

**Book Review**  
**Grand Canyon: Monument**  
**To Catastrophe**  
**Chapter 6 – Are Grand Canyon Rocks**  
**One Billion Years Old?**  
**Review by Greg Neyman**  
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This chapter as a whole reveals the underhanded tactics employed by the young earth proponents in order to prove their point...tactics which one would not expect from Christian authors.

The author immediately begins to cast ideas of doubt and suspicion in the minds of the reader. In the opening paragraph, he says "Few people, however, have examined, critically, the methods of dating, and very few people understand the nature of the assumptions..." All of the geologists worldwide who have studied at a university are here called "very few people." However, this represents tens of thousands of people with scientific degrees. The author trivializes their academic studies, and belittles their understanding of this particular branch of science. Implied here is that the only trustworthy scientists are those of the young earth variety, of which the author is one.

To carry this thought further, the author goes into an explanation of the "assumptions" of radiometric dating, and he uses more than eight pages to explain the process, using mathematical formulas to impress the reader with his knowledge of the subject. The authors' real intent here is not to educate people on the intricacies of radiometric dating, but to gain credibility for the author so that the readers accept his arguments that radiometric dating is based on unknowable assumptions, and thus cannot be trusted. The author successfully puts forward the idea that these "assumptions" are enough to cast doubt upon radiometric dating.

However, for the scientist in the field, working with these assumptions, and knowing their limitations, radiometric dating is still a useful tool. We know that radiometric dating has its limitations, and we work within the construct of these limitations, using them to validate the results. In most instances, radiometric dates can be relied upon. There are several instances where it cannot, and we know these limitations. One of these limitations is discussed below.

**"Ages" of Grand Canyon Rocks (Page 120)**

In this section, the author proceeds to give examples, from the Cardenas Basalt, various diabase sills, and the Uinkaret Plateau Basalt. Each of these formations are of volcanic origin. In the case of the Cardenas Basalt, potassium/argon dating for these formations range from 791 to 954 million years, but when refined are given an age of 715 million years. rubidium/strontium dating yields an age of 1.07 billion years.

The sills are dated 926 million years by potassium/argon, and a spread of .85 to 1.37 billion years for rubidium/strontium. Of this spread, the author says "...is geologically unreasonable, and causes us to question these age models."

For the Uinkaret Plateau basalt, K-Ar ages vary, depending on location of the sample, from 1.2 million years to 117 million years. Rubidium/strontium ages are given in Figure 6.6 as 1.34 billion years.

The authors go on in the next section to say these dates must be challenged. Here is the problem...they already are not trusted by geologists. What is really happening in this chapter...let's see.

### **The Truth about Austin's Methods**

Geologists have known for many years (at least the last 40) that radiometric dating for young volcanic rocks is unreliable. In discussions with other geologists, I've learned that young volcanic rocks such as these are perfect for what Dr. Austin is trying to do...discredit radiometric dating. Dr. Austin knows this, yet he proceeded to date these rocks anyway, knowing that the dates he would get would be unreliable. It is also understood from one source that the laboratory that did the testing advised Dr. Austin that he would not get an accurate date. Dr. Austin was not after valid dates...he was after erroneous dates, and he knew how to get them. I leave it up to you to decide the ethics of his methods.<sup>1</sup>

Here are some other issues with Dr. Austin and radiometric dating.<sup>2</sup>

- According to one geologist, when examining Dr. Austin's work on a Mount Saint Helens dacite, Austin used the old, conventional method of potassium/argon dating. This method has been discredited for many years. Austin's work was published in 1996, well after the method was discredited
- Dr. Austin admits there is excess  $^{40}\text{Ar}$  in his samples, but he makes no attempt to correct for the excess Ar when calculating the ages

Normally, a geologist doing meticulous work would use the correct formulas when calculating the ages of the rocks. Also, if a geologist knows about the excess argon, as Dr. Austin does, he would compensate in order to account for the excess argon in his equations. Choosing to use an outdated calculation method, because it gives you the best results for disproving radiometric dating, is suspect behavior for a reputable scientist.

This sums up this simple review of this chapter. This review shows you the depth that young earth creationists will go in order to prove their agenda. For those wishing to delve deeper into the scientific principles behind dating Grand Canyon rocks, check out the following online articles:

**A Criticism of the ICR's Grand Canyon Dating Project** - This excellent critical review of ICR's tactics and science is enlightening.

<http://www.talkorigins.org/faqs/icr-science.html>

**Radiometric Dating - A Christian Perspective** - Explains radiometric dating and its usefulness. One need not abandon the Bible if they accept long ages from radiometric dating.

<http://www.answersincreation.org/radio-christian.htm>

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<sup>1</sup> Discussion group email, dated 5 April 2003

<sup>2</sup> Discussion group email, dated 7 April 2003