NPIC/R-795/64
August 1964

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PHOTOGRAPHIC INTERPRETATION REPORT

TCS-7811/64
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12 Pages

NEW HF COMMUNICATIONS FACILITIES AT SOVIET MRBM/IRBM LAUNCH AREAS

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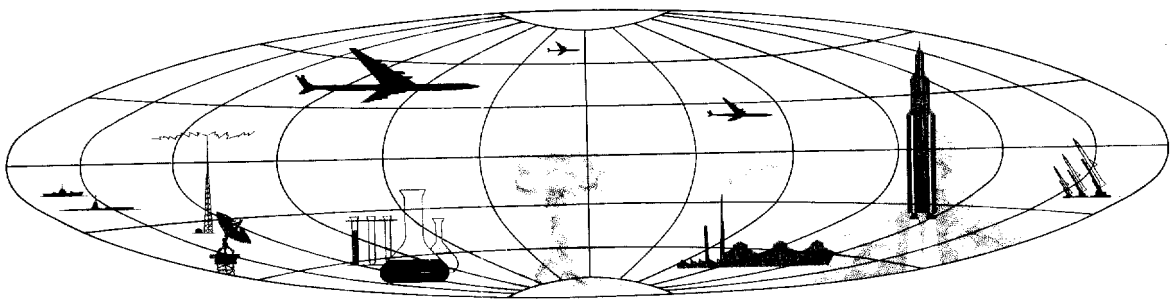

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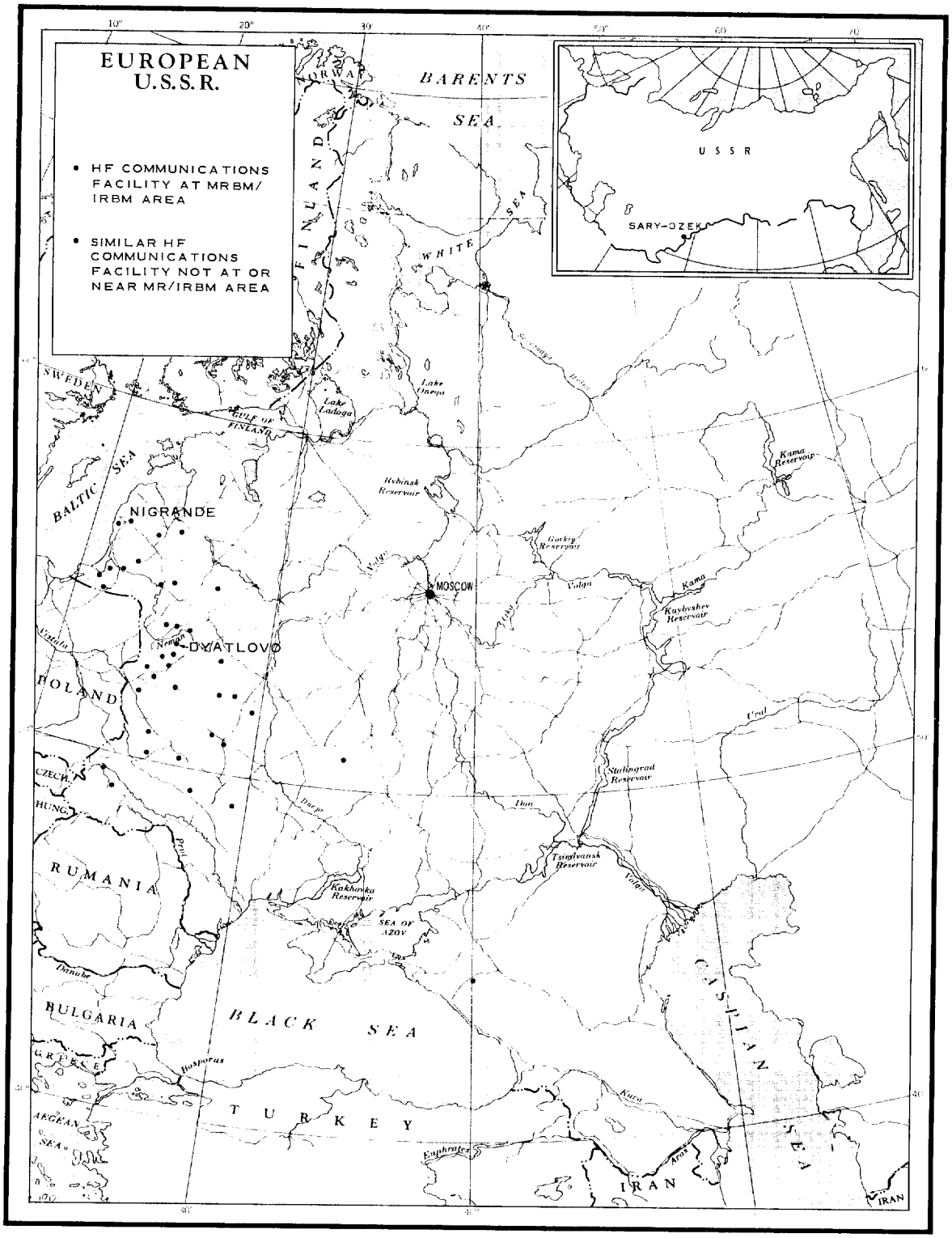

NPIC J-3408 (8/64)

FIGURE 1. LOCATION OF NEW HF COMMUNICATIONS FACILITIES, USSR.

25X1D
25X1D

INTRODUCTION

25X1D

Examination of the 165 MRBM/IRBM launch areas covered by photography o[redacted] and [redacted], and a partial search of [redacted], revealed new high-frequency (HF) communications facilities to be recently completed or under construction at a number of these areas (Figure 1). Similar facilities may exist at other areas, but are not presently identifiable. These new facilities apparently are intended to supplement existing primary types of communications such as landline/microwave relay.

This report furnishes a general description of these new facilities, and a tabular listing of pertinent specific information for each (Table 1). In addition, there are detailed considerations of both a typical facility (Figures 2 and 3), and of the facility at Nigrande IRBM Launch Area 3 which was specifically requested (Figures 4 and 5).

GENERAL DESCRIPTION

25X1D

Thirty-six new communications facilities, including one probable and two possible facilities, have been noted at or near MRBM/IRBM launch areas on photographic coverage of the USSR in [redacted] (Three other facilities, apparently similar but not at or near an MRBM/IRBM launch area, are also included in Figure 1 and Table 1.) Many of these facilities appear to be still under construction. A search of earlier photography to establish negation dates indicates a probable beginning of construction at most of the facilities in early [redacted] However, much of this earlier photography is of very small scale, and also of poor quality or partly cloud covered, so that it is not always possible to ascertain a valid date for the beginning of construction.

25X1D

These new communications facilities vary in minor ways from each other but are essentially similar with respect to the numbers and types of antennas present, and to the location of the facility relative to the MRBM/IRBM launch area.

Typically, the new communications facility is found at or very near to an individual MRBM/IRBM launch area, but with no more than one facility per launch complex (usually comprised of two or three launch areas), indicating one central communications control per complex.

The types of antennas present in nearly all cases are the horizontal dipole and the V. These most probably operate in the HF radio range and may be used for either transmitting or receiving, although they are effective over shorter distances than, for example, the rhombic or fishbone types which are capable of greater directivity and very long range. Rhombic antennas are present at only a very few of the facilities, and fishbone antennas at only one (Sary-Ozek). Neither the horizontal dipole nor V antennas at the facilities can be described in detail since the antennas themselves are not visible, their

25X1D

[redacted]

corrected directly by computer. For consistency, all azimuths are given between 0 and 180 degrees, the corresponding reciprocal azimuth being assumed.

TYPICAL MRBM/IRBM HF COMMUNICATIONS FACILITY

Typical of the new HF communications facilities being established at Soviet MRBM/IRBM launch areas is the one at Dyatlovo MRBM Launch Area 1 (Dyatlovo Launch Site*), 6.7 nautical miles (nm) northwest of Dyatlovo at

*TDI launch site designator

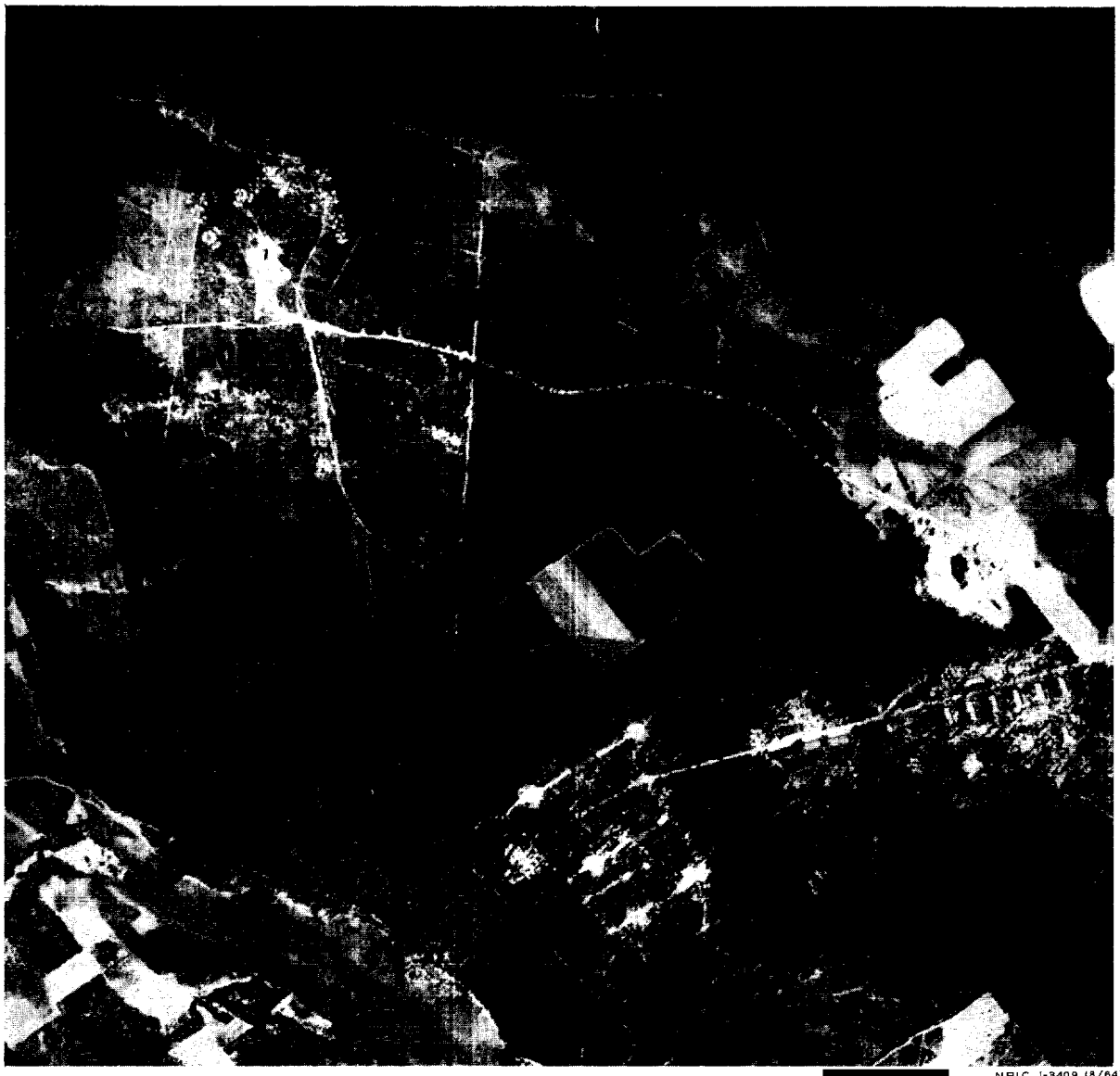

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FIGURE 2. TYPICAL NEW HF COMMUNICATIONS FACILITY, DYATLOVO, [redacted]

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53-33-[redacted]N 25-16-[redacted]E (Figures 2 and 3). This facility was not present on photography of [redacted] but was observed under construction on photography of [redacted] It is fenced and contains a security building at the entrance, two other small buildings or structures, and a central control building; an antenna field, consisting of 4 HF horizontal dipole antennas and 4 V antennas (2 large and 2 small), fans out west, north, and east of the control building. Propagation azimuths for the antennas are given in Table 1. Transmissions line traces can be seen within the facility, which is connected by road to the launch site access road.

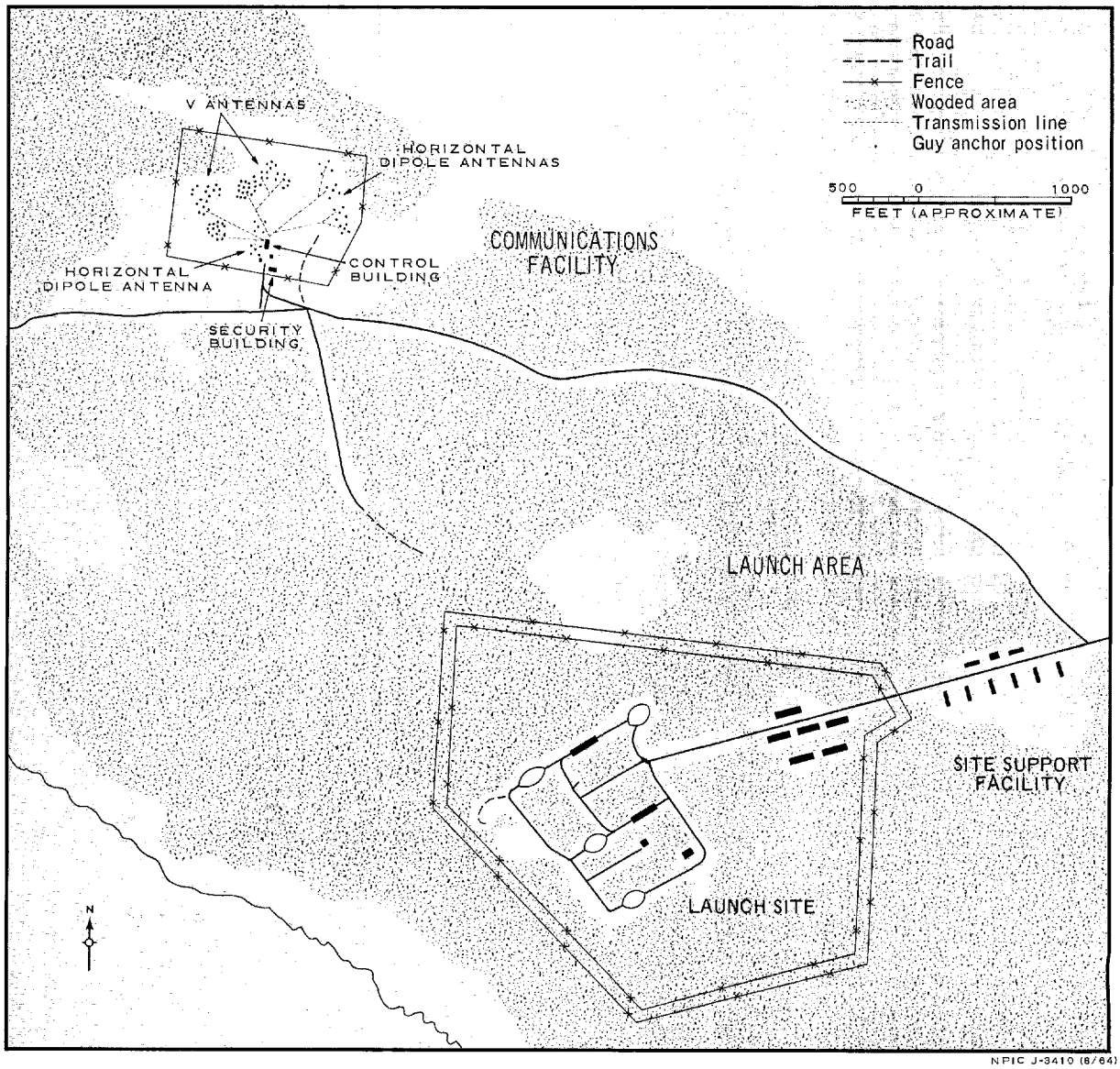

FIGURE 3. TYPICAL NEW HF COMMUNICATIONS FACILITY, DYATLOVO.

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HF COMMUNICATIONS FACILITY AT NIGRANDE IRBM LAUNCH AREA 3

The new HF communications facility at Nigrande IRBM Launch Area 3 (Vainode Launch Site*) is not as typical, there being no V antennas present, for example. This facility (Figures 4 and 5) is situated 2.5 nm north-northwest of Vainode at 56-28[redacted]N 21-50-[redacted]E. It consists of a control area, possibly still under construction, containing three buildings and two unidentified objects, and an antenna field containing 4 to 5 horizontal dipole antennas, some or all of which also appear to be under construction. The facility is not fenced, and no transmission line traces could be seen.

*TDI launch site designator

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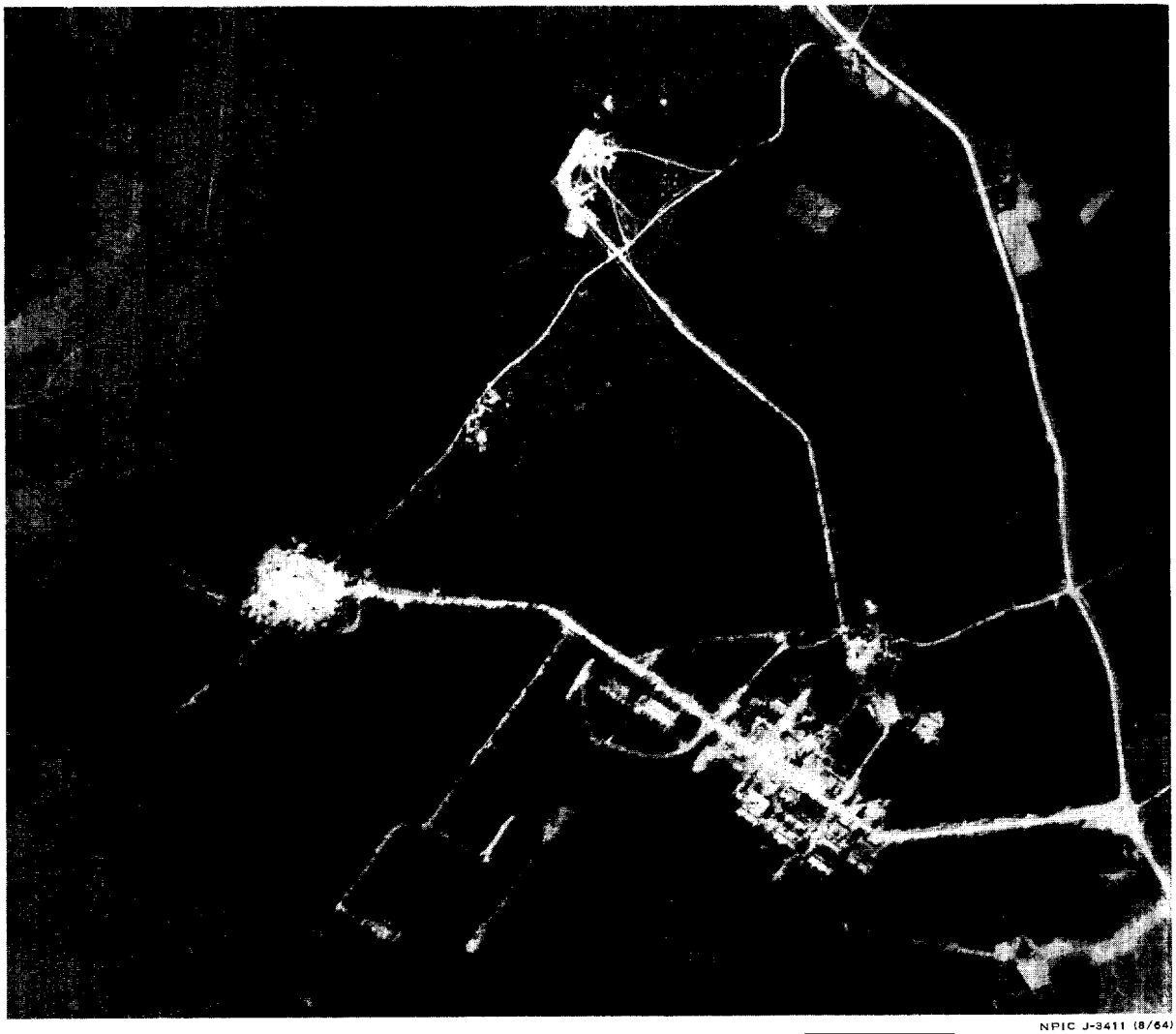

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FIGURE 4. NEW HF COMMUNICATIONS FACILITY, NIGRANDE, [redacted]

25X1D

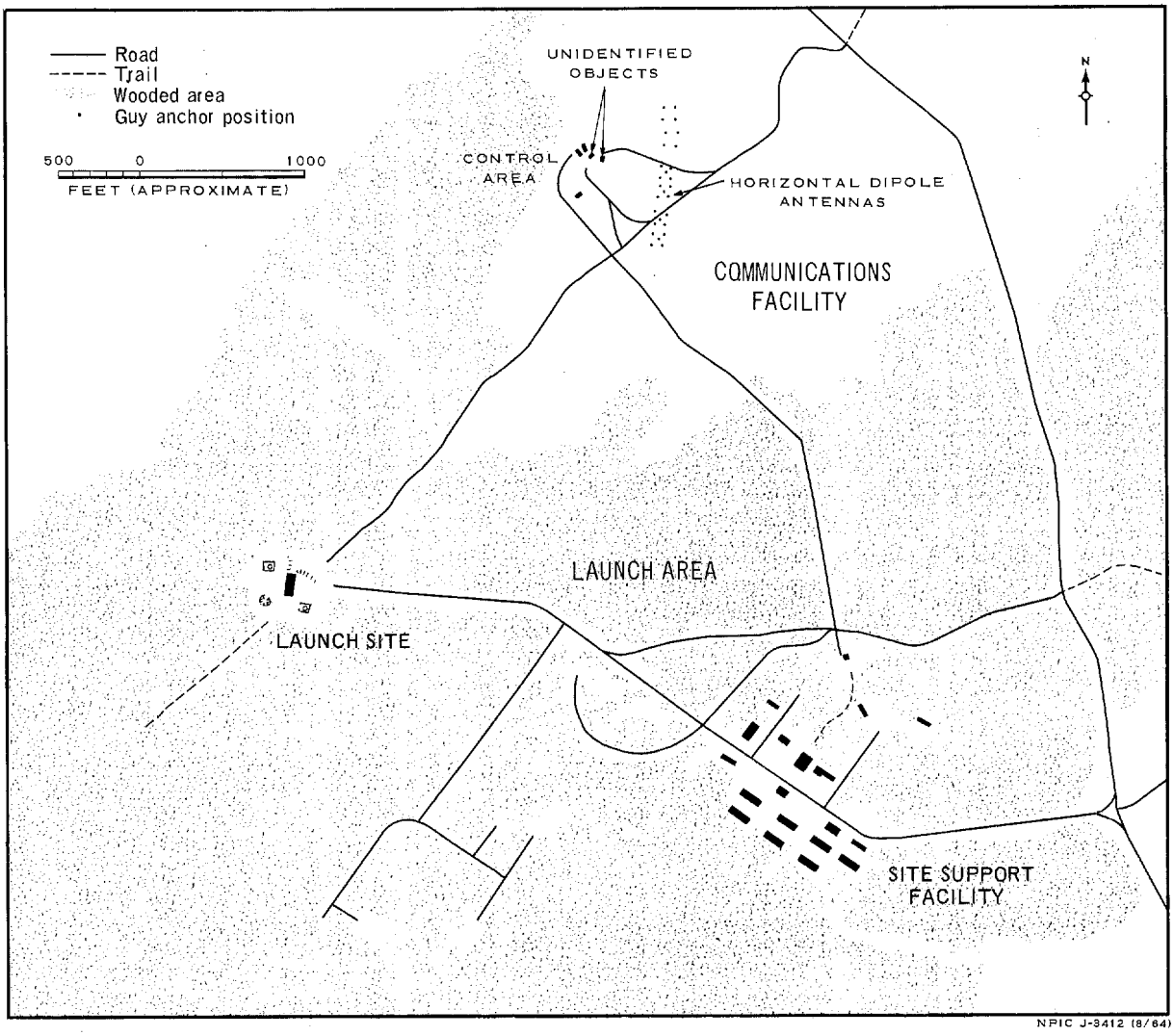

FIGURE 5. NEW HF COMMUNICATIONS FACILITY, NIGRANDE.

Table 1. HF Communications Facilities at MRBM/IRBM Launch Areas

Location		Coordinates	Number and Type of Antennas	[redacted]	Map Reference** (sheet number)
Associated MRBM/IRBM Launch Area*	Distance from Launch Area				
Belokorovichi 1 (Olevsk Launch Site 1)	1.7 nm S of launch area	51-07-00N 27-59-30E	2 dipole 1 V 1 possible V 2 rhombic		0233-7
Brest 2 (Brest Launch Site 2)	At launch area, 18.5 nm SE of Brest	51-51-45N 24-01-45E	1 large V 1 small V At least 2 dipole 1 U/I probable dipole U/C		0232-5
Brody 3 (Brody Launch Site 1)	1.5 nm W of launch area	50-06-00N 25-09-45E	Probable dipoles U/C		0233-11
Derazhnya 1 (Derazhnya Launch Site 1)	At launch area, 4.5 nm N of Derazhnya	49-21-00N 27-26-30E	At least 2 dipole 2 clearings for possible antennas		0233-17
Dolina 1 (Dolina Launch Site 1)	1 nm SE of launch area	49-04-00N 24-03-30E	3 possible dipole		0232-20
Drogobych 1 (Medenitsa Launch Site)	Immediately S of launch area	49-22-00N 23-45-30E	3 dipole		0232-20
Dyatlovo 1 (Dyatlovo Launch Site)	At launch area, 6.7 nm NW of Dyatlovo	53-33-00N 25-16-30E	4 dipole 2 large V 2 small V		0168-18
Granov 1 (Granov Launch Site 1)	At launch area, 4.5 nm NNW of Granov	48-56-15N 29-30-30E	2 dipole Probable dipole U/C		0233-18

See footnotes at end of table.

Table 1. (Continued)

Location		Coordinates	Number and Type of Antennas	[redacted]	Map Reference** (sheet number)
Associated MRBM/IRBM Launch Area*	Distance from Launch Area				
Gresk 1 (Gresk Launch Site 1)	At launch area, 9 nm NE of Gresk	53-14-50N 27-42-15E	At least 4 dipole 1 large V 1 small V		0168-19
Gvardeysk 1 (Gvardeysk Launch Site 1)	At launch area, 2.5 nm NE of Gvardeysk	54-40-30N 21-08-00E	3 probable dipole		0168-6
Jelgava 1 (Iecava Launch Site 1)	At launch area, 12 nm ESE of Jelgava	56-35-30N 24-03-45E	3 dipole 1 U/I		0153-21
Jonava 2 (Jonava Launch Site)	1.2 nm SE of launch area	55-00-45N 24-16-00E	2 dipole 1 V 1 day-night rhombic		0168-7
Konkovichi 1 (Petrikov Launch Site)	1 nm E of launch area	52-10-30N 28-36-15E	3 dipole 1 V 1 U/I		0168-25
Korosten 2 (Korosten Launch Site 2)	At launch area, 6.5 nm SW of Korosten	50-52-30N 28-30-30E	3-4 possible dipole U/C		0233-7
Kozhanovichi 2 (Kozhanovichi Launch Site 2)	At launch area, 2.6 nm SW of Zhitkovichi	52-11-45N 27-48-30E	2 dipole 1 V 1 probable small V		0168-24
Krasnoznamensk 2 (Ragnit Launch Site)	At launch area, 5.5 nm E of Newman	55-01-30N 22-11-30E	2 dipole 1 possible dipole U/C 1 large V 1 small V		0168-6

See footnotes at end of table.

Table 1. (Continued)

Location		Coordinates	Number and Type of Antennas		Map Reference** (sheet number)
Associated MRBM/IRBM Launch Area*	Distance from Launch Area				
Lebedin 1 (Lebedin Launch Site 1)	At launch area, 2.5 nm SSW of Lebedin	50-33-00N 34-26-00E	2-3 dipole		0234-6
Lida NW (none)	6 nm NW of Lida; 10 nm W of Lida MRBM Launch Area 2	53-57N 25-11E	6 dipole 2 large V 2 small V		0168-13
Lida 2 (Lida Launch Site 2)	At launch area, 7 nm NE of Lida	53-57-00N 25-28-00E	3 dipole 1 large V 1 small V		0168-13
Lutsk 1 (Lutsk Launch Site 1)	At launch area, 11 nm WNW of Yelsk	50-46-45N 25-04-15E	Possible dipole footings		0233-6
Maykop Fixed Field MRBM (Tulskaya)	2.5 nm E of launch area	44-31-00N 40-19-00E	3 probable dipole U/C		0249-24
Nigrande 3 (Vainode Launch Site)	At launch area, 2.5 nm NNW of Vainode	56-28-30N 21-50-15E	2-3 dipole 2 dipole U/C		0152-25
Ostrog 2 (Ostrog Launch Site 2)	1 nm SSW of launch area	50-16-15N 26-41-00E	3 probable dipole		0233-11
Paplaka 1 (Paplaka Launch Site 1)	At launch area, 6.7 nm WSW of Paplaka	56-24-00N 21-15-30E	No antennas visible		0152-25
Pinsk 2 (Motol Launch Site)	0.8 nm S of launch area	52-11-30N 25-44-00E	4 dipole (large & small) 1 large V 1 small V		0168-23

See footnotes at end of table.

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Table 1. (Continued)

Location		Coordinates	Number and Type of Antennas
Associated MRBM/IRBM Launch Area*	Distance from Launch Area		
Postavy 1 (Postavy Launch Site 1)	0.8 nm SE of launch area	55-09-30N 26-54-00E	2 dipole 1 large V 1 small V
Pruzhany 1 (Pruzhany Launch Site 1)	0.5 nm NE of launch area	52-30-30N 24-08-15E	3 dipole 1 large V 1 small V
Pruzhany SSE (none)	9.5 nm SSE of Pruzhany; 16.5 nm ESE of Pruzhany MRBM Launch Area 1	52-24-30N 24-33-30E	6 rhombic (3 day, 3 night) 4 dipole 2 V
Ruzhany 2 (Krupa Launch Site 2)	At launch area, 5.5 nm WSW of Ruzhany	52-49-30N 24-45-30E	3 dipoles 1 large V 1 small V
Sary-Ozek 1 (Kara Babau Launch Site 1)	At launch area, 7.4 nm NNW of Kara Babau	44-32-00N 77-46-45E	2 fishbone 2 dipole 1 large V 1 small V
Slonim 2 (Byten Launch Site 2)	At launch area, 10.5 nm S of Slonim	52-55-30N 25-21-30E	At least 3 dipole 1 V 1 probable V
Slonim W (none)	3.5 nm W of Slonim; 12.5 nm NNW of Slonim MRBM Launch Area 2	53-06-40N 25-13-00E	4 dipole 1 large V 1 small V

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See footnotes at end of table.

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Table 1. (Continued)

Location		Coordinates	Number and Type of Antennas
Associated MRBM/IRBM Launch Area*	Distance from Launch Area		
Sovetsk 1 (Slavsk Launch Site 1)	At launch area, 10 nm SW of Sovetsk	54-59-15N 21-37-15E	2-3 dipole 1 large V 1 small V
Taurage 2 (Taurage Launch Site 1)	0.7 nm S of launch area	55-09-15N 22-20-45E	4-5 dipole 1 large V 1 small V
Ukmerge 2 (Ukmerge Launch Site)	At launch area, 4.7 nm SW of Ukmerge	55-11-15N 24-42-30E	3 dipole U/C 1 large V 1 small V
Vselyub 2 (Vselyub Launch Site 2)	At launch area, 5.4 nm N of Vselyub	53-48-00N 25-46-45E	1 proba-ble dipole U/C 1 large V 1 small V
Yelsk 1 (Yelsk Launch Site 1)	At launch area, 7 nm SSE of Yelsk	51-42-00N 29-12-30E	2 dipole
Zagare 1 (Zagare Launch Site 1)	At launch area, 2.8 nm NNE of Zagare	56-23-15N 23-19-30E	Probable dipoles U/C 1 V
Znamensk 2 (Znamensk Launch Site 2)	At launch area, 3.1 nm WSW of Znamensk	54-35-30N 21-08-45E	Probable dipole U/C

*TDI launch site designator in parentheses.
**Map reference is to US Air Target Chart, Series 200 (scale 1:200,000).

REFERENCES

REQUIREMENTS

NSA. PO432/R64-64
NSA. P0432/R89-64

NPIC PROJECTS

N-656/64
N-856/64

TCS-7811/64
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