

REPORT
ON
SARATOGA MINE

BY
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REPORT
SARATOGA MINE
Gilpin County,
Colorado.

Obedient to request for a brief examination of the workings of the Saratoga Mine, the same has been concluded and the results are herein presented.

The examination or actual work upon the property having involved a period of but three days, and this property embracing at least five miles of underground workings, and having reached a total depth of 1300 ft., it can readily be understood that the examination upon which this report is based could be little other than superficial.

The mine's workings down to the 1000 foot level have been projected during a period of many years past, and the ground opened to that depth has been quite thoroughly stoped. The nature of the ground throughout this mine is what is termed soft, and wherein easy and inexpensive in development and ore extraction, does not possess the self sustaining properties of harder, more dense, or less decomposed formation; consequently requires a greater degree of support. The vein is very wet, that is it forms a water course which though a cessation for a time of operation in the earlier and older workings which were opened and operated by shaft down to the 1000 foot level, much water naturally accumulated in these excavations which added further to the ground's natural tendency to cave.

The vein may be stated has a general course of but 10 or 15 degrees north of west and south of east. During the greater portion of its length so far as opened, it is nearly vertical having a departure at the point where the main shaft was sunk from surface of less than 30 ft. in a depth of 1000 ft. This dip is northerly. Throughout the vein so far as observable, there is a greater inclination toward density or hardness on the part of the hanging wall than that of the foot wall. The vein shows a width at points possible to observe it, ranging from two inches to more than seven feet between walls, while it is stated that many wider portions have occurred in ground

now extracted and impossible to observe.

The greater portion of these old workings, that is, the workings which exist above the bottom of main shaft or above the 1000 ft. level are inaccessible through caving to a very large extent from appearances and also from evidence obtainable. From the sheet of the mine's workings it is apparent that stoping has been projected to an average distance of about 800 ft. on either side of the shaft, or a total average distance along each level of some 1600 ft. This stoping has been quite general though some considerable areas of unopened ground yet exist between the extremities of 800 ft. on either side of shaft mentioned and between the tenth level and surface; while a very great field within the limits of the Saratoga properties and lying west of the westerly extremities of old workings, yet remains wholly unopened. The tenth level though less than one half the length of those lying above it, yet remains in fairly good operative condition. The only operations throughout old workings, or those connected with shaft, are at present being conducted upon this level. This level is being operated by leasers in the extension of it westerly, and from this locality a considerable ore is at present being produced. The last 50 feet or thereabouts of this level extended westerly shows a decided pinch or a narrowing of the vein. At one point it has a width of but 2 inches but said to be of high grade. Fifteen feet distant, and in the breast at the time of this examination this ore streak has widened to an average width of 4 inches from roof to floor. At this point a general sampling was made giving a result of 0.30 ounces gold, and 0.10 ounces silver. This, it may be stated, was the only sampling done during this brief and superficial examination.

The main shaft of these old workings extending to the 10th or 1000 foot level, is in very good condition considering its age and the ground it encounters. It is two compartment though of somewhat small dimensions for so deep a shaft. It is vertical, and at its lowest extremity is 30 ft. distant from the vein. It is fairly well equipped, especially in the matter of hoist.

The Newhouse Tunnel extending from Idaho Springs in Clear Creek County to Nevadaville in Gilpin County passes through the western extremity of the Saratoga properties; and at a point little more than 2-1/2 miles distant from its portal intersects the Saratoga vein at a depth of 300 feet below the bottom of old workings or the 10th level, and 1300 feet below the collar of main shaft of old workings, and at a point about 2300 feet westerly therefrom. From this point of intersection of the Newhouse Tunnel with the Saratoga vein, a level known as the 13th or tunnel level has been extended easterly on said vein a distance of about 2800 feet, the point of commencement of this level being the most westerly workings on the Saratoga vein. Through the agency of this level and an upraise therefrom connecting with the 9th level of old workings, and two upraises therefrom connecting with the 10th level of old workings, these workings have been drained and are now and will henceforth be kept practically free from water, except sections where caves may have occurred in these old levels preventing the drainage of water to a connection with the upraises mentioned. The character of the formation embracing the vein at this level differs little from that in the upper workings; possibly owing to greater depth and naturally greater density, this level may prove less troublesome in maintenance than some of those nearer the surface. The discharge of water through this level and to the Newhouse Tunnel being that now of practically the entire mine, is somewhat copious though not troublesome aside from the wet and muddy condition created, together with that of the impurity of the discharge and its destructive effect upon nails, pipes, rails, tools, and all other equipment of iron and steel.

Aside from the extension of the level itself, the present breast of which is now at a point but 250 or 300 feet distant from the vertical line drawn through the easterly extremity of old workings above. In other words but this distance remains to reach a point easterly equal to that of the old workings.

Aside from the three upraises mentioned connecting with workings above, this 13th level commencing at the Newhouse Tunnel has

the following additional workings: at a point near the level's commencement is a small upraise and stope some 25 or 30 ft. in height in bad condition for examination and very wet. This is known as No. 1. At about 400 ft. is another known as No. 2 raised to a height of about 50 ft. No work is in progress at the time in either No. 1 or 2, and no provisions for their entry. At about 1000 ft. occurs a small stope known as No. 3 and closely connected with No. 4, 5 & 6; in fact 5 & 6 are now one stope and has reached to a height of 125 ft. No. 3, 4, 5 & 6 mentioned are in practically dry ground, totally different in this respect from any other workings on this level. At about 1500 ft. occurs an upraise 400 ft. in height reaching through and connecting with the 9th level of old workings, but impossible of passage between the levels mentioned. A short distance easterly from this upraise occurs another of limited height, and at about 1900 ft. is another known as No. 1 extending to the connection with level No. 10 a height of 300 ft. This also is impossible of passage through its entire length. At about 2300 ft. is upraise No. 2 reaching to level No. 10, and also closed for passage. Closely adjoining this on the east is an old stope now closed having a length of about 200 ft. and reaching to a height of about 150 ft. At about 2800 ft. the present breast is reached, and ^{the} level for a distance of about 400 ft. back of this having lost the vein and being run in the hanging wall, a cross cut to the north was made at a point 100 ft. back of breast encountering nothing but the country rock, when at 70 ft. back of breast another cross cut was extended to the south into foot wall a distance of 30 ft. encountering the vein lost. From this point to the breast, the drift follows the vein. It also backs up on the vein or extends westerly a distance of 25 ft. This is without question the Saratoga vein lost at a point about 400 ft. back of breast as mentioned, and not a parallel vein with same. Between the cross cuts mentioned as having been extended north and south respectively near end of 13th level, there is a stope recently started and now being operated. This stope commences at a point just east of south cross cut and extends to a point a short distance west of north cross cut. This comprises the

total openings made in the 13th level, there being no winzes sunk below it.

Work at the time of this examination was being conducted in the following places: In stopes 3, 4, 5 & 6, particularly in 5 & 6, which is now one stope and has reached to a height of 125 ft., the vein in east end has a width of 5 ft. embracing one foot of solid iron, the balance mill dirt. Going west the roof shows somewhat narrower vein, and somewhat less streak in width of iron, but taken as a whole makes about the best appearance of any of the openings.

No. 4 which has reached a height of about 25 ft. presents a remarkably fine structured vein of about 2 ft. in width, its west breast having a width of three ft. Its east breast narrows up to some extent. Upon the whole this is not far removed in the appearance it presents from No. 5 & 6, being remarkably fine.

At 100 ft. in No. 1 upraise that extends from the 13th to the 10th level, a drift has been started west and extended to a distance of 12 ft. but is now blocked and closed, and impossible of being entered. Easterly the drift has reached a distance of 35 ft. and the breast has 2 ft. of mineralized matter that is said to be good mill dirt.

In the stope extending over the two cross cuts near the breast of 13th level, there is presented a fine appearing occurrence of sulphides nearly the entire length of stope.

The breast of No. 13 level shows a 7 foot width of vein between walls, and wherein little heavy iron is presented, the whole mass seems to be well mineralized, and is said to be good milling material.

The foregoing are the important presentations in the openings above the 13th level and where work is at present progressing.

In the 9th level of old workings westerly from shaft, and directly over stopes No. 3, 4, 5, & 6 above 13th level occurs a stope showing on the map of mine's workings to have a length of from 150 to 200 ft. at least, but reaching only to a limited height, probably not more than 25 or 30 ft. above the level. This stope it is claimed was

but just started under a former management when the mine was closed, and is said to have been producing the best average grade ore of any stope in the old workings. This being true, the stopes 3, 4, 5 & 6 presenting the appearance they do, would indicate the possibility of each being in an individual ore shoot indicated as reaching at this point from the 13th to the 9th level a distance of 400 ft. in height and several hundred feet in length. An up-raise from the 13th level at this point would appear to be one of the best points for development presented.

Continued operation should be engaged in in the raising of the stope over the cross cuts referred to near the breast, while the breast itself should be pushed forward to a point at least vertically below the easterly extremity of old workings, and as much further as the values encountered warrant.

In the extended block of ground above 13th level and between upraises No. 1 & 2, there should be careful investigation as to the advisability of opening this ground. While all that territory westerly from the upraise extending from the 13th to the 9th level is practically virgin ground and unopened territory to the surface a height of 1300 ft. with the exception of the small openings 1, 2, 3, 4, 5 & 6. Here is presented a large field for careful inquiry. The levels extended from main shaft of old workings toward and into this great field for a short distance, it is true, show little stoping, while most of them are difficult of access to their western extremities whereby to determine the character of the ground so far as penetrated.

In conclusion it may be said that so far as operations are at present being pursued, they are so far as determinable from the superficial examination engaged in, at as promising points as are presented. Only a systematic and general investigation and sampling of the exposures of unopened blocks of ground could determine fully

and accurately the occurrence of presentations of a material of superior grade.

Very respectfully,

A. M. Allen & Co.

Lafayette
Lima Colo
Nov. 20th 1911

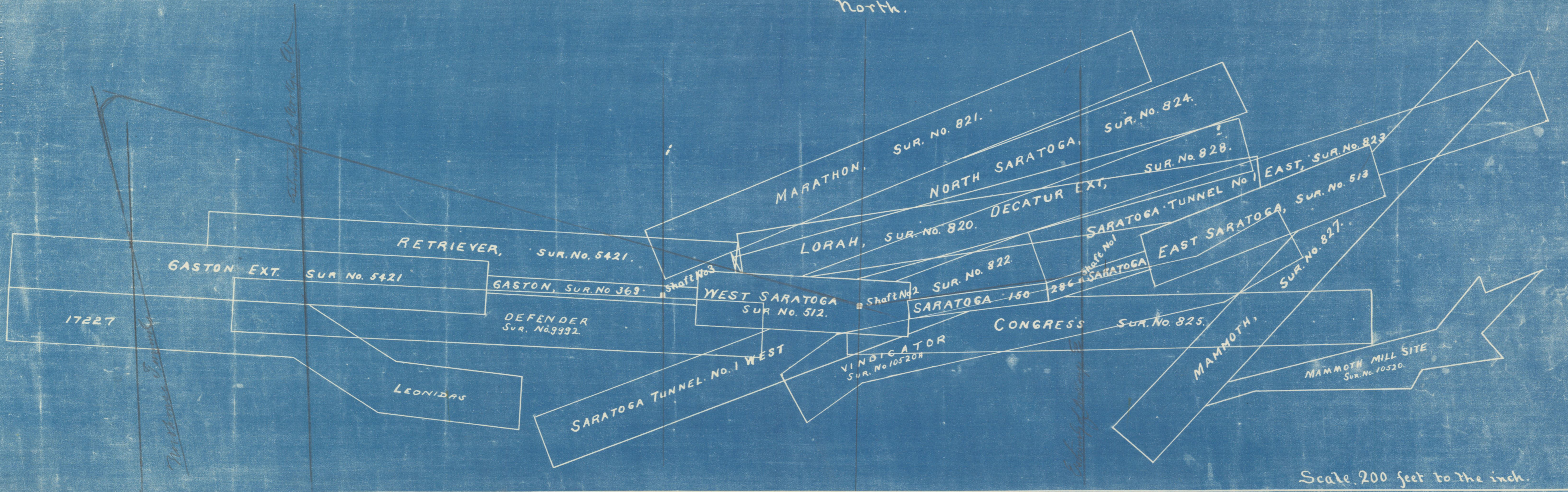
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North.

Admiralty of Bridge Co.

Northway Tunnel

Entrance of Mammoth



Scale 200 feet to the inch.