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Windfall Mine, Eureka, Nevada

The following summary of available information was prepared by J. O. Greenan, in July, 1950.

The group of ten patented lode claims is located about four miles south of Eureka. It is connected with the Lincoln Highway by 3½ miles of good dirt road.

Discovery was made about 1905. Small shipments of very high-grade gold ore were made. A cyanide leaching plant operated from 1908 to 1912. Crushing was coarse, using rolls. Mill production is said to have exceeded $1,000,000. Bullion returns for taxation purposes, said to be about one-third of the actual figures, show $349,428.35, from 65,132 tons of ore. It is said that various lessees have made considerable production, of which there is no record.

The mill tailings dump contains about 35,000 tons. Nine samples were taken, with results from $1.05 to $39.92. Apparently some of the samples were unduly high on account of migration of dissolved values to surface. Re-sampling is about to be done.

Ed Snyder (Combined Metals) and associates bought the property about 20 years ago for a reported price of $42,000. The former working shaft (500 ft.) had caved to about 50 ft. from surface. Snyder started a new shaft, and was at the 150 ft. point on July 4, 1934, when a fire destroyed the hoist and compressor house. The headframe was repaired, and is in excellent condition, but Snyder did not resume underground work.

Apparently Snyder had planned extensive work. His New Shaft is bottomed almost exactly at the old 300 ft. level, above which practically all the stoping has been done. Earl B. Young, in his report of November, 1937, (to Snyder) recommends, on the 300 level, "a crosscut westerly about 50 ft. to a known orebody, drifting southerly about 300 ft. to two known orebodies, additional drifting southerly to develop several hundred feet of dolomite-shale contact, also drifting northward to prospect the intersection with the east-west fissure in the gulch about 350 ft. distant."

He estimates from the 300 to surface at least 1,000,000 tons of a minimum of $5.25 in gold ($35.00), and even larger tonnages north and south of the New Shaft, and below the 300 level. He estimates mining and milling costs at $2.90.

The present option-holders are interested in the property as a possible open-pit operation. Five glory-holes have been opened along

a strike distance of about 1000 ft., and there is strong evidence that the zone may be several thousand feet in length. The largest glory-hole indicates a width of 80 to 100 ft., measured perpendicular to the strike of the contact. Four samples gave $5.20 across 41 ft. plus. Two samples gave $4.00 across 18 ft. of a zone over 50 ft. wide.

True widths are difficult to ascertain, due to cross-fractures at 45° to 90° to the main contact, which is a steep contact between Hamburg limestone and Secret Canyon shale. The ore is a replacement of these formations, which are Cambrian in age. Most of the profitable mines in the district have been in the Cambrian. (Hague.)

All previous operators have apparently thought of this mine as an underground operation, with relatively narrow widths. It has, as far as we know, never been investigaged from an open-pit operation, although one stope was mined 8 sets wide for 14 sets in length.

We have but one underground assay map (No. 4 herewith). It shows part of the 100 level, and some tunnels at about the same horizon. It shows 71 samples averaging $6.62 at $35 gold; eliminating two of these which went over $11.00, the average becomes $5.38. It is impossible to tell, from this map, what width this average represents. However, at the west end of Glory Hole No. 4, four samples show $8.30 across a width of 20 ft.

An old sample book (1911-12) showed 131 samples averaging $21.40, after excluding all over $87.50. After excluding 18 samples over $70 the average was $15.75. ($35 Au) Four successive samples of the 200 North Face averaged $79.00.

It seems evident that there is a zone of considerable length and width, with moderate gold values, which are in places concentrated so as to form pipes or tabular masses of relatively highgrade ore. Thorough investigation is certainly called for.

Lead ore exists at various points on the claims. A shipment of Oct. 26, 1931, gave 5.51 oz. gold, 6.2 oz. silver and 10.7% lead. Also, it is reported that, while milling, the ore contained enough lead in soluble form to make unnecessary the addition of lead acetate.

The waste dump at the caved Old Shaft is shown on Map No. 4 as averaging $3.20 at $20 gold, or $5.60 at $35 gold. This should be carefully checked, as this dump would naturally contain no material which was formerly considered to be ore, and therefore would be a good sample of the drifts and crosscuts where stoping was not undertaken.

Windfall Mine (Cont'd.)

The importance of gold in the Eureka District is not generally realized. For example, following are the production figures for 1903-1940 inclusive.

Gold - - - - - - -	$4,541,013.
Silver - - - - - -	3,266,066.
Lead - - - - - - -	2,955,020
Copper - - - - - -	353,116
Zinc - - - - - - -	17,929

I believe that the topography at the Windfall is favorable for open-pit mining. The ore itself is, in general, soft and friable, similar to sugar quartz, although naturally there are more solidly silicified zones. The Hamburg limestone, which is dolomitic, should stand very well, but the Secret Canyon shale would probably require a lower angle of repose. Drilling, blasting and shovelling should be very inexpensive.

It is easily possible that open-pit mining to a depth of 300 to 400 ft., might show ore zones which would be mineable by underground methods. This leads to the thought that the Windfall ore zone may persist in depth, and become basic in character, with lead and silver predominating.

In the immediate vicinity of the (as now recognized) ore-zone, there is an intrusion of andesite, or similar rock. This is locally considered a favorable condition, probably on the theory that the fracturing caused by the intrusion would furnish good channels for replacement of the limestone by ore minerals.

James O. Greenan