

## SEISMOLOGY

# Record Quake in Assam

► ONE of the "greatest earthquakes in history," possibly causing considerable loss of life, occurred in the same region where, in 1897, the strongest earthquake ever reported also occurred.

This is the region of the northern Burma, China and Assam province border, made famous during World War II by the Burma Road. The epicenter of the earthquake has been set at 28 degrees north latitude and 97 degrees east longitude, the Coast and Geodetic Survey reported and is accurate within one degree.

Exact number of lives lost and amount of damage caused is still to be determined because of communications difficulties from that area. It may take weeks to learn the full extent of damage.

The earthquake was scaled at a magnitude of 8.4. Top of the scale, based on the worst earthquakes of the past, is 8.5. The 1897 quake occurred before instruments were used to record magnitudes, but seismologists credit it with being the strongest on the basis of reports at that time.

The explanation of why we have earthquakes is relatively simple, but predicting when and where they will strike cannot be done with any accuracy.

The solid, rocky crust of the earth is always in a state of strain and is acted upon by shifting forces. When the rocks shift a little to relieve the strain, they cause an earthquake. The waves set up by this earthquake in the rocky material of the earth spread out like ripples from a stone in a pond and are detected on delicately balanced seismographs half way round the world.

Science Service helped to locate this earthquake by passing coded telegraphed

information from the many institutions that record information on their seismographs to the Coast and Geodetic Survey in Washington, D. C., for computation of the quake's epicenter.

Science News Letter, August 26, 1950

## METALLURGY

## Slag-Fuming Recovers Metal from Smelter Waste

► RECOVERY of strategic metals, such as lead and zinc, from waste piles at smelters by a wartime process known as slag fuming is proving a success and a third installation is now being made.

The waste piles are the heaps of slag from ore-bearing rock, the material that remains after ordinary smelting operation has been carried as far as economically possible. This slag, or tailings as it is sometimes called, still contains considerable metal and salvage of the metal is particularly important where known deposits of the ore are becoming depleted.

The fuming operation, as described by D. V. Sherban of the Babcock and Wilcox Company, is a process in which zinc or lead, in the form of vapor or fumes, is boiled or "fumed" up from the surface of a furnace-load of molten slag. The vapor is converted into a metallic oxide which is cooled as a solid, or as a powder known as "fume," for further processing into finished metal.

Three installations for slag-fuming have been made in North America, Mr. Sherban states. His firm has worked closely with the smelting industry in developing and manufacturing the equipment for this purpose.

The first was made in 1943 at Kellogg,

Idaho, by the Bunker Hill and Sullivan Mining Company. The second was made in Texas at El Paso for the American Smelting and Refining Company and went into operation about two years ago.

The latest installation is near the Arctic Circle at Flin Flon, Manitoba, where the Hudson Bay Mining and Smelting Company has an 800,000-ton accumulation of residue estimated to contain 26% of zinc alone.

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