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(147) Item 68

RECONNAISSANCE TRIP TO THE
BATTLE MOUNTAIN REGION
FOR THE
NEVADA STATE BUREAU OF MINES
May 23--June 2, 1938

Vincent P. Fiorella

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Left Reno in the afternoon, May 23. Arrived at Unionville that evening. Spent the night at Frank Horton's. They are employing three men getting cyanide plant in condition for treating rejects from old Arizona Mine. Spent forenoon of May 24 visiting various mines, particularly the old Arizona Mine whose workings are now largely caved. A few leasers are operating in the east end of camp.

Drove to Battle Mountain and out to Dumphy's Station on the Southern Pacific. Took road to barite property which leaves the highway about one mile east of Argenta Tank. From the highway to the mine is about $3\frac{1}{2}$ miles. This property is called the Nevada Barytes Property and is operated by the Chemical and Pigment Company. E. L. Ralston is manager. Mr. Ralston was very courteous and generously showed me over the property and gave me much information regarding the operations. At the time of my arrival, they were just completing a shipment of 1500 tons of barite, which is hauled by contract to Argenta Tank. This shipment completed their mining operations for the time being. They are now using the half-yard power shovel to make a road over to a nearby deposit. They are employing three men. The barite crops at an elevation of about 5900 feet. The trend of the barite deposit is north-south and, although it dips at various angles, appears to be predominately almost vertical. The barite lies between walls of argillite. The extent of these deposits is unknown but is undoubtedly quite large. This is undoubtedly the largest deposit of dark barite so far discovered in the West. From the shovel pit now in operation 25,000 tons of ore have been extracted. It is estimated that another 15,000 tons lies in the waste dump and can be recovered by screening operations. I should estimate that at least another 100,000 tons are in sight at this shovel pit above the bottom of the pit. The barite undoubtedly extends to an unknown distance below

the floor of the pit and also in a north-south direction from there. As much of the surface is covered by overburden. The outcrops of barite can only be seen on the higher points. In extending the road northward to another prospect, the shovel encountered barite, and in the few hours that I was on the property, they had stripped an outcrop for a distance of 50 or 60 feet. Mr. Ralston informs me that when he first investigated this property, he got a sample across 80 feet giving better than 90 percent BaSO_4 . No limestone was seen in this vicinity, but I am of the opinion, concurred in by Mr. Ralston, that the barite represents a replacement of limestone. Down the canyon about one half mile east of the Nevada Barytes Property, there are smaller exposures of good quality barite. This property was again visited on May 26. Their shipments of barite have continued over the past two years and average a specific gravity of about 4.2 and contain 85 to 95 percent BaSO_4 . The company's holdings lie in Sec. 19, T32 N, R 47 E and Sec. 13, T 32 N, R 46 E. These are on patented ground. They also hold portions of Sec. 24, T 32 N, R 46 E and of Sec. 18, T 32 N, R 47 E by location.

On May 25, Copper Basin was visited and the ground held by George Govich and Wood, who have discovered gold in surface croppings near the old Vail Placers in Long Canyon at the upper end of the Basin. They are sinking some shafts to prospect the ground in which Senator Noble Getchell has an interest. Much stripping has been done by power shovel to sample the outcrop. This work has now been discontinued and the prospecting is being carried on by hand labor. The country rock here is largely clay stone resulting from the alteration of argillites. It contains occasional seams of quartz. This clay stone in this region commonly carries copper, but usually does not contain workable gold deposits. This development will be quite interesting to follow to see what their results of prospecting will be. Lawrence and Springer are prospecting for turquoise a short distance northwest of the Copper Basin headquarters.

May 26. Visited Nevada Bar ytes Property and also barite deposit at Bateman Canyon. The mouth of Bateman Canyon is 18.2 miles from Battle Mountain on the Hilltop road. The barite deposit is 3.3 miles by road from the junction of Bateman Canyon with Crum Canyon. The workings are at an altitude of 6850 feet (by aneroid). The barite here is light to dark gray barite. Their lower pit is 8 feet wide, 20 feet long, and 8 feet high at the back. They are mining dense, fine-grained barite and have shipped but a few carloads, as this is a new discovery. This property is owned by Marion Clark, M. S. Fisher, and Dr. W. S. Courter, all of Battle Mountain. They are employing four men. This property is situated in the SW- $\frac{1}{4}$ Sec. 26, T 30 N, R 46 E. About 30 feet vertically up the hill, which has a 20-degree slope, is a north-south trench for 125 feet along the hillside. There is also a pit 20 feet long and 10 feet wide and 4 feet deep at the back. The longer dimension of the pit is north-south along the strike of the formation. There is a very thin detritus covering the outcrops, and it is here from 6 inches to 2 feet thick, covered with grass and short sagebrush. The topography in this area consists of soft rounded hills. The barite forms smooth slopes with but few outcrops, and evidently it weathers rather readily. Fifty feet still higher up the slope are inconspicuous outcrops of barite which show a fine lamination on the weathered surface. This structure indicates replacement of a finely laminated limestone. In places the barite is quite vuggy, and these openings are filled with a dark brown ocherous material which is probably iron and manganese oxides. Some cherty nobs crop inconspicuously. Dark blue, platy shale and brown limestone crop in this vicinity. For a considerable distance to the south there are other outcrops of barite. Although no estimate could be made of quantity of barite, due to scanty exposures and but few development pits, it is probable that this will develop into a large deposit. The general attitude of the rocks consists of a northerly strike and a dip of 15 to 20 degrees westerly. At the head of a short trench ~~leading~~ ^{across} with the slope of the hill, barite was seen replacing

brown limestone in a very irregular manner. This trench is about 300 feet northeast of the pits. The limestone is brownish in color and effervesces freely in dilute hydrochloric acid giving a chocolate brown solution. The brown coloration is probably due to manganese oxides. The quality of this barite is not known, but it has in general a dirty appearance.

May 27. Visited Slavin Canyon where the barite deposit of the Barium Products Company of Modesto, California is situated. It is reported this company shipped 85 cars of barite during 1937. The property is not being worked at the present time. Here the barite lies between siliceous shales strike north 15° east and dip 30° east at a point about one quarter mile north of the deposits. At the mine, the beds are flatter with a general north-south strike and dip 15° to 30° east. The barite is mined from an 8-foot bed encountered in beds of shales. The barite is offset by a normal fault of small throw. Both segments have been quarried. Other exposures of barite were seen in the vicinity. This barite is dark gray and closely resembles that in Bateman Canyon. As these deposits are but $1\frac{1}{2}$ to 2 miles apart, have the same strike, and appear to be on the trend of the same beds, it is probable that they occupy the same horizon. Dirty brown limestone like that seen at Bateman Canyon crops below the tool shed about 300 feet downhill from the mine. This limestone effervesces freely with hydrochloric acid giving chocolate brown solution like that from Bateman Canyon. The hills here have somewhat rounded contours with rare rock exposures, and have but a sparse growth of sagebrush. The elevation, as given by aneroid, is 5900 feet. This property is about one mile from the top of the alluvial fans and visible from Highway 40. The Slavin Canyon property is 15 miles from Battle Mountain and is reached by a fair road 5.3 miles in length which branches to the southeast of the Hilltop road. This road joins the Hilltop road about one-half mile from the front of the Shoshone Mountains. Battle Mountain is the shipping point for both the Slavin Canyon and Bateman Canyon deposits.

Visited the Izenhood Ranch about 20 miles north of Battle Mountain. A valley trending east from the ranch is supposed to contain tin placers for a distance of several miles. This tin is derived from small veins and irregular deposits in ~~the~~ ^{the} ~~lite~~ ^{lite} from the high hills to the north. This valley lies at an elevation of about 6200 feet. A crew of three men under the direction of Mr. P. S. Crocker is sinking shafts to prospect the placers. Several shafts have been sunk to depths ranging from 30 to 50 feet. So far but thin layers of gravel, up to 10 feet thick, are found. Most of the alluvium here consists of very fine sand and silt. No bedrock has been encountered so far. It is apparent that the bedrock here is quite deep, while at the windmill about two miles east of the ranch, water was encountered at 35 feet. It is probably that the bedrock is fairly shallow in the pass in the vicinity of the windmill, but near the Izenhood Ranch, it undoubtedly lies quite deep. No water was encountered in any of the shafts recently sunk, but water was encountered at about 50 feet in an old prospect shaft near the Izenhood Ranch house.

May 28. Visited the Copper Canyon Mine with Robert Raring. Here the copper deposits occur largely in clay stone, whereas the recently developed gold deposits are in quartzite. They have a large body of low-grade ore developed. The company is at present marking time, awaiting financial arrangements preparatory to sinking a working shaft and erecting a mill. It is planned to bring water from Willow Creek.

May 29. Visited the Copper Basin area with Mr. Raring. We again visited the Vail ground which is being sampled by Senator Getchell. Visited the Dolezal and Johnson lease which has opened a large deposit of gold ore in quartzitic material. Many carloads of gold ore have been shipped from this property. It lies to the northwest of the Sweet Marie Mine. A few other leasers are operating in the district.

DJ. Wilson is producing most of U.S. turquoise here.

May 30. Mr. Raring and I visited the old camp of Bannock where excep-

tionally rich gold ore was once mined. Tertiary gravels were placered from under a Tertiary basalt capping. Further up, in Box Canyon, dry placering is now being carried on in the vicinity of the old Buzzard Mine. The alluvial fan below Bannock should have good placer possibilities. Proceeded up Crum Canyon and over the summit onto Indian Creek. Visited the Gray Eagle Mine. Mr. A. Zachryson is in charge of developments and has a crew of four or five men getting out ore. They are also making a road and preparing the site for the lower tunnel. The ores of this mine occur in narrow veins from a few inches to three feet wide along a fault fissure in granodiorite. The ore consists largely of sphalerite, galena and various sulphantimonides and calcopyrite. Shipments are being made. The granodiorite is intrusive into quartzite. This is the same granitic mass along which occur the mines of the Hilltop and Mayesville districts. Visited the dredge at Tenabo. It is stated that they are putting through 3000 yards daily. Visited Gold Acres, four miles to the south, where Mr. Bumstead is mining silicified limestone through shallow tunnels. They treat 35 tons daily by leaching. They have six iron leaching tanks, each of which holds about 60 tons. Their heads are said to average somewhat over \$3.50 per ton, and the tailings about \$1 per ton. In all, about 18,000 tons have been treated. It is planned to install a large mill and obtain water from the valley to the east.

May 31. Had planned to visit Frank Horton's property in Valmy, but found nobody at the mine. Went to Adelaide and over the placer property operated by Frank Frandsen and Roy Haslet. They have a washing machine and a small shovel in operation. Water is obtained from Gold Run Creek. They are operating but a small crew and will apparently cease operation shortly for the season as the water is running low.

June 1. Visited Ragged Top Mine where a crew of two men are sinking the shaft. No production is coming from this mine at the present time. Returned to Reno.