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22 Pages

NPIC/R-11/63
February 1963

PHOTOGRAPHIC INTERPRETATION REPORT

ICBM LAUNCH COMPLEX

PLESETSK, USSR

ARMY NAVY AIR FORCE CIA

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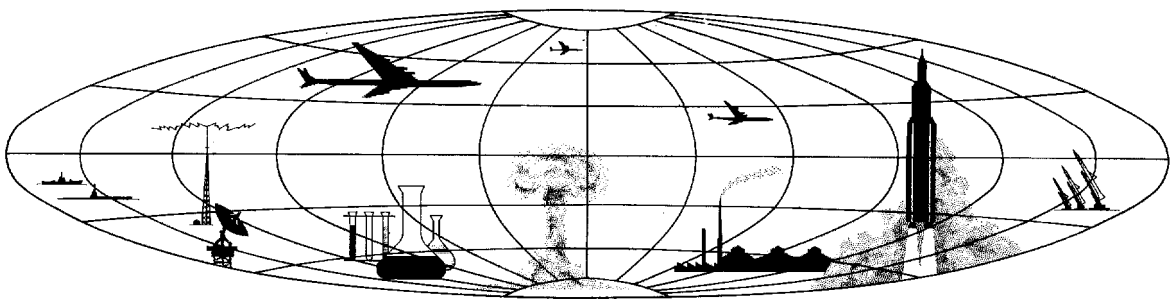
NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER



PHOTOGRAPHIC INTERPRETATION REPORT

ICBM LAUNCH COMPLEX

PLESETSK, USSR

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PREFACE

This report was prepared under NPIC Project JN-79/62 in response to CIA requirements DDI/RR/E/R-27/62, DDI/RR/E/R-35/62, and DDI/R/E/R-283/62, and USAR requirement 62-17. [redacted] 25X1

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SUMMARY

The Plesetsk ICBM Launch Complex consists of four rail-served launch points (I-IV), five road-served launch areas (A-E), a complex support facility, a rail-to-road transfer point, and an administrative and housing area.

Launch Points I-IV, each with one pad, are completed Type I facilities (see General Guide to ICBM Site Configurations, Page 15) similar to Complex B of the Tyura Tam Missile Test Center (TTMTC). Their pad orientation is on an azimuth of 330 degrees, ± 5 degrees.

Launch Areas A and B, also completed and each containing two pads, are Type II facilities similar to Complex C of the TTMTC. Area A has a Mod a configuration and Area B, a Mod b configuration. The pads at both areas are oriented on an azimuth of 330 degrees, ± 5 degrees.

Launch Area C is a Type III facility similar to those at Complex D of the TTMTC.

Launch Areas D and E are Type IV facilities in a middle stage of construction. Complex E of the TTMTC is probably their prototype. Pad orientation is on an azimuth of 265 degrees, ± 5 degrees.

INTRODUCTION

The complex is located northeast of Plesetsk on the Vologda-Arkhangel'sk rail line. Launch facilities extend about 18 nautical miles (nm) along the south bank of the Yemtsa River (Figure 1).

The topography of the general area of the complex ranges from level to rolling forested plains with numerous marshes, lakes, and streams. The soil in the region is generally clayey and gravelly and contains limestone rock formations. Surrounding forests of spruce and pine have been extensively logged.

Cold winters and cool summers with considerable precipitation prevail. The complex is not in the permafrost zone.

The complex is served by a rail spur from the double-tracked Vologda-Arkhangel'sk rail line and by an adequate local road network which links the launch complex to adjacent towns and villages. Obozerskiy Southeast Airfield, probably supporting the ICBM complex, is located approximately 25 nm to the north. First identified on photography of [redacted] this newly constructed primary airfield has an 8,400 foot runway. [redacted] 25X1 25X1 25X1

The launch complex is defended by six SA-2 SAM sites and two new-type SAM sites collocated with the north and northeast SA-2 sites. A SAM support facility was identified on photography of [redacted] 25X1

LAYOUT OF COMPLEX

The complex occupies an area of approximately 215 square miles extending in a northeast-southwest direction (Figure 1). It is bounded on the west by the Vologda-Arkhangel'sk rail line and on the northwest by the Yemtsa River. The town of Plesetsk is situated at the southwest edge of the complex.

A rail spur leaves the main line at Plesetsk and runs through the complex in a northeastern direction. About 3 nm from Plesetsk a branch of this rail spur runs northwest to the complex administrative and housing area. About 10 nm from Plesetsk another branch--an abandoned rail spur--runs north through Launch Area E. About 16 nm from Plesetsk the main rail spur branches out again. The northwest spur runs through the complex support facility, continuing on to Launch Points I and

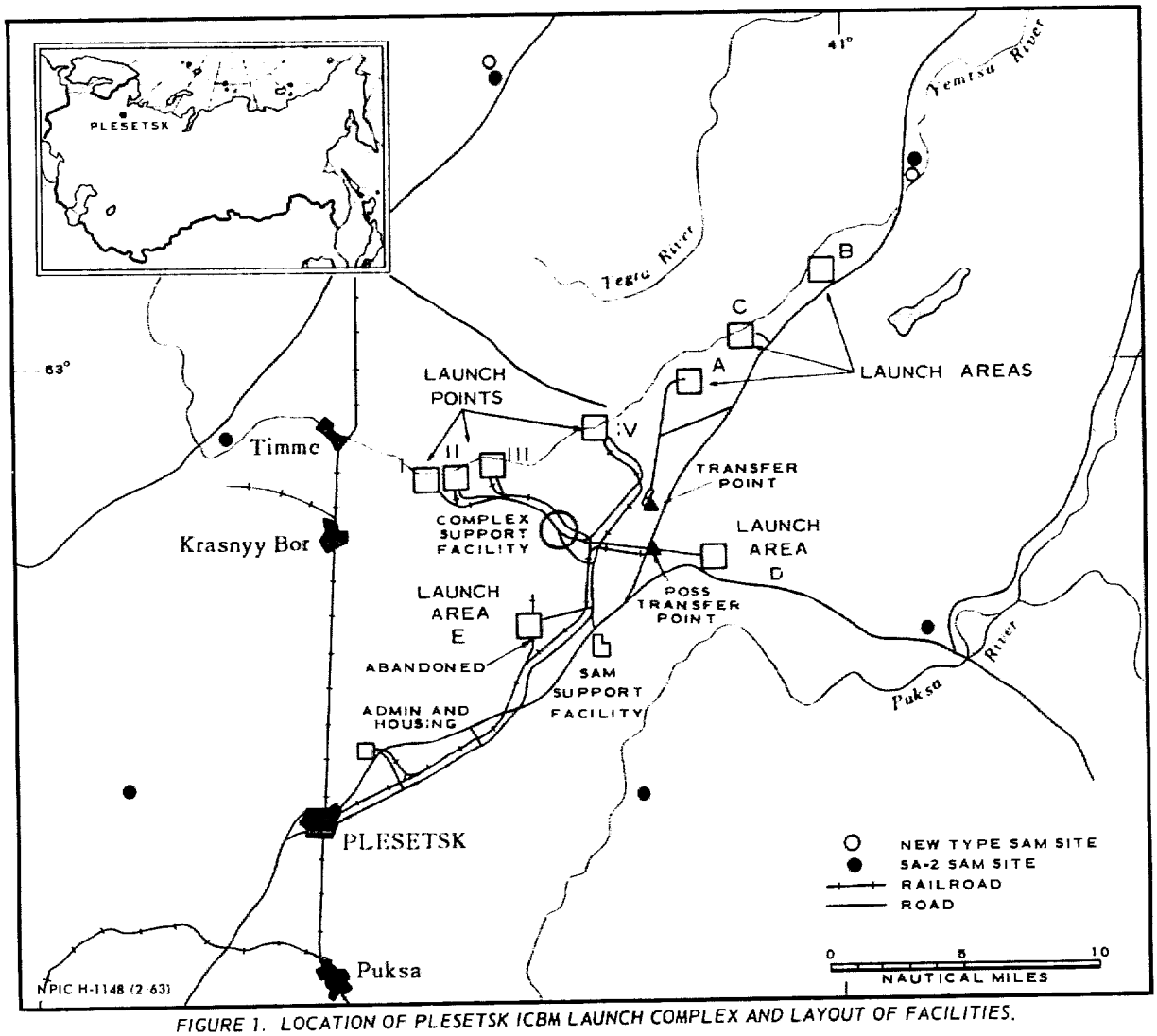
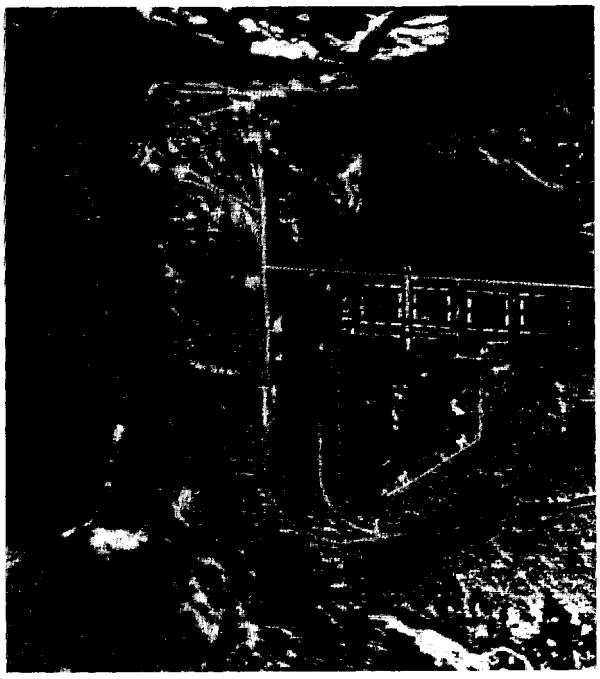


FIGURE 1. LOCATION OF PLESETSK ICBM LAUNCH COMPLEX AND LAYOUT OF FACILITIES.



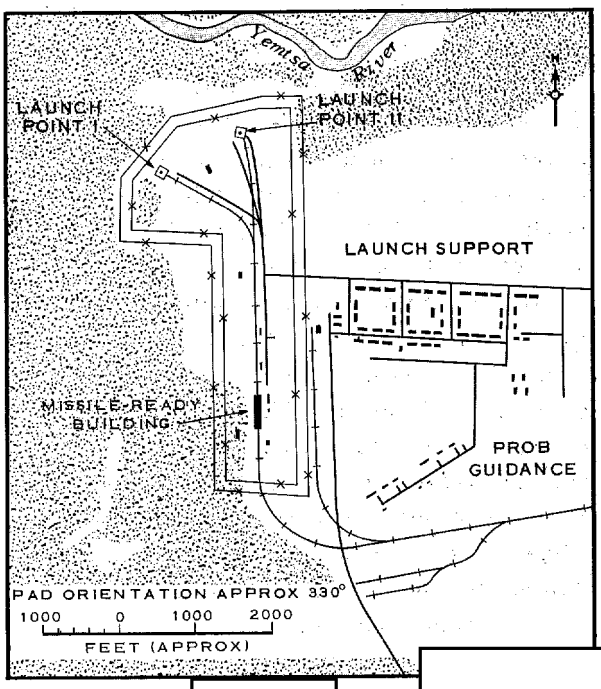


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FIGURE 2. PLESETSK ICBM LAUNCH POINTS I AND II ([redacted])

II and Launch Point III. The southeast spur terminates at a storage and transfer facility near Launch Area D. A rail-to-road transfer point--connected by road with Launch Area A, Launch Area B, and Launch Area C--is located about 19 nm from Plesetsk. The rail spur from Plesetsk terminates at Launch Point IV, where there is an underground storage facility.

LAUNCH POINTS I AND II

Launch Points I and II (Figure 2), each with one pad, are completed Type I facilities located at 62-55N 40-27E and 62-55N 40-28E, respectively, at the western end of the complex. The launch pads and missile-ready building occupy an inverted L-shaped area lying on a north-south axis. The maximum width of the area on the north side is 2,300 feet and the maximum length on the east side is 5,000 feet. The area is enclosed by a double security fence.

The launch pads, 1,200 feet apart, are concrete platforms built out from the escarpment along the Yemtsa River. Pad dimensions are 105 by 100 feet. An object on each pad is probably a missile gantry. An unidentified building, 140 by 70 feet, lies slightly behind and about midway between the pads. A missile-ready building, 410 by 140 feet, lies 3,450 feet south of the launch pads. Two associated buildings, each 70 by 30 feet, are located 425 and 850 feet north of the missile-ready building. Several other small, unidentified structures are located within the secured area. A rail spur enters the launch area at the south end, runs north through the ready building to a point 1,050 feet south of the pads, where it forks. From this point a spur continues to each pad. A road providing access to other elements of the launch complex enters the launch area on the east side, then parallels the rail spur connecting the ready building and the launch pads.

Outside the secured area is a probable guidance facility and a launch support area. The probable guidance facility, located 5,150 feet southeast of the pads, apparently consists of two like elements each containing at least three buildings. The largest building is approximately 145 by 45 feet, another is 85 by 50 feet, and the smallest is about 50 feet square. A similar, single installation is located behind each of the other two Type I facilities within this launch complex. A perpendicular to the axis of the probable guidance structure through the launch pads indicates a probable pad orientation of 330 degrees, ± 5 degrees.

The launch support area appears to be primarily for housing, except for one rail spur parallel to and outside of the east security fence. This spur serves a possible small heating plant and/or power plant. The launch support area contains about 50 buildings, 30 of which are arranged in three quadrangles of 10 buildings each. Except for a few small structures, most of the buildings are about 130 by 35 feet.

A two-track rail siding is located on the south side of the rail line leading to Launch Points I and II. This siding branches off about 0.5 nm before the line curves north into the secured area. The siding contains about 3,500 feet of track.

LAUNCH POINT III

Launch Point III (Figure 3) is also a Type I launch facility with one launch pad. It is located at 62-56N 40-32E on the south bank of the Yemtsa River and about 2.2 nm east-northeast of Launch Points I and II. The area is enclosed by an irregular, double security fence, 3,100 by 1,850 feet, with the long axis generally north-south.

The single pad of concrete construction is 105 by 100 feet and is built over the escarpment along the Yemtsa River. An object on

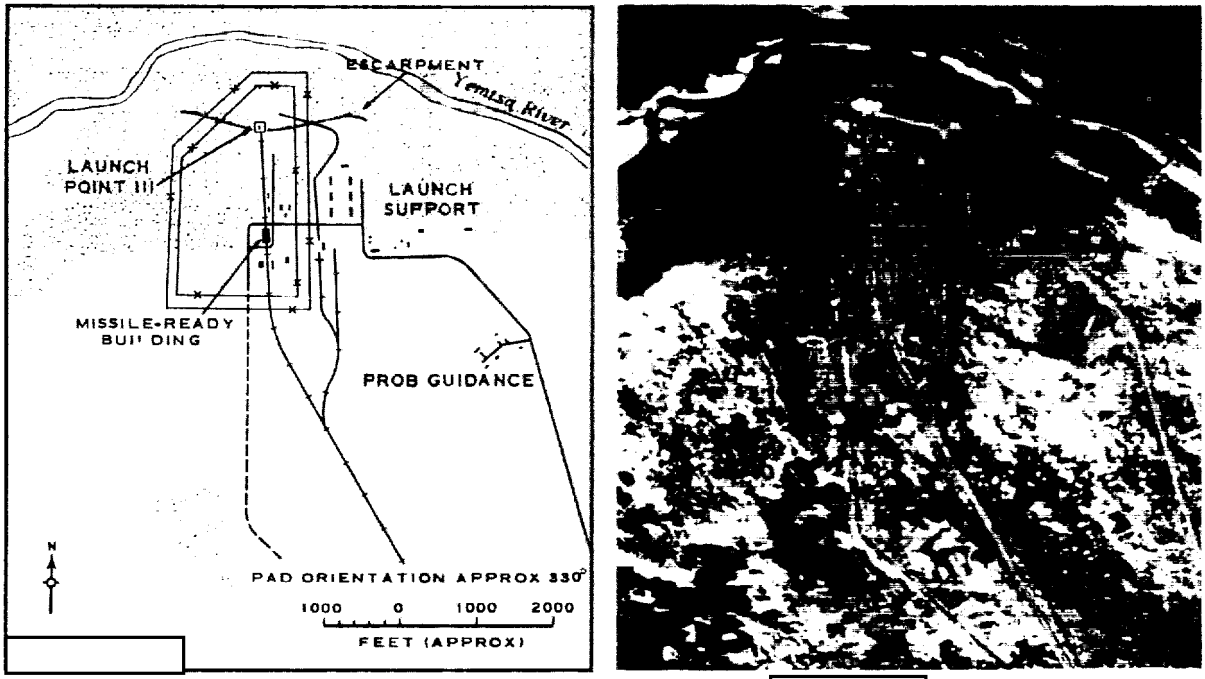

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FIGURE 3. PLESETSK ICBM LAUNCH POINT III (

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the pad is probably a missile gantry. A missile-ready building, 180 by 130 feet, is located 1,300 feet south of the pad. Two associated buildings, each 70 by 30 feet, are located 200 and 400 feet north of the ready building. Several other small, unidentified structures are located within the secured area.

A rail spur enters the launch area at the south end, runs north through the ready building, and continues on to the launch pad. A road providing access to all other elements of the launch complex enters the area on the east side.

A probable guidance facility is situated 3,950 feet southeast of the launch pad and consists of four buildings: one is 145 by 45 feet, the second is 85 by 50 feet, and the other two are 50 feet square. A perpendicular to the axis of the guidance structure through the launch pad indicates a probable pad orientation of 330 degrees, ± 5 degrees.

A support area of at least 12 buildings averaging 115 by 65 feet and a double-track utility rail spur with about 3,000 feet of track are adjacent to the launch area on the east side. The spur serves a possible heating and/or power plant. A second support area (not shown on Figure 3), 3,000 by 950 feet and enclosed by a fence, is situated 8,000 feet southeast of the launch area. It contains 30 small miscellaneous buildings which may be either quarters or storage units. This support area is connected with the launch area by rail and road.

LAUNCH POINT IV

Launch Point IV (Figure 4) is also a Type I launch facility with one launch pad It is located at 62-57N 40-41E on the southeast bank of a tributary of the Yemtsa River and 4.1 nm east-northeast of Launch Point III. The launch area forms an irregular rectangle, 2,600 by 1,300 feet, lying on a northwest-southeast axis and is enclosed by a double security fence.

The single launch pad, of concrete construction, is 150 feet square and overhangs a ravine of a tributary of the Yemtsa River. An object, 50 feet wide, on the pad is probably a missile gantry. Five small, unidentified structures are located within the secured area.

The rail spur from Plesetsk terminates at the launch pad. At a point 4,000 feet southeast of the pad, a rail spur branches out to the north and proceeds to a missile-ready building, 215 by 130 feet, which is situated at the shallow end of a gully. This ready building has the usual two associated buildings, 70 by 30 feet, located 250 and 500 feet to the south, but is unique in being the only ready building in the launch complex which has been found outside a secured launch area. This unique feature is

[redacted] 25X1

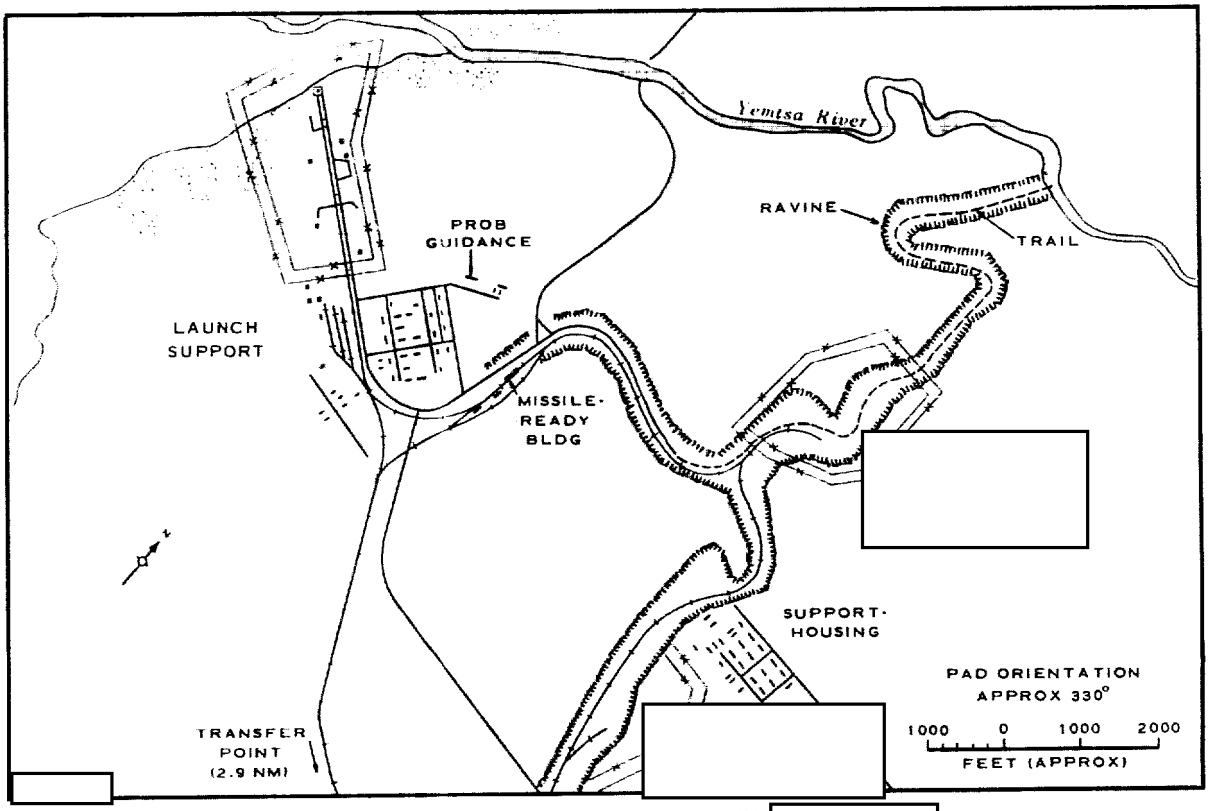

FIGURE 4. PLESETSK ICBM LAUNCH POINT IV (

A launch support-housing area of 35 buildings averaging 200 by 75 feet is located adjacent to the southeast end of the launch area and has a three-track utility rail spur with 3,000 feet of track.

A probable guidance facility is situated 3,250 feet east of the launch pad. The dimensions of its four buildings have not been ascertained but appear to be similar to those of the buildings at Launch Points I and II and Launch Point III. A perpendicular to the axis of the guidance structure indicates a probable pad orientation of 330 degrees, ± 5 degrees. It is noteworthy that this facility is offset slightly to the east of the launch pad instead of being directly behind, as are the guidance facilities at Launch Points I, II, and III.

LAUNCH AREA A

Launch Area A (Figure 5) is a road-served Type II (Mod a) facility located at 62-58N 40-47E on the south bank of the Yemtsa River and 3.4 nm northeast of Launch Point IV. Construction appears complete. The launch area measures 2,300 by 1,800 feet, and is enclosed by a double security fence. The secured area contains two elliptically shaped concrete launch pads, 375 by 125 feet, with an object, probably a missile erector, on each pad; two missile-ready buildings, each 170 by 105 feet; a bunkerlike structure, 135 by 65 feet; and several unidentified buildings. An unidentified building, 125 by 40 feet, lies 1,800 feet west of the secured area. A support area containing at least 20 buildings is also located west of the launch area. No water intake facilities are discernible; however, a probable drainage ditch runs from the northwest corner of the secured area and apparently discharges into the Yemtsa River. The area is connected with the rail-to-road transfer point by a good road. Pad orientation of Launch Area A is on an azimuth of 330 degrees, ± 5 degrees.

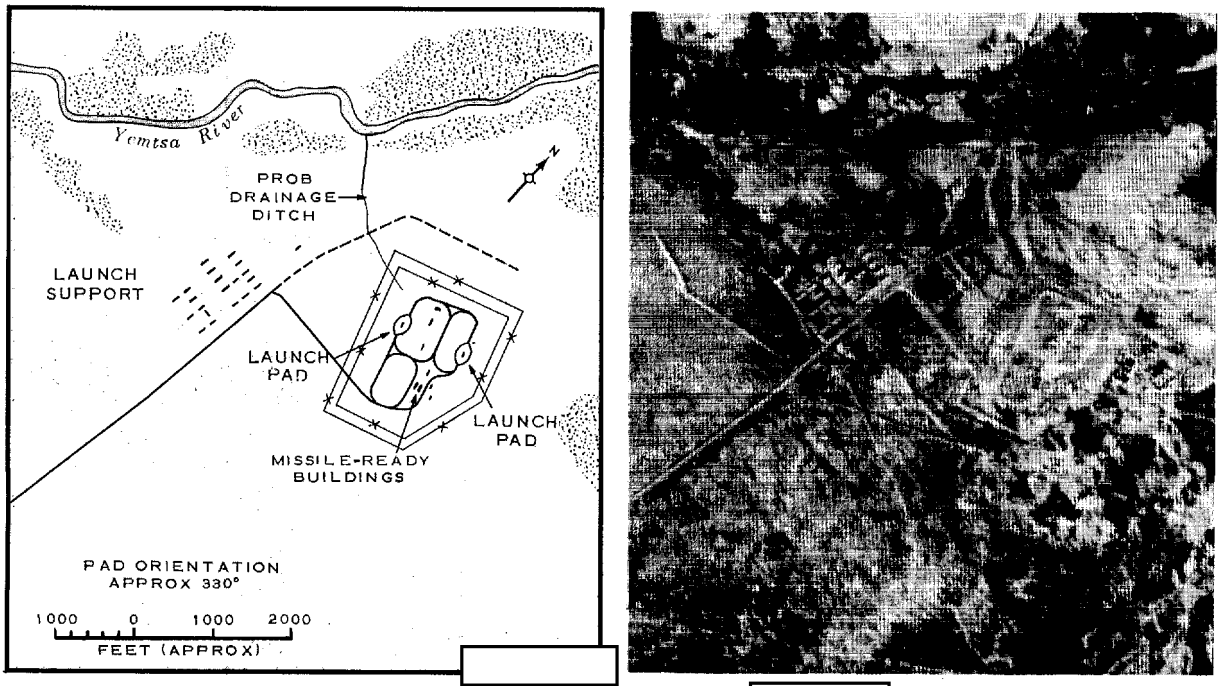

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FIGURE 5. PLESETSK ICBM LAUNCH AREA A [redacted] 25X1

LAUNCH AREA B

Launch Area B (Figure 6) is a road-served Type II (Mod b) facility located 63-03N 40-58E on the south bank of the Yemtsa River and 6.6 nm northeast of Launch Area A. Construction appears complete. The launch area is 1,900 feet square and is enclosed by a double security fence. The secured area contains two elliptically shaped concrete launch pads, 375 by 125 feet, with an object, probably a missile erector, on each pad; two missile-ready buildings, one 170 by 125 feet and the other 170 by 105 feet; and three unidentified structures. A support area containing 14 buildings, 125 by 40 feet, lies 4,000 feet southwest of the launch area. The launch area is connected with the rail-to-road transfer point by a good road. Pad orientation is 330 degrees, ± 5 degrees.

LAUNCH AREA C

Launch Area C (Figure 7) is a road-served Type III facility located at 63-01N 40-52E on the south bank of the Yemtsa River. The area, secured by a double fence, is 1,500 feet square and located 3.2 nm northeast of Launch Area A. The excavation was first seen on [redacted] Construction is still in progress and is paralleling work on the hardened silo configuration with two launchers at Launch Complex D at Tyura Tam and at seven other deployed ICBM complexes. A support area of at least eight buildings is located adjacent to the north side of the secured area. The area is connected to the rail-to-road transfer point by a good road.

LAUNCH AREA D

Launch Area D (Figure 8) is a road-served Type IV facility located 4.9 nm east of the complex support facility at 62-53N 40-50E. It is connected by road with all other elements within the launch complex. It occupies a generally rectangular area, 1,850 by 1,550 feet, and is enclosed by a single security fence.

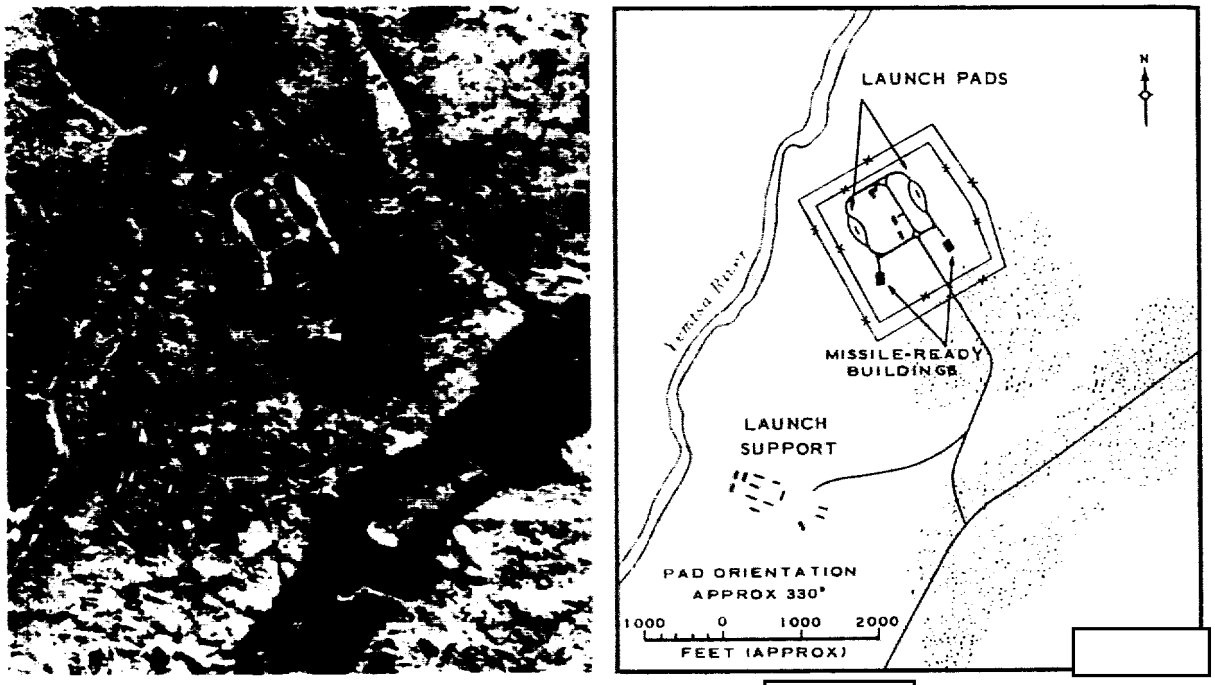

FIGURE 6. PLESETSK ICBM LAUNCH AREA B [redacted]

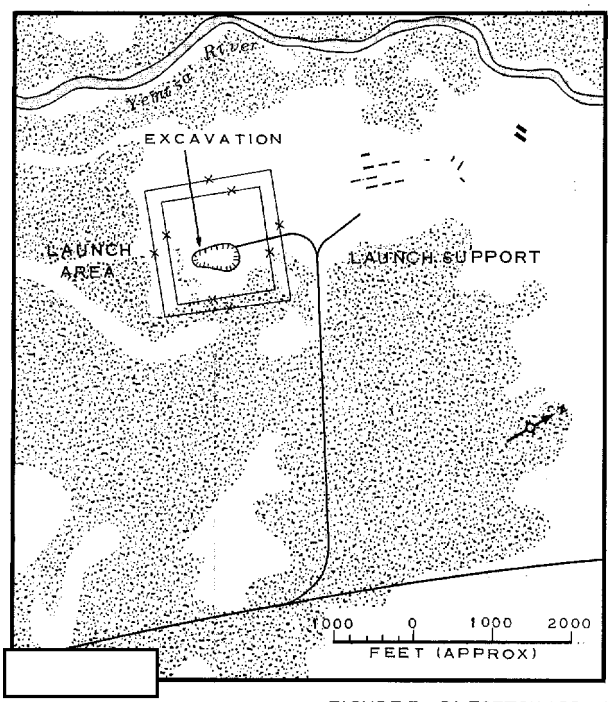

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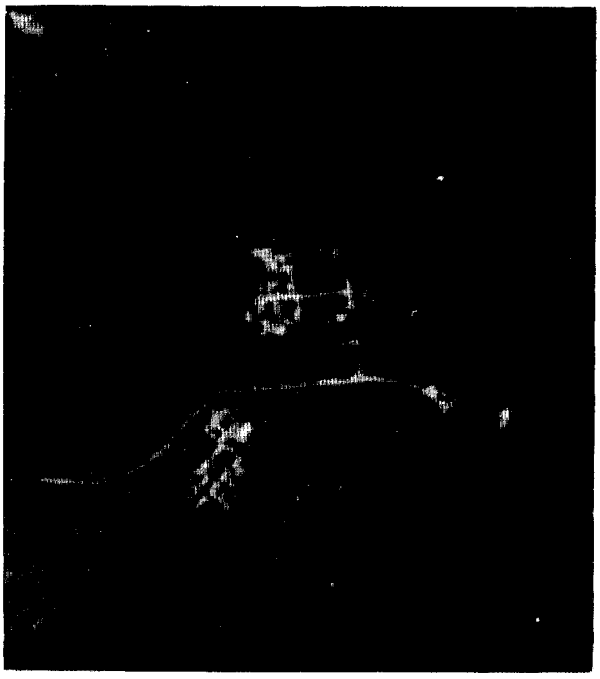
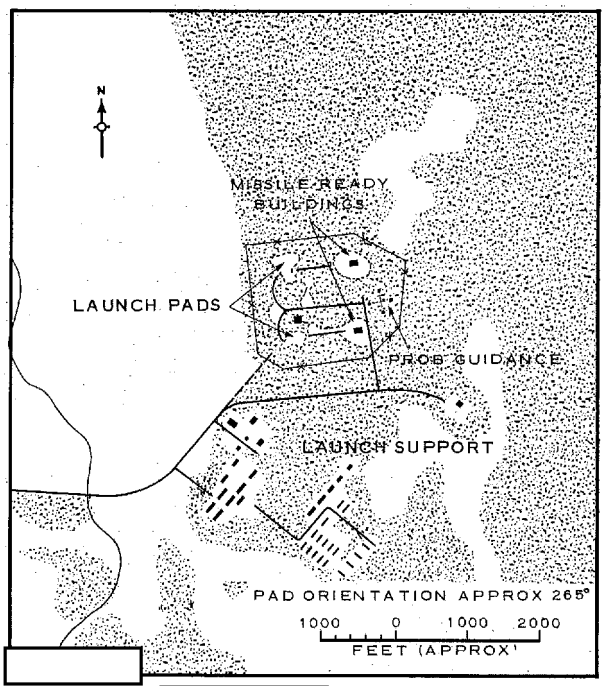
FIGURE 7. PLESETSK ICBM LAUNCH AREA C [redacted] 25X1





[redacted] 25X1

FIGURE 8. PLESETSK ICBM LAUNCH AREA D ([redacted] 25X1

The secured area contains two launch pads 800 feet apart; two missile-ready buildings, 130 by 115 feet, located 650 feet east of the pads; a probable guidance facility with a plus configuration of unknown orientation; and a road pattern connecting the components. All of the components are under construction. The pads are oriented on an azimuth of 265 degrees, ± 5 degrees.

One support area of 22 buildings lies 2,800 feet south of the secured area and a second group of 14 support buildings lies 2,000 feet south-southwest of the secured area. A possible rail-to-road transfer point is situated 4,800 feet southwest of the secured area between the access road and a branch of the main rail spur from Plesetsk. An unidentified building, 70 by 50 feet and served by an extension of the access road, is located 1,300 feet southeast of the secured area. A group of approximately 50 small structures--some of which may be tanks--lies along a rail spur 6,700 feet to the southwest.

LAUNCH AREA E

Launch Area E (Figure 9) is also a road-served Type IV facility located 4.2 nm south-southwest of the complex support facility at 62-50N 40-35E. It is connected by road with all other elements of the launch complex. A probable security fence is located on the north-east and south sides of the launch area but the installation as a whole has not been secured.

The launch area contains two launch pads 800 feet apart; two missile-ready buildings, 130 by 115 feet, located 650 feet east of the pads; a probable guidance facility with a plus configuration of unknown orientation; and a road pattern connecting the components. All of the components are under construction. The pads are oriented on an azimuth of 265 degrees, ± 5 degrees.

A support area containing approximately 35 buildings is situated 2,600 feet northeast of the launch area. Two unidentified scars are

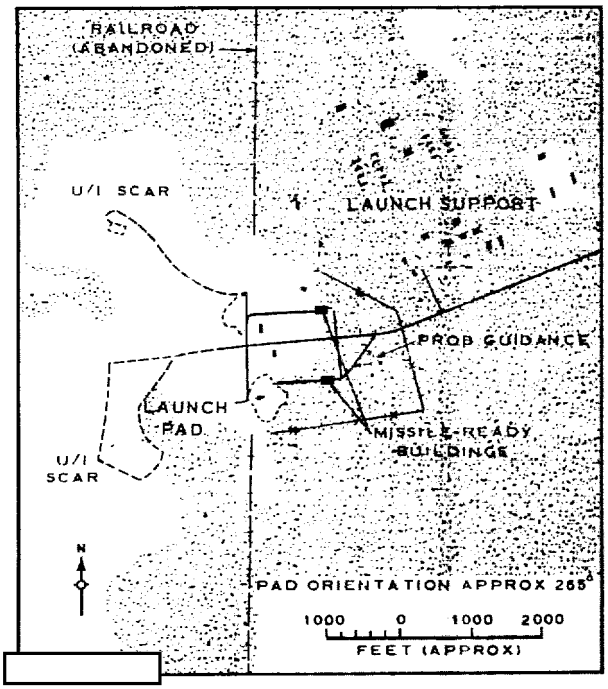
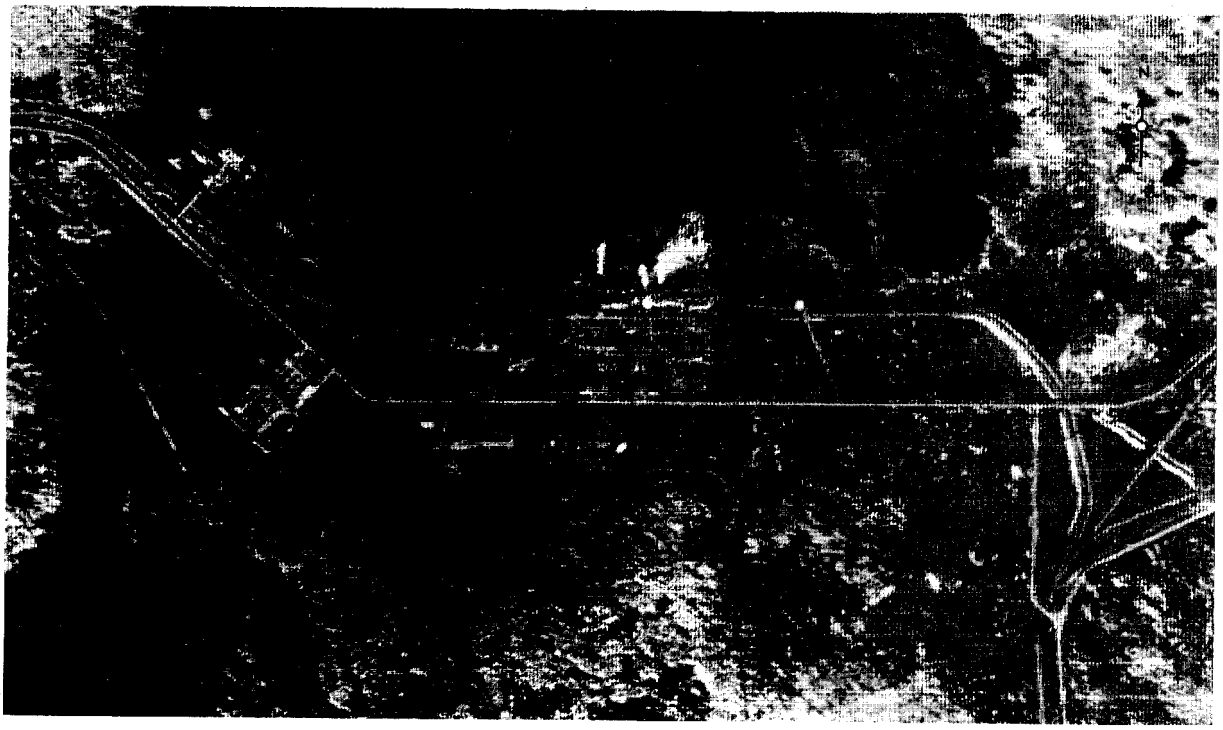


FIGURE 9. PLESETSK ICBM LAUNCH AREA E



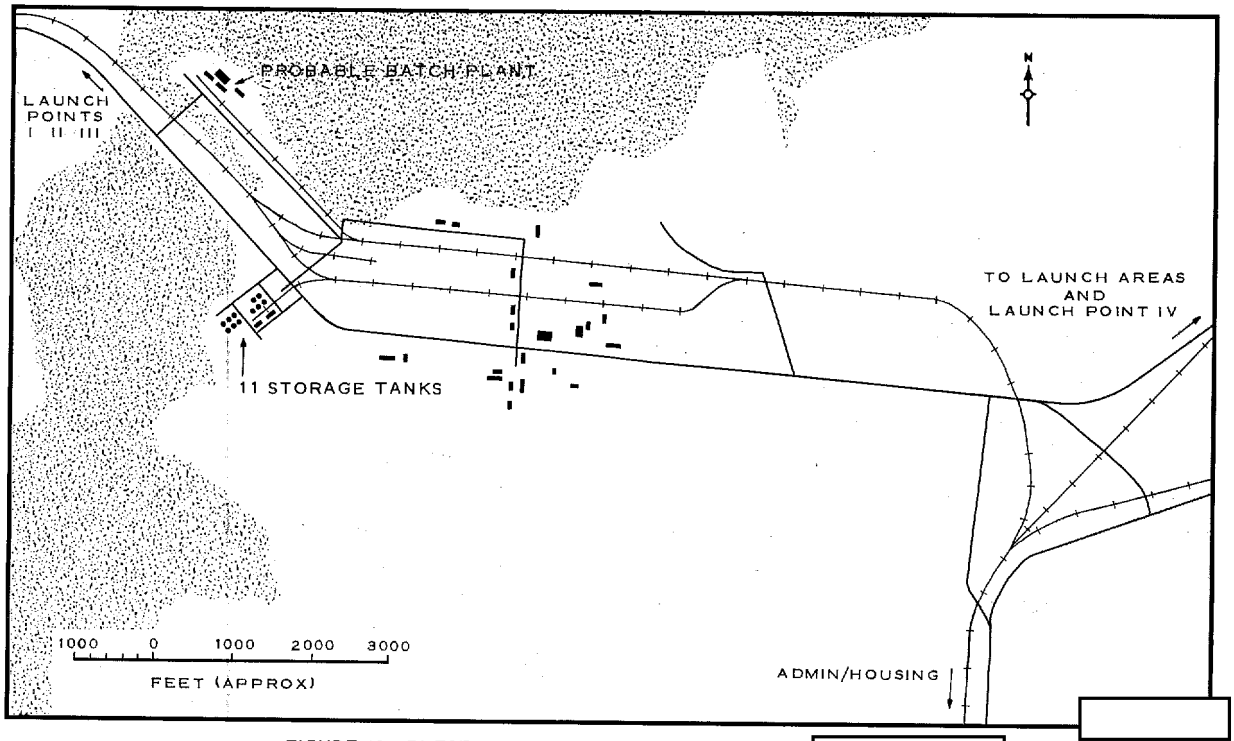


FIGURE 10. PLESETSK COMPLEX SUPPORT FACILITY [redacted] 25X1 25X1

located approximately 2,500 feet west of the launch area. An abandoned logging rail line runs through the launch area.

The complex support facility (Figure 10) lies south of the launch areas in a generally central location at 62-54N 40-39E. The area is served by rail and road and includes a rail siding 6,000 feet long and three shorter spurs. At least 25 buildings of various sizes and shapes, arranged in no definite pattern, are located within the installation. Open storage areas, construction equipment, and vehicle parking areas are located among the buildings. A probable concrete batch plant--served by a rail spur 2,700 feet long--is situated at the northwest edge of the installation. A tank storage facility of approximately 11 tanks--served by a rail spur 1,000 feet long--is situated at the west end of the installation. A third rail spur, 1,000 feet long, enters an open storage area. All elements of the launch complex are connected with this installation by road. In addition, all elements of the launch complex except Launch Areas A, B, and C are connected with this installation by rail.

RAIL-TO-ROAD-TRANSFER POINT

The rail-to-road transfer point (Figure 11) lies adjacent to the rail line to Plesetsk at 62-55N 40-45E. The transfer point, 1,700 feet long, is oriented with its long axis in a northeast-southwest direction. It has three crossover links 340 feet long, one at each end and one in the center. Two unidentified structures are located in a northeast half of the facility. A single security fence encloses the area.

A possible second rail-to-road transfer point serving Launch Areas D and E is located 2 nm south of the first transfer point at

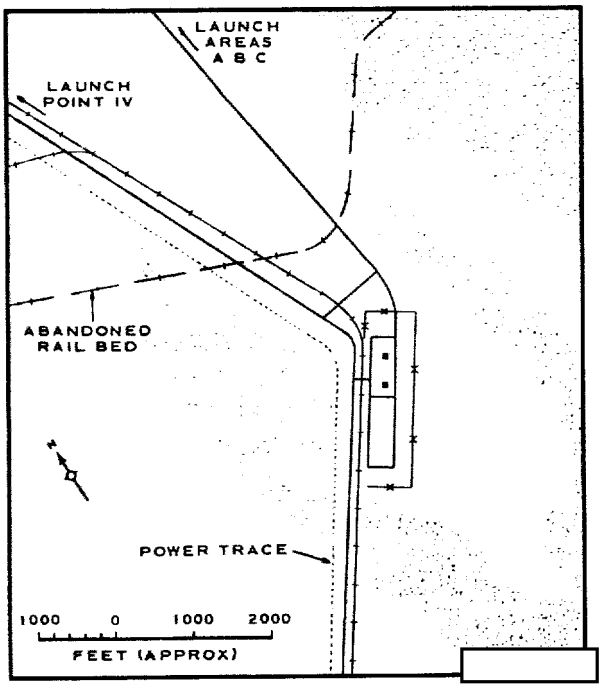


FIGURE 11. PLESETSK RAIL-TO-ROAD TRANSFER POINT.

62-53N 40-46E. It extends in a general east-west direction and is about 3,400 feet long by 680 feet wide. It has two possible crossover links. No security fence is apparent. Poor image quality precludes further interpretation of this facility.

ADMINISTRATIVE AND HOUSING AREA

The administrative and housing area (Figure 12) is situated near the southwest end of the launch complex at 62-46N 40-21E. It consists of approximately 270 buildings, of which approximately 35 are two-story barracks-type buildings measuring 240 by 80 feet, 5 are large administrative-type buildings, 120 are single-story dwelling units, 15 are various-sized warehouses and the remaining 95 are generally small, miscellaneous support buildings.

At the southeast end of the administrative and housing area, a rail spur 3,700 feet long

serves a probable concrete batch plant. At the southeast edge of the main block of buildings, a rail yard with three tracks 6,000 feet long serves a group of warehouses. The three largest warehouses are 600 by 200 feet. A probable power plant with a conveyer is located at the northwest end of the rail yard. A rail spur 1,800 feet long serves the power plant. At the northwest end of the area is a probable water treatment plant. East of the rail yard is an unidentified group of four dispersed, road-served buildings. The area is connected by road with all elements of the launch complex and by rail with all elements except Launch Areas A, B, and C.

CONCLUSIONS

Launch Points I-IV and Launch Area A first became suspect ICBM areas following [redacted] 25X1 However, poor-quality photography, cloud cover, and haze precluded positive identification of ICBM deployment at Plesetsk until [redacted] 25X1 which confirmed Launch Areas A, B, and C, and [redacted] 25X1 which confirmed Launch Points I-IV. Using these two missions as a comparative guide, it was determined that roads, railroads, built-up areas, and scarring observed at Launch Points I-IV and Area A on [redacted] were apparently the same for the most part as the features observed and identified at these areas on [redacted] 25X1 It is possible to conclude from this similarity that Launch Points I-IV were probably completed by [redacted] 25X1 and that Launch Area A was under construction at that time.

Launch Area B--not identified until [redacted] 25X1 was probably under construction as early as [redacted] 25X1 when a single building of the launch area was observed through a break in the clouds. Launch Area C was first seen [redacted] however, the clearing in which it is situated was present in [redacted] 25X1

Launch Areas D and E were not identified until [redacted] although construction activity in these areas was first noted [redacted] 25X1 There was no evidence of construction at Launch Area E in [redacted] or at Launch Area [redacted] 25X1 The limited activity observed in [redacted] suggests that construction at these areas was in an early stage.

The Plesetsk ICBM Launch Complex is unique in having in one complex all known types of ICBM launch facilities. Furthermore, the construction of these facilities at Plesetsk may possibly have been undertaken concurrently with the development of prototype sites at Tyura Tam. This pattern of development, along with the large-scale support facilities at Plesetsk, suggests that it may be both a deployed operational complex and a training-orientation facility. If this analysis is correct, future developments in the Soviet ICBM program may be indicated by activity at Plesetsk as well as at Tyura Tam.

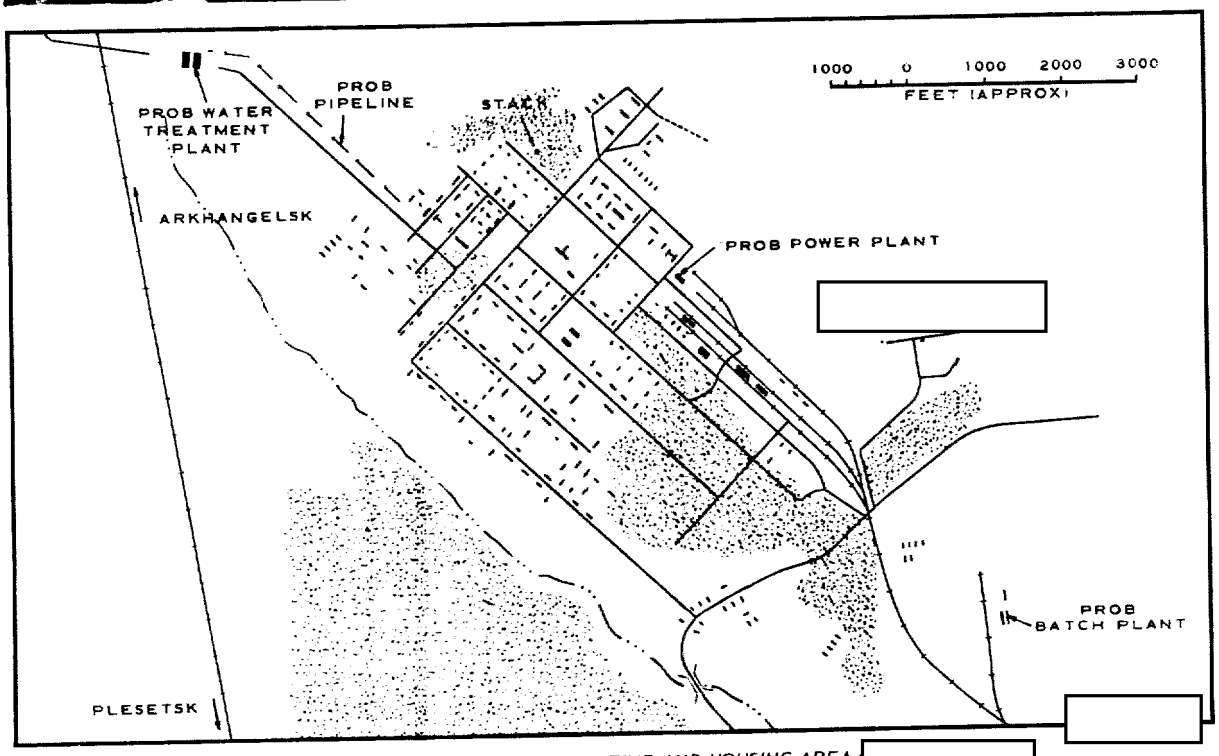


FIGURE 12. PLESETSK ADMINISTRATIVE AND HOUSING AREA

COORDINATES OF LAUNCH FACILITIES

Launch Point I	62-55N 40-27E
Launch Point II	62-55N 40-28E
Launch Point III	62-56N 40-32E
Launch Point IV	62-57N 40-41E
Launch Area A	62-58N 40-47E
Launch Area B	63-03N 40-58E
Launch Area C	63-01N 40-52E
Launch Area D	62-53N 40-50E
Launch Area E	62-50N 40-35E

GENERAL GUIDE TO ICBM SITE CONFIGURATION

Type I. First generation soft site with a single rail-served pad similar to Launch Complex A or B, Tyura Tam. To date, this type has only been observed at Plesetsk.

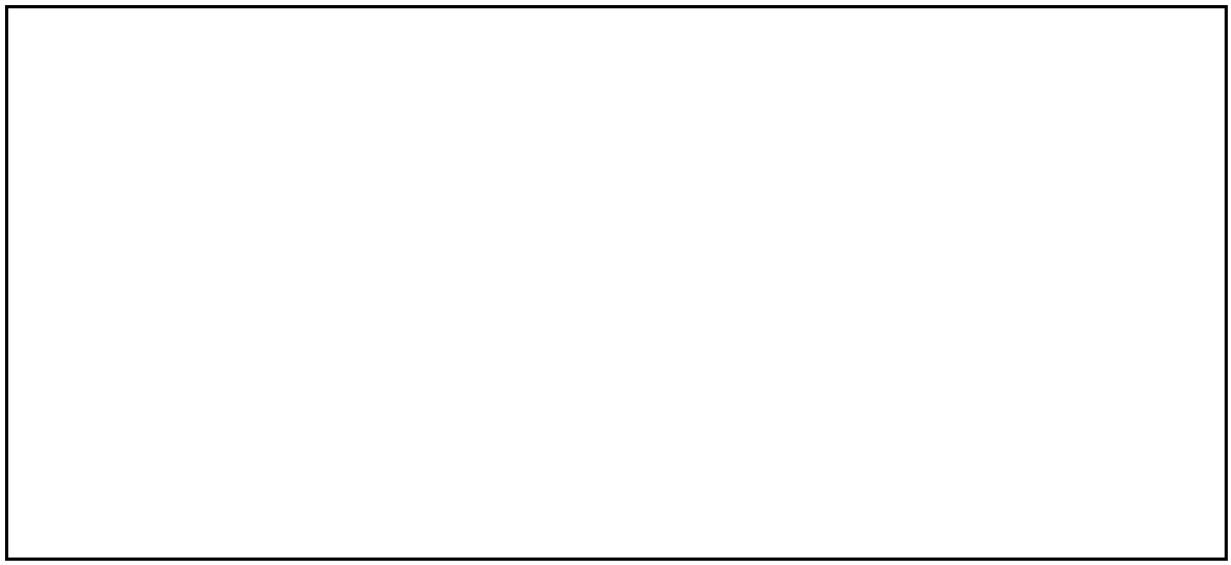
Type II. Second generation soft site with two road-served pads similar to Launch Complex C, Tyura Tam. This type was first observed at Yur'ya and subsequently at 11 other locations. There are two basic configurations of this type--Mod a and Mod b. Mod a has two ready buildings straddling a central road. Mod b has one ready building behind each pad.

Type III. A hardened ICBM launch site observed at Launch Complex D, Tyura Tam and eight confirmed ICBM complexes. Each site consists of two silo-type launchers and a control bunker. The degree of hardening cannot be determined from available evidence. The excavations during construction are about 200 feet wide and 500 feet long.

Type IV. A soft configuration consisting of two road-served launch pads. This configuration was first observed at Tyumen' and subsequently at three other confirmed ICBM complexes. It differs from Type II sites as follows: the pad separation is 820 feet instead of 980; the ready building is 820 feet from the pad and is smaller (115 by 130 feet); and there is a "plus sign" pattern to the rear of the pad area which is probably related to the guidance system used at this site.

REFERENCES

25X1



MAPS OR CHARTS

ACIC. US Air Target Chart, Series 200, Sheet 0102-9AL, 2d ed, Dec 61, scale 1:200,000 (SECRET)

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