the house, is used for storing and distributing the heat.

Once warmed by the sun, the water is pumped into an insulated tank in which it is held for use during sunless hours. The tank has a capacity of 1,200 gallons of water which should, during an average January day, rise in temperature a few degrees more than it falls at night, thereby storing heat energy for sunless days.

The heat-storing equipment is designed to keep the house at 68 degrees Fahrenheit night and day. However, supplementary heating has been provided by means of electric heaters which will go into operation if the inside temperature drops to 65 degrees. One room of the building is used for recording instruments to keep a continuous record of the temperatures. The other rooms are to be used as a home for an institute student and his family.

The parts of the entire system include the roof collectors, an attic storage tank, a radiant ceiling heating unit, two circulating pumps, and controls. Whenever the sun heats the water in the roof collectors to a temperature above that in the storage tank, a pump circulates the water from storage tank to roof and back. At other times the flow is cut off. Warmed water for room heating is circulated by the second pump.

Science News Letter, February 19, 1949

NUCLEAR PHYSICS

Tips To Uranium Hunters

➤ AMERICAN scientists and atomic prospectors hunting for the atom bomb element uranium got some tips from behind the Iron Curtain.

A relatively simple mathematical formula for telling how much uranium is concentrated in rock, using a Geiger-Mueller counter, was reported in SCIENCE (Feb. 11).

The authors are A. Szalay and Eve Csongor, Hungarian physicists at the University of Debrecen, Debrecen, Hungary. Their findings were made during a search for uranium in the Velence Mountains in Hungary. They do not discuss whether or not they found important new deposits of the radioactive element in their survey.

But they do believe they have discovered an important aid to uranium hunters, which they are passing on to Americans.

Geiger-Mueller counters, usually known only by the first name, are essentially tubes with a delicate electrical balance and amplifiers for giving off a sharp click when radiation strikes the tube and changes its electrical charge. The Hungarian scientists point out that the counter is used in prospecting for uranium to reveal the presence of radioactive materials.

The problem they claim to have solved is determining from the number of clicks, with the aid of mathematical formulae, how much uranium is in the rock.

Here's the way the Hungarian physicists advise prospectors to find out in a hurry how much uranium is in rock:

Shield the Geiger counter tube—any commercial tube size—with a thickness of two millimeters (about eight-hundredths of an inch) of lead. Place the counter against the rock. Cosmic rays from outer space will make the counter click, even with no radioactive material in the neighborhood, so the clicks of the counter minus the cosmic ray count will give "x" times the cosmic ray count. That is, if the cosmic ray count is 10 and you count 30 clicks, "x" is two (10 cosmic clicks and 20 uranium clicks).

The quantity of uranium in the rock is "x" times 25 grams of uranium per metric ton of rock ("x" times nearly nine-tenths of one ounce of uranium for about each 2,205 pounds of rock). If "x" is two, the rock would have only about one and eight-tenths ounces of uranium in each metric ton.

This fairly simple method is suggested by the Hungarian scientists for use by uranium explorers who want to cover lots of ground in a short time.

Science News Letter, February 19, 1949

The principal food of *wild hawks* is destructive rodents, not chickens as many believe.

Question Box

Photographs: Cover, Air Materiel Command; p. 115, Massachusetts Institute of Technology; p. 117, General Electric Co.; p. 119, U. S. Air Force.

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