2554

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. ..... Office No. 2554

LOCALITY

State Alaska.

General locality Katok Penin

Locality Sula, Kinmak Island

1901

CHIEF OF PARTY

F. Westdahl

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DATE .....

B-1870-1 (1)++

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U. S. COAST AND GEODETIC SURVEY.

O. H. Tittmann, Superintendent

State: Alaska

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DESCRIPTIVE REPORT.

Topographic Sheet No. 2554

LOCALITY:

Akatok Peninsula,
Unimak Island

1901.

CHIEF OF PARTY:

F. Westdahl

2554

W.D.C.

JAN. 24. 1902. 01706

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A.B.
L.

Assistant in charge of the Office.
Library and Archives.

Descriptive Report

to accompany topographic sheet, entitled

Treasury Department
U. S. Coast and Geodetic Survey
O. H. Tittman, Superintendent
Ikatok Peninsula, Unimak Island
Alaska

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OFFICE OF ASSIST. IN CHARGE
JAN 24 902
COAST AND GEODETIC SURVEY.

Surveyed in July and August, 1901, by the party in
Steamer "McArthur"

Ferdinand Westdahl, Assistant, Commanding

Scale $\frac{1}{40.000}$

The original field sheet of this survey was begun and completed before any triangulation points were determined, and during the entire survey it was exposed to wet weather so that it was impracticable to put a projection on it when finished. Instead the work upon it was transferred to and adjusted upon a new sheet and projection by Mr. O. M. Leland, Aid C. & G. Survey, who also executed the survey. The original field sheet has also been forwarded to the Office. The contours upon it are shown for every hundred feet difference in elevation above ordinary high water mark and are sketched mainly, the summits of the hills and bluffs only having been determined by vertical angles.

Ikatok Peninsula, like Cape Lazareff and the adjacent

part of Unimak Island, consists of a cluster of mountainous peaks connected with each other by low, level land, about twenty to thirty feet above the sea, and consisting of sand mixed with shingle. These low lands have upon them lakes of fresh water in which fish are plentiful. Both mountains and low lands are covered with tundra vegetation, moss, grass and flowers, which is exceedingly tiresome to walk over owing to its abundance and softness, especially after the frost has thawed.

The low isthmus connecting Ikatok Peninsula with Unimak Island is about three miles long in a northwest and southeast direction, about three miles across where it joins Unimak Island, and narrowing to one-quarter of a mile at its southeast extremity where it joins the peninsula. It consists of three main, converging ridges, from fifty to seventy feet high, with low depressions between them, all of coarse, dark sand, apparently disintegrated lava and scoria. The middle and oldest of these ridges, along which the base was measured, is covered with moss and grass, the others, with the depressions between them, with grass mainly. Dunes River, fed by lakes and streams from the eastern slopes of Round Top and adjoining mountains, runs to the eastward of the middle ridge and breaks through the eastern ridge about midway of the isthmus. It is a broad and shallow stream and evidently carries a lot of light volcanic debris towards the sea as it has formed a submerged spit at its mouth which projects into the deep water of Ikatan Bay.

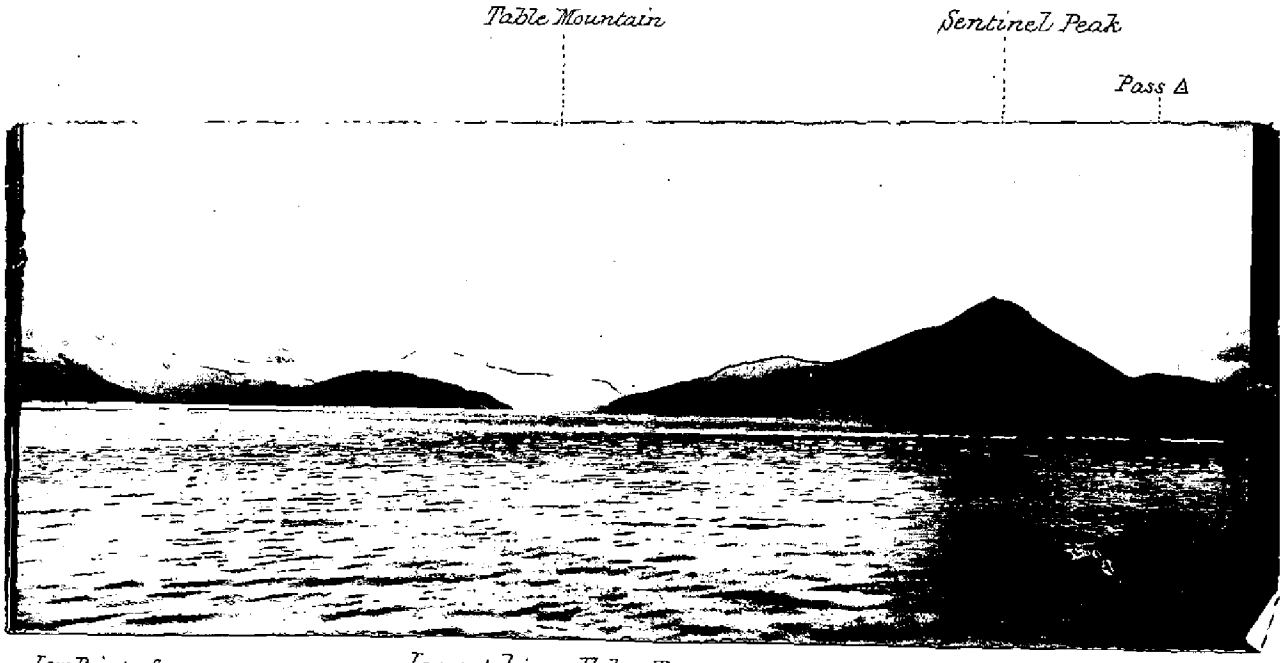
The western ridge is of recent formation and is as yet but sparsely covered with vegetation. The ocean surf in Otter Cove, the strong Northwest winds from the slopes of the ashcovered volcanoes, and the Dune River combined have probably formed these ridges, gradually extending the low land to the Eastward until it joined the low, shingle point making out from what must at that time have been Ikatok Island. The narrowest part of the isthmus is also the lowest as the ridges disappear and flatten out in a low, sandy area in the middle of which is a small lagoon of brackish water connected by a narrow slough with Ikatan Bay at high tide. The natives say that within the memory of men now living there existed a passage through to Otter Cove at this point, and Pilot Pavlof declares that during the Crimean war a Russian vessel came through this passage to avoid some British warships.

Ikatok Peninsula is about thirteen miles long, East and west, by about seven miles broad, and consists of three main divisions connected by low isthmuses. The Easternmost part is Cape Pankof which presents three high, almost perpendicular, cliffs towards the sea and gently sloping on the landward side, like three conical hills cut in twain through their summits and the outer halves washed away by the sea. This is a peculiar characteristic of the majority of the cliffs in this region. The Southeasternmost is the highest and its summit is a narrow, rounded edge of a perpendicular stratum of

basaltic rock, upon which was built Pankof △. It is a very conspicuous headland and, like Scotch Cap Cape in Unimak Pass, once seen not readily forgotten. A few rocks lie close under its face, on the continuations of its harder rock strata, none however beyond a quarter of a mile, and no sunken rocks have been seen in its vicinity except the Pankof Breaker, lying three and a quarter nautical miles about N. by E. (mag.) from its summit, and two miles from the nearest point of land. Cape Pankof is connected with the rest of the Ikatok Peninsula by a low isthmus about one mile long by half a mile broad, on either side of which lie East and West Anchor Coves.

Bird Island lies two miles to the southward of the western end of the Ikatok Peninsula and is high and so precipitous that no vegetation finds lodgment upon it. From it towards the nearest point of the land runs a sunken reef marked by kelp and some visible rocks near the mainland, so that there is no safe passage for a vessel to the eastward of Bird Island, nor should the western end be approached nearer than half a mile. The island and reef helps to break the force of the westerly swell in Dora Harbor. Three and a half miles northwestward from Bird Island, and more than half a mile off the precipitous shore of the peninsula, lies a rock awash at low water. In picking an anchorage in Otter Cove the first time, we passed this rock within a ships length and discovered it. The pilot did not know of its existence.

Isanotski Pass, from anchorage Southward of Dune River



Bays and Anchorages. Ikatan Bay, to the northward of Ikatok Peninsula, is about five miles long, northeast and southwest, by four miles in width. In its northwesternmost corner is the almost marked entrance to Isanotski, or False, Pass dividing Unimak Island from the Alaskan Peninsula. Sankik Island lies a little more than a mile from the north shore of the bay, is high with a rounded, grassy summit, and has a reef of rocks running from it towards the nearest point of the mainland to the northward. I am informed there is no safe passage for vessels to the northward of this island, and that the little bay to the northwestward from it is shoal. The north shore of Ikatan Bay, from this little bay towards Isanotski Pass is an almost perpendicular bluff showing almost level strata of alternate dark and lighter colored rock, with several cascades pouring over its edge into the sea. It rises to a height of about six hundred feet above the sea at its highest point, upon which Pass △ is located, and behind it falls slightly to a narrow table land and then rises rapidly to the summit of Sentinel Peak, a conical mountain about two thousand feet high. Off this north shore is a plateau about one mile wide where anchorage may be had in ten fathoms over sandy bottom, sheltered from ordinary northerly winds but much exposed in easterly and southerly winds. The southwest shore of the bay is low, sandy beach except in a short stretch towards the northern end where a rocky point juts out, and towards the southern limit where a broad flat bordered by a steep shingle beach with some boulders off it reaches out from the high land of the Ikatok Peninsula. There is

a little bight at the junction of the sand and shingle beaches and I sought anchorage there with the ship, but the water is very deep close up to the shingle and shoals too abruptly where the sand beach begins. It is a favorite place for grampus, or whalekillers, schools of which were disporting themselves almost constantly in the immediate vicinity of the shingle point. In the middle of the long stretch of sandy beach is the shoal spit formed by the Dunn River reaching out from the apparently smooth beach, not seen when coming broad on and treacherous to approach on account of the sudden shoaling from no bottom at twenty fathoms to less than five. Anchorages may be had both to the northward and southward of Dunn River in ten fathoms, sandy bottom, with barely swinging room clear of the beach and lying in the eddy current. A better anchorage to southward of Dunn River is to let go in seventeen to eighteen fathoms over sticky bottom and in steadier current. For this latter anchorage approach the beach until the next point on the east side of Isanotski Pass and within it is just open by the East point of the entrance to it, and both under the rim of the so called Table Mountain, further in, and on the west side of the Pass.* None of the anchorages along this shore are recommended however. While there is no ocean swell like in Otter Cove except in Easterly gales it is always rough here when the wind blows against the current, and all

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* See photograph opposite page 5 taken from the ship at anchor there.

winds between Northwest and northeast blow very hard and stir up a disagreable, choppy sea.

The south shore of the bay, from the above mentioned shingle beach to Ikatan Point, consists of bold, rocky bluffs, except in two places where there are short sandbeaches in front of valleys. On the line of the outermost points of this stretch is found a depth of ten fathoms, and towards the bay falls off to no bottom at twenty fathoms in two or three hundred yards. Off the western of the two sandbeaches, where the low valley behind it runs clear across the peninsula to Dora Harbor, is good anchorage in southwest to east winds. In approaching it bring Bird Island in sight over the middle of the low land and anchor in any depth desired as it shoals gradually to the beach. In the bight immediately under and to the westward of Ikatan Point is also good anchorage over soft, coarse sand bottom mixed with mud and safe in all winds from Southwest to Southeast. Approach the land until north end of Amagat Island is in line with extremity of Ikatan Point and anchor in about nine fathoms. Over the rocky cliffs to the westward of this anchorage are several cascades of pure fresh water where we filled our tanks twice. It is most convenient to do so at high water when the boat may be brought in so close that one length of hose is sufficient. The boat should not be filled too full as even in perfectly calm weather there is a sort of lumpy swell here caused perhaps by puffs of wind drawing through the gulches on the north side of the bay and

by the current from Izanotski Pass. At the time of watering, the ship was anchored abreast the waterfall in five fathoms about four or five hundred yards from it.

The current pushing through Izanotski Pass in its narrowest part near the southern end is very strong. There is a reef of rock projecting from the east point of the entrance and another reef from the next point inside on the west side. When a sudden northeast gale drove us from the anchorage off the Sand Beach to the southward of Dunes River after midnight, or morning of July 1st, we were a little late and the current had turned to ebb when we entered the Pass. We had to get in for shelter, however, and by going full speed, about seven and a half knots, we could barely crawl through, sometimes not gaining a yard for several minutes. Pavlof informs me that in this part of the Pass there is practically no slack, and that the current turns about three hours after high or low water on the Pacific side. I have had no opportunity to verify this statement as the only safe anchorage within the Pass, in the cove opposite Morzovoi or Protasoff village, is far away from this current, and when the weather moderated I had use for the ship and crew elsewhere. For the same reason I could not sound out Ikatan Bay and have recorded on the chart only the approximate depth at the anchorages. A short series of tide observations were made by the land party camped near the Astronomical Station.

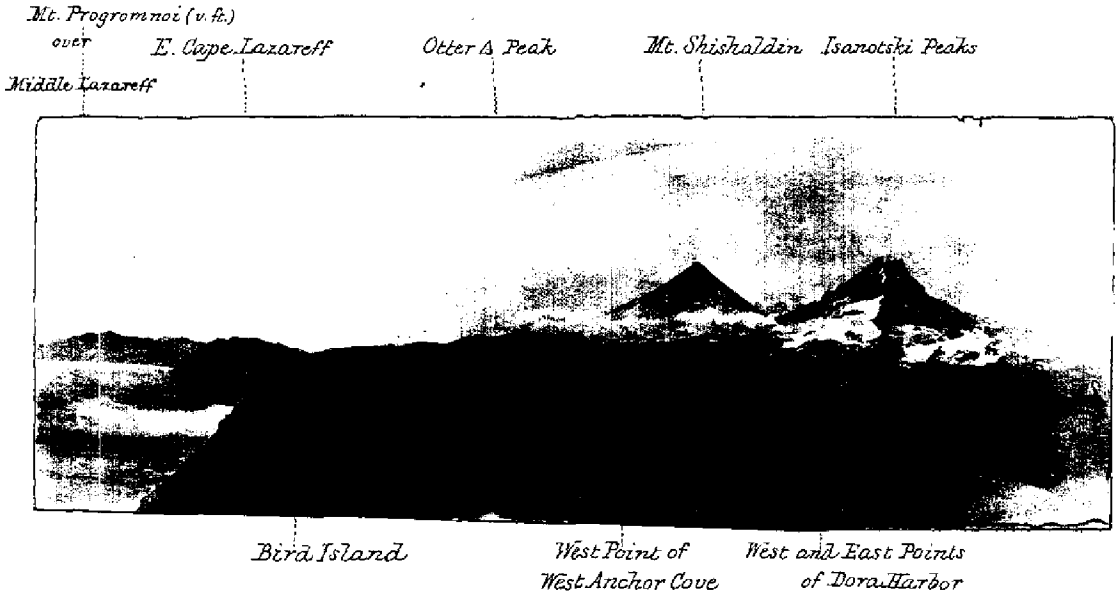
On the east shore of Ikatok Peninsula and within two miles of Ikatan Point are three indentations bordered by beaches

of shingle and boulders apparently, and there are rocky ledges exposed at low water. There may be anchorages in some of them but they do not look inviting and I have not investigated them. There is a fairly good supply of driftwood in these coves and all along this shore.

East Anchor Cove is a good anchorage and affords shelter except in winds from North to Southeast. Northwest winds blow off the land here, but in Marshove Bay they blow from the north and raise quite a sea which reaches to this anchorage in a lumpy, dead swell, uncomfortable but not dangerous. The best boat landings are at the northern end of the Sand Beach, and on the beach just within the Southern point of the Cove where there are some old buildings, the remains of an abandoned fishing station. There are rocky ledges exposed at low water between this landing and the Southern end of the Sand Beach in the main part of the cove. In entering this Cove the South point should be given a berth of at least half a mile, then round up until the summit of Bird Island is open from the west point of West Anchor Cove and anchor on that line at the desired depth. In northwest winds a more comfortable berth is found abreast the north end of the Sand Beach. This Cove has been sounded out and the survey is plotted on another sheet.

West Anchor Cove should afford good shelter in Easterly winds. I cannot speak of it from my own knowledge, however, as I entered it only once with the ship during the season in

West shore of Ikatok Peninsula, from near Pankof △



thick and rainy weather and anchored in the bight one mile to the eastward of the western point in thirteen fathoms over sandy bottom. During the night I laid there a southerly swell arose, indicating wind from that quarter, and I left the anchorage next day before the fog cleared. The survey shows a number of rocks off the southeast point with one large rock about a quarter of a mile off shore. Close in to the south shore near the southern end of the sand beach lies a high, pinnacle rock. Pavlof informs me that the holding bottom is not good at the eastern and most protected end of this cove; that the bottom is rocky; and that there are rocky ledges within it exposed at low tide. There is always more or less surf on the beach from the ocean swell, which is true of the entire coast to the westward of Cape Pankof.

<u>Dora Harbor</u> is protected in all winds and swell, particularly the inner harbor for vessels of light draught. The anchorage is very contracted and extensive areas of rocky bottom are seen at low tide all around the shores and making off to long distances from all the points. The reefs projecting from the west point towards Bird Island and from the East point to westward afford protection from ordinary southerly and westerly swell at the outer anchorage, but heavy swell from the southward is uncomfortable. The sailing directions given on page 13, Bulletin No. 40, for entering this harbor are good, except that the bearing of the East point from where I anchored

is SE. by E. instead of SSE ½ E. as there given. The west point bears SW. and is in range with Cape Lazaroff. Steering NW. for the west point until Bird Island bears South will clear everything alright, but brings one uncomfortably close to the reef ahead. I turned when the summit of Bird Island bore S ½ W, then steered N by W. until past the point of the eastern reef in about seven fathoms, then hauled to North and N. by E. to anchorage in five and a half fathoms.

There are two fishing stations in this harbor; the one located just within the East point is abandoned at present, but the one on the north shore in the inner harbor is occupied by a crew of twelve to fifteen men who go out in dories in good weather several miles beyond Bird Island and bring in their boats loaded with the finest kind of codfish in from three to four hours fishing in thirty to fifty fathoms of water. The harbor has been sounded out and the hydrography of it is shown on a separate sheet.

<u>Otter Cove</u> affords but an uneasy anchorage even at its most sheltered part which is the easternmost corner where the only safe boat landing can be had. Winds from NW. to NE. blow with great violence over the low isthmus, and even after eight or ten days of such off-shore winds the surf is still high in the cove and landing through it hazardous. The ship was anchored for several days in the eastern corner in five fathoms over sandy bottom, and twice temporarily on the west side off the southern end of the sand beach in six fathoms. In approaching the

former anchorage can should be taken to avoid the rock awash at low water, already mentioned as lying three and a half miles northwestward from Bird Island and more than half a mile off the shoreline.

In the names used for bays, points, etc. on this sheet I have been guided by chart No. 8800 so far as there given. I beg to refer to Descriptive Report of the sheet on Scale of $\frac{1}{40.000}$, which includes the entire season work and is not yet ready to be sent in, for the names to go on this sheet. This report is yet to be written and I intend to include in it a discussion and explanation of all the names.

Respectfully submitted

Ferdinand Westdahl

Assistant