## NEW MANGANI PLANT GOES INTO PRODUCTION

Milling operations at the Mangani Mine in Sumatra will start during the first week of April. This property will be the first gold lode operation to be brought into production by the Marsman interests outside of the Philippines.

The Mangani plant is located in the Barisan Mountains directly on the equator, longitude  $100^{\circ}$  18' East. It is about 60 kilometers from Pajacombo and 190 kilometers from Padang, the nearest seaport. Access to the property is made either through Singapore, up the Siak river via Pakan Baroe, or, from Batavia up the southwest coast of Sumatra to Padang, and thence by automobile road via Pajacombo.

The old Mangani mine was worked primarily as a silver producer. The ore was high in manganese and was very refractory; from all accounts this ore taxed the metallurgical talents of all Europe and America in working out the economic method of treatment. The present ore bodies, however, contain approximately 2/3 their values in gold, and are not especially refractory.

The property was operated intermittently from 1912 to 1931, and treatment plants of many types and designs, and in various stages of preservation can still be seen in the vicinity. During these periods of operation around 832,000 metric tons of ore were treated, from which 176,064 ozs. of gold and 7,588,448 ozs. of silver were recovered, the value of both being about 25 million pesos.

The new mill is an all slime cyanidation plant. The ore is dumped from standard mine cars over grizzlies directly into two  $10^{\prime\prime} \times 18^{\prime\prime}$  Krupp crushers. The crushed ore and grizzly undersize unite and are conveyed to a Traylor washer. The washer oversize goes directly to a storage bin, and the washer undersize to a 30<sup>''</sup> Akins classifier. The sands from the classifier



The new Mangani plant

join the washer oversize and the slimes directly to the thickeners. **2**0 All washing and grinding is done in cyanide solution. From the storage bin. the ore is crushed through a 1'-8''Traylor fine crusher to minus 1/2''and is conveyed to the ball mill ore bin ahead of a 6' x 8' Traylor ball mill. From here the usual practice of thickening, agitating, and filtering is followed, using three stages of thickening and two stages of agitation. The Crowe-Merrill bag type method of precipitation with zinc dust is employed, the solutions being clarified through Butter's type canvas covered frames prior to precipitation.

Recovery of 90% of the gold and 75% of the silver contained in the ore



P. M. Matthyson, left, and J. P. Crowder at Mangani.

is indicated. Test work was done on ore samples assaying approximately .20 ozs. of gold and 8.00 ozs. of silver per ton.

Power for the mine and mill is furnished by the Brani 1250 H.P. hydroelectric plant, while the Ramboetan 200 H.P. hydro-electric plant supplies the power for the camp and shops. Power is transmitted from Brani at 6,000 Volts, transformed and distributed through the plant at 1,000, 500 and 250 Volts. All motors are of the 50 cycle, 3 phase type.

Rainfall is in the neighborhood of 250 inches per year, thus insuring ample water for power and other purposes. The elevation of the mine is around 2,700 feet, and while the temperature during the day is often warm, the nights are cool and pleasant.

Mill construction was under the supervision of C. A. Weekley, general mill and smelter superintendent of Marsman & Company, Inc., while P. M. Matthyson is general superintendent.

