2613

April 26, 1954

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division

Subject: Denial of Application by Field Team, Region IV
Docket No. DMEA 2613 - Manganese (Amended)
(Formerly Docket No. DMEA 3213, cancelled)
Ace Building and Roofing Supplies Company
Denton manganese claims Nos. 1, 2 and 3
Greenlee County, Arizona

The applicant requested exploration assistance in the amount of $23,660.00 to explore the South ore zone for manganese on the Denton Claims, Greenlee County, Arizona.

The company originally obtained a contract Idm-5494 in February 1953, to explore the manganese deposit on the Denton Nos. 5 and 6 claims by shaft sinking, drifting and crosscutting. This project was terminated by mutual consent of the Operator and the Government in November 1953, without the discovery of any significant quantity of manganese ore.

The south zone, exposed in several places throughout a strike distance of about 2500 feet, is localized along a fault zone in grayish-brown vesicular basalt.

The ore consists of granular and vein-like masses of psilomelane which are concentrated along fractures in the basalt. The psilomelane formed as a result of supergene alteration of manganiferous calcite, which is the dominant mineral in the deeper parts of the ore zone.

Experience in the north ore zone has shown that commercial concentrations of manganese ore are localized only near the surface and do not extend to depths greater than a few tens of feet.

The south shear zone was exploited during World War I when about 1000 tons of concentrate were produced.

The vein has been prospected by several other shallow shafts, but there is no evidence to indicate that significant amounts of manganese concentrate have been produced other than the 1000 tons mentioned above.

Analyses of 6 samples from the south ore zone are as follows:

Number	Description	Width in feet	Percent Mn
12946	West end of ore zone	10.6	4.2
12948	Estimated 1000 tons stockpile	-	2.6
12752	Shaft Pillar	2.0 (?)	15.5
12949	Central part of ore zones	9.6	2.5
12950	Eastern part of ore zone	3.0	1.9
13001	Grab sample of dump		1.4

The ore, consisting of several thousand tons of material containing 2 or 3 percent manganese, is too low grade to be minable, as the Operator's experience shows the minimum minable grade is about 5 percent manganese under very favorable operating conditions.

The Field Team concludes that the Denton claims have been adequately prospected and there is no opportunity to discover significant reserves of manganese in the zone for which exploration is proposed, and therefore recommends that the application be denied.

We concur in the denial.

W. S. Martin, Chief
Iron and Ferro-Alloys Division

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