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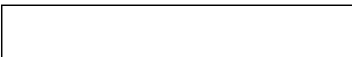
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PHOTOGRAPHIC INTERPRETATION REPORT



# HEAVY WATER PLANT CHIRCHIK ELECTROCHEMICAL COMBINE, USSR



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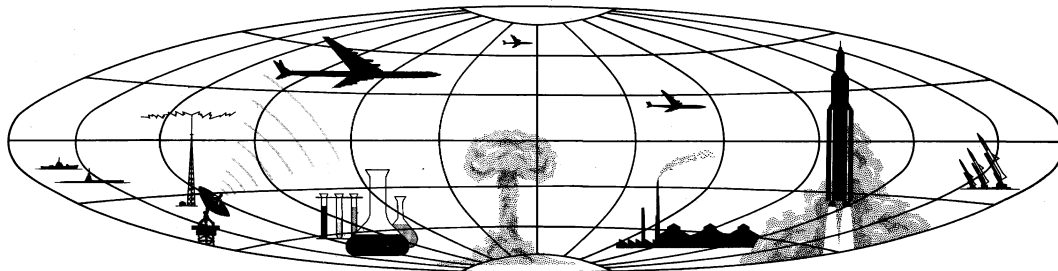


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## HEAVY WATER PLANT CHIRCHIK ELECTROCHEMICAL COMBINE, USSR

[redacted]

### INTRODUCTION

The Chirchik Electrochemical Combine [redacted] which includes a heavy water plant [redacted] is located at 41-27N 69-34E in the city of Chirchik, USSR (Figure 1). The combine is adjacent to the Chirchik Machinery Manufacturing Plant Frunze [redacted]

[redacted] photography of [redacted] provides the most comprehensive and detailed coverage of the combine, including the separately secured heavy water plant, since [redacted] photography of [redacted] (Figures 2 and 3). During the seven-year interval, considerable expansion has taken place at the combine; continuing construction is evident on current photography. Some modifications have been made on the two electrolysis buildings of the heavy water plant. The dimensions of the electrolysis buildings are based on measurements made in [redacted] 1/

### HEAVY WATER PLANT

Although no major changes can be observed at the heavy water plant, some modifications have been made on both the primary and secondary electrolysis buildings (Figure 4). The equipment previously

observed on the roof of the projection along the southern face of the primary building has apparently now been enclosed; only a pipeline can be positively identified. 1/ The projection itself has been length-

ened to about [redacted] A sixth vertical storage tank has been installed at the southwest corner of the primary building. Other additions are shown in red on Figure 4. It is now evident that the northern

face of this building with its 11 vents is higher than the main roof and not level as previously reported.

The western half of the smaller secondary electrolysis building has ap-

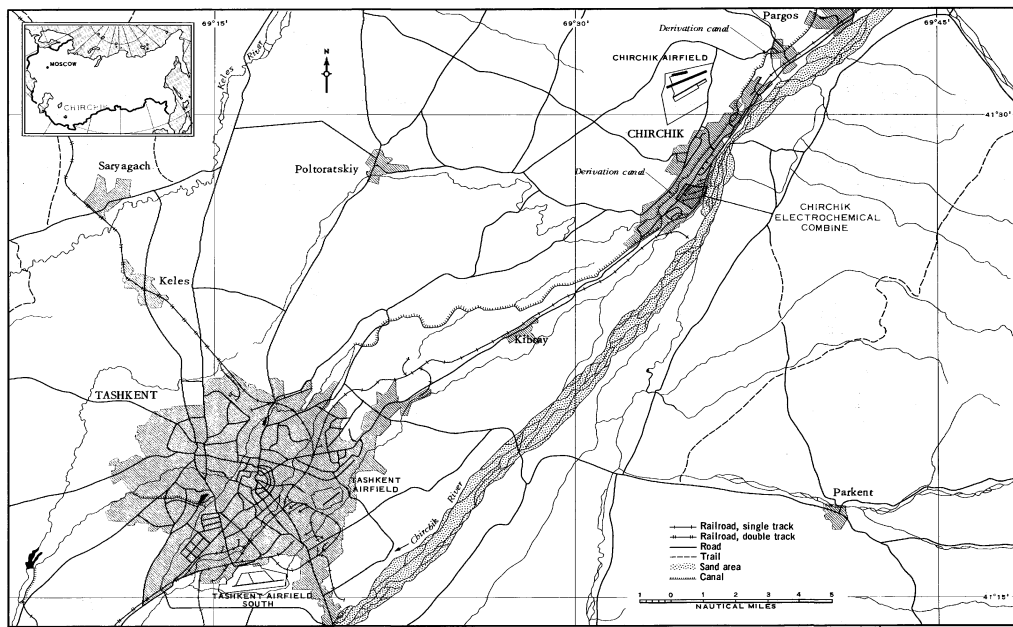
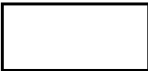
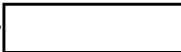


FIGURE 1. LOCATION MAP.

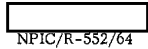
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FIGURE 2. CHIRCHIK ELECTROCHEMICAL COMBINE.



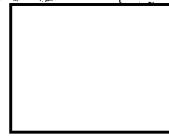
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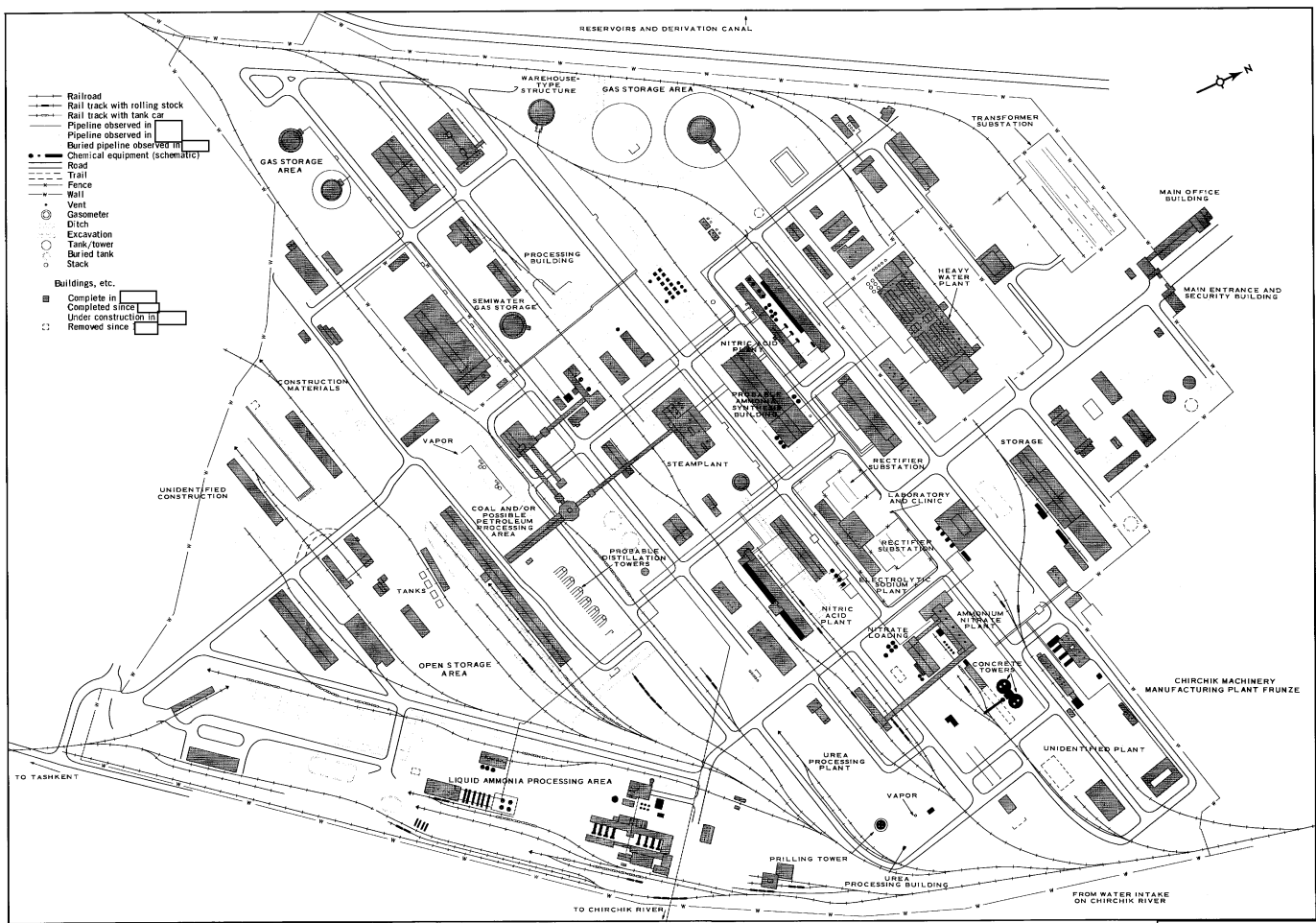


FIGURE 3. LAYOUT OF ELECTROCHEMICAL COMBINE.

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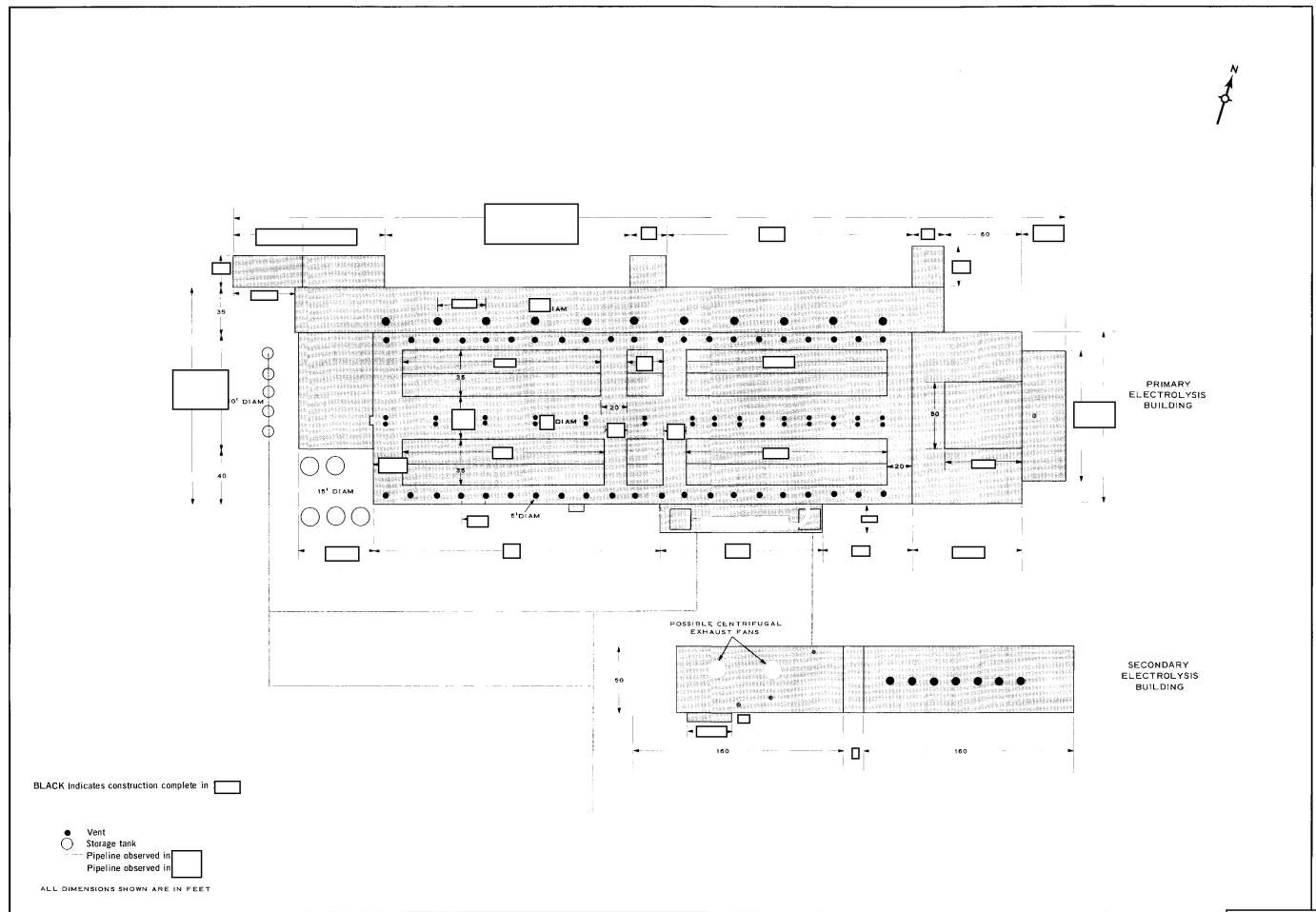


FIGURE 4. LAYOUT OF HEAVY WATER PLANT.

parently been lengthened and rebuilt or modified. The building is now about [ ] feet in overall length. The monitor on the roof of the western half appears to have been rebuilt, and two possible centrifugal exhaust fans have replaced the original 16 vents. 1/ Five irregularly placed vents and a small monitor-like configuration at the western end are also visible. Two additional pipelines are tied into the secondary building at two of the four newly observed low projections from the building. An excavation for a possible small building is visible west of the secondary electrolysis building.

### ELECTROCHEMICAL COMBINE

Some construction activity was observed in [ ] in the secured

area of the electrochemical combine. Construction has continued during the seven years from [ ] with an increase of about 30 percent in the total number of buildings (Figure 3). Eight buildings observed in [ ] have been enlarged, including four important processing structures. [ ] installed a urea processing plant which includes a prominent prilling tower in the eastern angle of the combine's area. An installation for the possible processing of petroleum (or natural gas) has been erected parallel to the previously reported coal processing and storage area. 1/ The coal facilities now appear to be inactive because no coal hopper cars or stored coal can be seen in the area and tank cars can be identified on a number of adjacent tracks. [ ] six completed gasometers were identified and a seventh was under construction. The seventh has now been

completed, but no others have been built.

Apparently the most recent construction activity at the combine has been and is taking place in the southern angle of the secured area. The presence of new pipelines and tank cars suggests the final processing and/or loading of liquid products.

A large number of pipelines, some with expansion loops, has been added since [ ] Their complexity in the central area of the combine is such that it is difficult to plot flow diagrams with any degree of accuracy. However, some of the new pipelines indicate distribution of distilled petroleum (or natural gas) products to the probable ammonia synthesis building and to the new urea processing plant. A new pipeline from an intake on the right bank of the Chirchik River supplements the water available from the reservoirs northwest of the plant, which are fed by the Chirchik derivation canal system (Figure

1) for the Chirchik cascade of hydroelectric powerplants.

A large new warehouse-type structure has been built near the western corner of the secured area; the structure may serve for the storage or shipment of heavy water because it has direct rail connection with the heavy water plant.

In the northeast corner of the combine's area an unidentified plant has been expanded. These buildings were previously identified as a liquid oxygen plant. 1/

No apparent change in the electric power system serving the combine is evident. Current [ ] photography is clear enough, however, to identify positively the principal transformer substation and the two rectifier substations which are attached to the electrolytic sodium plant (Figure 3).

#### REFERENCES

#### MAPS OR CHARTS

ACIC. US Air Target Chart, Series 200, Sheet 0328-17AL, 2d ed, May 61, scale 1:200,000 (SECRET)

ACIC. US Air Target Chart, Series 100, Sheet 0328-9998-100A, 3d ed, Feb 58, scale 1:100,000 (SECRET)

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DOCUMENTS

1. CIA. HTA/JR-6-58, *Heavy Water Facilities, Chirchik and Kirovakan, USSR*, 15 May 58 (TOP SECRET [ ])

#### REQUIREMENT

CIA. C-SI4-81,450

NPIC PROJECT

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