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NPIC/R-159/63
July 1963

PHOTOGRAPHIC INTERPRETATION REPORT

MISSILE-ASSOCIATED FACILITY

NEAR EMBA, USSR

[redacted]

CIA

DIA

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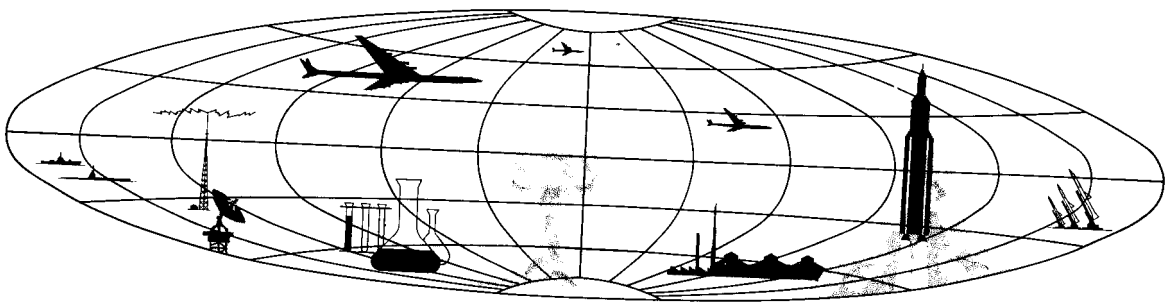
NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER



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PHOTOGRAPHIC INTERPRETATION REPORT

MISSILE-ASSOCIATED FACILITY NEAR EMBA, USSR

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PREFACE

25X1 This report, prepared in response to CIA requirement OSI/289/62 [redacted] presents a photographic study of the missile-associated facility near Emba, USSR.

The only photography of this installation is that provided [redacted] 25X1D

25X1D [redacted] The quality and small scale of this photography preclude the determination of exact measurements and the assigning of definite functions to many buildings and areas.

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SUMMARY

The Emba Missile-Associated Facility appears to be a major testing or research and development facility rather than an operational-type missile facility. It was still under construction 25X1D the date of the latest photography, and the particular type of missile activity cannot be determined at this time.

The facility includes a probable launch area with associated support facilities and a separate administrative and logistical support area.

The launch-associated facilities, located in the southern part of the installation, consist of a probable launch area, a technical support area, and an instrumented range containing eleven instrumentation sites which form a bell-shaped pattern extending approximately 35 nautical miles (nm) in a south-southwesterly direction.

The administrative and logistical support area, located in the northern part of the installation, includes a rail-served support area A and an adjoining airfield with a 7,500 foot runway.

INTRODUCTION

The Emba Missile-Associated Facility at 48-45N 58-04E (Figure 1) is under construction south of Emba, a town on the Kazakh railroad system 275 nm northwest of Tyura Tam.

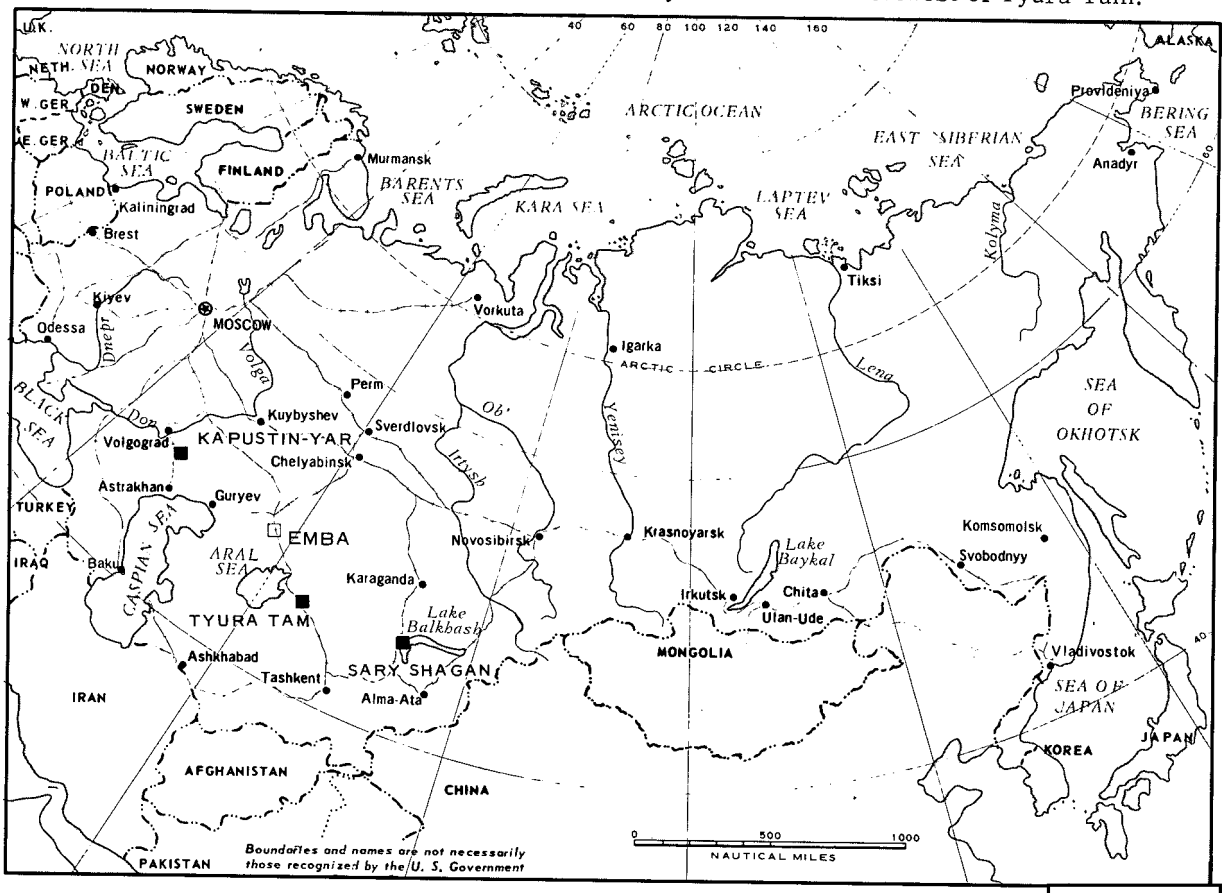

FIGURE 1. LOCATION OF EMBA.

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FIGURE 2. MISSILE-ASSOCIATED FACILITY AT EMBA

25X1D

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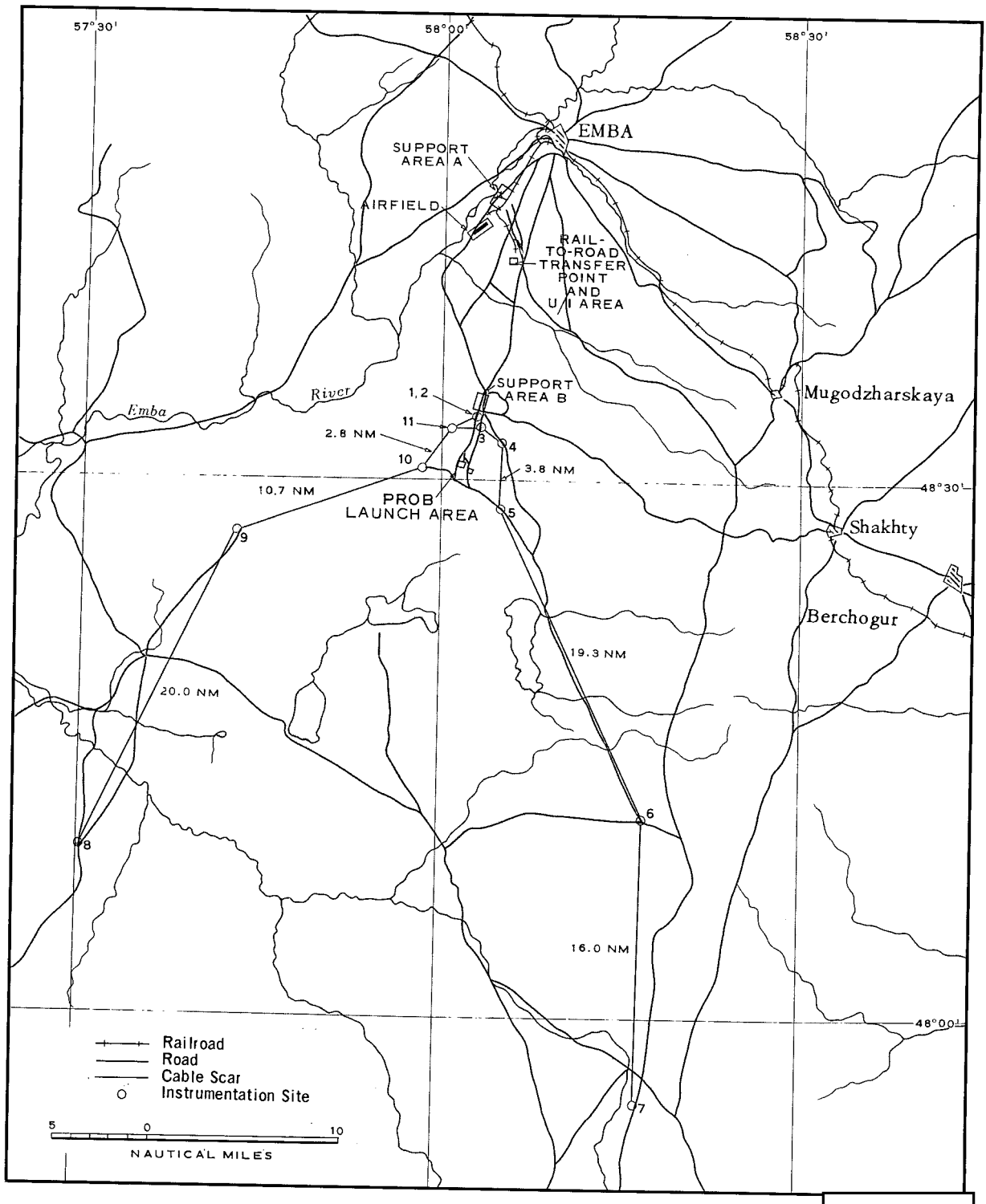

FIGURE 3. LAYOUT OF FACILITIES.

25X1

25X1 This facility was first observed [redacted] tography of this facility [redacted] 25X1D
25X1D [redacted] The
25X1 only available photo coverage of this area prior 25X1D
25X1 to this date was [redacted] photography [redacted]
25X1D [redacted]
25X1D [redacted] Although snow covered, this photography showed no evidence of a railroad or construction activity in the area south of Emba.

This report is based on a study of the photography resulting from the [redacted] 25X1D
[redacted] missions (Figures 2 and 3) and describes the changes resulting from construction 25X1
activity [redacted] 25X1D

25X1D [redacted] the following [redacted]
25X1D [redacted] missions have provided fair pho-
25X1

SUPPORT AREA A

Support area A is located 4 nm south-southwest of Emba, on the east bank of the Emba River (Figure 4). This support base, which occupies an area 9,000 by 5,000 feet, contains about 114 buildings and two sets of rail sidings having a total length of 10,000 feet. This appears to be the main support base. A rail line from this base joins the main railroad at Emba.

The buildings are primarily grouped into two separate areas. The northern area appears to be an administrative and housing area and contains 56 buildings, most of which measure about 50 by 25 feet. The southern area contains 33 buildings, most of which measure 130 by 30 feet, and appears to be a barracks or warehouse area. There are approximately 25 additional buildings on the base, of which five are major buildings, measuring from 150 to 215 feet long and from 40 to 65 feet wide.

This support base is still under construction. Of the present 114 buildings, two major buildings and 23 others had been con-
25X1D structed [redacted] Earth scarring throughout the area indicates preliminary activity for future construction.

Two sets of rail spurs are located immediately south of the building areas. One set, composed of three rail spurs, each 1,500 feet long and 225 feet apart, points northward toward the building areas. The western-most spur appears to serve a possible heating plant located near the end of the spur, and may be elevated to facilitate unloading of material from hopper cars. The other two spurs do not appear very active on any of the [redacted] missions 25X1
[redacted] The second 25X1
set of rail spurs points southward and is composed of three rail spurs, each 1,800 feet long and 375 feet apart, plus a short 600-foot rail spur which terminates in a "Y" fork.

The southern set of rail spurs appears more active than the northern set. On [redacted] 25X1D
[redacted] photography a few small warehouses 25X1
and a little open storage were visible. Photography [redacted] revealed that a few 25X1D
additional small warehouses had been constructed, additional material was being stored in the open areas between the rail spurs, and the short 600 foot long rail spur had been constructed [redacted] Construction activity 25X1D
is probably still in progress since the full capabilities of these rail sidings did not appear to be in use.

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EMBA AIRFIELD

Emba Airfield is located 6.5 nm southwest of Emba and just south of Support Area A (Figure 5). The airfield has a single graded-earth runway, 7,500 feet long by 650 feet wide and oriented northeast/southwest. An electronics landing facility, possibly a TOKEN radar, is located approximately 4,000 feet southeast of the south end of the runway. The airfield is rail- and road-served by the same system that serves support area A.

25X1D 25X1D The runway appeared serviceable the date of the earliest photography of this airfield. Construction activity, however, is still in progress. The width of the runway had doubled 25X1D 25X1D The only large building at the airfield, 130 by 30 feet, was constructed 25X1D 25X1D Earth scarring and construction activity are apparent near the north end of the runway in the vicinity of the railroad terminus. Increased track activity is apparent throughout the airfield area.

Three medium-sized transport aircraft and ten smaller unidentified aircraft were present at the airfield 25X1D Aircraft were possibly present on the 25X1D earlier missions, but poor photo quality precluded a determination of number or type.

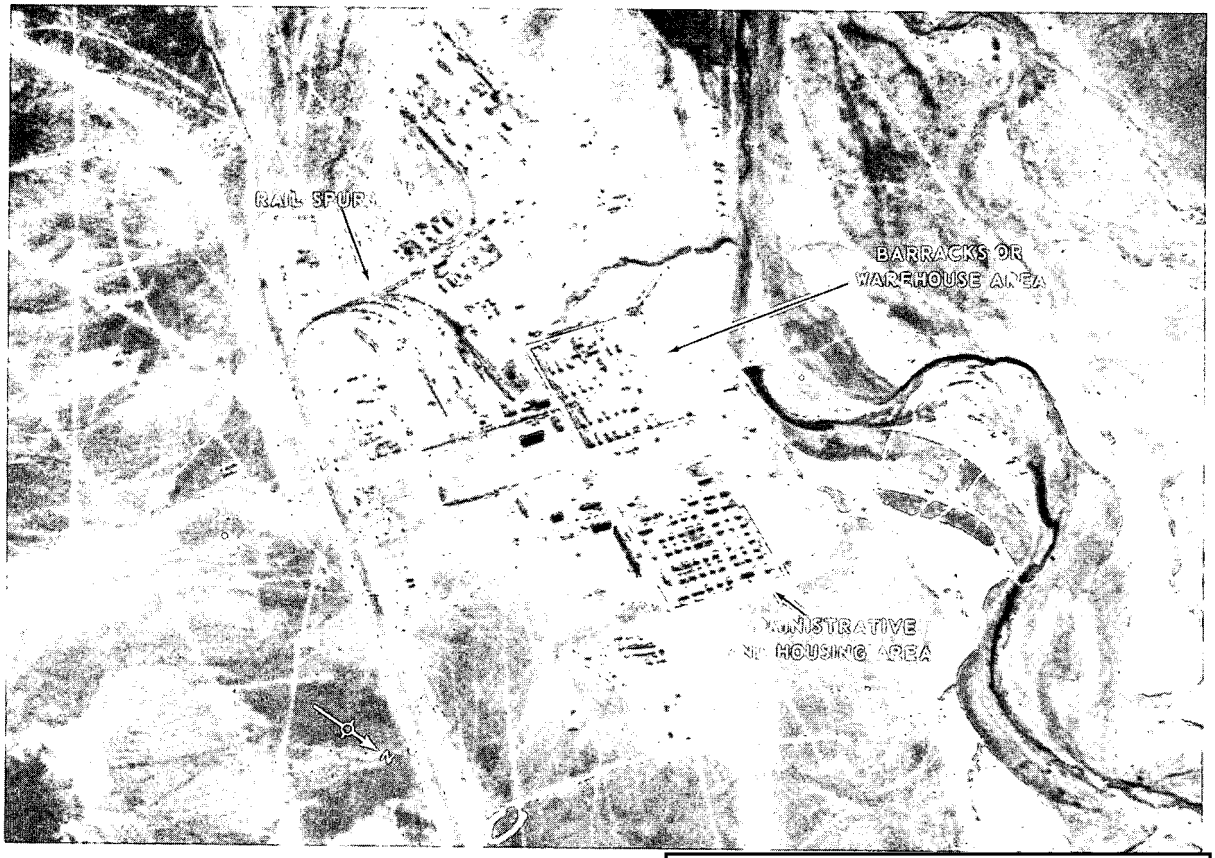

FIGURE 4. SUPPORT AREA A 25X1D

UNIDENTIFIED FACILITY AND RAIL-TO-ROAD TRANSFER POINT

An unidentified facility and an adjacent rail-to-road transfer point (Figure 6) are located 3 nm south-southeast of support area A at the terminus of the railroad line from Emba.

The unidentified facility occupies a rectangular area approximately 1,500 by 1,100 feet which contains six large buildings and five small structures. The largest building measures 170 by 65 feet and the other five buildings each measure approximately 125 by 50 feet. Earth scarring around the periphery of this area may be ditches. On the eastern edge of the facility a short rail spur appears to lead to a large pit, 150 by 80 feet, which has a spoil pile or a building at its southern edge. This unidentified facility appears active, but no significant change in the area was apparent

25X1

The rail-to-road transfer point is located just north of the unidentified facility at the end of a 4,000-foot long rail spur. No buildings are evident at this transfer point, but some materials appear to be stored in the open near the rail terminus. Roads leading from this transfer point connect with all major facilities. There was no apparent change in this area

25X1

SUPPORT AREA B

Support area B (Figure 7) is located 11 nm south of support area A and 8 nm south of the rail-to-road transfer point. This support area, which occupies an area 5,000 by 1,600 feet, contains approximately 25 buildings probably used for shops, barracks, or storage. It

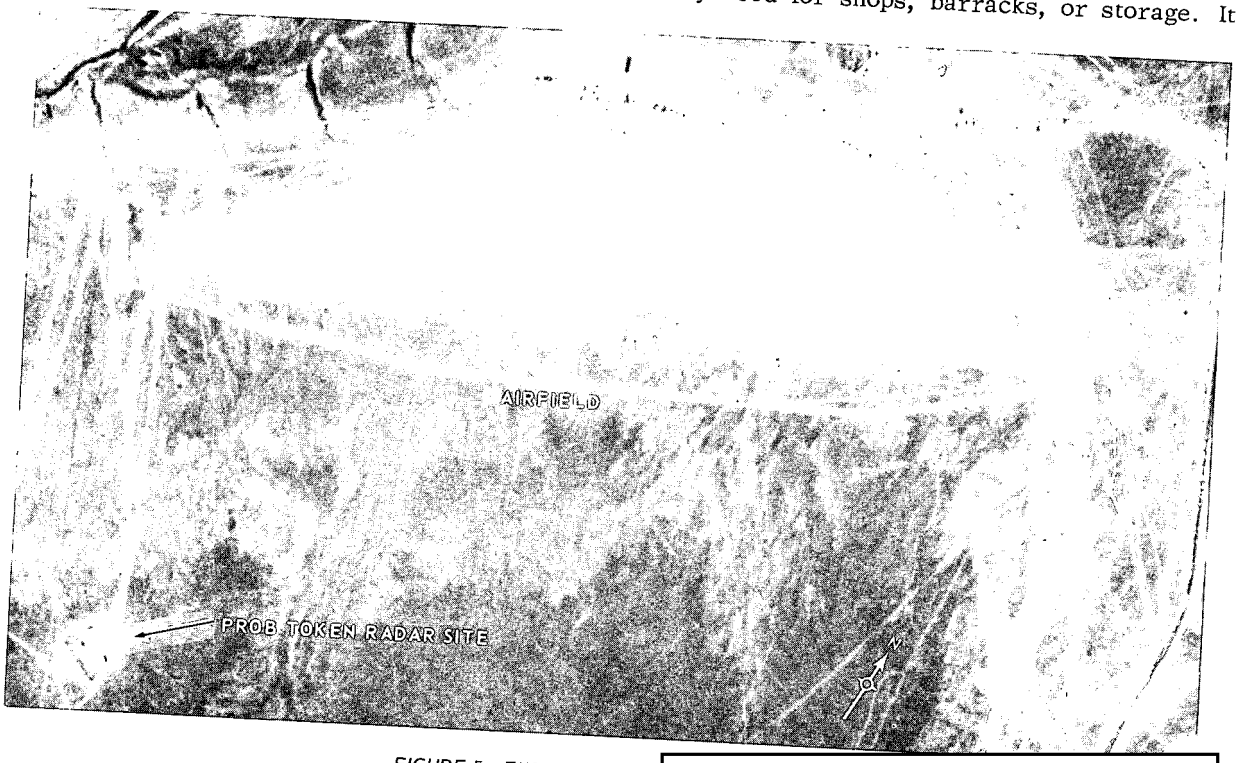

FIGURE 5. EMBA AIRFIELD

25X1

is located just north of the rangehead instrumentation sites and probably provides support for the operations at the instrumentation sites and the probable launch area. There was no apparent significant change in this support area [redacted] 25X1D

PROBABLE LAUNCH AREA

The probable launch area is located 3 nm south-southwest of support area B and 19 nm south-southwest of the town of Emba. The probable launch area (Figure 8) is enclosed in a rectangular double-fenced area measuring approximately 1,600 by 1,300 feet. The road pattern within the fenced area forms a rectangle approximately 800 by 600 feet, with an offset, north-south, center road (Figure 9). The roads appear to be hard surfaced and on a slight fill in order to maintain a common level. On the inside of both the east and west parallel roads is a white square area, approximately 75 feet on a side, which may be a vehicle hardstand or possibly the initial stages of launch pad construction. A low building or hardstand, 180 by 75 feet, is located on the northwest edge of the rectangular road pattern, and two small buildings are located near the northwest corner of the center offset road. Three small buildings, one of which is bunkered, are located just northeast of the fenced area and appear to be directly associated with operations in the probable launch area.

Outside the probable launch area, the roads do not appear to be graded or surfaced to provide smooth and finished access from the support facilities. While it is apparent that this area is still under construction, little significant change was noted in the probable launch area [redacted] 25X1

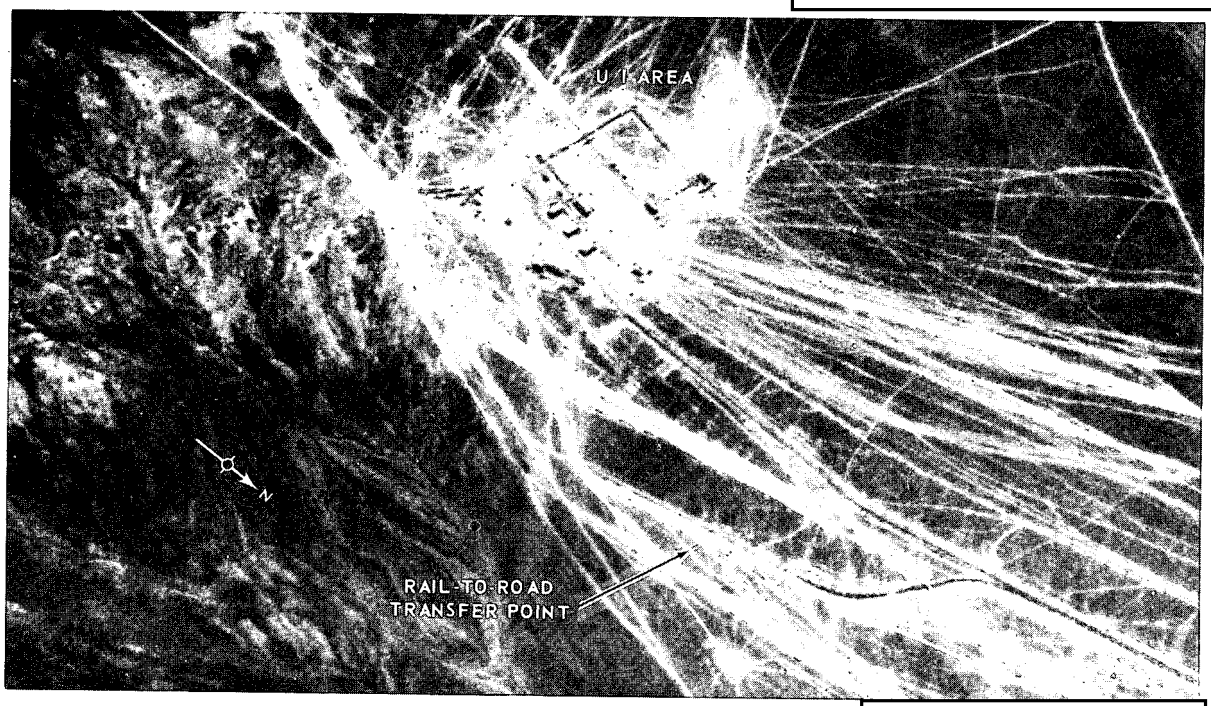

FIGURE 6. UNIDENTIFIED AREA AND RAIL-TO-ROAD TRANSFER POINT [redacted] 25X1

A smaller double-fenced area, 1,000 by 800 feet, is located approximately 2,000 feet southeast of the probable launch area. A few small buildings or bunkers are discernible within the fenced area, but the quality of the photography precludes a more detailed description of this area. There was no apparent change in this area [redacted] 25X1D

INSTRUMENTATION

The eleven instrumentation sites associated with this facility form a bell-shaped pattern oriented in a south-southwesterly direction. Three of the instrumentation sites are located near the apex of the bell-shaped pattern just north of the probable launch area. Four of the instrumentation sites form the eastern leg of the pattern which extends for 40 nm, and four sites form the western leg of the pattern which extends for 33 nm. The distance across the range between the most southern instrumentation site on each leg is 35 nm. Figure 3 shows the instrumentation pattern and the approximate distance between the sites.

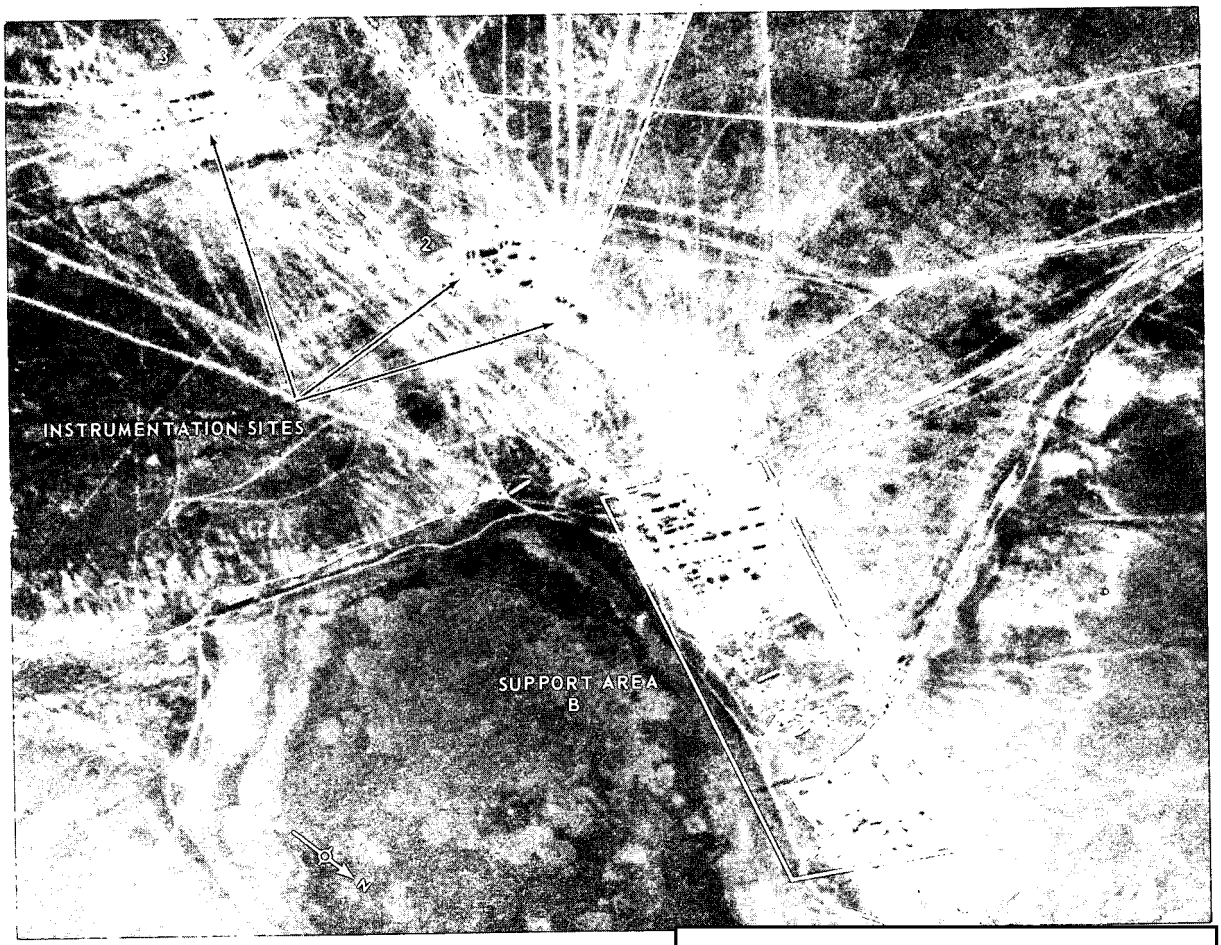

FIGURE 7. SUPPORT AREA B [redacted] 25X1D

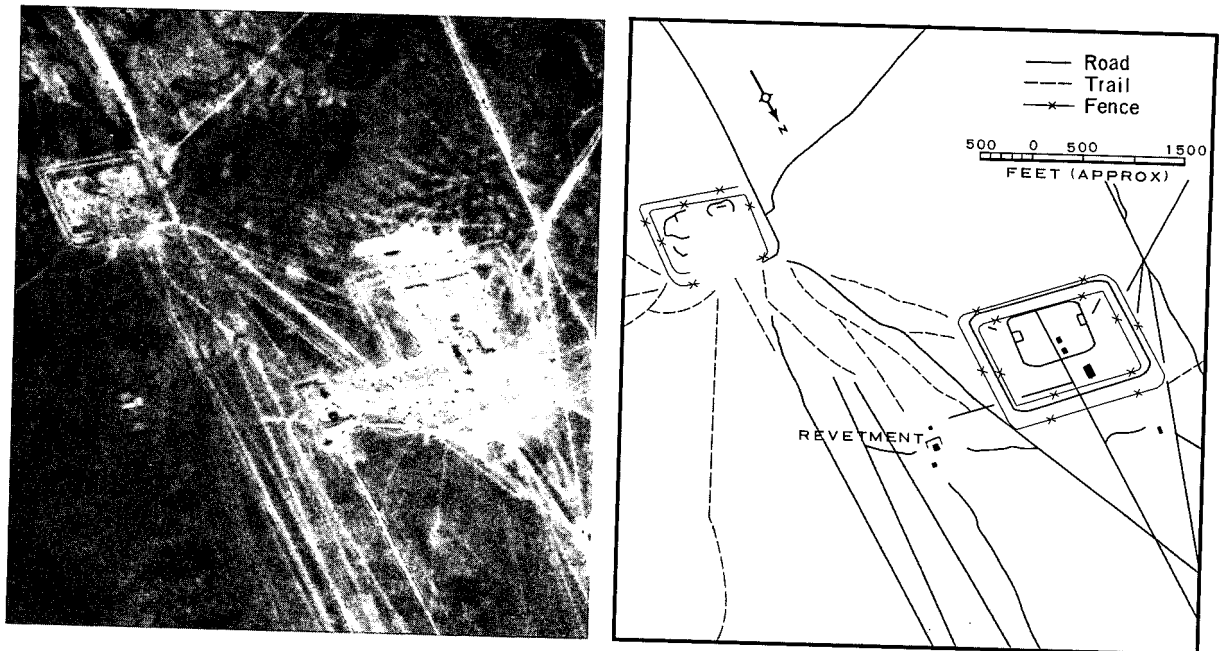

FIGURE 8. PROBABLE LAUNCH AREA

25X1

Five of these sites--sites 2, 6, 7, 8, and 9-- are extensively developed and similar in layout design. Figure 10 shows instrumentation site 6, which is typical of these five sites, except that it is the only site secured by fencing. In addition to a few support buildings, each of these five sites is characterized by a unique arrangement of five buildings in a row. A large rectangular building, 175 by 40 feet, is flanked on each side by two smaller square buildings, 40 by 40 feet. The major, or long, axis of this row of buildings at sites 6, 7, 8, and 9 appears to lie parallel to and looking in toward the nominal flight line. These four major sites are located the farthest from the probable launch area and are the last two sites on each leg of the instrumentation pattern. Site 2, however, which is similar, is located at or near the apex of the pattern in the vicinity of the probable launch area. This site has the same arrangement of five buildings in a row, but the long axis of these buildings is perpendicular to the range axis and looks down the nominal line of flight.

These five sites appear to contain more instrumentation than any identified instrumentation site at known Sino-Soviet missile test centers. The identification of these areas as instrumentation sites is based on the point-to-point interconnection of earth scars, the typical arrangement of the sites along the nominal flight line, and the similarity of this instrumentation pattern to that at Shuang-cheng-tzu 1/ and Kapustin Yar/Vladimirovka Missile Test Center. 2/

The remaining six instrumentation sites--sites 1, 3, 4, 5, 10, and 11-- are smaller than the others and cannot be described in detail from available photography. However, sites 4, 5, 10, and 11 appear to be similar, each consisting of a single, possibly circular, building.

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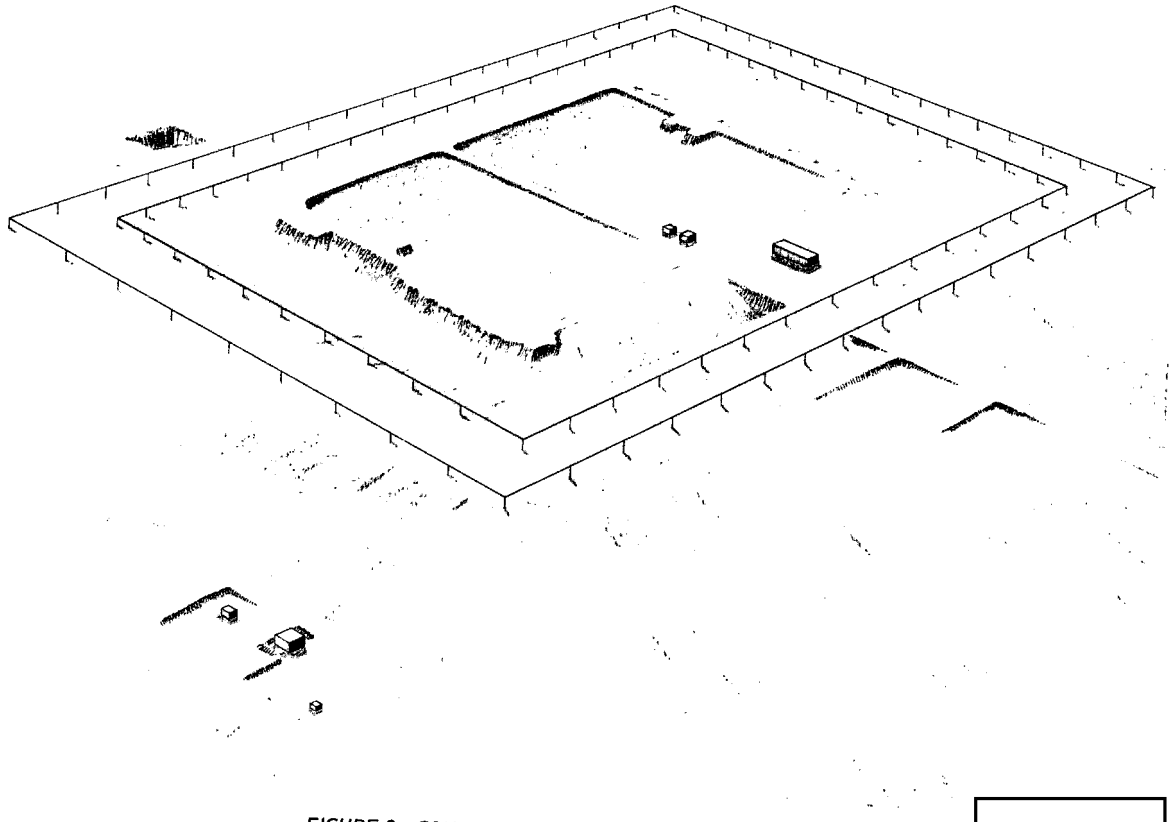

FIGURE 9. CONCEPT OF PROBABLE LAUNCH AREA.

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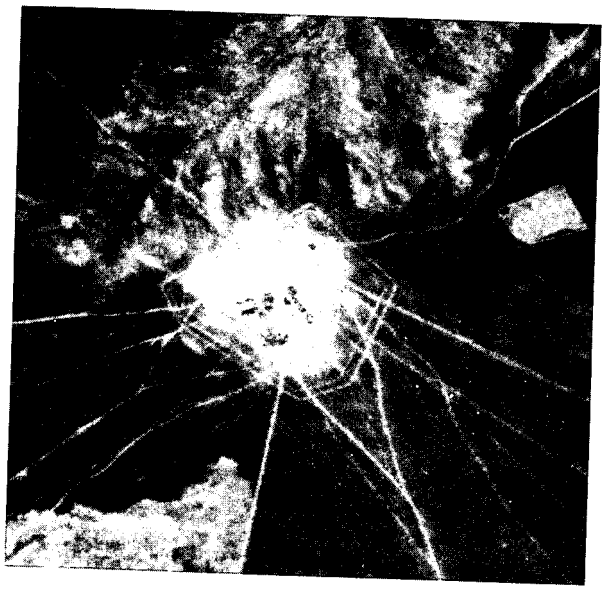

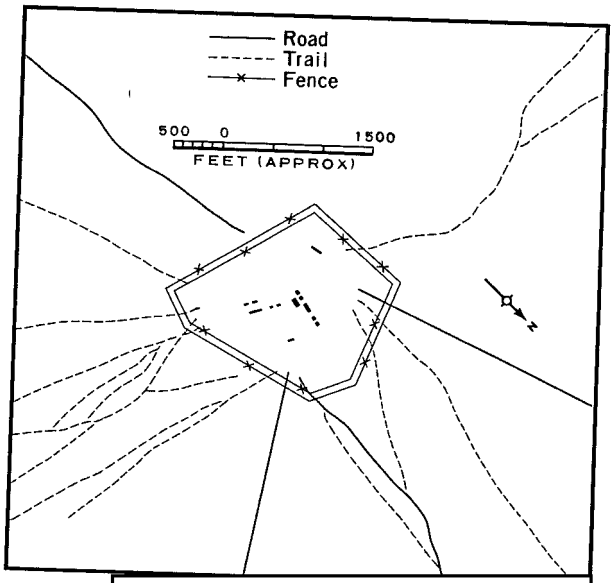

FIGURE 10. INSTRUMENTATION SITE 6

25X1D

CONSTRUCTION ACTIVITY AT INSTRUMENTATION SITES

25X1 25X1D There was no apparent change at instrumentation sites 1, 2, 3, 4, 5, 10, and 11. Construction activity was very apparent, however, at sites 6, 7, 8, and 9, the four major sites farthest from the launch and support areas. Several miles of new earth scarring or forest clearing, indicative of new roads, trails, pipelines, cables, and/or powerlines connect these sites to each other and to the rangehead area.

Building construction at the four major sites (6, 7, 8, and 9) was in various stages of 25X1D completion photography it appeared that building construction had been completed, since all four sites had now attained the same characteristic building layout pattern. The following description of changes in these sites 25X1D 25X1D shows the rate of progress in building construction.

Site 6. The buildings appear completed on 25X1D photography and no apparent change 25X1D was noted

Site 7. The five characteristic buildings and two support buildings were apparent on photography a few additional buildings were observed and the building construction appeared completed. There was no apparent change in the buildings 25X1D 25X1D 25X1D

Site 8. photography no buildings were present and only the initial stages of site clearing were observed 25X1D the site clearing appeared completed and the initial stages of building construction were apparent 25X1D the buildings appeared to be completed. 25X1D 25X1D 25X1D 25X1D

Site 9. On photography the site was cleared and initial building construction was evident. On photography the buildings appeared to be completed, and there was no apparent change in the buildings 25X1D 25X1D 25X1D

DOWN-RANGE INSTRUMENTATION

The area south of the Emba facility between the Aral and Caspian Seas and approximately 600 nm to the Iranian border was searched 25X1D on photography, but no identifiable instrumentation sites or major electronics installations were observed. This area south of the facility encompasses thousands of square miles of the desolate Plato Ustyurt and Peski Karakumy that could serve as impact areas.

Five large probable geological prospecting camps were observed at various isolated locations in the eastern half of the Plato Ustyurt west and southwest of the Aral Sea. These camps are very similar in design, each contain 25-30 buildings, and are characterized by very intensive track activity within a few miles of the camp area. While it appears that the primary function of these camps is gas or oil prospecting, the possibility does exist that, in this forbidding area where logistics is such a major problem, some type of instrumentation or electronics may be associated with these camps. A large-scale, low-oblique photograph of one of these camps may be found in USSR Illustrated Monthly. 3/

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REFERENCES

PHOTOGRAPHY

25X1D

DOCUMENTS

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3. Krupin, Vladimir. "Nightingales Stay in the Desert," USSR Illustrated Monthly, v.75, no 12, Dec 62, p.18-19 (UNCLASSIFIED)

REQUIREMENTS

CIA. OSI/289/62

25X1

NPIC PROJECT

J-55/63