History of the Black Horse, Paragon, and St. Peter Mines, Shoshone County, Idaho

Victoria E. Mitchell
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INTRODUCTORY NOTE

This report was prepared under a cooperative agreement with the U.S. Forest Service, Region I, as part of a project to identify and describe inactive and abandoned mines in Idaho. Work on this project included preparing detailed histories of mines in Region I that had significant recorded production. The information in this report is from a number of published and unpublished sources in the Idaho Geological Survey's mineral property files.

Where not otherwise noted, most of the mine production data is drawn from the U.S. Geological Survey's (USGS) annual volumes on *Mineral Resources of the United States* (1882-1923) and the equivalent volumes produced by the U.S. Bureau of Mines (USBM), *Mineral Resources of the United States*, 1924-1931, and *Minerals Yearbook*, 1932 to present. Information on underground workings and mine equipment is generally from the annual reports of the Idaho Inspector of Mines (IMIR) published from 1899 to 1979. After 1974, the Mine Inspector’s office was known as the Mine Safety Bureau, a section of the Idaho Department of Labor and Industrial Services. Detailed accounts of mine operations are, for the most part, drawn from the annual reports prepared by the companies for the State Inspector of Mines; these reports were required by law, and the information contained in them formed the basis of the Mine Inspector’s annual reports. Reports of recent developments are taken from the Idaho Geological Survey’s (IGS) annual reports on the developments in mining and minerals in Idaho (from 1984 to present) or from similar reports produced by the Survey’s predecessor, the Idaho Bureau of Mines and Geology (IBMG) from 1975 to 1984. Other published sources are referenced in the text. A complete bibliography is included at the end of the report. Where direct quotations are taken from source materials, the original spelling and grammar are preserved even in cases where they do not conform to currently accepted usage.
History of the Black Horse, Paragon, and St. Peter Mines, Shoshone County, Idaho

Victoria E. Mitchell

INTRODUCTION

The Black Horse, Paragon, and St. Peter mines are located in Paragon Gulch about 6½ miles east of Murray (Figures 1 and 2) on the Thompson Pass 7.5-minute quadrangle in T. 49 N., R. 6 E., secs. 7 and 18, and T. 49 N., R. 5 E., sec. 13. An associated millsite is in T. 49 N., R. 5 E., sec. 13 (Bennett and Mitchell, 1997). Claims in the vicinity of the mines are shown on Figure 3. Historical ownership of these mines is confusing because, at various times, the Black Horse (Murray Hill), Upper Paragon, and Lower Paragon (Chicago-London) mines have each been operated separately, as well as in combination with one or both of the other properties.

The mines are in the Prichard Formation near the transition zone with the overlying Burke Formation (Figure 4; Hosterman, 1956; Umpleby and Jones, 1923; Cressman, 1989). The Prichard Formation in the Murray area was described as follows (Hosterman, 1956, p. 728):

In the Murray area the Prichard formation has been divided into two mappable units based on lithology. The two divisions are referred to as the upper part and the lower part of the Prichard formation. The term "lowest part," however, is misleading because the lowest part or base of the Prichard is not exposed in the Murray district. Therefore, the lower part of the Prichard formation includes all of the formation observed except the upper 1,800 feet.

7Idaho Geological Survey, Main Office at Moscow, University of Idaho, Moscow.
Figure 1. Location of the Lower Paragon (Chicago-London), Black Horse (Murray Hill), Upper Paragon, and St. Peter mines, Shoshone County, Idaho (U.S. Geological Survey Thompson Falls 1:100,000-scale map).
Figure 2. Topographic map of the Lower Paragon (Chicago-London), Black Horse (Murray Hill), Upper Paragon, and St. Peter mines, Shoshone County, Idaho (U.S. Geological Survey Burke and Thompson Pass 7.5-minute topographic maps).
Figure 3. Chia map of the area around the Lower Paragon (Chicago-London), Black Horse (Murray Hill), and Upper Paragon mines, Shoshone County, Idaho. (Idaho Geological Survey mineral property files). Comparison of this map with Figure 1 suggests that only the upper two tunnels of the Black Horse are shown on this map.
Figure 4. Geologic map and sections of the Murray area, Shoshone County, Idaho (Hosterman, 1956, Plate 57).
Rocks of the Prichard formation underlie almost the entire drainage basin of Prichard Creek and its tributaries (pl. 57 [Figure 4]). In Bear Gulch about 9,000 feet of the lower part of the Prichard formation is exposed in the core of the Trout Creek anticline. This lower part is about 75 to 80 percent dark-gray argillites and 20 to 25 percent light-brownish-gray fine-grained impure quartzites. The bedding is usually regular. Individual beds average 2 to 6 inches thick and are rarely more than 12 inches; but a few quartzite beds are as much as 5 feet thick. In many places argillaceous rocks are laminated, and the visibility of these laminae range from slight to pronounced. The individual laminae range in thickness from 0.01 to 10 millimeters and occur as alternating light-gray coarser graded layers and dark-gray finer graded layers. Pyrite is found along many bedding planes, and the limonite derived from the weathered pyrite coats the rock a moderate-brown color.

The upper part of the Prichard formation forms a transition zone between the lower part and the overlying Burke formation. It is well exposed along the ridge running northwest from Goose Peak, where it is about 1,800 feet thick; it is also exposed near the heads of Bear and Paragon Gulches and along both the East and West Forks of Eagle Creek. The upper part contains quartzite and argillite in roughly a 2 to 1 ratio, which represents almost twice as much quartzite as the lower part and about one-half as much quartzite as the Burke formation. The quartzite ranges in appearance from thin bedded, impure, and greenish gray near the base to thick bedded, pure, and light gray to white near the top. The argillite is thinly laminated, the dark-gray fine-grained material alternates with light-gray coarser graded material. The individual laminae are rarely more than 1 millimeter in thickness. The argillite beds are more abundant near the base and become fewer until they disappear near the top.

Hosterman (1956, p. 745-746) described the mines as follows:

The Black Horse (pl. 61 [Figure 5]) and Paragon mines are both located in Paragon Gulch approximately 6.5 miles east of Murray. Accurate production figures for these mines are not available. Judging from the size of the stopes in the Black Horse mine, it probably had a fair production for a short time. The Paragon mines were inaccessible in 1953; therefore it was impossible to know what their stopes are like. U. S. M. (1923, p. 103) state that the lower Paragon mine had a production before 1923 of about 30 cars of 40 to 50 percent zinc ore and a few cars of lead ore. It is very doubtful if the upper Paragon mine produced more than several tons of ore.

The Black Horse (Murray Hill) mine exposes a mineralized shear zone that strikes N. 55° to 65° W. and dips 65° to 75° SW. The shear zone is exposed on the lower level for about 500 feet and on the upper level for 200 feet. The dip distance from the upper level to the lower level is about 625 feet. Stopes having an average width of about 3 feet have been made on the southwest-plunging ore shoots between the middle and lower levels. The ore consists of sphalerite mainly and some galena in a gangue of quartz and carbonate minerals. In the lower level, 100 feet north of the main shear zone, another considerably weaker shear, which may possibly be a split from the main shear, is exposed. This weaker shear has some galena, pyrite, and sphalerite in a gangue of quartz and carbonate minerals. The enclosing rocks, of the lower part of the Prichard formation, strike N. 15° to 20° W. and dip steeply east, forming part of the east limb of the Trout Creek anticline.

The upper Paragon mine was inaccessible in the summer of 1953, but according to Ransome (Ransome and Calkins, 1908, p. 190) a 300-foot shaft that collars in the stream bottom follows a mineralized shear zone that strikes about N. 70° W. and dips 45° SW. The

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2See p. 29 below for Ransome and Calkins' exact description.
Figure 5. Geologic map of the Black Horse Mine (Hosterman, 1956, Plate 61).
country rock includes both the upper and lower parts of the Prichard formation. The Prichard formation forms the eastern flank of Trout Creek anticline, strikes almost due north, and dips steeply to the east or is overturned to the west.

The inaccessible lower Paragon mine, often called the Chicago-London mine, is near the junction of Paragon Gulch and Prichard Creek. According to Umpleby and Jones (1923, p. 103), the mine had about 1,500 feet of drifts exposing a mineralized shear-zone type of vein that strikes N. 77° W. and dips 70° S. The ore minerals are sphalerite, galena, and pyrrhotite in a gangue of quartz and carbonate minerals. The enclosing country rock is the lower part of the Prichard formation which has a northerly strike, an easterly dip, and is also part of the east limb of the Trout Creek anticline.

BLACK HORSE MINE

The Black Horse Mine is in Paragon Gulch about halfway between the upper and lower workings of the Paragon Mine (Figures 1, 2, and 3). The mine is on the Thompson Pass quadrangle in T. 49 N., R. 6 E., sec. 7. The associated millsite is at the mouth of Paragon Gulch in T. 49 N., R. 5 E., sec. 13 (Bennett and Mitchell, 1997).

It is not known when the Black Horse Mine was discovered, although work was being done on the adjacent Paragon Mine as early as 1890 (Ransome and Calkins, 1908). By 1905, the Black Horse and associated claims were being operated by the Idaho-Montana Summit Mining Company (Table 1). The mine had one tunnel, and large bodies of high-grade ore were reported to have been opened near the surface. Shipments of high-grade lead-silver ore were made during the year. The mine was mentioned in the following year’s IMIR, but was apparently inactive for the next three years.

In 1907, the Idaho Mine Inspector described at length the first steps toward the construction of a railroad line to the Black Horse-Paragon area (1907 IMIR, p. 193-194):

The event of greatest importance to the extensive mineral region lying on the water shed on the North Fork of the Coeur d’Alene River and constituting nearly half of the mineralized area of the Coeur d’Alene country, was the incorporation, financing and starting the construction of a railway to tap this interesting district.

This new branch is to be known as the Idaho Northern Railway and is to be 33 miles long. It starts near Kingston, on the O. R. & N. Co.’s Coeur d’Alene line, and follows the north fork of the Coeur d’Alene River to the mouth of Prichard Creek, then up Prichard Creek to the heart of the North Side District at Murray and extends to Raven, a short distance above Murray. This enterprise was successfully promoted and financed in the east by Hon. B. F. O’Neill of Wallace, and E. P. Spaulding of the Monarch Milling Company, at Murray, whose enterprise and success in the matter are worthy of all praise from the residents of the North Side, for the completion of this important branch will relieve them from the embarrassing and costly disadvantage of wagon transportation over a high mountain divide to present railway connections under which they have always labored.

This enterprise was fully established and construction contracts let and the work in progress with a large force of men when the financial panic struck the country early in the fall.

Table 1. Companies and individuals operating at the Black Horse Mine.

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Officer</th>
<th>Date Incorporated</th>
<th>Charter Forfeited</th>
<th>Year(s) at Mine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idaho-Montana Summit Mining Company</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>(1905)</td>
</tr>
<tr>
<td>Paddy Burke and associates</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>(1909)</td>
</tr>
<tr>
<td>Black Horse Mining Co.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1911-1912</td>
</tr>
<tr>
<td>Murray Hill Mining Co.</td>
<td>C.E. Malletto, President</td>
<td>November 20, 1914</td>
<td>November 30, 1945</td>
<td>1912-1924</td>
</tr>
<tr>
<td>Paragon Mining Co.</td>
<td>L.W. Stedman, Manager</td>
<td>September 20, 1901</td>
<td>November 30, 1934</td>
<td>1919-1934</td>
</tr>
<tr>
<td>Shoshone County (?)</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>?-1946(?)</td>
</tr>
<tr>
<td>Senator Silver Lead Mining Co., Inc.</td>
<td>Thomas C. Runnfield, President</td>
<td>June 11, 1946</td>
<td>1964</td>
<td>1946-1964</td>
</tr>
<tr>
<td>Albert M. Nash (lessee)</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>1950-1951</td>
</tr>
<tr>
<td>Black Horse-Paragon Mining Co. (lessee)</td>
<td>Albert M. Nash, President</td>
<td>February 20, 1951</td>
<td>November 1976</td>
<td>1951-1953(?)</td>
</tr>
<tr>
<td>Clifton, Bentley &amp; Bennett</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>(1975-1981)²</td>
</tr>
</tbody>
</table>

¹Information not available in Idaho Geological Survey's files.
²It is not known when this partnership acquired the property nor how long it was held.

and while the bonds had been sold and the capital all provided for to push the thing through at a rapid rate, the local directors, in consideration of the money stringency in the east, wisely decided not to crowd the financial end, under the circumstances. They, however, are carrying a small force on the work at this time and keeping the enterprise alive, and as financial affairs become easier, this force will doubtless be gradually increased and the construction work pushed through to a finish.

The route follows an easy water grade all the way to its terminus, and presents no serious construction difficulties. In fact, it is believed that the road can be built and equipped with rails at a cost of $20,000 per mile.

What is locally known as the North Side section of the Coeur d'Alene field embraces the drainage of Pritchard, Eagle and Beaver Creeks and their numerous tributaries, covering an extensive area of richly mineralized territory that contains dozens of handsome lead-silver prospects and includes several fairly well developed mines, among which the Bear Top made quite an important output during the past year and shipped a number of cars of high grade concentrates which had to be hauled by wagon over the divide between the North and Side Forks at great expense.
With the Bear Top, Monarch, Black Horse and other developed resources of high grade lead-silver ore in the center of the North Side belt, and the young Callahan bonanza, which will be more nearly tributary to this new branch than its present shipping point at the south end of the district, and the Wait mine on the north end, the latter considered by competent judges to have the greatest showing of high grade lead-silver ore at the surface and in its numerous shallow openings of any mine ever found in the Coeur d'Alenes, together with dozens of other new development enterprises in progress in this class of ore, the new branch, when completed, is definitely assured of an important traffic resource of this class, that will doubtless rapidly increase into an important tonnage as time and development advance.

The Idaho Northern Railroad was completed to Murray in 1908, and it reached Paragon Gulch (its terminus) the following year.

In 1909, the Black Horse made a shipment of ore worth $65 a ton in lead and silver (Figure 6). About the property, the 1909 IMIR (p. 125) stated:

In this same vicinity there are several other properties which are and have been extensively developed, among which are the Orofino, Paragon, the Chicago-London and the Black Horse mines. This latter property is being developed through a lower cross-cut tunnel at the present time and some ore has been exposed; however, the showing is rather disappointing, as the upper tunnel, which was entirely within the carbonate zone, had a very flattering showing.

The Mine Inspector also noted that the property was being developed by Paddy Burke and associates, who were also operating the Orofino Mine and had recently optioned the Jack Waite.

Construction of a 150 tons-per-day (tpd) mill began in 1910. The 1911 IMIR, p. 126) contained the following information:

The Black Horse Company, in addition to its new plant, has recently completed a new gravity tramway connecting the mill with the mine in Paragon Gulch, and was breaking ground with a view to stoping ore for a mill run at the time of my visit last fall.

Small shipments were made from Black Horse in 1911. In addition, ore from the nearby Chicago-London (Lower Paragon) Mine was processed at the Black Horse mill. This ore yielded 11 cars of zinc concentrate and 5 cars of lead concentrate.

Development work continued at the mine in 1912 and 1913 (Tables 2 and 3), and short mill runs produced both lead and zinc concentrates (Table 4). Lead and zinc concentrates came from the Black Horse in 1915, and zinc ore was concentrated the following year. In 1917, the Murray Hill Mining Co. milled a few hundred tons of zinc ore from the Black Horse.

Umpleby and Jones (1923, p. 104-105) visited the area in 1916 and described the Black Horse (or Murray Hill) Mine as follows:

The Murray Hill mine, formerly the Black Horse, has produced considerable ore from a vein that strikes N. 70° W. and dips 65° S. It cuts Prichard slates, which strike N. 20° W. and dip steeply northeast. The ore occurs principally in two shoots 400 feet apart, one of which has
Figure 6. First shipment of ore from the Black Horse Mine (Wood, 1983, p. 99).
Table 2. Development work, number of men employed, and operating companies at the Black Horse Mine, by year.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Men Employed</th>
<th>Tunnels (feet)</th>
<th>Sinking (feet)</th>
<th>Cross-cutting (feet)</th>
<th>Drifting (feet)</th>
<th>Raising (feet)</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1912</td>
<td>12</td>
<td>110</td>
<td>9(^1)</td>
<td>15(^2)</td>
<td>---</td>
<td>---</td>
<td>Murray Hill Mining Co.</td>
</tr>
<tr>
<td>1913</td>
<td>20</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>Murray Hill Mining Co.</td>
</tr>
<tr>
<td>1919</td>
<td>1</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>Murray Hill Mining Co.</td>
</tr>
<tr>
<td>1949</td>
<td>6</td>
<td>3</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>Senator Silver-Lead Mining Co.</td>
</tr>
</tbody>
</table>

\(^1\) Combined figure for sinking and raising.
\(^2\) Combined figure for crosscutting and drifting.

Work for the year consisted of rehabilitating old workings.

been stope for a length of 80 feet and for 175 feet above the tunnel, and the other stope for 70 feet along the drift and for 170 feet above it. The average width of the shoots is about 2½ feet, but they wedge irregularly to seams at their ends. The central parts of the ore shoots contain the highest-grade ore, composed in large part of sphalerite and a little galena associated with quartz and calcite gangue. About 120 feet north of this vein a parallel vein has been followed for 1,000 feet. A shoot of ore 35 feet long and 2½ feet wide was found in this vein. On the margins of the shoot galena, pyrite, and sphalerite occur, but in the center the sphalerite is free from other ore minerals. Quartz and calcite comprise the gangue, with very little siderite. The sequence of deposition is in the main quartz, calcite, sphalerite, and galena, with pyrite, followed probably by a second generation of calcite.

Murray Hill Mining Co.’s 1919 report to the Idaho Inspector of Mines\(^4\) noted that the property was “shut down, awaiting more favorable operating conditions.” The following year, the company’s report to the Inspector stated that “we have not been operating since the fall of 1916 owing to the high cost of mining and the low price of metals.” In 1923, Murray Hill Mining Co.’s report said, “This property was sold to interests connected with the Paragon Mining Co. in 1919 — They made two payments and have defaulted on others.”

In 1924, the company reported to the Inspector that “The Murray Hill Corporation is still alive but we have sold our property to the Paragon Mining Co. who are now

\(^4\) Each year, mining companies operating in the state of Idaho were required by law to fill out a three-page questionnaire and return it to the state Inspector of Mines. These questionnaires were the main source of information for the Mine Inspector’s annual reports (IMRAs), but not all information on the forms was used in the printed reports. Quotations cited as coming from a company’s report to the Inspector of Mines were taken from the questionnaires, not the published reports issued annually by the Mine Inspector.
Table 3. Cumulative development at the Black Horse Mine, by year. Information is from company reports to Idaho Inspector of Mines; discrepancies in numbers reflect inconsistencies in the original data.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Development (ft)</th>
<th>No. of Tunnels</th>
<th>Total Length of Tunnels, Crosscuts, and Drifts (ft)</th>
<th>No. of Shafts</th>
<th>No. of Rises</th>
<th>No. of Crosscuts</th>
<th>No. of Drifts</th>
<th>Length of Principal Tunnels (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1919</td>
<td>8,000</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1920</td>
<td>3,000</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1923</td>
<td></td>
<td>3</td>
<td>-</td>
<td>4</td>
<td>6</td>
<td>290</td>
<td>440</td>
<td>900</td>
</tr>
<tr>
<td>1949</td>
<td>-5,200</td>
<td>3</td>
<td>-</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1950</td>
<td></td>
<td>2</td>
<td>-</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1952</td>
<td>1,000</td>
<td>1</td>
<td>-</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1955</td>
<td>600</td>
<td>2</td>
<td>-</td>
<td>0</td>
<td>0</td>
<td>3 or 4</td>
<td></td>
<td>600</td>
</tr>
<tr>
<td>1958</td>
<td>-5,200</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>800-900</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1959</td>
<td>-300</td>
<td>1</td>
<td>-</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1Information not reported to Idaho Inspector of Mines.
2Variously described as a shaft and an “upraise.”
3This may be the shaft at the upper Paragon Mine, rather than a shaft on the Black Horse property.
4The length of the intermediate levels was given as “about 1000 feet of tunnel.”
5The length of the intermediate levels was given as “several cross cuts of various length and ore in most of them.”
6In reference to the mine’s intermediate levels, the company’s description was “One with Several Cross Cut.”

operating same.” However, the following year, the story was a little different. According to the company’s 1925 report, “The Murray Hill Mining Co. has no property at present, as all property they formerly owned was sold to Paragon Mining Co. in 1919—- a partial payment was made but final payments are past due. The property is now in litigation an[d] we are trying to recover same for nonpayment.” The lawsuit continued at least into the next year, but by 1928, Murray Hill Mining was again reporting that the Black Horse had been sold to Paragon Mining Co. In 1934, Murray Hill’s report noted that the corporation had “sold all its property and will be disincorporated very shortly.” However, the company’s corporate charter was maintained for almost a decade “for future use alone.”

Paragon Mining Company apparently did very little work at the Black Horse during the time it held the property, and the company forfeited its corporate charter in
Table 4. Mine output and economic data for the Black Horse Mine for 1912 and 1913.

<table>
<thead>
<tr>
<th>Year</th>
<th>Tons of Ore</th>
<th>Average Value per Ton</th>
<th>Transport and Treatment Costs per Ton</th>
<th>Silver Recovered (ounces)</th>
<th>Lead Recovered (pounds)</th>
<th>Zine Recovered (pounds)</th>
<th>Gross Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td>1912</td>
<td>1</td>
<td>$35.00</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>$12,250.26</td>
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<tr>
<td>1913</td>
<td>406.5²</td>
<td>$44.70</td>
<td>$11.64</td>
<td>478.11</td>
<td>108,359</td>
<td>402,900</td>
<td>$20,197.59</td>
</tr>
</tbody>
</table>

¹Information not reported to the Idaho Inspector of Mines.
²Probably net smelter returns rather than gross returns.
³The company described “Mineral shipped during the year” as “406.5 net.”

1934. Nothing is known about what (if anything) happened at the mine during the next decade.

In 1946, the Senator Silver Lead Mining Company, Inc., purchased the Black Horse and leased the Lower Paragon claims for five years from Shoshone County. A prospectus for a public stock offering, dated April 15, 1947, contained the following information on the property⁴:

The early development in the Black Horse consists of approximately 4500 feet of tunnels and raises and some 1800 feet of tunnels, shafts and raises in the Paragon Group. The workings on the Black Horse have proven the vein system for a distance of 1400 feet in length and several well defined ore shoots of lead, silver and zinc ores.

Comments Made By Walter Jarvey on the Senator Silver Lead Mine

Mr. Jarvey, an experienced mine operator, was reared in this district and learned his mining the hard way. He was in charge of mine operations at the Highland Surprise Mine on Pine Creek at the time that around $125,000.00 was paid in dividends.

Following is Mr. Jarvey’s report on what he believes the present and future possibilities are for the Senator Silver-Lead property.

“As per your request here is my brief report on the Senator Silver-Lead property. My knowledge regarding this property was obtained through a very careful investigation and examination. I made this examination for my own personal benefit, because at the time it was made I was very much interested in acquiring this property for myself, therefore I made a very careful survey of the ore shoots on all three levels of the mine and the ore in the raises, also of the ore in the drift in Number 3 level where a winze was sunk. I will state that I can mine the ore that is now exposed in the workings of the Senator Silver-Lead property at a profit. The ore which is disclosed in your property in the lower levels or workings is a very high grade lead ore, commonly called galena ore. The upper workings or levels is a high grade carbonate lead ore.

Assuming that if I were to have charge of this property I would start work in three different places and in each one of them I am confident to show a profit from the start in the

⁴The copy of this prospectus that is in the IGS’s mineral property files has been retyped from the original, with some material omitted.
extraction of this ore. My method would be to high grade this ore as it is mined and at the same time to stockpile a good grade of milling ore as it is being broken down in mining operations.

I will further state that there is at least four years of ore in sight to be mined or that the present ore will open up and make it possible to mine ore for at least four years before it will become necessary to do any sinking below the Number Three level.

I believe it is conservative to estimate there is approximately 25,000 tons of ore in sight, and in the mining of this ore considerable high grade can be sorted and shipped direct to the smelter without having to be milled . . .

Signed
Walter B. Jarvey

The mine shipped 110 tons of zinc-lead ore in 1948, and the following year, the company reported that it had rehabilitated all the drifts in the mine and repaired the roads in the mine area. An article in the November 26, 1950, issue of Spokane’s Spokesman-Review contained the following information on the mine:

Albert M. Nash, mining engineer of Clark Fork, Idaho, has a 15-year lease on the Black Horse group of mining claims of Senator Silver-Lead Mining company of Wallace, Idaho, and plans to purchase the Paragon group adjoining Black Horse.

Both properties were silver-lead producers some years ago in the early days of mining in the Murray district.

Black Horse-Paragon Mining company is in the process of organization under the laws of Idaho.

Extend Power Line

It is planned to extend the power line and road to the property and to install the compressor plant and necessary machinery for full scale development. A considerable tonnage of mill feed will be recovered from the dumps and there are several spots in the property itself from which mining of ore could be commenced.

A follow-up story appeared in March 1951:

Capitalized at $250,000, the Black Horse-Paragon Mining company of Clark Fork this week filed articles of incorporation with the secretary of state. Incorporators are Albert M. and Mary A. Nash of Clark Fork, A. D. Ball of Seattle, George R. Balling of Chicago and D. T. Broderick Jr. of Pittsburgh.

The new company has leased claims formerly held in the Murray district by the Senator Silver-Lead Mining Co. of Wallace. Both the Paragon group and the Black Horse, which figure in the deal, were old silver-lead producers in the early days of the Murray boom. An extensive development program is planned by Albert M. Nash, Clark Fork, mining engineer. The power line will be extended to the property and necessary equipment installed for full scale development, it was reported.

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6This article may have appeared on page 30. From the photocopy of the article in IGS's Black Horse file, it is uncertain if the numeral in the column header was the page number.

7A photocopy of this article in the IGS's Black Horse files does not identify the newspaper that ran the story nor the page on which it appeared.
It is stated that old dumps contain a considerable tonnage of ore which can be profitably milled at present metal prices and there are several areas in the claims from which mining of ore can be started.

A slightly different version of this story appeared on March 2, 1951, in the Wallace Press Times.

Black Horse-Paragon Mining company, $250,000 capitalization, has been formed here [Clark Fork] as an Idaho corporation to take over the 15-year lease held by Albert M. Nash on the Black Horse group of mining claims, owned by Senator Silver-Lead company, Wallace. It also owns the Paragon group, purchased from George H. McKinnis, Kellogg. Both properties are four miles east of Murray, pioneer gold-mining camp of the first mining rush into the Coeur d'Alenes.

"This is the last frontier of the Coeur d'Alenes," said Nash, president and manager of the new company. "We plan to develop these properties at depth, and also to build a mill that will serve as a custom plant for the many small mines of the North Side."

The properties in the early days made small shipments to Utah and Colorado smelters, later to the East Helena plant and still later to the Bunker Hill smelter at Kellogg. Only scattered exploration and development work has been done.

On July 1, 1951, the following story on the Black Horse appeared:

Negotiations were entered into last week with the Washington Water Power company for the immediate extension of a power line to the Black Horse-Paragon Mining company property, Albert M. Nash, president and general manager, reported.

In addition to the contemplated new power supply, a new roadway is being built to the mine. Shoshone county highway crews are at work replacing the bridge and cleaning out and rebuilding the road to the mine. Lumber for the construction of the necessary buildings was delivered last week.

Nash reported a compressor will be installed in the near future and a mill built so that ore available in the old tunnels can be processed. The old dump, which contains an estimated 30,000 tons of lead-zinc ore, according to Nash, will also be milled, as well as ore from some of the small near-by properties.

The Black Horse-Paragon property is located approximately four miles east of Murray, Idaho.

Nash said he had leased his sawmill plant and equipment at Clark Fork, Idaho, and was devoting his full time to developing the mining property of the Black Horse-Paragon. Nash is making his headquarters in Kellogg.

On October 4, 1951, the following story appeared in the Wallace Miner:

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8 A photocopy of this article in IGS's Black Horse file does not identify the page where the story ran.

9 A handwritten note on the photocopy of this article in the Black Horse files identifies the newspaper in which the article appeared only as the Review (probably the Spokesman-Review) and does not give the number of the page on which the article appears.

10 A photocopy of this article in IGS's Black Horse file does not identify the page in which the article appeared.
A suit for $9075 against Senator Silver-Lead Mining company, Inc., George H. McKinnis, Kellogg, and Cecil Murphy, Wallace, was filed in district court here late last week by Harry Gallup, Moscow, Idaho, lumber merchant, who claims that the company stock sold to him and five other men in the Moscow area is worthless.

In his complaint Gallup, who says the other purchasers have assigned their claims to him, alleges that McKinnis, Murphy and the late H. C. Stapleton induced him and the others men to buy Senator stock in 1948 on representation that the company owned the Black Horse No. 1 and 2 and Black Horse Fraction mining claims and intended to buy 20 claims in the Paragon group. He contends that the company did not own these claims "or any claims," and that it had no plans to buy the Paragon.

The complaint says further that the money raised from the sale of the stock was used by Murphy for "his own personal use" and that he conveyed [conveyed] the Paragon claims to McKinnis on February 1, 1950. McKinnis, the complaint adds, conveyed his six of the 20 claims to the Black Horse Paragon Mining company last November and is negotiating for the sale of other claims in the group.

Gallup asks that McKinnis be restrained from disposing of these several claims.

The complaint states that Gallup paid $1050 for 7000 shares of Senator Silver-Lead stock. The other men who assigned their claims to him purchased stock as follows: Walter Bigham, Kendrick farmer, paid $2500 for 25,000 shares; George F. Brocke, Kendrick farmer and seed merchant, paid $2500 for 25,000; Byron G. St. Peter, Moscow, paid $2700 for 30,000 shares; Carl C. Cunningham, Moscow merchant, paid $200 for 2000 shares; and Dale Wallace, Moscow merchant, paid $175 for 1750 shares.

The outcome of this lawsuit is not known, but it appears to have had little effect on the activity (or lack thereof) at the mine.

In 1952, C.B. Forbes, secretary for Senator Silver-Lead, noted on the company's report to the Idaho Inspector of Mines:

"This is an old property which shipped considerable ore about 30 years ago[.] has been Idle for many years

The present Co. expect to do some development work this year and do have available ore in sight of a very good grade

Except for assessment work, the property remained idle. Black Horse-Paragon Mining Co. apparently relinquished its lease on the Black Horse in late 1953 or early 1954. Figure 5 shows the mine workings at about this time.

A newspaper article about the Black Horse appeared on July 13, 1956:

Work has been carried on the Senator Silver-Lead Mining Co. Ltd. This company acquired the Old Black Horse mine a well known shipper of high grade lead ore in the early

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11In July 1949, Senator Silver-Lead Mining still had the Paragon claims under lease. This lease was apparently terminated sometime between July 1949 and October 1950. The Black Horse group was owned by Senator Silver-Lead, probably until 1964, when the company went out of business.

12A photocopy of this article in IOS's Black Horse file does not identify the paper which ran the article nor the page on which it ran. An "Editor's Note" identifies the author of the article as George H. McKinnis.
days when horse [horse] power was used to transport the ore to the railroad. And slip scraper’s and four horse graders was used to pull the loads and keep them in shape to freight ore to the railroad to ship to the smelters.

For the past two years work has at different times been carried on at the property of the Senator. Two roads have been built to get to ore dumps that was extracted from the workings in the early days when lead ore sold from 4 cents per hundred to 4½ cents and zinc in many instances was just dumped the same as waste rock.

The work on the Old Black Horse mine, now the Senator Silver-Lead Mining Co. has acted as trenching as well as for road purposes and in the past week a mineralized zone has been exposed at surface depth. The value and extent of this zone isn’t known at present. Work hasn’t developed to date far enough to ascertain this. But in addition to this a carbonate ore showing has been discovered which bears the indication of considerable important which will be explored as soon as the road reaches this point on the property.

Since no electric power is available at the property, power is furnished by a Schram compressor mounted on a truck. After the rock is drilled, the compressor unit is moved, blasting done, and then the road is cleared by a bulldozer operated by Mr. Conner of Murray, who is also moving timber along the Thompson Falls road near the property.

A camp has been established ¼-mile from the work to eliminate unnecessary travel. Robert Montague is in charge of the time-keeper’s duties and doubles as camp cook.

It is expected that a shipment of ore (of ore) will be ready in the near future and will be sent to the Bunker Hill Smelter in Kellogg. George McKinnis, in charge of grading the ore and a veteran mine and smelter worker has stated, “This carbonate ore just exposed is as good [good] as any I ever saw in the Coeur d’Alene area.” The carbonate discovery at the Senator is at an elevation of about 4500 feet. It has been the history of the Coeur d’Alene mining district that when carbonate lead ore is found near the surface, that a Galena body of lead ore lies under it.

Due to the development in the past two years, considerable interest has been shown but not advertised in the area. The North Side bears strong similarity to the Pine Creek sector where the Nabob, Sidney, Highland, Nevada Stewart and Red Cloud are found. The North Side is similar in the inter-related positions of the properties. The No. 3 tunnel of the Old Black Horse, now the Senator Mining Co., could be extended on in and under the Bear [Bear] Top, Lone and Orofino. One tunnel, and one mill could handle the ores from all mines eliminating the necessity for dumping, sinking or hoisting for many years, McKinnis said. It would also eliminate mining at a high elevation, get away from snow problems and make one road serve all needs. Water supply would also be improved.

On the sector of the north side you have a continuation from the Sampson, U. S. Silver Lead and Jack Waite to the properties already named. The Sampson differs in silver values, having a very high silver content. Considerable development was done for many years by the late A. J. Brainard and R. L. Brainard, his brother. One of the big hindrances to further development was the difficult transportation problem to the properties. In the old horse and wagon days of 40 years ago it was a long haul over the Two Mile road at Osbourn to Pichard.

The days at the Senator are extremely hot, but the nights are cool. A large snow bank can still be seen on Steven’s Peak. However, development work continues at a good rate.

Another article, which appeared on July 19, 1956, reported these developments in a more succinct manner13.

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13 The photcopy of this story in IGS’s Black Horse file does not identify the newspaper which ran the article nor the page on which it appeared.
Senator Silver-Lead Mining Co., Ltd., has resumed exploration work at the old Black Horse mine on the north side of the Coeur d'Alene district east of Murray, it was reported last week by George McKinnis, veteran Kellogg miner who is associated with the firm.

Present work consists of road building which also serves as trenching exploration, he said.

One mineralized area has already been exposed in the road bed and another showing good carbonate mineralization at the surface will be crossed and exposed as the work progresses, he reported. He termed the carbonate ore "as good as any I have ever seen in the Coeur d'Alene district, and pointed out that past experience in the district indicates that there is a good possibility of finding a galena ore body beneath the oxidized outcrop.

The road construction work requires considerable blasting and a truck-mounted Schram compressor is being used since there is now [not] electric power available at the property, McKinnis reported. A camp has been set up about a quarter of a mile back from the work site.

Ready access to the No. 3 Black Horse tunnel will prove an important asset to the northside area, McKinnis pointed out, since it will eliminate the high-level snow problem, and open the way for extensive development into adjoining properties such as the Bear Top, Lone and Orofino. One tunnel and one mill could handle the ores from all the mines and it would gain enough depth on these ore bodies to eliminate the need for sinking and hoisting for many years, he noted.

In 1958, comments on the two reports (with different lists of officers) filed with the Idaho Inspector of Mines by the company reflect the state of the property and the company. In a cover letter addressed to Idaho Mine Inspector George McDowell and dated June 2, 1958, George H. McKinnis stated:

I have filled in the report to tye [the] best of my knowledge and belief. I believe it is very accurate the STOCK being NON ASSESSABLE and conditions bad to market any Treas. Stock we have had no funds and the ASSESSMENT work has been kept up by Myself and Son. and Cecil Murphy assisting. Co. has paid us no money and no STOCK for services rendered and we are trying to hang on a little longer thinking some improvement will develop but dont know what it will be.

Our Secretary or the one we did have has the Stock Ledger and the Minute Book but wont do anything for the Co. without Pay which the Co. hasent got. If further data is wanted please advise and I will put forth an effort to supply it. We are closed down inactive no production but my self and associates are keeping up the Assessment work from Yr. to Yr.

McKinnis styled himself as the resident agent of the mine and Cecil Murphy as "Assistant" (although Murphy's name was typed on the line for "Secretary"). Under the heading "Names of claims," McKinnis described the recent activity at the mine:

ASSESSMENT WORK ONLY NOT PRODUCING INACTIVE CLOSED DOWN

Past few yrs's road building and tunnels kept cleared and new roads constructed or built some prospecting at personal expense company had no funds culvert (culver) or bridge constructed to property

According to McKinnis, the development at the mine consisted of:

Footage or working openings of the property[ approximately one mile consisting of tunnels crosscuts drifts and raises main tunnel is approximately 8 hundred to 9 ft long drifts

19
each way from this tunnel hundred's of it has been driven and 2 additional tunnel above this tunnel is driven into the mt. and crosscuts driven each way from then and additional a raise driven that connects all three tunnels giving ventilation and opening's to the surface.

In contrast, the second 1958 report (filed by company secretary-treasurer C.B. Forbes) noted:

This property is inactive. have not had a directors meeting for about 2 years. Geo. McKinnis has looked after the assessment [sic] work every year. I fear this company is about done. They owe me more than $650.00 for secretary work besides a lot of stock due me.

In addition to listing Forbes as secretary, this version of the report listed Cecil Murphy as the company's statutory agent. However, by the following year, McKinnis was once again the statutory agent, and Secretary Forbes remarked: "Under recent Lead-Zinc Prices, no work could be done."

The company's fortunes did not improve. In the company's 1962 report to the Idaho Inspector of Mines, Forbes wrote:

This property is idle. 2 directors are dead, only the President and I are here nothing has been done. at the mine A stock holder has done the assessment work. I have kept up the corp. papers with the Sec. of State to date. I'll try to see the President soon and see what he thinks about it.

The following year, Forbes's comments to the Mine Inspector read:

Two active directors recently passed away. The writer, now 85 years old, has kept the Company intact, making yearly reports to Geo. Fletcher and sec. of state, all at my own expense. We do have a good our showing and hope to get some company interested for sake of the stock owners.

In 1975, the Black Horse Mine, in combination with the adjoining Paragon property, was being promoted by a joint venture partnership. The following memorandum was written to provide the partnership's promoter with information about the property (Bentley, 1975, p. 1-3):

[Here is a brief summary of the Paragon property owned by Clifton, Bentley & Bennett, a three-party joint venture partnership. The property consists of eleven patented lode claims and three patented placer claims together with eleven unpatented claims, well located and marked with all corner posts, center line posts and discovery posts in place as recorded. The unpatented claims were carefully chosen to enhance the entire property and to tie it together as an attractive mining property. One mine development, the old Black Horse mine, exists on these unpatented claims. It is idle at present but was a producing mine in past years. Much of the upper levels was stope out at that time but about four feet of mill run ore is showing under the existing rails on the creek level. Well mineralized outcroppings are evident to the north and west on these unpatented claims. Reference is made to the old Black Horse mine in the prospectus of the Senator Silver-Lead Mining Company dated April 15, 1947. I]
am furnishing to you portions of this prospectus which are relevant at present time [see p. 13-15, above]. I have in my possession a copy of an article which appeared in the Wallace Miner on June 27, 1946, concerning the Senator Silver-Lead and the Black Horse mine which they had purchased. You will note that the article states that carload lots of the ore assayed 84 percent lead and pure galena assays 86.6 percent. We have found many samples of this high grade ore in our prospecting over the old ore dumps on the property. . . .

The Clifton, Bentley & Bennett property is unincorporated but is a prime potential property for incorporation, larger in area and with more past production than the Bear Top, Ione, and Orofino prospects combined.

The patented claims are of course fee title property. The three placer claims are virgin gold bearing ground and in addition have prime creek bottom, summer home sites available. This type of ground is mostly in government ownership at present time and completely unavailable for private ownership.

The old Upper Paragon and St. Peter mines are located on the upper patented lode claims. Both are situated on prominent shear zones at the contact between the upper Prichard and lower Prichard geological formations, long recognized as the top mineral bearing zones.

The patented claims contain an estimated 600,000 board feet of commercial timber valued conservatively at $24,000.00. If home site development were contemplated, then some of this timber might be of more value "in place" or to enhance the home sites, than if it were harvested with some resulting scarring and for this reason it has not been harvested. It is steadily appreciating in value.

Certain inherent characteristics of the unpatented claims make them especially attractive at the present time. First, there is the fact that they are situated squarely between already proven mineral bearing ground and along the contact point between proven mineral bearing zones. Second, the outcroppings show definite values in valuable minerals. These facts make it much easier to carry on needed development under present regulations. Access to all of the claims is assured because the principal entrance, at the mouth of Paragon Gulch, is over patented land which is owned by us in fee simple title. Thus the beginning patented land makes certain access to the intervening unpatented land and also assures access to the upper patented land. The area is tied together as a very neat unit. . . .

I have in my possession a calculation of values made by A. E. Nugent of the Bunker Hill Co. dated July 26, 1955 in which he states that the total values of both dumps at the Black Horse amounted to $4,000.0014. It should be remembered that zinc was about twelve cents a pound at that time and lead perhaps sixteen cents. My own calculations show that these dumps should be in the neighborhood of $10,000.00 in value at the present time. Zinc is holding about thirty-six cents per pound. The gold which we know is in the placer claims has increased from $18 to $35 an ounce and is now in the neighborhood of $170 an ounce.

The Bunker Hill Co. was one of the companies that evaluated the property. Summers (1975, p. 1) summarized the potential of the mines as follows:

This is a narrow (3'-4') vein opportunity in Lower Prichard rocks.
There is no drill-indicated or developed reserve.
The property is small.

14Copies of Nugent's worksheets are in IGS's Black Horse file. According to these sheets, the upper dump was estimated to have 700 tons of material containing 2.38 percent lead and 0.15 ounce of silver per ton. The middle dump had 545 tons of material containing 3.71 percent lead, 3.9 percent zinc, and 0.25 ounce silver per ton.
The Paragon lead-zinc property consists of eleven patented and eleven unpatented lode claims and three patented placer claims located in Sections 17 and 18, T. 49 N., R. 6 E., six miles east of Murry, in Shoshone County, Idaho.

The property is owned by Clifton, Bentley and Bennett and is being promoted by Mr. Grady A. Stine at a price of $150,000.

The claims are located in the Lower Prichard formation, on the east limb of the Trout Creek anticline, north of the Thompson Pass fault. The ore occurs as galena and sphalerite with quartz and siderite in a three foot wide shear which strikes N. 60° W. and dips 70° SW.

The property has been developed by the Black Horse Mine, the Upper Paragon, the Lower Paragon and the St. Peter Mines. Only the Black Horse workings are still open. There is an unspecified length of vein galena exposed below the track at the Black Horse.

Associated assets at the property include three undeveloped placer claims on Prichard Creek, an estimated 600,000 board feet of timber and 1,250 tons of rock on the dumps.

Based on this summary, Bunker Hill declined to develop the property. There is no further mention of the Black Horse after 1975.

The mine was visited by an Idaho Geological Survey field crew in the summer of 1996 as part of a program to evaluate potential hazards from inactive and abandoned mines on U.S. Forest Service land in northern Idaho. Figures 7, 8, 9, and 10 show the mine and millsite as they appeared at that time.

Total recorded production for the Black Horse Mine between 1905 and 1948 was 8,621 tons of ore. This material yielded 1 ounce of gold, 1,129 ounces of silver, 70 pounds of copper, 248,652 pounds of lead, and 781,075 pounds of zinc. The extent of pre-1905 production, if any, is not known.

PARAGON MINE

The Paragon Mine consists of two sets of workings separated by the Black Horse Mine (Figures 1, 2, and 3). The Lower Paragon Mine, also known as the Chicago-London, is on patented land at the mouth of Paragon Gulch. The mine is in T. 49 N., R. 5 E., sec. 13, and T. 49 N., R. 6 E., sec. 18, near on the border between the Burke and Thompson Falls 7.5-minute quadrangles. The Upper Paragon Mine is located about 1½ miles up Paragon Gulch from its mouth. It is on the Thompson Pass 7.5-minute quadrangle in T. 49 N., R. 6 E., sec. 7 (Bennett and Mitchell, 1997).

The Upper Paragon was located in 1890 by Charles Tilden and other people (Western Historical Publishing Company, 1903), and work at the property began soon afterward (Ransome and Calkins, 1908). Additional claims located by L.W. Stedman (Western Historical Publishing Co., 1903) probably included the area that became the Lower Paragon workings.

In 1903, Western Historical Publishing Company printed the following information on the Paragon (1903, p. 1055-1056):
Figure 7. Main (No. 1) adit at the Black Horse Mine (Idaho Geological Survey photograph).
Figure 8. No. 2 adit at the Black Horse Mine (Idaho Geological Survey photograph).
Figure 9. No. 3 adit at the Black Horse Mine (Idaho Geological Survey photograph).
Figure 10. Black Horse millsite, with Prichard Creek in the foreground (photograph by Falma Moye, Idaho Geological Survey).
What is known as the Paragon group, owned by the Paragon Mining and Manufacturing Company, incorporated [Table 5], of which L. W. Stedman is superintendent and manager, consists of six claims and one hundred and twenty acres of land, viz: Paragon, Lavanche, Rhea, Ida, Bertha and Julia\(^{15}\), the Paragon having been located in 1890 by Charles Tilden and others. Mr. Stedman located the remainder of the claims from time to time. They were purchased for cash by the company in 1899. At the time the company took over the properties developments consisted of a thirty-two-foot shaft and tunnel. Mr. Stedman continued the shaft down several feet, in order to secure the trend of the ledge, and then followed the tunnel until a depth of one hundred and sixty feet had been attained. Thence was run a cross-cut which cut the ledge. The mine was supplied with an air shaft of three hundred and thirty-four feet, and also an exploration shaft. On the old works eighteen hundred feet were completed by Mr. Stedman. In order to secure depth a three-hundred-foot shaft is being sunk, on the completion of which it will be necessary to cross-cut a hundred and forty-five feet to catch the ledge. For shaft purposes the company erected a sawmill and cut their own lumber. The silver and lead ore lies in quartzite and slate, the ledge running north of west and south of east, and dips to the south. The discovery ore averaged seventy-eight per cent. lead, six ounces of silver and a little gold to the ton. At a depth of one hundred and sixty feet the ore ran from twenty to forty ounces of silver. The Paragon mine is located three-quarters of a mile west of the state line, in Shoshone County, at an elevation of four thousand two hundred feet. It is connected with the Thompson Falls road by a private roadway one mile in length constructed by the company. The air line distance from Burke is six miles, seven by trail. Of this property the Murray Sun of December 7th, 1902, said:

The work now being done, and the extensive improvements being made, by the Paragon company, are the natural result of developments made by tunnel in the east side of the mountain. Here exploitation was carried on for several years under Manager Stedman's directions, in a moderate way, until finally it was demonstrated by a cross drift that the company had a ledge fifty feet wide, all but five feet showing concentrating material, with here and there streaks of pure shipping ore. The large extent of the ledge was so clearly proven that the company immediately began arrangements for deeper prospecting in a larger and more far-reaching scale. Hence the present preparations for the installation of heavy machinery for sinking to a greater depth than obtained on the north side.

The Paragon company has large holdings on Paragon gulch, practically all the ground along both sides, except a number of claims owned by Charles Manley and his associates, and two owned by Mr. Peterson, Charles W. Tilden and Ole Larson, the latter joining the Paragon on the west. An extension of the Paragon on the northwest reaches the claim of John Broderick, which unites the Beatop mines with the Paragon group. The ore belt is no doubt the same, and continues westward for five miles. All the Paragon claims are heavily timbered and there is ample water for concentrating purposes. The Paragon is an incorporated company. The capital stock is two hundred thousand dollars, divided into two hundred thousand shares. The officers are citizens of prominence in St. Paul and they have all visited the camp the past summer. Dr. G. P. Sandberg is president, Dr. George S. Monson, vice-president, F. O. Hammer, secretary and treasurer, N. W. Dunn, attorney, and L. W. Stedman, local manager.

Ransome and Calkins (1908, p. 190) examined the Paragon in 1904 and described the Upper Paragon as follows:

\(^{15}\) These claims are part of the Upper Paragon.
<table>
<thead>
<tr>
<th>Company Name</th>
<th>Officer</th>
<th>Date Incorporated</th>
<th>Charter Forfeited</th>
<th>Year(s) at Mine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charles Tilden and others</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>1890-1899</td>
</tr>
<tr>
<td>Paragon Mining and Manufacturing Company, Inc.</td>
<td>Dr. G.P. Sandberg, President; L.W. Stedman, Superintendent and Manager</td>
<td>September 20, 1901</td>
<td>name changed to Paragon Mining Co.: February 17, 1920</td>
<td>1899-1901(?-1920)</td>
</tr>
<tr>
<td>Paragon Consolidated Mining Co.</td>
<td>Dr. G.P. Sandberg, President; L.W. Stedman, Manager</td>
<td></td>
<td></td>
<td>1901(?-1920)</td>
</tr>
<tr>
<td>Paragon Mining Co.</td>
<td>George S. Monson, President; L.W. Stedman, Manager</td>
<td>February 17, 1920</td>
<td>November 30, 1934</td>
<td>1920-1934</td>
</tr>
<tr>
<td>Shoshone County</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>7-1949(?)</td>
</tr>
<tr>
<td>Senator Silver-Lead Mining Co., Inc. (Lessee)</td>
<td>Thomas C. Rummerfield, President</td>
<td>June 11, 1946</td>
<td>1964</td>
<td>1946-1949</td>
</tr>
<tr>
<td>George H. McKinnis</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>2</td>
</tr>
<tr>
<td>Black Horse-Paragon Mining Co. (Lower Paragon)</td>
<td>Albert M. Nash, President-Manager</td>
<td>February 20, 1951</td>
<td>name changed to Strike It Rich: September 20, 1967</td>
<td>1951-1967</td>
</tr>
</tbody>
</table>
### Table 5 (continued). Companies and individuals operating at the Upper and Lower Paragon mines.

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Officer</th>
<th>Date Incorporated</th>
<th>Charter Forfeited</th>
<th>Year(s) at Mine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idaho General Mines, Inc. (Lower Paragon)</td>
<td>Albert Nash, President</td>
<td>November 23, 1925</td>
<td>active: 1981</td>
<td>3</td>
</tr>
<tr>
<td>Clifton, Bentley, &amp; Bennett (Upper Paragon)</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>(1975-1981)³</td>
</tr>
</tbody>
</table>

¹Information not available in IGS's files.
²McKinnis sold the Lower Paragon in 1951, but apparently retained ownership of the Upper Paragon. When he sold the property is not known.
³It is not known when Idaho General Mines acquired the Lower Paragon nor is any information available about the property after 1981.
⁴It is not known when Clifton, Bentley, & Bennett acquired the Upper Paragon nor is any information available for the property after 1981.

Work on the Paragon, which is situated in Paragon Gulch, east of Murray, began about 1890, but little was done until recently, when more extensive prospecting was commenced by the sinking of a 300-foot shaft. The lode, which runs about N. 70° W. and dips about 45° S., is in the Prichard formation, not far from the overlying Burke. The beds strike nearly north and south and have a dip of about 75° W. This dip, however, must be very local as the general dip of the formation in this vicinity is to the east, under the Burke.

The vein is a narrow zone of fissuring along which galena occurs in bunches where the fissure cuts the sandstone bands in the slates. The gangue is quartz and siderite and the ore bunches are for the most part metasomatic replacements.

All of the ore found up to the end of 1904 was near the surface and a few tons have been sacked for shipment. The new shaft is not on the vein and no crosscuts had been driven to the ore at the time of visit.

The 1904 IMIR (p. 119) noted, "The Paragon mine is another north side lead-silver property of great promise, with a big ore shoot exposed, well equipped with a substantial hoisting plant and undergoing steady development with quite a force of men." The 1909 IMIR mentioned that both the Paragon and the Chicago-London mines had been extensively developed. As mentioned earlier, the Idaho Northern Railroad was completed to Paragon Gulch (its terminus) in 1909.

The 1911 IMIR (p. 126) described the Lower Paragon (under the name "Chicago Mine") as follows:

The Chicago Mine at Paragon, a short distance above the Monarch, also shipped a dozen cars of mineral, including six cars of 50 per cent zinc ore and four cars of high grade.

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lead concentrates, which were produced as the result of a short run with the new mill of the Black Horse Mining Company, located at the mouth of Paragon Gulch. The Chicago Mine has a strong fissure with an interesting ore shoot about 100 feet long from which this production as made and is now being developed through a vertical shaft sunk from the surface. The result of this mill run is very interesting from the fact that it further demonstrates the feasibility of making a clean zinc and a clean lead product from what was formerly considered a difficult ore to treat, and these results are a gratifying indication of what may be done with ore of this class with an ordinary concentrating equipment in intelligent hands.

The mill run produced 11 cars of zinc concentrate and 5 cars of lead concentrate.

The 1912 (p. 175) IMIR noted: “The Chicago London property at Paragon, successfully developed its lost ore body at a new and deeper level and is in shape to make a further ore production of lead and zinc with a nice reserve of ore in sight.”

The company’s report to the Idaho Inspector of Mines for 1913 gave the following description of the mine’s equipment and camp:

Our surface improvements, machinery and mine equipment, as follows: The company’s property consists of about 850 acres of land, with water power and timber, all free of incumbrance; shaft-house building, consisting of engine room, blacksmith shop and drying room for the miners, all under one roof; power-house below shaft, consisting of 2 boilers, 1-100 H.P. Corliss Engine, 1-15 drill Leyner Compressor, Electric Light plant, blacksmith shop, all under one roof. The compressor is run by water power and steam when necessary, we have a 3,200 foot flume, about 300 feet of 24 inch penstock, with 205 foot head or fall, 10 foot Pelton Water Wheel; our machinery is run by water power 6 months in the year, 3 months one half water and one half steam, and 3 months all steam; 5 Ingersoll Piston Machine drills for drilling, 5 Hammer Machine drills for stopping (stoping), with all other necessary equipment for mining; 2,000 lbs. drill steel, all made up. Mine equipped throughout with 2 inch pipe for power and 8 inch pipe for ventilating, combined with engine and hoist at shaft house, engine and hoist inside work (timber hoist) drilling machines, pumps, blacksmith forges, electric light plant, crushing, pulverizing, assay furnace are all operated by this power.

We have a 2 story Manager’s House, comfortably furnished for the manager and family and stockholders when visiting the mine, building next door consisting of 2 rooms, used as a company office, post office, long distance telephone in office, also our own private line connecting company office, assay office, engineer’s office, power house and shaft house; 1 extra house for men (5 rooms), also a building for our mining engineer, used for assay purposes, surveying and draughting, and a residence, completely equipped for all assaying work, and a surveying outfit, warehouse for steel, etc., boarding house and accommodations for 40 men, besides a large root house or cellar for storage of boarding house supplies, powder magazine where from one-half to 2 tons are kept on hand and away from the other buildings; saw mill plant, with a capacity of 10,000 feet of lumber per day, we have a large barn, several horses, wagons, sleighs, etc., all these buildings are now lighted with electric lights, as well as ore car tracks from mine to mill.

The purchase price for the property was listed as $890,000; later reports noted that this was the value of the stock issued in trade for the property. Tables 6 and 7 show development at the mine, by year.

The mine produced ore in 1914, 1915, and 1916 (Table 8). Both lead and zinc concentrates were produced the first two years, and zinc concentrate was shipped in 1916. Also in 1916, the property was examined by Umpleby and Jones (1923, p. 103-104):
Table 6. Development work, number of men employed, and operating companies at the Paragon Mine, by year.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Men Employed</th>
<th>Tunnels (feet)</th>
<th>Sinking (feet)</th>
<th>Cross-cutting (feet)</th>
<th>Drifting (feet)</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1913</td>
<td>5-7</td>
<td>500¹</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>Paragon Consolidated Mining Co.</td>
</tr>
<tr>
<td>1914</td>
<td>5-7</td>
<td>500¹</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>Paragon Consolidated Mining Co.</td>
</tr>
<tr>
<td>1915</td>
<td>10</td>
<td>175²</td>
<td>—</td>
<td>—</td>
<td>175</td>
<td>Paragon Consolidated Mining Co.</td>
</tr>
<tr>
<td>1916</td>
<td>10</td>
<td>900²</td>
<td>600³</td>
<td>300⁴</td>
<td>—</td>
<td>Paragon Consolidated Mining Co.</td>
</tr>
<tr>
<td>1917</td>
<td>5</td>
<td>800²</td>
<td>400³</td>
<td>400⁴</td>
<td>—</td>
<td>Paragon Consolidated Mining Co.</td>
</tr>
<tr>
<td>1919</td>
<td>2</td>
<td>100¹</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>Paragon Consolidated Mining Co.</td>
</tr>
<tr>
<td>1921</td>
<td>20</td>
<td>300¹</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>Paragon Mining Co.</td>
</tr>
<tr>
<td>1922</td>
<td>10</td>
<td>100</td>
<td>200</td>
<td>200</td>
<td>—</td>
<td>Paragon Mining Co.</td>
</tr>
<tr>
<td>1923</td>
<td>5</td>
<td>500¹</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>Paragon Mining Co.</td>
</tr>
</tbody>
</table>

¹Total development for the year. The company did not differentiate the type(s) of work done.
²Total development for the year.
³Number is combined total for sinking and raising.
⁴Number is combined total for crosscutting and drifting.
⁵Number of men employed was not reported to the Idaho Inspector of Mines.

The property of the Paragon Consolidated Mining Co. comprises three groups—the Jewell on the west, the Chicago-London in the center, and the Paragon on the east—which lie across Paragon Gulch, a tributary of Prichard Creek. Work was begun on the Paragon in 1890, but only the Chicago-London has yielded ore; its output comprises 30 cars of ore containing 40 to 50 per cent of zinc and a few cars of lead ore.

The Chicago-London group has four levels, Nos. 2½, 3, 4, and 5, with a vertical difference between the highest and lowest of 350 feet. Tunnels Nos. 2½ and 3 have short drifts on the vein, but No. 4 has about 1,000 feet and No. 5 has 400 feet of drifts. The vein occurs in a fissure which strikes N. 77° W. and dips 70° S. It cuts beds of blue slate and impure sandstone of the upper part of the Prichard formation, whose general strike is north, with steep easterly dip. The ore occurs in rather small and widely separated shoots, two of which, about 300 feet apart on No. 4 level, have been stumped to the surface, and the easterly one is stumped also to No. 5 level. The west stope is about 35 feet long and the east stope probably averages 90 feet. The ore ranges from 1 to 4 feet in width. West of this stope on No. 5 level there are a few bunches of ore, and some ore in the face of the west drift is thought to be at the end of the shoot that was stumped on No. 4 level. Near the east end of the drifts on tunnels Nos. 4 and 5 a vertical north-south fault with gouge 2 to 6 inches thick cuts across the fissure. No ore has been found east of this fault, but the ore does not extend to it from the west, so its relation to the vein is not known.

The deposit is of the metamorphic fissure type, and the ore minerals are sphalerite, galena, and pyrrhotite in a gangue consisting predominantly of quartz but also containing
Table 7. Cumulative development at the Paragon Mine, by year. Information is from company reports to Idaho Inspector of Mines; discrepancies in numbers reflect inconsistencies in the original data.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Developments (ft)</th>
<th>No. of Tunnels</th>
<th>Total Length of Tunnels, Crosscuts, and Drifts (ft)</th>
<th>No. of Shafts</th>
<th>Total Length of Shafts (ft)</th>
<th>Length of Principal Tunnel (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No. 1</td>
</tr>
<tr>
<td>1913</td>
<td>11,000-12,000</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1914</td>
<td>12,000</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1915</td>
<td>12,500</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1916</td>
<td>13,500</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1917</td>
<td>14,500</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1919</td>
<td>15,000</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1920</td>
<td>15,000</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1921</td>
<td>17,500</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1922</td>
<td>18,000</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1923</td>
<td>18,500</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1924</td>
<td>19,500</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1925</td>
<td>20,000</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1931-1964</td>
<td>1,300</td>
<td>1</td>
<td>1,200</td>
<td>1</td>
<td>100</td>
<td>700</td>
</tr>
</tbody>
</table>

1Information not reported to Idaho Inspector of Mines.
2The principal, vertical shaft was 100 feet deep, with a 500 foot drift off the bottom of the shaft.

calcite and siderite. Beyond the ore shoots the vein is composed principally of quartz. Some of the ore is a mixture of steel galena and fine-grained sphalerite in which are fragments of unreplaceable wall rock, but probably the greater part is composed dominantly of coarse-grained sphalerite. Galena is much more abundant toward the ends than in the middle of the ore shoots, a relation similar to that observed in the Interstate vein. Quartz was clearly the first mineral deposited in the fissure; it was replaced by sphalerite and galena, in part deposited at the same time but for the most part the lead later than the zinc, as shown by numerous seams of galena cutting sphalerite. The age relations of calcite, siderite, and pyrrhotite are not apparent from the specimens collected.

The Paragon or Chicago-London vein is strikingly similar to the zinc-lead veins of the Pine Creek district. It has a similar strike and dip; it occurs near the same stratigraphic horizon; both are of the metasomatic fissure type; and the kinds and association of vein minerals are identical, though there is, of course, considerable variation as to the relative abundance of any ore mineral, such as pyrrhotite, calcite, or siderite. 

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Table 8. Mine output and economic data for the Paragon Mine for 1915-1917.

<table>
<thead>
<tr>
<th>Year</th>
<th>Tons of Ore</th>
<th>Average Value per Ton</th>
<th>Total Mining Cost per Ton</th>
<th>Transport and Treatment Costs per Ton</th>
<th>Silver Recovered (ounces)</th>
<th>Lead Recovered (pounds)</th>
<th>Zine Recovered (pounds)</th>
<th>Gross Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td>1915</td>
<td>1,500</td>
<td>$0.30</td>
<td>$20.00</td>
<td>168</td>
<td>27,000</td>
<td>177,492</td>
<td>$4,41.24</td>
<td></td>
</tr>
<tr>
<td>1916</td>
<td>3</td>
<td></td>
<td></td>
<td>60</td>
<td>10,600</td>
<td>112,200</td>
<td>$10,291.04</td>
<td></td>
</tr>
<tr>
<td>1917</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$2,296.77</td>
</tr>
</tbody>
</table>

1 The average value for the lead concentrate was $38.00 a ton, for the zinc concentrate, it was $28.50 a ton. Between June 29, 1914, and June 23, 1915, the company shipped 186 tons of zinc concentrate and 25 tons of lead concentrate. The mill’s recovery rate was 85 percent for zinc and 90 percent for lead.

2 This is the cost of freight and treatment for the lead concentrate. The freight for the zinc concentrate was $10.75 a ton, but the company did not know the cost of treatment.

3 The company shipped 110 tons of zinc concentrate and 10 tons of lead concentrate between June 23, 1915, and June 20, 1916.

4 The company shipped 115 tons of zinc concentrate between June 20, 1916, and June 6, 1920. The metal content of the concentrate was not stated.

A lamprophyre dike rich in biotite occurs in the hanging-wall side, 115 feet from the ore on tunnels Nos. 3 and 4, but converges toward the vein fissure on No. 4 level, 450 feet west of the point where the crosscut tunnel intersects the vein.

The Paragon vein is a narrow zone of fissuring that strikes N. 70° W. and dips 45° S. The principal ore mineral is galena, which occurs in bunches at points where the fissure cuts sandstone beds inclosed in the slate series. No continuous ore shoot has been found. The gangue is quartz and siderite, and the bunches of ore minerals are for the most part metamorphic replacement deposits.

The development work on the Jewell group is done in one of several small areas of monzonite that lie west of the Paragon. Here there are seams of galena, from a knife edge to 1 inch thick, that trend in different directions and at their intersections make small bunches of ore. The occurrence of lead in the monzonite is of unusual interest because it furnishes another specific example of mineralization following intrusion.

Intermittent development work continued at the mine for the next few years. Paragon Mining Co. purchased the adjacent Black Horse Mine in 1919 and made for plans for full operations the following year. However, the company’s 1921 report to the Idaho Inspector of Mines stated that general business conditions were such that the company would only do necessary repairs on the mill and mine. The illness and death of mine manager L.W. Stedman also interfered with the company’s plans. A small amount of

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development work was done the following year, but the serious illness of Stedman's successor, C.W. Grinsme, again disrupted the mine's operations.

In 1922, the company rebuilt the Black Horse mill, changed its flow sheet, and added a flotation unit. Equipment already in the mill included a jaw crusher, three trommels, eight jigs, three tables, and three sets of rolls. Extensive development was done, and the power line was extended 4 miles to the mine. Concerning operations at the mine, the September 18, 1922, issue of Mining Truth (p. 12) noted:

Two men are at work at the Paragon mine, in the north Coeur d'Alenes. Some mill alterations are in progress and should be completed by the end of September. As connection has been completed for supplying of electric power, it is anticipated the mill can be put in operation this fall.

A follow-up story ran in the October 17, 1922, issue of Mining Truth (p. 11):

After a short mine shutdown, Paragon mine, above Murray, is resuming, with a view to being on a production basis in a short time. The concentrator requires some additional equipment before being ready for operation. It has a capacity of about 140 tons daily.

The company did a limited amount of development and made one small shipment of ore in 1923. The mine was idle the following year. The April 16, 1925, issue of Mining Truth (p. 17) announced:

Work will be resumed by the Paragon Mining company on holdings near Murray in the Coeur d'Alenes, according to reports from headquarters of the company at St. Paul, Minn. The Paragon company owns 46 claims and is a consolidation of four companies.

In the past the Paragon holdings have been subjected to extensive development work, and ore has been shipped from the Paragon and also the Chicago-London and Blackhorse groups, now owned by the Paragon company. It is the opinion of experts who have examined the properties that, with depth, a body of commercial ore is likely to be encountered. Depth can be obtained by either sinking the shaft on the Chicago-London deeper, or extending the lower tunnel.

The property has a mill of 100-ton capacity that can be operated by a water power plant installed some years ago or by electricity furnished by the Washington Water Power company.

The officers and chief stockholders of the company reside at St. Paul.

An unpublished report in the IGS's mineral property files, which internal evidence suggests was written around 1926, described the property in detail (Author unknown, n.d., p. 1-3):

PROPERTY:

The Paragon Mining Company's properties comprise 53 claims, nearly half of which are patented, and are subdivided into five groups, as follows: The Paragon Group, the Chicago-London Group, the Black Horse, the Donald Group, and the Jewel Group. These groups are adjoining each other, forming one homogeneous whole, two miles in length and about one miles across the widest section.
LOCATION:

All the above claims are located on Paragon Gulch about 5 miles north of Murray, and about 25 miles from Wallace, Summit Mining district, Shoshone County, the heart of the Coeur d'Alenes, the greatest silver-lead mining district in Idaho and the United States.

PRINCIPAL METALS:

The principal metals produced from these claims are lead, zinc silver & gold, silver-lead being the predominating metal. Substantial gold value accompany the silver-lead ore.

Lead ore of milling grade, 10% to 15%; concentrates average from 52% to 75% lead; 10 to 30 oz. silver; $5.00 to $10.00 in gold per ton of concentrates. The high-grade or shipping grade of ore runs as high as 86% lead and 30 to 40 and as high as 90 ounces of silver to the ton, also carrying substantial gold values. This grade of ore, of course, requires no milling treatment, but is sacked "as is" and shipped to the smelter along with the concentrates. Zinc ores average 12%, 13%, low average concentrates 51% and 52%. The zinc ores seem to be located in one region of the property and the lead silver in another section, so that either or both ores can be mined at the same time, according to the best market position of the metal.

Also, a very fine and clean separation of the metals where found interblended, is accomplished at the mill, so no penalties are encountered at the smelter for excess of zinc in lead ores, etc.

The zinc ores are of exceptional richness and command the most favorable contract arrangements with the smelters.

GEOLOGY:

Elevation: Spokane, 1860' Wallace, 2730' Chicago-London, 3500' Paragon, 4100'

Speaking generally, the veins run northwesterly and dip to the South. In the case of the Paragon, for example, the lode runs N 70 W and dips 45 South. The veins on the Chicago-London and Black Horse groups, also, are of the same general trend.

The formation consists of Burke Quartzite, the Paragon Group; Revett Quartzite, and the Upper Pritchard [sic] Formation at the Black Horse, Chicago-London, and Jewell Groups. The Pritchard [sic] formation is known to be the deepest and oldest of the Coeur d'Alene sediments, and of a thickness of more than 8000'. The famous Interstate-Callahan mine is one of the notable producers of the Pritchard formation.

DEVELOPMENT:

The Paragon properties are opened up by a series of tunnels and two working shafts - one on the Chicago-London and the other on the Paragon. The Paragon shaft is to be sunk to the 1000' level to connect up with a proposed tunnel starting in on the Jewel group. This tunnel will be about one mile long and will traverse and connect up all the known veins on the various properties and doubtless expose new veins of perhaps surprisingly rich content. This tunnel will be constructed on a slight elevation from the mill-site to the bottom of the Paragon shaft, providing a gravity transit for both ore and water. The Chicago-London shaft is now down about 200' and about ready to cross-cut to the ore body which drift will constitute the Sixth level [Figure 11]. The Fifth level exposes large and rich veins than the Fourth. It is reasonable to expect that the same veins on the Sixth level will show a corresponding increase in both dimensions and quality. A two-compartment shaft with air hoist serves these lower workings of the Chicago-London.

Veins on the Chicago-London run from 3½ to 14 feet in width and from one to several hundred feet in length. There is sufficient ore exposed in the workings of the Chicago-London alone to keep the mill operating continually for the next year and a half, this is especially conservative in view of the additional ore body to be encountered with the drifting over of about 50 to 100 feet at the Sixth level. In the opinion of experts and practical miners, the Chicago-London is destined to prove at depth one of the biggest producers among the coming mines of the Coeur d'Alenes. It is of the characteristic fissure structure, and the veins consistently increase in size and improve in quality with every increase in depth. The Chicago-London property has been the scene of the most recent operations. The Black Horse group now
Figure 11. Cross-section of the Lower Paragon (Chicago-London) Mine, probably around 1926 (Author unknown, n.d.).
opened up by a series of tunnels and the Paragon group are slated for extensive development in connection with the building and completion of the proposed tunnel project referred to above. On the whole, some 20,000 feet of development work has been done on these properties involving an expenditure of approximately $400,000. Buildings, equipment exclusive of the mill, represent an additional $40,000 or $45,000 investment.

SURFACE IMPROVEMENTS:

One concentrating mill rated at 150 tons per 24 hours, in first class condition; one 20 drill, 2 stage Lener Compressor, and one 7-drill Ingersoll-Rand Compressor, both in good condition. The mine is served with electric power by the Washington Water Power Co. and also water power during the season from spring to late summer. The Company possesses all the water rights on Paragon and Pritchard (sic) Creeks. A 1000-light electric lighting plant is installed and operated by water power. Also a 150 horse power Corliss steam engine and boiler, for emergency purposes, Blacksmith shops, boarding house, superintendents’ house, mine office and assay plant and all tools and necessary machinery for complete mining operations.

ORE RESERVES:

It is somewhat difficult at this time, not having the available data in hand to give an exact account of the enormous tonnage of rich silver-lead ore that is lodged in several known veins traversing these properties, in view of the remarkable showing made at comparatively shallow depth. This applies particularly to the Paragon, Chicago-London and Black Horse groups. There is also a surface showing on the Jewel property exposing a vein 60’ wide. There is a tunnel on the Jewel 150’ long, which has exposed values of extraordinary promise. Assays of ores taken from the Jewel have shown silver values as high as 500 ounces to the ton. The very excellent showing already made in the upper levels of the Paragon, Chicago-London and Black Horse Groups, and the surface showing on the Jewel leads to the inevitable conclusion that with suitable development, an immense tonnage of both lead and zinc ores together with silver and gold values can be blocked out and mined at a very small cost. It may be stated, that between eight to ten thousand tons of lead-silver ore are broken down in the stopes and in the ore bins, ready for milling, and in addition thereto some 2000 tons of ore on the dump at the upper workings of the Paragon mine. Besides, at least 20,000 tons of exposed ore readily available for extracting and milling, according to a recent general estimate.

TRANSPORTATION:

Some years ago, the Union Pacific Railroad, after making an extensive survey of the territory, built a branch line from Enaville to Paragon at a cost of approximately $500,000. The Paragon properties comprise one-half the area covered in this engineer’s report which resulted in the building of the Railroad. Later, as a result of a washout from the spring floods, a portion of the road near Murray was washed out. A section of these lighter rails have since been taken up and used for building a logging road at Cedar Creek, pending resumption of operations at Paragon and the new Giant Ledge mine, now just starting its 200 ton concentrator16 just north of the Paragon property. The Railroad Company has assured the laying of standard rails and equipment right up to the mill door as soon as regular shipments are in evidence at the mines. The great Bunker Hill Smelter is located at Kellogg, about 30 miles from the Paragon properties, and is . . .”

Despite these optimistic reports, the company did only assessment work for the next few years. The next developments at the property were reported in the October 20, 1932, issue of Mining Truth (p. 9):

16The Giant Ledge mill was built in 1925, and it processed several hundred tons of ore in 1926.

17Idaho Geological Survey’s copy of this report ends here.
Paragon Mining Company, inactive for many years, passed out of the picture this month when the equipment on its former producer east of Murray, Idaho, was sold for less than $1,000. Paragon was at one time the terminus of the North Fork branch of the Union Pacific, the railroad having been extended from Murray to serve the Paragon mine and the Monarch, a few miles below. Dissension among the stockholders, mostly residents of St. Paul, Minn., is blamed for the company's plight. Creditors, including Theodore Furst, caretaker for several years, obtained a judgement for $4,172 early this year. The equipment brought less than a quarter of this amount, a compressor being purchased for use at the Golden Chest near Murray and the balance of the material going to the Coeur d'Alene Hardware & Foundry Company. To satisfy the balance of the judgement it is probable that the mining property itself will next be sold by the sheriff. The current report of the state mine inspector lists George S. Monson as president and F. O. Hammer, secretary, the company office being in the Commerce Building, St. Paul. Total development is around 15,000 feet. The property comprises 53 claims in the Summit district and was equipped with a 100-ton mill.

On June 1, 1933, Paragon Mining Co.'s attorney W.W. Dunn sent the following letter to Idaho Inspector of Mines W.H. Simons:

The blank form of Mine report addressed to Paragon Mining Co was turned over to me to answer.

A year ago F.O. Hammer our secretary, and the only person familiar with the affairs of the mine, died and we have not yet obtained much information of the mine affairs. To make the matter worse last week our President died.

Paragon Mining Co charter is dead by lapse of time and the Company is not permitted under the law to conduct any business, except to close its affairs and dispose of its property.

No work on the mine has been done for two or three years and will not be done unless we sell the mine and then only by other parties, probably under a new charter.

If it is necessary under these circumstances to make any report will you have the kindness to send me a copy of the report made in one of the past years and I will then endeavor to fill out the report if necessary, from what little information I can find.

As discussed above, the Black Horse-Paragon Mining Company was organized in 1951. This company owned the Chicago-London Group and held the Black Horse Mine under lease for about two years; the upper Paragon workings do not appear to have been included in the company's holdings. On June 30, 1952, company president Albert M. Nash reported to the Idaho Inspector of Mines:

A great deal of development was done years ago consisting of a number of tunnels and 450 ft. vertical shaft. Some ore extracted. Old workings inaccessible at this time so work done cannot be measured up. Shaft full of water.

4½ miles power line built to property [during the year], some road building and some surface prospecting with bulldozer.

Lumber now on ground for building compressor house and other necessary buildings. Plan to install compressor plant and hoist and open up old tunnels, pump out shaft and commence long low level drift on vein [ vein] to open up ore at depth.

Despite these plans, the property remained idle. The 1965 IMIR noted that the portal of the tunnel had been opened after a winter cave-in. Only assessment work has been done at
the property since that time. The six patented claims of the Lower Paragon were examined in 1981 by a geologist from The Bunker Hill Company (Wallace, 1981, p. 1):

Outcrops of argillaceous quartzites and quartzites of the Prichard Formation occur in the steep hill sides above Prichard Creek and the ridge between Cement Gulch and Paragon Creek. Numerous quartz stringers and veinlets with minor amounts of sulfides and abundant leached zones were noted.

Four adit sites, one shaft site and several discovery pits were examined. All were inaccessible due to sloughed or caved hillside. One upper level mine dump had appreciable mineralization. A grab sample off the dump assayed 1.3% Pb, 23.6% Zn, and 0.6 oz. Ag per ton. Sphalerite, galena, pyrite and other minerals appeared from dump specimens to be occurring [sic] in stringers and veinlets of quartz and in pods or blebs in quartzite and argillaceous quartzite. The mineralization is apparently not always associated directly with a quartz or carbonate gangue.

Recorded production is 78 tons of sorted material grading 37.4% Pb, 20.4% Zn, and 4.7 oz. Ag per ton for the period 1921 thru 1923. No other production records are available, however the tailings area below the mill site is extensive, indicating a moderate amount of production did occur.

The most recent mapping of the underground workings on the Lower Paragon was done in 1963 and dealt primarily with structures and the vein. Ore shoots were interpreted from the location and orientation of the stopes and may not conform to an interpretation of the intersection of bedding and vein structure as discussed in my status report of May 20, 198118. The #4 level (most extensive level) was accessible in 1963, therefore rehabilitation work necessary to gain access to the #4 level maybe [sic] limited to opening the portal.

Although Wallace proposed negotiating a lease on the Lower Paragon, apparently no agreement was reached.

The mine was visited by an Idaho Geological Survey field crew in the summer of 1996 as part of a program to evaluate potential hazards from inactive and abandoned mines on U.S. Forest Service land in northern Idaho. Figures 12, 13, and 14 show the Upper and Lower Paragon sites as they appeared at that time.

There are no accurate production records for either the Upper Paragon or the Lower Paragon (Chicago-London) mines. Some of the ore may have been combined with the output from the Black Horse during the years when the properties were operated by the same company.

ST. PETER (MYRTLE) MINE

The St. Peter, or Myrtle, Mine (Figure 4) is located about 1½ miles up Paragon Gulch from its mouth. It is on the Thompson Pass 7.5-minute quadrangle in T. 49 N., R. 6 E., secs. 7 and 8. In the summer of 1996, there was one partially open adit and several prospect pits in the area (Bennett and others, 1999).

18This document is not available in the Idaho Geological Survey’s mineral property files.
Figure 12. Partially open, water-filled shaft at the Upper Paragon Mine (photograph by Earl H. Bennett, Idaho Geological Survey).
Figure 13. Main waste dump at the Lower Paragon (Chicago-London) Mine (Idaho Geological Survey photograph).
Figure 14. Upper adit at the Lower Paragon (Chicago-London) Mine (Idaho Geological Survey photograph).
In 1954, the U.S. Bureau of Mines Yearbook noted production from the Myrtle Mine by McDaniell and St. Peter. Hosterman (1956) lists the St. Peter as an example of an unproductive vein. Nugent (1953, p. 1) examined the property for the Bunker Hill & Sullivan Mining & Concentrating Co.: 

On May 13th, Austin Park and myself visited the St. Peter-Myrtle unpatented claims in Township 49 N., R. 6 E., Secs. 7 and 8. These claims lie about one mile up Paragon Creek from its junction with Prichard Creek. Mr. St. Peter and Mr. McDaniell, both of Moscow, Idaho, met us at the junction and conducted us to the claims.

The claims are located over much of the old patented claims of the Julia-Last Chance, Paragon Groups and are to that extent invalid [Figure 15]. County records show that Mr. George McKinnis is paying taxes on the Julia-Last Chance-Paragon Groups which were formerly called the Paragon property.

The rocks of the area are Prichard slates with included quartzite bands all dipping steeply eastward (65 to 85 degrees). Various pits and workings said to have exposed ore were caved or inaccessible. Some pieces of high grade galena were observed near one pit, but the vein appeared under 8 inches in width and lensy. A sample of these pieces contained 60.7% lead, 4.1 oz. silver, 0.1% zinc, and 0.01 oz. gold. Ransome and Calkins, who examined the Paragon about 1906, stated: "The vein is a narrow zone of fissuring along which galena occurs in bunches where the fissure cuts the sandstone bands in the slates."

Workings consist of a 350 foot vertical shaft from which some 1000 feet of crosscut and drift has been driven and of a short adit tunnel.

On the basis of the conflict in ownership and the comparatively weak mineralization of the area near the Paragon shaft, the property does not merit further consideration. However, the region has many sub-marginal ore producers and one productive mine, the Jack Waite. Study of the region might reveal better structural localities than have so far been discovered.
Figure 15. Claim map of the unpatented St. Peter (Myrtle) claims, showing the conflict with the patented Upper Paragon Group (Nugent, 1953).
REFERENCES

Author unknown, n.d., Summary and memorandum in re: Paragon Mining Company: unpublished memorandum in Idaho Geological Survey's mineral property files, 3 p. (Internal evidence suggests this report was written in 1926.)


Idaho Geological Survey's mineral property files (includes copies of company reports to the Idaho Inspector of Mines).


