tric power in large quantities could be purchased from government-owned hydro-electric plants in western areas, or the great resources of oil shale, very near the phosphate deposits, might supply cheap fuel. This shale oil cannot be produced profitably and shipped any great distance by processes known today. But if the oil were used at the phosphate smelting plants, nearby, perhaps the project could be worked out. All this, however, is for the future. A more immediate possibility is the use of coal available within 25 miles of the phosphate field. At Anaconda natural gas is available at a very low price.

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GEOLOGY

Crystals in Antarctic Rocks Revise Geologic Theory

GRIMY, greenish-gray rocks, broken from the ice-carved, windswept slopes of an extinct volcano in the almost unexplored Raymond Fosdick Mountains of Antarctica by Dr. Thomas C. Poulter, senior scientist of the second Byrd Antarctic Expedition, may increase our knowledge of how rocks are formed.

Reporting the results of a study of these rocks to the Geological Society of America, Dr. C. N. Fenner, rock expert of the Carnegie Institution's Geophysical Laboratory, in Washington, finds that old ideas of rock formation need to be reviewed.

Until recently, it was believed that molten rocks deep under the earth's crust resembled basalt, a dark heavy rock, of which the Palisades of the Hudson, the Giant's Causeway in Ireland, and other famous clifflike structures are made. As these molten rock masses came near the surface, certain compounds in them crystallized as the rock cooled, leaving other mineral compounds molten until further cooling took place, and changing, as cooling went on, the chemical composition of the remaining molten material.

According to this theory, which has received much support, alkaline materials should crystallize first from a molten rock magma, leaving it more acid than before. The rocks from the Antarctic, however, do not follow the theoretical rules of change, suggesting to the geophysicists that laboratory conditions do not duplicate field conditions very closely, and that tests should be made of the rocks themselves and their minerals, and not of laboratory specimens under simpler conditions than those existing in nature.

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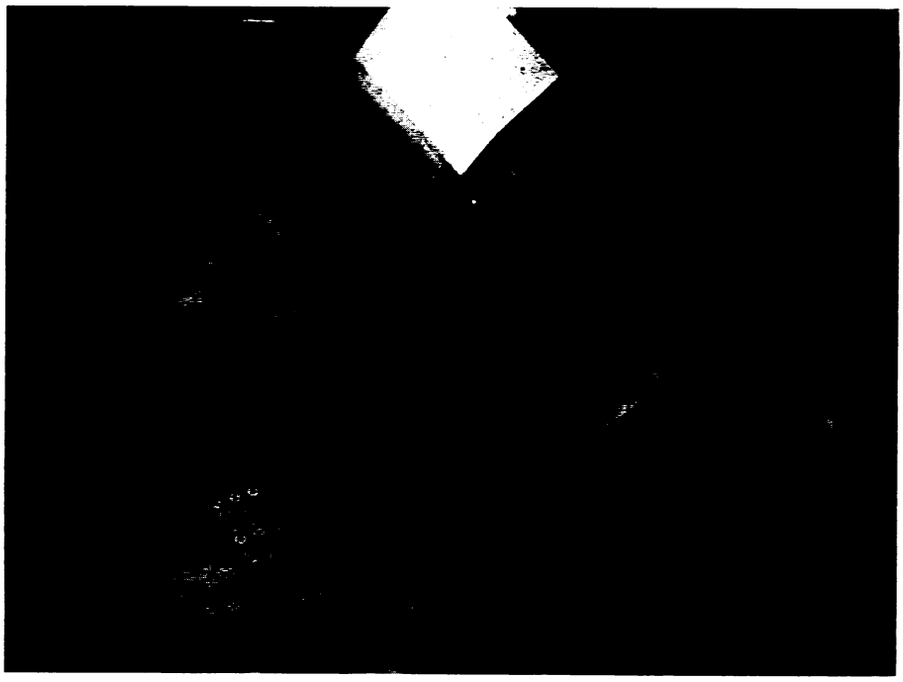

CHILD OF TOMORROW

Now, a reading machine joins the typewriter and adding machine as the latest addition to the gadgets of a "mechanical" education age. This ultra-modern four-year-old looks inquiringly at a page thrown on the screen of Science Service's machine for reading books recorded on microfilm. Libraries and scholars are using microfilm in increasing numbers to record on a few feet of film books and manuscript that would otherwise take up tremendous space.

PHYSIOLOGY

Night Blindness May Be Cause of Auto Accidents

UNTOLD numbers of children in America are today eating spinach, not because their parents tell them "It's good for you," but because a popular animated cartoon character performs prodigious and fabulous feats on the motion picture screen after partaking of this green vegetable.

With the merits to children a matter for the nutrition people to decide one can go on and add, however, that it might produce a more immediate and beneficial result for the country if the parents—and not the children—ate the spinach, or plenty of green and yellow vegetables.

The reason is that these vegetables contain vitamin A. It is now found that the lack of vitamin A can be one of the causes of "night-blindness" which is recognized as a major factor in night accidents in driving.

Night-blindness is the failure of proper regeneration of the chemical known as visual purple which is found in the retinal rods of the human eye. This visual purple is rich in vitamin A.

Glaring headlights produce temporary blindness lasting a second or two in a person with normal vision. In a person with night-blindness this effect, due to glare, lasts appreciable lengths of time. And, in a motor car travelling at a high rate of speed, a night-blinded person may have travelled several hundred feet in which control of the car is more by habit than by visual knowledge of road conditions ahead. There is no known cure for night-blindness, say physicians, but a liberal supply of vitamin A may, at least, give the eye the material it needs to prevent the onset of this condition. Do I hear little Johnny saying, "Pop, you better eat your spinach?"

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