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SCIENTIFIC INTELLIGENCE MEMORANDUM

"GUIDED MISSILE INTELLIGENCE FROM
THE KLYUCHI/KAMCHATKA COVERAGE"

22 August 1957

OFFICE OF SCIENTIFIC INTELLIGENCE

Declassification review by NIMA/DoD

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PREFACE

This Scientific Intelligence Memorandum provides a summary of the guided missile intelligence derived from AQUATONE coverage of the Klyuchi/Kamchatka area on [REDACTED]. A brief treatment of the reasons for guided missile intelligence interest in the Klyuchi area is included as well as a discussion of type of information which it was hoped would be acquired by the AQUATONE coverage.

Detailed photographic assessment of the AQUATONE data is continuing at HT AUTOMAT; it is unlikely however, that future photographic analysis will reveal any new information of sufficient guided missile importance to alter the conclusions reached herein.

The precise role of the Klyuchi area in the Soviet guided missile program continues to be the subject of further studies in OSI/CIA.

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GUIDED MISSILE INTELLIGENCE FROM
THE KLYUCHI/KAMCHATKA COVERAGE

PROBLEM

To assess the guided missile intelligence derived from the AQUATONE coverage of the Klyuchi/Kamchatka area.

CONCLUSIONS

1. The AQUATONE coverage did not reveal any specific indications of guided missile activity.
2. The probability that the Klyuchi area is the terminus rather than the launch point for a new guided missile test range between Novokazalinsk/Dzhusaly and Klyuchi areas is strengthened by the complete lack of evidence of the extensive facilities associated with rangehead type activities. The failure to detect instrumentation sites normally associated with an impact area is not surprising in view of the relatively less conspicuous equipment involved, and the fact that the most likely sites for such equipment were under cloud cover.
3. Within the presently permissible boundaries of future AQUATONE flights, the best known opportunity for acquiring data which should answer critical questions on the status of the Soviet ICBM program is coverage of the probable new rangehead in the Novokazalinsk/Dzhusaly area.

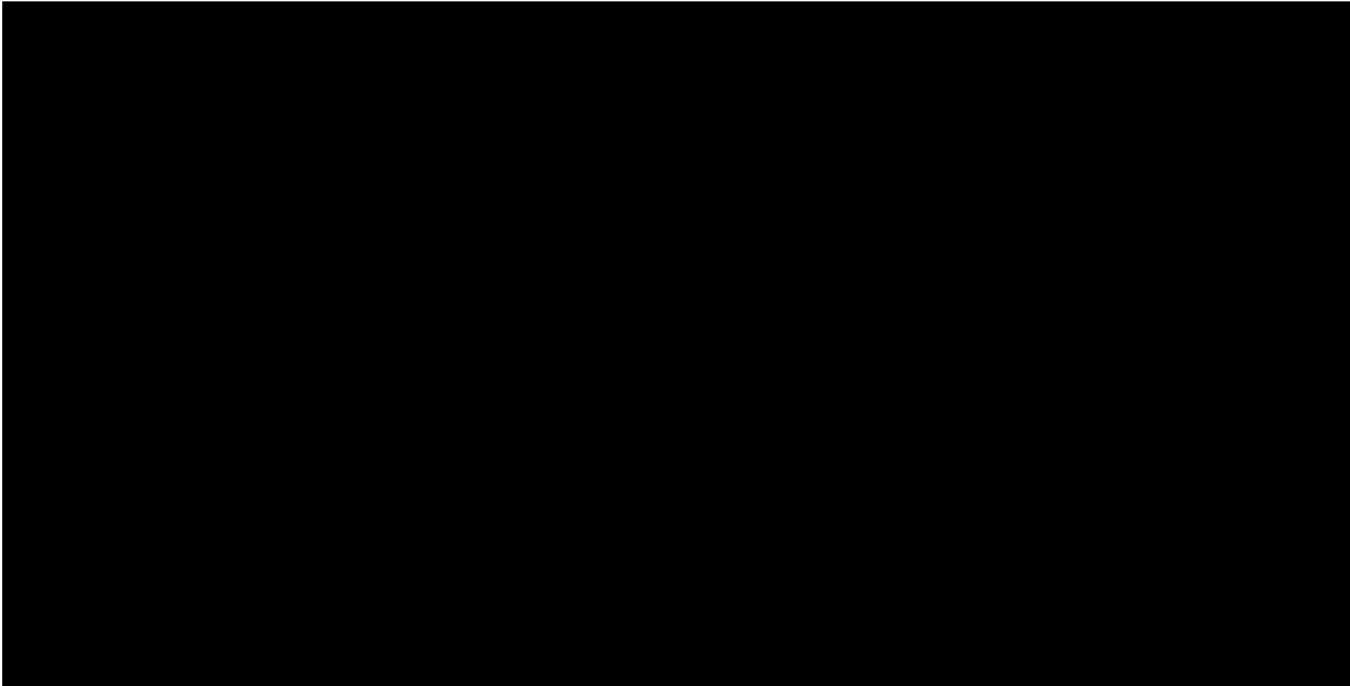
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DISCUSSION

A. Guided Missile Intelligence Interest in the Klyuchi Area

1. By its geographic location alone, the Kamchatka Peninsula area, including its bordering bodies of water, has long been a suspect location for the terminus of a new long distance ballistic missile flight test range. Impact points here would provide the longest great circle distance between known and suspect launching points in western USSR. Flight test ranges of 3000 to 4500 nautical miles could be achieved.

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*The Novokazalinsk/Dzhusaly area also includes the Kzyl Orda area.

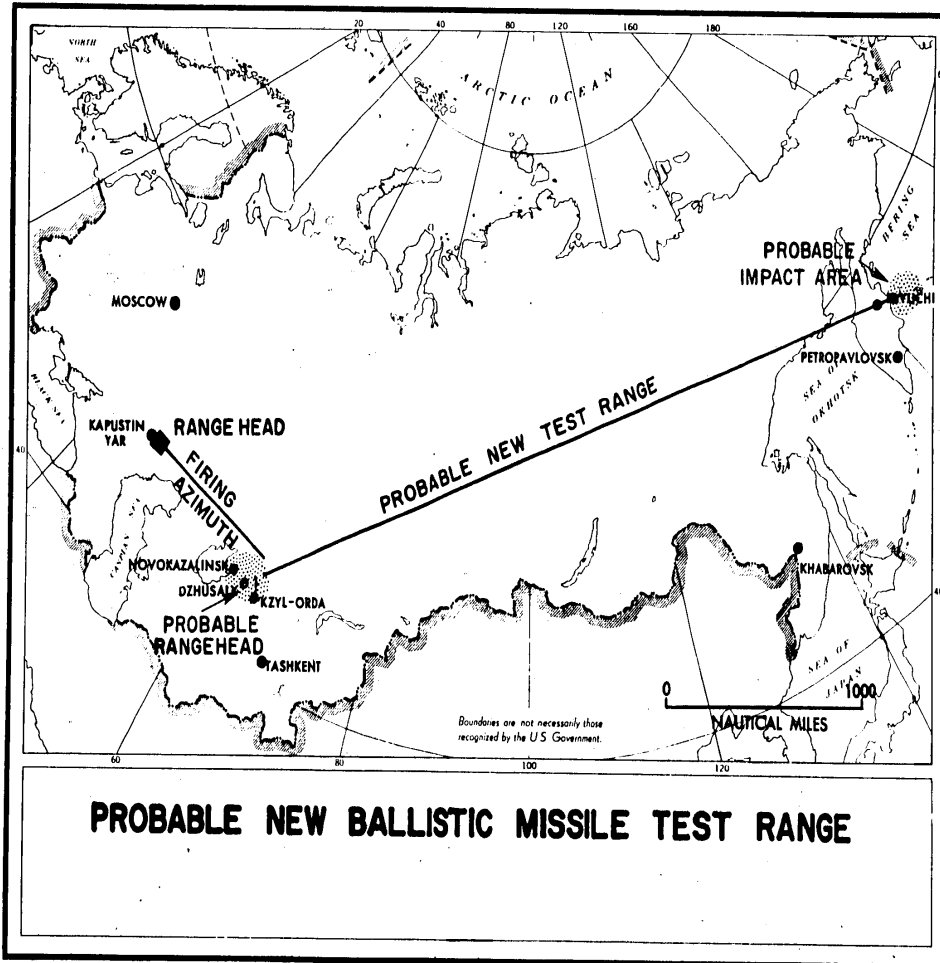
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PLATE I

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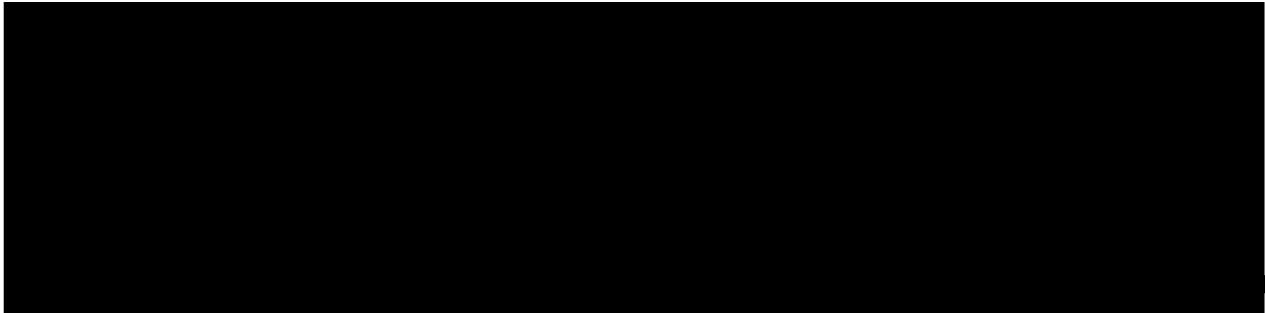
PROBABLE NEW BALLISTIC MISSILE TEST RANGE

B. Potential Guided Missile Information Available From AQUATONE Coverage of Klyuchi Area

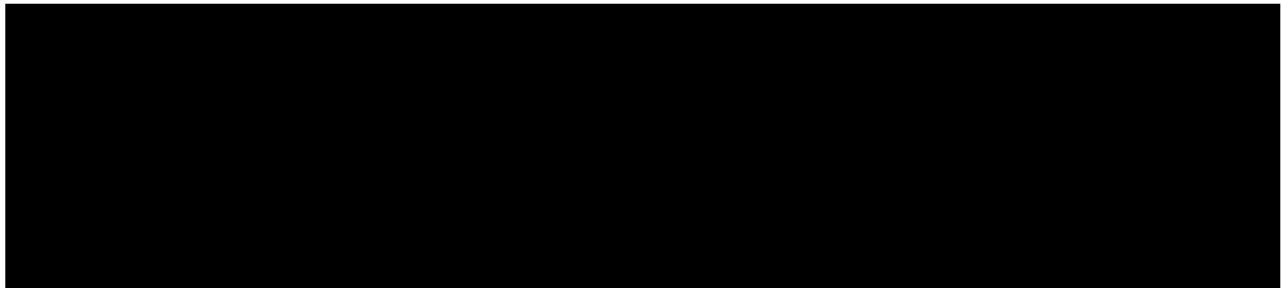
1. Klyuchi As An Impact Area. Instrumentation sites for acquiring missile telemetry and trajectory data would probably be located along the terminal trajectory path. It was unlikely that the AQUATONE photographs would provide sufficient resolution to determine the type of equipment located on the site and, consequently, the specific purpose and "readiness" of the site. With good general coverage of the Klyuchi area it might be possible to determine an instrumentation site pattern from which the intended impact area could be deduced.

2. Administrative and logistic support for the instrumentation sites in an impact area would probably be centralized on one location - possibly Klyuchi. Approximately 200-400 personnel would be needed to operate the equipment and provide "housekeeping" functions. A rapid and dependable communication system is needed to connect this location with its instrumentation sites. In addition, an equivalent system is required to connect the central location with the rangehead control station. A modest transportation terminus and some warehouse-type storage facilities should be present.

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4. Impact Area vs Launching Point. The type, quantity, dispersion and distinguishability of missile facilities located in a rangehead area compared with those in an impact area definitely indicate that by far the greatest opportunity for acquiring information on the status of the Soviet ICBM program would accrue from AQUATONE coverage of the rangehead area.

C. Data Acquired By AQUATONE Coverage of Klyuchi Area. ^{1/}

25X1D 1. [redacted] was flown over the Klyuchi 25X1D
area. Excellent photographic coverage was acquired on the primary target - the 25X1D
town of Klyuchi and the surrounding terrain. [redacted]

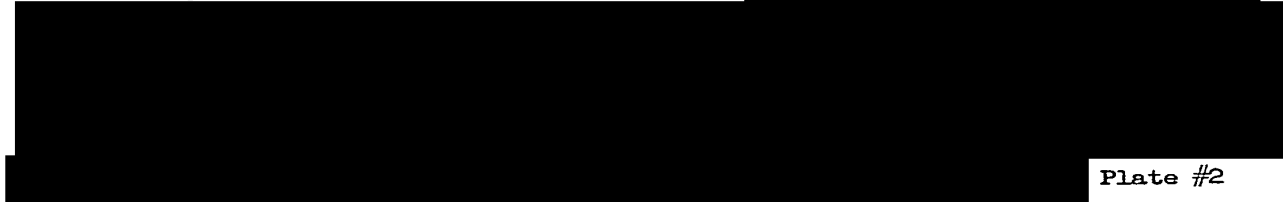


Plate #2

indicates the areas of AQUATONE coverage and the areas under cloud cover.

^{1/} HTA-B43-57, dated 23 June 1957, (Top Secret Chess)


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2. Two military type installations are located in the town of Klyuchi; one has been completed for sometime, and the other is currently under construction. The installation under construction consists of seven large two story buildings of barracks or warehouse type ranging in size from 30' x 90' to 60' x 130', and several other smaller buildings in varying stages of construction. On the western outskirts of Klyuchi there were seven HOUND helicopters parked in a small clearing. No large airstrips were detected near the town of Klyuchi; a large area (approximately 1,000' x 11,000') is being cleared just north of the town of Kozyrevsk which looks like the early stages of airfield construction.

3. The photography reveals considerable logging activity in the area. Villages of the Kamchatka River Valley are connected by a narrow swath (approximately 20' wide) cut through the vegetation which is typical of communication or power line clearings. The transportation in the area is restricted to narrow trails except in the immediate vicinity of villages and logging camps. There is considerable river traffic consisting of barges and small craft. Nearly all activities, (towns, logging camps, trails, communication or power lines and river docks) are located on the southern side of the Kamchatka river indicating little activity to the immediate north.



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D. Guided Missile Knowledge Derived From AQUATONE Coverage.

1. Klyuchi As A Launching Point. The AQUATONE coverage revealed no evidence of guided missile rangehead type activities. In fact there was a complete lack of any evidence indicating that such activity was intended for the area or could be supported by the logistic capabilities evident in and around Klyuchi. Although it is recognized that a rangehead could be located in an area under cloud cover, this is considered highly unlikely for the following reasons:

a. Klyuchi [REDACTED] in- 25X1D
dicating that the guided missile activity involved probably has its headquarters in Klyuchi;

b. Rangehead activities would require considerable logistic support during both the construction and operational phases. There is no indication of such logistic activity in the Klyuchi area.

c. The very rugged terrain and extremely poor weather conditions make this whole area of Kamchatka generally unfavorable for rangehead activities.

2. The AQUATONE coverage definitely weakens, but does not positively exclude, the possibility of a guided missile rangehead being located in the Klyuchi area.

3. Klyuchi As An Impact Area. The AQUATONE coverage did not provide any direct indications of the guided missile test range instrumentation sites normally associated with an impact area. Such sites would probably be dispersed along the terminal trajectory path and located on fairly elevated plateaus to

provide line-of-sight tracking on the incoming missile all the way to its impact point. Water impact is likely; therefore, some small "shacks" along the coastline with cables leading out into water to sonic detection systems would also be expected. Considering the probable locations of instrumentation sites and the areas under cloud cover, the absence of any direct indications of such sites on the photography is not surprising.

4. A heliport with seven HOUND helicopters was detected on the western edge of Klyuchi. Although these helicopters could be utilized for many purposes, there is the distinct possibility that they service guided missile instrumentation sites dispersed along the terminal trajectory path. In this

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[REDACTED]

Many of the destination points fall along a possible terminal trajectory path for ballistic missiles intended to impact in the water off the Kamchatka coast. Nine of the sixteen flights detected are to a coastal location between Ust Kamchatsk and Uka, and could be for installing or servicing instrumentation concerned with the sonic detection of water impacts.

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5. The military installation currently under construction could be a focal point for the impact area and as such could provide ample housing, warehouse and general logistic support facilities for the outlying instrumentation and communication sites. The 21,000 tons of cargo destined for Special Construction Unit at Klyuchi [REDACTED] could well be going into this new installation.

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6. Impact Area vs Launching Point. The complete lack of any indications of guided missile rangehead type activities in or around Klyuchi definitely weakens this possibility. These negative results when considered in the light of other associations with the guided missile program strengthen the probability that the Klyuchi area will be the terminus for the new test range. The comparative likelihood of detecting indicators of the two activities also becomes a factor favoring the "impact area" explanation. Although the Klyuchi mission failed to reveal any specific guided missile information, the negative results therefrom are of intelligence value both in assessing the role of Klyuchi in the Soviet guided missile program and in planning future collection activities.

E. The Unanswered Guided Missile Intelligence Questions.

1. This study further supports the belief that the Klyuchi area is probably the terminus for a new guided missile test range and as such undoubtedly would contain instrumentation sites. The types, quantities and locations of these sites are not known. AQUATONE coverage of the whole area would probably reveal possible locations of instrumentation sites from which a reasonable estimate of the intended impact point could be deduced.

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on Plate #3. The resolution and acuteness limits of AQUATONE search plots would preclude a definite identification of either the purpose or the equipment. It is, therefore, highly unlikely that the timing or status of the Soviet ICBM program can be acquired by additional AQUATONE coverage of the Klyuchi area at this time.

2. The probability that the launching point for a new long range ballistic missile test facility is located in the Novokazalinsk/Dzhusaly area is strengthened by the negative results of the Klyuchi coverage. The types, quantities, sizes and interconnections of rangehead facilities are susceptible to AQUATONE photography of sufficient clarity and resolution to determine the "readiness" of the test range. Consequently, within the presently permissible boundaries of future AQUATONE flights, the best known opportunity for acquiring data which should answer the critical question on the status of the Soviet ICBM program is coverage of the probable new rangehead in the Novokazalinsk/Dzhusaly area.

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