F.H. LRECHER! Probably C.Z Bof 238
ORIGINAL REPORT

Item 6

2860 0006

REPORT ON THE ILLINOIS MINING GROUP.

May 1st, 1914.

LOCATION AND ACCESSIBILITY:

The property is located in the northwest corner of Nye County, Nevada; in Township 13 N., Ranges 36 and 37 E. of Mount Diablo Base and Meridian, a few miles from Broken Hills and Quartz Mountain.

The nearest railway station is Luning, on the Hazen-Mina branch of the Southern Pacific system. The property is reached by good automobile roads from Luning, a distance of 42 miles, or from Fallon, a distance of 77 miles.

PROPERTY:

The property consists of a group of mining claims, known as the Illinois group, with a complete Lead Smelting Plant, Water System, Ore Stock and Surface Equipment, constitute the property holdings of this company. The Illinois group consists of five patented mining claims known as the Sand Mound, Silver Link, Illinois, Nevada and White Pine. These claims cover the apex of the lode for a distance of about one mile and a quarter. There are a number of adjoining unpatented claims.

HISTORY AND PRODUCTION:

The mine was discovered in 1875 by Alfred Welsh. The first work was done upon the Illinois vein. Welsh was poor and during the years 1876 and 1877 only the assessment work required by law was done. In the latter part of 1877 he made an agreement with Raymond and Ely of Pioche, Nevada, whereby they undertook to drive a tunnel on the vein until it should reach a depth of 100 feet, and whereby they agreed to buy the property.

They erected a small ten ton smelter on the property, which was operated for about two years, during which period a body of ground of small lateral extent on the Illinois vein was worked to the depth of about three hundred feet. All of this was hand work, the ore being hoisted by hand windlasses; but the exceeding richness of the mine enabled it to pay handsomely, even against such obstacles, and about $500,000 worth of bullion was disposed of during these two years.

At this time Raymond and Ely were also operating heavily at Pioche where their operations were not profitable. They became involved and their creditors wiped them out.

A balance was due Welsh on the purchase price of the property, for instead of paying for the mine out of the proceeds of it, Raymond and Ely had been investing in their Pioche operations the money they were securing from the operation of the Illinois vein.

Welsh, therefore, put in his claim for the balance due him on the purchase price, and in the final settlement of the affairs of Raymond and Ely, Welsh came out of the settlement with a two-fifths interest in the Illinois group; and Messrs. Booth & Company, wholesale grocers of Sacramento, California, got the remaining three-fifths.

The smelter had not been paid for so that the people who had erected it came and took it away.

The property was then closed down and remained closed until 1889. At this time the ore purchasing firm of W. J. Chamberlain & Company established an agency at Ledlie near Austin, Nevada, about 60 miles distant. Welsh, who had been during all these years living in hopes that he would some day be able to work the Illinois mine, was now absolutely penniless; but, finally, through the exertions of the agent of Chamberlain & Company, he managed to secure from Booth & Company a two years lease on their three-fifths interest in the property, but he had no money with which to begin work, so he borrowed $250 from the agent of Chamberlain & Company, agreeing in consideration of the loan to sell to Chamberlain & Company, all ore which he might extract from the Illinois Mine. With this $250 he began work on the property, and during the 18 months following, he sold Chamberlain & Company ore amounting in value to something over $130,000. Chamberlain & Company's agency at Ledlie was then discontinued, and thereafter Welsh shipped his ore to the Selby and Salt Lake smelters.

During this two years lease he made shipments exceeding $200,000 in value. He thus took out $100,000 a year from an original investment of $250. At the expiration of his lease, Welsh bought the three-fifths interest of Booth & Company paying $10,000 in cash and agreeing to make further payments at the rate of $5000 a month. The full amount of the purchase price cannot be ascertained. To secure the deferred payments he mortgaged the entire mine, including his two-fifths interest, to Booth & Company. Just at this time when the mine was producing royally and prospects seemed bright, Welsh decided to visit in triumph his old home in the east. So he went back home where he found all of his kin hard up. His father and brothers were farmers, and had the accustomed mortgages on their farms. Welsh was the returning wanderer who had struck it rich, so he paid off all the mortgages. But there was one brother who had no farm, consequently had no mortgage. Welsh took this brother back with him to the mine, who was constantly brooding because Welsh had not given him money as he had given to the rest of the family, brooded over his supposed grievance until he began to make threats about what he would do unless Welsh should equalize him with the rese of the family.

The friction between the brothers increased until one day in 1891 the younger brother placed a double-barreled shotgun against Welsh's stomach and blew a hole through him as a final argument and fled.

There was no one to continue the work in the mine so all operations stopped. Booth & Company enforced their mortgage and secured ownership to the entire property. A member of the firm of Booth & Company was T.G. Phelps, and the property passed into his hands. Phelps died shortly after this, and the property lay unworked until 1905. At this time the wonderful development of the mineral wealth of Nevada brought back the recollection of the Illinois mine to the mind of the former agent of Chamberlain & Company at Ledlie. He set to work to gather together the scattered interests of the heirs of Phelps, and after persistent and protracted labor, he met with complete success. The mine had been absolutely dismantled, the buildings destroyed and the old workings wrecked. A company was organized for the purpose of equipping and reopening the mine. A small steam hoist was installed and a shaft was carried down through the old workings. Ore was struck in 1906, as soon as virgin territory was reached beneath the old workings, and since that time the property has produced from shipping ore and a trial smelter run approximately $325,000.

Thus the production of the mine to date has been something over $1,000,000.

The mine was closed down on April 1st, 1914, on account of encountering water in the Illinois shaft; not, however, until the continuance of the ore body had been demonstrated, as the last samples taken from the shaft had shown a great increase in the gold content of the ore.

Some assay values of the last samples taken from the bottom ore as follows:

111.60	ozs.	silver,	1.14	ozs.	gold
12.84	"	"	1.28	"	"
17.60	"	"	1.07	"	"
8.45	"	"	1.16	"	"

The water encountered in the Illinois shaft and having to be removed by boisting in buckets, did not make for the economical development of the property at depth, but with the installation of even a very small pumping plant, the difficulty would be removed and the mine open at depth for very cheap and economical development.

TOPOGRAPHY AND GEOLOGY:

The Illinois group is situated on the west side of Lodi Valley. The principal rock formation is limestone, the bedding planes of which have a strike N.45° W. and a southwesterly dip of 80° from the horizontal. The limestone has been intruded by quartz porphyry about 40 feet in width, and several smaller intrusions (2 to 4 feet in width) of Hornblend Andesite. These porphyries to the west of the ore bearing zone of limestone have a strike of N. 60° W. and a southwesterly dip of 80° from the horizontal, and intersect the ore zone of limestone on the Sand Mound claim, diverging from the ore bearing zone of limestone on their northerly trend.

West of the porphyries is granite; thus a cross-section of the sequence of rocks to be found from east to west would be Limestone, Hornblend Andesite, quartz porphyry and granite, all having a northwesterly strike and southwesterly dip.

The ore deposition is confined to the limestone and consists of a succession of three parallel lense shaped deposits, known respectively from west to east as the Illinois, Welsh and East veins.

On account of the lense shaped nature of the deposits, these veins do not crop continuously on surface, but at intervals along the entire length of the five patented claims, and along the unpatented White Pine Extension claim.

The ore is a soft material, composed mainly of iron oxides, lime, silica and carbonate of lead, together with chloride of silver, making a valuable ore, not only in the content of precious metal, but in the fact that the composition of the ore makes it an ideal smelting ore, which can be smelted on the ground, thus adding to the economic value of the mine.

EQUIPMENT AND FACILITIES:

The property prior to 1914 was again equipped with the following:

First, a complete Lead Smelter, containing a lead blast furnace 48" x 108", good for a capacity of 100 tons smelting charge every 24 hrs. a complete steam power plant, ore bins, automatic sampling plant, fully equipped laboratory, and everything necessary for the sampling, assaying and smelting of the ore, making a very complete and up to date smelting plant, that could probably not be duplicated for less than $50,000.

Second, machine shop containing a steam power plant, lathes, drill presses, blacksmith shop, and in fact everything necessary for performing all machine work, which might have to be done for the smelter or mine.

Third, surface plant for mine, containing a steam power plant, steam hoist, gasoline engine, air compressor, power rock drills, ore cars, blacksmith shop, hand tools, and in fact everything necessary for mining and transporting the ore.

Fourth, a water system starting with a pure mountain spring, which produces about 15,000 gallons of water per day, which is conveyed to the mine by means of a 2 inch pipe line four miles in length to storage tanks of 68,000 gallons capacity, which are situated above all working places, and from which water is distributed to all necessary places, and under sufficient head to be a great protection in case of fire. This water system is alone considered to be worth at least $15,000.

ORE STOCK:

The following stock of ore is now on hand in bins at the smelter ready to be smelted as soon as the smelter is started:

Illinois ore	300 tons	worth	$ 8326.45
Germany	78 "	"	1795.41
White Pine & Ochre Hole	45.3 "	"	549.10
Flue Dust	55 "		1783.10
Furnace Barrings	50 "		2803.65
Litharge	8 "		664.13
Lead in furnace crucible	5 "		1860.69
Furnace skimmings	5 "		761.15
	546.3 "		$18543.68

Estimated gross value in cupel furnace	300.00
Coke at Smelter	972.00
	$19815.68

ORE RESERVES:

On account of the lense shaped hature of the ore deposits, it is impossible to estimate a definite quantity of ore as being in sight, but it will be seen that there are a number of faces containing the necessary values and widths to develop into the necessary tonnage for economical mining. Especially when it is remembered that the ore deposits are of lense shaped nature, and as experienced in the old workings of the mine, it was seen that an starting on a very small streak, the deposit would widen and produce a large tonnage of ore, as in one case they started on a streak only 5 inches in width, which widened to 32 feet and had a length of 110 feet.

Also, from a study of the map, it will be seen that the principal tonnage produced by the mine was from above the 7th level, the material being leached from the 7th level to the bottom, and the sudden increase of the gold content in the bottom together with encountering water, would seem to indicate that the limit of the leached zone had been reached, and that the deposit would again develop into a very productive shoot of ore; being enhanced by the increased content of gold and the secondary deposition of lead and silver, which should be expected on reaching the permanent water level.

CONCLUSION AND RECOMMENDATIONS

To summarize, it will be seen that the property has been very productive in the past, producing over $1,000,000 and under very unfavorable conditions, that the mine is now equipped with all the necessary modern and up to date equipment for mining and smelting the ore, providing an equipment that could not be duplicated at a cost short of $100,000, thus making it possible to handle the ore in a more economical manner than in the past.

The mine is about 1000 feet deep and dry to a depth of about

860 feet. Development should be continued in the upper workings, especially down from near the surface, with expectations of vast bodies of high grade ore indicated by the record of the mine; also its physical and geological indications. F. H. Lerchen's report states more of the geology, the underground workings, ore available including stope ore, and analysis of ore arrived at from smelter shipments; also suggestive developments.

September 23, 1925.

Kindly notice the above Report is dated May 1, 1914, since which time the smelter has been replaced by a mill, as it has been found that the ores will concentrate and cyanide to better advantage. The ore stock around the old smelter has been disposed of, and the steam hoist replaced by a gasoline hoist. The other conditions remain practically the same except the machine shop and other equipment not necessary to smelter maintenance.

F. H. Lerchen, mining engineer of authority, spent many weeks examining the property, and has made a much later report, including assays of hundreds of samples, and showing many thousand tons of good milling ore in the stopes, ready to hoist; also showing several faces of high grade ore indicating heavy ore chutes to be encountered.