

GEOLOGY

Last Glacier Melted Only 11,000 Years Ago

► **RADIOCARBON**, the atomic calendar, has revealed that the last great ice cap to cover North America was much more recent than geologists have suspected.

An ice sheet which reached as far south as Buffalo, Saginaw, Milwaukee and Minneapolis began to melt only about 11,000 years ago, Dr. Richard F. Flint of Yale University reported to the Geological Society of America in Washington.

It had been previously estimated that glacier ice stood along this line no less than 25,000 years ago.

The new date was obtained by measuring the decay of carbon 14, a radioactive isotope, in a layer of peat overlooking Lake Michigan in northern Wisconsin. By use of a radiation counter, the time at which the peat was laid down could be estimated with possible error of only a few hundred years.

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MEDICINE

TB Remedy Tibione Promising for Leprosy

► **TIBIONE**, a chemical developed in Germany as a tuberculosis remedy, is the most promising new drug for leprosy at present, Dr. Paul T. Erickson of the U. S. Public Health Service reported at the New York Academy of Sciences conference on leprosy.

One of the so-called mold remedies, aureomycin, and para-aminosalicylic acid, called PAS for short, also have shown early good effects on leprosy sores, Dr. Erickson said. Cortisone, the anti-arthritis drug, also may be helpful in some phases of the disease, it appears from limited experience with it.

The most important single advance in treatment of leprosy occurred in 1941. That, Dr. Erickson said, was the introduction of sulfone drugs. The most recent of these is promacetin. These drugs have largely replaced chaulmoogra oil. With the mold remedies and measures for improving the patient's resistance and caring for complications, the sulfones have "materially altered the outlook for the leprosy patient and the curability of the disease."

A new method of testing the effectiveness of leprosy drugs in one-twelfth the time previously needed was reported by Drs. E. Grunberg and R. J. Schnitzer of Hoffmann-La Roche laboratories, Nutley, N. J. The method makes use of mice as testing animals.

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Although attempts began about 1850 to produce *titanium* metal from its plentiful ores, it is only in the past decade or so that commercial production methods have been developed.

RESOURCES

Soviet Uses Synthetics

Lacking petroleum supplies, Russia depends on coal and oil shale to produce additional supplies. Would need new source in case of war.

► **TO COMPENSATE** for their lack of petroleum supplies, Russia and her satellite countries use the expensive processes of making liquid fuels from coal and oil shale to produce additional supplies of oil, according to Dr. Gustav Egloff, Universal Oil Products Company, Chicago.

This statement was made in Los Angeles at the meeting of the American Petroleum Institute attended by oil men from all parts of the country. How much liquid fuel is being produced by Soviet countries is not known, he stated.

Current plans in eastern Germany call for the production of 20,000 barrels a day of automotive fuels from lignite, he said. In Czechoslovakia a coal-hydrogenation plant is available for producing 30,000 barrels of gasoline a day. It seems reasonable to estimate that at least 100,000 barrels a day of synthetic liquid fuels from coal and oil shale are being produced in Russia and controlled countries, he said.

The combined total of crude oil and synthetic oils produced in the Soviet area amounts to about 1,000,000 barrels a day,

he stated. This is less than 10% of the total world production.

Total world production of crude oil is about 10,500,000 barrels a day. Of this, the United States produces approximately 52%; the Middle East 17%; Venezuela 14.5%; and Russia and her satellites only 8%. The strategic oil supplies of the world are located in two principal areas, fields bordering the Gulf of Mexico and the Caribbean Sea and those of the Middle East including Iraq, Iran and Arabia.

In any long conflict Russia would have to get more oil, and the Middle East stands as the most obvious point to seize because of its proximity. Control would not only divert supplies to Russia and triple her available resources, but also would cut off this source of oil from western European countries, leaving them more prone to invasion. Russia is reported to be fomenting border incidents and tribal wars in Iran, he declared, with the evident aim of developing a weak spot which will be ripe for invasion.

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RESOURCES

U.S. Needs Synthetic Fuel

If United States is to be independent of foreign countries in the future, we must rely on synthetics to supplement domestic petroleum.

► **BARRING** unexpected developments in atomic or solar energy, a time will come when America will have to rely on synthetic liquid fuels and imports to supplement domestic petroleum, Dr. James Boyd, director of the U. S. Bureau of Mines, told the American Petroleum Institute.

Of these two sources only synthetics can offer an assured supply from known resources within our own borders, he said. This supply is not subject to vulnerable sea lanes, foreign expropriation or exorbitant taxes and concession fees.

"For some years new oil fields discovered in the United States have been decreasing in size and importance," he declared. "The opposite is true of discoveries made abroad. Whereas the average new field found in this country rarely exceeds 2,000,000 barrels of recoverable oil, the 300 fields discovered abroad during the two decades prior to 1943 have an estimated ultimate yield averaging about 100,000,000 barrels each.

"Our potential oil land, of course, has

been far more intensely explored. We have drilled one wildcat well for every 12 square miles of average land area here, in contrast to one drilled for every 480 square miles abroad. We now have less than one-third of the proved oil reserves of the world, and the land area of Russia alone may be a greater potential source of new oil than continental United States."

Work in the United States in making synthetic liquid fuels from coal, oil shale and natural gas, both by the government and private industry, was reviewed.

Gasoline and other synthetic fuels will soon be in production commercially by a private plant in Texas which will use natural gas as a raw material. Research and development show that high-quality liquid fuels can be obtained economically from coal and oil shale. Both of these are available in vast quantities within this nation's borders. Improved processes are lowering the cost.

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