

1973 Feb. 22

Mr. R.. D. Buchheit,
345 Darbyhurst Road,
Columbus, Ohio. 43228

Dear Sir:

Way back in June of 1969 I wrote you some queries concerning the Tishomingo meteorite specimen which you examined with such great care and enthusiasm. You replied quite amply and promptly in early July and I have been quite remiss in not thanking you adequately and sooner.

At that remote time when I wrote I really had in mind chemical composition as distinguished from structural composition, but you have explained things in a better way than I could have asked questions. I feel quite satisfied that I have grasped what you determined from your work.

I had read a lot of articles about such matters in general so far as they concerned meteorites, and I knew some of the basic points you set out, but your exposition reorganized everything properly for me and gave me some new slants, too.

I haven't seen Ed Henderson for a long time and do not even know if you are still with Batelle, but was told not too long ago that you were. I am sorry I do not get up near Columbus and not even Washington in recent years. I have been going to some of the conventions of The Meteoritical Society, the last in 1971 as I missed their Chicago session this November. The papers are growing increasingly technical and beyond my ken.

You may be interested to know that one Hassell M. Ledbetter of the Cryogenics Division of the Institute for Basic Standards with the N.B.S. at Boulder, Col.. borrowed a piece of the Tishomingo from me for studies by X-ray diffraction and by "quantitative metallography". I told him about the prior work you and Ed had done and have no idea whether he is qualified to accomplish anything of more value. He has written: "Cursory examination indicates that the light-etching constituent, the matrix, is taenite while the dark-etching constituent, the plates or needles, is Type II plessite. A metallurgist calls these austenite and martensite, respectively...the nature of these phases will be verified by us." I hate to see him use the word plessite because I had always understood as you confirmed that such a term means little beyond connoting a mixture.

Sincerely,