SMITHSONIAN INSTITUTION UNITED STATES NATIONAL MUSEUM

WASHINGTON, D.C. 20560

October 1, 1968

AIRMAIL

Mr. Oscar E. Monnig 29 Chelsea Drive Fort Worth, Texas 76115

Dear Mr. Monnig:

"I am very anxious to get the matter of the Boaz, Alabama, iron meteorite settled", and I hope you will not object to my quoting your letter of September 9, 1958, to articulate this thought. After spending several hours today gathering together and reveiwing the Boaz correspondence, this seems an appropriate introductory sentence. Ed Henderson has turned this case over to me for accessioning, and I am sure you and I will be able to reach an agreement within the next decade or two.

Seriously now, the time for action does seem to be at hand. The following fact seem to be of importance:

- 1) The original weight of the Boaz meteorite was 14 lbs. 1 oz. (6.6 kg.).
- 2) The Boaz meteorite tends to decompose rapidly. A portion of the specimen has been lost to oxide while it has been at the USNM.
- 3) We are returning to you under separate cover the following items:
 - a) One slice weighing 356 g. mounted in plastic.
 - b) Two butt pieces coated with thin plastic weighing 3030 g., and 956 g.
- 4) We are retaining until we receive final word from you the following items:
 - a) One slice weighing 475 g., freshly prepared and in good condition.
 - b) One slice in bad condition that seems to have been temporarily forgotten about, 410 g. plus a few grams of oxide.

5) Enclosed with this letter are prints of two recent photographs we have taken of the good slice we are retaining.

Mr. Monnig, if my figures are correct, we have accounted for 4.75 kg. out of an original weight of 6.6 kg. At least 4 cuts were made accounting for some of this loss in weight. Parts of the meteorite have decomposed, and no effort was made to preserve the oxide. The two slices and two butt pieces that have been worked on have been ground and polished several times each. Each one of the operations consumes material, so I assume that all of the material has been accounted for.

It seems to me that the future of Boaz is bleak. It has slowly decomposed while we have had it regardless of how we have treated it. I would suggest that you keep the two butt pieces as dry as possible and perhaps they will not oxidize too badly. The slice mounted in plastic should be reasonably stable as long as it is kept under conditions of uniform temperature, near room temperature, preferably. Extreme changes in temperature are harmful and direct sun light is particularly bad.

Mr. Monnig, where do we go from here? I would like to accession the 475 gram slice we retained either as a gift from you (tax deductable) or as an exchange for the work done on the specimen. I would also like to try to use part of the slice in poor condition for a good chemical analysis and metallographic study. It is a shame not to study material of this type before it decomposes so badly that it is no longer practical to work with. The work Ed Henderson had me do on rust from Boaz several years ago now is essentially worthless by today's standards (I believe about 40 g. of oxide was consumed in the process). I have put a great deal of effort recently into study of Campo del Cielo material for just this reason. Unless the material is studied now and data recorded, valuable field collections may be lost by decomposition.

I will be very interested in hearing your reaction to this. You realize, of course, that if you act promptly our customary storage charges will be considerably reduced.

Will I see you next week in Cambridge at the Meteoritical <u>Society</u> meeting? One of the interesting things to me in reading the old correspondence on Boaz were your comments about the sad state of Society affairs and how you hoped they would improve.

Sincerely yours,

Roy S. Clarke, Jr. Associate Curator

Division of Meteorites