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Iron Valley  
Manganese file

Iron Valley Manganese file  
no interest

Winslow, Ariz.  
April 26th, 1940

Mr. G. M. Colvocoresses,  
Phoenix, Ariz.

W.C.

Dear Sir:

If any of your people are interested in a big manganese deposit I have one about sixty miles south-west of Winslow on the Pipe road. I control twenty three claims on it by location and can tie up about thirty more through the owners.

This is a real deposit of high grade manganese that assays from 36% to 56% metallic manganese. Apparently, most of the ore is psilomelane but there is some pyrolusite and hausmannite. It occurs as lenses in the Kaibab lime and also as, what appears to me, a vertical enrichment in a massive chert and brecciated lime. Not enough work has been done to date to determine the extent of the deposition but I have traced the brecciated zone on a north-east strike a distance of about two miles and found manganese outcrop at various points along it. The lenses of ore in the lime are exposed near the brecciated zone contact and down a draw at right angles to it for more than a mile. One party has about sixty tons of 44.6% metallic manganese on his dump now that was removed by two men working with hand steel and a wheelbarrow in nineteen days. However, I believe the brecciated zone will develop the biggest ore bodies, as the whole thing is highly colored with manganese oxide.

If interested write me at P.O. Box 1290, Winslow, Arizona.

Trusting this finds you well, I am,  
Sincerely yours,

A. A. Barr *John*

P.S. - If you wish to come out I am camped about two miles from the Song Valley filling station, which is about 25 miles north of Pipe.

NOTES REGARDING MANGANESE PROPERTY NEAR  
LONG VALLEY, COCONINO COUNTY, ARIZONA

These notes are intended to supplement the accompanying report by Ben W. McCloskey, dated January 20, 1930, and are the result of a personal visit to the said property in September, 1929.

T I T L E

I am advised that title to these claims, which are unpatented, is held by three Trustees who have full power to act for all other interested parties, and I am to receive a letter signed by all of the Trustees ratifying the terms of lease and sale indicated below.

Some of the interested parties have obtained so-called "Cabin Rights" which entitle them to erect buildings on the surface of the claims, but these rights are subject to the mining interests. Only one cabin has so far been erected which could be utilized by parties operating the property and all "Cabin Rights" would be ceded, if desired, to any purchaser of the mining claims.

ORE AND WORKING CONDITIONS

My visit to this property was brief and time did not permit making any detailed measurements or sampling of the ore nor a study of the geology. I can confirm in a general way the statements of Mr. McCloskey, who has spent many months on the ground and seems to have studied conditions thoroughly from the standpoint of a conservative and experienced miner.

I am of the opinion that the main fault, referred to by McCloskey, is really a contact fissure and that the principal ore body will be found along this contact from which smaller veins extend out into the country rock, and I think that the principal development should be confined to the contact fissure and to the branch fissures in its immediate vicinity.

This property has been worked in a very desultory manner and entirely without equipment other than hand steel. Developments have naturally been entirely near the surface and no attempt has been made to systematically open up ore reserves or determine whether or not the ore extends downward. The present owners and previous operators

have been financially unable to carry out such a program and have merely gouged from shallow pits and surface cuts such ore as they could readily mine and ship.

The grade of ore appears very fair as indicated by the analysis of shipments given in McCloskey's report, particularly the second carload, and I am to d that the first was of similar grade, although exact analysis is not available. The seventh, or last carload was taken out by Mexicans in the absence of the Foreman, and practically no sorting was done prior to shipment.

It would appear that the grade of shipping ore could be substantially improved through washing, and water for such purpose could be easily and cheaply made available through damming a small draw which crosses the property and which would serve to impound the water derived from the winter snows and the summer showers, the latter being particularly heavy in July and August.

There are no improvements on the claims, excepting the one cabin mentioned, which is fairly substantial, and some tent houses which were utilized to house the few miners employed.

To develop this property it would first seem advisable to install a small portable gas-driven compressor and hoist and to deepen the shaft on the Velmita Claim. Also surface stripping should be extended at points where the most favorable outcrops occur and trenches and shallow pits could be dug as conditions might indicate. A substantial amount of ore would probably be mined from this development work.

The essential equipment would cost about \$5,000 and I believe that the expenditure of an additional \$5,000 to \$10,000 for labor and supplies would prove or disprove the value of the property and present showings indicate that a fairly sizable ore body might be opened up.

The location of the property is its greatest handicap since working costs must include the truck haulage to the railroad 58 miles distant and over a very indifferent road, the present cost of this hauling being \$7.00 per ton. The road is now being improved

by the Forest Service and within a year this cost should be reduced to \$6.00, or less. The railway freight to Birmingham, Alabama, to which point all shipments have been made, is \$10.80 per ton, and the rate to California from the shipping point, Winslow, is \$7 per ton. Assuming that shipments should continue to Birmingham, the transportation on the present basis costs \$17.80 per short ton, wet, which equals about \$22.00 per long ton of dry ore.

The price paid for this ore has been 60¢ per long ton until when the grade exceeded 45% manganese, or 55¢ per long ton unit on lower grade material. There have been no bonuses or penalties. Therefore, one long ton of 46% ore brings about \$27.60 F.O.B. Birmingham, which, after deducting transportation as above, leaves \$5.60 for mining and profit.

If a substantial body of ore should be developed and washing facilities installed, the shipping grade should be raised to approximately 50% manganese on which basis payment for a long ton would equal \$30 and a reduction in the cost of haulage, plus a slight reduction in the freight rate which can probably be secured, should reduce transportation costs to \$20 per long ton, leaving \$10 to cover mining and washing, which should not exceed \$5, and a profit of \$5 per long ton to the mine operators.

#### TERMS

The terms on which this property is offered are as follows:

The owners will grant, to a responsible company, an option for a sufficiently long period to permit thorough examination and sampling. They would then lease and bond the property for a period of three years upon payment of \$1,000 to take care of certain pressing obligations. While operating under lease, they would expect a royalty of 10% of the net returns (that is the payment for ore less railway freight) and the royalties paid, as well the \$1,000 mentioned above, would apply on the purchase price, in case option to purchase were exercised.

The purchase price of the property would be \$36,000, or 75% interest would be sold for \$27,000. The price might be paid at any time during the term of the lease or upon its expiration.

C O N C L U S I O N

While this property is merely a prospect, it is my opinion that the general conditions indicate that it contains a substantial body of good grade manganese ore which could be mined with a reasonable degree of profit and that the present showing justifies the development work necessary to determine the facts.

Gradual opening up of the country with improvement of roads will tend to cheapen working costs and the continuation of an import duty on foreign manganese ore should protect the present price and obviate the danger of foreign competition. Mining could be carried on all the year round, or might be suspended with advantage during three or four months each winter. A thorough examination of the property could be made in April or May when all of the snow should have melted from the surface of the claims.

(signed) G. M. Colvocoresses

Phoenix, Arizona

1-24-30.

LONG VALLEY (Manganese)  
REPORT ON MANGANESE CLAIMS  
of  
THE MANGANESE ORE COMPANY

(A Common Law Declaration of Trust )

Situated in Coconino County, Arizona, near the Roosevelt Dam to Flagstaff Highway, at a point two miles west of Long Valley, sixty miles S. E. of Flagstaff, and fifty eight miles S. W. of Winslow, the shipping point on the main line of the Santa Fe. R. R.

The group contains five claims: The South Extension, The Marvis, The Velvite, The Zinconia and The Oaks.

TOPOGRAPHY & GEOLOGY:

The topography is that of a high plateau of sediments known as the Grand Canyon section, striking N. W. to S. E. with a low dip to the N. E. terminating in a Geo-Synicline ninty miles north east of Winslow.

The surface is cut by shallow broad valleys and over the area of the claims only varies in elevation about 110 feet. The elevation above sea level is about 7200 feet.

The Kaibab lime stone (Permian) is the topmost sedimentary rock and contains the manganese deposits. The downward sequence is Coconino sandstone, Supai Formation, Red Wall limestone (Carboniferous) and Cambrian quartzite, (this may be absent here) and the Suppai Formation and Red Wall Limestone are likely to be much thinner than at Canyon Creek where a section measured 2420 feet. (Kaibab lime not bedded) At Canyon Creek the Cambrian quartzite beds on crystalline rocks.

A conglomerate varying from ten to forty feet in thickness occurs locally along the eastern side of the claims and for a short distance east and several miles to the N. E. It occupies the time interval of the Shinarump Conglomerate, which is widely bedded over northeastern Arizona, but lithologically is totally different.

This feature has not had careful study and may be an old stream bed. The conglomerate marks roughly the southeast side of what appears to be a main fault striking for a considerable but unknown distance, approximately North 35 degrees East and throughout

the length of The South Extension, Velmita and Zinconia claims. Insufficient data are at hand to estimate the dip of this fault but it is believed to be less than 40 degrees to the S. E. and to be less than forty feet in vertical displacement.

Croppings of manganese ores, along which the three claims mentioned were located, prior to the discovery of the fault, coincide very closely with the strike of the fault in alignment. Though a superficial view of the surface does not indicate it the area west of the fault is a fracture zone and also careful plane table work over the general area is likely to show a broad low dome with the fracture zone along the approximate axis.

The formations are exposed in the deep canyon of West Clear Creek four miles west of the claims to a depth of about nine hundred feet, and show from 500 to 600 feet of Coconino sandstone and about 300 feet of kaibab limestone.

The limestone is interbedded in the upper part by three beds of sandstone of the same character as the Coconino. The beds vary in thickness from one to four feet and at the claims have played an important part in the replacement by manganese ores.

#### MANGANESE ORES:

The ores replace both lime and sandstone in faults or fractures and bedding plains adjacent to fractured areas. Considerable ore has left its original location and occurs as float, generally partially or entirely covered with soil and resting on hard surfaces of residual clay or on the limestone beds. In some cases clay has filled open fractures and lumps and nodules of ore are embedded in the clay. The ores near the main fault are often brecciated, containing fragments of sandstone, lime and chert, (The conglomerate contains chert pebbles) cemented by manganese oxides.

The mineral psilomelane composes the bulk of the ore bodies, pyrolusite occurring only as small seams or in vugs in the lumps of the psilomelane, Car lot returns are higher than hand samples. A fact which may be due to failure to give sufficient consideration to the pyrolusite content of large lumps of ore.

Ore occurs as far as eighteen hundred feet west of the main fault or fracture zone, but only where minor faults or cross faults occur. The Marvis claim is located at right angles to the three N.E. and S.W. strike claims on an alignment of ore crops. Evidence of minor faulting is present at the ore crops.

The shaft on the Velmita claim was sunk 28 feet on an open fracture filled with ground up manganese ore and decomposed sandstone, lime and lumps of pure ore from the size of peas to several hundred pounds in weight, The mass varies from three to nine feet in width encased by an irregular wall of horizontal lime beds on the east side of the shaft. The west side of the shaft still in the filling material except near the bottom of the shaft where holes dug through the mass encountered honey combed lime, the same character of lime is found in an open out 150 feet S. W. at the foot of the hill. At a depth of about 15 feet on the north end of the shaft the ore is cut off by a Vertical smooth open slip in the lime, striking about N. W. to S. E. The mass continues through the south end of the shaft to an unknown distance. At a depth of about twenty feet a solid mass of ore was encountered in the west side of the shaft. (Car No. 6 was mined from this body and an unknown quantity was removed several years ago.)

This ore bottomed on decomposed sandstone and lime but continues on a dip of approximately 20 degrees to the S. E as shown in a ten foot drift following the dip. It is pure ore, disintegrated around masses which appear to be in place and the grade lowered to some extent by water action depositing mud and clay with the fine and in the interstices of the masses and lumps.

On the surface other bodies of ore occur to the N.E. of the shaft in alignment approximating the main fault in strike, but is not believed to be the main fault referred to. The main fault quite probably swerves to the east opposite the shaft, in crossing Iron Mine Draw, and there is considerable surface evidence that the two converge at a point about 1200 feet N.E. However the ore follows the consistent strike, while what is provisionally termed the main fault is apparently barren and further work on the fault system is

regarded as important.

SHIPMENTS:

Car No. 1 was sent to Los Agneles to be used in ornamental work and an analysis was not obtained. The Mn. content is believed to have been above the average of the other cars which were all shipped to Bessemer Furnaces, Alabama. Complete analysis on car No. 7 are not immediately available but content in metallic iron, alumina, and phosphorus were approximately the same as that of other cars.

Car. No.	Gross Dry Tons	Met. Iron	Silica	Alum <sup>a</sup> a	Mn.	Phos	Water
1	32.						
2	27.43	2.76	6.59	2.30	48.32	.076	2.
3	32.22	2.72	8.83	2.59	46.83	.068	3.25
4	26.97	3.77	7.23	2.38	46.34	.072	2.87
5	26.75	2.88	9.26	1.01	46.44	.068	2.57
6	23.31	3.60	8.70	2.37	45.71	.066	3.47
7	43.66		13.57		44.74		2.

A further study of the fault system and exploration at <sup>at</sup> depth/favorable locations are recommended.

Respectfully submitted,  
(signed) Ben W. McCleskey  
(Jan 20th, 1930.)

Note: The signer is a party at interest in the property.

Long Valley (Manganese)

3 copies

copied

REPORT ON MANGANESE CLAIMS  
of  
THE MANGANESE ORE COMPANY  
( A Common Law Declaration of Trust )

Situated in Coconino County, Arizona, near the Roosevelt Dam to Flagstaff Highway, at a point two miles west of Long Valley, sixty miles S.E. of Flagstaff, and fifty eight miles S.W. of Winslow, the shipping point on the main line of the Santa Fe. R.R.

The group contains five claims: The South Extension, The Marvis, The Velmita, The Zinconia and The Oaks.

Topography & Geology

The topography is that of a high plateau of sediments known as the Grand Canyon section, striking N.W. to S.E. with a low dip to the N.E. terminating in a Geo-Synicline <sup>east</sup> ninety miles north of Winslow.

The surface is cut by shallow broad valleys and over the area of the claims only varies in elevation about 110 feet. The elevation above sea level is about 7200 feet.

The Kaibab lime stone ( Permian ) is the topmost sedimentary rock and contains the manganese deposits, The downward sequence is Coconino sandstone, Supai Formation, Red Wall limestone ( Carboniferous ) and Cambrian quartzite, ( This may be absent here ) and the Supai Formation and Red Wall Limestone are likely to be much thinner than at Canyon Creek where ~~is~~ a section measured 2420 feet. ( Kaibab lime not bedded ) At Canyon Creek the Cambrian quartzite beds on crystalline rocks.

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thickness occurs locally along the eastern side of the claims and for a short distance east and several miles to the N.E. It occupies the time interval of the Shinarump Conglomerate, which is widely bedded over north-eastern Arizona, but lithologically is totally different.

This feature has not had careful study and may be an old streambed. The conglomerate marks roughly the southeast side of what appears to be a main fault striking for a considerable but unknown distance, approximately North 35 degrees East. and throughout the length of The South Extension, Velmita and Zinconia claims. Insufficient data are at hand to estimate the dip of this fault but it is believed to be less than 40 degrees to the S.E. and to be less than forty feet in vertical displacement.

Cropings of manganese ores, along which the three claims mentioned were located, prior to the discovery of the fault, co-incide very closely with the strike of the fault, in alignment. Though a superficial view of the surface does not indicate it the area west of the fault is a fracture zone and also careful plane table work over the general area is likely to show a broad low dome with the fracture zone along the approximate axis.

The formations are exposed <sup>in</sup> the deep canyon of West Clear Creek four miles west of the claims to a depth of about nine hundred feet, and show from 500 to 600 feet of Coconino sandstone and about 300 feet of kaibab limestone.

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Respectfully submitted

*Ben W. McCleskey Jan 20th 1930*

Note. The signer is a party at interest in the property.

LONG VALLEY (Manganese)

(Note by G. M. Colvocoresses)

October 1937.

The present price of manganese ore precludes the possibility of operating these claims.

If better conditions should prevail at some future time, I feel that they should merit attention since transportation conditions to the railway have been much improved during the past eight years.

Worked in 40 or thousands of quarters  
failed for one reason or another. Think that  
only a few surface prospects have found & that  
these here soon exhausted. Chances for future  
seen from

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## CONCLUSION

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*S. H. Colman*

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The surface is cut by shallow broad valleys and over the area of the claims only varies in elevation about 110 feet. The elevation above sea level is about 7200 feet.

The Kaibab lime stone (Permian) is the topmost sedimentary rock and contains the manganese deposits. The downward sequence is Coconino sandstone, Supai Formation, Red Wall limestone (Carboniferous) and Cambrian quartzite, (this may be absent here) and the Suppai Formation and Red Wall Limestone are likely to be much thinner than at Canyon Creek where a section measured 2420 feet. (Kaibab lime not bedded) At Canyon Creek the Cambrian quartzite beds on crystalline rocks.

A conglomerate varying from ten to forty feet in thickness occurs locally along the eastern side of the claims and for a short distance east and several miles to the N. E. It occupies the time interval of the Shinarump Conglomerate, which is widely bedded over northeastern Arizona, but lithologically is totally different.

This feature has not had careful study and may be an old stream bed. The conglomerate marks roughly the southeast side of what appears to be a main fault striking for a considerable but unknown distance, approximately North 35 degrees East and throughout

the length of The South Extension, Velmita and Zinconia claims. Insufficient data are at hand to estimate the dip of this fault but it is believed to be less than 40 degrees to the S. E. and to be less than forty feet in vertical displacement.

Croppings of manganese ores, along which the three claims mentioned were located, prior to the discovery of the fault, coincide very closely with the strike of the fault in alignment. Though a superficial view of the surface does not indicate it the area west of the fault is a fracture zone and also careful plane table work over the general area is likely to show a broad low dome with the fracture zone along the approximate axis.

The formations are exposed in the deep canyon of West Clear Creek four miles west of the claims to a depth of about nine hundred feet, and show from 500 to 600 feet of Coconino sandstone and about 300 feet of kaibab limestone.

The limestone is interbedded in the upper part by three beds of sandstone of the same character as the Coconino. The beds vary in thickness from one to four feet and at the claims have played an important part in the replacement by manganese ores.

#### MANGANESE ORES:

The ores replace both lime and sandstone in faults or fractures and bedding planes adjacent to fractured areas. Considerable ore has left its original location and occurs as float, generally partially or entirely covered with soil and resting on hard surfaces of residual clay or on the limestone beds. In some cases clay has filled open fractures and lumps and nodules of ore are embedded in the clay. The ores near the main fault are often brecciated, containing fragments of sandstone, lime and chert, (The conglomerate contains chert pebbles) cemented by manganese oxides.

The mineral psilomelane composes the bulk of the ore bodies, pyrolusite occurring only as small seams or in vugs in the lumps of the psilomelane, Car lot returns are higher than hand samples. A fact which may be due to failure to give sufficient consideration to the pyrolusite content of large lumps of ore.

Ore occurs as far as eighteen hundred feet west of the main fault or fracture zone, but only where minor faults or cross faults occur. The Marvis claim is located at right angles to the three N.E. and S.W. strike claims on an alinement of ore crops. Evidence of minor faulting is present at the ore crops.

The shaft on the Velmita claim was sunk 28 feet on an open fracture filled with ground up manganese ore and decomposed sandstone, lime and lumps of pure ore from the size of peas to several hundred pounds in weight, The mass varies from three to nine feet in width encased by an irregular wall of horizontal lime beds on the east side of the shaft. The west side of the shaft still in the filling material except near the bottom of the shaft where holes dug through the mass encountered honey combed lime, the same character of lime is found in an open cut 150 feet S. W. at the foot of the hill. At a depth of about 15 feet on the north end of the shaft the ore is cut off by a Vertical smooth open slip in the lime, striking about N. W. to S. E. The mass continues through the south end of the shaft to an unknown distance. At a depth of about twenty feet a solid mass of ore was encountered in the west side of the shaft. (Car No. 6 was mined from this body and an unknown quantity was removed several years ago.)

This ore bottomed on decomposed sandstone and lime but continues on a dip of approximately 20 degrees to the S. E as shown in a ten foot drift following the dip. It is pure ore, disintegrated around masses which appear to be in place and the grade lowered to some extent by water action depositing mud and clay with the fine and in the interstices of the masses and lumps.

On the surface other bodies of ore occur to the N.E. of the shaft in alignment approximating the main fault in strike, but is not believed to be the main fault referred to. The main fault quite probably swerves to the east opposite the shaft, in crossing Iron Mine Draw, and there is considerable surface evidence that the two converge at a point about 1200 feet N.E. However the ore follows the consistent strike, while what is provisionally termed the main fault is apparently barren and further work on the fault system is

regarded as important.

SHIPMENTS:

Car No. 1 was sent to Los Agneles to be used in ornamental work and an analysis was not obtained, The Mn. content is believed to have been above the average of the other cars which were all shipped to Bessemer Furnaces, Alabama. Complete analysis on car No. 7 are not immediately available but content in metallic iron, alumina, and phosphorus were approximately the same as that of other cars.

Car. No.	Gross Dry Tons	Met. Iron	Silica	Alum'a	Mn.	Phos	Water
1	32.						
2	27.43	2.76	6.59	2.30	48.32	.076	2.
3	32.22	2.72	8.83	2.59	46.83	.068	3.25
4	26.97	3.77	7.23	2.38	46.34	.072	2.87
5	26.75	2.88	9.26	1.01	46.44	.068	2.57
6	23.31	3.60	8.70	2.37	45.71	.066	3.47
7	43.66		13.57		44.74		2.

A further study of the fault system and exploration at <sup>at</sup> depth/favorable locations are recommended.

Respectfully submitted,  
(signed) Ben W. McCleskey  
(Jan 20th, 1930.)

Note: The signer is a party at interest in the property.

WALTON BONE