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REPORT ON THE APEX
OF THE
TRIANGLE VEIN
OF THE
MONTANA TONOPAH MINING COMPANY
AS IT CONCERNS
THE TONOPAH MINING COMPANY OF NEVADA
BY
J. A. BURGESS, CHIEF ENGINEER
THE TONOPAH MINING COMPANY OF NEVADA.

see maps in map file

Tonopah, Nevada, October 7, 1909.

Mr. W. H. Blackburn, Superintendent,
The Tonopah Mining Company of Nevada,
Tonopah, Nevada.

Dear Sir:

Acting under your instructions I have made an examination of the "Triangle" vein of the Montana-Tonopah Mining Company, paying particular attention to its apex; and I submit the following report for your consideration.

Mr. E. D. North, Engineer for the Montana Company, conducted me yesterday through the workings on the Triangle vein, and showed me their underground map. I attach to this report a copy of the part of the map showing the vein in question, and three sections showing the form of the apex. The places through which the sections are made are shown by red lettered lines on the map.

TRIANGLE VEIN.

The Triangle vein is situated in the southwestern part of the Montana Tonopah Company's ground. It is near the north side-line of the Mizpah claim of the Tonopah Mining Company, and in its lower and more westerly parts, extends into the Mizpah claim. The vein strikes N. 60° E., and dips at variable angles to the south. In some of its upper parts, the dip is as steep as 70° , but is flatter in the lower levels, about 45° in places.

The vein has been explored on the 390 ft., 462 ft., and 515 ft. levels of the Montana workings. On the 390 ft. level it gets small and poor towards the west, and does not extend into the Tonopah Mining Company ground. On the 462 ft. level, the vein crosses into the Mizpah claim at 380 feet east of Mizpah Corner No. 1, and on the 515 foot level, it crosses into the Mizpah claim at 440 feet east of Corner No. 1.

The vein averages three or four feet in width, but is not at all uniform. In places it is only a stringer, in other places it is a good, solid vein, of average width and, in some places, it is composed of several veins separated by "horses". The value of the ore ranges

from \$3 or \$4, to \$20 per ton, although locally it may run as high as \$50. I should judge that \$15 per ton would represent its average value. The ore is oxidized, unlike the usual ore from the Montana Mine. The vein somewhat resembles the Burro veins in appearance.

APEX OF THE TRIANGLE VEIN.

The Montana workings have not yet been extended across the line into the Mizpah claim, but the Montana people assert their right to do so by reason of their owning the apex of the vein, and they are now sinking a winze on the vein from their 390 foot level, which will cross the line in a few days.

There seems to be no reason to question the Montana Company's ownership of the apex. The upper edge of the vein (the apex) is where it terminates against a large fault. The country rock above the fault is a dark blue altered andesite (probably later andesite), while that in which the vein lies is yellowish, oxidized, "earlier andesite". The fault contains much gouge and slickensides. The vein has not been found anywhere above the fault. The situation is illustrated in the accompanying sections, which are based on the map and my observations.

Section A - B shows the vein as exposed in a raise that was driven to the fault.

Section C - D shows this vein as exposed in the winze before mentioned.

Section E - F shows the vein as exposed in a stope. The apex in this place is not far above the 390 foot level. A raise was run up from this stope along the fault for over 100 feet showing occasional small bunches of quartz, but nothing that could be called the continuation of a vein. At 100 feet above the 390 foot level, the raise was turned up into the rock above the fault, which proved to be barren "blue" andesite. It is noteworthy that this fault, (called the "106" fault) is the downward continuation of the fault that forms the hanging wall of the vein in the Mizpah Drift 231; but as it does not contain a vein at this depth, and is not the continuation of the fissure containing the Triangle vein, it cannot be claimed that the Triangle vein is the con-

tinuation of the vein in Mizpah drift 231.

The apex of the Triangle vein, so far as now exposed, nowhere lies in Tonopah Mining Company ground, and our company seems to have no rights on this vein. The Montana Company has acted fairly in the matter. They have developed the apex of the vein for a considerable distance by stopes above the 390 foot level, and will be strictly within their rights in following the vein downward on its dip into the Mizpah claim. However, it is not probable that the Triangle vein will product much ore in the Mizpah Claim. Our workings on the Mizpah 600 foot level are under the vein, and show no ore worth working at that place.

Respectfully submitted,

Chief Engineer,
The Tonopah Mining Company of Nevada.

THE MONTANA-TONOPAH MINES CO.

ARTHUR H. LAWRY, MINE SUPT.
B. A. BOSQUI, - - - MILL SUPT.

OFFICERS:

CHAS. E. KNOX - PRESIDENT & GEN'L MGR
HENRY D. MOORE - - - VICE-PRESIDENT
THOS. J. LYNCH. - 2ND VICE PRESIDENT
W. B. ALEXANDER SEC'Y AND TREAS.
M. E. MCCRATE - ASST. SEC'Y AND TREAS.

MINE AND OFFICE AT TONOPAH, NEVADA

THIS COMPANY ALSO CONTROLS AND OPERATES
THE COMMON-WEALTH MINING AND MILLING CO.
PEARCE, ARIZONA

DIRECTORS:

HENRY D. MOORE W. B. ALEXANDER
SAMUEL L. KENT THOS. J. LYNCH
DUDLEY BALDWIN S. A. MENDENHALL
E. B. WAPLES J. M. WYNN
CHAS. E. KNOX

Tonopah, Nevada. March 28, 1913.

Mr. J. E. Spurr,

Vice-President, Tonopah Mining Company of Nevada,

Bullitt Building,

Philadelphia, Pa.

Dear Mr. Spurr:-

TONOPAH MINING CO. OF NEVADA		
REC'D APR -2 1913		
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I have yours of the 21st, and am pleased to advise you that the Montana Company is perfectly willing for you to give to Prof. Heinrich Ries any of the geological maps of the Montana property which would be of benefit to him, and that you may feel like giving to him. Also perfectly willing for him to put the name of the mine on the sections. In fact, we will be rather proud to have it so.

I might add that we are now, and will be at any time, perfectly willing for you to allow your friends to use any Montana data, which you are willing to furnish from the Tonopah property.

I am disappointed that you have not visited Tonopah as you thought possibly you would this month. I return to California Saturday, and will not be in Tonopah again for at least two weeks.

Yours very truly,

Chas E Knox

Philadelphia, March 21, 1913.

Mr. Chas. E. Knox, President,
Montana-Tenopah Mining Co.,
Tonopah, Nevada.

Dear Mr. Knox:

Prof. Heinrich Ries, head of the geological department of Cornell University is trying to secure lantern-slides showing complicated geological conditions in prominent mines and mining camps and is desirous of making some slides showing Tonopah relations. He has already seen the long geological section in the published report of the Montana Tonopah Mining Co., giving my report on the property. I have shown him the other two sections of the Montana Tonopah and he is desirous of obtaining these too. These sections will of course only be used for lantern slides in lectures to students, and the name of the mine can be omitted if so desired, and the information otherwise treated as entirely confidential. I have known Professor Ries personally for many years, and he will beyond question be most careful in his use of this material.

Please advise me if you are willing to let Professor Ries have these sections, in which case I will furnish him with copies from the tracings which I have. Also please advise whether or not you wish the name of the mine omitted from the sections or the lantern slides.

Yours very truly, ORIGINAL SIGNED
J. E. SPURR

JES-C cc HR

Vice President