

1964, May 8

Dr. John W. Harrington,  
P. O. Box 1208,  
Spartanburg, S. C. 29301

Dear Sir:

Here is a copy of a letter Mr. Sam Bishop of 2305 West Shandon, Midland, kindly wrote me after looking over our correspondence about the Colorado City crater. He knows that area like a book and employs the argot of geology well so that I felt his discussion would be of interest to you.

He seemed to be puzzled by your reference to the visible rim but I feel sure you meant the primary walls, the high conspicuous rim.

My thoughts are that science started off with a recognition of a relatively fresh crater as just that—a hole in the ground with walls tilted outward, ejecta, etc. Then along came those who said that underneath all this was an anticlinal mass of jumbled breccia representing a rebound when the crater was made, so that if erosion took all the crater away you would have this "hump" exposed or at least obvious.

Now we seem to have gone a step further (see especially page 3 of Sam's letter) and we say that if we wear away the anticline we may be down to the root of the crater, where, as Sam puts it, there may be a depressing effect but due to the overburden there was no rebound and the strata remained in a depressed state or synclinal form. The crux of the logic lies in his sentence, "Somewhere, with depth, the strata must return to a normal or stay in a depressed state".

Somehow, my thinking was that under the anticlinal portion there would be only the normal—not another synclinal structure. I felt that every portion which felt the shock responded by bulging upwards. I think the anticline is supposed to have subnormal gravity because it has expanded and is not as tightly packed as normal—full of breccia and some "looseness" to put it crudely. But below the depth where there was no such response, I felt the strata would simply be undisturbed, and I do not see how or why they would sink with an inability to bounce back. I realize I may be wrong and Sam may be right, and this is an interesting new track to me. I suppose it is also what you have had in mind.

Sincerely,

cc Mr. Sam Bishop