

In New Zealand, where most parts receive a generous rainfall and where water at shallow depths saturates the detritus of lowlands and is present in the innumerable joints and fissures of the more compact rocks, most random bores will get some water, and, with intelligent selection, the results would be better and certainly sufficient to keep the belief in dowsing alive or even to cause it to flourish. So far as is known, however, the diviners in New Zealand have totally failed to locate any commercial deposit of gold, coal, or oil; in the last few years eight positive clear-cut cases have come under the notice of officers of the Survey in which sites, selected by dowzers, three for coal and five for gold, and explored in depth by drill or drift, yielded nothing of value to the miner or even of interest to the prospector. Some ten years ago the Anglo-Persian Oil Co. carried out an exhaustive series of tests in oil-divining. Sir John Cordman regards the results as a "complete fiasco" (J. W. Gregory, *Water Divining*, p. 12, Public Works Roads and Transport Congress, 1927). Inexplicable failures of the rod to trace water-flow at shallow depths have occurred; at Arapuni several diviners are said to have failed to locate leaks in the headrace, and at least one walked over the Waikato flowing through the diversion tunnel without his rod responding.

More than with any other mineral product the prospecting for petroleum and the selection of bore-sites is peculiarly the province of the geologist. The world's oil-supply depends entirely on his efforts. The basis of his work is the collection of relevant and verifiable facts. He may trench and bore to get some critical facts and collaborate with several kinds of technical experts to get others. The mass of facts set out on maps and the geologist's discussion of his deductions and recommendations are considered by other geologists of long experience and proved capacity. Then, if the facts are sufficient, the deductions valid, the recommendations reasonable, and the factors of finance, markets, &c., favourable, boring is undertaken and may be successful. The procedure involves much hard work and costs a great deal of money. Now divining has been practised for many centuries, it would obviate vast expenditures, and surely if it had the slightest value the intelligence of directors and the cupidity of shareholders are enough to ensure that a diviner would be on the staff of every oil company; indeed, he would be the key man of the business. But practical tests innumerable, as well as more rigid scientific trials, have amply demonstrated that the short-cut to achievement offered by the diviner, though it may be alluring, is wholly illusory.

The scientist cannot refute the dowser's claims; magic and witchcraft were not disproved and never will be, but most people have simply ceased to believe in their cruder forms. Perhaps the most important characteristic of scientific method is the constant reference back to verifiable facts, but the diviner's reactions cannot be verified. Divining, indeed, is a form of magic, the dowser arrives at his results by methods wholly alien to those of science, though he may make use of the latest scientific jargon. The advances of science, often comprehensible only to the expert, tend to become invested with the very qualities of magic that science in making her discoveries had to abjure. Witness the cranks who, juggling with radio-electricity, the quantum theory, and other uncomprehended terms, purport to discover perpetual motion, the death-ray, and the manufacture of gold.

People like to hear of vast untapped oil-fields and other sources of wealth, and the press will devote columns of space to diviners' "discoveries"; the geologist's bald statement that there is no evidence may get a few lines. The rod's "location" of abundant underground streams or of a lost water-main has news value, but the uninteresting fact that drilling has failed or that the main is not where stated is not recorded. Undoubtedly this uncritical attitude of the press combined with the obvious sincerity of the great majority of the diviners has a great deal to do with the persistence of the wide-spread belief in divining in spite of the repeated and complete exposure of its fallacy.