

***Early
Radio Communications
in the
Thirteenth Naval District
Washington, Oregon
and
Alaska***





Early Navy Radio Communications in the Thirteenth Naval District,
Puget Sound, Washington, and Alaska.

BACKGROUND HISTORY

Any account of the early history of the Thirteenth Naval District must give space and proper recognition to the work of Lieutenant A. B. Wyckoff, USN. During three years of service on Puget Sound, May 1877 to May 1880, this officer became convinced that the great navy yard of the Pacific Coast should be on the shores of these waters. In his reminiscences he writes: "During my service on the Sound, I became greatly impressed with the commercial possibilities of that magnificent inland sea; its defensibility; geographical location (the nearest point of the United States to Alaska and the Orient, and the nearest point of our Pacific Coast to the Great Lakes, Chicago and New York), and on the shortest line through the United States from Europe to China and Japan. Then I was impressed with the wonderful natural resources of unequalled timber, inexhaustible coal and iron ore in the mountains, and a mild climate in which work could be done out of doors every day of the year. I was already familiar with all the navy yards in the country and could see that no one of them began to have the natural advantages that one located on Puget Sound would have when the increase of population and commerce justified it. All these reflections I embodied in communications to the authorities in Washington in 1879 and suggested that two hundred thousand acres of timber land be set aside as a naval reservation. I was a young Lieutenant, without influence and nothing came of my recommendations. Had that reservation been made at that time I could have selected that amount of magnificent timber land, still belonging to the government, within five miles of salt water, and the income from the judicious sale of the timber would now almost support a navy yard."

Unfortunately this project of a financially self-supporting naval activity was "lost in the committee." A decade later by an Act of Congress in 1888 a commission of three naval officers was appointed to examine the coast north of the 42nd parallel of north latitude in Oregon, Washington and Alaska for a suitable site for a navy yard and dry docks. Captain A. T. Mahan was a member of this commission. They recommended several sites on Puget Sound and Lake Washington. Not until after the appointment of a second commission in 1890 was a site finally selected. In 1891 Congress passed the necessary legislation. Lieutenant Wyckoff was ordered to Puget Sound and there, after selecting and purchasing most of the necessary land, he was ordered to assume command of "The Puget Sound Naval Station." On 16 September 1891 the flag was hoisted for the first time.

This event really launched the growth of permanent installations in the territory now known as the Thirteenth Naval District. In 1902 The Seattle Mail and Herald reported of the Yard: "So many improvements are being made that one would almost need to make weekly trips to the navy yard in order to keep up with the procession."

The later history of the yard and the District has been just such a procession with accelerated tempo in World War I and finally greatly expanded line of march in World War II.

The Commandants, Puget Sound Naval Shipyard form a line from 1893 on down numbering in their company many outstanding U. S. Naval officers. From its founding until 1937, the Thirteenth Naval District was administered under the Commandant, PSNY. The Thirteenth Naval District was then made the top command and the Commandant received orders as Commandant Thirteenth Naval District with additional duty as Commandant, Puget Sound Navy Yard. Previous to that date the yard had been known as the Navy Yard, Puget Sound. A complete roster of Commandants of the yard, up to the end of World War II, is included in the Appendix.

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EARLY NAVY RADIO COMMUNICATIONS:

The Navy was designated, in 1904, to provide efficient coastwise radio communications for the United States Government and, when not in competition with commercial stations, to receive and transmit all radio messages to and from ships at sea. The Army was authorized to erect such stations as deemed necessary provided they did not interfere with the coastwise radio system of the Government under control of the Navy Department.

The Navy proceeded with planning, site selection and erection of the coastwise system of radio stations and with the installations on naval ships. In June 1903, the Boston, New York, Mare Island and Puget Sound Navy Yards were provided guidance to assist them in fitting radio equipment in naval vessels.

The Navy Yard at Mare Island was directed to construct the coastwise system of radio stations on the Pacific Coast. The Navy Radio Station at Mare Island was the first naval radio station on the Pacific Coast, commissioned 27 April 1904. The Yerba Buena station (Goat Island) on San Francisco Bay was commissioned May 5, 1904. The Farallon Island station was opened on 8 December 1904, followed by Point Arguello 6 February 1906, Point Loma 12 May, 1906, Table Bluff, near Eureka, 23 October 1906, then Cape Blanco, Oregon, and North Head and Tatoosh in Washington.

Communication distances in the early spark transmitter days were limited to a few hundred miles. Messages for Navy ships at sea, originated in the Navy Department or elsewhere, were usually transmitted by landline telegraph to a central relay point on the Pacific Coast then relayed along the coastwise chain of Navy radio stations to the nearest station thence to the ship at sea. This chain of coastwise stations was also used to supplement the landline telegraph for transmission of messages between other naval and government activities.

The Navy radio station in the Puget Sound Navy Yard at Bremerton, Washington, was probably erected at about the same time as other stations along the north Pacific Coast however we have been unable to determine the exact date.

In 1867 the United States purchased the territory of Alaska from Russia for 7.2 million dollars. American emigration into the territory was sparse until gold was discovered there in 1898. The U. S. Army started construction of radio stations in Alaska in 1903.

During the summer of 1911 an expedition from the Mare Island Navy Yard established temporary radio stations at Kodiak, Dutch Harbor and St. Paul (Pribilof Islands) in Alaska and selected Unalga Island as the best location in the vicinity of Unimak Pass for a medium power radio station. Stations at Cordova and Sitka had been constructed prior to 1911 - dates unknown.

The Mare Island expedition of 1912 was organized for the purpose of erecting the Unalga station, making the installations at Dutch Harbor and St. Paul permanent, installing a small station at St. George (Pribilof Islands), rebuilding the Kodiak station (which had been destroyed by fire during the eruption of Mt. Katmai), and making changes at Cordova and Sitka. (The complete report of this expedition is contained in the Appendix).

The station at North Head, Washington, was apparently the primary relay station for message traffic to Alaska. No mention of the headquarters station at Bremerton (NPC) in connection with this type of traffic can be found until installation of 30 KW arc transmitters at Keyport, Washington, and Cordova, Alaska, some time before World War I.

At some point during this period of time the Army constructed a submarine cable (WAMCAT), between Seattle, Washington, and Ketchikan, Alaska. This tied in with the system of Army radio stations in Alaska and was used primarily for relay of message traffic for the many fish canneries in Alaska. After construction of the Navy coastwise stations in Alaska, the

Navy and Army cooperated with each other in traffic handling in that area. Whenever the Navy channels were ineffective, the Army cable was used for Navy traffic; whenever the Army cable was out of commission, the Army traffic was handled over the Navy circuits.

The American Marconi Company of America started operation in the Puget Sound and Alaska areas early in the century. The following article is quoted from the November 1914 issue of WIRELESS AGE, a publication of the American Marconi Company:

"Although little is known of the Northern District of the Pacific Coast Division, this division of the American Marconi Company is probably the largest in point of territory of the many districts in the Marconi organization. It embraces the states of Oregon and Washington and the territory of Alaska. Oregon has 94,560 square miles and Washington 66,880 square miles, while the area of Alaska is 590,884 square miles, or more territory than is comprised in Great Britain, Ireland, France and Spain.

"Until last year the only means of telegraphic communication between the United States and Alaska was the inefficient and insufficient Government cable. It remained for the Marconi Company to blaze the trail to the wonderland through a commercial wireless service that reaches the principal points in the great territory for which Congress recently passed a bill authorizing the construction of a railroad at a cost of forty million dollars.

"There are now under construction at Ketchikan and Juneau powerful wireless stations to communicate with Astoria, Oregon, the United States terminal which will relay by wireless to Seattle. The headquarters of the division are located in Seattle, the largest city in the State of Washington, the phenomenal growth of which daily furnishes additional evidence of the enterprise and almost unlimited extent of western resources. Strategically, it is the logical wireless center. It has an extensive coastwise and export trade, with regular steamers to Alaskan and Asiatic ports, besides being the principal industrial and commercial center of a large region exporting coal, timber, fish and agricultural products.

"A large number of ships are operated and maintained by the Seattle staff and an equal number make it a port of call. Fourteen shore stations, ten of which are in Alaska, add to the activities of the district. One of the principal shore stations is located at Astoria, a northern seaport of Oregon, about forty miles from Portland. As the principal port of entry for the Columbia River country and the headquarters of the salmon fishing industry of the north Pacific, Astoria maintains considerable wireless business with substantial steamship traffic conducted from there. A score or more of large salmon canneries and extensive manufacturing of lumber products further add to the profitable operation of this Marconi station.

"A very material increase in the importance of the Northern District to be looked for in the development in Alaska, according to Superintendent John R. Irwin, who recently returned from a 9,000 mile tour of inspection. In this great treasure house, approximately \$18,000,000 in gold is extracted annually with crude appliances, and it is estimated that the forests of the interior are capable of affording an ample supply of timber to the United States for a half-century, should other areas become exhausted. The salmon-packing industry also ranks high in Alaskan enterprises and yields about \$5,000,000 a year.

"Literally only the surface has been scratched. With the new transportation facilities, Alaska's yield will be multiplied one hundred fold and wireless telegraphy will become an increasingly important factor.

"The greatest part of the territory is heavily wooded and with a widely scattered population, the installation and maintenance of any other means of communication but wireless is made prohibitive by the expense; thus the interior as well as seaport business will in time be embraced in the wireless chain.

"The nucleus of this chain is represented primarily by the establishing of wireless communication between Astoria in Oregon and Ketchikan and Juneau in Alaska, with 25 kilowatt stations at the two former points.

"Trade in Juneau is principally confined to the export of furs and blankets, a large woolen mill being located nearly opposite Douglas Island, where the famous Treadwell Gold Mine has established the largest quartz-crushing mill in the world.

"Other Marconi stations are located at Kogging, Naknek, Clarks Point and Nushagak, on Bristol Bay, Chignik, on the Alaskan Peninsula, Karluk, and Ellamar, on Prince William Sound.

"The plans for expansion in this territory necessitated the relocation of the Seattle station and provided for an increase in power. A central location in the city was essential and this was provided through the enterprise of Burns Lyman Smith, owner of the new L. C. Smith building in which magnificent structure the Seattle station and the headquarters of the Northern District has just been housed. Coincident with the removal came the announcement that the opening of the new system for public service has been set for an early date."

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Navy communications in the 13th Naval District areas and in Alaska were low key during the period between 1912 and the start of World War I in 1917. Stations with low powered spark transmitters relayed their traffic through the nearest station. After installation of higher powered arc transmitters at Cordova in Alaska and in Keyport, Washington, message traffic from all of the Alaskan stations was collected at Cordova then relayed to the Keyport station. Keyport communicated directly with the Yerba Buena station in San Francisco Bay for exchange of outbound and inbound traffic. Even with the increased power, communications were difficult at times and alternate channels were employed such as the night time channel between North Head and Kodiak using spark transmitters.

When the United States entered World War I in April 1917, the Navy took over all commercial radio stations including the American Marconi stations in the United States and Alaska, and closed all amateur radio stations for the duration of the war.

Excerpts from the 1917 and 1919 annual reports of the Pacific Division of the Naval Communication Service are included here to show the status of Navy communications in this area. There is little difference between the 1917 and 1919 reports, however in those cases where changes were significant, we have included both reports to show the nature of the change:

ANNUAL COMMUNICATION REPORT, PACIFIC DIVISION, NAVAL COMMUNICATION SERVICE

13th Naval District; Naval Radio Stations, Puget Sound Communication District:

U. S. Naval Radio Station, Puget Sound (NPC): (from 1917 report)

1. Receiving and Control Station located at the Puget Sound Navy Yard, Bremerton, Washington. In addition to the receiving apparatus, this station is equipped with a 5 KW 500 cycle quenched spark set, adjusted for following wave lengths: 600, 952, 1200, 1512, 1905 and 2400 meters. This set will ultimately be installed at the Keyport station and operated by distant control.
2. Transmitting station located at Naval Torpedo Station, Keyport, Washington. Equipped with one 30 KW arc set, adjusted for the following wave lengths: 4000, 6000, 8500 and 10500 meters. This station is doing its own receiving until distant control lines are completed for its operation from the Puget Sound Station.

3. (Editors note: this paragraph is a 1918 addendum to the 1917 report)

(a) Construction work on the pole line for distant control circuits was begun April 23, 1918. It is estimated that the line will be completed approximately September 1, 1918. The conductors will be contained in a ten pair cable with circuits as follows:

- (a) Arc control (telegraph)
- (b) Spark control
- (c) Messages and orders (telegraph)
- (d) Telephone to Radio Station, Keyport
- (e) Telephone to Torpedo Station, Keyport
- (f) Miscellaneous

(b) Radio Communication:

1. Spark set: Communicates with North Head, Fort Worden, Tatoosh, and can be effected with Marshfield, Astoria and Seattle (NVL).
2. Arc set: (1917 - Now under test.)
(1918 - Communicates with Cordova, San Francisco, South San Francisco, Lents, San Diego, and with some difficulty with Great Lakes, also with ships equipped with arc apparatus depending on their range.

U. S. Naval Radio Station, Puget Sound (NPC): (from 1919 report)

1. Receiving and Control Station located at the Puget Sound Navy Yard, Bremerton, Washington.
2. Transmitting Station located at the Naval Torpedo Station, Keyport, Washington. Equipped with one 30 KW arc set adjusted for the following wave lengths: 4000, 5250, 6000, 8500 and 10500 meters. Also equipped with one 5 KW quenched spark set adjusted for the following wave lengths: 600, 952, 1200, 1512, 1905 and 2400 meters.
3. Conductors for distant controlling the Keyport transmitter apparatus from Puget Sound are contained in a ten pair overhead cable as follows:

- (a) Arc control (telegraph)
- (b) Spark control (telegraph)
- (c) Messages and orders (telegraph)
- (d) Two telephone tie lines, Navy Yard exchange to Torpedo Station exchange
- (e) Miscellaneous

(b) Radio Communications:

1. Arc set: Communicates with Cordova and San Francisco, and unreliably with Great Lakes. Also with ships with arc apparatus, depending upon their range.
2. Spark set: Effective with North Head, Fort Worden, Tatoosh and can be effected with Marshfield, Astoria and Seattle (NVL).

(e) Comment (from the 1917 report):

1. The Puget Sound station is not only a coastal station, but also the district center station for the Puget Sound Communication District. The office of the District Communication Superintendent, Puget Sound is located at this station.

2. The station handles considerable commercial traffic between Seattle and Alaska, the business being received over the Western Union Seattle-Bremerton cable and relayed to Keyport over a leased circuit on the Olympic Transmission Company's pole line and vice versa. All Alaskan traffic formerly routed via North Head and Kodiak is now handled via the Puget Sound-Cordova circuit.

3. It also takes over cable traffic during cable interruptions. This traffic when received is handled to and from the Seattle office of the Washington Alaska Military Cable and Telegraph (WAMCAT) system which has a circuit from the Puget Sound Navy Yard which terminates at Fort Worden. The Puget Sound Communication office and Fort Worden are also looped in on this circuit.

(e) Comment: (from the 1919 report):

1. The Puget Sound station was made the district center station for the Keyport transmitting station November 21, 1918. The office of the District Communication Superintendent is also located at this station.

2. The station handles considerable commercial traffic between Seattle and Alaska, the business being received over the Western Union Seattle-Bremerton cable. This traffic is increasing in volume each year. All traffic for Russia via St. Paul and Amadyr or Petropavlosk, Siberia, will, when the circuit is established, be handled by Puget Sound.

3. It also takes over all Alaskan cable traffic destined west of the 138th meridian during cable interruptions. This traffic is handled to and from the Seattle office of the Washington Alaska Military Cable and Telegraph system by Government submarine cable.

4. The station also takes over the work of the Yard Communication Office, daily from 7:00 pm to 7:00 am and on Sundays and holidays.

5. Post Office addresses: U. S. Naval Radio Station, Puget Sound, Bremerton, WA.
U. S. Naval Radio Station, Keyport, WA.

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U. S. Naval Radio Station, North Head (NPE)

(a) Located at North Head, Washington. Equipped with one 10 KW, 500 cycle quenched spark set, adjusted for the following wave lengths: 600, 952, 1905, 2000 and 2800 meters.

(b) Radio communication: Effective with Puget Sound, Tatoosh, Marshfield, Eureka, San Francisco (night only), Kodiak (night only), and ships dependent on their range. Can be effected with Astoria, Seattle (NVL), and at night with Sitka, Cordova (spark), Ketchikan and St. Paul.

(e) This station handles commercial traffic and has taken over the ship traffic formerly handled via the Astoria Marine Radio station, now closed. It was relieved of all Alaska communications upon the establishment of the Puget Sound-Cordova circuit, but is used in emergency during cable interruptions to relieve any congestion that may develop in the Puget Sound-Cordova and the Ketchikan-Astoria circuits.

(f) Communication between North Head and Sitka or Kodiak is not reliable; signals are weak at both ends. This, together with the prevalent static, makes communication by North Head station with Alaska difficult.

(g) Post Office address: U. S. Naval Radio Station, North Head, Washington,
via Ilwaco, Washington.

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U. S. Naval Radio Station, Tatoosh (NPD):

(a) Located on Tatoosh Island, Washington. Equipped with one 5 KW quenched spark set adjusted to the following wave lengths: 600, 952, 1200 and 2050 meters.

(b) Radio Communications: Effective with Puget Sound, Fort Worden, North Head, Marshfield, Eureka (night only) and ships dependent on their range. Can be effected with Seattle (NVL), Astoria and at night with Kodiak, when not interfered with by Canadian stations.

(e) This station handles commercial traffic. Post Office address: U. S. Naval Radio Station, Tatoosh, Washington.

U. S. Naval Radio Station, Astoria, Oregon (NUZ):

(a) Located at Astoria, Oregon. Equipped with one 25 KW 50 cycle rotary non-synchronous spark set, adjusted to a working wave length of 3500 meters. The present equipment does not permit adjustment to 300 and 600 meters. It has a setting for 5000 meters but it is not used on account of the greatly reduced radiation.

(b) Radio Communication. Is limited to traffic with Ketchikan, Alaska, but can also communicate with Marshfield, Puget Sound, Seattle (NVL) and Tatoosh.

(e) Comment: This station was taken over by the Navy from the Marconi Company on April 7, 1917. It was purchased from the Marconi Company on November 30, 1918. Its work is confined almost exclusively to commercial traffic to and from Alaskan points east of the 138th meridian longitude via Ketchikan and which is rather heavy, especially during the Alaskan canning season. It also takes over cable business between the U. S. and Alaskan points east of the above mentioned meridian during cable interruptions. All commercial traffic is received from and transferred to the Western Union or Postal lines at the station. It has some difficulty working with Ketchikan during the summer months with the present equipment. The station site is well adapted for a radio station being low and boggy and is well protected naturally.

Post Office Address: U. S. Naval Radio Station, Astoria, Oregon,
P. O. A-43, Astoria, Oregon.

U. S. Naval Radio Station, Astoria Marine (KPC):

(from 1917 report): This station was taken over by the Navy on April 10, 1917, and has since been operated by the Naval Communication Service for handling ship to shore traffic. It is a particularly good receiving station. When North Head can efficiently handle the ship traffic now handled by Astoria Marine, the latter station can be closed but this is not possible until North Head is relieved of Alaskan traffic and more efficient land line communication is furnished that station.

(from addendum to 1917 report): This station was closed and turned over to the Marconi Company, its owners, by the Navy on February 15, 1918, in the same condition as when taken over on April 10, 1917. All apparatus except the receiver used was obsolete and of little value. The small shed used as an office is in very poor condition; both masts were rotted and fell when the antenna was lowered by the Marconi Company on February 16, 1918. The traffic formerly handled by the Astoria Marine Station is now being handled by the North Head Station.

U. S. Naval Radio Station, Lents (KFU): (from 1917 report and 1918 addendum):

(Formerly operated as a Federal Telegraph Company station)

(a) Located at Lents, Oregon, a few miles from Portland. Equipped with one 30 KW arc set, adjusted for wave lengths of 3500, 4000, 6800 and 8500 meters.

(b) Radio Communications: Effective with San Francisco, Puget Sound (Keyport), Beach (San Francisco) under favorable conditions, and ships equipped with arc apparatus depending on their range. Can be effected with South San Francisco, Heeia Point, Great Lakes and Cordova.

(e) Comment.

1. This station was taken over by the Navy on April 15, 1917, and has since been operated by the Naval Communication Service for handling traffic of ships equipped with arc apparatus and as a relay station between San Francisco and Puget Sound and Cordova and Puget Sound in case of failure of those circuits and as a listening-in station. Its importance from a military standpoint is small, except for the purposes stated.

2. In addition to ship traffic, it formerly handled point to point traffic with San Francisco for the Federal Telegraph Company who now handle the same traffic by telegraph circuit leased from the Pacific Telephone and Telegraph Company between the Federal Company offices in San Francisco and Portland.

3. This station was acquired by the Government by purchase and all properties were transferred to the Government as of May 15, 1918.

(Ed. note: This station does not appear in the 1919 report).

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U. S. Naval Radio Station, Seattle (KPA):

(Formerly operated as a Marconi Marine Station)

(a) Located in the L. C. Smith Building, Seattle, Washington. Equipped with one 5 KW 500 cycle quenched spark set and one 1 KW 500 cycle quenched spark set; both sets adjusted for the following wave lengths: 300, 450, 600, 1665, 1800 and 2980 meters.

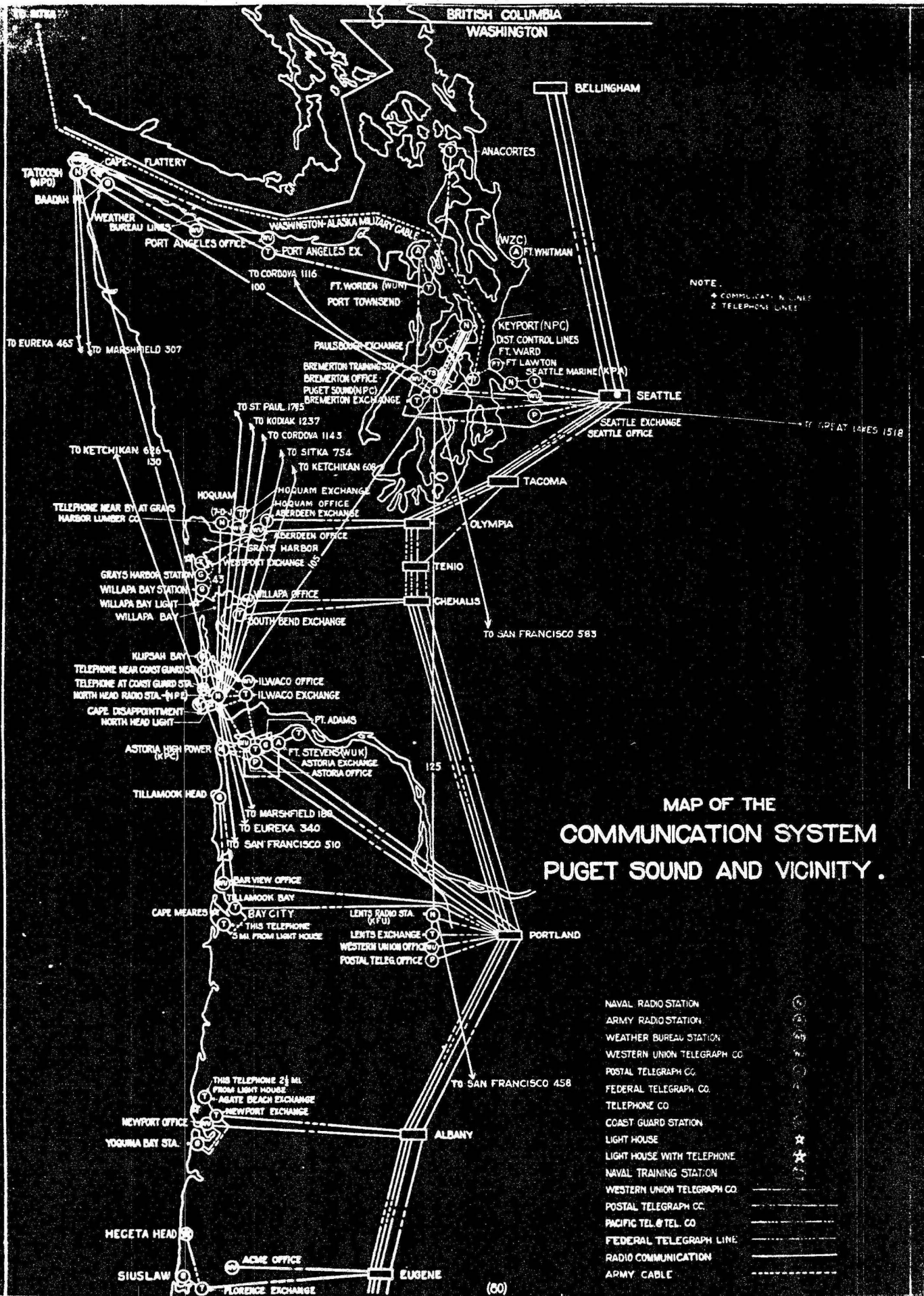
(b) Radio Communications: Effective with ships depending on their range. Can be made effective with Marshfield, Puget Sound, Tatoosh, North Head, Astoria High-Power and at night only with Ketchikan. The latter is not advisable on account of interference created.

(e) Comment.

1. This station was taken over by the Navy on April 13, 1917, and has since been operated by the Naval Communication Service for handling ship to shore traffic.

2. (from the 1919 report): This station was purchased from the Marconi Company on November 30, 1918. Call sign was changed from KPA to NVL. It is now being used for handling ship traffic and as a standby in case of failure of the Puget Sound-Keyport spark set or the Seattle-Bremerton cable.

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NOTE:
 + COMMUNICATION LINES
 2 TELEPHONE LINES

MAP OF THE COMMUNICATION SYSTEM PUGET SOUND AND VICINITY.

- NAVAL RADIO STATION
- ARMY RADIO STATION
- WEATHER BUREAU STATION
- WESTERN UNION TELEGRAPH CO.
- POSTAL TELEGRAPH CO.
- FEDERAL TELEGRAPH CO.
- TELEPHONE CO.
- COAST GUARD STATION
- LIGHT HOUSE
- LIGHT HOUSE WITH TELEPHONE
- NAVAL TRAINING STATION
- WESTERN UNION TELEGRAPH CO.
- POSTAL TELEGRAPH CO.
- PACIFIC TEL. & TEL. CO.
- FEDERAL TELEGRAPH LINE
- RADIO COMMUNICATION
- ARMY CABLE

U. S. Naval Radio Station, Hoquiam (7DJ):

(Formerly operated as an amateur station)

(a) Located at Hoquiam, Washington. Equipped with 1 KW 60 cycle nonsynchronous spark set adjusted for wave lengths of 300 and 600 meters.

(b) Radio Communication: Effective with North Head and intended for work with District patrol vessels, submarines or other small craft in vicinity.

(e) This station was taken over by the Navy on April 12, 1917, and has since been operated by the Naval Communication Service for listening-in purpose and will be used for communicating with patrol vessels and other small craft.

U. S. Naval Radio Station, Marshfield (NPF):

(a) Located at Marshfield, Oregon. Equipped with one 5 KW 500 cycle quenched spark set adjusted to the following wave lengths: 600, 952, 1500 and 2400 meters.

(b) Radio Communication. Now in effect with North Head, Eureka, Tatoosh, San Francisco (night only) and ships depending on latter's range. Can be effected with Astoria High-Power, Puget Sound and Seattle.

(e) Comment: This station handles commercial traffic. It's chief purpose is to handle ship traffic and furnish weather reports to shipping. It is also used for relaying point to point traffic between San Francisco and the North in case of failure of the San Francisco-Puget Sound arc circuit.

NAVAL RADIO STATIONS, CORDOVA COMMUNICATION DISTRICT, ALASKA

U. S. Naval Radio Station, Cordova (NPA) (from both 1917 and 1919 report):

(a) 1. The former station was located at Point Whiteshed. Present station located at Eyak, latitude 60 - 31 - 15 north, longitude 145 - 36 - 15 west, and Hanscom at latitude 60 - 28 - 30 north, longitude 145 - 25 - 15 west, Copper River and Northwestern Railroad. For all purposes of organization, the Eyak and Hanscom stations are known collectively as the Cordova Naval Radio Station. The railroad has established the name Eyak for Mile 7, and Hanscom for Mile 14, but the post office is still to be known as Mile 7.

2. The transmitting apparatus for both the arcs and spark is located at Hanscom, and the receiving and control apparatus for both is located at Eyak.

3. The Hanscom station is equipped with duplicate 30 KW arc sets adjusted for the following wave lengths: 4000, 5000 and 7600 meters and one (1) duplicate sending 10 KW 500 cycle quenched spark set adjusted for the following wave lengths: 600, 952, 2400 and 3024 meters.

4. The receiving station at Eyak has four receiving antennas.

5. The distant control lines between Eyak and Hanscom stations consist of six Government circuits on a Government pole line using the right of way of the Copper River and Northwestern Railroad.

(continued)

(b) Radio Communication. Arc set effective by schedule with Puget Sound (Keyport). Spark set now effective with Sitka, Kodiak, St. Paul, Seward, Anchorage (Alaskan Railroad Engineering Commission), and would be effective with North Head (day) if both stations used audions and schedule was arranged, and could be made effective with Ketchikan if necessary.

(c) Telegraph connections. Eyak has telegraph connections with the U. S. Army Cable Office at Cordova and through connection with the U. S. Army Cable Office at Valdez, Alaska, on the same line. Hanscom has same telegraph connection as Eyak.

(e) The Cordova station is not only a coastal station but also the District Center Station of the Cordova District and is the headquarters for the District Communication Superintendent, Cordova. This station handles commercial traffic both with shipping and point to point traffic in Alaska and to the United States. Cordova-Puget Sound arc communications ineffective during summer months on account of poor receiving conditions at Puget Sound and vicinity.

Post Office addresses for both stations: U. S. Naval Radio Station, Mile Seven, Alaska.

U. S. Naval Radio Station, Sitka (NPB):

(a) Located at Sitka, Alaska. Latitude 57 - 02 - 58 north, longitude 135 - 20 - 59 west. Equipped with a 20 KW 120 cycle open gap rotary spark set and a 5 KW 500 cycle quenched spark set. The 20 KW set, which is of an antiquated type, is to be removed and replaced by a duplicate of the 5 KW set. The station is adjusted for the following wave lengths: 600, 952, 2400 and 3024 meters.

(b) Radio Communication. In effect with Cordova, Kodiak, Ketchikan, ships with spark sets depending on their range, and at night with St. Paul and North Head. Last named communication is utilized mainly in case of cable break south of Sitka. Can also be effected with Juneau.

(e) Comment: Sitka handles commercial traffic both with shipping and point to point in Alaska and the United States.

U. S. Naval Radio Station, Kodiak (NPS):

(a) Located at Woody Island, Kodiak, Alaska. Equipped with one 7½ KW 500 cycle quenched spark set adjusted to the following wave lengths: 600, 952, 1905 and 2400 meters.

(b) Radio Communication: Effective with St. Paul, Cordova, Seward, Sitka, Ketchikan, Anchorage, Latouche, and with ships equipped with spark apparatus dependent on their range, and at night only with Dutch Harbor and North Head. Can be effected at night only with Tatoosh, but North Head provides better results.

(e) Comment: This station handles commercial traffic both with shipping and point to point in Alaska and to the United States. Kodiak now acts as a relay station between the westward stations (Naval stations and cannery stations) and Cordova, but a new satisfactory schedule is being worked between Cordova and St. Paul which will cut out unnecessary relays and leave Kodiak in a better position to handle local traffic from cannery stations in the vicinity.

U. S. Naval Radio Station, St. Paul (NPQ):

(a) Located at St. Paul, Pribilof Islands, Alaska. Latitude 57 - 07 - 20 north, longitude 170 - 16 - 22.5 west. Equipped with a 5 KW 500 cycle quenched spark set adjusted to the following wave lengths: 600, 952, 1710 and 2500 meters. Also with a 30 KW Federal Type arc set adjusted to the following wave lengths: 4000, 5400, 7000, 9900 and 11000 meters.

(b) Radio Communication: Spark set: Effective with St. George, Dutch Harbor, Kodiak, Nome (Army), cannery stations, ships equipped with spark sets dependent on their range, and at night with Cordova, Sitka and North Head. Communication with the last named three stations is seldom used, as relaying via Kodiak is more reliable. Also exchanges weather reports with Russian station, Anadyr, Siberia, and has daily schedules Petropavlovsk. Arc set: This set was commissioned August 1, 1919. Communication has been established with Cordova and tests are now being made to establish communication with Russian Island and Puget Sound.

(e) Comment: This station handles commercial traffic both with shipping and point to point in Alaska. It is the intention to establish a second Trans-Pacific circuit between Puget Sound and Russian Island, using the 30 KW arc set at St. Paul. In case direct communication cannot be established between Puget Sound and St. Paul, a second relay will be required at Cordova.

The value of St. Paul is mainly commercial, as an aid to shipping and as a relay point between Puget Sound or Cordova and Russian Island. It also handles Government traffic and traffic destined to, or originating with, representatives of the Department of Commerce on the Islands and for Coast Guard cutters engaged in the protection of seals.

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U. S. Naval Radio Station, St. George (NPX):

(a) Located on St. George Island, Pribilof, Alaska. Latitude 56 - 55 - 11.5 north, longitude 169 - 32 - 36.5 west. Equipped with a $\frac{1}{2}$ KW 500 cycle quenched spark set, calling and working wave 750 meters.

(b) Radio Communication: Effective with St. Paul and ships in the immediate vicinity, depending on both the ship's and the station's range. St. Paul is checked for commercial traffic handled by this station.

(e) Comment: This station handles commercial traffic. It is of value only for communicating between St. Paul and St. George Islands and for ships in its immediate vicinity. It is of no military value.

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U. S. Naval Radio Station, Dutch Harbor (NPR):

(a) Located at Dutch Harbor, Alaska. Latitude 53 - 53 - 14.5 north, longitude 166 - 32 - 08.5 west. Equipped with a 5 KW 500 cycle quenched spark set adjusted to the following wave lengths: 600, 952, 1512 and 2400 meters.

(b) Radio Communication: Effective with St. Paul and ships equipped with spark sets dependent on their range, and at night with Kodiak and Nome, but relaying via St. Paul is more reliable.

(e) Comment: This station handles commercial traffic both with shipping and point to point in Alaska. It also handles Government traffic between Coast Guard Cutters and the Senior Officer Present of the Coast Guard in Unalaska, when the Behring Sea Patrol Fleet is in Alaska.

U. S. Naval Radio Station, Seward (NPV):

(a) Located at Seward, Alaska. Latitude 60 - 07 - 23 north, longitude 149 - 24 - 40 west. Equipped with a 10 KW 500 cycle quenched spark set adjusted to the following wave lengths: 600, 952, 1905 and 2200 meters.

(b) Radio Communication. Effective with Kodiak, Cordova, Army Engineering Station at Anchorage, ships equipped with spark apparatus dependent on their range and with commercial station at Latouche owned by Kennecott Copper Corporation. Not effective with Sitka or St. Paul.

(e) This station handles commercial traffic both with shipping and point to point in Alaska. The value of this station is mainly commercial, as an aid to shipping, and to handle cable traffic in case of a cable break between Seward and Cordova. It would be of value in case of interruption to Seward-Anchorage telephone line. This break would be covered via the stations at Seward and Anchorage.

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U. S. Naval Radio Station, Ketchikan (NVH): (formerly a Marconi Company station):

(a) Located at Ketchikan, Alaska. Equipped with one 25 KW 60 cycle rotary synchronous spark set with working wave of 4000 meters and with following additional settings: 300, 600, and 500 meters.

(b) Radio Communication: Is limited for traffic between Astoria High-Power, Juneau, Sitka, Prince Rupert, and ships dependent on their range. Could be made effective with Cordova, if necessary. Can also communicate with Kodiak and at night only with North Head and Seattle (NVL). Also, in case of cable break, with Army radio stations at Petersburg and Wrangel.

(e) Comment: This station was taken over by the Navy on April 9, 1917, and has since been operated by the Naval Communication Service for handling Alaska traffic with Juneau and Astoria High-Power and also with Sitka. It has some difficulty working with Astoria High-Power during the summer months. It is of military value as a standby station for Cordova or Sitka in case of the loss or failure of either of those stations.

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U. S. Naval Radio Station, Juneau (NVD): (formerly a Marconi Company station):

(a) Located at Juneau, Alaska. Equipped with a 5 KW 500 cycle quenched gap spark set adjusted for standard waves.

(b) Radio Communication: Limited for traffic between Juneau and Ketchikan or to or from the United States via Ketchikan and with Sitka. Also in case of cable break communicates with Army radio stations at Petersburg and Wrangel. Communication with ships equipped with spark sets dependent on their range.

(e) Comment. This station was taken over by the Navy on April 8, 1917, and has since been operated by the Naval Communication Service for handling Alaskan traffic with Ketchikan and also with Sitka.

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(Ed. Note: All Marconi Company of America stations and Federal Telegraph Company stations were purchased by the U. S. Government after the end of World War I.)

U. S. ARMY RADIO STATIONS

CORDOVA COMMUNICATION DISTRICT, ALASKA

<u>Name and Location</u>	<u>Call Letters</u>	<u>Type of set</u>	<u>Working Wave lengths</u>
Nome	WVG	10 KW Spark	600, 2000
Kotlik	WVF	1 KW Spark	400
St. Michael	WVE	3 KW Spark	900
Nulato	WVH	10 KW Spark	1500
Fort Gibbon	WVD	10 KW Spark	1600
Fairbanks	WVB	5 KW Spark	1460
Circle	WVA	3 KW Spark	1250
Fort Egbert	WVC	5 KW Spark	1450
Petersburg	WVI	1 KW Spark	500
Wrangel	WVJ	1 KW Spark	450
Fort Yukon	WXX	1 KW Spark	1050
Holycross	WVK	2 KW Spark	1000

The above stations handle point to point Government and commercial traffic, working with one another, supplementing and in some cases paralleling the Washington-Alaska Military Cable and Alaskan Army Signal Corps telegraph system. Nome, Kotlik, St. Michael, Petersburg and Wrangel also handle ship to shore traffic.

Of the above stations, Nome, Petersburg and Wrangel would be of military value to the Navy in time of war for listening-in purposes. Nome would also be of value for communication with St. Paul, and with any Naval vessels in its vicinity. Petersburg and Wrangel would probably be of value to Naval vessels cruising in the inside passage.

The operation of the Army stations named above does not create any interference with Naval Radio Communications.

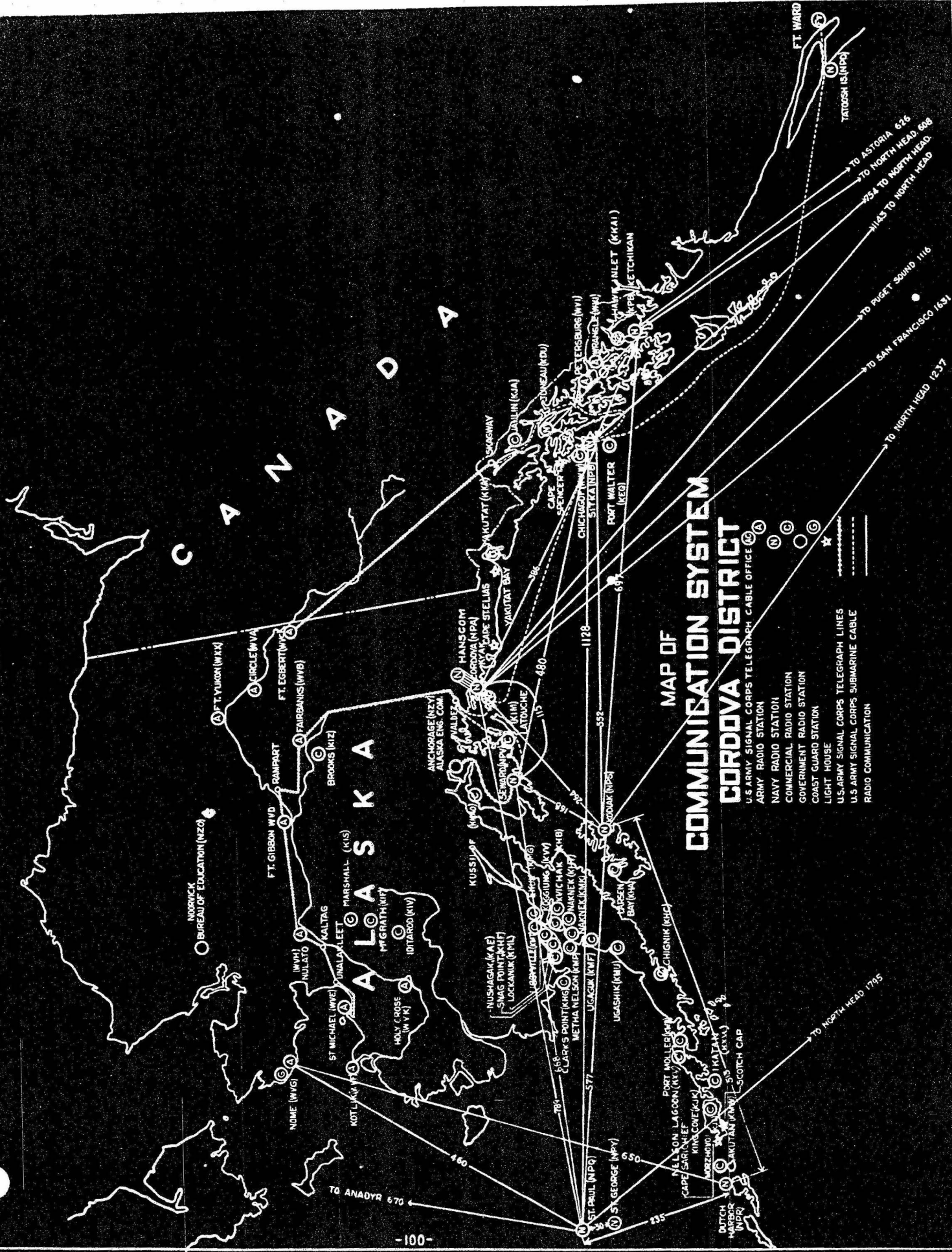


Alaskan Engineering Commission Radio Station, Anchorage (NZY):

(a) Located at Anchorage, Alaska. Equipped with 2 KW 500 cycle quench spark set, working on wave lengths of 300, 600, 750 and 1000 meters.

(b) Radio Communication: Effective with ships, depending on both the ship's and the station's range. Is also effective with Kodiak, Cordova and Seward.

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MAP OF CORDOVA DISTRICT COMMUNICATION SYSTEM

- U.S. ARMY SIGNAL CORPS TELEGRAPH CABLE OFFICE (A)
- ARMY RADIO STATION (B)
- NAVY RADIO STATION (C)
- COMMERCIAL RADIO STATION (D)
- GOVERNMENT RADIO STATION (E)
- COAST GUARD STATION (F)
- LIGHT HOUSE (G)
- U.S. ARMY SIGNAL CORPS TELEGRAPH LINES (H)
- U.S. ARMY SIGNAL CORPS SUBMARINE CABLE (I)
- RADIO COMMUNICATION (J)

WWI hostilities ceased on November 11, 1918 with the signing of the armistice. The country was still at war pending the signing of the peace treaty. The Navy had taken over all of the commercial radio stations at the start of the war. This appropriation of commercial stations necessitated paying rightful compensation to their owners. When the income of a station could be determined, payment was made on the basis of revenue and property value. A fixed rental was agreed upon for the low-powered stations which were continued in operation, with lower rates for those which were closed. The Navy maintained all the stations which were kept operative, while their owners paid taxes and insurance.

Early in 1918 the U. S. Shipping Board requested the Navy to make arrangements for the purchase of all radio stations on vessels owned or operated by them. The Marconi Company was unwilling to sell these installations unless the coastal stations were included. The Navy acquiesced to this and on 1 November, purchased, at a cost of \$798,500, the low-powered stations which had been taken over from the Marconi Company, plus the high-powered stations at Ketchikan and Juneau, Alaska, and Astoria, Washington.

Except for those mentioned, this transaction did not include any of the operating high-powered stations used by the Marconi Company for long distance radio communications during peacetime. The parent company, British Marconi, intended to resume such operations as soon as possible, and was making plans to utilize continuous wave equipment. They had already negotiated for the exclusive use of the Alexanderson alternator, but this was being held in abeyance.

It became known that they were also interested in the purchase of the patents and stations of the Federal Telegraph Company. The acquisition of these patents would give them control over the American rights to the Poulsen arc patents, and the arc transmitters would complement the alternator since it could be utilized for their low power requirements. To avoid complications and to obtain control of the Federal patents, the Navy, on 15 May 1918, acquired these together with three high-powered and five coastal stations for \$1,600,000.

* * * * *

During WWI, despite the enormous merchant ship program of the United States, the submarine campaign had so depleted Allied shipping that every hour lost by a convoy at sea due to poor visibility or due to delay in port was of great concern. Additionally, every day they kept at sea because of their inability to enter fogbound ports rendered them that much more vulnerable to the submarine menace.

In early 1918 the Chief of Naval Operations, concerned with the delays of transports by weather conditions, directed his Planning Committee to study the subject and endeavor to eliminate these delays. The Committee recommended the establishment of direction finder stations in groups of three around the approaches to the harbors of Boston, New York and Charleston, the entrances to the Delaware River and the Chesapeake Bay. One station of each group would operate as the master or controlling station and control a transmitter at a distant station by landline. The two "slave" stations would telegraph their bearings to the master, where the plotting would be done and fixes or bearings transmitted to the convoy commander. This was approved, and in June 1918 the sites for these stations were selected. Urgent requirements for new ship installations and improvement in existing ones delayed the completion of these shore stations. At the date of the armistice not one of them was in operation. On 26 December the New York group was placed in operation in time to be used by our battleships returning from their duty with the British Fleet. The remaining groups were commissioned rapidly thereafter and hastened the operations of the troopships returning our soldiers from overseas. Their successful operation resulted in the establishment of groups at all important ports in the United States, on the Great Lakes, and at dangerous navigational points along our coasts.

U. S. Navy direction finder stations were constructed along the West Coast of the United States and Alaska in the early 1920's. Those stations rendered invaluable service to commercial and Navy shipping for over two decades under Navy supervision. All of the Navy direction finder stations were transferred to the U. S. Coast Guard in 1941. Listed below are all of the DF stations constructed during the 1920's. Not all were kept in commission for the entire period:

Eleventh Naval District:

- Imperial Beach, California
- Point Firmin, California
- Point Hueneme, California.

Twelfth Naval District:

- Eureka, California
- Point Arguello, California
- Farallon Islands, California
- Point Montara, California
- Point Reyes, California
- Point St. George, California

Thirteenth Naval District:

- Tatoosh, Washington
- Fort Stevens, Oregon
- Klipsan Beach, Oregon
- New Dungeness, Washington
- Cattle Point, Washington
- Smith Island, Washington
- Destruction Island, Washington
- Soapstone Point, Alaska
- Hichenbrook, Alaska
- St. Paul, Pribiloffs, Alaska

* * * * *

Radio communications in the 13th Naval District during the next two decades were uneventful except for the transition from arc and spark transmitters to vacuum tube transmitters and from the low frequencies to high frequencies for long distance communications. Until the Navy could design and procure sufficient high frequency equipment for all stations, individual stations were encouraged to construct high frequency transmitters locally using available parts and powering the transmitters from the spark transmitter motor-generators.

Detailed information regarding communication activities in the 13th Naval District is not readily available as the Naval Communication Station, Puget Sound, was decommissioned in the early 1970's. All records were sent to the National Archives and are not available to this writer. The present NAVCOMMSTA Puget Sound was established at the Submarine Base, Bangor, Washington, in 1984. They have no 13th Naval District records.

We have been able to obtain a copy of the Administrative History of the 13th Naval District during WWII. To conclude this account of early Navy radio communications in the 13th Naval District and Alaska, excerpts from that history are included below:

District Communication Office and Naval Radio Stations, Thirteenth Naval District, 1940.

The District Communication Officer was the officer ordered by the Department (CNO) as such, with additional duties as Commanding Officer of radio traffic stations and radio direction finder stations which were not within the geographical limits of a navy yard or naval station. This additional duty was analagous to that of other commanding officers of subordinate activities of the Naval District.

The District Communication Officer maintained his office at Radio Puget Sound, Bremerton, Washington, with one CY and one stenographer.

The Assistant District Communication Officer was attached to Staff Headquarters, Seattle, Washington, as Instructor of Naval Communication Reserves and was in general charge of communications at Staff Headquarters.

The District Communication Officer was responsible for the following stations located in the Thirteenth Naval District:

U. S. Naval District Center Control, Radio Station; Puget Sound Navy Yard, Bremerton:

This radio station was located in the Puget Sound Navy Yard and occupied about two acres in the north boundary of the Navy Yard. The transmitters used by this station were located at Keyport and were remotely controlled from Radio Puget Sound. The control line consisted of 13 pair of wires in a lead cable on poles running from the Navy Yard via a circuitous route to Keyport.

On board complement:	CRM	9	CRM	6	(One CRM in charge)
	RM1	13	RM1	7	
	RM2	1	RM2	9	
	RM3	4	Y1	1	
	CY	1	Y2	1	
			SC2	1	
			S1	1	

Radio Transmitting Station, Keyport, Washington:

This station was the transmitting station for the U. S. Naval District Center Control Radio Station, Puget Sound and was located within the bounds of the Naval Torpedo Station, Keyport, Washington. Power was purchased from Puget Sound Power and Light Company. The station was connected by telephone direct to Radio Puget Sound. The station was not open to commercial business.

On board complement:	CRE	1	(In charge)
	CRM	1	
	RM1	2	
	RM2	2	

Radio Astoria, Astoria, Oregon:

This station was a traffic station located on the outskirts of Astoria, Oregon. It was a Marconi (RCA) station taken over and retained by the Navy during the first World War. As a traffic station it handled both Government ship and commercial ship traffic for the area. Power and water were purchased from local concerns. No emergency power was provided.

On board complement:	CRM	2	(One in charge)
	RM1	5	
	RM2	6	
	SC2	1	

Radio Dutch Harbor, Dutch Harbor, Alaska:

This was a combined traffic and high frequency direction finder station located near the old town of Dutch Harbor, Alaska. The station communicated direct with Radio Puget Sound on schedule basis throughout the day. The power supply consisted of duplicate engine driven A. C. generating units. The high frequency unit was maintained by the Thirteenth Naval District, but was assigned as a unit of the Mid-Pacific net controlled by the Commandant, Fourteenth Naval District.

Naval Radio, Bainbridge Island, Washington:

This was the old Army Fort Ward located on the southwest end of Bainbridge Island, which was abandoned about 1921 and turned over to the Navy in 1938 for development as a radio station. Originally it was intended that Radio Puget Sound would move to Bainbridge due to the high electrical noise existing in the Navy Yard. Subsequently, the Department added a major foreign intercept station and a high frequency direction finder station. It was planned that Bainbridge would maintain three activities:

- (1) District center receiving station.
- (2) Intercept station.
- (3) High frequency direction finder station.

and possibly a Volunteer Reserve communication school for enlisted personnel.

The allowance of personnel was variable and depended on personnel the Chief of Naval Operations directed the Bureau of Navigation to order to this station for duty. In 1940 the following personnel were assigned:

CRM	7 (One in charge)
RM1	6
RM2	5
RM3	1
SC2	1
PHM1	1
S1	1

Commander B. C. Furrington reported to Radio Bainbridge 15 July, 1940, as Officer in Charge. There was then before Congress a request for funds to purchase an additional 160 acres and construct a receiving building to accommodate Radio Puget Sound equipment. The original plan for development of this station called for an expenditure of about \$50,000 annually for the next four years.

Power was purchased from the Puget Sound Power and Light Company. A 25 KVA automatic gas engine driven A. C. emergency power plant was installed to take care of the radio station load whenever the commercial power failed, which was quite frequent during winter months. These outages are expected to be reduced as the power company renovates its present power line feeding the station.

Radio Intermediate D/F Station, Klipsan Beach, Washington:

This station, located near the town of Ocean Park, Washington, rendered intermediate frequency direction finder bearings to Navy and commercial shipping and conducted training exercises individually and jointly with all other intermediate direction finder stations in the district. Power was purchased from the local power company. The station was equipped with an engine generating unit for use in emergency.

On board complement: CRM 1 (In charge RM1 1 RM2 3

Radio Direction Finder Station, Tatoosh Island, Washington:

This was an intermediate direction finder station located on Tatoosh Island, Washington, at the entrance to the Straits. This station furnished direction finder bearings to Government and commercial shipping and conducted individual and joint training exercises with other district direction finder stations as outlined by the District Communication Officer. A US Weather Bureau and a US Lighthouse station are also located on this island. Engine driven motor generators were provided to supply necessary power to operate this station.

Radio Direction Finder Station, Empire, Oregon:

This was another intermediate direction finder station located on a sand spit across Coos Bay from the town of Empire, Oregon. Functions were the same as those listed above for Tatoosh. Power was purchased from a local concern and cabled across the bay to the station. A station boat was provided for station personnel to make trips to the town of Empire as necessary.

On board complement: CRM 1 (In charge)
 RM1 1
 RM2 3

Radio Direction Finder Station, Fort Stevens, Oregon:

Another intermediate D/F station located on the Army reservation at Fort Stevens, Oregon, by authority of a revocable permit from the War Department. Functions were the same as those at Tatoosh. Power and water supply were obtained locally.

1941

The District Communication Office moved to Seattle from the Puget Sound Navy Yard on 15 January 1941, with Commander A. W. Peterson, U. S. Navy, as District Communication Officer.

Radio stations were established at Section Bases in March 1941 at the following Section Bases:

Port Angeles, Wn.	Port Townsend, WN.
Seattle, Wn.	Kodiak, Alaska
Astoria, Ore.	Dutch Harbor, Alaska
Coos Bay, Ore.	Sitka, Alaska

The U. S. Coast Guard took over all Navigational Direction Finder Stations on 1 July, 1941: Klipsan Beach, Fort Stevens, Empire, Oregon, and Tatoosh Island, Washington.

Naval Radio Station, Astoria, was transferred to the Naval Air Station, Tongue Point, Oregon, as a Radio Transmitting Station on November 13, 1941.

On 7 December 1941, there were at the Communication Office, Staff Headquarters, three teletype machines. On 8 December there were sixteen. By 17 December private line teletypewriters had been installed to connect Staff Headquarters, Thirteenth Naval District, with the following activities:

- Naval Section Base, Astoria, Oregon
- Naval Section Base, Port Angeles, Washington
- Naval Section Base, Port Townsend, Washington
- Naval Section Base, Seattle, Washington
- Naval Section Base, Coos Bay, Empire, Oregon
- Communication Office, Puget Sound Navy Yard

Coast Guard Headquarters, Seattle, Washington
Western Air Command, RCAF, Victoria, B.C.
Commanding Officer Pacific Coast, RCN, Esquimalt, B.C.
Pacific Command, Canadian Army, Esquimalt, B.C.
Commanding General, Harbor Defenses of Puget Sound (Army)
Fort Worden, Washington
IX Army Corps, Fort Lewis, Washington
(Seattle office of ACS also looped in on this circuit)

Other private line teletypewriters were connected as follows:

- A. District Loop - Staff Headquarters, Seattle; NAS Seattle; NRS Bainbridge Island; Communication Office Puget Sound Navy Yard; Naval Radio Station Puget Sound Navy Yard.
- B. NAS Seattle and NAS Tongue Point, Oregon.
- C. Communication Office Puget Sound Navy Yard and Senior Officer Present Afloat, Puget Sound Navy Yard.
- D. Communication Office Puget Sound Navy Yard and Naval Radio Station Puget Sound Navy Yard.
- E. Loop - Communication Office Puget Sound Navy Yard; Naval Ammunition Depot, Puget Sound; Naval Torpedo Station, Puget Sound.
- F. Naval Radio Station Puget Sound Navy Yard and Commandant Twelfth Naval District through which Commandant Eleventh Naval District could be reached.

Direct telephone lines were installed connecting Staff Headquarters with:

Puget Sound Navy Yard, Bremerton, Washington
Naval Air Station, Seattle, Washington
Western Air Command, RCAF, Victoria, B.C.
IX Army Corps, Fort Lewis, Washington
Twelfth Naval District, San Francisco, California
through which Eleventh Naval District could be reached
Fort Worden, Washington. (Port Townsend Section Base or
Port Angeles Section Base could be reached via Fort Stevens).

Other private line telephone connections:

Commander, Patrol Wing Four with Naval Air Station, Seattle, WN.,
and with Naval Air Station, Tongue Point, Astoria, Oregon
Interceptor Room, Naval Air Station, Seattle, with Paine Field,
Everett, Washington
Interceptor Room, Naval Air Station, Seattle, with Gray Field
Operations Office, Fort Lewis, Washington

In December 1941, the Army Alaska Communication System cable between Seattle and Seward, Alaska, was reestablished and the Navy made arrangements to loop Naval Air Station, Sitka, into Ketchikan on this cable and to extend the cable from Seward to Naval Air Station, Kodiak. This cable was then used for joint communications, giving additional security, permitting the transmission of important dispatches via cable instead of exposing them to enemy interception over radio circuits. In July 1941 arrangements were made with commercial radio station KIRO to make that station available for broadcasting information of interest to the general public in the event of an emergency.

1942

U. S. Naval Monitoring System, located at 136th Street South and 22nd Avenue South, Seattle Washington, was established early in 1942. Its mission was as follows:

- (a) To monitor Navy and certain commercial radio transmissions.
- (b) To detect violations of communication operating procedure and security on Navy circuits guarded by the District operating forces and shore stations.
- (c) To maintain radio searching watches for unauthorized or suspicious transmissions.
- (d) To report and give complete data on all suspicious transmissions heard while guarding normal circuits.

Puget Sound Naval Radio Station was moved from the Navy Yard, Bremerton, to Bainbridge Island on 15 March 1942.

Naval Training School (Radio) University of Idaho was established in April 1942, and the Naval Training School (Radio) at Bainbridge Island, together with student personnel, was transferred to the University of Idaho at Moscow, Idaho.

U. S. Naval Radio Station, Kent, Washington, was established in August 1942. It was a Hackay Radio and Telegraph Company Station leased by the Navy for the duration of the war, for the purpose of an emergency transmitting station.

Transmitting equipment was transferred from Naval Radio Station, Keyport, to Radio Activities, Bainbridge Island, and was located at Battle Point in September 1942. The Radio Station at Keyport was retained as a standby emergency station with a caretaker in charge.

In the fall of 1942, at the suggestion of the District Communication Officer, the Commandant called to the attention of the Bureau of Naval Personnel the fact that since there were a number of separate activities located on Bainbridge Island, Naval Radio Station Bainbridge Island was a misnomer. Consequently, the name of the activity was changed and the Commanding Officer, Naval Radio Station, Bainbridge was given orders as Commanding Officer Naval Radio Activities, Bainbridge Island.

1943

In January 1943 the Navy began the development of the Loran system in the Aleutian chain, with the installation of Loran transmitting stations located on Umnak Island, St. Paul Island, St. Mathew Island, and Cape Sarichef. Loran system was later extended westward to Amchitka and Attu. Stations were manned and operated by Coast Guard personnel.

The plotting center for the high frequency direction finder net moved from the Northwestern Sea Frontier Headquarters to the Naval Radio Activities, Bainbridge Island, on 21 June 1943.

In September 1943, a communication plan was devised for utilizing the existing U. S. Navy West Coast High Frequency Direction Finder Net for locating friendly aircraft in distress. A plan was submitted to the Chief of Naval Operations, who interposed no objection to adoption of the plan, provided it be used only in emergencies when other facilities failed. The plan was submitted to all commanders on the West Coast and was used until late in 1944, when the Coast Guard established a DAB high frequency direction finder net within the Northwestern Sea Frontier to fulfill these requirements. Originally this net comprised the following stations: San Diego Naval Air Station, Goleta, Moffett Field Naval Air Station, Eureka, Tillamook Naval Air Station, and Tatoosh (Coast Guard).

1944

In January 1944 the Commanding Officer, Naval Radio Activities, Bainbridge Island, was made West Coast Communication Intelligence Officer and he proceeded to Adak, Alaska, to make a survey to determine suitable sites for locations of certain radio facilities and buildings for the expansion of the Communication Intelligence (Supplementary) Station; Adak having been determined to be the most desirable location for the interception of Japanese naval traffic. This station provided direct radio teletype communication between Adak and Naval Operations via Supplementary Radio Bainbridge and between Adak Supplementary and Pacific Fleet Radio Unit. Upon establishment of the Seventeenth Naval District on 15 April 1944, the District Communication Officer was relieved of all communication problems in Alaska and the Aleutians.

1945

Radio Station Keyport, which was retained as a standby emergency station during the war, was decommissioned in October 1945. This left all the radio stations in the Thirteenth Naval District under the cognizance of the Navy located on Bainbridge Island.

1945 was the peak year for all phases of communications during the war. There were few physical changes, moving stations, creating new procedures, etc., but the volume of work in each department continued to increase until several months after V-J Day.

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ALASKAN NAVAL RADIO EXPEDITION, 1912.

BY LIEUTENANT E. H. DODD, U. S. NAVY, MEMBER.

During the summer of 1911 an expedition from the Mare Island Navy Yard established temporary radio stations at Kodiak, Dutch Harbor and St. Paul, Pribilof Islands, Alaska, and selected Unalga Island as the best location in the vicinity of Unimak Pass for a medium-power radio station.

The expedition of 1912 was organized for the purposes of erecting the Unalga station, making the installations at Dutch Harbor and St. Paul permanent, installing a small station at St. George, Pribilof Islands, rebuilding the Kodiak station (which had been destroyed by fire during the eruption of Mt. Katmai), installing new apparatus in the Cordova station and overhauling and making minor changes in the station at Sitka.

The U. S. S. *Nero* was assigned by the Navy Department for transporting the personnel and material of the expedition. The equipment and material was assembled at Mare Island, and necessarily had to be complete in every detail, and in anticipation of emergencies and accidents. Practically no material could be obtained at the different places visited, and, with the exception of Cordova and Sitka, the limited time allowed for the expedition would have prevented obtaining any material by shipment from the United States.

About four months was required for assembling and stowing material on the *Nero* and fitting the vessel for the cruise. The *Nero* carried 1,010 tons of material for the expedition and about 40 tons of provisions, exclusive of live stock.

The preparation costs of the expedition were practically 13 per cent. of the total cost, and included working-party equipment, bedding, mess outfits, tools, machines, engines, motors, supplies and labor in handling same.

The personnel of the expedition, in addition to the complement of the collier, consisted of Lieutenant E. H. Dodd, U. S. Navy, Mare Island radio officer; Surgeon G. W. R. French, U. S. Navy; Electrical Expert Aide Geo. E. Hanscom; thirty-one navy-yard workmen, and thirty-eight enlisted men of the Navy, almost all of whom were petty officers. Not all of the enlisted men were with the expedition at any one time, because of transfers to and from the different stations visited.

The itinerary of the *Nero*, W. J. Kelton, N. A. S., Master, was as follows:

1912.

- May 20. Left Mare Island and arrived San Francisco.
- 21. Left San Francisco.
Towing U. S. S. *Fox* and *Davis*.
- 24. Off Tatoosh Island, Washington.
Let go of *Fox* and *Davis*.
- 29. Hove to for 20 hours in storm.
- June 2. Arrived at Dutch Harbor, Alaska.
- 7. Left Dutch Harbor and arrived at Unalga Island, Alaska.
While at anchor off Unalga, from the date of above arrival until the final departure from that station on September 6, 1912, on six occasions the *Nero* was forced to run to Dutch Harbor for shelter or put to sea and heave to on account of violent gales.
- 15. Left Unalga and arrived at Dutch Harbor.
Working party of 45 men remained at Unalga.
- 30. Left Dutch Harbor and arrived at Unalga.
Working party of 4 men remained at Dutch Harbor.
- Aug. 1. Left Unalga.
Working party of 46 men remained at Unalga. Vessel stopped at Dutch Harbor and picked up four men who were left there July 30th.

- Aug. 2. Hove to for 8 hours in storm.
 3. Arrived at St. George Island, Pribilof Ids., Alaska.
 7. Left St. George and arrived St. Paul Island, Pribilof Ids.

While off St. Paul the vessel was frequently forced to shift anchorage and twice to put to sea and heave to on account of severe storms.

26. Left St. Paul.

Two men of working party remained at St. Paul and left there Sept. 5, 1912, on the U. S. R. C. *Tahoma*, arriving at Unalaska Sept. 7, 1912.

29. Arrived Unalga.

Vessel was delayed by storm and stopped at Dutch Harbor to await favorable tide for going through Unalga Pass.

- Sept. 6. Left Unalga and arrived at Dutch Harbor.
 8. Left Dutch Harbor.

Departure was delayed 12 hours by storm.

- 12-13. Hove to 12 hours in storm.

14. Arrived Cordova, Alaska.

- Oct. 10. Left Cordova.

12. Arrived Kodiak, Alaska.

- Nov. 5. Left Kodiak.

Departure was delayed 36 hours by storm.

8. Arrived Sitka, Alaska.

13. Left Sitka.

Departure was delayed one day awaiting mail steamer. For five days after leaving strong southeast gales and heavy seas were encountered.

22. Arrived San Francisco.

23. Left San Francisco and arrived Mare Island.

Total time of cruise, 6 months, 3 days.

The weather conditions of the whole cruise were trying. Storms were the rule and fair weather was the exception. Every trip was delayed by storms, except two—from Cordova to Kodiak, and Kodiak to Sitka. At Unalga the expedition experienced good weather for 26 per cent. of the time, and

storms, with a wind velocity of 75 miles an hour or over, for 27 per cent. of the time. On days not included above there was either heavy rain or strong winds and rain. The first wharf built by the expedition was washed away on June 19th. Succeeding storms wrecked two lighters, and the last storm completely wrecked the pontoon used in landing stores. Outside work was not possible during the storms.

Bad weather was also encountered at Dutch Harbor and Pribilof Islands. At the latter station communication between ship and shore was difficult at all times and often impossible. There were only four working days at St. Paul without wind and rain. There were two days without rain at Cordova, and there was 26 inches of rain during the first two weeks at that station. Weather at Kodiak was fair, but on some days the temperature was below freezing. The wind at times blew great clouds of ashes down from the mountain side, making it difficult to recognize objects 50 yards away. During the time the expedition was at Kodiak there were a number of intermittent earthquake shocks. Good weather prevailed during the five days the expedition was at Sitka.

The Alaska stations are in isolated locations, and, outside of the radio work, the men detailed to them lead a lonely existence, with little opportunity for amusement or association with other persons. Provisions are difficult to obtain; mail is infrequent. The steamer *Dora* stops once a month at Dutch Harbor and also at Unalga on the same trip, if the occasion arises and weather permits. From the first part of November to about the first of June no vessels stop at Pribilof. The island supply ship makes two trips each summer from San Francisco, and revenue cutters, which base during the summer at Dutch Harbor, call at different times when on Behring Sea patrol duty. A steamer calls at Kodiak once in three weeks, and steamers reach Cordova and Sitka once each week. However, all operators assigned to Alaskan stations volunteered for the duty. There are five operators and a cook at Unalga, two at Dutch Harbor, two at Pribilof and four operators and a cook at Cordova, Kodiak and Sitka.

One of the principal objects of the Alaskan stations is to provide radio communication for isolated districts. All communicate with shipping, furnish weather reports on request and handle commercial business. During the summer the stations at St. Paul and St. George assist the revenue cutters in protecting the Pribilof Islands from seal poachers. During winter and spring these stations afford the only communication between those islands and the outside world. Dutch Harbor also works in conjunction with the patrol fleet, the headquarters of which is in Unalaska. The radio route is also used in case of a break in the Seattle-Valdez cable or the land telegraph line from Valdez to Nome. The cable broke just before the expedition reached Cordova, and while the work could have been handled by Sitka and Cordova new installation at the latter station would have been held up. Consequently, cable business was routed between Sitka and Nome via St. Paul, Pribilof. On a number of occasions the Sitka and St. Paul stations would be working on wave lengths of 1,000 and 1,400 meters, respectively, at the same time as Unalga and Pacific coast stations were working on 2,000 meters, and no station interfered with any of the others, indicating that all were sharply tuned.

ALASKAN NAVAL RADIO COMMUNICATIONS.

1. *Unalga (Akutan Pass, Alaska).*

Ten-kw. quenched-spark, high-frequency set. Wave lengths: 1,600 to 3,500 meters. Uses 1,800 meters and above for long-distance communication, 1,800 for long distance with ships, and will "listen in" on that tune for 15 minutes following 11:00 P. M. and midnight.

Three-kw. auxiliary set, rotary spark. Wave lengths: 300, 600 and 1,000 meters for local work with ships and nearby stations.

Storage-battery set, at times, for communication within radius of 60 miles.

Handles commercial business. Constant watch. Long-

distance work with other stations usually between midnight and 4:00 A. M., station time.

Communicates night with San Diego, San Francisco, Mare Island, Eureka, North Head, Sitka, Cordova, Kodiak, Alaskan cannery stations, Nome and Honolulu.

Day and night with Dutch Harbor, Pribilof, and probably later on with North Head, Cordova, Naknek, Nome and Honolulu.

Also communicates with revenue cutters, steamers crossing the North Pacific, those on the Nome-Seattle route, and whaling vessels at Akutan.

2. *Dutch Harbor (Alaska).*

Five-kw., quenched-spark, high-frequency set. Wave lengths: 300, 600 and 1,000 to 3,800 meters. Uses 1,400 meters and above for long-distance communication; 300, 500 and 1,000 for local work with ships and nearby stations.

Storage-battery set, at times, for communication within radius of 40 miles.

Handles commercial business. Following is watch schedule: Listens in and works, if called, for 15 minutes following the hours at 10:00 and 11:00 A. M., and 4:00, 5:00, 6:00, 7:00 and 8:00 P. M., and continuously from 9:00 P. M. until 1:00 A. M., or as soon after 1:00 A. M. as business is cleared. Will send messages at any hour, day or night.

Communicates night with North Head, Sitka, Cordova, Kodiak, Alaska cannery stations, Nome, and has communicated with Mare Island and Eureka.

Day and night with Unalga, Pribilof and Naknek.

Also communicates with revenue cutters, vessels crossing the North Pacific, those on the Nome-Seattle route, and whaling vessels at Akutan.

3. *Pribilof (St. Paul, Pribilof Ids., Alaska).*

Five-kw., quenched-spark, high-frequency set. Wave lengths: 300, 600 and 1,000 meters to 4,200 meters. Uses 1,400 meters and above for long-distance communication;

300, 600 and 1,000 for local work with ships and nearby stations.

Storage-battery set, at times, for communication within radius of 125 miles.

Handles commercial business. Following is watch schedule: Listens in and works, if called, for 15 minutes following the hours at 10:00 and 11:00 A. M., and 4:00, 5:00, 6:00, 7:00 and 8:00 P. M., and continuously from 9:00 P. M. until 1:00 A. M., or as soon after 1:00 A. M. as business is cleared. Will send messages at any hour, day or night. Long-distance work usually 11:00 P. M. and 1:00 A. M., station time.

Communicates night with Sitka, Cordova, Kodiak, Alaska cannery stations, and frequently with Mare Island, Eureka and North Head.

Day and night with St. George, Unalga, Dutch Harbor, Naknek and Nome.

Also communicates with revenue cutters, vessels crossing the North Pacific and on the Nome-Seattle route.

4. *St. George (Pribilof Islands, Alaska).*

Auxiliary station to St. Paul, Pribilof; not manned by naval operator, but will be during the summer months.

One-half-kw. set and auxiliary storage-battery set. Wave length: 300 meters.

Handles commercial business, but communicates only with St. Paul, Pribilof, station and ships in the immediate vicinity. No schedule of watches, but clears daily with St. Paul.

5. *Cordova (Alaska).*

Ten-kw., quenched-spark, high-frequency set. Wave lengths: 300, 600, 1,000 and 1,500 to 3,300 meters. Uses 1,500 meters and above for long-distance communication; 1,800 for long-distance with ships, and will listen in on that tune for 15 minutes following 11:00 P. M. and midnight; 300, 600 and 1,000 for local work with ships and nearby stations.

Storage-battery set, at times, for communication within radius of 50 miles.

Handles commercial business. Constant watch. Long-distance work usually from midnight to 4:00 A. M., station time.

Communicates night with San Diego, San Francisco, Mare Island, Eureka, North Head, Tatoosh, Alaska cannery stations, Unalga, Dutch Harbor, Pribilof and Honolulu.

Day and night with Sitka and Kodiak, and probably later on with North Head and Unalga.

Also communicates with local shipping, with steamers on Seattle-Cordova-Valdez-Seward route, on Nome-Seattle route and those crossing the North Pacific.

Has cable connections to Alaska military cable office at Cordova.

Kodiak (Alaska; Woody Island).

Five-kw., quenched-spark, high-frequency set. Wave lengths: 300, 600 and 1,400 to 6,000 meters. Uses 1,400 and above for long-distance communication; 1,800 for long-distance with ships; 300, 600 and 1,000 for local work with ships and nearby stations.

Storage-battery set, at times, for communication within a radius of 50 miles.

Also storage-battery auxiliary station in Kodiak village for communicating with main station.

Handles commercial business. Constant watch. (Only the auxiliary station listens in from 9:00 to 11:00 A. M., and 1:00 to 3:00 P. M., and 5:00 to 7:00 P. M., and clears with the main station immediately before and after each of the above periods.)

Long-distance work usually from 11:00 P. M. to 2:00 A. M., station time.

Communicates night with North Head, Tatoosh, Alaska cannery stations, Unalga, Dutch Harbor, Pribilof, Honolulu, Mare Island and Eureka.

Day and night with Cordova, Sitka, and frequently with Alaska cannery stations and Afognak.

Also communicates with vessels crossing the North Pacific,

on Nome-Seattle route, Valdez-Seward, on Seattle-Cordova route and with local shipping.

Sitka (Alaska).

Ten-kw. set, rotary spark. Wave lengths: 300, 600 and 1,000 to 2,000 meters. Uses 1,000 meters and above for long-distance communication; 1,800 for long distance with ships; 300, 600 and 1,000 for local work with ships and nearby stations.

Storage-battery set, at times, for communication within radius of 30 miles.

Handles commercial business. Constant watch. Long-distance work usually from 10:00 P. M. to 2.00 A. M., station time.

Communicates night with Mare Island, Eureka, North Head, Tatoosh, British Columbian stations, Ketchikan, St. Petersburg, Wrangle, Juneau, cannery stations in vicinity, Unalga, Dutch Harbor, Pribilof and Honolulu.

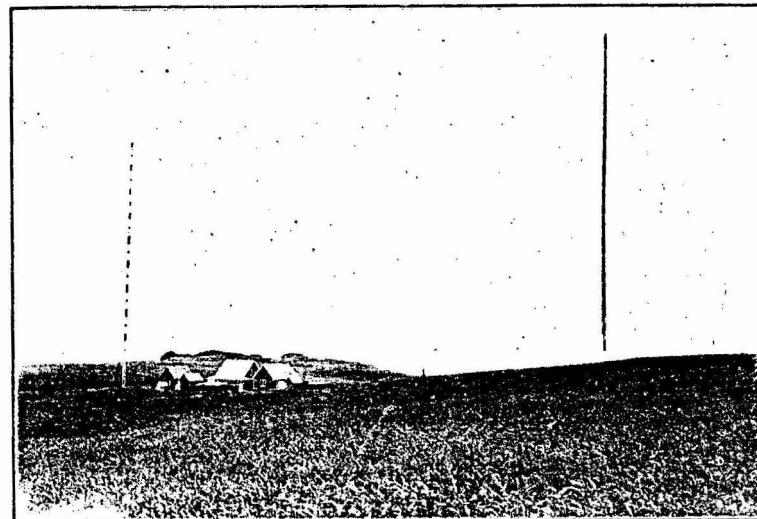
Day and night with Cordova and Kodiak.

Also communicates with local shipping, steamers crossing the North Pacific, and on southwestern and southeastern Alaskan routes.

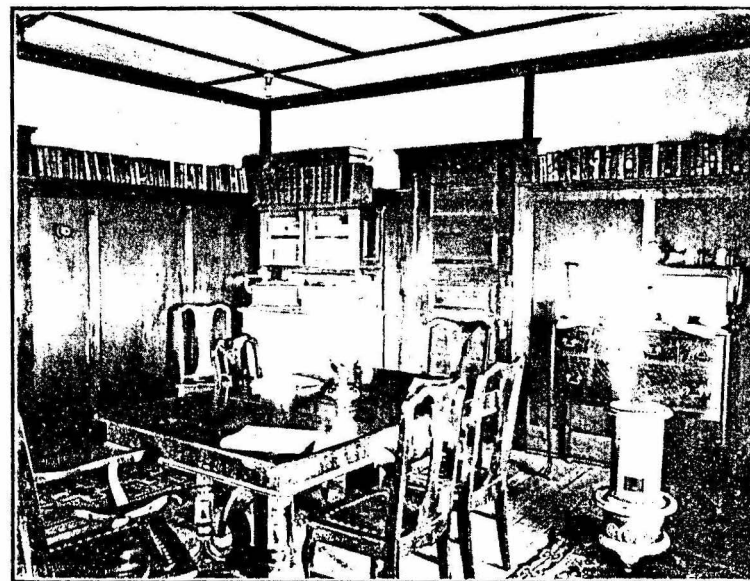
Has cable connection to Alaska military cable office at Sitka.

UNALGA.

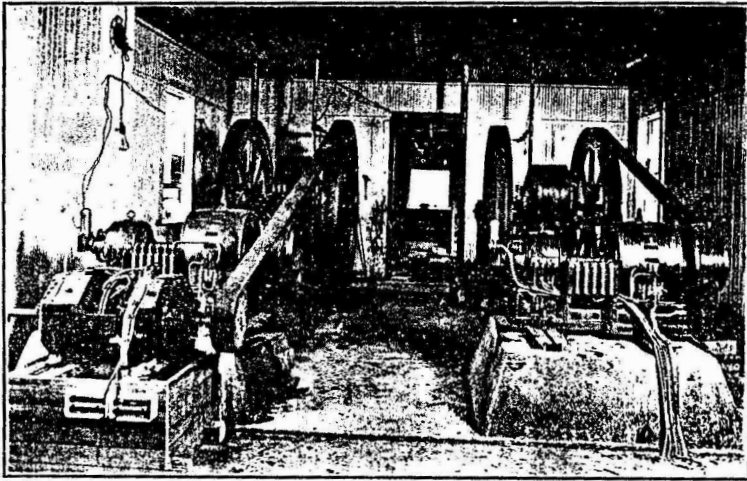
Unalga was an uninhabited island between the Akutan and Unalga Passes, about 25 miles from Dutch Harbor. The expedition arrived June 7th, and the material and equipment for the station was landed in 23 days, which were not consecutive, due to weather conditions. It was often necessary to continue operations until late at night to take advantage of favorable tides and good weather. A wharf 180 feet long was built in 5 days and utilized until June 19th, when it was carried away during a storm. The wreckage was cleared away on June 22 and the construction of a new wharf was begun, as it was impossible to land material by any other



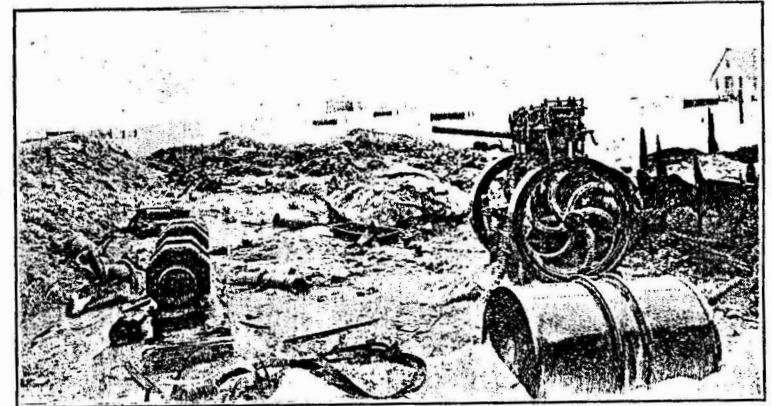
UNALGA STATION.—REAR VIEW.



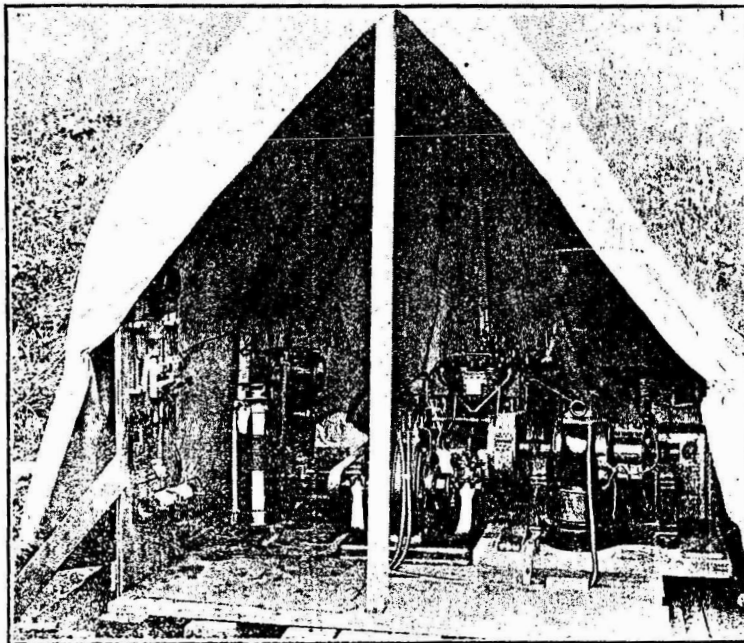
UNALGA.—DINING ROOM.



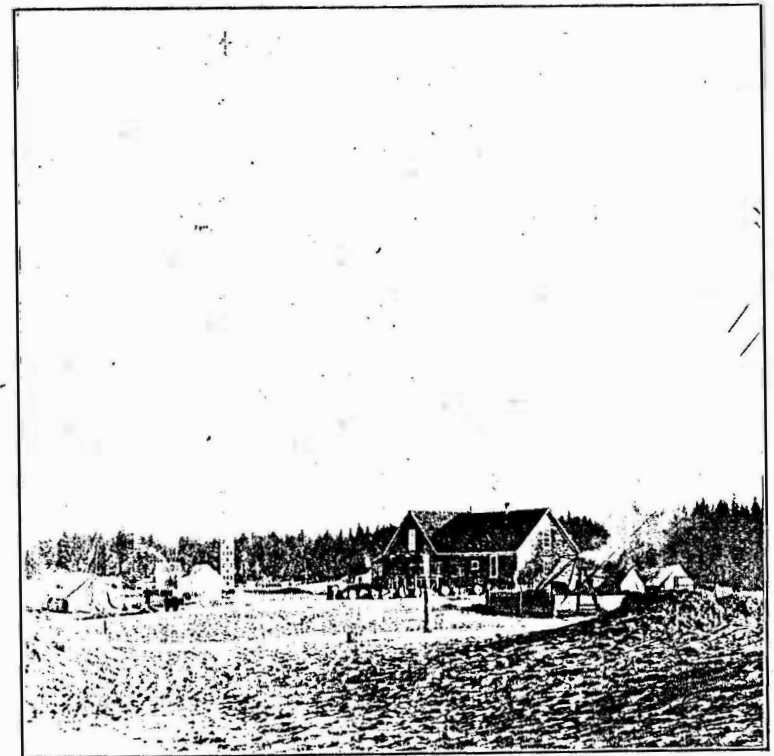
CORDOVA.—25-H.P. KEROSENE ENGINES. 10-KW. ALTERNATORS FOR MAIN SET, AND 3-KW. ALTERNATOR FOR CHARGING STORAGE BATTERIES AND ELECTRIC LIGHTING.



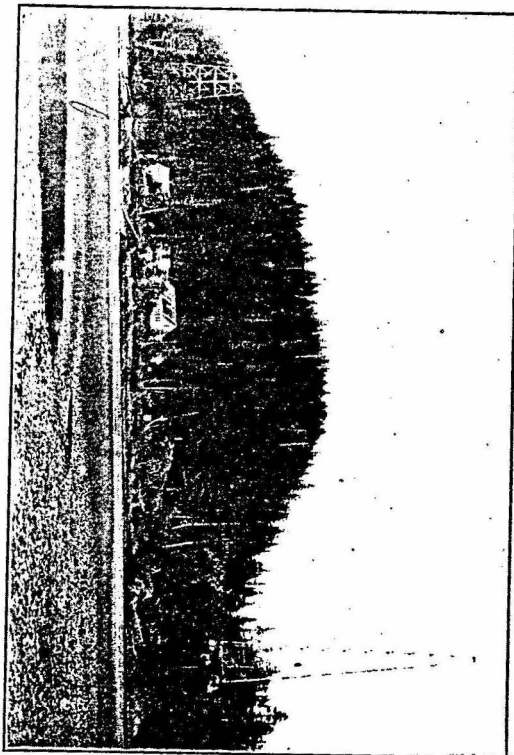
RUINS OF KODIAK STATION WHICH WAS STRUCK BY LIGHTNING JUNE 8, 1912. DURING THE ERUPTION OF MT. KATMAI.



UNALGA. — POWER PLANT FOR TEMPORARY RADIO SET, CHARGING STORAGE BATTERIES AND LIGHTING QUARTERS OF WORKING PARTY.



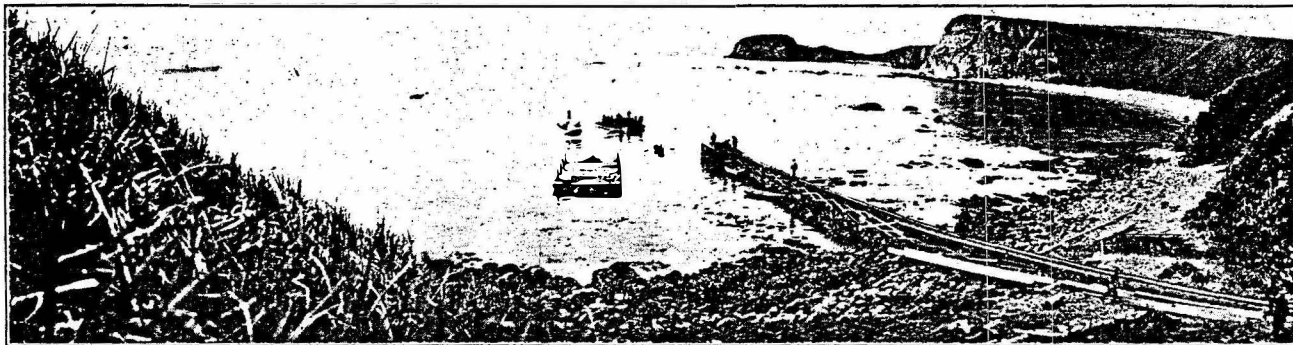
KODIAK.—COMPLETED NEW STATION.



CORDOVA STATION.



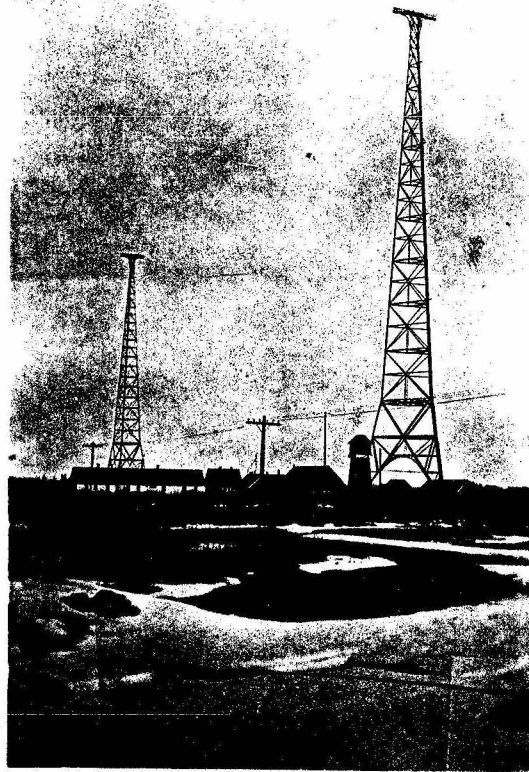
UNALGA.—LOCATION OF WORKING PARTY CAMP. STARTING BUNK HOUSE. (X) SITE OF RADIO STATION.



LANDING MATERIAL AT UNALGA. THE WHARF WAS CARRIED AWAY AND THE LARGE BARGE TOTALLY WRECKED DURING STORM OF JUNE 19, 1912.



COMMODORE COVE, UNALGA, DURING STORM OF SEPTEMBER 5, 1912.



U. S. Naval Radio Transmitter Station,
Cordova, Alaska "NPA" 1925

Equipment: 1 5Kw arc transmitter
1 2 Kw vacuum tube transmitter

Power: 1 75 HP Diesel
1 100 HP Diesel

HF transmitters added in 1928 - built
by Raymond B. Brightman, CRM in Charge at that time.

Photo provided by William H. Colvin, CRE USN (Ret)

means without entailing great delay. The wharf was completed in 6 days, a derrick rigged at its outer end and an industrial railroad installed on it. The railroad was extended to the working-party camp and a 5-H.P. stationary gas engine was used for hauling the cars up the 4 per cent. grade. The railroad was later extended to the station site and a 20-H.P. donkey engine installed for hauling the cars up the grade of 18.6 per cent. Considerable cribbing was necessary to cross swampy tundra and small surface streams. There were two cars, each of two tons capacity. Another railroad was built along the shore line from the shore end of the wharf to a gravel beach 1,050 feet distant. The two small cars for this road were moved by man power, and there was a slight down grade for the loaded cars.

Material was landed as fast as possible and stowed at various stations between the wharf and the camp. Tents were set up as protection for some of the material, and other material was covered with canvas. It was necessary to build a shed for the cement, and the inside was dried for three days with ten oil heaters before the cement could be put in it. As soon as the railroad was extended to the station site material was moved to that point and sorted and segregated on arrival.

The bunk house for the working party consisted of a dormitory 50 feet by 20 feet, dining room 38 feet by 20 feet, and kitchen, store-rooms and wash-room. In the dormitory were 58 bunks arranged in tiers of three. The officers' quarters were in a tent near the bunk house.

When the working party first landed a temporary storage-battery radio set was installed in a tent near the site of the station for communicating with the *Nero* and Dutch Harbor. On the 26th, the experimental radio set of the working party was installed in the tent, and later moved to the oil house. The set consisted of an 8-jar condenser, induction coil, break key and 1-P-76 receiving set. The generating apparatus, set up in a tent near the bunk house, consisted of a 6-H.P. gas engine, driving a 1-kw. self-excited 100-cycle alternator. As

the exciting coils of the alternator were burnt out, a 5-H.P., D.C., motor, brought with the expedition for running a saw bench, was used for exciting the fields and was driven with a leather belt from the same engine. Power leads were run to the tent in which the set was installed. Owing to danger of fire from oil lamps in bunk house, electric lighting was installed and current taken from the 5-H.P. exciter of the temporary radio set. This exciter, with a rheostat, was also used for charging storage batteries. A temporary telephone service was installed with four stations at important locations.

Unalga Island is composed mainly of volcanic rock covered with moss and tundra, but on the level where the station was located soil was found. In digging for anchors and foundations strata were as follows:

Tundra or moss, inches,	8
Sand, inches,	5
Brown clay, inches,	10
Black loam, inches,	10
Cinders, inches,	7
Yellow clay, inches,	12
Yellow clay and gravel,	8
Yellow clay and boulders,	30
Rock,	

The actual construction work at the station required about two months. The other time was required in handling material, temporary construction work, surveying, testing and adjusting, etc. A saw table was set up on the site, roofed for protection against rain, and driven by the 10-H.P. gas engine later used for the auxiliary radio set. A power-driven concrete mixer was of greatest assistance in saving both time and labor. It was necessary to build a dam in a small stream near the station, and run a pipe line, with gravity flow, to tanks set up temporarily, from which pipe and hose were led to the various engine and mast foundations and anchors. The station lathe was utilized as soon as set up. The work-

ing-party motor-driven lathe had been installed on the *Nero* and was also used when required.

A tent was set up for glazing windows and another as a machinist's tool and workshop. The oil house, in addition to its use for the temporary radio set, was utilized for calibrating, testing and adjusting, and measuring instruments and equipment of radio set. The coal house, which was the first building erected, was used as a combined tool-shed, workshop and drafting room. Weather interfered with the work, but advantage was taken of one good day to put up the power-house flooring, studding, rafters and over half of the outside sheathing.

The masts were laid off in the direction of Mare Island and Eureka. All material for their construction, except cement, was purchased in San Francisco for \$7,490. The concrete foundations were 5 feet by 5 feet by 2 feet, each weighing about two tons, and the anchors 7 feet by 4 feet by 5 feet top and 7 feet bottom, each weighing about 14 tons. Each mast was assembled on the ground, in ten sections of 30 feet each, and hoisted into place by the donkey engine. An 80-foot gin pole was used, with necessary fittings for shifting it up the mast as sections were landed and rigging set up. A six-foot 4 × 4 extension was placed on each mast for the single-wire aerial. The first section of the east mast was installed July 26th, and the last section after five working days, *i. e.*, days when weather permitted work on the mast. Better time was made with the west mast, which took only four days. The donkey engine was skidded along by its own power from the first to second mast, and after completion of the latter was skidded back again for railroad work. The masts were in no way affected by the high wind during the severe storm of September 5th.

The buildings at Unalga consist of a dwelling, in which is located the operating room, a power house with a covered passage to the dwelling, and a cottage for the electrician in charge. The buildings have shingled roofs and sides and are fitted with storm windows throughout. A glass porch extends

all around the dwelling and is of particular value in offering protection against cold winds and rain, and muffling outside noise which interferes with receiving. The inside of each building is finished with plaster board and battens. All buildings have electric lights and the dwelling and cottage are each equipped with range, water boiler, sink and bath.

There were installed nine 1,000-gallon kerosene fuel tanks and one 500-gallon gasoline fuel tank on a concrete foundation and with connecting pipes and leads to engine fuel tanks.

The dam was made permanent and a pipe line was led to the power house 396 feet distant. A 1½-H.P. gasoline-driven pump and four 500-gallon engine circulating-water tanks were installed in the power house. One 500-gallon tank was installed in the attic of the dwelling and another in the attic of the cottage. A 5,000-gallon redwood water tank was set up near the power house. Necessary pipe leads were made between the pump, tanks, engines and water systems of the dwelling and cottage. The pipe was laid under ground and provision made for draining to protect against freezing. A lead was also made for flooding the ground plate.

A cesspool was dug with sewer connections to both dwelling and cottage.

The expedition also built a coal house, an oil house and a small house for the 5-H.P. gasoline engine used with the railroad. The installation of the railroad was made permanent.

The operating room contains one 10-kw., 500-cycle, quenched-spark, Telefunken radio set, the 3-kw., rotary-spark, auxiliary radio set and a small storage-battery sending set.

The power house contains two 25-H.P. Fairbanks-Morse kerosene engines driving, by leather belt, two 10-kw., 500-cycle alternators with exciters. These were all mounted on one concrete foundation weighing 114 tons. A 10-H.P. gas engine, after being used to drive a saw bench, was installed on a 6½-ton concrete foundation, and, by leather belt, drives the 3-kw. auxiliary set alternator, with its exciter mounted

on same shaft. The exciter is also used for electric lighting and charging storage batteries.

The leads from the power house to the dwelling were run through the tunnel under the passageway between the two buildings and are easily accessible.

The power house also contains a lathe which can be driven by the pump or the 10-H.P. engine, and a large carpenter's work bench.

The ground plate consists of sheet copper covering a surface of 420 square feet and buried at an average depth of 4 feet, in moist clay and 20 bushels of charcoal. It is connected to all ground leads and protection devices in the dwelling and the power house. The ground was tested when operating with the 10-kw. set and no potential was obtained at the base of the aerial.

The main aerial is of the flat-top type, 12 wire, length 550 feet, spread 40 feet, down leads at the eastern end, bunched near the top, and stopped together all the way down. There was also installed a vertical aerial for the auxiliary set, 4 wire, length 250 feet, leading to the operating room from a point on the eastern mast 50 feet below the end of the main aerial. There is a single-wire receiving aerial 6 feet above the main aerial with a single down lead at eastern end. Switches were installed to allow the use of any one or all aeriels, or any combination of them. The main aerial was led into the dwelling through electrose tubes and further insulated by micanite plates in roof of the attic and ceiling of the operating room.

The station was furnished with complete equipment, including necessary furniture, table and kitchen ware, linen, stoves, a library of 400 books, technical and fiction; a phonograph with records, rifles and shot gun, and a complete outfit of machinist's, carpenter's and electrician's tools. A 44-foot motor boat, 35 H.P., was also furnished the station, but this was totally lost in a storm on September 12, six days after the expedition left. There was also furnished a sea-otter boat

and a 16-foot skiff. The station was given sufficient supplies to last two years.

Unalga was commissioned at 12:01 A. M., September 1st, and communication was established with Mare Island, Eureka, North Head and Sitka. The following day daylight communication was established with Dutch Harbor and Pribilof, with both main and auxiliary sets. The station clears with the Pacific coast stations every night, which includes forwarding the daily weather report of the observer at Dutch Harbor.

On September 3d the working party was sent back to the ship with bedding and provisions, and 38 men were brought ashore the morning of the 4th to gather up the small amount of material remaining. A violent storm began without warning at 10 A. M., and it was impossible for the men to return to the ship, which hurriedly put to sea. The men were marooned ashore until noon of the 6th, when the *Nero* returned. Provisions belonging to the station force were used and replaced later. The masts, buildings and aerials underwent a severe test without injury. The expedition left Unalga at 4 P. M., September 6th, for Dutch Harbor. Six days later, the 12th, the motor boat was lost and the wharf carried away in a heavy storm.

The cost of the construction work at Unalga was \$55,590.

DUTCH HARBOR.

On July 15th the *Nero* left Unalga with 23 of the working party and arrived at Dutch Harbor the same date. Most of the material for Dutch Harbor had been landed there on other days when the *Nero* was driven to that port to seek shelter from storms, and natives had been employed to transfer material from the landing to the station.

The working party remained at Dutch Harbor 14 days, during which time two 150-foot wooden lattice masts were erected to replace the ones blown down by hurricane in October, 1911. The roof and sides of the building were shingled, storm windows installed and the interior finished with

plaster board and battens. This rendered necessary the removal and reinstallation of the radio apparatus. Three 1,000-gallon kerosene fuel tanks and a 500-gallon gasoline fuel tank were installed. The piping for the kerosene tanks was so arranged that the tank could be filled from drums by air pressure working through a relief valve set at 20 pounds.

Dutch Harbor station has a 5-kw., 500-cycle, quenched-spark Telefunken radio set. Duplicate 12-H.P. Meitz and Weiss kerosene engines are used to drive the alternators. The radio set, engines and generators were thoroughly overhauled. There was installed a 6-wire, flat-top aerial, length 400 feet, spread 30 feet, with four down leads at the north end, bunched near top and stopped together all the way down. A single-wire receiving aerial was installed 5 feet below the main aerial, with single down lead at north end. This aerial is also used for sending on short wave lengths. Switches were arranged for using either aerial, or both at the same time. The station was furnished with necessary additional equipment and sufficient supplies for two years.

The station was recommissioned the night of July 29, 1912, and communication was immediately established with Sitka and Cordova. In August intermittent communication was established with Mare Island and Eureka, California.

Between 2 and 4 A. M., September 5th, a southwest gale with a reported velocity of 100 miles per hour during puffs, blew down the south mast. The storm also did considerable damage in the village of Unalaska and some damage at Dutch Harbor. On the afternoon of the 5th the station force had rigged a temporary aerial to the remaining mast, and were again in commission.

The *Nero* arrived at Dutch Harbor on the night of the 6th, and on the 7th the wreckage was cleared away and an 80-foot ship's mast set up and new aerials installed similar to the ones which had been carried away. The telephone line connecting the station with Dutch Harbor and Unalaska had suffered from the storm and this was also repaired.

The cost of new construction and the repair work at Dutch Harbor amounted to \$3,500.

ST. GEORGE.

The *Nero*, with a working party of 19 men, arrived at St. George, Pribilof Islands, the night of August 3d and left the night of the 6th. No work was done on the 5th as it was impossible for the working party to land. The installation at St. George is only for communicating with the larger station at St. Paul and with ships in the immediate vicinity.

The set consists of a 1½-H.P. gasolene engine, driving a 20-volt, 25-ampère, D. C. generator, which can be used for sending, or through a rheostat for charging storage batteries. Two Edison type B-4 batteries were furnished, also for sending, with a 4-inch and a 2-inch coil, either of which can be used. A small spark gap and a sending key completed the transmitting apparatus. For receiving, there was a Perikon detector, Murdock tuner, a Marconi and Shumaker condenser and standard phones. A 60-foot galvanized iron-pipe mast was erected and a single-wire antennae, 270 feet long, led from the top of the mast to the operating desk. The ground plate was buried about 5 feet, near the operating desk.

St. George is manned by one naval operator during the summer months and at other times the Government school teacher acts in that capacity.

The cost of work at St. George was \$700.

ST. PAUL, PRIBILOF.

The *Nero* and working party were at St. Paul, Pribilof, from August 7th to August 26th. Sixteen concrete anchors of 9 tons each, were installed for the two 225-foot lattice masts of the station, and new rigging was set up for each mast. The main aerial is a flat-top 6 wire, length 400 feet, spread 30 feet, 4 down leads at eastern end, bunched near top and stopped all the way down. There is also a single-wire

aerial for receiving and for sending on short wave lengths, 5 feet above main aerial.

Kerosene and gasolene tanks were installed, similar to those at Dutch Harbor. The old 60-cycle radio set was removed and a 5-kw., 500-cycle, quenched-spark Telefunken radio set was installed. Two 12-H.P. Meitz and Weiss kerosene engines were installed on a concrete foundation. Storm windows were fitted on both dwelling and power house and arrangements made for natives to shingle sides and roofs of the buildings. This work was completed after the departure of the expedition. The interiors of the buildings were finished with plaster board and battens and a small bed room was changed into a bath room. A cesspool was dug and a sewer was put in. Additional equipment and supplies for two years were furnished the station.

The nearest location for obtaining fresh water was 2,700 feet from the station. The expedition agreed to install a 5-H.P. gasolene-driven pump and to furnish necessary material and lay a pipe line from the well to the station, provided the island natives dug the well and the trench for the pipe line. This agreement was reached in view of the mutual benefits to both the village and radio station. The natives failed to perform their part of the work in time for the expedition to do its share before the date of departure. When the *Nero* sailed two men were left to assist in the completion of the work; these men joining the expedition later at Dutch Harbor via the United States revenue cutter *Tahoma*. The work was finally completed and the pipe line extended to the village, a quarter of a mile beyond the station.

The station was recommissioned August 24th, and the first messages with the new set were exchanged with Mare Island, a distance of 2,187 miles. The same night communication was established with Eureka, California, Sitka and Cordova, and the next day daylight communication was effected with Dutch Harbor and the temporary set at Unalga. After the departure of the expedition the St. Paul and Dutch Harbor stations exchanged signals during daylight, using only

storage-battery sets with small spark coils. This distance was 250 miles.

The location of the St. Paul station is excellent for radio communication and better results are obtained than at any other Pacific station. The absence of any high land, the good ground connections, the sweep over water before any land intervenes, are potent factors in making its work so effective.

The cost of the new installation and repairs at St. Paul was \$10,395.

CORDOVA.

The station at Cordova is located at Cape Whitshed, 9 miles from Cordova, where the *Nero* anchored on September 14th. A large barge was rented and material was loaded on it and sent to the station. The working party had to wait for a high tide before the barge could be beached close in to the station. In the meantime, the required material was dragged about 100 yards over the mud flats.

A 10-kw., 500-cycle, quenched-spark Telefunken radio set was installed after removing the old 60-cycle set. Duplicate 25-H.P. kerosene engines, similar to those installed at Unalga, were set up on a 92-ton concrete foundation. An extension was built to the power house for holding the fuel and circulating water tanks for the engines. Three 1,000-gallon kerosene fuel tanks were set up with necessary piping.

Between the 200-foot steel towers was installed a flat-top aerial, 8-wire, length 500 feet, spread 40 feet, with 6 down leads at the south end, bunched at top and stopped together all the way down. There was also installed a single-wire aerial, "T" type (15 feet above main aerial), for receiving and for sending on short wave lengths. The aerial at Cordova is liable to be carried away during winter by ice and snow, and facilities were furnished in order that repairs could be made quickly.

A three-room cottage, with shingled roof and sides, was built for the electrician in charge. The inside was finished

in the same manner as the cottage at Unalga. The station had a 10-H.P. motor boat, which was overhauled and an extension built to its cabin. In view of the probable damage to this boat from floating ice during the winter, a boat house was built, with ways, and a cradle and windlass were furnished for hauling the boat out of the water into the boat house.

The water system of the station was completely renewed and a number of small repair jobs and minor alterations were completed. In addition to the new radio set, other necessary equipment and some supplies were left at the station.

The station was recommissioned October 7th, 1912, and communication immediately established with Eureka, California, Unalga, Dutch Harbor and Pribilof. Daylight communication was established with Sitka, and later on with Kodiak, and at a later date night communication was established with Mare Island and North Head. The *Nero* left for Kodiak on October 10th, twenty-six days after arrival at Cordova.

The cost of the new installation and the repair work at Cordova amounted to \$20,200.

KODIAK.

The Kodiak station is located on Woody Island, about two miles from the village of St. Paul on the main island. With the exception of the masts, the station had been totally destroyed on June 8, 1912, when struck by lightning during eruption of Mt. Katmai. There was a depth of ashes, or rather powdered pumice, for about 8 to 12 inches all over the land. The only article left in the ruins of the old station which was of any value was a 15-H.P. gas engine, which was returned to Mare Island by the *Nero* and afterwards repaired.

All material for the new station was landed in three and a half days. A combined dwelling and power house was erected, with shingle roof and sides, storm windows fitted throughout and a glass porch built outside the operating room. The

inside of the building was finished with plaster board and battens. The dwelling was fitted with electric lights and equipment for all rooms, including kitchen and bath. A water system was installed with a 500-gallon tank in the attic, a 2,500-gallon redwood tank just outside the power house, and a 2-H.P. gasoline-driven pump. Water was pumped through pipe line from a well near the station.

Two 12-H.P. Meitz and Weiss kerosene engines were installed on a 44-ton concrete foundation, with 5-kw., 500-cycle alternator. A 3-kw. generator was set up for electric lighting and charging storage batteries. The engines were equipped with constant-burning lamps and necessary tanks. Three 1,000-gallon kerosene fuel tanks and one 500-gallon gasoline fuel tank were set up in the same manner as the ones at Dutch Harbor.

In the operating room was installed the 5-kw., 500-cycle, quenched-spark, experimental radio set, designed by Expert Electrical Aide George E. Hanscom. The set permitted rapid changes in wave-length settings from 300 to 6,000 meters, the latter being greater than obtained in any other station on the Pacific coast. A new ground plate was put in and connected to the ground of the old station, and, as usual, to all ground leads and protection devices.

New rigging was set up on both of the 225-foot wooden lattice masts and a main flat-top 8-wire aerial was installed, length 375 feet, spread 40 feet, 4 down leads at eastern end, bunched at top and stopped together all the way down. There was installed a single-wire aerial, "T" type (ten feet above main aerial) for receiving and for sending on short wave lengths. The station was furnished with a lathe, equipment for the dwelling and power house, and supplies for about one year.

An auxiliary station was established in the town of St. Paul to facilitate local communication. This station has a 60-foot mast, with a 4-wire vertical aerial, length 75 feet, spread 6 feet. A radio set, which was the usual storage-bat-

tery outfit, was installed in a one-room cottage built on the U. S. Customs Reservation.

The new Kodiak station was commissioned at 12:01 A. M., November 1st, eighteen days after the arrival of the expedition. Immediate communication was established with Cordova, Sitka and Unalga, and the next night with other Alaska stations and with Pacific coast stations as far south as Mare Island. On November 2d, the Mare Island operator, without previous intention or notification, tested all the new Alaska installations by calling in succession, Cordova, Kodiak, Unalga, Dutch Harbor and Pribilof, and obtained the daily weather report from each. The time required was less than thirty minutes.

The *Nero* left Kodiak November 5th, 1912, for Sitka.

The cost of the Kodiak station, including an estimate of \$5,000 for the purchase of the land on which the station was built, was \$23,283.

SITKA.

The expedition was at Sitka from November 8 to 13, 1912. A rotary-spark gap was installed, the condenser capacity increased, and minor repairs made to the apparatus. An 8-wire flat-top aerial was installed, length 400 feet, spread 40 feet, with four down leads at one end. There was also installed a single-wire aerial, "T" type, 200 feet vertical, 100 feet horizontal, for receiving and for sending on short wave lengths.

The plant at Sitka consists of duplicate 35-H.P. gasoline engines and 20-kw. separately excited alternators. The radio installation is a 10-kw. rotary-spark gap set, rated for the output used.

The cost of the work at Sitka was \$540.

The *Nero* returned to Mare Island on November 23d, 1912, after a cruise of six months and three days. The work originally planned for the expedition had been carried out, although at one time it was feared that a postponement of some of the work for another year would be necessary on account of the bad weather encountered and the rapid approach of winter.

The total cost of the expedition, including the subsistence of the personnel, was \$136,450. This amount, however, did not include the maintenance cost of the *Nero* nor the pay of her officers and crew.

During the cruise the health of the working party in general was good, in spite of exposure to inclement weather and the difficulty of obtaining fresh food. There were no serious accidents to the personnel. The material suffered from storms, but only one-half of one per cent. of the material carried was lost.

At Unalga, Dutch Harbor and Pribilof, the revenue cutters of the Behring Sea Patrol Fleet assisted materially in local transportation of men, mail and some supplies. An effort was made by the *Bear* and *Tahoma* to raise the sunken Unalga motor boat after the storm of September 12th, but a succession of heavy gales prevented any possibility of success. The Government agents at St. Paul and St. George also rendered valuable assistance to the expedition when at those islands.

The importance of the Alaskan stations will increase from year to year, particularly in view of the law authorizing them to handle commercial business. Districts which had no communication with the United States other than intermittent and irregular steamers are now in telegraphic communication, via radio to Eureka for points in California and to North Head for points outside of that State. Unalga can be a relay station from the United States to Japan and Siberia. Communication with the former has already been effected via Otchisi. Dutch Harbor is the farthest point to the westward at which a weather observer is stationed, and the daily reports from that station are of great assistance to forecasters in making weather predictions for the Pacific coast.

The most important work of the Alaskan stations is communication with vessels crossing the Pacific by the northern route, and with those sailing between Seattle and Nome and southeastern Alaska ports. Times of arrival and departure, private and business messages from passengers, the state of the

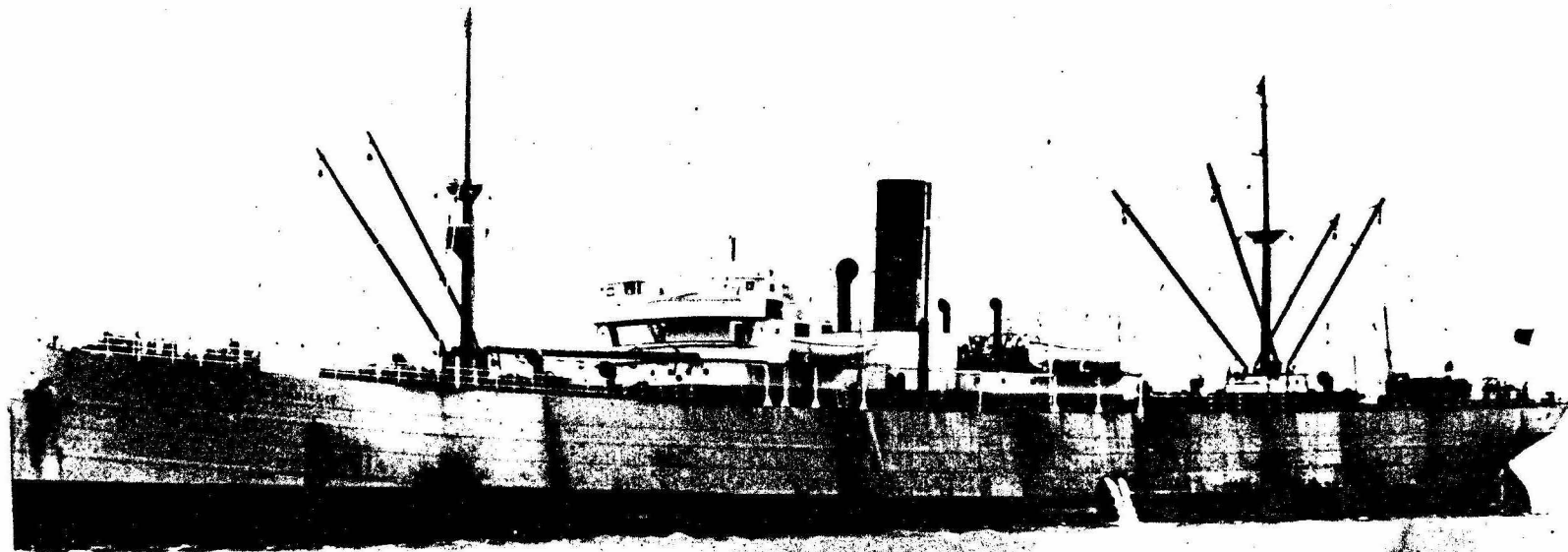
weather for transmission to other vessels, comprise the major portions of this work.

The dangers to navigation in Alaska are many, and these are increased by heavy fogs during the summer months. Should a vessel be wrecked or disabled while in Alaskan waters, her commander can communicate with the nearest radio station and be assured that assistance will be received from the nearest vessel or port as soon as possible. The saving of one vessel will justify the cost of the installation of the Alaskan stations. The rescue of all or some of the lives on board, even if the vessel is lost, cannot be reduced to terms embracing cash values.

Naval operators in Alaska must and do realize the necessity for constant attention when on watch, and, in spite of the lonely life and other hardships, it is believed the efficiency of the personnel will always be in advance of the efficiency of the installation, even though the latter is excellent.

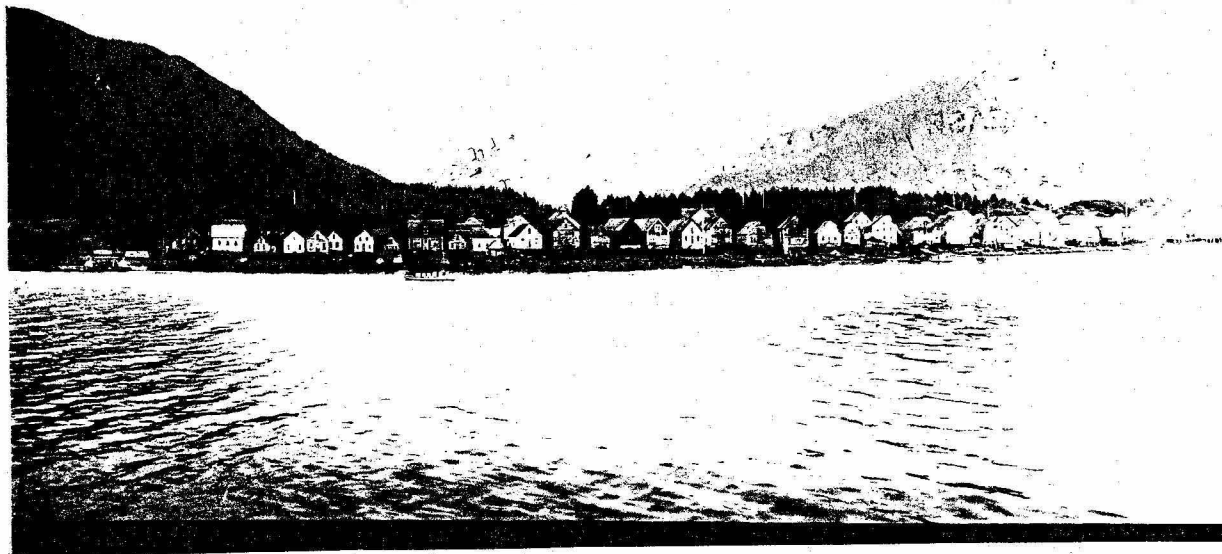


Navy Radio Station, Unalaga Island, Alaska, 1912. Photo provided by Shipyard Historian, Mare Island Naval Shipyard
Front Row: G. Mitchell, D. Bussboom, J. O'Malley, C. Gunderson; Middle Row: D. Shaw, P. Brown;
Top Row: C. Waters, D. Barry, J. Standish. (Construction crew).

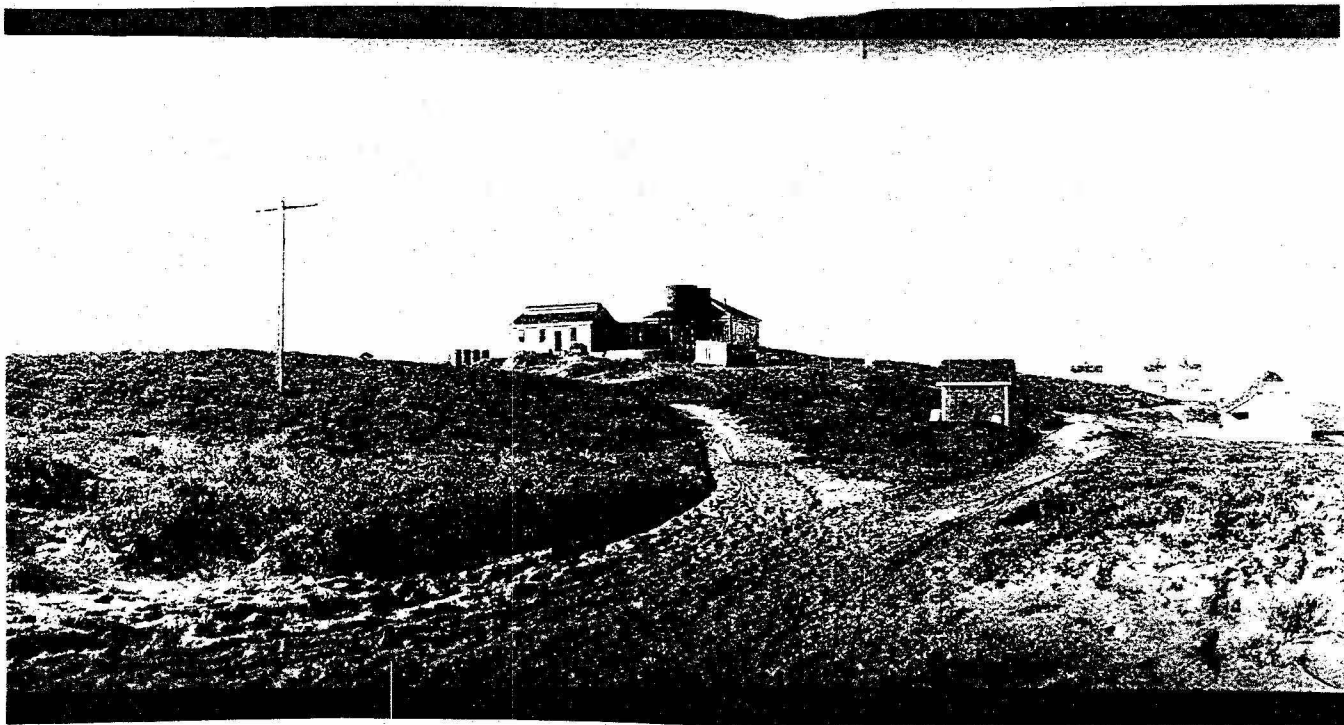


U. S. S. BUFFALO, Alaskan Radio Expedition, 1911

Photo provided by Shipyard
Historian, Mare Island Naval
Shipyard, Vallejo, Calif. ja

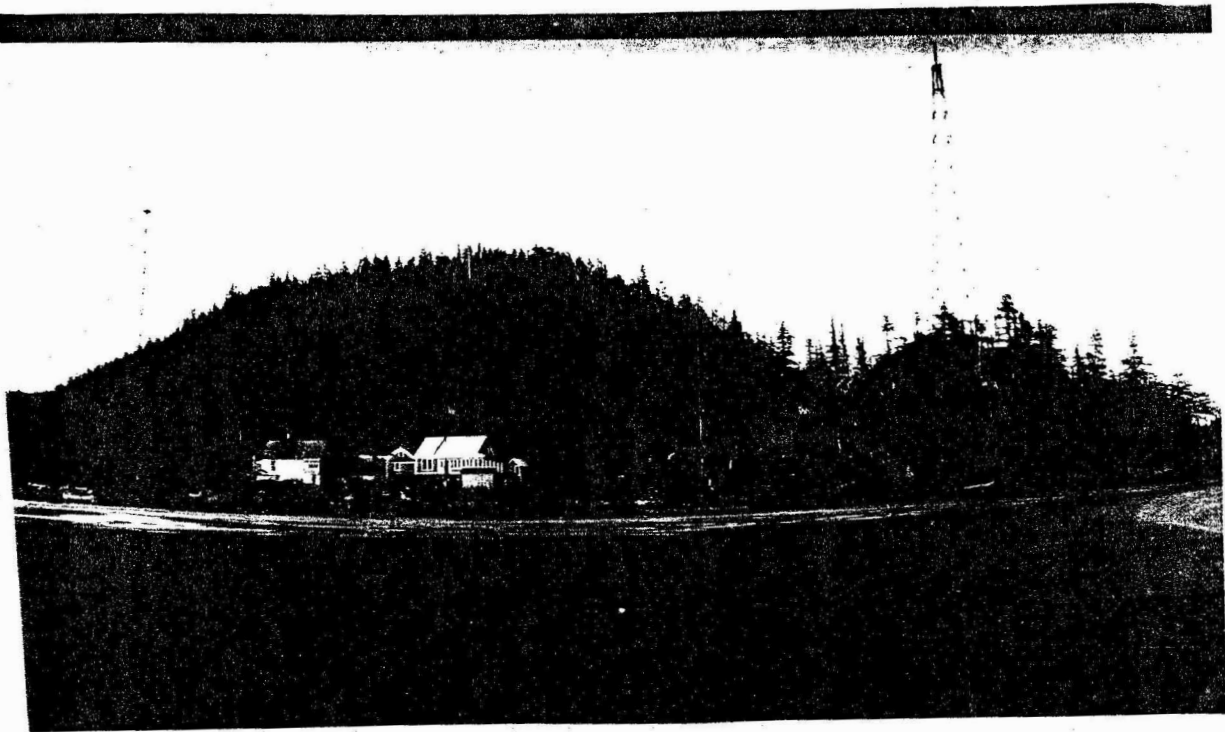


Indian River, Sitka, Alaska, 1912

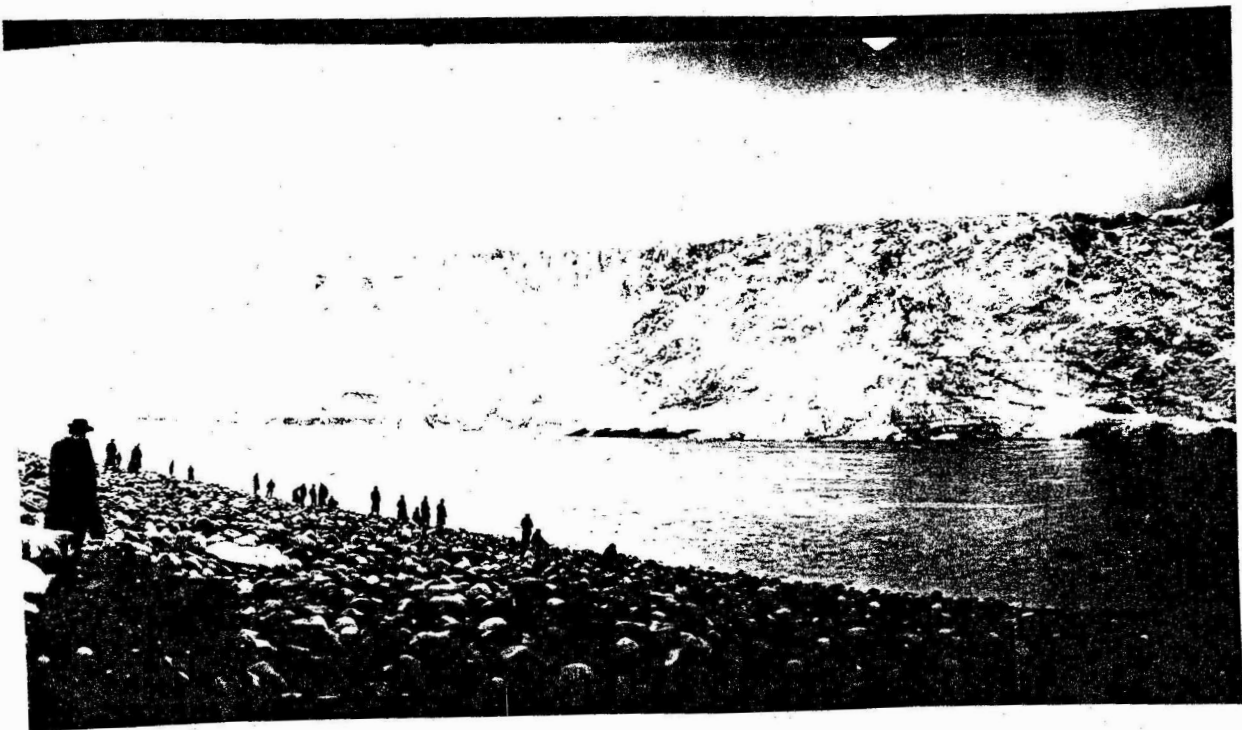


Naval Radio Station and Lighthouse, Cape Blanco, Oregon, 1912

Photos provided by Shipyard Historian,
Mare Island Naval Shipyard, Vallejo, California

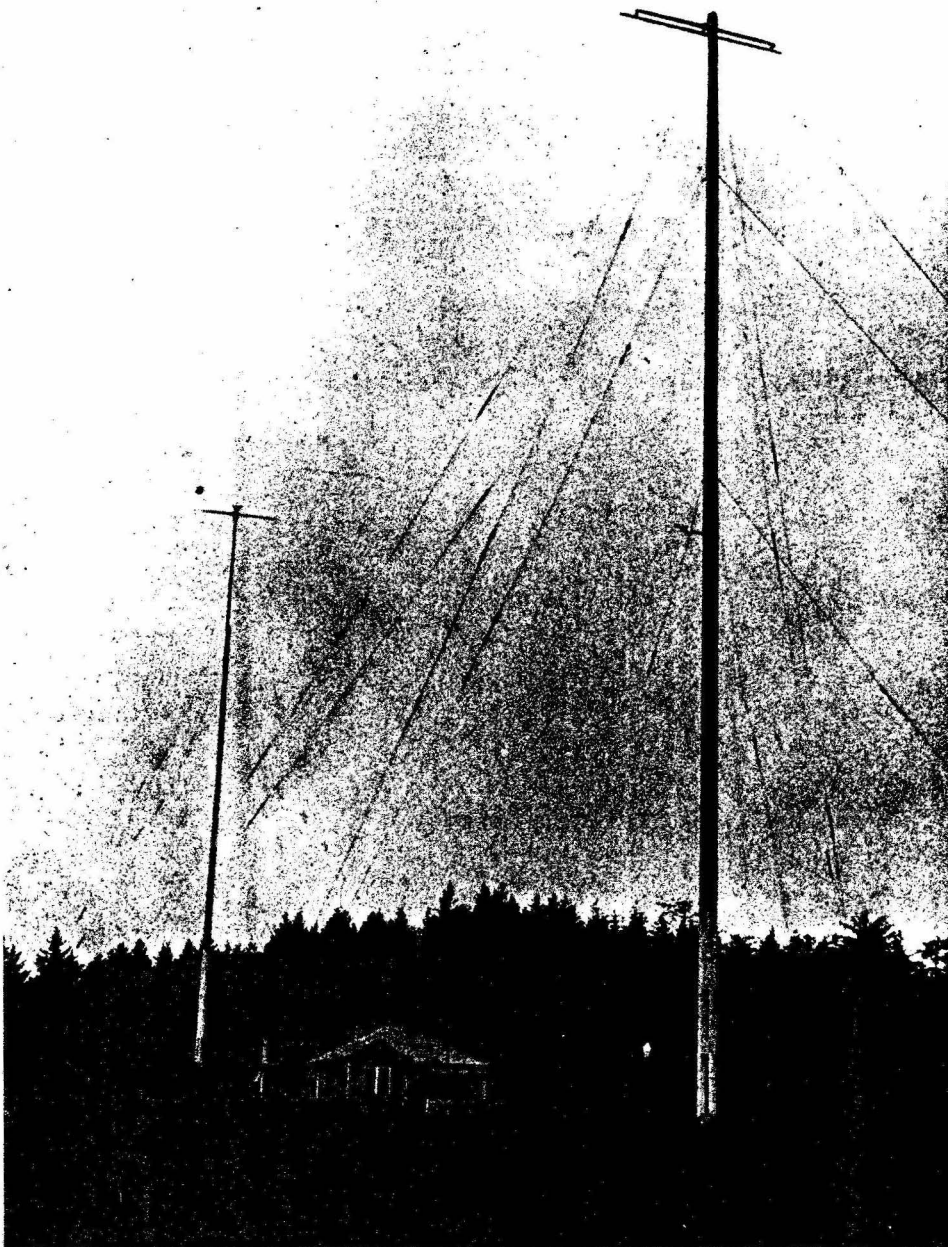


U. S. Naval Radio Station, Point Whiteshed, Alaska, 1912
(Cordova)



Copper River, Cordova, Alaska, 1912

Photos provided by Shipyard
Historian, Mare Island Naval
Shipyard, Vallejo, California



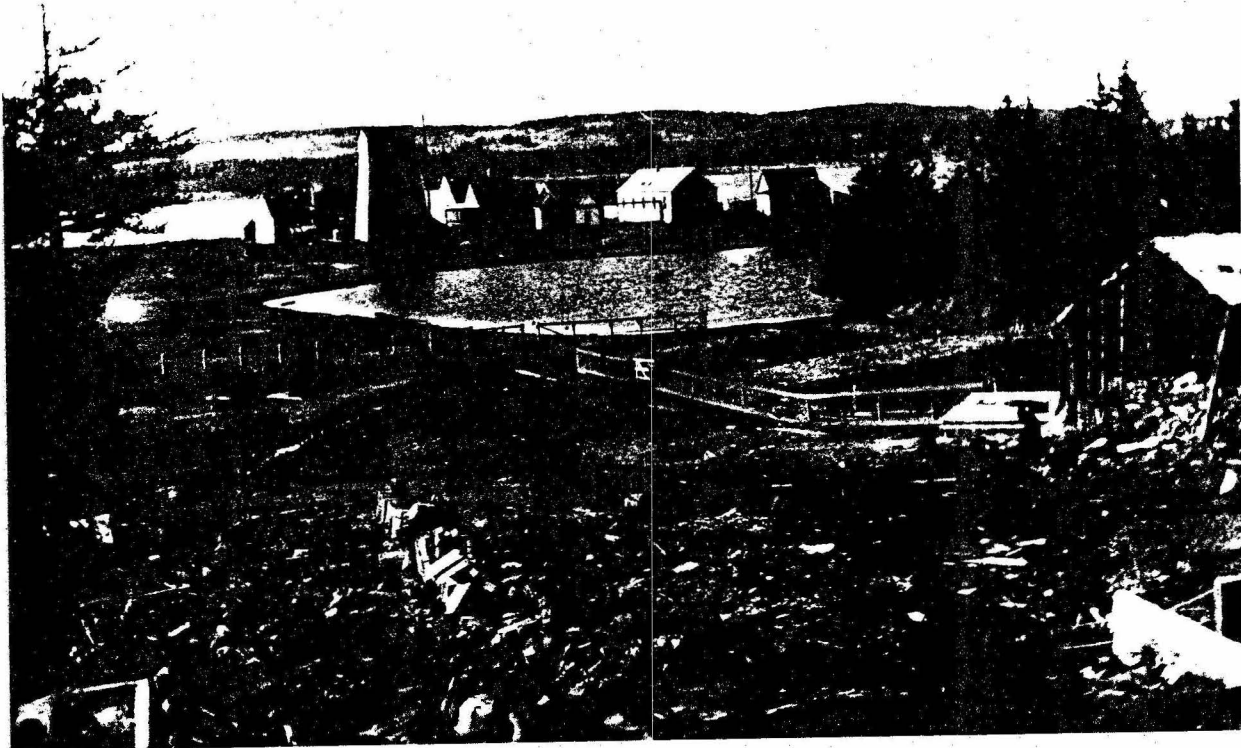
U. S. Naval Wireless Telegraph Station,
Sitka, Alaska, on Japonski Island.

(Photo copied from the "Robison Manual
of Wireless Telegraphy (Radio) for the
use of Naval Electricians - 1915"
by Lee H. Vernon LCDR USN (Ret)



U. S. Naval Wireless Telegraph Station, Sitka, Alaska,
on Japonski Island

(This photo copied from the Robison Manual of Wireless
Telegraphy (Radio) for the use of Naval Electricians (1915)
by Lee H. Vernon, LCDR USN (Ret)



U. S. Naval Radio Station, Kodiak, Alaska "NPS"

This picture was taken from the ruins of the Baptist Orphanage which burned to the ground in the winter of 1925-26. The station was on Woody Island. The picture is actually from the rear of the station. The town of Kodiak is 2 miles by boat from the top of the picture.

Water tanks and coal storage below the tanks. The boiler house was in a lean-to shed alongside.

Two duplex quarters and the dormitory are at rear. The light colored building is the power house and the house at the right was built about 1875 as a log cabin used by the North American Commercial Co, who shipped many sailing ship loads of ice from one of the lakes on Woody Island to San Francisco beginning shortly after 1850 and for several decades thereafter.

When the Navy built the radio station, they shiplapped the outside and refurbished the inside for use as living quarters for the yard workmen when they came up almost every summer. One day I crawled underneath it and found over 80 eggs the rats had carried from my chicken house over a hundred feet away from this cabin. I hauled them out and candled them. There were just a half dozen that were doubtful!

Photos and captions from:
Harold B. Phelps, LT USN RET



U. S. Naval Radio Station, Kodiak, Alaska, on Woody Island "NPS"
Built in 1910 or 1911; burned down in 1912 when Katmai erupted. Rebuilt in '14 or '15.
The first crew consisted of H. D. Martin in charge; G.G. Benson; R.M. Bitzer;
W. H. Sperlock and W.E. Apple. When it was rebuilt the crew was: Martin, Dickman,
Elmer Apple, Paulin, Wing, Adler and Thacker.



Portion of Kodiak in the foreground and the islands in the background:
"Near" Island; Forgetmenot Island; Woody Island and Long Island.
The radio station buildings "NPS" are the white spots on Woody Island.
Why the radio station was put on Woody is a long and almost unbelievable story,
very interesting. H. D. "Pa" Martin put NPS in commission when it was built in
1910 or 11 and it burned down when Katmai erupted in 1912, rebuilt in '14 or '15.
"Pa" told me he lost over 800 in paychecks as no one ever had a bank account in
the states. They banked their checks in a dresser drawer. They all got it back
but not too soon.

Photos and captions from:
Harold B. Phelps, LT USN RET



U. S. Naval Radio Station, Seward, Alaska "NPV" Built in 1918.

Married quarters left side; radio buildings on right.

These pictures were sent to me in the first part of 1919 by H. D. "Pa" Martin, CRM in charge when I was all lined up to go there for duty. I ended up at NFG and then NPM.

This was taken on a nice summer day, so Pa labeled it. Now see the other picture which Pa labeled "after a light rain.!"

When I went through Seward in 1924, E. J. "Eddie" Bahrs was in charge; W. F. "Wild Bill" Hickok, L.C. Mountain, were part of the crew. Don't remember the rest.

Also I found out the station had been built out on the mud flats and high tides always covered the grounds!

Photos and captions from:
Harold B. Phelps, LT USN RET



"NPV" Seward, Alaska. Built 1918.

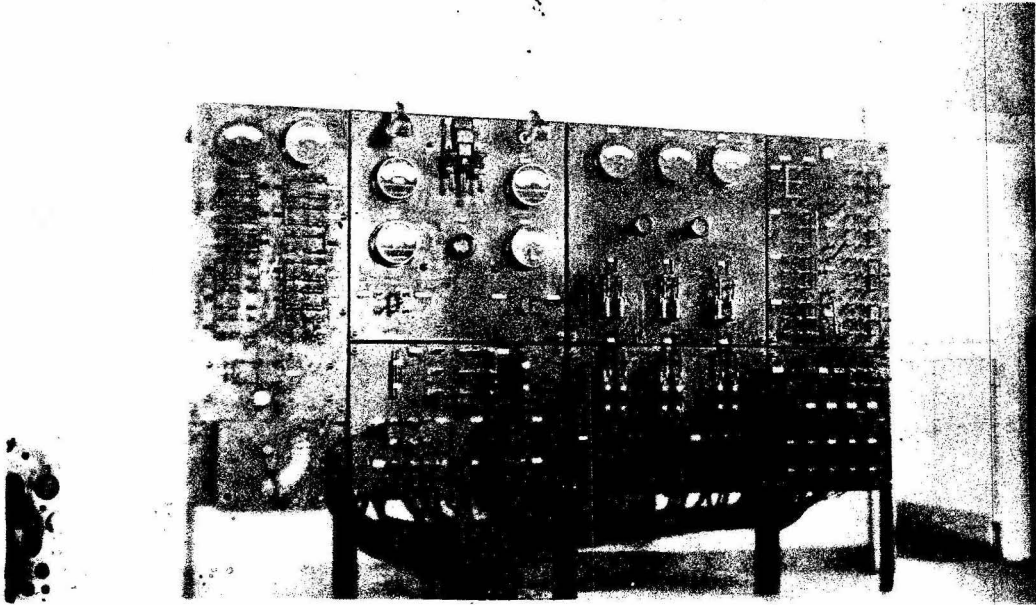
This picture was labeled by "Pa" Martin:

"After a light rain!"

When I went through there in 1924 enroute to Kodiak, I found out that the high tides always flooded the grounds and it was frequently necessary to go out in a dory to rescue the oil drums floating around.

The station had been built out on the mud flats.

Photos and captions from;
Harold B. Phelps, LT USN RET

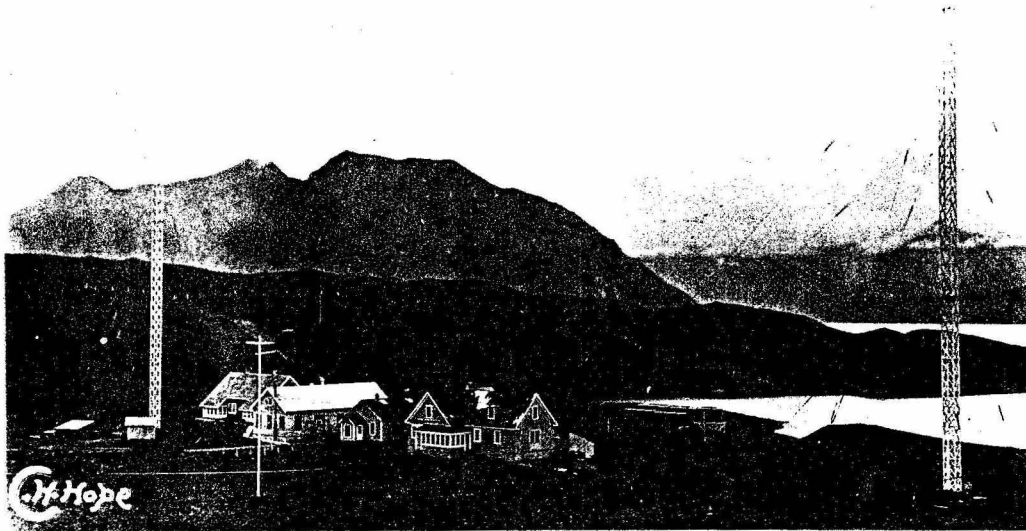


Power switchboard, U. S. Naval Radio Station, St. Paul, Alaska "NPQ" 1930. Someone before had ordered the paint for the interior of the power house but never got around to putting it on. In the winter of 1930-31 we painted it. I promised dire results to any man who spilled a can of paint. I had a piece of 2 x 12 across the top of this board. Who do you think spilled the only can? That's right, it was me!. It took about five gallons of gas to wash the paint off the back of this switchboard. It was a real mess! I sentenced myself to clean it up without any help. Did I get hell for that! H. B. Phelps CRM at NPQ 8-2-30 to 6-12-31



Photos and captions from:
Harold B. Phelps, LT USN RET

U. S. Naval Radio Station, St. Paul, Alaska "NPQ" 1930



U. S. Naval Radio Station, Dutch Harbor, Alaska "NPR" 1930.
 C. H. Hope was CRM in charge of NPR when this picture was taken. The two wooden towers were of the type erected at most of the Federal Telegraph Co. stations. One at South San Francisco "KFS" and one at Heeia, T.H., taken over by the Navy in 1917, both about 400 feet high. I believe the tallest wooden tower in the world -608 feet- was of this type somewhere on the East Coast. The Federal used only Poulsen arcs and each bolt in the towers had to be grounded or the arc would start a fire. This happened at KFS and they lost 100 feet of tower. It also happened at Heeia but a Chinese on watch shut down the arc, strapped on a fire extinguisher, crawled up and put out the fire.

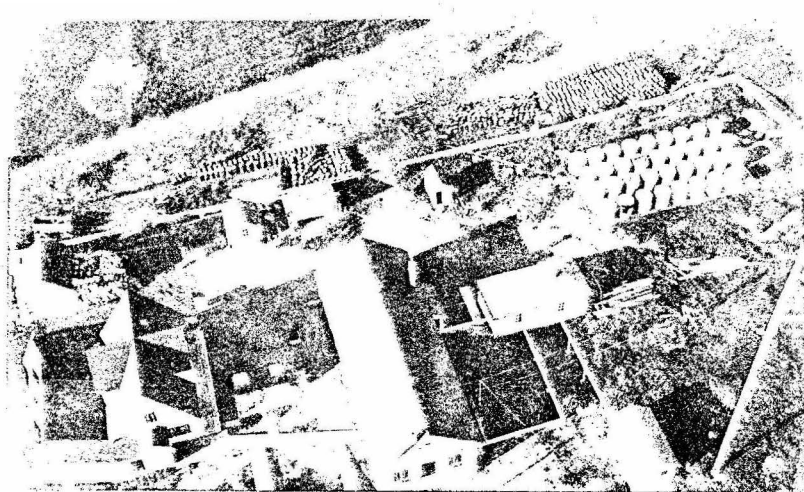


U. S. Naval Radio Station, Ketchikan, Alaska

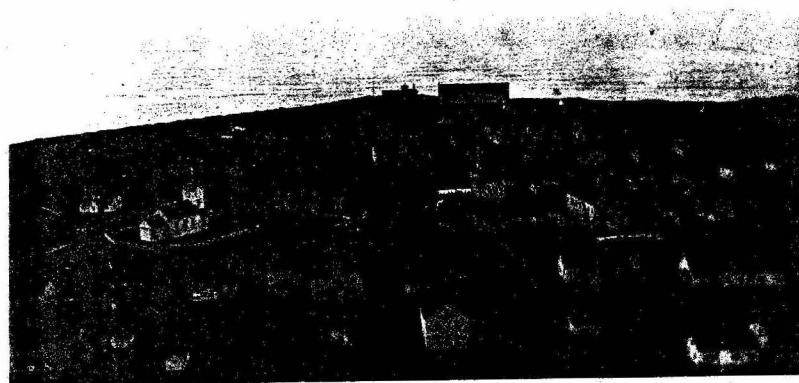
1924

L to R: Duplex quarters, dormitory and old Marconi living quarters. This station was taken over from Marconi in WWI. We worked NPA Cordova; NPB Sitka, and various cameries and ships. Most of our traffic went to WAMCAT (Washington Alaska Military Cable and Telegraph) in town for transmission over their cable, which ran from Seattle to Valdez.

Photos and captions from:
 Harold B. Phelps, LT USN RET



Partial view of Navy Radio Station NPQ, St. Paul,
taken from one of the towers.



NPQ, St. Paul, Alaska, DF building
(left of the long building)



Bassler, McGuirk, Bagley, Parker
NPQ, St. Paul, Alaska

Photos from Carl J. Bassler



CRM and Mrs. McGuirk, NPQ, St. Paul, Alaska
McGuirk was R-in-C at NPQ circa 1932-34



Bassler, Flip and Parker
loading fuel drums
NPQ, St. Paul

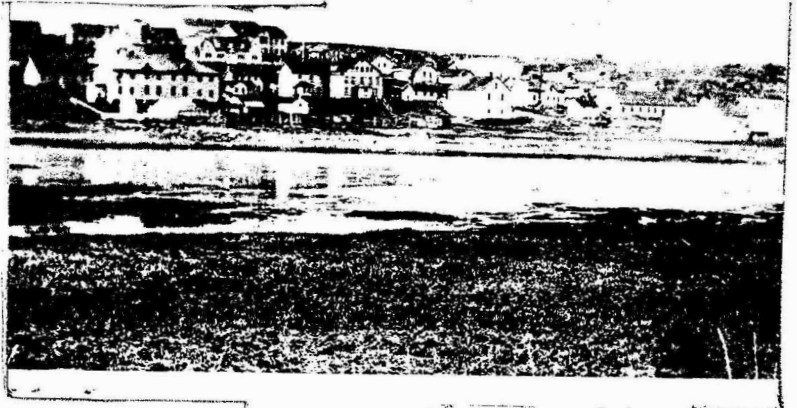
Photos from Carl J. Bassler



Native skin boat, usually
called "Bidara" or "Bidarka"
NPQ, St. Paul, Alaska



1.



2.



3.



4.

Panoramic view of St. Paul Island, Pribiloffs, Alaska - 1, 2, 3, 4, left to right. View from one of the radio towers. Village at left, Radio Station at right. Photos from Carl J. Bassler.



North Head, Wash



Sitka, Alaska

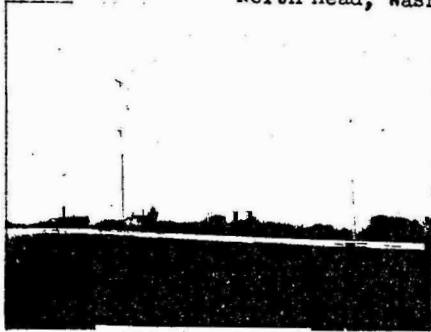
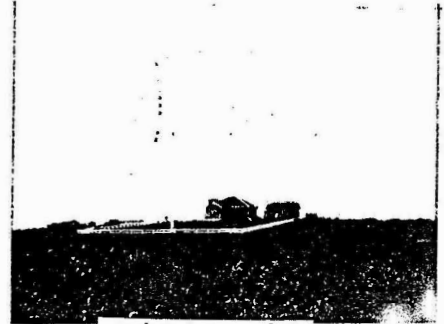


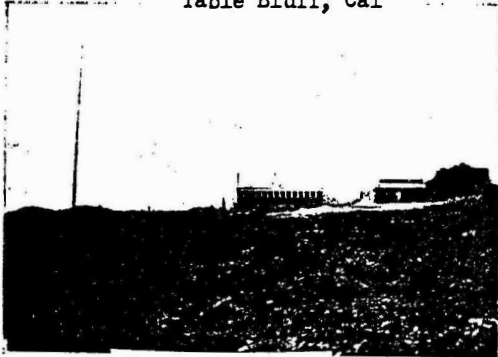
Table Bluff, Cal



Geo. E. Hanscom



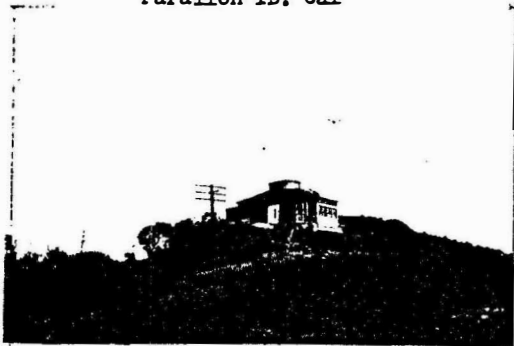
Point Loma, Cal



Farallon ID. Cal



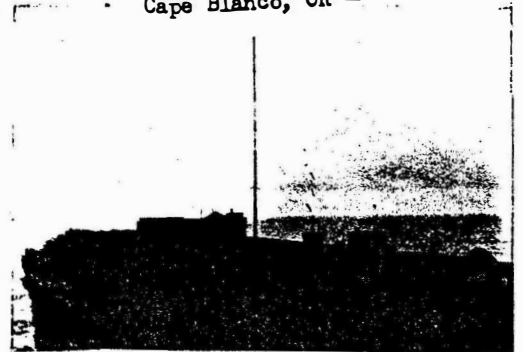
Cape Blanco, OR



Yerba Buena ID. Cal



Mare Island, Cal



Point Arguello, Cal

USN WIRELESS TELEGRAPH STATIONS ON THE PACIFIC COAST circa 1910

Copy provided in 1986 by:

Sue Lemmon, Shipyard Historian, Mare Island Naval Shipyard, Vallejo, CA 94592

COMMANDANTS, PUGET SOUND NAVAL SHIPYARD

	<u>Date Reported</u>	<u>Date Detached</u>
Lt. A. B. Wycoff	16 Sept 1891	1 Feb. 1893
Comdr. J. C. Morong	6 Feb. 1893	8 Aug. 1896
Capt. W. H. Whiting	8 Aug. 1896	15 June 1897
Capt. J. G. Green	19 June 1897	31 July 1899
Capt. J. B. Coghlan	31 July 1899	2 July 1900
Capt. W. T. Burwell	2 July 1900	29 Aug. 1902
Rear Adm. Y. Stirling	29 Aug. 1902	15 Apr. 1903
Rear Adm. C. J. Barclay	1 June 1903	8 Sept 1905
Rear Adm. W. T. Burwell	11 Sept 1905	18 July 1908
Rear Adm. J. A. Rodgers	18 July 1908	26 July 1910
Rear Adm. V. L. Cottman	26 July 1910	14 Feb. 1914
Comdr. D. W. Blamer	15 Feb. 1914	19 July 1915
Rear Adm. R. E. Coontz	20 July 1915	28 Sept 1918
Rear Adm. H. A. Field	28 Sept 1918	31 Mar. 1921
Rear Adm. J. A. Hoogewerff	17 June 1921	1 Oct. 1924
Rear Adm. J. V. Chase	1 Oct. 1924	31 Aug. 1926
Rear Adm. S. S. Robison	1 Oct. 1926	24 May 1928
Rear Adm. H. J. Ziegemeir	22 June 1928	15 Oct. 1930
Rear Adm E. H. Campbell	9 Jan. 1931	12 May 1934
Rear Adm. John Halligan	11 July 1934	11 Dec. 1934
Capt. H. G. Wallace (Acting)	11 Dec. 1934	13 July 1935
Rear Adm T. T. Craven	13 July 1935	8 May 1937
Rear Adm. E. B. Ferner	6 July 1937	30 Aug. 1940
Rear Adm. C. S. Freeman	30 Aug. 1940	31 Mar. 1942
Rear Adm. S. A. Taffinder	31 Mar. 1942	14 June 1944
Rear Adm. R. M. Griffin	15 June 1944	15 Feb. 1945
Rear Adm. R. W. Christie	15 Feb. 1945	

* * * * *

For the information of Old Timer Communicators:

Captain A. W. Peterson was the District Communication Officer, Thirteenth Naval District, during World War II.

Captain C. N. Ingraham, U. S. Navy (Retired), was the Convoy and Routing Officer, Port Director, Naval Transportation Service, Thirteenth Naval District, during World War II.

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The lists of personnel in this appendix were obtained by the historian of the Old Timer Communicators (OTC), John W. Trott, from Christmas cards and other documents provided by members, and others. Some lists were compiled strictly from names recalled by members.

The historian has researched the names to include first names or initials, Bellevue, San Diego and Electronic Maintenance schools class numbers, the ranks or rates at which the men retired from service and dates, their current status (living or deceased, when known) and any other pertinent data that would be of interest to OTC members and other readers.

Members and others who happen to read this history can help to augment these lists by searching their scrapbooks and their memories for any records, including Christmas cards, of officers and men who served in communications at any Naval shore communication or any Naval ship.

Readers are also invited to contribute (or loan) additional material for these histories including, but not limited to, personal recollections (sea stories), with dates, of their experiences in Naval communications. Of special interest are lists and photographs of personnel, photographs of early equipments, buildings, towers, antenna systems, etc. If possible, identification and dates of photo subjects should accompany each photo.

Please send such material to the Old Timer Communicators historian, John W. Trott, 4512 Pescadero Avenue, San Diego, California, 92107. Indicate which items are to be returned to you.

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13th Naval District -- Communications -- December 1932
(N8G, N8T, N8C, N8E, N8F, N8R, N8S)

RMS Cl#	Name	R/R	Retired	RMS Cl#	Name	R/R	Retired
	ALLEN, J T	RM2			JOHNSON, C F	CRM	
27	ANDERSON, L	RM2			JONES, N	MM1	
	BOSSART, Albert F	RM2			KERR, W H	SC2	
	BROWN, Damon F	CRM	CW02'45		MARION, R J	CRM	
	BROWN, G F	Y2			McFADDIN, C	Civ	
	BRYANT, William "J"	CRM	CW02'50	33	McFEARIN, Allen L	RM2	
	BYER, Earl Dewey	CRM			McQUAID, C W	MM1	
	BYERS, B J	RM2			MEDLER, J P	CMM	
25	COLE, William L	RM1	CW0?'4?		METT, P Jr	SC2	
	COLLIER, Gilbert V	RM2	CW03'57		MILLARD, G T	CY	
	CONNELLY, Frank E	RM1	CW02'53		NOVOTNY, E G	SC3	
	COOPER, Lowell	LCdr	Capt'46	15	PARKHURST, Dustin D	RM1	Lt '50
	CORDER, B	SC2		21	PARKS, Clyde G	RM1	CRM'42
?35?	CRATON, Lee H	RM3	RMC		PARKS, M	S1	
	CROOKS, C E	RM2		SD10	PATTERSON, Samuel J	CRM	
11-43	CROW, Frederick A	CRM	Lt '48	28	PETTENGILL, William F	RM2	Lt '58 (2)
	DAVIS, James C	RM1	CW02'50	19	PUMPHREY, William F	RM1	CW02'50
SD9	DAYTON, Harold H	CRM	CW0?'?		REED, A J	CRM	
	DICKINSON, L A	CRM			REED, B L	RM2	
	DISHON, Elmer F	RM2	W01'61				
	ELLIOTT, C W	RM2		SD9	SARFF, Sylvan R	RM1	Lt '52
				23	SHAW, Harvey C	RM1	CW02'52
				SD4	STILLWELL, Oscar R	RM1	Ltjg'4?
12	GAJEWSKI, Albert A	RM1			STOFFA, A S	RM1	
	GARRETT, C E	RM2			THOMAS, William	CY	CW0?'45
	GETZ, Meyer L	RM2			UTHILL, George F	RM2	CW02'53
	GREGOR, G C	CRM					
SD9	GROOMAN, A	RM1			VANDUKER, C J	RM2	
21	GUNN, Archibald W	RM1	CW02'51		VANNOY, Elvin N	CRM	Lt '51
	HALL, Francis J	CRE	1-23-42 CRE		WENSEL, Frank E Jr	Lt	Capt'47
31	HANNAFORD, Edward L	RM2	LCdr'56				
30	HARKER, Lewis S	RM2	RMC ??	30	WAGNER, James E	RM2	CW03'57
33	HARE, Jonas W	RM2	LCdr'58		WARD, L C	RM2	
	HARRIS, William A	RM2	Lt '53	32	WARNOCK, Samuel A	RM1	
	HARVEY, V C	SC2			WELCH, L G	RM2	
24	HELD, William E	RM1	LCdr'55		WING, Edson P	CRM	RMC '??
	HOLT, Jack N	RM1	RMC ??	24	WOLFORD, Elmo W	RM2	
22	HOUCK, Howard W	RM2	RMC '??				
	HOWARD, J J	S1		12	YOUNG, George A	RM1	CW02'47
	HUDSON, John A	CRM	CRM '??				
	HUGHES, W C	RM2					
15	HURTADO, Leon M	RM1					

Deceased

MEMBER OTC SoCal and/or NorCal
1978 or earlier

(2) Designated Naval Aviator.

From a copy in the OTC archives of a Xmas card belonging to Bledsoe. San Diego and Bellevue class numbers, if known, added for cross reference. Any errors in first names are those made during research.

13th Naval District - Radiomen per research -- June 1934.
(Partial list only)

RMS	Cl#	Name	Rate	Retired
		BLACKARD, Willard D	RM2	CW02'54
		CARRIGAN	RM	
		COOPRIDER (2)	RM	
15		DAVIDSON, Elmore E	RM1	CW03'53
		DAVIS, Jesse J (2)	RM3	CW04'59
		FAILER, Vernon L (1)	RM3	
		FLYNN, J B	RM2	
		GETZ, Meyer L	RM	
SD4		GLATZMAIER, John G	CRM	Lt '48
		HASTINGS, "Bob"	RM	
SD6		HORSLEY, Grant E (2)	RM1	LCdr'53
		MULLINS, Grover "Moon"	RM	
23		SHAW, Harvey C	RM1	CW02'52
		THOMPSON, Hugh O (1)	RM2	CW02'49

Names from Thompson's letter in
The Army-Navy Review of June 1934,
the last of his "Wailupe Warbler"
columns.

Deceased

MEMBER OTC SoCal and/or NorCal
1978 or earlier

(1) TAD from USS ASTORIA NEDC

(2) Due to report.

13th Naval District - Radio Puget Sound (Control) and Keyport -- December 1937

RMS	Cl#	Name	R/R	Retired	RMS	Cl#	Name	R/R	Retired
		ALBRIGHT, K E	RM2				KERRELL, Robert W	CRM	CW02'49
		ALESSI, Artilio	RM2	CW03'60		19	LARSON, Arthur C	CRM	Lt '51
		ARCHIBALD, Gerald L	RM1			20	LUCERO, Arthur A	RM1	CW02'49
		BAGLEY, Francis M	RM1	CW02'51			MARSHALL, Thomas A	CRE	LCdr'46
		BISHOP, Herbert E	RM1	Lt '52			MATHESON, Mrs Carol	Steno	
		CALL, F F	Y1				McKINNEY, Charles W	MM1	Lt '49
SD8		CARR, William A	CRM	RMC '??		23	NELSON	RM1	Cdr '58
		CHARLETON, James R	RM2	LCdr'56			OLSON, J T	SC1	
24		CORNELIUS, Marion E	CRM	Lt '51			PEGG, G F (or G E)	RM1	
		DAIGLE, Austin A	CRM	Ltjg'53			ROBITAILLE, G A	RM2	
EM30		DARK, LeRoy V	RM2	CW03'55			or		
		DOLSON, O E	S1				ROBITAILLE, George A	EM2	CW02'58
12		DYE, Harold M				34	STEELE, Roy M	RM2	LCdr'59
		FARRAR, "J" "C"	RM2	Cdr '58		32	St PIERRE, Francis W	RM2	Cdr '58
SD7		FRASER, Wendell L	CRM	Lt '48		33	STUBBS, Chancy N	RM2	ATC '??
21		FRONDORF, Victor L	RM1	Lt '51			TAYLOR, Alfred R	LCdr	Capt'52
		HARSHMAN, Paul O	CY	CW02'48			TINSLEY, Warwick M	Lt	Cdr '45
SD6		HARWOOD, Raymond	CRM	Lt '48		15	TRUAX, Arthur K	RM1	CW02'54
SD6		HERR, John F	CRM	Lt '48			ZEH, Alfred W	RM1	CRM '??
		HURNBLAD, Carl R	Y2	Ltjg'57					
28		JONES, Hubert F	RM1						

Deceased.
 MEMBER OTC SoCal and/or NorCal
 1972 or earlier
 Address available.

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 by Steele. San Diego and Bellevue class
 numbers, if known, added for cross reference.
 Any errors in first names are those made in
 1972 during research.

13th Naval District -- Communication Activities -- December 1938
 U. S. NAVAL RADIO STATION, PUGET SOUND NAVY YARD, BREMERTON, WASHINGTON

RMS Cl#	Name	R/R	Retired	RMS Cl#	Name	R/R	Retired
	TAYLOR, Alfred Richard	Cdr	Capt '52		EARLE, Ralph Jr	LCdr	Vadm '57
	DCO				ADCO		
	FRYBERGER, Elbert L	LCdr	Capt '54		KIEFER, Durand	Ltjg	LCdr '51
	RMO				Yd. Comm Ofcr		
	CARR, William	CRM			PEGG, G E (or G F)	RM1	
24	CORNELIUS, Marion E	CRM	Lt '51		RENOWDEN, William A	RM1	
SD9	FOX, R J	CRM			RICHARDS, Ervin R	RM1	CWO3 '48
SD7	FRASER, Wendell L	CRM	Lt '48		ROBINSON, Francis H	RM1	CWO2 '46
SD6	HARWOOD, Raymond	CRM	Lt '48		SKINNER, Walter L	RM1	LCdr '58
23	NELSON, James DeForest	CRM	Cdr '58		ZEH, A W	RM1	
	STEPHENSON, F W	CRM			BEMIS, Isaac C	RM2	Cdr '58
26	BEALL, John D	RM1	CWO2 '57		CARMICHAEL, Kenneth E	RM2	LCdr '60
	BLOWERS, J R	RM1			DITMARS, C E	RM2	
	BROOKE, Robert E	RM1	Ltjg '58		DUISEN, A	RM2	
	CASINO, Frank	RM1	RMC '??		HARPHAM, G A	RM2	
21	COYLE, Cassius R	RM1			MORGAN, E A	RM2	
	DONDAJEWSKI, Edmund R	RM1			SELCH, Kenneth B	RM2	WO1 '47
	FRASER, L J	RM1			SOUTHERLAND, Charles S	RM3	RMC '??
34	FULKS, Paul F	RM1	Lt '54		FOSTER, John R	CY	Lt '53
	HAMMOND, Donald R	RM1	CWO2 '55		BAILEY, Wallace R	Y1	Lt '55
18	HANLON, John F	RM1	LCdr '56		HURNBLAD, Carl R	Y1	Ltjg '57
	HENRY, John O	RM1			KEITH, N R	SC1	
	JENKINS, Alvin	RM1			PIGUT, A B	SC2	
20	LAMBERT, Maurice G	RM1			TUGMAN, W H	SC2	
	LARSON, Clarence J	RM1	RMC '??		TODD, A V	SC3	
26	MARVIN, Clair L	RM1			DUARTE, R D	F1	

Deceased

MEMBER OTC SoCal and/or NorCal
 1981 or earlier
 ADDRESS on hand in 1981

(continued)

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 by Colvin. San Diego and Bellevue class
 numbers, if known, added for cross reference.
 Any errors in first names are those made
 during research.

13th Naval District -- Communication Activities -- December 1938 (continued):

RMS				RMS			
<u>Cl#</u>	<u>Name</u>	<u>R/R</u>	<u>Retired</u>	<u>Cl#</u>	<u>Name</u>	<u>R/R</u>	<u>Retired</u>

U. S. NAVAL RADIO STATION, KEYPORT, WASHINGTON

	<u>BRADLEY, Donald H</u>	CRE	LCdr '46	15	<u>WALLACE, Glynn D</u>	RM1	Ltjg '52
SD6	<u>HERR, John F</u>	CRM	Lt '48		<u>CAWDREY, F L</u>	RM2	
33	<u>FARRAR, "J" "C"</u>	RM1	Cdr '58		<u>McKINNEY, Charles W</u>	MM1	Lt '49
26	<u>BOSSELET, Alfred J</u>	RM1	Cdr '58				

U. S. NAVAL RADIO STATION, ASTORIA, OREGON

	<u>LUSK, TRUETT C</u>	CRM	LCdr '49		<u>McCONNEL, Joseph L</u>	RM1	LCdr '59
	<u>BAGLEY, Francis M</u>	RM1	CWO2 '51		<u>WILLMARTH, James D</u>	RM1	CWO2 '49
	<u>BENJAMIN, Ivan S</u>	RM1	LCdr '56		<u>BATES, Elmer J</u>	RM2	LCdr '57
	<u>EATON, George B</u>	RM1	RMC '??		<u>DONNELLY, J J</u>	RM2	
	<u>GELINEAU, John H</u>	RM1	CWO2 '59		<u>VASKO, J A</u>	SC2	

U. S. NAVAL RADIO STATION, DUTCH HARBOR, ALASKA

	<u>NEWMAN, Loyd O</u>	CRM	Lt '49	39	<u>DUFF, Alan A</u>	RM2	CWO4 '58
23	<u>ANGELL, Edwin D</u>	RM1	CWO2 '55		<u>MILLER, G A</u>	RM2	
23	<u>JONAS, Basil W</u>	RM1	CWO3 '55		<u>PRUESS, Verlen E</u>	RM2	Lt '54
	<u>KENTON, Robert W</u>	RM1	Cdr '59		<u>HOLMES, Jesse G</u>	CMM	Lt '53
	<u>DOZEMAN, Clarence</u>	RM2	RMc '??				

U. S. NAVAL RADIO D/F STATION, EMPIRE, OREGON

SD7	<u>LUTES, Roscoe C</u>	CRM	LCdr '52		<u>JACKSON, Elwyn H</u>	RM2	
	<u>BISHOP, Herbert E</u>	RM1	Lt '52		<u>DAILEY, H V</u>	SC2	
33	<u>STUBBS, Chancy N</u>	RM1	ATC '??				

U. S. NAVAL RADIO D/F STATION, FORT STEVENS, OREGON

12	<u>IDYE, Harold M</u>	CRM	Lt '50		<u>CHARLETON, James R</u>	RM2	
	<u>MAGARIS, Paul L</u>	RM1	10-31-41 CRM		<u>GATES, E H</u>	RM2	
	<u>UZZELL, C F</u>	RM1					

U. S. NAVAL RADIO D/F STATION, TATOOSH ISLAND, WASHINGTON

	<u>HIXSON, Robert S</u>	CRM	Lt '??	34	<u>STEELE, Roy M</u>	RM1	LCdr '59
	<u>HORNE, Ralph S</u>	RM1	CWO2 '51		<u>IRWIN, Iven O</u>	MM2	LCdr '54
	<u>SMITH, William Millard</u>	RM1	CWO? '48				

U. S. NAVAL RADIO D/F STATION, KLIPSAN BEACH, WASHINGTON

SD?	<u>SCHMELZER, Paul H</u>	CRM	CWO2 '49		<u>McNAY, Austin K</u>	RM1	RMC '??
22	<u>BLANCHARD, Cecil R</u>	RM1	RMC '??		<u>SIMPSON, Nolan J</u>	RM1	CWO2 '53
20	<u>LUCERO, Arthur A</u>	RM1	CWO2 '49				

Deceased

MEMBER OTC SoCal and/or NorCal
1981 or earlier
ADDRESS on hand in 1981

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in first names are those made during research.

13th Naval District -- Communication Activities -- December 1939

RMS				RMS			
Cl#	Name	R/R	Retired	Cl#	Name	R/R	Retired

U. S. Naval Radio Station, Puget Sound Navy Yard

[PETERSON, A. W. (DCO) LCdr Cdr '47
 FRYBERGER, E L (RMO) LCdr Capt '54
 [SHOEMAKER, John (ADCO) Lt
 BEER, Robert O(YdComm)Ltjg Radm '59

7 [ADAMS, Frederick A CRM Ltjg '48
 23 [ANGELL, Edwin G RM1 CW02 '55
 [ARCHIBALD, Gerald L RM1

[BATES, Elmer J RM2 LCdr '57
 BISHOP, Herbert E RM1 Lt '52
 BLOWERS, J R RM1
 BOYER, C B RM1
 BRYANT, William "J" CRM CW02 '50

SD8 CARR, William A CRM
 24 [CORNELIUS, Marion E CRM Lt '51

DAILEY, H V SC3
 SD9 [DAYTON, Harold H CRM CW0? '47
 DePLACID, F J RM1
 DETTERICH, Clarence A RM1 LCdr '59
 DORMER, Robert L RM2 Cdr '62
 DOZEMAN, Clarence RM2 RMC '??

FENWICK, Morton A CY CW02 '47

FOSTER, John R CY Lt '53

GRIFFITHS, J C RM1

[HAMELIN, Roy Rolla CY CW02 '46
 [HAMMOND, Donald R RM1 CW02 '55
 [HARWOOD, Raymond CRM Lt '48
 HENDRICKS, H L RM2

JOVANOVICH, P S1

KOEPLINGER, W F CRM

26 MARVIN, C L CRM
 29 [McMARTIN, Francis J RM1 Ltjg '55
 MEIN, F J RM1

NORTHSTROM, Albert H CRM CW02 '45

PELLETIER, Albert J RM1 Capt '68

[ROBINSON, Francis H RM1 CW02 '46

STEPHENSON, F W CRM

SD6 WILLIAMS, Clayton CRM
 16 [WILMOT, George C CRM LCdr '51

U. S. Naval Radio Station, Keyport, Washington

[BRADLEY, Donald H CRE LCdr '46
 CHAMBERLAIN, H A CMM
 [DOBSON, John H CRM
 26 [BOSSELET, Alfred J RM1 Cdr '58

18 HANLON, John F RM1 LCdr '56
 15 [TROWBRIDGE, Warden L CRM CW02 '50
 WILLIAMS, C F CRM

[Deceased.

MEMBER OTC SoCal or NorCal 1973 or earlier
 ADDRESS on hand in 1975

From a Xmas card donated to the OTC archives
 by Dave Martin. San Diego and Bellevue
 class numbers, if known, added for cross
 reference. Any errors in first names are
 those made during research.

(continued)

13th Naval District -- Communication Activities -- December 1939 (continued):

RMS Cl#	Name	R/R	Retired	RMS Cl#	Name	R/R	Retired
U. S. Naval Radio Station, Bainbridge Island, Washington							
	<u>BENJAMIN</u> , Ivan S	RM1	LCdr'56		<u>LUSK</u> , Truett C	CRM	LCdr'49
	<u>CHAUNCEY</u> , Dorman A	CRM	CWO2'42		MORLAN, A E	SC2	
	DERKSEMA, M C	RM2			PALMER, C W	RM2	
18	GILMORE, Thomas E Jr	RM1	CWO2'60		SELCH, Kenneth B	RM1	WO1 '47
	GOODWIN, Keith E	CRM	LCdr'53		<u>SCHROEDER</u> , Edward M	RM1	LCdr'58
	<u>HESS</u> , Frank W	RM2	CTC '61		THOMSON, Fred R	RM2	Cdr '65
	JONES, H V	S2			WADE, A J	CRM	
	<u>KATZENBERGER</u> , Raymond S	CRM	Lt '48		<u>WILMARTH</u> , James D	RM1	CWO2'49

U. S. Naval Radio D/F Station, Klipsan Beach, Washington

	MARBOURG, R L	RM1			RICHARDS, Ervin L	RM1	CWO2'48
	McNAY, Austin K	RM1			McVICKER, George R	RM1	RMC '45
				SD7	SCHMELZER, Paul H	CRM	CWO2'49

U. S. Naval Radio D/F Station, Tatoosh Island, Washington

	DOUGHTY, J H	CRM			HOELTKE, Charles F	MM1	CWO2'51
SD9	FOX, R J	CRM			<u>HORNE</u> , Ralph S	RM1	CWO2'51
27	<u>HARRISON</u> , Russell B	RM1	CWO2'51		LAMBERT, M G	CRM	

U. S. Naval Radio Station, Astoria, Oregon

	BEACH, J A	RM2			DONNELLY, J J	RM2	
	GROUCH, D	CRM			<u>MILLER</u> , G A	RM2	
	<u>DONDAJEWSKI</u> , Edmund R	RM1			TODD, A V B	SC3	

(continued)

13th Naval District -- Communication Activities -- December 1939 (continued):

RMS Cl#	Name	R/R	Retired	RMS Cl#	Name	R/R	Retired
U. S Naval Radio D/F Station, Fort Stevens, Oregon							
	ARMSTRONG, L H	CRM		12	DYE, Harold M	CRM	Lt '50
	BROCKE, Robert E	RM1	Ltjg'58		GATES, E H	RM2	
					LARSON, C J	RM1	
U. S. Naval Radio D/F Station, Empire, Oregon							
	BEALL, John D	CRM	CWO2'57		HINKLE, Robert L	CRM	Ltjg'49
	CHASE, E M	RM2			STEELE, Robert Henry	RM2	LCdr'57
					WEDGE, M C	RM1	
U. S. Naval Radio Station, Dutch Harbor, Alaska							
	CASINO, Frank	RM1	RMC '??		MILLER, Henry K	RM2	LCdr'57
39	DUFF, Alan A	RM2	CWO4'58		PRUESS, Verlen E	RM2	Lt '54
	DUISEN, A	RM1			RICE, W W	MM2	
23	JONAS, Basil W	RM1	CWO3'55	22	RUSSELL, William	CRM	Lt '50
	KENTON, Robert W	RM1	Cdr '59				
U. S. Naval Air Station, Sitka, Alaska							
	BENECKE, O F	RM2			JACOBSON, H C	RM3	
	CHRISTENSON, D J	RM2			MONTGOMERY, J W	RM3	
					MORRIS, H J	RM3	
28	HUNT, Lloyd L	CRM	Ltjg'58		RATHEUN, Lorenzo E	RM2	CWO3'64
U. S. Naval Aerological Unit, Dutch Harbor, Alaska							
	BOURG, Whitney C Jr	RM3	LCdr'59		HYNUM, Bertrand F	RM1	CWO2'57
					NORTHRUP, L J	RM1	

Icy island of Adak seen as Navy's key North Pacific outpost

By Tom Burgess
Staff Writer

In the elusive shadow game played between the U.S. and Soviet navies, the center of attention across Pacific battlefields has shifted from the western Pacific to a tiny island that is home to otters, bald eagles, frozen tundra, 2,000 sailors — and a new Navy strategy for dealing with the USSR.

The island is called Adak, a tiny Aleutian Island located 600 miles from the Soviet Union's primary Pacific submarine base at Petropavlovsk on the Kamchatka Peninsula in the northern Pacific.

Adak will become increasingly important to the Pacific strategy because of its location and its already established naval station and air strip.

"All our trade routes from San Francisco and Seattle come within 50 to 200 miles of Adak," said Adm. James "Ace" Lyons, commander in chief of the U.S. Pacific Fleet.

"We take more oil out of the port of Valdez in Alaska than we import from the Persian Gulf. That alone makes the northern Pacific a key strategic area," said Lyons.

As a general rule, the U.S. fleet sails near countries with economic or political ties to the United States.

Until recently, that meant the Indian Ocean, near the oil-rich Persian Gulf, or along the east Asian continent.

Lyons has changed that.

The Navy will continue to send its aircraft carrier battle groups from Australia into the Indian Ocean to the Persian Gulf and into the western Pacific, said Lyons.

But in the future, he said, more U.S. battle groups will steam up to the Aleutian Islands that form the southern boundary of the freezing Bering Sea.

For the first time in modern warfare, Pacific fleet ships and submarines are being sent to perform war maneuvers nearer to the coastlines.

Many of the sailors and Marines involved in these North Pacific war

games are assigned to San Diego-ported ships and to Camp Pendleton.

Thousands of San Diego-based sailors have been issued new cold-weather uniforms, and Marines, clothed in white overalls, already have been sent north for "dead-of-winter" training in the Aleutians.

Lyons, a feisty and combative commander, said Adak and the northern Pacific interests him primarily because the Russians also are interested in the same stretch of ocean.

He believes Adak will become as important an outpost as is Keflavik — the key U.S. Atlantic Fleet listening post and fighter jet station in Iceland.

"The Soviets have recognized that the pendulum of history has swung to the Pacific. Their land forces have grown from 20 to 54 land division in 25 years. In the last five years they have increased their (Pacific) fleet from 200 surface combatants to 395 ships," he said.

The U.S. Navy operates 220 of its total of 570 ships and submarines in the Pacific Fleet. By 1990, the U.S. Navy will operate 600 ships worldwide, under the current military buildup.

"In the future, we will need to dedicate more military resources in the Pacific," Lyons said.

It is during the latest round of deployments that the effect of the new American strategy has become clear.

Last year, Lyons sent a carrier battle group for the first time into the Bering Sea, approaching the frozen narrows of the Bering Straits.

"The Soviets never found us up there," said Lyons, who had assigned the San Diego-based carrier Ranger and the battleship New Jersey to the deployment.

Last July, while a Soviet surveillance plane droned overhead, a U.S. ship fired a Tomahawk cruise missile, the first such launch from any deployed ship that was not fired on a Navy target range.

"We wanted the Soviets to see that," said Lyons.

As further evidence of increased attention to the northern Pacific, a Navy amphibious operation onto the shores of Adak was held last year.

When two Soviet Bear bombers came out, Lyons ordered Air Force F-15s from the Alaskan Air Defense command to intercept the Soviet intruders.

Then Navy F/A-18 fighters were sent aloft to finish escorting the Soviet planes from the region.

"We wanted the (Soviet pilot) to get a look at the operation," he said, to convey to his superiors a sense of how strong the American forces are.

"If he takes that message back, which is one we want him to take back, we've raised deterrence without firing a shot," he said.

• • •

The U.S. Naval Station in Adak is made up of several commands — and one small tree.

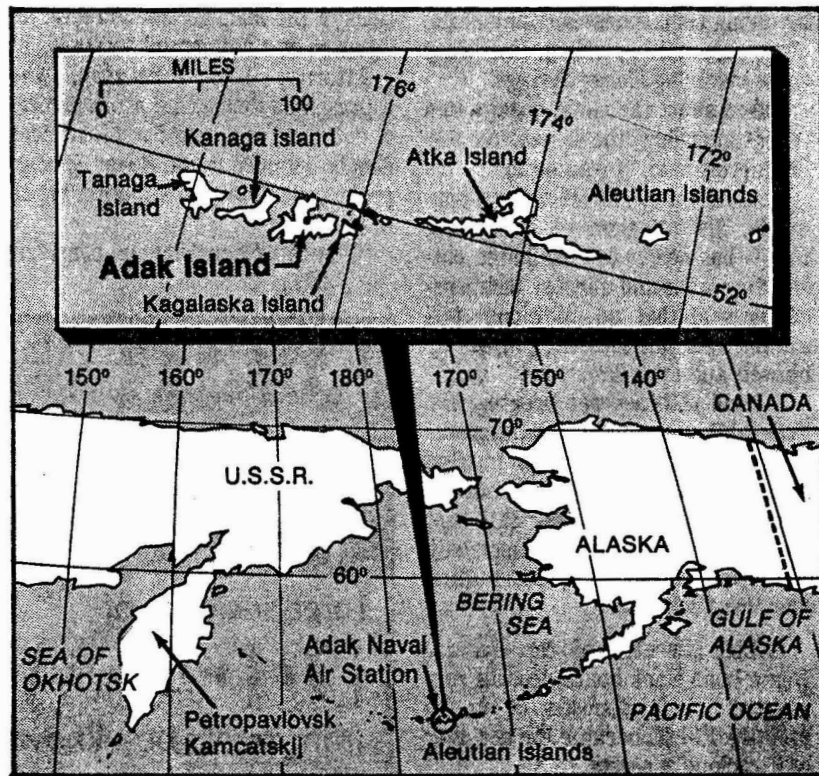
The Navy operates an air station that maintains Navy fighter jets and a permanent squadron of Orion submarine-hunting aircraft, temporary detachments of the Navy's front-line fighter aircraft, a submarine monitoring facility, a communications station and a submarine repair facility.

Adak is home to 2,000 sailors and 100 Marines, permanently assigned to the island. The sailors normally serve one-year tours. A few spouses live on the island.

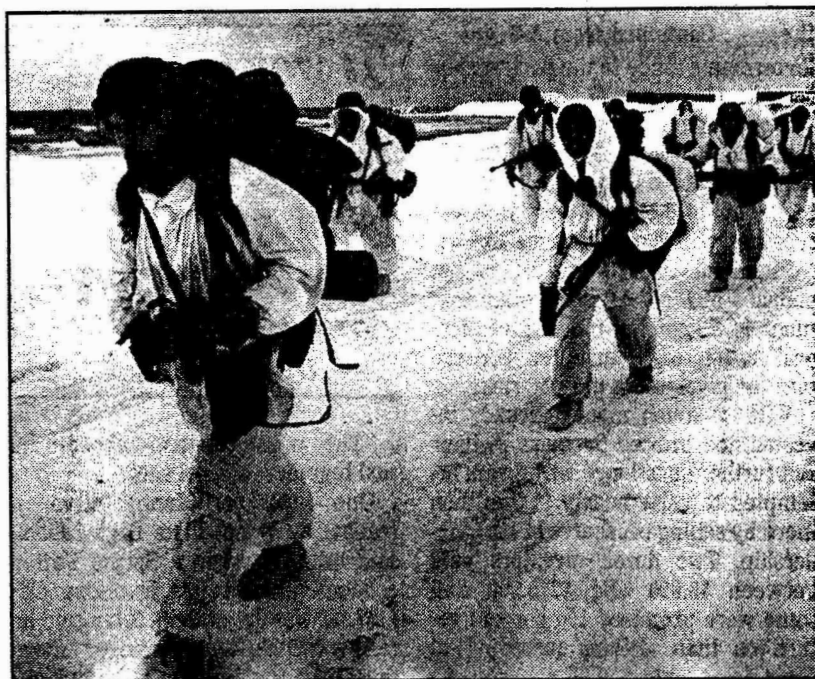
Just six years ago, Adak had only a small Orion aircraft detachment, the listening station, two bars, thousands of oyster-munching otters and bald eagles, caribou, ravens — and one 18-inch-high tree.

The tree was a special project of the sailors and Marines, who adorned it with a sign nearby that reads "Adak National Forest" as a tribute to the rugged weather that permits virtually no flora on the mountainous, snow-covered island.

Icy Island of Adak seen as Navy's key North Pacific outpost (continued):



The San Diego Union



U.S. Navy

Marines in cold-weather gear move out during a recent exercise at Shemya Air Force Base in the Aleutian Islands.

Personal recollections of Lee H. Vernon, LCDR USN RET:

BAINBRIDGE ISLAND

My tour of duty at the radio station on Bainbridge Island began in 1946, just after the end of WWII. I had been the Radio Material Officer on the Staff of Commander Amphibious Group Four and we had just returned to the States after the Okinawa - Ie Shima - Theya Shima - Aguni Shima operations in addition to landing the Occupation Troops at Sasebo, Nagasaki, and the Wakayama - Kure - Hiroshima areas in Japan. I was looking forward to some shore duty.

My orders stated that I was to proceed to the 13th Naval District for duty in "Demobilized Shipping." Upon arrival at District Headquarters in Seattle, I was informed that I would be sent to Port Townsend, Washington, to be the Officer in Charge of a boat pool where all of the small boats were being collected from the ships going into mothballs. I informed the Personnel Officer that I did not know a thing about boats except that they are to ride when going ashore on liberty. I requested his permission to talk to the District Communications Officer.

The District Communications Officer at that time was Captain Wayne N. Gamet. His office was at the District Headquarters on Second Avenue in downtown Seattle. I had reported to the 13th Naval District on January 19, 1946, and within three weeks my orders had been modified for duty as Officer in Charge of the Naval Radio Receiving Station, Naval Radio Activities, Bainbridge Island, Port Blakely, Washington. Fortunately, Captain Gamet was looking for a relief of the present OinC, LT (jg) Elmer Dickey who wanted to retire but was waiting for a contact relief.

In the 1946 13th Naval District Communications Organization, Captain Gamet, in addition to being the District Communications Officer, was also Commanding Officer, Naval Radio Stations, 13th Naval District. The stations on Bainbridge Island included the area formerly known as Fort Ward and also included the Naval Radio Receiving Station and the Naval Radio Transmitter Station at Battle Point. Fort Ward had been an Army Post during WWI and was taken over by the Navy at some time just before the start of WWII. The area occupied by the Army consisted of three disappearing coastal defense guns in cement revetments plus some smaller shore batteries along Rich Passage on the south side of the island. The Army built Quarters A, a brick two story building that became quarters for the Officer in Charge, Naval Radio Activities, Bainbridge Island. The Army also built a large barracks and messhall for the enlisted men, three sets of quarters (duplex) for CPO's on the hill side above the barracks and two duplex, two story officers quarters, quarters B and C, just down the hill below the OinC's quarters. There were several other buildings from the Army days and these were being used in 1946 for purposes different from what the Army had planned, I am sure.

When the Navy took over, the land area was expanded to about 330 acres and the nearby farms were absorbed and fenced into the Naval Reservation. Some of the farm houses were kept, moved up along the main road coming thru the station and used as quarters for personnel. There were ten sets of enlisted quarters along this main road. The old orchards were left more or less intact but unattended and provided station personnel with a good supply of apples each fall. My family and I first lived in Quarters D, directly behind the large brick Quarters A.

We later moved up near the main gate into quarters E1, downstairs below E2 where the Medical Officer lived. This large two story house had formerly belonged to a family who operated a dairy, using the full basement as the milking barn and the surrounding fields as the pasture. There was also an orchard next to the house.

Down along the beach and Rich Passage were the recreation building, swimming pool, Navy Exchange, Barber Shop, bowling alley, library, pool tables, movie theater and the main boat dock. Also near Pleasant Beach (we called it Stinky Beach when the tide was out) were three sets of duplex houses for enlisted personnel and civilian employees, the Station Electrician, who was responsible for the large diesel engine driven emergency generator, and the teletype repairman. This teletype repairman was a man named Phelps who was one of the material gang on the USS Oklahoma when I was in that radio gang in 1936-1939. The other buildings in the main part of the station near the barracks consisted of Building 11, the Operations Building for the Security Group Activities, the emergency power plant and the maintenance shop with the fire station. As I recall, we had civilian maintenance forces including a plumber, carpenter, painters and the electrician.

Electronic Engineering Services and installation of new antennas and electronic equipment was planned for and provided by the Industrial Manager's Office at the Bremerton Naval Shipyard. In 1946, LT. Dale Weeden was the Electronics Officer in that office. Shipyard personnel were used for these modifications and installations. We had several electronic technicians, or radiomen who were trained to do the preventive maintenance on station equipment. We had a regular routine of maintenance established to check sensitivity of the receiving equipment, test and adjust the multi-channel terminal equipment and overhaul the teletype equipment.

The Naval Radio Receiving Station for NPC was housed in a reinforced concrete building, Building 39, near the center of the station with the field of rhombic antennas around it. We had diversity receiving abilities with pairs of rhombic antennas for Kodiak Alaska, San Francisco, plus at least two other sets. The Kodiak and San Francisco circuits were the primary circuits. We had ship to shore circuits that were not very busy because of our inland location. These included 2716 kHz voice and two CW circuits. We had a teletype room on the second floor of the receiver building in addition to the radio receiver room and the control terminal equipment. There was an office on the second floor for the Chief in Charge. The first floor contained living space for one Chief Radioman; the office of the Officer in Charge and an office for that station yeoman. The full basement contained an Electronic Repair Shop, a Teletype Repair Shop and storage for spare parts. Also in the basement was a gasoline engine powered emergency power plant that would automatically start when the power failed to the building for any reason.

We controlled the transmitters at the Naval Radio Transmitter Station at Battle Point via VHF link equipment with two leased telephone lines as back-up, using our multi-channel terminal equipment in the receiver room. The teletype room was, in effect, a Message Center for the relay of traffic received from Kodiak and San Francisco to District Headquarters, Sand Point Naval Air Station and the Bremerton Naval Shipyard.

The Naval Radio Receiving Station was moved to Bainbridge Island from the Bremerton Naval Shipyard sometime during WWII. Quarters D, where we originally lived, was designated as the OinC quarters for the General Service Radio Receiver Station. During the relief process, LT (jg) Elmer Dickey led me by the hand to a rose garden consisting of about ten beautiful rose bushes in the Quarters D yard. He informed me that those rose bushes had been moved to Bainbridge Island from the radio station site in the Bremerton shipyard and were considered to be Station Property and their maintenance was the responsibility of the OinC, however I did not have to sign inventory cards for them.

Captain Wesley A. Wright was the Commanding Officer of Naval Radio Activities, Bainbridge Island when I reported on board in early 1946. He was relieved in April 1946 by Commander John M. Leitwiler. Commander P. P. Leigh became Commanding Officer in July 1948.

Personal recollections of Lee H. Vernon, LCDR USN RET (continued):

LT Harry W. Jackson was ordered to duty as Officer in Charge of the Naval Radio Transmitter Station, Battle Point, shortly after my arrival, relieving a Chief Radio Electrician, whose name I can't recall. Battle Point's main characteristic was the 800 foot vertical radiator for the VLF transmitter on 58 kHz. CRM L. F. Riley (Left Foot because of his morse code sending on the order wire) was the Chief in Charge. He was well known for his reputation with VLF transmitters. Riley had been in charge of the TAW transmitter at Lualualei for several years. Riley was later a civilian employee at the VLF transmitter station at Jim Creek. There were two sets of duplex quarters at the transmitter station. The OinC had one set of quarters, Riley lived in another. I do not recall who lived in the others. All other married personnel lived off the station. There was an enlisted barracks with messhall on the station. The helix house area is now a park. There is some effort to make that site into a Memorial Park honoring those who served on Bainbridge Island.

In 1946, access to Bainbridge Island was entirely by ferry. The Seattle ferry terminated at Winslow while the ferry from Bremerton terminated at Point White. All ferrys stopped running at 10 PM. We had a Medical Officer and a Chief Hospital Corpsman attached to the station. When it came time for the women of the station to have their babies and the ferrys had stopped running, we loaded them into a landing craft at the dock and made a run to the Naval Hospital at Bremerton. We would call the hospital ahead of time and ask them to have an ambulance and corpsman meet us at the dock. I was the Duty Officer during one of those runs and had to accompany the boat crew with the expectant mother. It can be exciting in the middle of the night not knowing if we would or would not hit a floating log because the LCP had no lights on it except running lights. We just made it on that run and there were no records I know of where a baby was born in the landing craft. Our two youngest children were born while stationed at Bainbridge Island, however my wife went to Seattle in plenty of time.

We had one emergency transmitter installed in a gun revetment on the hill behind the barracks. It was remotely controlled from Building 39. When the 200 foot towers were dismantled at the Keyport transmitter station at Bremerton, one of them was installed on the hill near our water reservoir, to support the antennas for our UHF harbor transmitter and receiver. Those equipments were installed in a building below the tower. They were remotely controlled from Building 39 but were seldom used since there were few ships in the area with UHF equipment.

I was the only General Service Officer on the station except for the Medical and Supply Officers. All other officers were with the Security Group. CRM Webster was my RinC, assisted by CRM Hobaugh and CRM Joe Young and two other CRMs. The latter four were the watch supervisors. Joe Young was an ex-POW. He was RinC at Guam (NPN) when captured by the Japanese. He still lives in Eugene, Oregon. I see him occasionally.

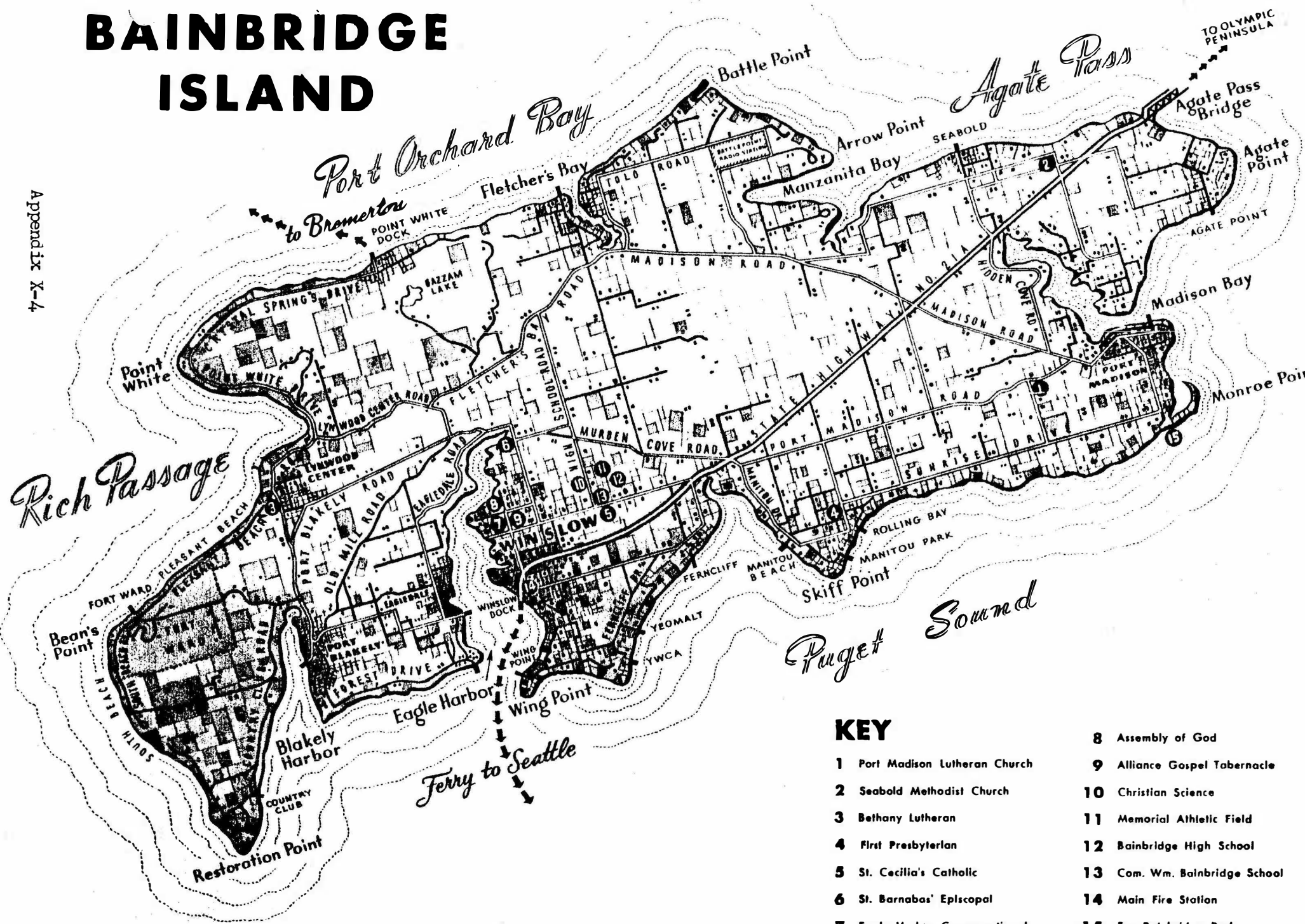
A LT (jg) Carr was ordered as my relief in October 1948 from Adak, Alaska, however he failed his physical examination and was transferred to the hospital. I was later relieved by CRE W. Hibbard and transferred to sea on the USS Mt. McKinley AGC-7 as Electronic Repair Officer. I left Bainbridge Island on 6 December 1948.

There were no WAVES on the station during my tour. There were many children who had the run of the station. It was a happy life for them like living in the country but still within a small community. The children of school age were bussed to the schools near Winslow.

Attached is a map showing Bainbridge Island as it is now with the Agate Pass Bridge. Also copies of some articles from the Crypto Veterans Association newsletters.

BAINBRIDGE ISLAND

Appendix X-4



KEY

- | | |
|--------------------------------|-------------------------------|
| 1 Port Madison Lutheran Church | 8 Assembly of God |
| 2 Seabold Methodist Church | 9 Alliance Gospel Tabernacle |
| 3 Bethany Lutheran | 10 Christian Science |
| 4 First Presbyterian | 11 Memorial Athletic Field |
| 5 St. Cecilia's Catholic | 12 Bainbridge High School |
| 6 St. Barnabas' Episcopal | 13 Com. Wm. Bainbridge School |
| 7 Eagle Harbor Congregational | 14 Main Fire Station |
| | 15 Fay Bainbridge Park |

BAINBRIDGE ISLAND — THE BOSSES

Editor's note: This list is as correct as current records can provide. Members who can make corrections or additions to any part of this list are requested to correspond directly to NAVSEC-GR Historian, Naval Security Group Command Headquarters, 3801 Nebraska Avenue, N.W., Washington, D.C. 20390.

NAVY STATION "S" (INCLUDES TRAINING SCHOOL)

Radio man in Charge	RMC K.E. Goodwin.....	___ Jan 40 to 14 Jan 41
Radio man in Charge	RMC T.C. Lusk.....	14 Jan 41 to 23 Apr 42
Radio man in Charge	RMC Martin A Vandenburg.	24 Apr 42 to 1 Jul 42
OIC (Dual hatted).	LCDR Robert I F Fravel.	1 Jul 42 to (?) 43
OIC — Acting.....	LT Louis Tordella.....	(?) to 1 Nov 43
OIC.....	CDR M.H. McCoy.....	1 Nov 43 to Jan 44
OIC.....	LCDR A.A. Murray.....	25 Jan 44 to ___ Oct 43
OIC.....	— R.W. Lafore.....	Nov 44 to ___ May 45
OIC.....	LCDR Rudolph E Veverka..	___ May 45 to ___ Dec 45

(STATION "S" APPARENTLY COMBINED WITH THE NAVRADSTA AFTER WORLD WAR II.)

OIC.....	LCDR Carl M. Smith....	(Jan/Feb 46 to Oct 47
OIC.....	LTJG K.E. Carmichael..	___ Oct 47 to 10 Jul 48
OIC (Dual hatted).	CDR P.P. Leigh.....	10 Jul 48 to 30 Nov 49
OIC.....	LTJG Edward H Schroeder.	30 Nov 49 to(?) May 50
OIC	LTJG Emerson C. Dean..	(?) May 50 to(?) Oct 51

(NAVRADSTA/RADIO ACTIVITIES* AT BAINBRIDGE ISLAND, WASHINGTON)

OIC.....	CDR B.C. Purrington.....	9 Aug 40 to 19 Dec 40
CO	CDR B.C. Purrington.....	19 Dec 40 to 6 May 43
CO (Dual hatted)..	LCDR Robert I. Fravel... 6 May 43 to ___ Jun 43	
CO	CDR Hoyt S. Scott.....	___ Jun 43 to ___ Jan 44
CO	CDR M.H. McCOY.....	___ Jan 44 to 30 Nov 44

(BILLET MAY HAVE BEEN VACANT FOR SEVERAL MONTHS)

CO.....	CDR Wesley A. Wright....	3 Aug 45 to (?) Apr 46
OIC.....	CDR John M. Lietwiler... (?) Apr 46 to 10 Jul 48	
OIC (Dual hatted)	CDR P.P. Leigh.....	10 Jul 48 to 30 Nov 49
OIC.....	LT George A. Morrison... 30 Nov 49 to (?)	

(*TITLE OF STATION APPARENTLY CHANGED TO NAVCOMSTA AFTER WORLD WAR II, AND THEN MUST HAVE BEEN CHANGED BACK TO NAVRADSTA.)

On 1 November 1952 the U.S. Naval Radio Station (T)(R)(S), Bainbridge was changed to the U.S. Naval Radio Station (T)(R), dropping the (S) mission which had been performed by Naval Security Group personnel. Station "S" ceased HFDF operations 111900Z on 13 March 1953 and moved to Marietta, Washington. On the 1 November 1952 date the U.S. Naval Radio Station (S), Marietta was established, and that station was formally commissioned on 15 April 1953.

The Bainbridge station was apparently closed on 31 March 1959.

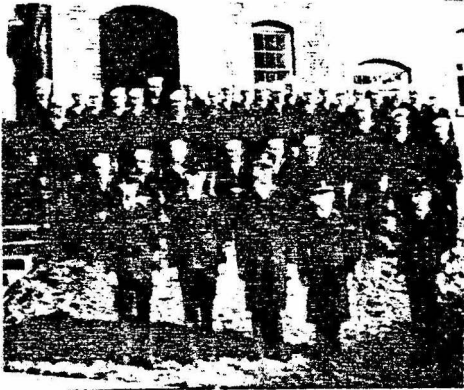


John M. Lietwiler



Louis Tordella

TWO GENERATIONS AT B.I.



One of the first RM school graduating classes. Front row from left: Chief Harshman, Chief Cornelius, CDR Purrington (OINC), ENS Nadeau and an unidentified Chief. (probably Schultz CBM)

NADEAU: BAINBRIDGE PIONEER

As an Ensign, Louis Nadeau commanded a general service RM school at Bainbridge Island. Originally a reserve in charge of Communications Unit 8 in Olympia from 1936 to 1940, Nadeau was chosen to head the radiomen's school in 1940 when it became obvious the United States was nearing involvement in the war and there was an acute shortage of radiomen. Nadeau, and some of his students, including Henry Long and R.S. Katzenburger, eventually became Security Group members.

For a number of years, Nadeau was Executive Officer of the Bainbridge Island facility, and to the cryptologic community still living on the Island. Nadeau is still the "Exec."

A Seattle Newspaper was interviewing former operators for a Pearl Harbor memorial edition and was generally told nothing, because "Nadeau would not like it." The newspaper finally interviewed Nadeau, but found: "You're likely to get a cold stare and conversation about the weather."

CDR Nadeau, now 80, still watches security on Bainbridge Island.



D.D. CORNELIUS

In the summer of 1940, "Fort Ward" was chosen to be the site of a "Class A Radio School, especially for Naval Reserve members. One of the first to arrive, was CRM M. E. Cornelius, given the task of supervising the conversion of the old army Brig to a radio school. "It looked like a zoo when we came here to remodel it," said CDR B.C. Purrington, station commander.

In September of 1940, M. E. Cornelius and his family moved aboard the station, where, after reconstruction, he became "principal instructor." Cornelius remained as an instructor until May, 1942, when he transferred to the University of Idaho at Moscow, and earned his commission. Finally, after 26 years, M. E. Cornelius ended his naval career as OinC of the Special Advanced Radio School in Great Lakes, in 1946.

In the meantime, his son, D.D. Cornelius, grew up, joined the Navy, went to the Security Group, and from 1950 to 1951 was stationed at Bainbridge "swinging the DAJ" and living just a block from the quarters he occupied with his family in 1941-42.

By this time, the Radio School has been converted to the Navy Exchange at Bainbridge Island. Later, "Corny" was stationed at Skaggs Island as an instructor of NAV-SECGRU Reserve Officer personnel, some of which were his father's students twenty years earlier!

Personal recollections of Lee H. Vernon, LCDR USN RET (continued):

ADAK ISLAND, ALEUTIAN ISLANDS, ALASKA
May - September 1943

In 1943 I was a Chief Radioman attached to the Staff of Commander Amphibious Forces Pacific with offices on the Broadway Pier at San Diego, California. We had been preparing for the amphibious landing on Attu and Kiska, outfitting the troop transports with electronic equipment and conducting training exercises near Oceanside, California.

We finally started our move toward the Aleutians in May 1943 when one other chief and myself were given orders to move the Staff enlisted personnel from San Diego to the Naval Shipyard in Bremerton where we were to board the USS PENNSYLVANIA. The PENNSYLVANIA was to be the flagship for the assault on Attu Island. There were about 30 enlisted men in this draft. We were loaded aboard a bus in San Diego for transportation to Los Angeles where we boarded a train. We had enough men to occupy one complete pullman car with some spill-over into the next car. This pullman car was attached to what could be truly called a "troop train." It was the longest train trip I have ever experienced. The cars were not air-conditioned in those days and the cars we had were quite old to begin with. Through the Sacramento Valley it was hot and the men opened the windows to let the air and the dust into the car. The other chief and I occupied the small stateroom at one end of the car. There were two first class in the stateroom at the other end. That stateroom had a continuous poker game going most of the time during the entire trip. Our train was pulled off on a side track regularly to let other trains go by in both directions. During each of these stops, some of the men would jump off the train and run around to get some exercise. If the side track happened to be in a small town, they would also run over to the nearest bar to catch a beer before the train pulled out again. It was a miracle that we finally arrived in Seattle, Washington, with all hands present.

We were bussed from the Seattle railway station to the Naval Shipyard in Bremerton where we boarded the PENNSYLVANIA. The Staff boarded and we met the transports at sea to begin our approach to Attu Island. While on board the PENNSYLVANIA we copied the NPM FOX broadcast and one other FOX broadcast in the Flag Radio space. We maintained radio silence at all times. We made only one transmission to a shore station after we had been at Attu Island for several days. The PENNSYLVANIA was providing gunfire support for the troops ashore, firing their 14 inch guns as well as their 5 inch guns when in close to the beach. This action always shook up the radio receivers and required close watch to ensure that the receivers were not detuned.

Admiral F. W. Rockwell was Commander Amphibious Forces during the Attu Island operation. Commander Sam Tucker was the Staff Communications Officer and Lt. Col. James Roosevelt (FDR's son) was the Marine Staff Officer. I later worked with Col. Roosevelt at the Amphibious Training Base, San Diego while he was testing radio equipment to see if they would work from the deck of a submarine to the beach as he prepared to lead the assault on Makin Island in the South Pacific. The Makin operation was to be a raid launched from submarine and was very successful.

After the Attu Island operation was completed, the PENNSYLVANIA returned to anchor in Kuluk Bay and the Staff moved ashore. The Staff officers were housed in quonset huts that were built on a small hill overlooking the air strip that was under construction by the Sea Bees. Enlisted personnel were housed in nearby quonset huts. The Chiefs were housed in what was called Sea Bee Town about three miles from this hilltop complex. This was a choice assignment for billeting because the Sea Bees unloaded the ships at the docks. If any mess halls on the island had steak for dinner, it was the Sea Bee mess. The only disadvantage was that the chief in charge of the Underwater Demolition Team kept all of his dynamite in the quonset hut and did much of his preparation for his job in that quonset hut. We had our noon meal on the Army mess at the foot of the small hill complex. The trip to and from Sea Bee Town was by jeep, usually hub-deep through those muddy roads. This hill

complex was called NORPAC HILL. I was to return to this same area in 1954 during a later tour of duty on Adak.

Our radiomen worked in the communications quonset with the radiomen from Commander North Pacific Staff. We received our traffic through their facilities but I am not sure what they were at this time. The administrative staffs of both Amphibious Forces and North Pacific used the same spaces. The purpose of the move ashore was to plan for and prepare for the assault on Kiska Island. The PENNSYLVANIA, some cruisers and escort vessels assembled in Kuluk with the troop transports when the plan was completed. We re-boarded the PENNSYLVANIA and proceeded to Kiska Island, landed the troops, only to find that the Japanese had evacuated the island.

The PENNSYLVANIA returned to Kuluk Bay and we went ashore once again but this time the Amphibious Force Staff and personnel were berthed at a new facility that had just been completed at Finger Bay, about 10 miles from NORPAC HILL. The purpose of our return to Adak was to try to discover what went wrong with the plans to catch the Japanese before they left Kiska Island. I am not sure what was decided but the Staff of Admiral Rockwell was disbanded and the personnel were transferred to many different stations. We had no communication facilities while at Finger Bay and received all our traffic via the North Pacific office. It was a lazy time for us during this last month on Adak. The operation at Kiska Island was in August 1943. I finally left Adak in September 1943, returning to the Amphibious Training Base, Coronado, California, as Assistant Radio Officer on the staff of Admiral R. O. Davis, Commander Amphibious Training. I had been commissioned as an Ensign in August 1943 but did not receive the official word until the 1st of September.

The majority of the personnel on Adak Island were Army. There must have been some Army communication facilities connecting the island with Kodiak, Dutch Harbor and the Alaska mainland. I have no information regarding those circuits. There was a Security Group on the island at this time. I have no knowledge of what they used for their communications prior to the establishment of the more permanent Communication Station facilities. The STATION HISTORY portion of this report gives some light on this subject. It was prepared by the present Commanding Officer of the Naval Security Group Activity at Clam Lagoon.

* * * * *

Personal recollections of Lee H. Vernon, LCDR USN RET (continued):

ADAK ISLAND, ALEUTIAN ISLANDS, ALASKA
March 17, 1954 to January 17, 1956

This tour of duty at the Naval Communication Station, Adak, started on March 17, 1954. This was actually my third tour of duty at or on Adak. My first tour was as a Seaman Quartermaster Striker on the USS RAMAPO, an oil tanker, from May 1934 through September 1934 during what was called the Aleutian Islands Survey Expedition. This expedition involved the USS OGLALA as flagship, the USS BUSHNELL, one submarine, the minesweepers SWALLOW, GANNET, QUAIL and the USS SIRIUS, a supply ship. The purpose of the RAMAPO was to act as a fuel-supply mother-ship for several 50 foot motor launches that were used to depth-sound and make charts of the harbors and bays around Adak and the nearby islands. We also refueled the minesweepers and the Grumman Duck airplanes that were present. We anchored in Kuluk Bay most of the time, however we made two return trips to Dutch Harbor to pick up mail and supplies from the SIRIUS. My second tour on Adak was from May until November 1943 while a Chief Radioman attached to the Staff of Commander Amphibious Forces, Pacific, conducting the Attu and Kiska operations.

Personal recollections of Lee H. Vernon, LCDR USN RET (continued):

My tour of duty at the U. S. Naval Radio Station (T), Mare Island, Vallejo, California had just ended and I was ordered to Adak as the Executive Officer of the Communication Station. I was detached from Mare Island on 26 February 1954 and arrived in Seattle for transportation on 14 March 1954. I was a Lieutenant at the time and was granted authority for concurrent travel with my wife and three children.

Our travel to Adak started early in the morning of 15 March 1954 when we were awakened at the Sand Point Naval Air Station, boarded a bus for Whidbey Island Naval Air Station to catch our plane. Our plane was a Douglas DC6 with cold bucket seats and a box lunch. We stopped overnight at Kodiak Island and visited with LCDR Harry W. Jackson who was the Executive Officer at the Naval Communication Station, Kodiak Island, and a former shipmate when he was Officer in Charge of the U. S. Naval Radio Station (T), Bainbridge Island, Washington. I toured the station that night with Jackson including the receiver and transmitter stations. The major item I remember was the transmitter station with its vertical radiator for low frequency use. Other than that, as I recall, Kodiak was actually smaller personnel-wise than the station at Adak, probably because Adak also had additional Security Group personnel. We remained overnight at Kodiak, sleeping in a building called the "Little Red Schoolhouse." This building may have been a school at one time but had been converted into a BOQ, and it was painted red!

We departed for Adak the next day on the same type of plane with the same cold, bucket seats but no box lunch since the flight was relatively short. On arrival we were greeted by Captain Allyn Cole Jr. the Commanding Officer of the Naval Communication Station Adak, and another friend from earlier days at Wailupe and the USS MT. MCKINLEY, LT. Don Tracey and his family. We felt right at home immediately on arrival.

Normally a tour of duty at Adak was 12 months for those persons who were not accompanied by their dependents. It was 18 months for those with dependents. Further, when dependent travel was authorized, there was usually a four to six week delay until quarters were available. It was a type of "hot bed system." Our permanent quarters were not ready for our occupation so we were housed in a very large quonset hut on NORPAC HILL. NORPAC HILL overlooked Kuluk Bay and the Naval Station and was the former site of the NORPAC headquarters during 1943 when Adak Island was first occupied by the military prior to the Attu and Kiska Island operations. We moved into our temporary housing, Quonset Hut 810C, formerly the quarters for Commander North Pacific and his Chief of Staff. This quonset was very large. The living room was 40 feet long and the dining room was an additional 10 feet. The children held foot races from the front door to the kitchen. There were three bedrooms in the back of the hut with an oil fired furnace in the last room. The furnace in the living part of the hut had a forced air circulation system in the attic. There was a hole in the firebox and each time the furnace started we had soot and smoke all over the hut. We finally arranged for some electric heaters so that we could turn the soot factory off.

The Naval Communication Station administrative offices were located about ten miles from the Naval Station at the Receiver Station near Clam Lagoon. The first shore communication facilities were constructed near Clam Lagoon in crude quarters in about 1943 but later consolidated into the area now occupied. With the offices at the Clam Lagoon site, commuting was required each day. There was a bus service for the enlisted personnel and for officers wishing to use it. I had a jeep assigned to me on a permanent basis and this was fortunate because the roads were gravel and full of potholes. Private cars took a beating on Adak because of the road conditions plus the wind driven rain that would penetrate any small crack around the doors and windows. This was no place for a convertible or the usual two door hard top type.

Personal recollections of Lee H. Vernon, LCDR USN RET (continued):

All housing for personnel, military and civilian, was provided by the Naval Station and was built in the Naval Station area. There were no married quarters at the Receiver or Transmitter site. We moved into our permanent quarters, O-26, on 1 April 1954. All of the married quarters were of the same style and construction: duplex, with 3 bedrooms in each half, single bath, kitchen, dining area in the living room. The front entry had room for removal of snow boots, outer clothing and the like, before entering another door into the living room. The houses were steam heated from a central steam plant and there were laundry facilities in the rear entry laundry room of each quarters. There were no garages so cars had to sit out in the weather. The exterior of the houses were finished with a type of hard surface sheet rock and unpainted. The windows would not open but there were vents below the windows that could be opened for air circulation. The quarters were completely furnished except for linens and personal items. These houses were very comfortable and there was plenty of closet and storage space. The kitchen was all electric but very small. The reason the exterior of the houses were this hard surface sheet rock was that when the wind blew, and there was no snow on the ground, sand and gravel would fly through the air. This action would sand-blast any paint from the surface.

The "Downtown" portion of the Naval Station included a Navy Post Office, a branch of the Bank of Alaska, a commissary store and a Navy Exchange. These facilities were within a few blocks of all housing and one very often walked to the "shopping center." There was an Enlisted Men's Club, CPO Club and a warehouse nearby had been converted into an Officers Club. There was also an American Legion Post which was also used for Teen Dances. The Berin Building, on a hill above the Naval Station, was the recreation center, with a movie theater, hobby shops and a swimming pool (the farthest west swimming pool in the United States). There was a Chapel still in operation after construction by the Sea Bees in 1944. There was a dispensary with two doctors and a dentist in addition to some nurses and hospital corpsmen. The nurses and school teachers were the only single women on the island. They lived in a wing of the BOQ. There were no Waves on the island during my tour.

The school building was about two blocks from the housing area and the school bus picked up the children from in front of their houses, delivered them to the school and brought them home at the end of the day. All the grades, 1st through 8th, were in the same building, with the 6th, 7th and 8th grade students all in one room. One teacher took care of these upper grades. There were two 1st grades and a kindergarten. There were Boy Scout, Cub Scout and Girl Scout activities for the children maintained by the parents of the children involved.

The weather is variable in this area to say the least. The day we arrived it was very nice with the temperature at a high of 50 degrees and there was no snow on the ground. We asked about that and were informed that a few days before there had been about four inches of snow but this was followed by about an inch of rain that washed it all away. There had been snow flurries regularly since our arrival but no snow was sticking below the 1000 foot level of the mountains. The mountains on the island are beautiful, very rugged and rough, usually covered with snow up until July. The wind is our most changeable condition. This island is located between the cold Bering Sea and the Northern Pacific where the warm Japanese current flows. This condition makes extreme weather conditions and the weather changes on very short notice. The winds come whistling down off Mount Moffett and is blowing 50 miles per hour in a matter of minutes. But these conditions do not seem to last long, then they turn around and blow the other way. Everyone here becomes accustomed to the winds in a matter of a month and look forward to them as the main source of variety. The island is completely barren in the winter time and all brown where the tundra grass is dead. In May and June the spring flowers start to come out and the grass turns green. This is the time when the island is really beautiful. There are a tremendous

Personal recollections of Lee H. Vernon, LCDR USN RET (continued):

number of varieties of flowers growing on the island during the summer months including several varieties of orchids. Summer really commences in June and lasts into September.

There are some civilian employees at the Naval Station in permanent positions like the Fuel King who is in charge of the oil storage facilities and some others. All others on the island, except dependents, are military. There was a small group of Air Force personnel and I do not recall what their purpose was. There was a Marine Detachment and on the extreme northwest end of the island is a Coast Guard Loran Station with a very small crew. There is a civilian airline, Reeves Aleutian Airline, that serves Adak when weather permits. LT. Don Tracey was the Communications Officer for the Naval Station and also operated the Post Office. During the Christmas season he would always inform anyone when asked why the delivery of packages was so slow, that his post office had only one hand-operated box crusher and therefore the packages were always delayed.

The Military Sea Transportation System operated ships from Seattle to Japan via Adak and brought our large cargo items like household effects and automobiles. These ships came about once a month from Seattle and stopped here again on their return from Japan, to pick up passengers and large cargo items for return to the States.

I had been ordered to the Communication Station as the relief for LCDR Harry Kushner. Upon arrival I was informed that I could relieve LCDR Kushner as soon as he could be rescued from a hiking trip he and another man had undertaken around the base of Mount Moffett at sea level. He and his friend had been gone three days and nights and no one was quite sure where they were. They finally returned and admitted that the trip was more than they thought it would be. They were storm bound in an old abandoned quonset hut on the Bering Sea side of Mount Moffett for about 36 hours and were very wet and cold when they finally returned to the Naval Station. At this same time, I was informed that I had been selected for promotion to Lieutenant Commander and the paper work had been sent to the Communication Station at San Francisco just after I left there.

The Communication Stations facilities at Clam Lagoon consisted of the Administrative Offices, Enlisted Barracks, Post Office, Enlisted Messhall, Bowling Alley and Theater, Fire Station, Motor Pool and service facilities, Public Works office and shop, and the water supply consisting of a dammed creek on the side of Mount Adagdak. Further up on the side of Mount Adagdak was the Operations Building where the General Service Communications and the Security Group Communications were located. The other component of the Communications Station was the Transmitter Station at the foot of Mount Moffett. Control of the transmitters from the Operations Building was by underground cable. The Transmitter Station had an Officer in Charge, LT John Nichols, when I arrived. The Transmitter Station had a crew of about 20 enlisted men, a small galley and messhall and a small barracks for single personnel. The antenna field around the transmitter building included rhombic antennas, one 800 foot vertical radiator for the low frequency transmitter and a long wire antenna about a mile long and only 15-20' above ground, also used with the low frequency transmitter. This long wire antenna was strung in an east-west direction and terminated at the east end to provide directional benefits toward Kodiak. There were no married quarters at the Transmitter Station and the married personnel lived in quarters at the Naval Station. The 800' vertical radiator was standing and in use when I arrived, however I believe the remains of the previous one was still on the ground nearby. The first vertical radiator was either blown down by winds or collapsed because there was too much tension on the many guy wires.

The Operations Building at Clam Lagoon housed the General Service Communications that included a Ship-Shore circuit on 2716 KC, 4235 KC Series and the point to point circuit with Kodiak. LT (jg) Jim Crum was the officer responsible for these circuits in addition to the teletype circuits to the Naval Station for delivery of their traffic. The largest tenant in the Operations Building was the Security Group. They also used the transmitters from the Transmitter Station. LCDR Paul Crews was the Security Group Department Head and

Personal recollections of Lee H. Vernon, LCDR USN RET (continued):

LT Wilbur W. Carter was their Administrative Officer. ENS Russell Tall was the Communication Station Personnel and Administrative Officer.

All the buildings at Clam Lagoon as well as Mount Moffett were of steel reinforced concrete construction with steam heat from the central steam plant in the Public Works building. The Receiver Station at Clam Lagoon had their own power plant. I believe the same was true of the Transmitter Station on Mount Moffett.

Communication with Kodiak was good most of the time, however there were many times when sun spot activity, atmospheric and snow or rain static made it impossible. These adverse times required the use of the low frequency radio teletype and we were able to maintain communications when the high frequencies would not go through. The antenna field around the Operations Building was made up mostly of rhombics plus some verticals around the building itself.

Antenna construction and repair was performed by civilian crews from the Puget Sound Naval Shipyard during the summer months. The daylight hours were from about 4AM until 9PM so much work was accomplished each day. There was much support provided by the Naval Station including the Sea Bee detachment. This support was road maintenance, motor vehicle overhaul, heavy hauling and trucking, supply and pay accounting for the personnel and support of the messhall and its supplies. Shipment and packing and unpacking of household effects in the quarters, maintenance of the quarters and their steam, water and electric systems, school for the children, operation of the recreation facilities at the Naval Station which were used by personnel from Clam Lagoon and Mount Moffett, medical facilities, commissary store and Navy Exchange and garbage service.

An interesting environment existed around the Clam Lagoon barracks area. There must have been at least 8 to 10 dogs, source never determined. All of these dogs were friendly with the personnel, had names, but lived outside the barracks-messhall area. However, they had their own territories staked out. There were two large dogs that lived back of the messhall and were in charge of the dumpster where all of the garbage was dumped. There was an understanding between these groups of dogs that to invade another group's area meant a fight. There was another group of dogs that lived near the fire department - service station area. These dogs were permitted to ride in the back of the trucks and vans that would drive through the area on occasion, causing much barking between the dogs on the ground and the dogs in the trucks. Another group had the public works area and the main entrance to the administration building and the barracks. These groups or packs of dogs did not mix or exchange territory, that I know of. Some of these dogs looked very much like they were a mix of the usual mongrel with the Blue Fox that formerly lived on Adak when it was a Fox Farm in the 1930s. It may be possible that some of the fox still existed and have interbred with the local dogs. It was suspected that some or all of these dogs came to the island with the Army troops that first occupied the island in 1942, then were left with friends as the troops were rotated.

On the slopes of Mount Moffett, several miles above the Naval Station proper, were many quonset huts built during the 1942-1944 period. These are all now abandoned. However, one of them up on the mountain, high enough to be in the snow zone, was rehabilitated and converted into a Ski Lodge. There were no rope tows or anything like that but there were some gentle slopes that could be used for skiing. There was a snack bar at the lodge and a warm stove to remove the chill after an "afternoon on the slopes."

We had a wide tracked vehicle called a weasel at the Mount Moffett site and the Clam Lagoon site. These vehicles were primarily designed for use in the snow. They were also very useful in travel over the tundra of the antenna fields. During heavy snow periods, the weasel at Mount Moffett was the only way in and out of the station because the snow

plows and road graders could not keep the road open. At Clam Lagoon the Weasel's main purpose was to serve the Coast Guard Loran Station three miles beyond the Clam Lagoon site, on the far northwest side of Mount Adagdak. The road to the Loran Station was always the first to close due to snow. The Weasel was also used to rescue the Marine patrols when their jeeps would become stuck in the snow and they called for help via their radio. The Naval Station provided snow clearance in the housing area with their snow plows and road graders including the road between the Naval Station and the Clam Lagoon site, as well as to the Mount Moffett site when snow conditions permitted. There were times when it was necessary to put chains on my jeep in order to get to the office at Clam Lagoon. The snow period on Adak was most severe during January through March. During the two Christmas seasons we were on Adak we did not have any snow on the ground at the Naval Station. It would often snow before Christmas but this usually followed by a rain that washed the snow away.

Summer was quite different. When a clear-shiney day arrived it was difficult to find any people in the offices except for those actually on watch. When the sun came out it was time to go fishing, hiking and picture taking. Photography was a very active hobby and color slides of the wild flowers, that were so plentiful, was a real challenge. Our slides had to be developed in Seattle and each time we received a new set, we would call in our friends for a showing.

Fishing was fabulous. In Andrew Lake their were Dolly Varden trout up to 24 inches long. At the mouth of the creek feeding Finger Bay the salmon would return to spawn and it was possible to catch several in just an hour or two. Also, from the long pier in Finger Bay were many crab pots to catch King crab. The crab pots and a reserved spot on the pier were very desirable items to be passed on to your relief when he arrived on the island. Speaking of King crabs, during one of my trips to Kodiak for a conference, I bought a very large King crab in a box and brought it back to Adak where we enjoyed it for several weeks. I also had one of these large King crabs frozen and shipped it via airmail to my parents in the little south Texas town where I was raised. When it arrived, the Post Office personnel were very anxious to deliver it because it was beginning to smell a little. The crab was still good but it had a fishy smell from the box that it was packed in.

The Coast Guard had a Loran station on the northwest side of Mount Adagdak overlooking the Bering Sea. They had about ten men plus one officer. There was a Marine Detachment at the Naval Station that provided security patrols for the Naval Station and the Communication Station sites. There was an air strip with submarine patrol planes operating daily, regardless of weather. The air strip ended at a very large rock at the foot of Mount Moffett. We always said that if a plane did not hit the runway at the beginning, on the edge of Kuluk Bay and rolled too far, it would certainly stop at the other end of the runway. Ground Control Approach radar was used when visibility was limited on the planes returning from patrols. While I was on Adak there were no crashes. Reeves Aleutian Airline, the civilian airline serving the island, was not equipped for GCA and therefore did not come to Adak when the weather was bad. The air strip was built by the Sea Bees in 1942-1943 by pushing a small hill into a small lake and packing it down. The packed earth was then paved to make the runway. There was another airfield on Adak near Andrew Lake. The remains of that airfield were still in evidence by the metal strips that had been laid down to make the temporary runways. That air strip was no longer in use. Andrew Lake airfield was used as a fighter strip during the 1943-1944 period. Some of the old hangers were still standing in 1954.

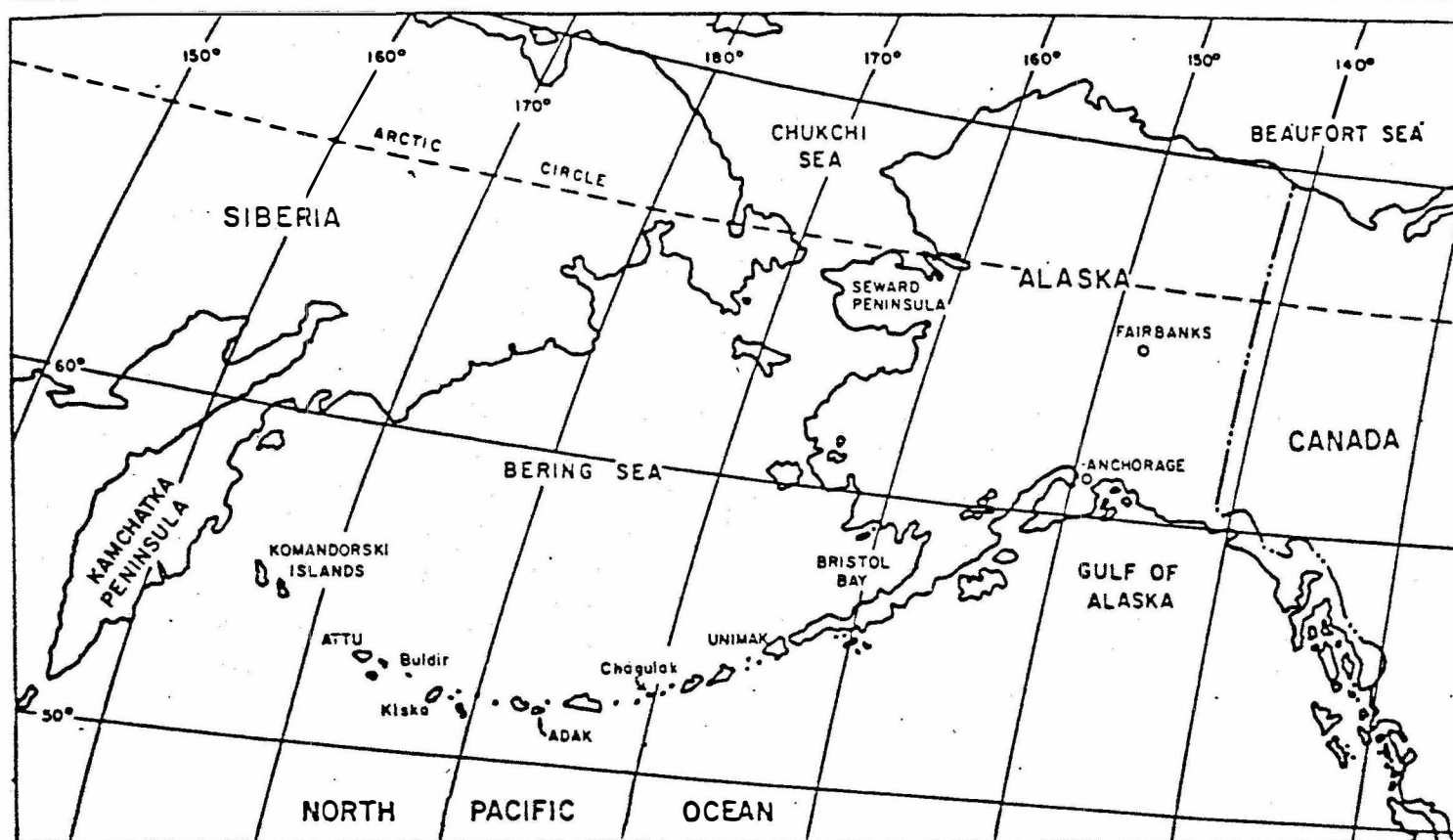
There was a requirement that all hands had to meet. This was called the Arctic Survival Course. One officer and about 30 men were given pup tents, C rations, sleeping bags and warm clothing, including parkas. They were then trucked out to a semi-remote part of the island and dumped off, with instructions to survive 24 hours in the winter weather. We had to scrounge wood for the fires, cook, or try to cook, our C rations, put up our pup tents and sleep in the snow or tundra. These exercises were always conducted in the winter time. One would be scheduled several weeks in advance without any idea of what the weather might be at

that time. I completed my course in January and survived even though the wood from the beach was met, snow was on the ground and it proved that survival was possible with little effort.

In July 1955 Captain Cole was relieved by Captain Floyd Clark. However, before Captain Cole left the island, he fell and broke his leg so had to stay on after being relieved. He and Mrs. Cole had already vacated their quarters to make room for Captain Clark, so he lay in the BOQ with a cast on his leg until he was able to travel. My rotation date was 18 September 1955 but my relief was not ordered until August 1955 and after leave and travel would not arrive until October. LCDR Roger L. Williams was my ordered relief, however he failed his physical examination, retired, and his orders were cancelled. A second relief was ordered to leave the States on or about November 30th and would not arrive until January. My orders were received transferring me to the Naval Communication Station, Washington, D.C., for duty at the Main Navy Building. My final assignment was as Officer in Charge of the Naval Radio Station (R), Cheltenham, Maryland. My relief, in January 1956, was LT Nasworthy. My family and I were packed and relieved in time to catch the USNS Frederick Funston departing Adak on 17 January 1956 after a stay of 22 months. We arrived in Seattle on 23 January after a very rough trip due to many storms.

As I said before, this return to Adak made me feel right at home and this tour was much more pleasant than my two previous tours. The isolation was really enjoyable with no television or daily newspapers to keep one stirred up and anxious. The only radio reception was in the evenings from the States and the entire community was a close knit group and very friendly. We were never deprived of any necessities and were constantly challenged to make our own entertainment through use of the recreation facilities, outdoor activities such as photography, fishing and hiking. There were bridge clubs, wives clubs, Boy Scouts, Cub Scouts, Brownies, various clubs for the enlisted and for officers, school activities, athletics when weather permitted, church services and theaters. The pace was much slower than in the States and we all enjoyed our tour very much. There were many parties welcoming newcomers and farewell parties for departing friends. There was a Toastmasters Chapter at the Officers Club with a monthly luncheon meeting. It was possible to go out to dinner in the evenings to the various clubs as a special treat. I understand that an Armed Forces Radio Station was added to the Naval Station in later years and this was followed by one channel of television generated on the island. Those facilities were recently upgraded to include a satellite dish system with cable television wired into each quarters and other living spaces. Duty on Adak was very much like any other community with the individual responsibilities to make life of your neighbors and yourself as pleasant as possible.

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ADAK and the ALEUTIAN ISLANDS

Adak Island is situated in the center of the Andreanof Group of the Aleutian Islands, midway between Seattle, WA and Tokyo, Japan on the great circle route. The island is 900 miles from Petropavlosk and the Kamchatka Peninsula and 1200 miles from Anchorage, AK. Adak measures approximately 22 by 36 miles and like all of the Aleutian Islands is treeless except for several recently planted evergreens.

Geologically, the Aleutian Islands are one of the most active areas in the world. Earthquakes are numerous. Adak's seismology lab registers 10 to 15 earthquake tremors a day but only about 25 per year are felt. The islands are the emergent peaks of a submarine ridge that extends more than 12,000 feet below sea level. 57 volcanoes are visible in the Aleutians and 27 of these are still active. The active volcano closest to Adak is Great Sitkin. Smoke and steam can occasionally be seen rising from this majestic 5,700 foot island. The volcanic origin of the Aleutians makes the islands rugged and mountainous with the larger ones, like Adak, dotted with lakes and cut by streams. Most have irregular shorelines with boulder or sand beaches, rocky cliffs, and offshore islets and reefs.

The Aleutians have the dubious distinction of spawning and enduring some of the world's worst weather. The islands are frequently buffeted by intense storms which move toward the east/northeast from the Japan area. In October 1977, a storm passed through Adak and the western Aleutians that pegged the needle on a 120 knot anemometer. Although winds in excess of 100 knots are not uncommon, the average velocity throughout the chain is 16 knots.

Adak generally has cooler summers and warmer winters than anywhere on mainland Alaska. The all-time recorded high is 75 degrees F. and the recorded low is 3 degrees F. However, the chill factor created by the wind can produce temperatures much lower than it actually is. Adak's maritime climate is characteristic of the islands with fog, persistent overcast skies, frequent cyclonic storms and high winds. Precipitation averages 68 inches a year which includes 98 inches of snow. Also, contrary to popular belief, Adak does not have the extreme hours of daylight and darkness found in other parts of the state. On the shortest day of the year, December 21st, sunrise is at 0952 and sunset is 1737. On the longest day of the year, June 21st, the sun rises at 0528 and sets at 2225.

STATION HISTORY

In 1942, the U. S. Navy established a Naval Operating Base on the island of Adak. At the same time, communications facilities were set up as an integral part of this base. These facilities consisted of a Radio Control Station at Heart Lake, where the receivers were located, and a transmitter station located at Rocky Point. In September 1943, a Communications Supplementary Activity was established at Clam Lagoon. These facilities, housed in quonset huts and wooden buildings, provided communications support for the Naval organization on Adak during and after World War II, until 13 March 1948 when a communications station was established as a command separate from the Naval Operating Base.

In July 1950, all facilities of the Naval Operating Base Adak were combined into the Naval Station Adak and on 25 September 1951, the Secretary of the Navy established the Naval Communications Station as a separate command.

Initial stages in construction of facilities to house the new command began in April 1949 and continued through the spring of 1952 with the final installation of electronic equipment. On 3 May 1952, commissioning ceremonies were held and Commander Arthur ENDERLIN, USNR, became the first Commanding Officer of the newly constructed communications facility.

Since originally built, additional facilities have been added to the station, including the communications center, receiver operations building and the special operations building. The facilities at Clam Lagoon currently provide berthing, messing and recreation for approximately five hundred and fifty men and women. The majority of the recreational facilities are located within the admin/industrial area and are inter-connected with other buildings, making it unnecessary for personnel to be subject to inclement weather.

On 1 April 1977, after twenty-six years Naval Telecommunications claimancy, Naval Communications Station was decommissioned and commissioned a Naval Security Group Activity under the major claimancy of Commander, Naval Security Group Command.



NORPAC
HILL

Full-scale armada of U. S. battleships, cruisers, destroyers, minesweepers, and transports—with an invasion force of 34,000—massed at Adak in August 1943 (above) for assault on Japanese-occupied Kiska. Only after landing did Americans learn that the 5,000-man garrison had been evacuated weeks earlier.

**Battleships: Idaho, Mississippi and New Mexico
Cruisers: San Francisco, Portland, Louisville, Santa Fe and Wichita**



TIM THOMPSON

Largest settlement in the Aleutians, the naval station at Adak, an antisubmarine patrol base, offers its 4,500 people a modern community with family quarters

Personal recollections of Paul W. Koenig:

I started aboard NECR/USS COLORADO (1935-38) as a striker from the deck force - no radio school - the hard way. I assume you are not wanting Fleet radio info but I do remember the old "NERK V NPL FOX" (Class E traffic) from 11ND that most of us strikers cut our teeth on. That plus ship-shore 323 kc (or was it 355 kc?) and the Navy manned DF stations along the coast (Eureka etc) that gave us fixes after "MO's" from us. That was about the extent of our contact with the 11th and 12th NDs. Trips to the Navy Yard at Puget Sound at Bremerton, Washington, gave us opportunities to work NPG (12th ND San Francisco) on the way north and NPC (at NYPS at that time).

As mobilization built up in 1940, duty at NQL, NAS Sitka, Alaska, 1940 thru 1943, was an enlightening experience. At first we were all Fleet personnel but soon we were all absorbed into the 13th ND.

The main stations of the Alaskan net were NQL (Sitka), NHB (Kodiak) and NPR (Dutch Harbor) with subordinate radio stations for weather data and water patrol craft base stations. At Sitka we also worked PANAM (later US Army Air), Yakutat and Cordova for flight data and weather. During the war we also worked, on a schedule basis, Canadian Navy stations such as Prince Rupert and Cold Harbor. For a time they relayed traffic from Seattle until one day a coded message was followed later by the plain text (complete with addresses and date time group the same). They also used operator signals called "X" signals similar to our old "Z" signals. They were complex in use and slowed things down, so they asked for copies of our "Z's". Thereafter things speeded up.

At Sitka we worked the Alaskan Net (NPC control station) CW Morse on a schedule basis to handle most outgoing traffic, aurora borealis, Kennelly heaviside layer, and JAP Morse station permitting. When the Japanese would climb on our frequencies, either to pass traffic to or from Kiska/Attu, or to heckle us, we would take turns trying to foul each other up. Our frequencies were somewhere in the 2000, (3385?), 6000, 8000, 12000 (12915?) or 16000 kc part of the spectrum. Sorry I can't be more specific - that was 40 years ago. Of course we copied NPC (NPG?) Fox, NPG weather skeds, commercial news (WCX, WJS, KTK). The radiomen published a 6 page paper every day, not only for the Naval Air Station, but also for U. S. Government officials in Sitka and the Army fort that was eventually built next to our station. NPC (NPG?) would broadcast regular Navy traffic, class E, flight messages, those lengthy ALNAVs and other general messages. We had a construction contractor who relayed his traffic through the Resident Officer in Charge of Construction (call sign AGAT VAIN - should have said "delivery group"). These messages were long logistic messages which we relayed through NPC. Kept us busy on the mid watches.

The contractor was building a seaplane base, complete with large hangars able to service PBV's. He started from a bare, moss-covered, rocky little island (named JAPONSKI by the Russians when they owned Alaska), therefor in truth I can say I was on the Island of Japan on December 7, 1941!.....just kidding. Eventually an Army fort was built adjacent to us.

The U. S. Army "ACS" - Alaska Communication System - handled all civilian traffic for the civilians in Sitka. There were no other communication facilities available at that time. The Army ACS was there in Sitka before the Navy came in 1939.

Back to news gathering for a crude newspaper. The Navy operators, on their days off, copied WCX/WJS (28 to 32 WPM CW) and KTK (20 to 25 WPM CW): baseball scores, international news, national news, etc. They cut the stencils, ran the copies on an AB DICK mimeograph machine, sorted and stapled the copies of a composite 6 page edition each day and distributed the paper throughout the base and to the moguls of Sitka. After this little chore, sometimes around midnight we were allowed to catch the last liberty boat across the channel to Sitka and hike home a couple of miles in the dark. There was no public transportation.

Personal recollections of Paul W. Koenig: (continued):

Sometime in early 1941 a Russian seaplane came by on its way non-stop from Nome to Seattle. It was supposed to be a civilian flight for whatever reason we peons were never enlightened. We were ordered to maintain a watch on some medium frequency in case they got into trouble and to give them weather advice. Our skipper, CDR "Black Jack" Tate USN cooked up a weather front. After finding that our senior CRM, Charlie Zak spoke good Polish, he had Charlie get on the circuit and "ham" it with the Russian radioman. By using the old International Code of Signals and his Buffalo, NY, Polish he got the plane to divert and come in to Sitka. We were all anxious to see what kind of aircraft they were flying. In due time an aircraft flew over the station from one end to the other, about as slow as you could fly a PBV and not stall, then back again. We were sure they were taking pictures of our new construction. They landed. All persons were in civilian clothing. They stayed overnight then went on to Seattle.

Shortly before the start of WWII, we had an unscheduled explosion. A dynamite storage shack on the opposite side of the island was found to be on fire. Fire quarters was sounded. The Army fire truck, being closest, got there first. Skipper Tate and our Navy fire truck had just started to round a rock promontory when they saw the fire was getting close to a shack containing detonators. The CO stopped the Navy people and sent a Marine to tell the Army to "get out of there" and take cover. The poor Marine was last seen trying to get the Army man in charge to move his men when the whole thing went up. It left a hole big enough to drop a truck in. It broke windows in Sitka a mile away. When I got there most of the people were milling around. All the trees were mashed flat. Finally our XO got Charlie Zak to take control of the service people in the area. It was odd to see a Navy chief lining up officers and enlisted men of the three services in a skirmish line and work them back and forth over the area looking for unexploded detonators, pieces of bodies and/or uniforms. A gruesome business! I imagine Charlie's presence of mind and resourcefulness in this and his handling of other problems setting up emergency radio and landwire communications on NAS Sitka helped with his immediate appointment to warrant Radio Electrician and his transfer to the "hot war" in the South Pacific. He now lives in San Diego on Granada Street.

Equipment at NQL NAS Sitka: When VP-41 reactivated the Navy base, about 1939, they had seaplanes that needed ramps. There were no hangars. The original 600 foot towers and the Navy Radio Station buildings were still there and available for our use. Our transmitting antennas were, in the beginning, all vertical. A strongback ran between the towers with insulators every so many feet. The St. Elmo's Fire seemed to build up in each segment of wire and, as a rainstorm approached, a charge would build up and finally let go with a POW BAM BAM! That, I believe, wrecked my eardrums for life. The towers were dynamited down sometime in 1941. NYPS built a duplex system in 1941. Our transmitter was a Marine Corps field unit set up on pipe-legs. It was portable but it did a good job considering the circumstances. It was in three parts: a center rectifier power unit, a low frequency unit and a high frequency unit. The low frequency unit was used on 500 kc for communication with the Coast Guard cutters and occasional merchant ships. We also used 355 kc with USN ships. The high frequency unit which had a range of 2000 to about 13000 kc. The HF unit was used mainly to work NPC and the Navy 2716 kc Alaskan Net, as well as YP patrol boats and aircraft. The PBV's used Morse CW out on patrols in the Alaskan Gulf. They had some very good operators.

Our receivers, up to 1941, were RAK/RAL super-regenerative, very stable. Later in the war we were given more modern, more sensitive, but not as stable, receivers. We also had civilian type Hallicrafters for press work. (They drifted badly). At first the receivers and transmitters were in the same room.

The NYPS engineers built a beautiful transmitter station on the other end of Japonski Island (about $\frac{1}{4}$ mile away) and we, the operators, moved into the NAS administration building

Personal recollections of Paul Koenig (continued):

with the old receiver gear. The transmitters were TDE, TBK or TBL; there were 5 or 6 (one low frequency, about 2 kw so we could get through to NPC - groups twice - when aurora borealis was roaring). There were three masts about 60 feet high in a triangle, under which many sheets of copper were sunk in the muskeg swamp. We were able to get out much better. We shifted up and down often, keeping the transmitter crew busy. We didn't have autoshift in the beginning.

Our radio gang, after the VP-41 people pulled out, was composed of radiomen from Fleet ships (I came from NIDN, USS TENNESSEE). The VP41 ops had reestablished NQL after it had been shut down in the 1920's. We relieved them about May 1940. I don't know our actual allowance. I remember these men: Charles Zak, CRM, RINC; Leroy T. Clark, CRM, in charge of transmitters; Hodges RM1 assigned to transmitters; Alfred W. Zeh RM1 main radio - a very fast Morse man; five RM3: William Webster, Hugh B. Cox, William Anderson, "Red" Bolster and Paul W. Koenig - all assigned to main radio.

I also remember two men left behind by the VP squadron: Bill Morris and "Jake" Jacobson - both assigned to main radio and patrol flights in base aircraft. Later a recalled USNR CRM Joseph Millus reported as relief for Charlie Zak.

When the war started a contingent of what we called the HF-DF men arrived and manned a DF tracking station sweating Jap Fleet units. Thompson RM1, Frantz RM1, Maciejewski RM1 and others made up that crew. They were credited with enabling the destruction of Jap troop carriers enroute to reinforce Kiska/Attu. The troop carriers had gone along blatting away with Morse. Our old pre-war R and S boats were laying in wait on their track and had a turkey shoot. The next thing we knew Thompson was wearing a LT's uniform. The HF-DF guys wouldn't tell us what they were doing but we had to relay their crypto work. Nuf said.

I served a tour at NEJ/NAS SEATTLE. Ray Knight was "major-domo" at 13th ND HQ TTY relay (YN?). I reported as RM1. Before I knew it all the main radio chiefs went west. I wound up as CRM and had to run the handling of heavy traffic generated by many squadrons, a Naval Air Supply Center and satellite stations using Morse, voice and NTX teletype. Suddenly COM13 decided we were to relay to and from all 13 ND air stations. For a while it was "day on and stay on" watches. When I reported CRM Red Hymum was RINC (we had no warrants); Roy Marbourg CRM was in charge of main and operational radio plus TTY (local); Leroy Clark CRM was in charge of radio transmitters several miles away. After all of the regular Navy old timers left, CRM Einar Hoel USN Ret took over transmitters (Hoel made CRM in 1913!) and I had the main radio, operational radio and all air stations in Washington and Oregon on the TTY NTX net. This lasted from 1943 to 1945. We had some CW Morse with "bug" toting "hot-shot" operators on Naval Air Transport Squadrons flying non-stop to Kodiak and Dutch Harbor. They sure did a job - crossing the Gulf of Alaska with NO radio navigation aids or radar.

Later I had ACRM G. B. Roberts as my assistant. He was at NPR when the Japs strafed the radio shack as well as the rest of the base. I had served with him on the USS TENNESSEE. Also had Roy Westendorf RM2. He later graduated as an enlisted pilot from the NAS PENSACOLA flight school and retired as LCDR I understand. WAVES Greenhalgh, Duggin and Houlihan RM3's are all I can recall. Some of them went to NPM toward the end of the war. CDR Ensor USNR (very active ham from Kansas) had a repair gang that kept our gear functioning. He had, among others, a RM2 named Browne. Browne had been a flying RM at the time of the Jap Dutch Harbor attack. A Jap pilot strafing the bay put a bullet through Browne's CW Morse sending hand as the PBX he was in was trying to take off to meet the attack.

I forgot to mention about "Red" Morris of NAS Sitka. About 1943, Morris, now a flying CRM, cashed in his chips when CDR Joe de Ganahl USNR wiped out a JRF seaplane with all hands aboard by flying into a stray island between Juneau and Sitka - no nav aids. They flew by

Personal recollections of Paul W. Koenig (continued):

the seat of their pants and with what they could see. Sometimes the fog would come down to the narrow channel water. Nuf said. Red was a very good CW Morse operator and also a technician - something that was hard to find in those days. Incidentally, Joe de Garahl was with Admiral Byrd on one of his Antarctic jaunts. Joe was a great guy to serve with. He was our Communication Officer for a while in 1940.

In 1940 I served a two month temporary duty tour detached from the USS TENNESSEE at the landline office at the Navy Yard Puget Sound. "A" was the landwire Morse call. I believe COM13 was in one of the Yard buildings. I bring this up to illustrate the primitive communications of 1940. NPC was then at the Navy Yard.

On that landwire telegraph net, the Navy Yard (NPC), the Army HQ in Seattle, the Coast Guard and several other military outfits were tied together in a series circuit - no teletype then. We passed traffic using American Morse if possible. Otherwise we used International Morse (generally on the night watches that we "boot operators" were assigned to.) At that time one of the requirements for promotion to RM2 was proficiency in American Morse.

I've run out of memories. I wish I could talk with some of my old shipmates. We could probably come up with more detailed information as to frequencies, equipment, networks etc.

Do you remember the old so-called RESTRICTED ship movement report messages and the SERVICE CIPHER 3? Some of our operators could break that code while they copied it! Hi Hi.

I was known as PAPA KILO and KAK800 when I worked as a Morse man for the US Border Patrol.

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Personal recollections of Frederick W. Frauens, Chief Radio Technician, USNR:

Where do I start to tell you of my little history on Bainbridge Island? Maybe we can do it this way:

- A. Preceding Bainbridge Island.
- B. Duty on Bainbridge Island.
 - 1. Arrival - Ship's company - Adcock loop antenna.
 - 2. December 7, 1941
 - 3. Pacific Coast radio stations.
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A. Preceding Bainbridge Island:

I was sworn into the Navy on 13 August 1941. This occurred in the Federal Office Building in Seattle. I left Seattle for San Diego boot camp on 15 August in Pullman car number 1013. While in boot camp I fired an old bolt action Springfield rifle on the Marine firing range at La Jolla on battery O-13. As you see I am very conscious of number 13 for the following reason: A short time after receiving my first amateur call, W7EAM, in Sept. 1933, as a youth of 15, I was shocked when I realized that "M" was the 13th letter in the alphabet. QST magazine, even in 1933, had a silent keys column contained in a huge black border. In those young years I was sure that I, having the 13th call issued in the W7EA series, would someday end up in the silent keys column, probably by high voltage. This was for real, it really bothered me for a while (how long?).

Pre-WWII San Diego Naval Training Station gave a test to see what a new boot might be qualified for, i.e., yeoman, machinist mate, radioman. The Navy, sizewise, was about 240,000 at that time. After testing I qualified to become a radioman. About that time I heard there was a radio school at Bainbridge Island whereas the big RM school was right there in San Diego. Born across the bay from Bainbridge Island in Seattle, living all my life in the same house in West Seattle, somehow I had to go to the Bainbridge school, vice the one in San Diego. It worked out although I had to wait an extra month in the transfer unit. Our small group, 36 to be exact, left for Bainbridge about 20 November 1941.

B. Duty on Bainbridge Island:

- 1. Arrival - Ship's company - Adcock loop antenna:

I do not remember the exact date of our arrival - probably the latter part of November 1941. Our small group was divided into 4 sections. I was one of the section leaders. We met Chief M. E. Cornelius, in charge of the radio school, and also a Chief Boatswain's Mate, short in stature, named Schultz - with a heavy Brooklyn accent. In the picture of one of the first graduating classes (Appendix "2 generations at B.I."), I believe the unidentified chief to be Chief Schultz, because of his size. The building behind that group picture is the brick building where the radio class was taught. There was a basement that we used as a clothes washroom. Years before, during WWI, it was a brig.

Where we lived was a long 2 story building to the right of the school building. To enter this barracks building you went up a short flight of stairs from the road, it had a small porch facing west, you could see the Bremerton ferry as it turned right up into the channel, before going left into Bremerton harbor. Because of Washington State winter weather many times we heard the ferries blowing their whistles, navigating by the returning sound

from the sounding boards along the channel.

As you entered the barracks building, you went into a large recreation room with a big broadcast radio, large easy chairs and sofas. We put up a Christmas tree in that room at Christmastime. From the recreation room you went down a long hall (so it seemed), passed the head and into the bunk area. Chief Schultz had a room at the entrance to the bunking area. There was a ladder (stairs) somewhere along this hall that went topside where the rated men, the sailors who manned a house some distance away that was on a turntable, with a funny-looking tilttable antenna on the roof. This outfit seemed only to be operated when it was getting dark and at night. Ship's company didn't associate with us!

The antenna on the roof of the house was called an Adcock loop antenna and we at that time referred to it as an ultra high frequency antenna. Actually in modern frequency spectrum terms it was probably HF. I never knew the frequency of it. Anyway they worked it at night to take advantage of skip distance and the frequency was probably adversely affected during the day.

Preparing for field day, cleaning, running a big floor polisher, preparing for inspection, was my section responsibility in the recreation room. I can still see the inspection party going around, all in a row, and the CO patting his white gloved hand high up where the two sashes of the windows lock together, and looking at his glove (while we held our breath) to see if it picked up any lint.

In the school building there was an SX-28 receiver. Being a ham, I would listen to it when I could and the following I remember distinctly: As soon as the war started all amateur radio was shut down, but what happened in the 20 meter band amazed me. With hams off the air a Japanese propaganda station almost immediately began playing symphony music and putting on skits. The skit that I remember the title of was called: "That But-in-Ski" Roosevelt." Of course all of the skits were negative about the United States. The 20 meter band was silent except for that station that seemed to be sitting right in the middle.

Chief M. E. Cornelius was also a ham and I'm sorry I didn't write down his call. Also he lived in a house with his family not too far from the school. He had a brand new 1941 Chevrolet.

Fort Ward had a Marine contingent for security and guard duty. For some reason we had to drill with them. We sailors got pretty snappy working out with those Marines. They are always tops at drilling. We also had to stand watches on weekends. Watch cap, sweater, peacoat, gloves, leggings and rifle. I remember standing watch after midnight in December and January. Up there it is cold - a damp cold - the worst!

B2. December 7, 1941:

I have forgotten the hours of the watch. I believe my section came on duty at midnight to 8AM the next morning, December 7, 1941. When you stand watch (as you no doubt did) the hours just before daybreak were the worst, where you really crave sleep and you have to struggle to stay awake. Once the light comes on you awaken. Anyway, there was this long all in the barracks building. In that hall was an intercom system (Teletalk). About 8AM voice came over the intercom: "Frauens, have you got the duty?" It was Chief Cornelius. "Yes Sir." Without any explanation he said: "Go around and cancel liberty, on my authority, or all hands, including ship's company, for all those who have not gone ashore." "Yes Sir" I did as I was told, went topside into ship's company area and passed the word, also among my classmates. It was only an hour later that we learned the reason. A Seattle broadcast station was heard on that broadcast radio in the recreation room that Pearl Harbor was under attack. So ended peace time "3 section liberty" for the duration.

Personal recollections of Frederick W. Frauens, CRT, USNR (continued):

The next day December 8 (Monday) was most unusual for two reasons:

- (a) School was cancelled.
- (b) We were put to work cutting brush and small trees.

Fort Ward is on a bluff overlooking the water. There are several disappearing gun revetments. The guns were long gone but the cement pads were still there. When there were guns they faced to the south protecting any movement on the way to Bremerton. Directly behind the guns, the ground dropped off rapidly into a gully running roughly east and west. In the face of this drop-off were cement rooms with metal doors no doubt for ammunition storage. Anyway, and I never really understood the reason, we sailors were instructed to disguise the pads and general area with brush and trees as much as possible - and we did!

B3. Pacific Coast Radio Broadcast Stations.

About one week after December 7th, with no explanation from Seattle broadcast stations, suddenly all were silent - all broadcast stations had gone off the air. We later learned that not only Seattle stations had shut down but all broadcast stations on the Pacific Coast. I think this lasted three days. Someone told me the direction finder station was responsible. The story went as follows: One station, probably at night, heard some very brief transmission on some frequency and concluded it was of Japanese origin. By landline (teletype) they asked some northern California station to listen on X frequency. Apparently some time later those signals were heard by both stations and each took a bearing, plotting the fix where the bearings crossed which turned out to be 400 miles off the Columbia River (Portland). You had to be there during this period. There were thoughts of invasion, bombing, mines in Puget Sound. Anyway, imaginations, fueled by the bombing of Pearl, caused someone to have concluded the West Coast was possibly to be invaded and here there were ships 400 miles off the Columbia River. Knowing that the aircraft that attacked Pearl probably got to Oahu by homing in on KGMB or KGUJ, Honolulu, all West Coast broadcast stations were secured to prevent similar homing in on a city. These facts, true or false, are as I heard them.

B4. Rifleman on ferry.

I remember talk at this time of the possibility of Japanese laying mines in Puget Sound. Someone must have thought this a serious consideration as for some period of time ferries from Seattle had a man up right at the bow with a rifle. His duty was to shoot anything forward on the surface. I remember we could see the result of the bullet impact on the water sometimes a spurt of water, before we ever heard the muffled sound of the shot. Someone commented what a cold job that guy had, especially being December and the ferry moving at 15 to 20 miles per hour.

B5. Direction finder training.

Somewhere along the line the thought occurred - why such a small school - only 36 to start with and two had flunked out? Somewhere along this 4 month course we were informed that 16 of us were scheduled for direction finder training and that would require another 16 weeks of training - I was one of the 16. At first this was great news - my family across the bay, my car, my girl - great - another 4 months at home! Towards the end of the present schooling this future training posed a problem: Sometime before school completion I read of the Radio Material School at Treasure Island, California. I believe I read it in QST. It sounded real interesting, especially the last two months of the eight month course was devoted to RADAR training. RADAR - a mystical, magic word! We didn't know the meaning of the letters. You almost said RADAR in hushed tones. The confusion factor was, we that made RM3 were given the opportunity of electing to stay with the direction finder training, or go to the school at Treasure Island. This was especially a problem for me where home was Seattle and the prospect of another 4 months at home. I decided to go to Treasure Island.

Personal recollections of Frederick W. Frauens, CRT, USNR (continued):

B6. Sending for class.

Since becoming a ham most of the time I was quite active as a radio amateur. At one point, I recall, I was of the opinion that if I failed to contact 4 or 6 stations a day, I was shirking my duty as an amateur. Of course practically all contacts in those early days were by hand key, transmitter/receiver all home made and probably 80% of my contacts were on 80 meters. Vibroplex or some other bug? Only commercial operators had those, just the fast guys! We probably traveled at 15 WPM maximum. Anyway, I always appreciated clean sending, proper spacing, etc. I became a good hand keyer (I thought). Apparently Chief Cornelius approved because on some occasions I would send code practice to the class. On the specific occasion that I remember, I was sending to the class it was a night session. While sending someone came in and announced that a report had just come in over the broadcast radio that a Japanese submarine had surfaced and had just shelled some oil storage tanks in the Santa Monica, California, area. That was the only time (at least at that time) that the West Coast was shelled. I don't recall if that terminated sending for that evening.

B7. Wash Room.

As mentioned earlier, our brick school building had an upstairs and, being on the side of a small knoll, there was a basement. This basement we used as a washroom to do our blues and we hung them on clothes lines strung around the room. This room had been a World War I brig. We could read the scratchings in the bricks. There were names, initials and dates of 1917/1918. One day after the war started I saw a Japanese civilian, small in stature, with hat and overcoat, lugging a big suitcase. He came to our school building and he and his suitcase were locked in the old brig, our washroom. This was the beginning of interning of Japanese-Americans. No doubt he lived on the island and was probably a vegetable gardener. The washroom was only a temporary holding cell. They took him away immediately and probably sent him inland to one of those camps. There was a story going around of discovering transmitting/receiving equipment at one of the farms - probably just a story.

B8. Final Exam.

I do not recall the details of the examination. Some fellows chose to study all night long preceding the next morning's test. Eight of the class made 3rd class and were offered future training as I've mentioned. Others could elect general radio assignment or choose submarine duty.

B9. Chief M. E. Cornelius.

Chief Cornelius was a serious man, no doubt very dedicated to his job and to the Navy. I felt he was an excellent example of a Chief Petty Officer.

In about the latter 60s or maybe 1970, working as a civilian at Hunters Point Naval Shipyard, I had occasion to contact the Supply Department at Bremerton Naval Shipyard. The lady I contacted heard my story about being at Bainbridge Island when the war started and her response to this just floored me. She said she was the daughter of M. E. Cornelius! What a small world! I told how her father contacted me on Dec 7th, told her the whole bit, Frauens do you have the duty, etc. She said her father had had a stroke and was not very well but she would ask him if he remembered the incident and me personally. Sometime later I did contact her again - she had asked him - he did not remember me - - .

C. Post Bainbridge Island.

It was early March 1942 that I left Bainbridge Island for Treasure Island and entered

Personal recollections of Frederick W. Frauens, CRT, USNR (continued):

the new school as a 3rd class RM. When I started school at Treasure Island I was in Class 5. Don't know how many classes preceded me at Bainbridge, probably less than a half dozen.


George, you asking for Bainbridge data brought back a flood of memories. Going from RM school to Treasure Island school life was moving fast in those days, you reslly didn't have time to look back to any great degree. In writing this and re-living Bainbridge again it really was a very memorable and wonderful time, full of experiences and we were all so young. I have recalled things that never surfaced in my mind until now. Memory is a wonderful thing.

A few years back one night on CW I contacted a W7 in Port Orchard, Washington. I told him about the Bainbridge school and he surprised me by telling me that he also went thru radio school there. He was not in my class.

And finally, on VJ Day, August 1945, I was a slick arm Chief Radio Technician and, when we got the word that the Japanese had surrendered, guess who had the duty? You are right - me! All personnel were turned loose to go into Honolulu and celebrate, all except me, I had the duty!

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NAVY DEPARTMENT, BUREAU OF NAVIGATION

SERVICE  SCHOOLS

UNITED STATES OF AMERICA

This certifies that

FREDERICK WYATT FRAUENS, 664 02 26, RM3c V-3 U.S.N.R.
has satisfactorily completed the prescribed course of study at the
Naval Training School (Radio), U. S. Naval Radio Station,
Bainbridge Island, Port Blakely, Washington.

this sixth day of March 1942.
 Graduated No. 4 in
 class of 34 students.

B. C. PURINGTON
 Commander, U.S. Navy, Commanding.



Haston

Anderson

Martin

Patterson

Williams

Frauens

Rhodes

Griffith

Personal recollections of Harold B. Phelps, LT USN (ret):

The urge to see something of Alaska came over me at an early age after reading dozens of stories by Jack London, Rex Beach, Robert W. Service and many others. I wasn't quite dry behind the ears so I put that idea in the "Awaiting Action" file for a few years.

In 1910 I learned to telegraph and in 1913 I was telegraphing for the Santa Fe R.R. in Winslow, Arizona. After spending the summer of '14 working nights and trying to sleep days I wasn't about to try another summer in Arizona. I took leave of absence and went to Los Angeles and inquired around about telegraph jobs in Alaska. It didn't take me long to find that the Army and Navy had such business almost sewed up.

That left me right in the middle of a quandary. What to do? Would it be the Army at \$21.00 and a horse blanket or the Navy at \$17.60 and a hammock? I was making \$90 a month with the Santa Fe and that was good money. I sure felt foolish taking that much of a cut in pay. I said to myself: "Now or never." I scouted around for more information on Alaska telegraph jobs and finally found an old signal corps man who had spent some time up there and he gave me a good line-up on the whole deal, some good jobs, some not so good and many of the jobs way out in the boondocks where the men were responsible for maintaining the line on either side of their station half the distance to the next station. Also that in the summer when making repairs they had to wade through swamps and hordes of mosquitos and in winter they waded through snow hip high on a tall Indian and he said the Alaskan winters could be real rugged at times.

I could feel my pioneering blood begin to curdle and that Navy hammock looked better all the time. He also told me that even if I could talk the signal corps into sending me to Alaska I would still be a big recruit and would certainly end up out in the boondocks at first. That decided me and I went to the Navy recruiting station to see if I could pass the physical before resigning from the Santa Fe. I passed and found out later that if a young fellow could walk into an Army or Navy recruiting station and possessed the necessary appurtenances such as one head with built-in ears, two arms and legs and was slightly warm, he was in the service right now, any name and any age the kid gave was taken as gospel, just walk in and be breathing.

On November 4, 1914, I signed on the dotted line as a "Landsman for Electrician (Radio)" which meant that I would go right to a radio school and didn't have to go through boot camp. All boot camps were quite rugged up until WWI. It took me almost ten years to get anywhere near Alaska. Almost made it to Seward in 1919 but ended up in Honolulu instead. My girl friend came out from San Francisco and we were married April 6, 1920.

Another five years went by quickly and I managed to wangle a job at Ketchikan where we arrived on June 30, 1924 on the Alaska SS Co. "Yukon". When we steamed in sight of Ketchikan that beautiful morning, I said to Betty: "Eureka. This is the place I have been looking for these many years." It looked like a good sized town and the houses peeping out from the trees on the hill back of town made it a beautiful sight. I could see the radio towers not too far north of town, an old Marconi station taken over by the Navy in WWI and just a nice walk to town. This would be all mine for the next two years and we decided it would be an ideal place to start our family. My crystal ball must have been a trifle murky as I couldn't foresee how soon my bubble would burst.

The salmon were running heavy that summer and the independent fish boats came in with full loads but the cannery traps were also overflowing and the canneries told the independents that they had more fish than they could handle, but as they always tried to treat the boys right they would give them \$10 a thousand for their fish. I believe \$20 a thousand was the going price at the cannery docks. The fishermen blew their tops and said they would dump the fish before they sold at that price. And that's what they did! Thousands of salmon went over the side and the tide deposited them in a neat three to four foot swath of

Personal recollections of Harold B. Phelps, LT USN (ret) (continued):

fish which lined the beach north of town for quite some distance. A few warm days and the fish were ripening nicely. A smelly job getting to town along the road. Fortunately a higher tide came along and almost cleaned the beach of all fish. In retaliation the independents decided that if the canneries wanted \$10 fish they would get them. The independents hit the traps hard and fast. Piracy was in the saddle, a few trap watchmen were shot, some killed outright and others trussed up and left to be found when the canneries tenders came to bail out the trap. And the canneries got their \$10 fish.

The latter part of July we had almost finished cleaning up the whole station and we were all set to stay indoors during the winter rains which, I had heard, could be quite heavy. We received a message from the Navyyard Bremerton, Washington: "Take a complete inventory of all government property on the station and prepare to turn the station over to the Army." A large crack developed in my bubble but the Navy had tried to unload some of their stations before and nothing had come of it so we bided our time and hoped for the best.

Our luck ran out the middle of September when an Army Captain came through Ketchikan and stayed over long enough to take over the station for WAMCAT. Some of the crew were ordered back to the states, others to Cordova and I was bound for Kodiak, but I had to wait for the return of the USS SWALLOW from the westward to pick up the equipment that the Army didn't want. The SWALLOW arrived on September 30th and, luckily, the SS Northwestern, headed north, came in that evening and we boarded her about midnight for Seward. She was a venerable old lady and crossing the gulf in heavy weather the creaks and groans that came from her carcass were terrific. Not much sleep that night.

On arrival at Seward we went immediately to the SS Redondo on which we had passage to Kodiak. The Redondo was one half of a Great Lakes freighter. The Nabesna was the other half and neither of them had been built for comfort as both of them were used only as feeders in the Seward area for the Alaska SS Co.

I asked the Purser when the Redondo would depart for Kodiak and when it was expected to arrive there. The Purser said "I don't know." I said "Come, come, my good man, surely you have an idea anyway." He denied having any knowledge of the ship's movements. Just then the Chief Engineer came in, I asked him. The Chief laughed and said "That's right. He doesn't know. I don't know and I doubt if the Good Lord above knows." The Purser was looking out the port and said "Come here young fellow. Take a look at that little white tub over there. That is the Starr. She isn't very large but it's a good seaworthy boat and has been running to the westward for quite a few years. You will also hear that Capt. Johanssen is crazy as a loon but don't you believe it. Capt. Johanssen is a very capable skipper and an able sailorman in these waters, so why don't you take my last bit of advice and go over to the Starr and engage passage to Kodiak, pay your own way and tear up this ticket. For your wife's sake you are interested in getting to Kodiak as quickly as possible and, come hell or high water Johanssen will get you there in eighteen hours. You will also hear that Johanssen is a trifle reckless, don't you believe that either, he is a good man at sea anywhere." The Chief said "No truer words were ever spoken."

They were nice fellows even if they didn't know anything about the ship, so I told them they had me over a barrel sunnyside up and I would have to believe them but that I would leave it up to the wife. The Purser said "I know you don't care what kind of a tub you ride on but this is a hell of a ship for any woman to have to go anywhere on. You had better take the Starr. I went topside and told Betty about it and she looked at the Starr and said "I don't know but the Starr looks awfully small from here and I think we better stay on here." I went back and told the Purser that we would stay on the Redondo. He said "OK and I hope you don't regret it but remember you may never get to Kodiak on this ship." I then asked him if he could give us a sailing time and he said "Right at this moment we are due to sail at 9 AM tomorrow, but you had better check back later tonight in case it's changed."

Personal recollections of Harold B. Phelps, LT USN (ret)(continued):

We went out to the radio station where we had friends and that evening someone said "You better check on that Redondo. They have a habit of leaving without any passengers that are not aboard." I told them I had been forewarned by the Purser. We got a room at the hotel so Betty could get a decent nights sleep and about 10PM I went to the Redondo and the Purser said "It's a good thing you checked back as we are leaving at 2AM." Later I got Betty out of the hotel and we boarded the ship. When did we sail? At 9AM of course.

When we got up in the morning Betty turned on the water in the wash bowl and felt something splashing on her feet. I looked underneath and there was no piping from the bowl to the drain line. From then on I wouldn't have been surprised at anything that happened on the Redondo.

All went smoothly and we stopped at a Seldovia saltery then up to Halibut Cove, back to Homer and headed for Anchorage. When we tied up at the dock the gangway was at about a 45 degree angle from the ship down to the dock. We went uptown and looked the place over and to a movie to pass the time. We returned to the dock early, fearing that if they had completed their business they would probably have left right then. Going down to the dock, we couldn't see a sign of the ship and I just knew they had left without us. Over alongside the shore was the SS WATSON tied up to a couple of tree stumps or piles and not a drop of water within a hundred feet of her keel. A cheap drydocking for cleaning strainers and inspection of the bottom. A little further down the dock we could see the Redondo's crows nest sticking up over the end of the dock and the gangway was now at a 45 degree angle from the dock down to the ship. Then I learned that they had a 39 foot tide there.

The Redondo departed late that afternoon and before we reached the lower end of Cook's Inlet it started to blow and a real williwa developed and the Skipper found he was making no headway so he ducked into some lee around Cape Elizabeth and waited for the weather to abate. The next morning found us underway and I looked out the port and told Betty "We should be in Kukak Bay pretty soon, I see rocks out there." A beautiful day, glassy sea and I was enjoying the scenery. If I had thought about it, those rocks were on the port side and we couldn't be heading west, but just then the waiter stuck his head in the port and said "We will be in Seward at 11AM." I said "Hey, you mean Kukak, don't you?" He just pointed off the port bow and there was Seward. Five days gone and back where we started!

We went to the radio station again and found the Lieut in Charge of the Naval Communication Service, Alaska, headquartered at Cordova, who was going to Kodiak for a bear hunt with O. D. Mitchell, Chief in Charge of the radio station. The LT was greatly surprised and disappointed that I wasn't in Kodiak becoming oriented on the station before they went on the hunt. I told him that he couldn't be more disappointed than I was as it wasn't pleasant floating around for five days on that old tub.

On the second go round we picked up a Scotsman who owned a few salteries around that area. One morning at breakfast, this Scotsman picked up his napkin. When he smoothed it out on his lap his hand came in contact with a mess of a couple of soft boiled eggs on the napkin. He cursed loud and clear. He called the waiter and cursed him louder and clearer. "What in blazes do you mean giving me such a napkin?" The waiter didn't bat an eye when he said "Well sir, they only give us one table cloth and one set of napkins for each trip." The waiter couldn't have helped seeing this mess when he folded the napkins. I dare say he had been given a bad time by that Scotsman on some previous trip and gave him the napkin deliberately.

We finally reached Kukak Bay. It began to look like we would see Kodiak this trip, which we did on October 17, 1924. It had taken us over ten days to make 185 miles from Seward. It was all over now and we could laugh about it but it was something we wouldn't forget.

Personal recollections of Harold B. Phelps, LT USN (ret)(continued):

Kodiak was quite a peaceful little fishing village and we liked the looks of it. We were anxious to see what we had drawn for the balance of my two year tour of duty in Alaska, and was I surprised when Mitchell met us and took us down to the Navy motor launch and we went to Woody Island about two miles from town. We had to crawl up a 10 or 12 foot ladder at low tide. I could see this might present some difficulties for the women to get from boat to dock in rough weather. The motor launch had been housed over as it had to lay at a buoy about a hundred feet from the dock. It was a sturdy 24 foot boat and survived all the weather quite well.

Woody Island didn't look too bad after we found we had comfortable quarters, hot and cold running water, even indoor plumbing, not a Chic Sale in sight. But when I looked in the power house I was somewhat bewildered. What in the devil would I do with all the engines, batteries and power tools, which I had never seen before. My only previous experience with gas engines had been to crank an auto several times. I had doubts about coping with the situation especially after Mitchell told me that the engines were all rather ancient and the batteries had been defective when installed; the fire system was useless and a lot of the plumbing would need renewing shortly. I expected Mitchell to leave within a few days but luckily for me he stayed until the next spring. I sure had a lot of homework to do on engines, batteries, plumbing and other things I would encounter there. Under Mitchell's guidance I learned it all good enough to keep the station operating. Mitchell told me "Quit worrying about it. Most of the people who come up here are in the same predicament and they make out after a fashion." I began to see that I was just a stranger in strange surroundings. Here I was, a man who had never done much of anything but telegraph and shoot pool, dumped right in the middle of so many strange looking contraptions.

As an example of how ignorant and/or stupid I was, I had been cutting galvanized pipe with a hacksaw and trying to run a thread on it, which worked at times but generally not so good. One day I was looking through a Starratt tool catalog and I ran across a picture of a pipe cutter, which I readily recognized as something that had been kicking around on a shelf in the power house and I hadn't had the slightest idea what it was. It was a lot simpler from then on as we always had plenty of piping to renew. Our fresh water came from the upper lake, from which the old sailing ships had taken ice back to San Francisco for many years around 1850 and for several decades thereafter. It was good water but it rusted the inside of pipe very quickly. The radio station was in the open, close to the beach for which we were very thankful as back among the trees the mosquitos were thick and always hungry.

The population of Woody Island was rather skimpy. The Baptist Orphanage with about 75 children with a Mr. Rickman in charge; Mrs. Rickman and four or five women assistants; Bill Robinson was foreman and general factotum. Bill's father, who had been foreman before Bill, was still living with Bill. A real old timer was Nicholas Pavlof who had a wife and three boys. Two or three of the Pavlof girls had married radiomen. Another had married Bob Morrison but she had died some years before. Morrison had a homestead on Forget-Me-Not Island. He had a few milk cows and he sold milk wherever he could. There was a priest and a few natives. The only one I remember was a fellow named Fadaoff who carved a model ship and presented it to us on the birth of our son. The radio station had from 6 to 8 people all told, so Woody Island wasn't overpopulated. Mr. Pavlof told me later that many years before there were more people on Woody Island than in the town.

There was a telephone line to town, a magneto ringing type phone and anyone who wanted to subscribe to the service simply purchased a telephone and some wire and cut a pole or two if he was any distance from the line. At that time there were only six subscribers in town plus the radio station. Eight rings was the general call for any news that might be of interest to all. It was a real party line as no matter whose ring was heard, everybody came to the party. It was amusing to ring someone and take the receiver off quickly to hear the clicks going down the line. I don't know when the phone was originally installed but

Personal recollections of Harold B. Phelps, LT USN (ret)(continued):

it had gone out in '23 or '24 and about this time AMCAT laid a new cable from Seattle to Valdez. The Navy dickered with the Army for a piece of the old cable for the Kodiak phone line

There were two stores in town: W. J. Erskine's right at the dock and Otto Kraft's on the mud flats at the south end of town. A Mr. Griffin or Griffith ran Erskine's store and a Mr. Knobel ran his office. Otto Kraft and his son Ben ran their store. Both stores carried just about everything. If they didn't have it they would order anything anyone wanted.

A U. S. Experimental Station was up on the hill in back of town where they were trying to breed cattle that would prosper on native hay and give good milk, as alfalfa was \$60 to \$70 a ton. That was rather steep for the native cow owners. There was a U. S. Commissioner and a U. S. Marshal; one school with two lady school teachers; one small hotel owned by Jack Hunt and his wife; one barber; a restaurant and bakery. A lawyer had come to town in anticipation of a rumored boom but he quickly found that the people of Kodiak were too honest and didn't need the services of a lawyer, at least he found he could never make a living there so he departed in the fall of '24.

The Standard Oil Company had already built a fueling station to get in before the rush of the boom. A Mr. Grube was in charge of this. Standard was also drilling over around Kanata. There were no motor vehicles in Kodiak but there were plenty of motor boats. Karl Armstrong had a fox farm on Long Island. Karl was a real old timer. His wife was said to have been the inspiration for the characterization of Cherry Malotte in Rex Beach's "The Silver Horde." Mrs. Armstrong died in 1925 or 1926.

A fellow named Abbert had a homestead south of town a few miles. I think he had a few cattle on his place. Jack McCord was running some cattle on an island down south.

The Admiral Line ships Admiral Watson and Admiral Evans alternated on their stops at Kodiak. The Starr and the Redondo also stopped in there.

The only crops around Kodiak were salmon, halibut, herring, blue foxes and moonshine. Some clams but not in commercial amounts. Crab or shrimp hadn't even been heard of, at least I never heard them mentioned. Not too much moonshine as the incoming boats from the States generally picked up good liquor at some Canadian ports. One skipper was caught and he decided it would be easier to exit this vale of tears via a 38 caliber. The revenuers would come to Kodiak once in a while but as soon as it was known they were on the ship, a small motor boat would leave the harbor on its errand of mercy to tip off the moonshiners. This boat was about the only one around to take the revenuers on their search so they had to wait for its return before they could leave. There had been some blue fox farms in the area but the bottom had dropped out of the fox market so many of the fox farmers had to resort to turning out white mule to keep the home fires burning, always hoping for a return of the market for the fox furs.

Before we arrived in Kodiak the town was in the throes of a big boom due to well founded rumors that a cold storage plant would be built there in the near future. Everyone was highly elated as this could very easily make Kodiak into a second Ketchikan. It would save the halibut fishermen a long haul to Ketchikan.

After looking the situation over we were quite dismayed to find that the only medical man in town was a young USPHS "first aid man" whose primary duty was to give first aid to sick or injured seafarers. He also took care of all the sick, lame and lazy in town. He was a very fine fellow and was always trying but all he could do when an ailing person called him was to ask the patient what seemed to be wrong. Then he would thumb through his little black book and try to find something that would dovetail with the patient's description of his ailment. If a patient was seriously ill we would contact any passing ship and appeal to them to come in and take the patient to Seward. It was a very healthy climate so this didn't happen often.

Personal recollections of Harold B. Phelps, LT USN (ret)(continued):

A few days after we arrived on Woody Island, the Lieutenant and Mitchell went on their hunt using a Bureau of Fisheries boat. When they returned a week or so later, the Lieut. was in a bad mood over something that had happened on the hunt. He insisted on going to a hotel in town. Mitchell tried to tell him the hotel wasn't much of a place but he insisted, so we took him over to town. We had no sooner returned to the station when he called and told us to bring him back. The Lieut. thought Mrs. Mitchell's bread was the best ever so she gave him a pint jar of her yeast starter which he put in his suitcase. His ship was due to sail at 9PM. It was dark when we started for town. The Lieut. had an enormous duffel bag which we put on top of the launch cabin. Out in midstream a tide rip caught us and the bag went over the side. I swung the tiller hard around. Luckily the bag was tightly packed. When it came to the surface we were right alongside it. We helped the Lieut. into his stateroom with the luggage. I inadvertently placed the suitcase right alongside the radiator. I didn't know the yeast starter was in the suitcase. It's not hard to imagine what happened when that pint jar, sealed tight, became a trifle too warm. Nothing like giving the visiting brass a good send-off!

One day in town I was talking with Erskine's office man, Mr. Knobel. I said: "Mr. Knobel, you were here when the radio station was first built. Why in the name of common sense did they put it on Woody Island when there is so much open land right here adjacent to town?" He laughed and said: "I wasn't here but I know the story. It all happened over about \$2 worth of cheap hard candy. Mr. Erskine will confirm this story. It was about 1910 or 1911. A Navy supply ship came in here and unloaded many tons of material and equipment to build the radio station, then the ship went westward with material for more stations. The Navy Yard workmen kept their tools and work clothes in our warehouse. One day while they were changing clothes, one of the men saw this 20 pound bucket of candy and broke it open. All of the men helped themselves. Later the warehouseman discovered the open bucket and reported it to Erskine's partner, who was a very hot headed fellow. He declared himself to the men and demanded they pay for the candy. The workmen laughed at him and told him to go jump off the dock. When the Navy supply ship returned the partner demanded of the skipper that the men be made to pay for the candy. The skipper saw how ridiculous the whole affair was. He sided with the men. He told them if that was the way the partner felt about it, they could look around and put the radio station anywhere they pleased just so it was in a good spot. The workmen, to spite the partner, chose Woody Island. And that is how the radio station was located on Woody Island." The next time I saw Mr. Erskine I asked him about it. He confirmed the story and said: "If I had been here it certainly wouldn't have happened but unfortunately I was away in the States and my partner was a hard man to get along with."

I had heard the story of how the two radio stations at Cordova had been located. It sounded like it was a figment of someone's overactive imagination. After hearing the story of Woody Island, I thought the Cordova story might not be too far fetched. About 1915 or thereabouts the Navy decided to establish headquarters for the Alaskan Division of the Naval Communication Service at Cordova. Two stations were to be built, a transmitter station and a receiver station. The Navy Yard at Mare Island sent a crew of construction men and radio engineers to Cordova to locate the most suitable sites. The Whiteshed location at that time was unsuitable because it was accessible only by boat. The crew had been instructed to concentrate on locating the stations along the Copper River railroad. They rented a speeder from the railroad and cruised up and down the track for quite a few days. They couldn't agree on the best locations. One evening at dinner the boss man said: "I just received a message from the Navy Yard. They told us to quit stalling and locate the station so construction could begin before winter sets in. Tomorrow morning I am going to bring two quarts of whiskey to the speeder. When we leave town we will start working on the first quart. Where we finish that quart will be the location of the first station. Where we finish the second quart will be the location of the second station." The first station was located at Mile 7 (Eyak) where the receiver and control station was constructed. The transmitter station was located at Mile 14 (Hanscom), named after George E. Hanscom, Senior Radio Engineer at Mare Island, who supervised the construction of all of the early Navy radio stations on the Pacific Coast and in Alaska.

Personal recollections of Harold B. Phelps, LT USN (ret)(continued):

The station at Seward was way out on the mud flats where almost every high tide the men had to go out in a boat and rescue the oil drums that had floated away. Harry Martin, an old time radioman, had opened up the Seward station in 1918. He sent me a picture showing all the buildings surrounded by water, which he labeled "after a light rain." I found out later it was during a flood tide. Now I was ready to believe anything about the locating of Navy Radio stations in Alaska.

I had decided that the Navy wouldn't try to get rid of the Kodiak station. It was doubtful that the Army would want it and there was not enough revenue from the few messages we handled to make it pay for a private owner but I knew that I wasn't going to paint this place up like I had at Ketchikan. So help me, in the spring of '25 we received a message "take a complete inventory of all government property on the station and prepare the station for sale." We went along as usual and nothing came of it.

In the winter of 1924-25 the temperature dropped rapidly. It was down to about 11 degrees when Mitchell said: "We had better get the furnace started right now." We started for the boiler house when Mitchell said: "My God, we'll have to put in a new damper. I ordered one and hung it in the boiler room but forgot to put it in." The old damper was so badly rusted we had to chisel out the bolts, which took some time. I was waiting in the boiler room for Mitchell to bring some tools when something zinged across the room and hit the other side like a shot. It took me some time to find that a plug had popped out and the pipe was frozen solid. We had waited a trifle too long. We got the damper in and started the furnace, hoping there was no damage to the boiler. There wasn't, but when the water warmed up we found there was no heat in about half the radiators. That was about noon and at four the next morning we thawed out the last pipe. The pipes were all heavily lagged. Crawling around under the houses in cramped quarters to remove the lagging and put a blow torch to the pipes was a job I hoped never to do again. I vowed that the next year I would start the furnace on the Fourth of July. At least freezing weather would never sneak up on me again. I was still learning the hard way.

One night in the winter of 1924-25 we were browsing through the wish books for lack of other forms of entertainment when we heard someone yelling outside. I stuck my head out the back door and heard the dreaded cry of FIRE, from the direction of the mission. We got into warm clothes in short order, picked up all of the two gallon fire extinguishers and slipped and slid to the orphanage with the 40 gallon soda acid fire extinguisher cart. The fire was confined to one upper room at the time. We climbed on the porch roof, broke open a window and turned on the nozzle of the tank. Not one drop came out of the tank because someone had at sometime before tipped over the cart a trifle too far when cleaning under it, a little of the acid had spilled into the soda and started the mixture working. There wasn't the slightest leak in the tank lid or hose to warn us that it had become deactivated. There was nothing at the mission to fight the fire so all we could do was stand by and watch it burn right to the ground. We rescued most of their supplies from the lower floor but it took a few good swats on the posterior regions of the boys and girls to keep them on the job of getting the supplies out of the melting snow and into a shed. I put men on watch through the night to keep supplies from ending up elsewhere. The next day we repaired the shed and put a lock on it. Someone in town donated a large range. We hauled it over and set it up in the church. People in town donated many things to help the situation and we finally got things in condition to feed everyone. They slept anywhere they could find room to put a cot, if they had a cot.

We had one other experience with fire on the station in early 1925 when everyone on the station was in town except Mitchell, his wife and Betty. Mitchell started for the boiler house to check it when he saw the roof burning. He ran and told the two women to bring buckets of water. He picked up a couple of small extinguishers and the fire was quickly doused. This could have been disastrous as our gasoline tanks were within six feet of the

Personal recollections of Harold B. Phelps, LT USN (ret)(continued):

boiler house. This reminded me of the story Harry Martin had told me. He was at Kodiak in 1912 when Katmai exploded and the whole area was covered with a pall of ash so thick it was almost impossible to see anything. Every person from the station was in town except the man on watch. When they decided to return to Woody Island they realized they were stymied. The ash was too thick so they made no effort to return. What they didn't know was that a jolt of lightning or a heavy charge of static electricity had hit the antenna causing a fire which destroyed most of the station, their living quarters included. None of the men had a bank account in the States. The dresser drawer was their bank. Nothing could be safer. Martin said he lost over \$900 and that was pretty close to a years pay. He got it back after many months of waiting for the Navy to confirm the loss. After Mt. Katmai blew up the only animals left were the bears. While I was there they had started restocking ptarmigan, rabbits, etc. It was in 1926 when they brought in the first deer.

I was talking to Mr. Pavlof one day. He said: "Do you see those rocks out there? They were brought here as ballast in the old sailing ships that used to carry ice from here to San Francisco for several decades after 1850." That was hard to believe until I realized that San Francisco was a long ox cart haul from the nearest ice in California. Mr. Pavlof was a very fine old gentleman, in his eighties in 1925. He had been educated in Moscow and St. Petersburg. His father or grandfather was the last Governor of Alaska under the Russians.

One time we started for town and around Forget-Me-Not Island the fog settled down fast. I slowed down and put a man in the bow with a boat hook. He let out a yell right away and we found ourselves in a mess of rocks but we got out without scraping anything. Before we started back to Woody Island, I phoned the station to send a man down to the dock to start pounding on the crane to guide us in. I wasn't worried about missing Woody Island but I wanted to get somewhere near the dock. I watched the boat's wake to keep on a somewhat straight course and ended up about 100 yards north of the dock. No compass on the boat. It was in the storeroom, of course, where such things belonged! On the trip back to Woody I again thought of the crew not being able to get back to the station in 1912 and I was thankful the fog caught us as it made me realize what a predicament I would be in if such a thing happened just about the time the baby decided to enter this world and I had to get to town for the doctor or nurse. The next day was clear so I got the compass out of the storeroom and headed for town to lay out a compass course. I did the same thing on the return trip. **This would be strictly by guess and by God in a fog as I couldn't take into consideration the wind and tide but it would give me a chance anyway.**

On June 1, 1925, Betty was feeling full of pep so she turned out the wash. We knew the time was getting short but she felt too good to take it easy. Around 11 PM Betty decided that I had better get the doctor. I called the doctor and Mrs. Clarke, so when we arrived, they were sitting on the dock. It was a beautiful night but, on the return to Woody, I was getting nervous and cut it a little too short passing Goat Island. The boat slowed down and I knew I was in the kelp bed. I threw out the clutch and raced the engine then threw the clutch in reverse hoping to cut free of the kelp. I rocked the boat back and forth several times, hoping that the old clutch would hold up. I finally broke free and clear. I sure cussed myself for making plans to cope with the fog and then to find myself enmeshed in kelp. About 4 AM the baby was born, a perfectly normal boy and that's all we wanted.

It had been very nice duty at Kodiak. We rather hated to leave when my tour of duty came to an end. We had been very fortunate in every way, very little trouble with the baby and what the doctor couldn't come up with as a cure for his ailments, Mrs. Clarke never failed us. When I received my orders, I went to Erskines and reserved a room with a bath on the SS Watson. Junior was a year old and it would be much easier with a private bath. Several days before we were due to depart I asked Mr. Knobel in Erskines if he was positive I had the bath reserved. He assured me that we had it. I must have had a hunch on it as,

Personal recollections of Harold B. Phelps, LT USN (ret)(continued):

when May 24, 1926 came and we went aboard ship we found the door from our room to the bath was locked. I located the Purser and told him that the door to the bath was locked. He told me we didn't have a bath reserved. I told him that I had checked with Mr. Knobel in Erskines a few days before and Mr. Knobel had assured me that we had the bath reserved. The Purser said: "I'm sorry but it's too late now, there is nothing I can do about it." I told him that I was going to get that bath one way or another and then he asked me if we would share it with the lady on the other side. I told him positively not as we had a year old baby and we needed the bath more than the lady did. The Purser still refused to do anything about it so I told him I would see the Skipper about it. He just shrugged. I thought about it a minute and then said: "Mister, you have my mad up. I'll be damned if I go to the Skipper. You took that bath away from us and I'm going to see that you give it back. Now I'm going to give you a much fairer deal than you gave me. I'm going back to my room. In exactly fifteen minutes, if that door isn't unlocked, there is a fire axe outside my room which will open it, even if I spend the trip to Seattle in the brig. Remember, fifteen minutes!" I returned to my room. In about ten minutes the bath was ours. Such things have always happened.

It was back to sea duty for me. Maybe I would get back to Alaska another time. I was quite sure that one tour up there wouldn't be enough for me.

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Personal recollections of William H. Colvin, CRE USN (ret):

I used to have a schedule with Ray Brightman, W6MIN, in Placentia, California. He is a longtime shipmate. We were up in Cordova, Alaska, together in 1927-1929.

Brightman is a crackerjack radioman. He was in charge of the transmitter station and believe you me he had to be an all around mechanic to keep Cordova, NPA, in operation in those days because the station was 7 miles from the control station, way out in the mud flats - the swamps! The only power they had came from one 75 HP and one 100 HP diesel engine generators. After installation, those diesels settled in those mud flats, swampy as they were, and there was a problem in keeping the drive belts on from the generators to the diesels. Every now and then one of the belts would wind its way off. The radioman on watch had better be on the lookout for that because it was pretty dangerous.

The old 100 HP diesel had gone through plenty. The station burned down once, in 1920 I think. The 100 HP had gone through that fire. While they were reconditioning the 100 HP, they moved in a new 75 HP diesel to take over. Well, they finally got the 100 HP back in commission and it gave trouble all the time. The 75 HP went along without any trouble but it too finally settled out of line and started giving belt trouble. That's the kind of station Brightman had to contend with. He had to keep the station going - and he did! At times he worked day and night to keep the station in commission.

In the dead of winter lots of things can happen. They had to have air pressure on the tanks. They had to have the batteries charged all of the time. The batteries would hold up pretty good but now and then, when the diesels were out for a long time, we couldn't charge the batteries so we had to send out traffic by landline to the Army station in Cordova. The Army had a communication office in Cordova. They also had a cable to Ketchikan and another one to Point Barrow. We would have times when our traffic was interrupted. We would send it to the Army in Cordova labeled IUPD - interrupted. Cordova would send most of it to Ketchikan by cable. Ketchikan had a radio station and would relay the traffic to NPC Bremerton. When we were in commission, we worked Bremerton ourselves.

I tell you Brightman had one hell of a time keeping that station going. He had some pretty good men to help him. He had a big Finn named Urho Stenback. He had Jim Beets and a fellow from Canada. He was in the U. S. Navy but had been born in Canada. He was a crackerjack mechanic. A station needed men like that. NPA was on the air most of the time but there were times when everything went wrong. The batteries would run down. The diesels wouldn't start. You can imagine working in the middle of the night. The temperature was below zero - cold - cold! There wasn't any heat in the powerhouse. Those fellows went around most of the time in the winter with their peacoats on. I wouldn't call it a good tour of duty!

But the Army would have interruptions at times too. During the two years I was there, the Army's cable broke between Seattle and Ketchikan and we would have to handle the Army traffic. Boy were we busy then! The Navy traffic alone would keep us busy but when we also had to handle the Army traffic we were really busy. Fortunately NPA and the Army communication office in Cordova were never out at the same time. If they had things would have been really bad.

While I was at Cordova, I bought a boat from a boat yard in Chehalis, Washington. It came up broken-down. It took me a month to assemble it. It was made out of cedar. After I got it finished, I bought a 10 HP Johnson motor. We had a lake there about two miles across. We used the boat in the summer time and we did a lot of fishing. There were lots of fish in that lake. In the winter we went skating on the lake. The lake was between the control station and Cordova. In the wintertime we would put on our skates and skate into town. In the summertime we would go over by boat.

Personal recollections of William H. Colvin, CRE USN (ret)(continued):

Back to Cordova. While the boys had a tough time keeping the station out in the swamps in commission, we had troubles of our own at the control station - 7 miles away. The only power we had came from a water wheel. There was a spring up on the mountain side. They piped the water down to the station in a wooden pipeline. Anything else would freeze and burst. This wooden pipe seemed to insulate the water to some extent. It didn't seem to freeze very often but when it did it wouldn't burst. Down at the foot of this hill the water pressure was about 180 pounds. That was enough to drive the waterwheel and the generator and charge the bank of batteries. After the batteries were charged they floated on the line. This waterwheel was in operation 24 hours a day. Everything on the station was DC of course. One time we had trouble with the wooden pipe line. An avalanche came down the mountain side - tons and tons of mud, old tree stumps, rocks and debris, and rubbed out our pipe line - 100 feet or more of it. Then we were really out of commission. We took every foot of fire hose up on the hill (I don't know what would have happened if we had a fire), connected three lengths of fire hose together and joined it to the break. That gave enough water to bring the water pressure back up to 180 pounds and put us back in commission but very temporarily.

Coming down from two years shore duty at NPA, Cordova, in 1929, I had my orders in my little hot hand for the destroyer Yarborough, then in the Navy Yard at Bremerton. On board was a CBM named Hickey. He told this one about the USS ARKANSAS:

"A CBM and a CQM were returning from a night on the town. After successfully making the gangway at 2 AM, the CQM said: 'Make ready to letter go, Chief. Let's get this thing underway.' A bright idea!. The CBM headed for the forecandle, the CQM for the bridge. In due time the CBM reported to the bridge that 'She's ready!' They weren't kidding -whammy went the starboard anchor into the drydock!"

Although there's a new Navy at the helm, amusing and pleasant memories of the old remain. The old Navy was a bit before my time, however I was "exposed" to the old one in this way:

Having joined the Navy in 1919, and immediately being looked upon as an apprentice seaman, my first "assignment" was to the Naval Training Station at Great Lakes, Illinois. There all of the drill instructors were from the Great White Fleet. They had brought much of the old Navy with them. President Theodore Roosevelt had sent the Great White Fleet on a goodwill cruise around the world in 1909.

The ships' crews labored long and hard to do all of the work required of them. New inventions and devices were soon to make operation of the ships much easier.

Before public address systems were introduced, several men were required to disseminate orders and urgent information throughout the ship. To be heard and understood clearly, the orders or information must be heard above the ship's underway noises. The boatswain's pipe, a shrill piercing whistle, was used as an alert. This was followed by the old attention getter: "Now hear this!" or "Do you hear there?"

Before the advent of radio broadcasts and Edison's phonograph, entertainment of the crew during leisure hours was lacking. The crew had to provide its own entertainment with available musical talent, filled in with "sea stories" and tall tales devised on short notice, or by one of the old ones. The taller the tale, the better. An example is this one about the mean old captain of a coastwise cargo vessel. The crew members kept deserting his command at every opportunity, leaving for parts unknown. To put a stop to this practice the captain ordered that no one could leave the ship for any reason whatsoever.

With no radio communication in those days, it was necessary to pick up the ship's mail and officials orders, at the various ports of call. It was the duty of the ship's mail

Personal recollections of Raymond B. Brightman, LCDR USN, (ret)(continued):

I was in charge, I figured it would be my fault if I didn't restrain him, but he got through it alright. We got it rigged up and everything went fine from then on. I might also tell you that there was about five or six miles of 1/4" solid copper cable that we used as a ground wire. I bet that someone could go up there now and dig that stuff up. With copper selling for 70¢ a pound he could be a rich man. I used to dig some of it up to make coils for the HF transmitters that I built. They had so many wires, one or two wouldn't make any difference.

The biggest job I had while I was up there was when the wind blew over the smokestack. The boiler plant furnished heat for all of the five or six houses, the barracks and the station buildings. The boiler stack was about forty or fifty feet high and about 24 inches in diameter made out of 1/8" steel, so it was pretty heavy. It was broken off at the roof line. I had to cut it loose. We still used the boiler but it was very unsatisfactory - lots of smoke and it didn't work very well. The job now was to replace the stack with a new one that we had shipped up from Puget Sound. It finally got up there. We used block and tackle and all kinds of other stuff.

This Swede that Colvin talked about was actually named Nelson. He was a Chief Machinist's Mate. He and Uhro Stenback, and the rest of the guys, got that stack up in the air. I was proud that we could do that work with the limited equipment we had.

Uhro used to run around with an Alaskan woman. He used to bring her around once in a while. We would sit and talk. He would say: "Lizzie, do you want to go up to Mile 17 and do some fishing?" She would answer: "Sup to you." "Maybe you would rather go to Cordova and tie one on." "Sup to you." Quite a character! Old Uhro was a strong guy, a good reliable fellow, too. I never heard of him after I left Cordova.

Well, I think that I have just about run out of history. I do remember on 3950 meters we had a 30KW arc at NPW. At certain times during the night we could work NPU in Samoa, which was pretty good. Also using the 5KW spark we could occasionally work Japanese station on 600 meters. This would be in 1922 or 1923. That was quite an experience in those days. Later on, I don't know whether you remember Jacke Mohler on the LITCHFIELD on the trip to Australia in 1925. We built a little 50 watt transmitter and powered it from the emergency radio shack. We got on 40 meters and worked the world with that transmitter. At that time, Fred Schnell from the ARRL, was on the SEATTLE. He was a LT in the Naval Reserve. I went over to see him one day. We chatted quite a while about work on 40 meters. That was pretty new at that time. Short wave was just coming in. It worked on 80 and then down to 40 and it wasn't long before they were down to 20 and then down to 10. Now I guess they are on 450 megahertz or something!

All I do here is work the American Morse schedule on 7055 kHz every morning from 9 to 9:30AM and there are only four or five stations left. We are interfered with by some jerk but we manage to get through if conditions are good. They have been pretty bad lately.

Well, I guess that about winds it up, George. I certainly haven't helped you much, but I don't have any suggestions either. Everybody that can give you any information is gone. So that will do it. 73, George. We will see you one of these days, I hope. Nice hearing from you and thanks for the information from Colvin.

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Personal recollections of Carl J. Bassler:

U. S. Naval Radio Station, St. Paul Island, Pribiloff Islands, Alaska (NPQ):

After fifty years, most of the specific details concerning equipment and frequencies are lost. The association with equipment and frequencies during my subsequent career with the FAA in Alaska and Washington, D.C. further dims my recollection of the earlier days.

Tour of duty at NPQ approximately April 1932 to February 1934.

Personnel:

In charge: CRM Peterson, relieved about 8/32 by CRM George (Mc) McGuirk.

Material: (Pop) Bagley.

Radiomen: (Heavy)Atkinson Keith Bledsoe
Otto Schmidt Parker
Carl Bassler (Jelly)
.... (Flip) Boris

Some of the above men were on station when I arrived and later transferred out. Others arrived during my tour and remained after we were transferred out.

Pharmacists: Two, in succession. Names totally lost, understandably, as all pharmacists were called "Doc."

Aerographers: Chief William Lindeman and 1st Class Shelton.

Cook: Dick Single men's mess.

Radio Equipment:

Transmitters: A Model T0, tube type with a 1000 cycle note, broad and good for calling on 500 kHz and collecting TR's.

Another larger and more powerful tube type, unmodulated and used as the main transmitter for all schedules, etc.

Receivers: Pretty much the standard types in use at that time. Do not recall any specifics.

In addition to the above, we had some sort of HF equipment used in schedules with NPC (Bremerton) as propagation conditions permitted. Operations were not very successful, probably because the equipment was somewhat experimental and, at that time, we were not conversant with such things as auroral and sunspot effects.

Aside from the continuous watch on 500 kHz, all traffic was handled on a schedule basis with NPC Bremerton, NPR Dutch Harbor and WXE Anchorage WAMCATS (later to be known as the ACS).

Personal recollections of Carl J. Bassler (continued):

Direction finder bearings were also provided ships on request. The DF facility was located on the top of a hill some distance away, on the west side of the island. On receiving a request for bearings, the ship would be advised to standby while we manned the DF. The operator on watch would transfer equipment controls to the DF lines and proceed up the hill to that facility. Fortunately, during my tour of duty there were not many requests for that service. The walk to the DF station was quite a chore, particularly at night and in stormy weather.

Power to the equipment was supplied by "portable" submarine batteries. There were two banks each with (I believe) nineteen 6 volt batteries in series. Charging was accomplished by generators powered by Fairbanks-Morse 'semi-diesels' - the model with the big flywheels. The semi's were readied for operation by applying a torch to a plug in the cylinder. When the plug became red hot, the engine was started by pulling the flywheel against compression.

We had a cantankerous sewer system. It plugged up at the most inconvenient times, especially in winter. The outfall seemed to be located just above mean tide. The outfall would freeze, requiring efforts to get the ice out of the pipe. The most effective way to accomplish this was to heat the ends of the rods, about six feet long and one inch in diameter, in the power house coal stove, dash down to the beach and jam the rod into the pipe to thaw the ice plug. Of course the rods lost quite a bit of heat in the process of getting down to the beach. The faster we ran the less heat loss. Quite a workout!

Our principal supplies were shipped in once a year via one of the Navy supply ships which arrived in July or August. All groceries and whatever else we needed for the coming year were generally ordered by June. When the ship arrived, all hands were turned to without interruption to the watch duties, etc. Daylight hours were almost continuous at that time of the year. There was only a small dock in rather shallow water. (Winter ice is tough on the docks). The supply ship anchored off-shore and everything was ferried in by 'skin boats' operated by the island natives.

From dockside, materials were distributed by loading everything onto a high-wheeled flatbed wagon. A small caterpillar tractor was used to pull the wagon. The limited capacity of the wagon required innumerable trips back and forth with occasional instances of the wagon overturning due to uneven terrain or turns made too sharply. Thousands of gallons of fuel in 55 gallon drums were taken to a sump, emptied and the fuel pumped to our tank farm. The Bureau of Fisheries let us use their stake truck in handling the fuel because it was too dangerous to haul that material on the wagon. Many tons of coal, in gunny sacks, were distributed and stacked in coal sheds associated with the individual quarters. By the time the supply ship left, two or three days after arrival, we were one haggard and exhausted group.

The island natives were wards of the U. S. Government. Together with the fur seal activities, they were administered by the Bureau of Fisheries. The Bureau had a vessel, the S.S. Penguin, serving the Pribiloffs as well as other installations. They tried to service the islands quarterly as practical. Winter ice conditions were influential. As space permitted, the Penguin would bring a limited amount of staples, such as eggs, butter, potatoes and occasionally fresh fruit for the Navy Station. Occasionally, during summer, a Coast Guard vessel would stop by to drop off mail picked up at Dutch Harbor and take whatever mail we might have for the "Outside." Once in a while we would be able to get in a few innings of baseball with the crew. With such infrequent arrivals, many non essential operations were suspended to see what mail and supplies were received.

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Personal recollections of Walter L. Skinner, LCDR USN (Ret):

In early 1936, as a RM2c with seven years of service, I reported in to the U. S. Naval Radio Station (NPC), Bremerton, Washington, for duty in the Thirteenth Naval District.

My previous duty had been:

USS Oklahoma	16 months
Fourteenth NavDist	26 months
USS California	36 months

Why would a Pennsylvania native with East Coast leanings request the Thirteenth Naval District? Cherchez la femme! My "soon to be" wife lived in Seattle. Things worked out as planned as we were married in June 1936. This outcome was due as much to luck as good management.

Shortly after reporting to NPC I was slated for transfer to the bachelor-manned RDF station on Destruction Island. Destruction Island is about three miles off the central coast of Washington and, to put it mildly, was not considered good duty. I was to relieve a radioman who had refused to paint the station flagpole. This was a solo boatswain-chair job and he said the set-up frightened him. The Chief-in-charge thought this was close to refusing duty and put him on report. In a week or so the whole episode faded away with no action being taken. In any case, I didn't go to Destruction Island, but later did go to the U. S. Naval Radio Direction Finder Station, Fort Stevens, Oregon.

With orders to Fort Stevens (NZR) a car became a necessity so we bought a 1930 Model A Ford coupe and drove down the coast to Fort Stevens. My seabag was out front between the right fender and the hood. The trunk had the clothing and the basic housekeeping necessities. A particularly hard to pack lamp shade was held by my wife. The trip down was uneventful except that the Megler-Astoria ferry delayed its departure to take us aboard. The road along the river was visible from the ferry terminal, where the road ended. Nothing else was there. The ferry skipper saw us about a mile away and waited for us. A very pleasant introduction to the area.

I reported in to the Chief-in-charge at Fort Stevens, CRM Grant, who, along with Magaris RM1c, had station quarters. I received an enthusiastic welcome from them and later from Githens and Davis, both RM2c. For a month prior to my arrival the station was one watchstander short. The Chief-in-charge had decided that he should be available for basic station interests during the day and that, when possible, he would take the 1800-2400 watch. Thus my arrival was a happy event as the watch list soon returned to normal.

On the morning of arrival-day plus one, CRM Grant gave me a tour of the station. Everything looked shipshape, everything worked well. I got the message.

Station electrical power was the domain of Magaris RM1c. There were forty, large 6 volt lead-acid batteries, each with its own detailed history, religiously kept. The batteries were split into two 120 volt banks. One in use, one on charge. The DC charging generator was driven by a one-lung, hot plug, huge flywheeled diesel engine that may well still be running faithfully somewhere. Electrical power (AC) was available through the Fort Stevens switchboard and was probably used in the station quarters.

The familiarization tour took us to the RDF operating building which was connected to the quarters and shop area by one-half mile of double width 2" x 12" planks, laid across the sand dunes. We contacted Davis RM1c, who was on watch, and took a quick look around. The Chief and I were due to stand the 1800-2400 watch together that evening so only its location and how to get there were important.

Personal recollections of Walter L. Skinner, LCDR USN (Ret) continued:

That evening I went in early and shot the breeze with Githens RM2c. He explained where the switches and other controls were, normal operations and what was really important. This helped considerably as I had time for it to sink in before I heard it again from the Chief.

The Chief arrived and, after a few pleasantries, we got right down to the job on hand.

Fort Stevens guarded: 375 Kcs, RDF frequency; 500 Kcs, Distress frequency.

Both frequencies fed into a switching junction box giving a choice of split-phone or either single frequency operation. The operating position was well laid out for receiver tuning, RDF wheel turning, bearing reading and transmitter control. True bearings were read directly from the calibrated scale. No corrections were necessary.

On a typical watch most of our activity was in furnishing bearings to commercial ships. The RDF bearings were usually sharp and definite, but weak signals with wide nulls and night effect with its swinging null were also encountered and so reported to the ships. Commercial ship transmitters varied considerably in strength and the operators in readability. The American and the Japanese ships were the best. The Greek ships the worst. Navy ships transiting the coast transmitted for about five minutes on an unknown frequency. You knew when but you didn't know where. The Navy ship bearings were sent to District Headquarters, so we gave them our best. The Columbia River Lightship was about fifteen miles away and we kept a log of its bearings. It wasn't uncommon for the lightship to drag anchor during some of the fierce winter storms centering on the mouth of the Columbia River.

As the watch progressed, the Chief explained the standard wall chart which showed a slice of the West Coast from Tatoosh Island, Washington, to Empire, Oregon. Most of the chart was ocean area. The RDF stations on the chart were:

(NPD) Tatoosh Island, Washington	South entrance Strait of Juan de Fuca.
Destruction Island, Washington	Three miles off central Washington coast.
(NZS) Klipsan Beach, Washington	Fifteen miles north Columbia River mouth.
(NZR) Fort Stevens, Oregon	Five miles south Columbia River mouth.
(NPF) Empire, Oregon	On north spit of Coos Bay.

Each RDF station had a true bearing compass rose centered on its chart location. A hole, with a lightly weighted string through it, marked the exact location of the RDF station. The chart side of the string had a pin which normally lay against the chart. To plot a bearing, pick up the pin, lay the string across the bearing on the compass rose, and stick the pin in the chart. It was a quick and accurate way to plot bearings.

The Chief pointed out the telegraph sounder that connected the shack with both quarters, and said not to hesitate to use it for help or consultation. With that information and "good luck and good night," he turned the watch over to me. So began my very pleasant tour of duty at Fort Stevens.

Like all Navy groups, the one at Fort Stevens changed rapidly. CRM Grant, a former destroyer force featherweight boxing champion, retired and became manager of a San Diego County airport. Magaris RM1c was later transferred to the destroyer Reuben James, which was later sunk in the Atlantic by a German submarine before we entered WWII. Magaris was lost in that tragedy. Githens RM2c decided to try the FAA. He sent me a card from Buffalo, Wyoming, while I was still at NZR. Davis RM2c is the only one whose given names I recall. His full name is Jesse James Davis, a native Texan. I lost touch, but if you read this JJ, my heartiest best wishes.

Personal recollections of Walter L. Skinner, LCDR USN (Ret) continued:

The personnel complement at Fort Stevens was typical of many RDF stations:

1	CRM	Chief-in charge	Quarters A
1	RM1c	Asst. R-in-C	Quarters B
3	RM2c		

A typical watch list:

<u>DAY</u>	<u>00-08</u>	<u>08-12</u>	<u>12-18</u>	<u>18-24</u>
1	1	2	3	4
2	2	3	4	1
3	3	4	1	2
4	4	1	2	3

The six hour watch at RDF stations was mandatory. It was questioned many times and the official answer was that after six hours on watch fatigue set in and the chances of an erroneous bearing increased.

On week days, men with the 18-24 watch had an 08-12 working party if needed.

Fort Stevens was in commission in 1936. It was a large base with most areas undeveloped. The administration buildings, barracks, parade ground and miscellaneous shops, were all within a mile of the main gate. About four miles farther out is Fort Stevens raison d'etre, coast artillery guns in tremendous revetments. With Fort Canby and Fort Columbia on the Washington side, they guarded the entrance to the Columbia River. The Navy RDF station was also about four miles from the main gate but in a direction that kept it well clear of the coast artillery installation. Fort Stevens is now an Oregon State park.

At NPC, we had a DCO named Ketchum, a LCDR. Our working parties included gardening. One day we caught a good sized garden snake and threw it into an adjacent chicken yard. The noise, fiestiness and terror of those chickens was 20 db above an airraid siren. An interesting feature of this was that the chickens belonged to RAdm "Turn-to" Turner, who arrived on the scene shortly and wanted to know what happened. The snake was gone and the chickens were calming down so we were as mystified as he as to the cause.

The landline operators at NPC thought they were the "fighter pilots" of the radio and with some reason. They had NavDist Headquarters, Army Headquarters, Coast Guard headquarters and Western Union on the line and a separate landline to the SOP ship. This required various MSG forms, word counts and codes.

NPC did not handle a high volume of traffic. Most messages originated in or were delivered to 13th ND activities. NPG at San Francisco was the tie in to the Navy Communication System. Fort Stevens administrative traffic was relayed to NPC via Astoria. There was a ship-shore and distress frequency split-fone watch. The landlines were mentioned previously. NPE Astoria, NPR Dutch Harbor and Adak were tied into NPC by schedule, I think. NPC was on the highest knoll in the shipyard and had a couple of about 125' towers for receiving antennas on the station.

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Personal recollections of George E. Riddle, CDR USN RET:

I was stationed at the U. S. Naval Radio Station, Astoria, Oregon, on the banks of the Young's River, about one and a half to two miles out of town. The original installation had been made by the American Marconi Company in approximately 1914 or 1915.

The personnel at the station while I was there in 1936 - 1937 were, to the best of my memory:

Chief Radiomen: (Security personnel):

M. VanDenberg he was relieved by

T. Lusk

Radiomen First Class:

H. Schnieder he made CRM and was transferred to Destruction Island

Blanchard he relieved Schnieder - both General Service

H. Kisner Security personnel - Administrative Asst. to Security Chief

Meyers " "

D. Barnum " "

Radiomen Second Class:

Burton Security personnel

Gelineau " " - Relieved Barnum

R. Meyers

E Chase

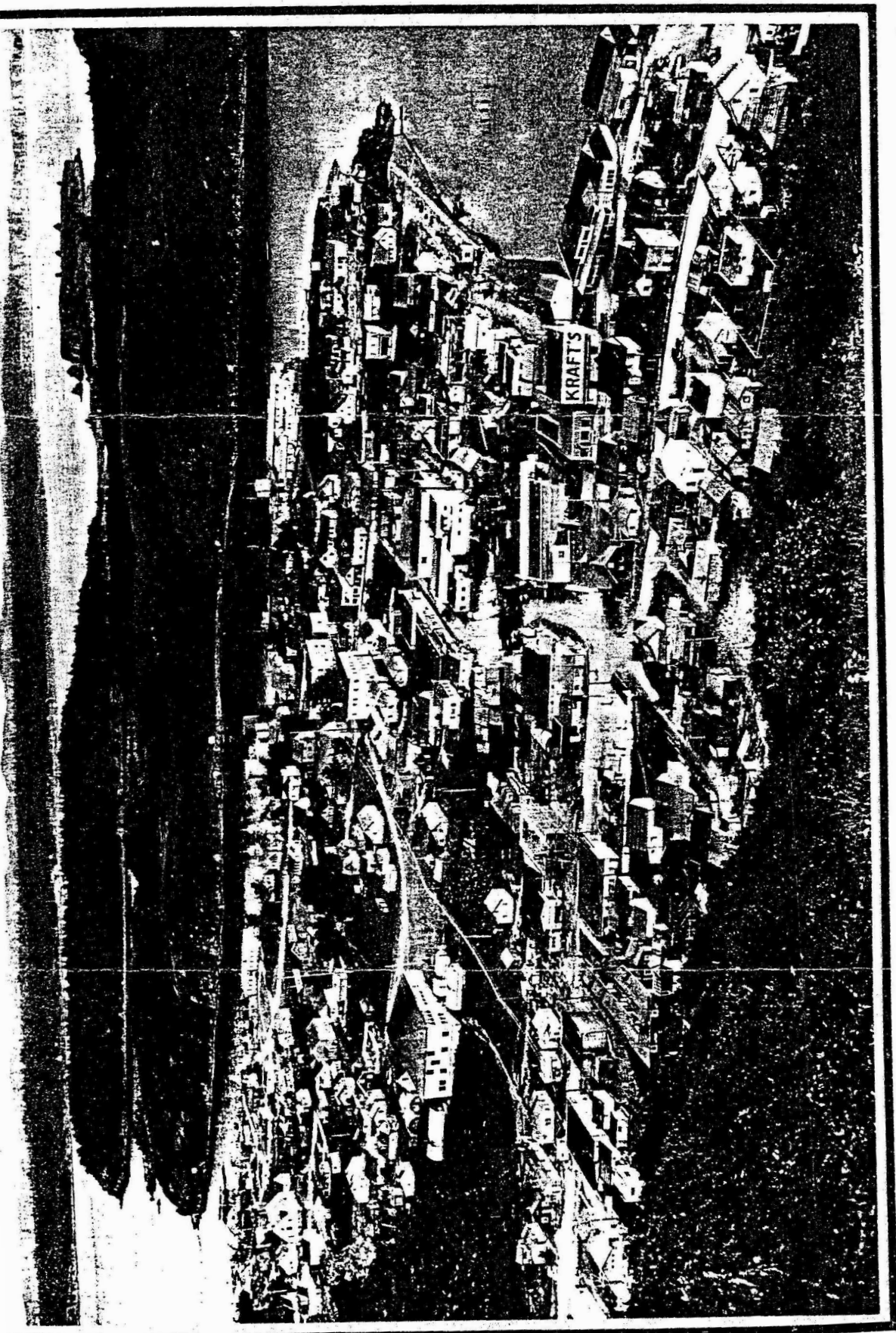
Archer

Eckbery (Edberg?)

G. Riddle

Comes (Late 1935 or early 1936, relieved Riddle on USS Kanawha)

Also one ships cook second class.



(Photo from Roy E. Brown, LT USN RET)

KODIAK, ALASKA, 1949

Personal recollections of Roy E. Brown, LT USN RET:

After my return from overseas in 1945, I did what a lot of POW's did and that was to get married again. I lucked out. Many of them didn't. I've barely started writing on this 21 years phase of my life since most of my thoughts in the past few years have been about prewar and WWII years in my correspondence and writing manuscripts.

I had gone into the Fleet Reserve and in 1949 had a temporary job in the Communication Station 17th Naval District, Kodiak, Alaska, for six months. I had bought a small cabin or hunting lodge and skid shack combination outside the city limits of the village of Kodiak on Mission Street. My son, Dennis, was born in the Naval Dispensary on the NOB, October 5, 1949. We left there in December to return to Eureka and Arcata, California, where my wife's folks lived. I've told you that I was recalled to active duty again Friday the 13th in October 1950.

I will try to answer some of your questions and give you a preliminary account of my memories of the 17th Naval District. I don't remember taking many slides of buildings on the NOB, and none of the transmitter and receiver sites. The latter were separated from each other and from the 17th ND Headquarters. Those sites were not on Woody Island. The CAA was occupying Woody Island at the time I was there. One of my duties was an inspection trip down the Aleutians as far as Attu. The stopover in Adak was brief. It was reported there was but one tree there and it had been planted by the station crew. Attu had a treacherous landing strip. There was a small crew there and some radio equipment but I don't remember the types. Most of the Aleutians from Adak to the end were barren, wind swept, foggy and with much rain. I think the expression "One's turn in the barrel" must have originated there.

The village of Kodiak was along the west central side near the entrance of St. Paul's Harbor. Woody Island was more easterly of the village. Kodiak was mostly a fishing village. The NOB was on the south side of the harbor along with the main air strip and tower with GCA. The landing strip ended up near a mountain so the planes coming in on foggy days had to be guided in by GCA. As I recall one could get back and forth to Woody Island via tug or lighter from the landing in Kodiak.

The village of Kodiak was probably around 1200 population. It had many bars and liquor joints. Also several churches including the old Russian Orthodox Church on Mission Road. The General Store and Post Office was located on the dock down from the main street. My Post Office Box was No. 1!

The transmitter site was just a few miles out from the NOB Headquarters in the valley. Radio teletype with frequency shift keying was used and a rhombic antenna pointed toward NPC. I'm not sure just where the receiver site was located.

There are many stories to tell about Kodiak, some of my duties there and what I did as a civilian. I did much amateur radio operating there too. I will try to relate some of the m to you at a later date. The days were long in the summer and the nights long in the winter. I have a book "Lord of Alaska" by Hector Chevigny which is a historical fiction book about the life of Aleksandr Baranov from 1790 to 1819 and his rule in Alaska from Kodiak to Sitka and the final sale of Alaska to the U. S. for \$7,200,000. And the U. S. thinks nothing of giving 100 million a year for our bases in the Philippines!

Enclosed is a copy of a photo of Kodiak village showing Woody Island in the background. Notice the two onion shaped domes of the old Russian Orthodox Church in the upper left center. It is on Mission Street. I had my shack further out of town on the same street where I had set up my amateur radio station with the call KL7AAB, which many of the personnel of the NOB Kodiak used to come out to and talk to relatives and friends in continental U. S.

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