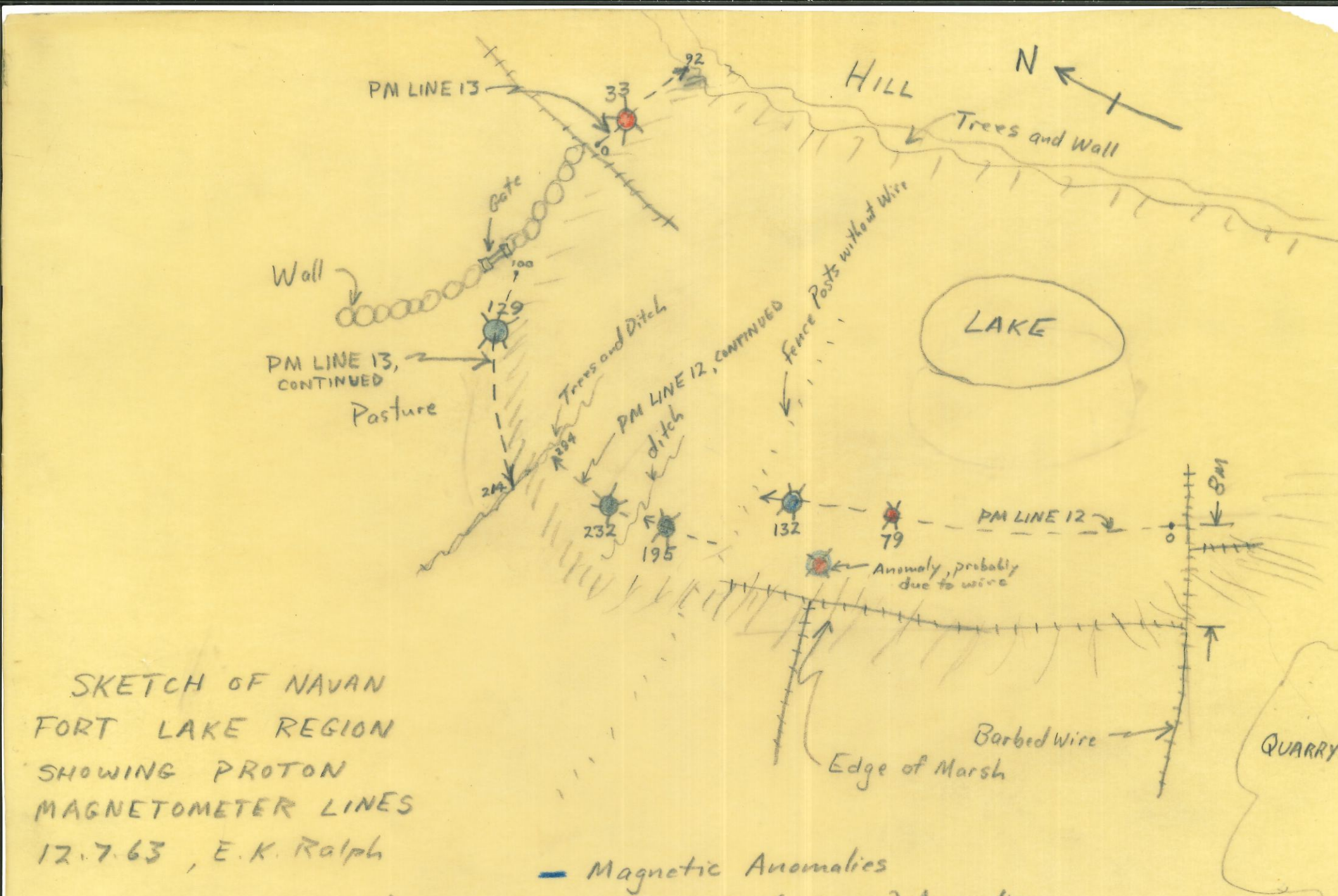


SKETCH OF NAVAN FORT LAKE REGION SHOWING PROTON MAGNETOMETER LINES

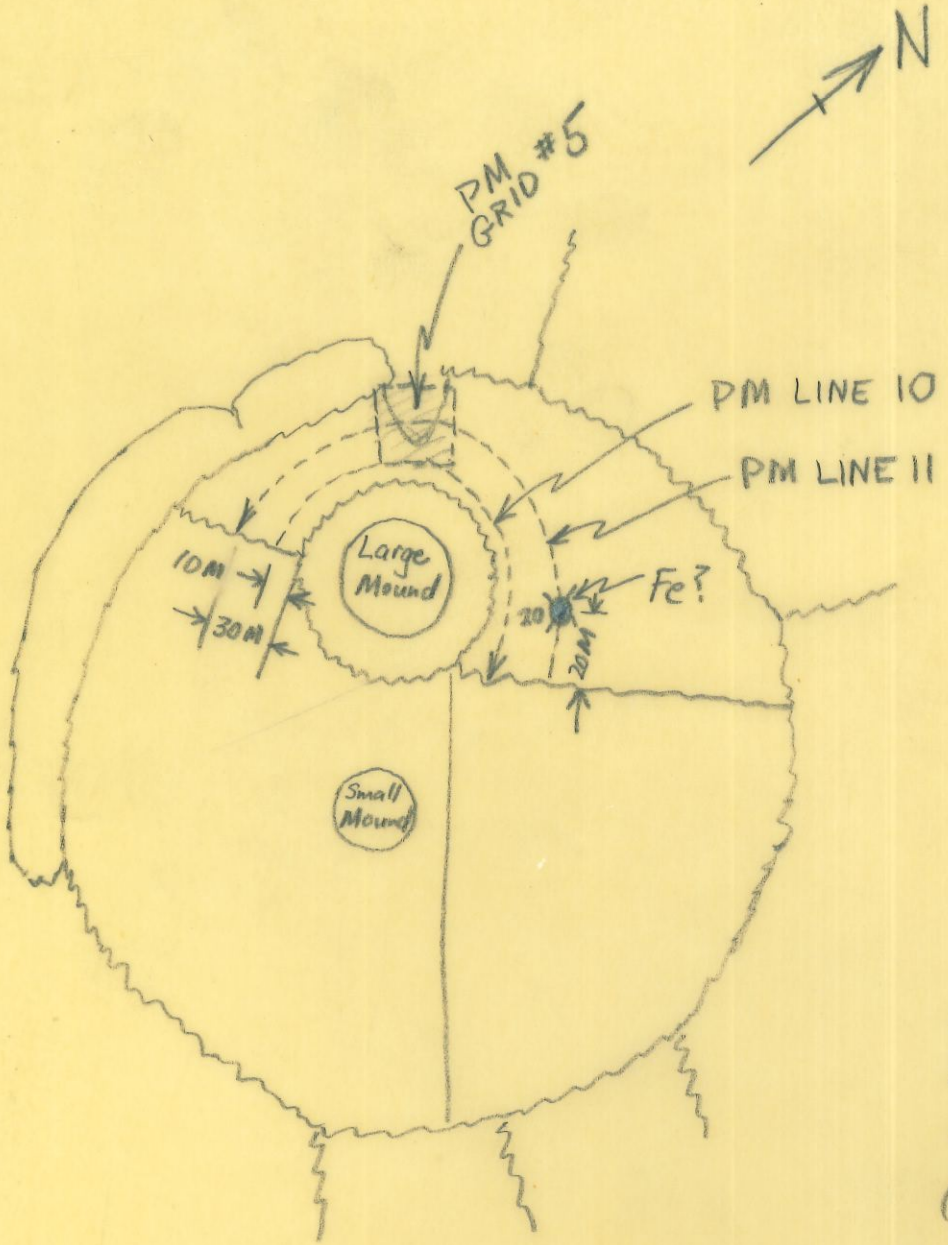
12.7.63, E.K. Ralph

(Not drawn to scale)

— Magnetic Anomalies

— Anti-magnetic (or Reverse) Anomalies

Proton Magnetometer readings were taken at 1 m (meter) intervals with detector bottle ½ m high.



NAVAN FORT

Sketch of mounds and surrounding trees showing location of lines and grid made with proton magnetometer (PM), 11.7.63, E.K. Ralph

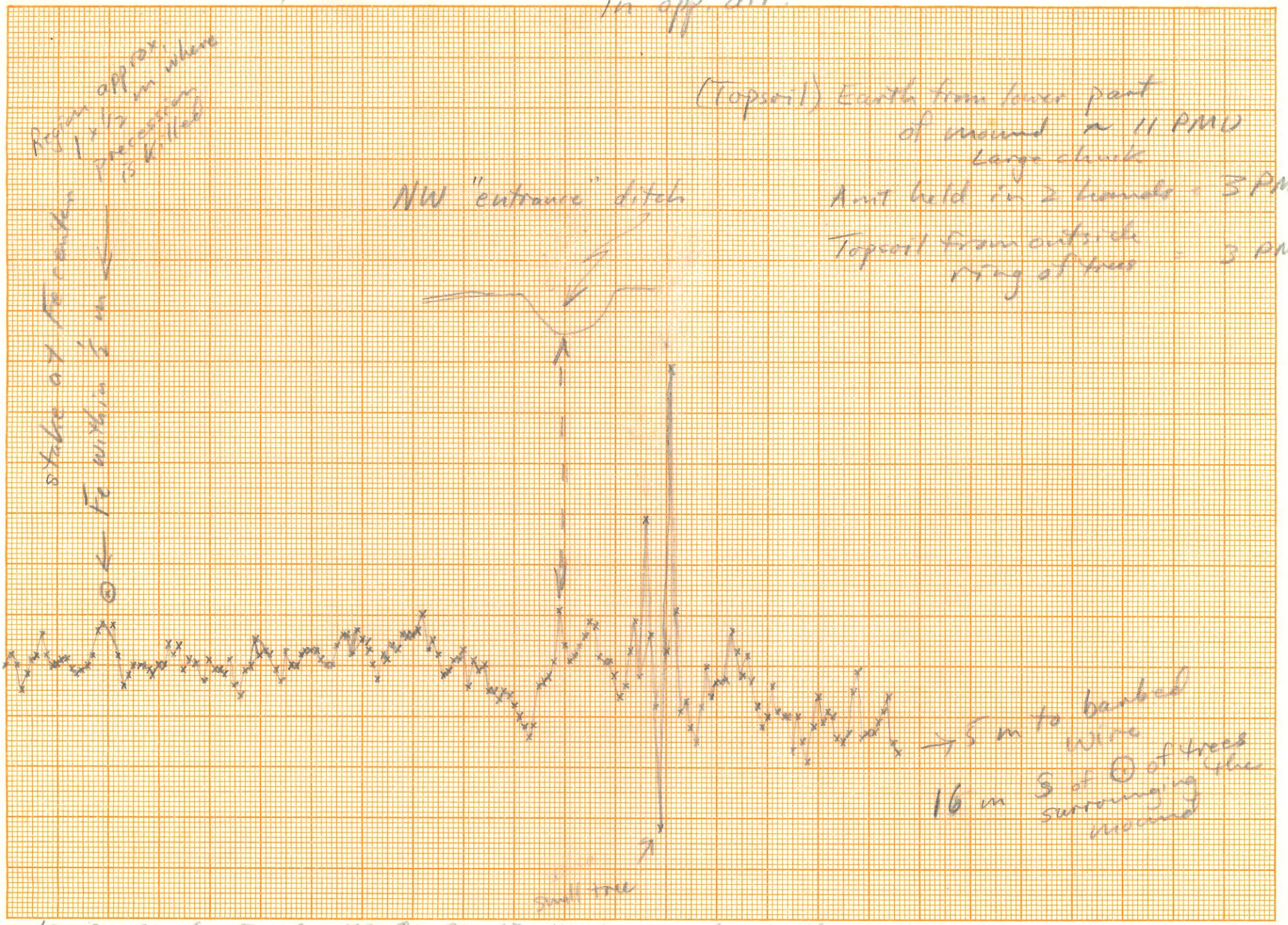
(Corners of the grid and the magnetic anomaly of line 11 are marked with stakes)

Line 10 10 m outside line of trees surrounding the big mound 11.7.63

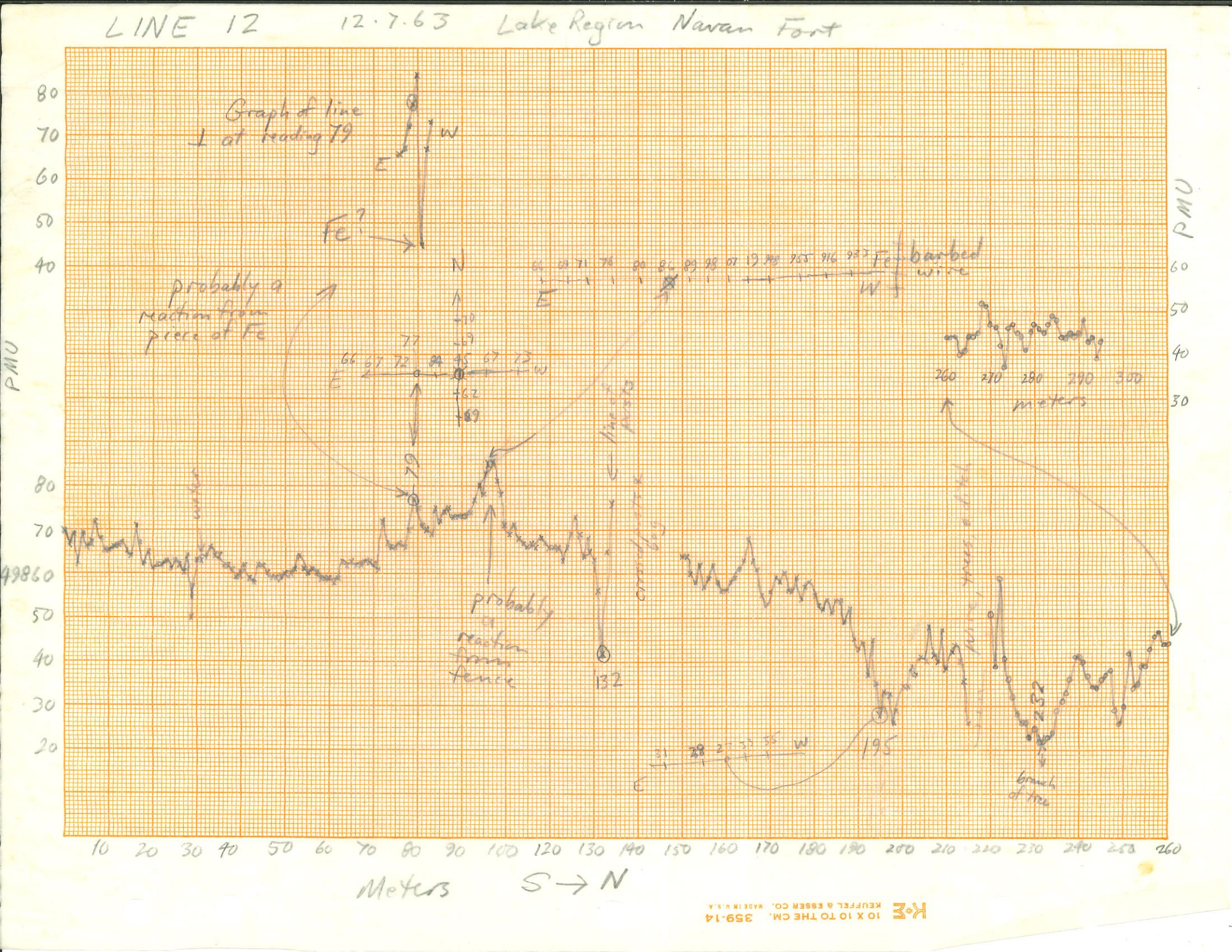
Start = 5 m W of barbed wire which runs ⊥ to the mound

11.7.63

Line 11, 20 m farther from mound than line 10 in app. dir.

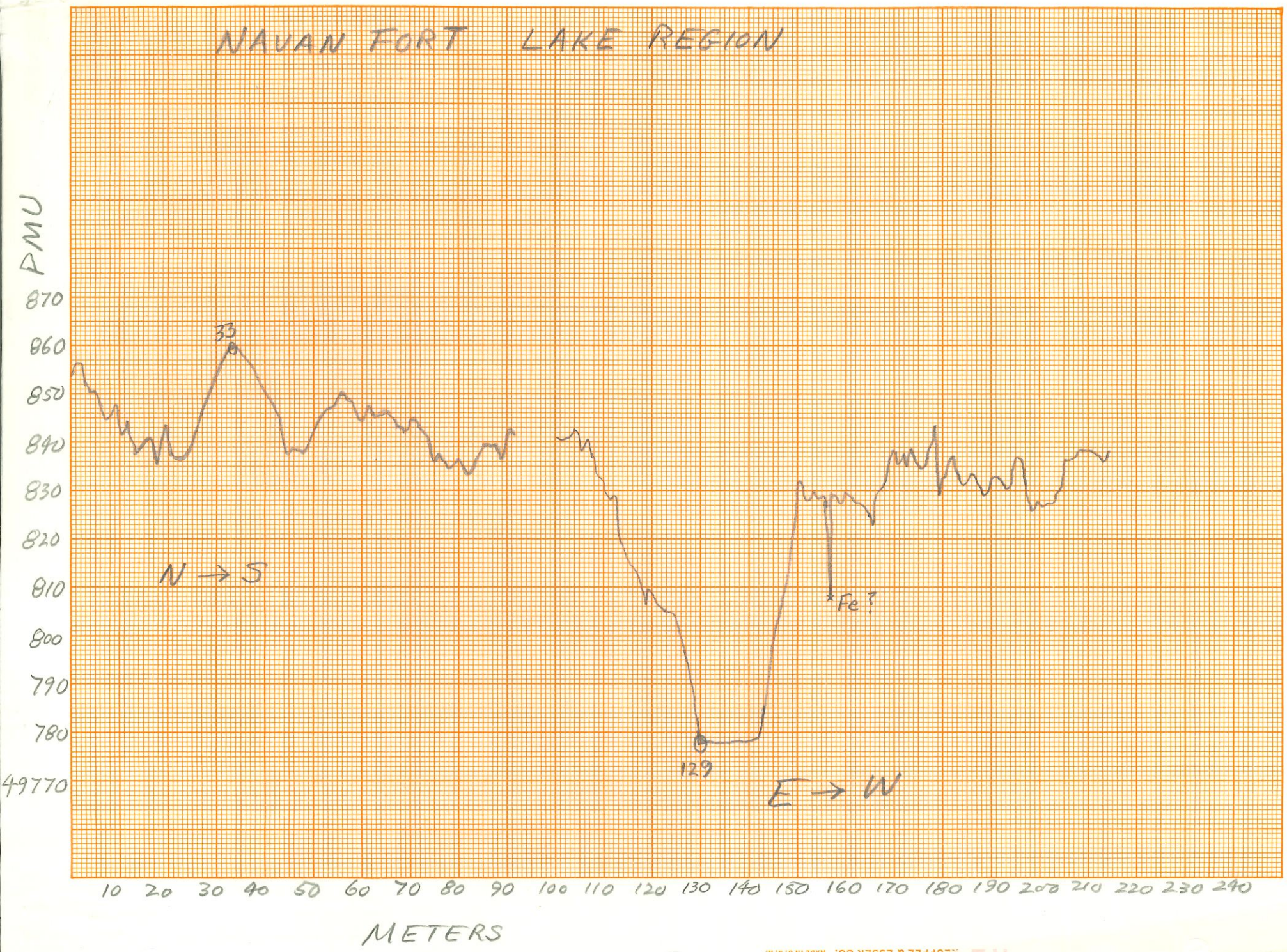


LINE 12 12·7·63 Lake Region Navan Fort

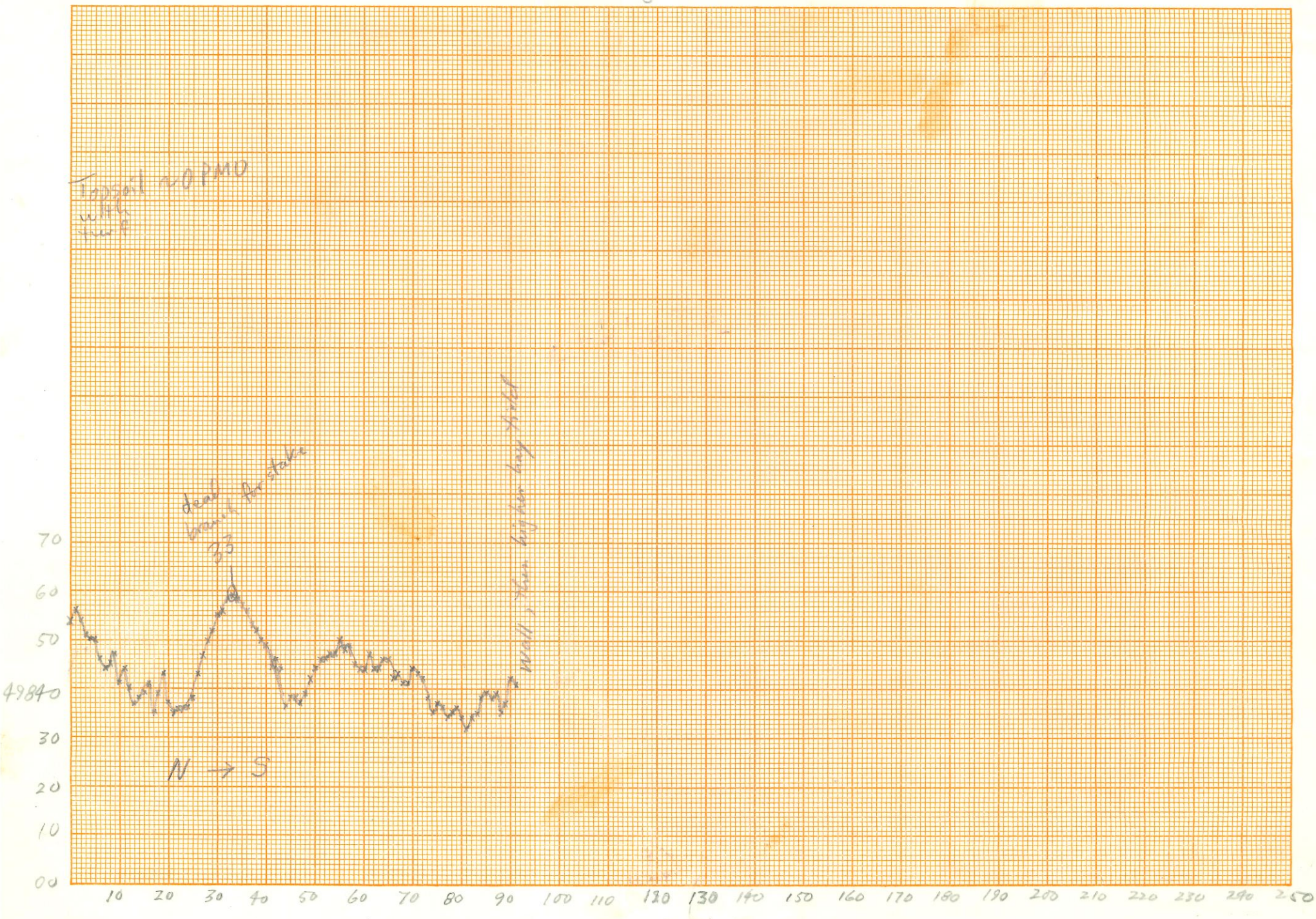


LINE 13

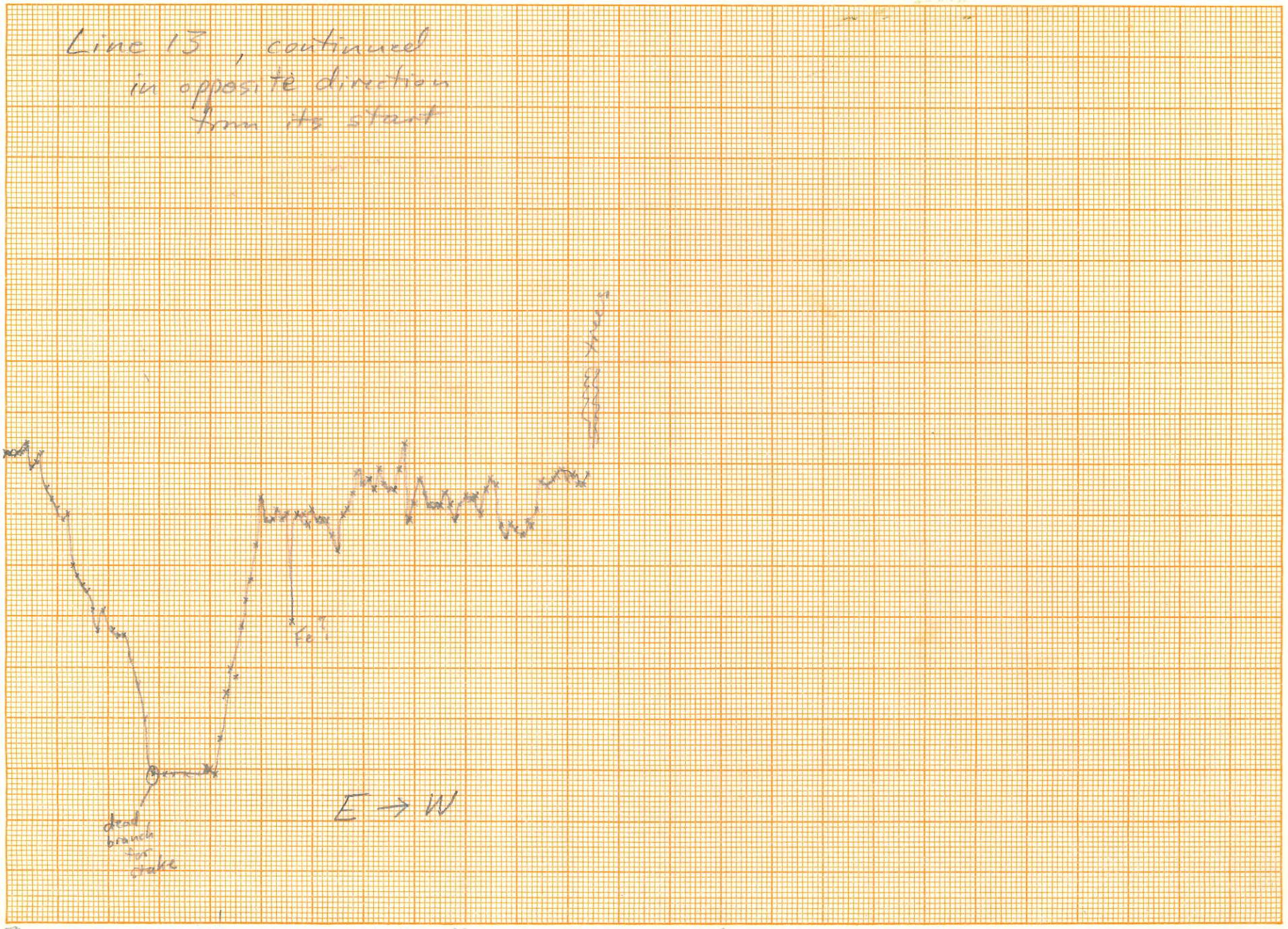
12.7.63

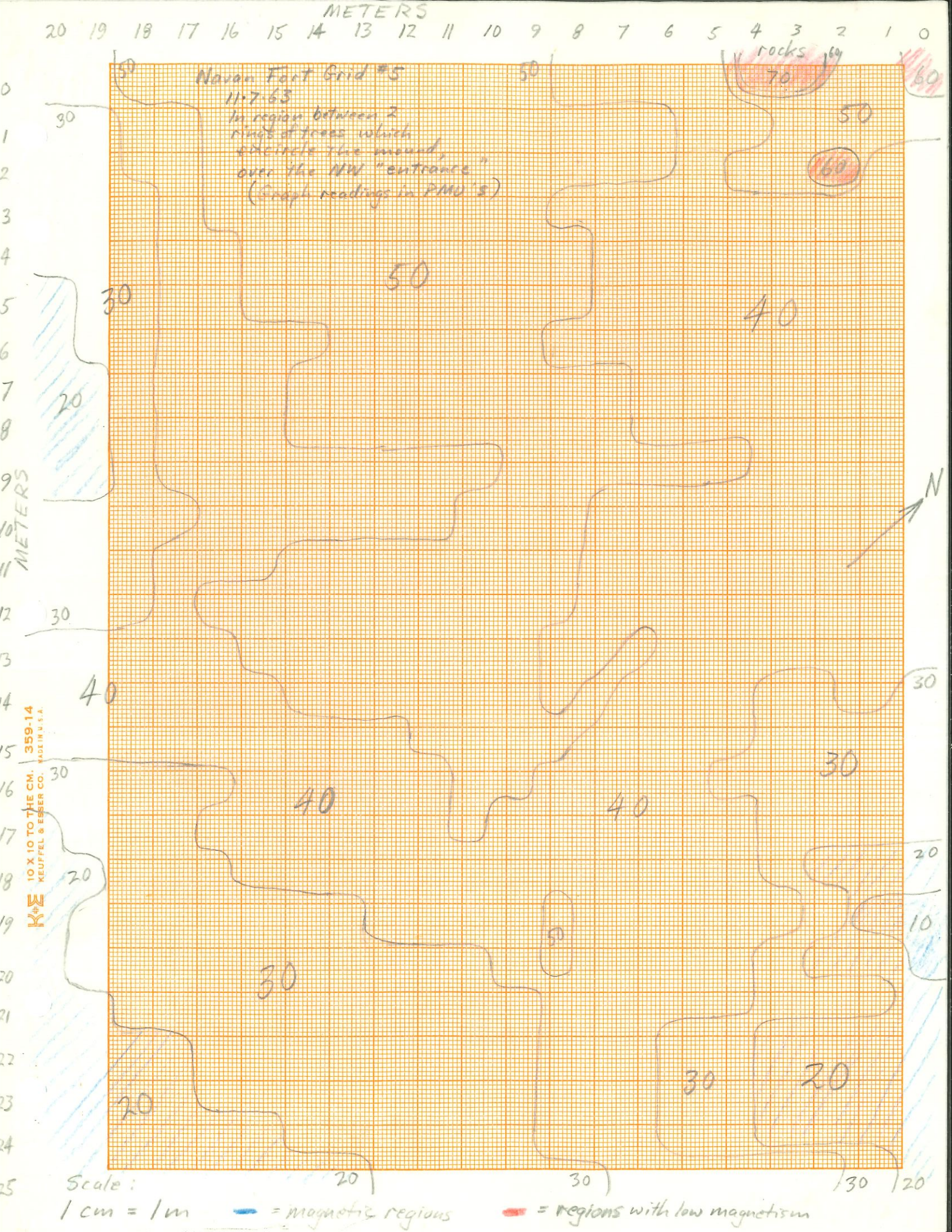


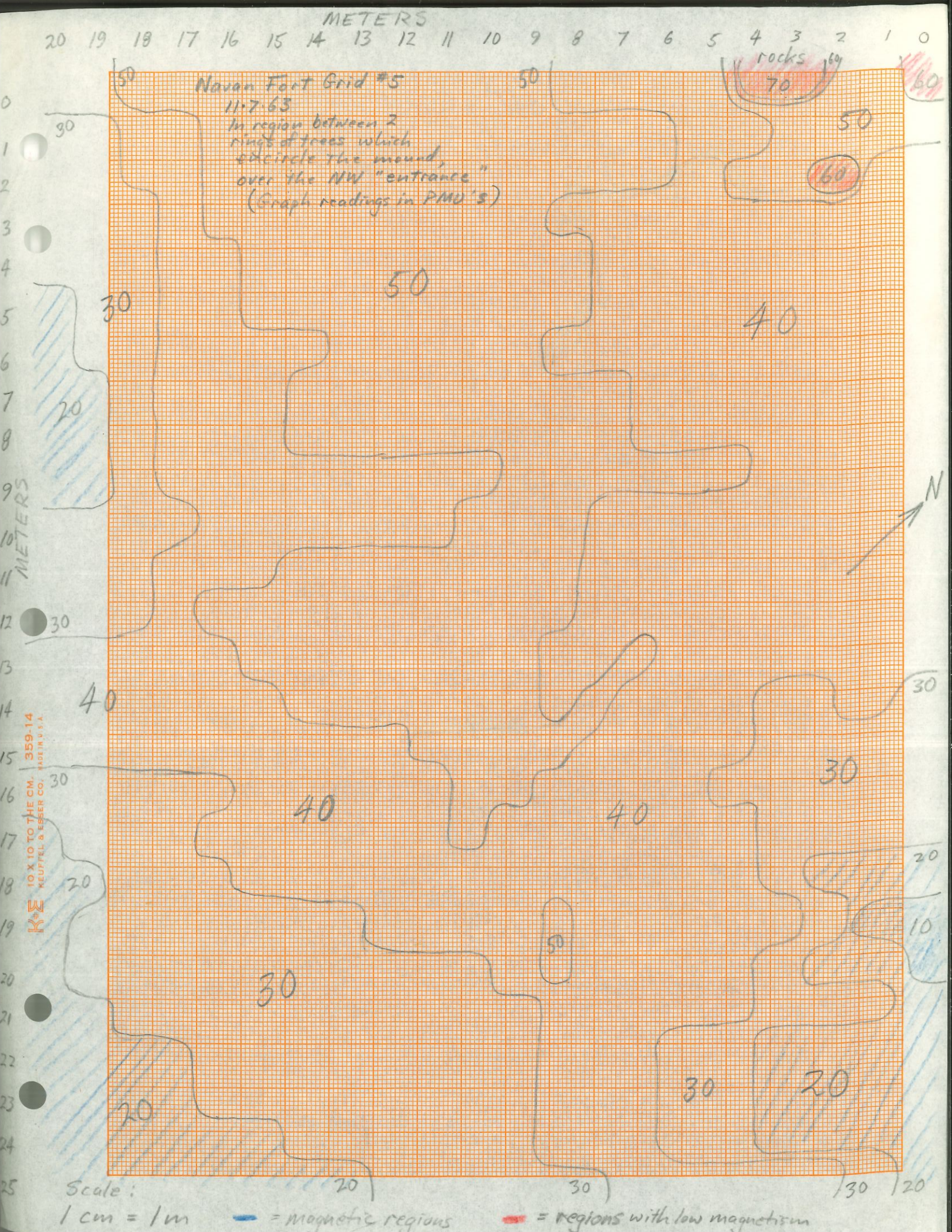
Line 13 Navan Fort, Lake Region 12-7-63



12.7.63




METERS
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0
Navaa Fact Grid #5
11.7.63
In region between 2
kinds of trees which
encircle the mound,
over the NW "entrance"
(Graph readings in PMU's)
rocks
70
60
50
40
30
20
10
N
METERS
10 X 10 TO THE CM. 359-14
KEUFFEL & ESSER CO. MADE IN U.S.A.
Scale:
1 cm = 1 m
= magnetic regions
= regions with low magnetism


METERS
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0
Navaho Foot Grid #5
11.7.63
In region between 2
rings of trees which
encircle the mound,
over the NW "entrance"
(Graph readings in PMU's)
rocks
70
60
50
40
30
20
10
N
METERS
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
10 X 10 TO THE CM. 359-14
KEUFFEL & ESSER CO. MADE IN U.S.A.
Scale:
1 cm = 1 m
= magnetic regions
= regions with low magnetism

Navan Fort

GRID #5

11.7.63

in region between 2 rings of trees encircling mound. Grid over NW "entrance"

20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
																rocks					
40	47	53	50	48	49	51	52	49	47	53	52	48	47	39	35	76	70	49	50	63	- 0
38	35	41	46	55	56	56	57	53	53	56	50	52	54	51	47	48	55	57	45	52	- 1
36	35	40	46	52	54	55	55	57	56	52	54	51	51	53	43	52	51	60	33	43	- 2
35	35	36	44	50	54	55	60	57	53	53	53	49	46	46	47	45	44	47	44	42	- 3
32	34	36	41	48	52	55	58	57	54	54	50	51	49	45	45	47	44	43	36	50	- 4
29	31	39	46	48	51	52	58	53	52	54	51	50	46	44	44	42	41	41	41	43	- 5
27	33	38	42	46	47	49	55	52	51	52	51	48	46	43	43	44	44	44	39	45	- 6
22	25	34	46	47	48	51	55	54	55	58	53	51	51	47	46	41	45	41	32	41	- 7
31	25	33	42	47	45	51	53	54	55	57	54	51	51	47	46	41	39	43	38	5	- 8
27	24	35	40	46	46	51	54	54	49	48	52	53	51	54	50	51	46	41	40	46	- 9
30	31	33	38	41	40	41	41	41	48	53	51	50	41	48	48	47	45	41	42	44	- 10
32	31	33	40	40	44	53	54	53	50	50	51	50	46	47	43	44	39	35	44	42	- 11
34	31	39	41	50	54	56	50	47	50	49	50	50	49	48	46	45	43	44	39	43	- 12
40	39	41	43	43	53	55	54	54	51	50	50	46	44	50	45	42	41	43	46	50	- 13
41	41	41	43	43	43	51	53	54	51	51	52	48	50	44	45	40	39	38	45	36	- 14
41	39	40	43	45	44	43	45	49	54	55	52	53	45	45	42	40	39	40	39	37	- 15
35	37	35	36	36	41	43	41	44	49	50	52	47	45	38	40	37	39	38	38	35	- 16
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24	26	30	30	35	40	44	44	35	40	48	46	44	46	46	45	42	35	21	25	23	- 18
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22	33	30	26	29	27	29	36	40	36	38	43	51	48	40	39	41	37	20	20	19	- 20
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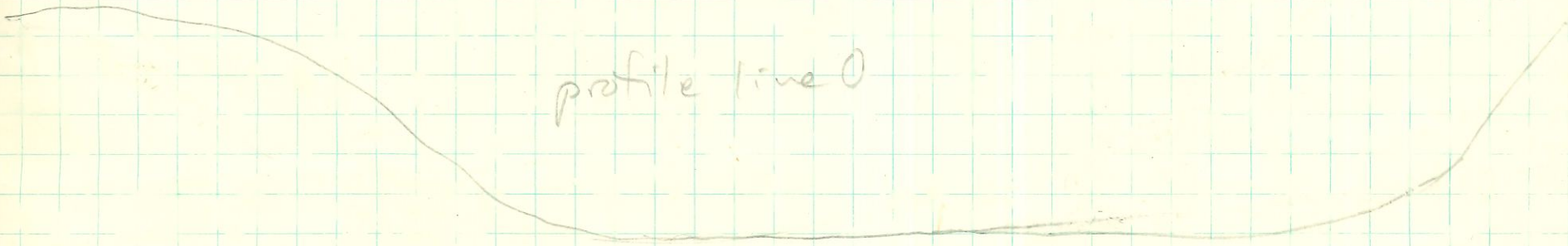
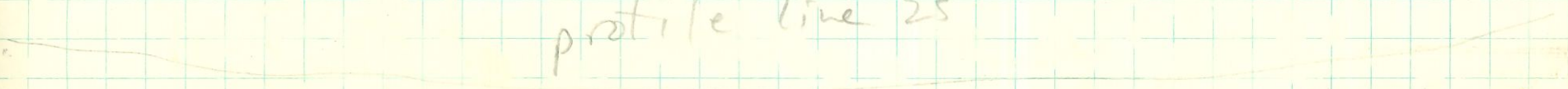
24	24	25	29	31	32	24	30	32	33	36	36	43	48	42	35	36	28	28	28	26	- 22
30	22	27	28	31	26	35	37	36	35	39	37	43	42	43	39	36	29	24	25	26	- 23
19	28	29	30	28	25	31	33	32	33	36	37	41	42	43	37	34	28	24	26	20	- 24
21	26	31	31	33	29	23	28	31	33	31	30	36	38	43	46	47	41	41	31	26	- 25

6 trips 8

N





PROTON MAGNETOMETER SURVEY - JULY 1963

NAVAN FORT

SUMMARY

(See sketches and magnetometer graphs for specific details)

Mound Region

Line 10 - no anomalies
Line 11 - at 20 m from start - a magnetic anomaly, probably a piece of buried iron at shallow depth.

Grid #5

This grid over the so-called NW entrance indicates that the earth in the depression has not been disturbed for many years. Probably the center of the depression has been partly filled over the course of time, as evidenced by the slightly less magnetic soil which is more extensive in lower region (NW) of the grid, i.e. the region where the depression is deepest. The rocks, which are visible on the surface, appear as small anti-magnetic anomalies.

The topsoil in the mound region has high magnetism - causes a change of approximately 7 PMU's when approximately 500 cc. of earth are held against the magnetometer detector bottle. Therefore, the magnetic regions in the east and south corners of the grid probably represent the natural earth, or, at least, the earth of which the mound was constructed.

Lake Region

These anomalies were tested with a rod on 7-14-63.
The results are as follows:

Line 13

An. 33 - anti-magnetic. Sand was found at depth of 1/2 m, probably a heavier and more shallow deposit than in surrounding areas.

An. 129- magnetic. Solid rock was encountered at 1/2 m depth. In a spot 12 meters away, rocks were encountered at 1 m depth. Test excavations of the anomaly and just west of it are needed to explain this large magnetic reading.

Line 12

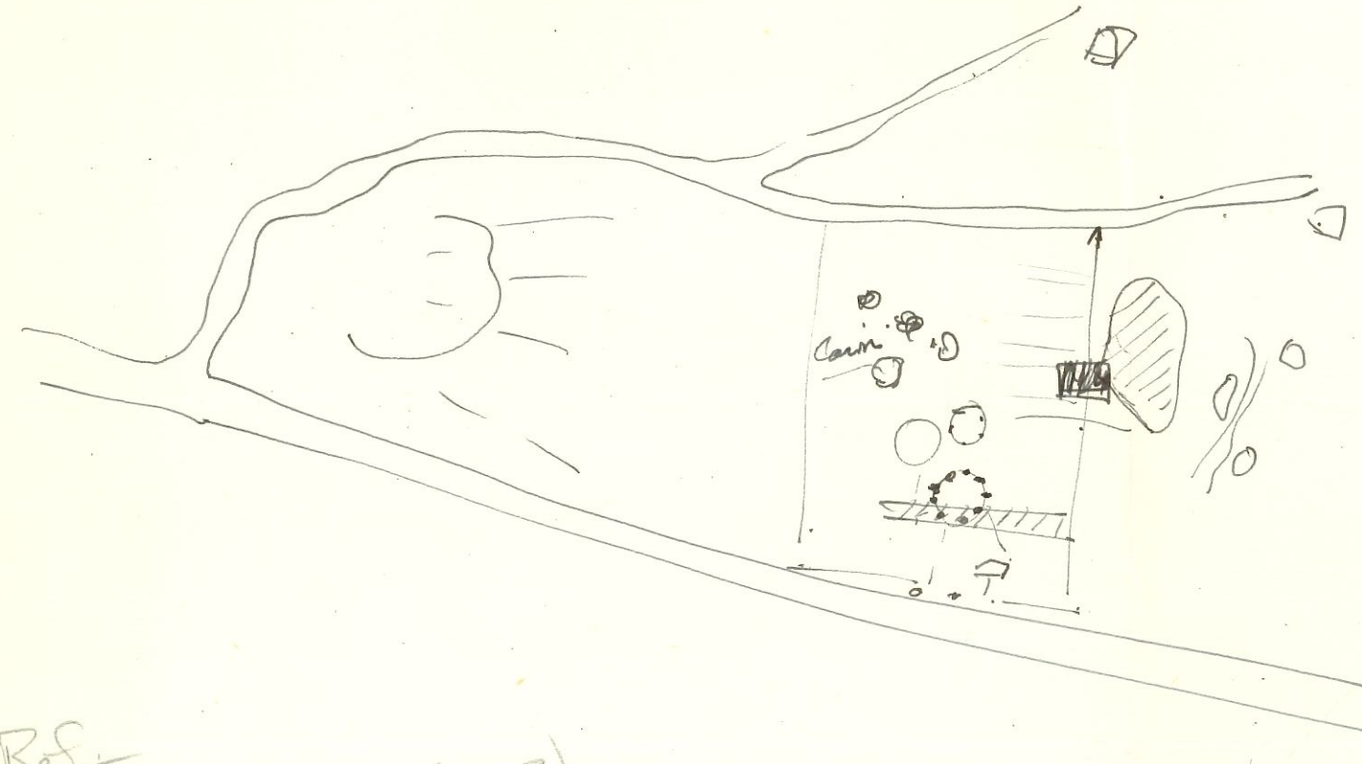
An. 232 - magnetic (17 m wide, 20 PMU). Rod revealed brown mud to depth of 1-3/4 m.

An. 132 - magnetic (4 m wide, 23 PMU), One-half meter north from the center, a large animal bone and rocks were found at approximately 1/2 m depth. This anomaly may, therefore, represent a soil disturbance from the burial of the animal, or there may also be a horseshoe that we did not find.

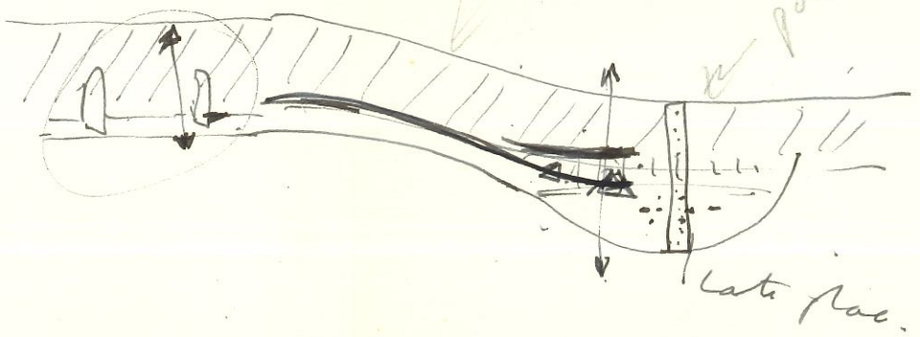
An. 79 - Anti-magnetic, probably a reaction from nearby small magnetic anomaly (3 m wide, 30 PMU) that is characteristic of a small piece of iron at shallow depth.

Elizabeth K. Ralph

Beaghmore



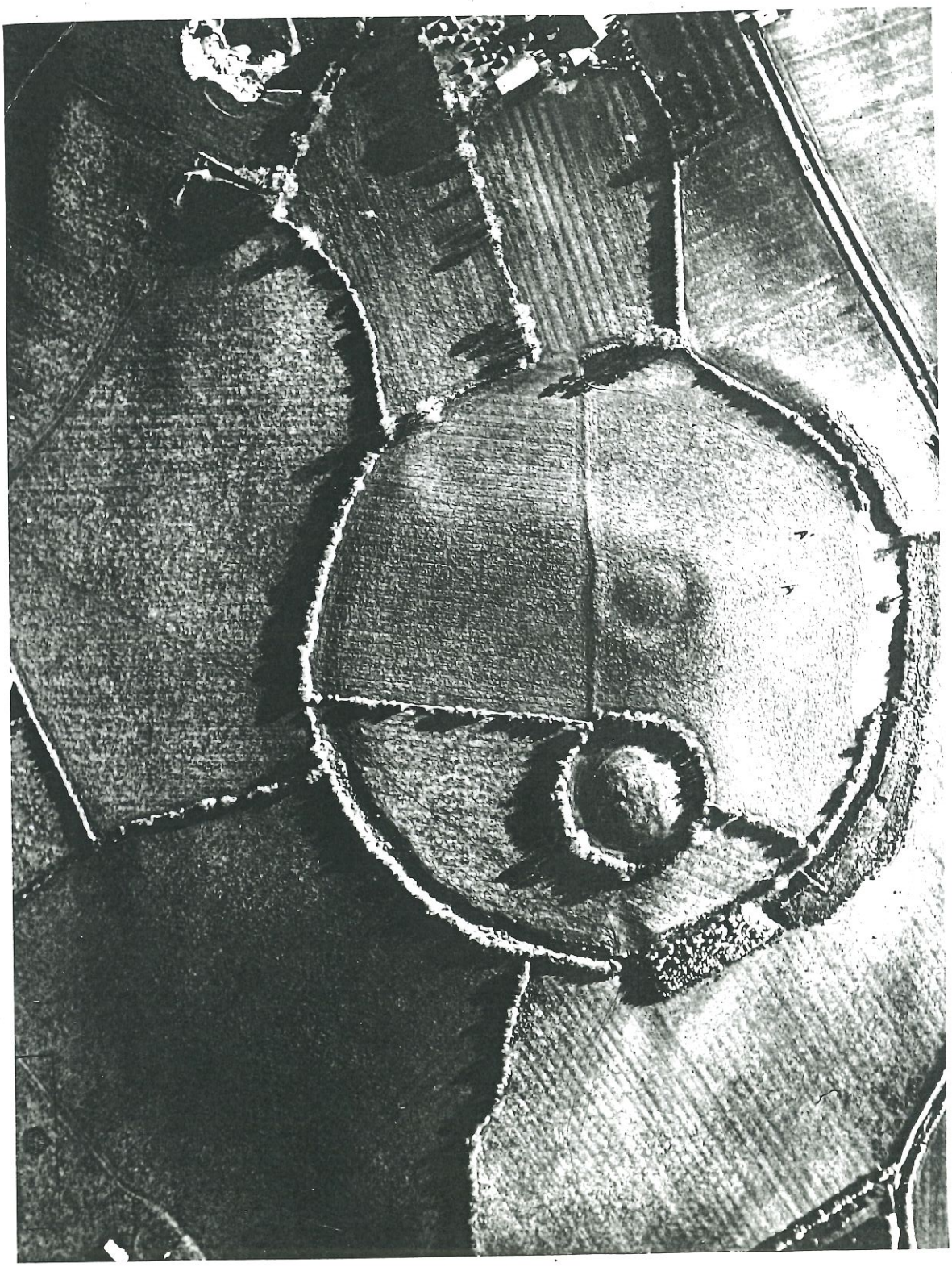
Is there connection be. stone ⑤ & pollen sequences in the this intervening region



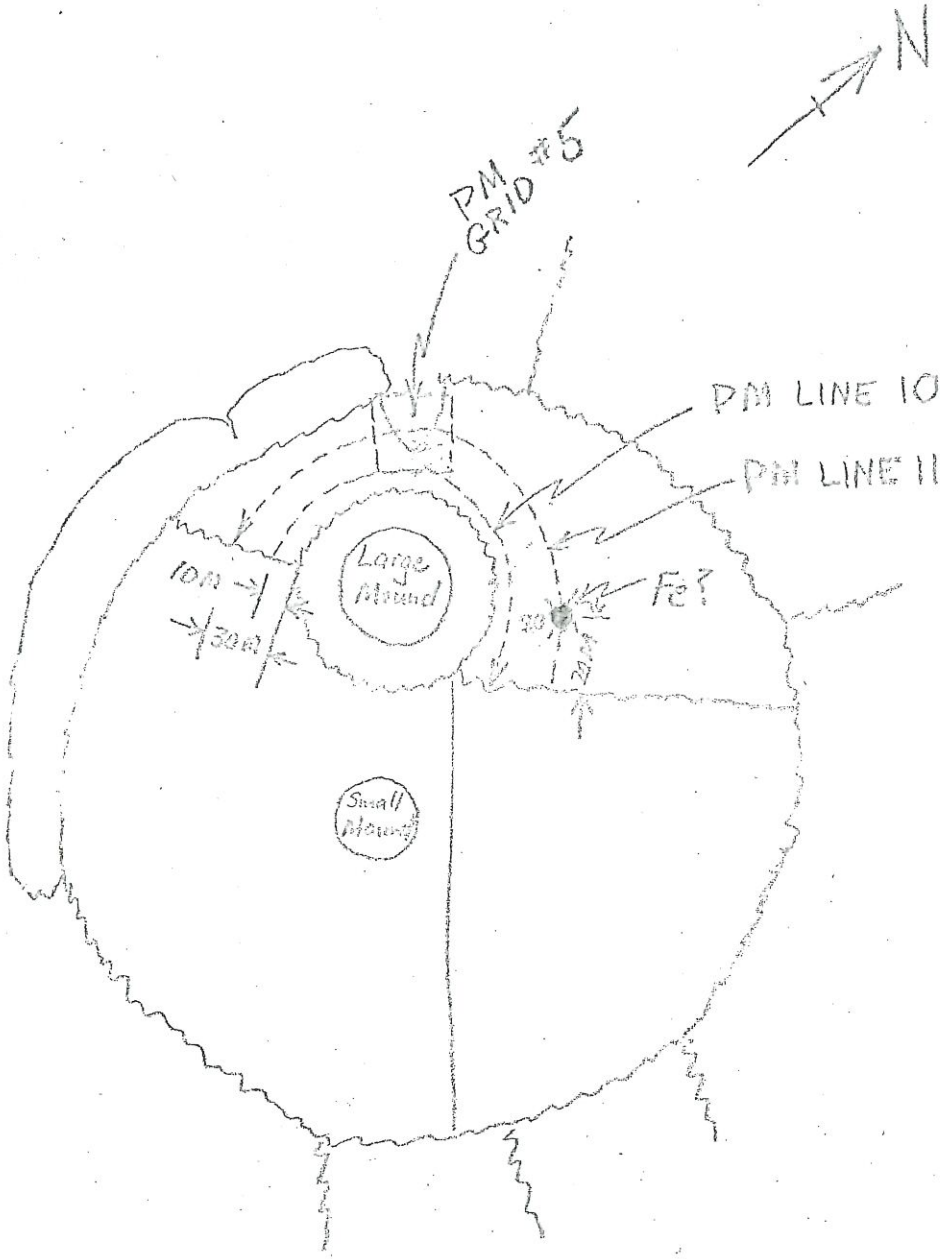
Ref.

MAY. A McL. (1953)
Neolithic Habitation Site
Stone ⑤ & Alignments at
Beaghmore, Co Tyrone.
J. Roy. Soc. Antiquities,
Ireland
LXXXIII (Pt II) 173-193)

PS 06/2013



PS 001 2013



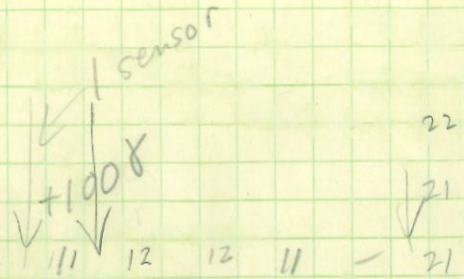
MAYAN FORT

Sketch of mounds and surrounding trees showing location of lines and grid made with proton magnetometer (PM), 11.7.63, E.K. Ralph.

(Corners of the grid and the magnetic anomaly of line 11 are marked with stakes)

GRID1

Grid #1 Original



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76	99	4	22	4	4	3	7	3	12	16	25	25	29	28	30	28	32
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64	83	3	18	98	1	0	6	4	18	24	36	35	27	29	31	29	33
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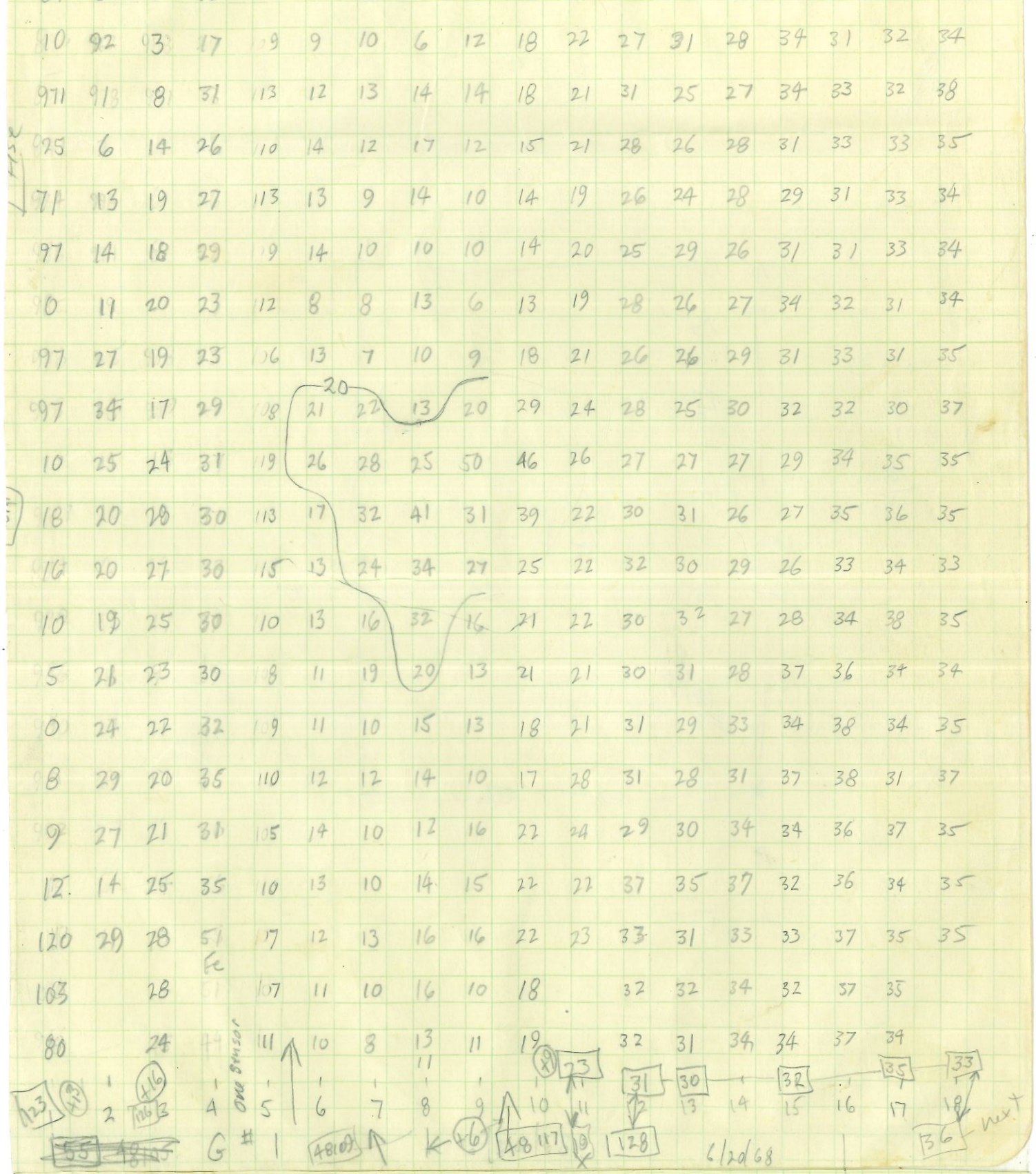
20
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-12
+4
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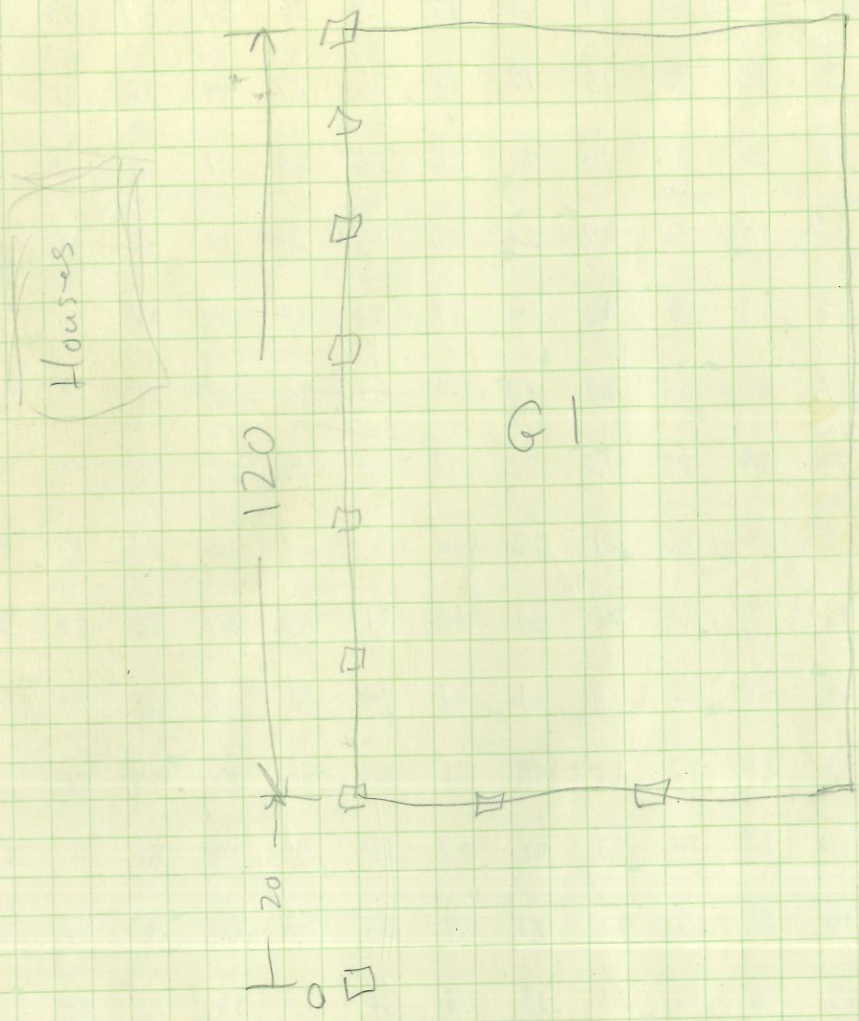
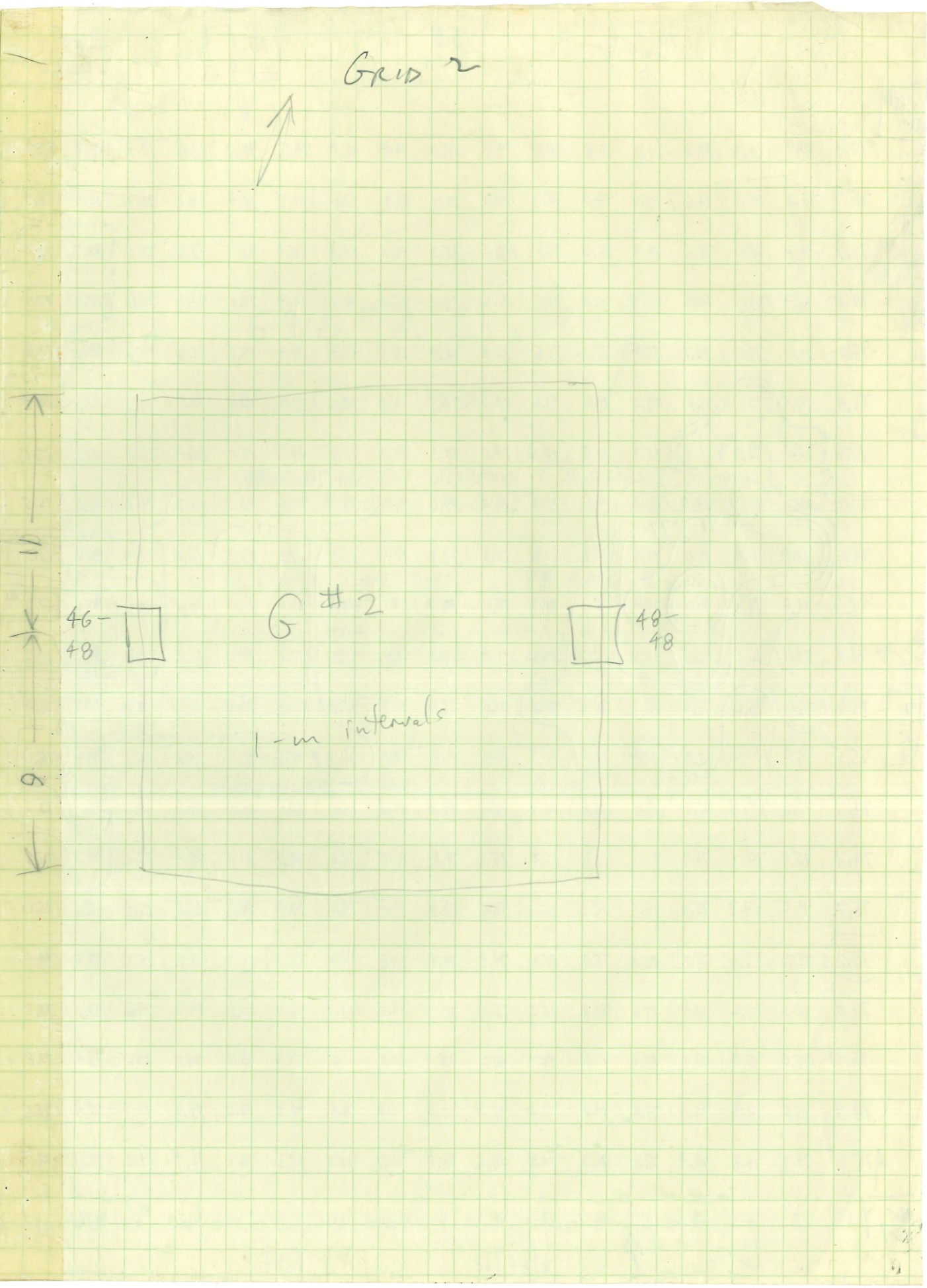
-10
-15
-15
-15
-15
-17
-17
-17
6/20/68
next


Houses
120
G1
20


GRID 2
46-48
G #2
48-48
1-m intervals

GRID #2

SCALE - 1:100

N

MADE WITH AUDIO READOUT
0.2 DIV. ~ 1.0 γ

BASE CONTOURS, 74 AND 75, NOT DRAWN
ANTI-MAGNETIC ANOMALIES SHOWN WITH BROKEN LINES

GRID REF.

West to East
46000 to 48000

South to North
47000 to 49000

G2

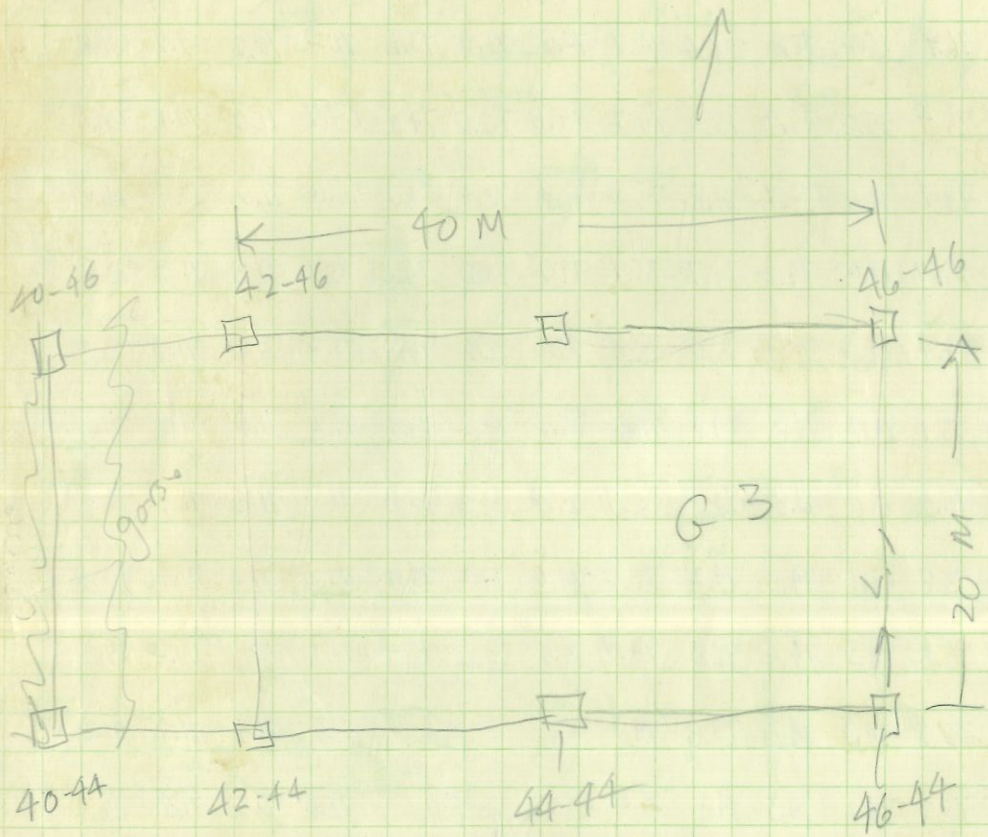
6/26/68

1:100

GRID 3

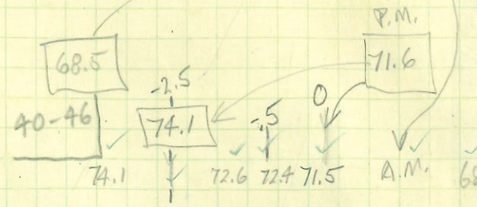
V	V
69.7	69.0
69.1	69.7
69.4	69.8
69.8	70.0
70.0	70.8
70.2	70.4
70.6	70.4
70.6	70.8
70.5	70.7
71.0	70.6
71.0	70.9
70.9	70.9
71.0	70.8
71.0	70.9
71.0	71.0
71.0	71.0
71.0	71.2
71.0	71.2
71.2	
71.0	71.2
37	36

#3



GRID # 3

SCALE - 1 : 100



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74.2	73.3	72.8	72.1	71.2	68.0	68.3
74.3	73.6	72.8	72.3	71.2	68.0	68.3
74.5	73.6	72.9	72.4	71.4	68.0	68.3
74.6	73.4	72.9	72.6	71.4	68.0	68.1
74.7	73.4	73.3	72.6	71.6	68.2	68.0
74.3	73.3	73.4	72.6	71.8	68.3	67.9
74.7	73.4	73.0	72.6	72.0	68.6	67.7
75.0	73.4	73.0	72.5	72.0	68.2	67.7
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74.8	73.4	73.6	72.5	72.1	68.0	67.8
74.9	73.5	73.6	72.8	72.5	68.2	67.9
75.1	73.6	73.3	72.4	72.4	68.1	68.0
75.2	73.5	73.6	72.3	72.1	68.1	68.1
75.6	73.4	73.4	72.4	72.1	67.8	68.1
75.1	73.0		72.6	72.2	68.0	68.5
74.8	72.9		72.5	72.2	68.2	

40-44

61 60 59 58 57 56 55

68.7																								
68.4	68.4	68.7	67.6	68.8	68.8		69.0	68.3	68.3	68.3	69.0	68.5	69.0		70.0		69.2	69.0						
68.0	68.4	68.3	67.4	68.8	68.5	68.7	68.9	68.8	68.3	68.8	69.2	68.8	70.2	70.0	70.0	70.2	69.1	69.7						
68.3	67.9	68.1	67.7	68.9	68.3	68.9	68.4	68.7	68.3	68.3	69.3	69.0	70.4	69.4	70.0	70.0	69.4	69.8						
67.9	67.4	67.7	67.6	68.9	68.7	69.0	68.7	68.8	68.6	68.3	69.2	68.9	70.0	70.0	70.1	70.0	69.8	70.0						
68.1	67.6	68.1	67.5	68.7	68.7	69.0	69.2	69.1	68.8	68.6	69.2	69.0	70.0	70.0	70.2	70.2	70.0	70.8						
67.9	67.5	68.1	67.7	68.5	68.6	69.0	69.0	69.1	68.7	68.3	69.1	69.0	70.3	70.2	70.6	70.9	70.2	70.4						
67.8	68.0	68.1	67.8	68.4	68.7	69.0	68.9	69.0	68.7	68.4	69.2	69.0	70.4	70.6	70.8	70.7	70.6	70.8						
67.5	68.1	68.7	67.8	68.3	68.8	68.8	68.5	68.7	68.3	68.4	69.1	69.0	70.5	70.6	70.8	70.6	70.6	70.8						
67.5	67.7	69.2	68.1	69.0	69.1	68.6	68.5	68.8	68.2	68.0	69.3	69.0	70.2	70.6	70.6	70.7	71.0	70.6						
67.7	67.7	69.0	68.1	68.0	69.3	69.2	69.0	69.3	68.4	68.1	69.2	69.0	70.2	70.7	71.0	70.8	71.0	70.9						
67.8	67.7	69.3	68.2	68.7	69.2	69.1	69.0	69.0	68.6	68.3	69.1	69.0	70.3	70.7	71.0	70.8	70.9	70.9						
67.5	67.8	69.2	68.0	68.8	69.6	69.2	68.9	68.8	68.4	68.0	69.4	69.0	70.4	70.7	70.8	70.6	71.0	70.8						
67.7	67.9	69.1	68.0	69.1	69.3	68.6	68.6	69.0	68.6	68.7	69.5	68.8	70.3	70.6	70.8	70.9	71.0	70.9						
67.7	67.6	69.0	67.5	69.0	69.1	68.2	68.5	68.4	68.4	68.7	69.4	68.7	70.3	70.3	70.8	70.8	71.0	71.0						
67.7	67.5	68.8	67.9	68.9	69.1	68.0	68.6	68.9	68.2	68.8	69.4	68.7	70.4	70.7	70.8	70.8	71.0	71.0						
67.9	67.8	68.5	67.8	69.1	69.0	68.0	68.7	68.3	68.2	68.4	69.2	68.7	70.6	70.8	70.8	71.0	71.0	71.2						
67.9	67.8	68.3	68.0	69.0	69.0	68.0	68.3	68.3	68.2	68.4	69.2	68.7	70.6	70.9	70.8	70.8	71.0	71.2						
67.8	67.4	68.0	68.0	69.0	69.0	68.0		68.2		68.8		68.3	70.6	70.9	71.0	71.0	71.2 71.0	71.2						
54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36						
			68.7				68.3				68.3	67.0	69.7											

±0

Hut

6/27

4.0

Hut

76.2

-3.5

-5.4

7C

-5.0

75.8

-4.0

-2.7

73.5

excavation

46-46

PIT

71.0

6/27

75.2

74.5

1-Meter

G-3 6/26/68

46-44

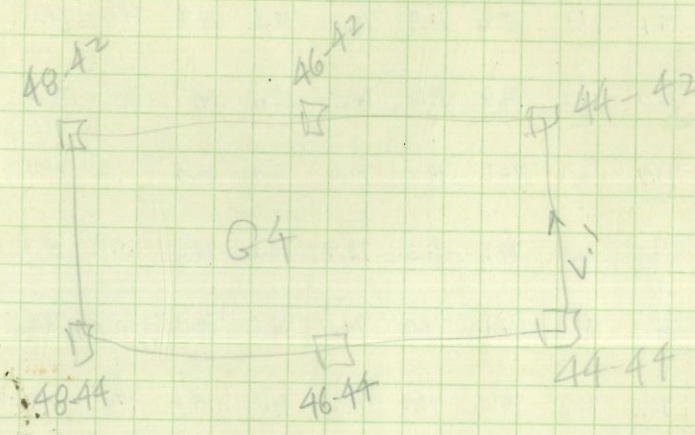
GMD 4

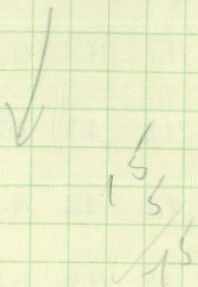
GRIDS

DUN AILINNE

IRELAND

1968





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G-A

6/28/68

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71.0 72.0 wheel barrow 72.0 72.6 71.9 46-49 71.4 72.6 stakes

48-42

+3.0

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71.6	71.6	70.2	70.8	70.8	70.8	72.0	71.8	7
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70.8	71.0	70.4	71.0	71.2	72.4	71.2	72.0	7
70.8	71.0	70.0	71.0	71.0	72.0	71.6	72.6	7
70.6	70.4	70.0	70.8	71.0	72.0	71.8	72.4	7
70.0	70.6	70.6	71.4	71.0	72.2	71.8	71.6	7
70.6	70.8	70.8	70.8	71.6	71.4	72.0	72.0	
70.4	71.0	70.6	70.0	70.6	71.8	72.0	71.8	
70.8	70.4	70.0	70.2	70.0	71.4	71.4	72.0	
71.0	70.2	69.8	70.2	70.0	71.6	71.4	72.0	
70.2	69.8	69.8	70.2	70.4	71.4	71.6	71.2	
70.2	70.0	69.8	70.0	70.4	70.8	70.6	71.0	
69.8	69.8	70.0	70.0	69.8	70.4	70.4	70.6	
69.8	69.6	69.2	69.8	69.8	70.0	69.8	70.0	
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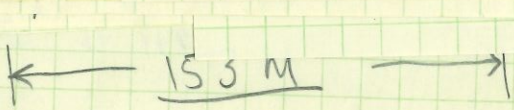
71.0

48-44

Q 1



367

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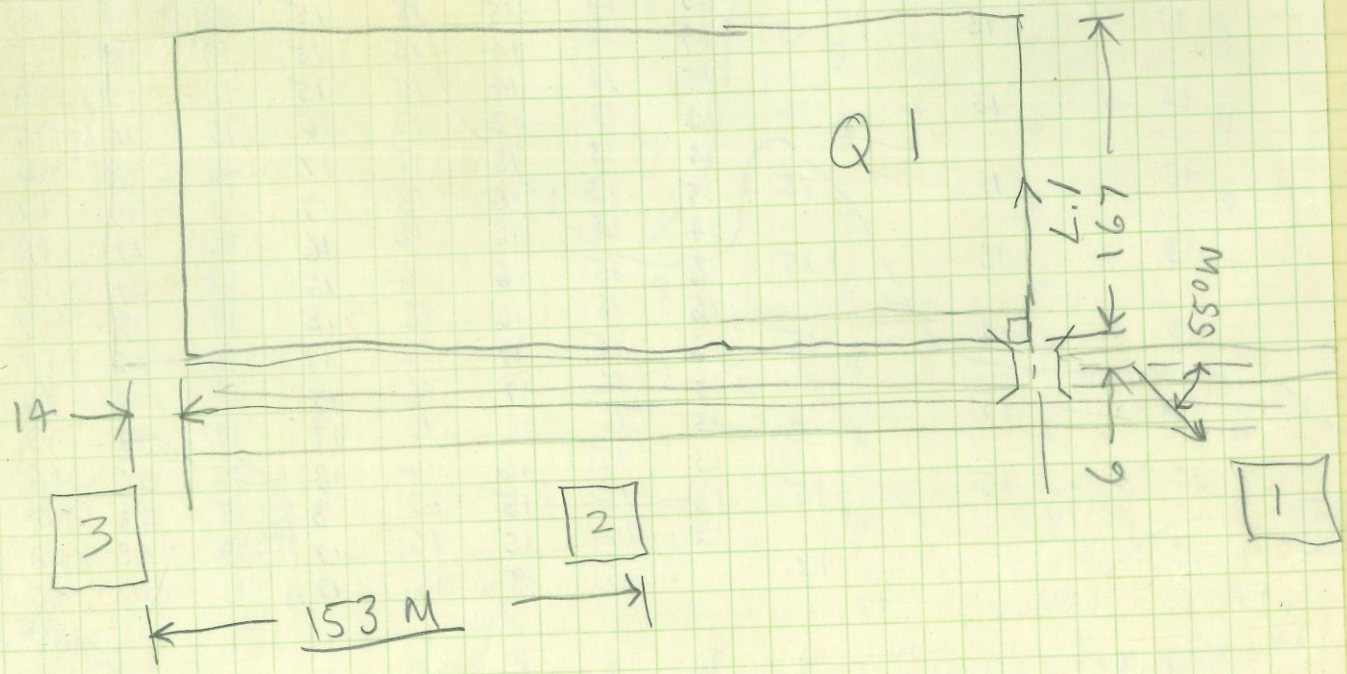

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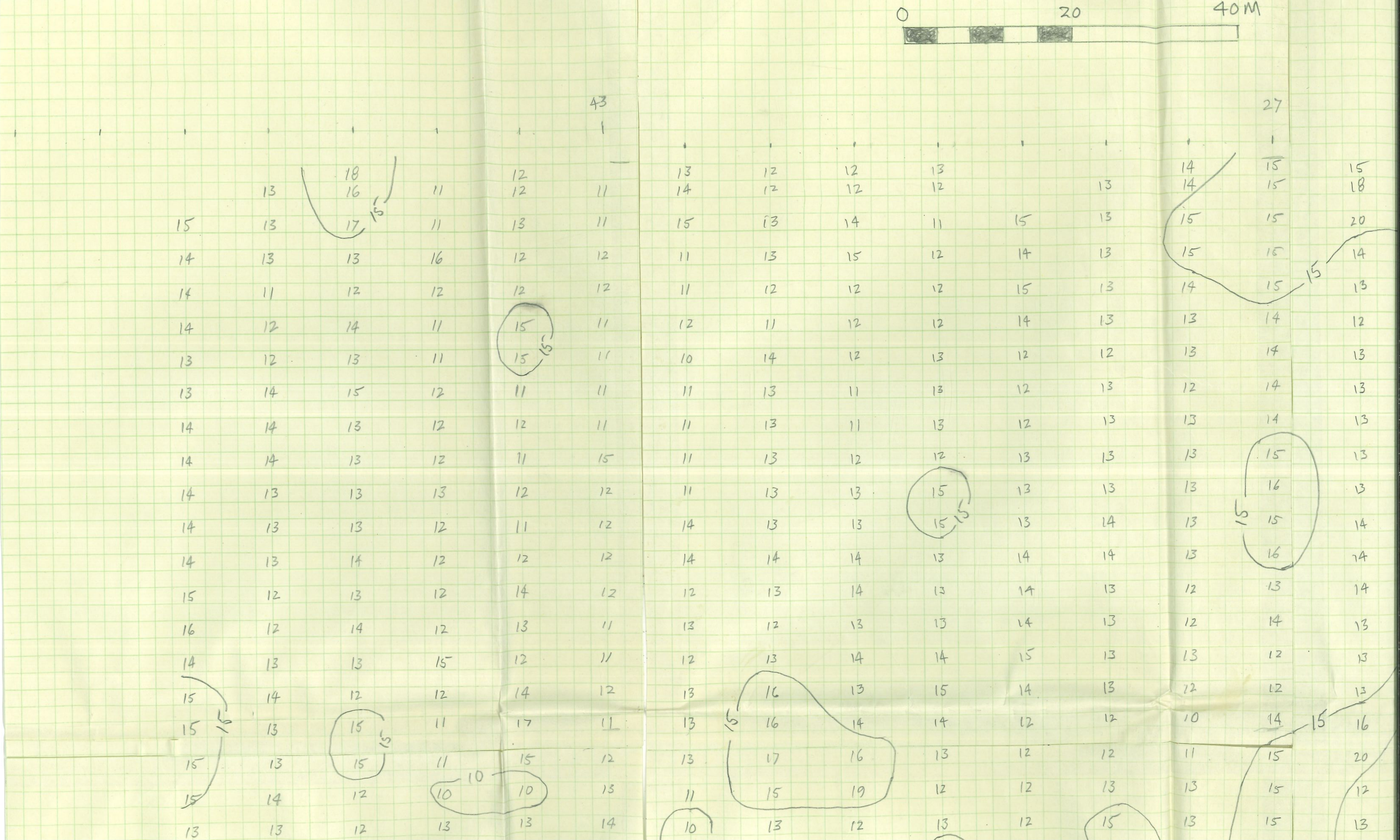

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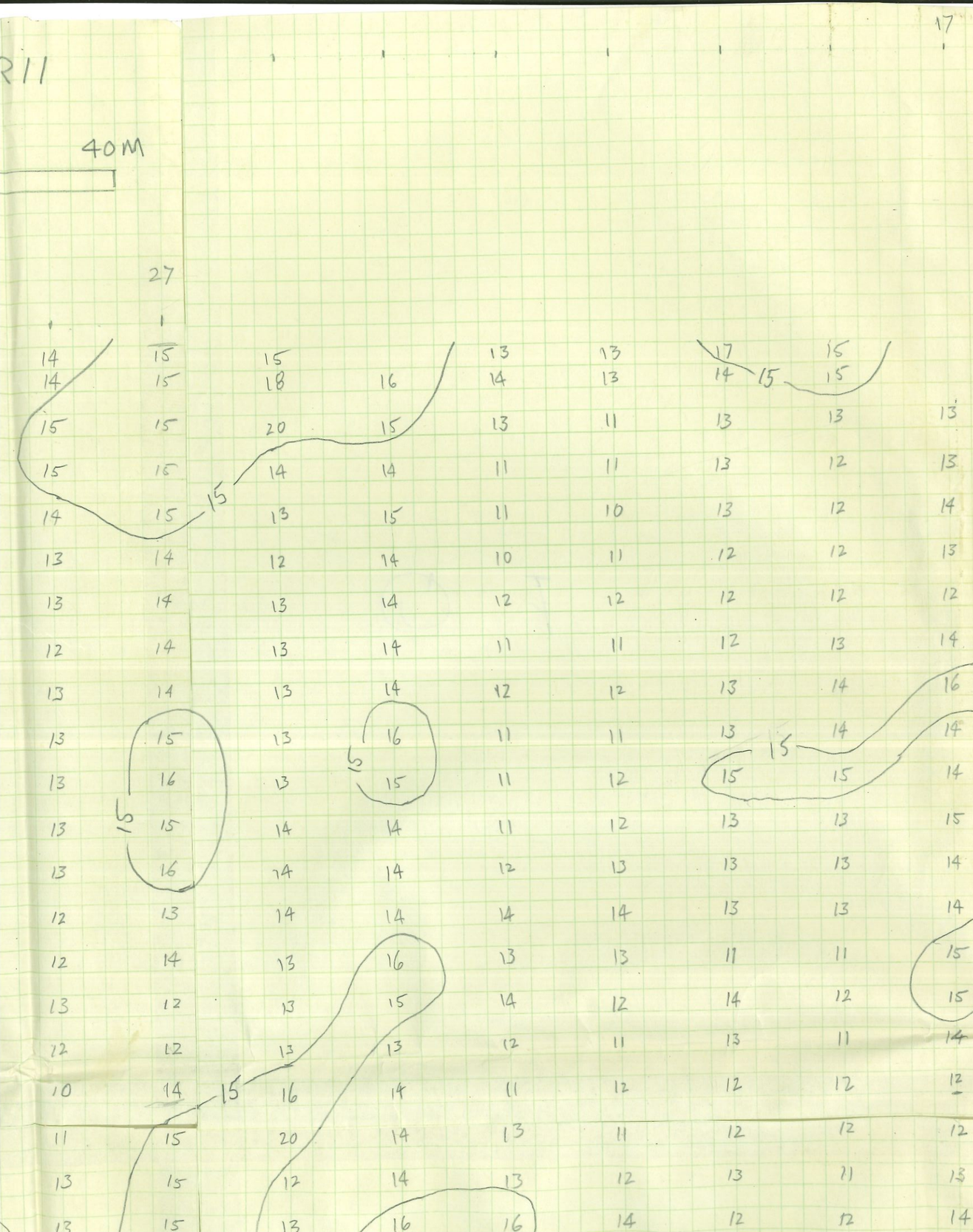
R11

40M



Q1

7/17/67

pointe

ash #2

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asst #2

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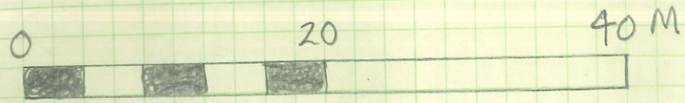

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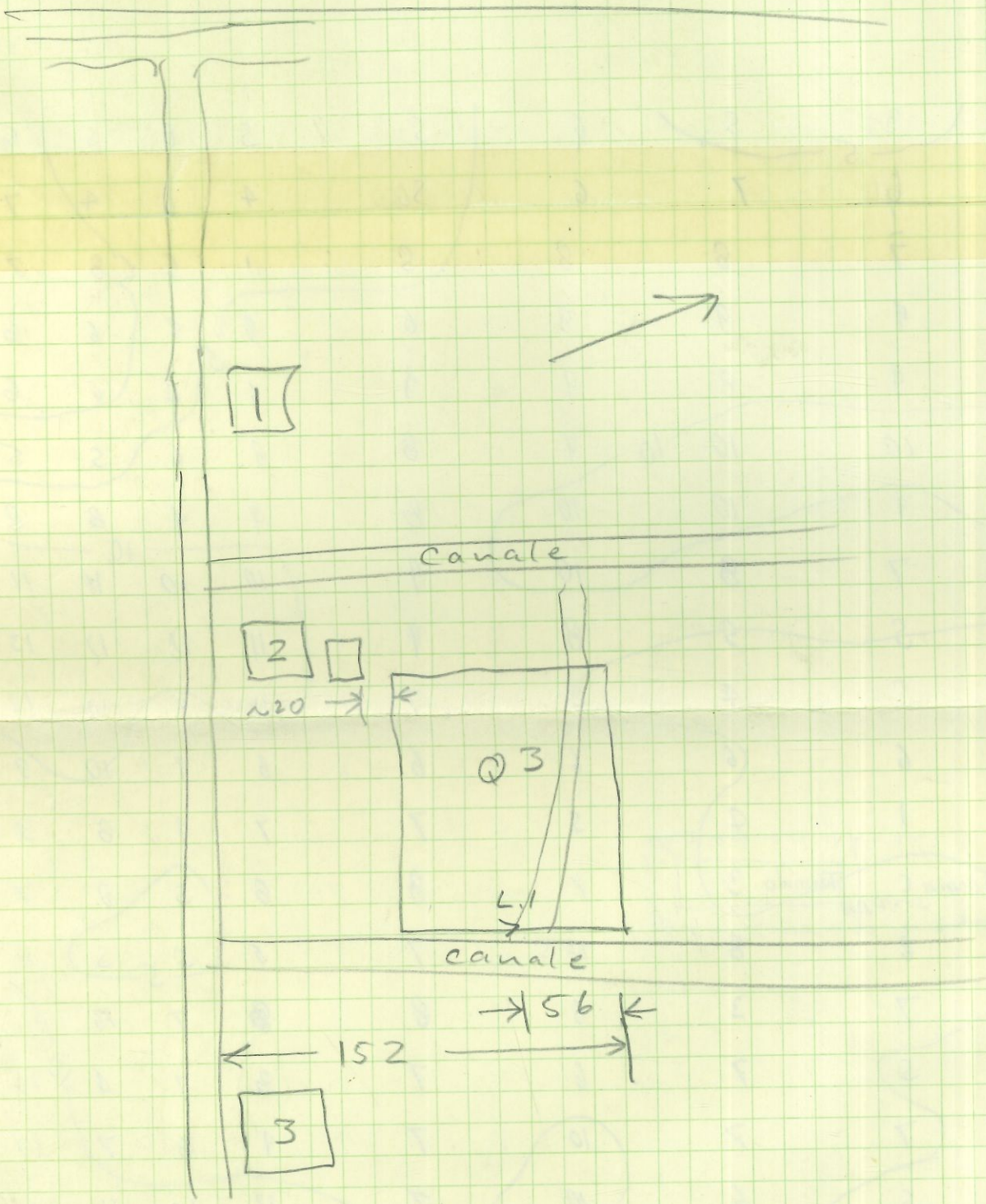
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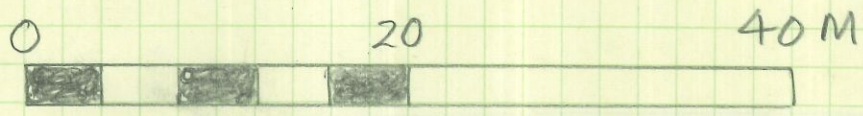

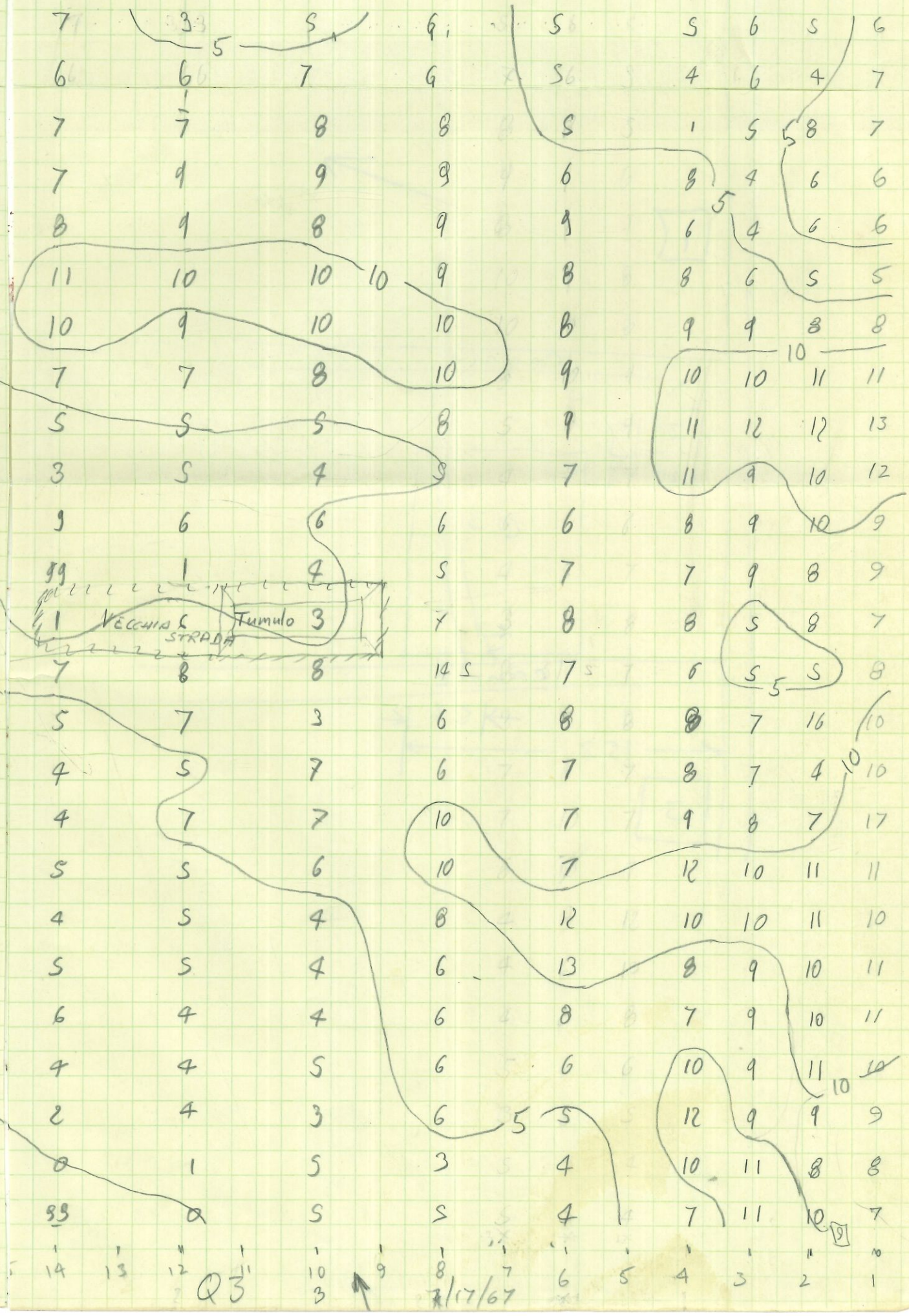

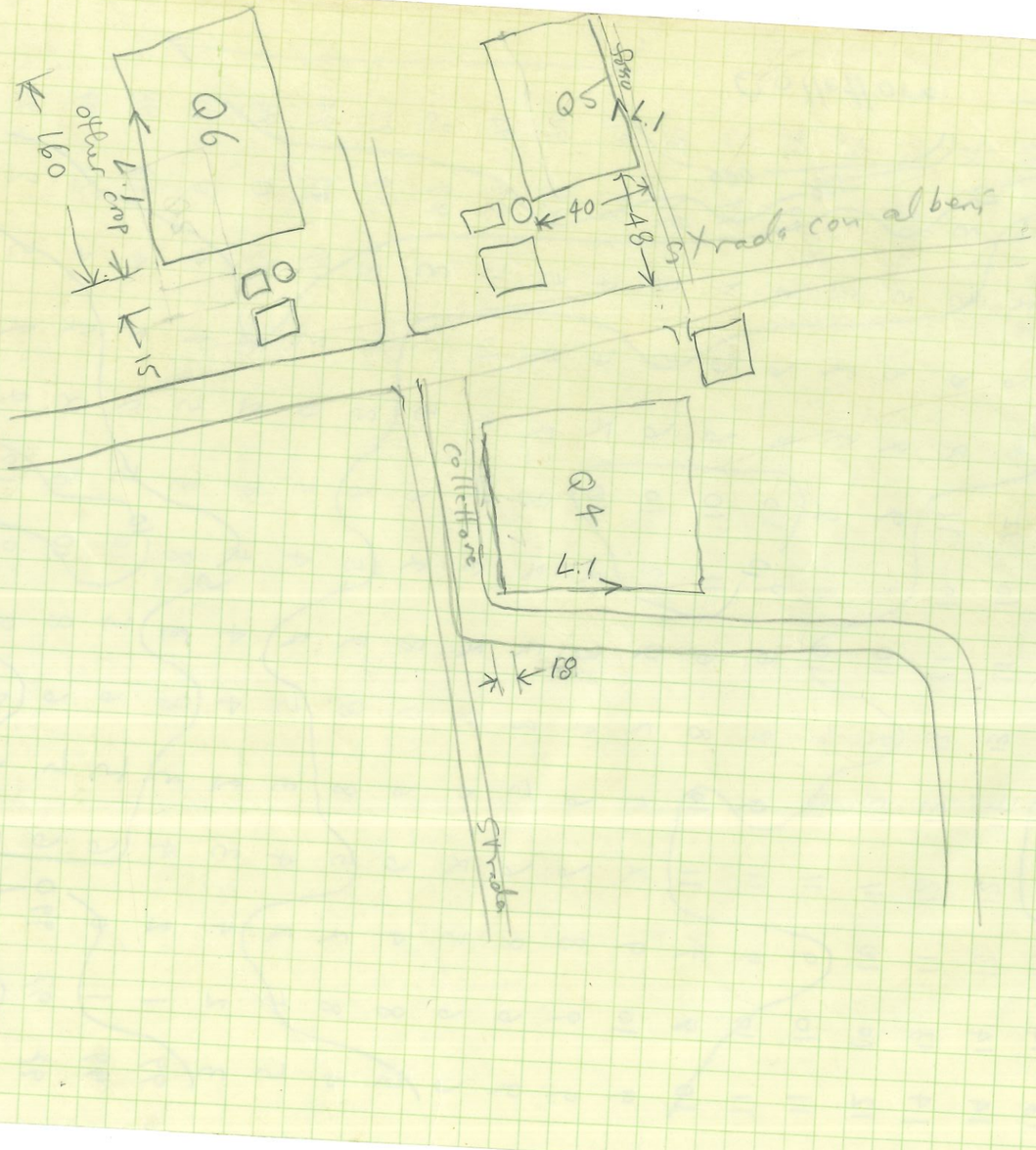
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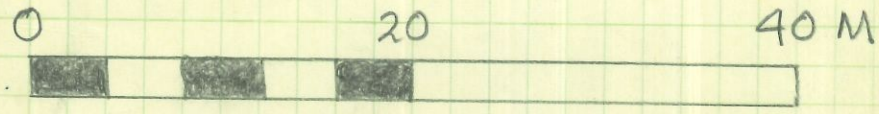

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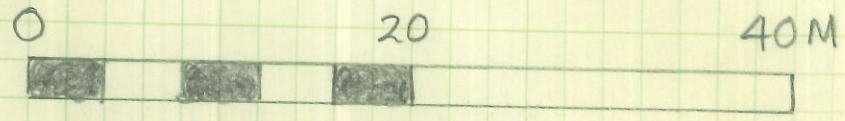

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2.50 duro

B

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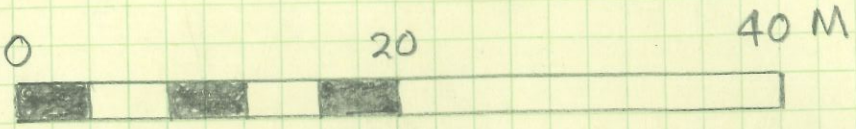
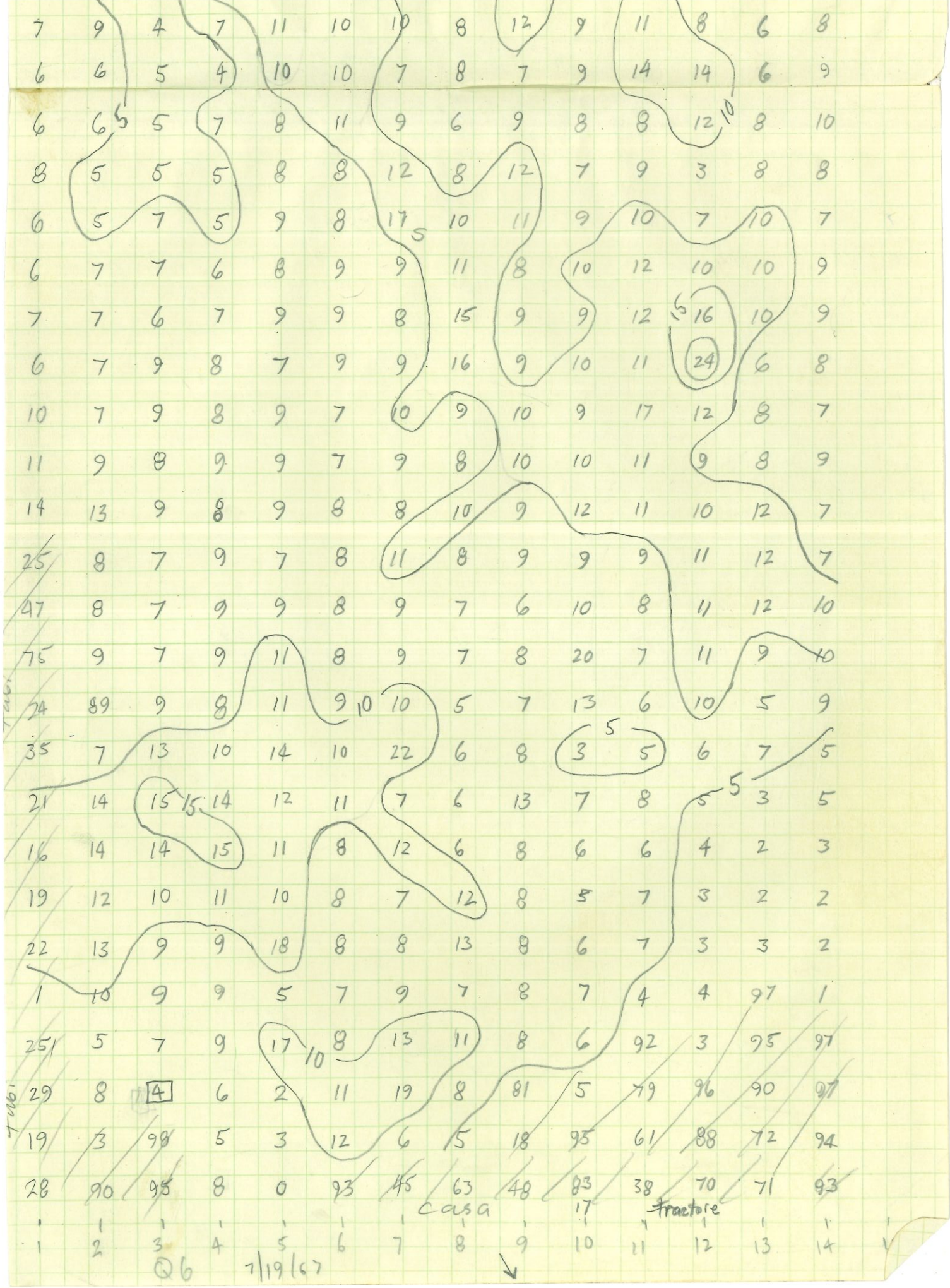
Q5

Q6

Q 6 SIRII

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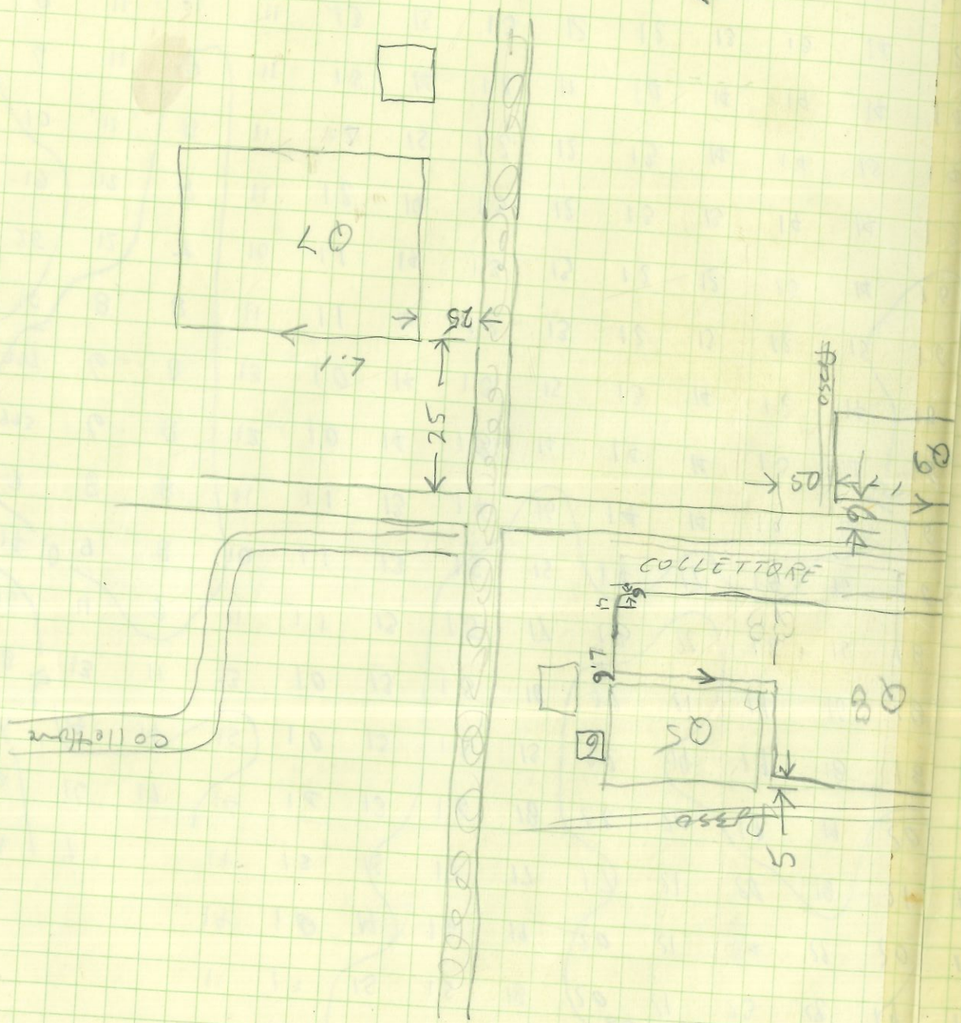

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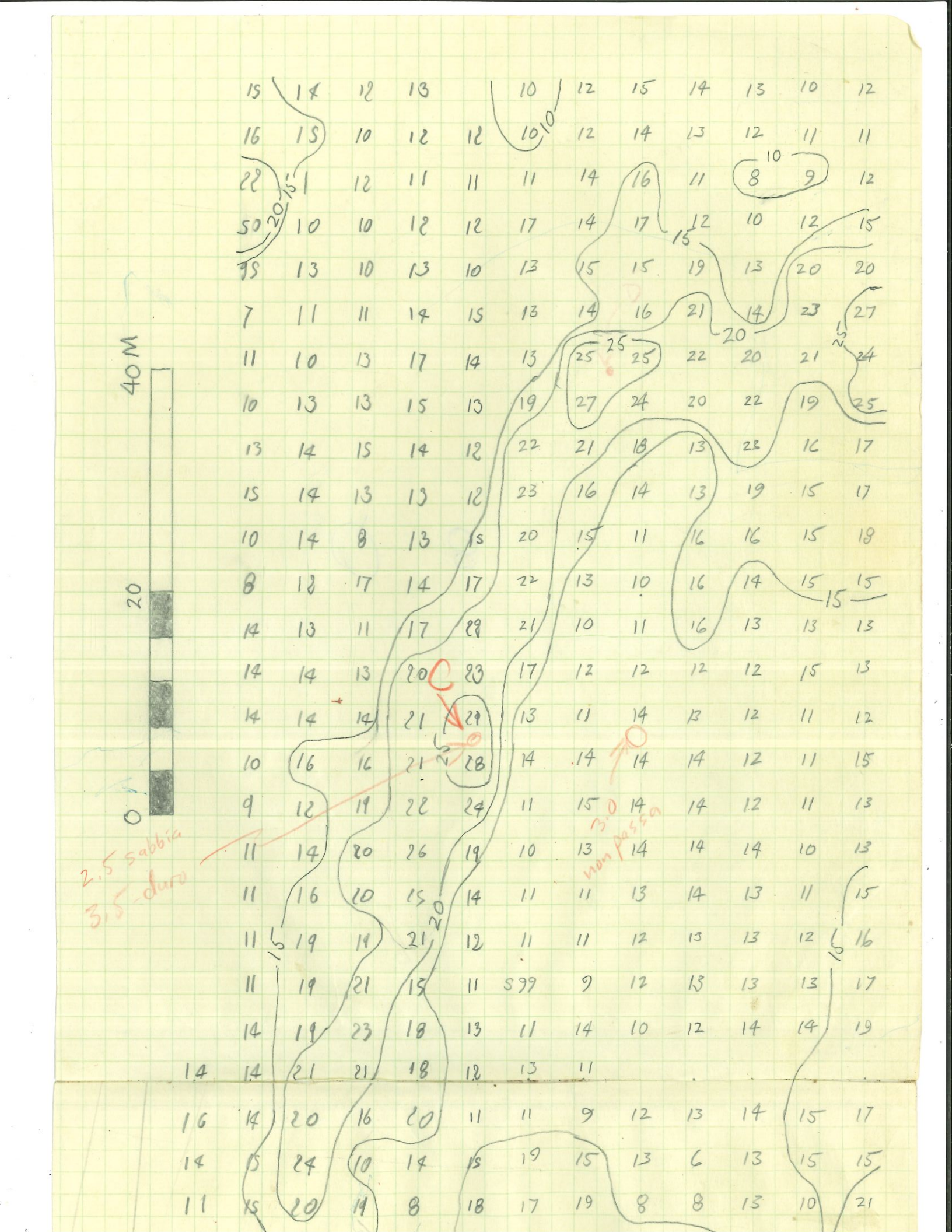
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3,5 duro
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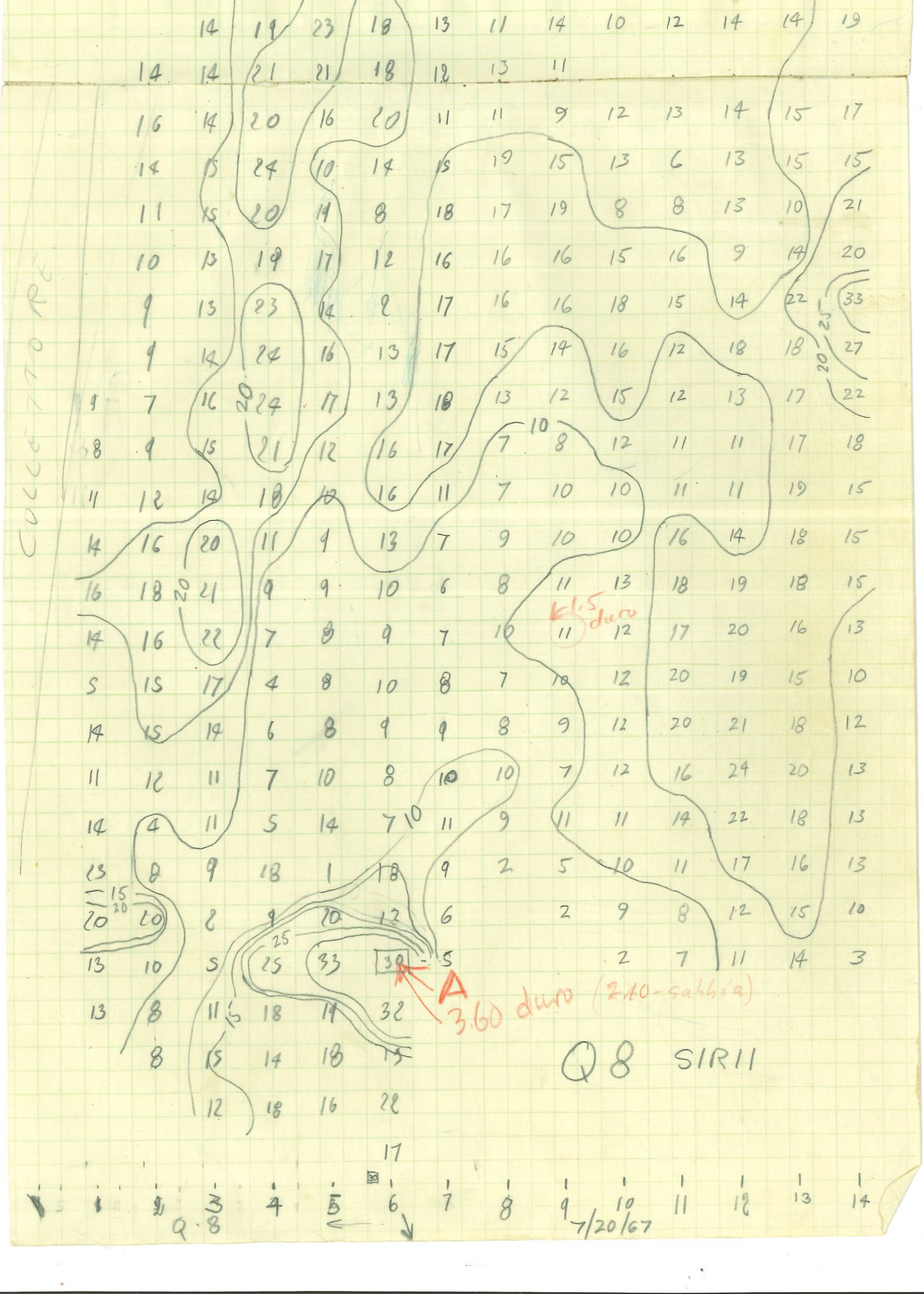
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3.60 duro (2,40-sabbia)
Q8 SIRII
Q·8
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Q 9

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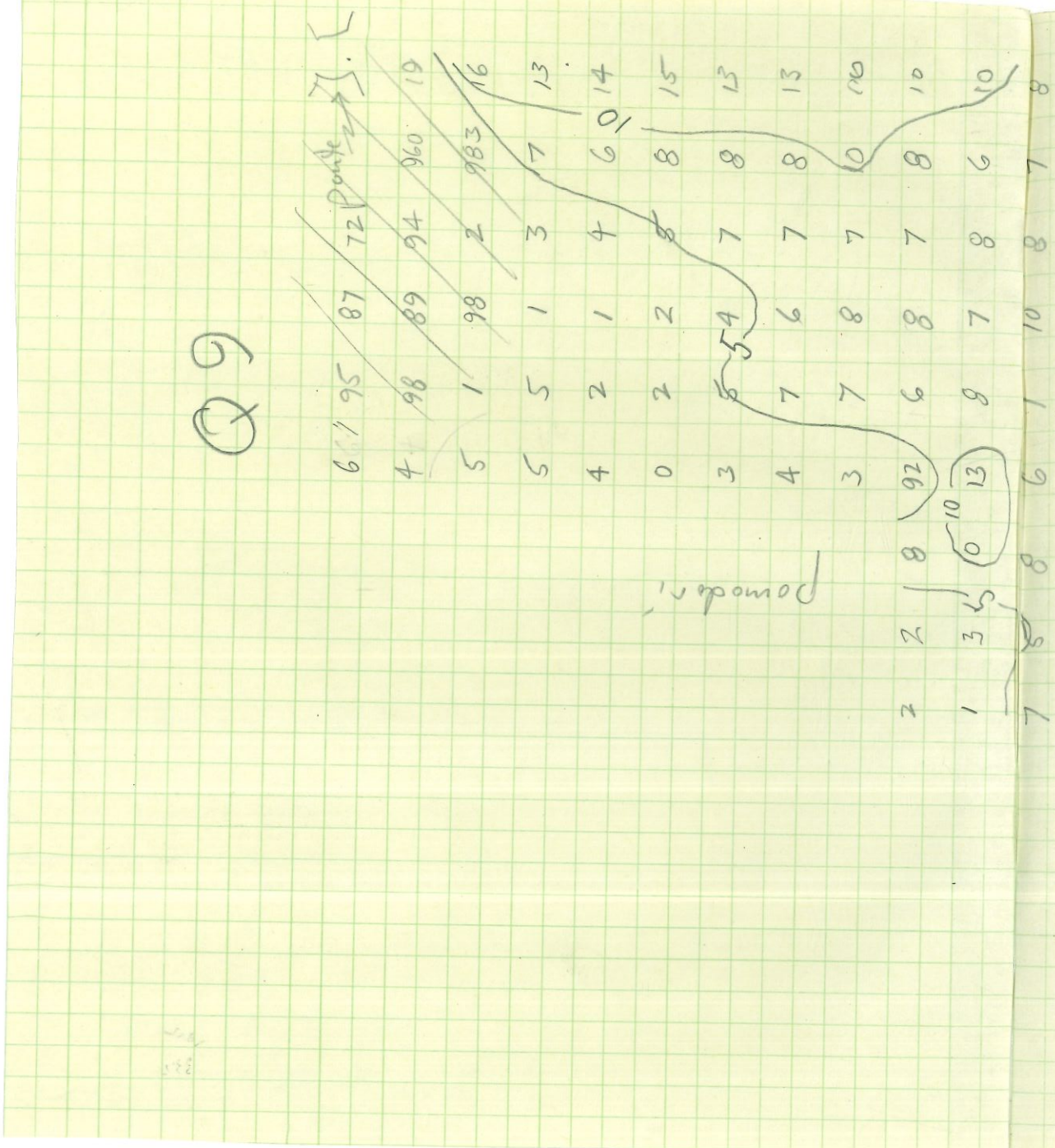

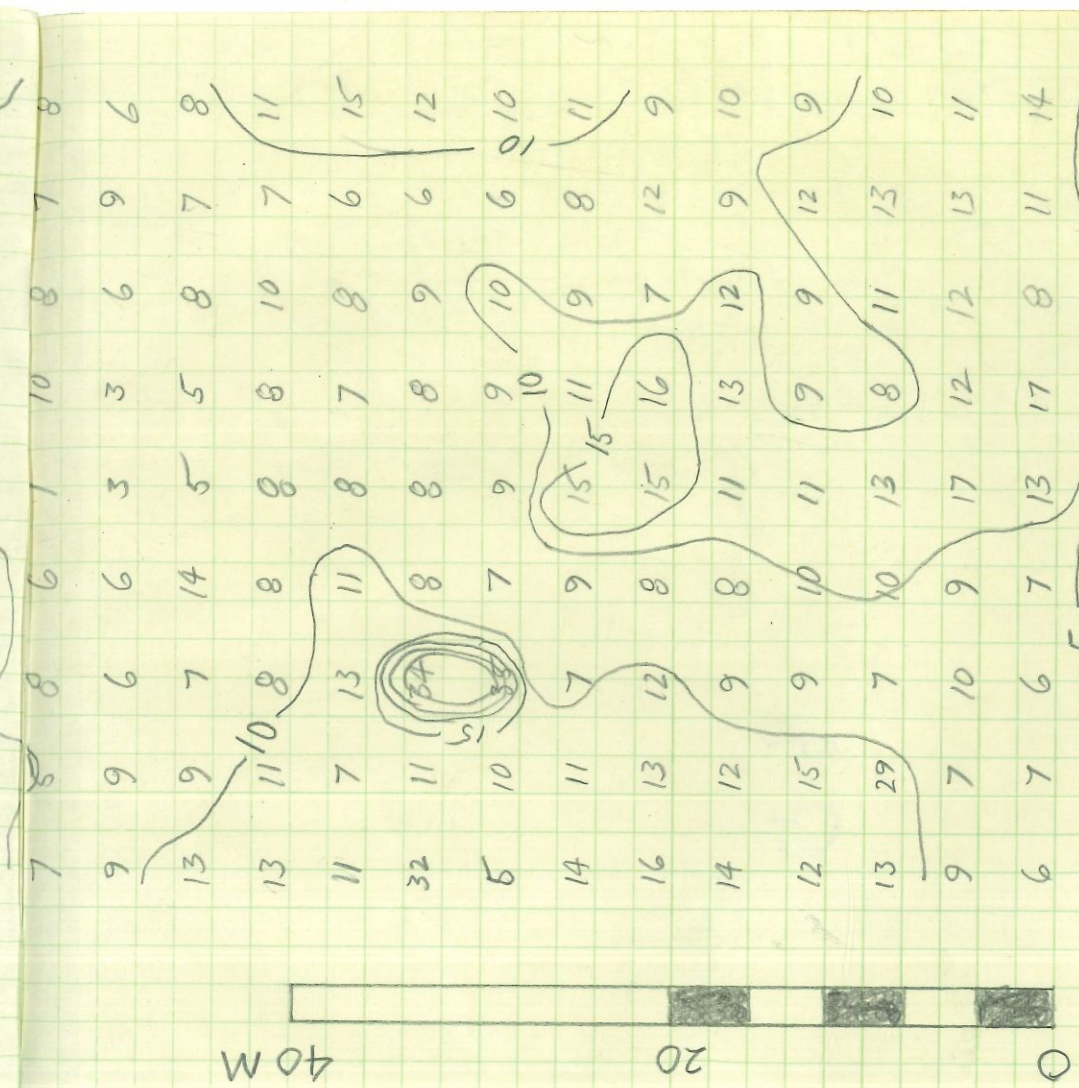

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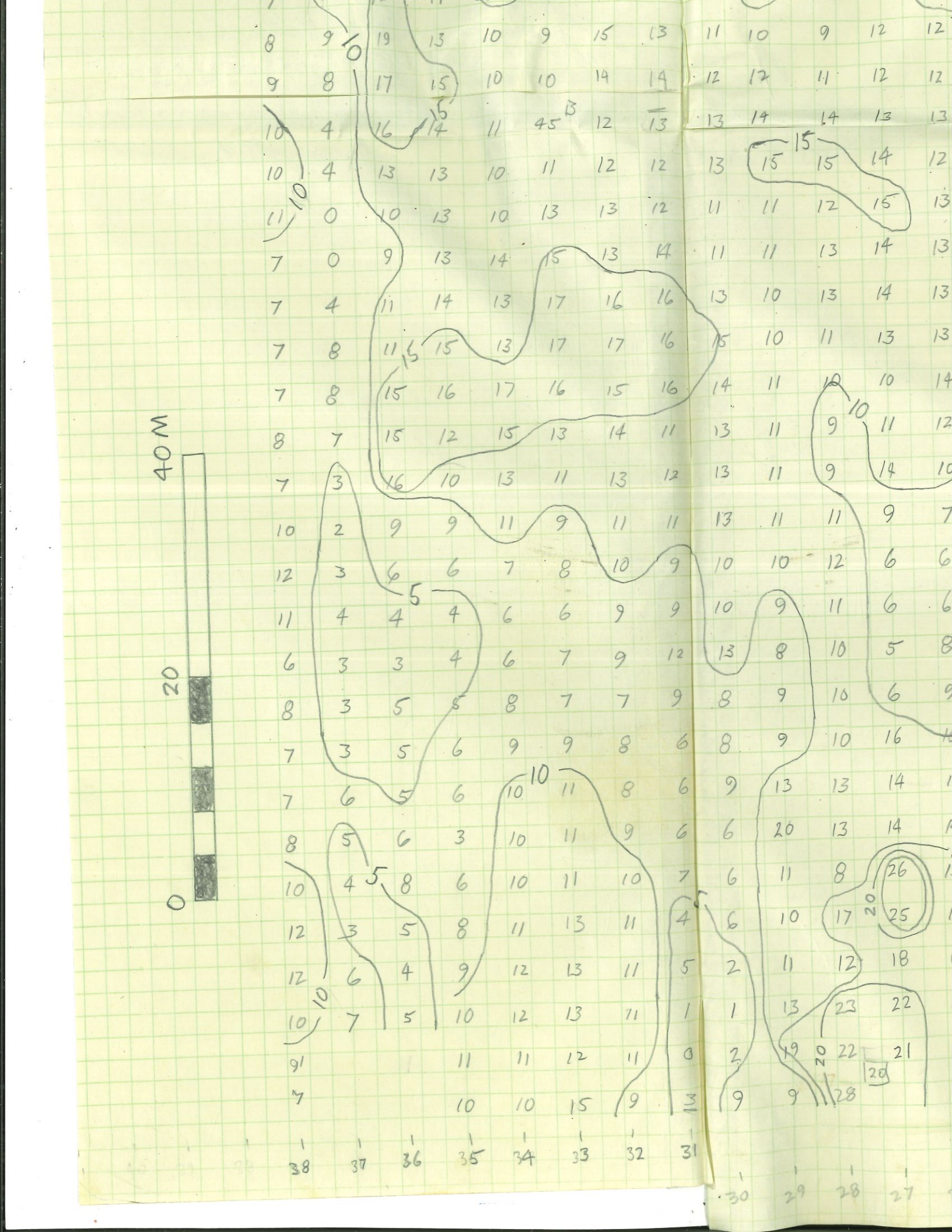
Q 10 7/21/67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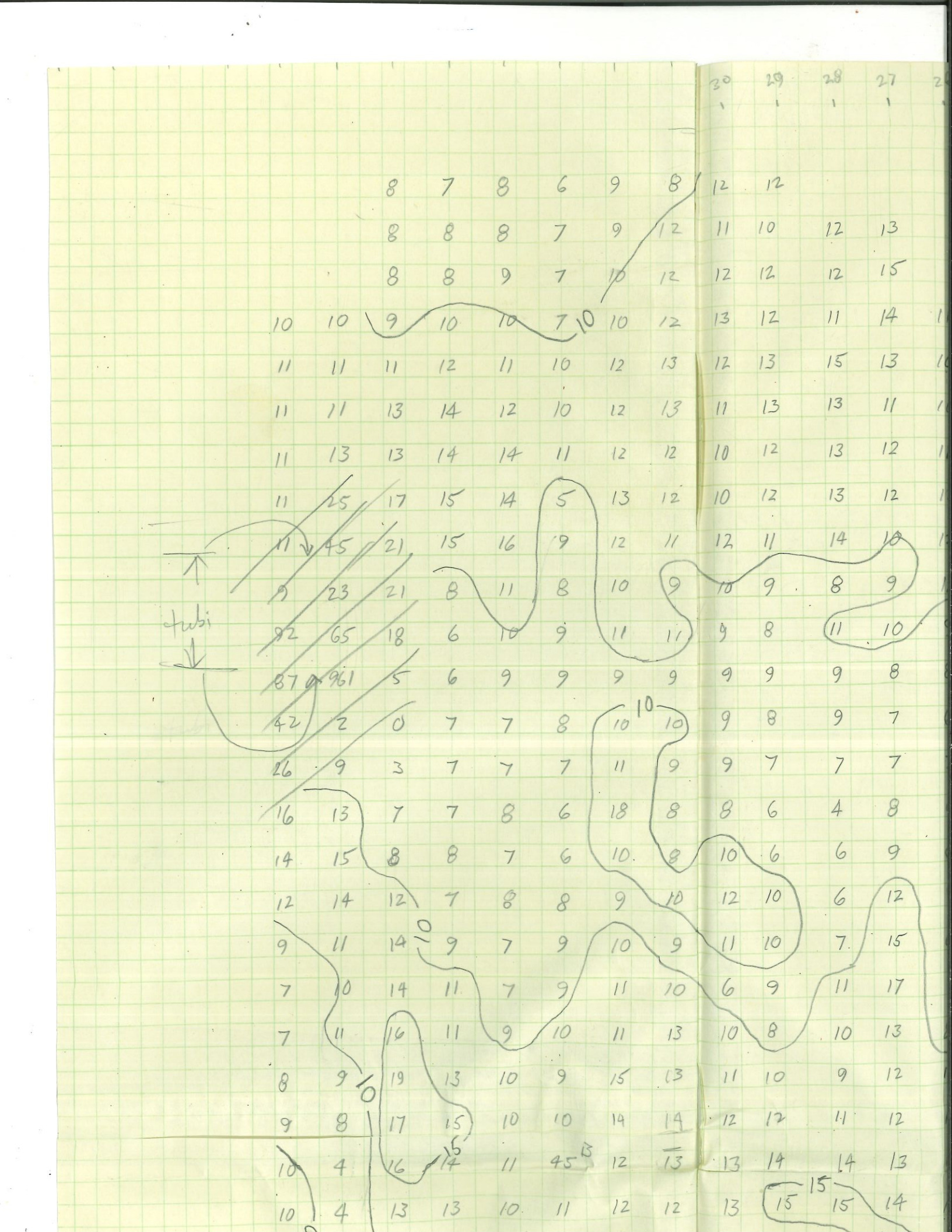
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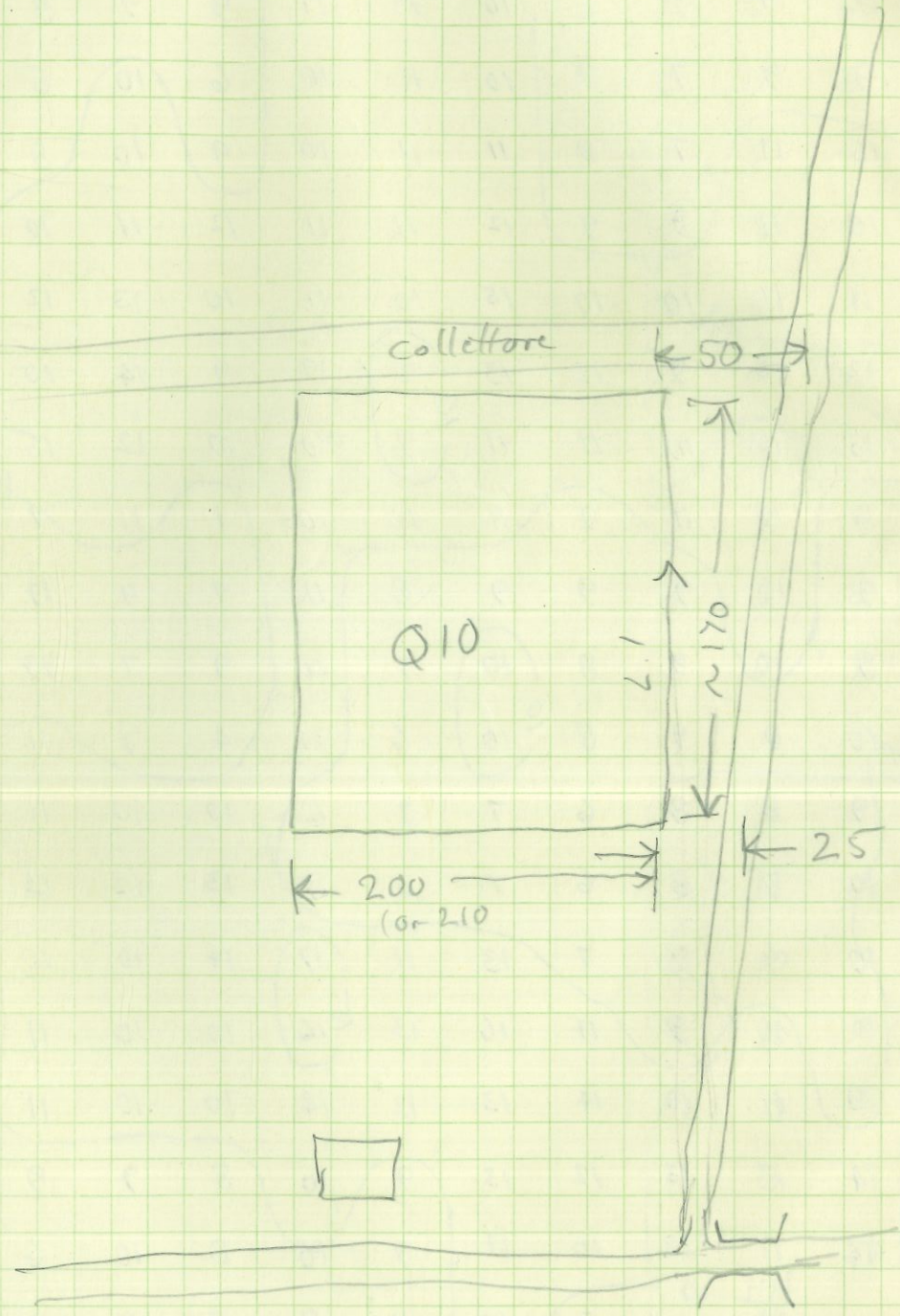
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