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imagery analysis report

Series Production of the  
POST GATE Radar (S)

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## SERIES PRODUCTION OF THE POST GATE RADAR (S)

### INTRODUCTION

1. (S/WN) The series production of a Polish-designed probable low-altitude search radar, designated POST GATE, has begun at Warszawa Radar Works T1 [redacted] Poland (Figure 1). Thirteen POST GATE radars were seen in the test area and finished-vehicle holding yards of the plant on imagery of [redacted] Nineteen POST GATEs, the highest number ever observed, were seen on [redacted] The significant numbers of POST GATE seen, in comparison with earlier observations, indicate that the system may soon be deployed in large numbers. Deployment of this radar would greatly enhance the ability of Polish air defenses to detect and to track low-altitude targets.

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### DISCUSSION

#### The Radar System

2. (S/WN) The POST GATE radar system (Figure 2) appears to consist of a tower trailer, a box-bodied operations van truck, a generator/support trailer, and an antenna trailer. The antenna (Figure 3) is a parabolic mesh reflector [redacted] A prominent feed horn extends from the right side. The antenna is mounted at a fixed-elevation angle on a drive unit which allows a 360-degree rotation.<sup>1</sup> The drive unit is atop a three-section telescopic steel lattice tower which is mounted on the front end of an eight-wheel flatbed trailer. The operations van truck is a nondescript, flat-roofed van body on a TATRA-148 truck. The dual-axle generator/support trailer, approximately [redacted] appeared to be canvas covered and to have slightly chamfered edges. The dual-axle antenna trailer is approximately [redacted] [redacted] When the antenna is on the trailer, support bows and canvas are erected over the trailer, effecting a chamfered-edge appearance.

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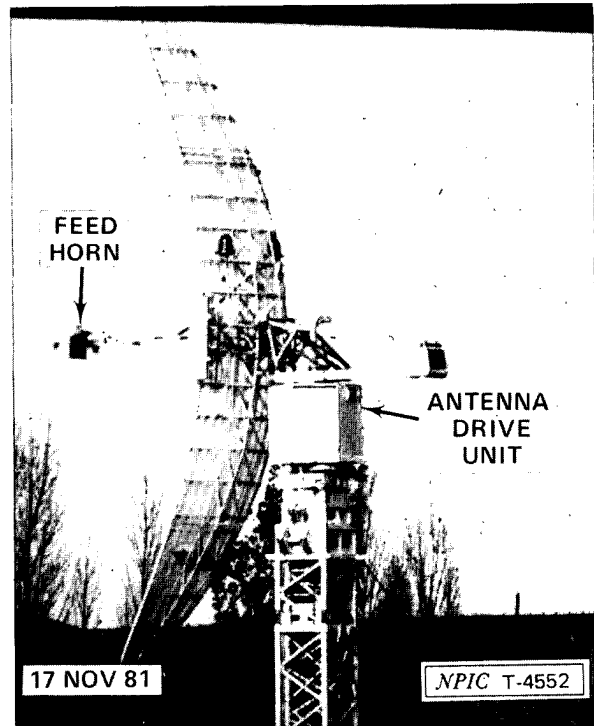
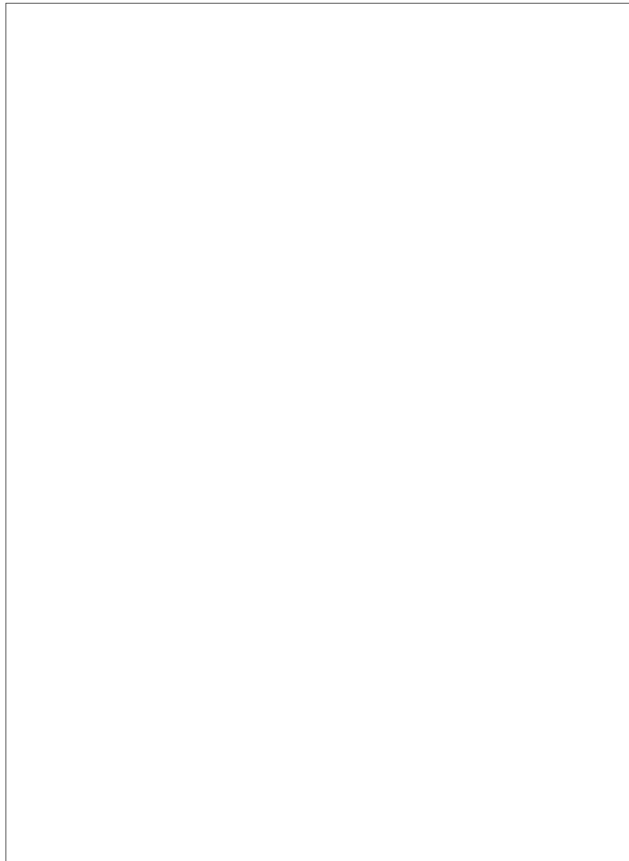
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3. (S/WN) When the radar system is in the deployed mode (Figure 2), four stabilization outriggers are swung out from the corners of the tower trailer. The tower and antenna are then erected. The operations van truck is usually parked at the end of the right front outrigger, with the generator/support trailer nearby, and the antenna trailer is usually parked at the end of the left front outrigger. When the system is in the travel mode (Figure 4), the tower is lowered to the trailer bed, and the antenna is removed. The outriggers are swung back to the sides of the tower trailer, which may then be canvas covered. The antenna trailer carries the antenna, and the operations van usually tows the tower trailer. The prime movers for the other trailers have not been identified.

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**FIGURE 3. POST GATE RADAR ANTENNA AND TOWER. DIA photograph, 6878 5055 82 (CONFIDENTIAL).**

### **Imagery Analyst's Comments**

4. (S) The POST GATE was developed at Warszawa Radar Works T1, where it was first identified in 1974. The POST GATE antenna is similar to the HIGH GATE height-finder radar, also developed and produced at this plant. There are two major visible differences between these radars. First, the HIGH GATE antenna is positioned on a lattice tower mounted on the rear of a TATRA-148 truck, while the POST GATE lattice tower is mounted on a flatbed trailer. Second, the POST GATE lacks the nodding mechanism of the HIGH GATE. Signal differences and the lack of a nodding capability support the hypothesis that the POST GATE is a dedicated horizon search radar.<sup>1</sup>

5. [ ] Although deployment of the POST GATE could have begun as early as 1978, it has only been identified at a very small number of sites. The high count of 19 POST GATES at the Warsaw plant in July is extremely unusual for a Polish radar system. This count exceeds the annual production total of any single type of Polish radar during the last six years.<sup>1</sup> Therefore, deployments of the POST GATE to Polish early warning/ground control intercept sites should increase in the near future.

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**REFERENCES**

**IMAGERY**

(S/WN) All applicable satellite imagery acquired from May through July 1982 was used in the preparation of this report.

**DOCUMENT**

1. DIA. DST-1710S-452-82, *Polish AC&W Radars (U)*, Mar 82 (SECRET, [redacted])

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(S) Comments and queries regarding this report are welcome. They may be directed to [redacted]  
[redacted] Warsaw Pact Forces Division, Imagery Exploitation Group, NPIC, [redacted]

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