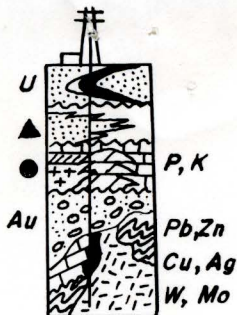


JOHN E. WELSH Ph.D. NATURAL RESOURCE GEOLOGIST



Dear Oscar:

Enclosed is the abstract published in Meteoritics:
I am also enclosing a picture of the meteorite.

I have an idea as to how to find additional
meteorites in the western deserts. If you are in Salt Lake
please contact me, my wife and I would enjoy having you
and your wife for dinner.

Regards

John

THE HICKIWAN, ARIZONA, CHONDRITE: AN ORIENTED STONE

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The Hickiwan meteorite was discovered on March 23, 1974 seven kilometers east of Hickiwan, Pima County, Arizona (112°24'32" W., 32°21'30" N.) by one of us (JEW). It was noticed because of its dark-brown color contrasting with the light granite grus of the pediment. The single stone is a well-oriented specimen with the shape of a flattened cone 15 cm in diameter and 6 cm in height, weighing 1,928g.

A study of the texture, mineral content and mineral composition was made using microscopic and electron microprobe techniques. Chondrules are readily discernible, although some intergrowth with the matrix has occurred. The matrix is a fine grained and somewhat recrystallized. Plagioclase occurs as small interstitial grains, and polysynthetically twinned clinopyroxene is present in minor amounts. Both olivine (Fa 19.4) and pyroxene (Fs 17.2) are homogeneous (%MD for FeO is 1.1 and 1.3 %, respectively) as determined by microprobe analyses. Thus, Hickiwan is placed into petrologic group 5. A modal analysis yields (in weight percent) 14.0 % metal, 3.8 % hydrated iron oxides of terrestrial origin, 4.9 % troilite, 67.1 % olivine and pyroxene, 0.8 % chromite and 0.1 % ilmenite. Calculating hydrated iron oxide as metal, the mode is very close to the average for H-group chondrites. Thus, the Hickiwan stone is classified as an H5 chondrite.

* Speaker

Dear John: This abstract was submitted to the Meteoritical Society Meeting which will be held in Cambridge, England, this summer. Hope it meets with your approval. If you have any suggestions, we can make changes in the galley. Thanks to your wife for calling in the weight of the stone. Best wishes, Klaus

