

operate for two or three years, instead of the shorter periods to which previous programs have been intentionally limited. Members may join at the beginning of each quarter-year. Under previous plans members were accepted only at the beginning of the program and for the entire length of its operation.

Dues will be increased slightly. They will be set at \$33 per year, it is now planned. Under the last plan, the dues were \$2 per month for each of the eight months of the plan.

## GEOLOGY

## Artificial Earthquake Reflections Show Oil

**N**EW prospecting methods may soon be needed in the great oil fields of the Texas-Louisiana Gulf Coast area. Like fishermen combing the sea for fish harder and harder to find, the oil prospectors have gone to increasingly finer "nets" to trap their sought-for oil deposits.

In the good old days exploratory wells were drilled, in geologically-typical formation, and often struck oil. Then came the core drilling methods which brought up to the surface samples of underground rock for examination and analysis.

Next, at least in the Gulf Coast region, reports E. DeGolyer to the American Petroleum Institute, came refraction seismology, which used dynamite blasts to set up sound waves in the earth's crust, and then studied their speeds of arrival several miles away.

In the salt dome oil region refraction seismology worked splendidly, for the waves travelled through salt at a speed of some 15,000 to 16,000 feet a second. In neighboring clays and rocks the speed was less than half that much. If the sound waves through the earth from the man-made earthquakes arrived at the receiving station much quicker than normal there was good chance that a hidden salt dome was in between. And in that region this usually meant oil.

Refraction seismology proved extremely successful in the seven short years it took to explore the Gulf Coast. For a cost of from \$20,000,000 to \$30,000,000 some 60 salt domes were located, or as many as previously had been known to exist in the region. The ability of this method, however, now seems to be exhausted, states Mr. DeGolyer.

The newest method is reflection seis-

Efforts will be made to bring the health program closer to the members, by community organization if necessary, in order to arouse in the members a feeling of responsibility for the plan which they have not heretofore shown.

Medical groups in North Dakota are eager to have the new program started and on a long-time basis. They point out that the present custom of operating the program for a limited time, stopping and starting it, is enough to make a program fail.

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mology and oil prospectors are recombining the Gulf Coast with good success. What will come after this method no longer is practical, is unknown but it may be a form of soil gas analysis.

Despite the increasing difficulties of finding oil, the improvement of methods has actually lowered the "prospecting cost" hidden in each barrel of oil that goes to the consumer. In the early 1920's this ran as high as 25 cents a barrel. Today it is only 10 to 12 cents a barrel.

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## ARCHAEOLOGY

### Ten Years to Restore Mammoth Stone Circle

**F**OR CENTURIES, says a British archaeologist bluntly, the stone circle of Avebury has been "the outstanding archaeological disgrace of Britain."

But now, a ten-year campaign is underway to clean up Avebury and set the pattern of stones in place as nearly as possible the way prehistoric Britains left them.

Avebury rates special care, for it has been called the most impressive megalithic monument in the world. Far bigger than Stonehenge, the circle of ancient ceremonies encloses an area 1,130 feet in diameter.

Around the western rim, now, more than half the original stones stand erect. But back of that simple statement is a struggle of archaeologists to cope with three-foot heaps of broken bottles, tins and rusty pig wire; not to mention jungle growth, and derelict cottages, now at last removed.

Progress thus far is reported by Alexander Keiller of the Morven Institute of

Archaeological Research, in the British journal *Antiquity*.

Mr. Keiller concludes that at first, in the early Bronze Age, three small circles of stones were ranged in a row at Avebury. Then, later in the Bronze Age, builders had a far grander idea and formed a huge circle. They ignored the earlier plan, if indeed they knew of it. This second Avebury is a ditch forming the mammoth circle, a bank outside that, and a single line of big stones inside it.

Some of these stones have been completely buried. Unearthing one, the archaeologists found a skeleton of a medieval workman, killed suddenly by accident while burying the stone. It happened in the fourteenth century, judging by two silver pennies of Edward I, minted at Canterbury in 1307, which had been in a pouch. The unfortunate man was a barber, for with him were his pointed scissors.

Avebury is now attracting thousands of visitors, and a museum has been opened to hold the accumulating evidence of its long story.

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## ARCHAEOLOGY

### Nestor's Palace of "Odyssey" Fame Unearthed

**E**XCITED over discovering ruins of Nestor's Palace, famed in Homer's "Odyssey," archaeologists are eagerly examining more than 600 Greek documents from the ruins, written in a baffling script.

The palace, identified almost certainly as the place where wise Prince Nestor entertained and advised young Telemachus in Homer's tale, has been found by the Ionian Sea on the promontory of Pylos.

Prof. Carl Blegen of the University of Cincinnati, noted for his discoveries at Troy, and Dr. K. Kourouniotis, director of the National Museum at Athens, are in charge of the excavations. The palace is revealed as a large residence, strongly built of stone with columns and fresco decorations.

Palace archives, stored in a small room, survived the fire that wrecked the ancient palace. Written on clay, they are in the mysterious kind of writing that was used by the brilliant civilizations of the Island of Crete. They prove that Greeks of the thirteenth century B. C. borrowed this script from Crete. Scholars can decipher only a few signs, but they recognize many of the archives as lists of men and goods, probably tax records.

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