

4474

~~CONFIDENTIAL~~

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton Director

State: T. H.

DESCRIPTIVE REPORT

Topographic
Hydrographic

Sheet No. N 474

LOCALITY

Territory of Hawaii
Gardner Pinnacles

1929

CHIEF OF PARTY

K. T. Adams H. & G. E.

GOVERNMENT PRINTING OFFICE

DECLASSIFICATION BY NOAA
PURSUANT TO DOC SYSTEMATIC REVIEW
GUIDELINES AS DESCRIBED IN SECTION
3.3 (a), EXECUTIVE ORDER 12356

Applied to Chart #173 10/16/14 ~~20~~.

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 Letter **B**REGISTER NO. **4474**State **Territory of Hawaiian Islands**General locality **Pacific Ocean**Locality **Gardner Pinnacles**Scale **1/5000** Date of survey **July 19**, 19**29**Vessel **Steamer GUIDE**Chief of Party **K.T. Adams**Surveyed by **V.M. Gibbens**Inked by **V.M. Gibbens**Heights in feet above **M.S.L.** to ground ~~to top of mass~~~~Contour Approximate contour~~ Form line interval **25** feetInstructions dated **March 26,**, 19**29**

Remarks:

DESCRIPTIVE REPORT
to accompany
TOPOGRAPHIC SHEET
No. N-Scale 1./5000

Gardner Pinnacles. Hawaii, T.H.

Date of Instructions: March 26, 1927.
Date of Survey: July 19, 1929.
Chief of Party: K.T. Adams, H & G Engineer.
Topographer: V.M. Gibbens, Aid.

LIMITS: Gardner Pinnacles.

CONTROL: For the control a Theodolite was set up at Gard and angles turned from Mark to the various points on the Island. The azimuth of Mark was determined by astronomical observations.

METHOD: The Theodolite was set up at Gard and angles were turned to the various points about the Island, also measuring the depression angles. The elevation of the Island was obtained by taping up one side of the Island with a three hundred foot tape and measuring the depression angle. The Theodolite cuts were supplemented by sextant cuts to tangents and points. A rough traverse was run around the Island with a three hundred foot tape making a free hand sketch as we went. The Northeast side of the Island is mostly from sketch as the sides were steep and could not get any angles from there. The small detached pinnacle was mostly from sketch, as only a very few cuts and angles were obtainable.

GENERAL DESCRIPTION:

Gardner Pinnacles are solid volcanic rock pinnacles, the larger pinnacle being 190' in elevation. They are barren of vegetation, but are covered with guano. From a little distance away and when the sun is shining on the larger pinnacle, it looks as if it was snow capped. The landing was made just north of the bight on the west side of the Island. Landings have to be made in comparatively smooth weather.

Four Kodak pictures of Gardner Pinnacles are on the following page.

Respectfully submitted,

V.M. Gibbens
V.M. Gibbens, Aid.

Approved:
K.T. Adams
K.T. Adams
Chief of Party.

PICTURES TO ACCOMPANY DESCRIPTIVE REPORT OF GARDNER PINNACLES



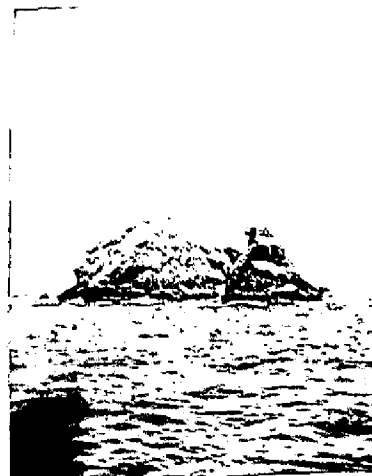
Looking at large Pinnacle
from the West. Arrow Points
to where landing was made.



Looking at both Pinnacles
from the West; the smaller
Pinnacle being on the left
hand side of the larger
Pinnacle.



Looking at both Pinnacles
from the South.



Looking at both pinnacles
from west North West.

STATISTICS SHEET NO "N"

Statute miles of high water line-----0.4

Square miles of area-----9.91

Working days----- 1

Number of men in party----- 3

Applied to Compilation of Chart 4102 7/14/60 ERI

Topographic data on
Gardner Pinnacles

H.I.

U.S.S. Garde

R. T. Adams

1929

Filed in des. report

at T. 4474

Gardner Pinacles

July 19, 1939.

Azimuth Mark = crack between
two rocks on top of and in the
center of the smaller and
detached Pinnacle Rock.

Station A

On S.E. edge of Top of the
Pinnacle.

Telescope of instrument level
with top of the Pinnacle.

Azimuth Mark

Sta A 24-53

Station B

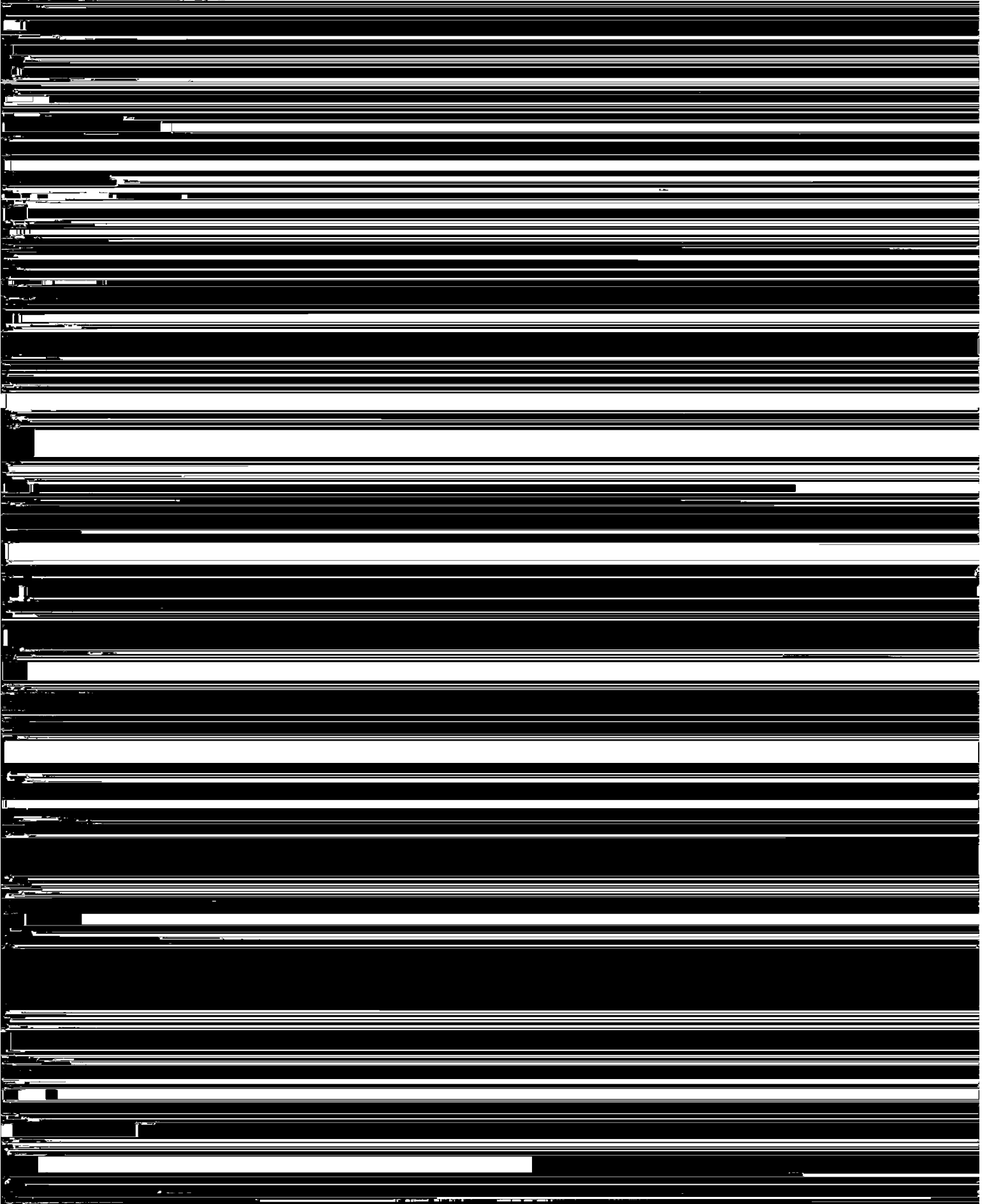
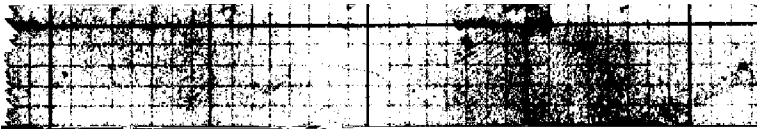
K 22.6 → 207°15'

Gard

41

5/2

—



A
5

Gard
Mark

Hor 4

34-55

R Tan
Mark

87-57

4
Mark

47-36

3
Mark

58-21

(4)

Gard
Mark

38-13

3
Mark

72-54

4 Tan 3
Mark

62-18

R Tan 3
Mark

110-58

Tan about 4 way
to top

R Tan 6
Mark

54-35

4 way up

(3)

Gard
6

95-54

V.A. Dist
42-17 179

6
Mark

64-16

112-29
121

R Tan
6

99-173

W to Gard

R Tan
Mark

70-32

V.L. Gard

R Tan
4 Tan

66-36

Gard

Gard
5

142-27

Mark
5

108-11

Top Mark
to W.L.

8°20' V.A. 9°43'

R Tan
4 Tan

9°46' at W.L.

L. Tan. Gard. R. Tan. Mark

Rock - Mark

V.A. To (7) 49°53'

V.A. (2) 41°08'

V.A. (5) 23°28'

(1)

(2)

(2)

(3)

56-17

89-21

PACIFIC OCEAN

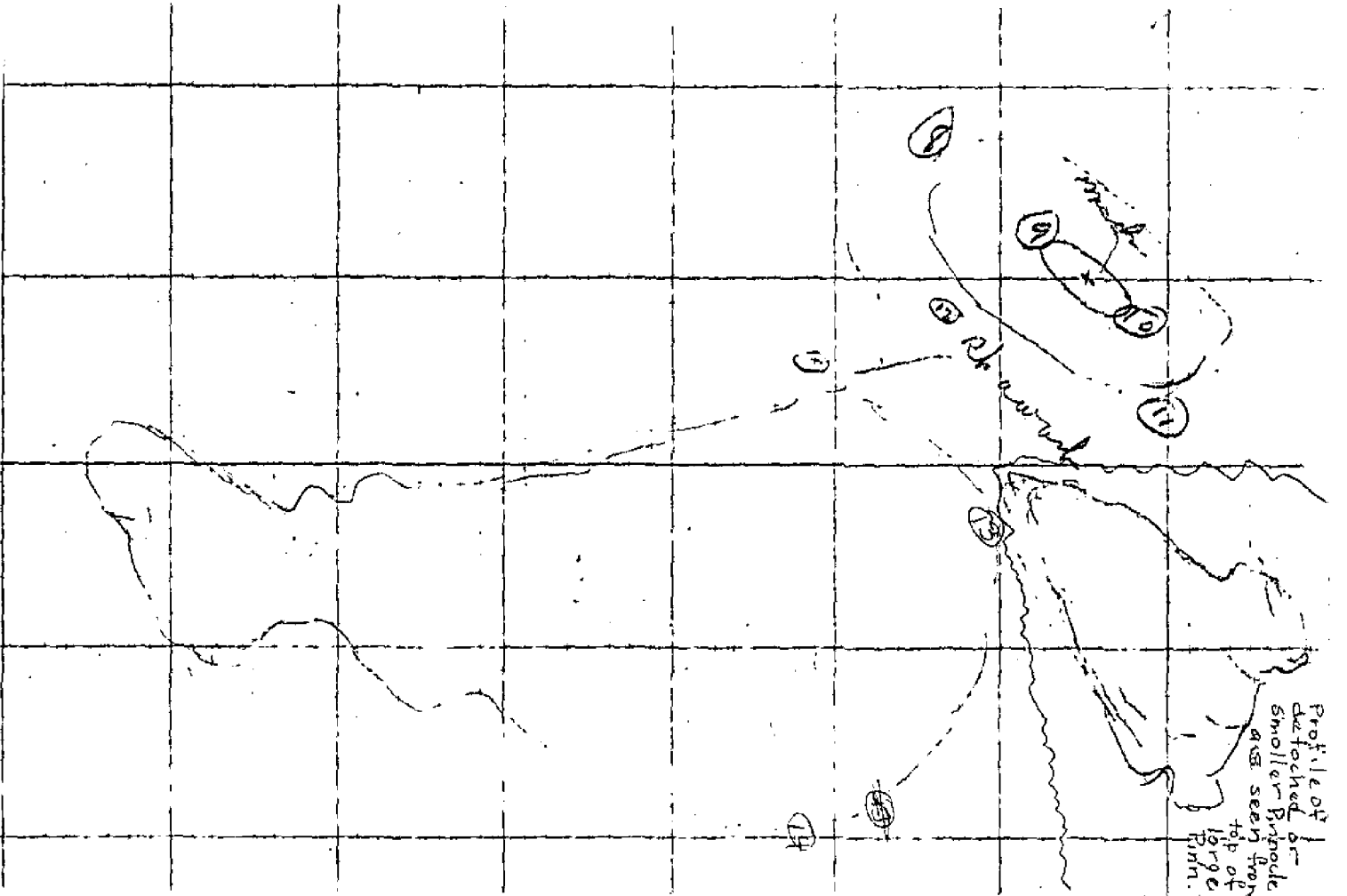
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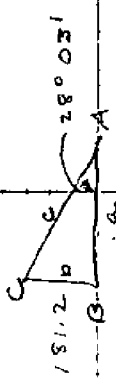
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10-2

300

20





$$\frac{118-03}{28-03}$$

$$\tan 28^{\circ} 03' = \frac{181.2}{a}$$

$$a = \frac{181.2}{\tan 28^{\circ} 03'}$$

$$\frac{2.2581308}{2.5315427} = 340.05$$

$$\begin{aligned} \tan A &= \frac{b}{a} \\ b &= \tan A \cdot a \\ a &= \frac{b}{\tan A} \end{aligned}$$