# The Haven Chondrite

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ABSTRACT

*The Haven, Reno County, Kansas, aerolite (ECN=+0977,379; cl.=veined crystalline chondrite, Cka) was discovered by Mr. George Westfall, in September* 1950, *while he was engaged in drilling wheat on his farm. The meteorite is the first to be recovered in Reno County, or for that matter, in the entire Arkansas Valley. The aerolite has a total weight of* 2948.4 *grams and a specific gravity of* 3.523 *at* 19.5°C. *Nearly the entire specimen is covered with a fusion crust. The main mass of the meteorite is preserved in the H. O. Stockwell collection.*

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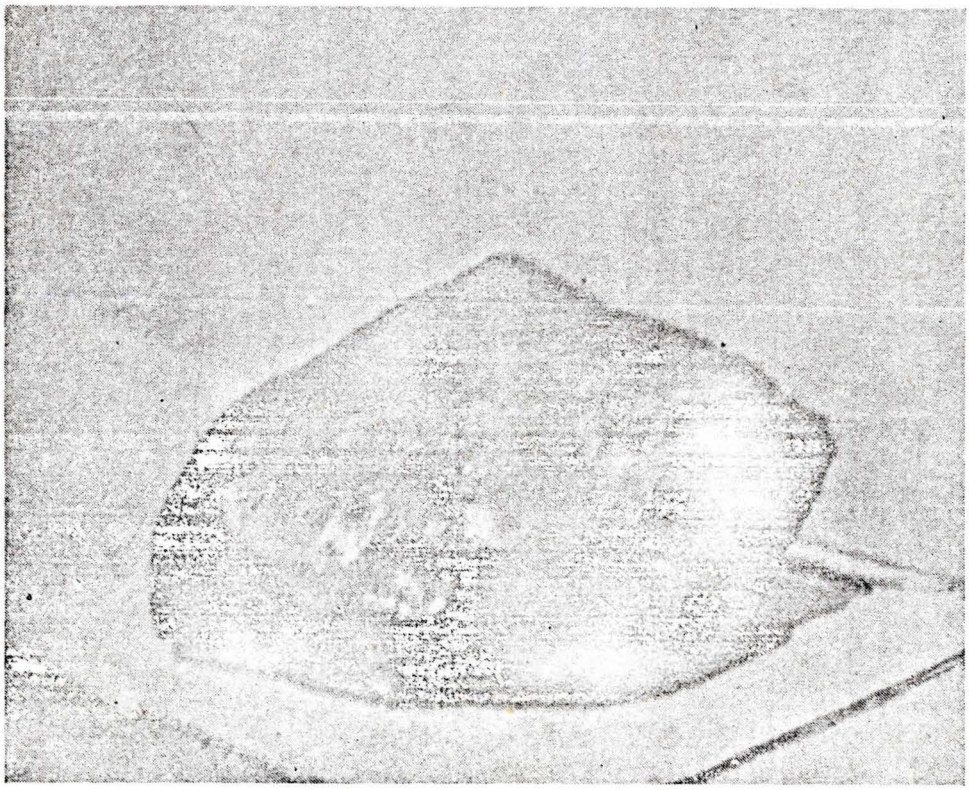
The Haven aerolite was discovered by Mr. George Westfall, in September 1950, while he was engaged in drilling wheat on his farm, which is located north-east of the town of Haven, Reno County, Kansas. The strange rock was first noticed by Mr. Westfall several years previous to his discovery, but at that time he did not bother to climb down from his tractor for a closer examination. During the intervening years Mr. Westfall made numerous trips to Hutchinson, where he was a customer of the Hilton Electric Company, Mr. H. O. Stockwell's place of business. While on one of these visits Mr. Westfall noted that several specimens in the fine collection of meteorites, which Mr. Stockwell has on display for his customers, were in many respects similar to the odd-looking rock in his wheat field. The next time he encountered the rock he stopped his



**The Haven Chondrite—1/2 size.**

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tractor and got down for a closer inspection. The rock so much resembled some of the stony meteorites which he had seen in the display that he picked it up and took it home, where it was later purchased by Mr. Stockwell, who recognized it as an entirely new meteoric find The meteorite was later cut by Mr. Stockwell, and several of the slices were removed and forwarded to me for further study.

The exact location of the Haven chondrite is 4 miles north and 2 miles east of the town of Haven, Reno County, Kansas, in the Cheney quadrangle, on the George Westfall farm which is located in the S. ½ of the N.W. ¼ of Sec. 15, T 24, R 4 W. The Longitude of the place of find is approximately W. 97° 45′ 21″ and the latitude is N. 37° 57′ 51″. This location has an equatorial coördinate number (ECN) of +0977,379.

The Haven is the first meteorite to be recovered in Reno County, Kansas, and for that matter in the entire Arkansas Valley. The overall dimensions of the mass are as follows: length, 186.5 mm.; width, 128.6 mm.; thickness, 88.9 mm. The total weight of the specimen is 2948.4 grams. The Haven aerolite is covered with a heavy dark brown primary fusion crust with the exception of the base and one end which show signs of fracturing. There is a secondary fusion crust on the thinner edges of the resulting irregular surfaces. The remaining portion of the fractures is unfused and of a yellowish color. The entire specimen is covered with a number of pit-like depressions some of which are as great as 6 mm. in diameter. There are 5 or 6 hair line cracks which appear on the surface. The heavily fused side with 10 distinct pits is well shown in the photograph (Fig. 1). Several slices of the meteorite which were polished and stored for sometime in a box developed a considerable deposit of molysite ($FeCl_3$) and limonite ($Fe_2O_3H_2O$) which was derived from the alteration of the unstable lawrencite ($FeCl_2$).

The following data was derived from a study of a 24.3 gram polished slice which measured 52.2 mm. X 39.1 mm. X 4.5 mm. in greatest dimension. The Haven meteorite belongs to the class of veined crystalline chondrites (Cka); however I observed that on several of the slices studied, little or no veining occurred except near the outer periphery of the specimen where for the most part the veins run parallel with the outside surfaces. Nickel-iron is fairly abundant and evenly disseminated throughout the firm crystalline mass. The meteorite has many small fractures, few of which connect with the outside surface. The specific gravity of the Haven chondrite is 3.523, at 19.5°C. as determined with a precision Jolly balance. The main mass of the Haven meteorite is preserved in the H. O. Stockwell collection.