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July 1961

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PHOTOGRAPHIC INTERPRETATION REPORT

ICBM LAUNCH [REDACTED] ALEX  
YU [REDACTED] USSR



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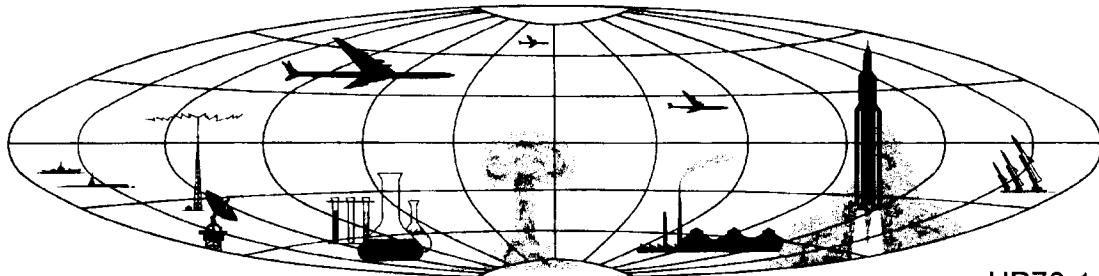
CIA

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PHOTOGRAPHIC INTERPRETATION REPORT

ICBM LAUNCH COMPLEX  
YUR'YA, USSR

NPIC/R-1/61  
July 1961

NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER

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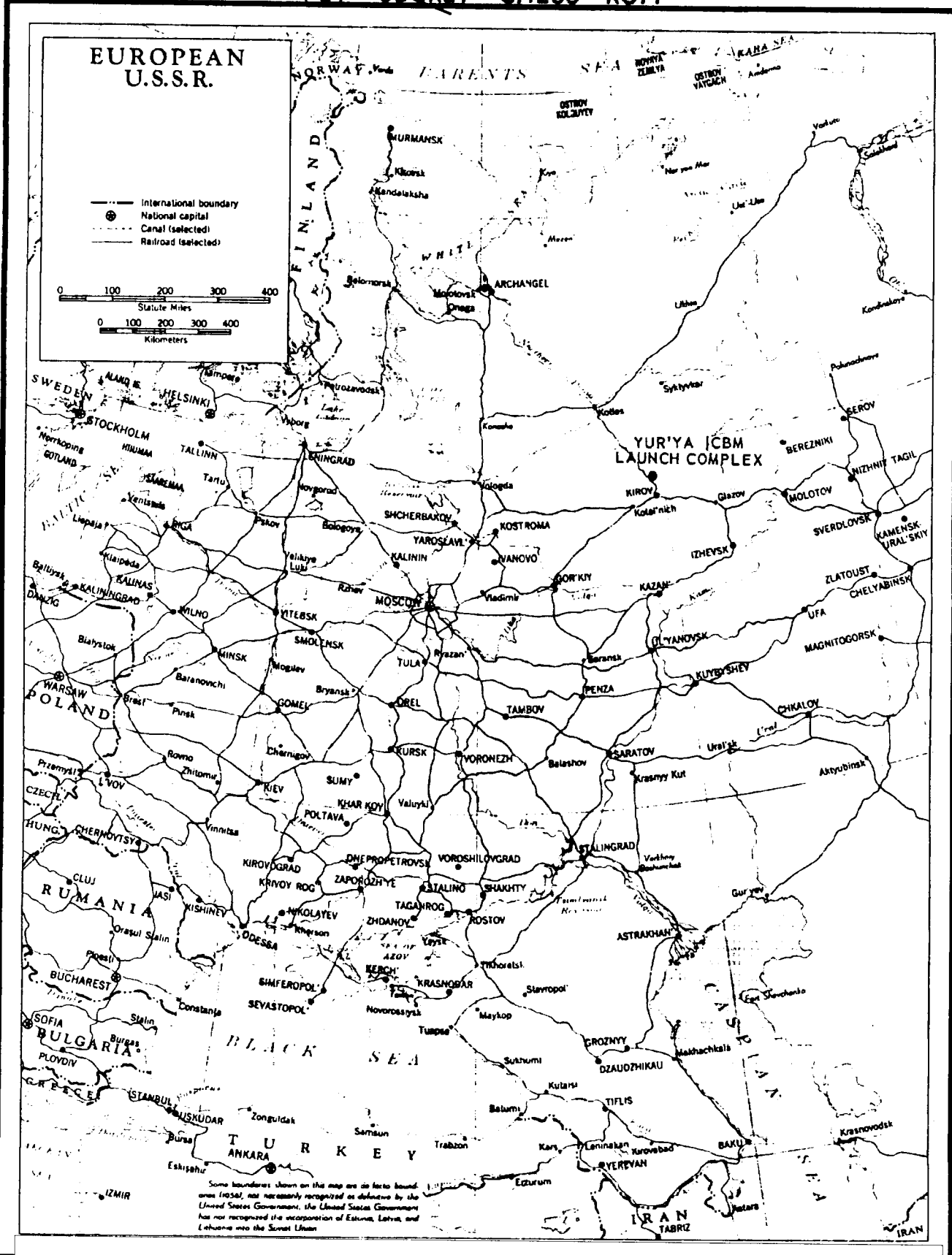
## PREFACE

This photographic interpretation report has been prepared by the Army, Navy, Air Force, and Central Intelligence Agency in answer to CIA requirement DDI/R-15/61 and Air Force requirement AFIC-1, 1961, requesting an accurate location and detailed analysis of the Yur'ya ICBM Launch Complex from photography of KEYHOLE Mission [redacted] [redacted] June 1961).

25X1 Since final scale computations [redacted] were not available, mensural data given in this report are only approximate. The accuracy of measurement and interpretation was also affected by the large amount of halation around light-toned objects located in dark-toned wooded areas and the dense cloud shadow which is prevalent throughout the area. All mile distances are given in nautical miles and all bearings are from true north.

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Some boundaries shown on this map are de facto boundaries (1956), not necessarily recognized as definitive by the United States Government. The United States Government has not recognized the incorporation of Estonia, Latvia, and Lithuania into the Soviet Union.

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## SUMMARY

June 1961 satellite photography provides the first observation of a deployed Soviet ICBM launch complex. This Complex, northeast of Yur'ya includes four road-served launch areas, each with two pads. The Complex is defended by at least three SA-2 SAM sites. The photography indicates a probable ICBM launch complex signature; it confirms the prototype site at Tyura Tam; it confirms that defensive measures (SAM sites) will be found at other launch complexes; and it confirms the road mobility of the missile from a transfer point in the Complex to the launch area.

## INTRODUCTION

The Yur'ya ICBM Launch Complex is located in a forested area 9 nautical miles (nm) northeast of Yur'ya (see Figure 1). It consists of four launch areas with two pads each, and centrally located support facilities situated in at least eight separate areas. Cloud cover prohibits complete observation. Three completed SA-2 SAM sites, about 15 nm from the center of the Complex, have been identified. Cloud cover precludes identification of additional SAM sites or a SAM support facility. The Complex is served by a rail spur branching from the main line between Kirov and Kotlas. Each launch area and certain support areas are road served. The spur terminates at a rail-to-road transfer point in the general vicinity of the support facilities. The nearest reported airfields are located at Kirov, about 35 nm to the south. These airfields are shown on maps but could not be confirmed because of cloud cover. The ICBM facilities and interconnecting roads give the Complex a crescent-shaped appearance with the open portion to the northeast. In general, the Complex covers about 150 square nautical miles. The quality of the photography and tree cover preclude confirmation of whether the entire complex is secured. Double fencing is prominent along three sides of one launch

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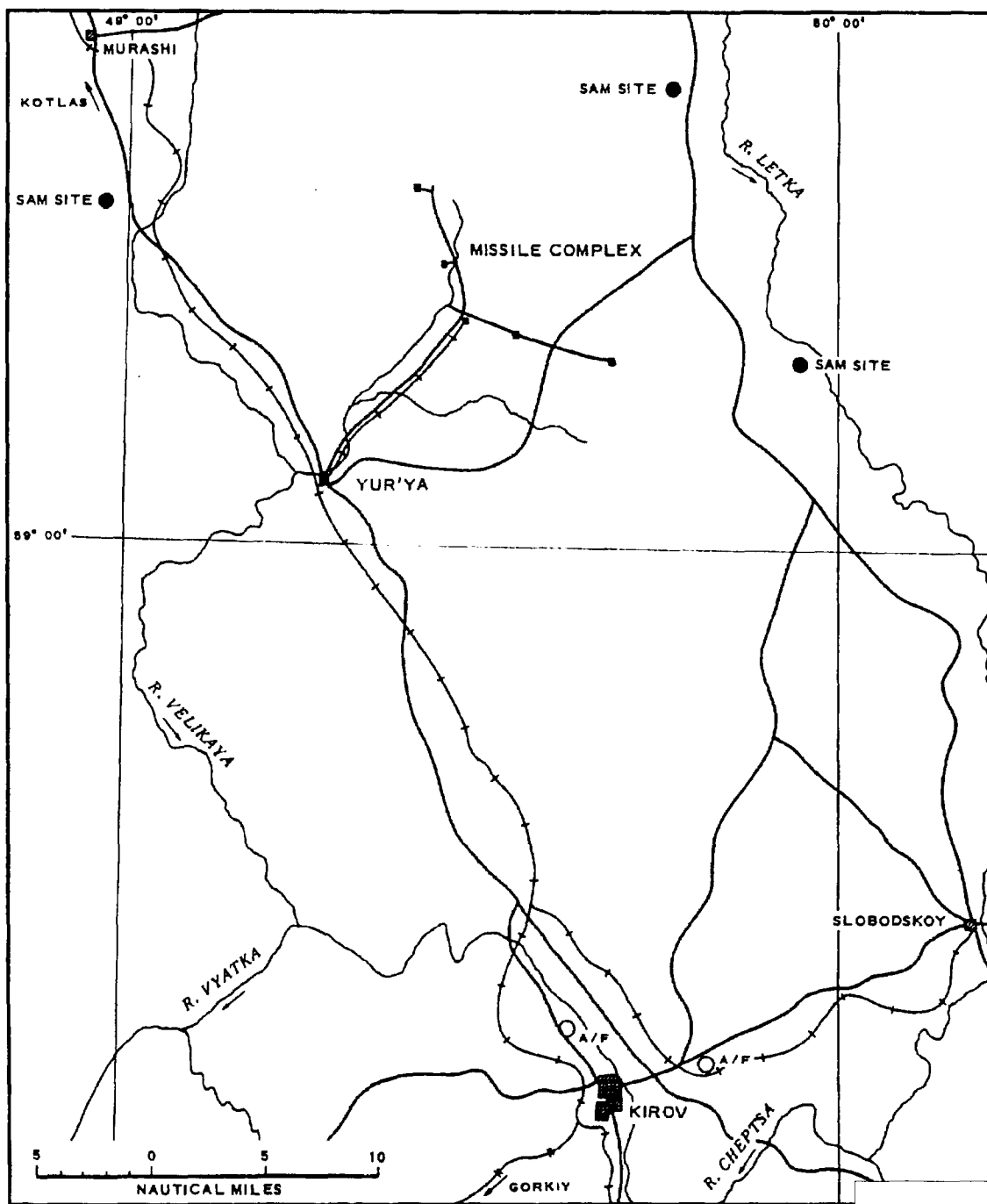


FIGURE 1. YUR'YA ICBM LAUNCH COMPLEX AND DEFENDING SAM SITES. The nearest airfields are located at Kirov, 35 NM to the south.

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area; a single fence can be seen along three sides of another launch area. Two storage areas at the support facilities are also fenced. Road check points and the isolated location of the Complex may be considered sufficient security for some of the facilities.

From photographic evidence, three launch areas appear complete and one is under construction. Most of the support facilities appear complete. The area to the north and southeast was thoroughly searched for additional launch areas or support facilities but none could be identified. Numerous roads and trails crisscross the general area of the Complex. They are used for economic activity (logging and agriculture).

#### LAUNCH AREAS

The four road-served launch areas, designated Launch Areas A, B, C, and D, are strung out along an improved road. Two are located to the north and two to the east of the centrally located support facilities (see Figure 2). The distance from Launch Area A to Areas B and C is 25,000 feet; Launch Area D is 20,000 feet north of Area C. Each launch area covers an average of about 90 acres. While the individual launch areas are not identical in configuration, significant features and dimensions are consistent throughout, and all four areas resemble the prototype launch area at Launch Complex C, Tyura Tam (see CIA/PIC/JR-17/60). Each launch area has been modified slightly to meet existing terrain conditions or missile-handling procedures; however, each conforms to one of two distinct configurations (see Figure 3). Each area contains two elongated pads, 1,000 feet apart. Their precise shape cannot be determined because of halation and ground scarring. The distance between pads at Complex C, Tyura Tam, is 1,300 feet.

The long axes of the pads in any one launch area at Yur'ya are parallel, and all pads are oriented in a generally north-south direction with orientations of 335 and 340 degrees. In each launch area, wide-radius

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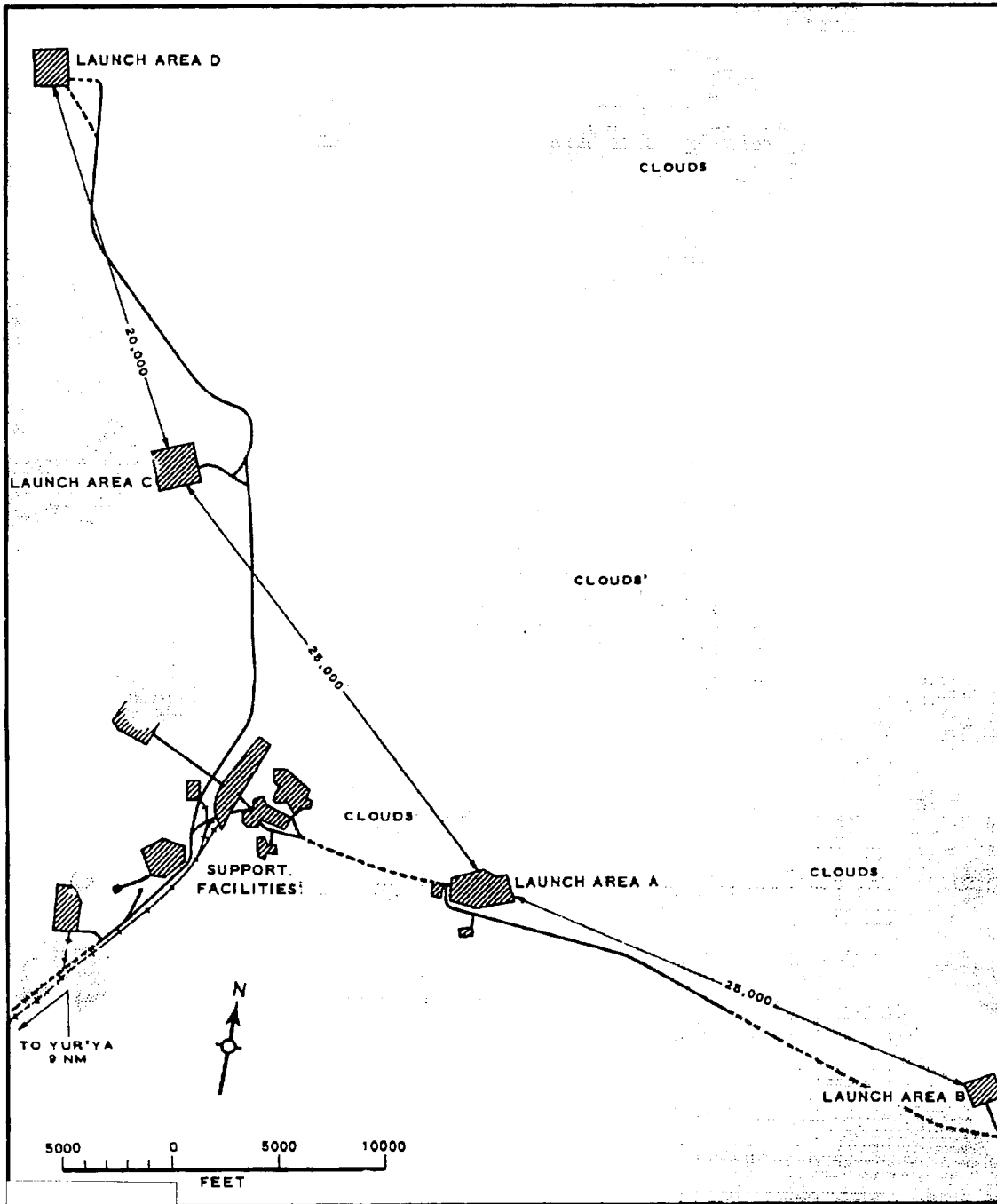


FIGURE 2. LOCATION OF FACILITIES IN THE YUR'YA ICBM LAUNCH COMPLEX. Only those roads which serve missile facilities are shown. Clouds and cloud shadow prohibit a complete interpretation of this complex.

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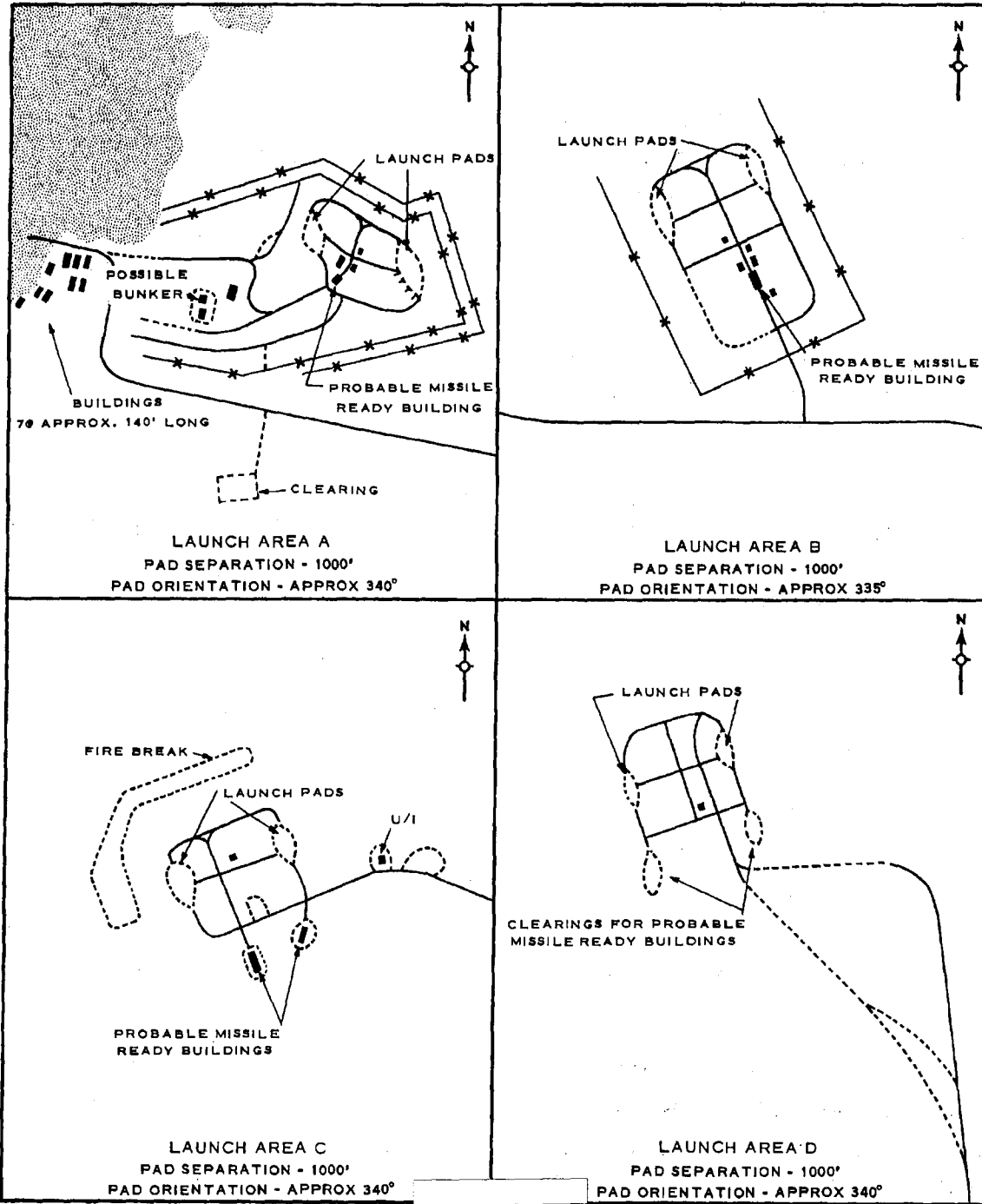


FIGURE 3. YUR'YA LAUNCH AREA CONFIGURATIONS. Launch Areas A and B more closely resemble the launch area at Complex C, Tyura Tam.

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turns are in evidence at several road intersections and along several curves.

Of the four launch areas, Area A, which appears complete and double fenced, and Area B, which also appears complete and single fenced, more closely resemble the launch area at Launch Complex C, Tyura Tam. In addition to the pads, Areas A and B contain several structures, one of which appears to be a probable missile ready building. It appears to be of the drive-through type, is about 120 to 140 feet long, and is centrally located with respect to each launch pad. Vehicle stalls appear to abut the inside edge of one pad in Area A. Such stalls and a probable missile ready building are also present at Launch Complex C, Tyura Tam.

Launch Area A also contains a possible control bunker which may be the main control, with the other launch areas subordinated to it. Similar bunkers have not been found in the other areas; however, cloud shadow precludes interpretation of these areas.

At least seven barracks-type structures adjoin the west side of Area A. They may be quarters for the missile crews. Such quarters have not been identified at the other launch areas.

Launch Areas C and D constitute another type of area configuration. The basic difference between them and Areas A and B is in the number and positioning of the probable missile ready building. Launch Area C appears complete, and a portion of a firebreak is visible. Launch Area D is still under construction; no security measures are evident, and the access road does not appear complete.

Each of these two areas contains a clearing about 1,200 feet to the rear of the pads on which, in the case of Area C, the probable missile ready building is positioned. Area D contains only the clearings; however, both are in line and connected by roads to the pads. At Area C, one is in line and the other is offset to utilize the center road leading to the pad.

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## SUPPORT FACILITIES

The support facilities at the Complex consist of eight separate areas, located along and at the terminus of the road and rail spur from Yur'ya (see Figure 4). The rail spur terminates in three sidings: two widely spaced long parallel sidings and one short curved siding. The long sidings constitute the receiving and rail-to-road transfer point. These rail facilities are similar to the corresponding rail facilities at Launch Complex C, Tyura Tam, and indicate that missile-handling procedures are basically the same.

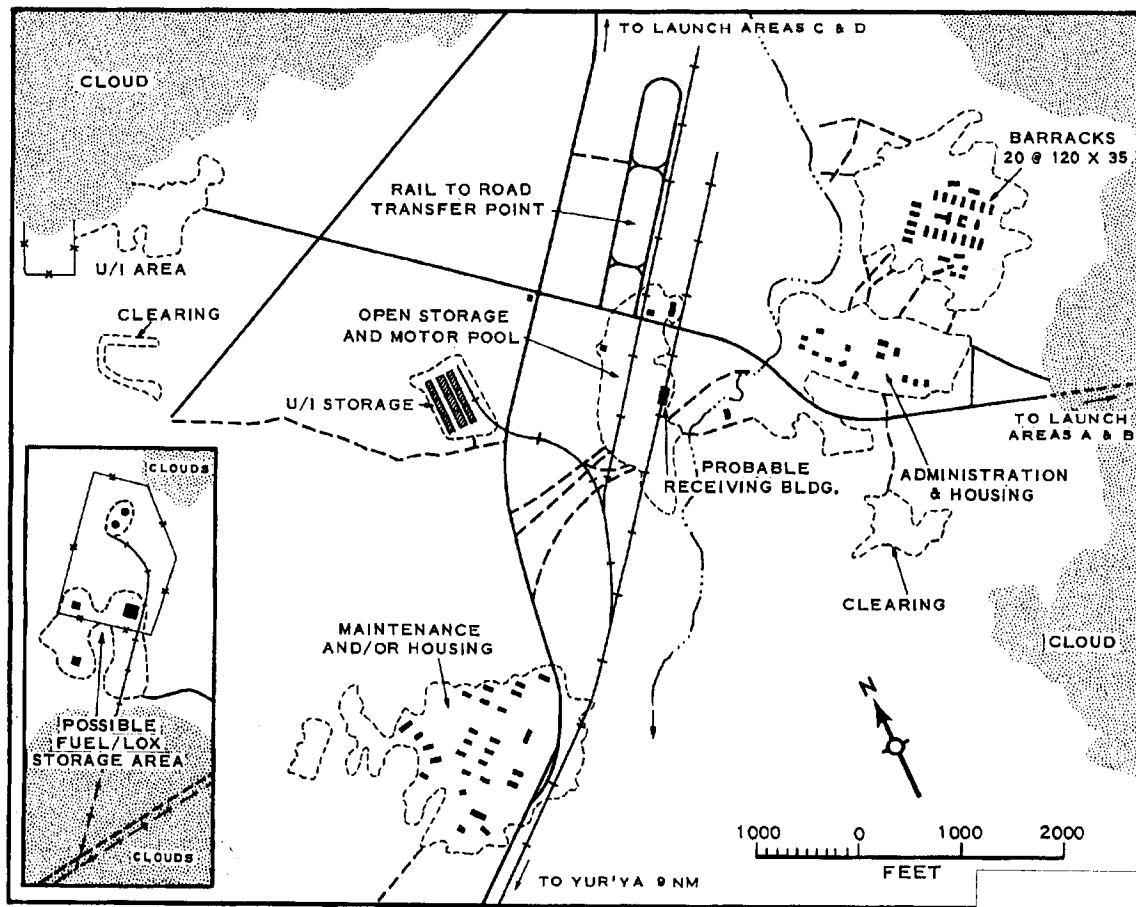


FIGURE 4. SUPPORT FACILITIES AT THE YUR'YA ICBM LAUNCH COMPLEX.

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At a point on one of the long sidings, there appears to be a structure straddling the siding that could function as a missile-receiving building. The other long siding parallels a road network conspicuous by wide-radius turns. Roads from the transfer point lead directly to the launch areas. Adjoining the transfer point on the south there appears to be a motor pool and an open storage area. The short curved siding leads to an unidentified storage area in a clearing containing what appears to be nine warehouse-type structures in three rows; each building is about 200 feet long.

To the west of the transfer point and served by a straight, well-graded road is an unidentified fenced area. Most of the area is obscured by a cloud, but its apparent isolation and prominent access road with direct connection to roads leading to the launch areas indicate that the area is significant in the operation of the Complex.

East of the rail sidings are a barracks area and an administration and housing area. The barracks area contains over 30 buildings, 20 of which are approximately 120 by 35 feet. Assuming these to be single-story units and allotting 150 square feet per man, they could accommodate about 560 men. Buildings in the administration and housing area are difficult to identify. The general pattern of the area indicates that the east side contains administration buildings and the west, single-unit family-type housing.

Along the rail spur from Yur'ya is an area containing at least 26 buildings. The quality of the photography does not permit an accurate building count or the establishment of a general pattern. However, the location of the area with respect to the rest of the Complex suggests housing, probably for construction personnel, and/or maintenance facilities.

Farther to the southwest and served by a rail siding is a fenced area, possibly a fuel/LOX storage area, which appears to contain two tanks, a building or bunker, and at least two other structures.

Several clearings are located in the general vicinity of the support facilities, but no function can be assigned to them. Facilities which can-

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not be specifically located or identified but which are believed necessary for the support and operation of the Complex -- such as facilities for warhead storage; missile assembly, checkout, and storage; central control and guidance; and communications, water, and power -- may be located in these cleared areas, or may possibly be cloud covered or incorporated in areas otherwise designated.

## COORDINATES OF SIGNIFICANT ITEMS

Center of Complex (transfer point)	59-10N 49-29E
Launch Area A	59-09N 49-33E
Launch Area B	59-08N 49-41E
Launch Area C	59-12N 49-28E
Launch Area D	59-15N 49-24E
SAM Site (14 nm NE)	59-20N 49-46E
SAM Site (15 nm ESE)	59-03N 49-57E
SAM Site (16 nm WNW)	59-15N 48-58E

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## REFERENCES

## PHOTOGRAPHY

<u>Mission</u>	<u>Date</u>	<u>Pass</u>	<u>Frames</u>	<u>Classification</u>
	Jun 61			TSR

## MAPS AND CHARTS

- ACIC. USAF Pilotage Chart, Sheet 155B (Omutninsk), 1st ed, Oct 52, scale 1:500,000 (C)
- ACIC. USAF Pilotage Chart, Sheet 155A (Kotel'nich), 1st ed, Dec 54, scale 1:500,000 (C)
- AMS. Series N501, Sheets 39-1 and 39-4, 2d ed, Jun 55, scale 1:250,000 (U)

## DOCUMENT

- CIA. PIC/JR-17/60, New Launch Area and Other Developments, Missile Launching Complex, Tyura Tam, USSR, Jul 60 (TSC)

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