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SMF #21

CENTRAL INTELLIGENCE AGENCY

WASHINGTON 25, D. C.

OFFICE OF THE DIRECTOR

BYE 2369-67
Copy 4 of 8
15 MAY 1967

MEMORANDUM FOR: The Deputy Secretary of Defense

Special Assistant to the President
(Mr. Rostow)

The Deputy Under Secretary of State for
Political Affairs

SUBJECT: OXCART Reconnaissance of North Vietnam

1. The attached document is forwarded to the members of the 303 Committee for further consideration and approval as a result of the meeting on Friday, 12 May 1967.

2. Part I delineates the requirement for expanded, repetitive, high resolution photography with particular attention to those priority areas where the emplacement of offensive missile systems is considered most likely.

3. Part II is an operational plan to obtain this photography. The plan proposes the use of the OXCART vehicle, deployed to and operating from a prepared base in Okinawa, to overfly and photograph the priority areas of North Vietnam.

Richard Helms
Director

Attachment - 1
As stated

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6 - Deputy Director of Central Intelligence
7 - Deputy Director of Science and Technology
8 - Director, National Reconnaissance Office

OXCART RECONNAISSANCE

OF

NORTH VIETNAM

CONTENTS

I. DETECTION OF OFFENSIVE MISSILES IN NORTH VIETNAM THROUGH PHOTOGRAPHY

GENERAL

1. Examination of operational limitations, vulnerabilities, swathe widths and other related aspects of present photographic reconnaissance activities in North Vietnam reveals that it would be inadequate to provide timely and positive assurance of detection of offensive medium range missile systems if they are introduced into North Vietnam. (For details see discussion of Current Coverage.) While the remedy suggested in this proposal will still not provide "positive assurance" of detection of such systems, it appears to be the only photo recce plan that will materially increase the likelihood of such detection.

Coverage Requirements

2. The primary requisite is, of course, nearly complete coverage of North Vietnam with particular attention to those priority areas where the emplacement of offensive missile systems is considered most likely. Ideally it would be desirable to obtain thorough coverage of the important rail transloading yards of Pingshiang and Kung Ming in China in order to detect possible introduction of offensive missiles at the earliest possible date, i.e. while they are in transit. This may be politically undesirable. Therefore this operational proposal confines itself to the likely areas in North Vietnam including marshalling yards and spurs in the North Vietnamese rail system as well as the port of Haiphong. A second requirement is that the coverage be repetitive. This is essential in order that new activity or changes in the nature of previously observed activity, can be detected promptly. A third and equally important requirement is adequate resolution to identify different types of missiles or missile-associated equipment. Resolution on the order of 2-1/2 to 3 feet is needed to distinguish between missiles and missile-associated ground support equipment and other hardware such as armored vehicles and transport equipment.

Current Coverage

3. Following is a brief review of the limitations of the current photography on North Vietnam.

a. Satellite Coverage

High-resolution coverage is currently being provided [redacted] Weather is a limiting factor owing to the difficulties in scheduling satellite coverage to coincide with periods of good weather.

[redacted]

The lower resolution KH-4 missions are capable of providing the necessary overall coverage of North Vietnam because they photograph an area approximately 160 miles wide. Experience has shown, however, that only about one KH-4 mission a year--they are launched about once a month--finds North Vietnam sufficiently cloudless to obtain adequate overall coverage of the country. The quality of KH-4 photography would generally permit the detection of a missile site of standard configuration, but better resolution would be required to identify missiles or missile-associated equipment and to detect a well-camouflaged site or one of a novel configuration. (See Attachment I)

b. High Altitude U-2 Coverage

This reconnaissance aircraft, with any of its camera systems, is capable of providing the required resolution to identify missiles and missile-associated equipment. The vulnerability of the U-2 to multiple launches of SA-2 missiles imposes serious operational limitations on the use of this reconnaissance vehicle in North Vietnam. Therefore, since the introduction of surface-to-air missiles into North Vietnam in 1965, operations of these aircraft have been restricted to areas outside the range limitations of known SAM emplacements. This has generally confined U-2 photography to the northwestern portion of North Vietnam.

Since the beginning of the year, 67 U-2 missions have been flown, 37 of which covered portions of North Vietnam. Much of the photography from these missions, however, had cloud cover. (See Attachment I)

c. Combat Reconnaissance Coverage

These missions range from high level (30,000 feet) to low level (500 feet) with the majority between 5-10,000 feet. The quality of this photographic coverage ranges from excellent to poor. The National Photographic Interpretation Center reports that it received photography from an average of

800-900 of these missions a month during 1966 and 750 a month this year. About 20-25 percent of these, however, are flown to produce infrared or side-looking radar imagery--a product that cannot generally be applied to identifying missiles. Much of the coverage consists of short film strips covering major road and rail segments, point targets such as the Thai Nguyen Iron and Steel Complex, and other strike targets. The shortness of the flight lines and the narrow band of lateral coverage because of the relatively low altitude of the reconnaissance aircraft result in numerous gaps in photo coverage. Moreover, tactical reconnaissance aircraft are prohibited from flying in the sanctuary or buffer area--that part of North Vietnam within 20 miles of the Chinese border. Because this effort is utilized primarily to support strike operations, the overall photographic coverage of North Vietnam by combat reconnaissance aircraft has been relatively limited. (See Attachment I)

d. Drone Coverage

Low-level drones--24 have been recovered thus far in 1967--are flown at 1,500 feet and provide excellent quality photography. The low altitude of the drone, however, restricts the usable photography to approximately one mile on either side of the flight line. These missions are directed primarily against critical targets in the Hanoi and Haiphong areas.

The high-level drone--five out of twelve have been recovered--is flown at an altitude above 60,000 feet but is vulnerable to the SA-2 missile. Most of

the high-level drone missions have been programmed over the eastern portion of the China/North Vietnam border where tactical aircraft do not operate, but for missile search purposes they have not provided any usable photography of that area, largely because of unfavorable weather. High-level drone photography is capable, however, of providing identification of missiles or missile-associated equipment under optimum operational and weather conditions. The above notwithstanding, high-level drones have proved to be highly vulnerable. Thus neither the high-level drone with its vulnerability nor the low-level drone with its very narrow coverage, could provide timely repetitive photography necessary for the detection of the type of missile sites in question. (See Attachment I)

Priority Search Areas

4. The priority missile search areas delineated on the attached map are a slightly modified version of those first established by the LOOKOUT Task Force over a year ago. These areas are receiving additional study. In general, our considerations for establishing priority search areas--particularly for fixed-site medium-range missiles--were the availability of adequate road nets and the suitability of terrain for the emplacement of the site and for masking or camouflaging it. A secondary consideration was the availability of air defense protection with such weapons as the SA-2 surface-to-air missile. (See Attachments II and III)

Attachments: 3
I - Map of Photographic Coverage
II - Map of Priority Missile Search Areas
III - Rationale for Search Area Selection

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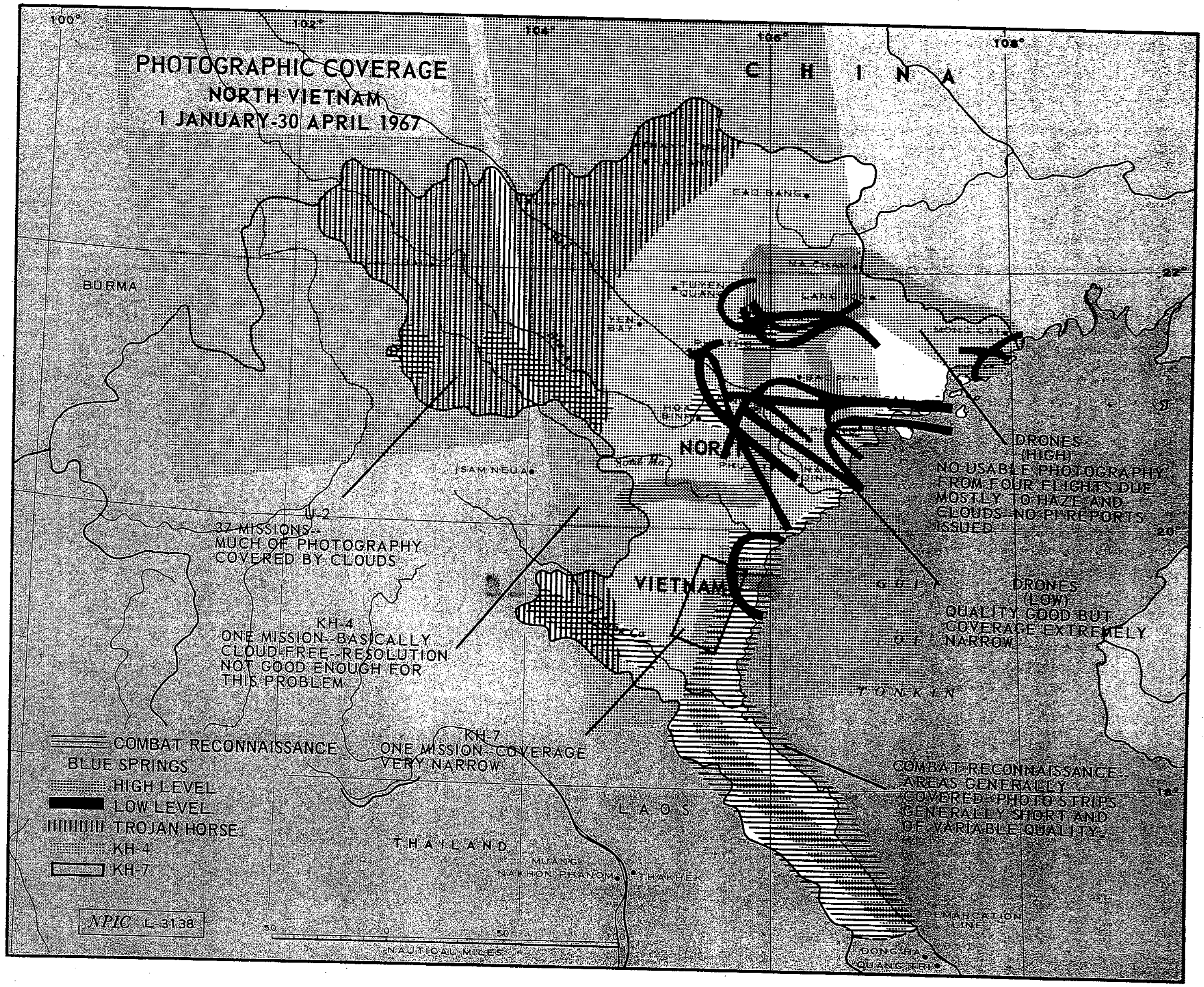

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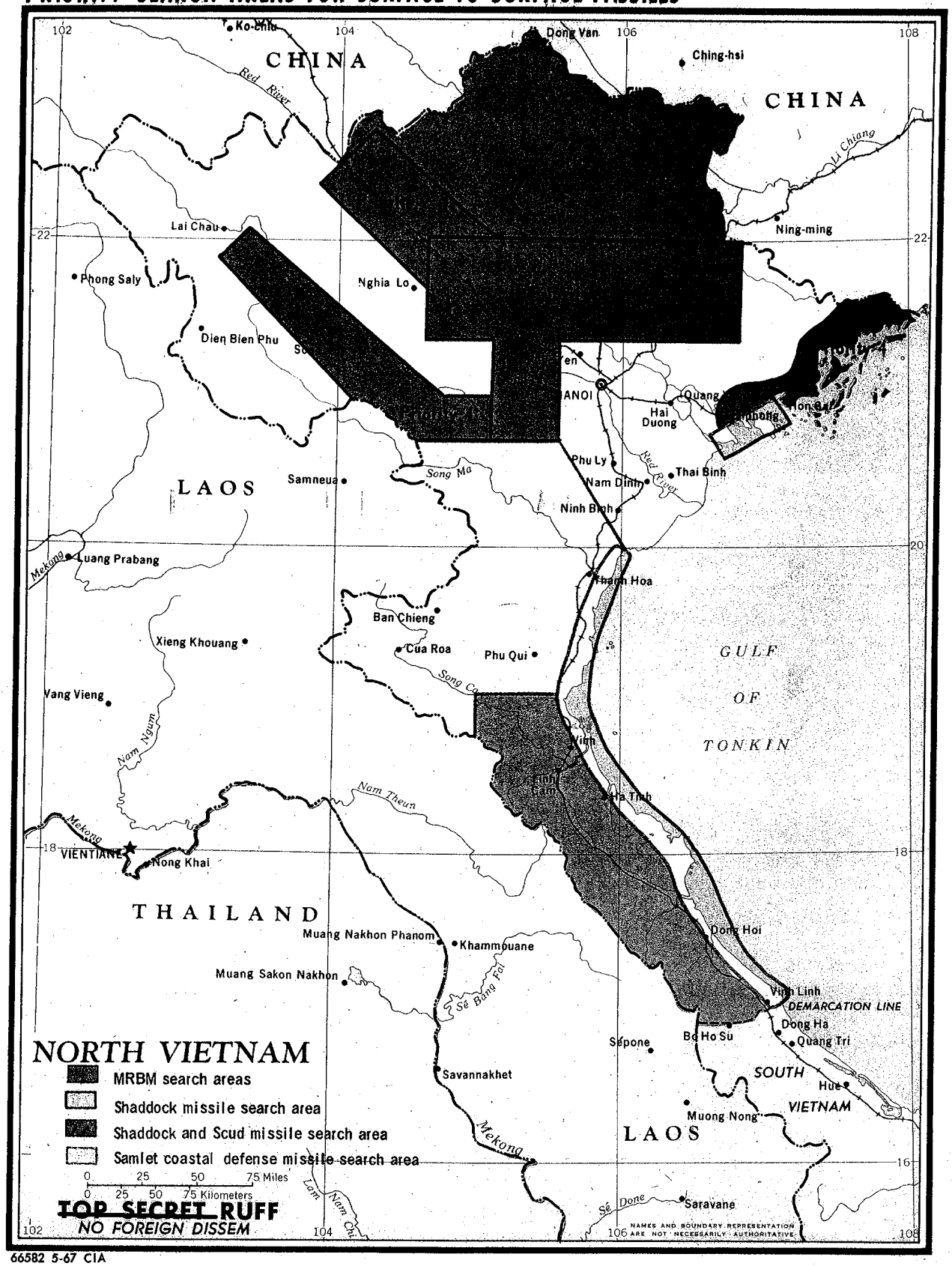
PRIORITY SEARCH AREAS FOR SURFACE-TO-SURFACE MISSILES



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Rationale for Selecting Search Areas for MRBMs in North Vietnam

Priority 1: This area--a short distance north and west of Hanoi--is given first priority because it already has excellent SAM and AAA defenses and good interceptor defenses, good rail and road facilities, forested areas for concealment, and suitable plain to hilly terrain.

Priority 2: This area along the rail line from Hanoi to China is given second priority because of the rail transportation available and its location well inland and behind a barrier of SAM, AAA, and interceptor defenses. It also has extensive forests for concealment and large areas of suitable terrain.

Priority 3: This area well north of Hanoi is given third priority because of its rearward position, good roads, extensive forests for concealment, and generally suitable terrain. This is the best area for defense by Hanoi's interceptors. Much of the northwestern part of this area is too mountainous to be suitable.

Priority 4: Two areas have been assigned fourth priority: a strip of hilly country along the Moc Chau - Lai Chau road in the northwest, and a strip along the northeastern coast from Haiphong to the Chinese border. Except for the SAM-defended Haiphong vicinity, these areas

would be difficult to defend from air attack. They have good roads, and offer generally suitable terrain and good opportunity for concealment.

Rationale for Selecting Search Areas for Tactical Missiles

The areas for these missiles were selected entirely on the basis of weapons range.

II. OXCART RECONNAISSANCE OPERATIONS PLAN

1. The required photographic coverage of North Vietnam will be accomplished by the OXCART vehicle operating from Kadena Air Base in Okinawa. This operating location at Kadena has been prepared for OXCART operation for some time.

2. Operational missions will be planned, directed and controlled by the Central Intelligence Agency Operations Center. Three OXCART aircraft and the necessary task force personnel will be deployed from Area 51 to Kadena.

3. With this inventory a minimum of nine (9) successful operational missions per month can be flown consistent with available weather. Overcast skies are a predominate feature associated with the monsoon season and limit the number of days suitable for effective photographic reconnaissance. As the monsoon season wanes, the number of clear days increases permitting more frequent, repetitive reconnaissance coverage. Missions will be launched on a twenty-four hour alert basis. This will permit maximum utilization of the favorable weather available. In addition to the operational missions flown, necessary test and proficiency sorties will be flown from Kadena. OXCART aircraft will be rotated [redacted] to maintain the required number of operationally ready aircraft at Kadena.

4. Project OXCART has been maintaining a capability to deploy to Kadena and to launch the first operational mission fifteen (15) days after approval of implementation of this plan. Dependent upon aircraft condition upon arrival at Kadena the first operational mission could be launched on the thirteenth (13th) day after approval. Three (3) days after approval is received the supporting task force will be in place, necessary logistical support will be airlifted and the supporting tanker aircraft will be deployed. The OXCART aircraft will deploy on alternate days starting with the fifth (5th) day after approval. This deployment schedule is included as Attachment I to this plan.

5. The OXCART aircraft will be flown non-stop from [redacted] to Kadena with three aerial refuelings enroute. These refuelings will be supported by tanker aircraft operating from Beale AFB, California; Hickam AFB, Hawaii; and Kadena AB. The deployment route is planned to provide for adequate fuel reserves at designated recovery bases in the event of a missed aerial refueling or loss of one engine. The deployment route is included as Attachment II.

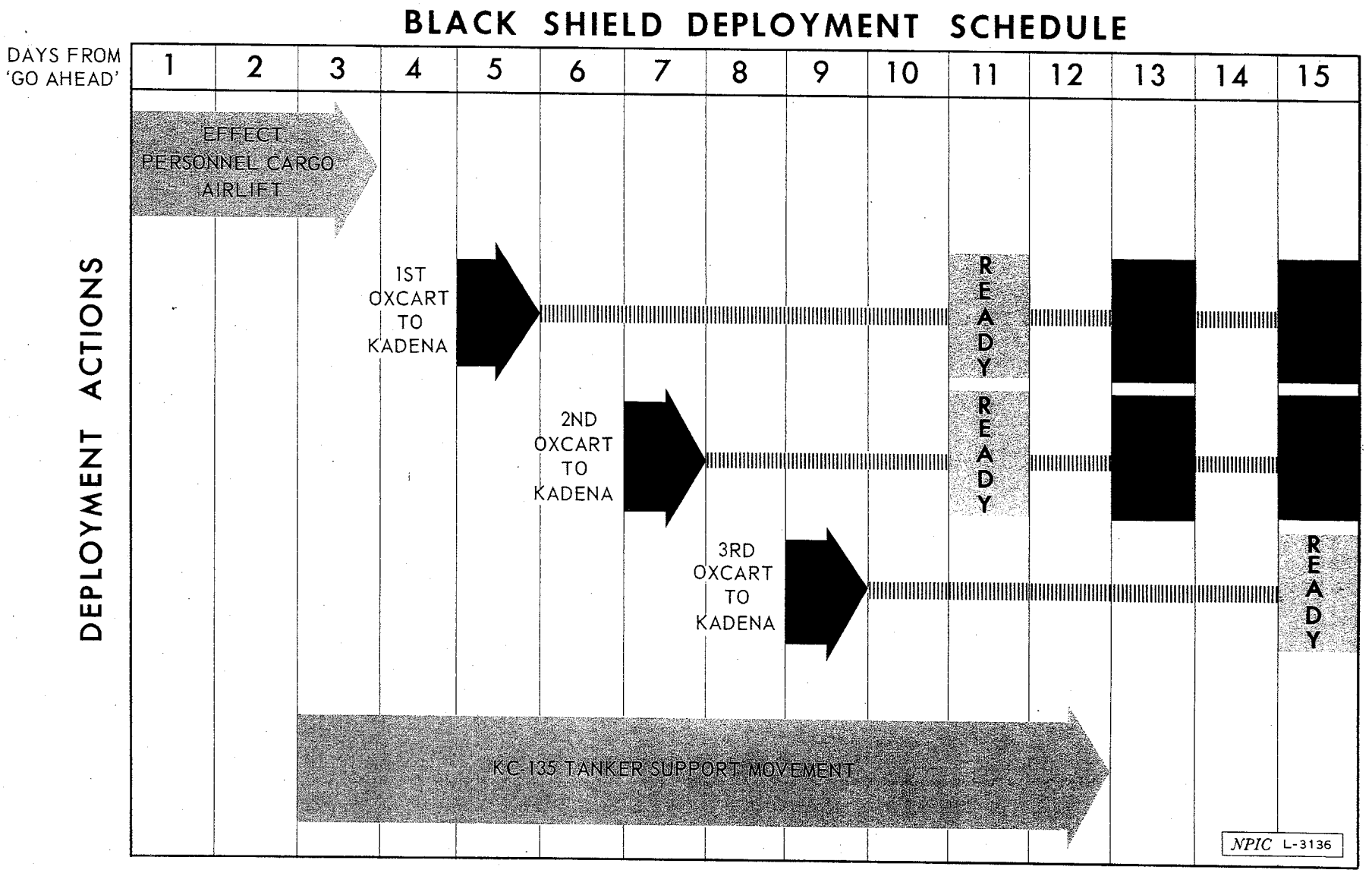
6. Should a crisis situation dictate, an extension of the deployment route from Kadena for photographic coverage of

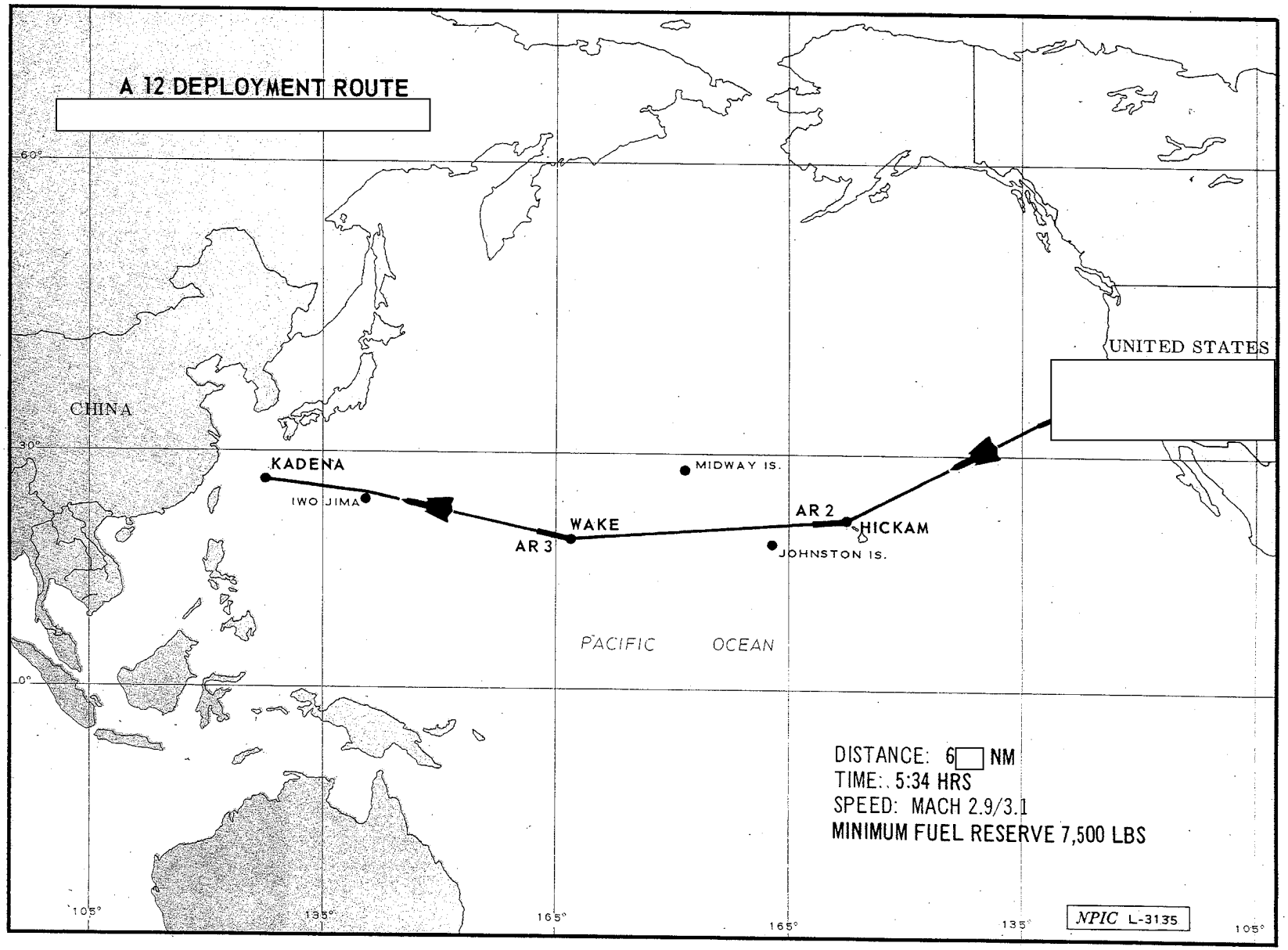
North Vietnam and return to Kadena is possible. This would require two additional aerial refuelings for a total elapsed time of 8 hours and 40 minutes.

7. A typical OXCART operational mission from Kadena with two aerial refuelings enroute is included as Attachment III.

8. Coverage of the majority of the SA-2 defended areas of North Vietnam northward from the Demilitarized Zone is possible on one mission which will provide photographic ground resolutions from 1 foot to 3.5 feet. An enlargement of this typical route is included as Attachment IV. Flexibility of operation will permit several possible variations of this route to provide additional coverage of North Vietnam.

9. The OXCART vehicle is virtually invulnerable to SA-2 and other defensive systems in North Vietnam because of its high operational altitude, high speed and the Electronic Counter Measures systems installed.


BLACK SHIELD DEPLOYMENT SCHEDULE
DAYS FROM 'GO AHEAD'
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
DEPLOYMENT ACTIONS
EFFECT PERSONNEL CARGO AIRLIFT
1ST OXCART TO KADENA
2ND OXCART TO KADENA
3RD OXCART TO KADENA
READY
READY
READY
KC-135 TANKER SUPPORT MOVEMENT
NPIC L-3136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30°
0°
CHINA
UNITED STATES
[redacted]
KADENA
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MIDWAY IS.
WAKE
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HICKAM
JOHNSTON IS.
PACIFIC OCEAN
DISTANCE: 6[redacted] NM
TIME: 5:34 HRS
SPEED: MACH 2.9/3.1
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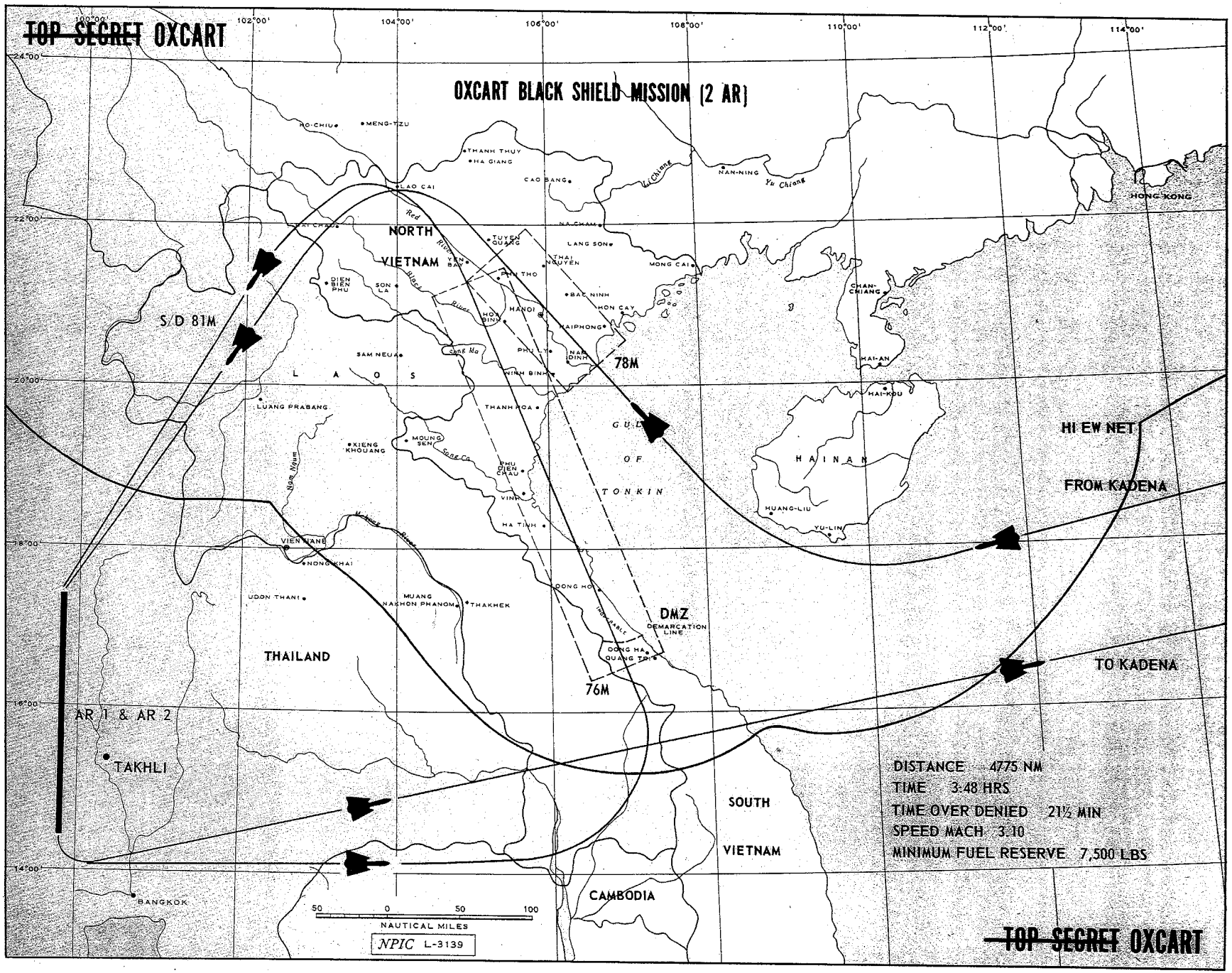

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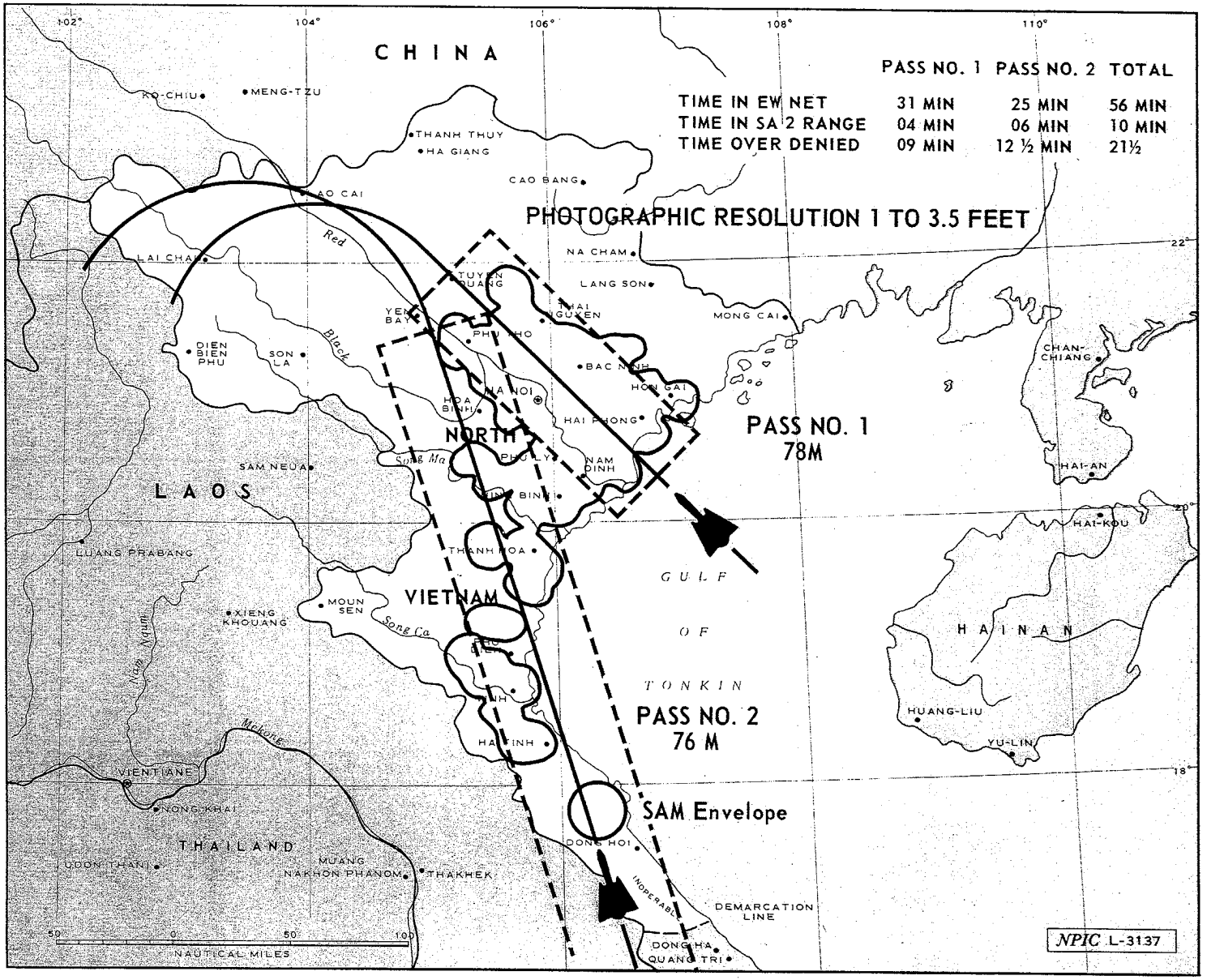

	PASS NO. 1	PASS NO. 2	TOTAL
TIME IN EW NET	31 MIN	25 MIN	56 MIN
TIME IN SA 2 RANGE	04 MIN	06 MIN	10 MIN
TIME OVER DENIED	09 MIN	12 ½ MIN	21½