1647 So. Nevada Ave.
Colorado Springs, Colorado.
January 16, 1951

Mr. J. H. East, Jr.
Regional Director-Bureau of Mines
224 New Custom House
Denver 2, Colorado.

Dear Mr. East:

The enclosed reports and maps on the Colorado Central and Hall Tunnel properties at Silver Plume are for your consideration of a Government loan.

We have acquired these properties by outright purchase from owners in the East and hope to get under production at the earliest possible date.

To advance the Hall Tunnel 1600 feet and rehabilitate the properties is a major project. We feel that the geologists who state that the area should be very productive many hundred feet deeper are right. In fact work on other properties in the territory in recent years proves it.

Little work has ever been done from the Hall Tunnel, and none on the famous Colorado Central since 1908. At that time lead was of little value and zinc brought a penalty. Only the highest grade of ore would pay then because of hoisting thru various winzes and the long slow haul in wagons to the mill. A very reputable Geologist who was thru the mine in those days, as well as reports and statements from early day miners, assure us that there are large quantities of lead and zinc left in place, and broken in stopes.

With a strong demand for strategic metals for National defense it is our desire to reopen these properties and concentrate our mining efforts in those areas where lead and zinc predominate.

The property is favorably situated on U. S. Hi-way #6. Idaho Springs, Georgetown and Silver Plume afford good homes, schools and churches. The power line and transformer tower are at the portal of the Hall Tunnel plus an abundance of good water.

Our Company is incorporated as the Colorado Mutual Mining and Milling Company, principally composed of a group of local business and professional men. Some of us have had several years experience in mining operations. Our Superintendent of Operations is a Man who has operated in Cripple Creek for years and with good success in Silver Plume. He is honest, conservative and efficient.

Under present day conditions it is difficult to make an accurate estimate on the cost of such a project. We have gone into it quite thoroughly however, and had a good Engineer check it over. There has been a watchman at the Hall Tunnel for years; therefore the buildings, one compressor and motor, ventilating fan and motor, need a minimum of repair. Also included is several hundred feet of track and pipe. The tunnel now closed at the portal was open until a year ago. However, a great deal of rehabilitation work is necessary after getting into the Colorado Central property.

Our estimate of the amount of money needed is as follows:

Surveying & Engineering	$ 3,800
Drilling Machines	3,000
Mucking Machine	5,000
Locomotive	8,000
Tram Cars	2,000
Sharpener	1,000
Motor-Generator Set	1,500
Additional Compressor	7,000
Misc. Equipment & Tools	5,000
Tunnel & Building Repair	5,000
Ore Trucks & Pickup Trucks. . . .	11,500
Extend Tunnel 1600 Feet	56,000
Rehabilitation of present workings and development	50,000
Repair Road to Highway	700
Total	$159,500

We feel that the above amount should put us on a profitable basis.

We have invested a considerable amount of money in acquiring the properties, but have been unable to raise the capital to get into operation.

Respectfully yours,

George F. Stiner Pres

Colorado Mutual Mining
and Milling Company.

Excerpt from Mineral Resources of Colorado,
Prepared under the Supervision of
John W. Vanderwilt, Consulting Geologist
Denver, Colorado.

Silver Plume-Georgetown District, Clear Creek County

The Silver Plume-Georgetown district occupies an area of about 25 square miles in the west-central part of Clear Creek County, surrounding the towns of Silver Plume and Georgetown. ****

The total value of output in the Silver Plume-Georgetown district has amounted to more than $30,000,000 but exact figures for many years are lacking. ****

Much of the ore mined has commonly contained between 20 and several hundred ounces of silver to the ton, though some shipments have contained as little as 10 ounces and small streaks of unusually rich ore are reported to have contained more than 1000 ounces to the ton. Some of the richest ore came from the Colorado Central vein, where first-class ore averaged 700 to 800 ounces of silver to the ton and the average silver content of ore mined over a sixteen year period is reported to have been 200 ounces to the ton. *****

The base-metal content of the silver-lead ores is as variable as the silver content. Ore shipments on which data could be obtained have contained from 2 to 50 percent of lead and from 4 to 40 percent of zinc. *****

Many of the ore shoots in the district are fairly large. In some of the larger mines, ore shoots have been followed rather continuously from the surface to depths between 600 to 1500 feet. Stope lengths of several hundred feet are not uncommon and several compound ore shoots have stope lengths of more than 1000 feet. The veins, however, are in general narrow, and in most places the ore bodies have had a thickness of only 1 to 3 feet, though locally they have widened to as much as 10 or 15 feet. In some of the larger mines, also, there are indications that the ore bodies are becoming smaller and less continuous with depth and that the silver content is decreasing with depth.

In no place, however, is there evidence that the lower limit of mineralization has yet been reached and, even in the deeper mines, future exploration seems warranted where structural conditions are favorable. *******

Excerpts from U. S. G. S. Professional Paper No. 63
Economic Geology of the Georgetown Quadrangle

The Colorado Central mine, which lies in Leavenworth Gulch southwest of Georgetown, is one of the most famous of the region. It was discovered in 1872, and has been worked more or less continuously up to the present day (1908) producing an estimated total of over $8,000,000. The Colorado Central veins strike to the northeast and are nearly vertical; they have been continuously opened up, both at the surface and underground, for a distance of three-fourths of a mile. The workings reach a depth of about 1,050 feet, the lower levels (beneath the 600-foot or ocean wave tunnel level) being worked only by shafts.

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Relation of Ores to Depth

The following statement is made by an engineer who had many years' experience with the mine, and with it the more limited observation of the writers agrees:

Concerning the effect of depth upon the value of the ores, although the mine is worked to a depth of 1,000 feet, no particular difference is to be noted. Rich and poor ore channels are found at all depths. Within 100 feet of the surface some of the richest and some of the poorest were encountered, and the same might be stated of almost any depth. Upon the same horizon were found bodies of ore which were rich in silver and others which were poor in that metal. The poor ores, were apparently the same galena and zinc blende which in another place were enriched by the true silver minerals and were therefore rich in silver.

While this is true, there are certain other features worthy of note. The rich and the poor ore both occur practically at the surface. A portion of the vein outcrop examined by the writers was 4 feet wide, and the vein filling consisted chiefly of zinc with some galena.

****

A BRIEF REPORT

ON

THE COLORADO CENTRAL CONSOLIDATED SILVER MINES

SITUATED ON

LEAVENWORTH MOUNTAIN

UPPER CLEAR CREEK MINING DISTRICT

By
Talmadge Kyner
Denver, Colorado
December 31, 1919

Denver, Colorado
December 31, 1919

Preface:

Complying with a request that I submit a brief report on the Colorado Central Mines, embracing lode claims, locations adjoining these mines, mill sites and rights of way and terminal holdings, now being operated by the Colorado Central Mines Company, I present the following statement covering only the more salient facts relative to the history of the mines, their production to date, tonnage of payable ore known and probable, character of ores and their amenability to metallurgical treatment, geological and economic conditions, with conclusions as to the presence and probability of ore resources in partly developed or undeveloped sections of the mines at depth below and beyond points now reached by present mine workings, and such recommendations relative to, future development, mining and milling operations as I consider advisable and necessary in the production of greater tonnage and economy of operations.

Location:

The mines, prospects, mill and mill sites, development and drainage tunnels, rights of way, terminal holdings and other properties controlled by the Colorado Central Mines Company, and covered by this report, are all situated on the southern slope of Leavenworth

Mountain, between the forks of Clear Creek, in the upper Clear Creek Mining District, Clear Creek County, Colorado, adjoining the townsite of Georgetown, on the line of the Colorado & Southern Railroad, Fifty miles from Denver, and at an elevation of from 8,500 feet to 10,000 feet above sea level.

Extent of holding and titles.

In extent, the superficial area embraced by the mines, mill sites and other consolidated holdings, approximates a total of 250 acres, embracing within and controlling a great portion of the productive mines and valuable lode claims on the southeasterly slope of Leavenworth Mountain.

Under the Colorado Central Mines Company, the control and possession of these mines and other properties has been acquired by purchase, options, bond and lease, taken under tax title, or are being acquired by virtue of tax titles, and by discovery and location.

Abstracts of title to the patented areas have been passed upon and show that the same are free of any title defects, and none of the holdings carry any obligations other than those assumed under terms of purchase, bond an lease, or option agreement.

History and Production:

The history of the discovery, development and production

to date of the mines of Leavenworth Mountain is of interest and importance in that it serves to accentuate the fact of the average high grade output of the mines, and enormous returns therefrom. And that because of the heavy mine costs, high treatment charges and other expenses obtaining during the period of greatest activity, only the ores having a high silver content could be mines profitably: necessitating the leaving in the stopes, as filling, standing broken and unbroken in the mine workings, or undeveloped and contained in the mine dumps, the lower grade ores, because of the lack of adequate methods of concentration and the recovery of their metallic content; but which now, by reason of advance in metallurgical science, perfecting of mechanical methods of treatment, and the solving of the metallurgical problem presented by these ores, afford a tremendous tonnage, the mining and treatment of which can be made highly profitable over a period of years.

Following the discovery of the mines in the Silver Plume area adjoining Leavenworth Mountain on the north, in 1864, and the silver excitement which began in 1866, the Equator Vein (part of the Colorado Central Lode) was discovered and opened in the latter year,

following which the Colorado Central Vein was discovered in 1868, coming into immediate prominence because of the large bodies of ore and the extra-ordinary high grade output.

Following the discovery of the Colorado Central Vein or lode, the veins afterward opened by the Wide West Mining Company, the Aliunde Mining Company (part of the Colorado Central Vein), the Hall Extension of the Colorado Central Lode (Husted-Chisholm Estate) the Kirtley Mine and other veins paralleling or adjacent to the Colorado Central Lode were developed and actively worked until, following the demonetization of silver, the fall in the price of the metal brought about cessation of operations and the closing of the mines.

Production

During the time the writer was engaged in rehabilitating the Colorado Central Mine (1916-1917), associated with Mr. E. C. Wiard, an exhaustive search was made of the available records of ore purchasing companies and smelters, the ore books and other records kept by the several mining companies, together with the data contained in the United States Geological Survey Bulletin No. 63 (pages 245-275).

Character of Veins

The veins of Leavenworth Mountain are found occupying a broad, deep-seated regional area of gneissic and granitic formations,

containing bands and masses of pegmatite. In general they occupy nearly vertical, faulted and fissured zones over 1,200 feet in width and some 5,000 feet in length. The most striking feature of this zone is the presence of two large, paralleling, granite porphyry dikes, 100 to 150 feet apart, in thickness ranging from 20 to 50 feet, and having a trend or strike, from sothwest to northeast throughout the length of the Colorado Central and Hall or Husted-Chisholm Estate Holdings.

There appears no question but that these granite-porphyry dikes afforded the pre-existing planes of weakness which, with the stress and movement subsequent to their intrusion, were responsible for the fissuring and faulting, and the creating of strong deep-seated and persistent circulation channels, giving access and vent to circulating, mineralizing waters and thermal gases.

The stronger, more important veins have been found occupying contract fissures on either side of or near to these porphyry dikes. Between the dikes, however, numerous cross veins and fissures occur, having no general strike or dip. In places these intermediate veins are so numerous and intersecting as to present the appearance of a mineralized stockwork.

A noticeable feature of the stronger veins is a tendency for one ore body to discontinue and be offset more or less, its place

being taken by an imbricating vein. From study of the veins and the depth to which they have been shown to persist in undiminished strength, there is no reason to question their deep-seated origin, or that the ores they contain will continue and be found in undiminished quantity and richness far below the deeper mine workings.

Occurrence and Character of Ore:

In general the ores occur as irregular lenses, bodies and shoots, having a trend or pitch to the southwest in the veins. The more important bodies have been found in contact with or lying near the porphyry dikes. Numerous rich ore bodies, however, were found as so-called "flat veins" in the area between, and in fissures throughout the crushed and sheared zone adjoining.

A division covering the character of the ores would arrange them in three classes, in all of which the principal minerals (by volume) would be galena and sphalerite. The galena occurs both massive, cubical, and as the fine-grained, so-called "steel galena", in neither of which are found silver in amounts much in excess of 30 ounces per ton, unless the rich, argentiferous minerals, polybasite, tetrahedrite, argentite or pyrargyrite are present.

The sphalerite (zinc) ores occur mainly as high grade sphale-having a low silver content, and where opened in the mines, have been found attaining width of from 2 feet to 3 feet of solid mineral with usually from 3 feet to 5 feet of concentrating ore enclosing. Much of the solid zinc ore will return, as broken without sorting from 40% to 50% metallic zinc.

During the time the mines were actively worked, only such ores of high grade character as would stand the excessive costs were mined, the portions of the veins not productive of high grade ore were considered barren, when, in point of fact, they contained the large bodies of lower grade, silicious ore carrying disseminated values, which today present opportunity for the mining and treatment of large tonnage ranging in value for the lead, zinc, silver content, from $10.00 to $50.00 per ton, and without doubt containing lenses and small bodies of high grade, concentrated or secondary enrichment ores.

The records of the several mines are replete with statements relative to the occurrence of "low grade ores", "heavy lead ore, low in silver" and "bodies of zinc-lead ore having low silver content". This is especially true of the Colorado Central Group, and, to the knowledge of the writer, is true also of the Husted-Chisholm Estate holdings, the Kirtley Mine. The heavy lead, low silver bearing ores

were allowed to remain unbroken, in large measure, and were only worked where known to contain pay streaks of the rich, argentiferous minerals. To a great extent, the portions of the veins noted in governmental reports as unproductive, or are designated as "unmineralized", are now known to contain a tonnage approximating 1,000,000 tons of low and medium grade ore, all of which, under present day conditions, can be considered of profitable grade. In calculating the gross tonnage and value of same remaining in these mines, total length of the known ore bodies have been given, arbitrarily, a width of but four feet, whereas in point of fact, there are many places where the bodies range up to twenty feet in width, and seldom fall below three feet.

In estimating the value of the tonnage that can be safely relied upon as remaining in the mines as stope filling, standing unbroken in the partly developed or in undeveloped areas, I have employed the figures and values returned by exhaustive surveying and sampling, and have consistently disregarded high assays, and have not taken into account the value of the lead and zinc content of the ores.

In determining the probable net value of these ores I have fixed an arbitrary $5.00 per ton as the cost of reopening caved levels,

development of new ground, completion of drainage and haulage tunnels, mining, transportation and treatment, and have figured a flat 20% loss in recovery. Without entering into detail, the following tabulation gives the approximate tonnage and net value of the ore contained in the mines named: Price of silver employed - $1.00 per ounce.

	Tons	Ag. Content	Loss	Gross Val.	Net Value
Colorado Central Recoverable Stope Filling:	250,000	9 oz	20%	2,250,000	550,000.00
Colorado Central Standing re Above 1,000 ft. level	450,000	12	20%	5,400,000	2,070,000.00
Colorado Central Below 1,000 ft.	125,000	15	20%	1,875,000	875,000.00
Hall (Husted-Chisholm Estate)	140,000	15	20%	2,100,000	980,000.00
Wide West-Hall Tunnell	96,000	12	20%	1,152,000	441,000.00
Other Sources	75,000	12	20%	900,000	345,000.00
	1,136,000			13,677,000	5,261,000.00

To the net figure of $5,261,000.00 can be reasonably added a probable $1,052,000.00 representing the net return value for the lead and zinc content of the above tonnage, or in all a total of $6,313,000.00.

Although I have, throughout this report, consistently avoided reference to the high grade, shipping ores as a possible source of additional revenue, or the prospective value of the areas outside of the developed mines, in conclusion will say: There is shown now in the more accessible parts of the mines sufficient evidence to warrant the statement that without doubt just as high grade ore will be found, and in just as great quantity, in the undeveloped, partly developed or virgin areas outside of and below present mine workings as was produced therefrom during the years of greatest activity. It will be recognized, however, that in large measure the successful operation of the mines must be based upon the economical mining and treatment of a uniformly high tonnage of medium and low grade ore. Given careful, efficient management, the operation of these mines can be made highly profitable over a long period of years.

Respectfully submitted

Tallmadge Tyner

Denver, Colorado
December 31, 1919

BRIEF REPORT

ON

PROPOSED COMBINED GROUPING OF MINING PROPERTIES LOCATED

N

LEAVENWORTH MOUNTIN

CLEAR CREEK COUNTY, COLORADO

By
Eugene Bush
Denver, Colorado
September 1944

With the purpose in view of clarifying the intent of this resume, it is necessary to first present a little historical data, involving two of the four groups of mining claims presented herein. These two groups forming the principal basis of this report.

All had to do with, what is known as Leavenworth Mountain, located near Georgetown, Colorado. In the very early 80's, two very important mineral discoveries were made, each discovered by separate owning interests. One group working on what later became known as the Colorado Central fissure system, and the other on what is now known as the Colorado Central Extension fissure system. These discoveries located on the south slopes of Leavenworth Mountain. For some two or three years these two units operated independently showing very great profits to their owners, from very shallow workings. Both groups finding that the ore values were going to depth, resolved, and did combine into one operating group. The new combined group sinking a shaft, and from the shaft working the two fissure systems as named above. At the time of this reorganization or new combination, the then new owners, placed in absolute charge a Mr. [illegible]. Hall, mining engineer, who acted in the capacity of General Manager. During the following

many years that Hall served the new organization he was instrumental in the sinking of a shaft to a depth of 1000 feet and from this shaft worked both of the above mentioned fissure systems, concentrating his entire mining activities to the easterly sector of the reorganized holdings. During the period under Hall's management the recorded production of this combined group amounted to well over twelve millions of dollars.

It must be borne in mind that the mining that was carried on under Hall's management, was for the most part, that of hand sorting the very high pay streak, throwing back into the stopes as filling that which would not meet the visual requirements of the various not too well trained miners, this stope filling thought classed as waste at the time, can at the present time be classed a very high grade of mill ore. The purpose of this type of mining was forced on the managements, because of in adequate and improper milling conditions of the time, which were not suitable to the peculiar ores mines, further the nearest railroad service to this group being Georgetown some two and half miles from the shaft over very mountainous and precipitous roads. With the very high freight rates at that time from Georgetown to the smelters, and a very difficult wagon haul between the mine and Georgetown, not mentioning the smelter rates, etc., it is not difficult reasoning to understand why the above method was used, and the ultimate result of such

method of mining. Because of the Geographic location it has always been impossible to serve this group other than as described.

Hall forseeing the short comings of this very wasteful manner of mining, early in his career as Manager started by patenting claims on the south slopes of Telegraph which adjoined the combined group on the west. After having proven his own ore zones, he severed connections with the Central group and came over on the North slopes of Leavenworth, where he would be near the railroad, and started what is known as the Hall Tunnel, or the Wide West Group. This tunnel was intended not only to cross cut ore bearing fissures on the Northern slopes of Telegraph, but primarily to reach at a greater depth the two great fissure systems, and proven ore bodies on the Southern slopes. In the driving of this tunnel it was known at the time, and as later proved, that this tunnel would cross-cut the present named fissures, i.e., Polaski, McClellan, Central and Central Extension at great depth. Hall continued with his project up to the time of his death at which time the tunnel had been advanced into Leavenworth Mountain a distance of 26[illegible]0 feet, and at that distance had cross cut four great ore bearing fissures, on the Northern Slopes, but which at the time could not be mined because of dispute in ownership of ground.

In November 191[illegible] actual work was resumed on the Hall Tunnel, at which time it was advanced [illegible]10 feet, together with some [illegible]06 feet of drifting

on the various exposed fissures, however at the end of the world war brought this work to an abrupt close, and has remained so, the objective of the Hall Tunnel yet remaining to be reached.

All of the properties mentioned herein, are located in Clear Creek County, Colorado, on the westerly and easterly branches of Clear Creek, being approximately three quarters to two miles southerly from the town of Silver Plume, and about the same distance from Georgetown, the County Seat of the aforementioned County.

The properties are all contiguous and occupy positions bordering on both of the above creeks, and are located within the Griffith, Queens and Argentine Mining Districts, on both the Northern and Southern slopes of Leavenworth Mountain.

These two towns mentioned above lie in the center of the largest and richest mining district in the State of Colorado. These districts having a production record of over twenty five million up to 1910, and at the present time has been barely scratched. (See U. S. Geological report by J. E. Spurr, G. H. Gary and S. H. Ball, which are complete on the above districts).

Four groups of claims are herein covered, namely, The Central comprising 37 patented claims, Chisholm-Huested, comprising 21 patented claims, The Wide West comprising 18 patented claims, and the Calumeth-Snyder comprising of 10 patented claims in all. The

elevations on the above groups range from eighty two hundred to eleven thousand feet above sea level. The Central group laying generally on the Southerly slopes of Leavenworth Mountain, and the latter groups 80% on the Northerly slopes.

Owing to the close proximity of these groups to Georgetown and Silver Plume, enables one to get the best class of mining labor, due to the fact, men are able to live at home with their families and where their children can attend schools, both of these facilities being provided at the two mentioned towns.

The General formation of the entire section is granitic, bordering the plains region to the East, these granits are highly metamorphic but approaching the axis of the range they become less so, and more Archean in appearance. These groups being located close to the Apex of the range, and hence enjoy greater freedom from the later alteration of the original formation.

The ore in all cases occurs in a fracture of the formation, and is commonly termed a fissure vein. Across the four groups of claims there are eight major fissures laying generally east and west, and named in their order from north to south, are known as the Dorothy, Pulaski, McClellan, Hartley, Ocean Wave, Equator, Colorado Central, and Colorado Central Extension. The ore in all of these fissures occur

in primary form, (sulphides) carrying lead in the form of "Galena" zinc in the form of "Sphalerite", and the sub-forms of "Black Jack" and "Rosin" zinc. The silver compounds, such as "Argentin", "Stephanite" and "Pyargyrite" in which Gold occurs generally, it may be said that the gold varies greatly, as has been proved from some twenty samples taken at various places on all of the above fissures, the low assay showing 0.03 ozs. per ton, while the high being 2.52 ozs. per ton.

The above fissures or veings vary in width from 3 to 15 feet, and the pay streak presenting widths ranging from six inches to four feet, and infrequent occurrences may possibly show widths as great as four or even six feet. As commonly known in speaking of the pay streak throughout the various fissures these occur sporadically, investigation reveals that these shoots varied in length along the fissures from approximately two hundred and fifty feet to as high as one thousand feet.

On the Central Group there has been a shft sunk to the one thousand foot level, and extensive workings from this point to the east and west. It was found that these workings were flooded from the six hundred level down and that the shaft was not in the best of repairs,

however, with the aid of ropes entrance was gained to many of the upper levels. The majority of mining was carried on in the eastern sector of their property holdings, while all indications were that not so much had been done to the extreme westerly portion of the property. There are of course other workings on this ground but of no real relative importance.

The production was made from rather shallow workings on both Chisholm-Huestead and the Calumeth-Snyder groups, these are at higher elevations and have no real bearing on the final purpose of this proposed plan, other than the proving of the fissures, and that the ore lense does exist. Just why production on these later two was not continued is mere conjecture, but from available information, the general raising of prices in all commodities peculiar to mining on a falling metal market discouraged the owners.

The Wide West group is developed by a cross cut tunnel, nine feet wide by eight feet high, 3250 feet in length, with a 7/10 of 1 grade, this tunnel has been driven from North to the South, and at the present is within approximately 750 feet from their extreme southern end line. Encountered during the driving of this tunnel has been four very important fissures. In only one of these has there been any development work done, resulting in the exposure of a fissure six feet wide, having a pay streak of from three to thirty inches wide. Approximately 900 feet of work has been done along this fissure with the pay

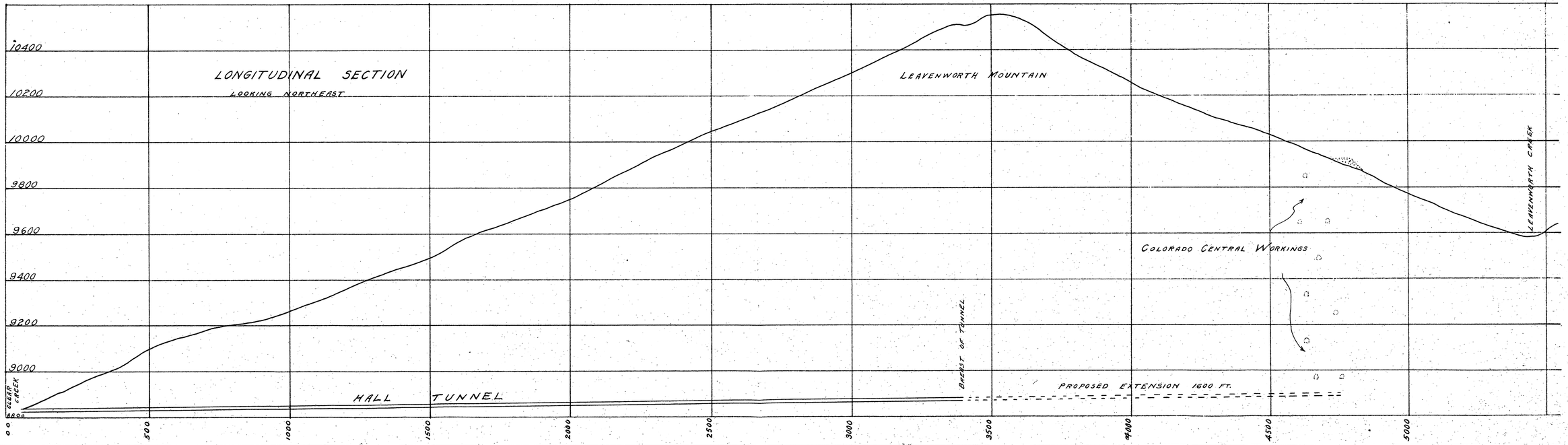
streak showing the entire length, samples taken along the vein show the value as being good, the assay values showing from 10.00 up to $90.00 per ton, the principal values being gold and silver. Other than one very small stope no mining has been carried on. And as stated that no development had been done on the other fissures, I therefore made no attempt at taking samples. However, good ore values are apparent. All of the exposed fissures encountered in this tunnel, are generally east and west. The tunnel is in a remarkable good shape. There exists two or three very minor caves which could be cleared in a very short order.

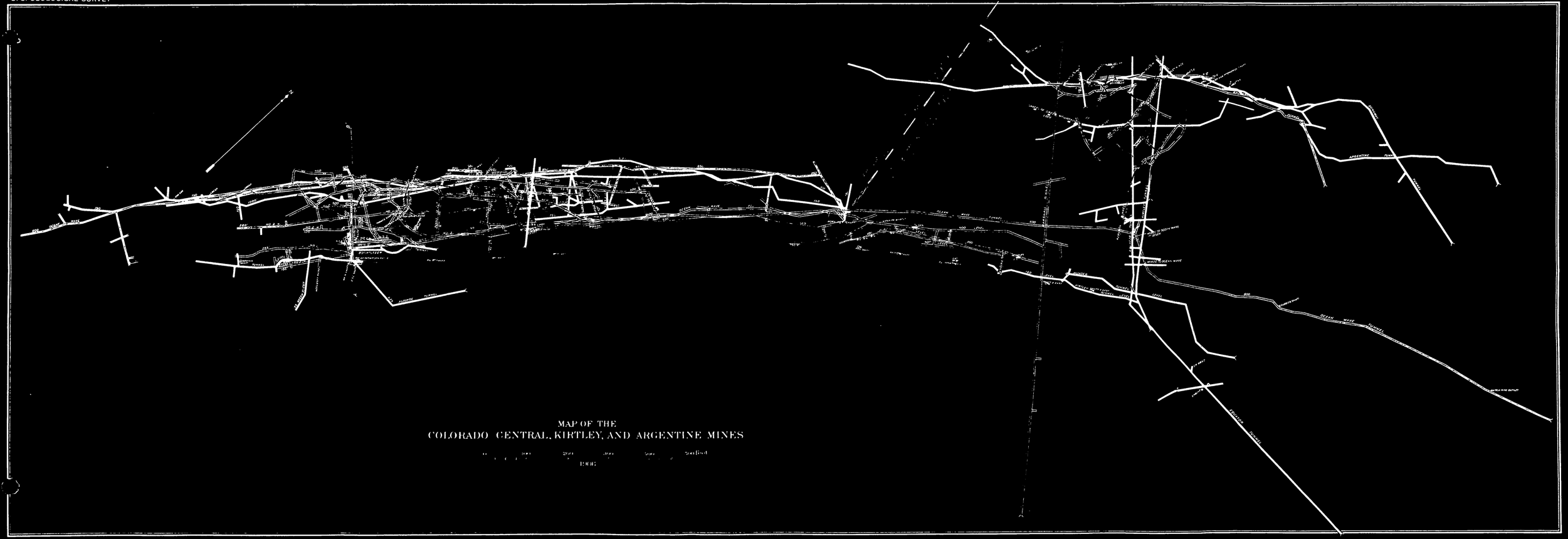
As I have heretofore stated with sufficient funds to purchase these four groups of mining claims, as well as the funds to continue the Hall Tunnel to its conclusion, the exploring on the fissures which have already been cut, the purchase of adequate machinery to carry on this work, there is no question but that it will result in one of the biggest producing mines in the western region.

The very fact that Hall tapped the ore bodies on the southern slopes within his own ground, and yet not taking into consideration the unmined ground left in the Central, both at depth and to the west of their workings, as well as all the virgin territory on the northern slopes, resolves itself into merely a financial backing. With such finance there remains no doubt in my mind that returns would be enormous.

There are many plans which present themselves for the further operation, should the required capitol be made available. It is my belief that among these the most favorable would be that, first continue the Hall tunnel, while at the same time exploiting the fissures on the northern slopes. Thus a good production of ore could be made long before the Hall Tunnel had reached its objective.

It may be asked why not use the already made facilities which exist on the Central, the shaft and workings. The cost of pumping these workings and general repairs to the shaft, as well as taking into consideration, that this would preclude any mining of ore till completed, while on the other hand, by using the Hall tunnel, it permits all that is precluded on such plan. Further highway, power and water are immediately available at the Hall Tunnel site.


LONGITUDINAL SECTION
LOOKING NORTHEAST
LEAVENWORTH MOUNTAIN
COLORADO CENTRAL WORKINGS
LEAVENWORTH CREEK
BREAST OF TUNNEL
PROPOSED EXTENSION 1600 FT.
HALL TUNNEL
CLEAR CREEK
10400
10200
10000
9800
9600
9400
9200
9000
8800
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000



MAP OF THE
COLORADO CENTRAL, KIRTLEY, AND ARGENTINE MINES

1906