Another check was made to confirm this time measurement using a different method called uranium fission-track dating. (Figure 3.) This process was used on uranium-bearing volcanic glass found at the site where the fossils were discovered. Based on this method, a determination was made of the ratio of the number of observed tracks (developed by etching the sample) resulting from natural fission of uranium-238 to those resulting from slow-neutron-induced fission of uranium-235 in a calibration experiment. Then, using the known ratio of uranium-235 to uranium-238 in nature, the age of the glass was computed to be essentially the same as the two-million-year-old fossils.

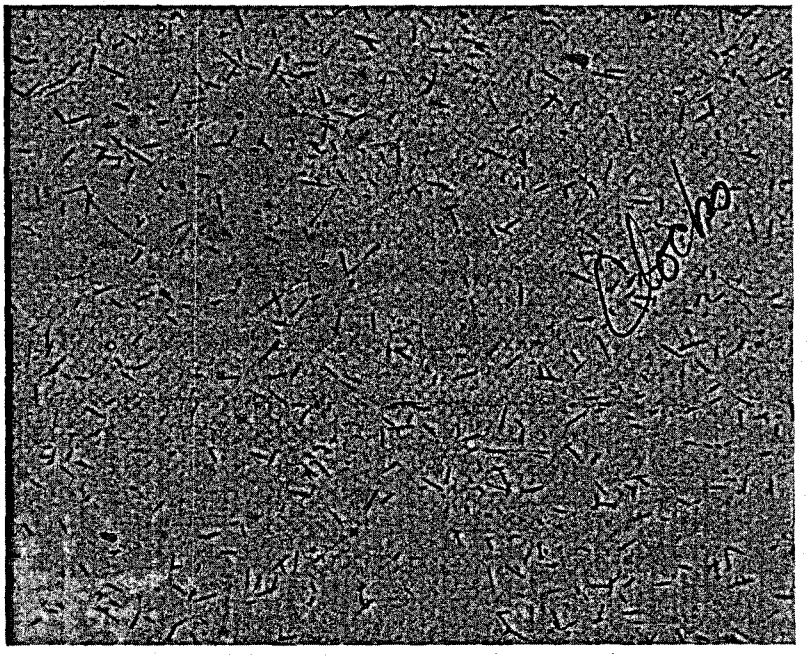

Figure 3. Tracks of uranium fission from a fossile antelope bone fragment from Hopefield, Cape Province, South Africa.

Two radioactive-dating techniques were used in combination to support the hypothesis that the continents of Africa and South America were at one time part of the same landmass and later drifted apart. Rocks of west Africa and eastern Brazil were dated, first by measuring the amount of strontium-87 formed in the radioactive decay of rubidium-87 in a total sample of rocks and then by measuring the argon-40 formed in the decay of potassium-40 in minerals separated from the rocks. The results delighted the proponents of continental drift because rocks 600