Buckskin National Gold Mining Co.

The Buckskin National Gold Mining Co. property comprises 2 patented and 9 unpatented claims on the northeast slope of Buckskin Peak at an altitude of about 8,100 feet above sea level, 3 miles southeast of the camp of National. The nearest railroad point is Winnemucca, about 60 miles south. The Buckskin National Gold Mining Co. was incorporated in Nevada in 1912 with a capitalization of $1,250,000 shares, par value $1, nonassessable. The mine has been operated intermittently under company management and by lessees. It was formerly equipped with a 100-ton flotation mill, but it was found that the flotation process was unsuitable for the ores. For the past two years the property has been operated by the Nevada Lucky Tiger Mining Co. under a lease agreement. In June 1937 fifty men were employed in the production of 50 tons of ore per day.

Development includes three adits, the longest 1,250 feet, an underground shaft 400 feet below the 100-foot adit level, and other workings totaling 6,500 feet. Equipment includes a 75-horsepower, Fairbanks-Morse, Y-type, Diesel engine connected to a 350-cubic-foot-capacity Sullivan compressor, an electric hoist, and a 50-ton cyanide mill. Power for milling is furnished by a 150-horsepower, 3-cylinder, Fairbanks-Morse, Diesel engine connected to a generator.

Ore is present in a quartz fissure vein having a strike of north 15° west, a dip of 76° westerly, and an average width of 4 feet. The values are in gold and silver. Formation is rhyolite and andesite. On the 10-foot level, the vein has been opened up for a length of 3,000 feet. The average grade of the ore mined is $16 per ton.

Ore is mined by the open-stope method. Mining and milling costs for the month of May 1937, when 1,511 tons of ore were treated, was as follows:

Stoping	$2.308
Development	3.310
Milling.	2.916
Marketing	.062
General	.361
Cost per ton . . .	8.957

Mine development for the same period was 448 feet, and the average cost per foot of development was as follows:

Labor	$7.177
Supplies	3.060
General charge . .	.053
Miscellaneous . . .	.115
Average cost per foot	10.405

Ore is treated by the all-slime cyanidation process. The mill flow sheet is shown in figure 2. The ore is ground to 80 percent minus-200 mesh. Cyanide consumption is 2.1 pounds, lime consumption 16 pounds, and ball consumption 3.1 pounds per ton. On $16 ore, the extraction of the gold is 96 percent, silver 85 percent, and the over-all extraction 92.6 percent. Water for milling is obtained from a spring in the vicinity and from the mine workings. The flow of water in the mine is about 35 gallons per minute. The mine water contains considerable sulphuric acid. The cost of generating electricity is 1.2 cents per kilowatt hour.

National Mine

The National Mine comprises a group of eight patented claims owned by P. H. O'Neil and associates of Los Angeles, Calif. The mine was acquired by the present owners in 1928 at a foreclosure sale. When the writer visited the property in June 1937 a crew of eight men was employed. Development consists of 10 adits, 3 shafts, and other workings, totaling about 6 miles. The main adit has a length of 1,950 feet; the mine workings below this adit are filled with water. Nearly all the ore was mined from above the main adit level. The property is equipped with an 80-horsepower, Fairbanks-Morse, semi-Diesel engine connected to a generator, an Ingersoll-Rand compressor (9 by 8 inches), and a 10-stamp mill (1,051-pound stamps). Other mill equipment includes a jaw-crusher (9 by 16 inches), a ball mill (4 by 5 feet), two amalgamation plates, and two Wilfley tables. At the time of the writer's visit, hand methods of mining were employed. Small lots of high-grade ore mined were either treated by amalgamation in the small laboratory-size ball mill at the mine or shipped to smelters.

The formation consists of Tertiary lavas, chiefly rhyolite, andesite, and basalt. The ore deposits occur in quartz veins of two types, one containing copper, lead, and silver and the other gold and silver. The general strike of the veins is north and south, with a steep east or west dip. Lindgren[15] considers the veins of the camp to be low-grade silver veins with a small gold content, and the rich gold shoot of the National vein an unique occurrence. The rich shoot of the National vein contained electrum, an alloy of gold and silver. The width of this vein varies from 6 inches to 2 feet. Stibnite is the most characteristic sulphide in the vein material.

A shipment made to American Smelting and Refining Company (Selby Smelter) on April 14, 1937 gave the following return:

Metal quotations:	Au	$35.00 per ounce
	Ag	$ 0.77 per ounce
Settlement assay:	Au	96.184 oz.
	Ag	117.90 oz.
	As	2.30 percent
	Sb	.20 percent

15/ Lindgren, W., Work cited (footnote 13), p. 32.

Metal payment:	96.184 oz. Au at $33.8846825		$3,259.19
	117.90 oz. Ag, less 5%, at .77		86.24
	Total		3,345.43
Treatment charge:	Base charge	$10.00	
	As and Sb (over 1%)		
	1.5% at $0.50	.75	
	Handling sacks	.75	
		11.50	11.50
	Net value per ton		3,333.93
Weight:	Gross weight, 12 sacks	1,020 lbs.	
	Tare	20 lbs.	
		1,000 lbs.	
	Less moisture, 1.5%	15 lbs.	
	Net weight.....	985 lbs.	
	985 lbs., or 0.4925 ton, at $3333.93		1,641.96
Deductions:	Sampling and assaying	10.00	
	Express	34.35	
	Sampling	10.00	
		54.35	54.35
	Net proceeds		1,587.61

McCormick Group

The McCormick group of 18 unpatented claims and 2 fractions, owned by D. C. McCormick and John Dermody, of Rebel Creek, Nev., and Mrs. J. E. Ward, of Reno, Nev., is situated on the summit of Buckskin Peak in the Santa Rosa Range at an elevation of 8,600 feet above sea level. The road to Buckskin Peak goes up Canyon Creek gulch to the divide and then skirts the high ridges at the crest of the range. From the Winnemucca-McDermitt highway the distance is 15 miles, of which the last seven are fairly steep. The property was located a number of years ago by Chalmers McCormick, of Rebel Creek, as a gold-silver property, but nothing of importance was found until 1929, when John Dermody discovered cinnabar in a prominent outcrop on Buckskin Peak. The production of quicksilver has been 58 flasks.

Development comprises two shafts, one 42 feet deep and the other 58 feet, and several adits, the longest of which is 300 feet. Underground workings total about 600 feet.

Equipment includes an Ingersoll-Rand portable compressor, jackhammer, several camp buildings, and a D-retort with a capacity of 2 tons per 24 hours. The ore treated in this D-retort was hand-sorted to average about 5 percent quicksilver. The ore is crushed to about 1-inch size in a Joshua-Hendy jaw crusher (8 by 8 inches) belt-connected to a 6-horsepower gasoline engine. About 700 pounds of ore are treated per charge; the oil consumption is about 20 gallons per ton of ore. Water for domestic use is available from several springs on the ground.

The cinnabar occurs in a rhyolite that has been altered extensively by hot-spring action. The croppings are very rugged and prominent, covering an area roughly 1,000 feet long and 500 feet wide. Most of the work has been done on the northeast end of the deposit. In general the rhyolite has been altered to a gray chalcedony, vesicular in character, in which the cinnabar occurs as disseminations and seams. The distribution of cinnabar over a large area is promising, and the future of the deposit depends to a great extent on whether the average grade of the ore is high enough to work on a large scale. According to Don C. McCormick, preliminary sampling indicates that the average grade of the ore is better than 5 pounds of quicksilver per ton.

PARADISE VALLEY DISTRICT

The Paradise Valley, also known as the Mount Rose, district is on the east slope of the Santa Rosa Range, about 11 miles northwest of the town of Paradise Valley. The nearest shipping point is Winnemucca, 60 miles a little west of south from the old camp of Spring City in the central part of the district. The first locations in this area were made in 1868; it was organized as the Mount Rose district in 1873. The mines were worked actively from 1879 to 1891. Subsequently, a revival of interest took place from 1907 to 1915 and again from 1931 to 1935, when small amounts of silver ore were mined.

The total production from the district is probably in the neighborhood of $1,500,000, although some estimates are as high as $3,000,000. Nearly all the production was made prior to 1900, when complete statistics on mineral production were not compiled. According to Burchard,16/ from January 1879 to December 1883 the Paradise Valley mine produced $366,735.

According to Gus Rogers, of Winnemucca, the records of the old Silver Butte Mining Co. show a production of $706,405 from March 1883 to April 1887, out of which $150,000 was paid in dividends. In the early days the ores were crushed in stamps and treated by pan amalgamation. The tailings from these early-day mills were reworked twice, the last time in 1913 and 1914. The principal property in the district was the Silver Butte Mining Co.

Silver Butte Claims

Fourteen unpatented claims formerly included in the property of the Silver Butte Mining Co. were relocated by Gus Rogers and associates, of Winnemucca, in 1931. Subsequently, the claims were taken over by a group from Astoria, Oreg., and a small mill was erected, which treated several thousand tons of low-grade ore obtained by screening the dumps. It closed down in 1935. When the writer visited this area in June 1937 there was no activity.

16/ Burchard, H. C., Report, Director of the Mint, on the production of precious metals in 1883, pp. 515-529.

TABLE 4. - Gold, silver, copper, and lead production from National District, Humboldt County, Nev., 1909-36 - Continued

[Compiled by Charles White Merrill, Mineral Production and Economics Division, Bureau of Mines]

Year	Lode					
	Copper		Lead		Total value	Average recoverable value of ore per ton[1]
	Pounds	Value	Pounds	Value		
1909	----	----	----	----	$96,372	$557.06
1910	----	----	----	----	1,283,044	24,208.38
1911	60	$8	390	$18	831,588	930.19
1912	----	----	----	----	596,186	132.07
1913	28	4	----	----	127,630	2,058.55
1914	----	----	----	----	87,294	31.08
1915	----	----	----	----	201,993	10.78
1916	----	----	----	----	131,157	4.77
1917	----	----	----	----	445	29.67
1918	----	----	----	----	25,364	667.47
1919	----	----	----	----	17,563	924.37
1920	110	20	----	----	26,606	2,418.73
1921	----	----	----	----	19,756	2,822.29
1922	----	----	----	----	8,798	2,932.67
1923	234	34	14	1	19,806	181.71
1924	281	37	333	27	41,329	37.61
1925	----	----	----	----	4,953	35.38
1926	----	----	----	----	309	154.50
1927	550	72	2,101	132	4,246	56.61
1928	893	129	2,407	140	28,055	117.88
1929	792	139	6,369	401	44,803	461.89
1930	----	----	----	----	----	----
1931	----	----	----	----	----	----
1932-36	(2)	(2)	(2)	(2)	(2)	(2)
	3,434	482	13,946	805	4,065,338	47.80

1/ Not to be confused with average assay value of ore.

2/ Bureau not at liberty to publish figures, but concealed figures included in totals.

TABLE 4. - Gold, silver, copper, and lead production from National District, Humboldt County, Nev., 1909-36
[Compiled by Charles White Merrill, Mineral Production and Economics Division, Bureau of Mines]

Year	Lode					
	No. of mines	Ore	Gold		Silver	
		Short tons	Fine ounces	Value	Fine ounces	Value
1909.....	2	173	4,544.44	$93,942	4,673	$2,430
1910.....	3	53	60,451.50	1,249,643	61,854	33,401
1911.....	20	894	39,197.36	810,281	40,153	21,281
1912.....	3	4,514	27,837.35	575,449	33,719	20,737
1913.....	8	62	5,986.31	123,748	6,421	3,878
1914.....	6	2,809	3,850.32	79,593	13,925	7,701
1915.....	3	18,732	9,188.41	189,941	23,772	12,052
1916.....	2	27,478	5,928.54	122,554	13,075	8,603
1917.....	2	15	20.83	431	17	14
1918.....	3	38	1,012.00	20,920	4,444	4,444
1919.....	5	19	719.72	14,878	2,397	2,685
1920.....	2	11	1,093.00	22,594	3,662	3,992
1921.....	1	7	893.04	18,461	1,295	1,295
1922.....	1	3	403.12	8,333	465	465
1923.....	7	109	573.49	11,855	9,654	7,916
1924.....	1	1,099	1,096.06	22,658	27,771	18,607
1925.....	2	140	106.68	2,205	3,959	2,748
1926.....	2	2	9.12	189	193	120
1927.....	1	75	1.45	30	7,076	4,012
1928.....	2	238	785.90	16,246	19,727	11,540
1929.....	2	97	1,218.76	25,194	35,776	19,069
1930.....	---	-----	-----	-----	-----	-----
1931.....	---	-----	-----	-----	-----	-----
1932-36.....	---	2/	2/	2/	2/	2/
	---	85,045	175,501.96	3,774,215	457,190	289,836

See footnotes on page 34.

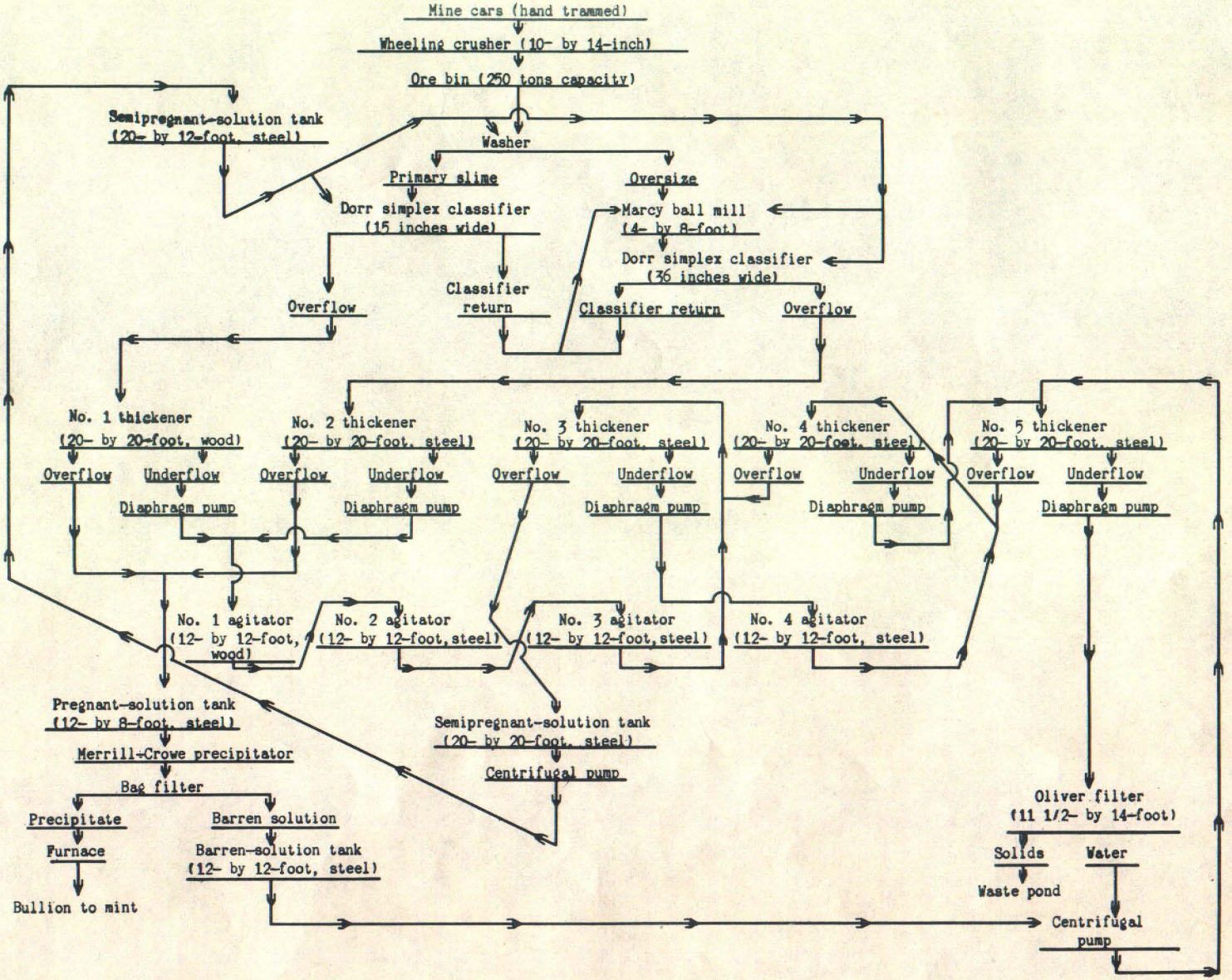

Figure 2.- Flow sheet of Nevada Lucky Tiger mill, National district, Humboldt County, Nev.