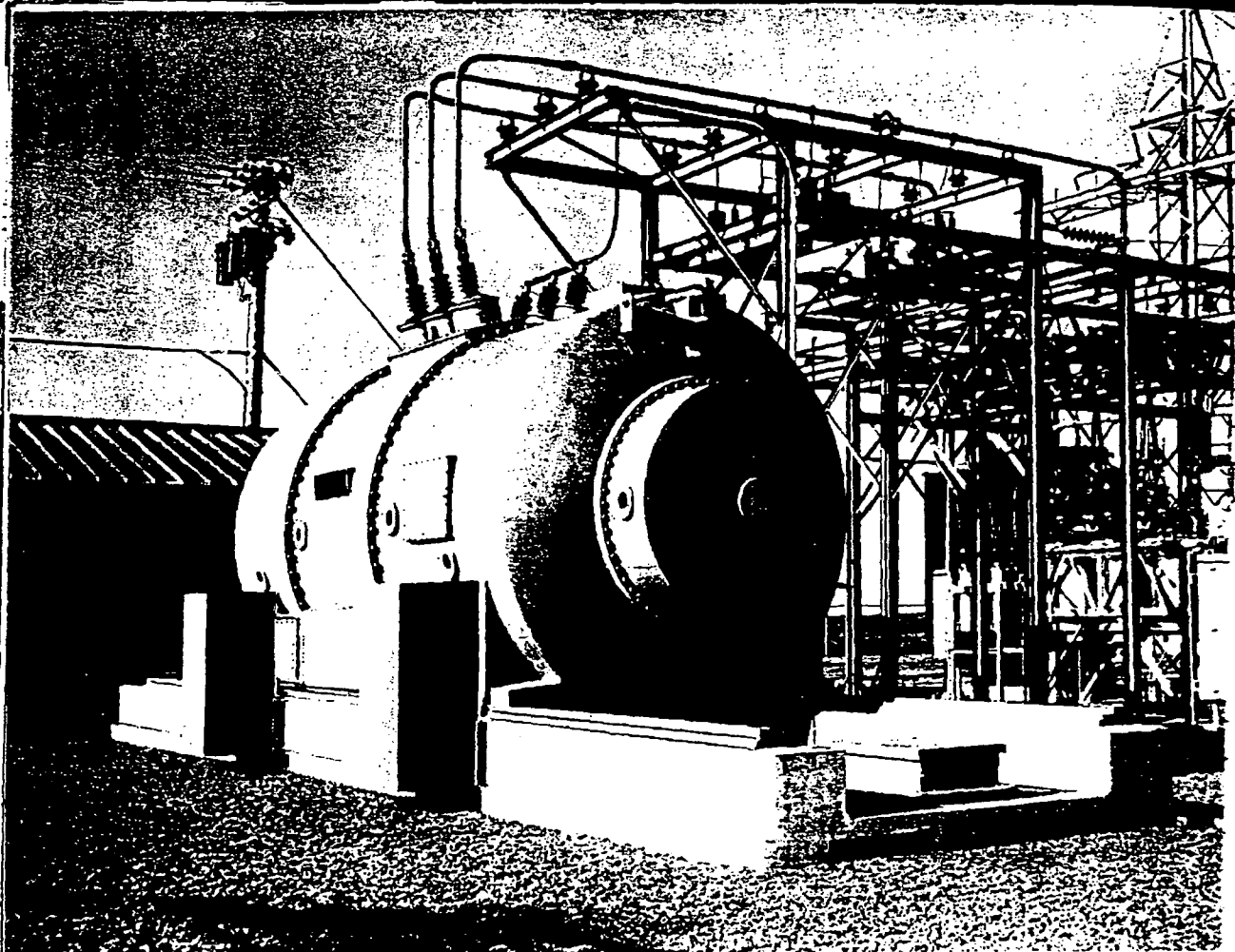




The Elliott 40,000-kva synchronous condenser at the Beaver Creek substation, showing bus connections from transformer bank to condenser. Starting is by means of reduced voltage from the autotransformer bank in the switchyard.

BEAVER CREEK SUBSTATION—KEY LINK IN NORTHEASTERN COLORADO TRANSMISSION SYSTEM

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BEAVER CREEK substation on the Bureau of Reclamation's Colorado-Big Thompson Project is the main switching station of the Bureau's high-voltage system now serving a widespread area in northeastern Colorado. Located near Brush, Colorado, the substation was placed in operation in March 1953, the first of its kind to be installed on this transmountain diversion project.

All lines radiating from the Beaver Creek installation are operated at 115 kv except one, a 46-kv line, now being connected to the substation. Power is delivered over this network to several stepdown substations supplying REA and other distribution systems which serve more than 14,000 customers in rural areas and in small communities.

The importance of switching operations, particularly after system troubles or outages, influenced the decision to make this station attended. However, operators have no control over system frequencies, and some synchronizing operations must be cleared through the power plant operators.