Economic Considerations

If a region where iron mining was once one of the principal industries gradually undergoes a change by which all the mines are closed and yet the iron-manufacturing industry still continues, the natural conclusion would be that the iron ore deposits had been exhausted. In Northampton County, however, where eighty-four limonite mines are known to have been worked and at present none are in operation, other causes have contributed to the existing situation. Many of the mines were worked out or abandoned because the ore was too lean, but many of them were closed for other reasons, and it is not improbable that as much ore still remains in the ground as has ever been mined. Many of the mines when closed had as much ore in sight as at any preceding period, and undoubtedly there are numerous deposits that were never worked. When the fields are freshly plowed many promising places for prospecting can be distinguished by the brown color of the soil and the fragments of float ore, which favor the conclusion that some ore deposits have never been developed.

In the early days many of the iron companies that operated furnaces acquired ore properties which they either worked or leased under the arrangement that all the ore would be sold to the furnaces at current prices. The royalties paid ranged from twenty to fifty cents a ton. In addition, independent companies acquired ore properties and engaged in iron mining and always found a ready market for their ores. In recent years, however, a great change in the iron industry has resulted in closing most of the small independent furnaces and a concentration of the iron business in a few large companies. The disposal of the pig iron made by the small independent furnaces has become increasingly difficult, and most of them have had to close. The larger companies found so many objections to the local brown iron ores that mining continued to decline until all were closed.

Perhaps the chief objection to the local brown iron ores is the variability of the supply. In winter the severe weather prevented open-cut mines from operating, and the conditions of the roads at times interfered with the delivery of the ore. No concern that uses a large quantity of ore wishes to contract for a supply that is so uncertain.

The variation in composition was also a drawback to the utilization of the local limonite ores. Both the iron content and the amounts of silica and phosphorus were extremely variable and hence objectionable. The ore averaged too high in phosphorus for Bessemer ore, and none of it was high in iron. The average limonite ores of the district contained only a little more than 40 percent of iron. Under such conditions it was inevitable that high-grade iron ores low in phos-