

MASSIVE PIECES OF STEEL:

The Japanese Guns of Kiska and Little Kiska islands



SPIRIT-LADEN BULLETS

“[The Japanese anti-aircraft crews] stared at the enemy planes as they pointed the guns.... The closer the enemy planes come, the calmer [the men] become. As soon as the order ‘fire!’ is given, the bullets, intended to find the target without fail, spit through fierce flames, and the bullets travel through the atmosphere with the spirit of our brave soldiers in them.”

Yunosuke Osawa, Japanese Naval Correspondent
(U.S. Alaska Air Defense 1943:77)

“In general, although its total firepower would have been formidable, Kiska ordnance was badly worn, and some of the heavier types were fairly old. Ranges of coastal defense guns were short and no match for the attacking forces of the United States Navy.”

(U.S. Alaska Defense Command 1943:17)

“I saw the three [Japanese] 6” coastal defense guns at Little Kiska, which are massive pieces of steel..”

(Charles Mobley 1996: 87)

MASSIVE PIECES OF STEEL

A Preliminary Report to Assist Field Investigators
in the Condition Assessment
of the Japanese Guns on Kiska and Little Kiska islands

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1943 KISKA GUN INVENTORY
AS COMPILED BY THE U.S. ALASKA DEFENSE COMMAND

Naval Coast Defense Guns (CD)

Six 6" Naval Coast Defense Guns
Four 4.7" Naval Coast Defense Guns
Four 76 mm Naval Coast Defense Guns
Two 75 mm Naval Coast Defense Guns

Antiaircraft (AA)

Four 120 mm Naval Dual Purpose Antiaircraft Guns
Twenty-two 75 mm Dual Purpose Antiaircraft Guns
Ten 25 mm Model 96 (1936) Type 2 Dual Mount Antiaircraft-Antitank Guns
Eleven Model 98 (1938) 20 mm Antiaircraft Antitank Automatic Guns
Four 20 mm Aircraft Oerlikon Machine Guns (removed from damaged Japanese fighter aircraft)

Artillery

Nine 75 mm Model 41 (1908) Mountain Guns (Regimental Guns)
Two 70 mm Model 92 Battalion Howitzers
Nine Model 94 (1934) 37 mm Mountain Guns

1943 GEOGRAPHIC BREAKDOWN AS DETERMINED BY THE U.S. ALASKA DEFENSE COMMAND

North Head (See Map 1)

Three 6" Naval Coast Defense Guns
Four 4.7" Naval Coast Defense Guns
Four 120 mm Naval Dual Purpose Antiaircraft Guns
Four 75 mm Dual Purpose Antiaircraft Guns
Two 25 mm Model 96 (1936) Type 2 Dual Mount Antiaircraft-Antitank Guns
Two Model 98 (1938) 20 mm Antiaircraft Antitank Automatic Guns
Two 75 mm Model 41 (1908) Mountain Guns (Regimental Guns)
One wooden dummy or drill gun

Main Camp (See Map 2)

Two 76 mm Naval Coast Defense Guns
Four 75 mm Dual Purpose Antiaircraft Guns
Eight 25 mm Model 96 (1936) Type 2 Dual Mount Antiaircraft-Antitank Guns
Two Model 94 (1934) 37 mm Mountain Guns

Sub Base (See Map 3)

Two 76 mm Naval Coast Defense Guns

South Head (See Map 4)

Four 75 mm Dual Purpose Antiaircraft Guns
Four 20 mm Aircraft Oerlikon Machine Guns (removed from damaged Japanese fighter aircraft)
One wooden dummy or drill gun

Gertrude Cove (See Map 5)

Two 75 mm Naval Coast Defense Guns

Six 75 mm Dual Purpose Antiaircraft Guns

Six Model 98 (1938) 20 mm Antiaircraft Antitank Automatic Guns

Two 75 mm Model 41 (1908) Mountain Guns (Regimental Guns) (includes Ethel Cove)

Three Model 94 (1934) 37 mm Mountain Guns (includes Jeff and Ethel Coves)

Little Kiska (See Map 6)

Three 6" Naval Coast Defense Guns

Four 20 mm Aircraft Oerlikon Machine Guns (positions and ammunition only)

Four 75 mm Model 41 (1908) Mountain Guns (Regimental Guns)

One Model 94 (1934) 37 mm Mountain Gun

North Central Kiska (This area is not addressed in this paper.)

Four 75 mm Dual Purpose Antiaircraft Guns

Three Model 98 (1938) 20 mm Antiaircraft Antitank Automatic Guns

Two Model 94 (1934) 37 mm Mountain Guns

Beach and Bluff Coves (This area not addressed in this paper.)

One 75 mm Model 41 (1908) Mountain Gun (Regimental Gun)

One Model 94 (1934) 37 mm Mountain Gun

Vega Bay Shore (This area not addressed in this paper.)

Two 70 mm Model 92 Battalion Howitzers (Link Hill)

A BRIEF GLOSSARY

breech: the rear end of a gun barrel. In a modern, breech-loading gun, the projectile/charge is loaded into the breech opening. This is in contrast to an antiquated muzzle-loading gun in which the projectile/charge is loaded into the muzzle, or front of the weapon. In muzzle-loading guns, the breech is sealed closed.

breech block: the mechanism in a breech-loading gun that closes the breech opening prior to firing

bore: the inside diameter of a gun barrel usually measured in inches or millimeters)

caliber: the diameter of the bore of a gun measured either in inches/millimeters or weight of its projectile (the latter denoted in pounds)

elevation: degrees above horizontal a gun barrel may be raised

fixed ammunition: bullet, propellant, primer, and cartridge case in a single unit

interrupted screw breech block: a screw-type breech block in which sections of the threaded block have been removed. The threads are not continuous round the axis (as say, those seen on the threaded base of a light bulb), but “interrupted.” The design allows the screw to be inserted directly into the breech end of the gun barrel and tightened in only 1/4 or 1/6 of a turn.

muzzle: the front end of a gun barrel

revetment: an embankment or wall of earth or sandbags raised around a gun emplacement to protect against strafing and shell fragments

semi-fixed ammunition: bullet and propellant are two separate units, the latter usually contained in a bag

transverse: rotation in degrees of a gun along the horizontal plane

The author wishes to acknowledge the technical assistance of Robert H. Spring, Capt. (Ret'd), Royal Canadian Artillery (M). Mr. Spring graciously gave of his time and expertise during the research of this paper. Thank you for deciphering the language of guns.

Of course, the author is responsible for all errors.



A Japanese 6" gun on Kiska or Little Kiska Island [exact location unknown]. Photograph in *The Forgotten War* (Cohen 1984), no caption. (Image courtesy Thomas Boardman, Boise, Idaho)

6" Naval Coast Defense Gun:

Characteristics:

Type: Navy

Bore: 6"

Barrel (length): 20' overall; 12' from shield to muzzle

Transverse: 360 degrees

Elevation: 30 degrees

Breech: Interrupted screw

Weight: 4,784 lbs

Shield: 1-1/4" plate on sides; 4" plate on front; 2-1/2" plate on top

Revetment: 26' inside diameter

Ammunition: Semi-fixed-powder charge of one increment. (Separate primers were found screwed into the cartridge case after a plug placed there for shipping purposes had been removed.)

ORDNANCE TYPES

NAVAL COAST DEFENSE GUNS (CD)

(The following description of 6" naval guns draws heavily upon Dr. Dirk H.R. Spennemann's Essays on the Marshallese Past, second edition 2000, a collection of articles that discusses the preservation issues of the Marshall Islands from oral traditions and traditional skills, to archaeology and World War II history. A digital version of Spennemann's essays was available on the internet as of 7/14/2007 at: <http://marshall.csu.edu.au/Marshalls/html/essays/essays2.html>

Although Spennemann's focus is on the 6" guns of Micronesia (with brief mention of the Aleutian guns), it is assumed the Kiska and Little Kiska guns share much the same characteristics, if not all, of their sister guns in the South Pacific Theatre. Where known differences occur, they are noted below. Other dissimilarities may be noted during field investigation.)

JAPANESE 6" NAVAL GUNS were found emplaced on land for coastal defense in both the Aleutian and South Pacific Theatres. These guns were of standard naval design, and in many cases retained their original shipboard configuration, including turret, mounting, etc.

Since the 6" guns were on pedestal mounts with a 360 degree traverse they were not only used for coastal defense (against enemy vessels) but could also be brought to bear against inland targets, such as beachheads where invading Allied troops and vehicles would be clustered (U.S. Army 1944: 237). A crew of nine, usually under the command of a lieutenant of the Imperial Japanese Navy (IJN), was needed to operate the weapon. To service a battery of three 6" guns, a total of sixty-three men were required.

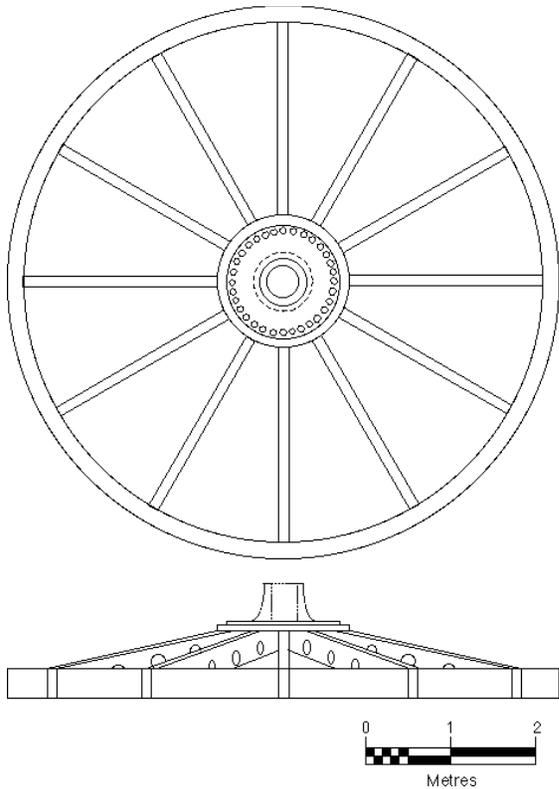
JAPANESE 6" naval guns had lever-operated, interrupted-screw breech blocks with hinges on the right-hand side (as seen when looking from breech to muzzle). In Micronesia, the breech blocks were found to be forged of copper alloy. The metal was highly prized by scrap dealers and the blocks were removed in their entirety or sawn off if stubbornly attached. A 1995 photograph in Mobley (87) shows a 6" gun on Little Kiska with breech block intact (see cover of this report). The hinge is on the right and a close examination shows the interrupted-screw design. Mobley's photograph corresponds to two 1943 close-up views of a 6" gun breech block in *The Enemy on Kiska*. (There are no page numbers associated with photographs in *The Enemy on Kiska*, and the images are too poor to reproduce. Only photocopies of the document can be found in Alaska.) There is anecdotal evidence that as of 2007 no 6" gun breech blocks, made of copper alloy or not, remain on Kiska or Little Kiska islands.



The interrupted screw breech block of a 3" Japanese Naval gun known as the "Kiska Gun." Once emplaced on Kiska Island, this weapon now stands in front of the Headquarters Building at the Canadian Army Cadet Camp, Vernon, B.C. (photograph by Robert H. Spring, Capt. (Ret'd), Royal Canadian Artillery (M)



A 1995 photo of a 6" naval coast defense gun on Little Kiska with breech block intact. Although largely overgrown with vegetation, three "spokes" of the pedestal mount can be seen to the right of the shield turret. This gun photo and the cover image account for two of the three 6" guns emplaced on Little Kiska (Mobley 87).



Above: Illustration of 6" naval coast defense gun pedestal mount. (<http://marshall.csu.edu.au/Marshalls/html/UKNaval/UKNaval3.html>)

Right: Photograph of 6" naval coast defense gun pedestal mount, Kiska or Little Kiska Island [exact location unknown]. (NPS photo, Roll 5, Kiska Is. 9-8-89, photographer: Sue Morton)

The range drum and the elevating wheel of the 6" gun were located on the left side of the breech and the transversing wheel on the right. The gun had two telescopic sights and an electrical trigger mechanism with pistol grip. Spring suggests that if the gun's electrical system failed, it could also likely be fired by percussion as well.

Two iron recoil cylinders (recuperation tubes) were mounted underneath the gun barrel to dampen kickback when firing. Each measured 6 inches in diameter, and contained a densely coiled spring, two copper alloy caps, a central rod, and retaining nuts. Numbers may be found on the brass caps of the recoil cylinders, and these may or may not correspond with numbers on the gun. The cylinder numbers are located on the narrow flange or on the main surface.

The guns were set on a pedestal mount in the "hub" of a wheel-shaped steel base. Twelve "spokes" radiated from the central hub and ended in a heavy outer rim. The base of a Kiska gun can be partially seen in a 1995 photograph by Mobley (see preceding page). The base is largely overgrown by vegetation in the photograph, but a number of the "spokes" are visible. Spennemann reports that the spokes were perforated either to reduce weight or increase strength. In the South Pacific Theatre the entire base section was prefabricated, transported to the defensive position and there bolted and welded together in place. The wheel-shaped base, which had a diameter of 21', was simply set into the earth without concrete reinforcement.



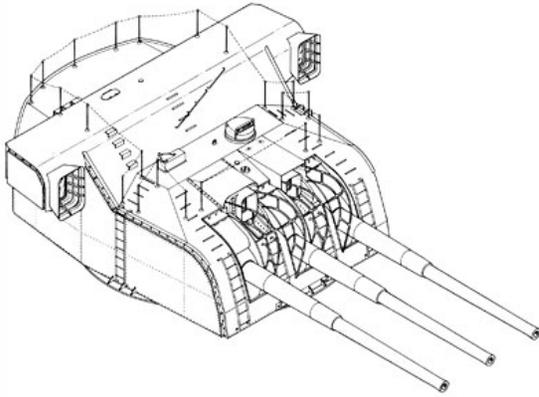


Illustration of a triple mount of 6" guns aboard the Japanese battleship *Yamato*, which entered service 16 December, 1941. (<http://www.pbs.org/wgbh/nova/supership/>)

The 6" naval guns emplaced at Kiska and Little Kiska islands are single barrels protected by shield turrets. The use of shielded single barrels was a common shipboard practice for the Japanese navy from 1895 through 1905. Thereafter two to three barrels were fitted in a single turret aboard ship so as to be aimed and fired in unison. As found elsewhere in the South Pacific Theatre, the Kiska and Little Kiska's 6" gun turret shields consisted of four steel plates bolted together and then bolted to the gun mount. The top plate was flat except for a small embrasure at the rear. The side plates were flat as well, while the front plate was curved at the edges. A gun port was located in the front plate as well as a long horizontal vision aperture for gun laying (aiming). In 1943, U.S. Intelligence measured the steel plates that form the Kiska and Little Kiska 6" turret shields. The plates measured 4 inches thick at the front, 2.5 inches thick on top, and 1.5 inches thick at the sides. One 6" gun shield (located on Little Kiska) had been dimpled by U.S. fifty caliber aircraft machine gun bullets, but none had penetrated the steel plating. Spennemann surmises that the shield turrets in Micronesia were custom made for use with 6" guns in coastal defense installations and were not removed from decommissioned naval vessels.

The Japanese used 6" guns of both Japanese and British manufacture in coastal defense.

Batteries were usually formed of guns according to country of origin—British guns with British guns, Japanese with Japanese. In the Marshall Islands, the British 6" guns were further segregated according to year of manufacture with batteries formed of only British Model 1905 guns or Model 1898. The practice of grouping guns according to country of manufacture was not followed in the Aleutians. Spennemann reasons that the mix of gun types may have been due to the rapid nature with which the defenses at Kiska and Little Kiska were raised.

Of three 6" guns located on North Head, Kiska Island, two were manufactured by the Japanese Kure Naval Arsenal, and one by the British firm Armstrong Whitworth and Co., Ltd. (Model 1900). Of the three 6" guns on Little Kiska Island, two were manufactured by the Japanese Kure Naval Arsenal and one by the British firm Sir Armstrong Mitchell (Model 1894).

Visually 6" guns of Japanese and British manufacture appear identical.

Spennemann states:

"In view of the limitations of the archival resources little can be advanced to differentiate between the guns of British manufacture and the guns of Japanese origin after they have been exposed to the elements and a certain amount of corrosion has set in. If the breech block is present (with associated data stamped into the metal), then this question can be answered readily. In its absence, however, other data need to be drawn. It appears that numbers have been stamped into various gun parts made from copper alloys. While some of the numbers may belong to the gun mount, others will belong to the gun barrel."

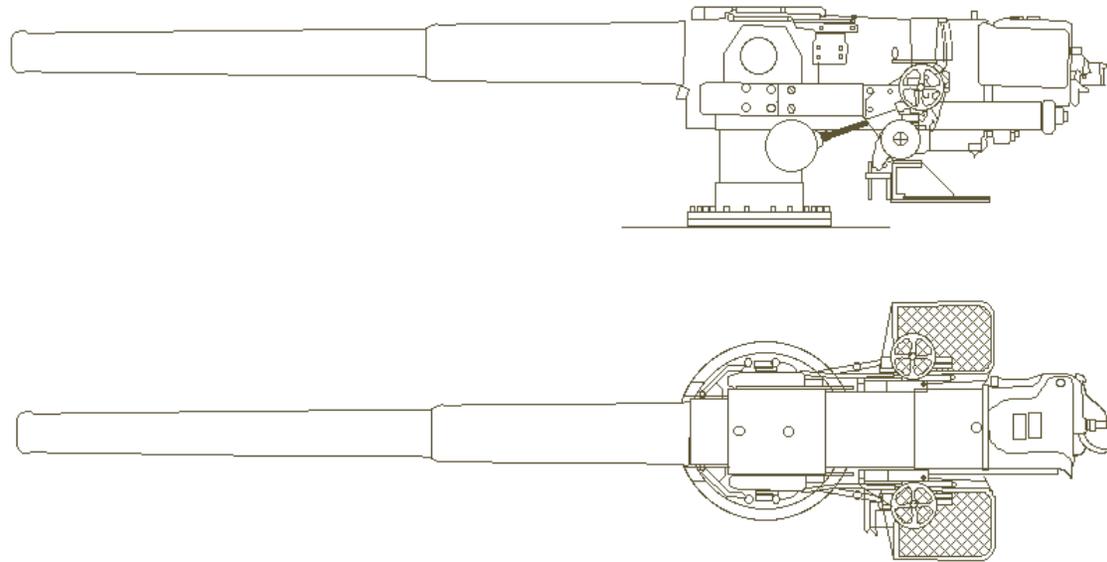


Illustration of a British made "Vickers-Armstrong Ltd." 6" Mk II naval coast defense gun. (<http://marshall.csu.edu.au/Marshalls/html/essays/es-ww2-5.html>)

The two 6" guns on Kiska and Little Kiska islands were manufactured by the British ordnance firms W.G. Armstrong Whitworth and Co., Ltd. (Model 1900) and Sir W.G. Armstrong Mitchell & Co. Ltd. (Model 1894) respectively. These two firms were precursors of Vickers-Armstrong Ltd.

The following is the merger history of the British ordnance manufacturer Vickers-Armstrong:

1883: The Sir W.G. Armstrong Co. merged with Charles Mitchell & Co. to form the Sir W.G. Armstrong Mitchell & Co. Ltd. (the maker of the Model 1894 6" gun on Kiska Island).

1897: The Sir W.G. Armstrong, Mitchell & Co. Ltd. merged with the Sir Joseph Whitworth & Co. Ltd to form the W.G. Armstrong Whitworth & Co. Ltd. (the maker of the Model 1900 6" gun on Little Kiska Island).

1928: The W.G. Armstrong Whitworth & Co. Ltd. merged with Vickers Ltd. to form Vickers-Armstrong Ltd.



The "oval mark" stamped into the breech end of the barrel of a 3" Naval gun indicating it is of Japanese manufacture. The faint marking has been digitally circumscribed to better show its location. Once emplaced on Kiska Island, this weapon now stands in front of the Headquarters Building at the Canadian Army Cadet Camp, Vernon, B.C. (photograph by Robert H. Spring, Capt. (Ret'd), Royal Canadian Artillery (M))

At Kiska and Little Kiska islands, the breeches of all 6" guns with associated manufacturing data (in either English or Japanese characters) have most likely been removed. There may remain, however, additional information stamped elsewhere on the guns.

In an email from Spennemann to Spring dated 8 May 2007, Spennemann describes one such mark that identifies a 6" gun of Japanese manufacture as follows:

"...the mark can't be missed. It is on the breech end of the barrel, above the breech, but on top of the barrel (not the breech face). Also, it has Japanese markings. The oval (marking) does not occur on British guns AFAIK (as far as I know). The oval (marking) is about 2 inches long and 1 inch wide, with a clear outline and text in the middle."

It is important to note that the absence of such an oval marking does not preclude a gun from being of Japanese manufacture. Spennemann does not specify that "all" Japanese 6" guns were stamped with this mark, but to his knowledge, "some" were.

If markings cannot be found anywhere on the gun, investigators may attempt to count the number of lands on the interior of the gun barrel. The 1943 gun inventory compiled by U.S. Intelligence (U.S. Alaska Defense Command 17) stated that:

"A few of the (6") guns of Japanese make were rifled with 28 lands in contrast to the British guns which had 48 lands."

The term "lands" is used when discussing the "rifling" of a gun. In order to increase accuracy and stability of flight over great distance, the inside of a gun barrel is scored (rifled) in a spiral fashion from breech end to muzzle. This scoring or "rifling" imparts a spin to a fired projectile. In American football, a quarterback adds spin to a thrown ball. A well-thrown pass or "perfect spiral" travels a greater distance and is more accurate in its course than a poorly thrown ball with no spin. The latter wobbles or may even tumble end-over-end. Distance is diminished and the course may be well off. So would be the case with a projectile fired from a smoothbore gun over great distance.

Originally all gun barrels were smoothbore as is still the case with modern shotguns. Peer through a shotgun barrel as if it were a spyglass and the smooth interior of the tube is readily apparent. (Great distance and accuracy are not required of a shotgun.) Hold the barrel of a hunting rifle (a weapon manufactured for distance) to the light and the spiral cut can be seen.

"Lands" are the remains of the original smoothbore barrel after the rifling cut has been made; they appear as raised areas within the barrel. The "grooves" are the portion of the smoothbore barrel cut away; they appear as depressions, or furrows.

Since the breech end of a 6" gun is cut with the threads for the interrupted-screw breech block, it may be very difficult or impossible to count the lands in the barrel at this end. Climbing one's way to the



Rifled barrel of a World War I French 75 mm gun showing lands and grooves. (http://en.wikipedia.org/wiki/Image:Canon_rayé_première_guerre_mondiale_img_1967.jpg)

muzzle of a standing 6” gun barrel to count the number of lands may also prove unrealistic. Nonetheless, counting the lands of Kiska and Little Kiska’s 6” guns may help distinguish between Japanese and British manufactured barrels. It is important to note that U.S. Intelligence stated that a “few” of the guns of Japanese manufacture were rifled with 28 lands. It could be inferred then, that “most” 6” guns of Japanese manufacture had 48 lands as did their British counterparts upon which they were modeled. A count of 48 lands on a barrel without other supporting data does not preclude a gun from being of Japanese manufacture.

It is probable the Kiska and Little Kiska islands’ 6” guns were weapons removed from decommissioned vessels and transported to the Aleutians for the purpose of coastal defense and were not salvage from damaged Japanese vessels in waters offshore Kiska (these being mostly vessels of the Japanese merchant marine.) Some guns, however, (likely those of smaller bore such as the 76 mm) were removed from damaged ships beached in bays or that now rest on the ocean bottom.

A fiction has circulated that the two British made 6” coast defence guns (one on Kiska and the other on Little Kiska) were brought to the islands by the Japanese Imperial Army from Singapore following its fall in early 1942. Scholars of the artillery defences in Singapore during World War II indicate that there is now enough evidence (both archival data and data from field investigations) to support putting the myth of “Singapore guns” in the Aleutians to rest. For more details contact: Robert H. Spring, Capt. (Ret’d), Royal Canadian Artillery (M), of Maple Ridge, B.C. (email: bobspring@shaw.ca). (As an aside: In *The Forgotten War*, the author Stan Cohen captions a USFWS photograph of a 120 mm antiaircraft gun [not a 6” gun] as follows: “This is possibly the gun captured by the Japanese at Singapore and brought to Kiska in 1942.”) The question still remains, however, as to whether the 6” British-made guns at Kiska and Little Kiska may be war booty from the fall of the British territory of Hong Kong in 1941 (a possibility forwarded by Dr. Karl Hack, Department of History, The Open University, Singapore) or from some other captured British territory or colony.

A less dramatic answer as to the guns’ origins may be that they were simply purchased by Japan in legal arms trade.

The Japanese began to procure British manufactured warships and guns beginning in the late 1800s, with volume increasing significantly at the end of the Sino-Japanese War in 1895. At the time, the British navy and shipyards were the most advanced in the world. Great Britain supplied warships and ordnance to not only Japan, but to a myriad of countries including Italy, Russia, and Spain. Weapons trade between Great Britain and Japan ceased upon the signing of the Washington Naval Tonnage Limitation Treaty in 1922. This post World War I agreement aimed at halting the proliferation of naval warships and guns in hopes of preventing yet another global war. Japan dismantled warships and removed and stored the naval guns for future use as coastal defense (as was her right). It is possible that the two antiquated British made 6” guns on Kiska and Little Kiska islands, the Sir Armstrong Mitchell



View of probable 6" gun with intact breech block, Kiska or Little Kiska Island [exact location unknown], 1989. The distinctive turret shield of the big gun has been crushed. (National Park Service photo, Roll 5, Kiska Is. 9-8-89, photographer: Sue Morton)



Second view of probable 6" gun with intact breech block, Kiska or Little Kiska Island [exact location unknown], 1989. (National Park Service photo, Roll 5, Kiska Is. 9-8-89, photographer: Sue Morton)

(Model 1894) and the Armstrong Whitworth and Co., Ltd. (Model 1900), were once part of this “mothballed” weapons cache, dusted off and shipped to the Aleutians.

After passage of the 1922 Naval Tonnage Limitation Treaty Japan refused to renew contracts with British arms firms. In 1903, Japan had obtained license to manufacture 6” guns of the “Vickers-Armstrong design” on her home soil and did so. The Japanese 6” guns in the Aleutian and South Pacific Theatres are nearly indistinguishable from British made guns of the same bore size because they are “clones” of the latter—Japanese copies of a British design.

As of this writing, the history of the British manufactured 6” guns on Kiska and Little Kiska islands can only be conjecture. New data gathered during field survey in 2007 may allow researchers such as Spring to trace Kiska and Little Kiska’s British made 6” guns to their origins.

The above is a very brief synopsis of the history of British/Japanese pre-World War II arms trade as it concerns the 6” guns of the Aleutians. For a detailed, far-reaching account, refer to Spennemann’s essay: “British Naval Heritage in Micronesia: Tangible Evidence of the Armament Trade from 1890 to 1937. Chapter 6: Tracing the Origin of the Guns” available online as of 6/17/2007 at: <http://marshall.csu.edu.au/Marshalls/html/UKNaval/UKNaval6.html>

The minimum caliber of a “gun” at 20 mm, has been a de facto standard since WWII. Weapons below this caliber, even those designed for anti-aircraft use and deployed in conjunction with 20 mm cannon and higher caliber guns, are defined as heavy machine guns and will not be discussed in this paper.

Descriptions of the Japanese guns on the following pages are drawn primarily from:

U.S. Army

Handbook on Japanese Military Forces, 14 September 1944, War Department Technical Manual TM-E 30-480, pages 217-239 (original copy with shoestring binding)

U.S. Alaska Defense Command

The Enemy on Kiska, Periodic Report #60. Kiska: HQ, U.S. Troops, Office of the Intelligence Officer, November 24, 1943 pages 17-23

Mobley, Charles

Cultural Resource Investigations at Kiska, Little Kiska, and Semisopochnoi, Aleutian Islands, Report prepared by Charles M. Mobley & Associates, Anchorage, Alaska, under contract to Dames & Moore, Anchorage, Alaska for the U.S. Army Corps of Engineers, Alaska District, 1996, pages 86-96

Technical data from these three sources is so intertwined that the inclusion of in text citations would adversely affect text flow. Citations are limited to a few direct quotes.

Illustration of 4.7" gun from The Enemy on Kiska (U.S. Alaska Defense Command 1943; no page #)



4.7" C.D. GUN

4.7" NAVAL COAST DEFENSE GUN:

Characteristics:

Type: Navy

Bore: 4.7"

Barrel: 16.5'

Traverse: 360 degrees

Elevation: approximately 30 degrees

Breech: Interrupted screw

Weight: undetermined

Shield: None

Revetment: 20' inside diameter

Ammunition: Semi-fixed; one increment of powder in raw silk bag inside brass shell case.



Facing the muzzle of a 4.7" Naval Coast Defense Gun [location unknown]. (National Park Service photo, Roll 4, Kiska Is. 9-8-89, photographer: Sue Morton)



FOUR 4.7" COASTAL DEFENSE GUNS, two manufactured by the Kure Naval Arsenal and two by Armstrong Whitworth and Co., (Model 1905) were emplaced in a battery located near the tip of North Head. Pedestal mounts were set in concrete. Guns lacked shields and bicycle traversing gear. Telephone and buzzer systems connected the guns with a fire control center, range finder, and searchlights. Firing was accomplished by an electrical trigger mechanism operated by the gunner.



This page, 3 views of 4.7" gun(s) on Kiska Island [exact locations unknown]. To immediate left, close-up of pedestal mount. (National Park Service photos, Roll 4, Kiska Is. 9-8-89, photographer: Sue Morton)



A 4.7" Naval Coast Defense Gun on Kiska Island [exact location unknown]. (National Park Service photo, Roll 4, Kiska Is. 9-8-89, photographer: Sue Morton)



A 4.7" Naval Coast Defense Gun on Kiska or Island [exact location unknown]. (National Park Service photo, Roll 4, Kiska Is. 9-8-89, photographer: Sue Morton)



"Japanese [76 mm] gun and bunker. The ammunition was left intact due to the hasty evacuation of the island." Photograph in *The Forgotten War, Volume 2* (Cohen 1984:224). (Image courtesy National Archives 80-G-80270)

76 mm Naval Coast Defense Gun:

Characteristics:

Type: Navy

Bore: 76 mm

Barrel: 10'

Traverse: 360 degrees (revetment walls limited traverse)

Elevation: approximately 30 degrees (revetment precluded elevation).

Breech: Interrupted screw

Shield: None

Revetment: 13' square

Ammunition: Semi-fixed with single increment powder charge



Oblique view of the 3" Japanese Naval gun known as the "Kiska Gun." Once emplaced on Kiska Island, this weapon now stands in front of the Headquarters Building at the Canadian Army Cadet Camp, Vernon, B.C. Note similarities to 1943 photograph of 76 mm (2.994 inches) Naval coast defense gun on preceding page. As of this writing the "Kiska Gun" has not yet been definitively identified. (photograph by Robert H. Spring, Capt. (Ret'd), Royal Canadian Artillery (M).)



The remains of the freighter *Borneo Maru* in Gertrude Cove as seen in 1995. (photographer: Charlies Mobley)

FOUR 76 MM COAST DEFENSE GUNS were located by U.S. Intelligence in 1943, two in the radar area at the Main Camp, and two at the Sub Base. All were naval guns manufactured by the British Yasu Manufacturing Co., (Model 1898), and all were established in covered revetments. U.S. Intelligence surmised that it was possible these guns were removed from damaged Japanese ships beached at Kiska Harbor. As of 1995, the rusting hulls of three Japanese vessels were still visible above water. These were the remains of the *Borneo Maru* at Gertrude Cove, the *Urajio Maru* in Kiska Harbor, and the *Nojima Maru* offshore Trout Lagoon (Mobley 77). According to NPS archaeologist Susan Morton (1990), an underwater survey of Kiska Harbor by National Park Service divers in 1985 revealed nine submerged vessels in total. Among those were the *Nissan Maru*, the submarine *RO-65*, the transport *Kano Maru*, and an unidentified 200' vessel and 40' landing craft (Lenihan 1992; Murphy and Lenihan 1995).

The 76 mm gun bases were mounted in concrete and gun revetments were connected to fire control centers by speaking tubes. Although their fields of fire were limited by their substantial revetments, the two guns at the sub base completely commanded the narrow harbor entrance between North Head and Little Kiska. Gun revetments were excellently camouflaged and could not be seen from a distance.

The two radar guns were apparently intended to cover the strategically important low ground at the inner end of Salmon Lagoon which provides a natural route for invasion.



22 Massive Pieces of Metal: The Japanese Guns of Kiska and Little Kiska islands



This 3" Japanese Naval coast defense gun was transported from Kiska Island to Canada, early 1944 by the 24th Field Artillery Regiment, Royal Canadian Artillery.



The gun arrived by train at Vernon, British Columbia 21 January 1944. It was then trucked to the Canadian Army Cadet Camp, Vernon, B.C. which at the time was a large training facility for the Canadian army regular force. An entry in the Regimental War Diary of the 24th Field Artillery Regiment for 21 January 1944 notes:

“Quarters were finished today and also the unloading of the nine freight cars. Much comment has been aroused by the weight of the Japanese gun which the C.O. (Lt. Col R. P. Drummond, ED) has shipped as a souvenir from Kiska. It took eight strong men to move the barrel alone from the freight car to truck.”

An accompanying plaque states that the gun “was captured on the beach of Kiska...”

As of this writing, the gun has not been definitively identified, but it appears to be a 76 mm Naval coast defense gun. Two each were placed in the Main Camp and at the Sub Base on Kiska Island.

All photographs taken in 2007 by Robert H. Spring, Capt. (Ret'd), Royal Canadian Artillery (M).

NO IMAGES CURRENTLY AVAILABLE FOR THIS GUN

75 mm Naval Coast Defense Gun:

Characteristics:

Type: M1905. In the Japanese calendar Meiji 38 - the 38th year of the reign of Meiji Tenno, emperor of Japan from 1867 to 1912; in the Gregorian calendar the year 1905

Bore: 75 mm

Barrel: 8 – 10'

Traverse: 360 degrees

Elevation: approximately 40 degrees

Breech: Sliding wedge

Shield: Simple detachable ½" plate shield providing protection from front only

Revetment: 12' – 14' inside diameter

Ammunition: Fixed – point detonating projectiles

TWO ANTIQUATED 75 MM GUNS were found in individual positions at Gertrude Cove Camp with pedestal mounts set in concrete.

U.S. Intelligence commented on the poor state of the Kiska and Little Kiska guns:

“In general, although its total firepower would have been formidable, Kiska ordnance was badly worn, and some of the heavier types were fairly old (such as the 1905 75 mm Naval Coast Defense gun). Ranges of (Japanese) coastal defense guns were short and no match for the attacking forces of the United States Navy.” (U.S. Alaska Defense Command 1943:17)

ANTI-AIRCRAFT GUNS (AA)



A 120 mm anti-aircraft gun on North Head, Kiska Island, 1995 (photographer: Charles Mobley)

A SINGLE FOUR-GUN BATTERY OF 120MM DUAL-PURPOSE NAVAL GUNS was established at North Head. Pedestal mounts were set in concrete. Guns were pointed and trained individually and traversed and elevated manually. Details of manufacture, weight, etc. were lacking since all name plates had been removed. The recoil mechanism of the guns contained two recuperator tubes, and all guns were fitted with light splinter shields. U.S. Intelligence concluded the shields were apparently useful only for psychological purposes since they had been thoroughly riddled by machine gun fire from strafing United States aircraft. Communication was provided by speaking tubes and telephone.

120 mm Naval Dual Purpose Anti-aircraft Gun:

Characteristics:

Type: Naval

Bore: 120 mm

Barrel: 45 caliber

Traverse: 360 degrees

Elevation: 75 degrees

Breech: Sliding wedge

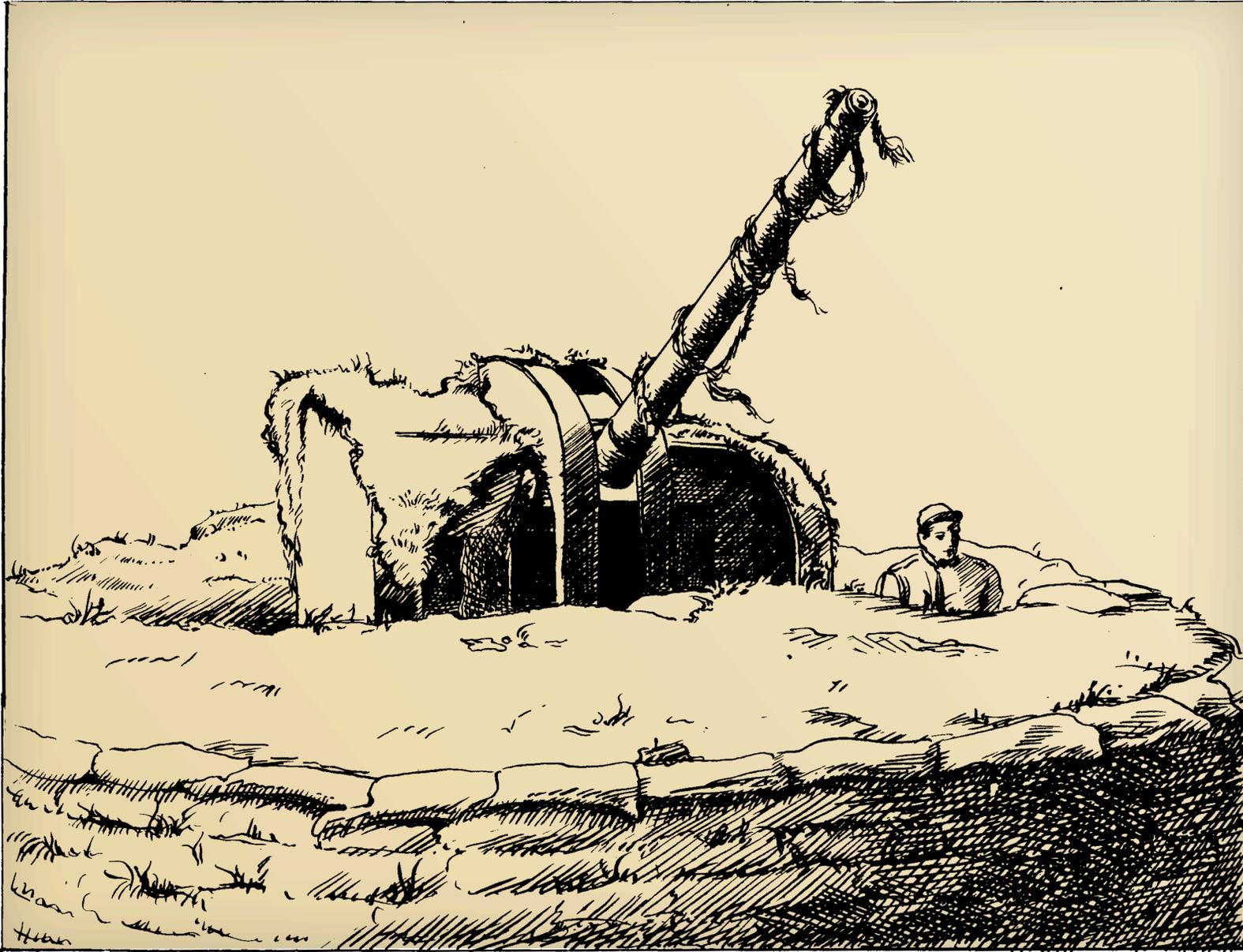
Shield: 3/8" plate – splinter-proof only
– open at rear

Revetment: 22' inside diameter

Ammunition: unknown

Weight: 2910 kilograms

Illustration of 120 mm gun from The Enemy on Kiska (U.S. Alaska Defense Command 1943; no page #)



120 MM. DUAL PURPOSE



Bomb damaged 120 mm anti-aircraft gun on North Head, Kiska Island as recorded in 1943 by U.S. Intelligence (University of Alaska Anchorage, Open File: Kiska, 25507 A.C.)
For later views of this same weapon, see following page.

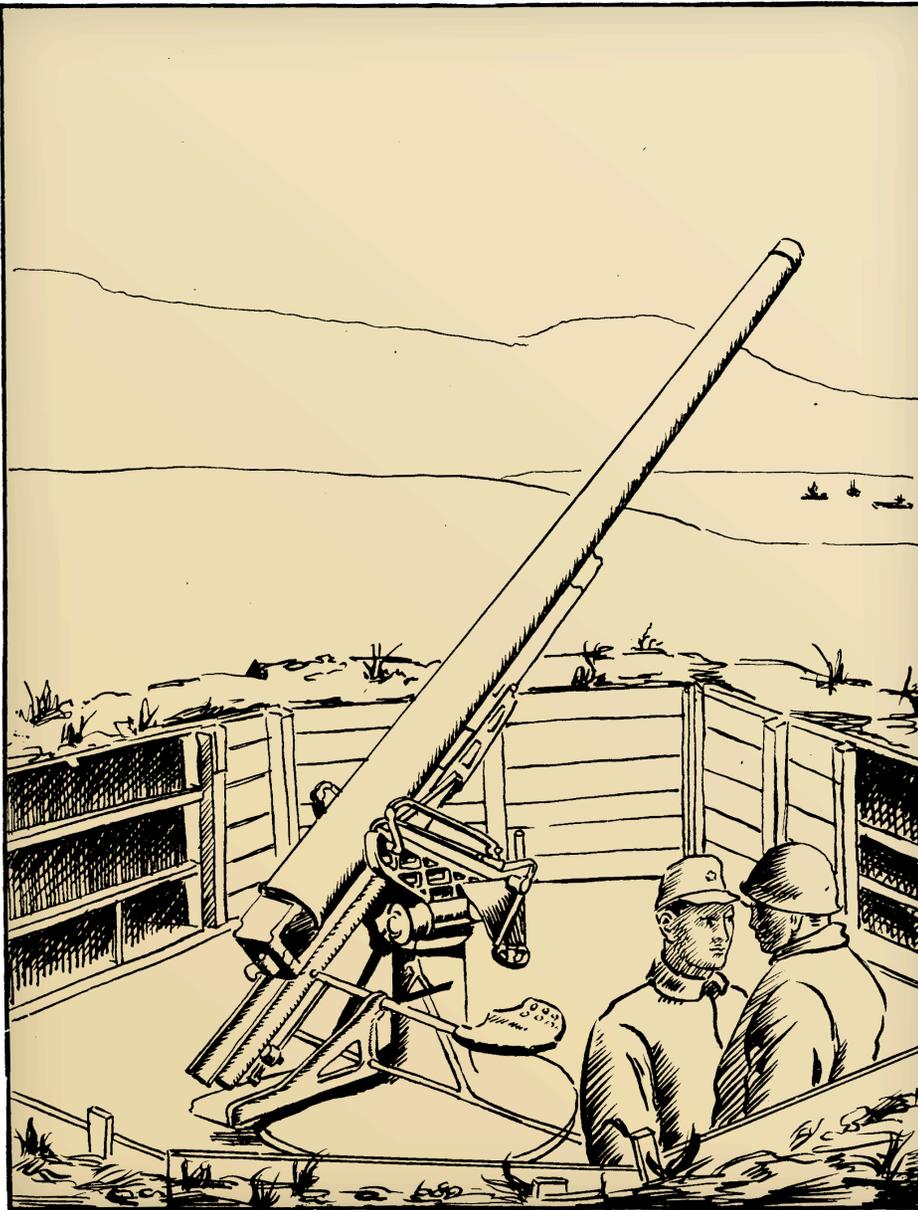
Bomb damaged 120 mm anti-aircraft gun on North Head, Kiska Island as recorded in 1989 ((National Park Service photo, Roll 4, Kiska Is. 9-8-89, photographer: Sue Morton))



Bomb damaged 120 mm anti-aircraft gun on North Head, Kiska Island as recorded in 1995 (photographer: Charles Mobley)



Illustration of 75 mm gun from The Enemy on Kiska (U.S. Alaska Defense Command 1943; no page #)



75 MM. DUAL PURPOSE A-A

75 mm Dual Purpose Antiaircraft Gun:

Characteristics:

Type: Type 88 (1928)

Caliber: 75 mm

Maximum range: unknown

Vertical range: 30,000 yards

Horizontal range: 15,000 yards

Maximum elevation: +85 degrees

Maximum depression: 0 degrees

Maximum traverse 360 degrees

Weight, overall: 5,830 pounds

Muzzle velocity: 2,360 feet per second

Ammunition: High explosive, shrapnel, and incendiary



A 75 mm anti-aircraft gun on Kiska or Little Kiska Island [exact location unknown]. (National Park Service photo, Roll 4, Kiska Is. 9-8-89, photographer: Sue Morton)



Japanese crew handles a 75 mm anti-aircraft gun, Kiska Island. (University of Alaska Anchorage, Alaska at War collection, Album 2.2.60)

THE TYPE 88 was one of the most widely used of all the many Japanese anti-aircraft guns, and was the predominant ordnance found on Kiska Island. The gun was issued to nearly all Army anti-aircraft units in the field, but as the war progressed many were withdrawn from overseas theatres and relocated for defense of the Japanese mainland islands. Today, the Japanese Type 88 75 mm guns are extremely rare. D. Colt Denfeld, U.S. Army Corps of Engineers military historian comments:

“There’s only a few . . . in the world. They were easily converted to scrap because they were so mobile” (Mobley 1996: 92).



According to Mobley (91) at least one of the 75 mm anti-aircraft guns at South Head, Kiska Island was mounted on a rubber-wheeled carriage. (photographer: Dave Erikson, Dames & Moore)

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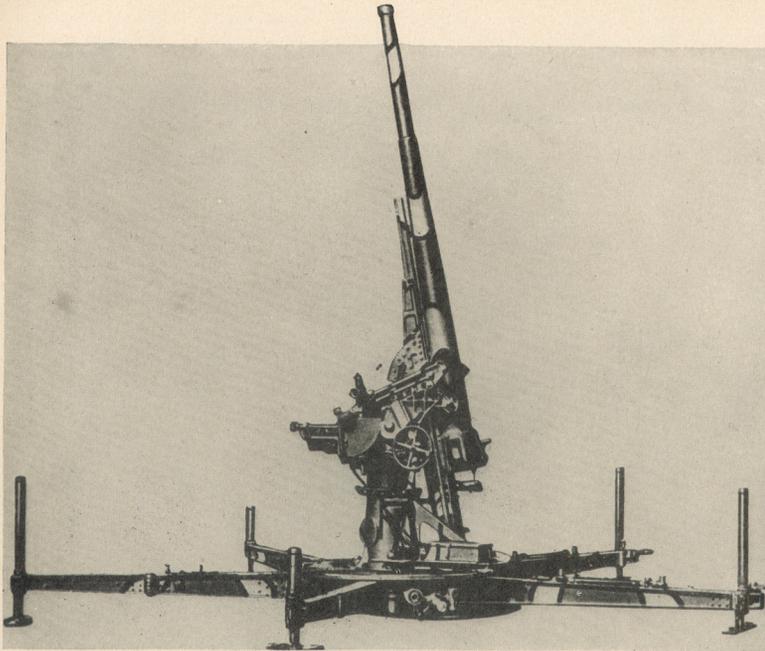
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Figure 234. Model 88 (1928) 75-mm anti-aircraft gun.

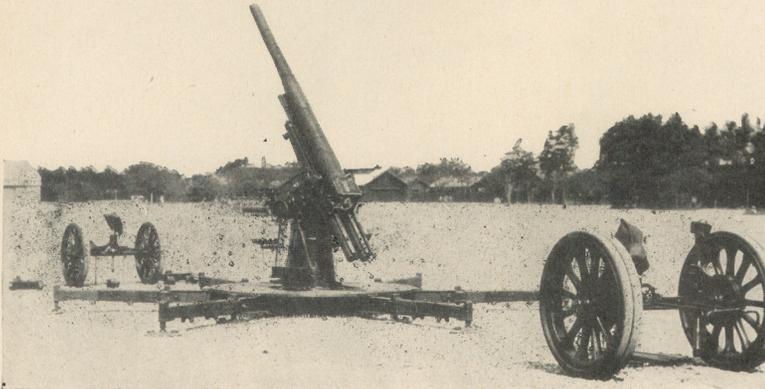


Figure 235. Model 14 (1925) 105-mm anti-aircraft gun showing detachable wheels used for transport of piece.

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In 1943, twenty-two of the Type 88 guns were found emplaced in batteries located in all strategic Kiska Island areas. They were usually established in a four-gun battery, sometimes in the shape of an "L", with fire control instruments located at the center. These included height finders, binoculars (3-5 per battery) data computers, and covered Command Post (CP). Communication between CPs and guns was provided by speaking tubes and buzzer systems. The type 88 had a 360 traverse, an 85 degree elevation, and a 44.5 caliber barrel. The gun had a hydropneumatic variable recoil system and a semiautomatic horizontal, sliding wedge breech mechanism. The Type 88 was not only used for air defense, but could, and was, brought to bear against ground targets as well. Guns had no shields but were sunk approximately five feet below the top of their revetments which measured 18 - 20' in diameter. All Type 88 guns on Kiska Island were camouflaged with yellow, green, and brown paint.

The Type 88 was a mobile, truck-drawn gun. For firing, the wheels were removed and the gun supported by five outriggers. During transit, the barrel was dropped back on a cradle extension and secured to the ends of two outriggers. The wheels were refitted and the spider legs folded in.

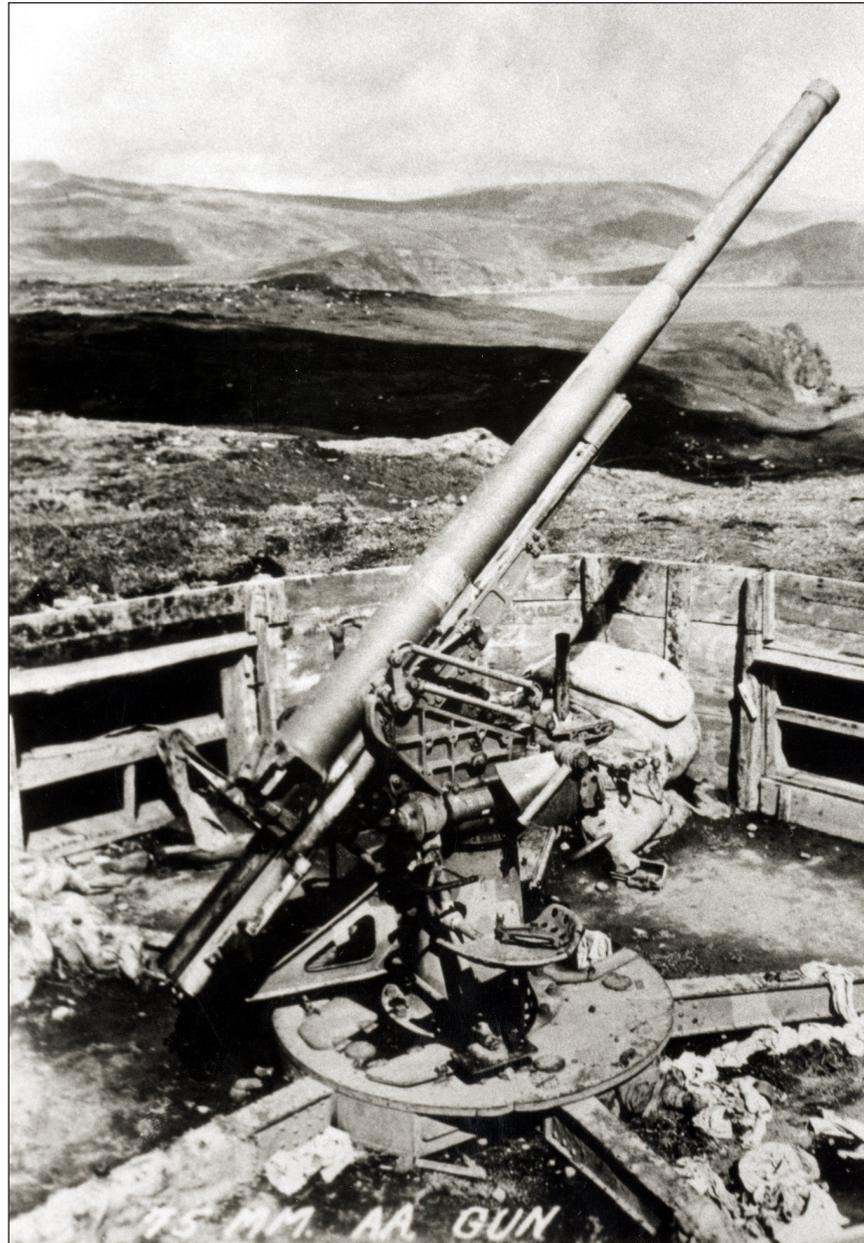
Like most Japanese heavy guns, the Type 88 was virtually hand-built with very few parts that did not need extensive machining.

In 1994 the U.S. Army summed up the merit of the Type 88:

"The gun itself was unremarkable and an un-spectacular performer but it was one of the best the Japanese used in action" (U.S. Army 1944 [as quoted in Mobley 1996:92]).

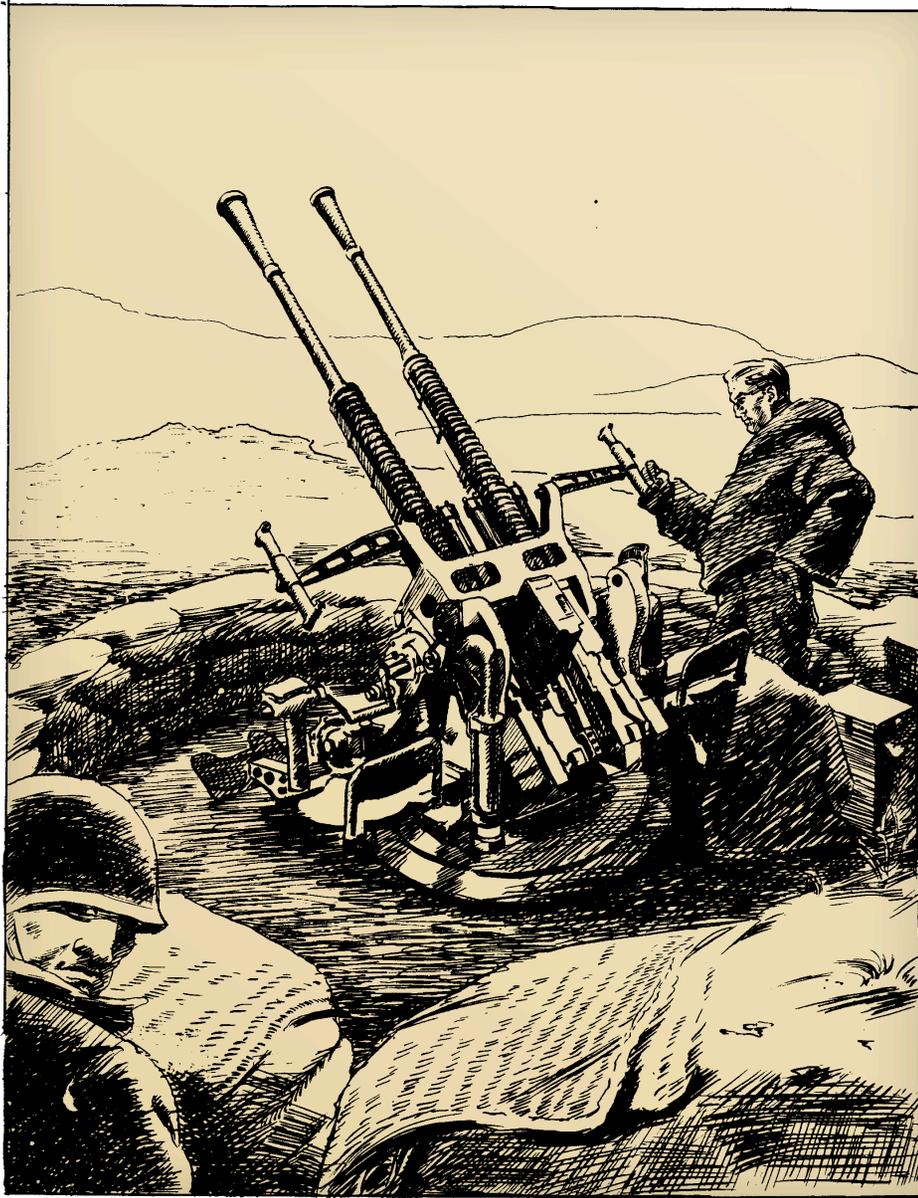


Japanese 75 mm anti-aircraft gun on Kiska or Little Kiska Island [exact location unknown]. (Project Seamark, NPS/Navy/USFWS Aleutians, September 1989, photographer: Michael Eng[?])



Japanese 75 mm anti-aircraft gun on Kiska or Little Kiska Island, 1943. (National Park Service, Alaska Regional Office)

Illustration of 25 mm gun from *The Enemy on Kiska* (U.S. Alaska Defense Command 1943; no page #)



25 MM. A-A GUN

25 mm Model 96 (1936) Type 2 Dual Mount Antiaircraft-Antitank Gun

Characteristics:

Caliber 25 mm (.984 inch)

Estimated vertical range; 14,000 feet

Maximum elevation: +80 degrees

Maximum depression: -10 degrees

Traverse: 360 degrees

Magazine capacity: 15 rounds

Weight (single gun without mount):
246 pounds

Weight (three guns triple mount):
5,330 pounds

Sight calculation

Cyclic rate of fire (per barrel): 300
rounds per minute

Muzzle velocity 2,978 feet per
second

Revetments: 15 feet in diameter

Ammunition: High explosive tracer,
high explosive, and armor piercing
tracer

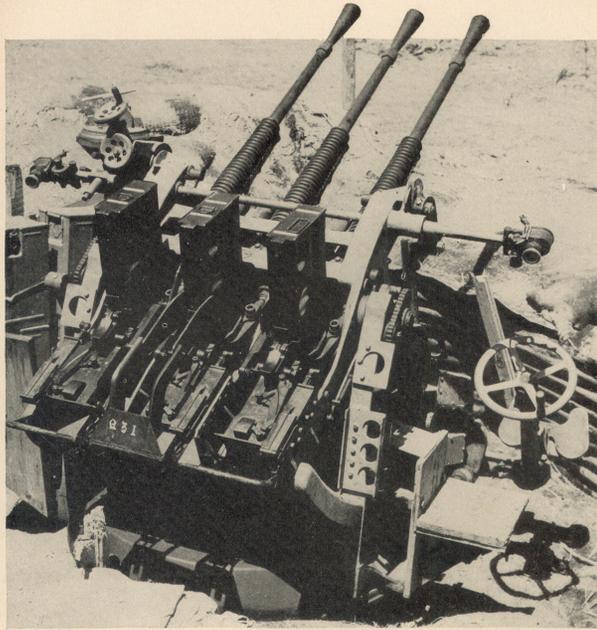


Figure 232. Rear view of model 96 (1936) type 2, 25-mm AA/AT automatic cannon, triple mount.

(2) Characteristics.

Caliber.....	40-mm (1.57 inch).
Maximum vertical range.....	14,000 feet (approximately).
Maximum elevation.....	+85°.
Maximum depression.....	-5°.
Traverse.....	360°.
Weight in firing position (dual mounted gun).....	2,500 pounds (approximately).
Sight.....	Calculating.
Length of barrel.....	5 feet 2 inches.

(3) Ammunition. Armor piercing high explosive, high explosive with time fuze, high explosive with point detonating fuze, and tracer.

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d. Model 88 (1928) 75-mm antiaircraft gun.

(1) General description. This has been the standard Japanese mobile heavy antiaircraft weapon (fig. 234). Specimens have been found on all airfields captured from the Japanese. It is a truck drawn weapon. For firing, the wheels are removed, and the gun is supported by five outriggers. During transit, the barrel is dropped back on a cradle extension and secured to the ends of two outriggers. The gun has a hydropneumatic variable recoil system and a semiautomatic horizontal, sliding wedge breech mechanism. Fire control instruments captured indicate that the older system of transmitting

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THE MODEL 96 (1936) Type 2, 25 mm antiaircraft-antitank gun was a gas-operated, air-cooled, magazine fed weapon. First introduced as a naval gun, the 25 mm was landed as the war progressed (the weapon was often found emplaced still with its naval mountings attached). Traverse and elevation were controlled by hand wheels. Firing at full or semiautomatic, the gun was highly effective against low flying aircraft. Its magazine held 15 shells with a ratio of one tracer to four high explosive (HE). The ammunition had a large propelling charge that gave the weapon a high muzzle velocity with an estimated vertical range of 14,000 feet. The 25mm projectile had three rotation bands, two on the portion of the shell that lay outside the brass case, and one on the portion of the projectile that extended well into the case. Projectiles were also fitted with point detonating fuses and with bursting charges of "tetrel" (likely *tetryl*—an odorless yellow crystalline solid used to make detonators and explosive booster charges in both World Wars).

The 25 mm AA guns found on Kiska had not been encountered before in the Aleutian Theatre, although 25 mm ammunition had been found on the beach at Attu, possibly awaiting transshipment to Kiska. Revetments for the guns at Kiska measured approximately 15 feet in diameter. Command posts consisting of prefabricated steel plated turrets were found emplaced in the ground near two of the 25 mm positions.



A 25 mm antiaircraft gun [exact location unknown]. (National Park Service photo, Roll 5, Kiska Is. 9-8-89, photographer: Sue Morton)

All 25 mm guns on Kiska were dual-barreled Naval guns. Elsewhere in the South Pacific Theatre the weapon was found in triple mounts. Customarily emplaced near airfields for antiaircraft defense, the gun's 10 degree depression below horizontal also made it an effective weapon for direct fire against ground targets such as tanks.

In 1943, U.S. Intelligence commented on the merit of the 25 mm Model 96, Type 2: "Probably the most efficient ordnance type noted at Kiska was the 25 mm AA guns – a relatively long-ranged, rapid firing Naval weapon that corresponds generally with our 40 mm AA gun" (U.S. Alaska Defense Command 17).

Illustration of 20 mm gun from The Enemy on Kiska (U.S. Alaska Defense Command 1943;no page #)



20 MM. A-A GUN

**Model 98 (1938) 20 mm
Antiaircraft Antitank Automatic
Gun.**

Characteristics:

Caliber: 20 mm (0.79 inch)

Type feed: 20 round box magazine

Weight: 836 pounds (without wheels)
Maximum range horizontal: 5,450
yards

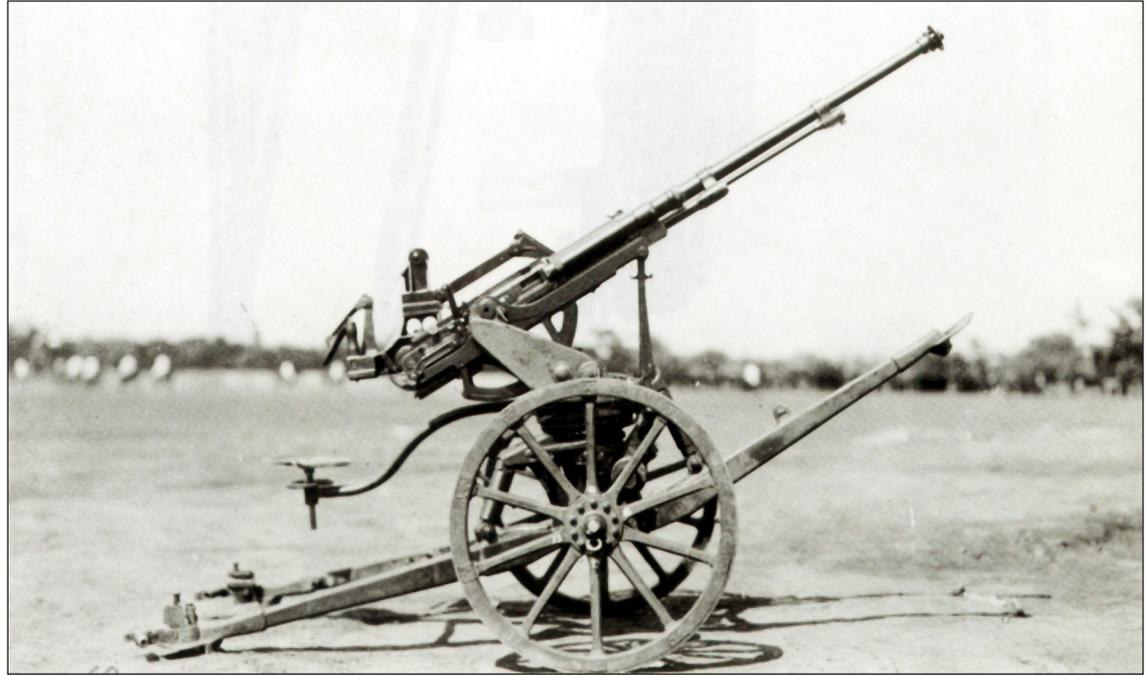
Maximum range vertical: 12,000 feet

Muzzle velocity: 2,720 feet per
second

Rate of fire: 120 rounds per minute

Traverse: 360 degrees

Principle of operation: Gas-
operated, semi-or full automatic



Type 98 20 mm antiaircraft antitank automatic gun on wheeled carriage (*Imperial Japanese Army and Navy Uniforms & Equipment 1997:322*)

THE MODEL 98 (1938) 20 mm Antiaircraft Antitank Automatic Gun was a gas-operated, semi- or full-automatic weapon, that fired both armor piercing (AP) and high explosive (HE) shells, usually in the ratio of one to one. It was a dual-purpose weapon intended for use against both aircraft and tanks. The 20 mm gun barrel measured approximately seven feet long with two recuperators located underneath the tube. It was a lightweight, wheeled gun that could be easily manhandled or even broken down for pack transport. When firing, the gun could be supported on three spider legs. These would be raised when traveling. The vertical box magazine held twenty rounds. At Kiska 20 mm positions were set up individually and in batteries usually in support of larger 75 mm antiaircraft batteries. Revetments measured from 8 to 10 feet in diameter.

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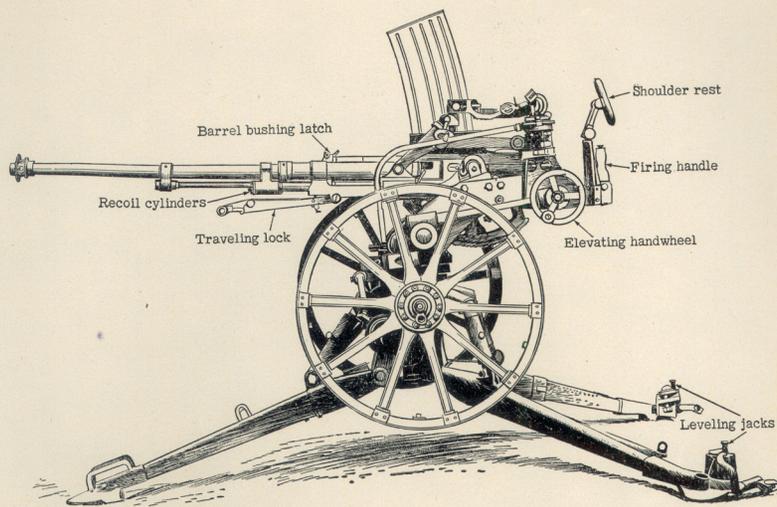


Figure 210. Model 98 (1938) 20-mm anti-aircraft antitank automatic cannon.

(3) *Ammunition.* Armor piercing tracer and high explosive tracer ammunition has been recovered.

c. Model 98 (1938) 20-mm anti-aircraft antitank automatic cannon. (1) *General description.* This is a gas-operated, semi- or full-automatic, all purpose weapon (fig. 210), similar in mechanism, but larger and heavier than the model 97, 20-mm antitank rifle. The ammunition is not interchangeable. The carriage permits firing from its wheels. Supported on outriggers with wheels removed it has a fast 360° traverse.

(2) *Characteristics.*

Caliber.....	20-mm (0.79 inch).
Type feed.....	20 round box magazine.
Weight.....	336 pounds (without wheels).
Maximum range—	
horizontal.....	5,450 yards.
vertical.....	12,000 feet.
Muzzle velocity.....	2,720 feet per second.
Rate of fire.....	120 rounds per minute.
Traverse.....	6,400 mils (360°).
Principle of operation.....	Gas-operated, semi- or full automatic.

(3) *Ammunition.* High explosive tracer and armor piercing tracer have been recovered.

d. Model 11 (1922) 37-mm gun. (1) *General description.* This weapon (fig. 211) is still in use in some areas, although its place in the infantry organization has been taken by model 94 (1934) 37-mm gun and other antitank weapons. It resembles the U. S. 37-mm infantry gun, M 1916. The gun

is carried by four men. This weapon is listed by the Japanese as 十一年式平射歩兵砲 which is translated "11th year model low trajectory infantry gun".



Figure 211. Model 11 (1922) 37-mm gun.

(2) *Characteristics.*

Caliber.....	37-mm (1.46 inch).
Weight in action.....	205.75 pounds.
Length (with trails folded).....	90 inches.
Over-all width (in firing position).....	49.25 inches.
Breechblock.....	Vertical sliding wedge, which may be operated semiautomatically.
Traverse.....	584 mils (33°) by handwheel.
Elevation.....	248 mils (14°) by handwheel.
Depression.....	85 mils (-4.8°).
Sight.....	Telescopic, used for direct laying.

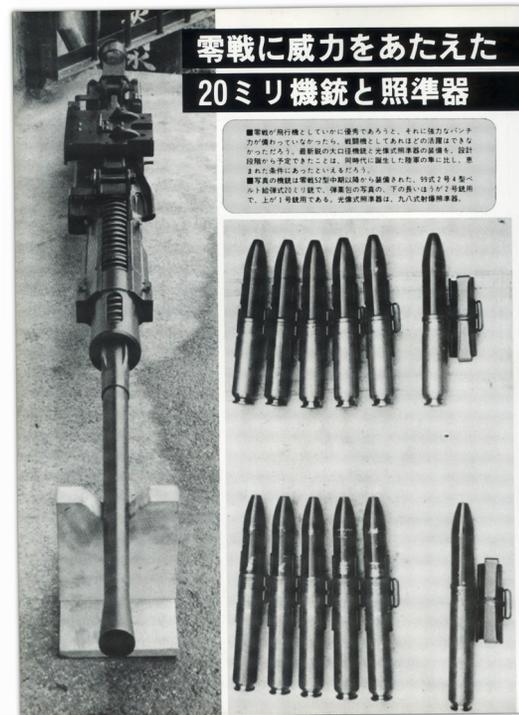
e. Model 94 (1934) 37-mm gun. (1) *General description.* This weapon (fig. 212) is referred to by the Japanese as the "Infantry rapid fire gun." It

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20mm Aircraft Oerlikon MG

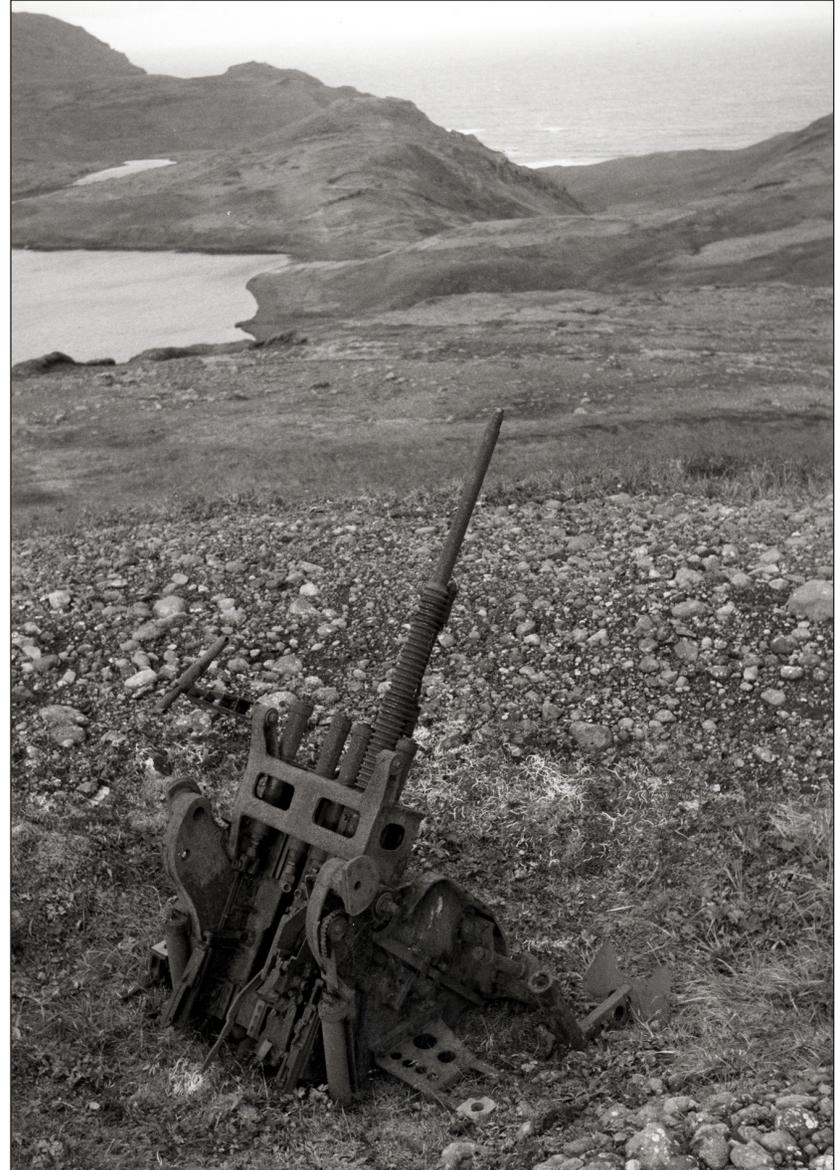
Four 20 mm Swiss made Oerlikon Machine Guns, apparently taken from disabled float Zeros, were established on crude improvised stands as supporting guns for a 75 mm dual purpose battery at South Head. Other similar positions with 20 mm aircraft ammunition nearby were found at Little Kiska and in the Main Camp, but no additional guns were noted. Although the same caliber as the regular 20 mm AA guns, the projectiles for the Oerlikon Machine Gun have a much smaller propelling charge.



Oerlikon 20 mm Machine Gun and ammunition. (Image from "The Japanese Zero" in *The Maru Magazine*, 1980.)



Japanese 20 mm anti-aircraft gun, Kiska or Little Kiska Island, 1943. (National Park Service, Alaska Regional Office)



Identified in Mobley (94) as a single-barreled 20 mm anti-aircraft gun, this weapon is more likely a dual barreled 25 mm anti-aircraft gun with one tube missing. This gun is located at the north-central approach to the Main Camp, Kiska Island.

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Figure 215. Side view of model 41 (1908) 75-mm infantry gun, showing unusual trail construction.

ments. High explosive, armor piercing, and smoke shells are fired. The standard model 83 delay and instantaneous fuzes are used.

h. Model 41 (1908) 75-mm infantry gun. (1) *General description.* This weapon (fig. 215) was originally the standard pack artillery weapon, but when it was largely superseded by the Model 94 (1934) 75-mm mountain (pack) gun, it was then used as an infantry "regimental" gun. It is widely distributed throughout the Japanese Army. It has an interrupted screw type breechblock and a hydro-spring recoil mechanism. There are no equalizers or equilibrators. The markings 四一式山砲

which appear on the barrel, mean "41 model mountain gun." This weapon may be easily and quickly disassembled for pack into loads, the maximum weight of each being approximately 200 pounds. Actual firing of the weapon at a range of 3,200 yards resulted in 75 percent of the rounds falling in a rectangle 20 by 30 yards. At maximum range (7,800 yards) 75 percent of the rounds fell within a rectangle 100 yards wide and 200 yards long.

(2) *Characteristics.*

Caliber.....	75-mm (2.95 inch).
Length (over-all).....	170 inches.
Width (over-all).....	48 inches.
Weight.....	1,200 pounds.
Traverse (total).....	106 mils (6°).
Elevation.....	+650 mils (+40°).
Depression.....	-319 mils (-18°).
Maximum range.....	7,800 yards.

(3) *Ammunition.* Ammunition recovered included common high explosive, armor piercing, high explosive, shrapnel, hollow charge AP and incendiary. For description of incendiary shell see chapter 9, section V.

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Section III. ARTILLERY

1. GENERAL. Between 1925 and 1936, all Japanese artillery pieces were either redesigned or replaced by newer designs. An examination of a majority of the designs known to exist leads to the belief that the following features will be incorporated in any newer designs produced since 1936, although no weapons over 47-mm in size and bearing a model date later than 1936 as yet have been reported:

- Hydropneumatic recoil systems.
- Use of equilibrators.
- Muzzle brakes.
- Increased muzzle velocities.
- Improved high speed mounts on all medium and heavy pieces (using either pneumatic tires or tires filled with sponge rubber).

Since Japan has had access to German weapon designs for some years, it may be assumed that Japanese weapons embodying the following features may be encountered:

- Hollow charge projectiles.
- New incendiary projectiles.
- Self-propelled mounts of various kinds.
- Rockets.

2. FIELD ARTILLERY. a. Model 94 (1934) 75-mm mountain (pack) gun. (1) *General description.* This is the standard Japanese pack artillery piece (fig. 216) which replaced the model 41 mountain gun. Designed for rapid assembly and dismantling, it breaks down into 11 units, the heaviest of which weighs 210 pounds. The weapon is normally transported by 6 pack horses. It is characterized by a comparatively long split-trail, hydro-

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75 mm Model 41 (1908) Mountain Gun (Regimental Gun)

Characteristics:

- Type: Model 41 (1908)
- Caliber: 75 mm (2.95 inches)
- Length: (overall) 170 inches
- Width: (overall) 48 inches
- Weight: 1,200 pounds
- Traverse: (total): 6 degrees
- Elevation: +40 degrees
- Depression: -18 degrees
- Maximum range: 7,800 yards
- Ammunition: Common high explosive, armor piercing, high explosive, shrapnel, hollow charge AP and incendiary.



The above Japanese characters found on the barrel of the Model 41 75 mm Mountain gun read: "41 model mountain gun." Illustration from *Handbook on Japanese Military Forces*, 15 September 1944, page 220

Artillery Pieces

THE MODEL 41 (1908) 75 mm Mountain gun was originally the standard Japanese pack artillery weapon until largely superseded by the Model 94 (1934) 75 mm mountain (pack) gun. The Model 41 was then utilized as an infantry "regimental" gun. It was widely distributed throughout the Japanese Army.

On Kiska and Little Kiska Islands, Model 41 75 mm Mountain guns were emplaced in heavily constructed covered positions commanding many of the beaches. A complete four-gun battery had been established at Little Kiska. Four similar emplacements, only two of which were filled, overlooked the beach at Salmon Lagoon on Kiska Island. Other 75 mm guns were set up in individual positions on the high ground behind strategic beaches near Gertrude Cove and the Main Camp. The gun had an interrupted screw breech block and a hydro-spring recoil mechanism. There were no equalizers of equilibrators. Japanese markings on the barrel read "41 model mountain gun." This weapon was used against ground forces only.

"Mountain" guns by definition are light weapons that can be transported through difficult terrain. The Model 41 could be easily and quickly disassembled into individual loads for travel, the maximum weight of each being approximately 200 pounds.

Ammunition was fixed and had a point detonation fuze. Some ammunition for this gun had steel cartridge cases; only 2 round were discovered. Actual firing of the weapon at a range of 3,200 yards resulted in 75 percent of the rounds falling in a rectangle 20 by 30 yards. At maximum range (7,800 yards) 75 percent of the rounds fell within a rectangle 100 yards wide and 200 yards long. The majority of the Model 41 Mountain guns observed at Kiska and Little Kiska islands were manufactured at the Osaka Army Munitions Plant in March 1941.

As of 2007, two of Kiska's Model 41 75 mm Mountain guns were being held in storage in Anchorage, Alaska—one in a National Park Service warehouse (contact Bruce Greenwood, Superintendent, Alaska Affiliated Areas, 907 644-3503), and one in a warehouse of the Anchorage Museum at Rasmuson Center (contact Walter Van Horn, Collections Department Director, 907 343-6182). Although originally emplaced on either Kiska or Little Kiska islands, these two guns had been on display outdoors at the Adak Naval Air Station on Adak Island prior to their transport to Anchorage. The Adak Naval Air Station closed in 1997.



"A 75 mm gun emplacement found near Kiska Harbor." In *The Forgotten War* (Cohen 1984). (Photograph courtesy U.S. Army Archives, Washington)

The following was recorded during a brief inspection of the Rasmuson Center gun:

Breech opening and barrel filled with concrete.

Breech block removed.

Shield measurement: approximately 57 9/16 inches wide by 55 ½ tall by 1/8 thick.

Diameter of wooden wheels with spokes and metal rim: 39 ½ inches.

Barrel length: 54 3/8 inches.

Diameter of bore at muzzle: 2 7/8 inches (2.875 inches or 73.025 mm). The diameter of a new 75 mm bore measures 2.9528 inches, a difference of .0778 of an inch. This small discrepancy in bore diameter is due to rust and the application of a thick, tar-like protective sealant. The entire weapon, including the wheels, has been coated with this black sealant. Condition: fair to good, considering the gun's exposure to the elements while on Kiska or Little Kiska Island and its location outdoors at the Adak Naval Air Station. In places the black sealant on the gun has blistered. The metal underneath has been exposed and is actively flaking. Even with parts missing or frozen in place by rust or welds, the gun retains its overall integrity. Prompt professional restoration is recommended to insure the gun's survival.

The following was noted during a brief inspection of the National Park Service gun:

Bore remains clear from breech to muzzle.

Breech block removed.

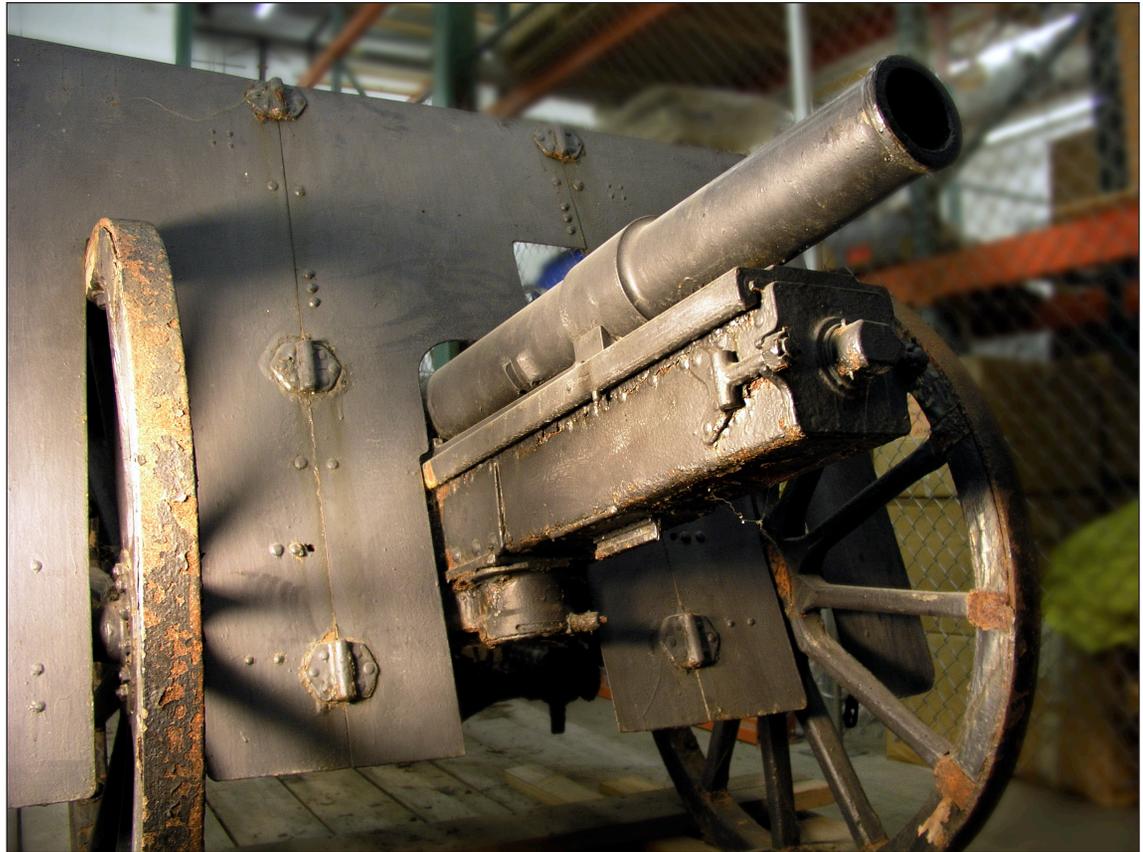
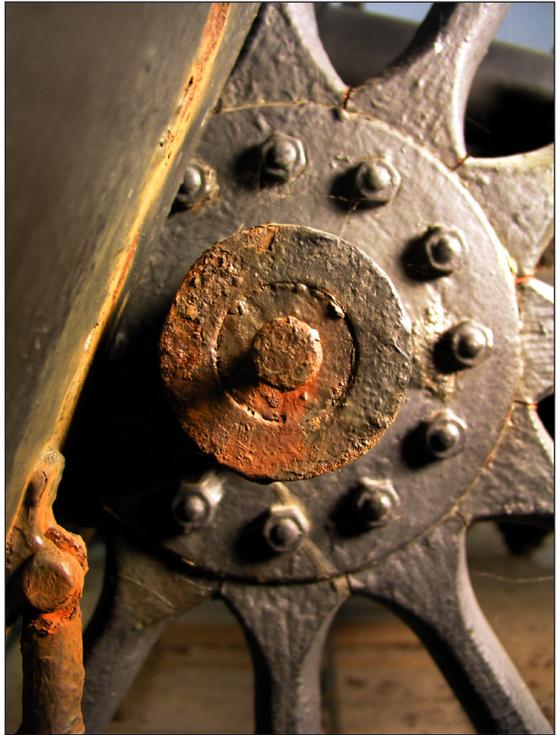
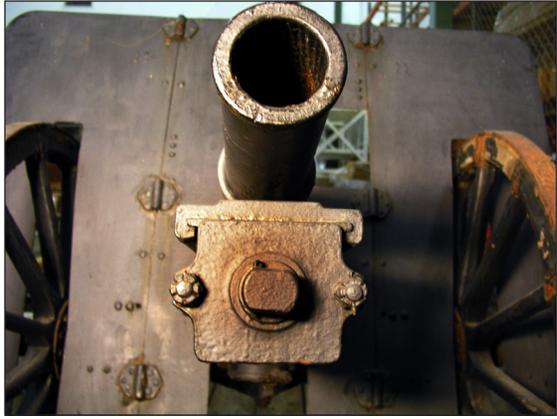
Most moving parts, especially those associated with the firing or laying of the gun have been welded or have rusted in place. As with the Rasmuson Model 41, the entire NPS gun has been liberally coated with a black, tar-like, protective sealant. Condition is consistent with the Rasmuson gun as well.

Prompt professional restoration is recommended to insure the gun's survival.

Photographs taken of the National Park Service 75 mm Model 41 Mountain gun appear on the following pages; all images by Archgraphics.



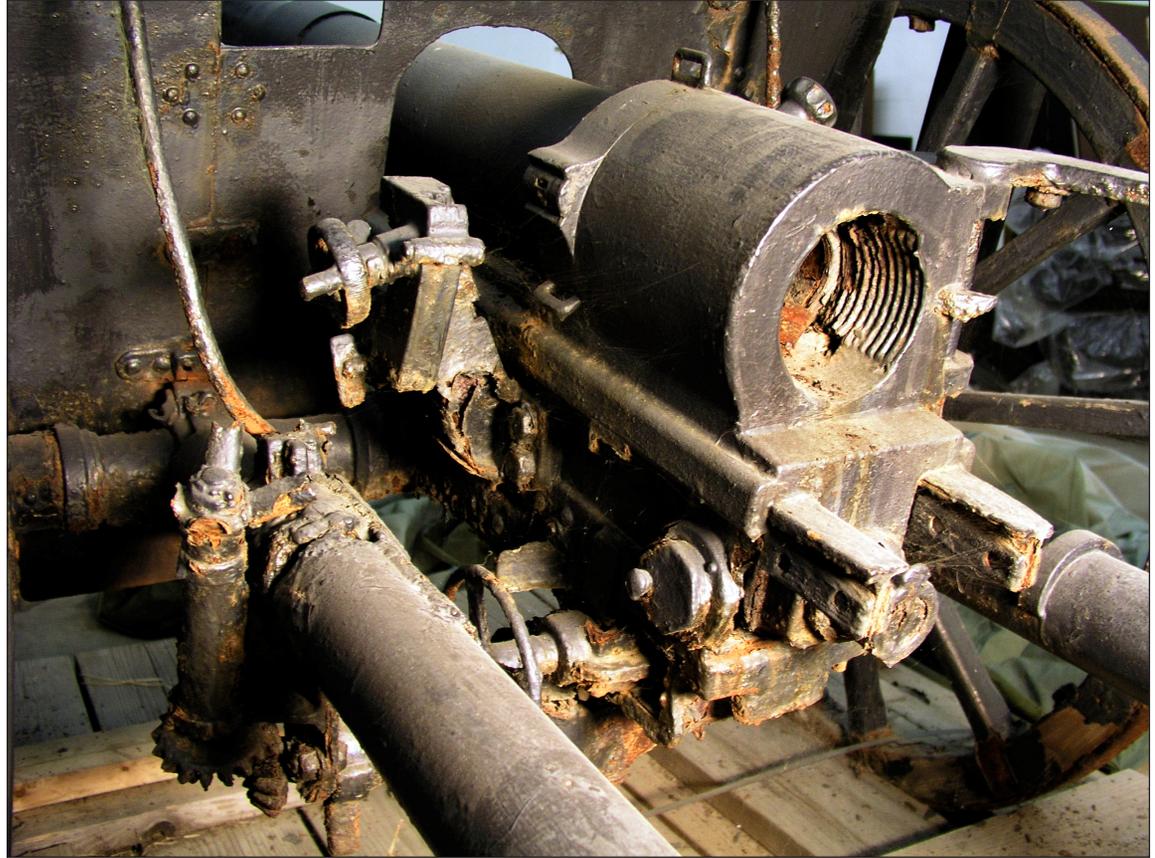
Model 41 (1908) 75 mm Mountain gun at National Park Service warehouse, Anchorage, Alaska. Note unusual rectangular trail.



Above: oblique front view of Model 41 (1908) 75 mm Mountain gun showing shield, barrel, and hydro-spring recoil mechanism

Above left: detail of muzzle and front of hydro-spring recoil mechanism

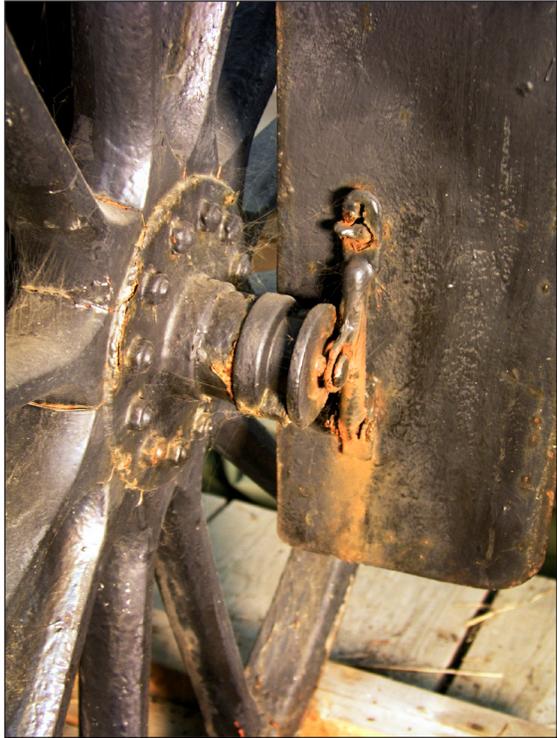
Left: detail of wheel hub



Above: oblique view of left hand side of Model 41 (1908) 75 mm Mountain gun breech with remains of laying (aiming) apparatus (wheels, gears, etc.)

Above left: view of breech opening with breech block hinge on right

Left: detail of interrupted screw breech opening



Above: view of right hand side of Model 41 (1908) 75 mm Mountain gun

Above left: detail of shield/axle connector



Left: detail of metal wheel rim

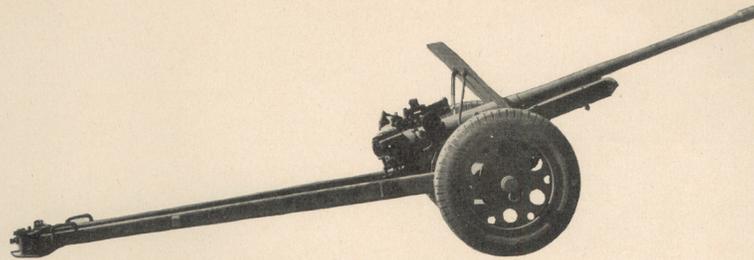


Figure 213. Model 1 (1941) 47-mm gun.

g. **Model 92 (1932) 70-mm howitzer (Battalion gun).** (1) *General description.* This weapon (fig. 214), despite its unusual appearance, has proved to be effective as an infantry support howitzer. It has an interrupted thread type, drop breech-block mechanism. Light in weight and maneuverable, it fires a projectile of relatively large weight, and can deliver fire at ranges varying from 110 yards to 3,000 yards. The Japanese markings 九二式 歩兵砲 which read "92 model infantry gun", appear on the barrel.

(2) *Characteristics.*

Caliber.....	70-mm (2.76 inch).
Total weight in action..	468 pounds.
Thickness of armor shield.....	0.156 inch.
Traverse.....	800 mils (45° total).
Elevation.....	+50°
Depression.....	-10°
Range.....	3,075 yards.
Danger area of burst..	40 yards (approximately).

(3) *Ammunition.* The ammunition is semifixed, the propelling charge being divided into four incre-

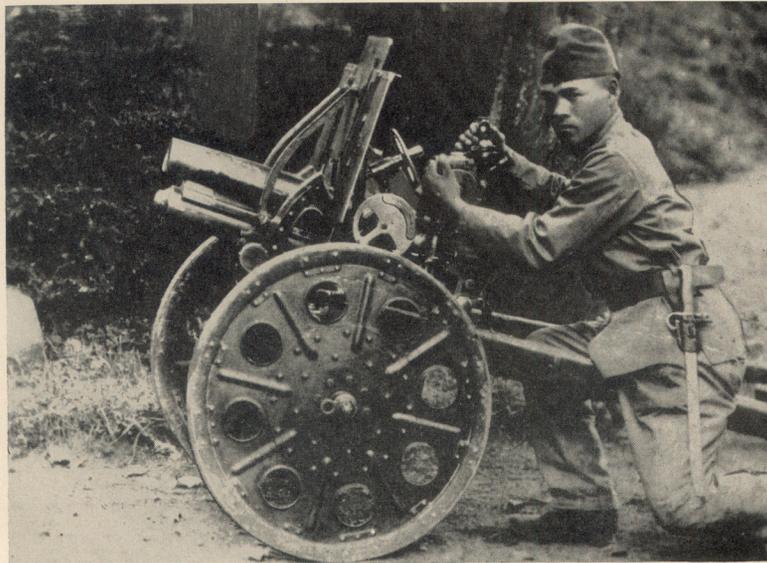


Figure 214. Photograph of model 92 (1932) 70-mm howitzer (Bn. gun) showing gunner and sights.

70 mm Model 92 Battalion Howitzer

Characteristics:

Caliber: 70 mm (2.76 inch)

Total weight in action: 468 pounds

Thickness of armor shield: 0.156 inch

Traverse: 45 degrees total

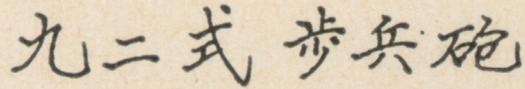
Elevation: +50 degrees

Depression: -10 degrees

Range: 3,075 yards

Danger area of burst: approximately 40 yards

Ammunition: High explosive, armor piercing, and smoke shells



九二式歩兵砲

The above Japanese characters found on the barrel of the Model 92 70 mm howitzer read: "92 Model infantry gun." Illustration from *Handbook on Japanese Military Forces*, 15 September 1944, page 219

DESPITE ITS UNUSUAL APPEARANCE, the Model 92 (1932) 70 mm howitzer (Battalion Howitzer) proved effective in the role of close infantry support. Light in weight and maneuverable, it could fire a projectile of relatively large weight at ranges varying from 110 yard to 3,000 yards. The gun had an interrupted screw drop breech block. Japanese markings on the barrel read "92 model infantry gun." By definition, a howitzer is a gun of relatively short barrel length that can deliver a projectile at medium muzzle velocity at a usually high directory. The line of fire may be indirect with the target not visible to the gun crew. The weapon is useful in delivering fire to targets in defilement or hidden by terrain, with projectiles "lobbed" over fortifications or mountains. In contrast a "gun" has a longer barrel that can deliver a projectile at high velocity at a relatively flat directory. Fire is usually direct, with the target visible to the gun crew.

Only two Model 92 (1932) 70 mm howitzers were found at Kiska. Ammunition for the gun is fixed and has point detonating fuzes.

RESTRICTED

TM-E 30-480
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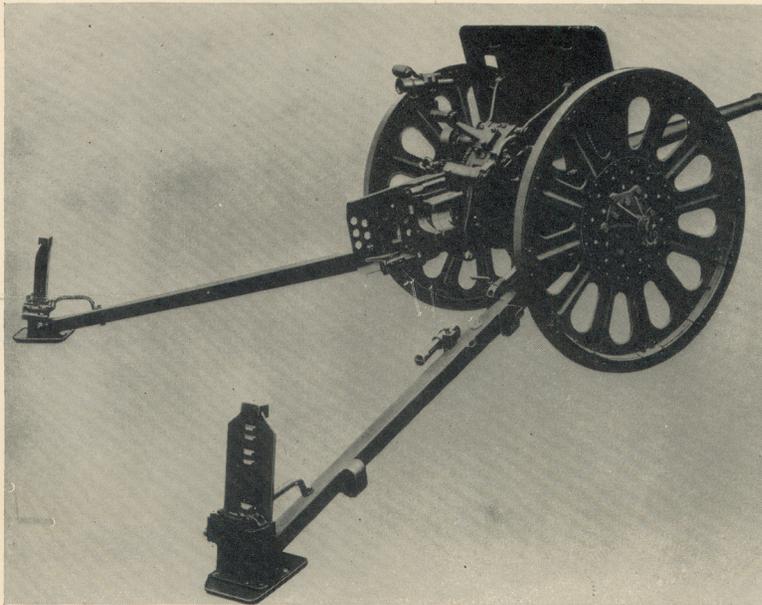


Figure 212. Model 94 (1934) 37-mm gun.

is an infantry close support weapon firing both high explosive and armor piercing high explosive ammunition. It has a semiautomatic, horizontal, sliding type breechblock. When the shell is loaded, the rear of the cartridge case trips a catch that closes the breechblock. Recoil action of firing opens the breech and extracts the cartridge case. Sighting is by a straight telescopic sight. This weapon has marked on the barrel the following 九四式三十七口径砲 which reads "94 model 37-mm gun."

(2) Characteristics.

Caliber.....	37-mm (1.46 inch).
Length (over-all in travelling position).....	114 inches.
Width (over-all in travelling position).....	47 inches.
Weight.....	714 pounds.
Traverse.....	1,062 mils (60°).
Elevation.....	+480 mils (27°).
Maximum range.....	5,000 yards.
Muzzle velocity (armor piercing ammunition).....	2,300 feet per second.

NOTE. This piece may be found mounted on wooden spoke wheels or with perforated steel disc wheels as illustrated in figure 212.

218

f. Model 1 (1941) 47-mm gun. (1) General description. This is an antitank weapon of modern design (fig. 213). The wheels are independently sprung, and a lock is provided on each wheel for locking the springs out of action. It has a semiautomatic, horizontal, sliding wedge breech mechanism. The low silhouette, wide tread, and long split trails give this gun excellent stability. Preliminary tests indicate a muzzle velocity of 2,700 feet per second. The steel disc wheels are fitted with sponge rubber filled tires. This weapon has marked on its breech the following symbols 一式機動四十七口径砲 which mean "Model 1 47-mm mobile gun."

(2) Characteristics.

Caliber.....	47-mm (1.85 inch).
Weight.....	1,600 pounds.
Traverse.....	60°.
Elevation.....	+19°.
Depression.....	-11°.
Muzzle velocity.....	2,700 feet per second.

(3) Ammunition. Armor piercing high explosive and standard high explosive shells have been recovered.

RESTRICTED

Model 94 (1934) 37 mm Mountain Gun

Characteristics:

Caliber: 37 mm (1.46 inch)

Length: (overall in traveling position) 114 inches

Width: (overall in traveling position) 47 inches

Weight: 714 pounds

Traverse: 60 degrees

Elevation: 27 degrees

Maximum range 5,000 yards

Muzzle velocity (armor piercing ammunition): 2,300 feet per second

九四式三十七糎砲

The above Japanese characters found on the barrel of the Model 94 37 mm Mountain gun read: "94 Model 37-mm gun." Illustration from *Handbook on Japanese Military Forces*, 15 September 1944, page 218

THE MODEL 94 (1934) 37 mm Mountain gun was referred to by the Japanese as the "Infantry rapid fire gun." At Kiska, nine such guns were found in widely separated areas to bolster trench and machine gun defenses at strategic beaches.

The Model 94 (1934) 37 mm Mountain gun was an infantry support weapon used primarily against tanks and mechanized equipment. It had a semiautomatic, horizontal, sliding type breech block. When the shell was loaded, the rear of the cartridge case tripped a catch that closed the breech block. Upon firing, the recoil action automatically opened the breech and extracted the cartridge case. The gun fired both high explosive and armor piercing high explosive (usually fixed) ammunition and was sighted by a straight telescopic sight. The gun is marked on the barrel "94 model 37 mm gun." This mobile artillery piece may be found mounted on wooden spoke wheels or with perforated steel disc wheels.



Model 94 (1934) 37 mm mountain gun, Little Kiska Island as recorded in 1995. (photographer: Charles Moley)

THE MAPS

The National Park Service, National Historic Landmark Collections in Anchorage Alaska, holds two sources compiled by U.S. Intelligence that plot the location of Japanese guns abandoned by Imperial Forces on Kiska and Little Kiska islands, 28 July 1943. (National Park Service, Alaska Regional Office, 240 W5th Avenue, Anchorage, 99501; Contact: Janet Clemens, Historian 644-3461)

The first source titled *Detail Chart Index Kiska Island* was “Prepared by the Photographic Interpretation Unit, Advanced Intelligence Center, North Pacific Force, and Photographic Interpretation Section, A-2, 11th Air Force.” The document contains fifty-one, photocopied, 11 by 17 inch charts that cover the entirety of Kiska and Little Kiska islands. The National Park Service copy was “Reproduced at the National Archives” (year not given). The original documents may have been printed in color (or tinted) as the legend states that certain features are “in blue.”

This Chart Index was developed prior to and in preparation of the Allied invasion and reoccupation of Kiska and Little Kiska islands, 15 August, 1943. The document is a “second edition,” dated July 28, 1943, ironically, the same day as the Japanese garrison’s clandestine evacuation from the islands. The charts are based on the “Kiska Map by Corps of Engineers, U.S. Army, Scale 1/25000, 1943.” The scale of the charts themselves, however, are 1/10000.

Important features (including gun clusters) were circled by U.S. Intelligence prior to printing and given an associated number. Unfortunately no legend (with numbered feature descriptions) accompanied the National Park Service copy of the Index. A copy of the legend may exist at the National Archives in Washington D.C., and if so, could provide important information concerning the guns on Kiska and Little Kiska islands.

The second source is comprised of 4 sheets that together form the “Kiska Harbor & Vicinity” map series. The series was “Prepared under the direction of the Chief of Engineers, U.S. Army, 1943. Horizontal control by U.S. Coast and Geodetic Survey, 1873, 1904, and U.S. Navy, 1933. 1935. Topography by 29th Engineers, U.S. Army, using multiplex aero-projectors, from K-17 (single lens) aerial photographs. Photography by 11th Air Force, U.S. Army 1943.” The series is an “Edition of July 1943.” The scale is 1/10000.

Coverage is confined to southeastern Kiska Island, from North Head (excluding Little Kiska Island) westward to Gertrude Cove.

The four sheets that form this document are joined together by cellophane tape. The document measures roughly 59 inches wide by 43 inches tall. The true age is uncertain. The paper stock is yellowed as is the majority of the cellophane tape that binds the sheets together. The outside edges of the document are frayed and torn, in particular the upper, “northern” edge. The document has been folded and refolded many times and shows signs of multiple use.

Japanese road, trails, and military use areas have been highlighted by hand on the document in medium-point red and orange markers, post-production. Notations have been added in cursive and print text in orange and red markers post-production as well. At this time it is unknown by whom or when these comments were added to the document.

Although both the above documents were based upon aerial photographs taken by the 11th Air Force, U.S. Army and both date to July 1943, a cursory examination shows the two are quite dissimilar. Coastlines and contours are rendered differently and the number and locale of Japanese structures, defensive positions, guns, machine guns, and other features do not correspond. Fortunately, there is agreement as to the location of most of the larger bore guns.

Six maps plotting the locale of Japanese guns on Kiska and Little Kiska islands were generated for this report using the Chart Index series as base maps. Areas covered coincide with the “1943 GEOGRAPHIC BREAKDOWN AS DETERMINED BY THE U.S. ALASKA DEFENSE COMMAND” located at the beginning of this report and include:

North Head	(Map 1)
Main Camp	(Map 2)
Sub Base	(Map3)
South Head	(Map 4)
Gertrude Cove	(Map 5)
Little Kiska	(Map 6)

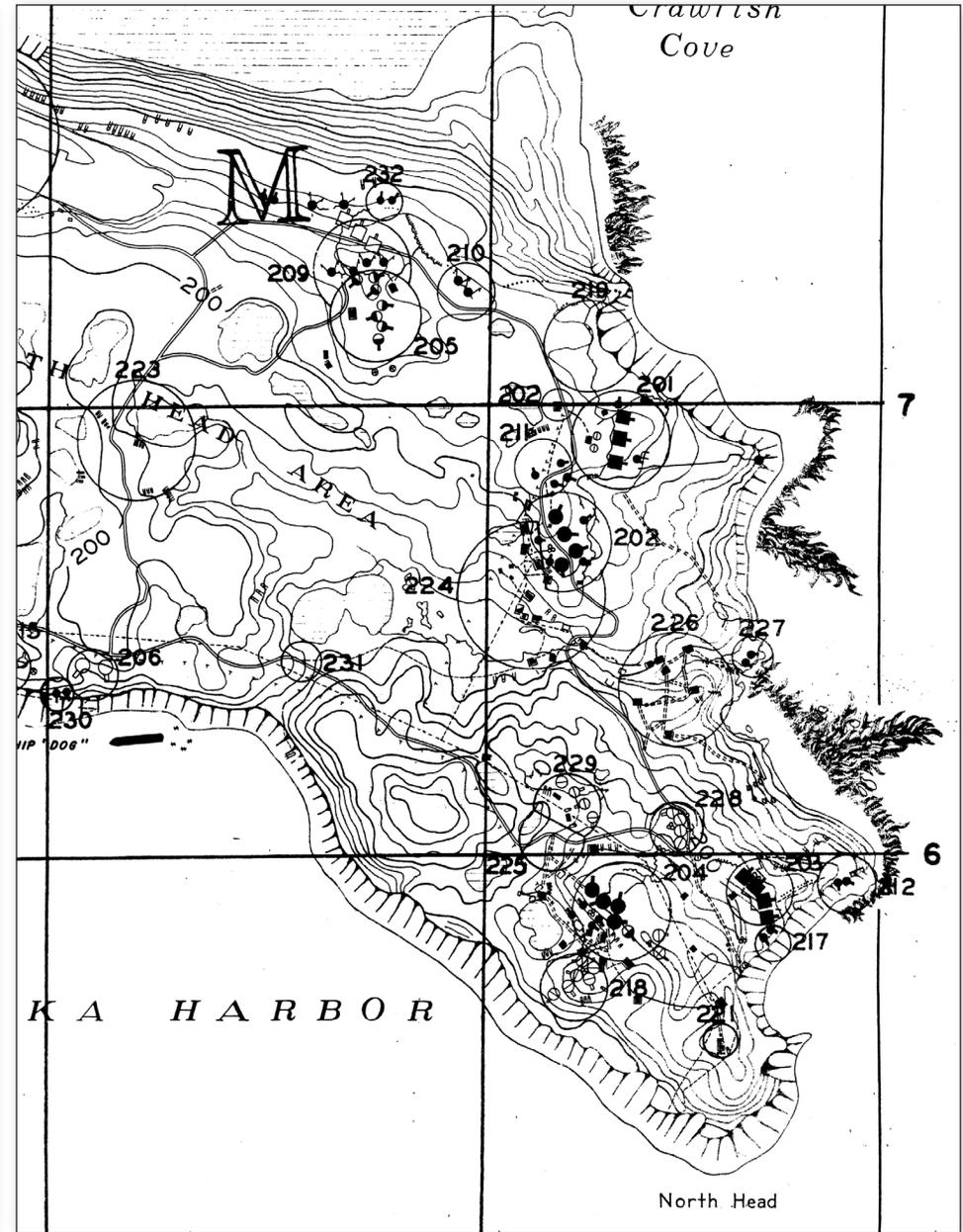
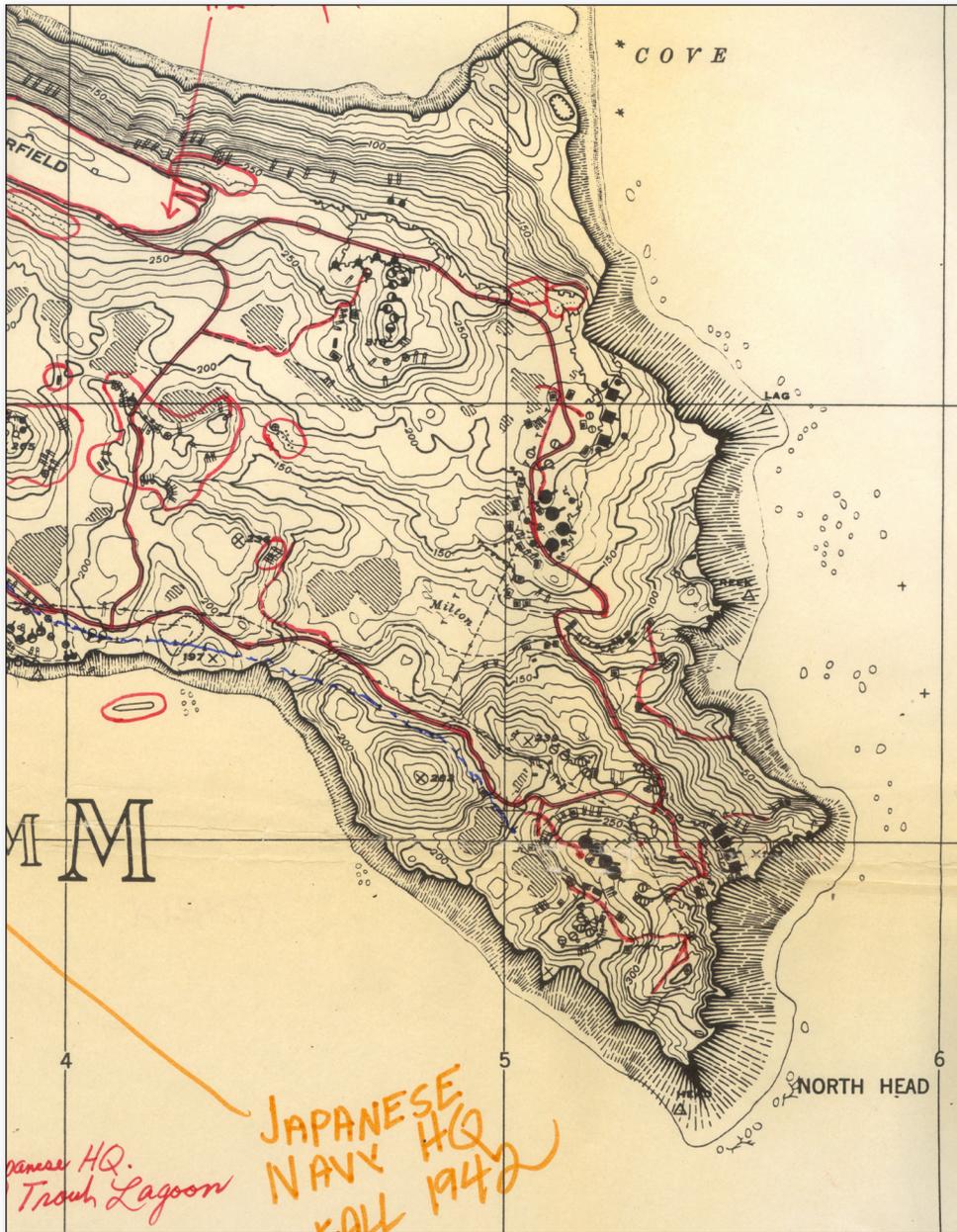
It is thought the Chart Index series postdates the Kiska Harbor and Vicinity Maps and represents the more accurate of the two documents discussed above. As already stated, the Chart Index is a “second edition.” It is also marked prior to printing with circles denoting important features; the “Kiska Harbor & Vicinity” map series does not contain this level of detail. Finally, on the most pragmatic level, the 51 maps of the Chart Index cover areas the Kiska Harbor and Vicinity Maps do not, such as Little Kiska Island and South Head.

The legends of both of these documents group Japanese guns in the following broad categories: Heavy A.A.; Medium A.A.; Coastal Defense Gun; and Covered Artillery Emp. (emplacement). Except in the case of North Head (where the weapons were broken down into bore diameter and type), the bore diameter and type of guns in all other geographic areas could only be inferred by reference to the “1943 KISKA GUN INVENTORY AS COMPILED BY THE U.S. ALASKA DEFENSE COMMAND”

located at the beginning of this report. Where the gun tally was low, as in the case of Little Kiska (Map 6), the bore size and type could be determined with little difficulty. Where the gun tally was high, such as at the Main Camp and Gertrude Cove (Maps 2 and 5), the bore diameter and type of gun remained generic (i.e., Medium A.A. etc.). In many cases, the number of guns given in the 1943 Gun Inventory for a specific geographic area differed from the number of like guns plotted on the Chart Index series of that locale. This was especially the case when it came to artillery. Only ground truthing will determine which of the plotted gun sites actually contain weapons.

Following page, left: detail of North Head from the "Kiska Harbor & Vicinity" map series. The series was "Prepared under the direction of the Chief of Engineers, U.S. Army, 1943. Horizontal control by U.S. Coast and Geodetic Survey, 1873, 1904, and U.S. Navy, 1933. 1935. Topography by 29th Engineers, U.S. Army, using multiplex aero-projectors, from K-17 (single lens) aerial photographs. Photography by 11th Air Force, U.S. Army 1943."

Following page, right: detail of Sheet No. 20 from the map series entitled "Detail Chart Index Kiska Island." The series was "Prepared by the Photographic Interpretation Unit, Advanced Intelligence Center, North Pacific Force, and Photographic Interpretation Section, A-2, 11th Air Force, July 28, 1943."



A THIRD SOURCE

The two most important illustrations centered on the Japanese guns on North Head, Kiska Island can be found on in the publication *The Enemy on Kiska* (no page numbers) compiled by the U.S. Alaska Defense Command in 1943. The first illustration titled “Breakdown of Weapons North Head,” shows a schematic of Japanese guns and machine guns as arranged on North Head. An associated map on the following page titled “The Defenses of North Head, Reproduced from 29 Engr. – Kiska Harbor – 1 to 10,000, By G-2 Map Section Adv. CP. HQ. A.D.C.” shows these same guns overlain on a North Head base map. Dated, “As of Aug. 1943,” the “*Enemy on Kiska*” map postdates the two documents in the National Park Service, National Historic Landmark Collections and represents the most accurate plotting of Japanese guns on North Head, Kiska Island after Japanese evacuation. Unlike the generic categories provided in the legends of the NPS maps (“Coast Defense, etc.), the August 1943 map provides millimeters and inches of guns (6 inch, 4.7 inch). These numbers represent ground truthing of bore diameters that could only have been crudely estimated by examination of aerial photographs. The gun data for North Head given in *The Enemy on Kiska* was overlain atop a base map from the Chart Index series.

Unfortunately, the publication *The Enemy on Kiska* contains no other illustrations of the breakdown of weapons for the remainder of Kiska and Little Kiska islands.

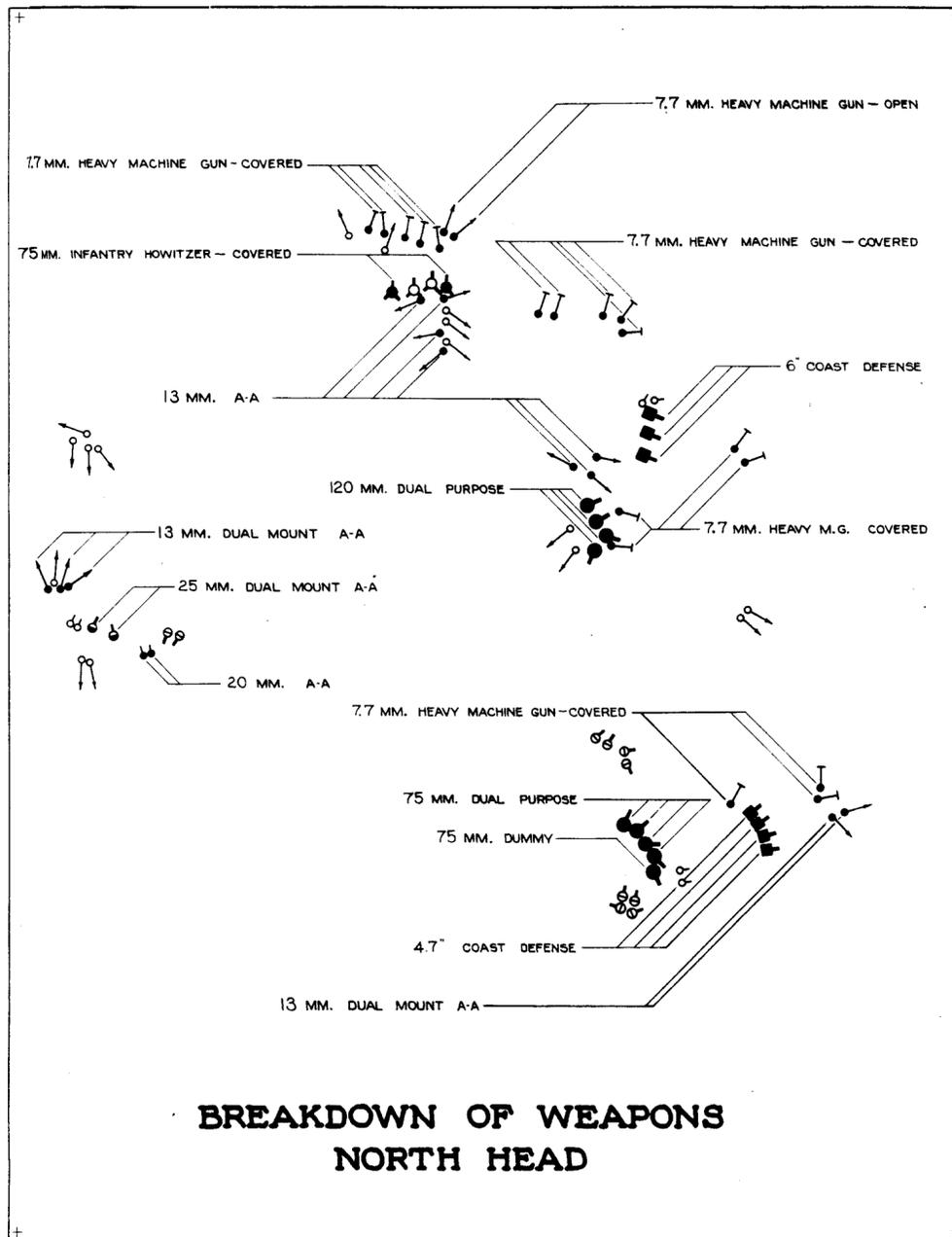


Illustration titled "Breakdown of Weapons North Head," from *The Enemy on Kiska* (no page number) compiled by the U.S. Alaska Defense Command in 1943.

THE MOBLEY MAPS

In 1995, Dr. Charles Mobley, in conjunction with Dames and Moore, conducted an archaeological survey of Kiska and Little Kiska islands as part of a hazardous, toxic, and radioactive waste (HTRW) study to inventory contaminated areas on the islands. Dr. Mobley was brought onboard at a late date to take the place of the principle archaeological investigator who had become ill. As the only archaeologist on the HTRW survey team, Mobley was not able to visit all the designated Operable Units or AREAS (as the survey areas were called by Dames and Moore). In a number of cases, Mobley relied upon information collected by other members of the Dames and Moore team to describe the cultural resource landscape. The team's findings were published in *Cultural Resource Investigations at Kiska, Little Kiska, and Semisopchnoi, Aleutian Islands, Alaska*, 1996.

Two maps were generated for this report based upon Mobley's Figure 47 [Dames and Moore Figure 2-1] and Mobley's Figure 28 [Dames and Moore Figure 2-2]. The maps contain pertinent data from Mobley's report as well as photographs. These maps reflect the cultural resource landscape of Kiska and Little Kiska islands as of 1995 and should be weighed against the 6 maps generated for this report using data dating to 1943.

NOTE: The digital maps generated for this report measure 12 inches by 18 inches or greater. They may be printed on a letter size printer using the "Fit to Print" function, but much detail will be lost. The maps were generated in high resolution and may be examined in detail (using the "zoom" function) on a computer screen.

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U.S. Army

1944 *Japanese Weapons*. U.S. Army Technical Manual 30-480. (As quoted in Mobley, this document appears to be a revised reprint of the original Technical Manual listed above. Cited page numbers for this document do not correspond to those of the original copy used for this publication. Revised document could not be located).

U.S. Alaska Defense Command

1943 *The Enemy on Kiska*, Periodic Report #60. Kiska: HQ, U.S. Troops, Office of the Intelligence Officer.

Map 1: Plotted Locations of Japanese Guns on North Head, Kiska Island 1943



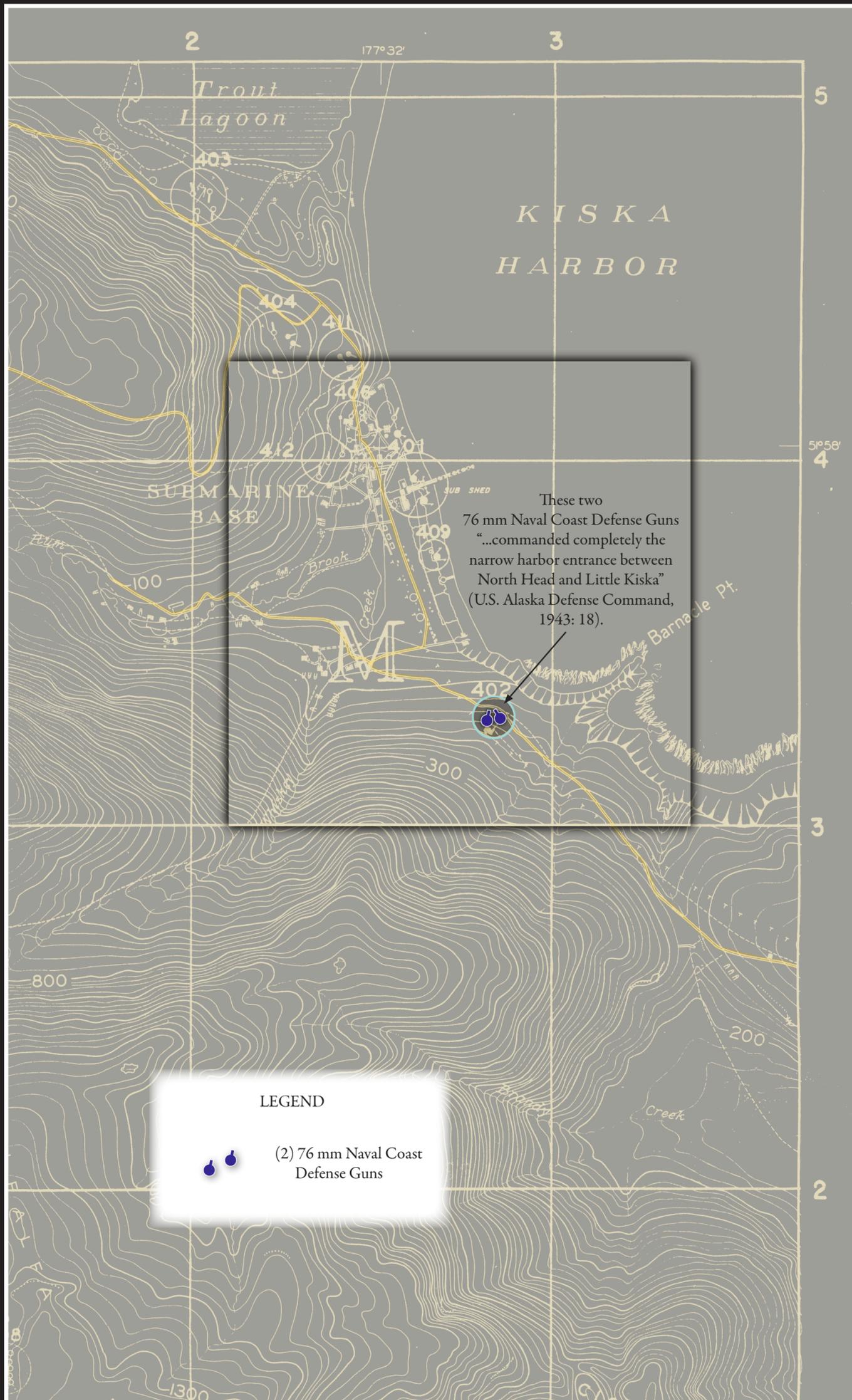
This illustration is a digitized/colorized version of Sheet No. 20 of the map series entitled *Detail Charts Kiska Island*, "Prepared by the Photographic Interpretation Unit, Advanced Intelligence Center, North Pacific Force, and Photographic Interpretation Section, A-2, 11th Air Force, July 28, 1943." Medium AA weapons identified in millimeters by the illustration "Breakdown of Weapons North Head" in the publication *The Enemy on Kiska* by Irving P. Payne, 1st Lt., Sig. C., dated 16 August, 1943.

Map 2: Plotted Locations of Japanese Guns at Main and Upper Camps, Kiska Island 1943



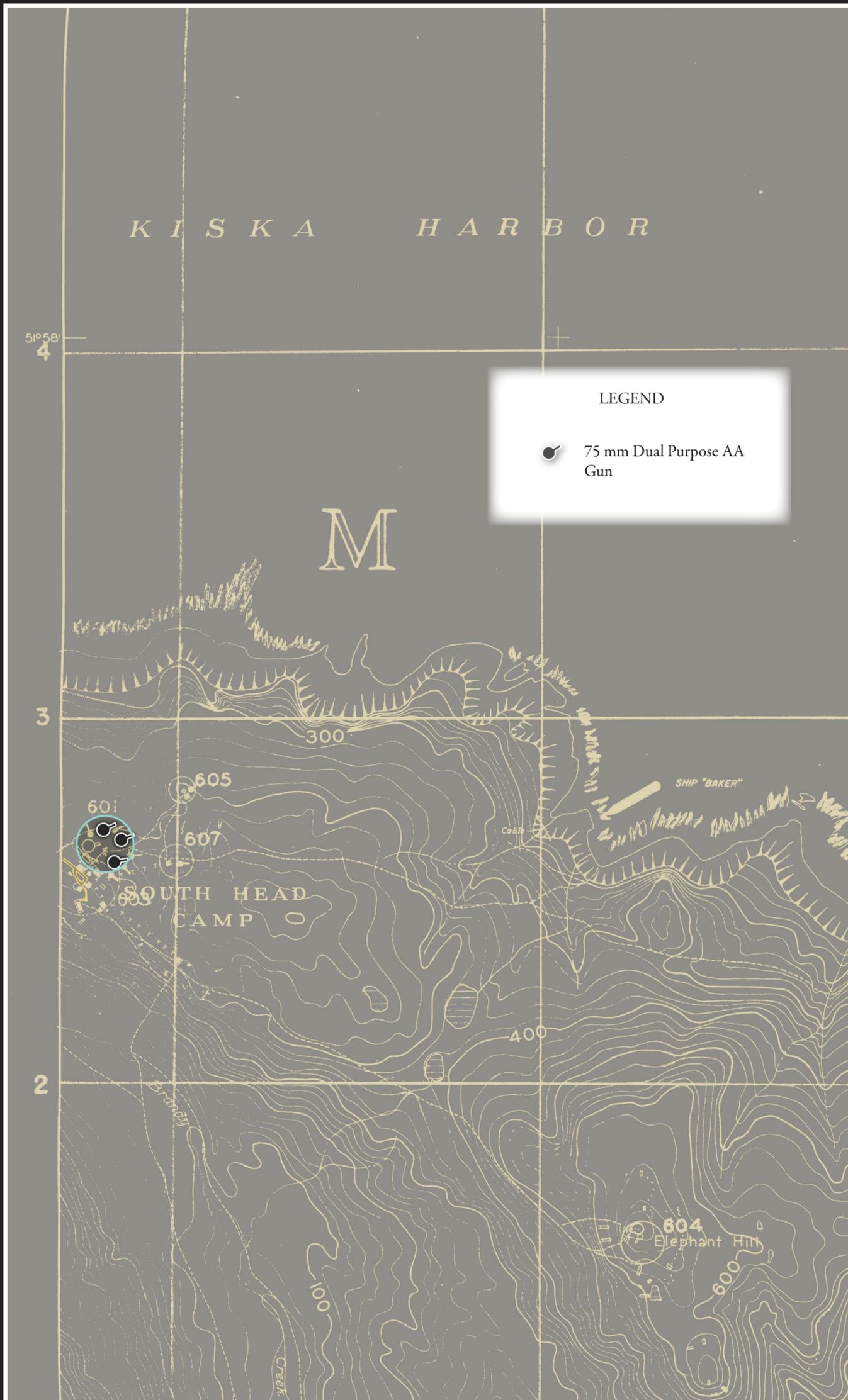
This illustration is a digitized/colorized version of Sheet No. 19 of the map series entitled *Detail Charts Kiska Island*, "Prepared by the Photographic Interpretation Unit, Advanced Intelligence Center, North Pacific Force, and Photographic Interpretation Section, A-2, 11th Air Force, July 28, 1943." Millimeters of guns could not be determined with available data.

Map 3: Plotted Locations of Japanese Guns at Submarine Base, Kiska Island, 1943



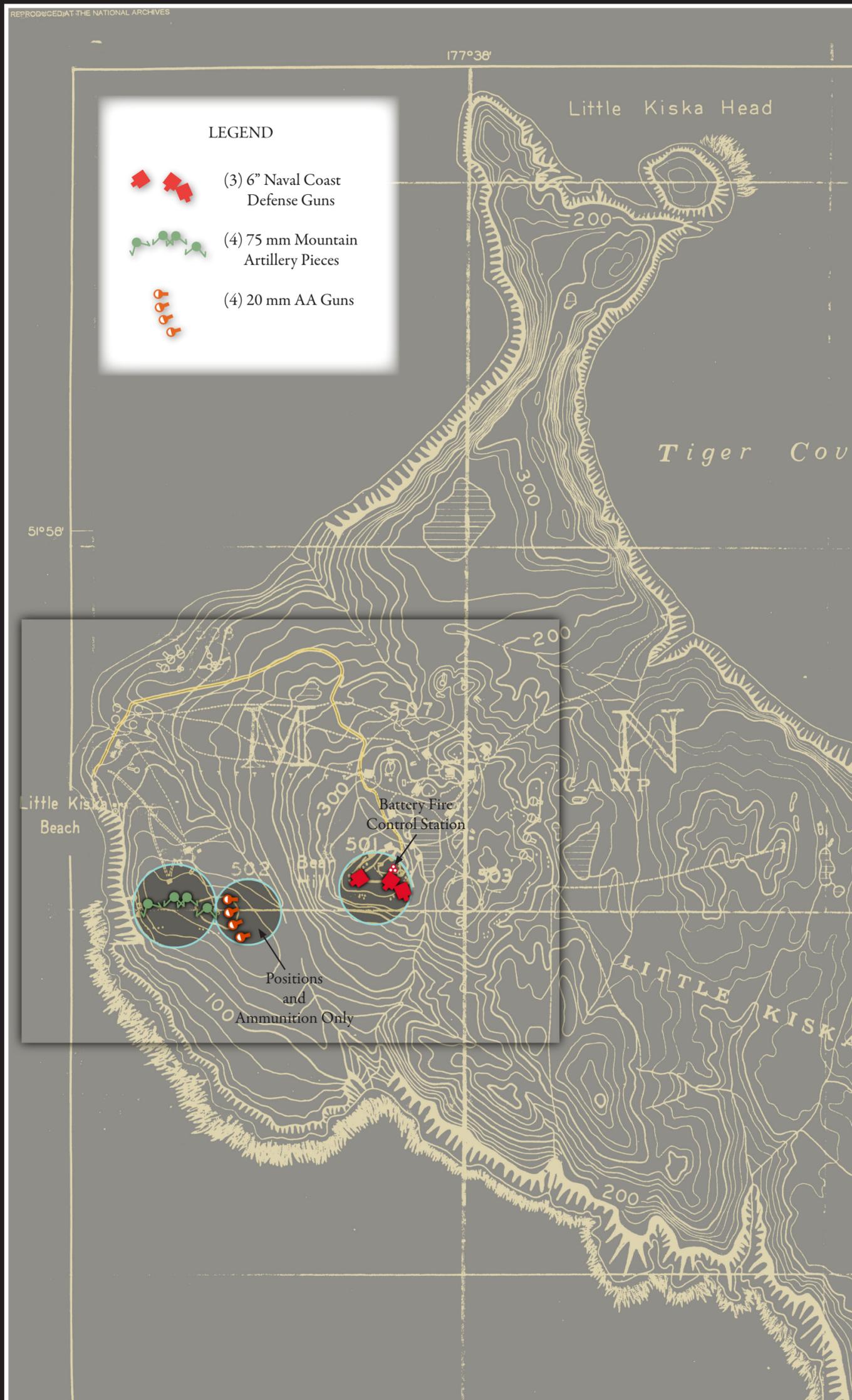
This illustration is a digitized/colorized version of Sheet No. 26 of the map series entitled *Detail Charts Kiska Island*, "Prepared by the Photographic Interpretation Unit, Advanced Intelligence Center, North Pacific Force, and Photographic Interpretation Section, A-2, 11th Air Force, July 28, 1943."

Map 4: Plotted Locations of Japanese Guns at South Head, Kiska Island, 1943



This illustration is a digitized/colorized version of Sheet No. 27 of the map series entitled *Detail Charts Kiska Island*, "Prepared by the Photographic Interpretation Unit, Advanced Intelligence Center, North Pacific Force, and Photographic Interpretation Section, A-2, 11th Air Force, July 28, 1943."

Map 6: Plotted Locations of Japanese Guns on Little Kiska Island, 1943



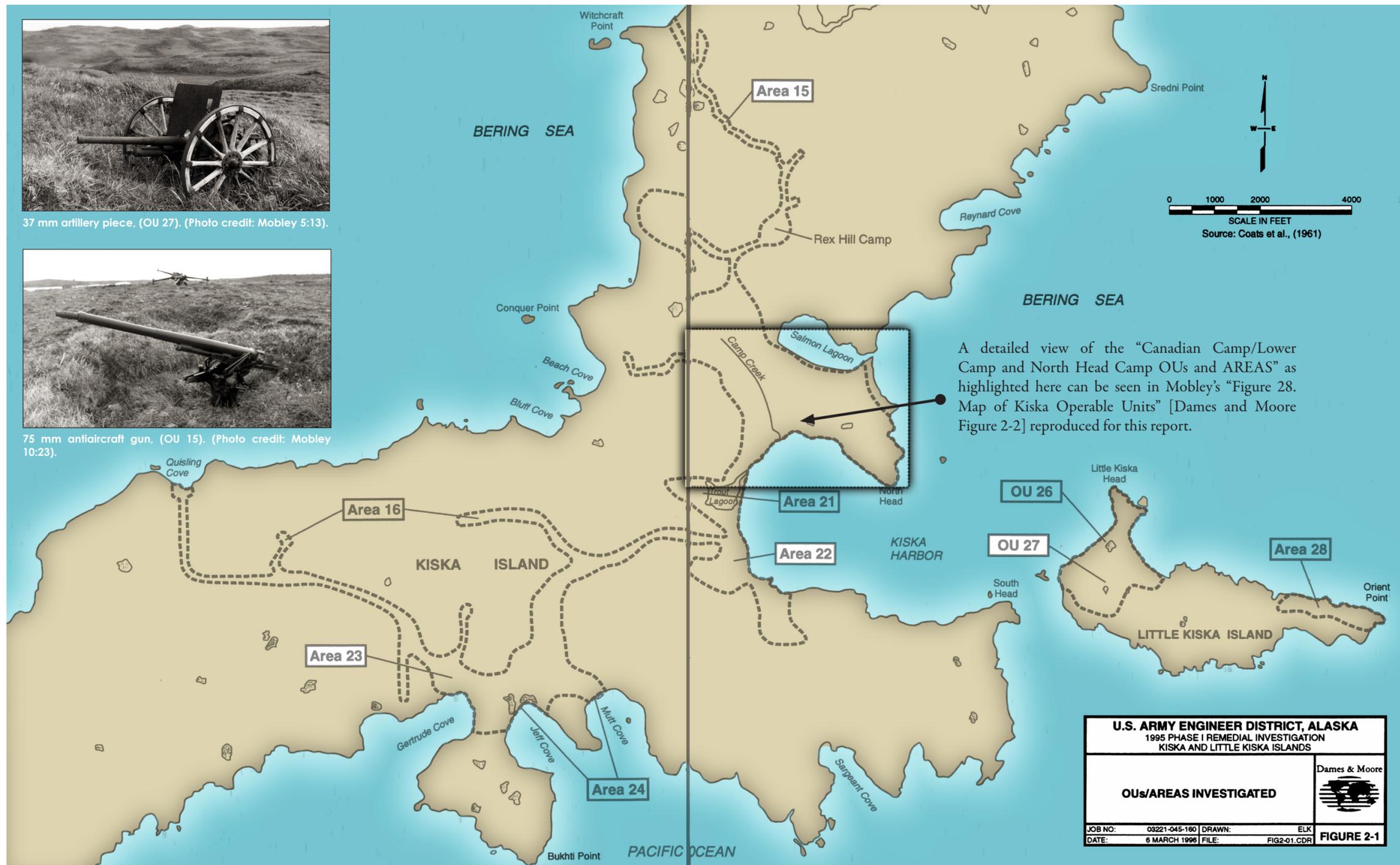
This illustration is a digitized/colorized version of Sheet No. 29 of the map series entitled *Detail Charts Kiska Island*, "Prepared by the Photographic Interpretation Unit, Advanced Intelligence Center, North Pacific Force, and Photographic Interpretation Section, A-2, 11th Air Force, July 28, 1943."



37 mm artillery piece, (OU 27). (Photo credit: Mobley 5:13).



75 mm anti-aircraft gun, (OU 15). (Photo credit: Mobley 10:23).



A detailed view of the “Canadian Camp/Lower Camp and North Head Camp OUs and AREAS” as highlighted here can be seen in Mobley’s “Figure 28. Map of Kiska Operable Units” [Dames and Moore Figure 2-2] reproduced for this report.

U.S. ARMY ENGINEER DISTRICT, ALASKA 1995 PHASE I REMEDIAL INVESTIGATION KISKA AND LITTLE KISKA ISLANDS	
OUs/AREAS INVESTIGATED	Dames & Moore
JOB NO: 03221-045-160 DRAWN: ELK	FIGURE 2-1
DATE: 6 MARCH 1996 FILE: FIG2-01.CDR	

Left: Mobley’s Figure 47 [Dames and Moore Figure 2-1] showing OPERABLE UNITS (OUs) and AREAS investigated by Dames and Moore in 1995 as part of a hazardous, toxic, and radioactive waste (HTRW) study to inventory contaminated areas on Kiska and Little Kiska islands.

Descriptions of WWII Japanese materiel below by Dr. Charles M. Mobley as found in *Cultural Resource Investigations at Kiska, Little Kiska, and Semisopchmoi, Aleutian Islands, Alaska, 1996*.

It should be noted that as the only archaeologist on the HTRW survey team, Dr. Mobley was not able to visit all designated OUs or AREAS. In such cases, Mobley relied upon information collected by other members of the Dames and Moore team to describe the cultural resource landscape.



Three Japanese 75 mm anti-aircraft weapons in “gun dump” at Gertrude Cove, AREA 23. One 75 mm artillery piece was also found in this area. The former weapons are used primarily against attacking aircraft, the latter against enemy ground forces. Mobley also noted 75 mm coastal defense guns in AREA 23. These weapons are employed primarily against enemy Navy vessels. All three weapons are described as 75 mm, but each is a specialized weapon with a distinct purpose (Photo credit: Mobley 3:18).

Area 15–Kiska Island Road Net North/Radar Station Camp Road
The access road west to the former Radar Station Camp branches off Race Road approximately three quarters of a mile north of Airstrip Road. “Four 75 mm guns, a 20 mm anti-aircraft gun, and wood and metal debris were observed along this road...” (Mobley 45). The four 75 mm anti-aircraft guns were emplaced near the junction of Race and Radar Station Roads. One of the pieces was completely up-ended so that its five-legged “spider” base hung suspended in the air. Another gun was partly turned over. Another had a 75 mm projectile wedged into the end of its barrel. The fourth had its barrel detached from its base (Mobley 92). Mobley personally saw the one 20 mm anti-aircraft gun “off Area 15 (Kiska Island Road Net North), in what the Allies called the ‘North Central’ area.” He noted “a hexagonal steel bunker buried in the ground approximately 200 feet from the gun” (Mobley 95).

Area 22–Former Submarine Base/South Head Hill
This area consisted of the valley and adjacent hillside along the southwestern corner of Kiska Harbor. It included the former Submarine Base and the defensive positions and roads along South Head Hill east of the Sub Base (Mobley 59). According to Mobley, one 45 mm coastal defense gun was located on the beach approximately 50 feet south of the former submarine railway. Another 40 mm gun was located on South Head Hill, positioned to defend the harbor from points south (66). [Note: no guns of these sizes are described in the gun inventory compiled by Allied intelligence after re-occupation of Kiska Island.] Mobley personally saw one 76 mm Japanese coast defense gun in the Submarine Base area: “Its barrel pokes out over the edge of the sand bluff at the water’s edge, overlooking the submarine base beach at its south end. I didn’t look at it closely, and the weather was too poor to photograph it ...”(88).

Area 23–Gertrude Cove Camp/Trout Lagoon Road
East of Trout Lagoon Road was a small debris pile and “gun dump” containing an undetermined number of 75 mm anti-aircraft guns and one 75 mm artillery piece. Mobley cited from three to possibly five 75 mm anti-aircraft weapons in the gun dump in different sections of his investigation (63, 92). To further complicate the inventory of weapons in Area 23 is the following quote: “Six 75 mm coastal defense guns were abandoned along with other military debris approximately 1/4 mile from the [Gertrude Cove Beach]” (Mobley 67). Allied intelligence, however, noted only two 75 mm coastal defense guns emplaced at Gertrude cove in 1943. The question arises as to whether the military debris located “approximately 1/4 from the beach” in reference to the six 75 mm coastal defense guns, is the same small debris pile located east of Trout Lagoon Road that contains the 75mm anti-aircraft guns? Ground truthing may clarify the number and millimeter of guns in Area 23.

OU 27–Little Kiska Gun Emplacement
The South Pass Road on Little Kiska Island terminates on top of Gun Emplacement Hill. There were three 6-inch coastal defense guns, three 25 mm anti-aircraft guns, one gun turret, and one wheeled cannon (37 mm artillery piece) found on this hill (Mobley 70). Mobley personally saw the three 6” coastal defense guns at this location. He describes them as “massive pieces of steel [that] seem to have been relatively untouched by Allied bombardment, aside from some .50 caliber dents in the armor of one” (87). Mobley also personally examined the one 37 mm artillery piece. “...we saw no others,” he noted. “although they were once distributed at six different locations, it would seem that some have been removed or destroyed” (92-93).



Left: Mobley's Figure 28 [Dames and Moore Figure 2-2] showing the "Canadian Camp/Lower Camp and North Head Camp Operable Units (OUs) and AREAS."



Kiska Island, North Head

In 1995, Mobley reported that, "North Head has the highest concentration of gun emplacements" [on Kiska and Little Kiska islands]. "In general, these are located along the perimeter of North Head Road, in clusters on the hilltops and at other strategic positions such as south of Cable Lake, North Head Point, and on top of Hill '275' south of Junior Lake" (55). Mobley personally saw the four 120 mm anti-aircraft positions on North Head. "They rang[ed] in condition from relatively intact to severely damaged. Most if not all of the damage to the latter was done by an Allied bomb." Mobley also noted "a cluster of 25 mm anti-aircraft weapons moved by the Allies from their original positions" (88).

(OU 4)

At "Operable Unit 4, at the Main Camp, up towards the Canadian Camp garage," Mobley noted "an intact battery of four 75 mm anti-aircraft guns overlooking Kiska Harbor. Each gun is set in a circular depression about

12-14 feet in diameter, made by the enclosing sodded revetment that once contained protected alcoves for shells, gear, and people" (93).

OU 10

Operable Unit 10 is located "along the steep hillside and plateau west and northwest of the Kiska Harbor Lower Camp, above Trout Lagoon Road between 350 and 650 feet ms1" (Mobley 40). The Unit was examined for "approximately 1,200 feet along Trout Lagoon Road between the Lower Camp area and Trout Lagoon, and approximately 1,500 feet up the steep hillside" (40). Two gun emplacements containing disabled 25 mm anti-aircraft guns were found along the hillside.

OU 12

Mobley noted three twin-barreled 25 mm anti-aircraft guns "near OU 12 ... that were obviously re-located there by the Allies after the Japanese

evacuation. They're rusty but relatively intact, and their metal bases, looking like cylindrical steel spools, are nearby" (93-95).

Mobley concluded the 1995 Japanese gun inventory as follows:

"The remaining weapons I saw were small anti-aircraft guns, 47 of which were counted by the Allies when they took inventory in 1943. Others on the Dames & Moore crews saw examples that I didn't."

Above, top: Intact 120 mm anti-aircraft gun with armored shield, North Head. (Photo credit: Mobley 8:28). Above, bottom: One of four 75 mm anti-aircraft guns overlooking the Main Camp. (Photo credit: Mobley 2:10).



Right: Three twin-barreled 25 mm anti-aircraft guns on North Head near OU 12.