

COPY

THE TONOPAH MINING COMPANY OF NEVADA

PHILADELPHIA

October 21, 1921.

Mr. Norval J. Welsh,  
c/o The Victor Smelting & Mining Co.,  
Gage, Luna County, New Mexico.

Dear Mr. Welsh:

We have today received Mr. Carlisle's report on the Tres Hermanas properties. Mr. Carlisle states in his letter that he has written you the result of the assays. Mr. Carlisle thinks this property could not be developed into a commercial proposition; this is disappointing and I regret the outcome of it very much. I hope, however, you will not be discouraged, and you will continue your efforts to throw in our way an acceptable property.

You can be assured that in case you do succeed in directing our attention to a property that proves, upon examination acceptable, that you will be fairly treated in the matter.

With kind regards, I am

Very truly yours,

JHW.

President.

N.M. Bureau of Mines  
& Mineral Resources  
Socorro, N.M. 87801 File Data

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NM Mine File No.5488

# THE TONOPAH MINING COMPANY OF NEVADA

EASTERN OFFICE  
572 BULLITT BUILDING, PHILADELPHIA, PA.

PLEASE ADDRESS ALL COMMUNICATIONS  
TO THE COMPANY, TONOPAH, NEVADA

TONOPAH, NEVADA,

Gadsden Hotel,  
Douglas, Ariz.  
Oct. 17th, 1921.

Mr. J. H. Whiteman, Pres.,  
Tonopah Mining Co. of Nevada,  
Philadelphia, Pa.

Dear Mr. Whiteman:

Am just leaving on the train south for Nacozari with Mr. Beauchamp. From there we go to Cumpas to the south and then around to several properties within a days ride from Cumpas. I shall probably be gone 12 to 14 days and expect to see at least half a dozen properties in ~~th~~ that time. Shall have wires forwarded ~~xx~~ when possible but shall not get mail until I return.

I told Mr. Miller I was going to the Chispas district on this trip but as two more things have been presented there and it seems to be an important trip I shall go by auto south from Nogales and Cananea, when time after getting back from this trip.

The tests and assays on the Tres Hermanas properties finally arrived and results were too disappointing to proceed. It is a place where a tonnage of so called ore is likely to be found but after seeing results I do not think it will ever make commercial ore. I have written to Mr. Welsh giving him the results and telling him that I could not recommend it.

There are one or two other matters which I shall write you ~~later~~ ~~when next writing~~. I may find that I cannot write until getting to Nacozari on the return.

Yours very truly



NORVAL J. WELSH

Gage, New Mexico,  
September 21, 1921.

Mr. J. H. Whiteman,  
Pres't, The Tonopah Mining Co.,  
Philadelphia, Pa..

Dear Mr. Whiteman:-

The general tenor of Mr. Carlisle's remarks, when present upwards of two weeks ago, was such as to lead me to infer that his opinion regarding the possibilities of the Tres Hermanas proposition, while largely dependent on the determination of two or three then uncertain factors, was such as would quite possibly result in your concluding to undertake some exploration and development in the district.

In one or two instances, our joint inspection of the district proved disappointing. This was particularly so as regards the Waterloo Shaft, in which disseminated ore was first observed in the district. The bottom was under water some twenty-five feet, the result of summer rains and seepage, and inaccessible.

This was particularly disappointing in that the lower part of the shaft makes the best showing in the field, as regards disseminated ore, and in that, as I have more recently ascertained, the Waterloo claim, in the center and forming one of a group of seven claims, has reverted from control of the Romaho Mining Company, an organization illy-conceived, inadequately financed and poorly managed, to that of the owners.

However, not to trespass on Mr. Carlisle's domains, the purpose of this letter is to say that I took advantage of his stay with me to explain to Mr. Carlisle, in a general way, my situation here at Gage, to say that my present connection is, and has been for over a year, extremely unsatisfactory, with many disagreeable features, and that, in taking the Tres Hermanas proposition up with you, I did so largely in the hope that, among other things, it would lead to my breaking away from Gage and becoming identified with your operations, preferably in my having charge of at least such initial exploration and development as you might conclude to undertake in that district.

Mr. J. H. Whiteman- 2

Sep't 21, 1921.

I realize, of course, that at this stage I am to you but little more than a name, and it may be that, in any event, I am a bit premature in so addressing you. I feel, however, that no harm can be done in expressing my hopes and desires and making them known to you, to the end that, should you decide to proceed in the Tres Hermanas district, they may be given such consideration as is warranted.

Yours faithfully,

  
HOWARD C. CARLISLE

NJW/

cc- Mr. H. C. Carlisle,  
Gadsden Hotel,  
Douglas, Arizona.

TONOPAH MINING COMPANY OF NEVADA.

Chloride, New Mexico.  
REC'D Sept. 12, 1921.

Mr. J. H. Whiteman, Pres.,,  
Tonopah Mining Co. of Nevada,  
Philadelphia, Pa.

SEP 13 1921



Dear Mr. Whiteman:

Re Tres Hermanas District, N.M.

Have finished a three day examination of the Tres Hermanas District including properties presented by Mr. H.J. Welsh.

In summary there is considerable basis for the interest shown by Mr. Welsh but it will probably not make anything like the tonnage he expects. There is quite a chance for a tonnage of low grade lead-silver ore - if it proves to be ore - and at this stage the main question seems to be whether or not it will be commercial if found. This will have to be determined by tests on concentration of samples and I have asked that this be done in Tonopah.

Although the district is of interest I take exception to the deduction that the granite area is underlain by granite porphyry or any different rock and also that there is going to be large bodies of disseminated ore. Instead what appears to be a different rock is merely the same granite below oxidation with alteration of its component parts along parallel fractures. It is along these fractures only that solutions have come and changed feldspars to soft white kaolin and at same time deposited lead and zinc sulphides carrying silver. How often these fractures come or how far into the walls deposition of the lead and zinc has occurred remains to be proven. Apparently it will be close to the main fractures only and barren between.

There is a good chance of getting values along these fractures and parallel ones may come every 20 or say 50 feet. I should not expect the mineralization to be continuous along these fractures. It would seem not to be too much of a chance to take to try for tonnage along these fractures but the first question seems to be will the ore be commercial?

It can almost be said that zinc in the west is not an asset ~~in the west~~ during normal times - even when in concentrates. Here it will be mixed with iron sulphide which cannot well be separated and it would surely not be an asset. The lead sulphide can be taken out with only a reasonable loss but question is here what amount of the silver will go with the lead and what part will be lost with the zinc and iron.

There is no real information on this as yet. The shipping product would be a lead concentrate, and with only about 3/4 of an ounce silver to the percent of lead in the ore, the silver would have to go with the lead to make it a commercial product.

A reasonable option can be obtained and 100 feet of shaft sinking on the bottom of one of the deeper shafts together with about 300 feet of underground work would probably prove the value of the property one way or the other. The advisability of this seems to depend on results of concentration tests to see if a commercial product can be obtained from the ore.

Of the two main shafts in the district I did not see the bottom of the Waterloo due to water from recent rains. Should we later decide to investigate further it would be well to see the bottom of this - water will soon drain out - as this Waterloo sounds like the best place to continue the sinking.

As Mr. Welsh says, values have ~~remained constant~~ increased in depth but this is due to oxidized capping being leached and assaying nothing. Then comes a partially oxidized zone with very low values and the two deeper shafts are practically out of this zone but not entirely. 100 feet in either of the deeper shafts would probably get out of this zone. Then cross-cutting is necessary to determine the number of parallel fractures and a drift on the best fracture to determine amount of mineralization along one fracture.

I shall write you further on this when the tests are finished at Tonopah.

Am now at Chloride, 60 miles from the railroad at Engle, and on the way to the tin property. Shall return to Douglas from here.

Yours very truly,

*H. C. Carls*

# THE VICTOR SMELTING & MINING COMPANY

GAGE, LUNA COUNTY  
NEW MEXICO

NORVAL J. WELSH  
Manager

August 5, 1921.

Mr. J. H. Whiteman,  
Pres't, Tonopah Mining Company,  
Philadelphia, Pa..

Dear Sir:-

Referring to my letter of the 1st inst, descriptive of the Tres Hermanas Mining District, the sketch map enclosed therewith shows the large extent of territory taken up by locations north, south and easterly from the holdings of the Romaho Company.

The larger portion of this ground has been located consequent on developments in the Waterloo Shaft, during the last couple of years. In other part, some of the locations have stood for a long time. This applies especially to the old Nigger Mine, one of the older and probably the most successful of the early vein mines, the situation of which is indicated, north of Romaho.

In this part of the porphyry area, my choice of ground warranting exploration for disseminated ore would embrace the Nigger group of three claims and the territory immediately adjoining, north and south, a total of around 20 claims. Various shafts and pits in this section, up to 65' deep, exhibit the altered granite porphyry and indicate the close proximity of the underlying mineralized quartz porphyry.

Referring to the map, the Manning and Evans properties, together with a third group, of four claims, adjoining the Manning on the north, occupy what is known as Chloride Gulch. Evidences of faulting are to be seen in the gulch, which has an east-northeast course, and it is not unlikely that it occurs along a strong fracture zone.

These three claim groups are adjoined on the east by the South Trail group, of nine claims. These are located in large part in a basin at the foot and west of Middle Peak, while to the north, and west of North Peak, are located the Kentucky and Apache groups, with



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the attractive Gold Flat group adjoining the Apache on the west.

Each of these several groups has its talking points and there is but little to choose between them as regards surface indications. I have grouped them together, however, only for the reason that, should future developments warrant, they could be operated jointly by a single company and ore be furnished by all to a common milling plant. The center of interest today, of course, is in existing developments in the Manning and South Trail shafts and it does not necessarily follow that each of the groups mentioned should be taken possession of at this time.

At this writing I hold leases and options of purchase on the South Trail and Kentucky groups and have the refusal of a contract, on generally similar conditions, covering the Manning property. The South Trail and Kentucky groups embrace about 15 claims and constitute a compact tract of approximately 300 acres. The contracts covering these two groups call for a purchase price of \$5,000 per claim, with a first payment, amounting to one-third of the total, by October 31st, 1922, and the balance fifteen months later.

The Manning property consists of five claims and contract may provide for full payment (\$25,000) in two years. Until very recently the owners have held out for terms similar to those in their contract with Weiser. In this the purchase price was lower but monthly payments were called for from the date of contract. To such terms I would not agree and it is only now that the owners see the light of reason.

Other conditions of the contracts are only such as are customary. As regards development and other work the only stipulation is that referring to the annual assessment work. As covering all three groups, this would come to \$2,000 yearly. In each case the expenditure could be confined to one locality.

My view of the proposition as it now stands is that it has large possibilities of developing as something new in the mining world and on a large scale. It is in an embryo state as yet and there is no telling whether I am right or wrong. If right, the capital necessary with which to accomplish sufficient preliminary work of exploration and development to prove its possibilities will be but a bagatelle compared to future revenue. If wrong, the worth of a now possible extensive deposit of mineral will have been determined on a comparatively small expenditure.



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As covering such preliminary work, I would recommend sinking the present South Trail 65-foot shaft an additional 100 feet and crosscutting therefrom at the lowest level as might be warranted; that five hundred to a thousand dollars be expended on the Kentucky group, in assessment work of an exploratory nature, and that a similar amount be spent on the Manning property, preferably in the present shaft if determined as advisable.

Such work would largely prove the character of the now seeming deposit and would determine the desirability of either surrendering possession of the property, or else of additional exploratory work with churn drills and the possibility of proving a large tonnage of milling rock.

The work outlined could be accomplished in from six to eight months time and at a cost of from \$10,000 to \$15,000, depending on the amount of work done and covering everything from labor and management to equipment and incidentals. Installation of a small compressor would hasten the desired end and bring the total cost to substantially the same figure as all hand work.

Believing, as I do, that there is here presented a possible opportunity to develop a large tonnage of disseminated lead-silver and zinc ore, a proposition that would necessitate large capital and extensive mining and milling equipment, I would like to obtain the financial backing and co-operation of important interests in its initial exploration and, if warranted, subsequent development, equipment and operation. To such interests I will turn over my contracts and participate therein with them on any basis they consider equitable and fair.

I have presented the matter to you at length and in detail in the hope that the proposition will appeal to you and have your favorable consideration. I will be glad to furnish you with any additional information possible and to forward samples of the mineralized porphyry for inspection, if you so desire.

Yours faithfully



NJW/p

# THE VICTOR SMELTING & MINING COMPANY

GAGE, LUNA COUNTY  
NEW MEXICO

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1921

J. H. W.

NORVAL J. WELSH  
Manager

August 1, 1921.

Mr. J. H. Whiteman,  
Pres't, The Tonopah Mining Co.,  
Philadelphia, Pa..

Dear Sir:-

The Tres Hermanas Mining District, situated in the south central part of this ~~(Luna)~~ county, some 10 miles north of the Mexican boundary line, has long been known as a more or less inconsequential producer of lead-silver (galena) ore and, more recently, of zinc carbonates and silicates.

The galena ore has come, primarily, from normal fissures, generally narrow, in granite porphyry; latterly, together with the zinc ores, from deposits in limestone, formed near an east-west igneous contact which flanks the main intrusive mass on the north.

The granite, or quartz syenite, porphyry is the predominating rock of the district. It is coarse grained, massive in structure and of a brownish color. It embraces an area some six miles in length, south from the contact, by three miles wide and constitutes the peaks and other higher elevations of the mountain group. At such elevations it is practically unaltered, if at all, and contains no introduced minerals, of economic importance, such as are found in the underlying formation.

Faulting is evidenced superficially at several localities in the porphyritic area, forming what are probably fault zones, along, roughly, northwest-southeast lines. The two most prominent of these zones are situated upwards of two miles apart, with a central zone possible, and are intersected and probably connected by a greater series of minor slips and fractures having a general east-northeast trend. Of these, some are quartz filled and constitute the narrow veins above mentioned.

Throughout the northern part of the porphyritic

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area, in various flats, basins and gulches, and at varying distances up to two and three miles south of the main contact, are a number of shafts and pits ranging in depth from mere location and prospect holes up to 160 feet below the surrounding surface.

With but few exceptions, these shafts and pits were put <sup>down</sup> for the purpose, or with the expectation, of developing seams or narrow veins of galena, often carrying major silver values. Some of them date from Civil War and early Indian days. In many cases they proved disappointing and were abandoned. Of late, however, they have taken on an added significance and the ground is once again pretty thoroughly covered by locations.

The present two deepest shafts in the area are known as the "Waterloo," of the Romaho Mining Company, and the Manning, respectively 105' and 160' in depth, upwards of two miles apart. The Manning was sunk 100' to its present depth a year ago; developments in the Waterloo two years ago induced sinking of the Manning to its present depth later and were instrumental in bringing about present new interest in the district. The location of each is noted on enclosed sketch tracing.

Started originally by a cattle man as a well, the Waterloo Shaft at 70 feet encountered disseminated mineral and no water and was abandoned by the cow man. He subsequently sold his rights therein to the present owners and they proceeded to enlarge the "well" and to sink it an additional 30 feet.

The first 40 feet of the shaft is timbered and lagged and the country rock hidden from sight. From this point down, while timbered, the country is exposed and the overlying porphyry is seen to have been altered and to have lost, in greater part, its distinctly granitic character. At 100 feet the enclosing rock is essentially a quartz porphyry, highly fractured and often crushed and kaolinized, and shows a very general state of mineralization.

At the 100-foot level the quartz porphyry is exposed over a width of 20 feet. Pyrite is very general throughout and the primary lead and zinc (rosin blende) minerals appear to increase progressively in amount as depth is gained. In short, present developments in the shaft strongly indicate the possibility of the porphyry area of the district developing as a deposit of disseminated lead-zinc-iron ore. Hence the new interest in it.

My interest in the Tres Hermanas district was first attracted a year ago, when a man from the Silver City

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country, north of here, entered the field and took possession of the Manning and South Trail groups of claims. His name was Weiser, an experienced mining and mill man well known in the Santa Rita and Hanover districts as having put the Republic Mine, of the Empire Zinc Co., on its feet.

He came with the financial backing of certain elements in the force of the Chino Copper Company. Between them they organized a small syndicate, each member subscribing some fixed amount monthly as working capital, and proposed to develop and prove the ground to an extent and then dispose of the property to people able to develop and operate it in a large way.

Suffice it to say here that all went well with them until last fall, by which time Weiser had done some 200 feet of sinking and crosscutting. Meanwhile, too, they were making monthly payments of around \$500 to the Manning owners. Came the closing down of Chino and reduction of forces. Weiser's support was cut off, he could neither carry on the work nor meet the Manning payments, alone, and had no choice but to surrender possession and withdraw.

I knew Weiser rather well. We would occasionally meet and talk shop, when he invariably expressed himself as much gratified with the results he was obtaining. In such manner my interest in the field grew. Eventually, after withdrawing, he told me that he had hopes of effecting other financial arrangements and of coming back. This he has never done. Last spring I went down to the Tres Hermanas and looked the field over, particularly as regards his old holdings. I have since been down a number of times, with present results.

Assay Values: In a field of this seeming character, where the tonnage possibilities are great and the existing developments slight, over a large area, it appears to me that assays of samples to be had at this stage, whether high or low, are of considerable value only as demonstrating the mineralization of the underlying quartz porphyry, as now exposed, and as indicating the possibilities of more thorough exploration.

Waterloo Shaft: I am advised by the party who first suspected the possibility of disseminated ore in the district, an experienced miner, that a sample taken at about the 65-foot level in this shaft, when evidence of disseminated mineralization first became clear, gave results of 2.1% lead, 1.9 ozs. silver, 0.01 oz. gold and 2.5% zinc.

I have the same authority for the statement that at the 100-foot level a general sample, taken over a width

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of 18 feet, assayed \$12.85 per ton in lead, silver and zinc, with results of 7% lead, 7.2 ozs. silver and 3.6% zinc.

On my last visit to the district, about three weeks ago, desultory work of sinking this shaft deeper was being undertaken. Much of the material then showing in the bottom would have assayed well, in lead and probably silver.

**Manning Shaft:** This shaft is in bad condition and dangerous of entry, for lack of timbering. I have been in it but once and then not below 100 feet, account water in the bottom. The material on the dump is in every respect similar to that in the Waterloo Shaft, over  $1\frac{1}{2}$  miles distant, and all shows varying degrees of mineralization.

Assays from crosscuts at the 120- and 160-foot levels, of samples cut over widths of 8 feet, have run as high as 20% lead, 14 ozs. silver and 18% zinc. These results are of Weiser's sampling and I might add that, on the occasion of our last conversation, he told me that he figured that his work here had put 18,000 tons of "good grade milling" probable ore in sight.

**South Trail Shaft:** This is 65 feet deep and is situated about 1,800 feet easterly from the Manning. Weiser's work in it was done just before he pulled stakes. It encountered the quartz porphyry at about 40 feet in depth. At 60 feet it exposes a narrow seam (4") of shipping grade, mixed sulphide ore; next to it, upwards of 8 feet of disseminated ore assaying 4.2 ozs. silver, 3.6% lead and 1.12% zinc.

Weiser's opinion of this shaft was that, foot for foot of depth, it was of even greater promise than the Manning. In any event, taken together, they speak well for this section of the field.

**Location:** The porphyry area herein described is situated in the north central part of the Tres Hermanas Mountains, Townships 27 and 28 South, Range 9 West, N.M.P.M., Luna County, New Mexico, about 10 miles northwest of the Village of Columbus.

The shipping point for ores from the district is Tomerlin switch, 10 miles west-northwest, on the Hermanas-Deming branch of the El Paso & Southwestern Railroad.

**Water:** A well near the limestone contact will furnish upwards of 100 gallons per minute; ample for all initial exploration and development purposes.

For milling and other purposes, requiring water



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in large volume, a practically unlimited supply is available in the heavy water-bearing sands which underlie the surface at shallow depths some three miles north of the range and the South Trail group of claims.

Treatment: I have given some thought to this angle of the proposition and believe that straight selective flotation, or a preliminary treatment on tables and this followed by flotation, would give the desired results.

From what I have read of the Bradford process of selective flotation, developed and in use on a large scale at Broken Hill, and now being successfully adapted to lead-zinc-iron ores, tailings and slimes in this country, it would appear well adapted to treatment of the Tres Hermanas disseminated ores.

Concluding: My proximity to the Tres Hermanas district, coupled with the general lassitude in mining in this section for upwards of a year, has afforded me a good opportunity to go over the district at leisure and carefully observe its possibilities.

A deposit of disseminated lead-silver and zinc minerals in porphyry is, I know, quite unusual at least. As regards the possibility of a commercial deposit of such kind in the Tres Hermanas, I think it can be accounted for in large part by the crushed and fractured character of the underlying quartz porphyry, a condition probably due to the faulting and fracturing hereinbefore mentioned.

Favorable conditions were thus presented for the passage of circulating waters and other mineralizing agencies, presumably introduced under pressure from below, and a resultant general mineralization of the enclosing rock and enrichment at localities where the structure favored concentration.

Replacement and some phase of metamorphism probably entered into the problem. It cannot, however, by present developments, be determined to what extent mineralization of the quartz porphyry has taken place, or how great the concentration of mineral may be at different localities. All that can be said with certitude at this time is that such deposition and concentration of mineral has taken place to an undetermined extent.

From continued observation of the district, over a period of several months, and basing my ideas in part on the statements of others, men in whom I have confidence and who have actually performed work in the



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porphyry area, I am frankly of the opinion that its possibilities, as demonstrated by present developments over an extensive area, are such as to warrant the expenditure of a reasonable sum of money in systematic exploration, work that would quickly and readily determine the true possibilities of the field as a producer of commercial disseminated lead-silver ore.

For such purpose I know of no better locality than that embraced by the South Trail and Manning groups of claims, the possibilities of which have already been demonstrated, to some extent, by the work accomplished in the Manning and South Trail shafts.

This letter will be followed by another, having particular reference to these properties. It may be that a proposition of the kind will not strike your fancy, or that of your company, but I will hope to the contrary.

Yours faithfully,



NJW/p