

GEOPHYSICS

Radio Waves Pierce Earth

► PROGRESS in sending radio waves to greater depths in the outer crust of the earth is reported from Texas. Radio waves are stated to have been transmitted through 1,125 feet of earth, rock and salt.

In a demonstration by William M. Barret, geophysicist of Shreveport, La., at the Morton Salt Company's mine at Grand Saline, Texas, new principles and apparatus were used. Radio waves at a frequency of 1602 kilocycles were sent from a portable transmitter located on the earth's surface to a receiver positioned at a depth of about 700 feet within the mine and far removed from any metallic objects.

The transmitter and receiver were separated by approximately 700 feet of sedimentary formations, some 25 feet of cap rock, about 400 feet of salt and 100 feet of air. Elaborate precautions were taken at the surface and underground to prevent any of the radio signals reaching the receiver through air or metal at the mine shaft, which was separated from the receiver by 1,800 feet of circuitous tunnels.

According to Mr. Barret, the method developed by the company of geophysicists of which he is president has possible applica-

tions in searching for oil and other minerals. In it, as explained by him, radio waves from the transmitter pass into a unique type of radiating mechanism which directs waves into the earth with far greater effectiveness than heretofore possible with conventional transmitting antennas.

The receiver used in the mine was a conventional type equipped with a radically new type of antenna, which served to collect the wave energy from the transmitter and bring it to the receiver. The radio signals received in the demonstration were heard

over a loud speaker while the test was underway, despite the fact that they had travelled through several fresh water sands and some five to nine feet of porous cap rock carrying salt brine.

Considerable research has been carried out during the past decade or so in attempting to send radio waves through earth as an aid to underground explorations. In this, both the U. S. Geological Survey and Bureau of Mines has been active. The latter agency has been particularly interested in saving the lives of miners entrapped underground. With the use of low-frequency waves, it has successfully transmitted the human voice through ground strata alone, and also by way of trolley wires, pipes and other metallic installations.

Science News Letter, April 2, 1949

PSYCHOLOGY

Women Judge Character

► WOMEN are slightly better judges of character than men when it comes to simply looking at a person's face.

This is the finding of a London psychologist who showed subjects the portraits of historical characters. Only the faces from little-known portraits were used so that the "judges" would not recognize any of the historical personages.

J. S. Wilkie of the University of London enlisted the aid of a historian in judging the true characters of the persons in his portraits.

More than 60 subjects judged the characters from the portraits, in such terms as intelligent, dull, kind, unkind, proud, humble and so on.

Women and persons over 30 did better at spotting the actual known characteristics from the faces than did men or persons under 30 years of age.

Among the historic figures used in the experiment were King Louis XVI of France, the French revolutionist, Robespierre, and the famed Prussian military leader of the war of 1870, Helmuth von Moltke. The latter's portrait produced the most true judgments, while Robespierre's portrait had the least consistent judgments from the subjects.

Superiority of women judges over men showed up most definitely on King Louis, while older judges, over 30, showed their powers better on Robespierre.

Reporting his findings to the American JOURNAL OF GENERAL PSYCHOLOGY (Jan.) the London psychologist says that liking or disliking the person in the portrait was most important in the judging. If the subject liked the face, he consistently said it was due to frankness, sense of humor and high intelligence.

Of "particular interest," he notes, was the importance given to sense of humor by English subjects.

From the face-judgments came an ideal: "a frank, sincere person with a sense of proportion, kindly and intelligent, affectionate and dependable."

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Words in Science—

FIDO

► FIDO saves lives, but it is no canine hero. The name comes from the words, fog, intensive dispersal of. It applies to systems for clearing fog over airports by the use of heat.

The name was given by the British during World War II, when systems were developed to clear the famed English fog at British bases. Now, FIDO is being modified for commercial use.

Essentially, a FIDO system consists of a series of burners which heat the atmosphere over a foggy runway. This raises the saturation point of the air, enabling it to absorb the water vapor of which fog consists.

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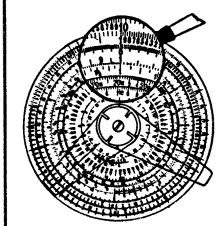


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