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BUFFALO VALLEY DISTRICT

The Buffalo Valley district, also known as the Mill Canyon, is on the western slope of the Battle Mountain Range in T. 32 N., R. 42 W., M. D.B. & M., 17 miles in a southerly direction from Valmy, a station on the main line of the Southern Pacific Railroad and the Victory highway. From Valmy the property is accessible by automobile over a fair desert road. Buffalo Valley, from which the district derives its name, lies south of the Battle Mountain Range.

First prospecting in this area was done in the sixties, but no important discoveries were made at that time and activity ceased until 1912, when Clyde Ganser and others located a number of claims on and adjacent to a small hill where extensive croppings were found to contain gold. The principal groups of claims were purchased by the Buffalo Valley Mines Co., organized in 1916. This company, with only limited funds available, has prospected its holdings intermittently, efforts being directed toward blocking out a large tonnage of milling-grade ore. In 1936 the company obtained a Class B prospecting loan of $20,000 from the Reconstruction Finance Corporation, which was spent on further exploration of the known ore bodies. In May 1938 three men were employed at the property in mining shipping ore by hand methods.

Although there are a number of mines on the eastern slope of the Battle Mountain Range, the Buffalo Valley Mines Co. is the only promising property so far discovered on the western slope; it is isolated from the other mines of the district.

The production of the Buffalo Valley Mines Co., according to John T. Reid of Lovelock, has been 268 tons of ore averaging 0.695 ounces in gold and 1.88 ounces in silver, which was shipped to the Mammoth Smelter at Keswick, Calif., in 1924; and 792 tons averaging $8.96 per ton (gold figured at $20.67 per ounce), which was treated locally in a small cyanide leaching plant over a period of several years. In addition, several carloads of ore were shipped to the Salt Lake smelter early in 1938.

Buffalo Valley Mines Co.

The Buffalo Valley Mines Co. is incorporated under the laws of Arizona with a capitalization of 1,500,000 shares, par value $1, of which 750,000 shares have been issued. John T. Reid of Lovelock, Nev., is president and principal owner. The property comprises 28 unpatented claims and fractions and the water rights of Mill Canyon near the mine.

Equipment consists of a 15 horsepower gasoline hoist, a partly dismantled cyanide leaching plant (capacity 10 tons per day), assay office and equipment, blacksmith shop, tools for hand mining, and camp accommodations for a crew of 10 men.

Development includes 5 adits, 36 prospecting shafts ranging from 5 to 40 feet deep and totaling about 800 feet, and other workings totaling approximately 2,800 feet. The main adit is 600 feet long. The deepest working is 240 feet below the surface.

The formation comprises a series of limestones, cherts, shales, and slate beds having a general strike of north and south and dipping 35° to 45° westward. The gold deposits occur along the bedding planes and in the fractured zones of limestones in proximity to an aplite dike that cuts the sedimentary strata at acute angles both as to strike and dip. Ore consists of silicified ferruginous material carrying gold with minor amounts of silver. In places, oxidized copper minerals are present. Gold values increase with the copper content of the ore.

According to John T. Reid, the Hill and Estes discovery shaft, sunk to a depth of 90 feet, penetrated ore 30 feet from the surface. The first 15 feet averaged $13.60 in gold and the second 15 feet $5.50, a general average of $9.55 for 30 feet with gold at $20.67 per ounce. This shaft was sunk 60 feet farther to connect with the Fayant adit, which is 365 feet long. Fifteen feet from the portal of the Fayant adit a heavy gouge was cut where mineralization begins, and from this point the following samples taken by Reid and assayed by A. F. Bardwell of Salt Lake City, Utah, gave the following results:

Sample	Length, feet	Assay value per ton	Value of product
1	20	$2.35	$47.00
2	20	1.60	32.00
3	20	2.68	53.60
4	7	6.05	42.35
5	8	1.95	15.60
6	23	23.90	549.70
Total	98		740.25
Average uncut value per ton			7.55

The adit in which the foregoing samples were taken cuts the ore body at an acute angle to its strike. The true width of the ore body is about 25 feet.

Another adit driven to cut the Hill and Estes vein at greater depth intersects the walls of the vein at points respectively 260 and 300 feet from the portal. The average grade of the vein material over this 40-foot width is reported to be $3.10 per ton with gold at $20.67 per ounce. The true width of the vein is about 25 feet. From this adit drifts were extended on the Hill and Estes vein, and in one place 1,060 tons of ore was extracted, of which 268 tons was shipped to the Mammoth smelter at Keswick, Calif., and 792 tons was milled locally. The average analysis of the smelter shipments was as follows:

	Ounces
Gold.....	.695
Silver.....	1.88
	Percent
Silica.....	85.4
Iron.....	4.1
Alumina.....	1.5
Lime.....	1.5

In addition to the Hill and Estes vein there is another vein in the lower adit near the portal. This vein is composed of crushed material occupying a position between a limestone footwall and overlying surface detritus. Over a width of 9 feet the crushed material averages $2.50 in gold at the old price of $20.67 per ounce.

Tests made in the small cyanide leaching plant erected about 1925 showed that a recovery of 85 percent of the gold and silver can be obtained by crushing to minus 10-mesh and a 4-day leaching cycle. Reagent consumption was 1/4-pound sodium cyanide and 2 pounds lime per ton of ore.

BULLION DISTRICT

The Bullion district, also known as the Lander district, is on the east slope of the Shoshone Range about 23 miles southwest of Beowawe, the nearest shipping point. It adjoins the Hilltop district on the southeast. The first locations were made here sometime in the seventies, when the town of Lander (now abandoned) was established. In the early days a number of small silver properties were operated, including the Silver Side, Grey Eagle, and Lovie mines. The latter was the principal producer and was equipped with a five-stamp pan amalgamation mill. In the spring of 1905 Charles Montgomery discovered gold ore about 2 miles southeast of Lander, and the camp of Tenabo was established more conveniently situated to the mines. A rush to Tenabo took place in 1907, and although it attained a population of nearly 1,000, the following year all but a few had left.

The placer deposits in the vicinity of Tenabo were discovered by A. J. Raleigh in 1916. No accurate statistics on the metal production in the district prior to 1902 are available. The Lovie mine is credited with a production of at least $200,000 in silver, and a number of other properties are known to have produced smaller amounts. From 1902 to 1936 the metal production (table 4) was $947,612, chiefly in silver and gold with some copper and lead.

Goldacres Mine

The Goldacres mine, owned by a Denver group, comprises 50 unpatented claims on the east side of the Shoshone Range about 5 miles south of Tenabo and 30 miles south of Beowawe, the nearest shipping point. Although the property was prospected many years ago, there was no production until 1936, when the present company began operations under the management of E. J. Bumstead. The mine is unique, in that it has been operated profitably from the beginning on ore carrying a little over $4 per ton in gold. In April 1938, 11 men were employed at the mine, and daily production was about 25 tons of ore.

The mine is developed by an adit 400 feet long and subsidiary workings totaling about 2,500 feet. Equipment includes a compressor, blacksmith shop, machine drills, assay office, cyanide leaching plant, and camp accommodations for a crew of 15 men.