LAS VEGAS DISTRICT

Three Kids Manganese Mine.

We returned to Las Vegas the night of June 3, and on June 4th visited the great manganese deposits 16 miles NE of Las Vegas. The extent of these manganese beds is not generally known or appreciated. Discovered in 1917, the Three Kids was bought by the Lowney Manganese Association, and made a large production in 1917. Adjacent discoveries were made over a wide area, and were consolidated by the Thorkildson Trust & Saving Bank of Los Angeles.

Over 12,000 tons of 40% manganese ore was shipped from the Three Kids Mine. The ore was mostly extracted from near the surface, after first removing a variable thickness of overburden, but a portion of it was mined from large, slightly inclined, open stopes, supported by a few pillars. The beds were 40 feet thick in places, with an average thickness of about 25 feet.

Westerly from the Three Kids Mine, along the foothills for 3 miles are manganese outcrops, some of which have been opened up by shafts, and two miles east is the Hard Scramble Mine. In all of them the geologic al conditions are uniform and identical. Several hundred feet west of the Three Kids a thickness of 30 feet of ore is exposed in a shaft and over half a mile west about 6 feet of good ore is exposed in another shaft. Some miles to the northwest, on Las Vegas Wash, a drilled well is said to have passed through similar manganese beds. The wide extent of the underlying manganese had not been indicated by these workings at the time that Pardee & Jones examined the area for the United States Geological Survey in 1917 and 1918.

The ore appears to have been a general and widespread replacement of a sedimentary lake bed of Tertiary age, probably similar to the Kutias deposit of Eastern Europe. Subsequent to formation the bed was broken up by block faulting, and to the south and east it is covered by later flows of volcanics. Its extent northwesterly in the valley could be learned by churn drilling. If too much of it has not been removed from the floor of the adjacent valley and the low foothills by erosion, it might prove to cover an area of from 10 to 20 square miles.

The ore from the Three Kids Mine ran: Manganese, 41%, SiO_2 11%; P. 0.03%; Fe, 1%; moisture, 11.6%. Simple quarry methods were used in mining. The porous black ore was chopped out with axes, and loaded on trucks with forks with tines spaced one inch to screen out the siliceous fines. At that time 40% Mn. ore brought $25. per ton at Las Vegas. Mining costs were $2., trucking to Las Vegas $5.50. At present western prices it cannot be mined, but nevertheless it is a great future mineral asset for Nevada.

It may be that future development will prove these manganese beds to compare in size to those of Kutias in the Georgian Republic, 50 miles east of the Black Sea, which extend over an area of 10 square miles, are from 5 to 8 feet thick and rated as the greatest manganese deposit in the world. The grade of the Kutias is 50% Mn. and the annual production before the war was 1,000,000 metric tons per year.

The poorer grade of Las Vegas manganese, which has an 11% silica content, and the extensively block faulted and tilted beds are to its disadvantage. The faulting will cause an increased cost in the mining. When improved prices and a greater demand comes from western markets, however, the adverse natural factors would not prevent a large operation.