

## XXXV. AN OKLAHOMA METEORITE

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From the Oklahoma Geological Survey.

In spring of 1921 a few fragments of a meteorite were sent to the chemistry department of the Oklahoma Geological Survey by John Harper, of Smithville, Oklahoma. The meteorite as found is said to have weighed 16 pounds and was picked up in sec. 1, T. 1S., R. 26E. The fragment of the meteorite sent to the Survey was rough, jagged, and deeply pitted on the surface. It was very irregular in outline, dull rusty red in color, of a high specific gravity, of great tenacity and hardness, strongly magnetic, and distinctly malleable. These physical properties place the meteorite in the class of metallic iron.

After the meteorite had been around the laboratory sometime, some blood red drops appeared scattered over its surface. These, when tested chemically, gave strong reactions for chlorine and iron. In the preliminary chemical tests it was found that no single acid attacked the meteorite rapidly. However, after certain acids had been used for a short time the surface oxide was dissolved, exposing a beautiful silver-white metallic surface.

The following is an analysis of the meteorite made by the writer in the laboratory of the Oklahoma Geological Survey:

## Analysis of Meteorite

	<i>Per Cent</i>
Silicon -----	Trace
Carbon (present as graphite) -----	Not determined
Free metal iron -----	91.60
Free metallic nickel -----	7.23
Free metallic cobalt -----	Trace
Phosphorus -----	0.234
Chlorine -----	0.220

## TOTAL

99.285

The minerals present besides the five metals are most probably Schreibersite, the phosphide of iron, Lawrencite, ferrous chloride, and graphite.

The presence of Schreibersite is merely conjectural, but the two other minerals are pretty definitely proved present by their sensible properties.