West Iron Mine

The West iron deposit in on section 7, T. 31 N., R. 51 E., M. D. M. and B., at the junction of Safford and Palisade Canyons several hundred yards south of the main lines of the Southern Pacific and Western Pacific Railroads, which pass through Palisade Canyon. It is owned by the Southern Pacific Land Co. From 1907 to 1915, the deposit was worked by the American Smelting, Refining & Mining Co. for fluxing material. After this company relinquished its lease, the property remained idle.

Former operations were confined largely to an open pit approximately 200 feet in diameter and 80 feet deep, which is now filled with water. Below the bottom of the pit is an inclined shaft 180 feet deep, from which two levels, spaced 50 feet apart vertically, have been driven. There is no usable equipment on the property.

According to Jones,[31] the iron occurs probably as a replacement deposit from 60 to 150 feet thick, dipping 40° to the north and east. The country rock is an andesite. The ore is massive and compact hematite, with probably a little magnetite, and contains minor quantities of quartz, fluorapatite, and phlogopite. The following analyses,[32] made by Prof. Walter S. Palmer of the Mackay School of Mines, indicate that the ore is of a uniformly high non-Bessemer quality.

	Upper level	Intermediate level	Lower level
	Percent	Percent	Percent
Insoluble	1.98	1.80	0.45
Ferric oxide (Fe_2O_3)	95.15	89.19	98.44
Ferrous oxide (FeO)	None	None	None
Alumina (Al_2O_3)	1.35	3.52	1.16
Cupric oxide (CuO)	0.43	1.94	Trace
Phosphorous pentoxide (P_2O_5)	Not det.	0.69	Not det.
Ignition loss	0.44	2.53	0.05
Total	99.85	99.67	100.10
Total iron (Fe)	66.54	62.37	68.84

The precious metals contained in the ore are virtually negligible.

SCHROEDER DISTRICT

The Schroeder, also known as the Maggie Creek district, is in the Independence Range, a short distance west of Maggie Canyon and 11 miles northwest of Carlin, Elko County, Nev. The first prospecting was done here in the '70s, but since no important discoveries were made it never became prominent. The Nevada Star Mining Co. operated in this area from 1906 to 1909, but only a small amount of ore was shipped. The total production of metals, chiefly gold and silver with a little lead and copper, has been obtained wholly from shipping ores produced largely by lessees; the value has been about $50,000.

31/ Jones, J. Claude, The Barth Iron Ore Deposit: Econ. Geol., vol. 8, 1913, pp. 247-263.

32/ Jones, J. Claude, work cited, p. 257.

About 1930, barite was discovered on the west ridge of Maggie Canyon, and consistent annual shipments have been made for the past 5 years by the Industrial Mineral & Chemical Co. of Berkeley, Calif.

Maggie Group

The Maggie group comprises three unpatented claims and a patented railroad section (sec. 35, T. 34 N., R. 52 E.) owned by A. H. Berning and A. R. Berg of Carlin, Nev. Gold was found on this property by Berning in 1925, and in 1936 the property was leased to the Cuba Consolidated Mines Co. This company is reported to have shipped six cars of ore in 1936. Development work consists of an open cut, an adit about 40 feet long below the open cut, and other scattered workings, totaling less than 100 feet. In the fall of 1937 the property was inactive. Equipment includes a Sullivan portable compressor, jackhammer, ore bin, and camp accomodations for several men.

The values, chiefly gold, occur in a quartzite formation sheared and stained with iron oxides. There are no pronounced structural features to determine the extent of the mineralization. Probably the ore shipped, reported to average $15 per ton, was largely concentrated mechanically. Smelter returns on a carload of ore shipped July 29, 1936, by the Cuba Consolidated Mines Co. to the American Smelting & Refining Co. furnished the following data:

Metal quotation:	Gold	$34.9125 per ounce	
		Ounce per ton	
Settlement assay:	Gold	0.417	
	Silver	.8825	
	Lead	None	
	Copper	None	
		Pounds	
Wet weight		120,720	
Moisture, 1.15 percent		1,388	
Dry weight		119,332	or 59.666 tons

Metal payment:	Gold 100 percent at $31.81825 per ounce		$13.28	
	Treatment charge		3.50	
	Net value per ton		9.78	
	59.666 tons at $9.78			$583.53
Deductions:	Freight, $2.90 per ton	$175.04		
	Sampling	36.22		
	Assaying	6.00		
		217.26		217.26
				366.27
	Royalty, 10 percent of net smelter returns			36.63
	Net proceeds			329.64

Good Hope Group

The Good Hope group of five patented claims and a patented mill site is owned by A. H. Berning and associates of Carlin, Nev. This property was first located in the '70s and several shipments of ore were made at that time. Development consists of an inclined shaft reported to be 250 feet deep and about 100 feet of lateral workings. Only equipment on the property is a 9-horsepower, Fairbanks-Morse geared hoist.

The prevailing formations are limestone intruded by rhyolite. Values are chiefly in lead and silver with a small amount of gold. The ore occurs in bunches in a vein striking northwest-southeast, dipping 50° northeast, and varying from 3 to 6 feet in width. On the south end of this property, on the Good Hope No. 7 claim, is a vein of barite. This part of the property is under lease to the Industrial Minerals & Chemical Co., which company, in 1935 and 1936, shipped about 300 tons of barite paying a royalty of 50 cents per ton.

Barite

Barite occurs on the E. 1/2 of the E. 1/2 of the NE. 1/4 of Sec. 27, T. 34 N., R. 51 E., M. D. B. and M. This section is one of those included in the original railroad land grant and is owned by the Southern Pacific Land Co. For the past 5 years the barite deposits have been worked under lease by the Industrial Minerals & Chemical Co. of Berkeley, Calif. Development consists of three adits, the longest 700 feet. Equipment for mining comprises an Ingersoll Rand Imperial, type 14, portable compressor and several jackhammers. The barite is mined by open-stope method and it is hauled to Carlin in trucks for rail shipment to the Pacific coast.

The barite occurs in a vein striking S. 30° E. and dipping about 70° easterly. The width of the vein averages about 10 feet. Country rock is shale. The barite is massive, and relatively free from impurities but in places is stained with iron oxide. The deposit has been explored to a depth of about 75 feet.

UNION DISTRICT

The Union district is in Union Canyon in the Sulphur Range, 45 miles by automobile north of Eureka. It can also be reached by automobile from Palisade, about 35 miles north. It is sometimes considered a part of the Mineral Hill district, which is about 7 miles northwest. The first mineral discovery was made by James Lindsay in 1866. In 1887, a small smelting furnace was erected, and, from the size of the slag pile, it is estimated several hundred tons of ore were reduced. After lying idle for many years, the principal claims were acquired by the Union Mines Co. organized by William P. Fairman of Philadelphia, Pa. From 1915 to 1918, this company rehabilitated the mines, did considerable development work, and shipped 7,088 dry tons of ore having a gross value of $175,802, or an average of $24.80 per ton. This ore was hauled to the Union siding on the Eureka-Nevada Railroad by wagon team and shipped to the U. S. Smelting, Refining &