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May 9, 1933

Dr. H. B. Stenzel  
Department of Geology  
A. & M. College  
College Station, Texas

My dear Stenzel:

At the Houston meeting I talked with you about your giving a statement for our publication on structural geology on the pre-Cambrian structural features in the Llano region. The statement, as I explained at the meeting, cannot very well stand as a separate article and can, I believe, be best used as an insert in the discussion of structural features of the Llano region. In order that you may see just how this is to fit into the manuscript I am enclosing the page that is supposed to precede your discussion. The next page following your discussion has the heading "Paleozoic Deformation."

I believe I have sent circulars relating to a proposed symposium on structural features both to Lonsdale and yourself. The third circular of this series will be issued next week and I shall send you copy.

With best wishes,

Very sincerely yours,

  
E. H. Sellards, Director

EHS:JC  
Enclosure

**Pre-Cambrian Structural Conditions in the Llano Region**

**by H. B. Stenzel**

## Central Texas

The term central Texas is here used to apply to that part of the state west of the Gulf Coastal Plain, east of the Pecos River, and east of the High Plains. Its principal geographic subdivisions are the Edwards Plateau, the Llano uplift, the Osage Plains, and the Grand Prairie.

### The Llano Uplift

The Llano uplift or Llano region is structurally a large dome located in central Texas. The formations exposed in the center of the dome are of pre-Cambrian age, these older rocks being surrounded by formations of Paleozoic and Cretaceous age. The history of this region included structural deformation antedating the Upper Cambrian, which is the oldest Paleozoic present; doming in mid-Pennsylvanian time; and faulting in or preceding Strawn time. In addition to the structural deformation of these periods the region has undergone fluctuations in elevation in Paleozoic and Mesozoic time as shown by repeated incursions of the sea across this region.

### Pre-Cambrian Deformation

There is no evidence that the deformation seen in the pre-Cambrian rocks is confined to or otherwise characteristic of this particular region. On the contrary, it is probable that pre-Cambrian deformation of the kind seen in these rocks is widespread and that these rocks are similar to the pre-Cambrian rocks elsewhere in this part of the state. This conclusion is supported by the fact that wherever the drill has penetrated to pre-Cambrian formations in central Texas, they have been found to consist of rocks similar in character to those of the Llano region. Within the pre-Cambrian is seen a northwest-southeast structural trend developed in pre-Cambrian time. ~~The uplift may therefore have in fact a pre-Cambrian antecedent.~~ The following statement on pre-Cambrian structural conditions in this region has been supplied by <sup>Dr. H. B.</sup> Stenzel/