6433

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton *Director*

State: ALASKA

DESCRIPTIVE REPORT

Topographic
~~Hydrographic~~ } *Sheet No.* L-1935

LOCALITY

Aleutian Islands

Bogoslof Island

1935

CHIEF OF PARTY

H. B. Campbell

U. S. GOVERNMENT PRINTING OFFICE: 1930

Applied to drawing of chart No. 9302 — A. B. Maize — Mar 1937

Applied to drawing of chart No. 8802 — A. B. Maize — June 21 1937

" " " " " " 8861 — J. F. Walker — Jan 1942

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. L-1935

REGISTER NO. T6433

State Alaska

General locality Aleutian Islands

Locality Bogoslof Island [1]

Scale 1:10,000 Date of survey June 19--Aug. 28, 1935

Vessel DISCOVERER

Chief of party H. B. Campbell

Surveyed by George E. Morris Jr.

Inked by George E. Morris Jr.

Heights in feet above MHW to ground ~~to tops of trees~~

Contour, ~~Approximate contour, Form line~~ interval 20 feet

Instructions dated April 13, 1934, 19

Remarks: Some contours omitted to prevent overcrowding; see profiles for relief.

The names in this rpt are wrong. Castle Rock is on the south end and Fire Isd. is at the north end. See many old Coast Guard reports and blue prints. RRL

DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET FIELD NO. L-1935

BOGOSLOF ISLAND

Work done under instructions Project HT-177 dated April 13, 1934.

-:-

a GENERAL DESCRIPTION

Bogoslof Island consists of two islands, the main island and ~~Castle Rock~~ Fire Island, connected by a rocky bar which bares in spots at mean lower low

Fire Isd →

← Castle Rk.

× 1

This appearance is only a recent development RRL

BOGOSLOF ISLAND BEARING NORTHEASTWARD

water. ~~Castle Rock~~ Fire Isd, as its name implies, resembles a medieval castle which rises nearly perpendicularly from the water. The pinnacle rocks consists of two summits, sharp in outline, rising at the southwestern edge of the plateau. The plateau ends in a vertical cliff along the beach but breaks away in a series of steps to the north. The volcano rises above the plane of the island northwestward of the pinnacle rocks.

← Fire Isd

2 ×

THE VOLCANO AND ~~CASTLE ROCK~~ Fire Island bearing Northwestward FROM ◎ GAG

Both Castle Rock and the pinnacle rocks are beginning to disintegrate and the movements of the nesting fowl start minor rock slides

← begin copy here

from time to time. The volcano is of more recent formation (reported by the Coast Guard cutter "Northland" in 1927). It is a mound of porous lava rock or cinders that has weathered but little and is still sharp and rough. Steam mixed with a trace of sulphur fumes issues gently from cracks near the top of the volcano. In a few places the rock feels warm to the touch.

The pond at the base of the volcano is salt water with some sulphur in it. The surface ~~of it~~ is four feet below high water, but a very high tide will cause the pond's surface to rise about a foot. This height is not reached until several hours after the time of high tide. A very low tide does not affect the elevation of the pond. Gas from the volcano bubbles through the water near the southern shore of the pond. This gas has no odor. The surface temperature of the water measured several times during June, July, and August was 68° F. This is several degrees warmer than the sea water and much warmer than the average air temperature. On the warmest days all members of the party went in swimming. The bottom drops away from the shore at an angle of about 60°. There is a large amount of drift wood scattered along the shore of the pond. This undoubtedly was washed there during an extremely high tide when the water covered the low sand barrier between the pond and the sea.

The plateau of the island is a mixture of black sand, lava dust and cinders, and rock.

Castle Pk.

3

X

bearing Southward

THE PLATEAU AND ~~PINNACLE~~ Castle ROCKS FROM ⊙ JUG

The beach is black sand except along the northern spit, where it is

pebbles and small boulders, and around the volcano, ~~which extends to the water and along the west edge of the pinnacle rocks which is rocky~~ where it is rocky. The sand is unstable and shifts with the sea. The spit on the southeast end of the island hooks toward the west when the sea has been easterly for a continued period and toward the east when the sea is westerly. Both extremes which were observed between June 19th and August 28th are shown on the sheet. The rocky portions of the beach are more stable.

There is a small patch of wild rye (Elymus mollis trin) and a narrow fringe of a low creeping vine along the easterly shore of the pond. Another very small patch of wild rye is on the plateau. There are numerous small tufts of grass and a very short green moss on the plateau and the eastern slope of ~~the pinnacle rocks~~ Castle Rock. The sea gulls spread the wild rye and other seed in making their nests and in a few seasons the plateau will be covered with grass and moss unless there is another volcanic eruption. At present the vegetation is too sparse to change the grayish black hue of the island as seen from the sea.

There was no fresh water on the island so all drinking water was brought ashore in kegs. The washing was done in sea water.

The island is used as a breeding ground by ~~sea-lions~~ sea lions. There were hundreds of ~~sea-lions~~ sea lions along the sand beaches of the island on the first of June. At that date most of the ~~sea-lion~~ sea lions calves had been born although there were a few born as late as June 16th. A rough estimate would apportion the cows and bulls at about twenty cows to each bull. At this time of the season the bulls jealously guarded the cows, always staying between the cows and the intruders. Both bulls and cows would abandon the calves and get out of possible danger. The calves would make small effort to escape, but would bawl loudly when handled by anyone. When the calves were about two months old they became more wary although at three months

4
X

~~SEA-LIONS~~

they could be approached when asleep. About the second week in July the bulls and cows began leaving until near the first of August there was only ~~about~~ one cow for every six or eight calves and about fifty bulls left on the island. Each cow would herd about six or eight calves, keeping them in the water a good deal of the time evidently teaching them the fine points of swimming and fishing. The roar and barking of the entire herd made a continual sound like an airplane a short distance overhead. The herd was quiet for only a few of the very early hours of the morning. When the camp was first established the ~~sea-lions~~ sea lions were very timid and wouldn't allow one to get close to them, but as they became more accustomed to us they became more indifferent; in fact, the rodman had trouble getting them to move so he could rod in the high water line without walking among them. I found it difficult to approach close enough to them to get ~~some~~ close-up snap shots with a camera.

About one thousand sea gulls (glaucous gull) were nesting on the plateau. The nests consist of slight hollows in the sand lined with a wisp of grass or a short piece of kelp. The gulls lay two or three eggs in a nest about the first of June. They did not replace any eggs taken after the third week in June. One of the party placed a dozen eggs in one nest and the gulls had distributed the eggs so there were no more than three in ~~a~~ any nest by the following morning. The eggs hatched the latter part of July. After the young had hatched, the gulls would try

to rout intruders by swooping at them in a "Power dive" and by setting up a great racket. Occasionally a gull would drop a murre egg near the intruder but this was more likely by accident than by intent.

The pallas murres arrived between the first and the fifteenth of June. There were fifty thousand of them by a conservative estimate nesting on the pinnacle rocks and ~~Castle~~ Fire Island. Rock. They laid a single egg pushed against the side of the cliff.

PALLAS MURRES

The sea gulls preyed on the murres, stealing the eggs when the murres left them. The gull would sometimes break open the egg and eat it, but usually would carry it away in its beak or throat. When the young gulls were hatched the old ones swarmed around the murres to steal eggs. I've often seen a gull tug at the tail feathers of a murre to get it to move while a second gull would take the egg. The gulls would carry eggs in their beaks for a quarter of a mile to their nests. ~~The murres would offer no resistance to the gulls.~~ Early in August when the murres began to hatch, the gulls would steal the young murres and swallow them head first at a gulp or carry them away to feed to the young gulls. The murres would try to fight off the gulls from the young, but the gulls would hover around until their opportunity came to steal either an egg or a murre. The murres stopped laying eggs near the middle of August. The gulls would try to take the murres from one another while in flight and several murres would change captors in midair. A few fell to the ground and escaped for the moment. When the young murres grew so large that the gulls could no longer swallow them, the gulls would carry them away and decapitate them and eat all but the feathers and the breast bone. A few gulls that were killed were eaten by other gulls.

A few cormorant nested in inaccessible places on ~~the pinnacle rocks and~~ Castle Rock and Fire Island. A few sea parrots (tufted puffins) nested in the crevices of the volcano, hiding their eggs from the thieving gulls.

Toward the end of August a large flock of sabine gulls came to the island and fished in the surrounding water. Nearly all of the birds had left the island by September 15th.

Swarms of furry covered flies infested the loose rocks around the pinnacle rocks. These were very sluggish even on warm days and did not bother our camp.

The murres were pestered by a tick about the size and appearance of a small wood tick. These became especially numerous the second week in August. As many as one hundred were picked off the inner walls of the tent each day for a week. Several got on the members of the party but only one tick drew blood.

b LANDMARKS — omit

The pinnacle rocks and the peaks of ~~Castle Rock~~ Fire Island are conspicuous. The entire island, however, is of such small area that separate landmarks could not be charted except on a chart of larger scale than is now issued. A list of the positions is included. — omit

omit

Flies is Fire Island X 5

c CONTROL — omit

~~CASTLE ROCK~~ BEARING SOUTHWESTWARD Fire Id.

Plane table graphic triangulation was used in surveying the island. The survey was made in advance of triangulation control. A point on the sheet was selected for the triangulation station Bogoslof 1935 and a line through R.M. No. #3 used for an orientation line. The projection was made on the sheet after the field work for the triangulation had been completed

using the preliminary computation for the position of Bogoslof and the azimuth of the line Bogoslof-R.M. #3. The final computation changed the position of Bogoslof by a small amount but the projection was not changed. (Preliminary: Latitude 53° 55' 1396.1, longitude 168° 02' 198.7; final: latitude 53° 55' 1393.5, longitude 168° 02' 200.4).

d TRAVERSE

No traverse was run.

f CONTOURS

All contours were verified by offshore observations. The contour interval used on the sheet is twenty feet but some of the contours on the pinnacle rocks and the volcano are omitted to avoid overcrowding. No contours are shown on ~~Castle Rock~~ Fire Island. Instead several profiles of the pinnacle rocks, ~~Castle Rock~~ Fire Island, and the volcano traced from camera snapshots are shown on the sheet. These clearly show the shapes of the peaks.

6 X Bearing northward ? FROM ⊙ ICE

~~CASTLE ROCK~~ Fire Island

7 X bearing northwestward ? FROM ⊙ JUG

K NEW NAMES

Well-established local names which do not appear on the chart are the identifying names Castle Rock, Pinnacle Rocks, and the Volcano. It is evident that local names change with each volcanic change of the island. The names assigned in the 1923 Coast Guard survey of the island are no longer in use. The pinnacle rocks and the plateau are unquestionably that part called "Castle Island" and Castle Rock must be the remains of "Fire Island". There was no local mention of "Sealion Point" although that point remains. The name would be more appropriate for the new point

on the southern end of the island.

It is believed that the local names for the features of the island will be changed each time there is a volcanic change of the configuration of the island. If the island is charted on a larger scale than it now is with the present names given, the name is less likely to be changed unless the feature itself changes.

m PHOTOGRAPHS

The photographs that were used for the profiles shown on the sheet are included in this report.

One of the fliers engaged on the U. S. Navy air-photographic mapping of the Aleutian Islands took an oblique picture of Bogoslof Island that shows the configuration to advantage. It is believed that a copy of that picture (if one can be secured from the U. S. Navy) would be a valuable addition to the topographic sheet as a record of the condition of Bogoslof Island in 1935.

n CHANGES

It is doubtful if there has been any great change in the island ~~except as~~ previously noted under (a) and by notes on the sheet since the reported change in 1927. The outline of the pinnacle rocks as sketched by the Coast Guard survey party in 1923 resembles the outline of the rocks now but the elevations do not check. It is believed that these differences

Castle Pk. X 8 Castle Pk 9 X

~~PINNACLE ROCKS~~ BEARING EASTWARD Bearing northwestward FROM ⊙ SPIT

and the difference in elevation of the volcano as given in the Coast Pilot is due to inaccuracies in the prior surveys more than to a settling of the

~~peaks~~

Bogoslof Island has a local reputation for shifting position rather frequently. This can be accounted for by two reasons other than faulty navigation. Although the island is small it presents a marked difference in appearance when viewed from different directions. Anyone glimpsing the island from different directions on widely separated occasions might believe the island to have changed. The charted positions of the shorelines of Unalaska and Ummak Islands in the vicinity of Bogoslof are in error by a few miles. A navigator taking his departure from different points on Unalaska or Ummak Island would obtain different dead reckoning positions of Bogoslof Island which would create the impression that Bogoslof had shifted in position.

The positionoof Bogoslof may change the next time the volcano erupts, but that can be proved only after the next eruption. Until then it is doubtful if there will be any major change in the configuration of Bogoslof Island.

STATISTICS

3.2 statute miles shore line

0.3 square statute miles area

Respectfully submitted,

George E. Morris Jr.

George E. Morris Jr.
Jr. H. & G. E., C.&G.S.

Approved and forwarded:

H B Campbell

H. B. Campbell, R.&G.E.,
Chief of Party, C.&G.S.

Form 567
Ed. Dec., 1929

DIVISION OF CHARTS, FILE NO. _____

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Seattle, Washington

January 17, 1936

DIRECTOR, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted.

H B Campbell
H. B. Campbell Chief of Party.

DESCRIPTION	POSITION						METHOD OF DETERMINATION	CHARTS AFFECTED
	LATITUDE			LONGITUDE		DATUM		
	°	'	D. M. METERS	°	'	D. P. METERS		
Hi) pinnacle rocks ×	53	55	1464	168	02	305	Plane-table	
Ned)	53	55	1562	168	02	379	"	
Point) Castle Rock*	53	56	1321	168	02	853	"	
Peak)	53	56	1256	168	02	756	"	

NOTE: These landmarks are recommended for charting only on a chart of larger scale than the present No. 8802.

×Castle Rock and pinnacle rocks are one and the same feature.
*The above named "Castle Rock" is miss-named and should be "Fire Island" - (see T-6433)
C.K.G.

A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report. The selection, determination, and description of these points are of primary importance.

The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

U. S. GOVERNMENT PRINTING OFFICE: 1930

	Remarks	Decisions
1		
2	this is really Fire Island see Lukens' notes herein, and U.S.C.P. reference	Fire Island.
3		
4		
5		
6	on this topo. sheet it is called Castle Rock, and on the Hydro. chart it is correctly named	Fire Island.
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M 234

GEOGRAPHIC NAMES

Survey No. 6433

Name on Survey	A: On Chart No. 8802	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: part 2 C.P. Alaska U. S. ~~Light List~~ 1936 Pg. 24	K	
Bering Sea ✓	*									1
Castle Rock ?										2
Bogoslof Island	*									3
Volcano ?										4
Pinnacle Rocks ?										5
Fire Island ✓								*		6
										7
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Annotation of the above geographic names should be made when further information can be gathered - P.O.P.

Names underlined in red approved by P.K. on 4/30/36

M 234

FORM M-238

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MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT } No. H
~~PHOTOSTAT OF~~ } No. T 6433

{ received April 9, 1936
registered April 14, 1936
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
✓ 20	R. R. Lukins	RRL	- D. R. Lewis.
22			
24			
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82			
83			
88			
90			

RETURN TO

82	

C. K. Green April 16 '36

REVIEW OF TOPOGRAPHIC SURVEY No. 6433

Title (Par. 56) Bogoslof Island, S.W. Alaska

Chief of Party H.B Campbell Surveyed by G.E. Morris Jr Inked by G.E Morris Jr

Ship Discoverer Instructions dated April 13, 1934 Surveyed in June-Aug 1935

1. The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 7, 8, 9, 13, 16.) ✓

2. The character and scope of the survey satisfy the instructions. ✓

3. The control and closures of traverses were adequate. (Par. 12, 29.) ✓

4. The amount of vertical control that the Manual specifies for -~~contours~~-formlines- was accomplished. (Par. 18, 19, 20, 21, 22, 23.)
Numerous elevations taken

5. The delineation of -~~contours~~-formlines- is satisfactory. (Par. 49, 50.) ✓

6. There is sufficient control on maps from other sources that were transmitted by the field party to enable their application to the charts. (Par. 28.) Pictures submitted and U.S. Navy oblique picture mentioned as having been taken

7. High water line ~~on marshy and mangrove coast~~ is clear and adequate for chart compilation. (Par. 16a, 43, 44.) ✓

8. The representation of low water lines, reefs, ~~coral reefs~~ and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41.) ✓ See reverse side

9. Rocks and other important details shown on previous surveys and on the chart were verified. (Par. 25, 26, 27.)

See reverse side

10. ~~The span, draw and clearance of bridges are shown. (Par. 16c.)~~

11. Locations and elevations of summits are given. (Par. 19, 51.) ✓

12. The tree line was shown on mountains. (Par. 16g.)
No trees on this island

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Use reverse side for extending remarks.

R-317

Paragraph 8

The South East point of Bogoslof Island shifts as shown on the survey.

Paragraph 9

This is an original survey and is not charted properly.

13. The descriptive report covers all details listed in the Manual, in so far as they apply to this survey. (Par. 64, 65, 66, 67.)

14. ~~The descriptive report also contains additional information required in aero-topography relative to type of photographs, method of compilation and type of ground control.~~

15. The descriptions of recoverable stations and references to shore line were accomplished on Form 524. (Par. 29, 30, 57, 67 except scaling of DMs and DPs, 68.) *None submitted*

16. A list of landmarks for charts was furnished on Form 567 and plotting checked. (Par. 16d, e, 60.)

17. The magnetic meridian was shown and declination was checked. (Par. 17, 52.) *Several meridians shown. About 3° difference in declination at ΔBogoslof and ⊙Jug Declinatoire checked*

18. The geographic datum of the sheet is *Unalaska (Unad justed)* and the reference station is correctly noted. (Par. 34.)

19. Junctions with contemporary surveys are adequate.
No junctions with other surveys

20. Geographic names are shown on the sheet and are covered by the Descriptive report. (Par. 64, 66k.)

21. The quality of the drafting is good. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46, 47, 48, 49, 50.) *Names of Islands (Castle Rock) wrong & changed in accordance with information furnished by Capt. H.R. Lukens.*

22. No additional surveying is recommended.

23. The Chief of Party inspected and approved the sheet and the descriptive report ~~after review by~~

24. Remarks: *According to the topographer this island does not shift as has been reported but is an optical illusion in viewing the island from different directions*

Reviewed in office by *Chas. R. Bush Jr.* *June 6, 1936*

Examined and approved:

C K Green — Chief, Section of Field Records

Fred. L. Peacock — Chief, Section of Field Work

L O Colbert — Chief, Division of Charts

G Rude — Chief, Division of Hyd. and Top.

R-317

Bogoslof from the air, bearing southwestward

Castle Rock Volcano and Pond Fire Island Courtesy United States Navy

1 Bogoslof Island bearing northeastward
7 Fire Island bearing northwestward
5 Fire Island bearing southward
2 The Volcano and Fire Island bearing northwestward
9 Castle Rock bearing northwestward
8 Castle Rock bearing eastward
3 The Plateau and Castle Rock bearing southward
4 Sea Lions

TAKEN IN 1935 Fire Island Volcano Castle Rock

VIEWS OF BOGOSLOF ISLAND

VIEWS OF BOGOSLOF ISLAND

TAKEN IN 1935 Fire Island Volcano Castle Rock

4 Sea Lions
3 The Plateau and Castle Rock bearing southward
8 Castle Rock bearing eastward
9 Castle Rock bearing northwestward
2 The Volcano and Fire Island bearing northwestward
5 Fire Island bearing southward
7 Fire Island bearing northwestward
1 Bogoslof Island bearing northeastward

Bogoslof from the air, bearing southwestward

Castle Rock Volcano and Pond Fire Island Courtesy United States Navy