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basic imagery interpretation report

Makat ASM Impact Area (S)

MISSILE RANGES: AIR LAUNCHED FACILITIES

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USSR

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RCA-16/0002/83

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DISSEMINATION CONTROL ABBREVIATIONS

NOFORN -	Not Releasable to Foreign Nationals
NOCONTRACT -	Not Releasable to Contractors or Contractor/Consultants
PROPIN -	Caution-Proprietary Information Involved
ORCON -	Dissemination and Extraction of Information Controlled by Originator
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INSTALLATION OR ACTIVITY NAME	COUNTRY
Makat ASM Impact Area	UR

UTM COORDINATES	GEOGRAPHIC COORDINATES
39UYP70355331	48-06-00N 053-44-00E

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MAP REFERENCE

DMAAC. USATC, Series 200, Sheets FP0236-21R and FP0236-22R, scale 1:200,000

		NEGATION DATE (If required)

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ABSTRACT

1. (TSR) This is the initial NPIC basic report on Makat Air-to-Surface Missile (ASM) Impact Area, USSR, and satisfies the basic reporting requirement for this target. This report summarizes ASM tests (based on impact craters) and describes activity at the test facilities and the targets from January 1975 through December 1982.

2. (C) This report contains a location map, six annotated photographs, and three tables.

INTRODUCTION

3. (TSR) Makat ASM Impact Area (Figure 1) is on a large, dry lowland north of the Caspian Sea, approximately 475 kilometers (km) east of Akhtubinsk/Vladimirovka Airfield and approximately 60 km northeast of Makat. Makat ASM Impact Area (Figure 2) contains two missile impact areas—Makat Target Area A and Makat Target Area B —and three corner reflector target sites.

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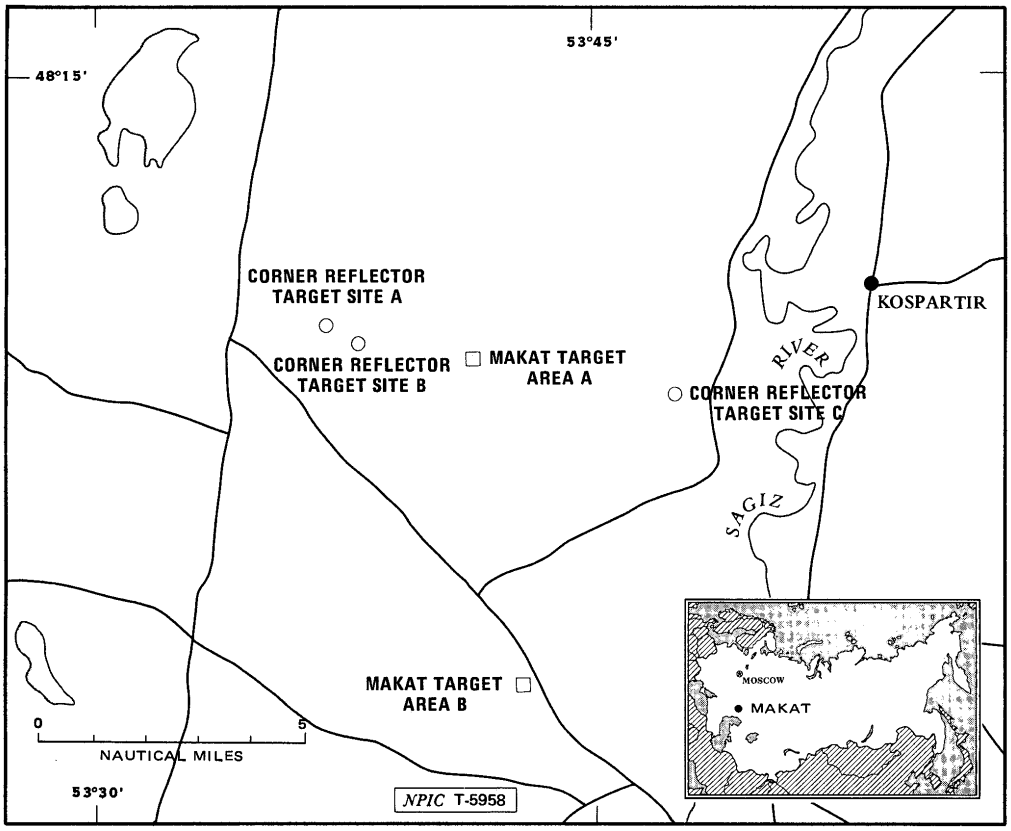

FIGURE 1. LOCATION OF MAKAT ASM IMPACT AREA, USSR

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BASIC DESCRIPTION

Makat Target Area A

4. (TSR) Makat Target Area A (Figure 3) contained three target radar sites, a support area, and a salvage area. The locations of the target radars at each target radar site changed slightly as damaged radars were replaced and craters were filled. Crater diameters, bearings, and distances from the target radars are given in Table 1.

Target Radar Site A

5. (TSR) Target radar site A contained a BAR LOCK radar-occupied mound and ten missile impact craters The craters had been filled No additional craters were observed during the reporting period. The BAR LOCK remained on the mound but was not present when the site was next imaged The site remained unoccupied a BAR LOCK was on the mound, radar support vehicles were at the base of the mound. Two additional support vehicles were connected by cables to the radar support vehicles the radar support vehicles were deployed in an inline configuration, and three radar support vans were adjacent to the support area. The radar and support equipment remained in this configuration (Figure 4). The outer generator van was not present 25X1 25X1 25X1 25X1 25X1 25X1 25X1

6. (S/WN) The proximity of target radar site A to the support area, the absence of recent missile impact craters, and the abandonment of target radar sites B and C suggest that site A may have become a tracking site for Makat ASM Impact Area. However, the deployment of the radar support equipment in an inline configuration, which placed these vehicles at a greater distance from the radar and provided greater protection from a direct hit, also suggests that this site may have remained an active target area.

Target Radar Site B

7. (TSR) Target radar site B was first observed on imagery and had probably been abandoned Three missile impact craters (one a direct hit) were observed during this period. 25X1 25X1

Target Radar Site C

8. (S/WN) Target radar site C was first observed on imagery and was operational only one support van, which remained was present. the site had been abandoned. No missile impact craters were observed during this period. 25X1 25X1 25X1

Makat Target Area B

9. (TSR) Makat Target Area B (Figure 5) contained two BAR LOCK-occupied target radar sites (sites A and B), a support area, and a salvage area Two additional BAR LOCK target radar sites (sites C and D) were present Site B was abandoned The location of the target radars at each target radar site changed slightly as damaged radars were replaced and craters were filled. Crater diameters, bearings, and distances from the target radars are given in Table 2. 25X1 25X1 25X1

10. (S/WN) The parking configuration of the BAR LOCK power and support vehicles at sites A, C, and D was changed from a side-by-side arrangement to an inline arrangement in April and May 1982. The inline arrangement placed the support vehicles at a greater distance from the radar, providing greater protection from a direct hit.

Target Radar Site A

11. (TSR) Target radar site A (Figure 6 and Table 2) contained a BAR LOCK radar set and five missile impact craters The craters had been filled and additional testing had begun 14 impact craters (two direct hits) were observed. The site was not occupied Testing had probably resumed when a BAR LOCK radar set was again present. The support vehicle parking configuration was changed from a side-by-side arrangement to an inline arrangement Four impact craters (one a direct hit) were observed A probable FLAP WHEEL antiaircraft fire control radar and an additional support van were at the site 25X1 25X1 25X1 25X1 25X1 25X1 25X1 25X1

Target Radar Site B

12. (TSR) A probably damaged BAR LOCK radar set and three missile impact craters were at target radar site B The craters were being filled One additional crater (a direct hit) was observed The site was abandoned when the radar and support vehicles were gone. 25X1 25X1

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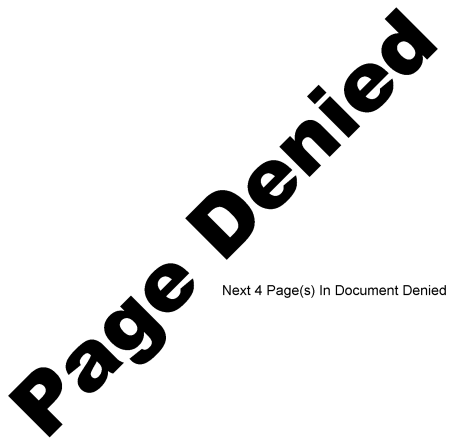

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Target Radar Site C

13. (TSR) Target radar site C was first observed on imagery [redacted] when a BAR LOCK radar set was present. Six missile impact craters were observed [redacted] The craters had been filled [redacted] No additional craters were observed throughout the remainder of the reporting period. The BAR LOCK support vehicle parking configuration was changed from a side-by-side arrangement to an inline arrangement [redacted] 25X1 25X1 25X1 25X1

Target Radar Site D

14. (TSR) Target radar site D was first observed on imagery [redacted] when a BAR LOCK radar set was present. No missile impact craters were observed [redacted] when one crater was present [redacted] when a direct-hit crater was observed. The two craters had been filled by [redacted] No additional craters were observed during the remainder of the reporting period. The BAR LOCK support vehicle parking configuration was changed from a side-by-side arrangement to an inline arrangement [redacted] 25X1 25X1 25X1 25X1 25X1

Corner Reflector Target Sites

15. (TSR) Makat ASM Impact Area contained three active corner reflector target sites during the reporting period. Each site contained a double row of large and small corner reflector panels oriented on a north/south axis with the panels facing west. Crater diameters, distances, and bearings to the center of the corner reflector target sites are given in Table 3.

Corner Reflector Target Site A

16. (TSR) Corner reflector target site A (48-10-01N 053-37-10E) had been heavily damaged [redacted] when approximately 60 impact craters were present. [redacted] all but 13 craters had been filled, and at least two new craters could be discerned. Limited search imagery of poor interpretability precluded the identification of additional craters or changes to the site [redacted] when at least 49 impact craters were discernible. Extensive damage to the corner reflector target panels precluded the determination of crater distances and azimuths. 25X1 25X1 25X1

[redacted] 25X1

[redacted] 25X1

[redacted] 25X1

Table 1. Makat Target Area A, Makat ASM Impact Area, USSR

This table in its entirety is classified TOP SECRET RUFF

Crater	Date Observed	Target	Crater Diameter (m)	Distance/Azimuth (m/deg)	Remarks
Target Radar Site A (48-09-13N 053-41-24E)					
A1		BAR LOCK			
A2		BAR LOCK			
A3		BAR LOCK			
A4		BAR LOCK			
A5		BAR LOCK			
A6		BAR LOCK			
A7		BAR LOCK			
A8		BAR LOCK			
A9		BAR LOCK			
A10		BAR LOCK			
—		BAR LOCK	—	—	Craters filled
—		BAR LOCK	—	—	
—		BAR LOCK	—	—	
—		BAR LOCK	—	—	
—		—	—	—	
—		—	—	—	
—		BAR LOCK	—	—	No support vehicles present
—		BAR LOCK	—	—	Support vehicles at base of mound
—		BAR LOCK	—	—	One additional support vehicle present
—		BAR LOCK	—	—	Two additional support vehicles present
—		BAR LOCK	—	—	No change
—		BAR LOCK	—	—	Radar support vehicles changed to inline configuration
—		BAR LOCK	—	—	No change
Target Radar Site B (48-09-19N 053-41-12E)					
—		BAR LOCK			
B1		BAR LOCK			Radar possibly damaged
—		BAR LOCK			
—		BAR LOCK			
B2		BAR LOCK			Fire in area; HIP C helicopter nearby
—		BAR LOCK			BAR LOCK antenna sections on ground near crater B2
—		BAR LOCK			New BAR LOCK present
—		BAR LOCK			
B3		—			Radar area cloud covered
—		—	—	—	Crater B3 confirmed near site of radar seen on
—		—	—	—	Site unoccupied
—		—	—	—	Site unoccupied
Target Radar Site C (48-09-07N 053-41-29E)					
—		BAR LOCK	—	—	First identification of site; two support vehicles and two prime movers also present
—		BAR LOCK	—	—	Prime movers removed from immediate site area
—		BAR LOCK	—	—	Usual complement of BAR LOCK support vehicles present
—		—	—		One support vehicle (van trailer) present
—		—	—	—	One support vehicle (van trailer) present
—		—	—	—	No radar or support vehicles present

Table 2. Makat Target Area B, Makat ASM Impact Area

This table in its entirety is classified TOP SECRET RUFF

Crater	Date Observed	Target	Crater Diameter (m)	Distance/Azimuth (m/deg)	Remarks
Target Radar Site A (48-02-56N 053-43-20E) (Keyed to Figure 6)					
A1		BAR LOCK			Radar probably damaged
A2		BAR LOCK			
A3		BAR LOCK			
A4		BAR LOCK			
A5		BAR LOCK			
—		BAR LOCK			Craters filled
—		BAR LOCK			
A6		BAR LOCK			
A7		BAR LOCK			
—		BAR LOCK			
A8		BAR LOCK			
—		BAR LOCK			
A9		BAR LOCK			
—		BAR LOCK			
A10		BAR LOCK			Radar damaged
—		BAR LOCK			Radar damaged
A11		BAR LOCK			A new and a damaged radar present
A12		BAR LOCK			
A13		BAR LOCK			
A14		BAR LOCK			
A15		BAR LOCK			
—		BAR LOCK			New radar probably damaged
—		BAR LOCK			New radar probably damaged
A16		BAR LOCK			Radar removed from crater
—		BAR LOCK			New radar present
A17		BAR LOCK			
—		BAR LOCK			
A18		—			
A19		BAR LOCK			
—		BAR LOCK			
—		—			Radar absent; support vehicles present
—		—			Radar and support vehicles absent
—		—			Radar and support vehicles absent
—		BAR LOCK			Radar and support vehicles present
—		BAR LOCK			
A20		BAR LOCK			
—		BAR LOCK			
—		BAR LOCK			Support vehicles absent
A21		BAR LOCK			
—		—			
—		BAR LOCK			
—		BAR LOCK			
—		BAR LOCK			Support vehicles changed to inline configuration
A22		BAR LOCK			
—		BAR LOCK			
A23		BAR LOCK			Radar possibly damaged
—		BAR LOCK			
—		BAR LOCK	—	—	
—		BAR LOCK	—	—	FLAP WHEEL and additional support van present

Crater	Date Observed	Target	Crater Diameter (m)	Distance/Azimuth (m/deg)	Remarks
Target Radar Site B (48-02-32N 053-42-56E)					
B1		BAR LOCK			Radar probably damaged
B2		BAR LOCK			
B3		BAR LOCK			
—		—			Craters being filled
—		BAR LOCK			
B4		—			Debris in crater
—		BAR LOCK			
—		—	—	—	Support vehicles present
—		—	—	—	Radar and support vehicles absent
Target Radar Site C (48-02-52N 053-42-56E)					
—		BAR LOCK	—	—	Radar and support vehicles present
C1		BAR LOCK			Radar damaged
—		—			One support vehicle present
—		—			One support vehicle present
—		BAR LOCK			Radar and support vehicles present
—		BAR LOCK			
—		BAR LOCK			
C2		BAR LOCK			Radar possibly damaged
—		BAR LOCK			
C3		BAR LOCK			
—		BAR LOCK			
C4		BAR LOCK			
—		—			
—		—			
—		BAR LOCK			
—		BAR LOCK			
C5		BAR LOCK			Radar possibly damaged
C6		BAR LOCK			
—		BAR LOCK			
—		BAR LOCK	—	—	Craters filled
—		BAR LOCK	—	—	
—		BAR LOCK	—	—	Support vehicles changed to inline configuration
—		BAR LOCK	—	—	
Target Radar Site D (48-02-29N 053-43-04E)					
—		BAR LOCK	—	—	Radar and support vehicles present
—		BAR LOCK	—	—	
—		—	—	—	Support vehicles present
—		—			Support vehicles present
D1		BAR LOCK			
—		BAR LOCK			
D2		—			
—		—			
—		BAR LOCK	—	—	Radar and support vehicles present
—		BAR LOCK	—	—	
—		BAR LOCK	—	—	Craters filled
—		BAR LOCK	—	—	
—		BAR LOCK	—	—	Support vehicles changed to inline configuration

Table 3. Corner Reflector Target Sites B and C Makat ASM Impact Area

This table in its entirety is classified TOP SECRET RUFF

Crater	Date Observed	Crater Diameter (m)	Distance/Azimuth (m/deg)
Corner Reflector Target Site B (48-09-44N 053-37-58E) (Keyed to Figure 7)			
—			
B1			
—			
B2			
B3			
B4			
—			
B5			
B6			
B7			
—			
—			
B8			
B9			
—			
B10			
B11			
B12			
B13			
—			
B14			
—			
Corner Reflector Target Site C (48-08-42N 053-47-53E)			
C1			
C2			
C3			
C4			
C5			
C6			
C7			
C8			
C9			
—			
C10			
C11			
—			
C12			
C13			
C14			
—			
C15			
C16			
C17			
—			

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Corner Reflector Target Site B

17. (TSR) Corner reflector target site B (Figure 7 and Table 3) had been constructed and probably replaced corner reflector target site A. The site contained two parallel rows of corner reflector panels on a north/south axis. One row contained seven large panels, and the other row contained 41 small panels. the row of large panels was oriented north-northeast/south-southwest and bisected the row of small panels. The large panels had been returned to their original orientation No significant changes to the site were observed during the remainder of the reporting period. Fourteen craters, with diameters ranging from the center of the site. 25X1 25X1 25X1 25X1 25X1

Corner Reflector Target Site C

18. (TSR) Corner reflector target site C (Table 3) contained two parallel north/south rows of corner reflector panels The western row contained five large and four small panels, and the eastern row contained 13 small panels. No significant changes to this configuration were observed during the reporting period. Seventeen craters, with diameters ranging were from the center of the site. 25X1 25X1 25X1

Other Test Activity

19. (TSR) Approximately 300 additional impact craters were discernible within the impact area during the reporting period. The targets at these crater sites could not be determined.

REFERENCES

25X1

MAPS OR CHARTS

DMAAC. US Air Target Chart, Series 200, Sheets FP0236-21R and FP0236-22R, 2d ed, Jul 80, scale 1:200,000 (CONFIDENTIAL/WNINTEL/ 25X1

REQUIREMENT

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