CONSOLIDATED PBY CATALINA

Photos and History



The Consolidated PBY Catalina was an American flying boat of the 1930s and 1940s produced by Consolidated Aircraft. It was one of the most widely used multi-role aircraft of World War II. PBYs served with every branch of the United States Armed Forces and in the air forces and navies of many other nations.

The initialism of "P.B.Y." was determined in accordance with the U.S. Navy aircraft designation system of 1922; PB representing "Patrol Bomber" and Y being the code used for the aircraft's manufacturer, Consolidated Aircraft.

The XP3Y-1 had its maiden flight on 28 March 1935, after which it was transferred to the US Navy for service trials. The XP3Y-1 soon proved to have significant performance improvements over current patrol flying boats.

XP3Y-1 at Norfolk Naval Air Station 1935




No 2544 4-10-35
Consolidated Aircraft Corp.
XP3Y-1 Initial Flight - Naval Air Station
Norfolk Va. March 21 1935.


Consolidated XPSY-1 4-23-35
No.2578 Normal patrol condition



Consolidated XP3Y-1 4-23-35
NO.2577 Normal patrol condition

The Navy requested further development in order to bring the aircraft into the category of patrol bomber, and in October 1935, the prototype was returned to Consolidated for further work, including installation of 900 hp engines.



No. 2850

CONSOLIDATED AIRCRAFT CORPORATION
XP3Y-1 TAKING OFF

5-13-36

XP3Y-1 during a rough-water landing



For the redesignated XPBY-1, Consolidated introduced redesigned vertical tail surfaces. The XPBY-1 had its maiden flight on 19 May 1936, during which a record non-stop distance flight of 3,443 miles was achieved.

XP3Y-1 at Coco Solo Panama Canal Zone after non-stop flight from Norfolk



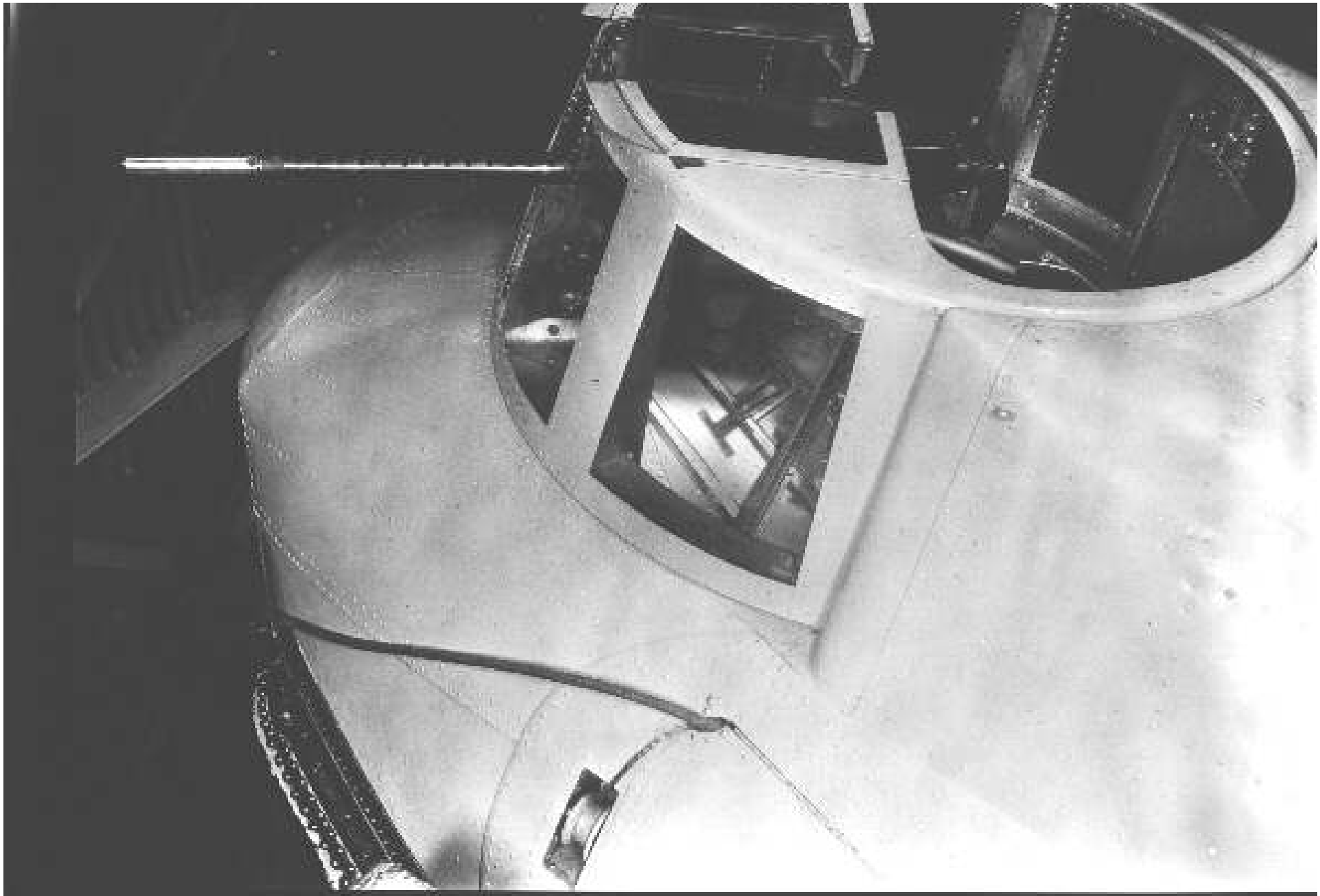
3433 mile record on non-stop flight from Panama to Alameda



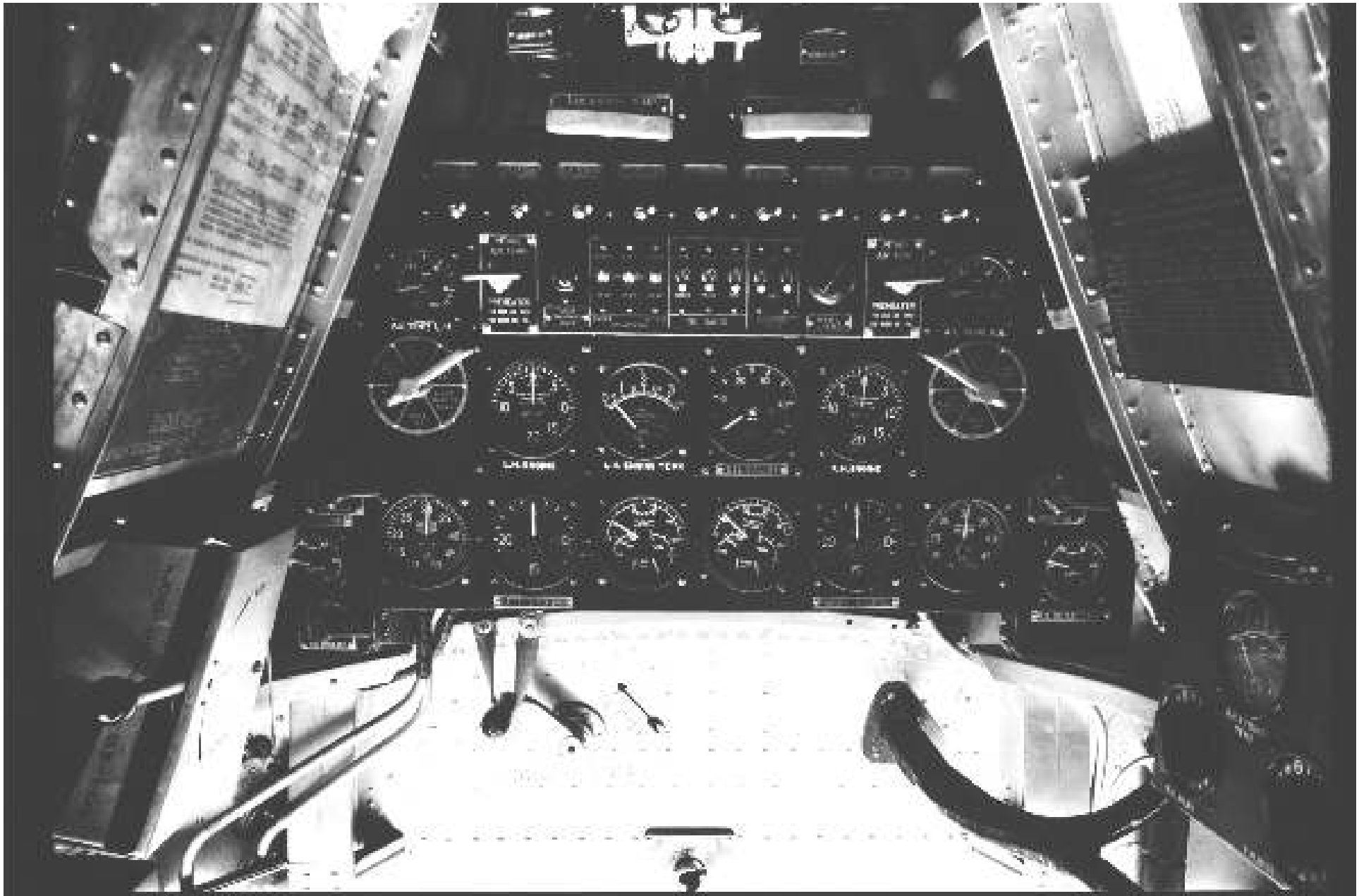


NO. 10091 CONSOLIDATED AIRCRAFT CORP. 5-16-36

XP3Y-1 IN FLIGHT



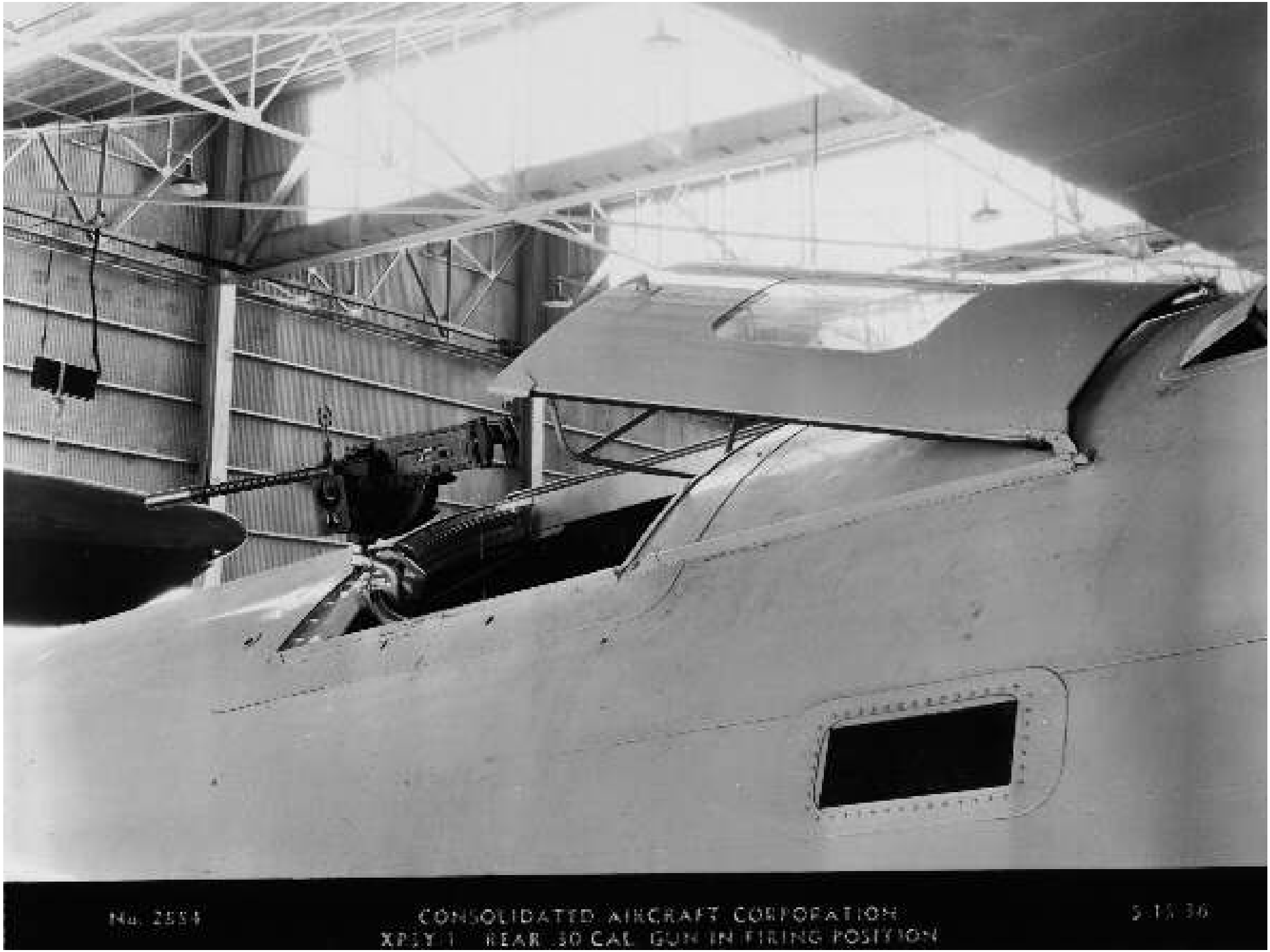
No. 2812 CONSOLIDATED AIRCRAFT CORPORATION 5-15-44
XP5Y-1 BOW GUN IN FIRING POSITION



NO. 2870 CONSOLIDATED AIRCRAFT CORPORATION 5-15-36
XP3Y-1 MECHANICS INSTRUMENT PANEL



No. 2869 CONSOLIDATED AIRCRAFT CORPORATION 5-26-36
XPBY-1 PILOT'S INSTRUMENT PANEL


No. 2554
CONSOLIDATED AIRCRAFT CORPORATION
XPBY-1 REAR .30 CAL. GUN IN FIRING POSITION
5-15-36

The XPBY-1 was delivered to VP-11F in October 1936. The second squadron to be equipped was VP-12, which received the first of its aircraft in early 1937. The second production order was placed on 25 July 1936.

PBY - 1

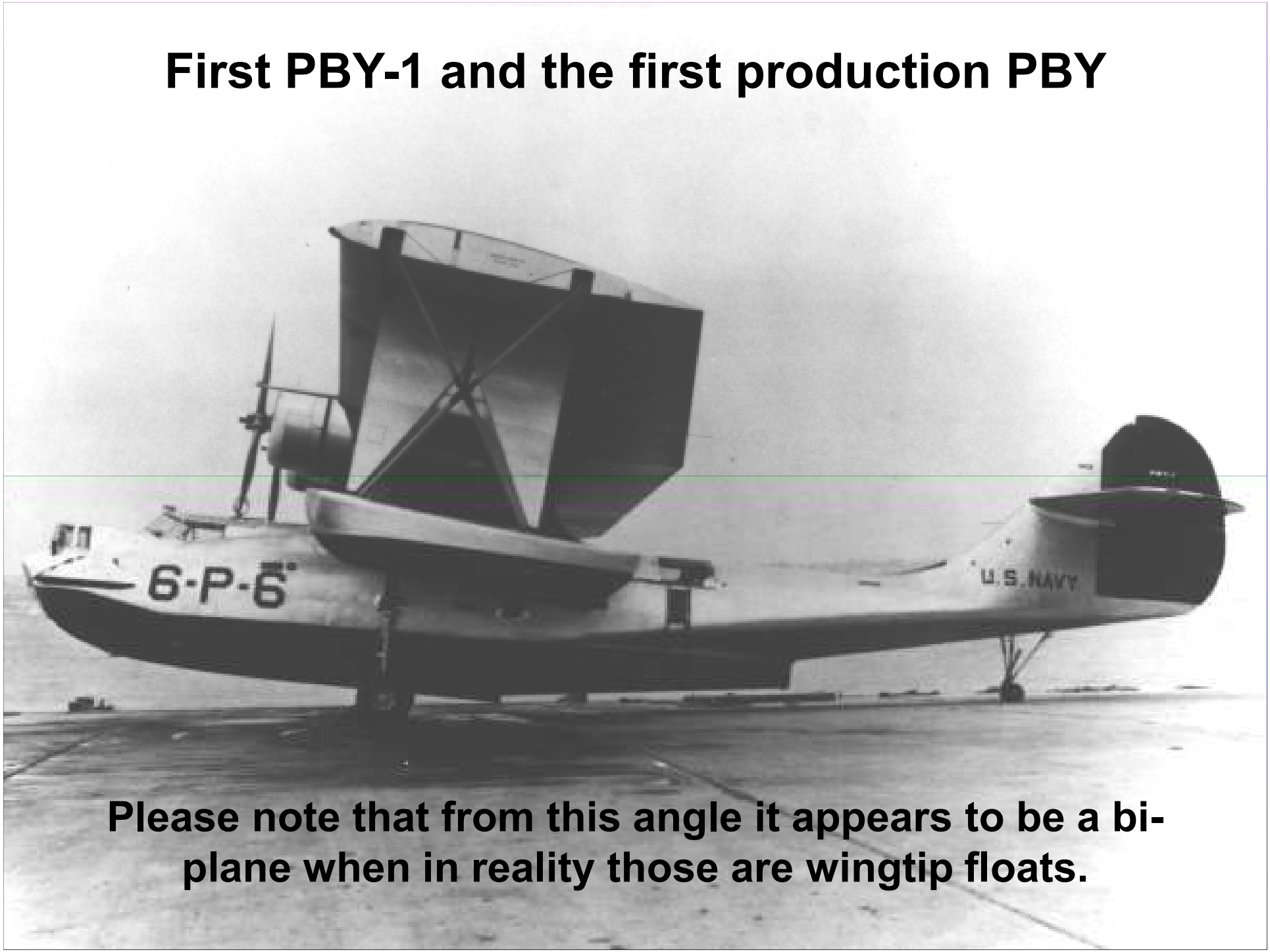
September 1936–June 1937
Original production model.

Number Built 60

Assembly shop of the San Diego plant



First PBY-1 and the first production PBY



Please note that from this angle it appears to be a bi-plane when in reality those are wingtip floats.



VP-6F was the first squadron to get production PBYs

VP-6F was based in San Diego before departing for Pearl Harbor




U.S. NAVY
12-P-9


Beaching crew

Lake Washington Seattle 1937



Taken May 27th 1937 during Golden Gate Bridge Dedication



PBY-1




12-P-7
VP-12

1937 VP-11F Hawaii



Fleet Tactical Exercises Nov 1937




U.S. NAVY
П-Р-9


U.S. NAVY
4-J-8


3-P-10


U.S. NAVY
3-P-10
3-P-8

Taken over Alaska 1937




Taken over Alaska 1937
2·P·2

Taken over Alaska 1937




Taken over Alaska 1937

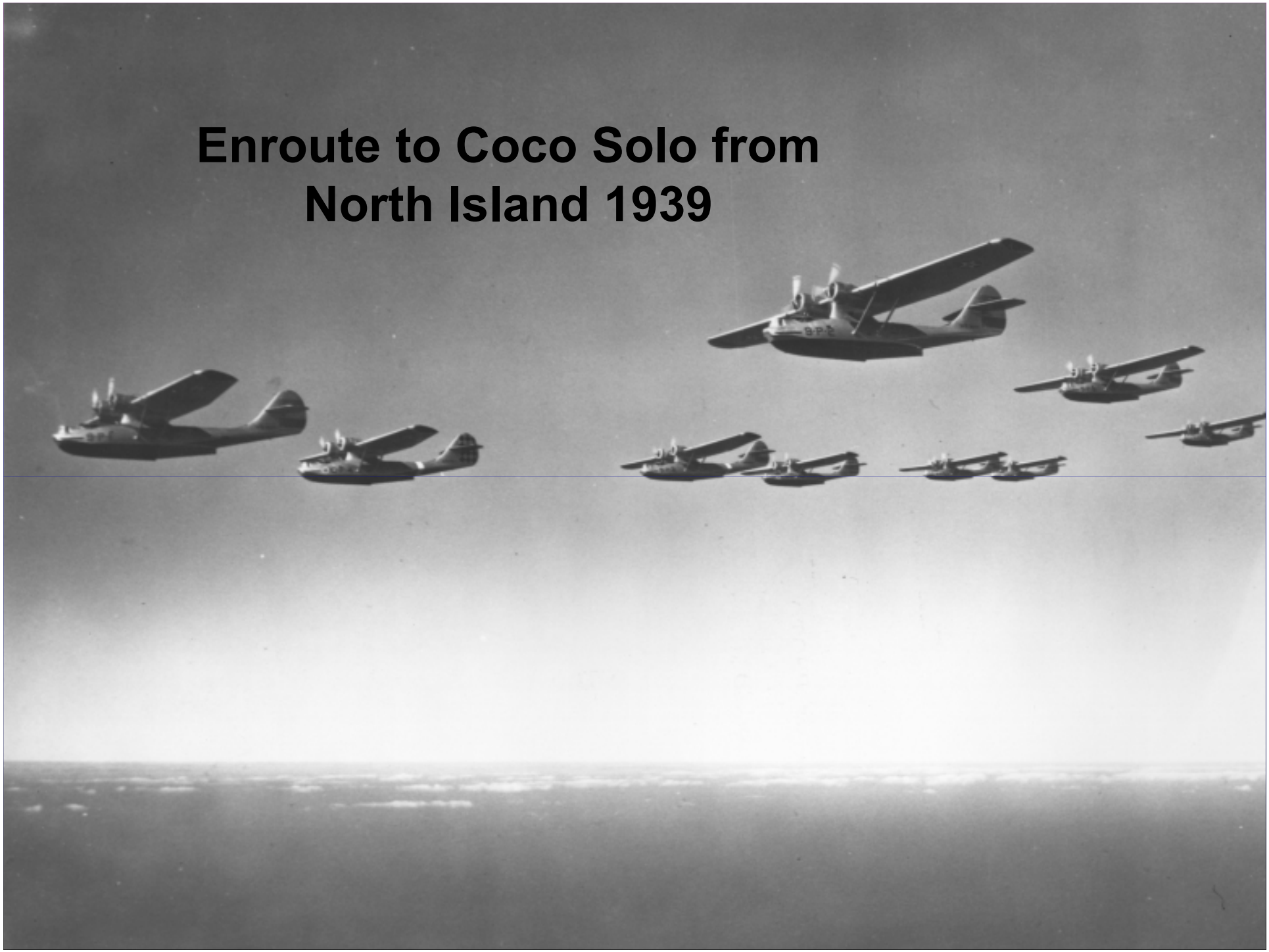
VP-12F 1938



Enroute to Coco Solo from North Island 1939



Enroute to Coco Solo from North Island 1939



PBY-1 of VP-6 with True Blue tails





Up on the step



Utility Squadron Four Aircraft Atlantic Fleet
1941

PBY - 2

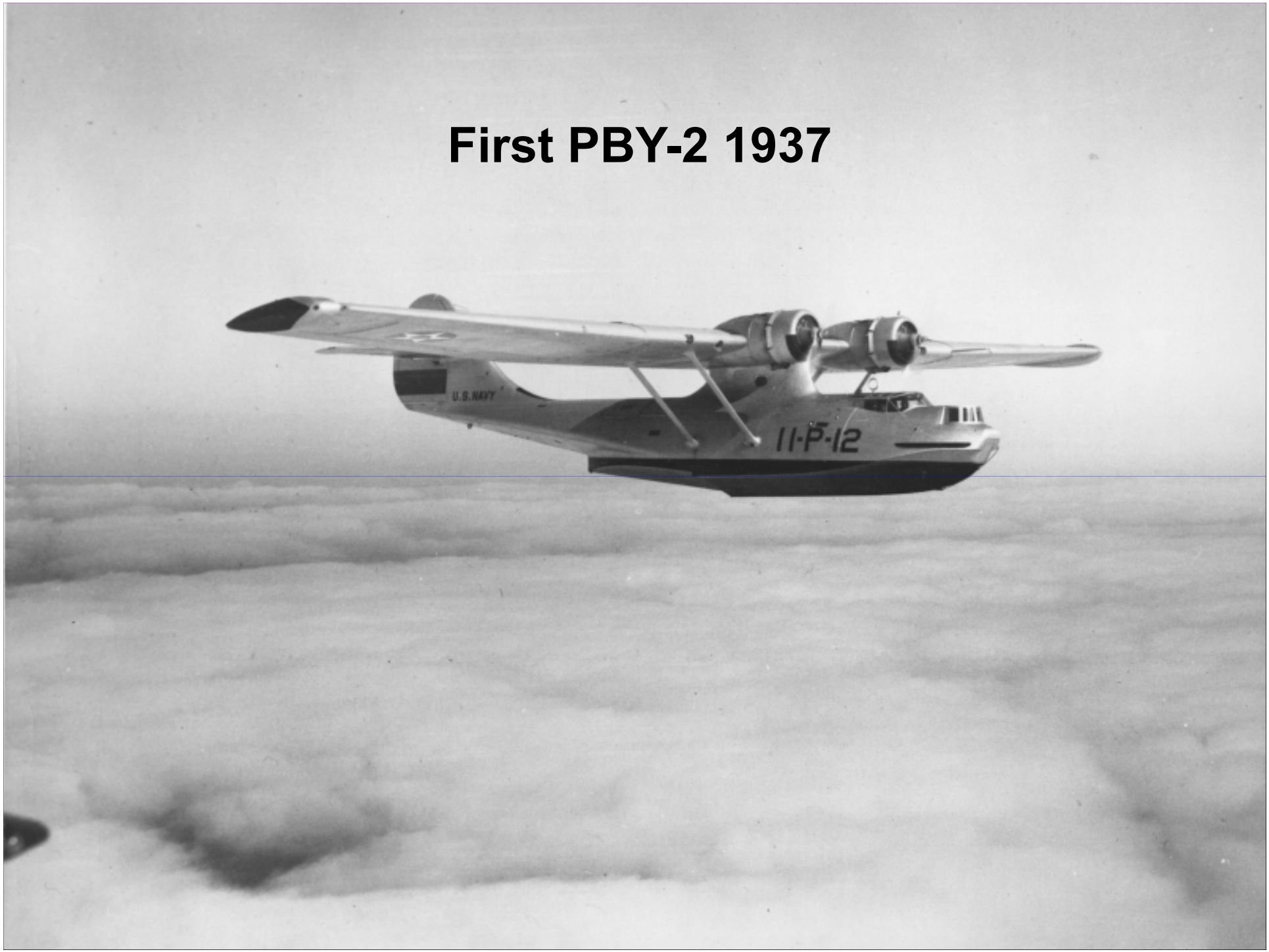
May 1937–February 1938
Minor alterations to tail structure, hull reinforcements

Number Built 50

First PBY-2 1937



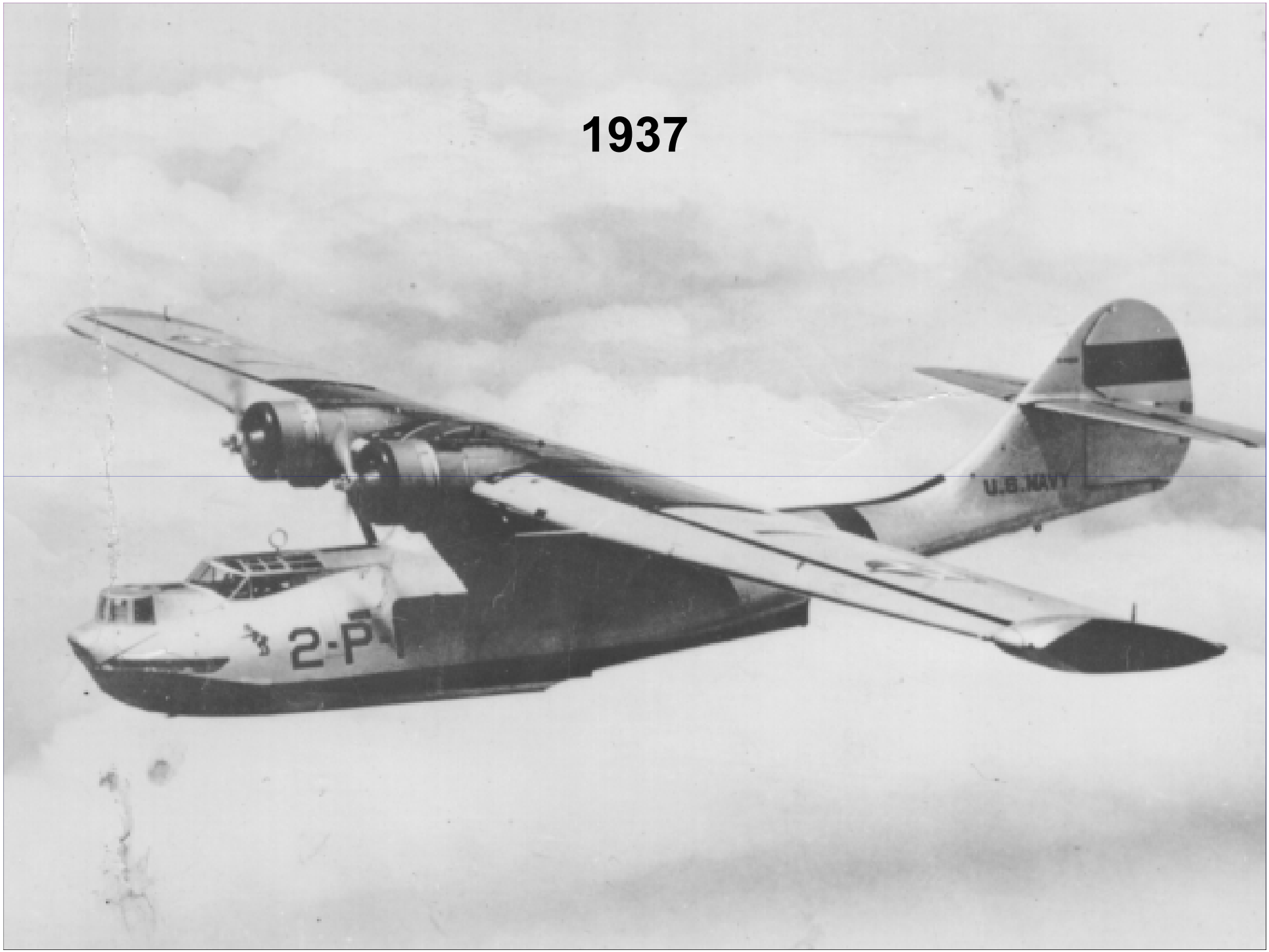
First PBY-2 1937



First PBY-2 1937



1937




2-P-1



18 planes departed San Diego 1938-Jan-18 and arrived Pearl Harbor


U.S. NAVY


1939


1942
64

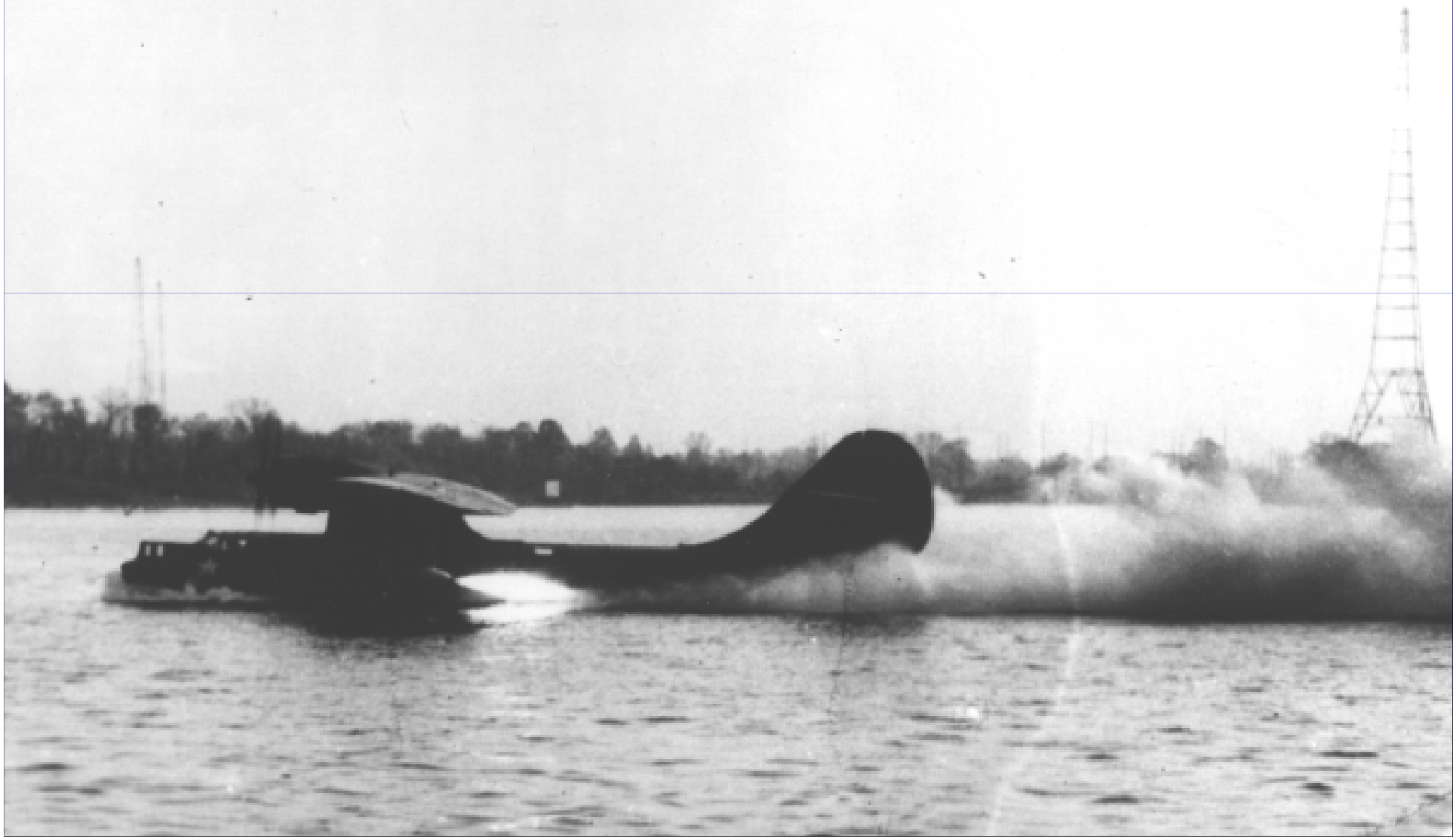
NAS Jacksonville 1942





Plane 64 dropping a test bomb 1942

Taxi test with BuAero project DU-1 liquid propellant JATO unit on PBY-2



PBY - 3

November 1936–August 1938
Higher power engines.

Number Built 66

Consolidated PBY-3 patrol bombing plane
1937




U.S. NAVY



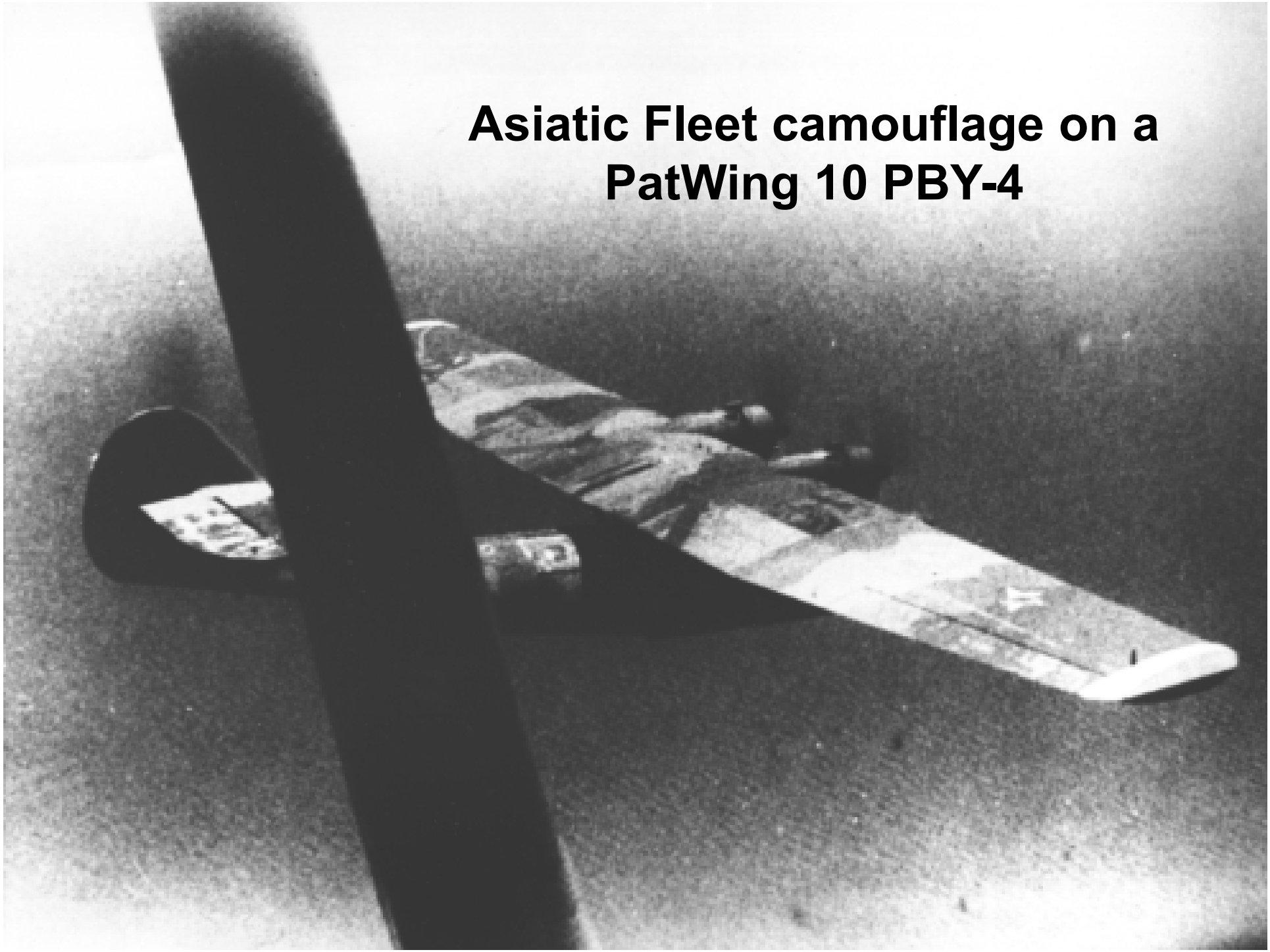
PBY - 4

May 1938–June 1939
Higher power engines, propeller spinners, acrylic glass blisters over waist guns (some later units)

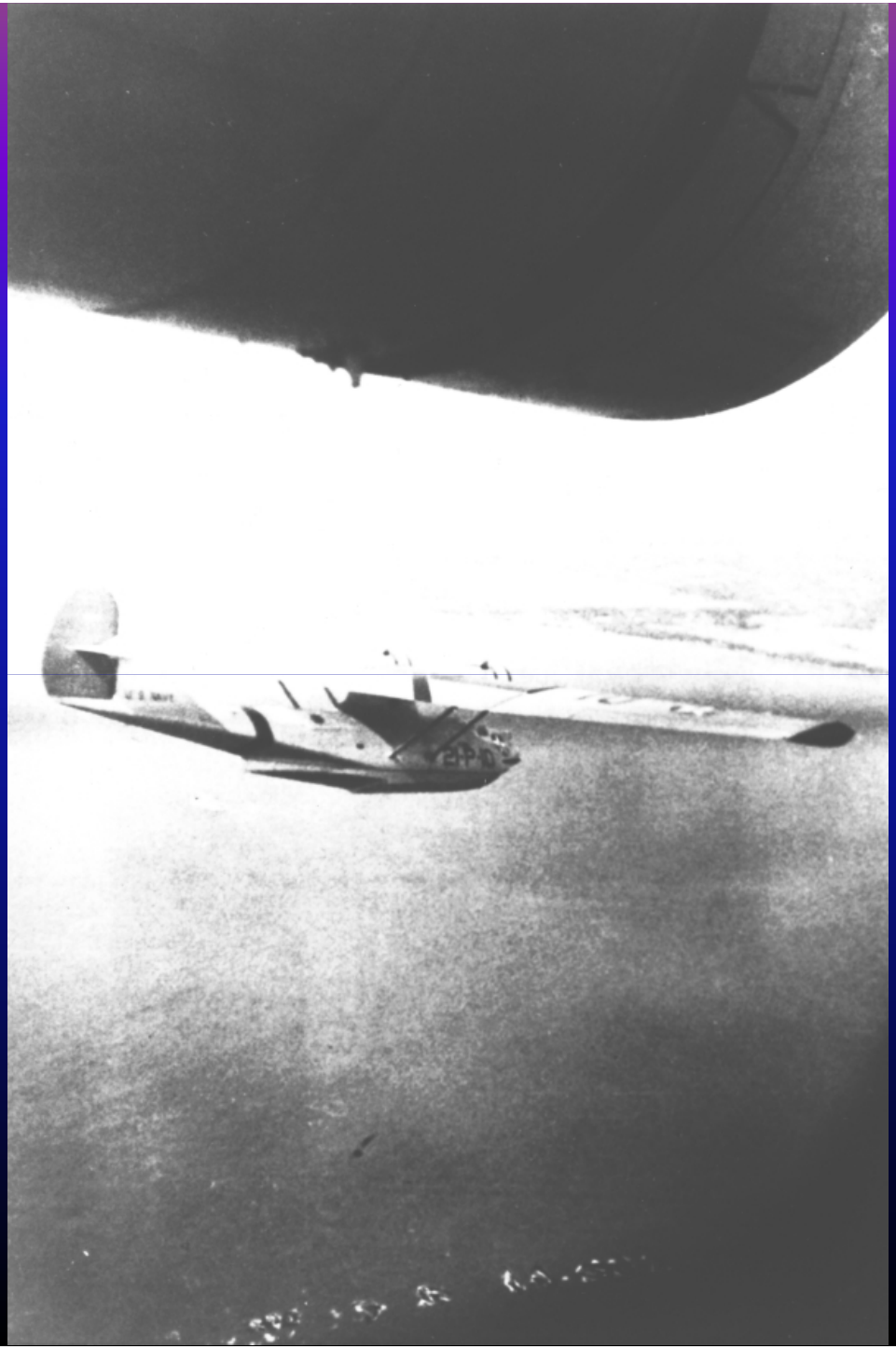
Number Built 32


U S NAVY
12
12
13-P-15


NAS Sangley Point circa
1939
21-P-12
21-P-3



Asiatic Fleet camouflage on a PatWing 10 PBY-4



Patrol from Java in March 1942

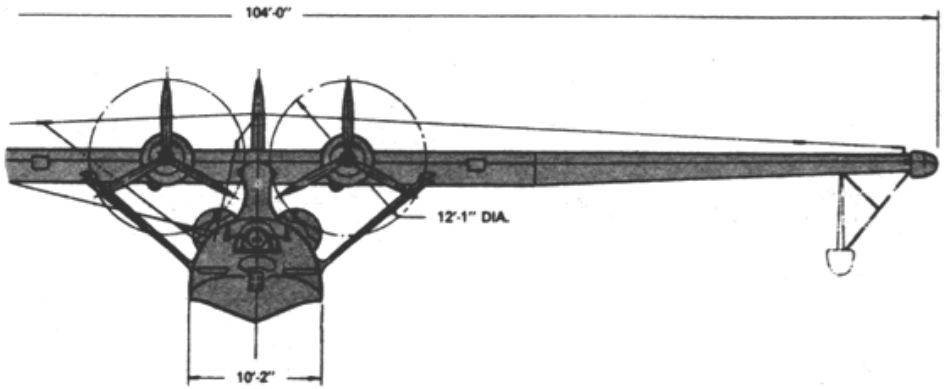
During World War II, PBYs were used in anti-submarine warfare, patrol bombing, convoy escorts, search and rescue missions (especially air-sea rescue), and cargo transport. The PBY was the most successful aircraft of its kind; no other flying boat was produced in greater numbers.

PBY - 5

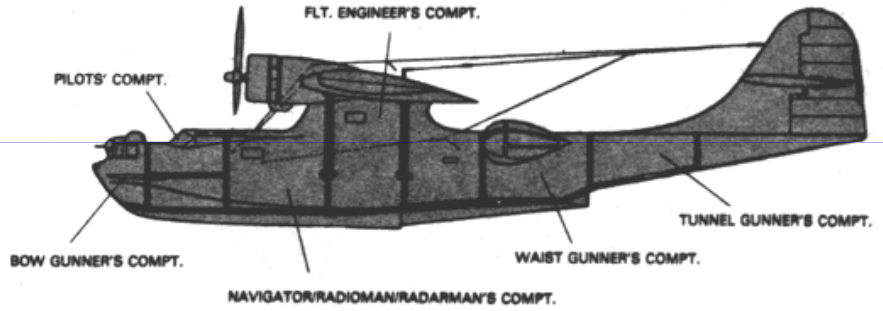
September 1940–July 1943
Higher power engines (using higher octane fuel), discontinued use of propeller spinners, standardized waist gun blisters.

Number Built 684





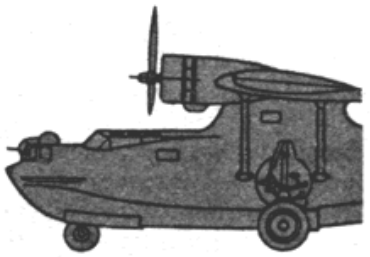
PBY-5



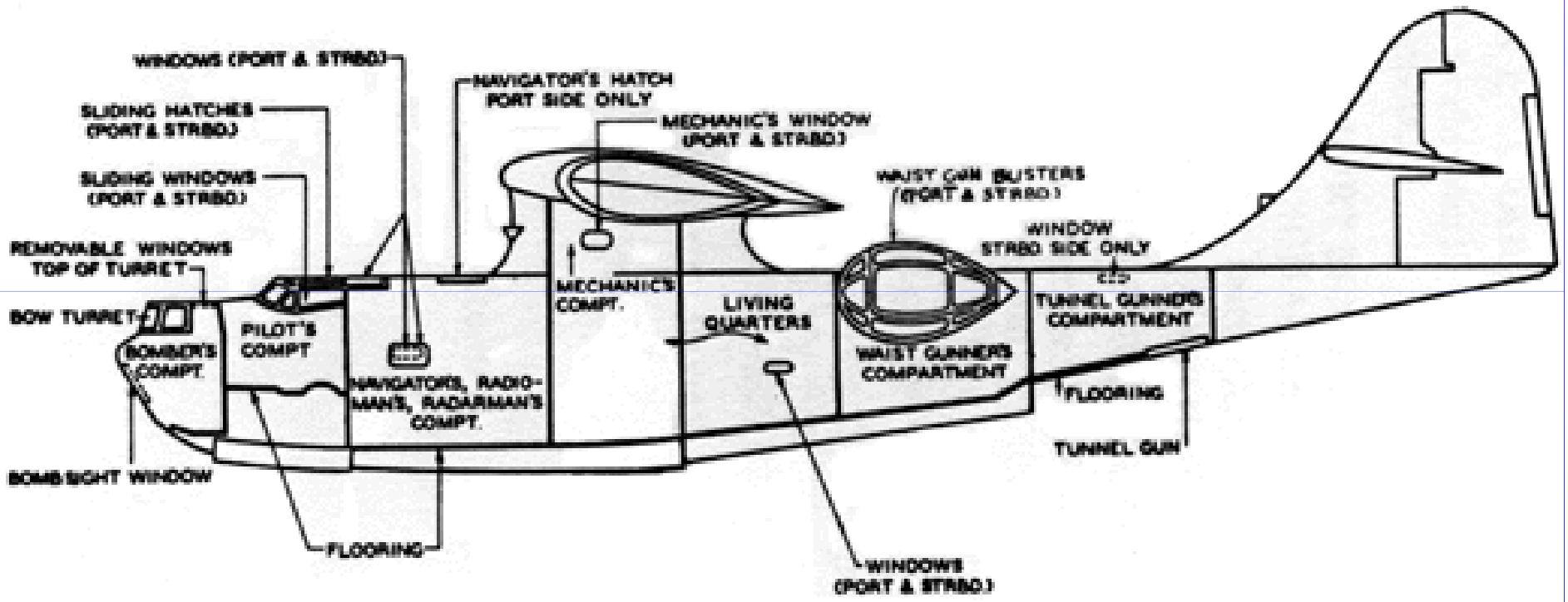
PBY CATALINA

	PBY-5	PBY-5A
Wing span	104 ft.	104 ft.
Length	63 ft. 10 in.	63 ft. 10 in.
Height	18 ft. 10 in.	20 ft. 2 in.
Wing area	14000 sq. ft.	14000 sq. ft.
Gross weight	31800 lbs.	34000 lbs.
Engine (2)	R-1830	R-1830
Horsepower (T.O.)	1200	1200
Max. speed (7000 ft.)	195 mph	180 mph
Cruising speed	110 mph	117 mph
Service ceiling	18000 ft.	15000 ft.
Range	2850 mi.	2550 mi.

Performance data approx.



PBY-5A

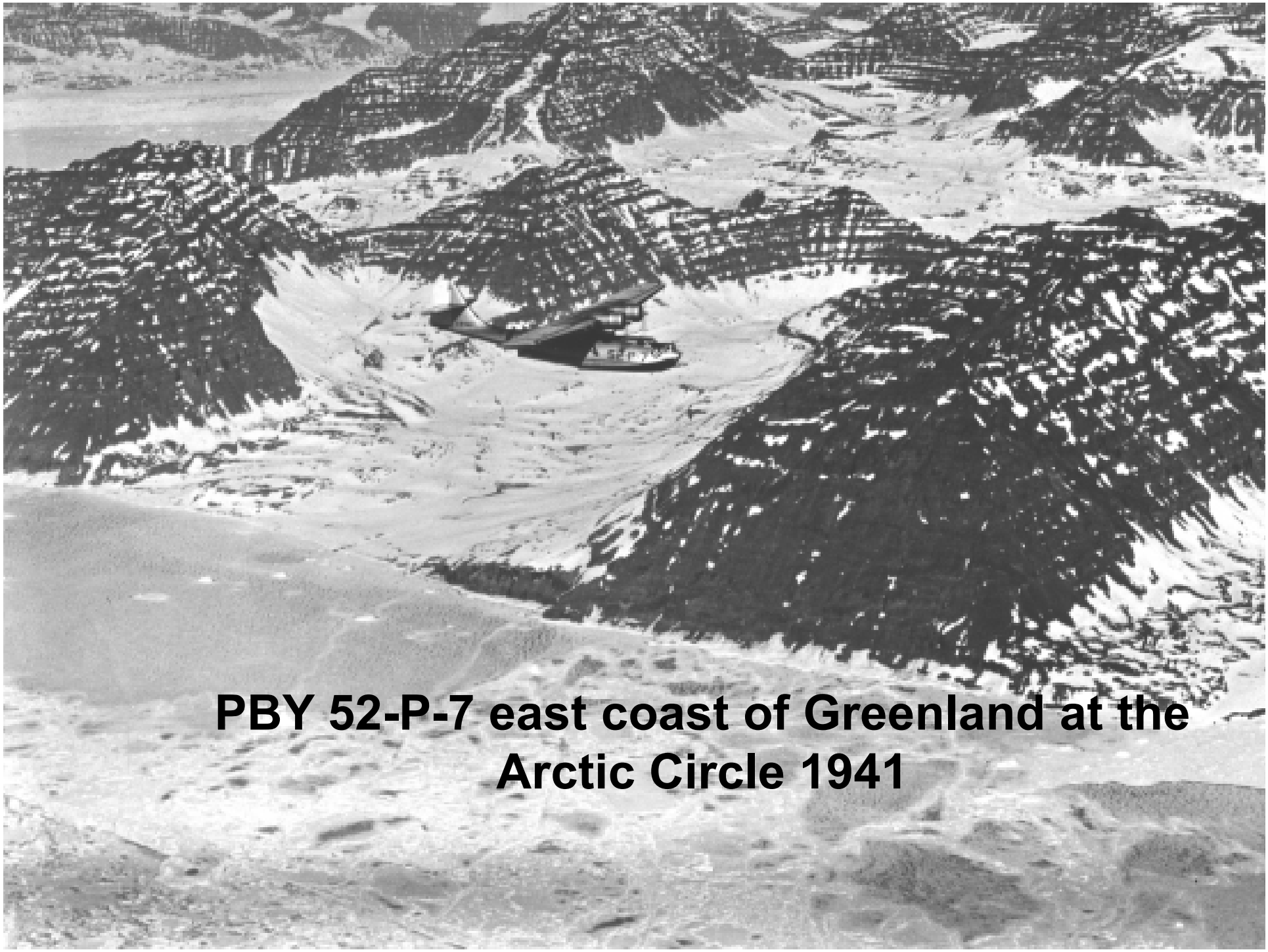

WINDOWS (PORT & STRBD)
SLIDING HATCHES (PORT & STRBD)
SLIDING WINDOWS (PORT & STRBD)
REMOVABLE WINDOWS TOP OF TURRET
BOW TURRET
BOMBER'S COMPT.
PILOT'S COMPT
BOMB SIGHT WINDOW
NAVIGATOR'S HATCH PORT SIDE ONLY
NAVIGATOR'S, RADIO-MAN'S, RADARMAN'S COMPT.
FLOORING
MECHANIC'S WINDOW (PORT & STRBD)
MECHANIC'S COMPT.
LIVING QUARTERS
WINDOWS (PORT & STRBD)
WAIST GUN BUSTERS (PORT & STRBD)
WAIST GUNNER'S COMPARTMENT
WINDOW STRBD SIDE ONLY
TUNNEL GUNNER'S COMPARTMENT
FLOORING
TUNNEL GUN


1940-Sep-06



PBY 52-P-7 east coast of Greenland at the Arctic Circle 1941





PBY 52-P-7 east coast of Greenland at the Arctic Circle 1941


PBY 52-P-7 east coast o
Greenland at the Arctic
Circle 1941

NAS Norva 1941





BuNo 2289 flying near a residential area in San Diego

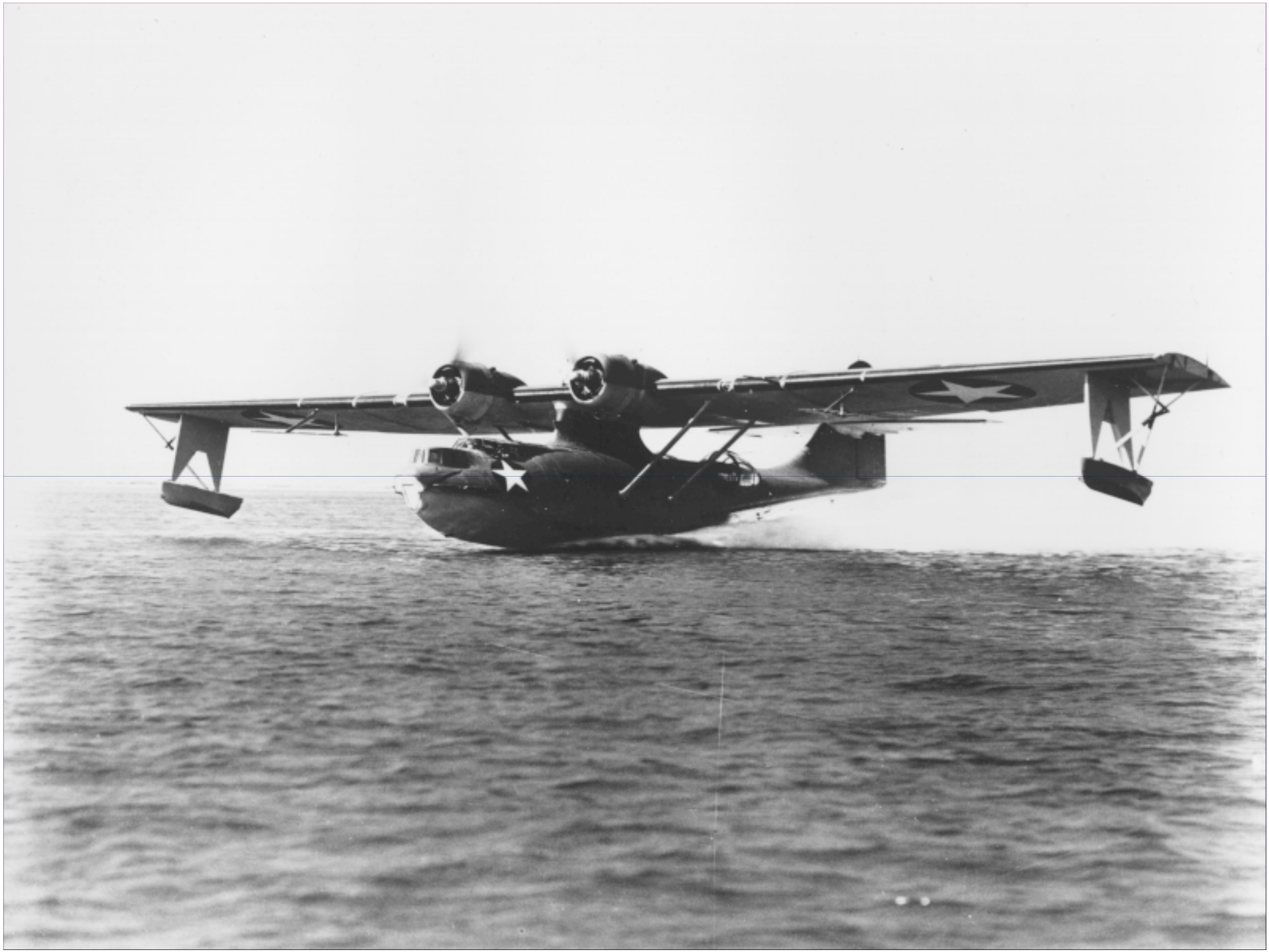


Film crew making a training film

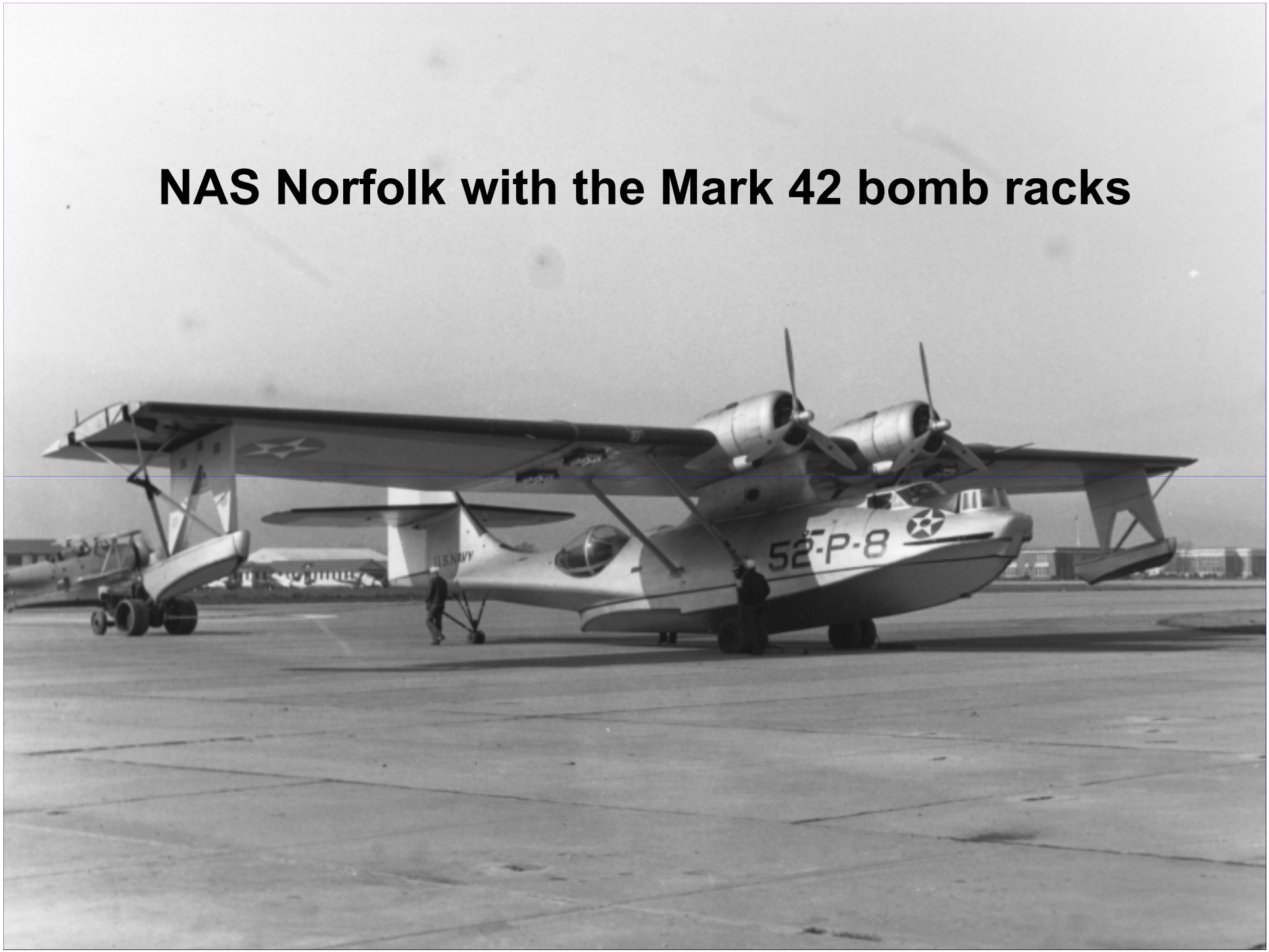

Following
Storm Dutch
Harbor 1942


PBY landing at NAS Jacksonville Florida
March 1943





NAS Norfolk with the Mark 42 bomb racks




Night landing at NAS Jacksonville Fla 1943


11-7


Flight missions and patrol flights














301 P9 261 R 28


304 PJ 262
R 18 3/4





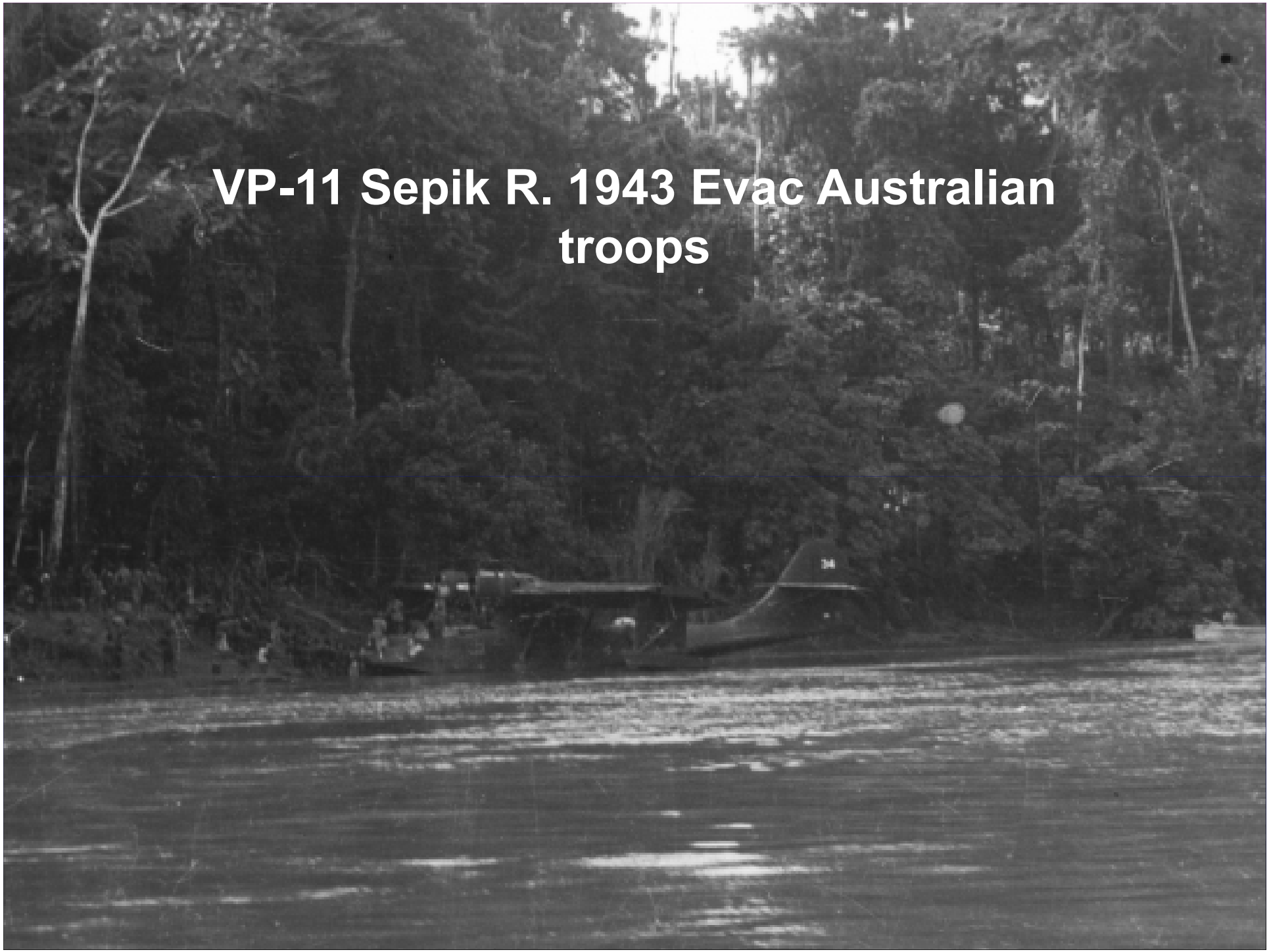





Primitive
radar gear


Antennas everywhere


JI·P·36



VP-11 Sepik R. 1943 Evac Australian troops

PBY – 5A

October 1941–January 1945
Retractable tricycle landing gear
Introduced tail gun position, replaced bow single gun position with bow "eyeball" turret equipped with twin .30 machine guns (some later units), improved armor, self-sealing fuel tanks.

Number Built 802

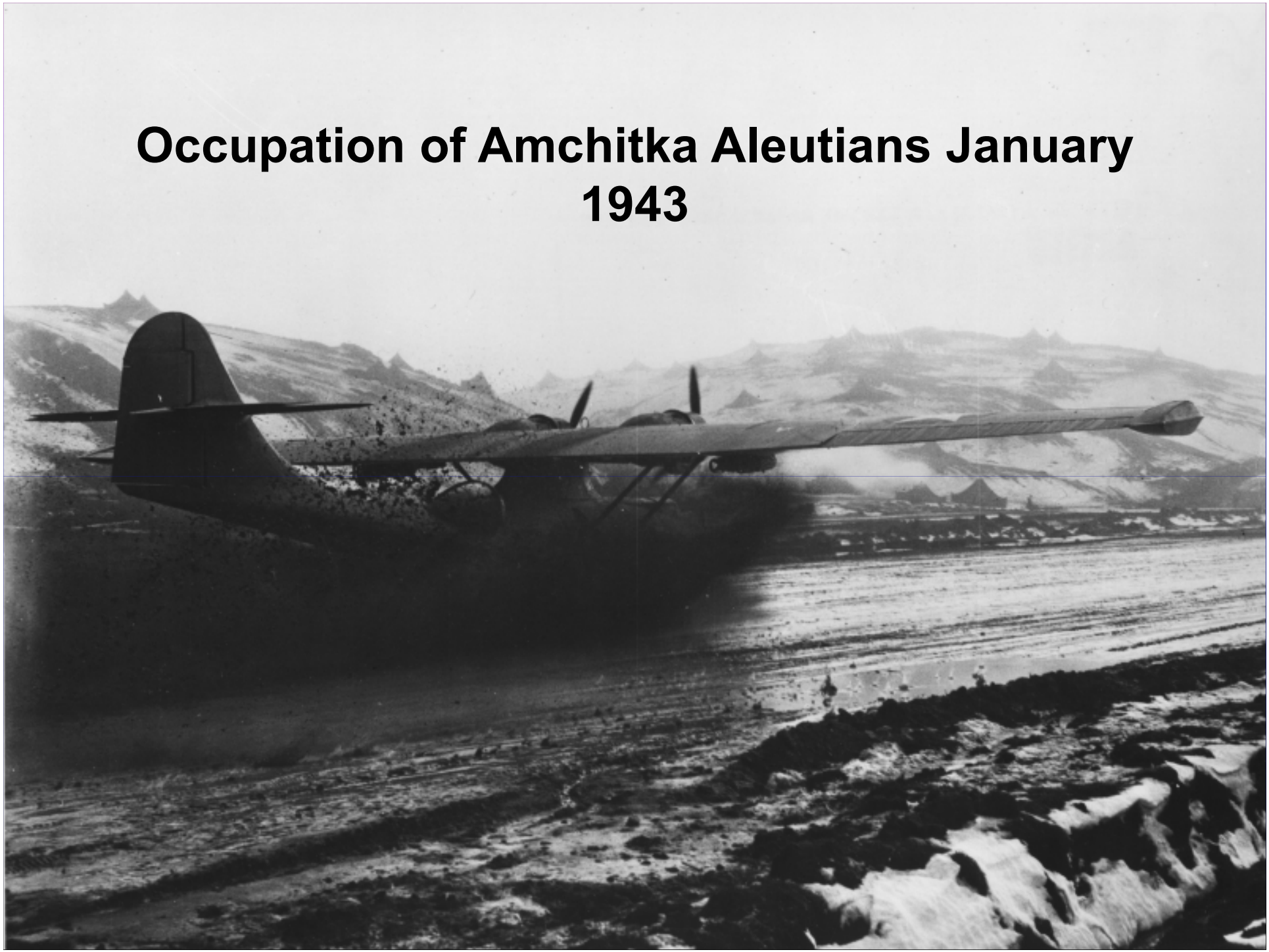
PBY-5A Catalina 1942





After sinking
U-164 1943

Occupation of Amchitka Aleutians January 1943





Aleutians in 1943


100



Disembarking German POWs 1943 Natal Brazil

Fleet Air Wing FOUR (FAW-4) in the Aleutian Islands . Four Mark 37 depth charges are on the wings





PBY-5A 1943



PBY-5A Catalina of Patrol Squadron VP-61 in the Aleutians in March 1943.

VJ-16 line NAS San Juan



VP-63 operated out of Port Lyautey in North Africa



PBY-5A from VP-44 1945



PBY – 6A

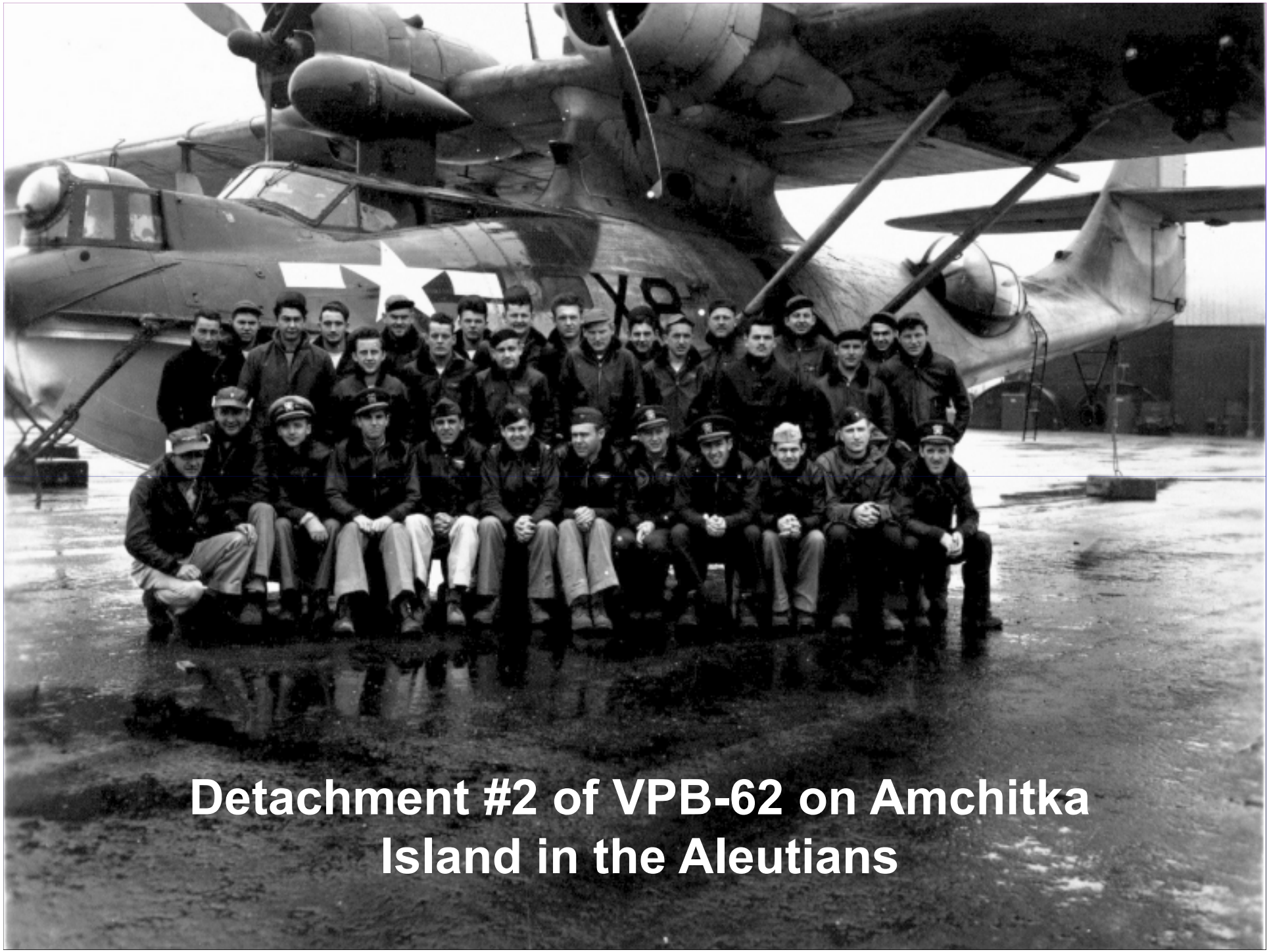
January 1945–May 1945

Incorporated changes which including a taller vertical tail, increased wing strength for greater carrying capacity, new electrical system, standardized "eyeball" turret, and a radome over cockpit for radar

Number Built 175



Consolidated New Orleans assembly line on 1944



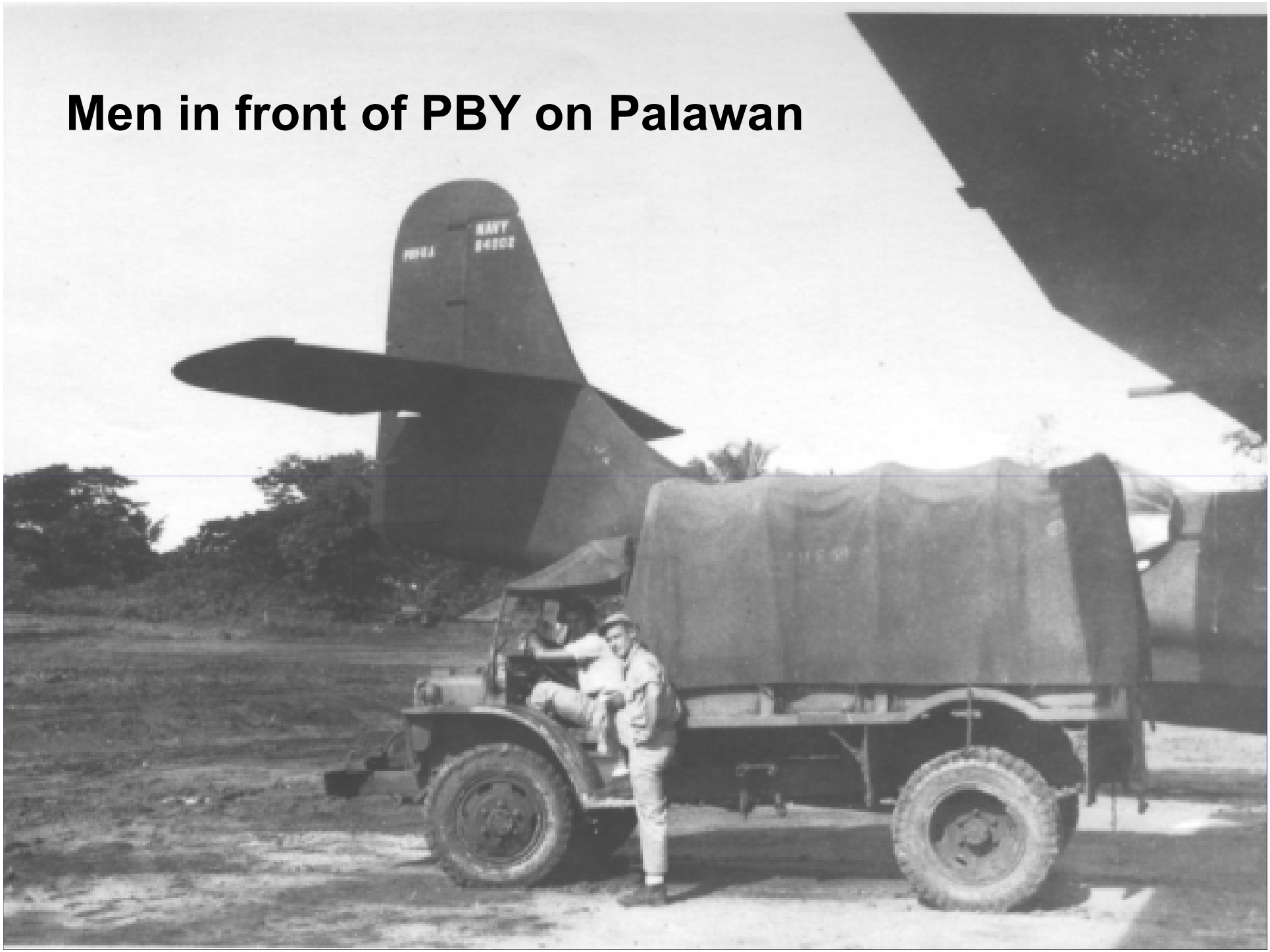
Detachment #2 of VPB-62 on Amchitka Island in the Aleutians



Amchitka Island in the Aleutians


B994

Men in front of PBY on Palawan





A Coastal Command Catalina located the German battleship Bismarck on 26 May 1941 while she tried to evade Royal Navy forces.



A RCAF Canso flown by Squadron Leader L.J. Birchall foiled Japanese plans to destroy the Royal Navy's Indian Ocean fleet on 4 April 1942 when it detected the Japanese carrier fleet approaching Ceylon (Sri Lanka).[



A flight of Catalinas spotted the Japanese fleet approaching Midway Island, beginning the Battle of Midway.






BLACK CATS

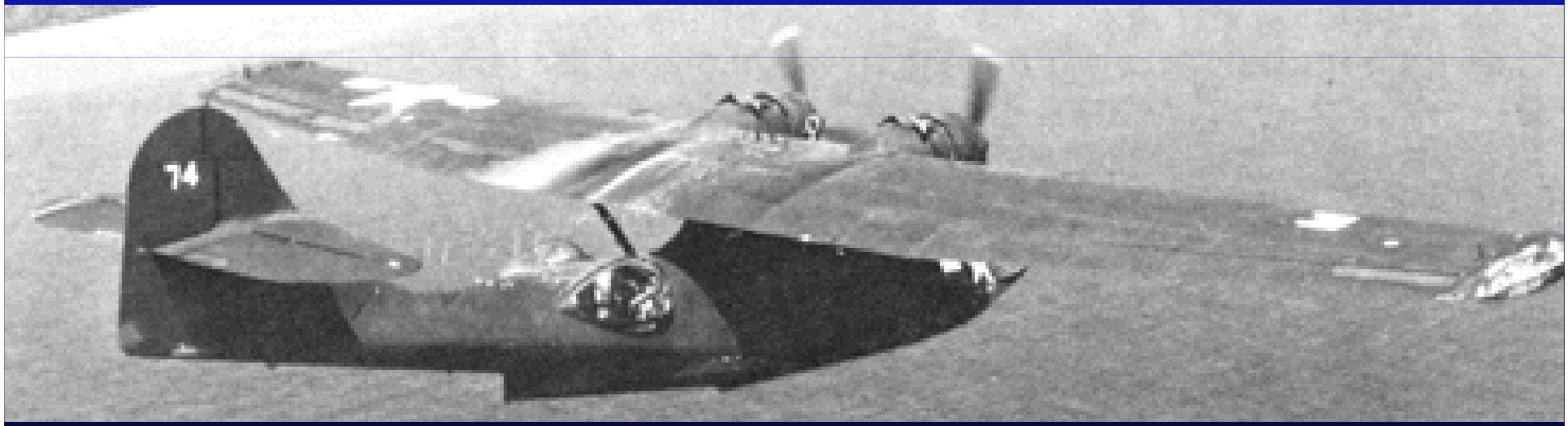


Several squadrons of PBY-5As and -6As in the Pacific theater were specially modified to operate as night convoy raiders. Outfitted with state-of-the-art magnetic anomaly detection gear and painted flat black, these "Black Cats" attacked Japanese supply convoys at night.

Catalinas were surprisingly successful in this highly unorthodox role. Between August 1943 and January 1944, Black Cat squadrons sank 112,700 tons of merchant shipping, damaged 47,000 tons, and damaged 10 Japanese warships.

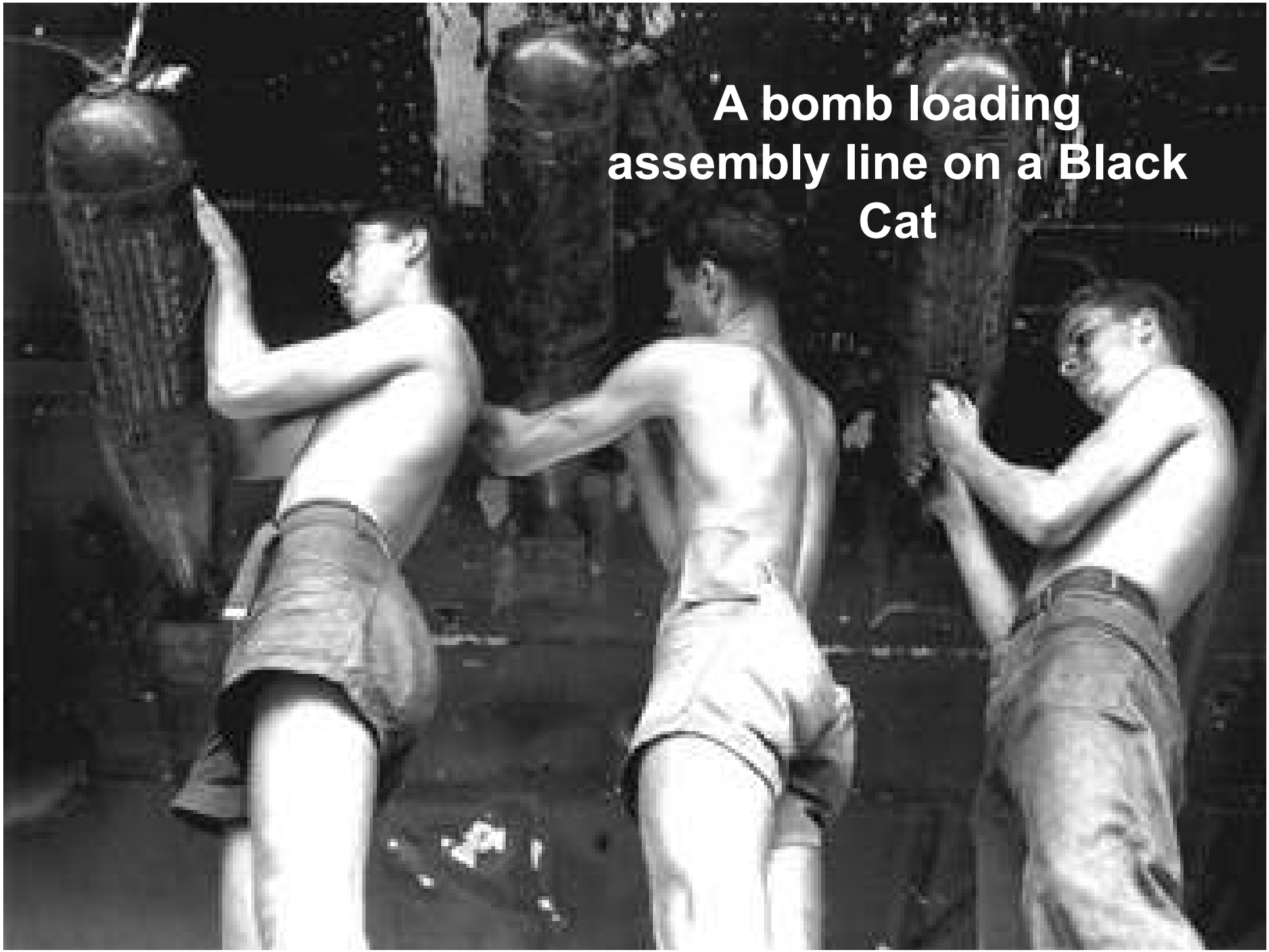


A Black Cat prowls the South Pacific waters off New Guinea





A Black Cat warms up its engines on a Caroline Island atoll 1945


A bomb loading assembly line on a Black Cat

A Cat is gassed up while being overhauled

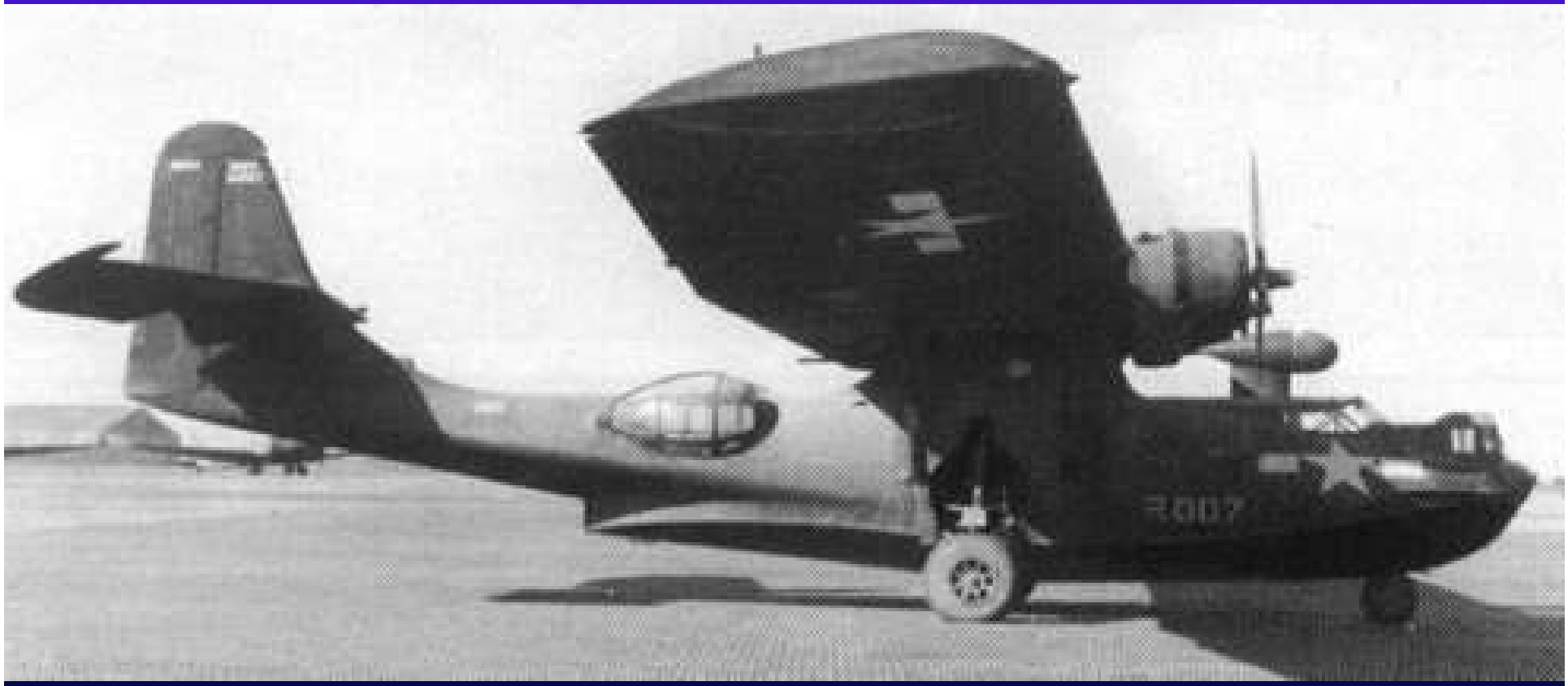


A crewman squats beneath the hood of his PBY's engine to work on it while it is run up

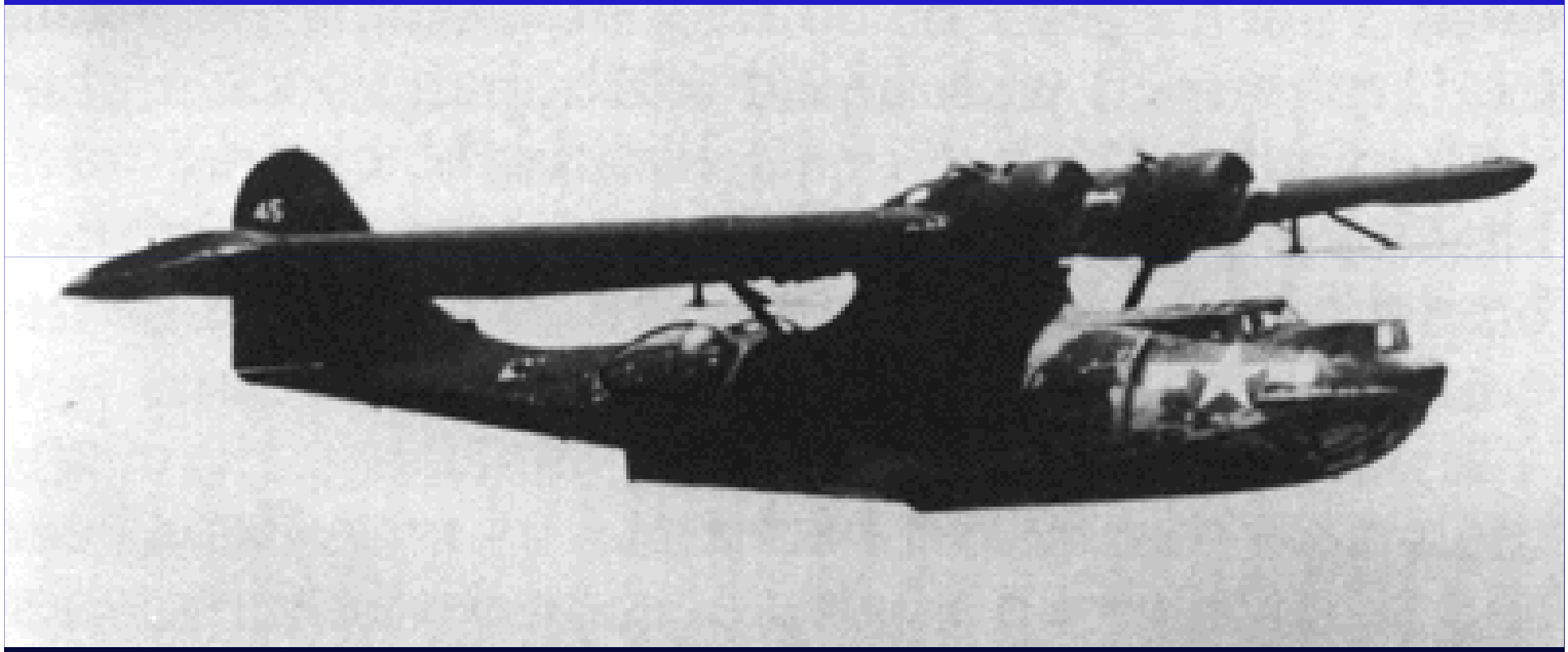
1944



A late war PBY6-A Black Cat at Lunghwa Airdrome Shanghai 1945



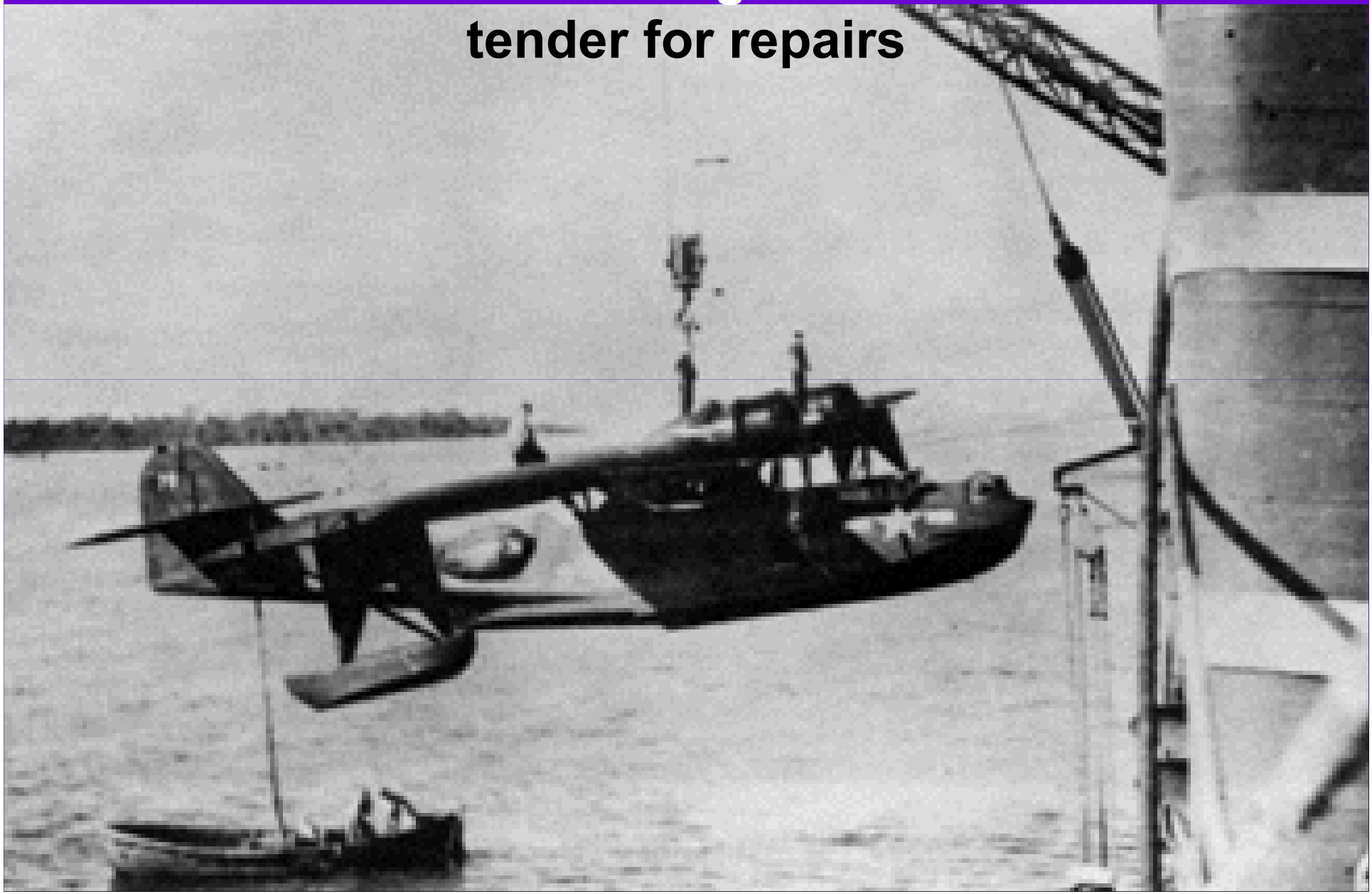
Typical beat-up Cat. Note the search radar under the wings





VP-11 Black Cat on the Sepik River New Guinea

A VP-33 Black Cat being hoisted aboard the tender for repairs





A VP-33 Cat makes its buoy

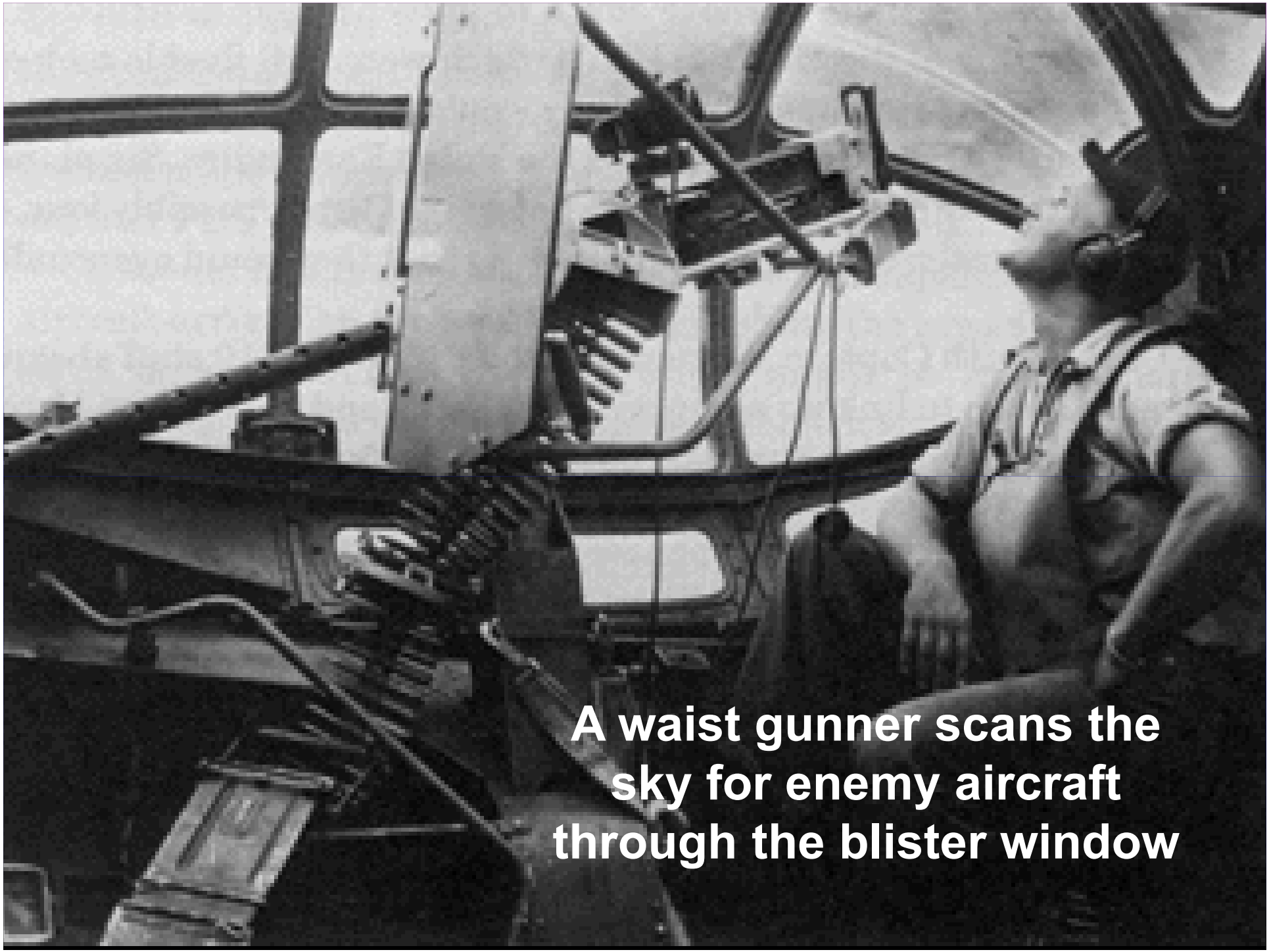
A VP-54 PBY-5A sits on Henderson Field on the island of Guadalcanal in 1943



Black Cat on the island of Guadalcanal 1943




A VP-91 Cat
refuels from the
tender



A waist gunner scans the sky for enemy aircraft through the blister window

An RAAF Black Cat flies over Bird Island

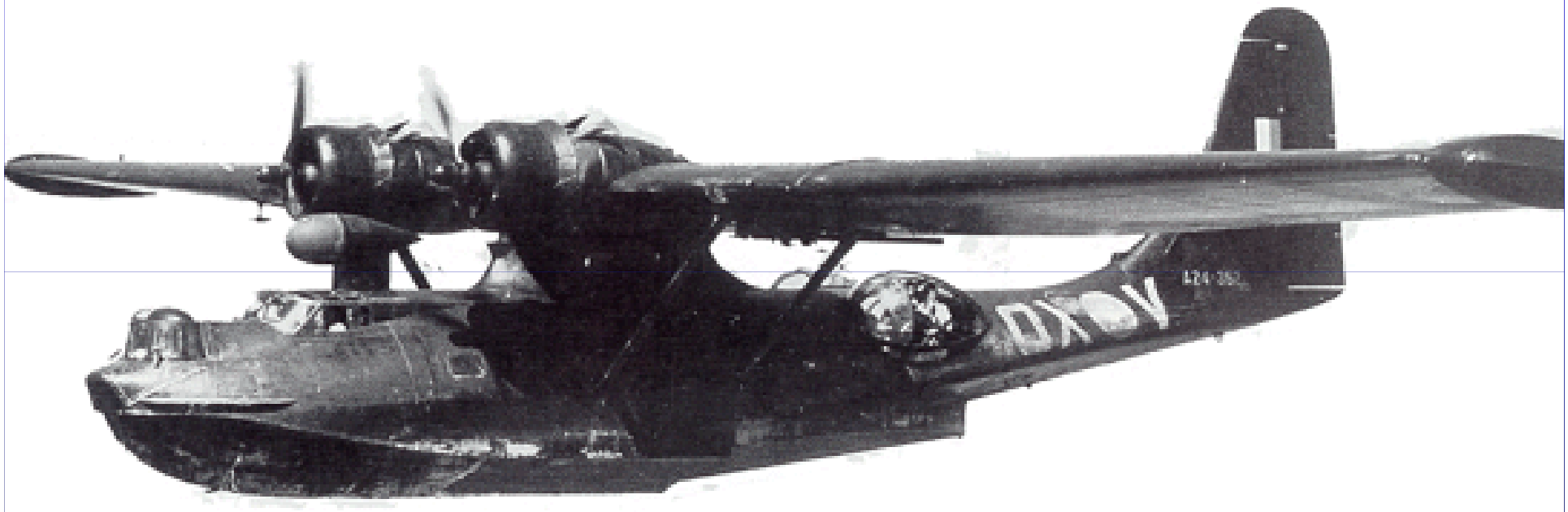


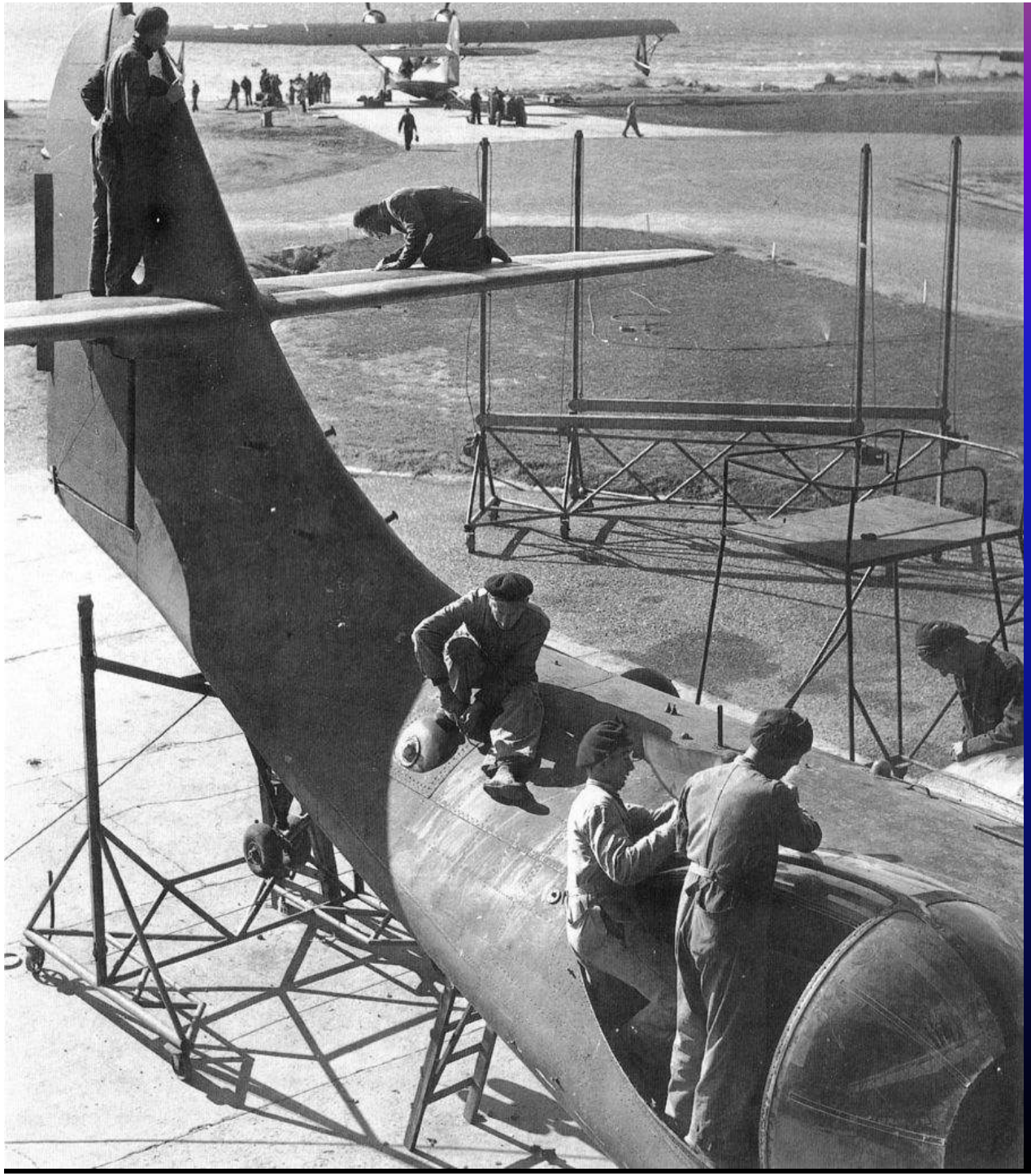
The Royal Australian Air Force (RAAF) also operated Catalinas as night raiders, with four squadrons Nos. 11, 20, 42, and 43 mounting mine-laying operations from 23 April 1943 until July 1945 in the southwest Pacific deep into Japanese-held waters, that bottled up ports and shipping routes and kept ships in the deeper waters to become targets for US submarines; they tied up the major strategic ports such as Balikpapan that shipped 80% of Japanese oil supplies.

In late 1944, their precision mining missions sometimes exceeded 20 hours in duration and were carried out from as low as 200 feet in the hours of darkness. Operations included the bottling up the Japanese fleet in Manila Bay planned to assist General MacArthur's landing at Mindoro in the Philippines. Australian Catalinas also operated out of Jinamoc in Leyte Gulf, and mined ports on the Chinese coast from Hong Kong as far north as Wenchow. They were the only non-American bomber squadrons operating north of Morotai in 1945.

The RAAF Catalinas regularly mounted nuisance night bombing raids on Japanese bases, earning the informal title "The First and the Furthest". Targets of these raids included the major base at Rabaul. RAAF aircrews, like their US Navy counterparts, employed 'terror bombs', ranging from mere machine gunned scrap metal and rocks to empty beer bottles with razor blades inserted into the necks, to produce high pitched screams as they fell, keeping Japanese soldiers awake and scrambling for cover.

Black Cat of No. 43 Squadron Royal Australian Air Force





Catalina maintenance at RAAF Lake Boga

RAAF Black Cat takes off Australia



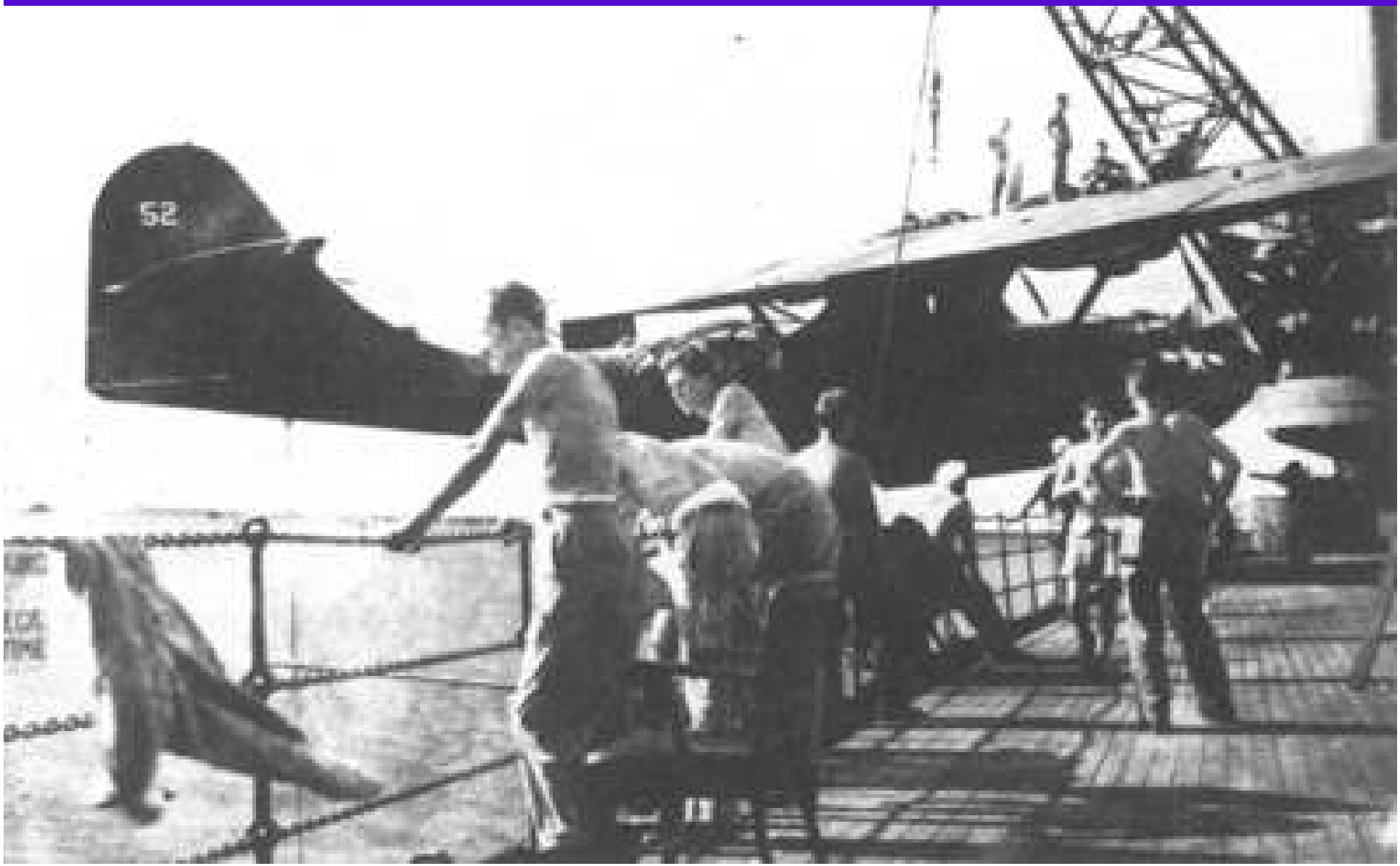
RAAF No. 64 Squadron



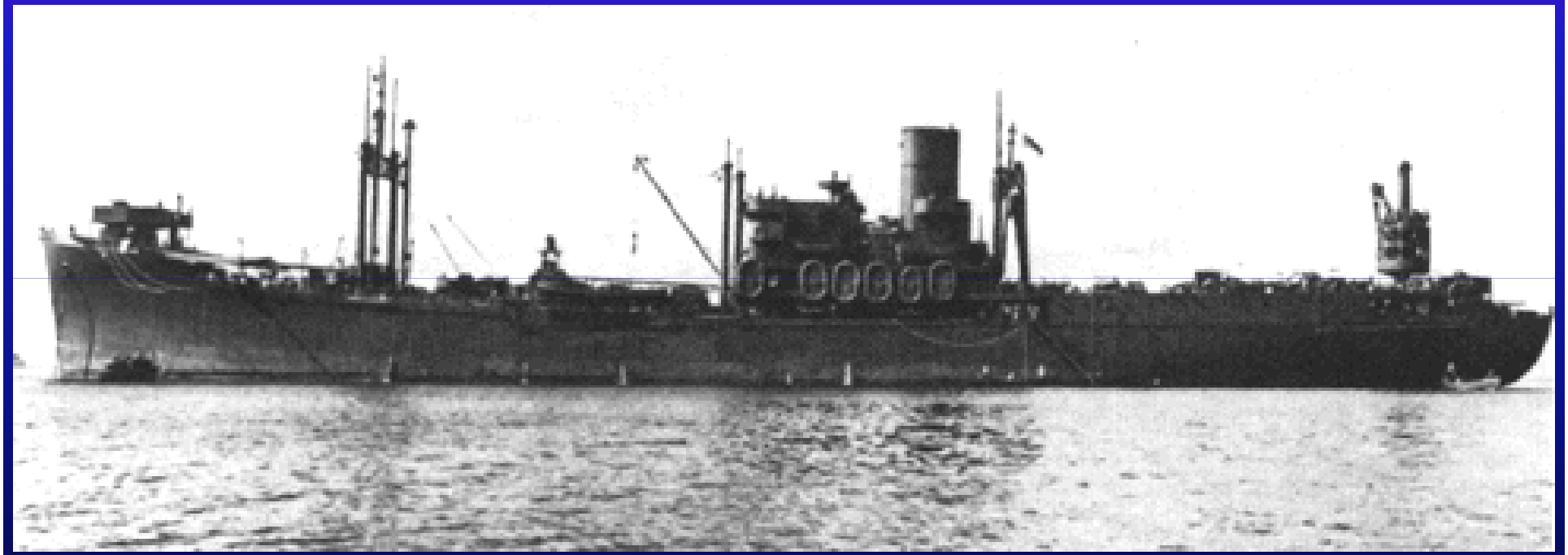


Royal Australian Air Force Black Cat lumbers up the ramp

Battle-damaged PBY being hoisted up on board the U.S.S. Tangier



Seaplane Tender U.S.S. Tangier



Black Cat base of VP-50 at Los Negros



Black Cat crew (VP-33)



Black Cat is seen with four .50-caliber machine guns in the nose

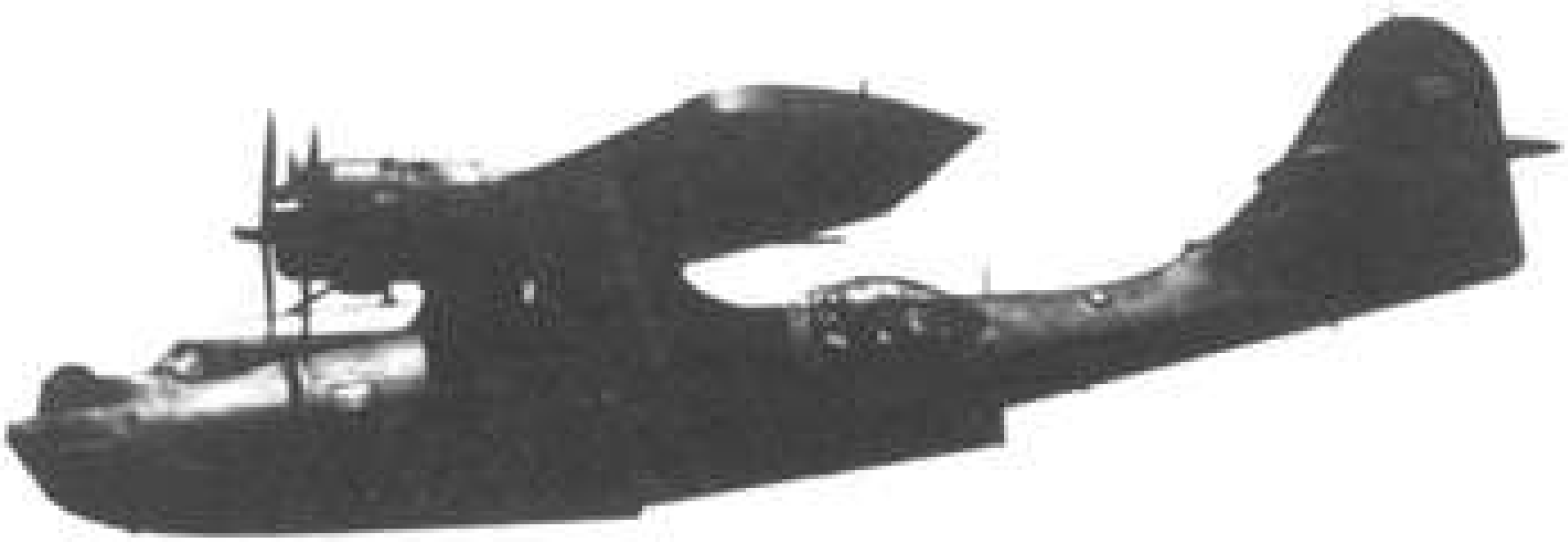



Black Cat navigator reports the aircraft's progress to the plane commander

Black Cat near Samarai Island on December 23 1943



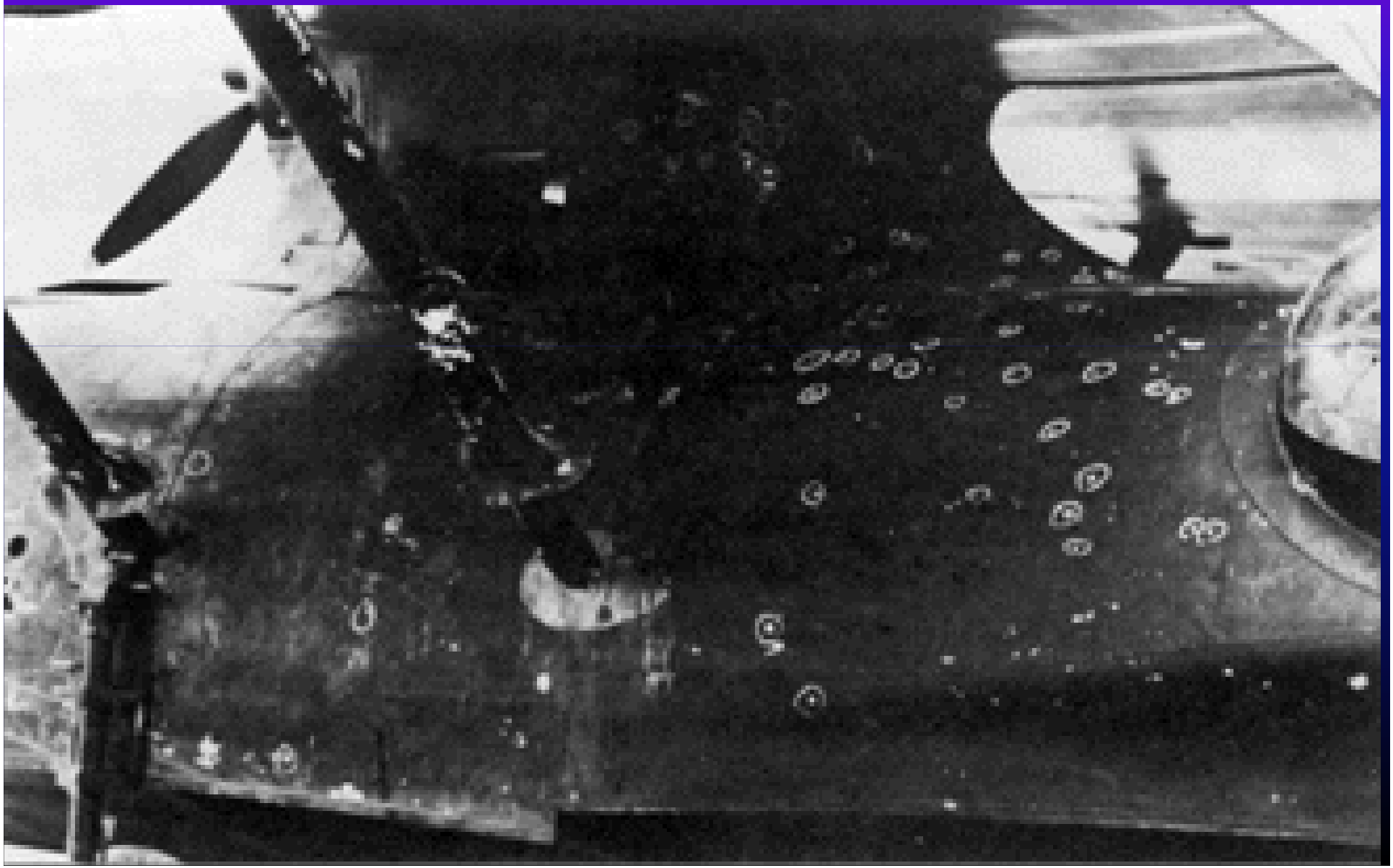
Black Cat on patrol



Black Cats outbound

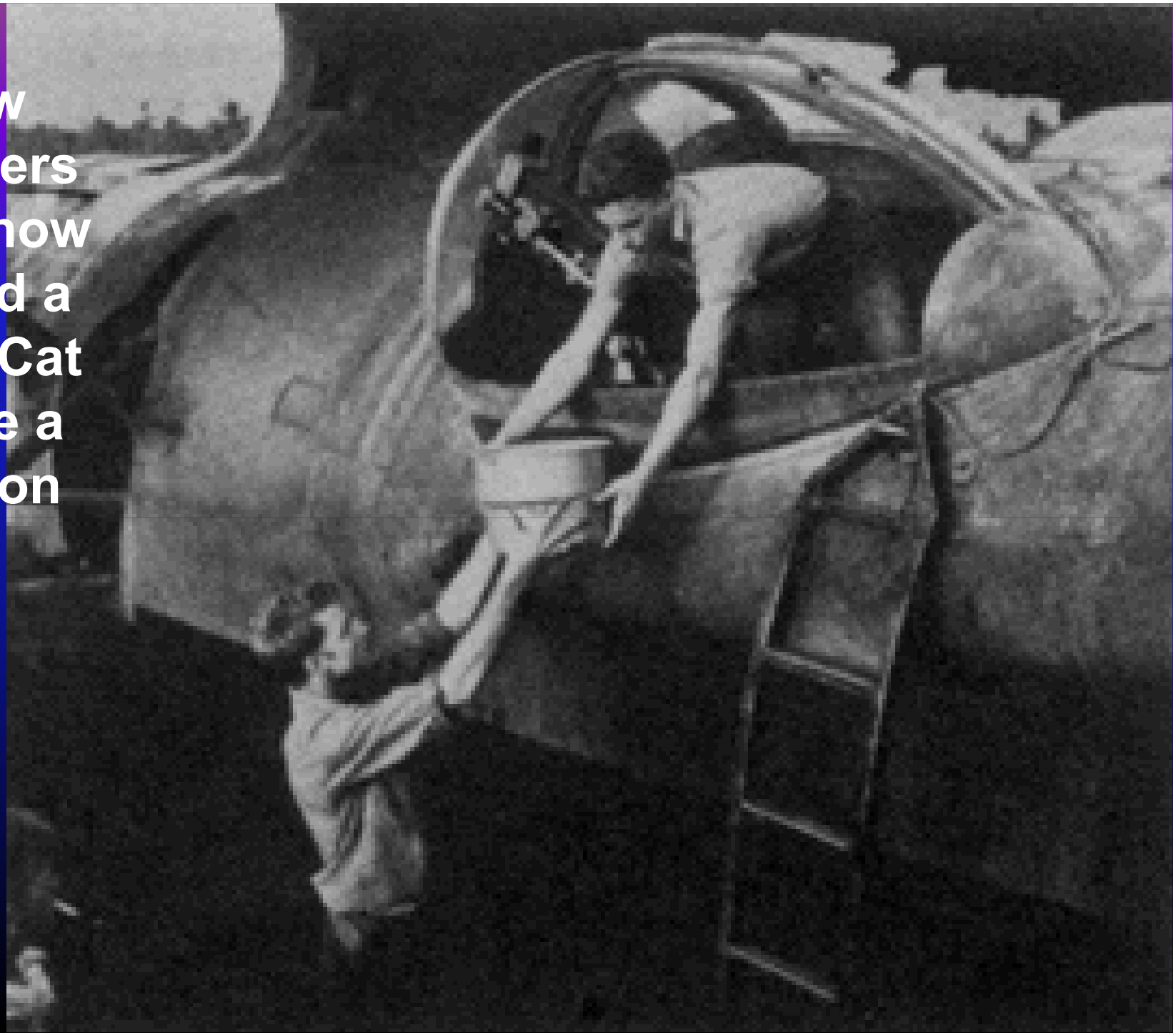


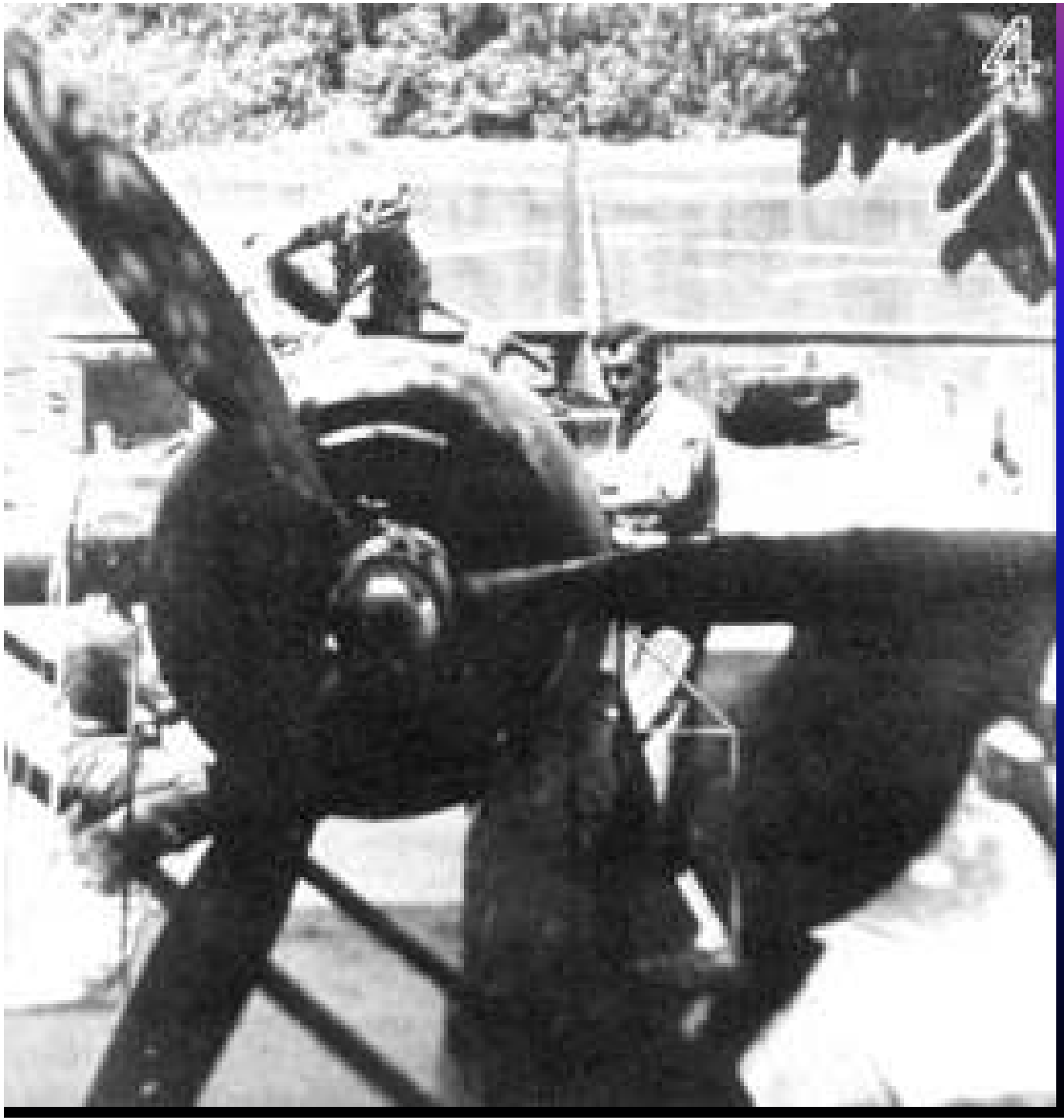
Bullet holes have been circled in white





Crew members load chow aboard a Black Cat before a mission





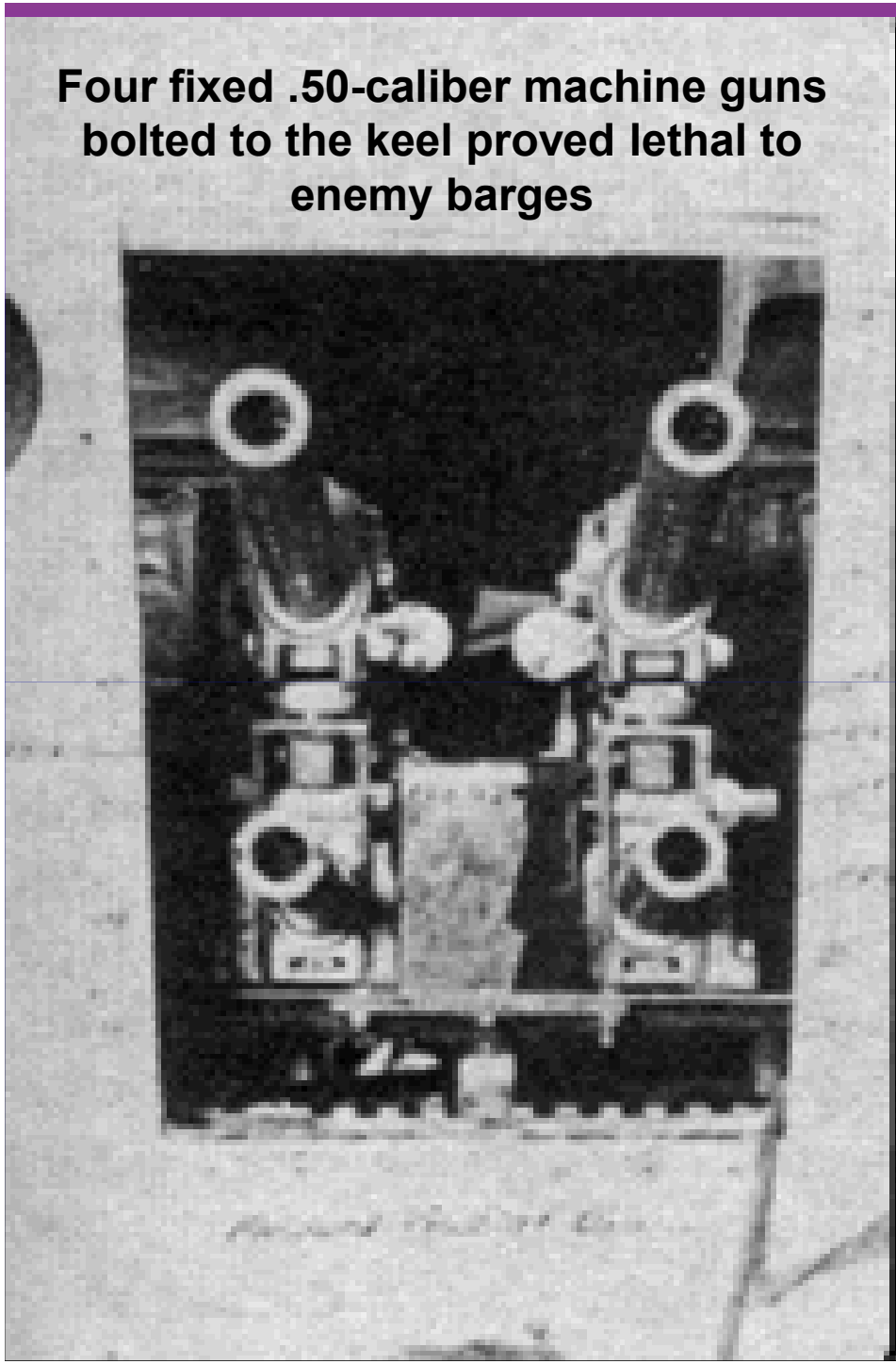
During the Sepik River operation

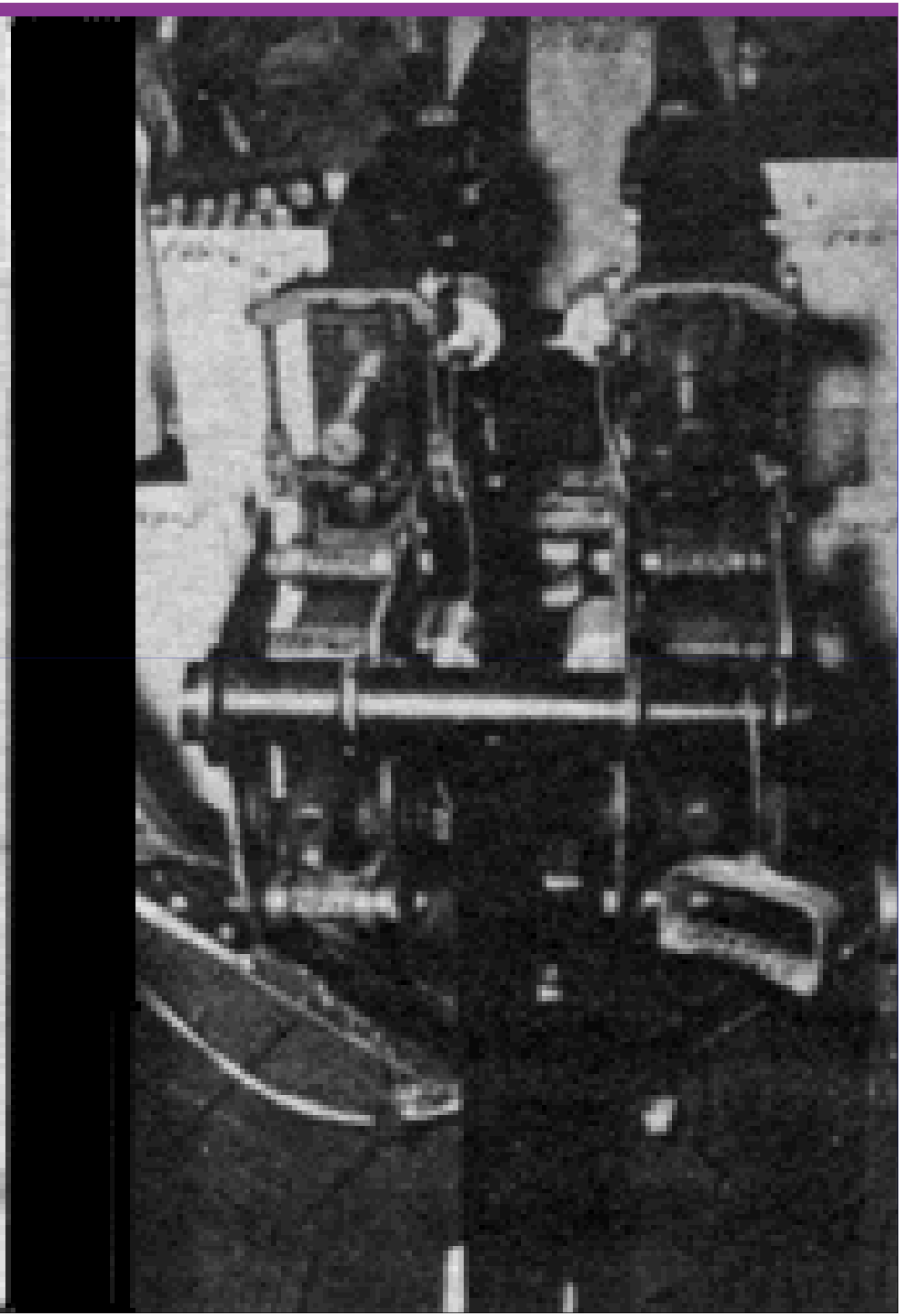


Engine maintenance was routinely performed with the craft moored to a buoy


Fixed 20mm cannons mounted in the bow

Four fixed .50-caliber machine guns bolted to the keel proved lethal to enemy barges






from the
starboard
blister of a
PBY



Gunner in his blister window 1944

In New Guinea in late 1943



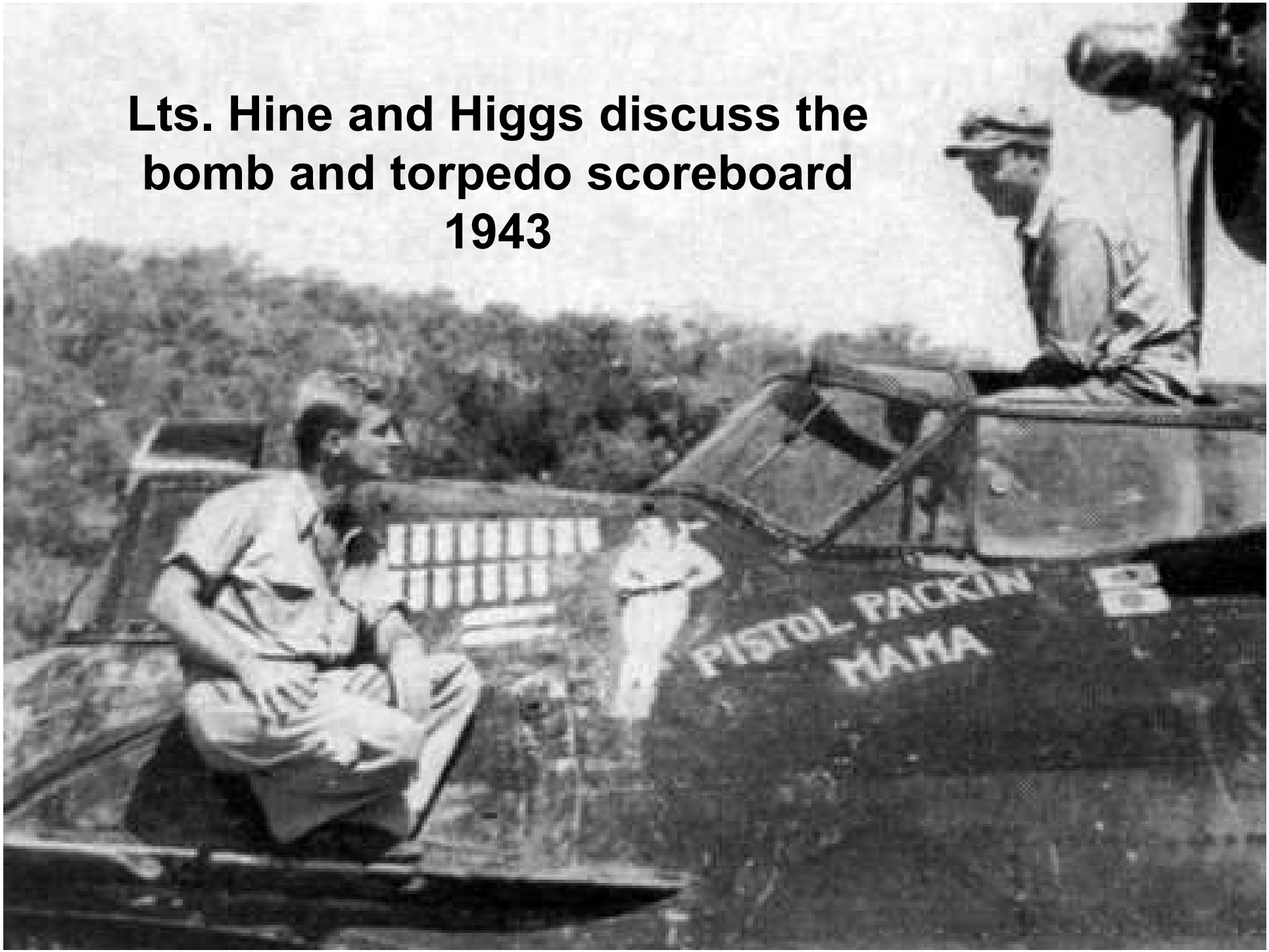

Late PBY-5As were
preequipped with the
twin .30 caliber
eyeball bow turret

Lieutenant Commander Flip Anderson got two destroyer escorts at Zamboanga

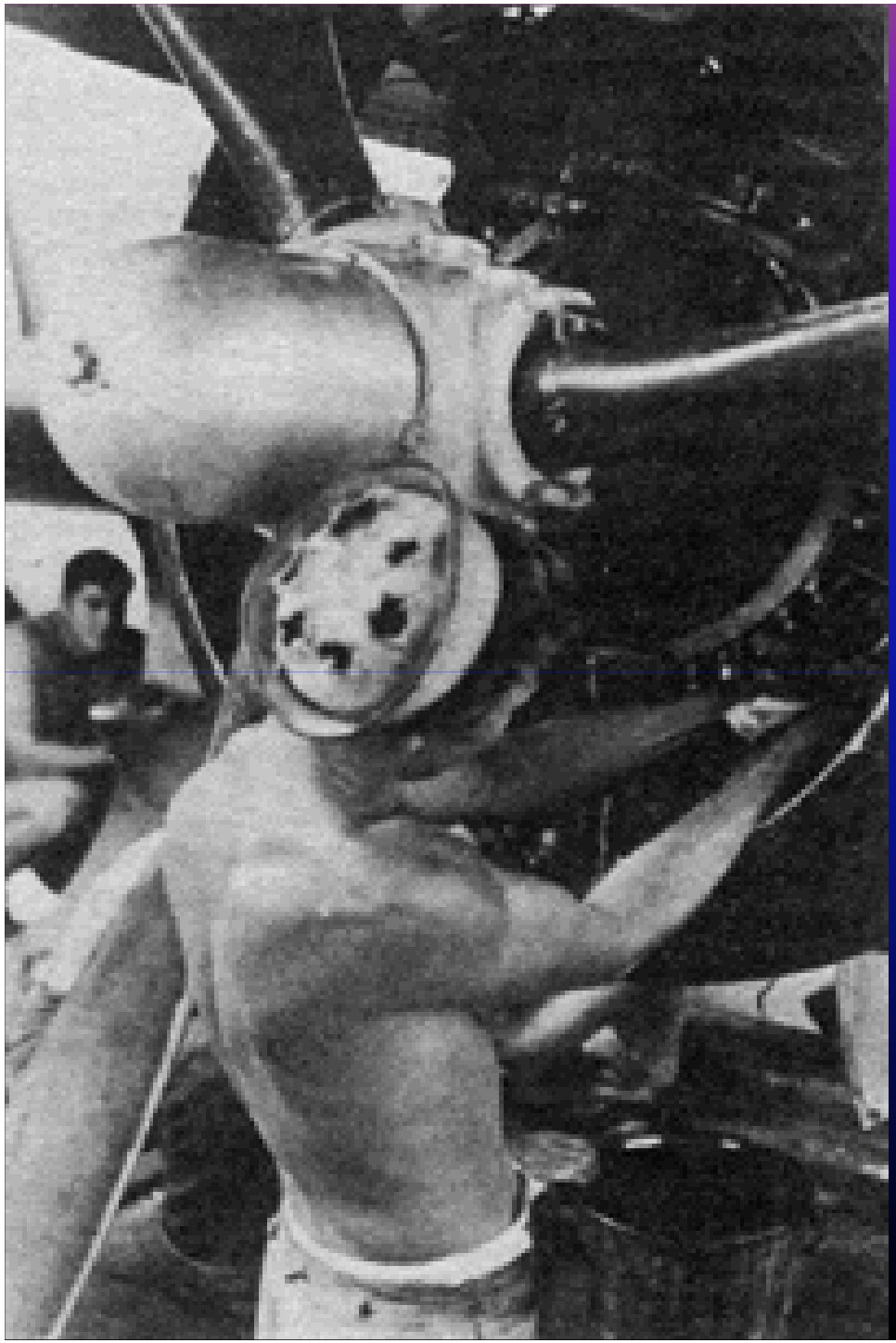


Location of the wing bomb mounts

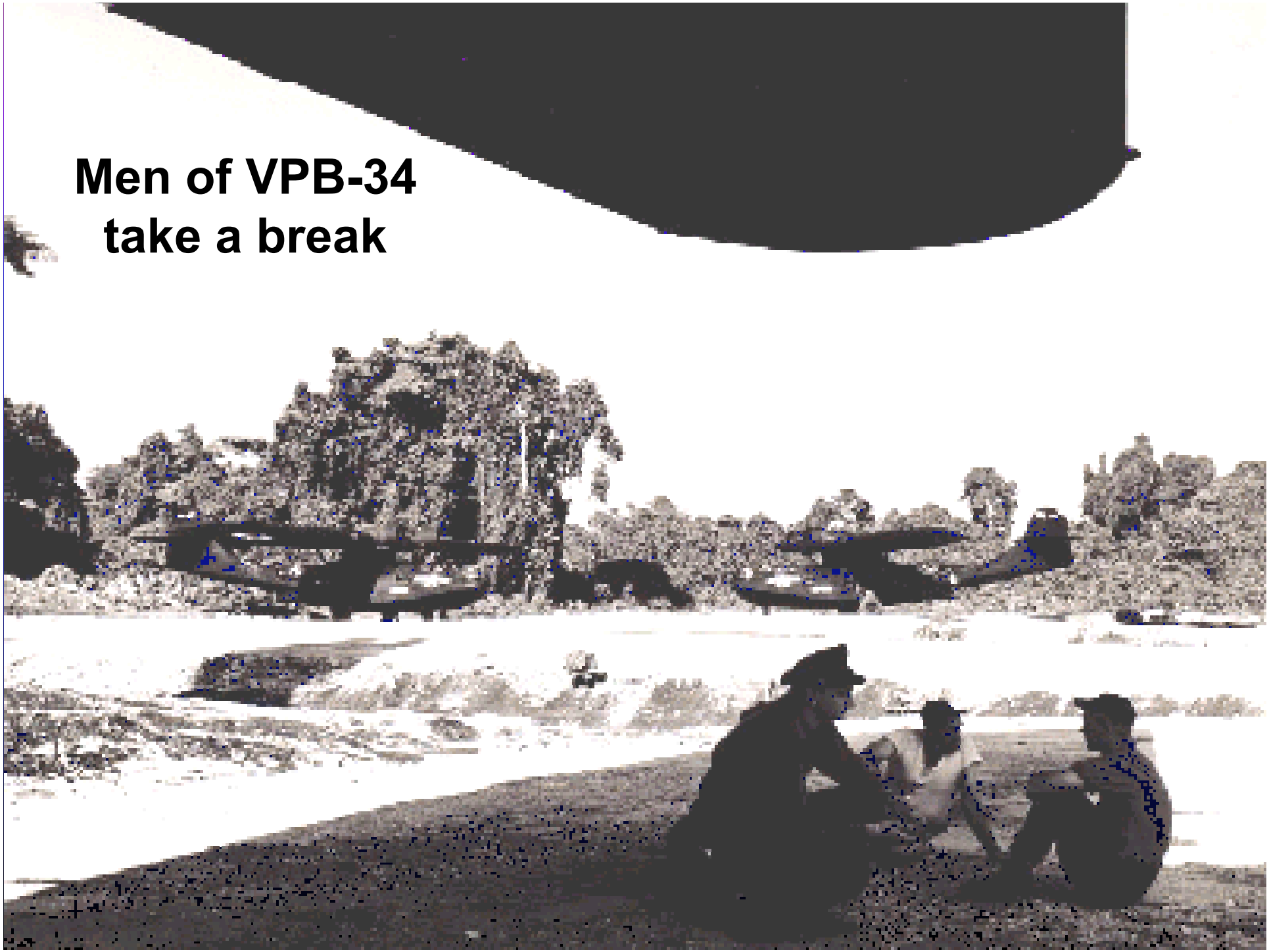




Lts. Hine and Higgs discuss the bomb and torpedo scoreboard 1943



Mechanics labored through the scorching heat of the day


Men of VPB-34
take a break

Morning muster for a Black Cat squadron





Open-sea landings were hazardous under the best conditions



PBY Black Cat crew Patrol Squadron 11



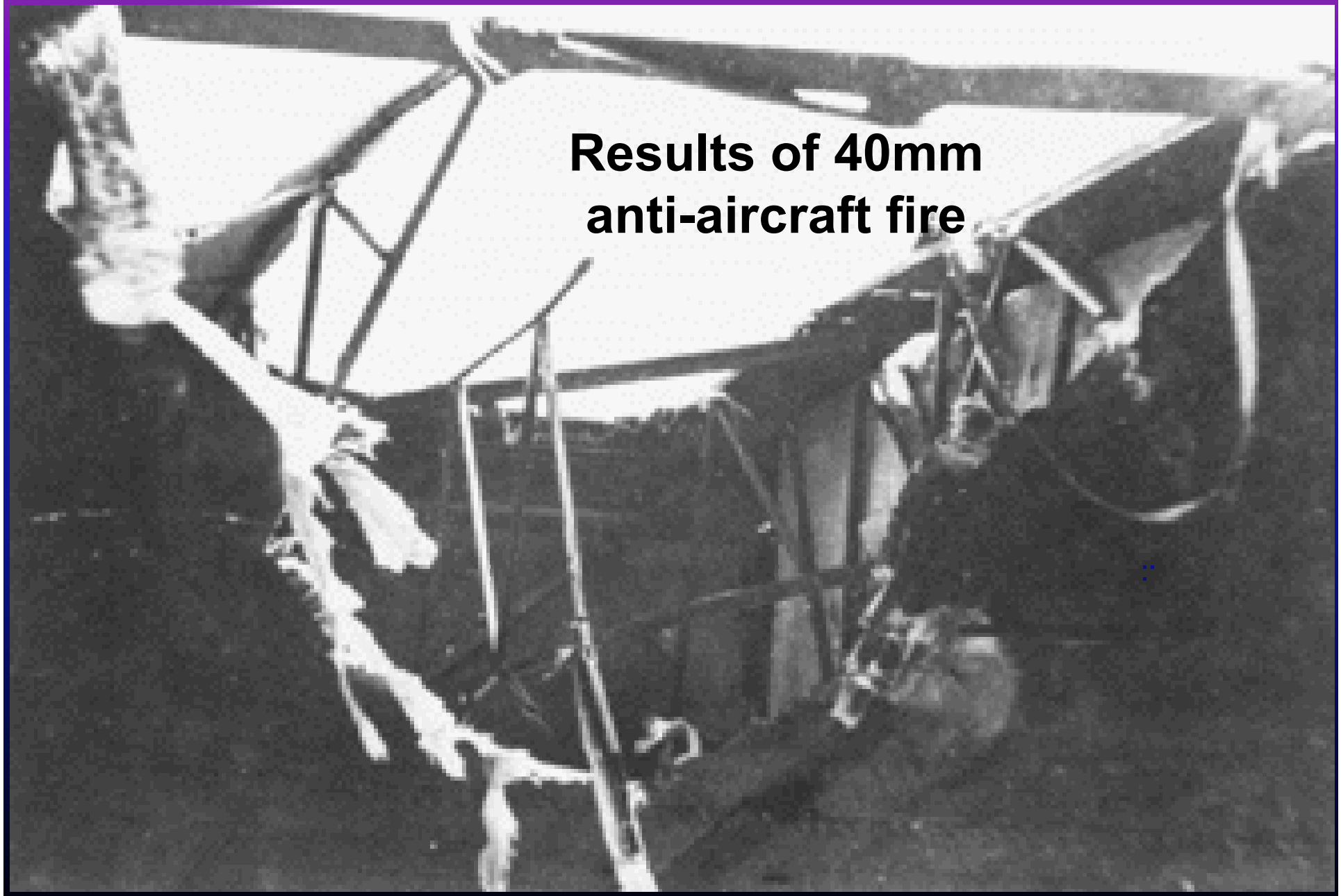
PBY of the Fly-by-Night squadron taking off




Picking up downed
aviators

Rare color photo of a Black Cat on the island of Guam in April 1945




Results of 40mm
anti-aircraft fire

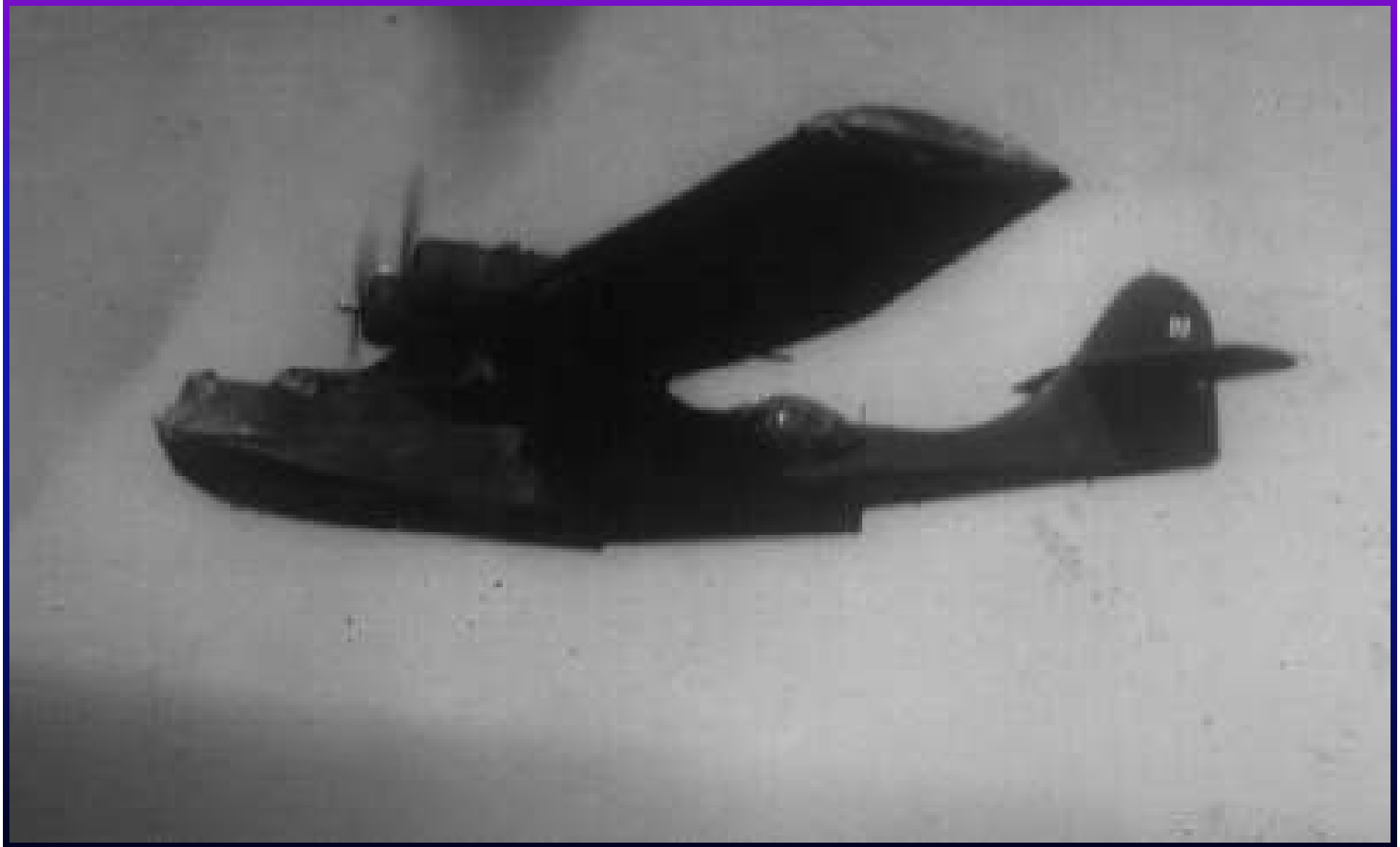






View of VP-54 Black Cat B64





VP-23 Black Cat is viewed from another PBY



VP-23 crew member checks the gun inside his blister window




VP-44 Black Cat
delivers
supplies to
coastwatchers





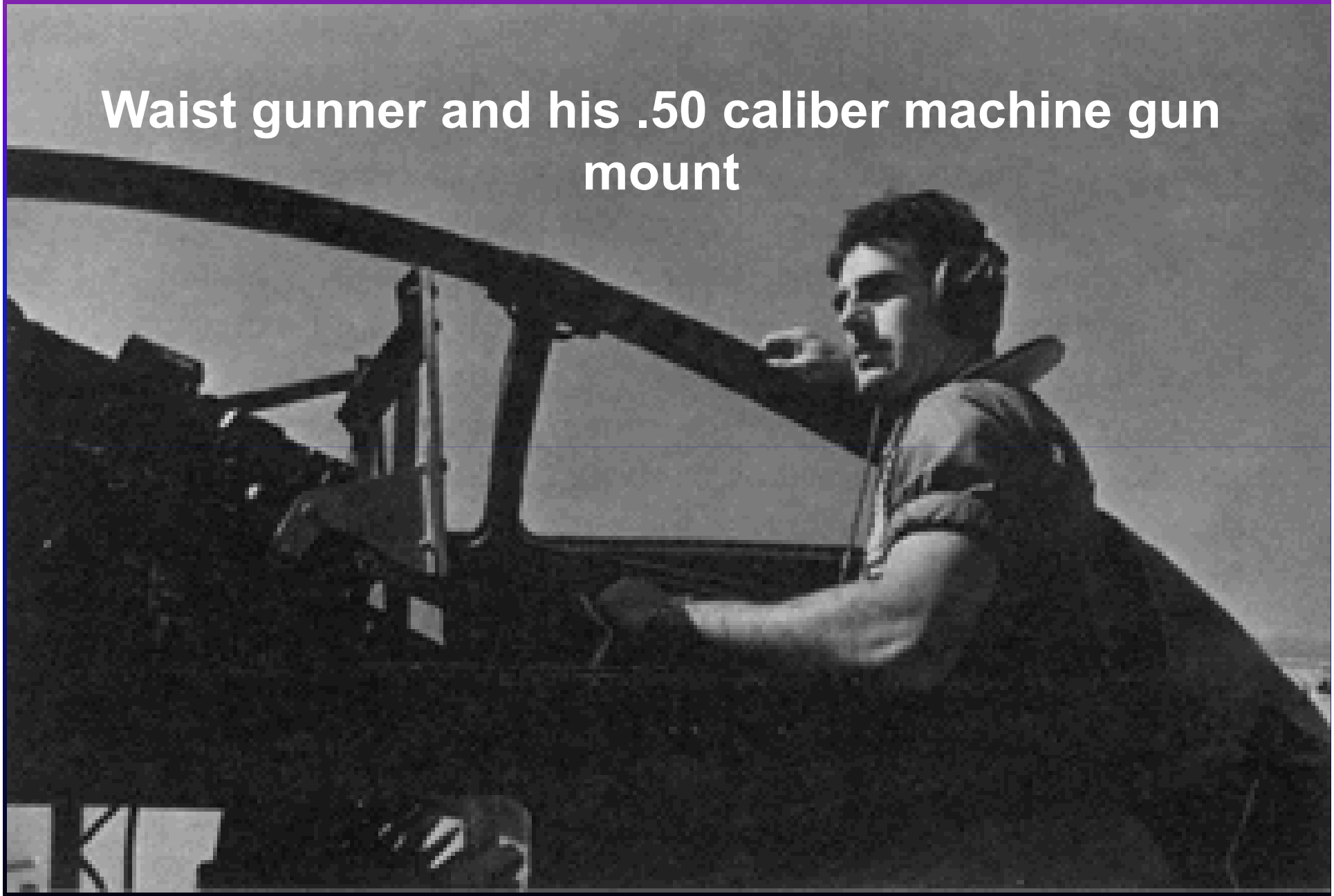
VP-54 Squadron Photo



VPB-71 Black Eagle crew.

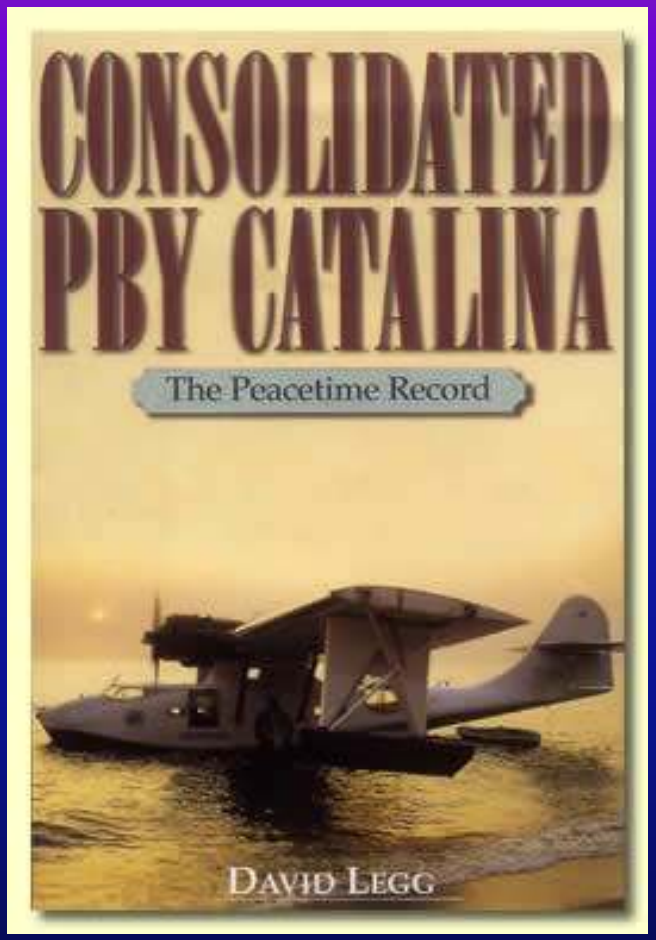

Black
Eagle

Waist gunner and his .50 caliber machine gun mount



Wing floats down and coming in





The last active military PBYs were not retired from service until the 1980s. Even today, over 70 years after its first flight, the aircraft continues to fly as an airtanker in aerial firefighting operations all over the world.

Here are some examples of how they have been utilized







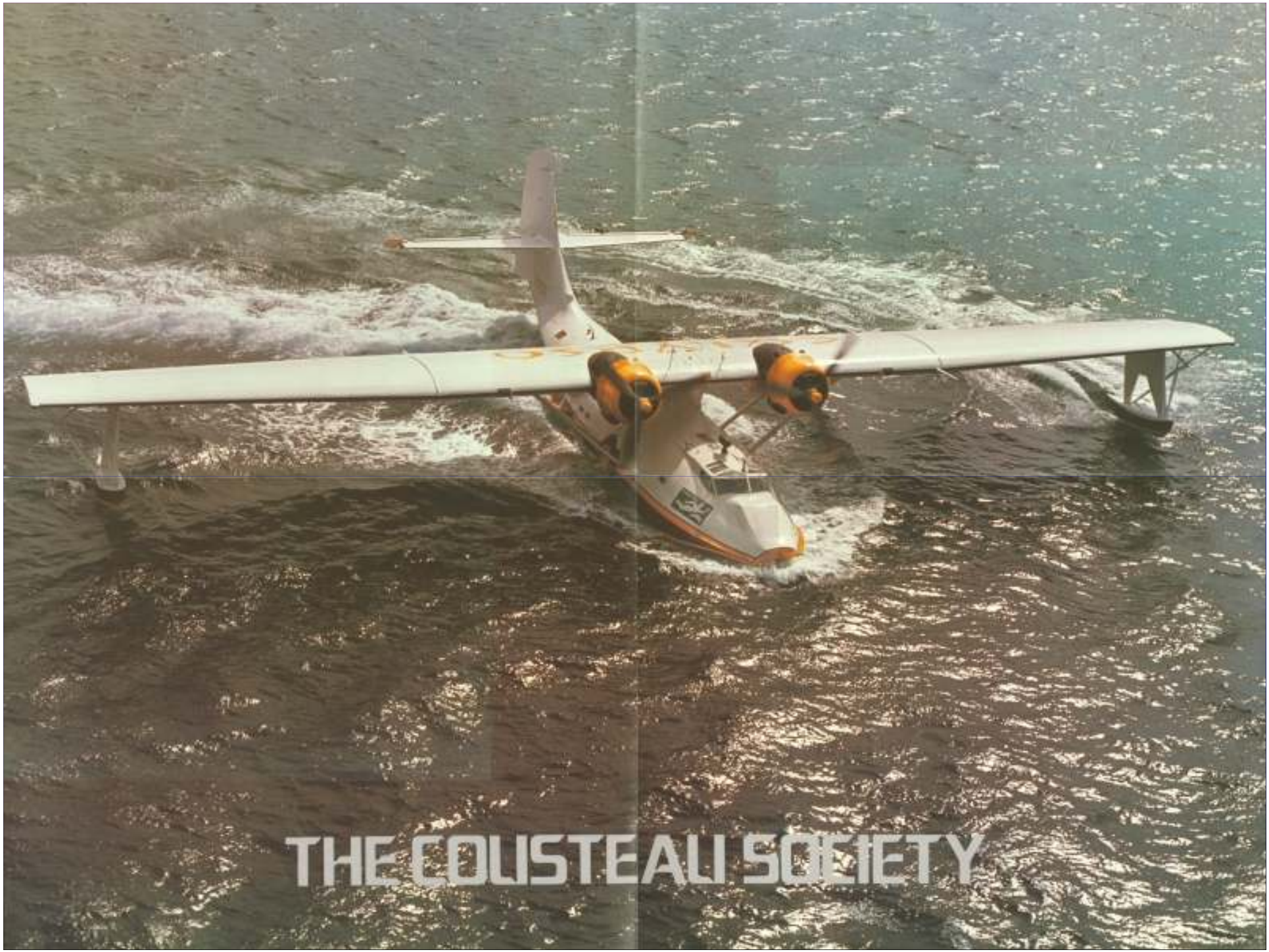


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Printing: Dai Nippon, Japan


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