

Harran to become Mideast breadbasket

DAILY NEWS Oct
p. 3

Turkey dams Euphrates for electricity, irrigation

By Paul Bolding
Reuters Staff Writer

BOZOVA—Arid swathes of Eastern Anatolia, the famous Harran plain, could become a Middle Eastern breadbasket, and a fifth of Turkey's electricity needs could be generated, by a giant dam now being built across the Euphrates river.

Work began five years ago on the Atatürk Dam, the fifth largest rock-fill barrier in the world, and the first turbine will start turning in 1990, local deputy manager for Turkish State Waterworks, Raif Özenci, told Reuters.

Cost estimates vary, but Özenci said the 2,400-megawatt dam, being built mainly by a Turkish consortium, would cost 900 billion lira (1.3 billion dollars) at 1986 prices.

The dam will create a lake flooding dozens of villages and submerging ancient sites where archaeologists are now toiling in sweltering heat to save threatened relics.

The crescent-shaped dam will be 1,914 meters (1.2 miles) long at the crest, and its body, with the cross-section of a pyramid, will have a volume of 84.4 million cubic meters (110.4 million cubic yards).

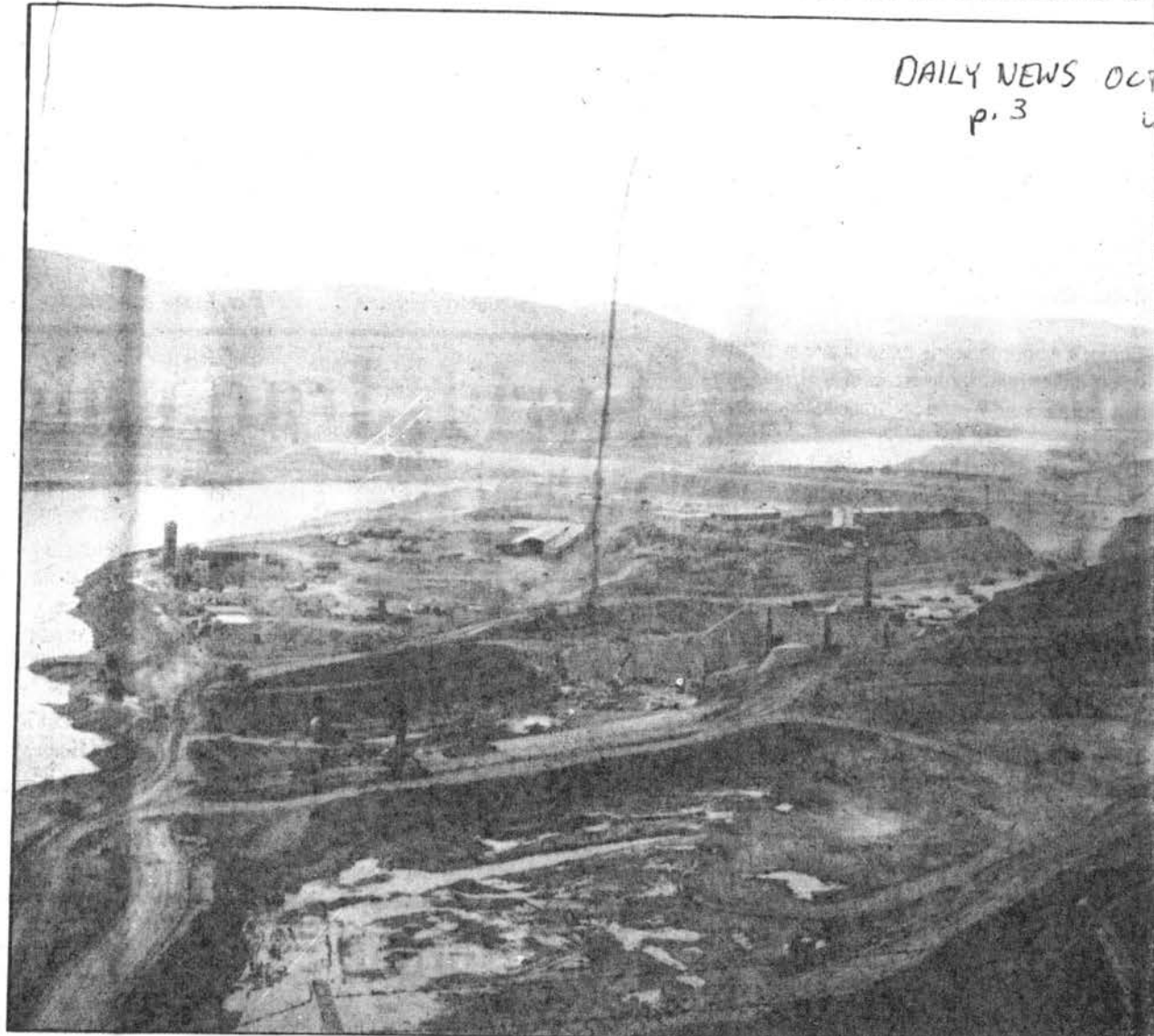
Only four dams of its kind are bigger, Özenci said -- two in the United States, one in Argentina and one in Pakistan.

"Most dams are built in steep gorges, but the geology meant we had to work across a broad valley," he said. "But this did mean we could start work without diverting the river."

At the site, about 120 mammoth trucks, each able to haul 85 tonnes, work around the clock ferrying rock, gravel and other construction material, backed up by bulldozers and graders.

Two 400-meter (yard) tunnels have been dug through rock so the trucks need not grind up a hill to reach the site.

In June, Prime Minister Turgut Özal travelled to Bozova, 570 km



(356 miles) southeast of Ankara, for the opening of tunnels to divert the river while the dam takes shape above.

During the ceremony, Özenci noted with pride that Turkish engineers were building the dam. Foreign firms carried out previous hydroelectric projects.

Turkish officials do not know precisely how much the dam will boost crop production, but the reservoir, with a surface area of 817 square km (315 sq miles), will be a major element in a 30-year irrigation project for Southeastern Anatolia.

Twin 26-km (16-mile) tunnels will channel water to an area around the town of Şanlıurfa.

Trade unionists hope this will provide work for some of the 250,000 people who leave each

summer for seasonal jobs on cotton plantations near the town of Adana, to the west.

Concern has grown over poor health care and conditions in the "tent cities" housing the low-paid Adana migrants.

Some 6,000 workers are now employed at the dam site, with the number expected to rise to 10,000 in 1988.

The lake will inundate 26 villages wholly and 106 partially, depriving 55,000 people of their present homes.

At Samsat, the townsfolk seemed unconcerned. Referring to a new town under construction nearby, a local greengrocer said: "Anyone who wants will get a new home. I will get a new shop. We are happy."

But the dam has forced a race against the clock on archaeologists excavating a mound near the

Roman town of Samosata. "We are doing our best to rescue the site but there is never enough time," said Dr Nimet Özgüç, head of the team.

The main find so far has been a place dating from the first century B.C., Commagene Kingdom. Özgüç said mosaics and gold jewellery from the period had been rescued.

The dam has caused concern in neighbouring Syria, which completed its own Baath Dam on the Euphrates in June. But Özenci said Damascus was wrong to worry. "The (Atatürk) Dam will have no great influence on the river."

The main contractor at Bozova is Ata Construction, Industry and Trading Company, a consortium of three Turkish firms formed for the job. Electrical equipment is being supplied by the Swiss com-

panies Brown Boveri and Sulzer-Escher-Wyss.

The U.S. Export-Import Bank has supplied a credit of 1 billion dollars for Caterpillar graders, and the Swiss are financing their share, said.

He said it was a long process of filling the reservoir, which would start in late 1988. The 300-megawatt turbines will start up in May 1990, with the remaining seven to come at four-month intervals.

The project will generate 1 billion kilowatt-hours a year, or 22 percent of Turkey's current electricity needs, at a cost of 1 billion kWh a year.

The dam's output will be an annual 8.1 billion kWh. Water is taken from the reservoir for irrigation schemes

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The U.S. Export Import Bank supplied a credit of 113 million dollars for Caterpillar trucks and graders, and the Swiss companies are financing their share, Özenci said.

He said it was hoped the year-long process of filling the lake would start in late 1988. The first 300-megawatt turbine is due to start up in May 1990 with the remaining seven to come on stream at four-month intervals thereafter.

The project will generate 8.9 billion kilowatt-hours (kWh) a year, or 22 percent of Turkey's current electricity needs of 40.4 billion kWh a year.

The dam's output will drop to an annual 8.1 billion kWh when water is taken from the reservoir for irrigation schemes.

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