8238

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Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. EX-2455 *Office No.* H-8238

LOCALITY

State Alaska, Aleutian Islands

General locality Adak Island

Locality Cape Yakak to Crone Island

19 55

CHIEF OF PARTY

S. B. Grenell

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DATE April 3, 1956

B-1870-1 (1)

8238

Form 537
(Ed. June 1946)

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER NO. H-8238

Field No. EX-2455

State Alaska, Aleutian Islands

General locality Adak Island

Locality Cape Yakak to Crone Island

Scale 1:20,000 Date of survey 12 July to 7 August 1955

Instructions dated 16 December 1954

Vessel EXPLORER

Chief of party S. B. Grenell

Surveyed by S.B. Grenell, J. Bowie, K.B. Jeffers, F.X. Popper, G.E. Haraden & H.A. Garcia

Soundings taken by [illegible], graphic recorder, hand lead, [illegible]

Fathograms scaled by Fathometer readers

Fathograms checked by K.B. Jeffers, G.E. Haraden, H.A. Garcia

Protracted by H.A. Garcia and A.J. Hamlett

Soundings penciled by H.A. Garcia and A.J. Hamlett

Soundings in fathoms [illegible] at [illegible] MLLW and are based on a velocity of sound of 800 fms/sec.

REMARKS: Survey of Chapel Roads is plotted as a sub-plan on this sheet at a scale of 1:5000.

U. S. GOVERNMENT PRINTING OFFICE 16—66520-1

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY NO. H-8238
FIELD NO. EX-2455
Cape Yakak to Crone Island,
South Coast Adak Island,
Aleutian Islands, Alaska
Project 1218 - Season 1955
Scales: 1:20,000 and 1:5000(Insert)
USC&GSS EXPLORER - S.B. Grenell, Comdg.
Surveyed by: S.B. Grenell, J. Bowie, F.X. Popper, S.L. Hollis & G.E. Haraden

A. PROJECT:

This survey was accomplished under authority contained in the Revised Instructions for Project 1218 (formerly CS-218) dated 16 December 1954, file 22/MEK, S-2-EX.

B. SURVEY LIMITS AND DATES:

This survey covers the inshore area on the south coast of Adak Island from Cape Yakak at the south end of Adak Strait eastward to Crone Island. The survey includes Bay of Waterfalls, False Bay, Beyer Bay, and Hidden Bay. A survey of Chapel Roads and Chapel Cove at a scale of 1:5000 is plotted as an insert on this sheet. Hydrographic surveys were started on 12 July and completed on 7 August 1955.

Junctions were made with previous surveys as follows:

H-8146 (EX-2654) 1:20,000 1954, south end of Adak Strait.
H-8140 (EX-4254) 1:40,000 1954, off Cape Yakak.
H-6899 (USN-1934) 1:60,000, reconnaissance survey.

Review, par. 4.

In addition to the above junctions were effected with the following contemporary surveys:

H-8234 (EX-4255) 1:40,000 (1955) offshore survey.
H-8239 (EX-2555) 1:20,000 (1955) at eastern limit of this survey.

A junction was also made with the 1:5000 scale survey of Chapel Roads which is plotted as a sub-plan on this sheet.

C. VESSEL AND EQUIPMENT:

The work close inshore was accomplished by EXPLORER launches Nos. 1, 2, and 3 using 808 type portable graph recorders. The offshore areas were surveyed by the Ship EXPLORER using 808 type recorder supplemented by the EDO recorder No. 4. All soundings were scaled from continuous profiles. Permanent shoran camps were established on Cape Yakak and Elf Island. Temporary prefabricated shoran shacks were used at Stations EVEN and ROCK in Bay of Waterfalls, and at station FANG and HOOK in Beyer Bay. For a complete discussion of the constructions and use of portable shacks see "Special Report on Portable Shoran Instrument Shack, Ship EXPLORER, 1955" which was forwarded to the Washington Office on 10 November 1955.

D. TIDE AND CURRENT STATIONS:

A portable automatic tide gage was installed in Chapel Roads on 12 July 1955 and was maintained in continuous operation until its removal on 7 August. All soundings in this area were referred to MLLW as determined at this tide station.

A Roberts Recording Radio Current Buoy was anchored at current station No. 13 off Turret Point in Latitude 51° 35.2', Longitude 176° 49.5'. The meter broke down during this period and little results were obtained. Observations indicate that there is not much current in the area. There is an apparent westerly setting oceanic current with a maximum velocity of less than one knot.

E. SMOOTH SHEET:

The smooth sheet projection was constructed by ship's officers on a flat sheet 42" x 60" and trimmed to 38" x 60". Shoran arcs were drawn for the 20,000 scale work as soon as the projection was checked. There was no appreciable distortion of the sheet at that time. A sub-plan projection at a scale of 1:5000 was constructed in the upper left hand corner of the sheet to permit plotting the survey of Chapel Roads and Cove on the same sheet.

Shoreline and photo-hydro signals were transferred directly to the smooth sheet from blue line prints of advance manuscripts of shoreline compilation furnished by the Photogrammetry Division. See manuscripts T-11329, T-11330, T-11331, and T-11334. (1953 1955) The shoreline for Chapel Roads is taken from T-11566 and signals from the same sheet based on a graphic control survey on (1954) a Dinoplex sheet by this party. The transfer of signals and shoreline detail has been verified. (subsequently destroyed) D.R. attached

F. CONTROL STATIONS:

Triangulation stations previously established were recovered as follows:

HID - (USE) 1943
KAG - (USE) 1943
YAKA, ROCK, BUCK, and CANE were established by this command in 1954.
Stations FANG and GULF were established this season.
Shoran station EVEN was located by theodolite cuts, and shoran station HOOK was located by a short traverse from GULF 1955.

Photo-hydro stations were identified on field photographs by this party. Final positions were determined in the Washington Office (see paragraph "G"). Signals on the insert were located by graphic control methods -- transferred to the photogrammetric plot -- and the blue line copy of the advance manuscript was used to transfer the signals to the smooth sheet.

G. SHORELINE AND TOPOGRAPHY:

Shoreline and topographic details were transferred directly to the smooth sheet from blue line prints of *advance manuscripts T-11329, T-11330, T-11331, T-11334 and T-11566 (1953-55) compiled by photogrammetric methods based on 1955 field inspection data. *subsequently reviewed in Wash. Office   Review, par. 1

The south coast of Adak Island is rocky and very irregular. There are high cliffs along much of the outside coast. In many places the high water and low water lines coincide. The south and west shore of Cape Yakak is particularly rough. The surf along much of the shore prevented a closer approach to the beach.

A portion of the shoreline in Beyer Bay was not inked on the smooth sheet pending further investigation of the photographs. It will be noted that several shoran fixes plot inside the high water line along this coast. The corrections to shoran distances from HOOK and FANG have been re-examined and found correct. The sum of the corrected observed distances taken while crossing the base line between these two stations checks the true distance within reasonable limits, usually less than 0.010 mile. This is accepted as further proof of the shoran accuracy. Before any further attempt is made to adjust the shoran positions it is recommended that the photographs of this area be re-examined. The shoreline in Beyer Bay lies at the foot of sheer cliffs ranging from 50 to more than 100 feet in height and it is possible that the shadow of these cliffs may hide the true shoreline in places. The beach is fringed by heavy kelp which may have been mistaken for shoreline. There is also the possibility that the shoran signals were affected by the close proximity of the cliffs but this is thought to be less probable. The hydrographer states that the soundings at these places are close to the high water line, probably within 20 meters in most places.   Review, par. 7

The preliminary shoreline manuscript shows a rock awash at Latitude 51° 40.58', Longitude 176° 51.79' which was confirmed by the hydrographer. The rock is not shown on the advance manuscript. It has been plotted in *pencil on the smooth sheet with an appropriate note. A rock awash at Latitude 51° 39.6', Longitude 176° 52.9' located by the hydrographer on position 34a (Launch No. 1) is not shown on manuscript T-11329.
*subsequently inked

At Latitude 51° 38.3, Longitude 176° 54.15' a *bare rock was located by the hydrographer on position 148a (Launch No. 1). There is no rock on manuscript T-11329 at this position but there is one about 75 meters west.   Note in S/A vol. not clear - shown as * per RHC. [illegible]
* Revised to RK. Awash during verification

H. SOUNDINGS:

All soundings were scaled from continuous profiles recorded on 808 type fathometers. Some soundings by the ship were obtained from EDO records. All fathometers were calibrated for a speed of 800 fathoms per second and no temperature and salinity corrections were applied to observed depths. All soundings on this sheet were corrected for tide, draft of transducer, variation of initial setting, and phasing head error. See special report on fathometer corrections.

I. CONTROL OF HYDROGRAPHY:

Shoran distances were used to control the horizontal position of hydrographic units. Most of the ship's work is controlled by shoran. The ship soundings off False Bay are located by sextant fixes on photo-hydro signals. All sounding lines not controlled by shoran are positioned by sextant fixes on shore signals.

Two temporary shoran stations were set up in Bay of Waterfalls (EVEN and ROCK) and these stations were subsequently moved to Beyer Bay (FANG and HOOK). The stations were manned only during periods when they were actually in use. Six separate shoran stations were used to control hydrography on this sheet. One launch boat sheet was constructed on a Dinoplex sheet (metal mounted). The lack of distortion in this particular case was very helpful since distance arcs could be drawn at any time without applying a distortion factor which is not the case for standard cloth backed paper. See special report on the use of Dinoplex sheets submitted previously. See also special report on Shoran Corrections, Season 1955.

J. ADEQUACY OF SURVEY:

This is the first complete basic survey of the area. It should supersede all previous surveys for charting purposes. The junctions with prior surveys of 1954 off Cape Yakak are good. Proper junctions with contemporary surveys to the south and east were effected.

K. CROSSLINES:

Approximately 7.5% of all lines run are crosslines.

L. COMPARISON WITH PREVIOUS SURVEYS:

No previous hydrographic surveys have been made of the area covered by this sheet with the exception of a few widely spaced and poorly controlled reconnaissance lines.

The junctions with 1954 surveys off Cape Yakak are good and depth curves join correctly without adjustment.

M. COMPARISON WITH CHARTS: *See Review, par. 6A.*

(a) Chart No. 9121 - (Insert). The largest scale chart of Chapel Road and Chapel Cove appears on chart No. 9121, 1947 edition, print dated 8/25/52 at a scale of 1:10,000. The Roads and the Cove have been more completely surveyed and major differences are to be found in the delineation of depth curves greater than 10 fathoms and in the position of McCullock Rock. The chart shows this rock as being near the north side of the entrance to Chapel Cove and with a least depth of 2.5 fathoms. The present survey indicates that this rock is south of charted position and almost in the exact center of the channel. A hand lead sounding of 2.9 fathoms was observed on this rock.
2.7 fms. by fathometer, pos. 22-23 f.

(b) Chart No. 9193, scale 1:120,000, second edition, print date 7/20/53. This is the largest scale chart of the area, and is too small to warrant detailed comparison with the new survey. The few scattered soundings are in good general agreement with the survey. This portion of the chart should be recompiled. See paragraph N for further discussion of uncharted soundings.

N. DANGERS AND SHOALS:

This survey revealed the existance of the following shoals which had not been charted previously.

(1) 1.7 fathoms Latitude 51° 41.4', Longitude 176° 50.8' - Pinnacle rock slightly west of center of Bay of Waterfalls and 1.2 miles NNE of Middle Rock. See position 152b (green) Launch No. 2, Vol. 7, page 45.

(2) 1.1 fathoms Latitude 51° 38.09', Longitude 176° 45.34', position 131f to 132f (green) Launch No. 2, Vol. 9, page 30; A rock in the center of the entrance to the cove in False Bay.

(3) 1.1 fathoms Latitude 51° 40.52', Longitude 176° 40.70', positions 125f ~~111-112f~~, Launch No. 1; reef on the north shore of Beyer Bay. Breakers prevented further investigation of this reef. The hydrographer states that there is probably a least depth of 1.0 fathom on the rock.

(4) 1.1 fathoms Latitude 51° 39.19', Longtude 176° 39.05', position 68f, Launch No. 1, see note page 35, Vol. No. 6.

The 10-fathom sounding (9.9) near the north end of Bay of Waterfalls was thoroughly investigated; see positions 58c to 85c, Launch No. 3. No further indication of a pinnacle could be found.

All charted shoals and bare rocks were found except as noted in M with respect to McCullock Rock.

O. COAST PILOT INFORMATION:

The coast line is very bold with high cliffs above rocky beaches in all but a few places. The bottom is very irregular and rocky.

The EXPLORER anchored in the following listed places. In all cases the holding ground is poor and protection is only fair at best.

(1) Chapel Roads, Latitude 51° 38.85', Longitude 176 49.30', 25 fathoms, rocky bottom. Note that small vessels can anchor 10 to 12 fathoms, mud bottom in the center of Chapel Cove.

(2) Beyer Bay, Latitude 51° 39.70', Longitude 176° 43.40', in 30 fathoms, sand and shell bottom.

The Bay of Waterfalls is about 8 miles in length, 5 miles wide at the entrance and about 0.5 mile wide at the head of the bay. It is too deep to permit anchorage except (1) along the shelf close inshore, (2) in Cataract Bight, or (3) at the head of the bay. Winds from all directions have a tendency to funnel through the axis of the bay and Pacific Ocean swells reach all parts of the bay. Vessels proceeding to the head of the bay should pass close aboard Low Point to avoid the submerged rock just west of the center line of the bay and 1.2 miles NNE of Middle Rock.

Hidden Bay at the eastern limit of the sheet is a narrow inlet about 1.25 miles in length and 0.1 mile wide with deep water in mid channel. Small boats will find good shelter in the west arm at the head of the bay with anchorage in 11 fathoms, mud bottom.

See Special Report, "Notes for Revision of Coast Pilot, No. 9", submitted in November 1955.

P. AIDS TO NAVIGATION:

Cape Yakak light is a small structure at the top of the cliff 194 feet above the water. It is an unwatched white light visible 10 miles over an arc from 85° to 275° approximately.

There are no other aids to navigation maintained in the area covered by this survey.

Q. LANDMARKS FOR CHARTS:

Not actually a tower but a low cubical structure. See description following page 7. JMA

In 1954 it was recommended that the silo and radar tower on Cape Yakak be shown on Chart 9193. These structures are still in place and are good landmarks particularly the silo. There are no other objects except peaks and rocks which are suitable as landmarks.

Plotted 12/27/56 on ch. 9193 L.S.S.

R. GEOGRAPHIC NAMES:

See special report on geographic names previously submitted and list of geographic names attached to this report.

It has been recommended that the name "Beyer Bay" be used to designate the entire body of water between Cape Kagigikak and the group of islands approximately three miles to the eastward. It is also recommended that the largest island in the above group be called "Crone Island."

The indentation of the coast between Turret Point and Cape Kagigikak bears the name "False Bay." It should be noted that the 1954 coast pilot notes refer to the small bay off Adak Strait and just north of Chlanak as False Bay.

Z. TABULATION OF APPLICABLE DATA:

(1) Submitted with this report
  (a) 1 Smooth sheet with insert of Chapel Roads
  (b) 3 Boat sheets

(c) 1 Combination graphic control and boat sheet, 1:5000 scale
(d) 14 Volumes, sounding records
(e) 4 Envelopes, fathograms

(2) Submitted separately
(a) Special Report on Geographic Names
(b) Special Report on Landmarks for Charts
(c) Notes for Revision of Coast Pilot No. 9
(d) Tide Observations - Chapel Roads
(e) Current Records - Station No. 13
(f) Special Report on Shoran Corrections (No. 90)
(g) Special Report on Fathometer Corrections
(h) Magnetic Observations at BUCK and CANE

Respectfully submitted,

Charles W. Clark
Charles W. Clark
Commander, C&GS

Approved and forwarded:

George A. Nelson
George A. Nelson
Commander, C&GS
Comdg. Ship EXPLORER

BOT (continued)
ft. high. It is 2 m. from where the slope breaks sharply down to the NE, and 4 m. from where the slope breaks sharply down to the W. Mark is a standard disk, set in the top of a brass pipe projecting 4 in. above the surface, and stamped "BOT USN 1933-1954."

Reference mark 1 is near the middle of the flat area, and set in bedrock 8 in. above the ground. It is a standard disk, stamped "BOT USN NO 1 1933-1954."

Reference mark 2 is at the highest and SE part of the flat area, and set in bedrock. Mark is a U.S.C.&G.S. standard reference-mark disk, stamped "BOT USN NO 2 1933-1954."

Reference marks are SE of the station, and are within 1/4" of being in line with the station.

The horizontal distances to reference marks 1 and 2 are 12.268 m. and 22.450 m., respectively. The horizontal distance from reference mark 1 to reference mark 2 is 10.182 m.

Station was remarked in 1954.

****

DIM (U.S.N.) (Aleutian Islands,Alaska,U.S.N.,1933;S.B.O., 1954)(Previous description is on page 5)--Station is in the Bay of Islands, at Vincennes Point, approximately 300 ft. above tide level. The area is mostly bare bedrock, and the station is at the W end of an E-W rock ridge which is higher on the W end. The mark is 5 ft. W of the top of a grassy hummock which is the only grass on the ridge, and 14 in. below the surface of the grass. It is a standard triangulation disk, set in bedrock and stamped "DIM USN 1933-1954."

Reference mark 1 is a standard reference disk, set in bedrock 10 ft. S of the grassy hummock, and near the highest part of the ridge. It is stamped "DIM USN NO 1 1933-1954."

Reference mark 2 is 2 ft. lower than the station, and at the point where the rock slopes sharply down to the N, S, and W. It is set in bedrock, and stamped "DIM USN NO 2 1933-1954."

Station was remarked in 1954.

Following measurements with horizontal distances were made:

OBJECT	DISTANCE	DIRECTION
STAT (U.S.N.)	meters	0°00'00"
R.M. 1	3.551	219 42 59
R.M. 2	3.140	345 08 37

****

FEL (U.S.N.) (Adak Island,Alaska,U.S.N.,1933;S.B.O.,1954) (Previous description is on page 5)--Station is in the Bay of Islands, at the S side of Unalga Bight, 190 m. NW of the mouth of a stream at the S end of the bight, 14 m. E of the highest part of a sloping area, 70 m. SW of the high-waterline, 32 m. SW of where the slope breaks sharply down to the beach, and 4 m. E of the line through the near tangent and E side of Large Rock.

Subsurface station mark is a standard triangulation disk, stamped "FEL USN 1933 1954" and set in the top of a 1-in. brass pipe 4 in. below the surface.

Surface mark is a 2-in. cross cut 1/4 in. deep in a 6- by 8-in. rock. A pile of rocks was left on and around the station.

Reference mark 1 is a standard reference disk, set in the top of a 1-in. brass pipe 10-in. above the surface. It is 1 m. SW of a telephone pole, and stamped "FEL USN NO 1 1933-1954."

Reference mark 2 is a standard disk, set in the top of a 1-in. brass pipe projecting 8 in. above the surface. It is stamped "FEL USN NO 2 1933-1954."

Station was remarked in 1954.

Following measurements were made with horizontal distances:

OBJECT	DISTANCE	DIRECTION
STAT	meters	0°00'00"
R.M. 1	5.920	230 04 44
R.M. 2	7.093	318 49 52

****

JOE (U.S.N.) (Aleutian Islands,Alaska,U.S.N.,1933;S.B.O., 1954)(Previous description is on page 5)--Station is located on a blunt point that marks the E limit of Unalga Bight in the Bay of Islands, Adak Island. Station is about 40 ft. above the waterline, about 35 ft. from shore, on a grassy slope about 7 m. from a break in the slope at the bluff. Mark is a standard bronze disk, stamped "JOE USN 1933-1954" and set in 1-in. in diameter brass pipe blush with the surface of the ground. Pipe is the original mark.

Reference mark 1 is on a point 2 m. from the break in the slope of the bluff, about 3 ft. lower than the station mark. Mark is approximately 5 m. from the station bearing about N-NE. A standard bronze disk, set in a brass pipe 6 in. above the surface, and stamped "NO 1 1933-1954."

Reference mark 2 is on an adjacent point to that described above, 15 m. to the SE. Mark is approximately 15 m. bearing about E-SE from the station, and about 5 ft. lower than the station. Mark is a standard bronze disk, set in a brass pipe 6 in. above the ground surface, and stamped "NO 2 1933-1954."

Station remarked in 1954.

****

LON (U.S.N.) (Aleutian Islands,Alaska,U.S.N.,1933;S.B.O., 1954)(Previous description is on page 5)--Station is at the NW side of Adak Island in the Bay of Islands, on the highest part of the W end of Ringgold Island. Mark is a U.S.C.&G.S. standard triangulation disk, set in the top of a 1-in. brass pipe projecting 6 in. above the surface, in the center of a grassy hummock. It is stamped "LON (USN) 1933-1954."

Reference mark 1 is a U.S.C.&G.S. standard reference disk, set in bare bedrock 25 yds. SW of where the slope breaks sharply down to the N, and 10 ft. lower than the station. Mark is stamped "LON (USN) NO 1 1933-1954."

Reference mark 2 is a U.S.C.&G.S. standard reference disk, set in bare bedrock 15 ft. lower than the station, and 5 m. NE of a small grassy hummock. It is stamped "LON (USN) NO 2 1933-1954."

Station was remarked in 1954.

OBJECT	DISTANCE	DIRECTION
CAREFUL	meters	0°00'00"
R.M. 1	30.812*	197 46 30
R.M. 2	25.590*	277 42 40

NOTE--(*)Slope distance (mark to mark).

****

NOR (U.S.N.) (Aleutian Islands,Alaska,U.S.N.,1933;S.B.O., 1954)(Previous description is on page 5)--Station is on the highest part of North Island (which is on the E side of Adak Strait and N part of the Bay of Islands) and near the center. The best approach is up the valley from the S, and then up the high point on which one of the reference stakes can be seen.

Station mark is a 2-in. lead pipe with a nail for a center. It projects 12 in. above the surface. Reference stakes are iron pipes projecting 2 ft. above ground.

OBJECT	DISTANCE	DIRECTION
ROT (U.S.N.)	meters	0°00'00"
Reference stake		25 01 56
Reference stake	4.070*	114 16 24
Reference stake	3.317*	293 45 24

NOTE--(*)Horizontal distances.

****

OLD (Aleutian Islands,Alaska,O.C.J.,1925;S.B.O.,1954)(Previous description is on page 5)--Station is W of Adak Island, at the N part of the Bay of Islands, on the N end of the first small island E of Dora Island. It is 5 ft. from the extreme N-NW end and 2 ft. above mean high water. Mark is a standard triangulation disk, cemented in bedrock and not stamped.

Reference mark 1 is 7 m. from the extreme N end of the Island, and at the base of an overhanging projection of bedrock. It is stamped "OLD NO 1 1925-1954." This reference mark was added in 1954.

OBJECT	DISTANCE	DIRECTION
NOR (U.S.N.)	meters	0°00'00"
R.M. 1	5.410*	193 34 54

NOTE--(*)Horizontal distance.

****

ROT (U.S.N.) (Bay of Islands,Alaska,U.S.N.,1933;S.B.O.,1954) (Previous description is on page 5)--Station is in the Bay of Islands, on the highest hill on Dora Island. It is 12 ft. NE of a small grassy hummock which is the highest part of the hill. There is another prominent grassy hummock 95 ft. S-SE of the station. The station mark, which was set in the old cross, is cemented in a drill hole in bedrock. It is a standard triangulation disk, stamped "ROT (USN) 1933." The area was covered with 6 in. of dirt and grass and will probably become covered again.

Reference mark 1 is a standard bronze disk, set in bare bedrock 2 ft. S of a 4-ft. vertical face of the rock, and 4 ft. E of a sharp drop for 4 ft. It is stamped "RM NO 1."

Reference mark 2 is a standard disk, set in a drill hole in the original chiseled cross in a 2- by 2-ft. bare rock 1 ft. high, on the top of a ridge extending to the NW. It is stamped "RM NO 2."

The station was remarked in 1954.

OBJECT	DISTANCE	DIRECTION
NOR (U.S.N.)	meters	0°00'00"
R.M. 1	4.988*	40 08 12
R.M. 2	11.333*	340 19 06

NOTE--(*)Horizontal distances.

****

STAT (U.S.N.) (Aleutian Islands,Alaska,U.S.N.,1933;S.B.O., 1954)(Previous description is on page 5)--Station is in the Bay of Islands on Staten Island, 400 m. N of the S end of a small peninsula, near the center of the island, on the highest hill in the vicinity, near the E end of a small flat area, 19 m. SE of a grassy hummock, near the W end of a flat area, and 6 m. N of where the slope drops steeply down to the S. Station mark is a U.S.C.&G.S. standard triangulation disk, set in bedrock, 18 in. below ground surface, and stamped "STAT USN 1933-1954."

Reference mark 1 is N of the station, on a small projection of bedrock 1 ft. above the rest of the flat area, and just N of the center of the flat area. It is stamped "STAT USN NO 1 1933-1954." Horizontal distance is 6.330 m.

Reference mark 2 is 1.870 m. (horizontal distance) W of the station, on a ledge of bare bedrock, 10 in. above ground surface. It is a standard reference disk, stamped "STAT USN NO 2 1933-1954."

The station was remarked in 1954.

****

TUB (U.S.N.) (Aleutian Islands,Alaska,U.S.N.,1933;S.B.O., 1954)(Previous description is on page 5)--Station is on the W side of Adak Island in the Bay of Islands, 460 m. N-NE of the E end of Ina Island, approximately 150 m. E of the E end of the middle one of three small peninsulas, and on an isolated hill approximately 200 ft. high. Most of the top of the hill is bare bedrock with grassy hummock on the highest and S-SW part. Station is in the center of the hummock. Mark is a U.S.C.&G.S. standard triangulation disk, set in the top of a 1-in. brass pipe projecting 4 in. above ground, and stamped "TUB USN 1933-1954."

Reference mark 1 is 10.396 m. (mark to mark) N, and set in bare bedrock 5 ft. lower than the station. It is stamped "TUB (USN) NO 1 1933-1954."

Reference mark 2 is a standard reference disk, set in bare bedrock to the NE, and 6 ft. lower than the station. Slope distance (mark to mark) is 13.160 m. Stamped "TUB (USN) NO 2 1933-1954."

Station was remarked in 1954.

****

FAR 2 (U.S.E.) (Adak Island,Aleutian Islands,Alaska,U.S.E., 1943;S.B.O.,1954)(Previous description is on page 6)--The station and reference marks were recovered as described by C.D.M. in 1943.

****

LOW (U.S.E.) (Adak Island,Alaska,U.S.E.,1943;S.B.O.,1954) (Previous description is on page 6)--Recovered as described in good condition. Revised description follows:

Station is located about midway along the E side of the Bay of Waterfalls, Adak Island, on a high point of the ridge, 765 ft. in elevation, and about 1/2 mi. back from the shore. Mark is a U.S.E. standard disk, stamped "LOW 1943" and set in a drill hole in the rock surface at the S end of the highest part of hill top.

Reference marks are the butt ends of 50 caliber shell casings, cemented in drill holes protruding about 1 in.

Reference mark 1 is 4.645 m. (15.24 ft.) N of and at the same elevation as the station.

(Continued on page 24)

LOW (continued)

Reference mark 2 is 2.490 m. (8.17 ft.) E of and 1 ft. below the station.

Head of Bay is visible from the station.

Supply of loose rocks available for a signal building.

Station was reached from the N side of a small bight just N of Chapel Cove, by following a drainage line to approximately 300-ft. level, thence N along the ridge on the left hand to the top of the ridge and station.

OBJECT	DISTANCE meters	feet	DIRECTION
CHAP (U.S.N.)			0°00'00"
R.M. 1	4.645	15.24	155 59
R.M. 2	2.490	8.17	244 40

****

WES (U.S.N.) (Adak Island,Alaska,U.S.N.,1933;S.B.C.,1954) (Previous description is on page 6)--The station and both reference marks were recovered in good condition.

On the E side of Adak Strait, on the W side of Adak Island, on Eddy Island which is the most NW island W of the entrance to the Bay of Islands, on the highest point of the island, at about the center of a large flat-topped hummock, and 158 ft. above mean high water. Station is marked by a 1/2-in. galvanized-iron pipe, set in a concrete post projecting 8 in. above the ground.

Reference marks are U.S.C.&G.S. standard disks, set in triangular concrete blocks flush with the surface.

Reference mark 1 is on the N slope of the hill, and 7 ft. lower than the station. The disk is stamped "1 1943."

Reference mark 2 is on a nearly flat area on the E slope of the hill, 59 ft. SE of reference mark 1, and lower than the station. The disk is stamped "2 1943."

OBJECT	DISTANCE meters	feet	DIRECTION
SHARP			0°00'00"
R.M. 1	9.927	32.56	100 50 58
R.M. 2	13.719	45.02	197 50 50

****

ZEP (U.S.N.) (Adak Island,Alaska,U.S.N.,1933;S.B.C.,1954) (Previous description is on page 6)--The station and both reference marks were recovered in good condition.

On the SW peninsula of Adak Island, about 4-1/2 mi. N of Cape Yakak, about on the axis of the peninsula, on the highest point of the peninsula, and on the top of the hummock forming the highest point. The station is marked by a 1/2-in. galvanized-iron pipe inside a 1-in. brass pipe, flush with the surface of the ground and buried under several inches of moss and grass. The elevation of the station is 668 ft. above mean high water.

Reference marks are U.S.C.&G.S. standard disks, unstamped and cemented in outcropping rocks. Distances and directions to the reference marks were not measured.

The station was reached from the Bay of Waterfalls, by landing in a small cove with a low waterfall about 1-3/4 mi. SW of Middle Rock. Follow the nearly straight valley inland to about the summit of the ridge, thence right for about 1/4 mi. to the station.

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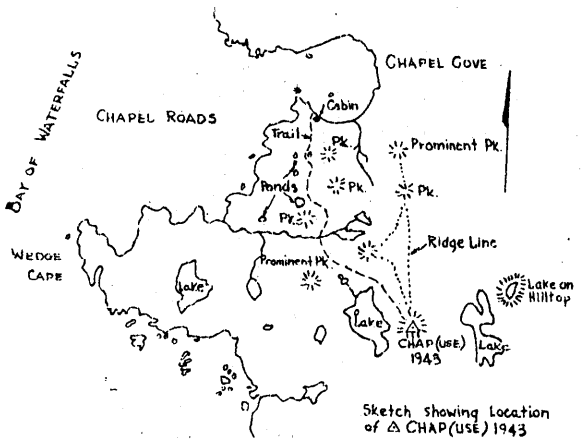
CHAP (U.S.E.) (Adak Island,Adreanof Islands,Alaska,U.S.E., 1943;S.B.C.,1954)(Previous description is on page 7)--Station recovered in good condition. New description follows:

On the E side of the Bay of Waterfalls, Adak Island, about 3/4 nautical mi. S-SE of Chapel Cove, 1.0 nautical mi. E-SE of Wedge Cape, near the S end of a N-S ridge which constitutes the highest ground between Chapel Cove and Turret Point. Several distinct peaks about 500 ft. high form the above ridge, and the station is on the S one overlooking much lower ground toward Turret Point. A fair-sized lake lies at the base of the peak to the W of the station, and a similar lake lies twice as far to the E. The station mark is a standard Corps of Engineers, U.S. Army, bronze disk, stamped "CHAP 1943" and cemented in a projecting rock outcrop on the N side of the top of the peak. A sharp grass hummock, the same height as the mark, lies 10 m. S. The station and the hummock are the high points of the peak. Boulders were piled 2 ft. over the mark. No reference marks exist.

To reach the station, land in Chapel Cove at a cabin and follow the trail passing on the W side of the cabin in a S direction upward into the hills. Proceed according to the sketch.



Sketch showing location of △ CHAP(USE) 1943

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BUCK (Adak Island,Alaska,S.B.C.,1954)--Station is located on the E side of the Bay of Waterfalls, on the N side of the entrance to Chapel Cove. It is marked with a standard topographic disk, stamped "BUCK 1954" and set flush in a drill hole on the top of and in the approximate center of a large rock (100- by 25-m.) which lies about 150 m. SW of the point. Station is 31 ft. above high water. There are no reference marks.

OBJECT	DIRECTION
ZEP (U.S.N.)	0°00'00"
CANE S	259 49 48.0

Height of pole above station mark - 4.27 m.

****

CANE (Adak Island,Alaska,S.B.C.,1954)--Station is located on the E side of the Bay of Waterfalls, on the S shore of Chapel Cove, and about 400 m. E of the S entrance to the cove. It is marked with a standard topographic-station disk, stamped "CANE 1954" and set flush in the top of the sloping rock which is the first point E of the entrance to the cove. Station is 13 ft. above high water, and about 10 m. back from the waterline. There are no reference marks.

OBJECT	DIRECTION
ZEP (U.S.N.)	0°00'00"
BUCK N	69 18 19.2

Not actually a tower

****

CAPE YAKAK, RADAR TOWER (Adak Island,Alaska,S.B.C.,1954)--The station is on Cape Yakak, on the W side of the entrance to the Bay of Waterfalls. It is near the SW corner of an abandoned military installation. It is a low cubical solid-appearing structure, about 20 ft. on the cube. The structure consists of a concrete base supporting a massive gear system for rotating a 20-ft. radar screen. It is about 150 ft. S-SW of station STEEL TOWER, and about 200 ft. S of station YAKA. The point sighted on was the estimated center of the structure.

This is an intersection station. Landmark

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CAPE YAKAK, SILO (Adak Island,Alaska,S.B.C.,1954)--This station is the center of an army-type prefabricated structure built with a wooden frame and plywood sheathing. The building is a vertical cylinder capped by a 45° cone. It is about 20 ft. in diameter, and the apex of the cone is about 30 ft. above the ground.

The station is located on Cape Yakak, on the W side of the entrance to the Bay of Waterfalls. It is on high ground in an open area about 0.1 mi. N of an abandoned military village, near the top of the old road to the beach. It is 500 ft. (paced) N by E of station YAKA (previously described). The point sighted on was the apex of the conical roof.

This is an intersection station. Landmark

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CAPE YAKAK, STEEL TOWER (Adak Island,Alaska,S.B.C.,1954)--Station is located on Cape Yakak, on the W side of the entrance to the Bay of Waterfalls. It is an open steel framework, about 25 ft. square, and about 25 ft. high. The four legs are set in concrete blocks. The center of the tower is 297 ft. (measured with a carpenter's cloth tape) S of station YAKA, and 150 ft. (estimated) N-NE of station RADAR. The point sighted on was the center of the tower.

This is an intersection station. May not stand very long

****

CAREFUL (Aleutian Islands,Alaska,S.B.C.,1954)--Station is on the W side of Adak Island, on Careful Point, approximately 1/3 mi. S of the most N point, 1/3 mi. N of two lakes, and on the highest isolated hill in the vicinity. Station is 227 ft. above high water. Station mark is a standard triangulation disk, set in the top of a 1-in. brass pipe extending 5 in. above ground, and in the center of the E grassy hummock on the hill. Disk is stamped "CAREFUL 1954."

Reference mark 1 is SW of the station, on the S side of the ridge between two hummocks. It is a standard reference disk, set in the top of a 1-in. brass pipe projecting 8 in. above the surface, and stamped "CAREFUL NO 1 1954."

Reference mark 2 is a standard reference disk, set in a 1-in. brass pipe extending 8 in above the surface, and NW of the hummock. It is stamped "CAREFUL NO 2 1954."

OBJECT		DISTANCE meters	DIRECTION
NOR (U.S.N.)			0°00'00"
R.M. 1	SW	9.615*	146 56 40
R.M. 2	NW	6.643*	233 37 31

Height of telescope above station mark - 1.5 m.

NOTE--(*)Horizontal distances.

****

ROCK (Adak Island,Aleutian Islands,Alaska,S.B.C.,1954)--On the W side of the Bay of Waterfalls, Adak Island, on Middle Rock, near its center and on the highest part, just S of the grass-topped portion. A pool of stagnant water, surrounded by high grass, lies 5 m. N of the station, and 10 ft. lower in elevation. The rock surface falls off abruptly to the pool 2.5 m. N of the station. The mark is a standard topographic-station disk, stamped "ROCK 1954" and cemented in a drill hole in the rock surface. It is midway between the first and second transverse cracks in the rock surface S of the pool. Elevation of station above high water is about 35 ft. No reference marks were established.

Height of telescope above station mark - 2 m.

Height of banner top above station mark - 12.0 ft.

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YAKA (Adak Island,Alaska,S.B.C.,1954)--Station is the center of a low wooden lookout tower located on Cape Yakak, on the W side of the entrance to the Bay of Waterfalls. The lookout tower is built straddling a quonset hut, and an auxiliary building is on top of the quonset hut, centered in the tower and connected to the quonset hut by a hatch, the center of which corresponds roughly to the center of the tower.

The platform of the tower is approximately 13.5 ft. square. The station mark is the intersection of a line chiseled in the floor of the platform with the center crack of the platform planking, and surrounded by a 4-in. triangle of nails driven into the planking.

(Continued on page 25)

Used for shoran station

UNITED STATES COAST AND GEODETIC SURVEY
Descriptions of Triangulation Stations

YAKA (continued)
The station is 297 ft. (measured) N of a skelton steel tower, and 500 ft. (estimated) S of a 30-ft. (estimated) radar tower with a conical top. The station is 20 ft. above ground. The center pole is 14 ft. long with a 4-1/2 ft. banner 6 in. from the top.
This is an intersection station.

DEPARTMENT OF COMMERCE — RECOVERY NOTE, TRIANGULATION STATION — 6673 R
Name of Station: YAKA
Established by: S. B. Grenell Year: 1954 State: Alaska See page 24.
Recovered by: S. B. Grenell Year: 1955 County: Adak, I.
Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
Station was recovered as described in good condition.

DEPARTMENT OF COMMERCE — RECOVERY NOTE, TRIANGULATION STATION — 6635 R
Name of Station: CHUGUL See pages 1, 7.
Established by: U. S. Navy Year: 1943 State: ALASKA, ALEUTIAN ISLANDS
Recovered by: S. B. Grenell Year: 1955 County: CHUGUL ISLAND
Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
The station was recovered in good condition. Original description inadequate. New description as follows:
The station is on the most w'ly point of Chugul Island, approximately 0.15 naut. miles east of Tanaga Point, and about 0.1 naut. mile west of a small bight on the north side of a neck of land joining the point with the island proper. The station is at the west end of the highest ridge on the point, about 96 meters NW of a very prominent conical mound, about 75 meters south of the north bluff, and about 150 feet above high water.
Station is marked with a standard US Navy disk cemented in a rocky outcrop surrounded by grass tundra. There are no reference marks.
The aforementioned bight east of the station affords the closest approach with a short, steep pitch of tundra above the beach.

DEPARTMENT OF COMMERCE — RECOVERY NOTE, TRIANGULATION STATION — 6637 R
Name of Station: COVE See page 1.
Established by: S.C.M. Year: 1943 State: Alaska
Recovered by: S.B. Grenell Year: 1955 County: Igitkin Island
Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
Station was recovered in good condition and found as described.

DEPARTMENT OF COMMERCE — RECOVERY NOTE, TRIANGULATION STATION — 6642 R
Name of Station: EGO See pages 1, 7.
Established by: U.S. Navy Year: 1934 State: Alaska
Recovered by: S.B. Grenell Year: 1955 County: Igitkin Island
Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
Station was recovered in good condition and found as described.

DEPARTMENT OF COMMERCE — RECOVERY NOTE, TRIANGULATION STATION — 6660 R
Name of Station: PASS See page 1.
Established by: C.C.M. Year: 1943 State: Alaska
Recovered by: S.B. Grenell Year: 1955 County: Igitkin Island
Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
Station was recovered in good condition and found as described.

DEPARTMENT OF COMMERCE — RECOVERY NOTE, TRIANGULATION STATION — 6669 R
Name of Station: TAGADAK See page 1.
Established by: U.S. Navy Year: 1934 State: Alaska
Recovered by: S.B. Grenell Year: 1955 County: Tagadak Island
Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
The station was recovered in good condition, original description inadequate. New description as follows:
The station is near the break in slope at the southwesterly end of the highest part of the south end of Tagadak Island. It is on the most Northerly point that will just see the southwesterly highest point on Asuksak Island. The station is about 15 meters south of a rock outcropping running east-west on a mound that falls steeply away to the east and south.
The station is marked by a standard U.S. Navy disk set in a truncated concrete pyramid projecting about 10 inches above the ground. There are no reference works.
Station is most easily approached from a gravel beach on the west side of the island.

DEPARTMENT OF COMMERCE — RECOVERY NOTE, TRIANGULATION STATION — 6671 R
Name of Station: UMAK See page 1.
Established by: U.S. Navy Year: 1934 State: Alaska
Recovered by: S.B. Grenell Year: 1955 County: Umak Island
Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
Station was recovered in good condition and found as described.

DEPARTMENT OF COMMERCE — RECOVERY NOTE, TRIANGULATION STATION — 6630 R
Name of Station: BAT See page 2.
Established by: USN Year: 1934 State: Alaska
Recovered by: S.B. Grenell Year: 1955 County: Little Tanaga I.
Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
Station recovered as described in good condition.

DEPARTMENT OF COMMERCE — RECOVERY NOTE, TRIANGULATION STATION — 6627 R
Name of Station: ASUKSAK See page 2.
Established by: U.S. Navy Year: 1934 State: Alaska
Recovered by: USC&GS S.B.G. Year: 1955 County: Asuksak Island
Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
Station was recovered in good condition and found as described.

DEPARTMENT OF COMMERCE — RECOVERY NOTE, TRIANGULATION STATION — 6640 R
Name of Station: DYE (USN) See page 2.
Established by: U.S.N. Year: 1934 State: Alaska
Recovered by: S.B. Grenell Year: 1955 County: Kagalaska Island
Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
Station was searched for by two parties for a total of over two hours and not found. The top of the small island upon which the station was thought to be located was tentatively identified on a picture. This point, when transferred to the photo manuscript, coincided with the geographic position of the triangulation station. Station must be considered destroyed.

DEPARTMENT OF COMMERCE — RECOVERY NOTE, TRIANGULATION STATION — 6644 R
Name of Station: GREAT SITKIN See pages 2, 21.
Established by: U.S.N. Year: 1934 State: Alaska
Recovered by: S.B. Grenell Year: 1955 County: Great Sitkin Island
Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
Station was recovered in good condition, and as described.

DEPARTMENT OF COMMERCE — RECOVERY NOTE, TRIANGULATION STATION — 6648 R
Name of Station: ICE (USN) See page 2.
Established by: U.S. Navy Year: 1934 State: Alaska
Recovered by: S.B. Grenell Year: 1955 County: Little Tanaga Island
Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
Station is on the highest part of the center of three grass-topped islands off the northwest side of Little Tanaga Island. It is a U.S. Navy disk set in the top of a concrete truncated pyramid projecting 6 inches above the ground.

DEPARTMENT OF COMMERCE — RECOVERY NOTE, TRIANGULATION STATION — 6651 R
Name of Station: KEY See page 2.
Established by: USN Year: 1934 State: Alaska
Recovered by: S. B. Grenell Year: 1955 County: Umak I.
Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
Station recovered as described in good condition.

DEPARTMENT OF COMMERCE — RECOVERY NOTE, TRIANGULATION STATION — 6653 R
Name of Station: LITTLE TANAGA See page 2.
Established by: U.S. Navy Year: 1934 State: Alaska
Recovered by: S.B. Grenell Year: 1955 County: Little Tanaga Island
Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
Station recovered as described, in good condition.

DEPARTMENT OF COMMERCE — RECOVERY NOTE, TRIANGULATION STATION — 6655 R
Name of Station: MAL See page 2.
Established by: USN Year: 1934 State: Alaska
Recovered by: S. B. Grenell Year: 1955 County: Umak I.
Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
Station recovered as described in good condition.

DEPARTMENT OF COMMERCE — RECOVERY NOTE, TRIANGULATION STATION — 6666 R
Name of Station: SID See page 2.
Established by: USN Year: 1934 State: Alaska
Recovered by: S. B. Grenell Year: 1955 County: Little Tanaga I.
Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
Station mark had been broken loose from the concrete monument which was badly broken. Station Mark was found at the base of the broken monument. Station is considered destroyed.

DEPARTMENT OF COMMERCE — RECOVERY NOTE, TRIANGULATION STATION — 6670 R
Name of Station: TEL See pages 2, 20.
Established by: U.S.N. Year: 1934 State: Alaska
Recovered by: S.B. Grenell Year: 1955 County: Kagalaska Island, Aleutian Islands
Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
Station and R.M. recovered in good condition as described by K.G.C. in 1953. That description adequate and no changes required.
Station used for shoran location in 1955; not occupied for triangulation.

DEPARTMENT OF COMMERCE — RECOVERY NOTE, TRIANGULATION STATION — 6636 R
Name of Station: CLAM See pages 3, 21.
Established by: U.S.N. Year: 1934 State: Alaska
Recovered by: S.B. Grenell Year: 1955 County: Adak Island
Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
Station was recovered as described in good condition.

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RECOVERY NOTE, TRIANGULATION STATION 6645 R

NAME OF STATION: OUL See page 3, 20.
ESTABLISHED BY: USN YEAR: 1934 STATE: Alaska
RECOVERED BY:* S. B. Grenell YEAR: 1955 COUNTY: Kagalaska Strait, Aleutian Islands

Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:

Station and R.M. recovered in good condition as described by K.O.C. in 1953. That description is adequate and no changes are required.

Station used for shoran location in 1955; not occupied for triangulation.

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RECOVERY NOTE, TRIANGULATION STATION 6646 R

NAME OF STATION: HID 1943 See page 3.
ESTABLISHED BY: C. D. M. YEAR: 1943 STATE: Alaska
RECOVERED BY:* S.B. Grenell YEAR: 1955 COUNTY: Adak Island

Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:

Station mark and reference mark recovered as described in good condition. Original description is adequate and complete.

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RECOVERY NOTE, TRIANGULATION STATION 6665 R

NAME OF STATION: SCAB See pages 3, 12.
ESTABLISHED BY: CDM YEAR: 1943 STATE: Alaska
RECOVERED BY:* S.B. Grenell YEAR: 1955 COUNTY: Adak Island

Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:

Station was recovered as described in good condition.

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RECOVERY NOTE, TRIANGULATION STATION 6667 R

NAME OF STATION: SOUTH (USN) - CL-3 (1943) See pages 3, 11, 14.
ESTABLISHED BY: U.S.N. YEAR: 1943 STATE: Alaska
RECOVERED BY:* S.B. Grenell YEAR: 1955 COUNTY: Adak Island

Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:

Station was recovered as described in good condition.

OBJECT	DISTANCE (feet)	DIRECTION
REV	-	0° 00' 00"
RM 1	14.39	233° 51' 14"
RM 2	13.74	324° 47' 25"

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RECOVERY NOTE, TRIANGULATION STATION 6674 R

NAME OF STATION: ZETO (USN) See pages 3, 8, 14.
ESTABLISHED BY: U.S. Navy YEAR: 1933 STATE: Alaska
RECOVERED BY:* S.B. Grenell YEAR: 1955 COUNTY: Adak Island

Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:

Station was recovered as described in good condition.

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RECOVERY NOTE, TRIANGULATION STATION 6661 R

NAME OF STATION: REV (USN) 1933 See pages 3, 10, 11, 17.
ESTABLISHED BY: U.S.N. YEAR: 1933 STATE: Alaska
RECOVERED BY:* S.B. Grenell YEAR: 1955 COUNTY: Adak Island

Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:

Station was recovered as described in poor condition. The top of the truncated pyramid containing the station mark was found broken completely away, but an impression of the end of the shank of the mark was left in the base of the concrete pyramid. Recovery is considered positive and the mark was replaced and reenforced in its original position. The mark is a USN Survey mark and is unstamped. RM 1 and RM 2 were found lying on the ground and are to be considered lost. HF 4, 1945, was recovered in good condition.

Station is on north end of Adak Island, about 1.2 miles NW of Kuluk Bay, about 0.7 mile SE of the SE end of Andrew Lagoon, on the highest hill between Kuluk Bay and Andrew Lagoon, at an elevation of about 632 feet.

To reach station, follow Husky Road until east of station, then climb on foot to the highest point of hill and station.

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RECOVERY NOTE, TRIANGULATION STATION 6649 R

NAME OF STATION: JIT (USN) See page 4.
ESTABLISHED BY: U.S.N. YEAR: 1933 STATE: Alaska
RECOVERED BY:* S.B. Grenell YEAR: 1955 COUNTY: Adak Island

Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:

Station was recovered as described in good condition. There is a wooden tripod erected over the station mark.

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RECOVERY NOTE, TRIANGULATION STATION 6656 R

NAME OF STATION: NOF (USN) 1933 See page 4.
ESTABLISHED BY: USN YEAR: 1933 STATE: Alaska
RECOVERED BY:* S.B. Grenell YEAR: 1955 COUNTY: Adak Island

Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:

Station was searched for approximately one hour and was not found.

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RECOVERY NOTE, TRIANGULATION STATION 6632 R

NAME OF STATION: BOOT (USE) 1943 See pages 5, 22.
ESTABLISHED BY: U.S.E. YEAR: 1943 STATE: Alaska
RECOVERED BY:* S. B. Grenell YEAR: 1955 COUNTY: Adak Island

Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:

Recovered as described in good condition. Station was visited to build a hydrographic signal, not occupied.

G E Haraden
G.E. Haraden

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RECOVERY NOTE, TRIANGULATION STATION 6641 R

NAME OF STATION: EASY See page 7.
ESTABLISHED BY: (USE) YEAR: 1943 STATE: Alaska
RECOVERED BY:* S.B. Grenell YEAR: 1955 COUNTY: Adak Island

Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:

Station was recovered as described in good condition

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RECOVERY NOTE, TRIANGULATION STATION 6647 R

NAME OF STATION: HID (USE) 1943 See page 7.
ESTABLISHED BY: U.S.E. YEAR: 1943 STATE: Alaska
RECOVERED BY:* S.B. Grenell YEAR: 1955 COUNTY: Adak Island

Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:

Station mark is a Corps of Engineers, U.S. Army, bronze disk, stamped "HID 1943", cemented in a drill hole in bedrock on hilltop. There are two 3-inch iron pipes filled with cement and projecting about two feet above ground. One is about 25 feet east and the other 25 feet south of the station mark. Both are loose in the ground.

Station is best reached by following around east end of Adak Island to the larger of two small islands at the entrance to Hidden Bay. Station is in approximate center of and on the highest point of the island. A small pebble beach on the north side of the island affords a good landing place.

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RECOVERY NOTE, TRIANGULATION STATION 6650 R

NAME OF STATION: KAG (USE) See page 7.
ESTABLISHED BY: U.S.E. YEAR: 1943 STATE: Alaska
RECOVERED BY:* S. B. Grenell YEAR: 1955 COUNTY: Adak Island

Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:

Station was recovered approximately as described. A new description follows:

The station is located 0.75 miles NNW of the most SE'ly tip of Cape Kagigikak, about 240 yards south of the highest hill on Cape Kagigikak, on the top of a small hill just south of two small dry gravel lake beds. It is 9 feet west of a small grassy knoll and is a standard Corps of Engineers, U.S. Army, Seattle Office, triangulation disk stamped KAG 1943, and cemented into a rock outcrop.

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RECOVERY NOTE, TRIANGULATION STATION 6628 R

NAME OF STATION: AL-11 (USN) See pages 8, 17.
ESTABLISHED BY: U.S.N. YEAR: 1943 STATE: Alaska
RECOVERED BY:* S.B. Grenell YEAR: 1955 COUNTY: Adak Island

Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:

Station was recovered as described in good condition.

OBJECT	DISTANCE (feet)	DIRECTION
DREW	-	0° 00' 00"
RM 1 (center of pipe)	8.49	161° 55' 50"
RM 2 (center of pipe)	10.68	246° 39' 58"

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RECOVERY NOTE, TRIANGULATION STATION 6629 R

NAME OF STATION: AL-29 (USN) 1943 See pages 8, 17.
ESTABLISHED BY: U.S.N. YEAR: 1943 STATE: Alaska
RECOVERED BY:* S.B. Grenell YEAR: 1955 COUNTY: Adak Island

Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:

Recovered as described, except RM #1 is loose in the ground and RM #2 no longer has nails set in cement in top of pipe.

RM 1 - 2.75 meters.

RM 2 - 3.20 meters. G E Haraden

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 526
(Rev. Feb. 1948)

RECOVERY NOTE, TRIANGULATION STATION 6639 R

NAME OF STATION: DREW (U.S.E.) See pages 8, 15, 17.
ESTABLISHED BY: U.S.E. YEAR: 1944 STATE: Alaska
RECOVERED BY:* S.B. Grenell YEAR: 1955 COUNTY: Adak Island

Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:

Station was recovered as described in good condition.

OBJECT	DISTANCE (feet)	DIRECTION
BALSA	-	0° 00' 00"
RM 1 (to nail)	11.29	179° 25' 58"
RM 2 (to nail)	11.81	286° 13' 06"

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 526
(Rev. Feb. 1948)

RECOVERY NOTE, TRIANGULATION STATION 6638 R

NAME OF STATION: DAK (USE) See page 7.
ESTABLISHED BY: U.S.E. YEAR: 1943 STATE: Alaska
RECOVERED BY:* S.B. Grenell YEAR: 1955 COUNTY: Adak Island

Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:

Station was recovered as described in good condition.

Two referencde marks were also recovered which were not previously described. Both reference marks are 3-inch iron pipes, filled with cement and driven into the ground. Imbedded in the cement are two nails, one bent to point at the station mark, and the other, upright, on the far side of the pipe from the station mark.

RM No. 1 is on a flat area approximately north of the station.

RM No. 2 is on a grassy knoll, the highest point on the hill, and approximately east of the station.

OBJECT	DISTANCE	DIRECTION
HID (USE) 1943	-	0° 00' 00.0"
RM No. 1	7.188 m. (23.58 ft.)	132° 57' 01.0"
RM No. 2	15.063 m. (49.42 ft.)	218° 12' 34.0"

S.L. Hollis Jr.
S.L. Hollis, Jr.

*Name of chief of party should be inserted here. The officer who actually visited the station should sign his name at the end of the recovery note.

U. S. GOVERNMENT PRINTING OFFICE

NOTE.—One of these forms must be used for every station recovered.

T 999-12

H-8238 Field No. EX-2455

Vol. No.	Day Ltr.	Date	No. Pos.	Wire Sdgs.	Sta. Miles Sdgs. Line
1(Ship)	A	7-14-55	146	0	46.5
1 "	B	7-15-55	143	8	51.1
2 "	C	7-19-55	138	0	58.9
2 "	D	7-26-55	4	4	
2 "	E	8-3-55	117	0	47.2
2 & 3(Ship)	F	8-4-55	99	0	30.4
3 "	G	8-5-55	3	3	0.0
3 "	H	8-6-55	52	11	10.5
4(Lch. 1)	a	7-15-55	199	0	31.8
4 "	b	7-28-55	137	3	27.6
5 "	c	8-2-55	141	0	25.9
5 "	d	8-3-55	112	0	21.3
5 & 6 "	e	8-4-55	175	0	35.8
6 "	f	8-5-55	140	3	25.9
6 "	g	8-6-55	94	0	11.8
7(Lch. 2)	a	7-13-55	87	0	11.4
7 "	b	7-23-55	164	0	24.3
8 "	c	8-2-55	97	0	19.3
8 "	d	8-3-55	92	5	16.7
8 "	e	8-4-55	135	0	23.9
9 "	f	8-7-55	133	2	26.9
10(Lch. 3)	a	7-14-55	86	0	21.0
10 & 11 "	b	7-15-55	129	0	34.3
11 "	c	7-23-55	90	3	13.8
12 "	d	7-28-55	60	0	6.3
12 "	e	8-7-55	123	0	23.3
		1:5000 Scale Insert			
13(Lch. 3)	a	7-12-55	121	0	15.4
14 "	b	7-13-55	94	5	10.1
14 "	c	7-15-55	3	2	0.0
14 "	d	7-29-55	36	0	3.7
		TOTALS	3150	49	675.1

AREA SURVEYED: EX-2455 = 75.00
EX-05155 = 00.66
Total 75.66 Square Stat. Miles.

TIDE NOTE TO ACCOMPANY

H-8238 Field No. EX-2455

All hydrography on this survey was referred to the portable tide gage at Chapel Roads, latitude 51° - 38.5'N, longitude 176° - 49.5'W. A reading of 3.4 feet on the tide staff corresponds to MLLW. No time or range corrections were applied to the observed readings.

GEOGRAPHIC NAMES

HYDROGRAPHIC SURVEY H-8238

Field No. EX-2455

Cape Yakak
Middle Rock
Cataract Bight
Bay of Waterfalls
Chapel Roads
Chapel Cove
Pulpit Rocks
McCulloch Rock
Wedge Cape
Turret Point
False Bay
Cape Kagigikak
Beyer Bay
Hidden Bay
Crone Island (field name)
Adak Island
Middle Point
Red Rock
South Rocks

LIST OF SIGNALS

SURVEY NO. H-8238

FIELD NO. EX-2455

NAME	SOURCE
ABE	T-11330
ADD	T-11329
AIM	T-11330
ANY	T-11331
ARC	T-11334
ARE	T-11330
AWE	Topo EX-A-55 & T-11566
BAB	T-11330
BAH	T-11329
BEN	T-11330
BOA	T-11330
BUN	T-11334
BUCK	Triangulation 1954
CAB	T-11329
CAP	Cape Yakak Light T-11334
CANE	Triangulation 1954
CAW	T-11330
COB	T-11330
COX	T-11330
COY	T-11331
CUT	T-11330
DAR	T-11330
DEL	T-11329
DEV	T-11334
DIE	T-11330
DUN	T-11330
EDI	T-11329
EEL	T-11330
EGO	T-11329
ELF	See Descriptive Report H-8234
EVE	T-11330
EVEN	Triangulation 1955
FAL	T-11329
FANG	Triangulation 1955
FED	T-11329
FIZ	T-11330
FOX	T-11330
FRY	T-11334
GAR	Topo & T-11566 EX-A-55
GAY	T-11330
GIN	T-11330
GOO	T-11329
GULF	Triangulation 1955
GUN	T-11334
GUM	T-11334
GRA	T-11329
HAS	T-11334
HEM	T-11330
HID	Triangulation 1943
HOB	T-11330
HOOK	See Descriptive Report H-8238
HOY	T-11330
HUG	T-11331
ICY	T-11330
IRK	T-11330
JEF	T-11330
JIL	T-11330
JON	T-11330
KEO	T-11330
KEY	T-11330
KIP	T-11330
LEG	T-11330
LEN	T-11330
LES	T-11330
LIE	T-11330
LOG	T-11331
MAN	T-11331

MEG	T-11330
MUT	T-11330
NAV	T-11330
NAY	T-11330
NIK	T-11331
NOT	T-11331
NUN	T-11330
OAR	T-11330
ODD	T-11331
ODE	T-11331
OKI	T-11330
OLE	T-11330
OWN	T-11330
PAC	T-11330
PAD	T-11330
PAR	T-11330
PAT	T-11331
PAX	T-11334
PAY	T-11331
PQI	T-11329
PUS	T-11330
QUE	T-11330
QUO	T-11331
REE	T-11330
RIG	T-11331
RIN	T-11331
RIT	T-11334
ROCK	Triangulation 1954
RUG	T-11330
SAC	T-11329
SAG	T-11331
SIC	T-11330
SILO	Triangulation 1954
SKY	T-11334
SOL	T-11331
TAX	T-11330
TOD	T-11334
TOG	T-11331
TOO	T-11330
UNO	T-11334
VAN	T-11330
VEL	T-11330
VEX	T-11334
VIV	T-11331
VUE	Topo Sheet EX-A-54
WAN	T-11334
WAS	T-11330
WIN	T-11330
WOW	T-11331
YAKA	Triangulation 1954
YAW	T-11330
YEA	T-11331
YES	T-11334
YET	T-11330
ZAG	T-11334
ZAP	T-11331
ZED	T-11330
ZIM	T-11330
UGO	T-11330

LIST OF SIGNALS

Sub-Plan H-8238

EX-05155

NAME	SOURCE	NAME	SOURCE
AWE	T-11566 & Topo	LAK	T-11566 & Topo
BEV	Topo Sheet EX-A-55 destroyed	MOO	T-11566 & Topo
BUCK	Triangulation 1954	NAT	T-11566 & Topo
CANE	Triangulation 1954	OBA	T-11566 & Topo
CUE	T-11566 & Topo	PAS	T-11566 & Topo
DID	T-11566 & Topo	RET	T-11566 & Topo
EAT	T-11566 & Topo	SAP	T-11566 & Topo
EVEN	See Descriptive Report H-8238	TEN	T-11566 & Topo
FOG	T-11566 & Topo	URN	T-11566 & Topo
GAR	T-11566 & Topo	VUE	T-11566 & Topo
HIT	T-11566 & Topo	WON	Topo Sheet EX-A-55
ISH	T-11566 & Topo	YAK	T-11566 *
KAL	T-11566 & Topo	ZOO	T-11566 *

NOTE: * These signals have one cut by Topo.

Approval Sheet

H-8238 (EX-2455)

The ship hydrography on this survey was accomplished under my direct supervision. The launch work was inspected daily. All field records have been examined and are approved. No additional field work is required.

The smooth sheet is only partially plotted at this time and is subject to review by my relief.

S. B. Grenell
Capt., C&GS
Commanding Ship EXPLORER

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 27
Ed. April 1945

POSITION COMPUTATION, THIRD-ORDER TRIANGULATION

				°	′	″						°	′	″
α	2 GULF	to 3 HID		279	13	52.2	α	3	to 2					
2d ∠		&		+ 275	47	27	3d ∠		&			−		
α	2	to 1		195	01	19	α	3	to 1					
$\Delta\alpha$							$\Delta\alpha$							
				180	00	00.0						180	00	00.0
α'	1	to 2					α'	1	to 3					

First Angle of Triangle

	°	′	″			°	′	″			°	′	″			°	′	″
ϕ	51	40	42.016	2 GULF	λ	176	41	21.130	ϕ				3	λ				
$\Delta\phi$		+	3.162	101.194 mm.	$\Delta\lambda$		−	01.365	$\Delta\phi$					$\Delta\lambda$				
ϕ'	51	40	45.178	1 HOOK	λ'	176	41	19.765	ϕ'				1	λ'				

	Logarithms	Values in seconds		° ′ ″				Logarithms	Values in seconds		° ′ ″		
				$\frac{1}{2}(\phi+\phi')$							$\frac{1}{2}(\phi+\phi')$		
s	2.005 155	(458.1)					s					Logarithms	Values in seconds
$\overline{\text{Cos}}\alpha$	9.984 899	1396.3					$\text{Cos}\alpha$				s		
B	8.509 956			s	2.005 155		B				$\overline{\text{Sin}}\alpha$		
h	0.500 010	1st term	− 3.1623	$\overline{\text{Sin}}\alpha$	9.413 616	(773.1)	h		1st term		A′		
s^2				A′	8.508 820	379.8	s^2				Sec ϕ'		
$\text{Sin}^2\alpha$				Sec ϕ'	0.207 564		$\text{Sin}^2\alpha$				$\Delta\lambda$		
C				$\Delta\lambda$	0.135 155	−1.3650	C				$\text{Sin}\frac{1}{2}(\phi+\phi')$		
		2d term	+	$\text{Sin}\frac{1}{2}(\phi+\phi')$					2d term	+	$-\Delta\alpha$		
h^2				$-\Delta\alpha$			h^2						
D							D						
		3d term	+						3d term	+			
		$-\Delta\phi$	− 3.162						$-\Delta\phi$				

16—44238-1 U. S. GOVERNMENT PRINTING OFFICE

GEOGRAPHIC NAMES

Survey No. H-5238

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
Alaska										1
Aleutian Islands										2
Adak Island									BGN	3
Cape Yakak									"	4
Bay of Waterfalls									"	5
Middle Rock									"	6
Cataract Bight									"	7
Chapel Roads				(tide station)					"	8
Chapel Cove									"	9
Wedge Cape				(use this name pending action by BGN to revise)					"	10
Turret Point									"	11
False Bay										12
Cape Kagigikan									BGN	13
Beyer Bay				(large application)					"	14
Hidden Bay									"	15
Crone Island										16
Additional Names in Insert:										17
McCulloch Rock										18
Middle Point									BGN	19
Red Rock										20
South Rocks										21
Pulpit Rocks										22
										23
				Names approved						24
				4-10-56. L. Hecy						25
				(see charts						26
				9193, 9121)						27

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ...8238..

Records accompanying survey:

Boat sheets .4...; sounding vols. ..14..; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 5-Envelopes;

special reports, etc. 1-Descriptive report, 1-Smooth sheet, and

1-Envelope Sheran Plotting Abstracts.

The following statistics will be submitted with the cartographer's report on the sheet:

			verifier D.J.K.
Number of positions on sheet		(3149)	
Number of positions checked		36 (prelim)	114
Number of positions revised		3 (prelim)	0
Number of soundings revised (refers to depth only)		45 (prelim)	170
Number of soundings erroneously spaced		8 (prelim)	132
Number of signals erroneously plotted or transferred		—	0
Topographic details	Time	32	15 hrs
Junctions	Time	2 (prelim. exam.)	8 hrs.
Verification of soundings from graphic record	Time	40	8 hrs.

Prelim. verif'n L. M. Evans III 206 9/28/56

Verification by D. J. KENNON ..... Total time 180 Date 11/19/56

386

Reviewed by J. A. Dinsmore ..... Time 32 Date 12 Dec. 1956

M-2232-1

Form 537a
Ed. Nov. 1929

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. EX-A-55

REGISTER NO.

State Alaska - Aleutian Islands

General Locality Adak Island

Locality Chapel Roads and Chapel Cove

Scale 1:5000 Date of survey , 19 55

Vessel SHIP EXPLORER

Chief of party S. B. Grenell

Surveyed by G. E. Haraden

Inked by

Heights in feet above to ground to tops of trees

Contour, Approximate contour, Form line interval feet

Instructions dated 16 December 1954, 19

Remarks: Graphic Control Sheet also used as boat sheet

EX-05155

GPO 266853

Information from this G.C. sheet transferred to H-8238

DESCRIPTIVE REPORT TO ACCOMPANY GRAPHIC CONTROL SHEET EX-A-55
CHAPEL ROADS, ADAK ISLAND, ALASKA

A. PURPOSE:

The purpose of this survey was to locate sufficient signals to control a hydrographic survey of Chapel Roads.

B. PLANETABLE SHEET:

The projection was ruled on Dinoplex laminated paper by EXPLORER officers. The planetable sheet was also used for the boat sheet.

C. CHARACTER OF CONTROL USED:

Two C&GS triangulation station, BUCK, 1954 and CANE, 1954 were used to control the survey. One supplemental station, EVEN, located by theodolite was used for a check point.

D. METHODS:

Standard methods were used. Six setups were made, two over triangulation stations and four by resection. Twenty four signals were located. Seven of these are located by two cuts only. Signal AWE was rodded in from station BUCK 1954. Signals ZOO and YAK were located in longitude by a planetable cut and latitude by photo-grammetric methods. All other signals were located by three or more cuts.

A short section of shoreline was rodded in immediately north of station CANE, 1954. All the hydrographic signals were also identified on the 1:5000 field photographs of the area.

The rock awash, approximately 20 meters north of signal OBA, was also located by planetable cuts. No landmarks were located and no list of planetable positions is submitted with this report.

Respectfully submitted,

Gerard E. Haraden

Gerard E. Haraden
LTJG, C&GS

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8238 FIELD NO. EX-2455

Alaska, Aleutian Islands, Adak Island, Cape Yakak to Crone Island

Project No. CS-1218

Surveyed - July - Aug. 1955 Scale 1:20,000

Soundings: Control:

808 Fathometer
Hand lead

Shoran
Sextant fixes on shore signals

Chief of Party - S. B. Grenell
Surveyed by - S. B. Grenell, J. Bowie, K. B. Jeffers, F. X. Popper, G. E. Haraden and H. A. Garcia
Protracted by - H. A. Garcia and A. J. Hamlett
Soundings plotted by - H. A. Garcia and A. J. Hamlett
Verified and inked by - L. V. Evans III and D. J. Kennon
Reviewed by - T. A. Dinsmore 12 December 1956
Inspected by - R. H. Carstens

1. Shoreline and Control

The shoreline originates with the reviewed manuscripts of air-photographic surveys T-11329, T-11330, T-11331, T-11334 and T-11566 of 1953-55.

The origin of the control and shore signals is given in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated except in foul inshore areas or where the sounding lines terminated at steep-to banks.

The entire shoreline in this area is fringed with offlying rocks. The bottom for the most part slopes sharply from the

high-water line to depths of 10-fms. Outside of the 10-fm. curve, the gradual slope of the bottom is interrupted by some uneveness. A prominent shoal with a least depth of 1.7 fms. rises sharply from 20-fm. depths in lat. 51°41.4', long. 176°50.8'. Many other dangerous shoals and submerged knolls together with several depressions contribute to the uneveness of the offshore area.

4. Junctions with Contemporary Surveys

Adequate junctions were effected with H-8234 (1955) on the southeast and south and with H-8140 (1952) on the southwest. The junctions with H-8239 (1955) on the east and H-8146 (1954) on the west will be considered in the reviews of those surveys.

5. Comparison with Prior Surveys

H-6899 (1934) 1:60,000

This prior reconnaissance survey by the U. S. Navy overlaps a portion of the present survey in the offshore area on the south. No important differences are noted between the prior and present depths.

No other prior surveys falling within the limits of the present survey are registered in this office. The present survey supersedes the prior survey.

6. Comparison with Chart 9121(Chartlet dated 9/17/55)
Chart 9193 (latest print date 7/5/54)

A. Hydrography

A small chartlet attached to chart 9121 covering Chapel Roads and Chapel Cove has been published as Notice to Mariners No. 38 (1955). The chartlet shows revised hydrography in the subject area based on advance information (boat sheet) of the present survey. It is noted that McCulloch Rock is charted about 60 meters southwestward of its smooth sheet position. It appears, however, that this was purposely done to maintain its position in relation to the charted shoreline. All other hydrography has also been charted in relation to the charted (old) shoreline rather than to the present geographic datum.

Charted hydrography on chart 9193 originates principally with early reconnaissance surveys by the U. S. Navy including the previously discussed prior survey. Several shoal soundings covering inshore dangers revealed by the present survey have been added to the chart by hand correction prior to verification and review. Numerous smooth-sheet soundings have been revised during verification.

The present survey entirely supersedes the scanty charted information.

B. Aids to Navigation

There are no floating aids to navigation charted in this area. Cape Yakak Light located in lat. 51°35.58', long. 176°56.69', on the present survey is in agreement with the charted position.

7. Condition of Survey

a. The sounding records are complete except that reference notes to rocks were not always clear. The Descriptive Report covers all matters of importance.

b. The smooth plotting was generally accurate except as noted in the following paragraph.

c. The scanning and plotting of soundings at uneven time intervals was not carefully done in the field. Numerous revisions made during verification eliminated erroneous irregularities in the depth curves.

d. The ends of numerous sounding lines controlled by shoran fixes along the west side of Beyer Bay conflicted with the shoreline as noted by the hydrographer on page 3 of the Descriptive Report. A reexamination of the photographs by the Division of Photogrammetry revealed no significant errors in the shoreline. Inasmuch as there were few references in the sounding volumes to the distance offshore or to offlying rocks, the ends of the conflicting sounding lines could only be arbitrarily moved offshore with the resulting corrections. falling entirely at the ends of the lines.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

Although there are numerous undeveloped offshore shoal indications throughout the surveyed area, it is not believed that additional development would reveal substantially lesser depths. The survey is therefore considered to be basic for charting purposes and no additional field work is recommended.

Examined and Approved:

Max G. Ricketts
Chief, Nautical Chart Branch

Charles A. Schanck
Chief, Division of Charts

Karl B. Jeffers
Chief, Hydrography Branch

Samuel B. Grenell
Chief, Division of Coastal Surveys

RMC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. Apr. 1950

TIDE NOTE FOR HYDROGRAPHIC SHEET

16 April 1956

~~Division of Coastal Surveys~~

Division of Charts: R. H. Carstens

Plane of reference approved in
14 volumes of sounding records for

HYDROGRAPHIC SHEET 8238

Locality Aleutian Islands

Chief of Party: S. B. Grenell in 1955
Plane of reference is mean lower low water, reading
3.4 ft. on tide staff at Chapel Roads
4.5 ft. below B. M. 1 (1955)

Height of mean high water above plane of reference is 3.5 feet.

Condition of records satisfactory except as noted below:

William Thofus

Chief, ~~Division of~~ Tides Branch

U. S. GOVERNMENT PRINTING OFFICE 877035

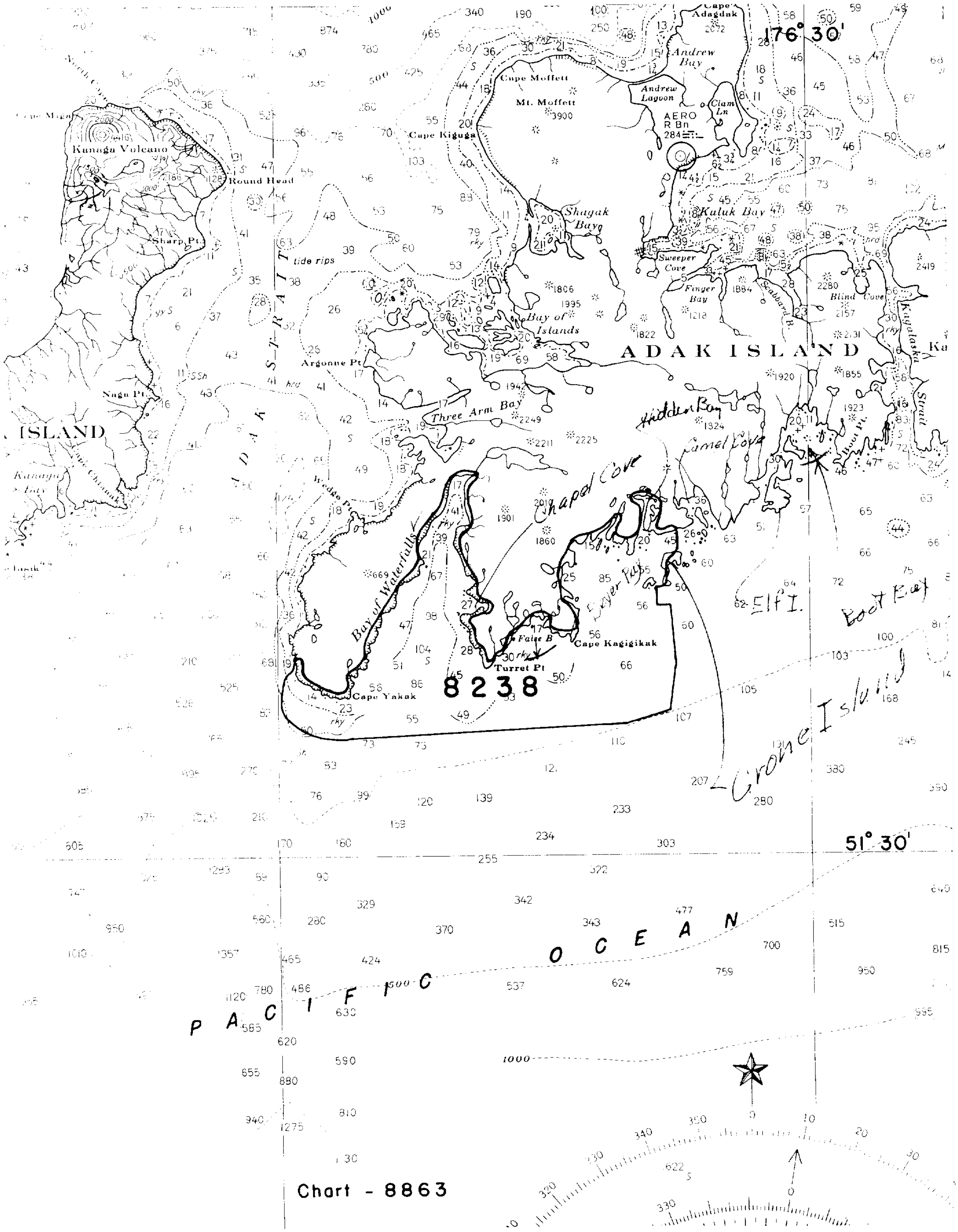
176° 30'
51° 30'
Cape Adagdak
Andrew Bay
Andrew Lagoon
Clam Ln
AERO R Bn
Cape Moffett
Mt. Moffett
Cape Kiguga
Kanaga Volcano
Round Head
Sharp Pt.
Shagak Bay
Kuluk Bay
Sweeper Cove
Finger Bay
Scabbard B.
Blind Cove
Kayolaska Strait
tide rips
ADAK STRAIT
Bay of Islands
ADAK ISLAND
Argonne Pt.
Naga Pt.
ISLAND
Three Arm Bay
Hidden Bay
Camel Cove
Chapel Cove
Wedge Pt.
Bay of Waterfalls
Boot Pt.
Elf I.
Boot Bay
False B
Turret Pt
Cape Kagigikak
Cape Yakak
8238
Crone Island
PACIFIC OCEAN

Chart - 8863

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8238

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
12/28/56	9193	[illegible]	~~Before~~ After Verification and Review Partially applied. Filled in blank areas; minor errors in shore line not corrected. Consider as fully applied until chart is reconstructed. JMA.
			Before After / Verification and Review
5/28/57	9102	Wittmann	~~Before~~ After Verification and Review JMA
6-24-58	8863	Wittmann	~~Before~~ After Verification and Review
9-18-67	9121	D.J. Romesburg	~~Before~~ Fully After Verification and Review Added new hydro, soundings & depth curves
12/30/92	16467	Joseph Robinson	~~Before~~ After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.