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SUBJECT Hydroelectric Plants on the Rama and Neretva Rivers near Jablanica

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1. The largest objective of the five year plan of Bosnia and Hercegovina is the construction of two hydroelectric plants on the Rama and the Neretva rivers, near Jablanica. The plants were planned by Engineer Jaroslav Cerni, and construction is executed by Hidrogradnja construction enterprise of Bosnia and Hercegovina, under the management of Engineer Danilo Protic.

2. The works chiefly consist of five large construction areas, three of which are above ground and the other two underground. They extend over a huge territory which follows the whole course of the Rama river from Stit (Kovacevo Polje) to the Rama's junction with the Neretva river, and on the Neretva river from Konjic to Jablanica, a length of approximately 50 kilometers. One of the plants will be built on the Rama river and will be known as "Rama". The other plant on the Neretva river is to known as "Jablanica". Since neither river has enough water in the summer time, two artificial lakes are to be constructed on the two rivers, one above the other so that water from the Rama lake after passing through the Rama plant, will enter Neretva lake, and feed the Jablanica plant.

3. The first construction site is located in the middle of the course of the Rama river, where the first big dam is being built. This dam will close the upper course of the river and form the first artificial lake which will extend on the Kovacevo Polje (Field) from Stit to the entry into the canyon, a distance of about 10 kilometers. The lake will have a capacity of approximately one hundred million cubic meters of water. The dam will be of earth 500 meters long, its base will be 300 meters wide, and the top a mere 50 meters. The dam will contain a million and a half cubic meters of earth and other construction material.

4. The second construction site is an underground canal, 10 kilometers and 325 meters long. (Incidentally, it is the longest subterranean canal in Central Europe). It leads from the lake for approximately 10 kilometers, then rises abruptly at an angle of 90° and is syphoned and distributed to the turbines, from which it is discharged into the Neretva lake. The fall of the water in the "Rama" plant is 300 meters. In spite of the fact that this plant has less water than the Jablanica plant it will be just as strong because of the depth of the fall.

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5. The third construction site is situated above Jablanica, and a little below the juncture of the Rama and Neretva rivers. A second dam is being built there to form Neretva lake which will extend from Gracanica to the dam, thus covering the lower portion of the Rama river course. On the Neretva river, the lake will extend from Konjic to the dam. The total length of the lake will be about 40 kilometers, its depth approximately 70 meters, and its capacity some 400 million cubic meters of water.

6. The Jablanica dam will be a cement construction, arc shaped so that the pressure of the water will be directed toward the granite sides of the shore. The dam will be 84 meters high, its base will be 25 meters wide, and the top 6 meters. The Sarajevo-Mostar and Prozor-Jablanica highway will pass along the top of the dam. Three hundred thousand cubic meters of cement will be used for the dam's construction, which will require about 130 thousand cubic meters of sand, and an endless number of wagons of cement, iron, and other construction material. To make possible the construction of the dam, the course of the Neretva river was diverted through two auxiliary channels; one of them, through which the Neretva river now flows, was dug in the record time of seventy days during the summer of 1950. When all the work on the dam is completed, the two channels will probably serve to empty the lake in order to clean it.

7. To speed up the work on the dam, a cement factory was built on the construction site itself, and a pit of sand and gravel was opened supplying 24 wagons of sand and gravel daily. Cement and sand silos are now being constructed. A new industrial railroad line, 4.5 kilometers long, is also being built from Jablanica to Rama. It will be used exclusively for the transport of material, so as to keep the traffic clear on the main Sarajevo-Mostar railroad line. Large cranes have been placed on both sides of the construction site. The most important work presently under way is at the Neretva river bed which must be cleaned in order to build a strong base for the dam.

8. The lake which will be formed will inundate the present railroad line, the Konjic-Jablanica road and the Paprasko, Rama, Stari and Novi Ostrozac villages. The inhabitants of those villages will be moved away. The new railroad line has already been built to pass through a 400-meter tunnel. This new railroad line will be moved, however, since it will also be submerged by the future lake. The tunnel will be abandoned. The new Sarajevo-Mostar highway and railroad line will follow the shore line of the lake and pass across the dam.

9. The fourth construction site is located near the Zuglici railroad station, where two water tunnels, two kilometers long and five meters wide, are being built through Papraska and Jablanica. The first tunnel was completed 25X1 and the second one, which is parallel to the first, is still under construction. These tunnels will divert the water from Neretva lake to the Jablanica hydroelectric plant. To obtain sufficient water pressure in the tunnels, the water will be diverted at a point 40 meters below the lake level for a pressure of 4 atmospheres. There will be a difference of 100 meters in level between the lake and the turbines.

10. The fifth construction site is the machine hall of the Jablanica hydroelectric plant. Nothing can be seen from the outside. The main hall is situated 500 meters from the entry of the tunnel. It is 150 meters long, 23 meters wide, and 36 meters high. Turbines and generators are to be installed there. Three channels lead from the hall outside: one for cables, and two other auxiliary channels used for the transportation of material. The auxiliary channels are only temporary, and will be closed after the completion of the building. The walls of the hall are one meter thick. Three other, short channels lead from the main hall into a smaller hall, where devices for the closing off and distribution of the water will be installed. From the small hall, another set of three channels will carry the water into the main channel.

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11. The underground work requires the digging of more than a million cubic meters of hard earth, and almost that much must be moved above the ground for external construction. Several apartment houses as well as other cultural and social dwellings have already been constructed in Jablanica for the workers. The two hydroelectric plants, Rama and Jablanica, shall supply over 400,000 horsepower, and give over one billion and two hundred million kilowatt-hours of electric power. The power will be utilized by the heavy industry of Bosnia and Hercegovina, and for the electrification of the new Sarajevo-Mostar-Dubrovnik railroad, which will be of normal gauge.

25X1A [redacted] Comment: The hydroelectric combine on the Neretva and Rama rivers will be one of the largest water power combines in the Balkans, and alone will supply one half of the electric energy which is at present supplied by Dnjeprostroj, and together with the hydroelectric combine at Jajce, will be one of the main sources of supply of electric power for Bosnia and Hercegovina. The chief engineer at the construction site of the Jablanica hydroelectric plant is Engineer Avdo Kadic.

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