NMBM Bulletin 8

In contrast to the Magdalena Mountains, the main part of the range is remarkably free from dikes. At the southern end of the range, however, where the lower flows are exposed, dikes are abundant. They range in character from rhyolite to basalt and other basic dikes, and they strike and dip in different directions. Along Alamosa Creek a surprising view can be obtained of basaltic bodies containing xenoliths of rhyolite and trapped by overlying flows of rhyolite.

ORE DEPOSITS

Gold is the chief metal in the ore deposits of the San Mateo Mountains. In the Rosedale district, the most important producer in this area, the ore mined was valuable only for its gold content. In the San Jose district the ores contain silver in addition to the gold. A lead deposit occurs south of the old fort of Ojo Caliente in the southern part of the range, but possibly this ore deposition was related to the mineralization of the Fairview-Chloride district, a short distance to the south.

ROSEDALE DISTRICT

ROSEDALE VEIN

Location.—The abandoned town of Rosedale lies about a mile within the edge of the hills on the northeastern slope of the San Mateo Mountains. It is about 25 miles slightly west of south from Magdalena and about 30 miles a little north of west from San Marcial. The roads from either of these towns are passable without any great difficulty.

History and Production.—Gold was discovered in the San Mateo Mountains in 1882.[1] A rush to the district followed the discovery, but development work was handicapped by frequent incursions of the Apache Indians under Geronimo.

The Rosedale mine[2] has the reputed distinction of having paid dividends for about 15 years simply from ore extracted during development. The Rosedale Mining Co. was formed about 1886. The property was acquired by the E. H. Martin Co. in 1898 and was operated continuously until 1911, when the mine was shut down. Practically no stoping was done during this period. It is said that the shutdown was due to dissension among the Eastern backers rather than to any difficulty at the mine. The ore was treated by amalgamation and cyanidation in a 10-stamp mill. According to Gordon[3] about 450 tons of ore was produced monthly.

The property was sold in 1913 and was worked by the new owners until 1916 when a fire which destroyed the mill and spread to the mine caused a second shut-down which has

[1]Gordon, C. H., op. cit. (Prof. Paper 68), pp. 259-260.
[2]The writer is indebted to J. H. Robb of San Marcial, N. Mex., for much information concerning the Rosedale mine.

NM Mine File No.5643

continued to the present time. Mining was confined mainly stoping during this second period of operation. The total p duction of gold probably amounted to several hundred th sand dollars. It was reported in 1930 that the mine had ag been sold.

Workings.—Figure 12 shows the entire workings of t Rosedale mine except the minor crosscuts. The shaft is 7 feet deep, and approximately one mile of workings extend fr it. The caved part of the workings is not shown.

Geology.—It was impossible to enter the shaft, and her most of the following statements are based on observatio made at the surface and in the adit.

The ore occurs in a well-marked brecciated and shear zone in rhyolite porphyry. The strike is N. 20° W. and t dip is 75°-90° SW. The vein is in a brecciated band along t upper side of the shear zone and is 3 to 5 feet wide. The sh zone extends for 25 to 30 feet into a footwall of white rhyol porphyry. The hanging wall is pale reddish-brown rhyo porphyry, and breccia fragments of this rock are abundant the vein.

The brecciated and sheared rhyolite has been partly mented by banded bluish-white quartz. This has also b fractured, and the entire mass has been recemented with gl vein quartz. The walls have been silicified, and the outc stands out clearly.

The vein carries free-milling gold. According to Gord numerous assays are said to have given an average value $10 a ton in gold. No silver is present. There is a small qu tity of limonite throughout, and much manganese dioxide curs near the portal of the adit in stringers and as films on fracture surfaces. The manganese, which is said to be asso ated with the higher grades of ore,[2] becomes decidedly less distance is attained in the adit. Sulphides appear below wa level which is at a depth of 726 feet[3]. Some of the quartz the oxidized ore above water level contains cavities forme occupied by other minerals.

Figure 12 shows the two ore shoots that have been locat These shoots apparently joi with depth. The distribution the manganese in the adit corresponds with the length of shoot on that level.

Structural Relations.—An interesting feature at the Ro dale tunnel is the fact that the vein becomes tighter as it comes steeper, and accompanying this change the amount manganese present diminishes. The change in the amount manganese may be referred in part to the depth of oxidati

[1]Idem.
[2]Idem, and local information.
[3]Idem.

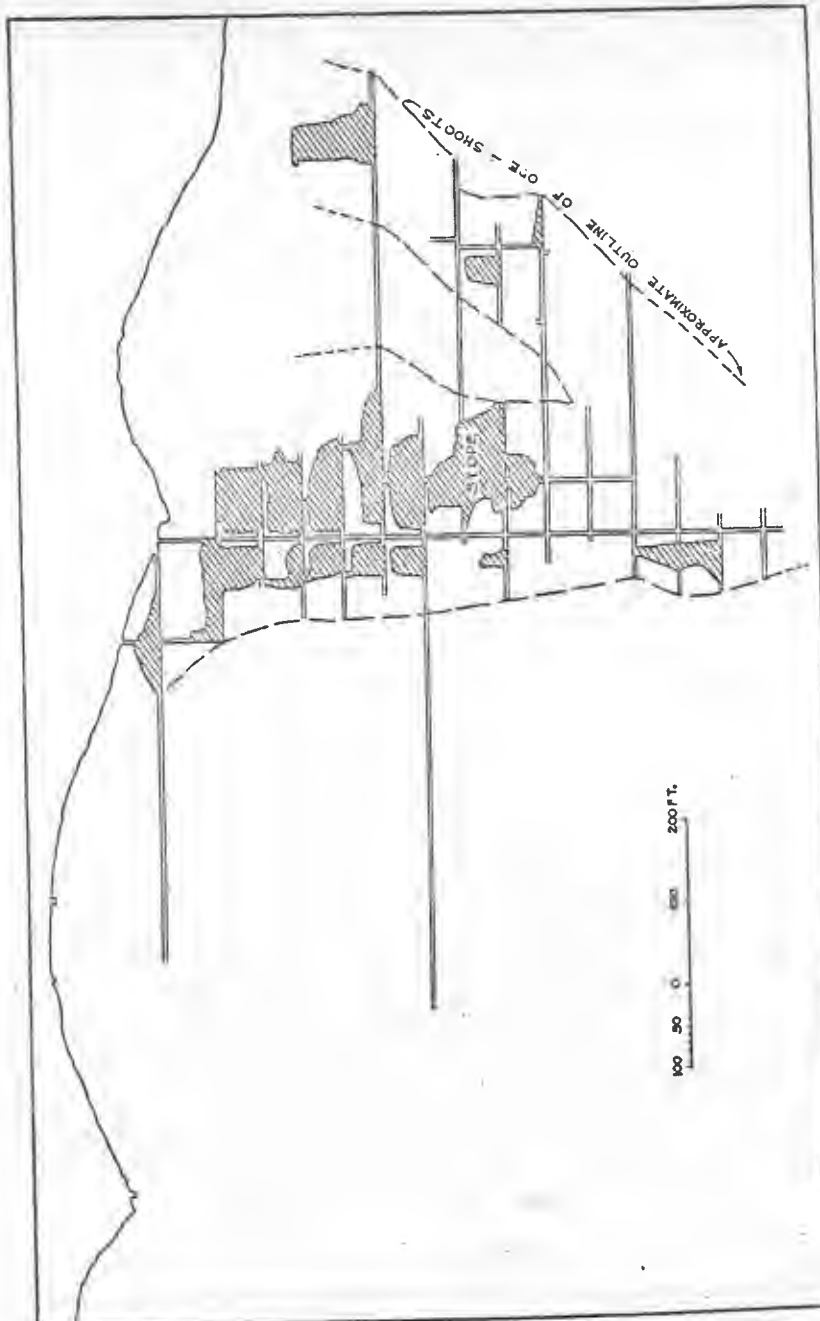

Figure 12.—[illegible] San Mateo Mountains, vertical projection. Looking N. 70° E.

but it is significant that this change accompanies a mark change in both the physical character and attitude of the vei It is probable that this circumstance indicates that the locati of the ore shoot was controlled by the warp that is indicat by the change in dip along the fault surface. Similar war may have caused the localization of other shoots.

The vein is traceable for some distance to the north, ar 7 claims are located upon it. To the south, however, it appea only in the arroyos and the lower ridges. The rhyolite in th few higher ridges shows more evidence of flowage than th in the vein walls and may be a different flow. Vegetation an talus make it difficult to find any possible contact without co siderable difficulty, but it appears that the vein has been co ered by a later flow. If this is true it is an important featur since there may be a number of workable veins in the distri which do not outcrop. The suggestion is supported by an o currence in Alamosa Canyon where irregular intrusive masse of basalt in rhyolite are capped by other rhyolite flows, which though older than the basalt itself, are later than the forma tion of the fractures up which the basalt came and thus pre vented it from reaching the surface.

Robb Prospect.—The Robb prospect is on the claim ha adjoins the Rosedale mine on the south. The vein at this plac is 10 feet wide. Mr. Robb reports ore valued at $12 a ton at th bottom of a 20-foot winze. Fine-grained volcanic breccia whic carries considerable manganese is visible in the bottom of thi winze. The rhyolite at this prospect and especially in th ridges between it and Rosedale shows some flowage feature and contains feldspar phenocrysts in addition to the quartz.

LANE PROSPECT

The Lane prospect is about 2 miles north of Rosedale i Whitecap Canyon not far east of Whitecap Spring. The vei is well defined and strikes northwest. It is very similar in man respects to the Rosedale vein. The ore is said to be somewha richer than at Rosedale.

NEW GOLDEN BELL VEIN

The New Golden Bell prospect is in sec. 12, T. 6 S., R. 6 W. on a vein similar to the Rosedale vein and parallel to it. Th prospect includes three claims which were surveyed for paten in March, 1927. The latest development work was in the sum mer of 1929. The vein carries silver and gold in small quanti ties. No shipments have been made.

SAN JOSE DISTRICT

GENERAL FEATURES