

THE VALLE MINES MINERAL TRACT

The selling prices of both lead and zinc have set records during the early part of 1977, and this will probably help to cause an increase in the prospecting for these two metals. Any area which has possibilities, for either one or for both, is likely to be studied intensively. An old area, which so far has been neglected but which shows good chances for both metals, is the historic Valle Mines District near the southeast corner of the Vineland, Missouri quadrangle. The district extends along the border between Jefferson County and St. Francois County and is only 55 miles from St. Louis. The property is largely owned by the Valle Mining Company of St. Louis.

The "Big Lode" of Valle Mines was discovered in 1824, and mining became quite active over nearby areas after that date. The orebodies were filled cavities which were originally formed by solution work in the Potosi and Eminence Formations. The mines were characteristically shallow, above the water levels, and the ores were highly oxidized and were rich. By 1910, Valle Mines had produced a total of over 50,000 tons of lead (from galena) and had shipped about 70,000 tons of zinc concentrates (mostly smithsonite) for treatment elsewhere. After 1910, production gradually decreased, and ceased in 1934, except for some clean-up operations.

There was never any real prospecting to locate orebodies for a reserve ahead of mining. The sinking of shafts and other

development was the only actual prospecting and such ore was mined as found. Conversely, much of the property was never tested and there may be more ore of the filled cavity type to add to the actual mining figures given above. Any geological structure which had as much ore, even if of a "fringe type", as this Valle Mine district has had, certainly deserves a further study for that reason alone. If there are other reasons, it is even better.

The Valle Mining Company was formed very shortly after the 1824 discovery. Their present land holdings in the area total 5,500 acres, most of which was acquired before 1900. Nearly all of the Valle Mines district is included. This large block of prospecting land is a big advantage. Compare the effort to acquire the 5,500 acres with one negotiation with the effort to acquire 55 separate 100-acre tracts, each with a different owner.

The Vineland fault zone extends across the property with a strike of roughly N60°W. Including the branches, the fault zone covers a strip up to several miles in width, with the down-throw side to the north. This faulting is part of the Ste. Genevieve system, which in turn is part of the great 38th parallel lineament which has so many ore districts associated with it. It is probable that the original ore solutions of the Valle Mines district came up the Vineland main fault and then were distributed to favorable horizons and locations through the branch faults.

Aero-magnetic mapping of the area by the U.S.G.S. and the Mo.G.S. in the early 1940s shows several anomalies in the general area of Valle Mines. The anomalies are of rather limited horizontal extent and of moderate amplitude. They are much too small to show any iron ore of fair size, but they do indicate some Pre-Cambrian topographic highs of moderate size--in other words, "porphyry high".

The Valle Mining Company in 1906 had six diamond drill holes put down on the property. (This is an exception to the statement above that there had been no real prospecting.) The records and maps are confusing about these holes. The most likely groupings seem to indicate a structural high on the property. The holes penetrate to about the middle of the Bonneterre Formation, with the structure based upon the top contact of the Bonneterre. The cores were logged by the Mo.G.S. in 1906, again by them in 1943, and recently by the Valle Company. All agree in that the Bonneterre has been dolomitized, a very important point. Structural highs and dolomitization are the two main requirements that the Bonneterre needs to act as a suitable host rock. With these met, the local presence of mineral solutions can form orebodies.

The general area north of the old Lead Belt, that is, north of the town of Bonne Terre, was drilled by the St. Joe and some other companies around 1950 or so. These were widely scattered holes, one to five miles apart and drilled as "scout" holes. Apparently, no mineral was cut as there was no fill-in areas of drilling. The Valle Mines district itself was not drilled. St. Joe and Valle Mining Company did not agree on option terms.

The property was formerly served by the "M.R. & B.T." RR which crossed the middle of the land. This railroad has been abandoned, but good transportation is available by highways. Most of the property is well above drainage levels. There are springs and ponds available for water supply near the edges.

The Valle Mining Tract of 5,500 acres offers a good prospecting location. It is large enough to contain ore in quantity both as possible extensions of the shallow ore, but more important, to have possibilities at depth in the Bonneterre formation. This last is almost untested and unknown, but indications are that there are good structural highs accompanied by dolomitization. For more detail, contact

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