1909. By this process it became possible, for the first time, to save the zinc content of Bingham ores, thus adding to the value of ore production.<sup>1</sup>

The Yampa mine operated by the Tintic Mining and Development Company and situated in Carr Fork began its life in 1904 and continued an active producer for some seven years. In 1904 this company erected a 250 ton smelter in the lower part of Bingham Canyon and three years later completed a 12,000 foot tramway to connect it with the smelter. At the same time the electrification of most of the property was completed, a step which was soon followed by the other outstanding producers in the district.<sup>2</sup> Shortly after the capacity of the smelter was enlarged to one thousand tons per day. High production continued to 1910 when declining grade of ores and high production costs presented insurmountable obstacles which finally forced the company to close its smelter and curtail mining operation.<sup>3</sup>

Another significant operation was conducted at the head of Carr Fork by the Utah Metal and Tunnel Company, which in 1910 undertook the driving of a tunnel under West Mountain for the

---

<sup>1</sup>United States Geological Survey, Mineral Resources of the United States, 1909 (Washington: Government Printing Office, 1911), p. 477.

<sup>2</sup>United States Geological Survey, Mineral Resources of the United States, 1907 (Washington: Government Printing Office, 1909), p. 458.

<sup>3</sup>United States Geological Survey, Mineral Resources of the United States, 1910 (Washington: Government Printing Office, 1912), p. 593.



purpose of draining the mines there and developing the ore bodies at depth.<sup>1</sup> The tunnel was completed in 1913 having a length of 11,494 feet with a waterflow of 750,000 gallons per day.<sup>2</sup>

Two collateral enterprises of considerable importance which were begun during the period between 1896 and 1914 in Bingham were the Copper Belt Railroad and the Highline extension of the Denver and Rio Grande Railroad. The former was a company organized in 1900 for the purpose of building a railroad within the canyon so that ore shipments from the mines high up in the canyon might be facilitated. The line when completed connected with the Denver and Rio Grande road at Bingham and extended up the East Fork as far as the workings of the Ohio Copper Company, and then by means of a bridge and switchbacks crossed to the other side of the canyon and ran up Carr Fork as far as the present site of the Armstrong Tunnel. Later, when the Boston Consolidated Company began to operate the road was extended up Muddy Fork. The road was narrow gauge and was of necessity so steep in grade at places as to present serious difficulties in operation in spite of the use of shay engines. Nevertheless, the construction of this road increased ore shipments appreciably since it replaced team freighting for distances of three miles and more. Railroading under these conditions had its problems and has been described as a "fight to get up hill and then one

---

<sup>1</sup>Statement of Mr. George E. Addy, June 10, 1949.

<sup>2</sup>United States Geological Survey, Mineral Resources of the United States, 1913 (Washington: Government Printing Office, 1916), p. 402.

to keep from falling down." On numerous occasions runaways occurred, and once a derailed train ended up on the main street of Bingham after wrecking some houses on its trip down the mountainside.<sup>1</sup>

The Denver and Rio Grande Highline came into being as a result of the operation of the Utah Copper mine. In the early days of the mine the Denver and Rio Grande handled all the ores produced to the mills at Magna. As stripping operations were contemplated which would produce large tonnages of ore high in the canyon, a series of long switchbacks were built off the main line beginning at Lead mine so that the road might be brought to the elevation of the pit. In this manner the steep grades and consequent difficulties which troubled the Copper Belt Railroad were avoided. The Highline was standard gauge, and when stripping was commenced handled cars directly from the mine. This road set something of a record when it cleared six thousand tons of ore out of its yards in a single day. But it was still not enough to keep up with the demand of the mills or the production of the mine. Eventually the shipment of Utah Copper ore was taken over by the Bingham and Garfield Railroad and the Highline was abandoned.<sup>2</sup>

To sum up, the period of Bingham's history between 1896 and 1914 was remarkable for the introduction and instant success of copper mining. It was a period of sustained high production

---

<sup>1</sup>Salt Lake Mining Review, June 15, 1910.

<sup>2</sup>Salt Lake Tribune, January 18, 1917.

with consequent high profits to the companies and prosperity for the camp. Secondly, the trend toward consolidation continued as is evidenced by the decreased number of properties coupled with their increased size. More and more capital was needed for successful operations. Consequently, large amounts of eastern and foreign capital were introduced with the result that the larger part of the industry of Bingham was closely integrated with large eastern financial interests. Bingham more and more began to represent the modern type of industrial mining.



## CHAPTER V

With the first World War Bingham passed into the fourth and final period of her economic development. It was a period which must be regarded as essentially one of the extension and culmination of earlier trends. First of all, the years 1914-1940 exhibit the tendency of mining properties to consolidate in order to overcome technical and financial problems. In the early days of the camp there were perhaps ten or twelve important or potentially important producers at any given time, with often fifty or more minor properties in the process of development. By the 1920's, however, there were only half a dozen major producers, one of which produced millions of tons more than the rest combined. Moreover, the number of small properties was reduced to a dozen or less. The process of consolidation carried on through the years had tended to absorb the smaller concerns so that by 1920 about ninety per cent of the producing mineral ground was controlled by six large companies.<sup>1</sup>

A further significant change in the industry is found in the passing of the independent smelter. Between 1870 and 1890 numerous small smelters were operated in Bingham or in nearby Salt Lake Valley. In the late eighties and nineties most of these smelters were forced to the wall by exhaustion of the ore

---

<sup>1</sup>Based on an analysis of the number of producing companies and quantity of production by the writer.

deposits on which they drew, by low grade of complex ores, or often by lack of improved facilities and bad management. Thus such works as the Mingo, Germania, and Utah Lead Smelters were forced to close down. Their place was taken by smelters connected with the larger mining companies. Thus, the Utah Consolidated and United States Mining Companies built smelters which were intended for their exclusive use, but which later began to do custom work.<sup>1</sup> These works and others of their type, by means of new techniques and large resources, were able to keep up with changes in the industry and to effectually overcome competition. By the time of the first World War smelting was almost exclusively in the hands of three companies: United States Smelting, Refining and Mining Company; the International Smelting and Refining Company; and the American Smelting and Refining Company. All these concerns were more or less closely linked with larger interests in the east.

The period in question was one of increasing achievement in copper mining. Larger and larger tonnages were mined and higher and higher recoveries of copper made. It was in this field, of course, that Utah Copper outclassed all other properties. However, correspondingly great progress was made in silver, lead, and zinc mining and in underground copper mining.

Production during these years was largely in the hands of four large properties: Utah Copper Company; the Utah

---

<sup>1</sup>United States Geological Survey, Mineral Resources of the United States, 1919 (Washington: Government Printing Office, 1921), p. 377.



Consolidated Mining Company (later the Utah-Delaware Mining Company); the Utah Apex Mining Company; and the United States Smelting, Refining and Mining Company. Those properties which might be classed as being in a secondary position as far as amount of production was concerned were the Utah Metal and Tunnel Company, Bingham Mines Company, and the Ohio Copper Company. Relatively minor properties included the Silver Shield, Queen, New England, Bingham Coalition, Utah Bingham, Conger, Bingham Amalgamated, Hayes, the Montana-Bingham and many others.<sup>1</sup>

The economic history of the Bingham District as a whole is traced best from the production figures of the period.<sup>2</sup> In 1914 corresponding with a slight drop in the copper market at the beginning of World War I, gross production value dropped to \$25,537,240.00. The next year, however, under the stimulus of war production, the gross production value rose to \$39,223,793.00, and this rise continued throughout the war years reaching a high of \$72,866,895.00. The closing years of the war saw a gradual tapering off and the post war slump dealt a staggering blow to Bingham as evidenced by an annual production of \$6,651,346.00 in 1921 when all the mines in Bingham were entirely shut down or their operations drastically curtailed. However, a revival commenced the next year and production values mounted to a high of \$69,803,927.00 in 1929. Bingham's economy, with that of the rest of the nation, responded to the crash of 1929; and three

---

<sup>1</sup>Ibid.

<sup>2</sup>All figures taken from table in Appendix I. For sources see table.



consecutive drops brought production to a low of \$9,205,725.00 in 1932. After that year there was a gradual but pronounced rise of value under improved business conditions to \$33,707,918.00. in 1938. A jumpy copper market started a brief slip in 1939 but the onset of the war brought values up to \$50,013,034.00, and the next year production jumped again to \$70,540,717.00. From this brief summary, it can be seen that Bingham's economy followed that of the nation quite closely. Within this period of three booms and two depressions some of the most interesting developments in Bingham came forth.

The history of the individual properties of Bingham, though tied to the same general pattern, is somewhat complicated. The outstanding operation of the whole period is, of course, the Utah Copper Company.

The year 1914, with its jumpy copper market, forced reduction of operations at the Utah Copper property to fifty per cent of capacity but still 6,470,166 tons of ore were produced.<sup>1</sup> By this time steam shovel operations were well under way and underground mining had been entirely discontinued. The property was in splendid shape to meet the demands which were placed upon it when World War I brought with it high metal prices and correspondingly high production effort. In 1917, the peak year, 12,542,000 tons of ore were produced and a nearly equal amount of waste removed.<sup>2</sup> The general depression which came in the

---

<sup>1</sup>United States Geological Survey, Mineral Resources of the United States, 1914 (Washington: Government Printing Office, 1917), p. 725.

<sup>2</sup>United States Geological Survey, Mineral Resources of the United States, 1921 (Washington: Government Printing Office, 1932), p. 193.

twenties had its effect, however, and in 1921 operations were curtailed except for some development work.

Improving business conditions through the late twenties made themselves felt in the operations of the Utah Copper Company, and by 1929 production reached an all time high (to that date) of 17,724,100 tons of ore. In that year also dividends totaled forty per cent of the production value.<sup>1</sup>

However, with the crash of 1929 production dropped fifty per cent immediately and continued to drop. No dividends were paid in 1932, 1933 and 1934 and large losses were sustained to keep the property operating even on a reduced basis. But in 1935 a decided upswing took place which continued with a slight tremor in 1936 to 1938. In that year the company undertook a major project in the construction of a mile and a quarter vehicular tunnel to connect upper and lower Bingham, thus permitting extension of stripping operations on ground formerly occupied by the town and the county road.<sup>2</sup>

With the onset of World War II there was a short recession similar to that of 1914. With the coming of the war, however, high metal prices insured profit for the mine. The upswing was even more pronounced in 1940 when a new production record of 19,310,200 tons was attained.<sup>3</sup>

---

<sup>1</sup>United States Geological Survey, Mineral Resources of the United States, 1929 (Washington: Government Printing Office, 1932), p. 616.

<sup>2</sup>United States Geological Survey, Mineral Resources of the United States, 1938 (Washington: Government Printing Office, 1938), p. 444.

<sup>3</sup>United States Geological Survey, Mineral Resources of the United States, 1940 (Washington: Government Printing Office, 1940), p. 458.



Throughout the period the Utah Copper property was the leader in Utah and in the nation in tonnage produced and in the recovery of ore. Numerous technical contributions of significance have come out of the operations which have served as the prototype and forerunner of the so-called "porphyry copper" mines.<sup>1</sup>

The United States operation in the East Fork continued to hold a significant position among the underground mines of the district, particularly in the production of silver, lead, and zinc ores. In 1914 production averaged roughly 20,000 tons per year of lead, zinc, and copper ores.<sup>2</sup> Development and production continued apace except for 1921 when curtailment of operations was necessary. By 1929 production had reached the rate of 216,500 tons.<sup>3</sup> In 1929 also, the company acquired the Bingham Mines Company thus coming into the control of the Mascott tunnel, which penetrates the eastern portion of the Oquirrhos in an important mineral bearing section.<sup>4</sup> Though the 1929 peak soon was lowered considerably by the depression, the company was able to maintain operations on a reduced scale throughout the period of crisis.<sup>5</sup> With the general upswing in the copper market

---

<sup>1</sup>A. B. Parsons, The Porphyry Coppers (New York: McGraw-Hill, 1937) p. 57.

<sup>2</sup>United States Geological Survey, Mineral Resources of the United States, 1914 (Washington: Government Printing Office, 1916), p. 749.

<sup>3</sup>United States Geological Survey, Mineral Resources of the United States, 1929 (Washington: Government Printing Office, 1932), p. 648.

<sup>4</sup>Ibid.

<sup>5</sup>Mining and Metallurgy, October, 1948.



in 1938 the property was able to resume full scale operations which were maintained to 1940.

The Bingham Mines Company (or the Bingham Consolidated as it is sometimes called) operated the Dalton and Lark and Yosemite groups and drove the Mascott tunnel. The Ohio Copper Company operated through the tunnel which provided the sole practicable outlet for its ore. Thus, the two properties are somewhat bound up with one another. Both properties were at one time controlled by F. A. Heinze whose activities have been previously mentioned. In 1916 control of these two properties passed to other hands, and a considerable upswing in production took place aided by the war and its high prices.<sup>1</sup> The Bingham Mines Company maintained operations on a fair scale for some five years. In 1921, in common with most of the other mines in the district, it was shut down. The late twenties saw a partial revival, till in 1929 the company was absorbed by the United States Company. Production consisted largely of lead-zinc ore with some silver and lesser amounts of copper ore with some iron fluxing ore. Considerable difficulty was encountered because of declining ore values in the latter days of the property.<sup>2</sup>

The Ohio Copper Company continued to produce till 1918 when the newly remodeled mill was crippled by the burning of the crushing plant. This circumstance coupled with declining grade

---

<sup>1</sup>Goodwin's Weekly, December 16, 1916.

<sup>2</sup>United States Geological Survey, Mineral Resources of the United States, 1919 (Washington: Government Printing Office, 1922), p. 440.

of ore and a drop in copper prices led to the curtailment of operations.<sup>1</sup> However, in 1922 the company commenced the interesting project of leaching the ore body in place. Water was pumped to the top of the old caved stopes and distributed through them, being allowed to percolate through the broken ore, thus taking into solution the copper content. When the water reached the Mascott tunnel level it was collected and the copper content precipitated by scrap iron and the water recirculated. This practice was highly successful, large amounts of copper being produced. For instance in 1927 production was 4,825,587 pounds of nearly pure copper.<sup>2</sup> This operation was maintained till 1931 when the depression forced a shut down.<sup>3</sup> The Ohio Copper property remained dormant till 1938 when a tailings retreatment plant was built at Lark. This plant was operating successfully in 1940.

The history of the next three properties may best be considered as a whole, since they are near neighbors, are all situated on the same formation, and now constitute one holding. Beginning with the southernmost these mines are: Utah Metal and Tunnel Company, the Utah Consolidated Mining Company, and the Utah Apex Mining Company. The history of all of these properties

---

<sup>1</sup>Ibid.

<sup>2</sup>United States Geological Survey, Mineral Resources of the United States, 1927 (Washington: Government Printing Office, 1930), p. 665.

<sup>3</sup>United States Geological Survey, Mineral Resources of the United States, 1931 (Washington: Government Printing Office, 1934), p. 568.

during this period revolves to a large extent about a prolonged series of disputes arising out of apex rights.

There is a well established mining law that whoever owns the apex (that is the point where it comes nearest the surface) of a dipping lode or vein may mine that ore body as far down as he cares to follow it regardless of those owning land under which the lode dips. In the region under consideration apexes of many lodes occur which dip into neighboring properties. Each of the properties followed its ore bodies down and sooner or later started mining in its neighbor's territory. Probably more litigation has arisen over this rule than any other single provision of mining law, and the situation in Bingham was certainly no exception.

What might be determined the definitive settlement of apex rights in Bingham occurred between 1918 and 1923 in a series of lawsuits between the Utah Consolidated and the Utah Apex. As early as 1918 forewarnings were noticed when the Utah Consolidated settled an apex suit with the Utah Metal and Tunnel Company on terms favorable to the latter in return for a waiver of apex rights. In 1918 also, the Utah Consolidated purchased the holdings of the Yampa Mining Company, all this presumably in a move to better its position for a forthcoming suit.<sup>1</sup>

Finally in December of 1918 the Utah Consolidated filed suit against the Utah Apex for \$500,000.00 for alleged removal of

---

<sup>1</sup>United States Geological Survey, Mineral Resources of the United States, 1918 (Washington: Government Printing Office, 1921), p. 396.



ores in the former's ground in the Dana fissure area. The Utah Apex brought countersuit in the amount of \$1,750,000.00 alleging the mining of ores in the Leadville area belonging to the former.<sup>1</sup> Extensive preparations were made by both parties to the suit. Mine models, maps, and sections were made and numerous expert witnesses brought into consultation. Thousands of feet of development work were done in order to demonstrate the various geological theories involved.<sup>2</sup> After prolonged argument the case was decided in December, 1921 in favor of the Utah Apex, and the Utah Consolidated ordered to render an accounting of the ores mined. The case was appealed but denied.<sup>3</sup> The two parties failed to agree on the amount of damages and thus a whole new series of suits were launched which, after denial of appeal, were finally settled in favor of the Utah Apex, damages being set at \$1,154,928.98.<sup>4</sup>

The central point of dispute was whether or not certain formations which apexed on Utah Consolidated ground were true lodes or not. The decision rendered was of the utmost value in clarifying the status of other properties in the district and elsewhere. In spite of its legal and geological interest the suit was fatal to one party. The Utah Consolidated found it necessary to borrow \$1,300,000.00 from the International

---

<sup>1</sup>Deseret News, December 16, 1918.

<sup>2</sup>Statement of Mr. George E. Addy, Bingham Canyon, August 16, 1949.

<sup>3</sup>Salt Lake Tribune, December 16, 1921.

<sup>4</sup>Salt Lake Tribune, March 7, 1923.

Smelting and Refining Company to pay its judgement, and as a result control of the property passed into the hands of the latter concern. The Utah Consolidated was shortly revived under the name of the Utah-Delaware Mining Company.<sup>1</sup>

During 1914 and after, both the Utah Apex and the Utah Consolidated produced at very high rates and expanded their plants considerably, both constructing mills and various other facilities.<sup>2</sup> The Utah Apex was considerably hampered in the spring of 1917 by a severe mine fire, but otherwise production was high till the depression of 1921 forced the halting of full-scale operations.<sup>3</sup> However, both operations did very well in the years following up to 1929 when both companies found it necessary to stop operations. Between 1932 and 1937 both entirely discontinued company operations and produced entirely by leasing. In 1937 the apparent necessity of more economical production led the two companies to consolidate their holdings under the name of the National Tunnel and Mines Company for the purpose of driving a tunnel from a point near Tooele in order to drain the deeper workings of both mines thus avoiding much expensive pumping. In 1938 this enterprise, called the Elton Tunnel was begun and was still in progress in 1940. These

---

<sup>1</sup>United States Geological Survey, Mineral Resources of the United States, 1923 (Washington: Government Printing Office, 1927), p. 435.

<sup>2</sup>Statement of Mr. George E. Addy, Bingham Canyon, August 16, 1949.

<sup>3</sup>J. A. Norden, Field Notes on Mine Fire, MSS, Utah Apex Mining Company Records, Field Notes Series, Vol. 27.



preparations and an improved metal market served to revive operations to a considerable extent after 1937.<sup>1</sup>

The Utah Metal and Tunnel Company expanded its operations by the absorption of its neighbor the Bingham and New Haven in 1916.<sup>2</sup> Operations were carried on on the company account till 1921 when dropping prices forced the inauguration of a small leasing program which was continued till 1925 when the Utah-Delaware Company leased some ground and financed the development of considerable bodies of copper ore.<sup>3</sup> In the slump of 1929 the mine was shut down entirely except for some small leases. In 1934 leasing on a large scale was revived, the upper levels of the mine being leased to the Utah-Delaware Company and the lower to the American Smelting and Refining Company. Nevertheless, exhaustion of the ore bodies forced the shutting down of the entire property in 1936 at which time surface rights and water rights were sold to the Utah Copper Company. The property was still closed in 1940.<sup>4</sup>

Thus, it has been attempted to outline the economic history of Bingham through the three epochs of lead-silver, gold and copper mining and to show the response of the industry to

---

<sup>1</sup>Statement of Mr. George E. Addy, Bingham Canyon, August 16, 1949.

<sup>2</sup>Deseret News, April 2, 1918.

<sup>3</sup>United States Geological Survey, Mineral Resources of the United States, 1927 (Washington: Government Printing Office, 1930), p. 666.

<sup>4</sup>This property was absorbed by the National Tunnel and Mines Company in 1944, but no production has taken place.



challenge in the form of changing ore, varying prices, and the inherent difficulties of mining. That the response was vigorous is amply demonstrated in view of the continued life and progress of the district. The economic contribution of Bingham to Utah and the nation is indicated by the fact that up to 1940 the total gross production value of all ores was \$1,285,177,699.00, and of this amount not less than \$250,000,000.00 was paid out in dividends.

## CHAPTER VI

In the previous chapters attention has been confined chiefly to the economic factors in Bingham's history, with some consideration devoted to the facts of early settlement. Though the story of Bingham may be said to be determined primarily by economic factors, a very strong secondary influence is to be found in the various social forces active in Bingham's history. In this social history some of the most interesting aspects of the study are found.

Bingham during the larger part of its history, and to some extent at the present time, exhibits the contrast between the mining community and the farming community in Utah. The difference in society, in attitudes, in population, even in appearance has never failed to impress even the most casual observer, but there has been little agreement of the interpretation of these differences. Those visitors to Bingham who have had an anti-Mormon axe to grind have been prone to contrast the happy activity and bustle of the mining camps with the torpor of the valley towns under the sway of Mormonism.<sup>1</sup> Those who have been more or less favorable to the Mormons have tended to point out the peace and quiet, good government and social order of the Mormon towns compared with the disorganized and

---

<sup>1</sup>J. H. Beadle, The Undeveloped West or Five Years in the Territories (Philadelphia: The National Publishing Company, 1873), p. 342.

calloused society to be found in the mining camps. One of the latter school visiting Bingham in July, 1873, had this to say concerning the town:

The village of Bingham, five miles within the canyon is remarkable for nothing especially different from other mining camps already described, excepting that murders are rather more common. A few days before our arrival there was a lively family difficulty, in which a father and his three sons were killed. Their relations contemplate shooting the murderer when they catch him and as in that case the murderer's friends will go for them and that going for will be avenged, there is likely to be a diminution of the population of the camp.

Bingham is a healthy locality as to climate, but there are other influences which make life quite as insecure as where yellow fever and cholera prevail. Whisky kills a great many people not accounted in the little cemetery as murdered. The number of headstones telling of violent death by the pistol and knife is quite appalling. "The burying ground is getting to be a little respectable now. There's two fellers in there," said my informant, "who died a natural death--all the rest of 'em would have been alive now if they'd kept clear of whisky and lived peaceable."<sup>1</sup>

The language is probably overdrawn for the sake of effect, but there is corroboration of the three murders in a contemporary newspaper.<sup>2</sup>

A rather more complete view of Bingham is provided in the reminiscences of George Robert Bird, who came west from New York in the seventies, arriving in Bingham in 1875. He says:

This shanty city was along a narrow canyon which began in the low foot hills covered with sage brush, and then extended upward with a sinuous course to what was known as upper Bingham, where in winter the snow lies deep and slides are common. All sorts of people were there . . . Jew, Gentiles and Mormons. The business was almost entirely

---

<sup>1</sup> John Codman, The Mormon Country, A Summer with the Latter Day Saints (New York: United States Publishing Company, 1874), p. 133.

<sup>2</sup> Deseret News Weekly, July 30, 1873, mentions the killing of "old man Cotton" and his two sons rather than three. A third relative was wounded in the fray, however, and was believed in danger of death. Later his wounds proved not so serious.



Hebraic, the mining almost to a man Gentile, but by no means gentle, and the teaming and toiling by "Jack" Mormons . . . . This canyon was well occupied by this industrious town. Against the rocky sides the houses pressed their backs, while their fronts, of more varied designs of ugliness, looked boldly on the street. This street was a narrow affair, without pretense of road-work, and was simply a wagon trail up which supplies and men were carried. People thronged it because there was no other place to walk. A side walk was an unthought of thing. Little suggestions of such a possibility were seen in little platforms built . . . . before the saloons and hotels. These were nice things to land on in stepping from the stage on a muddy day, and in good weather an excellent place for pedestrians to clean their huge boots or take a free rest. The street was a sight at all times for a street sweeper. The litter was terrific, for it was the custom of the house-keepers to sweep the surplus contents out of their houses with a dash of the broom, into the street, and then to bang their doors with an air . . . . of having done a good days work.

The grand climax of this was on Monday morning, after the strenuous work of Sunday was over, the camp's rest day but not religious day. Packs of cards, used and cast away by those in bad luck, were swept out by the bar keep, and the roadway looked like an outdoor gamblers paradise.

The "hells" were all indoors, and you had to go within to see them and smell them. I do not deny that the odors of the place came out, but the sniff you got when mixed with oxygen and the ozone of the Bingham hills, was nothing in its strength to the full blast of the interiors.

The rest of the canyon was taken up by the river or "crik," that was always trying to pass down and squeeze its way, with considerable noise over boulders, through riffles and sluices set in its way by the industrious placer miner, and get out in the open to find its peace in the bosom of the river Jordan. I need not name the other occupants of this narrow vent in the hills, since they were only tarantulas, rattlesnakes and mammoth spiders.<sup>1</sup>

Bird goes on to mention among "several other bloody affairs, gunfights and homicides," the affair of Rory Macdonald, the stage driver, and Taylor, the shoemaker. The issue at point

---

<sup>1</sup>George Robert Bird, Tenderfoot Days in Territorial Utah (Boston: The Goreham Press, 1918), p. 154 et seq. Mr. Bird wrote sometime after the events he witnessed and his memory is not accurate in all details. Further his work bears signs of having been sensationalized to some extent. However, it is borne out by other contemporary sources and his description seems to be essentially correct.

was MacDonald's attentions to Taylor's wife. The latter told MacDonald to "go heeled" for he was out to get him. Rory settled matters by shooting Taylor with a sawed off shotgun as the latter sat bending over his work. The populace thought this action rather unsportsmanlike, and MacDonald left town one jump ahead of a necktie party.<sup>1</sup>

Between 1870 and 1880 the Deseret News Weekly takes note of twelve deaths in Bingham, all classified as murder or manslaughter. Two of these crimes are of considerable interest if not much historical significance.

One which indicates the layer of plain hard brutality which underlay most of the events of this type is the Cotton affair previously mentioned by Codman. The details are obscure. Suffice it to say that after a prolonged feud, S. M. Butcher and two of his friends had a showdown with the Cotton clan; and after a prolonged fight, two of the latter party were killed. Considerable interest was taken by the press in the fact that both the Cotton boys were shot five times each yet refused to die, and were finally disposed of as they lay by stabbing and a shotgun blast respectively. There was considerable furore in the camp and threats of lynching were made, but the parties concerned were finally brought to trial.<sup>2</sup>

---

<sup>1</sup>Bird, op. cit. This item is partially corroborated from two other sources. The Utah Mining Gazette, June 13, 1874, advertises teaming and freighting by R. MacDonald. The Deseret News Weekly, August 2, 1875, carries a notice of the arraignment of Rory MacDonald for the killing of John Metz.

<sup>2</sup>Deseret News Weekly, July 30, 1873.



The Deseret News editorialized on the matter as follows:

Bingham has been the scene of more than one bloody tragedy. There is quite a large number of graves at the mouth of the canyon, some of which contain the remains of a few parties who were killed by accident, while the balance contain the remains of individuals who have met violent deaths at the hands of their fellow creatures. These killing affairs commenced in picking off one at a time, then two, and now comes the latest Bingham tragedy in which three men bit the dust.<sup>1</sup>

Evidently the population of Bingham after this affair felt the need of reform for the next week the Deseret News carried a brief note to the effect that Elders Milo Andrus and Isaac Groo were called to preach at Bingham on Sunday the seventeenth by invitation of the inhabitants.<sup>2</sup>

Another incident of rather more humorous nature occurred later in 1873. Theodore Burmiester and one MacManus became involved in a quarrel. It led to gunplay in which Burmiester fired at MacManus but missed, striking instead an innocent bystander, Mike Fagan. The contending parties were pacified somehow and all adjourned to Clay's saloon nearby to give first aid to Fagan and to fortify themselves. There W. Burmiester, the town marshall, brother of Theodore, attempted to arrest MacManus. MacManus would not be arrested and opened fire, hitting W. Burmiester in the stomach and chest but in the process again wounding Fagan, who had been carried into the saloon.<sup>3</sup>

<sup>1</sup>Ibid.

<sup>2</sup>Deseret News Weekly, August 13, 1873.

<sup>3</sup>Deseret News Weekly, July 21, 1873.



Naturally Bingham was subject to the other frailties of mining camps. A good deal of drinking was done. In 1879 there were six establishments which advertized themselves as dealing in liquor.<sup>1</sup> For a total population of less than one thousand this is a rather high percentage.<sup>2</sup> As was usually the case in mining towns, prostitution also existed. Contemporary newspapers mention the fact that several "notorious women of the town" fled to Bingham during various vice drives in Salt Lake City. It is intimated that they found a happy home there.<sup>3</sup>

Yet it must not be imagined that Bingham had no social cohesiveness. It developed an ethos of its own--rough, not very law abiding, certainly anti-Mormon and to an extent anti-Christian, but with a certain crude gaiety and boisterousness. This is indicated by a letter from Bingham published in the Salt Lake Tribune in 1873:

A man who has never been much in the mines will not at first be pleased with the appearance of Bingham. Located in the bottom of a narrow, winding canyon, the precipitous sides of which seem ready to topple and pitch headforemost into main street . . . the town does not impress a stranger as a desirable place to live. But there are many signs of prosperity here even to the cursory observer. Long lines of heavily loaded ore wagons go crunching and grinding along through the dust, on their way to Sandy with freights of first class ore. On the sides of the hills are the mouths of shafts and tunnels which give evidences of substantial work. A number of new houses are being completed including a new hotel opposite Wells Fargo's, which was opened yesterday. Then the streets look lively at night.

---

<sup>1</sup>Utah Gazetteer and Directory, 1879-1880 (Salt Lake City: H. L. A. Culmer, 1879), p. 188. It is possible there were a number who did not advertize.

<sup>2</sup>United States Bureau of the Census, Compendium of the Tenth Census (Washington: Government Printing Office, 1880), Part I, p. 309. Figure given is 1,022 for Bingham precinct which indicates something less than 1,000 for Bingham proper.

<sup>3</sup>Deseret News Weekly, April 11, 1877, January 23, 1878.

The gay gambalist [Sic] flourishes in spotless linnen and twenty dollar boots and female woman is abundant. Almost every one goes heeled, and when you go into a saloon and refresh your self with a glass of wine, after your journey the bar keeper asks you if you won't have a cigar, and it is no walnut leaves and stems either, but a regular two-bit havana. All these things show that times are good, the boys flush and are the best indications of a lively mining camp.

Certainly the streets were gay at night and the inhabitants were able to organize a celebration if the occasion demanded. In 1875 the twenty-fourth of July was celebrated in sarcastic fashion by a parade and speeches, the principal feature of the former being "a parade by 36 hand made hand carts" bearing patriarchs of the church drawn by "slashing blondes from Fort Harriman." The feature of the oratory was a long and somewhat labored effort at narrative versification delivered by "fat Jack, the bard of the Oquirrhs" entitled "How I Got My Seventh Wife." "After this salute to the pioneers," the correspondent concludes, "the celebrators adjourned to the various saloons to rest from their labors."<sup>2</sup>

Shortly after this the Bingham correspondent of the Tribune was moved to speculate on the religious complexion of the camp by the unwonted presence of a preacher. He decided that Gentile or Mormon "a preacher would not make his salt in this town if he had to depend on Christianity for his subsistence."<sup>3</sup>

---

<sup>1</sup>Salt Lake Tribune, September 3, 1873.

<sup>2</sup>Salt Lake Tribune, July 27, 1875.

<sup>3</sup>Salt Lake Tribune, October 20, 1875.



A rough solidarity was typical of the people of Bingham. In 1875 one of the fills on the grade of the Bingham and Camp Floyd Railroad damaged the sluice ditches of the placer miners in lower Bingham Canyon. Failing to obtain satisfaction in the courts, the inhabitants seized one of the locomotives of the railroad concern and auctioned it off piecemeal to pay the miners' damages. A total sum of \$260.00 was obtained from the sale of the bell, smokestack, whistle, headlight and such other items.<sup>1</sup>

The more polite social amenities were not altogether lacking in Bingham although they were of necessity curtailed. "Well conducted dances," socials, box suppers and the like were given.<sup>2</sup> And lodges such as the Oddfellows, Good Templars, and Knights Templar were active.<sup>3</sup>

Culture was represented in Bingham by a literary club at which the effusions of some of the literati of the camp were read, and a lecture and debating society which held meetings during the winter of 1875.<sup>4</sup> The town also boasted a lyceum organization which maintained a library of sorts and sponsored lectures given on various topics.<sup>5</sup>

It is evident, however, that in spite of these institutions,

<sup>1</sup>Salt Lake Tribune, June 22, 1875. Whether any action at law by the railroad or if any of its property was recovered cannot be ascertained.

<sup>2</sup>Salt Lake Tribune, September 12, 1873; October 10, 1873; December 7, 1874.

<sup>3</sup>Utah Gazetteer and Directory, 1879-80 (Salt Lake City: H. L. A. Culmer, 1879), p. 43.

<sup>4</sup>Salt Lake Tribune, November 10, 1875.

<sup>5</sup>Salt Lake Tribune, November 17, 1875.



and the trend toward a more organized society which they indicated, that there was a marked contrast between the orderly, regulated, and highly controlled life typical of the surrounding Mormon community and the free and easy, largely unregulated life of the early Utah mining camp. This contrast had the important effect of reinforcing the already hostile attitude of Mormonism toward mining. That a society based in great part upon religion and with a strict moral code should react to Babylon set down in its midst is to be expected. The words of Whitney, the Mormon historian, though written sometime afterwards, reflect the Mormon attitude: "Who wished to see Deseret, peaceful Deseret, the home of a people who had fled for religious freedom and quiet to these mountain solitudes, converted into a rollicking, roaring mining camp? Not the Latterday Saints."<sup>1</sup>

This attitude is seen in the editorial columns of the Deseret News which may be said to reflect in general the policy of the Latter-Day Saint Church. Between 1863 and 1872 eleven editorial articles appear in the News with an anti-mining tenor.<sup>2</sup> In addition many of the news items concerning the mining industry are "slanted" to give an unfavorable picture.<sup>3</sup> Perhaps the best example of this attitude is found in the Deseret News Weekly for April 5, 1871. It condemns the mining industry and warns the brethren in the following terms:

---

<sup>1</sup>Orson F. Whitney, History of Utah (Salt Lake City: George Q. Cannon and Sons, 1893), Vol. II, p. 107.

<sup>2</sup>See Deseret News Weekly, June 22, 1864; May 24, 1866; August 30, 1866.

<sup>3</sup>Deseret News Weekly, September 6, 1866; May 18, 1870.

With an enormous influx here of settlers from outside communities, every effort will be sure to be made to introduce every fashion, folly, custom and vice of the world, and here is the danger to our inexperienced youth; and unless parents exercise far more vigilance than circumstances here have required in the past, to keep their children in the ways of virtue, purity and holiness, many of them, through their inexperience and innocence will be sure to be led into vice and sin.

Yet, there is a curious ambivalence in Mormon attitudes toward mining. If the moral atmosphere which came from the mining camps was reprehensible, they brought with them a widening economic horizon which many Mormons welcomed in spite of themselves.

With the coming of mining, eastern and foreign capital entered Utah in large amounts,<sup>1</sup> bringing with it a decided upswing in Utah's economy. The mines provided markets for produce from the valley farms, markets for commercial establishments of various sorts, and considerable employment in collateral enterprises such as railroads, wagon freighting, foundaries and machine shops.

Indicative of increasing Mormon participation in activity connected with mining is the fact that no less a person than Brigham Young was "largely interested" in the Wasatch and Jordan Valley Railroad which had as one of its chief businesses the hauling of ore from Alta.<sup>2</sup> A letter written by President Young to the New York Herald mentions this line and goes on to say that the many mineral deposits in its vicinity will contribute to the success of the road and the prosperity of Utah.<sup>3</sup> The

---

<sup>1</sup>Note the number of foreign investments cited in Chapter II.

<sup>2</sup>Deseret News Weekly, April 16, 1873.

<sup>3</sup>Quoted in Deseret News Weekly, April 23, 1873.



tone and content of this letter seem to indicate a somewhat modified stand on mining though one must keep in mind that it was written for Gentile consumption. However, since the Mormons had hitherto decried the mining possibilities of Utah, any encouragement of mining seems doubly significant.

This changing attitude is evidenced also in the policy of the Deseret News which during 1873 and after shows considerably more sympathy for the mining industry.<sup>1</sup>

Besides Mormon interest in collateral industries there was also an increasing amount of direct participation in the mining industry by Mormons. One early writer mentions that large numbers of Mormons were employed as freighters and laborers at Bingham.<sup>2</sup> Government publications of the time also assert this, saying that surface labor was largely in the hands of the Mormons because of the low wages they would accept.<sup>3</sup> The Omaha Herald confirms this by advising miners to stay out of Utah because of the competition of Mormons working for low wages.<sup>4</sup> It is in this regard that we encounter our old friend Bishop Archibald Gardner

<sup>1</sup>See for instance Deseret News Weekly, April 23, 1873; April 16, 1873.

<sup>2</sup>Bird, op. cit., p. 154.

<sup>3</sup>United States Treasury Department, Mineral Resources West of the Rocky Mountains (Washington: Government Printing Office, 1873), p. 300.

<sup>4</sup>Quoted in the Deseret News Weekly, March 18, 1871. This seems to indicate some participation by Mormons in mining. On the other hand its quotation by the Deseret News may be a left handed attempt to discourage miners from coming to Utah though this does not seem likely in view of the limited circulation of the Deseret News.



for we find him taking a contract to construct a canal for the Bingham mining firm of Carson and Buzzo in 1874.<sup>1</sup>

Whether or not Latter-Day Saints actually worked underground as miners and muckers is somewhat more difficult to determine. Two early authorities unite in saying that the Mormons refused to work underground.<sup>2</sup> However, there is some evidence on the other side of the ledger.

A good deal of insight is gained in regard to the whole problem of relations between the mining industry and the Mormon Church when one considers that a substantial portion of the English converts, at least, were miners. It appears quite probable that these people would find it difficult to adapt themselves to the hard agricultural life of Utah and that their first resort when disappointed or in difficulties would be to return to the mines. That the proportion of ex-miners in the population of Utah was high is indicated by the following figures:

OCCUPATION OF FOREIGN CONVERTS TO THE L. D. S. CHURCH<sup>3</sup>  
 Figures show percentage engaged in occupation.

<u>Occupation</u>	<u>1850-51</u>	<u>1852-55</u>	<u>1861-63</u>	<u>1868</u>
Farmers	10.0	5.7	10.0	6.2
Unskilled labor	19.4	19.9	23.3	30.4
Skilled labor	16.8	24.4	20.8	28.0
Miners	12.5	10.4	8.3	22.4
Building trades	12.9	14.6	10.6	?
Manufacturing	17.9	13.7	15.2	11.2
Service employees	8.2	5.1	9.2	1.9
Professional	2.9	8.2	2.5	?
Average percentage of miners 15.1				

<sup>1</sup>Deseret News Weekly, March 18, 1874.

<sup>2</sup>Bird, op. cit., p. 154 and U. S. Treasury Department, op. cit., p. 300.

<sup>3</sup>Newbern I. Butt, The Soil As One Factor in Early Mormon Colonization. Unpublished Master's thesis, Brigham Young University, 1938, p. 6.

This table is not complete yet it is sufficient to show a high proportion of miners among early Utah settlers. There is, in addition to this evidence of probability, a definite reference to Mormon participation in underground mining in the case of the Winnamuck mine operated in its early stages by a group of "Mormon Farmers."<sup>1</sup>

To sum up, the evidence shows considerable direct participation in mining by Mormons. Secondly, Mormons were largely interested in the collateral industries which derived a great deal of their support from mining enterprises.

In view of these facts it is not surprising that the Mormon attitude toward mining continued to be changed and finally underwent complete reversal. Most striking evidence of this is found in the change in the Mormon journalistic attitudes of the time. The qualified approval of the 1870's gives way to the pronounced good will of this item of 1886:

From a gentlemen just arrived from Bingham we learn that business is improving slowly, the mines furnishing ore fully up to the usual standard. In the Homestake in which the gentleman is interested, a good force of men is being constantly employed and ore is being shipped with tolerable regularity and in large quantities. The Sacred owned by A. Keyser of this city and leased by Darling and Co. works two shifts and is producing enormously. Altogether the outlook at the "Old Reliable" is as reliable as anything in the past which means that it is steadily holding on.<sup>2</sup>

By the 1890's the shift is almost complete. In that decade the attitude of the Deseret News, at least, becomes not

<sup>1</sup>United States Bureau of the Census, Tenth Census of the United States (Washington: Government Printing Office, 1880), XVLI, Appendix I, p. 408.

<sup>2</sup>Deseret News Weekly, November 3, 1886.



only friendly but enthusiastic. Especially during 1893 when the Bland-Allison Silver Purchase Act was under fire was this noticeable. The News carried numerous editorials favoring free silver or at least high support prices for that metal.<sup>1</sup> In addition, considerable attention was paid to the possibility of building a new copper smelter in Salt Lake City. The News declared itself "unqualifiedly" in support of the smelter.<sup>2</sup>

However, not all of the modification of attitudes and the social situation took place on the Mormon side. Bingham modified its ways considerably, too. After passing through the boom period of the seventies a noticeable settling down took place, a phenomenon which seems to be typical of mining camps if they survive their first period of development. Bingham was by no means a country village but there appears to have been a slackening of the homicide rate; a justice of the peace and a constable put in their appearance, and the residence of men with families brought forth such institutions as schools and millinery stores.<sup>3</sup> It would appear likely, also, that the slackening of anti-Mormon feeling through the nation in the late nineties would have the effect of easing the tension between the two groups somewhat.

In conclusion, it may be said that the social history of

---

<sup>1</sup>Deseret News Weekly, March 11, 1893; January 17, 1893.

<sup>2</sup>Deseret News Weekly, February 18, 1893.

<sup>3</sup>Utah Gazetteer and Directory, 1888 (Salt Lake City: Lorenzo Stenhouse, 1888), p. 33.



Bingham between 1863 and 1900 revolves about one theme--gradual synthesis between widely separated Mormon and Gentile groups under the stimulus of economic pressure. Modification of the Mormon position is observable in a more favorable attitude toward mining. Modification of the position of the Gentiles is observed in a more settled type of social organization in Bingham.

## CHAPTER VII

The second period of the social history of Bingham is typified by the continuation of the movement toward Mormon-Gentile synthesis earlier noted and by the development of a new and significant trend found in the introduction of large numbers of immigrants differing radically in stock from those coming to Utah previously. These two movements launched Bingham upon a second period of social conflict and adjustment which lasted from the turn of the century to 1930.

The basic cause of both movements was the economic prosperity which attracted both native Utahns and immigrants to the district during the period in question.

The extent to which Bingham had attracted Mormons may be accurately gauged from the field notes of Andrew Jenson, Latter-Day Saint Church Historian, who visiting Bingham in 1900 wrote:

The Brethren in Bingham belonging to the church are mostly employed in and about the mines as miners and teamsters. Of the 1872 inhabitants of Bingham about 300 are supposed to belong to the Latter Day Saints but only 11 families of 72 souls have their names properly enrolled in the ward records as members of the church.<sup>1</sup>

Apparently the dominantly Gentile atmosphere had had its effects. However, it must be remembered that the Bingham Ward had just been organized the previous year.<sup>2</sup>

---

<sup>1</sup>Andrew Jenson, Manuscript History of West Jordan Stake, Utah, MSS collection L. D. S. Church Historian's Office, Salt Lake City.

<sup>2</sup>Ibid.

In any case, the new ward showed considerable vitality. A Relief Society and Sunday School were organized and apparently functioned quite well. In 1902 a meeting house was built and subsequently enlarged. The ward membership was considerably enlarged in later years.<sup>1</sup> Thus the formal organization of the Latter-Day Saint Church entered Bingham and with it the process of Mormon-Gentile synthesis continued.

The larger movement of this epoch functioned contemporaneously with this synthesis. It is, of course, found in the various waves of immigrants who entered Bingham. The pattern of immigration in Bingham differs markedly from the rest of Utah and it forms one of the lasting social effects of the mining industry upon the history of the state.

It is well known that foreign immigration played a considerable part in the settling and populating of Utah. The movement of converts to the Latter-Day Saint Church to Utah was encouraged by the authorities of the church both on doctrinal and practical grounds. As a result, a large number of people, mostly of north European stock came to Utah. These people did not differ too radically from those already here so that their absorption was relatively easy. However, the increasing importance of the mining industry brought to Utah large numbers of southern Europeans and Orientals whose assimilation was more difficult and prolonged. The mining industry of Bingham played a foremost role in this development.

---

<sup>1</sup>Ibid.



During the early period of Bingham's history the inhabitants did not differ appreciably in stock from the majority of the people in Utah.<sup>1</sup> From 1879 to the late eighties the largest single group appears to have been native Americans of the gold rush stamp. The largest foreign group was the Cornish or "Cousin Jack" with the Irish second. There was a considerable number of Chinese and a smaller number of Germans.<sup>2</sup> The presence of the Cornish is attested by a number of newspaper references.<sup>3</sup> The Cornish were among the most skilled miners of that day and they were imported in many cases to take charge of some of the more technical aspects of mining. Their influence is demonstrated by the continued use of such terms as Cornish Manway, Cornish Engine, Cornish Jig, etc.

A considerable number of Irish names appear in newspapers of the time also.<sup>4</sup> The presence of the Chinese is specifically mentioned though no clue is given to their numbers.<sup>5</sup>

<sup>1</sup>The character of the evidence for this early period is somewhat fragmentary. No detailed census figures exist. School records do not embrace this item of information. Mining company records, which form evidence for a later period, have perished. Before 1900 evidence consists largely of the statements of early residents and names appearing in directories and news items dealing with the camp.

<sup>2</sup>Statement of W. H. Pool, October 14, 1940. Mr. Pool visited the camp quite regularly during the 1880's selling produce.

<sup>3</sup>Utah Mining Gazette, September 27, 1873; Salt Lake Tribune, February 10, 1874.

<sup>4</sup>Salt Lake Tribune, June 11, 1874; June 30, 1874; July 20, 1875; July 27, 1875.

<sup>5</sup>Salt Lake Tribune, March 17, 1874.

The Germans, too, were imported because of their technical skills particularly because of their knowledge of smelting.<sup>1</sup> The situation evidently remained much the same until the late nineties when there was an influx of Irish attracted by the opening of copper mining.<sup>2</sup>

At the turn of the century a significant change occurred in the pattern of migration to Bingham. At that time a considerable number of Slavic people commenced to come in attracted by the work to be found. The nationalities involved were principally Croats, Serbs, Slovenes and Bulgarians.<sup>3</sup> Their period of greatest immigration appears to have been between 1900 and 1910; from that year on the number of new arrivals declined.<sup>4</sup> The extent of the Slavic immigration may be indicated by the fact that in 1909 approximately forty per cent of the employees of the Utah Consolidated Mining Company were Slavic in origin. Though other foreign groups, chiefly Scandinavian, were present at this time, there is no doubt that the Slavic group was the dominant immigrant group.<sup>5</sup>

---

<sup>1</sup>Utah Mining Gazette, May 2, 1874.

<sup>2</sup>Statement of Mr. George E. Addy, September 15, 1949.

<sup>3</sup>Statement by J. M. Dunoskovic, secretary to local Croatian Lodge and resident of Bingham since 1907, September 15, 1949.

<sup>4</sup>Ibid.

<sup>5</sup>Payroll vouchers Utah Consolidated Mining Company, January, 1909. This is the earliest record available. The statement is based on an analysis of the payroll records by the writer. Nationality or stock is not given in the records prior to 1925, but was determined roughly by surname. After 1925 determination of nationality was positive.



The tension aroused by the incursion of this group was considerable. In 1911 a mob drove a considerable portion of the Slavic group out of Bingham and burned their houses, and there were numerous individual clashes. Continued violation of the laws and inability of peace officers to make arrests was the cause of this action.<sup>1</sup> There was also a considerable degree of feeling between various parts of the Slavic community itself, particularly between the Croats and the Serbs who had long standing political and religious differences.<sup>2</sup>

The years 1900-1910 saw also the introduction of a considerable number of Japanese and Koreans who were brought in by the Utah Copper Company as track laborers.<sup>3</sup>

As numerous as the Japanese were the Greeks who arrived about the same time brought in also by the Utah Copper Company. The racial composition of the working force of this property is evidenced by these figures of 1914:<sup>4</sup>

<u>Nationality</u>	<u>Number Employed</u>
Japanese and Koreans	416
Greeks	406
Italians	151
Armenians	72
Albanians	55
Fifteen other groups	<u>100</u>
Foreign employees	1200
American employees	600

---

<sup>1</sup>Statement by Mr. George E. Addy, September 15, 1949.

<sup>2</sup>Statement by Mr. J. M. Dunockovic, September 15, 1949.

<sup>3</sup>Salt Lake Tribune, October 1, 1912. This source mentions some 150 Japanese and Koreans as having been in Bingham for several years.

<sup>4</sup>T. A. Rickard, The Utah Copper Enterprise (San Francisco: The Mining and Scientific Press, 1919), p. 36.



To the contents of the melting pot a large group of Mexicans and Spaniards were added during 1912 and 1913. They were imported by the mining companies to serve as strike breakers in a labor dispute during those years. Once established their numbers increased steadily, especially during and after the first World War which cut off European immigration. They have remained to the present time the numerically dominant foreign group in Bingham.

From 1890 on a number of Scandinavian immigrants came to Bingham.<sup>1</sup> Their numbers were never as large as some of the other groups mentioned, however, and they were absorbed into the community with comparative ease.

These, then, are the main tides of immigration prior to 1920. These waves of immigration involved a relatively small number of nationalities. Many more nationalities came in greater or lesser numbers, enough to make Bingham a true melting pot. A list of the parents in the Bingham schools in 1918 includes people of Finnish, Greek, Italian, Austrian, Japanese, Albanian, Armenian, Serbian, Dutch, Scotch, English, French, Irish, Cretan, Swiss, Dane, Mexican, Norwegian, Croatian, Swedish, Montenegrin, Spanish, Turkish, Russian, German, Canadian, Korean, and Bulgarian origin.<sup>2</sup>

---

<sup>1</sup>There was a strike in the early nineties apparently because Cornish miners refused to work with Finns. Jake Hoster, early resident quoted by Beatrice Spendlove, History of Bingham Canyon, Utah, unpublished Master's thesis, University of Utah, 1937. Hoster has since died.

<sup>2</sup>R. W. Spangler, "Bingham--Melting Pot of the West," New West Magazine (June, 1918), p. 13.

The depression of 1920 marked a turn in the pattern of immigration to Bingham, though after that date considerable numbers of foreigners continued to be employed, the proportion of American workers in the camp commences to rise so that by 1929 sixty to seventy per cent of the working force was native born.<sup>1</sup> The probable causes of this change are first of all, increased restrictions on immigration to the United States, discontinuance of the importation of labor by the mining companies and the tightening of the agricultural situation, and the closing of other mines in Utah which forced many Utahns to seek jobs in Bingham.

The depression of 1929 had the effect of stopping immigration to Bingham from within and without the state almost completely. There were not enough jobs even for local labor and the incentive to come to Bingham was gone. This situation prevailed up to 1940; local labor was entirely adequate to fulfill the labor demand and no significant number of new people came to the district.

The social situation brought about by immigration to Bingham resembles the situation of the new arrival in American society generally. The newcomer was forced, partly by prejudice, partly by his own ignorance, to take the hardest and lowest paid work. He was worked in national gangs and segregated in his place of residence to a certain extent. A rather curious evidence of this is found in the names used locally to apply to certain parts

---

<sup>1</sup>Employment Records, Utah Apex Mining Company, 1925, 1926, 1927, 1928, 1929. Archives at Bingham Canyon, Utah.



of the camp. "Finn Hill, Mexicanville, Bohunk Town, and Little Italy," are typical. However, segregation in Bingham was never fully carried out. Housing segregation was impossible due to the limited space available in the canyon. An extremely rapid labor turnover made complete job segregation impossible. Each new wave of immigrants arriving assumed the lowest step on the social and economic ladder. They were soon forced up or off by succeeding arrivals, and in the highly mobile society of a mining camp their progress upward was relatively easy. Nevertheless, there were serious tensions arising out of the immigrant situation. These, combined with the ordinary conditions of a mining camp which are unsettled at best, combined to inaugurate a new period of social disorganization.

The most easily observed symptom of these conditions was an increase in crime. Again Bingham makes the headlines rather consistently in the mention of crimes committed there.<sup>1</sup> Easily the most outstanding single instance which demonstrates this condition is the affaire Lopez which is of considerable interest in itself.

The exact origins of Raphael Lopez or Ralph Lopez, as he called himself, are unknown. Several stories concerning his early life and the motives which led him to his first killing are current in Bingham to this day. The first dependable fact known concerning Lopez is that he arrived in Bingham in the fall

---

<sup>1</sup>Deseret News, June 11, 1917; May 9, 1917; August 14, 1913; April 17, 1918; March 21, 1918.



of 1912 as one of a number of Mexican strikebreakers imported that year. Lopez had some pretensions to being unusual among Mexican strikebreakers; he was light in complexion, so much so that he could pass as a "white man" if he so chose. He spoke excellent English and was apparently a man of some education. He mixed with the "white" population socially and was very popular in the camp. One fact which added greatly to his prestige was that he was known to be an excellent rifle shot and something of a quick draw artist. He was seen to practice both arts assiduously.<sup>1</sup>

Lopez appears to have led a relatively peaceful and law abiding life except for a prolonged quarrel with the deputy sheriff, Julius Sorensen, who was stationed in Highland Boy where Lopez lived. The cause of this feud is usually ascribed as an unjust arrest of Lopez by Sorensen.<sup>2</sup>

The event which launched the career of Lopez as a criminal was the killing of Juan Valdez at one o'clock on the morning of November 22, 1913.<sup>3</sup> No motive is known for this killing. Local tradition (which forms the basis for all newspaper accounts and other documentary material) consists of three versions: First, that Lopez shot Valdez in revenge for the latter's killing of Lopez's brother in Mexico years before; secondly, that Valdez was

---

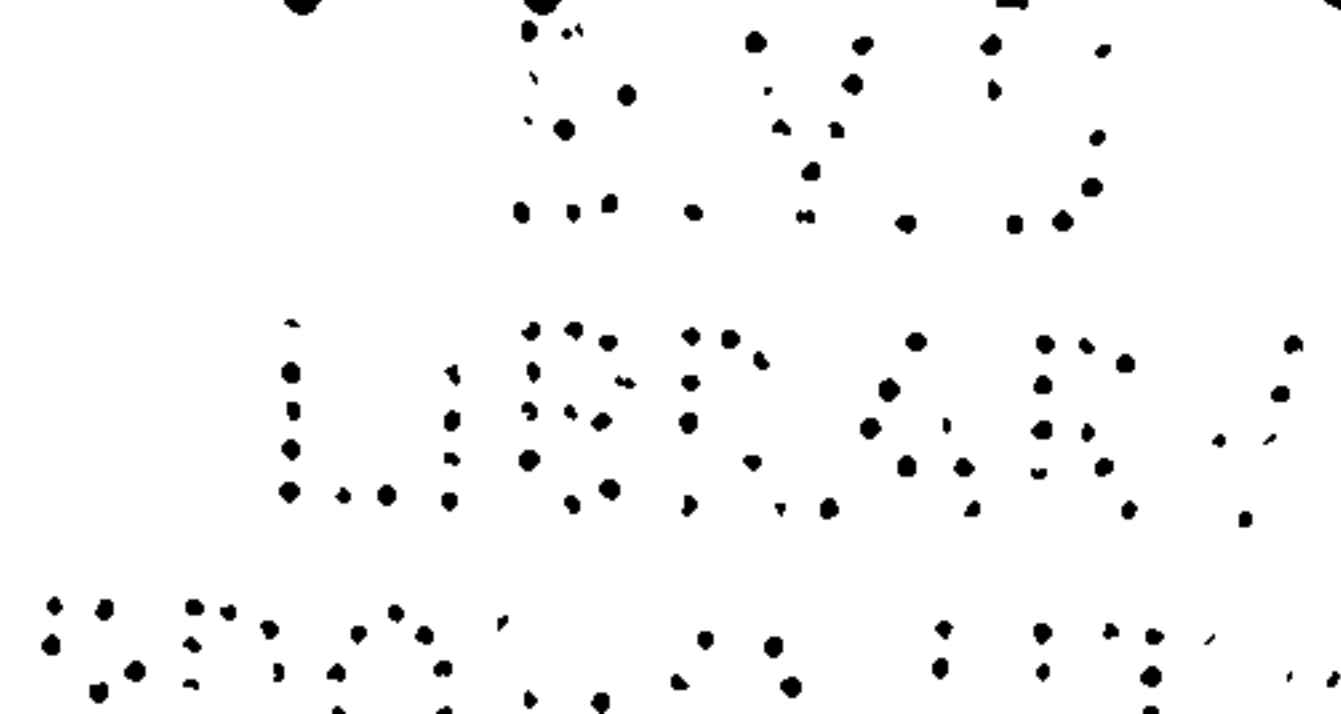
<sup>1</sup>Charles L. Austin, September 15, 1949. Mr. Austin was personally acquainted with Lopez.

<sup>2</sup>Anonymous, Utah's Greatest Manhunt--The True Story of the Hunt for Lopez (Salt Lake City: F. W. Gardner Company, 1913), p. 38. The same story is found in local tradition.

<sup>3</sup>Salt Lake Tribune, November 22, 1913.

shot in self defense in a political quarrel; thirdly, that the shooting took place as the result of a quarrel over a girl, Inez Ocariz. Whatever the case the real cause will probably never be known; only Lopez and Valdez knew and Valdez is certainly dead and Lopez presumably so. The two men were alone in a room of a boarding house when the other boarders heard loud voices and shots; when they got to the room they found Valdez dead and Lopez gone. Lopez was followed to his house and there it was discovered that he had taken a rifle, pistol and cartridges and had gone up the gulch into the mountains.

The next morning deputies Sorensen and Whitbeck followed Lopez's tracks up Last Chance Gulch in a light snow that had fallen during the night. They passed over the ridge to the south and followed the tracks down Butterfield Canyon and into Salt Lake Valley. They were joined near the town of Lark by deputies Grant and Jensen and the four continued to follow the tracks which turned south toward the Jordan Narrows. Late that afternoon the trail led them to the ranch house of E. B. Jones eight and one-half miles south of Lehi on the west shore of Utah Lake. As the posse approached the house the figure of a man was seen to leave and enter the brush. Deputies Grant and Jensen remained where they were; Sorensen and Whitbeck went to inquire at the house. While talking with Mrs. Jones they heard shots and they rushed back to where they had left Grant and Jensen. Drawing near they saw two riderless horses running away. As they stopped to look for the other deputies two more shots rang out and Whitbeck fell from his horse while Sorensen was saved only by the plunging





of his frightened mount.

After recovering himself, Sorensen looked about and found that Grant had been instantly killed and Jensen and Whitbeck mortally wounded. In spite of Sorensen's ministrations, Jensen died within twenty minutes and Whitbeck in an hour. At the end of that time the survivor of the posse went to the Jones' house and telephoned for help.<sup>1</sup>

In a short time a Salt Lake County posse and a Utah County posse arrived at the scene, but by that time it was dark and they could do little but follow Lopez's trail a short distance toward the Lake Mountains.

During the night Lopez apparently walked into the Lake Mountains. There he stopped at two shepherders' cabins. At one he slept for awhile. At the other he secured a little food and traded his hat for a cap which would cover his ears. He then went further into the mountains and holed up at a spot near Soldier's Pass.

The next day part of the posse pursued the bandit on horseback while the rest moved to cut off possible avenues of escape. Part of the posse came near Lopez's hideout, and he opened fire forcing them to seek cover; and then held a long conversation with them asking how many men they had and inquiring especially after deputy Sorensen. Eventually the men crawled out and brought Sheriff Smith to the scene with a large

---

<sup>1</sup>Salt Lake Tribune, September 22, 1913.



number of men. The spot where Lopez was believed to be was surrounded and the posse opened fire at a distance of three hundred yards, firing about three hundred shots. Lopez is supposed to have fired about twenty back. No results were obtained and at dark the posse returned to Mosida.<sup>1</sup>

When the posse returned to the spot the next day a long and careful approach to the hideout revealed nothing except some empty pistol cartridges and the fact that Lopez was not there. Again the pursuit was launched, and on the whole it had indifferent success. Suffice it to say that for the next five days the posse, which, by this time, included the sheriffs of Juab and Tooele counties, apparently had no clear idea of the whereabouts of Lopez. The fugitive was reported at Eureka and at Lehi as heading west, south or north or east. On the twenty-sixth of September what appeared to be a more definite clue was obtained when Maurice Valdez, a cowboy at MacIntyre ranch near Eureka, reported that he had given Lopez food and the fugitive had headed west into the desert.<sup>2</sup>

The next day, however, the pursuit was given an entirely new turn when Mike Stefano, a Greek employed by the Utah Apex Mining Company at Bingham, reported that Lopez had awakened him in the middle of the night, obtained food, blankets, overshoes, and a rifle and ammunition, and had entered the workings of the Apex mine. The search was immediately transferred to Bingham

---

<sup>1</sup>Salt Lake Tribune, November 23, 1913.

<sup>2</sup>Salt Lake Tribune, November 27, 1913.

and guards were placed at all entrances to the mine and at strategic points within the workings. Meanwhile, Sheriff Smith consulted with the operators of the mine on the best course of action. It was finally decided to bulkhead the mine and drive Lopez out with poisonous fumes. To this end damp hay, sulfur, damp gunpowder, and green wood were brought into the mine. While a party of men were placing a pile of this material at the foot of a blind stope on the Andy incline, two shots rang out and Douglas Hulsey and Tom Manderich fell. Hulsey was instantly killed and Manderich, badly wounded, rolled down the incline finally wedging in some timbers some distance from the rest of the party. They were unable to reach him for fear of drawing fire and he died shortly. By putting out their lights, the party finally extricated themselves and brought the bodies to the surface.<sup>1</sup>

The hunt was renewed with redoubled vigor after this. The next day work at the mine was halted, the fires lit and the workings smoked for five days. At the end of that time the bulkheads were opened; and after the smoke had cleared from the workings, a careful search, lasting three days, was made. No trace of Lopez was found except his bedding and a few scraps of food. At the place where these articles were found tracks were discovered leading to another blind stope. This stope was dynamited after a melodramatic demand for surrender by the sheriff, but subsequent search revealed no trace of the bandit.<sup>2</sup>

---

<sup>1</sup>Salt Lake Tribune, November 30, 1913.

<sup>2</sup>Salt Lake Tribune, December 8, 1913.



The search was given a new turn the next day when a Greek trammer, Bill Karos, declared that he had been accosted by Lopez and his matches, candles, and tobacco taken from him.<sup>1</sup> This had the effect of launching the hunt all over again and the mine was diligently researched. Two days later Inez Ocariz, Lopez's supposed girl friend, and Mrs. W. S. Cole stated that they talked to Lopez in one of the mine tunnels and they offered to get him to surrender. The offer was never accepted and the women's story was discounted as a publicity stunt.<sup>2</sup> The Mexican consul in Salt Lake City also offered his services in an attempt to secure Lopez's surrender, but the project was never attempted.<sup>3</sup>

On December 13, Sam Rodgers, a shift boss at the Apex mine, declared that Lopez had accosted him in the mine and conversed with him for some time. Lopez declared that he would not be taken alive, but that he would force the posse to hunt him out and kill him and that he would kill as many of them as possible before he died. Rodgers' story was also regarded as a publicity stunt, but the search was carried on. Rodgers demonstrated either his fear of Lopez or his remorse at the tale he had told by refusing to enter the mine and by leaving town as soon as possible.<sup>4</sup>

These comic opera touches brought the more spectacular aspects of the manhunt to an end. The guard over the mine was

---

<sup>1</sup>Salt Lake Tribune, December 9, 1913.

<sup>2</sup>Salt Lake Tribune, December 12, 1913.

<sup>3</sup>Ibid.

<sup>4</sup>Salt Lake Tribune, December 13, 1913.



maintained for sometime longer but no one else saw Lopez or thought they saw him and the excitement gradually died out. Search of the mine and subsequent operation of the part where Lopez was believed to be hiding revealed no trace of the bandit.

Persistent local tradition has it that Lopez escaped from the mine after the shooting of Hulsey and Manderich, won his way to Mexico and became a trusted lieutenant of Pancho Villa. Another story has it that Lopez left the mine the same night he entered it thus foxing the sheriff into guarding an empty hole while he made his escape. Manderich and Hulsey were supposedly shot by members of the search party who became panicky and mistook them for Lopez.<sup>1</sup>

The writer can only conclude that there is ample possibility for both stories to be true. An obscure entrance to the mine was left unguarded for some hours after the shooting of Hulsey and Manderich, and there is a possibility that other entrances were left unguarded.<sup>2</sup> The posse may well have shot at each other. It is a nervous business trailing a crack shot through a place where a hundred opportunities for ambush offer themselves. Of course, Lopez may well have crawled into some long forgotten hole in an abandoned part of the mine and there died. There are scores of miles of workings in the mine in questions. In any case no positive evidence of Lopez's death has ever been found.

---

<sup>1</sup>C. W. Spence, October 23, 1949. Mr. Spence was a shift boss at the Apex mine in 1913.

<sup>2</sup>T. A. Rickard, The Utah Copper Enterprise, (San Francisco: The Mining and Scientific Press, 1919), p. 41.

The story of Looez remains a lasting part of the folklore history of Bingham. Indeed, Lopez has become Bingham's outstanding folk hero. He always appears in the role of the hero, who like Billy the Kid, was pushed just a little too far by the law.

Other symptoms of the disorganized society typical of a booming mining camp can be cited. Mention is made of a rather extensive vice district which served as a political football in Salt Lake County for many years.<sup>1</sup> During most of the period in question the town boasted between thirty and thirty-five saloons, the taxes on which provided the entire city budget.<sup>2</sup> Two of these establishments perhaps deserve some mention as samples. The Old Crow and the "Sixteen to One" were among the favorites in the camp. The former boasted a mahogany bar sixty feet long and twelve bar tenders. It reportedly did a land office business.<sup>3</sup>

In conclusion then, it may be said that Bingham during this period reached the climax of the role it was to play in the process of Mormon-non-Mormon synthesis, and that the camp served to introduce to Utah new population elements differing from the majority of the inhabitants of the state. The social history of the camp revolves about the absorption of these groups.

---

<sup>1</sup>Goodwin's Weekly, February 26, 1916.

<sup>2</sup>Spendlove, op. cit., p. 106.

<sup>3</sup>George E. Addy, September 15, 1949.

## CHAPTER VIII

No history would be complete without some mention of the rise of organized labor in the district. In comparison with many mining districts labor's rise in Bingham was late and slow. Nevertheless, the rise of labor, though delayed, played a considerable part in the making of Bingham's history.

The earliest period of the district between 1863 and the 1870's was featured by little organization of labor. No unionization was attempted or apparently even thought of. A number of reasons may be advanced for this. In the first place, the early miner was the individualist par excellence, he considered himself an independent agent and usually he worked for another man only long enough to get a "grubstake" so that he could prospect on his own account. The opportunities for the latter activity were excellent and often quite profitable. Every man saw himself as a prospective mine owner, and it was difficult if not impossible to interest him in projects for collective betterment.

Secondly, most miners of that day were unmarried and with few responsibilities. They did not remain in one camp long but preferred to wander around from district to district. If wages and working conditions in one camp did not suit them, they left for another, usually with fair prospects of bettering themselves. Thus, we get the phenomenon "tramp miner" often difficult for the mining company to control, but equally reluctant to surrender any



degree of his independence to a union.

However, as time went on some evidences appeared of group action, and the concern of certain sections of labor about working conditions and wages in the district became apparent.

An interesting instance of early collective action appears in an event which can only be characterized as a forerunner of the sitdown strike. In 1875 the force of miners employed at the Neptune mine took possession of the mine and of the surface buildings of the company and refused to allow the continuation of operations till three months back wages were paid to them. They drove off representatives of the company and sheriff's deputies armed with injunctions. They had the entire support of the camp and to a considerable extent the sympathy of members of the law enforcement agencies. They held their position for some two months, but unfortunately the outcome of their strike is not known.<sup>1</sup>

The earliest instance of union action along classic lines found in connection with the Bingham mining industry is a strike of smelter employees at the Sheridan Hill Smelter at West Jordan in October, 1875. The "Miners' League" went on strike for an eight hour day and improvements in working conditions. The strike was broken easily and quickly by the use of strikebreakers backed by police, many of the old employees being arrested.<sup>2</sup> The movement

---

<sup>1</sup>Salt Lake Tribune, May 6, 1875; July 11, 1875. No mention of the outcome has been revealed by search of subsequent issues of the Tribune or of other periodicals.

<sup>2</sup>Deseret News Weekly, October 25, 1875.

was apparently a spontaneous and isolated one for no record of strikes at other smelters or mines can be found. Indeed the tone of the newspaper article cited gives the impression that only a part of the employees at the struck smelter were involved. But these two instances isolated as they were and incomplete as the evidence is concerning them show that the ingredients of future labor action were not lacking.

If the sources for labor history in Bingham in the early period can be characterized as scanty the evidence for the period between 1875 and 1890 must be said to be almost entirely absent. The writer's search of the Deseret News, the Salt Lake Tribune, and various mining publications of the period has revealed nothing concerning labor activity at Bingham. Local tradition makes no mention of labor activity either, and the testimony of older inhabitants when available likewise offers no information.<sup>1</sup>

This evidence is incomplete but it seems likely that any major strike or other labor activity would receive mention in the newspapers or would have survived in local memory. The general characteristics of the time with its emphasis on individualism tend to substantiate this point of view. Whatever the case, the writer is inclined to think that union activity was a relatively minor factor if it existed at all in the period in question.

Working conditions in the mines during the years between

---

<sup>1</sup>Thomas Tibble and Jake Hoster, whose memories of Bingham are quoted in Spendlove's History of Bingham make no mention of union activity till the late 1890's. These men are since dead. Because of the transient character of mining camp population, old residents are rather scarce.



1863 and 1890 were poor by present day standards. Before 1896 a ten or eleven hour day was common. Wages ranged from \$2.00 per shift for muckers to \$3.00 or \$3.50 for experienced miners. No liability insurance, accident compensation or other financial safe guard existed for the work though there was at least one plan for a voluntary contribution medical treatment scheme.<sup>1</sup> Safety measures were rather casually handled in most mines. No system of mine inspection existed and the use of safe practices depended entirely on the conscience of the owner and the intelligence of the miner. Probably most mines paid reasonable attention for their day to safety measures, but there were doubtless many exceptions. In addition the miner of this period lacked many of the mechanical devices which have made present day mining an easier and safer occupation. Such things as hard hats, overwind devices of hoists, change rooms, showers, goggles, and other items were entirely lacking.

These characteristics of long hours, low pay, and poor working conditions which would ordinarily make a fertile field for unionism only gradually came to have this effect. The slowness of the rise of organized labor can be traced to a number of causes. First, the bad working conditions mentioned were bad only in comparison with modern standards. They were ordinary risks of the trade by the standards of the time. Secondly, the wages, also low by modern standards, were adequate for the low commodity prices of the time. Then, too, there was considerable

---

<sup>1</sup>Utah Mining Gazette, April 25, 1874.



personal contact between employer and employee, many of the mine owners operating their own mines. In such an atmosphere there was little need for collective bargaining. Above all, the prevailing individualistic philosophy of the times and the large number of opportunities for prospecting exerted influence against any collective action.

By the late 1890's some change in the situation was apparent. The influx of immigrants coinciding with the beginning of copper mining made for an oversupply of labor with consequent lowering of wages and worsening working conditions. A strike by some miners at this time to secure increased wages and to drive out competing foreign labor shows both economic and social tension.<sup>1</sup> It serves also as evidence that by this time some sort of rudimentary union organization existed.

It appears that after the turn of the century a gradual worsening of labor-management relations took place. This was probably due to worse working conditions but also because of growing consciousness of grievance on the part of the workers. It must be remembered also that the 1890's and 1900's saw the growth of the Western Federation of Miners, the first powerful union of miners in the west, and that their activities and the actions of others of their stamp made the miners increasingly conscious of their position. Indeed, the whole period was one of growing consciousness of the grievances of labor. The nation

---

<sup>1</sup>Jake Hoster quoted in Spendlove, op. cit., p. 61. Hoster states that the "cousin Jacks" went on strike ostensibly for higher wages, but really for the purpose of driving out some Finns who having no savings would be forced to leave during a long strike.

wide challenge to the prevailing individualistic philosophy was active in Bingham and the change in the attitude of the miners was correspondingly great. This new attitude was seconded by the vanishing opportunities for individual prospecting, and as the miner saw his dreams of wealth fading away his mind became more and more receptive to ideas of unionism.

But the specific grievances of the miners were enough to have caused considerable ill will. The most common complaint seems to have been the "speed up"; that is, the imposition of excessively high production quotas. A mucker was often expected to handle ten tons of ore per shift and miners were expected to keep the heading well ahead of the muckpile, often without sufficient help. The wages given for hard work of this sort were too low in the opinion of the men. Complaints against the rather vicious "sign over" system and the taking of "hip money" were also common.<sup>1</sup>

The increasing frequency of abuses such as these coupled with the changed attitude of the miner and growing union activity soon united to cause in Bingham a nearly classic example of the mining camp strike of the period. This most interesting event in the labor history of Bingham occurred in 1912 when for the first time, a large scale strike took place.

The first hint in newspapers of the period concerning the

---

<sup>1</sup>Statements of J. M. Dunoskovic, Tony Tezak, Joseph E. Kopesec, and Manuel Susaeta, Bingham, September 15, 1949. The "sign over" is the assignment of earnings to another, usually a local merchant, who in turn advances liberal credit and often cash loans at high interest rates. "Hip money" is a cash bribe given to the foreman or employment agent of a mine to secure a job and the payment of a monthly levy to keep the job once secured.



strike appears September 10, 1912, when the miners voted to strike for a general fifty cent wage boost. On the eleventh Charles H. Moyer of the Western Federation of Miners arrived at Bingham to take charge of the strike. The same day a representative of the Utah Copper Company declared that no wage demands had been presented to the company prior to the strike call and further declared that the strike vote taken was fraudulent.<sup>1</sup> This evidence shows a rather abrupt beginning for the strike. It is highly probable that the strike had been developing for some time. The violence and bitterness which characterized the strike point toward a long incubation period and the fact that the union was able to strike every mine in the camp shows considerable beforehand organizing activity on the latter's part.<sup>2</sup>

Between the tenth and the eighteenth of September hopes were entertained for the peaceful settlement of the strike; indeed, the strike date was delayed several days for this very purpose. However, negotiations came to nothing and from the first it became apparent that one side or the other would have to give considerable ground. While the wage question was the ostensible cause of the strike, the real and more significant issue was the matter of union recognition. R. C. Gemmel of the Utah Copper

---

<sup>1</sup>Salt Lake Tribune, September 10, 1912.

<sup>2</sup>The writer can find no union or company official who had first hand contact with the strike willing to make a statement. A search of two companies' records for the time involved has yielded little significant data. Union records for the time have perished or very likely were not kept. In interviews with the local inhabitants the writer encountered considerable reluctance toward mentioning of names and specific details, especially details concerning the individual's role in the strike. There is still a considerable amount of feeling about this strike in the district.



Mining Company declared his company's policy by saying:

We do not treat with the officers of the union regarding any matters connected with the mines. We do not recognize the Federation. We are always willing to confer with our employees or properly appointed committees. If this is done the mine operators or the directors of the companies affected would take the issues under consideration and all controversies could be adjusted.<sup>1</sup>

The union's position was stated with equal plainness by Moyer:

It seems very strange to me that, in this day and age when all prominent thinkers grant to the employee as well as to capital the right to organize for the purpose of promoting their own welfare, a small number of operators at Bingham should deny this privilege to their employees. Had the Bingham operators accorded to their men this right we would unquestionably bring about a speedy and amicable adjustment of the wage question.<sup>2</sup>

The relative positions of union and company on the eve of the strike found the latter with a considerable advantage. The companies' financial resources were superior, they could expect the support of a considerable section of the press and of public opinion, and the business group at Bingham were favorable to them.<sup>3</sup> Their main strength and strategy lay in maintaining the solidarity of the mine operators in the district until the strike could be broken. This solidarity was not always easy to maintain, the smaller operators showing a disposition to negotiate with the miners.<sup>4</sup>

---

<sup>1</sup>Salt Lake Tribune, September 18, 1912.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

On the other hand, the miners had definite commitments of support from the Western Federation of Miners, and the majority of miners in Bingham appear to have favored the strike. But the miners had their trouble also. The "aristocratic" craft unions did not join in the strike. The steam shovel operators, locomotive engineers, machinists, carpenters, boilermakers and the like remaining aloof. Labor's position was further weakened by the lack of complete solidarity within the miner's union itself. The strike vote was apparently far from unanimous and Moyer himself wished to postpone the strike.<sup>1</sup> In addition, the foreign element in the union was very strong and as subsequent events showed imperfectly disciplined.

The union's strategy was centered on keeping the mines shut down, particularly the Utah Copper property, which besides being the largest operation in the district was the leader of the opposition. This involved keeping strikebreakers out of Bingham as the companies very early declared their intention of resuming operations as soon as the necessary labor could be found. The more turbulent element among the miners, however, found a policy of waiting not to their taste and during the night of September 18 about eight hundred armed strikers took possession of the Utah Copper property and certain strategic points controlling traffic up and down the various canyons. In the process some shots were exchanged with Utah Copper Company guards. The strikers terrorized the town that night by random firing into the town and at positions held by the guards. In the morning men attempting to return to

---

<sup>1</sup>Ibid.



work were fired upon and most traffic through the town halted.<sup>1</sup>

On the morning of the nineteenth counteracting forces swung into action. Moyer and Yanco Terzich, leaders of the union, bent every effort toward getting the strikers to refrain from violence. Sheriff Sharp of Salt Lake County commenced the recruitment of one hundred and fifty special deputies to be sent to Bingham and proposed the disarmament of the strikers. Meanwhile, Governor William Spry considered calling martial law in order to insure peace at Bingham. Local authorities closed all saloons in the district and local merchants cut off nearly all credit buying.<sup>2</sup>

A state of extreme tension prevailed throughout the district throughout the day and night of the nineteenth with shots being exchanged periodically between groups of strikers and company guards. Fortunately, no one was hurt.

However, on the twentieth a definite move toward peace was made through the efforts of Yanco Terzich and Father Vasilios Lambrides of the Greek Orthodox Church, who persuaded the strikers to attend a mass meeting that afternoon where they were to be exhorted toward more peaceful measures.<sup>3</sup> Governor Spry, Moyer, and others spoke at the meeting urging the strikers to law and order. In the course of the meeting part of the grievances of the strikers came to light when the Greeks among them declared that they would be willing to return to work

---

<sup>1</sup>Salt Lake Tribune, September 19, 1912.

<sup>2</sup>Ibid.

<sup>3</sup>Salt Lake Tribune, September 20, 1912.



provided that they be freed of the exactions of Leonidas G. Skliris, so-called "Czar of the Greeks," who was the agent in charge of securing Greek employees for the Utah Copper Company. He was accused of demanding bribes in return for securing jobs for men applying to him and of using coercion to make these same men trade at a store in which he was part owner.<sup>1</sup>

Skliris denied all charges and R. C. Gemmel also branded them as false, declaring that the men were specifically warned against any practices which might lead to peonage.

By the next day immediate danger of violence had passed and a state of armed truce prevailed in the camp, though it was apparent that it was only a state of truce since both the union and the companies were making preparations for continued strife. D. C. Jackling, operator of the Utah Copper Company, declared that his company would bring in strikebreakers as soon as the sheriff could offer them protection. In the meantime, the strikers took measures to stop the importation of strikebreakers, sending out appeals for all union men to refrain from coming and also allegedly mining the Markham Gulch railroad bridge over which the strikebreakers would have to pass to enter Bingham.<sup>2</sup>

The next few days saw action by more moderate forces, with Governor Spry and Clarence H. Darrow offering to mediate in the dispute. However, the operators remained aloof, as they did also to offers of direct negotiation from the union.<sup>3</sup>

---

<sup>1</sup>Ibid.

<sup>2</sup>Salt Lake Tribune, September 21, 1912.

<sup>3</sup>Salt Lake Tribune, September 24, 1912.

More and more armed deputies were sent to Bingham and fifty sharpshooters of the Utah National Guard were sent also. By the twenty-sixth of September over four hundred deputies armed and paid by the operators were present in Bingham.<sup>1</sup> On the twenty-seventh the Tribune reported the Utah National Guard readying machine guns to be sent to Bingham, but the Guard denied this saying the activity at the armory was only routine preparation for fall maneuvers.<sup>2</sup>

The situation continued tense up to October 2 when the union made good earlier threats by calling a sympathy strike at the Nevada Consolidated and Steptoe Valley Smelting Companies at McGill, Nevada. These properties were subsidiaries of the Utah Copper Company. Union president Moyer also threatened a strike at the Santa Rita property in New Mexico and a possible general strike of all the Guggenheim properties (Utah Copper, Nevada Consolidated, Santa Rita, and several properties in Colorado and Arizona).. It was reported that the majority of the Nevada miners were not in favor of the strike in view of the twenty-five cents per shift wage increase which they had received from the company a short time before, possibly in a move to head off the strike. Nevertheless, the walkout took place and the Nevada properties were shut down.

On the fourth of October the union made a further effort at conciliation when President Moyer offered to step down and

---

<sup>1</sup>Salt Lake Tribune, September 26, 1912; September 20, 1912.

<sup>2</sup>Salt Lake Tribune, September 27, 1912.



permit the companies to negotiate directly with a committee of their employees if they so chose. Again no response was forthcoming on the part of the company.

During the preceding few days the union appears to have been steadily losing strength. The number of armed deputies in Bingham and the threat of National Guard intervention stayed the union's hand considerably. Furthermore, by this time the long pinch of the strike was making itself felt and considerable numbers of strikers were forced to leave Bingham to seek work elsewhere.<sup>1</sup> Thus by threat of superior armed force and internal weakening the position of the strikers was gradually sapped away. By the eighth of October the miners agreed to waive union recognition as a condition to settlement of the strike asking only for an eight hour day, a fifty cents per shift wage increase, and abolishment of the Utah Copper Company's system of employment agents. The companies again refused to negotiate and the strike continued in spite of the efforts of O. N. Hilton, attorney for the Western Federation of Miners, and an employees' committee.<sup>2</sup> The union announced intention to extend the strike to other properties but apparently nothing came of it.<sup>3</sup>

The reason for the refusal of the companies to negotiate became apparent the next day when the Utah Consolidated Company

---

<sup>1</sup>Salt Lake Tribune, October 4, 1912. Corroborated by much local testimony. Interviews with J. M. Dunockovic, Joseph E. Kopesec, S. N. Pregaris, September 15, 1949.

<sup>2</sup>Salt Lake Tribune, October 9, 1912.

<sup>3</sup>Ibid.



brought in fifty strikebreakers under heavy guard and commenced work. The next day the Utah Copper Company commenced work on the same basis with one hundred men. At the same time strikers occupying company houses or houses built on company ground were evicted. Some violence occurred but no one was seriously hurt.<sup>1</sup>

By the fourteenth of October production was under way on a somewhat reduced basis when the plans of the companies struck a snag in a unforeseen sympathy strike of mill and smelter workers at Magna and Garfield. However, the next day five hundred strikebreakers, originally intended for the mines, were put to work at the mills and operations resumed.<sup>2</sup> In spite of the union's efforts to stop the importation of strikebreakers and their efforts to secure a grand jury probe of the actions of the sheriff and the Salt Lake County attorney, importation of strikebreakers under heavy guard continued; and during the next week three more major properties resumed operations. To all practical purposes the strike was broken, and by the twenty-fourth operations had been resumed at the struck properties in Nevada. The same day the last forlorn hope of the Bingham strike perished when the Butte local refused financial support for the strike.<sup>3</sup>

With the breaking of this strike the work of the Western Federation of Miners in Bingham came to an end and all union activity was dealt a severe setback. There was no other large

---

<sup>1</sup>Salt Lake Tribune, October 12, 1912. Confirmed by J. M. Dunoskovic who was present during the arrival of the strikebreakers.

<sup>2</sup>Salt Lake Tribune, October 16, 1912.

<sup>3</sup>Salt Lake Tribune, October 24, 1912.

scale strike till 1936 and union activity in the interim years was somewhat of the underground variety. It is perhaps a measure of the bitterness caused by the 1912 strike that the labor movement now passed into the hands of the radical International Workers of the World, and that the I. W. W. evidently received an appreciable measure of support. Indeed, the I. W. W. was able to strike two properties in the spring of 1913, though the strike was short lived being broken by the same tactics as the larger strike in 1912.<sup>1</sup> Handbills were distributed at the time of the strike declaring the I. W. W.'s aims:

- 1st The release of all class war and political prisoners
- 2nd That all bonus and contract work be abolished
- 3rd Abolition of the physical examination
- 4th That we receive 8 hours portal to portal
- 5th Better food in company boarding houses
- 6th Change rooms, showers, lavatories, etc. to be installed at all mines.<sup>2</sup>

In addition to this early activity by the I. W. W. there appears to have been considerable underground union activity during the period of the first World War. Evidence of this is found in the actions of a "citizens committee" which in October, 1917, warned three union organizers to leave Bingham or stay

---

<sup>1</sup>United States Geological Survey, Mineral Resources of the United States, 1913 (Washington: Government Printing Office, 1915), p. 744, reports a strike at the Dalton and Lark properties; local tradition credits the I. W. W. with engineering the strike.

<sup>2</sup>Quoted in Spendlove, op. cit., p. 70.



at their own risk.<sup>1</sup> These men were officers of the International Union of Mine, Mill and Smelter Workers who were attempting to organize a branch of the American Alliance of Labor and Democracy.<sup>2</sup> A "Citizens' Protective League" charged these men with having been instrumental in the 1912 strike and declared that they were attempting to interfere with the war effort.<sup>3</sup> The "Citizens' Protective League" was composed of two managerial employees of the Utah Copper Company, one doctor, one banker, and one merchant. The "League" was apparently successful for there is no record of the organizers returning, and a few months later a suspected I. W. W. agitator was arrested on suspicion of disloyalty.<sup>4</sup>

By the end of the first World War union activity seems to have been suppressed almost entirely. The blacklist was in use in at least one mine, and those suspected of being union members or organizers were discharged.

This lack of strong union organization persisted throughout the twenties and the early thirties till the coming of the C. I. O. upon the scene. The C. I. O., taking advantage of the preparatory work of the International Union of Mine, Mill and Smelter Workers and the greatly liberalized labor laws of the New Deal era, was able to dominate the scene, succeeding unions

---

<sup>1</sup>Deseret News, October 29, 1917.

<sup>2</sup>Ibid.

<sup>3</sup>Deseret News, October 31, 1917. The organizers were Guy E. Miller, Ben Goggin, and E. G. Locke. The latter is mentioned in newspaper accounts of the 1912 strike.

<sup>4</sup>Deseret News, April 29, 1918.



supposedly dominated by the companies as bargaining agents. By 1936 the C. I. O. felt itself strong enough to risk a strike, and in October the United States and Lark properties were struck. The strike was completely peaceful and on December 18 was ended by negotiation, the following terms being reached: First, recognition of collective bargaining and of the union as the agent; second, a raise of twenty-five cents per shift; third, no discrimination against strikers in rehiring.

This victory together with the changing attitude of the public and the government toward organized labor combined to bring unionism to a peak never before attained in Bingham's history. This outline of the history of organized labor in Bingham shows a fairly typical case history of western unionism: early indifference, growing abuse and a violent reaction, suppression and final triumph as a result of long struggle and the markedly changed attitude of the government and the public. If anything, the labor history of Bingham is somewhat more peaceful than most. A glance at the record of the Western Federation of Miners in such camps as Cripple Creek, Butte, and the Coeur d'Alene district will assure this. However, though less violent and bitter the history of Bingham unionism is none the less significant to the history of Utah.

## CHAPTER IX

The history of the city of Bingham forms an intrinsic part of this study important for its own sake as well as because of the fact that Bingham is a rather typical example of the growth of an industrial type mining camp.

It must be pointed out in the beginning that Bingham existed solely because of the mining industry. There was no other economic activity in the city and the prosperity of the mines was immediately and profoundly reflected in the prosperity of the camp. An excellent illustration of this may be seen in the population of the camp at various times.

In the earliest period the population of Bingham was quite small; probably only a few dozen at most with the life of the camp regulated accordingly. By the seventies, however, the rising prosperity of the camp brought about a marked increase in population and activity. A correspondent of the Utah Mining Gazette, writing in 1874, had this to say:

Bingham city began its existence by the erection of a sawmill in 1864 by James Campbell [Sic] It has gradually increased in population until it numbers at the present time some 1300 inhabitants. It constitutes the present terminus of the Bingham Canyon Railroad, and also the headquarters of ore freighters and base of supplies for the mines.<sup>1</sup>

---

<sup>1</sup>Utah Mining Gazette, May 2, 1874. The tone of the article is rather boosterish and the population of the camp may be exaggerated. However, since reliable figures show the population of the camp in 1880 to be 1,022 and the activity of the camp was about the same at both times the earlier figures may be accurate.

A more accurate conception of the population may be formed for the period after 1880 when the U. S. census figures become available:

POPULATION OF BINGHAM CITY<sup>1</sup>

<u>Year</u>	<u>Inhabitants</u>
1880	1,022
1890	1,101
1900	1,872
1910	2,881
1920	2,676
1930	3,248
1940	2,854

These figures show a fairly steady increase especially in the years between 1890 and 1910. It was this time which saw the beginning of the copper mining era which brought great prosperity to Bingham. Similarly the peak in 1930 corresponds with the great boom period of 1929-30. The sharp drop in 1940 is due in large part to the advent of the automobile which has made it possible for men to commute from the valley to jobs at Bingham. If figures for the whole district were obtainable for every year there would be considerable more fluctuation especially during the various boom and depression periods.

Bingham in the seventies resembled the typical mining town. Hastily constructed frame buildings were scattered up and down the narrow canyon interspersed with placer diggings and mine dumps. The streets were narrow, ankle deep in dust in the

---

<sup>1</sup>U. S. Bureau of the Census, Census of the United States 1880, 1890, 1900, 1910, 1920, 1930, 1940 (Washington: Government Printing Office, 1880, 1890, 1900, 1910, 1920, 1930, 1940.). It is necessary to keep in mind that these figures are for Bingham City and the total population of the district was considerably higher.



summer and knee deep in mud in the winter. By far the most prominent buildings were mills and smelters with dance halls and saloons running them a close second. Yet the inhabitants of Bingham were proud of their town and they expressed it in the typical American vein of bragging. The Salt Lake Tribune report on the "rise and fall of the Bingham exaggeration club," had this to say:

The reputation of Bingham was spread far and wide through the influence of its two newspapers the Carr Fork Mirror and the Bear Gulch Times. According to them mine owners retired wealthy after about six months work and . . . . deeded their mines, mills and machinery to their employees who in turn retired wealthy, giving those who followed full control of the property. Palatial residences sprang into existence with each retiring miner. Schools and churches, banks and brokers, gambling rooms and gorgeous saloons followed in the wake of this universal prosperity.

It was conceded by one and all that the Masonic lodge of Bingham was the largest- in point of architecture- the finest- in funds the richest- of any in the U. S. Its members represented more capital than any society before or since. The same was said of the Oddfellows, Redmen, etc. . . . . Six days after the subscription list was thrown open, eight hundred members were enrolled, representing a cash capital of \$23,000,000. The initiation fee was only \$2,000 and a monthly fee of \$200 a mere trifle.<sup>1</sup>

The two newspapers mentioned probably added not a little to the prestige of the town. Little other than the fact of its existence is known of the Carr Fork Mirror. But it is known that the Bear Gulch Times existed during 1875 at least. It was tabloid size and its editor and publisher was E. W. Pierce. Both these sheets had a predecessor in the Bingham Pioneer which first appeared July 5, 1873. The Salt Lake Herald says: "We yesterday received a copy of the first issue of the Bingham Pioneer, a new weekly paper edited and published by Charles G. Loeber, Esq. . . .

---

<sup>1</sup>Quoted in J. Cecil Alter, Early Utah Journalism (Salt Lake City: Utah State Historical Association, 1938) p. 35.

every Saturday at Bingham Canyon. The Pioneer is a 24 column paper, and the first number is well filled with reading matter and presents a very neat appearance typographically and in general makeup." The life of the Pioneer was woefully short, however, for the Deseret News of August 23, 1873, says "The Bingham Pioneer died of a big dose of the times without an obituary."<sup>1</sup>

During the eighties Bingham was apparently without the benefits of journalistic enterprise because the next paper of which there is record is the Bingham Bulletin, established in 1891 and functioning at the present time.<sup>2</sup>

That the town of Bingham was not without literary enterprise in this period is evidenced by the somewhat lamentable effusions of "Fat Jack, the Bard of the Oquirrhs" who may be quoted in part:

Begone ye blue tailed flies, each  
Yellow jacket pest  
That eat our steaks and bore us  
Thru linnen coat and vest;

Sweep gently down the canyon, each  
Balmy cooling breeze,  
And fan our panting eyebrows neath  
Saloon, stoop and trees.

And all ye honest miners, smile  
Not on me today,  
Think of friends and sweethearts  
In the home so far away.

And while I tell my story of the  
Good old bye gone days  
When I had a full team to my cart,  
Fill up my glass, Bill Clays.

---

<sup>1</sup> Ibid.

<sup>2</sup> Spendlove, op. cit., p. 105.



Boys, ye may think it soft of me  
 A sheddin' them bitter tears  
 But a gettin' that team that left me  
 Was the work of many years

From St. George to Oneida thar  
 Warnt a happier man than me  
 When I first got a pair of wheelers  
 In the fall of '63

But I thought my team unfinished  
 And early in the spring  
 I found a span of Danish blondes  
 And worked them in the swing

But still I wasnt satisfied  
 I longed for a pair of grays,  
 And cursed be the day I got them  
 Fill 'er up again--Bill Clays.

Twas late in the summer of '70  
 Close by the Jordan stream  
 Ever on the watch for beauty  
 My eye caught the flashing beam

Of a big blue eye and a droppin' lash  
 Twas the bluest kind of blue  
 And the thought of my unfinished team  
 Pierced me through and through

Somehow twarnt very hard a  
 Fixin' the whole thing then,  
 Twas easy hitching the leaders  
 But I never unhitched agin.

And they led me a string for years  
 Till they gave my cart a rise  
 Smashed my cart like the parson's shay  
 And--gin if you please, Bill Clays

And it warnt the make of my hand cart  
 That made the boys look round,  
 But that span of dashing Jordan girls  
 That whirled me over the ground

And I never looked for a smash-up,  
 As I calmly slid through life  
 Till Art Smith advised me to spike my team  
 And take a seventh wife.

Did ye ever see mustangs buck boys  
 Eh! Well they couldnt hold a light  
 To my fancy team a bucking  
 Though I held on ever so tight



The wheelers kicked the dash board  
 Into kindling wood, you bet,  
 And what became of the rest of the harness  
 I'm blowed if I know yet.

Yes, I fixed the old cart, boys  
 For this the 28th time  
 And I've given you my experience in  
 A rambling sort of rhyme  
 An' buckskin whangs my bind, boys  
 Old broken spokes and springs  
 But nothing in life can hold, boys  
 Loves shattered worn heart strings  
 Now, boys ye must excuse me  
 For I've drunk of a bitter cup  
 But if ever in the future ye would lead a faster life  
 As ye value your peace of mind, boys  
 Beware of a seventh wife.<sup>1</sup>

The people of Bingham seem during this period to have been a devil-may-care group about their government as well as their literature. Evidence has been cited before before to show that they were somewhat casual about their law enforcement agencies, and they were similarly careless about the other attributes of city government. Indeed, as the town grew, serious problems of sanitation, water supply, and fire protection came to the fore, all of which were blithely ignored till after the turn of the century. The method of sewage and garbage disposal used will perhaps illustrate this. Liquid sewage was disposed of by piping or dumping it into the open creek which ran through the center of the town, and garbage and refuse was disposed of in the same manner. When the creek became too clogged to flow the inhabitants banded together and cleared it out, carting the debris down the canyon.<sup>2</sup> This same water was used for placer works and also in

---

<sup>1</sup>Salt Lake Tribune, July 27, 1875.

<sup>2</sup>Spendlove, op. cit., p. 86. Original source is local tradition. The writer has heard the same story many times. Indeed, he has seen the same method used in some parts of the district.

the mills and so came into contact with men. There is also great likelihood that it was used for some culinary purposes. Needless to say, this system was very dangerous from the public health standpoint. Probably the only thing which saved Bingham from a series of epidemics of typhoid was the fact that the water of the creek was contaminated with mine water and mill waste which are usually highly acid and therefore antiseptic. Thus the growth of bacteria was inhibited and the health of the town safeguarded. Culinary water was procured from a number of springs and streams higher in the mountains, but water service was entirely a matter of private enterprise and water carters were a feature of the town.<sup>1</sup> Indeed, the writer has heard some oldtimers say that they always drank beer because it didn't cost much more than water and tasted considerably better.<sup>2</sup>

If culinary water was scarce, water for fire fighting and the apparatus to go with it was almost entirely lacking. This was forcibly brought home to the people of Bingham in 1895 when three fires within two months destroyed a substantial portion of the town.<sup>3</sup>

These problems and others similar to them weighed on the citizens for many years. There was considerable agitation for incorporation of Bingham as a city which would enable the citizens

---

<sup>1</sup>Ibid. Deseret News, September 15, 1905, carries a report by the state sanitary commission concerning the extreme unsanitary conditions at Bingham.

<sup>2</sup>Joseph E. Kopesec and Manuel Susaeta, September 15, 1949.

<sup>3</sup>Deseret News, July 19, 1895; August 20, 1895; August 26, 1895.

to handle the difficulties which faced them. The move was opposed by the more conservative elements in the populace and in all likelihood by the mining companies who desired to avoid any increase in taxes.<sup>1</sup> By 1904 the pressing civic problems finally overcame the opposition and the town was incorporated. The first members of the town board were C. V. Anderson, C. E. Adderley, Jerome Bougard, Charles Burke, William Waters and F. W. Quinn. In 1905 the new city government was gotten fairly underway with the floating of a \$10,000.00 bond issue to pay for the installing of the first part of a water supply and sewage system. During the next eight years four bond issues were floated to pay for the completion of these systems and to pave the main street of the town. These bond issues were the major political issue during the period and with the completion of the projects much of the fire passed out of local politics.<sup>2</sup> Since that time the local elections have been based largely on personalities and often the platforms of the parties have been practically indistinguishable.

Though the politics of Bingham were comparatively peaceful, the same cannot be said for the life of the town as a whole. After 1900 increasing population and prosperity brought boom times to Bingham again and the town passed through a period similar to the 1870's. Though lacking the blood and thunder elements of the early times, it was still a pretty rowdy period. A visitor to Bingham in 1903 reported the streets as crowded at three o'clock

---

<sup>1</sup>Spendlove, op. cit., p. 90.

<sup>2</sup>Spendlove, op. cit., p. 108.



in the morning as at noon and living accommodations so hard to find that he was forced to sleep on a pool table for a period and very happy to get that much accommodation. Landladies often indulged in the practice of doubling or tripling up in bed space. That is, they would rent the same bed to three men working on different shifts. At any given time one was at work, the other amusing himself, and the third asleep. As may be seen from the accompanying photographs, Bingham's streets were unpaved and either muddy or dusty. On wet days owners of plank bridges at convenient crossing points did a good business.

Much of the history of Bingham centers around a series of disasters which serve to illustrate the hazards of living in a mining camp. Probably the greatest loss of life has been caused by snowslides which are a constant danger in Bingham. The district has suffered from them from the beginning and hardly a winter passed without news of death or property damage from this cause.<sup>1</sup>

Probably the most severe loss occurred on February 17, 1926, at Highland Boy, where a slide in Sap Gulch buried twenty houses and entombed some one hundred people, of whom twenty-seven were killed.<sup>2</sup>

Fires also have taken their toll in Bingham. In 1895 a series of fires in August and September destroyed fifty houses and the railroad depot, doing \$220,000.00 damage. Narrow streets, close buildings, frame construction, and lack of fire precaution

---

<sup>1</sup>See Deseret News Weekly, March 24, 1875; Salt Lake Tribune, January 24, 1882, for two examples.

<sup>2</sup>Deseret News, February 17, 1926.

made the town prey to a number of fires in the next few years; though eventually this challenge reacted in the creation of an efficient volunteer fire department. The most disastrous fire occurred in 1932 when half the town of Highland Boy burned with damages of about \$400,000.00.<sup>1</sup>

Other incidents ranging through floods, mudslides, and falling rocks have kept life in Bingham interesting if not exactly safe.

The religious history of Bingham is somewhat limited. As a rule miners are not a church going people and in some quarters churches and churchmen are looked upon with some disfavor. Even today a large part of the population are non-church goers. However, as time went on and the population of the camp changed churches came to have an increasing place in the life of the camp.

The Latter-Day Saint Church was the first on the scene and in one sense it was the most important since it participated in the Mormon-Gentile synthesis. The progress of the Mormon Church has been traced elsewhere in this study.

Of the other religions in Bingham by far the most important was the Catholic. There were probably a considerable number of Catholics among the early inhabitants but they appear to have been a somewhat irreligious group. In any case, they were some distance from any organized branch of their church and had small opportunity for religious activity. It was not till 1877 that Father Lawrence Scanlan conducted the first Catholic service in Bingham.<sup>2</sup>

---

<sup>1</sup>Witnessed by the writer.

<sup>2</sup>W. R. Harris, The Catholic Church in Utah (Salt Lake City: Intermountain Catholic Press, 1909), p. 344.



After this periodic visits were made to Bingham by various priests to administer to the spiritual needs of the Catholic people, but it was not till 1890 that a Catholic chapel was erected.<sup>1</sup> The next few years saw the arrival of numerous immigrants from Catholic countries such as Serbia, Croatia, and Austria with the result that the number of Catholics increased to the point where it was feasible to erect a larger chapel and install a resident priest in 1907.<sup>2</sup> The arrival of these immigrants made the Catholics the numerically dominant group, a position which they hold to this day.

The Protestants have played a somewhat minor role in the district due to their comparatively small numbers. The principal denominations involved seem to have been Methodists and Lutherans.

The Methodists seem to have drawn their support from native American migrants to Bingham from outside Utah. A Methodist congregation was in existence in the nineties, but there was no church or resident pastor. In 1912 and 1913 two Methodist chapels were built, one in Bingham proper and the other in Highland Boy. Both have continued to function as branches of the Methodist Home Missionary Society up to the present time.<sup>3</sup>

The Lutheran congregation which seems to have consisted chiefly of Scandinavian immigrants reached a considerable size between 1900 and the late twenties. However, no evidence of the

---

<sup>1</sup>Spendlove, op. cit., p. 133.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.



residence of a pastor appears and the flock is scattered at the present time.<sup>1</sup>

The fourth important religious group in Bingham is the Greek Orthodox Church. As far as the author can ascertain no chapel was ever built for this group. However, there was a priest in Bingham in 1912.<sup>2</sup> As the number of Greeks in Bingham declined after the first World War, the priest was apparently withdrawn. At the present time services are held from time to time by priests from Salt Lake City.<sup>3</sup>

The activity of these religious groups has played a considerable part in the modification of the social situation in Bingham. Through their influence much of the typical mining camp atmosphere has been overcome and a more organized society achieved.

Quite as symptomatic of changing social organization in Bingham was the development of schools. In 1876 Bingham was first organized as a school district and the same year an elementary school was put into operation. Schooling at Bingham seems to have been somewhat limited in extent for that year the state contributed \$116.00 to the running of the school.<sup>4</sup> During the next twenty years the budget remained about the same never rising above \$200.00.

<sup>1</sup>There is a Lutheran Church building in existence at present in Bingham, but it is unused. The evidence concerning this point is derived from local tradition.

<sup>2</sup>Salt Lake Tribune, September 20, 1912.

<sup>3</sup>George Agnostakis, Interview, Bingham Canyon, March 18, 1947.

<sup>4</sup>Biennial Report of the Superintendent of District Schools (Salt Lake City: W. C. Dunbar, 1878), p. 27.

However, schools were established in the towns of Lark, Highland Boy, and Copperfield. By 1901 the total Bingham school population had reached 346.<sup>1</sup> In 1905 a definite forward step was taken when the small local school districts were abolished and Bingham was incorporated into the larger Jordan School District. The improved situation made itself felt in the establishment of a high school at Bingham in 1910 with a total enrollment of twenty students.<sup>2</sup> Thereafter the schools steadily improved in material plant and in ability to meet the needs of Bingham. By 1924 a new high school building had been built and substantial school buildings constructed in Highland Boy, Lark and Copperfield. In 1930 a new high school building was constructed at Copperton at the mouth of the canyon and students were hauled in buses from the various towns to attend it.<sup>3</sup>

Thus by 1940 the process of amalgamation which has been typical of Bingham's social history was virtually complete. The town of Bingham seems to demonstrate the same stages in this development as the district as a whole. Moreover, the development of its institutions contributed materially to the process. The history of the town of Bingham is substantially that of a mining camp which was able to survive its various boom periods and settle down to a type of organization suggestive of a manufacturing town of the same size.

---

<sup>1</sup>Utah School Reports, 1900 (Salt Lake City: 1901) p. 364.

<sup>2</sup>Utah School Reports, 1910 (Salt Lake City: 1910) p. 395.

<sup>3</sup>Spendlove, op. cit., p. 123.

## CHAPTER X

The conclusions reached in this study of the history of Bingham fall into three general categories:

First, Bingham played an important role in the introduction of mining to Utah and in so doing made a significant contribution to the economic growth of the state.

Second, that Bingham was instrumental in attracting to Utah numbers of Gentiles and thus contributed materially to the synthesis of Mormons and Gentiles.

Third, that Bingham also attracted large numbers of immigrants differing markedly from the north European type typical of Mormon immigration and thus helped to determine the composition of Utah.

The economic history of Bingham may be divided into four periods. The first of these from 1863 to 1875 saw the inception and first growth of the camp. The first recorded discovery of ore was made September 17, 1863 either by George Olgive or Mrs. Robert K. Reid. Mining activity was begun immediately afterward, but because of transportation and marketing difficulties had to be curtailed till 1870 when the arrival of the Utah Central Railroad at a nearby point enabled more economic production. In 1873 the completion of the Bingham and Camp Floyd Railroad gave a further boost to the camp by bringing the railroad right to



the camp. As a result of these factors and the richness and availability of the lead-silver ores mined in the period Bingham entered on a boom period in 1870 which lasted for some five years.

After 1875, however, the declining grade and altering nature of the ores forced the closing of many mines and emphasized the necessity of finding more rich ore or of improving the methods of production. Eventually both things were done. Deposits of ore were found and the introduction of more machinery and the amalgamation of various properties lowered the cost of production. In addition, the exploitation of oxidized gold ores not hitherto mined was begun. This period of transition and adaptation extended from 1875 to 1896.

In 1896 a fundamental and significant change was made in mining at Bingham when the discovery of exploitable copper ore by Samuel Newhouse in the Highland Boy mine ushered in the era of copper mining. Within five years copper had become the main mineral production of the Bingham district and a period of unparalleled prosperity had been ushered in.

By 1903 the development of improved methods of reduction of ores and the tenacity and engineering genius of E. A. Wall and D. C. Jackling had made possible the development of the great Utah Copper property, now the Kennecott Copper Corporation. This mine became a producer of world importance and made a huge economic contribution to Bingham and to the state. For convenience's sake, the era of copper mining has been considered in two periods, i. e., from 1896 to 1914 and from 1914 to 1940. Yet

in reality the two periods are one in that they saw continuing increase in production from every mine in the district up to 1929 when some of the underground producers began to fall away. It is this period which has had the maximum effect upon the economic history of Utah.

The effect of Bingham mining on the economy of the state may be amply demonstrated by the fact that the total gross production up to 1940 has amounted to \$1,285,177,699.00. Of this sum by far the larger part has remained in Utah as payment for labor and supplies.

The social history of Bingham had its chief determinant in the economic trends of the camp yet it forms an interesting and significant part of the study.

The first significant theme in the social history of Bingham centers around the synthesis between Mormon and Gentile groups between 1863 and 1900. As is well known, the Latter-Day Saint Church was hostile to mining largely because mining would introduce large numbers of non-Mormons into Utah and thus upset the aims of the church. However, once mining enterprise was introduced the cash income which it produced was very attractive to many Utahns. The result was that many Mormons were attracted to Bingham and that many more became employed in enterprises that depended on Bingham mining for their sustenance. This economic pressure produced a change in attitude on the part of Mormon society toward mining with the result that a considerable step forward was taken in the synthesis of the two elements of the population.

The second theme in the social history of Bingham centers around immigration between 1900 and 1940 and the processes of assimilation which accompanied it. The inauguration of copper mining in 1896 with the consequent enlargement of operations made a much increased labor force necessary. To supply this demand many immigrants came from Europe and Asia.

The first group to arrive were Scandinavians who came in the nineties. By far the most numerous and important group were the Slavs who began to come in around the turn of the century and who continued to dominate immigration till the time of the first World War. Numerous Greeks and some Orientals arrived in this period also. In 1912 some Mexicans and Spaniards arrived who formed the vanguard of a new wave which moved in after the first World War. They are the largest immigrant group at the present time. In addition to these main waves of immigration numerous other groups of people forming a virtual cross section of Europe came to Bingham. Thus Bingham was responsible for determining in part the pattern of immigration to Utah and played a role in the formation of the present social structure of the state.

The chief value of Bingham's history as a field of study is that it serves as a microcosm reflecting in more easily measurable terms some of the movements which have played a great part in Utah and United States history.



## BIBLIOGRAPHY

### Books

- Alter, J. Cecil. Early Utah Journalism. Salt Lake City: Utah State Historical Association, 1938.
- Anonymous. A True Story of Lopez by an Eye Witness. Salt Lake City: Salt Lake Publishing Co., 1913.
- Bancroft, Hubert Howe. History of Utah. San Francisco: The History Company, 1890.
- Beadle, J. H. The Undeveloped West: Or Five Years in the Territories. Philadelphia: National Publishing Co., 1873.
- Bird, George R. Tenderfoot Days in Territorial Utah. Boston: The Gorham Press, 1897.
- Bingham Commercial Club. Souvenir of Bingham. Salt Lake City: Privately Printed, 1912.
- Blair, George E. and Sloan, R. W. The Mountain Empire, Utah. Salt Lake City: Blair and Sloan, 1904.
- Bonwick, James F. Mormons and the Silver Mines. London: Hodder and Stoughton, 1872.
- Bowles, Samuel. Across the Continent, A Summer's Journey to the Rocky Mountains. Springfield, Mass.: S. Bowles and Co., 1866.
- Codman, John. Mormon Country, A Summer with the Latterday Saints. New York: United States Publishing Co., 1874.
- Culmer, H. L. A. Utah Gazetteer and Directory, 1879-80. Salt Lake City: H. L. A. Culmer, 1879.
- Harris, W. R. The Catholic Church in Utah. Salt Lake City: Inter-Mountain Catholic Press, 1909.
- Kantner, H. W. B. Handbook of the Mines, Miners and Mineral Resources of Utah. Salt Lake City: Sloan and Co., 1896.
- Parsons, A. B. The Porphyry Coppers. New York: McGraw-Hill Book Co., 1937.

- Polk, R. L. Utah Directory 1900. Salt Lake City: R. L. Polk, 1900.
- Rickard, T. A. The Utah Copper Enterprise. San Francisco: The Mining and Scientific Press, 1919.
- \_\_\_\_\_. A History of American Mining. New York: McGraw-Hill Book Co., 1932.
- Rodgers, Fred. Soldiers of the Overland. San Francisco: The Grabhorn Press, 1938.
- Sloan, E. L. Utah Gazetteer. Salt Lake City: E. L. Sloan, 1874.
- Sloan, R. W. Utah Gazetteer and Directory for 1884. Salt Lake City: Herald Printing and Publishing Co., 1884.
- Stansbury, Howard. Exploration and Survey of Great Salt Lake and Adjacent Country in the Territory of Utah. Washington: Robert Armstrong, Public Printer, 1853.
- Stenhouse, Lorenzo. Utah Directory 1888. Salt Lake City: Lorenzo Stenhouse, 1888.
- Stenhouse, T. B. H. The Rocky Mountain Saints. Salt Lake City: Shephard Book Co., 1904.
- Tullidge, Edward W. History of Salt Lake City. Salt Lake City: E. W. Tullidge, 1880.
- Whitney, Orson F. History of Utah. Salt Lake City: George Q. Cannon and Sons, 1893. Vol. II, p. 107.

#### Government Publications

- Boutwell, J. M. Economic Geology of the Bingham Mining District, Utah. Washington: U. S. Government Printing Office, 1905.
- Butler, Bert S. Cre Deposits of Utah. Washington: U. S. Government Printing Office, 1920.
- United States Bureau of the Census. Census of the United States, 1880, 1890, 1900, 1910, 1920, 1930, 1940. Washington: U. S. Government Printing Office, 1880, 1890, 1900, 1910, 1920, 1930, 1940.
- United States Geological Survey. Mineral Resources of the United States, 1882-1931. Washington: U. S. Government Printing Office, 1882-1931.
- \_\_\_\_\_. Minerals Yearbook, 1932-1940. Washington: U. S. Government Printing Office, 1932-1941.

United States War Department. The War of the Rebellion.  
Washington: U. S. Government Printing Office, 1880.  
70 Vols. in 128.

United States Treasury. Mineral Resources of the States and Territories West of the Rocky Mountains, 1867-1877.  
Washington: U. S. Government Printing Office, 1867-1877.

Utah Superintendent of Schools. Biennial Report of the Superintendent of District Schools of the Territory of Utah, 1876.  
Territory of Utah, 1876.

Utah Superintendent of Public Instruction. Utah School Reports, 1900. Salt Lake City: 1901.

#### Newspapers

Deseret News, Salt Lake City, 1863-1940.

Deseret News Weekly, Salt Lake City, 1863-1900.

Goodwin's Weekly, Salt Lake City, 1911-1916.

Salt Lake Tribune, Salt Lake City, 1870-1940.

Salt Lake Mining Review, Salt Lake City, 1899-1937.

Utah Mining Gazette, Salt Lake City, 1873-1874.

#### Periodicals

Anonymous. "News Items," Engineering and Mining Journal.  
January 7, 1911.

Anonymous. "News Items," Mining and Metallurgy. October, 1948.

Spangler, R. W. "Bingham--Melting Pot of the West," New West Magazine. June, 1918.

#### Unpublished Materials

Diary of Thomas Bingham Sr. and Thomas Bingham Jr., 1824-1906.  
Miscellaneous Mormon Biographies, Manuscript Collection,  
Brigham Young University.

Diary and Journal of Archibald Gardner, 1840-1873. Miscellaneous  
Mormon Biographies, Manuscript Collection, Brigham Young  
University.



Diary of Robert Gardner. Miscellaneous Mormon Biographies,  
Manuscript Collection, Brigham Young University

Jensen, Andrew. West Jordan Stake Historical Record. Manuscript  
Collection, L. D. S. Church Historian's Office, Salt Lake  
City, Utah.

Butt, Newbern I. The Soil as One Factor in Early Mormon  
Colonization. Unpublished Master's Thesis, Brigham Young  
University, 1938.

Spendlove, Beatrice. A History of Bingham Canyon, Utah.  
Unpublished Master's Thesis, University of Utah, 1937.

#### Public Archives

Record of Mineral Claims, Salt Lake County. Salt Lake County  
Recorder's Office, Salt Lake City, Utah.

#### Private Archives

Employment Records of the Utah Apex Mining Company, 1923-1930.  
Office of the National Tunnel and Mines Co., Bingham  
Canyon, Utah.

Field Notes Series, Vol. 27, Utah Apex Mining Company. Office  
of the National Tunnel and Mines Co., Bingham Canyon,  
Utah.

Payroll Vouchers of the Utah Apex Mining Company, 1912-1922.  
Office of the National Tunnel and Mines Co., Bingham  
Canyon, Utah.

Payroll Vouchers of the Utah Consolidated Mining Company, 1909-1920.  
Office of the National Tunnel and Mines Co., Bingham  
Canyon, Utah.

#### Interviews

George E. Addy, Bingham Canyon, Utah, June 10, 1949; September 15,  
1949; August 16, 1949.

George Agnostakis, Bingham Canyon, Utah, March 18, 1949.

Charles L. Austin, Bingham Canyon, Utah, September 15, 1949.

J. M. Dunoskovic, Bingham Canyon, Utah, September 15, 1949

Joseph E. Kopesec, Bingham Canyon, Utah, September 15, 1949.

W. H. Pool, Salt Lake City, Utah, October 14, 1940.

C. W. Spence, Bingham Canyon, Utah, October 23, 1949.

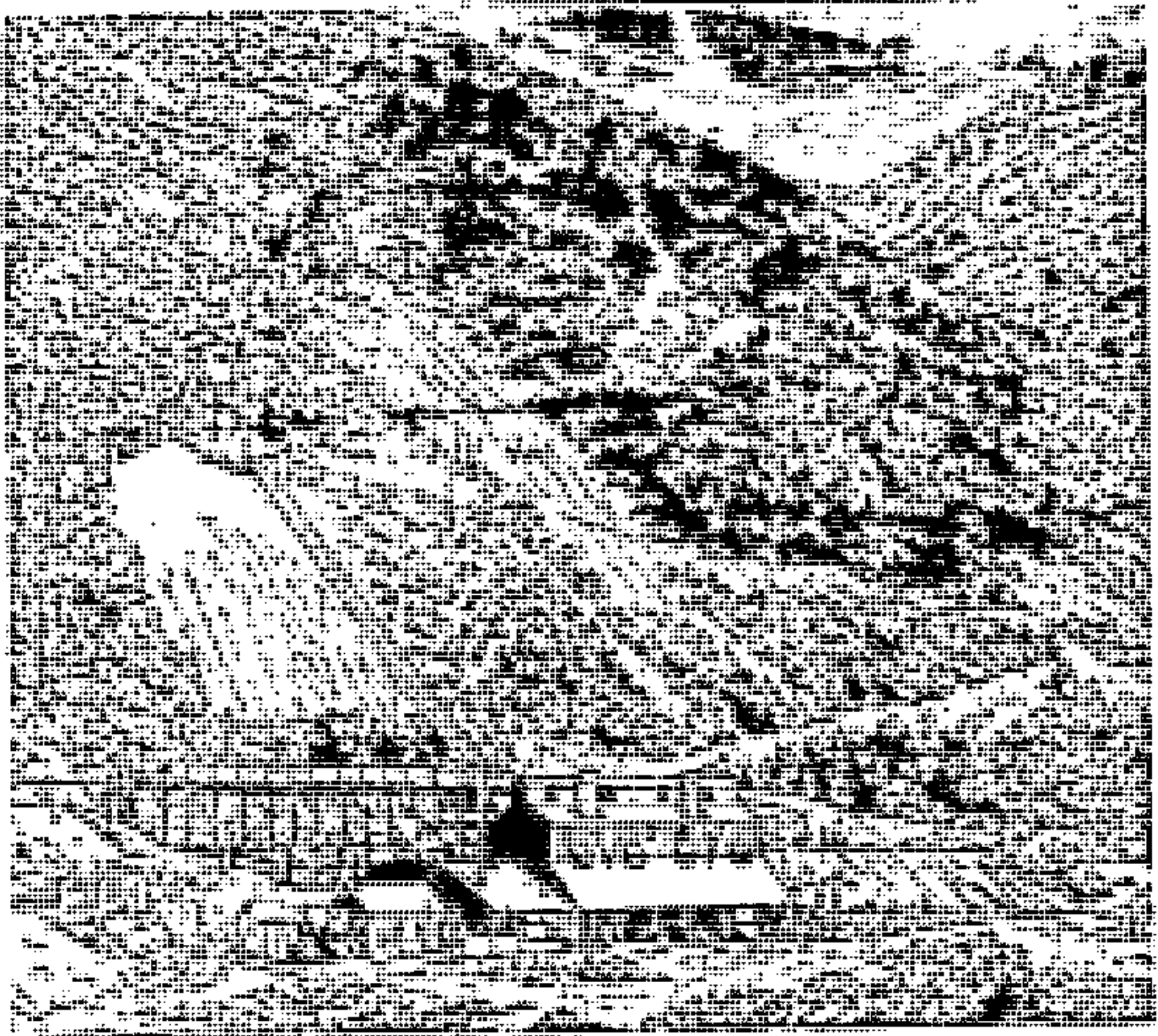
Manuel Susaeta, Bingham Canyon, Utah, September 23, 1949.

Tony Tezak, Bingham Canyon, Utah, September 15, 1949.

Maps

Map of the Great Salt Lake and Adjacent Country (New York: Ackerman, Lithographers, 1853), Map Collection, Brigham Young University.

United States Geological Survey. Utah, Bingham Mining Map, 1901.

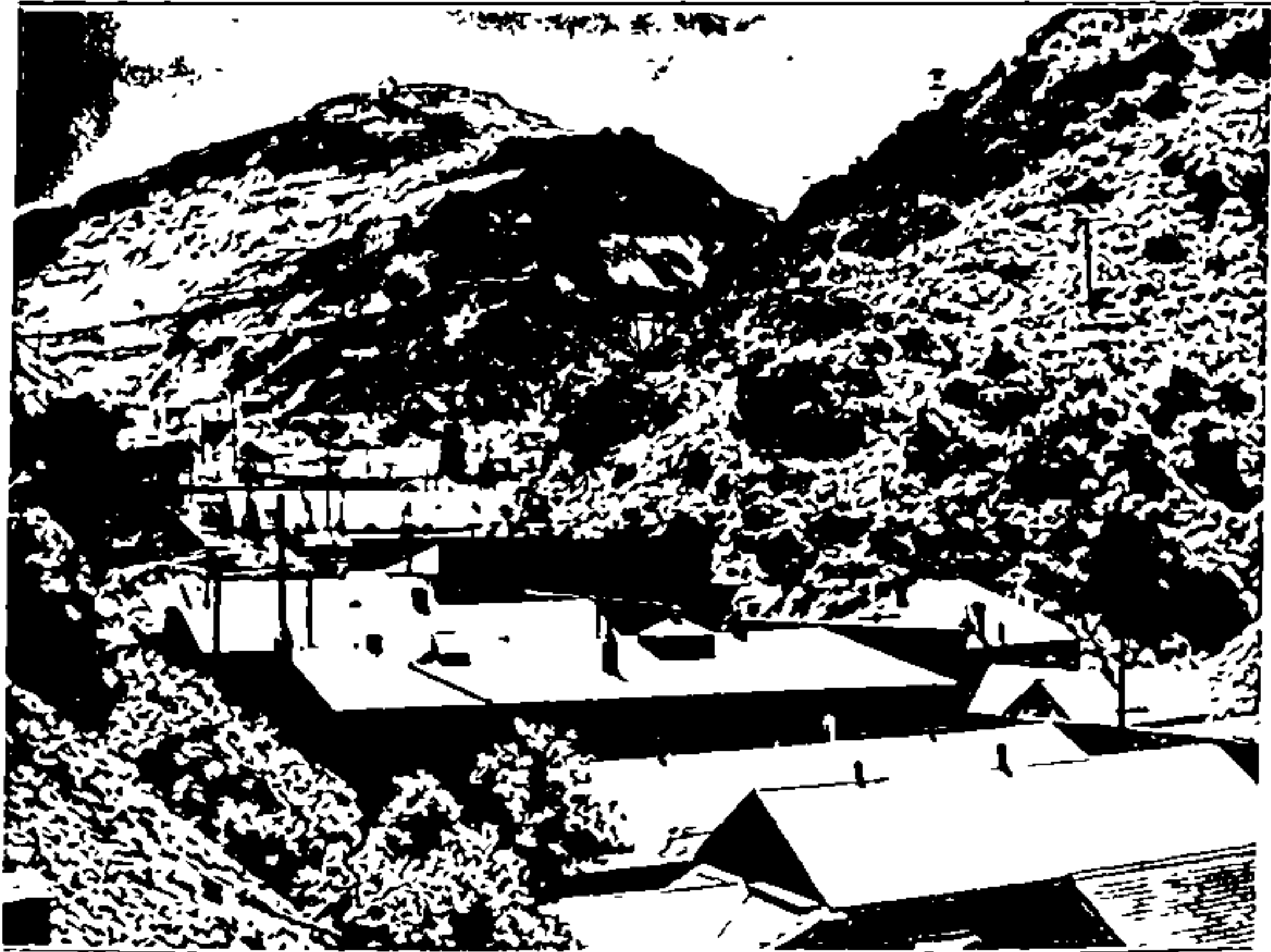


The Winamuck Works, Bingham Canyon.





A. VIEW OF BINGHAM CANYON IN 1900, SHOWING LOCATION OF DISSEMINATED DEPOSITS



B. VIEW OF BINGHAM CANYON IN 1916 FROM SAME POINT AS SHOWN IN A

Changes were produced by operations of Utah Copper Co. Photographs furnished by U. C. Co., 1917.



View from Julia Dean Mill showing Carl Watts Mill in lower center. Copper Bar A. B. C. D. E. F. G. H. I. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z. AA. AB. AC. AD. AE. AF. AG. AH. AI. AJ. AK. AL. AM. AN. AO. AP. AQ. AR. AS. AT. AU. AV. AW. AX. AY. AZ. BA. BB. BC. BD. BE. BF. BG. BH. BI. BJ. BK. BL. BM. BN. BO. BP. BQ. BR. BS. BT. BU. BV. BW. BX. BY. BZ. CA. CB. CC. CD. CE. CF. CG. CH. CI. CJ. CK. CL. CM. CN. CO. CP. CQ. CR. CS. CT. CU. CV. CW. CX. CY. CZ. DA. DB. DC. DD. DE. DF. DG. DH. DI. DJ. DK. DL. DM. DN. DO. DP. DQ. DR. DS. DT. DU. DV. DW. DX. DY. DZ. EA. EB. EC. ED. EE. EF. EG. EH. EI. EJ. EK. EL. EM. EN. EO. EP. EQ. ER. ES. ET. EU. EV. EW. EX. EY. EZ. FA. FB. FC. FD. FE. FF. FG. FH. FI. FJ. FK. FL. FM. FN. FO. FP. FQ. FR. FS. FT. FU. FV. FW. FX. FY. FZ. GA. GB. GC. GD. GE. GF. GG. GH. GI. GJ. GK. GL. GM. GN. GO. GP. GQ. GR. GS. GT. GU. GV. GW. GX. GY. GZ. HA. HB. HC. HD. HE. HF. HG. HH. HI. HJ. HK. HL. HM. HN. HO. HP. HQ. HR. HS. HT. HU. HV. HW. HX. HY. HZ. IA. IB. IC. ID. IE. IF. IG. IH. II. IJ. IK. IL. IM. IN. IO. IP. IQ. IR. IS. IT. IU. IV. IW. IX. IY. IZ. JA. JB. JC. JD. JE. JF. JG. JH. JI. JJ. JK. JL. JM. JN. JO. JP. JQ. JR. JS. JT. JU. JV. JW. JX. JY. JZ. KA. KB. KC. KD. KE. KF. KG. KH. KI. KJ. KK. KL. KM. KN. KO. KP. KQ. KR. KS. KT. KU. KV. KW. KX. KY. KZ. LA. LB. LC. LD. LE. LF. LG. LH. LI. LJ. LK. LL. LM. LN. LO. LP. LQ. LR. LS. LT. LU. LV. LW. LX. LY. LZ. MA. MB. MC. MD. ME. MF. MG. MH. MI. MJ. MK. ML. MM. MN. MO. MP. MQ. MR. MS. MT. MU. MV. MW. MX. MY. MZ. NA. NB. NC. ND. NE. NF. NG. NH. NI. NJ. NK. NL. NM. NN. NO. NP. NQ. NR. NS. NT. NU. NV. NW. NX. NY. NZ. OA. OB. OC. OD. OE. OF. OG. OH. OI. OJ. OK. OL. OM. ON. OO. OP. OQ. OR. OS. OT. OU. OV. OW. OX. OY. OZ. PA. PB. PC. PD. PE. PF. PG. PH. PI. PJ. PK. PL. PM. PN. PO. PP. PQ. PR. PS. PT. PU. PV. PW. PX. PY. PZ. QA. QB. QC. QD. QE. QF. QG. QH. QI. QJ. QK. QL. QM. QN. QO. QP. QQ. QR. QS. QT. QU. QV. QW. QX. QY. QZ. RA. RB. RC. RD. RE. RF. RG. RH. RI. RJ. RK. RL. RM. RN. RO. RP. RQ. RR. RS. RT. RU. RV. RW. RX. RY. RZ. SA. SB. SC. SD. SE. SF. SG. SH. SI. SJ. SK. SL. SM. SN. SO. SP. SQ. SR. SS. ST. SU. SV. SW. SX. SY. SZ. TA. TB. TC. TD. TE. TF. TG. TH. TI. TJ. TK. TL. TM. TN. TO. TP. TQ. TR. TS. TU. TV. TW. TX. TY. TZ. UA. UB. UC. UD. UE. UF. UG. UH. UI. UJ. UK. UL. UM. UN. UO. UP. UQ. UR. US. UT. UY. UZ. VA. VB. VC. VD. VE. VF. VG. VH. VI. VJ. VK. VL. VM. VN. VO. VP. VQ. VR. VS. VT. VU. VV. VW. VX. VY. VZ. WA. WB. WC. WD. WE. WF. WG. WH. WI. WJ. WK. WL. WM. WN. WO. WP. WQ. WR. WS. WT. WU. WV. WW. WX. WY. WZ. XA. XB. XC. XD. XE. XF. XG. XH. XI. XJ. XK. XL. XM. XN. XO. XP. XQ. XR. XS. XT. XU. XV. XW. XX. XY. XZ. YA. YB. YC. YD. YE. YF. YG. YH. YI. YJ. YK. YL. YM. YN. YO. YP. YQ. YR. YS. YT. YU. YV. YW. YX. YY. YZ. ZA. ZB. ZC. ZD. ZE. ZF. ZG. ZH. ZI. ZJ. ZK. ZL. ZM. ZN. ZO. ZP. ZQ. ZR. ZS. ZT. ZU. ZV. ZW. ZX. ZY. ZZ.



Town of Highland Boy



PANORAMA OF THE PROJECT WITH THE CLEAR CORP COMPANY AND BROWN & CALDWELL ENGINEERS COMPANY BY BENJAMIN T. COLE

Plate IV





4. VIEW IN 1906 WHICH ORIGINAL OUTLINE OF HILL WAS STILL APPARENT



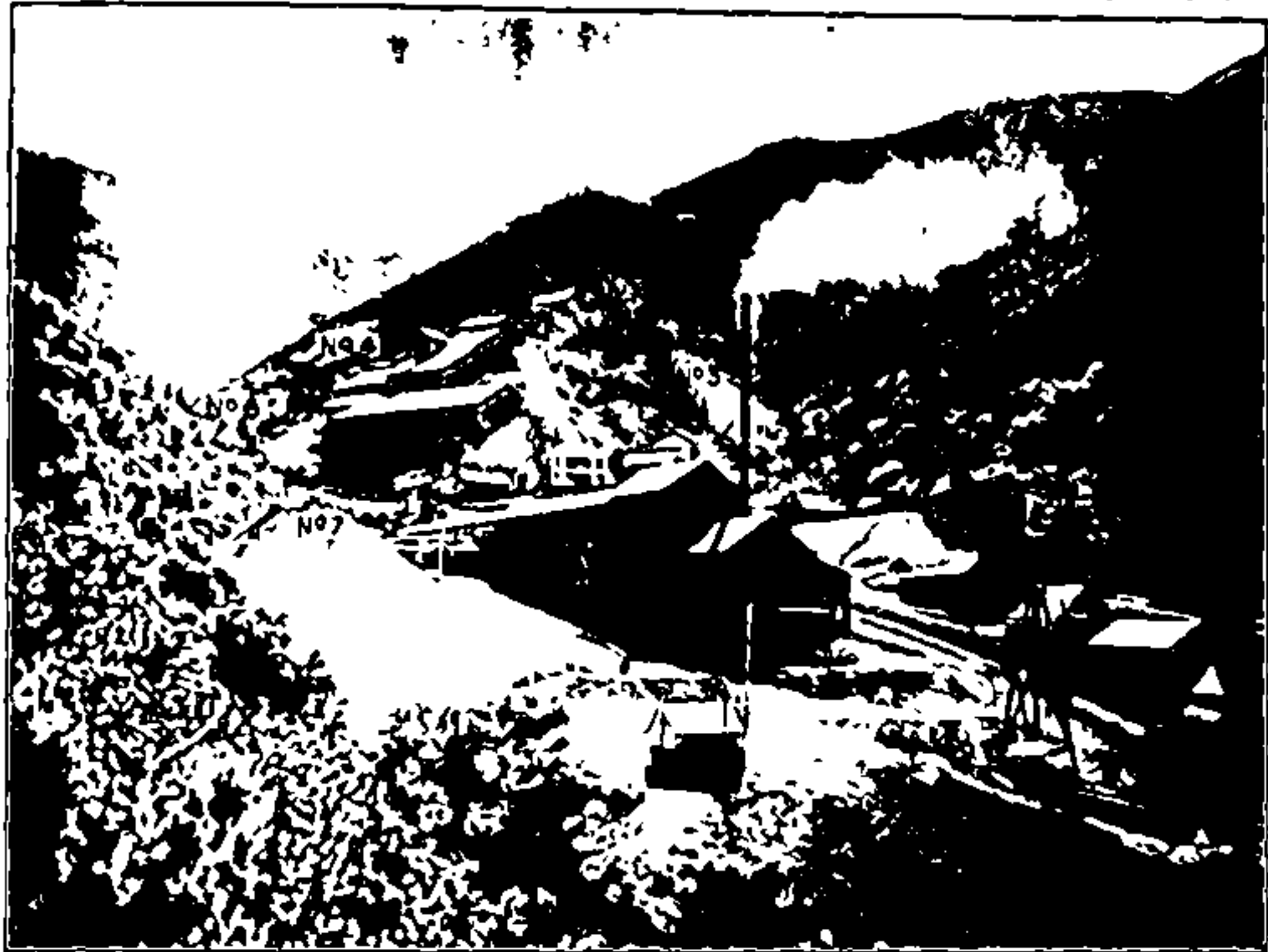
5. VIEW IN 1910 AFTER DESTRUCTION OF HILL BY REARLY CONE PLAYS AND MUCH OF THE HILL  
 OUTLINE OF PULPITARY ONE EVIDENCE OF UTAH COPPER CO. IN BINGHAM CANYON  
 Photographs furnished by Utah Copper Co.



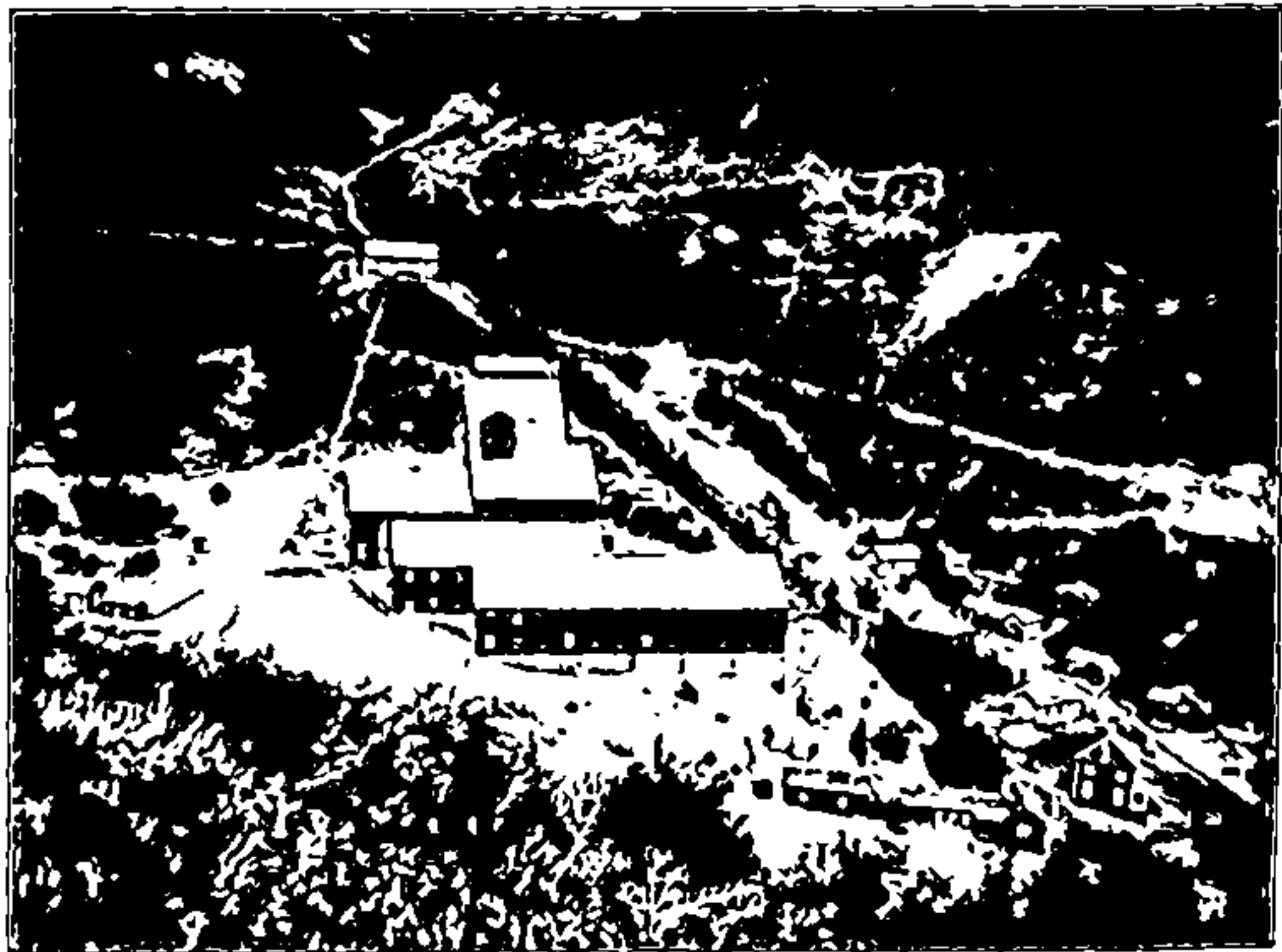
Town Officials Leading Procession—Miners' Union Day



Yampa Street



4. HIGHLAND BOY TUNNELS UPPER TERMINAL OF AERIAL TRAMWAY AND OLD CYANIDE MILL.  
View is west up Carr Fork (left) and Sap Gulch



5. THE GREAT WALL OF YAMPA LIMESTONE ON NORTH SLOPE OF SAP GULCH  
View is north over old Highland Boy cyanide mill



YEAR	ORE	GOLD		SILVER		COPPER		LEAD		ZINC		TOTAL VALUE
		FINE OZ	VALUE	FINE OZ	VALUE	POUNDS	VALUE	POUNDS	VALUE	POUNDS	VALUE	
1865	7	43,506.00	899,340	1,207,212	1,583,910	90,500	25,311	13,958,000	862,192			3,370,753
1873												
1874		4,111.00	84,928	416,920	533,658	120,000	26,400	4,000,000	240,000			885,040
1875		1,451.00	29,996	300,000	372,000	400,000	90,800	27,000,000	1,556,000			2,058,795
1876		1,800.00	37,209	435,000	504,600	536,000	112,560	26,000,000	1,586,000			2,240,369
1877		3,750.00	77,519	550,000	660,000	228,000	43,320	21,000,000	1,156,000			1,935,839
1878		3,000.00	62,016	650,000	747,500	534,400	88,710	15,070,000	542,520			1,440,746
1879		4,000.00	82,678	950,000	1,064,000	100,000	18,600	8,460,000	346,860			1,512,147
1880		7,410.00	153,178	430,965	495,616	50,000	10,700	8,942,709	447,135			1,106,625
1881		4,317.00	89,240	805,193	909,868	45,000	8,190	12,345,700	592,594			1,599,892
1882		3,386.00	69,995	433,134	493,773	50,000	9,565	8,500,000	416,500			989,833
1883		3,173.00	65,592	439,981	488,379	50,000	8,250	16,250,000	688,750			1,260,971
1884	24,787	5,000.00	103,359	440,510	489,057	95,000	12,350	15,350,000	567,950			1,172,718
1885		5,000.00	103,359	1,350,000	1,144,500	100,000	10,800	14,250,000	555,750			2,114,409
1886		5,000.00	103,359	800,000	792,000	240,000	26,640	20,000,000	920,000			1,841,999
1887		4,400.00	90,956	600,000	588,000	500,000	69,000	18,000,000	810,000			1,557,956
1888		3,500.00	72,357	483,000	454,020	650,000	109,200	18,000,000	792,000			1,427,571
1889		4,750.00	97,261	561,280	527,603	250,700	33,845	17,588,000	685,932			1,344,641
1890		4,037.00	83,452	456,990	473,540	175,000	27,300	17,202,000	774,090			1,358,382
1891		6,564.00	135,690	750,500	742,995	594,618	76,111	26,563,000	1,142,209			2,097,005
1892		4,444.00	96,000	605,896	527,130	497,000	57,656	24,505,500	980,220			1,661,002
1893		8,000.00	165,375	650,000	607,000	205,000	22,140	20,042,100	741,558			1,436,073
1894		11,000.00	227,390	650,000	409,500	274,756	26,102	14,250,000	470,250			1,133,242
1895		10,000.00	206,717	700,000	455,000	610,000	65,346	15,842,300	506,954			1,234,018
1896		8,000.00	165,375	610,000	414,800	500,000	54,000	15,542,312	466,296			1,100,444
1897		7,200.00	148,837	500,000	300,000	1,419,010	170,281	11,456,782	412,444			1,031,562
1898		9,000.00	186,047	350,000	206,500	2,283,791	283,190	5,720,000	217,360			893,097
1899		8,611.00	178,006	201,801	121,081	4,145,028	708,800	2,320,000	104,400			1,112,286
1900	101,132	12,266.00	252,734	238,267	147,726	6,196,660	1,028,646	4,260,000	187,440			1,616,564
1901		17,262.00	356,837	691,923	475,154	14,422,341	2,408,543	2,754,799	118,455			3,298,980
1902	260,790	26,580.00	530,467	477,883	253,278	14,759,621	1,816,433	3,896,463	159,754			2,777,922
1903	433,759	43,192.00	892,858	880,129	475,270	17,279,704	2,317,333	2,241,283	94,134			3,829,575
1904	705,792	56,391.00	1,165,685	1,488,360	829,476	30,628,334	3,728,604	5,209,383	227,702			6,057,476
1905	1,012,009	63,701.00	1,316,817	1,980,583	1,196,272	39,219,739	6,118,279	23,494,879	1,104,259			9,736,627
1906	996,121	78,996.00	1,632,786	1,927,350	1,291,325	39,424,276	7,608,885	22,927,661	1,306,877			11,839,873
1907	1,503,82	75,750.24	1,565,483	1,786,580	1,179,143	45,431,914	9,086,393	21,971,064	1,164,466			12,995,485
1908	2,691,640	60,382.09	1,248,221	1,053,146	558,168	71,155,740	9,392,558	15,169,518	637,120			11,836,067
1909	4,166,992	73,599.47	1,521,436	1,615,394	890,005	92,560,390	12,032,844	30,365,819	1,305,730	699,524	35,075	15,735,090
1910	5,427,953	85,526.64	1,767,992	1,800,410	972,222	113,725,280	14,443,110	30,271,016	1,331,925	3,572,347	192,907	18,708,156
1911	6,044,893	110,389.00	2,281,943	2,786,810	1,477,009	129,995,865	16,249,483	46,576,337	2,095,935	4,715,121	268,762	22,373,132
1912	6,567,948	86,396.11	1,785,532	2,028,496	1,247,625	116,621,793	19,242,696	43,822,495	1,972,012	2,711,982	187,127	24,434,792

1907	1,503,822	75,730,241	1,565,483	1,786,580	1,179,143	45,431,964	9,086,393	21,971,064	1,124,466				
1908	2,691,640	60,382,099	1,248,221	1,053,146	558,168	71,155,740	9,392,558	15,169,518	637,120				11,836,067
1909	4,166,992	73,599,477	1,521,436	1,615,394	890,005	92,560,390	12,032,844	30,365,819	1,305,730	649,524	35,075	15,735,090	
1910	5,427,953	85,522,411	1,767,992	1,800,410	972,222	115,725,280	14,443,110	30,271,016	1,331,925	3,572,347	192,907	18,708,156	
1911	6,044,893	110,387,000	2,281,943	2,786,810	1,477,009	129,995,865	16,249,483	46,576,337	2,095,935	4,715,121	268,762	22,373,132	
1912	6,567,942	86,396,111	1,785,532	2,028,496	1,247,625	116,621,793	19,242,696	43,822,495	1,972,012	2,711,982	187,127	24,434,792	
1913	9,990,374	85,856,666	1,774,815	2,402,692	1,454,850	144,920,494	22,462,676	71,001,138	3,124,060	3,421,742	191,616	21,008,007	
1914	7,800,661	109,079,800	2,151,520	2,383,051	1,817,827	191,928,811	18,876,009	76,453,128	2,981,672	4,121,977	210,221	25,537,290	
1915	9,693,184	121,299,179	2,507,477	2,704,833	1,371,351	176,593,914	30,903,848	80,004,006	3,760,198	5,491,359	686,929	39,223,793	
1916	12,777,693	120,461,379	2,490,158	3,095,335	2,036,730	223,619,609	55,010,424	85,976,490	5,933,758	10,765,192	1,492,536	66,913,606	
1917	14,150,394	108,415,711	2,241,152	2,786,120	2,296,763	225,411,675	61,537,327	73,523,708	6,323,039	4,603,479	469,554	72,866,895	
1918	13,607,650	99,459,233	2,056,005	2,437,757	2,437,757	211,194,861	52,165,131	79,775,150	5,663,894	5,739,150	522,262	62,845,050	
1919	6,086,379	67,233,944	1,389,849	1,607,132	1,797,988	116,696,528	21,705,554	51,610,987	2,894,382	2,566,376	187,345	27,977,118	
1920	6,067,180	51,031,527	1,054,915	1,589,972		110,670,055		52,481,577		2,113,741		27,521,576	
1921	1,538,309	46,175,144	964,525	976,984		28,011,004		22,576,646		69,390		6,651,346	
1922	4,745,810	57,438,328	1,187,355	1,381,299		91,761,737		38,695,793		4,633,586		17,348,973	
1923	11,829,839	99,852,844	2,064,141	2,046,071		216,037,146		50,705,666		3,084,295		39,558,508	
1924	12,708,566	102,372,160	2,116,643	2,494,698		236,180,622		69,571,834		11,477,212		41,039,519	
1925	13,140,350	113,049,110	2,336,932	3,433,478		227,632,039		109,964,255		26,355,371		48,610,601	
1926	14,521,472	120,465,311	2,490,239	3,528,460		248,975,102		109,993,079		50,762,818		52,107,450	
1927	14,519,121	124,165,011	2,566,718	3,582,084		249,918,989		111,015,187		49,097,827		47,473,366	
1928	17,251,706	140,813,933	2,910,882	3,728,942		287,684,950		104,750,662		44,492,643		55,308,535	
1929	18,615,213	160,993,079	3,328,035	4,644,955		311,891,841		98,874,016		43,588,545		69,803,927	
1930	10,134,900	105,825,833	2,197,614	3,517,117		175,669,746		85,172,500		44,714,792		32,706,186	
1931	8,485,873	106,865,811	2,204,151	2,502,057		147,706,141		67,193,735		53,215,411		20,884,363	
1932	3,465,178		1,450,356	1,973,814		62,468,976		65,780,992		40,492,579		9,206,725	
1933	3,833,509	61,963,920	1,231,082	1,993,113		71,636,113		66,059,434		41,296,403		10,742,036	
1934	4,502,819	77,374,221		2,252,991		83,585,788		64,831,973		33,221,628		14,934,162	
1935	7,055,212	109,405,200		3,455,538		126,120,952		72,576,150		35,992,591		21,268,289	
1936	14,252,656	149,449,200		3,753,539		248,905,761		64,902,783		34,843,386		35,764,865	
1937	23,720,375	240,147		4,873,479		406,842,000		90,466,000		41,139,200		69,414,205	
1938	12,607,863	129,388		3,671,794		212,098,560		82,668,239		46,192,937		33,707,919	
1939	20,039,432	190,553		4,120,296		335,712,875		73,689,979		41,721,903		50,073,034	
1940	26,753,382	256,552		4,760,252		467,010,531		75,713,100		43,623,377		70,540,717	
1865-1940	Total	4,195,808		117,138,653		3,161,215 <sup>o</sup>		1,385,850 <sup>o</sup>		371,749 <sup>o</sup>		1,285,177,699	

<sup>o</sup> indicates figure in short tons.

Sources:

1865-1917 V.C. Heikes  
1917-1940 U.S.G.S.

Ore Deposits of Utah  
Mineral Resources of U.S.  
Mineral Yearbook

Total Dividends 1865-1934  
exclusive of Those Paid by U.S. Mining Co.  
Total Estimated Dividends  
1865-1940

242,889,503  
250,000,000

YEAR

# TOTAL ORE PRODUCTION AND TOTAL GROSS VALUE IN MILLIONS

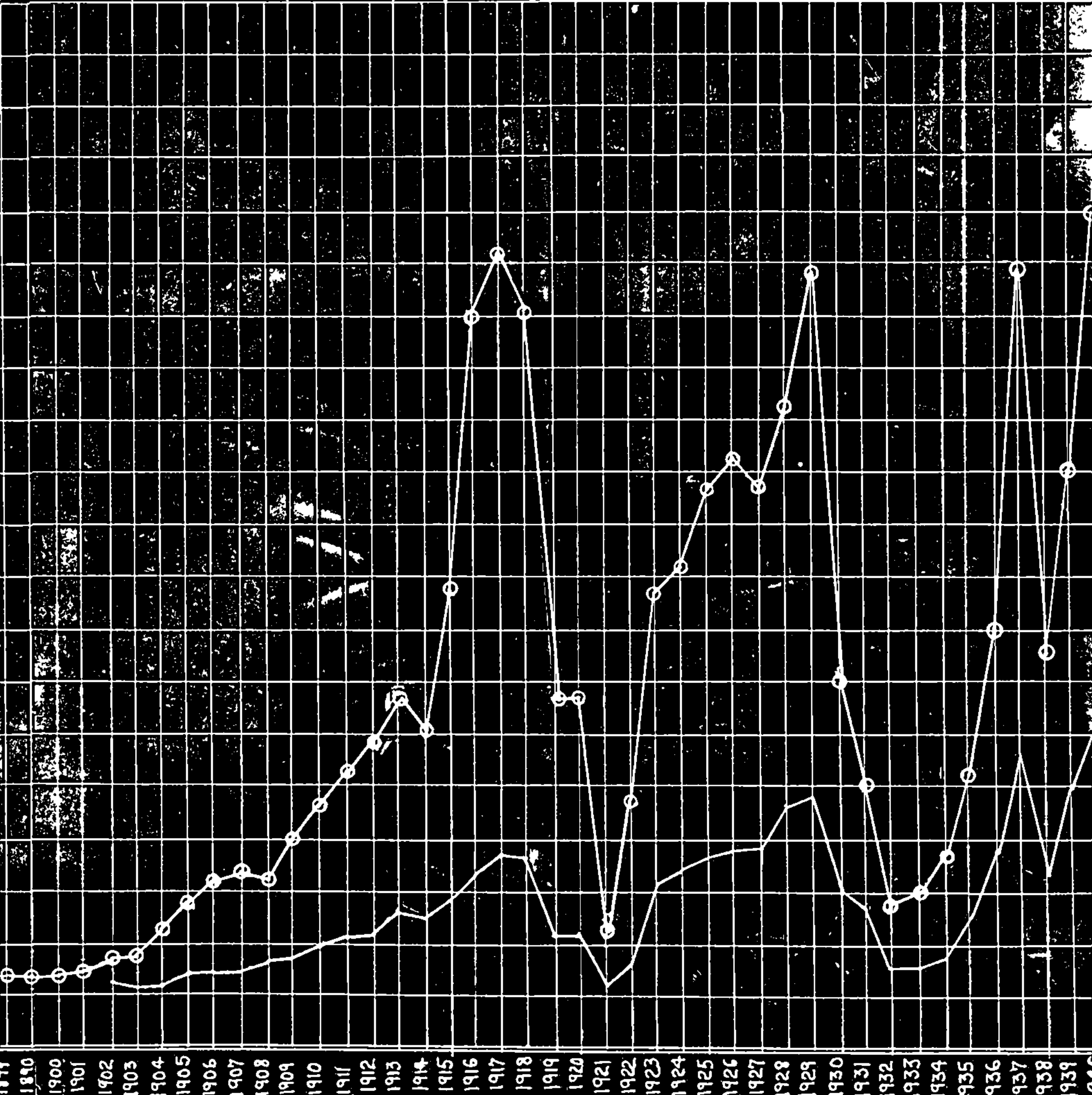
Gross Value   
Ore-production 

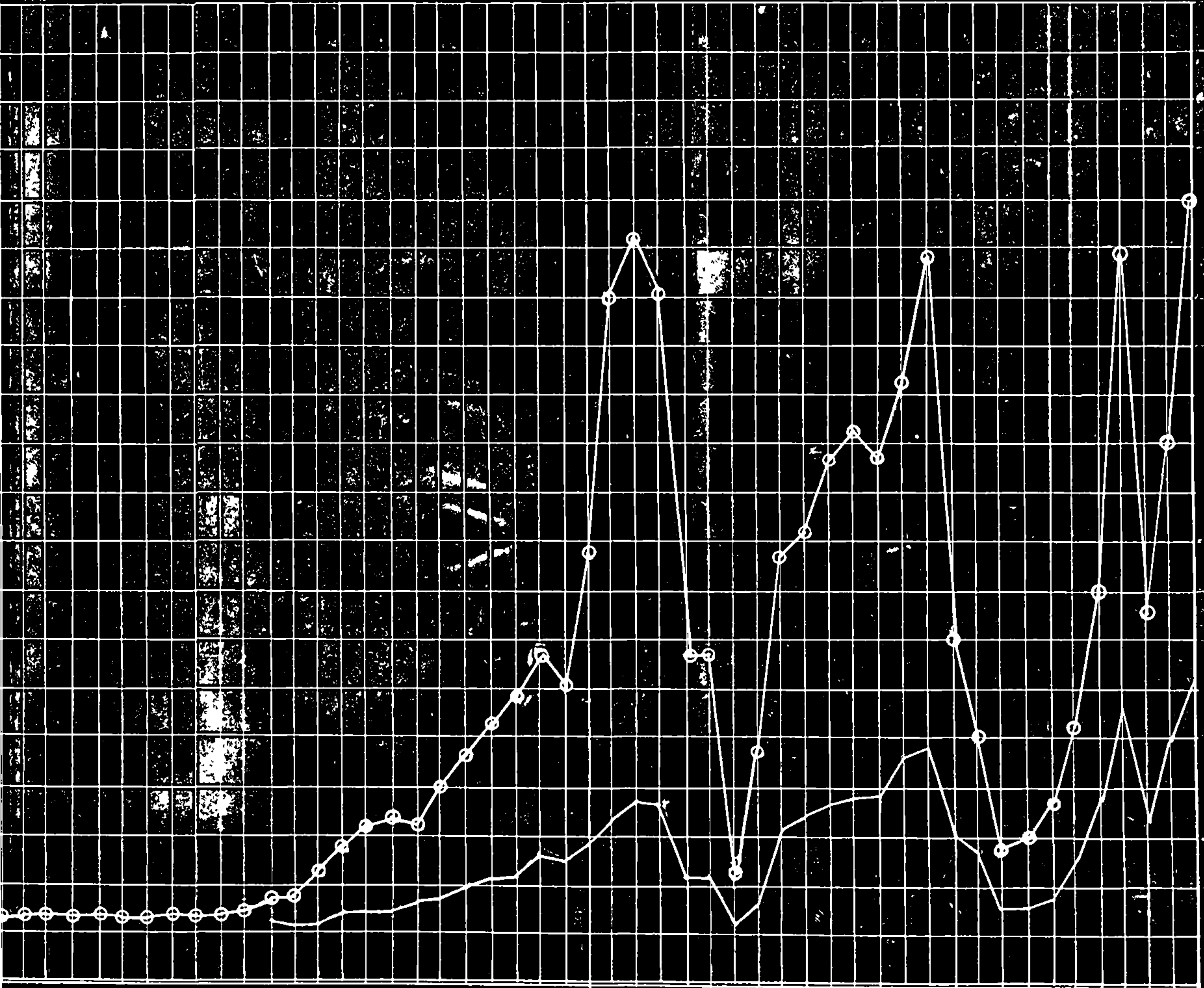
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90

1865  
1873  
1874  
1875  
1876  
1877  
1878  
1879  
1880  
1881  
1882  
1883  
1884  
1885  
1886  
1887  
1888  
1889  
1890  
1891  
1892  
1893  
1894  
1895  
1896  
1897  
1898  
1899



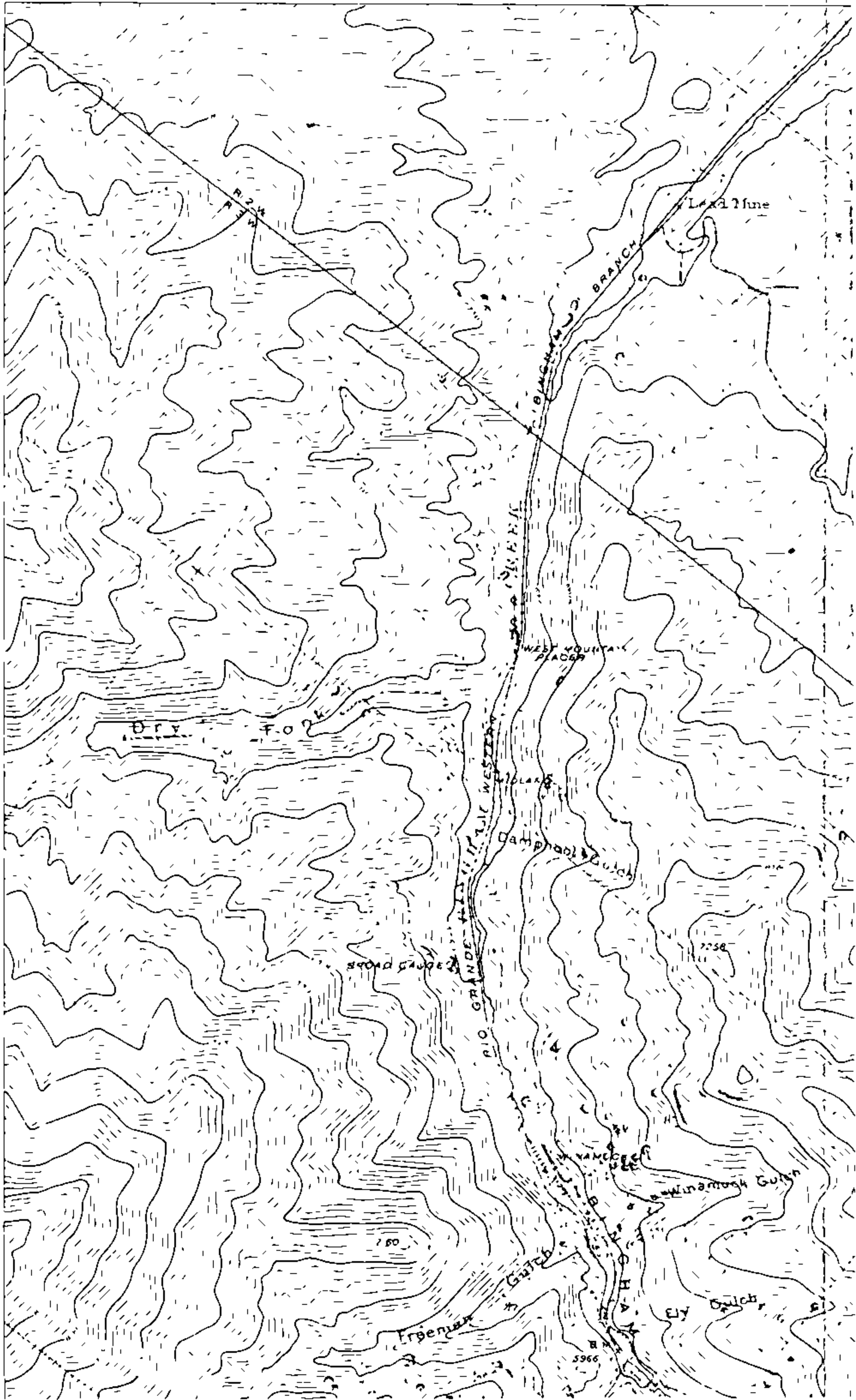






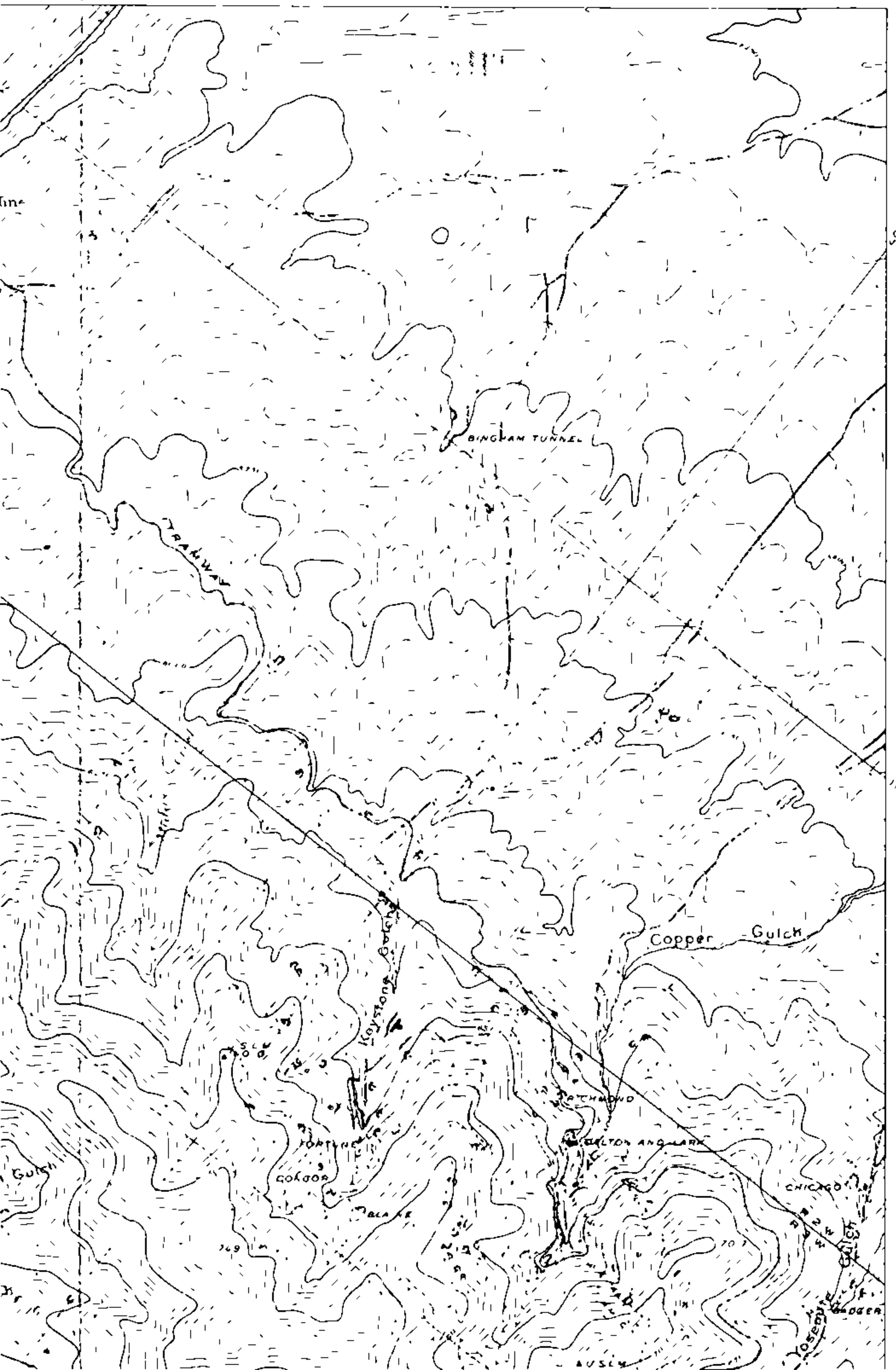
1893 1894 1895 1896 1897 1898 1899 1890 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY



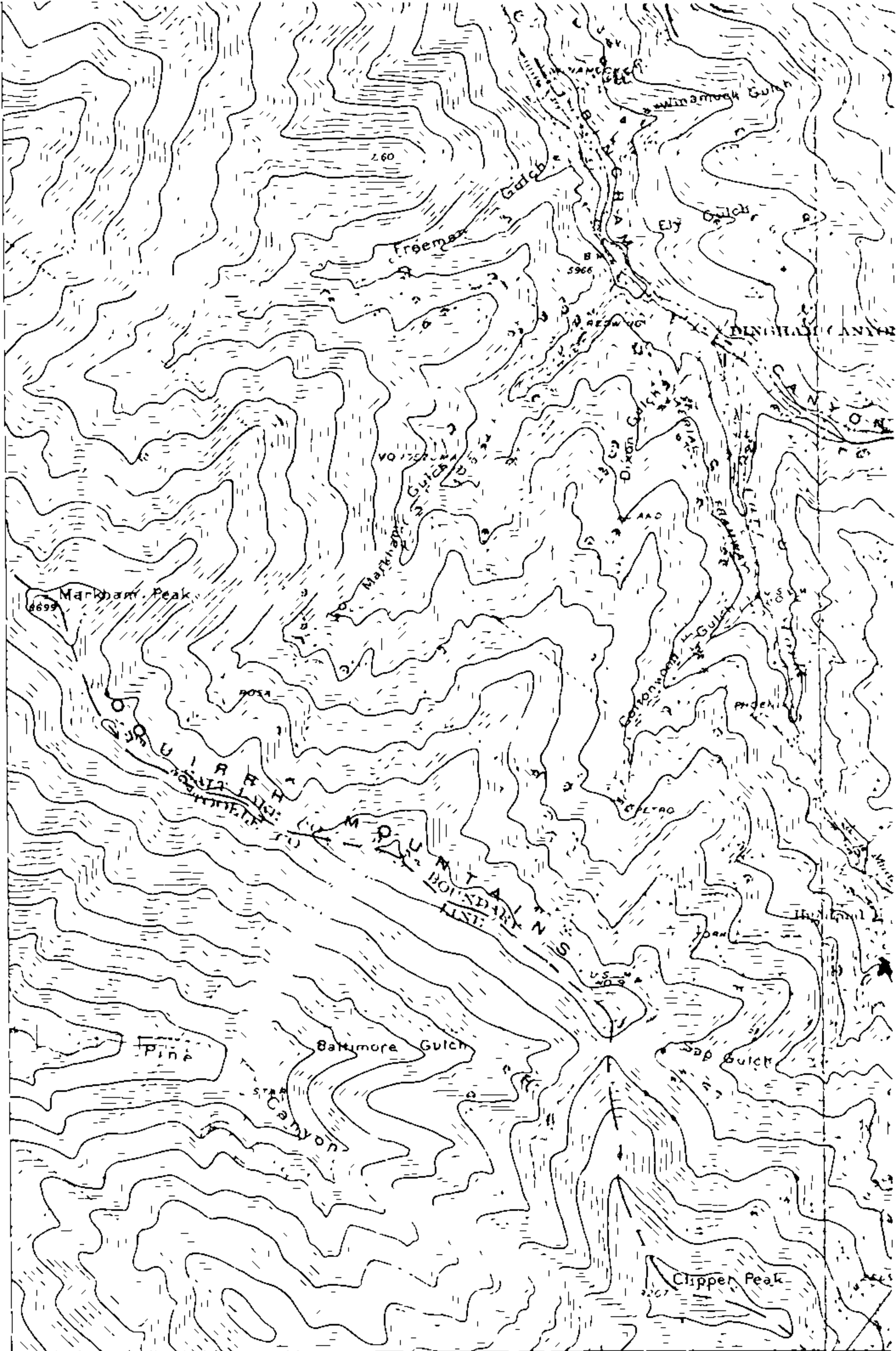


UTAH  
BINGHAM MINING MAP

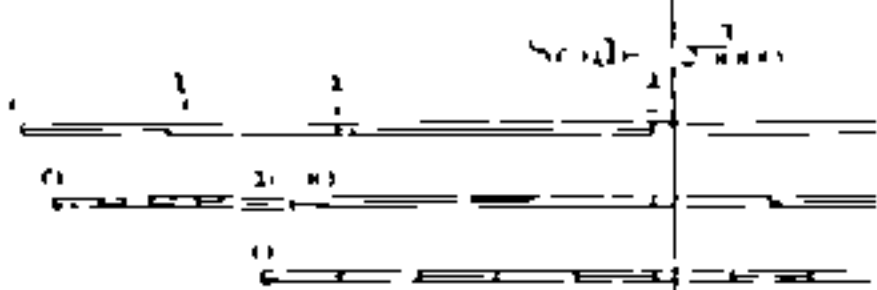


50-20

11-10



Contour interval 50 feet  
 Triangles indicate peaks  
 Thin lines indicate drainage  
 ET F. 1910



Contour interval 50 feet  
 Triangles indicate peaks  
 based on observations of K. ...





# THE TOPOGRAPHIC MAPS OF THE UNITED STATES

The United States Geological Survey is making a series of standard topographic maps to cover the United States. This work has been in progress since 1882, and the published maps cover more than 47 percent of the country exclusive of outlying possessions.

The maps are published on sheets that measure about 10 1/2 by 20 inches. Under the general plan adopted the country is divided into quadrangles bounded by parallel of latitude and meridians of longitude. The quadrangles are mapped on different scales, the scale selected for each map being that which is best adapted to general use in the development of the country, and consequently, though the standard maps are of nearly uniform size, the areas that they represent are of different sizes. On the lower margin of each map are printed graphic scales showing distances in feet, meters, miles, and kilometers. In addition, the scale of the map is shown by a fraction expressing a fixed ratio between linear measurements on the map and corresponding distances on the ground. For example, the scale 1/25,000 means that 1 unit on the map (such as 1 inch, 1 foot, or 1 meter) represents 25,000 of the same units on the earth's surface.

Although some areas are surveyed and some maps are compiled and published on special scales for special purposes, the standard topographic surveys and the resulting maps have for many years been of three types, differentiated as follows:

1. Surveys of areas in which there are problems of great public importance—relating, for example, to mineral development, irrigation, or reclamation of swamp areas—are made with sufficient detail to be used in the publication of maps on a scale of 1/62,500 (1 inch = one-half mile) or 1/125,000 (1 inch = 2,000 feet), with a contour interval of 1 to 100 feet, according to the relief of the particular area mapped.

2. Surveys of areas in which there are problems of average public importance, such as most of the basin of the Mississippi and its tributaries, are made with sufficient detail to be used in the publication of maps on a scale of 1/125,000 (1 inch = nearly 1 mile), with a contour interval of 10 to 100 feet.

3. Surveys of areas in which the problems are of minor public importance, such as much of the mountain or desert region of Arizona or New Mexico, and the high mountain area of the northwest, are made with sufficient detail to be used in the publication of maps on a scale of 1/250,000 (1 inch = nearly 2 miles) or 1/500,000 (1 inch = nearly 4 miles), with a contour interval of 20 to 250 feet.

The aerial camera is now being used in mapping. From the information recorded on the photographs, planimetric maps, which show only drainage and culture, have been made for some areas in the United States. By the use of stereoscopic plotting apparatus, aerial photographs are utilized also in the making of the regular topographic maps, which show relief as well as drainage and culture.

A topographic survey of Alaska has been in progress since 1898, and nearly 41 percent of its area has now been mapped. About 15 percent of the Territory has been covered by maps on a scale of 1/250,000 (1 inch = nearly 2 miles). For most of the remainder of the area surveyed the maps published are on a scale of 1/500,000 (1 inch = nearly 4 miles). For some areas of particular economic importance, covering about 4,000 square miles, the maps published are on a scale of 1/125,000 (1 inch = nearly 1 mile) or larger. In addition to the area covered by topographic maps, about 11,000 square miles of southeastern Alaska has been covered by planimetric maps on scales of 1/250,000 and 1/500,000.

The Hawaiian Islands have been surveyed, and the resulting maps are published on a scale of 1/250,000.

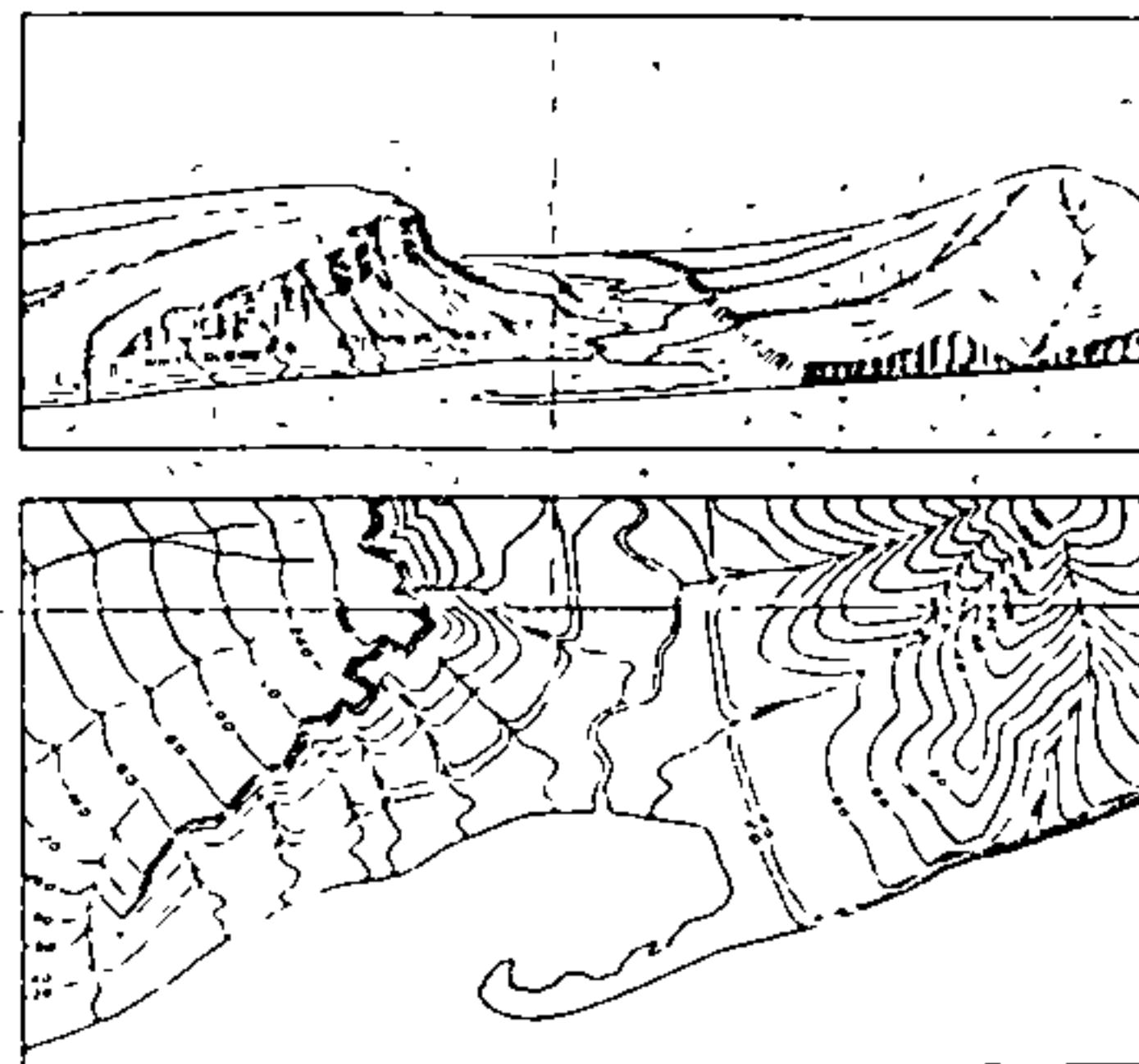
A survey of Puerto Rico is now in progress. The scale of the published maps is 1/25,000.

The features shown on topographic maps may be arranged in three groups—(1) water, including seas, lakes, rivers, canals, swamps, and other bodies of water, (2) relief, including mountains, hills, valleys, and other features of the land surface, (3) culture (works of man), such as towns, cities, roads, railroads, and boundaries. The symbols used to represent these features are shown and explained below. Variations appear on some earlier maps, and additional features are represented on some special maps.

All the water features are represented in blue, the smaller streams and canals by single blue lines and the larger streams by double lines. The larger streams, lakes, and the sea are accentuated by blue water lining or blue tint. Intermittent streams—those whose beds are dry for a large part of the year—are shown by lines of blue dots and dashes.

Relief is shown by contour lines in brown, which on a few maps are supplemented by shading showing the effect of light thrown from the northwest across the area represented, for the purpose of giving the appearance of relief and thus aiding in the interpretation of the contour lines. A contour line represents an imaginary line on the ground (a contour) every part of which is at the same altitude above sea level. Such a line could be drawn at any altitude, but in practice only the contours at certain regular intervals of altitude are shown. The datum or zero of altitude of the Geological Survey maps is mean sea level. The 20-foot contour would be the shore line if the sea should rise 20 feet above mean sea level. Contour lines show the shape of the hills, mountains, and valleys, as well as their altitude. Successive contour lines that are far apart on the map indicate a gentle slope, lines that are close together indicate a steep slope, and lines that run together indicate a cliff.

The manner in which contour lines express altitude, form, and grade is shown in the figure below.



The sketch represents a river valley that lies between two hills. In the foreground is the sea, with a bay that is partly enclosed by a hooked sand bar. On each side of the valley is a terrace into which small streams have cut narrow gullies. The hill on the right has a rounded summit and gently sloping spurs separated by ravines. The spurs are truncated at their lower ends by a scarp cliff. The hill on the left terminates abruptly at the valley in a steep escarp, from which it slopes gradually away and forms an inclined tableland that is traversed by a few shallow gullies. On the map each of these features is represented, directly beneath its position in the sketch by contour lines.

The contour interval, or the vertical distance in feet between one contour and the next, is stated at the bottom of each map. This interval differs according to the topography of the area mapped. In a flat country it may be as small as 1 foot, in a mountainous region it may be as great as 250 feet. In order that the contours may be read more easily certain contour lines, every fourth or fifth, are made heavier than the others and are accompanied by figures showing altitude. The heights of many points—such as road intersections, summits, surfaces of lakes and benchmarks—are also given on the map in figures, which show altitudes to the nearest foot only. More precise figures for the altitudes of benchmarks are given in the Geological Survey's bulletins on spirit leveling. The geodetic coordinates of triangulation and transit-traverse stations are also published in bulletins.

Lettering and the works of man are shown in black. Boundaries, such as those of a State, county, city, land grant, township, or reservation, are shown by continuous or broken lines of different kinds and weights. Public roads suitable for motor travel the greater part of the year are shown by solid double lines, poor public roads and private roads by dashed double lines, trails by dashed single lines. Additional public road classification if available is shown by red overprint.

Each quadrangle is designated by the name of a city, town, or prominent natural feature within it, and on the margins of the map are printed the names of adjoining quadrangles of which maps have been published. More than 4,100 quadrangles in the United States have been surveyed, and maps of them similar to the one on the other side of this sheet have been published.

Geologic maps of some of the areas shown on the topographic maps have been published in the form of folios. Each folio includes maps showing the topography, geology, underground structure, and mineral deposits of the area mapped, and several pages of descriptive text. The text explains the maps and describes the topographic and geologic features of the country and its mineral products. Two hundred twenty-five folios have been published.

Index maps of each State and of Alaska and Hawaii showing the areas covered by topographic maps and geologic folios published by the United States Geological Survey may be obtained free. Copies of the standard topographic maps may be obtained for 10 cents each, some special maps are sold at different prices. A discount of 40 percent is allowed on an order amounting to \$5 or more at the retail price. The discount is allowed on an order for maps alone, either of one kind or in any assortment, or for maps together with geologic folios. The geologic folios are sold for 25 cents or more each, the price depending on the size of the folio. A circular describing the folios will be sent on request.

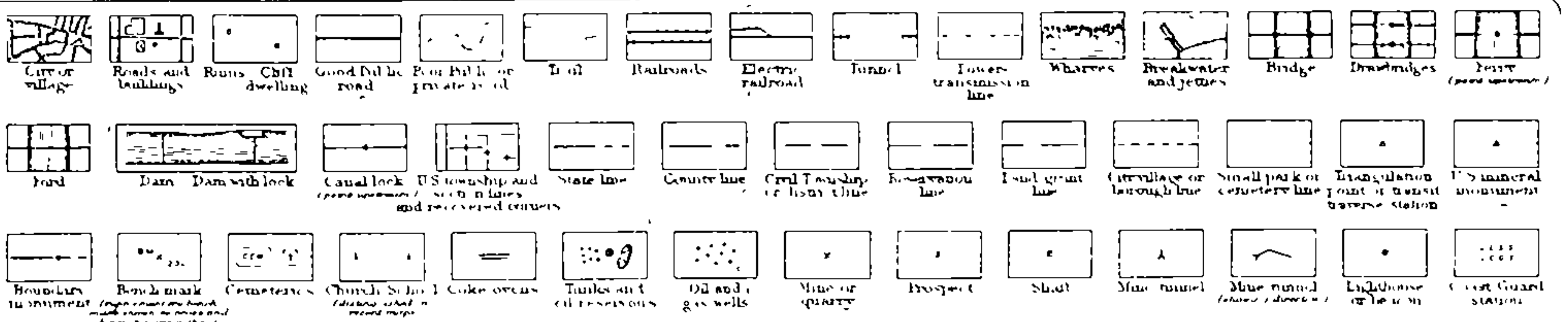
Applications for maps or folios should be accompanied by cash, draft, or money order (not postage stamps) and should be addressed to

THE DIRECTOR,  
United States Geological Survey,  
Washington, D. C.

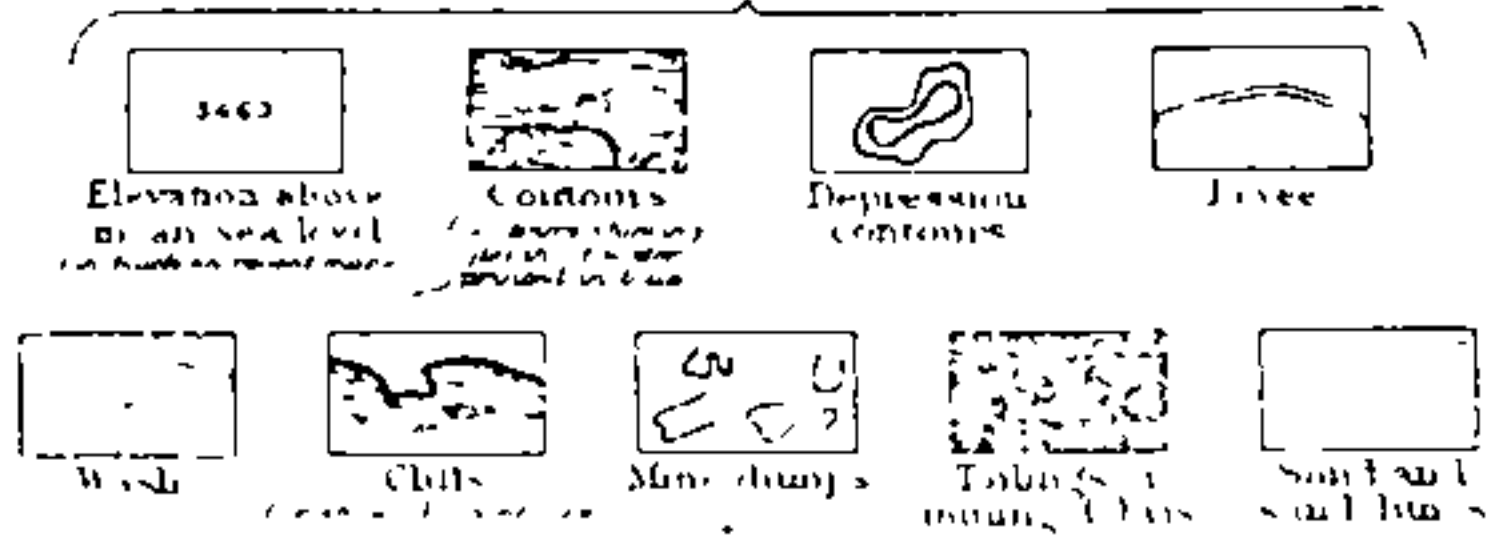
November 1937

## STANDARD SYMBOLS

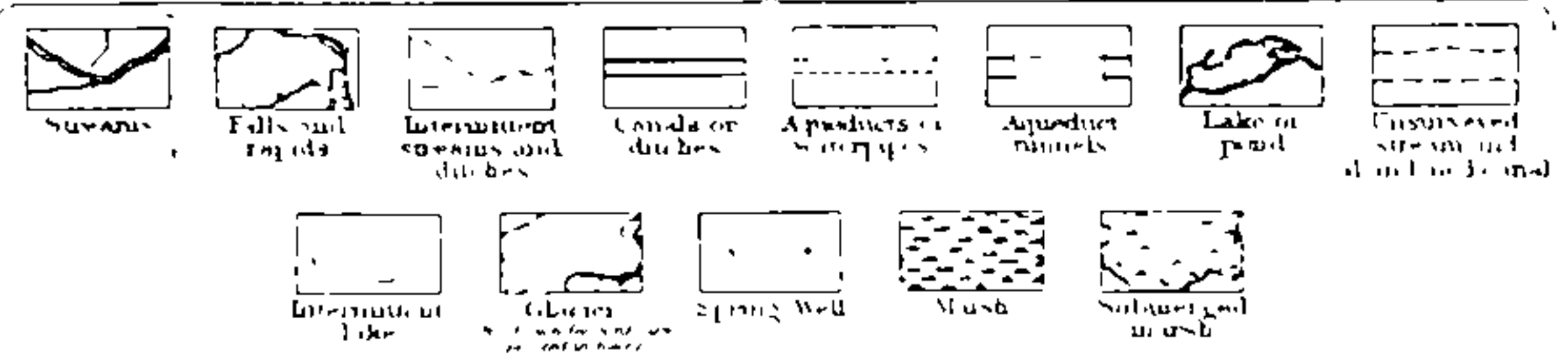
### CULTURE (printed in black)



### RELIEF (printed in brown)



### WATER (printed in blue)



### WOODS (when shown, printed in green)



## GLOSSARY OF MINING TERMS

**Adit--**A horizontal opening in the earth's surface for mining purposes having connection with the surface.

**Amalgamation--**The process whereby gold is recovered by means of its affinity to mercury. Mercury is introduced into the finely crushed ore, it takes up the gold, and by reason of its weight the amalgam may be easily recovered. The mercury is then distilled off leaving the gold.

**Change room--**A building where men employed underground may bathe and change their working clothes for street clothes.

**Complex ore--**An ore containing more than one recoverable mineral, often lead, zinc, and silver or gold and copper. Most often the ores are closely combined and difficult to process.

**Crushing--**The process whereby ore is reduced to a small, even size, a step necessary to ready it for concentration.

**Dip--**The angle at which an ore body or geological formation enters the earth's surface.

**Drift--**A horizontal opening in the earth's surface having no direct connection with the surface. It is a branch of a tunnel or shaft.

**Hard hat--**A helmet, usually made of bakelite or other composition; designed to protect the miner against falling objects.

**Huff Electrostatic Process--**A process whereby colloidal particles of minerals suspended in air are precipitated by means of attraction to electrically charged plates.

**Jig--**A concentrating device which operates by means of a vertical reciprocating motion which settles ore to the bottom of a tray where it is drawn off.

**Miner--**A person engaged in the mining process who drills and blasts the rock, breaking the ground in preparation for loading and hauling.

**Mucker--**A person engaged in the process of mining who shovels the ore or waste into a car or chute and who acts as the miner's assistant.



Overwind device--A safety designed to guard against accidental raising or lowering of a mine elevator past its normal position.

Raise--An opening driven up from an interior point in the mine, i. e., from a tunnel or drift.

Refractory--An ore difficult to treat because of its chemical or physical nature.

Riffle--A device for recovering placer gold or amalgam (mercury containing gold). It consists of a flume with regularly spaced cleats on the bottom. The washing action of the water takes away the waste leaving the gold caught behind the cleats.

Shaft--A vertical or sloping opening in the earth's surface for mining purposes having direct outlet on the surface.

Shay engine--A locomotive engine designed for hauling on steep grades. Power is not applied directly to the wheels from the piston as is the case in an ordinary engine, but is applied through a system of secondary gears, thus giving great tractive force.

Stamp milling--A process for crushing ore by the verticle motion of a large iron shod, weighted timber or casting called a stamp, which is raised and then dropped on a platen bearing the crude ore.

Strike--The longitudinal axis of an ore body or a geological formation.

Stope--An underground place where ore is being or has been mined.

Timberman--A worker in the mine who shores and props up the walls and roof with timber or other material.

Tunnel--A horizontal opening in the earth's surface for mining purposes, having connection with the surface.

Winze--An opening driven down from an interior point in the mine, i. e., from a tunnel or drift.