

COMANCHE, TEXAS, METEORITE

The sample submitted by Gilmore Durham of Comanche weighed 625.1 gm. when recd. and 614.8 after an irregular area some 3 cm. sq. had been ground on the two carborundum wheels and roughly finished with emery cloth. 48 hours' standing produced some tendency to exudation of lawrencite, especially in an oxidized central triangular area. This was cleaned before etching with nitol for about 6 minutes. Figures previously indicated were confirmed and the iron is a coarse octahedrite. The finer lines are about 1 mm wide with a tendency for many to run 1.5, while some widened or merged ones seem to attain 3 mm.

There is no unusual structure; no troilite was noticed and there is no schreibersite of any size (a few very tiny spots taken for taenite may be schreibersite). Taenite is poorly to moderately well exhibited, but does not divide the kamacite lines with any conspicuousness. A few plessite fields with their taenite stringers running across them are about as outstanding as anything. An oxidized (black) layer along one natural crust side extends inwards for an average of 1 mm., varying from less than that to over 2. In special spots the oxidation penetrates much more deeply, sometimes seeming to affect kamacite more and in one case running between two lines as tho the taenite had been more attacked.

The natural exterior is a dappled whitish brown, somewhat more reddish in spots, the white to reddish sandy soil having in this way combined with the limonitic crust. Where this has been knocked off, the underlying very dark brown crust is revealed. One end of this piece has had a blow torch applied to it and has been beaten slightly.

A peculiar crustal feature is developed well in only one place on this piece: rounded or roughly elliptical areas suggesting a broken blister and filled with glittering dark material that is suggestive of iron sulphide. It is tempting to interpret these as blisters formed by lawrencite with resulting fillings of terrestrially formed marcasite or pyrite in oolitic or tiny xls. form. Two poorer examples of this sort, cut thru in the grinding process, showed nothing unusual underneath; they are apparently a superficial weathering phenomenon of some sort.

The piece had extreme dimensions of about 8 x 4 x 5 cm. Approximately concave-convex, pointed at one end with a wider base at the other. One side near the base had been melted with a cutting torch.

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