

ROTH
#7A of
16 Dec 79
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~~slopewash, it is evidence~~
~~movement of archaeological material by slopewash.~~
~~, however,~~
~~It is probable, that distribution patterns of the various~~
~~types of items have been distorted by this mechanism,~~
~~rather than totally destroyed, this~~
~~clearly discernible~~
~~the concentration of items that form this and~~
~~hundreds of other, similar features as well as the differential~~
~~distribution of items within the feature support the~~
~~conclusion that spatial patterning within the feature~~
~~have been distorted by mechanism of erosion,~~
~~have not been destroyed by the removal of their soil~~
~~context, but rather distorted.~~

c. 1060

946-2295

2648 Kaitei

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to the north and west, is ~~a hard~~ ^{hard} saprolitic hardpan, almost
totally ^{gently-sloping land} devoid of vegetation. Part of the eroded area is along the

750-ft (c. 229 m.) contour ~~forming~~ ^{that} may be ~~loosely~~ ^{loosely}
~~called~~ ^{termed} the central plateau of the island.

~~Site 109~~

~~Feature 109A is situated~~

Feature 109A

~~Feature 109A is situated on, eroded land~~ ^{gently-sloping (c. 7% grade)}
~~6000 ft~~ ^(c. 600 ft.) ~~(c. 2100 ft.)~~
c. 1.8 km) northeast of Kamohio Bay and (c. 600 m) east
of Kaneloa Gulch at about 1060 ft. (c. m.) elevation.

~~No vegetation grows on the site, though~~ ^{though} ~~the~~ ^{kaie}
trees and grass ~~grow~~ ^{can be found} on nearby remnants of soil,
~~no vegetation grows~~ and in the gulches, no vegetation
^{feature}
grows on the ~~site~~ itself.

~~Feature 109A is~~

Interpretations and Conclusions: Outline

I. History of the Feature:

A. Time span: ~~whole feature~~

- 1. Whole Feature
2. Single square brackets whole sequence, so that seems temperature is not an important factor.
3. (note: erosion)
3. Feature seems to represent major occupation of the ~~sub~~ interior of the island.

B. Duration and number of uses.

1. Problem: permanence of Kawa habitation sites
2. Constant occupation seems unlikely: no structure; rel. little inventory
3. Intermittent seems ~~more~~ likely: if so, how often and how many times.
4. On basis of dates so far; ^{at least} many occupations as years is possible.
5. Minimum: how reached & pass period between occupations
6. Why return here? -- how much to do with ~~for~~ ^{foreign} and function of site

II. Form of the site:

- B. Stratigraphic context removed by erosion, so horizontal distribution not ~~possible~~ available
- C. At least two fireplaces; concentrations of activities seem still to be visible

A. Probably
no structure
or very
small (+)

~~P. Multiple B~~
E. At least ~~3~~ uses seem ^{likely} ~~possible~~ in remains:

- 1) ~~Thucleis~~ ~~4~~ } based on such factors as
- 2) ~~Nucleus 2~~ (unlike 2 large fires so close)
- 3) Deposition on top of nucleus 2
- 4) Wide spread of items?

E. Prob. ~~few~~ users (size const. material)

~~D. Same feature~~

III. Function of Site

A. Probable activities

- 1) Fire building (heat at least, ^{prob. cooking} ~~poss. light~~)
- 2) ~~Cooking~~ & Eating (shells)
- 3) Cooking: (stones)
- 4) basaltic glass working
- 5) ~~basalt working~~

Note: # of flakes vs. # cores

5) basalt working: note: flaking/adzes

6) Sleeping (likely)

7) hut-building (probable: rain possibility)

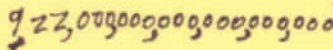
~~8) Farming nearby (assess)~~

B. Primary function?

IV. Place in the settlement pattern

IV ~~11~~. Erosion Effects: ~~A. advantage: whole array used~~

A. ~~Advantage~~ Intro: 1084 one of ~~the~~ several hundred,
so we must assess value of them singly and as a pattern



1 grain doubled 6 4 times

and what kind

- V Feature 109A in the Kaho 'olave archaeological context
A. Inland vs. Coastal

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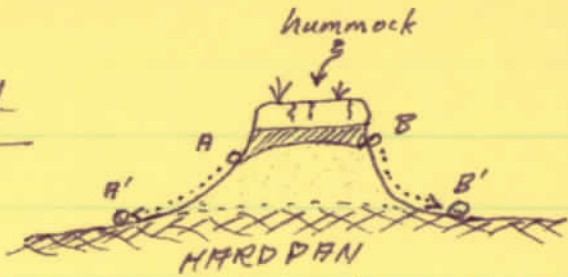
Tentative Conclusions:

- 1) At least two fireplaces
- 2) Multiple uses over — years
- 3) Some reason for repeated use
- 4) Basaltic glass worked here on relatively large scale
- 5) Basaltic glass probably used elsewhere more than in place (note ratios)
- 6) Possibly adzes ^{preforms} were worked at 109A, since ~~from~~ the small numbers of cores indicates little production of flakes as tools. (Note 3(?) adz preform frags)
- 7) All activities tended to be centralized in the northeast quadrant of the site.
- 8) Erosion has not destroyed spatial ~~info~~ distribution information altogether. Note: ^{good} no evidence of sorting according to size or mass.
- 9) Possibly diff basaltic glass activities in various n vs. s part of the site: (note core/flake ratios)
- 10) The &/or function of the two (?) fireplaces poss. different (see dist of other materials.)

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- 11) Very little coral use: those few are tool-quality, probably
- 12) Intermittent use over span; poss. as many as few as 6 distinct ~~uses~~ (only return here?)
- 13) Function unknown: but connection w/coast is clear

Lateral Displacement



Mechanisms:

1. ~~Gravity plus slope (contributing slump)~~

a) ~~sliding~~

b) ~~rolling~~

* Gravity operates in cases 1-3 & 5 all cases

2. Sheetwash & Gullying NW → SE

3. Wind NE → SW

4. Explosive Ordnance

5. Bioturbation

a) non-human (mainly goats)

b) human

Nonrandom distribution

1400-1650

250

500

1800
1300
500

24
5
120
3
600

100
0 = 30 yrs
80
56

Of equal importance was the collection of detailed data on ~~the~~ this feature to ~~provide~~ provide a context within which the ~~significance~~ nature and significance of ~~other similar~~ the ~~number~~ hundreds of ~~other~~ similar features situated in central Kaho'olawe.

Setting

Kaho'olawe is the smallest of the eight ^{Hawaiian} major islands, being 45 sq. mi (c. 116.5 sq. km) in size. ~~It~~ It receives the its summit, Lua Mahika crater, is 1477 ft (c. 450 m) high. It is the most arid island both because ~~of~~ its low relief (Lua Mahika ~~and~~ reduces orographic rainfall and because it ~~is in~~ is situated in the rain-shadow of 10,023 ft (c. 3055 m) ~~east. Maui~~ Haleakala, the mountain that forms eastern Maui, which is only 7 mi (c. 11.3 km) to the north.

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✓ The ~~salvage of Site #109A~~ ^{Feature} project 109A fieldwork was conducted under contract

with the U.S. Navy from ~~the~~ the 19th through the 23rd of November 1976 by a research team ^{that included} ~~that included~~ composed of Robert J. Hammon, ^{Archaeologist on} ~~and Farley Watson of~~ the State Historic Preservation Officer's staff; Farley Watson, ^{Historic Sites Specialist} of the Historic Sites Section of the Hawaii Department of Land and Natural Resources; Mervyn Morgenstein, geologist and president of Hawaii Marine Research, Inc.; and Patrick McCoy, ^{Archaeologist with} ~~of~~ the Bishop Museum.

The ~~purpose of the salvage of~~ Feature 109A

In addition to preservation of data

Feature 109A was salvaged in order to preserve the data and cultural materials, ^{contained within it} ~~as well as to establish~~

✓ This is a preliminary report on the ^{collection} ~~salvage~~ of cultural
data from Feature A of archaeological site 20-97-109 on the
island of Kaho'olawe. This ^{which was conducted under a contract with the U.S. Navy} ~~project~~ ^{works and} took place during the early
phase of the Kaho'olawe Cultural Resources Survey, ~~which~~
~~a continuous on-going~~ ~~an on-going~~
an on-going project ~~that~~ sponsored by the U.S. Navy,
which ^{uses the island for training purposes} ~~controls the island~~. The purpose of the survey is the
identification and evaluation of the cultural resources of
Kaho'olawe, ~~near~~ ^{and nearly all of which are ancient Hawaiian archaeological sites} to allow the Department of the Navy to fulfill
nearly all of which are ancient Hawaiian archaeological sites.
The Navy undertook the survey of Kaho'olawe in order to fulfill
its responsibilities under ~~the~~ Executive Order 11593 and
the National Historic Preservation Act of 1966.

RJN
#210p
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~~A concentration of~~
A tendency for all items to concentrate in the northeast
quadrant of the feature. (~~extending~~ is readily apparent, as
is ~~a concentration~~ ^{cover} of unworked basalt ~~concentrated~~
the ~~fact~~ ^{quadrant} in extensive area extending from
the ~~northeast~~ ^{quadrant}, into the southeast quadrant, without

U	22
U-G	3
U-G-B	2
U-G-B-S	4
U-G-S	2
U-B	3
U-B-S	
U-S	3
G	1
G-B	
G-B-S	4
G-S	2
B	1
B-S	
S	1

U	22
U-G-B-S	4
G-B-S	4
U-G	3
U-B	3
U-S	* 2
U-G-B	2
U-G-S	2
G-S	2
G	1
B	* 2
S	* 2
U-B-S	-
G-B	-
B-S	-

49?

Unnumbered Basalt 37

- 1-296
- 2-238
- 3-175
- 4-134 154-4
- 5-144-5
- 7-117
- 8-113
- 9-100 ✓
- 10-95
- 11-92
- 12-86
- 13-83
- 14-80

- 15-75
- 16-71
- 17-67 ✓
- 18-63 ✓
- 19-60
- 20-59 ✓
- 21-57
- 22-54 ✓
- 23-52
- 24-49
- 25-48
- 26-44 ← 43-27
- 27-41
- 28-40 ✓
- 29-40 ✓

B-glass

- 1-47
- 2-45
- 3-43
- 4-41
- 5-38
- 6-37

- 7-30 ✓
- 8-27
- 9-22
- 10-21
- 11-17
- 12-16

- 13-14
- 14-13 ✓
- 15-12

- 1-8 ✓
- 2-7
- 3-6 ✓
- 4-5 ✓
- 5-4 ✓
- 6-3 ✓

14

50 sq = 100% @ 25 m

KHLWE

Site 109
Prelim Dist
SQUARES = 2x2 m

100	+200	# Squares
50	+100	2
25	+50	5
	+25	19
		15
		35



Contour map:
1.80m in 25m
(c. 7% grade)

1.80
1.94
0.19
1.80

22
22
25
27
28
124 - 4m sq.

-496 sq. m. = 5338.9 sq. ft.

C. 28x
30m at
max extent

355
233
6
28
30
632

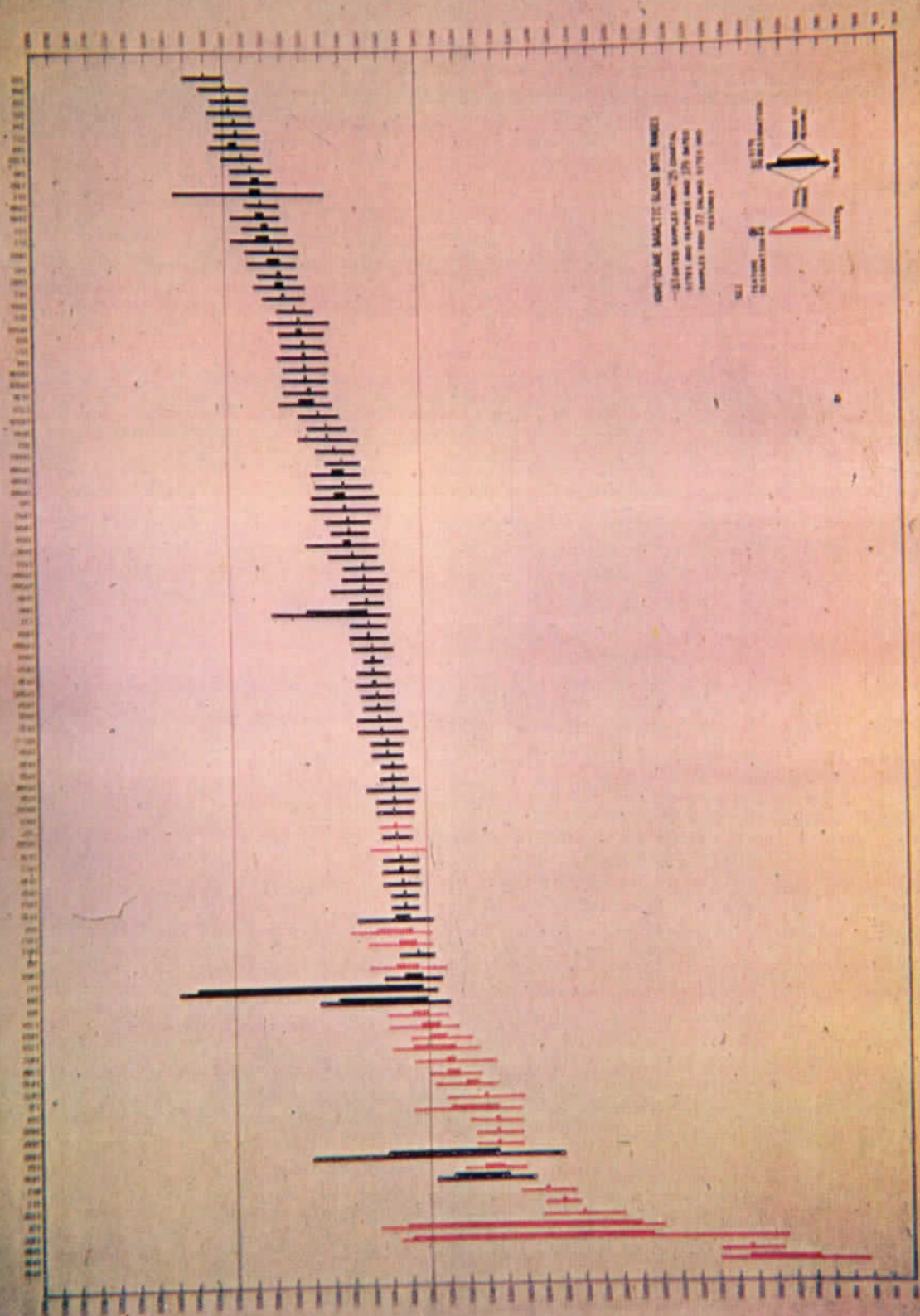
2,38 m
Total Mollusc
Shells & Frags

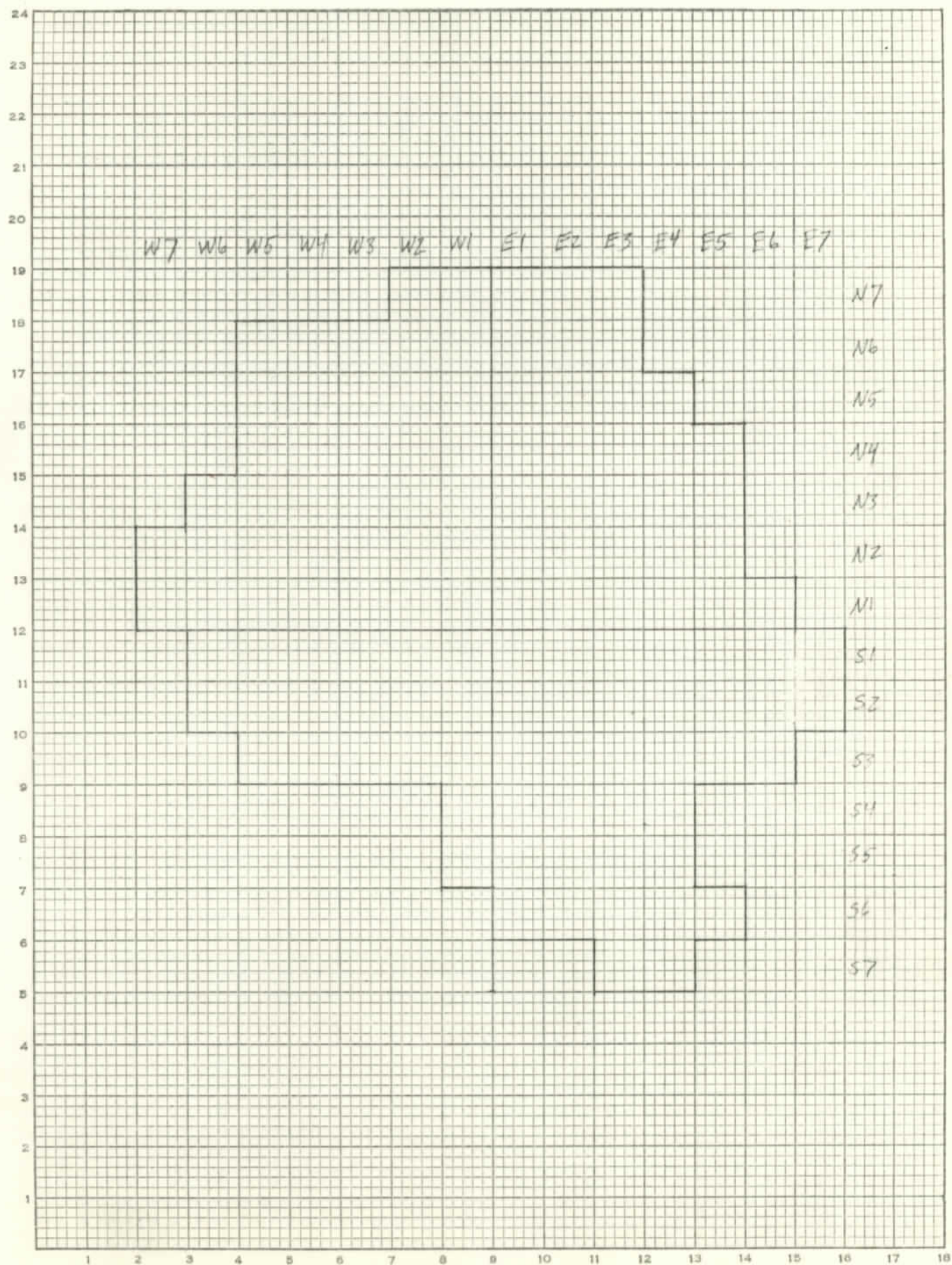
1	N1W1	2
2	N1W2	2
3	N1W4	1
4	N2W1	2
5	N2W3	1
6	N2W4	1
7	N3W1	4
8	N3W5	1
9	N4W5	1
10	N5W3	1
11	N6W2	1
	N5W4	
12	S1W2	1
13	S1W3	2
14	S2W2	2
15	S2W3	3
16	S2W4	1
17	S3W1	1
18	S3W2	1
19	S3W3	1
20	S3W4	1
21	S3W5	1
22	S4W1	1

(p1.3)

23	N1E1	3	✓
24	N1E2	7	✓
25	N1E3	2	
26	N1E5	2	
27	N2E1	7	✓
28	N2E2	4	✓
29	N2E3	4	✓
30	N2E4	4	✓
31	N3E3	3	✓
32	N3E4	4	✓
33	N3E5	1	
34	N4E1	1	
35	N4E2	1	
36	N5E2	2	
37	N6E1	1	
38	N6E2	1	
39	S1E1	1	
40	S1E2	7	✓
41	S1E3	11	✓
42	S1E4	1	
43	S2E1	1	
44	S2E2	3	✓
45	S2E3	11	✓
46	S2E4	2	

47	^{P5} S3E1	1	
48	S3E3	1	
49	S3E4	4	✓
50	S4E1	1	
51	S5E1	1	
52	S5E2	2	
53	^{P6} S6E4	3	✓
54	S7E4	1	
55	S6E5	1	



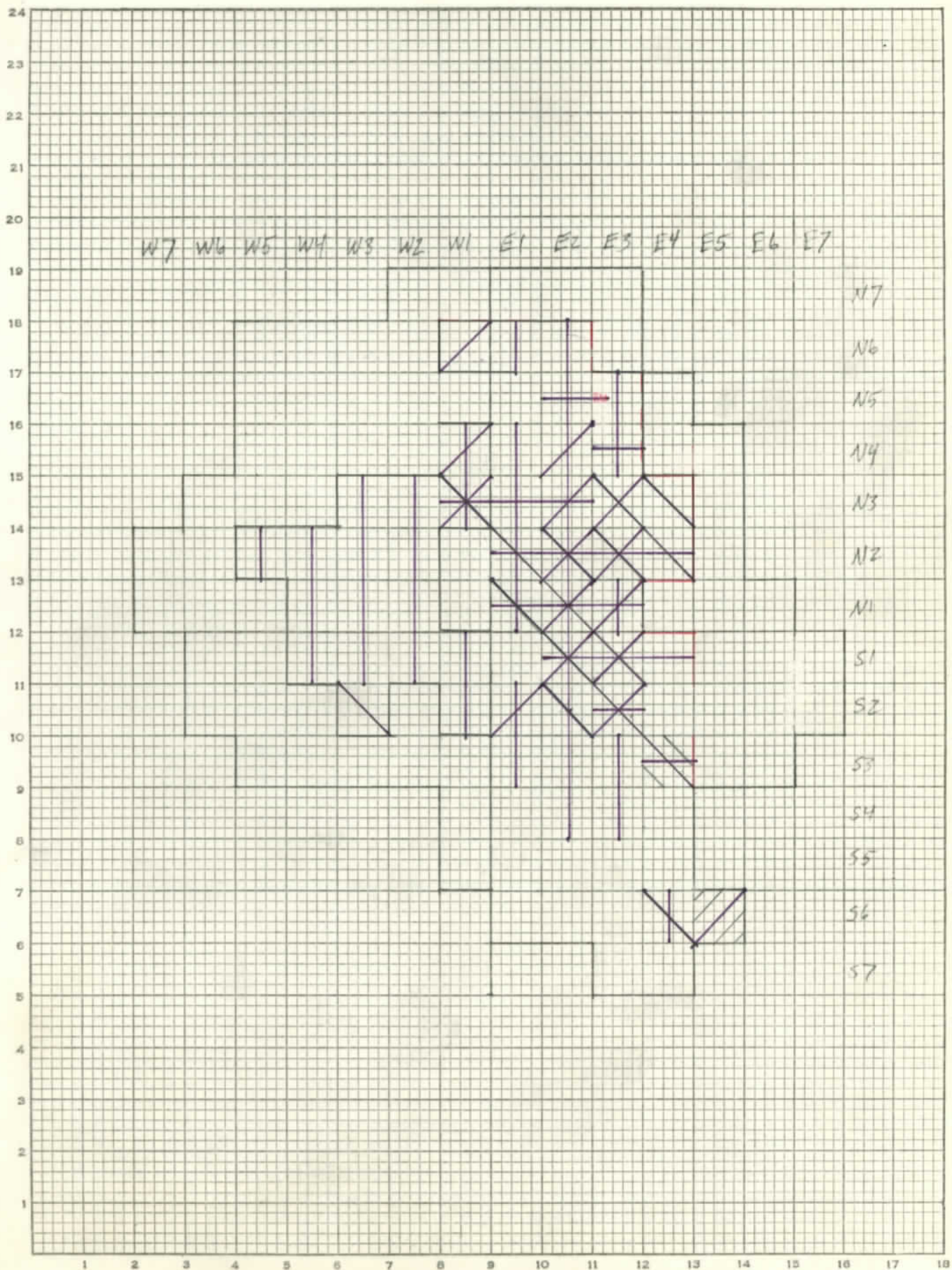


18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

1
2
3
4
5
6
7
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9
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11
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13
14
15
16
17
18
19
20
21
22
23
24

S7
S6
S5
S4
S3
S2
S1
N1
N2
N3
N4
N5
N6
N7

W7 W6 W5 W4 W3 W2 W1 E1 E2 E3 E4 E5 E6 E7



$$\begin{array}{r}
 N5E2 = 100 \\
 T = 668 = 14\% \\
 \hline
 N3E2 \quad 238 \\
 N3E1 \quad 100 \\
 N4E2 \quad 117 \\
 N4E3 \quad 113 \\
 \hline
 568 = 12\%
 \end{array}$$

$$\begin{array}{r}
 296 \\
 175 \\
 154 \\
 \hline
 625 \\
 134 \\
 100 \\
 \hline
 859 \\
 11 \\
 18\%
 \end{array}$$

