

numbers of mineral deposits which the old "hit-and-miss," random explorations would never have revealed. For example, many ancient gold seekers, not understanding these past events, wasted their time and efforts looking for gold in sedimentary layers which were far from any outcrop of gold-bearing igneous rock. Likewise, a host of other prospectors in the past have been frustrated because they had no understanding of the natural orderliness of the earth's strata. But in this present generation, prospecting for minerals and petroleum, being based on a fairly adequate understanding of events of the past, is highly successful.

Thus the various branches of science have greatly amplified man's early knowledge of the orderliness found in nature. As a result, the human population has been benefiting immensely from this revealing of "earth's secrets."

The Methods of Science

At this point it is logical that we briefly examine the nature of the scientific methods man uses for investigating the created world. People often misunderstand the work of the scientist. Some think of his work as a creating (or inventing) of new ideas, instead of a discovering of facts and principles. Others think of scientific research as a sort of game in which the scientists select what evidences they want and throw out the unwanted.

Actually scientific research is an investigative process in which all observations are used as a basis for the most unbiased conclusion. (We must of course remember that when we say "all observations" we will exclude those measurements or readings which have been distorted by error or by some irrelevant factor. For example, if the temperatures at various points in a lake are being measured periodically for the purpose of determining the amount of natural seasonal temperature fluctuations, one should discard a thermometer reading which was inadvertently taken near to a release point for waste from a sewage plant.) There is nothing mysterious, secret, or tricky about scientific research. In reality the work of the earth scientist consists of a reading of the record of God's works. It is true that such a scientist may not always be aware of the Creator who formed the meaningful record which he investigates, but this lack of awareness does not invalidate the results obtained.

Another way to define the work of a scientist is to say that it is a collecting of data and an investigation of the meaning of that data. The word "data" refers to observed facts or bits of information. These are the raw material from which scientific principles are derived.²

It has sometimes been said that even the collecting of data by a scientist is influenced by the personal bias and prejudice of the scientist. In the strictest sense there is probably truth in this statement, for we have limitations as to the perfection of our work. However, it is very incorrect to say that a significant amount of bias is always present. Consider how absurd it would have been