

Bridge

Southern Marianas II.

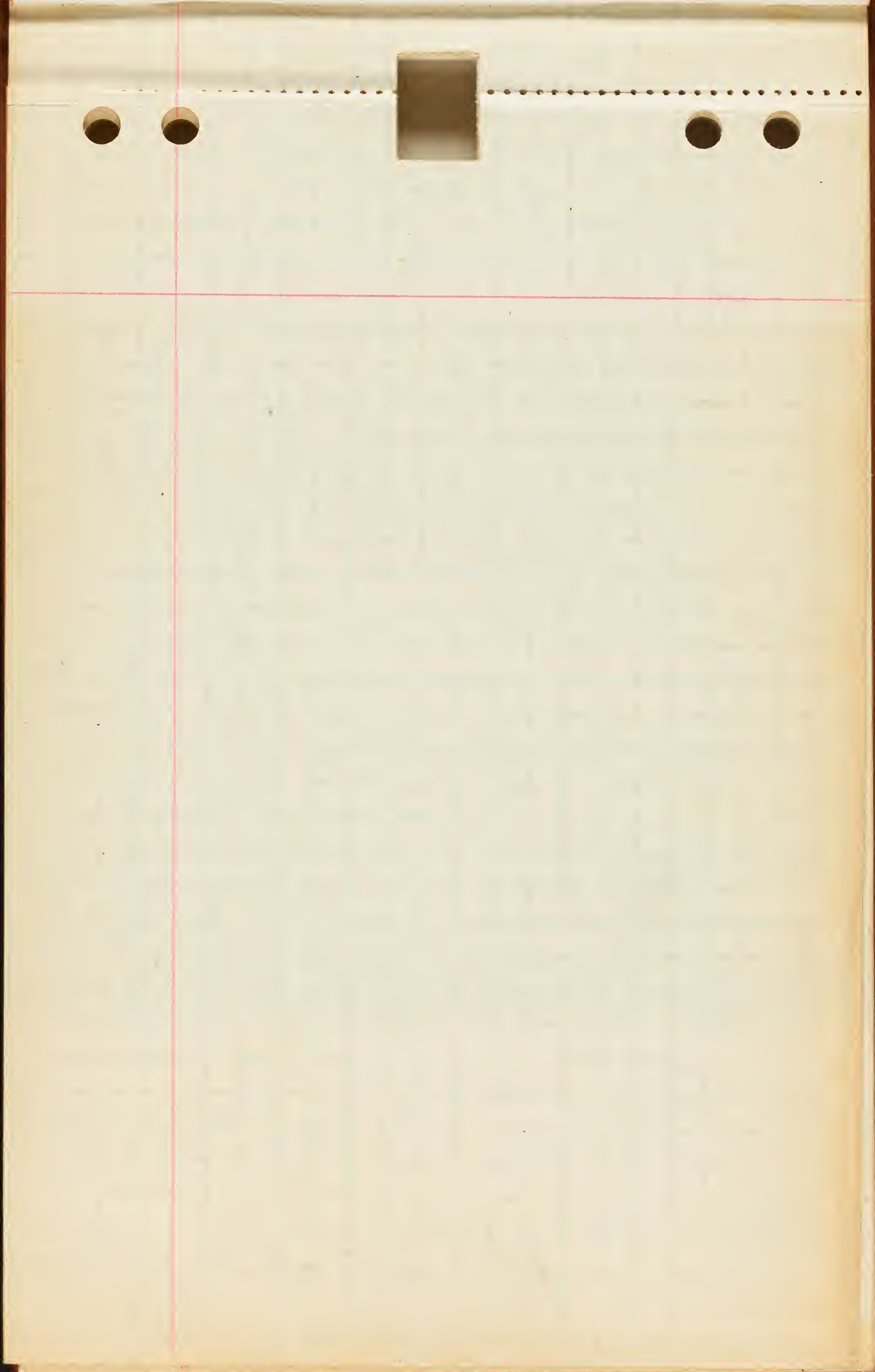
6/9

1946

UNITED STATES
DEPARTMENT OF THE INTERIOR
DI-6

APPROVED DECEMBER 1941

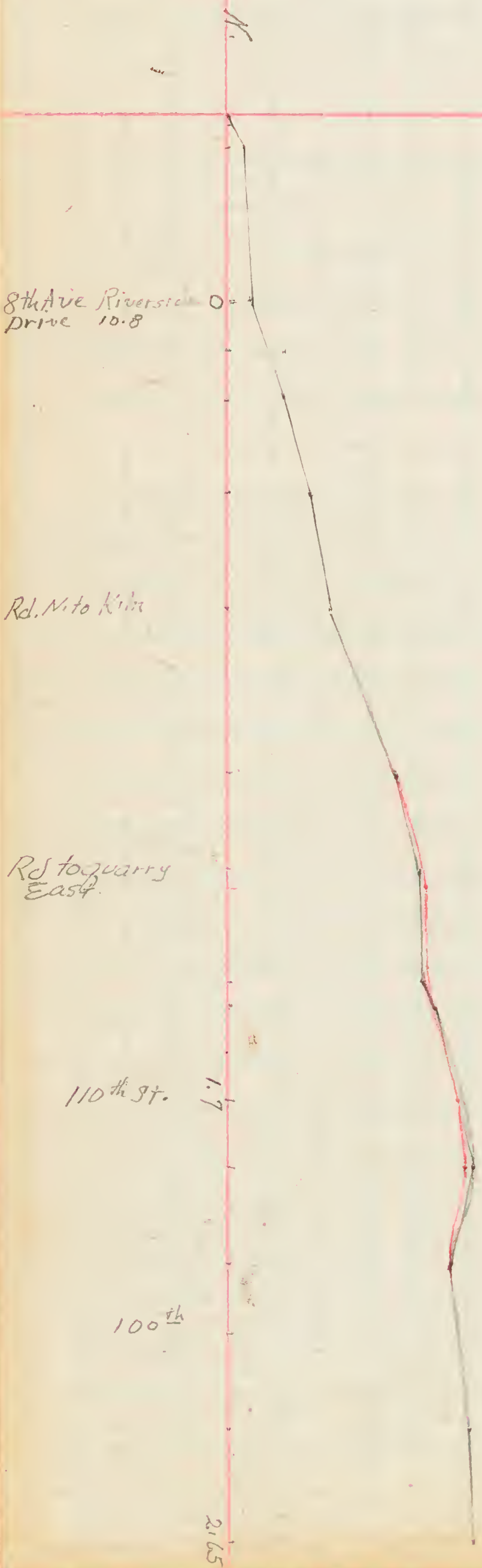
Ff Oscar Calvo - Chamorro -
" Ferdinand Stippich - American - Capobianco -



Bridge - Piper - Rogers -
6/8/46

Tinian Island
Profile along 8th Ave -
Page 1

Scale -
1/31680
V 1/3168



2
65

Mill. Goat Rd

86th ave

Rd to Jap Strip

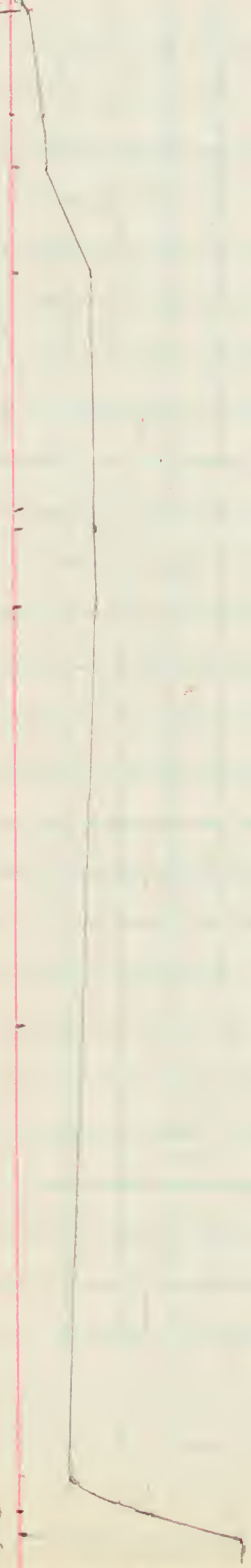
Riverside Drive -

Sea level - 5.

Timian
Profile strip - 8th Ave
Page 2

N
S.L.

Ushi Pt.



3.00

Timian Island
 Profile along - Broadway -
 from Ushi Point - to the bird docks -
 ①

300
Circle 116th st,
Shrine — ←
113th st.
Sink hole to
west,
96th

Broadway

86th

72d

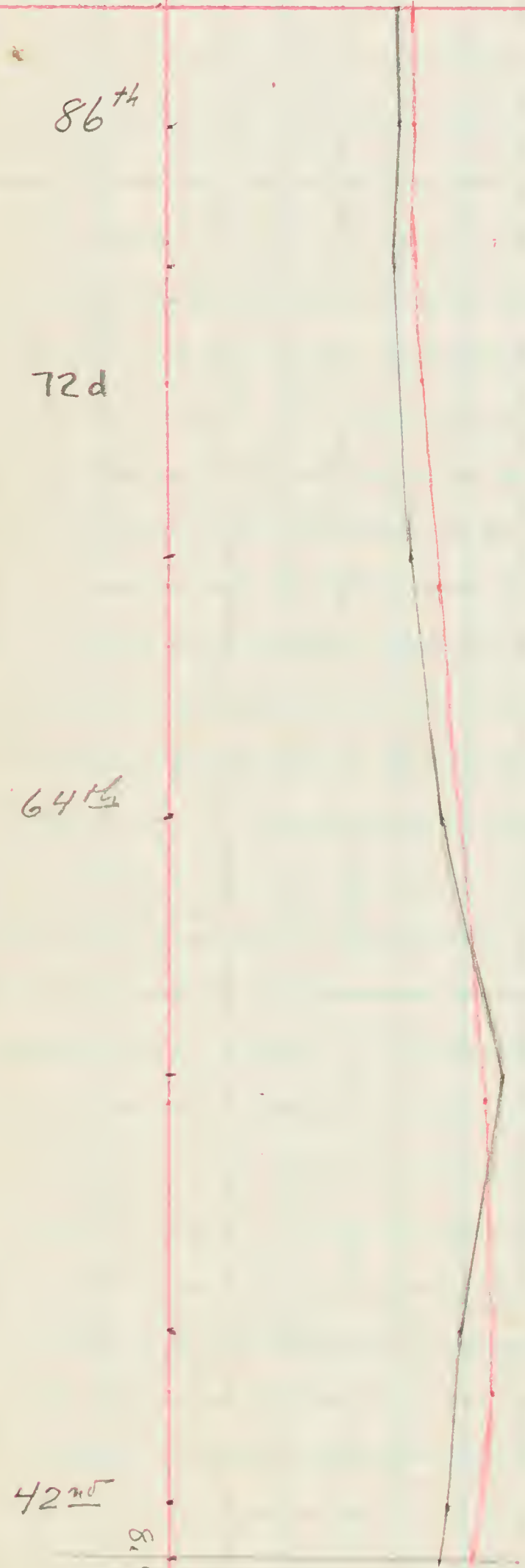
64th

42nd

8.8

Brooklyn

3

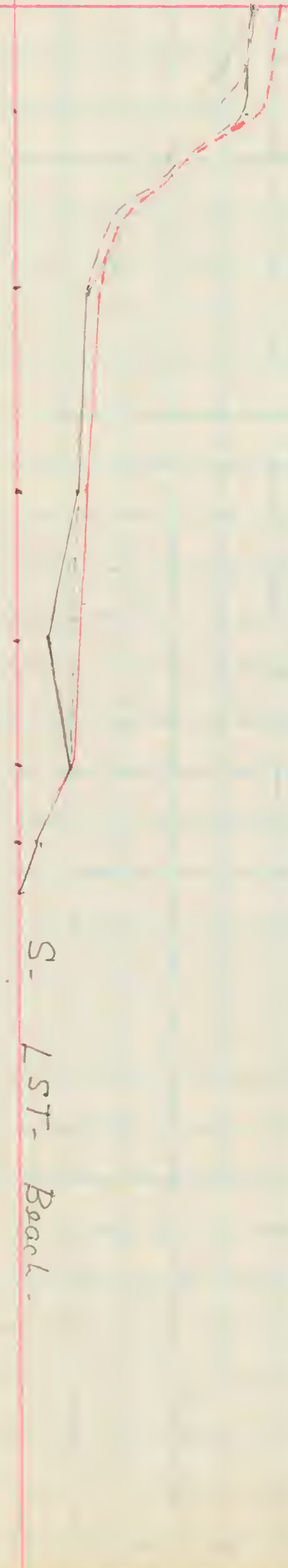


Canal St

W. Bldg

S. 1st - Back

Bradley



W. Sea level.

Due west from
Road 2.100

West End Dr.

8th Ave

sink.

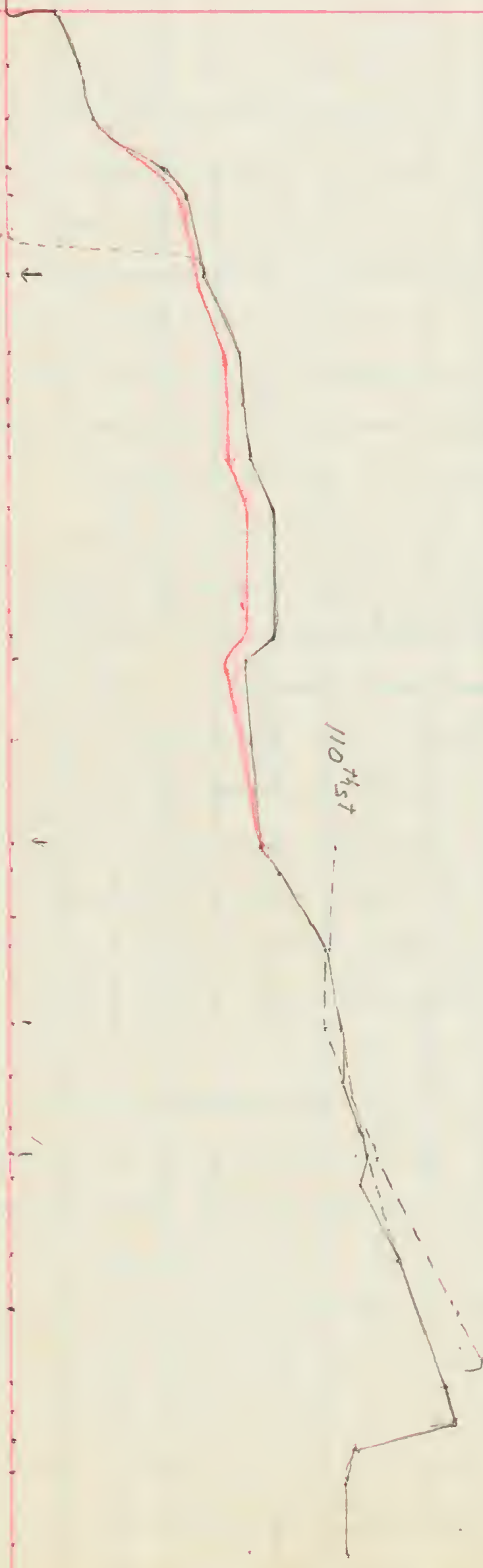
Edge of bluff.
Base " "

110th St

Laso Hill.

Laso Hill.

Timian.
Profile on 100th St



Base Upper Bluff

nd

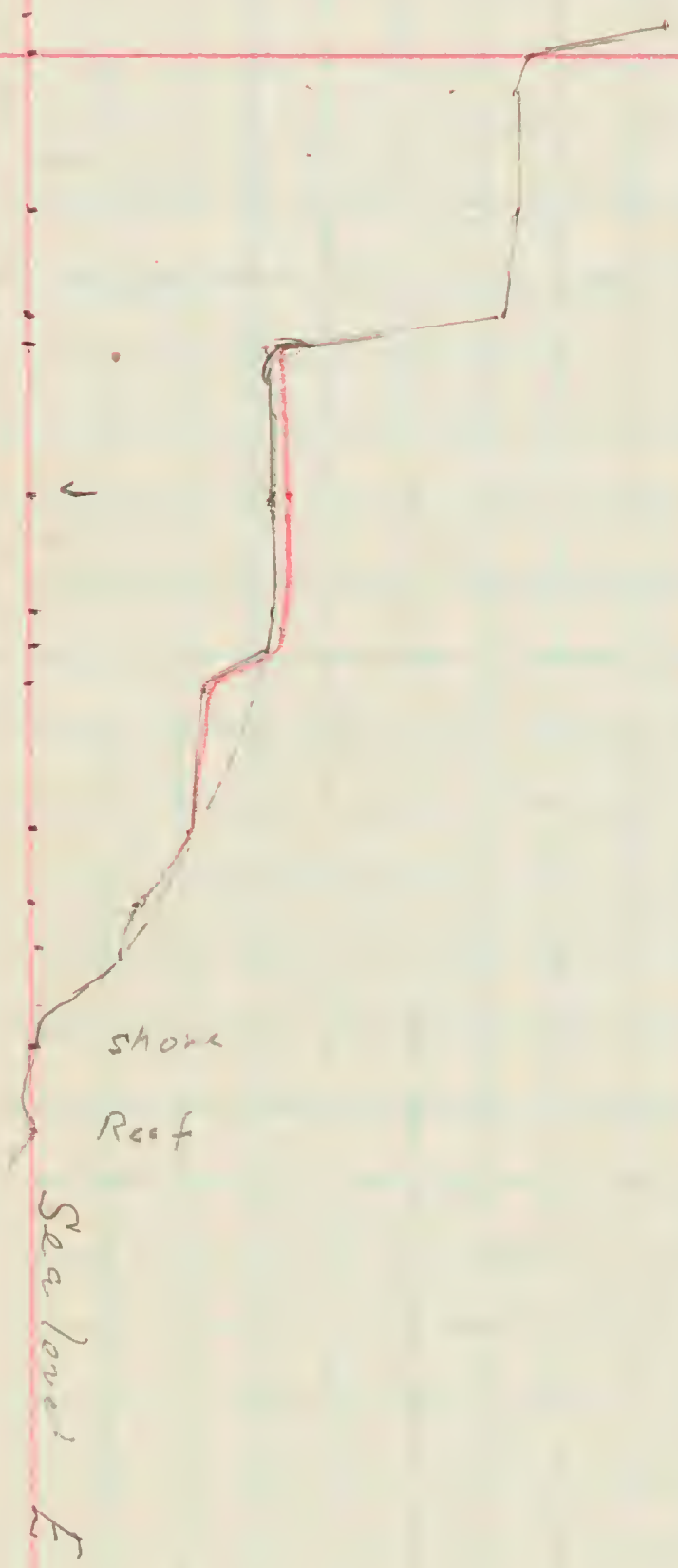
Top 2nd Bluff
Base 2nd "

Broadway 2100' ←

shore
Reef

Sea level E

100th St.



W.

Riverside Dr

West End Ave

8th. Ave

Profile on 8th. St. - 5th St
Broadway.

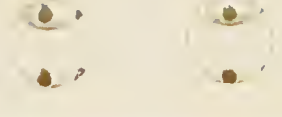
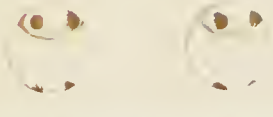


Bdway - ←

Traverse shifted 0.5 mi S to 7th St -
Up 10'



Sci to Broadway then East 7th St.



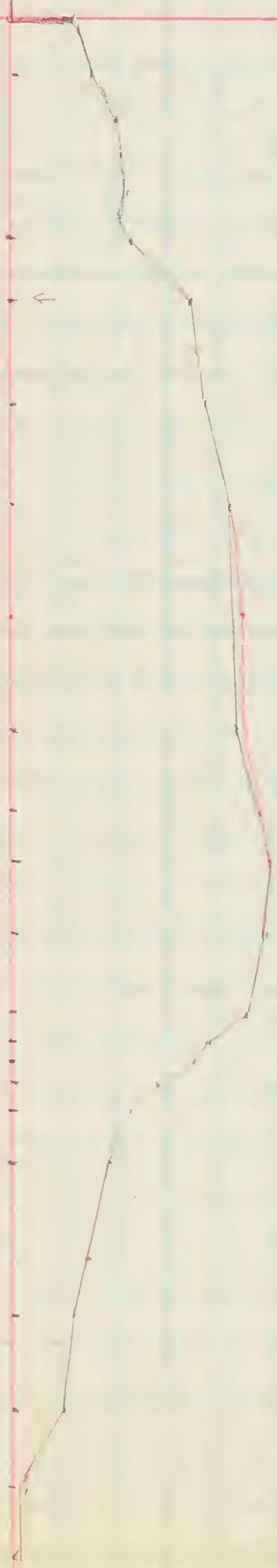
*Station 111
Plots*

8th Ave
Top Hill



Bowly

2nd Ave



Profile across 400 2nd St.

Mary's Tomb

H19
Hans

Rota - (second trip)

7/13/46.

Flew up to Rota with Piper in a B-26 -
Bad weather, rain, heavy clouds, low
ceiling. Made one pass at airport before
landing.

With Piper and Cmdr Coffeythwaite drove
up to Sakana and turned south to edge
of bluff. S. to 5940 E - 1035 N - west
to 5900 E - 1040 N. S to edge of cliff at
5900 E - 0990 N. and then west along top of
cliff for about 100 yds. At this point a
steep trail leads down over cliff to large
spring at elev 350m (abt 1100') -

This spring flows from a large cave in coral ls.

A 6" and an 8" pipe carry water to large
iron storage tank - from which a 6"
line carries water to Rota and Sonson -
This line is not in too good condition it
has been tapped at several points by
natives - notably near phosphate plant at
Terusea.

No pipe seen going east.

A pump house containing a 1 cylinder
gas engine geared to a two cylinder
horizontal pump ~~was~~ is connected to

a $1\frac{1}{2}$ " line that carried water to phosphate
village at Salama

Piper estimated the spring at approx 600 gal
per minute - more than 1 sec. ft.

The main ledger area is a large grid of blue lines forming columns and rows. A vertical red line is positioned on the left side, creating a margin. The grid is used for recording numerical data, with some faint numbers visible in the cells. The page is otherwise blank.



Additional Collections Rota 7/13-18/46.

R-13 Coral limestone - quarry and deposits
at trail fork on road to phosphate mine
6088 E - 1319 N. Has ~~been~~ been painted
for camouflage - ~~Sheet 3~~ Photo - 56

R-14 Basalt. Sheet 2. Old road on south
side of island below spring 5850 E - 0960 N.
Photo 56

R-15 Basalt. with olivine and ~~olivine?~~ on same
road as R-14 - but about 1000 yds farther east
Photo 56

R-16 Decomposed agglomerate - Same Road
as R-14, 15 on sharp nose where we ate
lunch - Approx. location - 6035 E -
0955 N. Photo 56

Check that last 3 locs on photos -
particularly # 56.

Saipan.

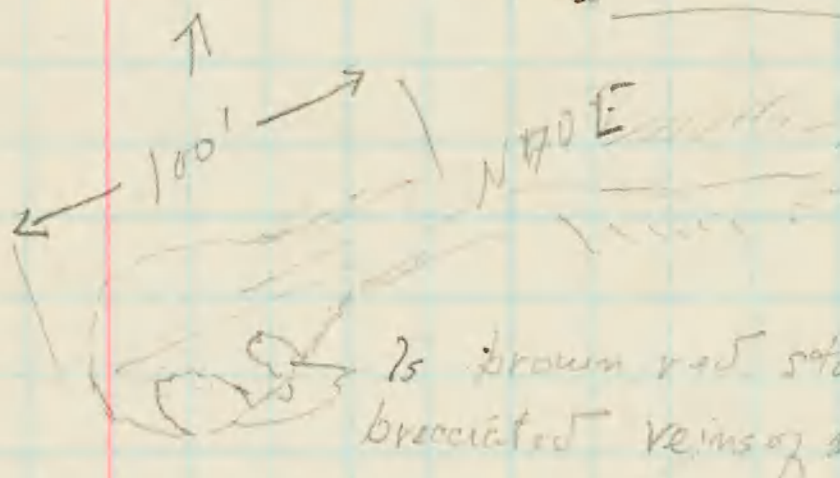
21-7-46

Tuff at entrance to Donkey Spg. N. 50°E
20 SE.

Old manganese mine on road through Naval Magazine
Sheet 2 - 1465 E - 2865 N.

Mine is an open cut about 100' long trending N. 70°E.

At mouth a dump - 20-25' high. cut outer edge extends
N another 100-150' East. rail track - 30" gauge



runs from mine to dump -
cut about 15' deep - in clay
which appears to be of igneous
origin. On south wall of
pit are two pits of limestone
each 5-6' thick, 5-8' high.



extending 10 or so into opening
limestone is brown - bluish -
very fine grained, with conchoidal
fracture - dull - somewhat
earthy much brecciated.
Space between blocks filled with
clay and manganese. Mn in
veins some 6-8" across -
apparently good quality.

About 100' north of opening is
a stock pile 50x50' at
base - 40x40 on top - and at
least 5' thick on average.

In other places to building

Stock pile 2000 - 10

Concrete clay in ft.

to 4000 to 10000 cubic feet

Additional Collections from Saipan - 20-7/26-7-46

- S-11 Limestone - top of Marpi point - (Tapochau?)
Sheet 2 - 1755 E - 3325 N - Photo 18.
- S-12 Rhyolite pumice - road cut Tsukimi Bay - same
as S-6 - Sheet 2 - 1766 E - 3061 N
Photo 18
- S-13 Limestone - top of Oisumaitok Hill - - Sheet 2,
1295 E - 2815 N - Photo 16
- S-14 Limestone in saddle NE of Mt Atchugau
Sheet 2 - 1258 E - 2882 N - Photo 16
just north of fault.
- S-15-a-f Rhyolite - Summit of Mt Atchugau - Sheet 2
1330 E - 2868 N - Photo 16
- a. pinkish - dull - porous - somewhat weathered
b. same -
c. pumice
d. gray porous - banded
e. hard red - flinty
f. pumice

Saipan Collections

- S-16 Limestone. Ridge along hillside north of fault north of Mt. Atchugau - Sheet 2 1340E - 2905N. East side of Valley
Photo 16 Elev abt. 160'
- S-17 Limestone a few feet down hill (west) of preceding - Sheet 2 1240E - 2905N -
Photo 16.
- S-18 Red limestone. Small quarry on old Road to Karraberra Pass. Elev. abt 300
Sheet 2, 1395E - 2965N. Photo 16
- S-19 White limestone same locality as S-18
- S-20 Decomposed Andesite. old road to Karraberra pass - at sharp turn - Elev - 120 -
Sheet 2, 1361E - 2958N - Photo 16
- S-21 Bedded, medium grained tuff. Sheet 5 along road Charan-Kanoa to Abster field on steep grade 0.4mi NW of Kobler. Sheet 5 - 0565E - 1598N.
Photo 11,
- S-22 Coarse grained bedded, tuffaceous agglomerate. Just east of S-21 - Sheet 5 - 0572E - 1601N Photo 11

Saipan Collections,

- S-23 Soil - near officers mess, Casual Co north of Galaperi - Sheet 2 1570 E - 2835 N
Photo 16
- S-24 Limestone with microfossils resting on hydrite
Due east of Mt Atchugau - in bend of old cane road - Sheet 2 1395 E - 2867 N -
Photo 16
- S-25 Limestone with microfossils (large) 3rd cut from west on old railroad grade above Laulau Bay - Sheet 3 - 1040 E - 1965 N -
Photo 25
- S-26 Limestone 1st cut from west old H grade above Laulau Bay - Sheet 3 - 1022 E - 1961 N - Photo 25
- S-27 Andesite 5th cut from west on old H grade above Laulau Bay - Sheet 3 1076 E - 1980 N
Photo - 25
- S-28 Tuff - Donnay - 2nd cut on East side Hy Noj Junction with Western Base Rd. Sheet 4
1282 E - 2505 N - Photo 15, 16
28-a fine grained 28-b Coarse grained over

ying 28-a

S-29 Limestone at Manganese mine east of
Mt Atachugau / Sheet 2 1463 E - 2867 N.
Photo 16

S-29a Manganese from veins in S-29 -

S-30 Fossiliferous ls - Same loc as S-2
Sheet 1 - 1030 E - 2760 N - Photo 16

S-31 Fossiliferous ls - near fault on road to Radio
Hill - Sheet 2 - 1188 E 2840 N - Photo 16

S-32 Rocks from conglomerate layers in Doushan gneiss
a formation - Various localities on road
leading to Radio Hill, west side of Range
Sheet 2 photo 16

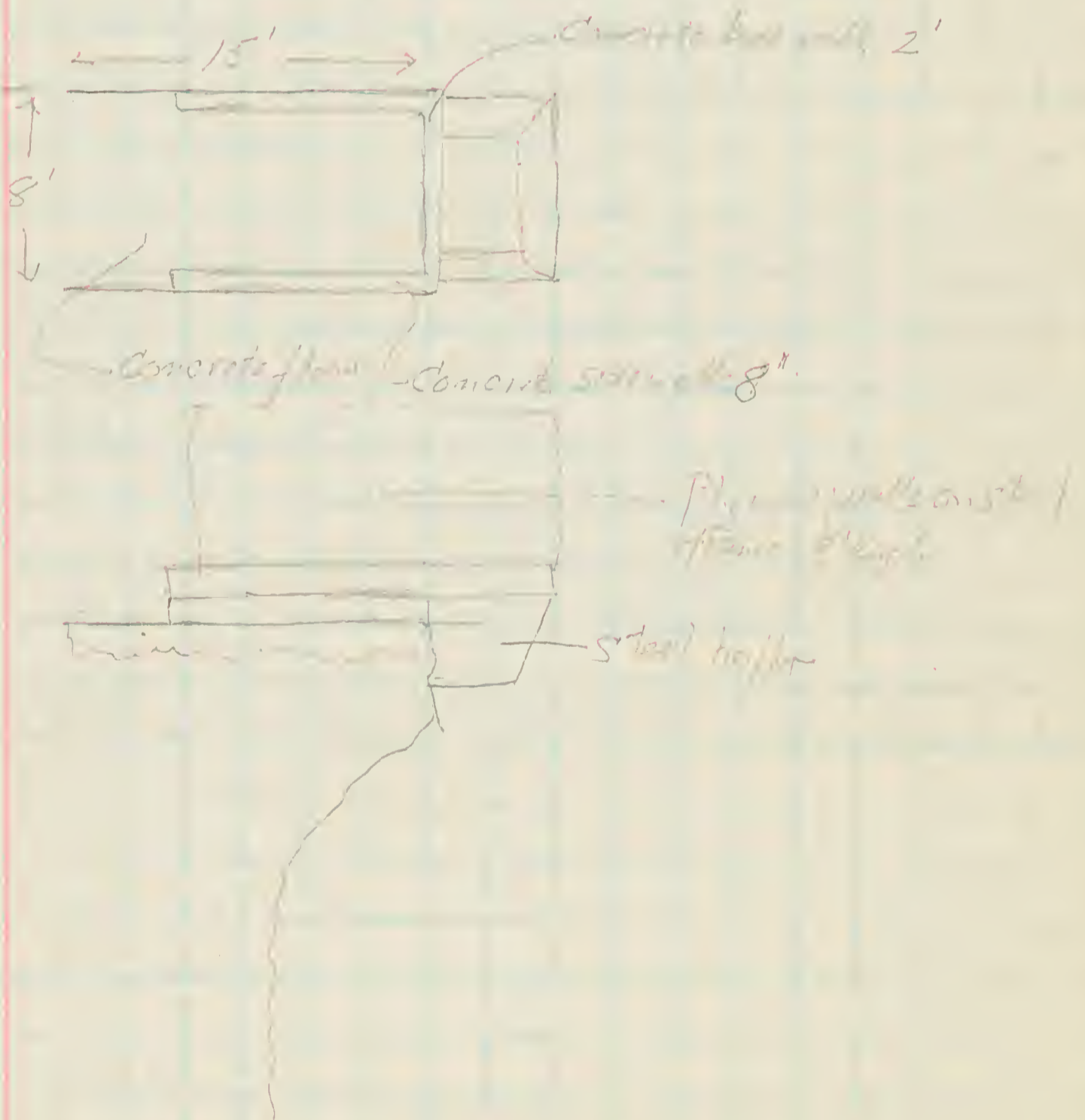
S-33 Limestone fragments from conglomerate layers
in Donnan gneiss. Quarry on road to
Isley Field - Sheet 3 - 0830 E - 1730 N.
Photo 16

Notes of my visit to the quarry



20/1/1902

Cut Retaining wall - remove old bars 1 hr 15 min
 foundation in concrete type of wash base - also dump
 into deep water - in cliff - possibly Amazon.
 Cliff top is level at this point.
 dump base enough to reach level



S-34 Limestone quarry on road to Isleyfield just
south of S-33 - Sheets 3-5 - 0830 E - 1700
N. Tapochouls. Photo 26

S-35 Limestone - quarry just north of west end of
Kagman air strip - Sheet 4 1245 E - 2010 N.
Photo 25.

S-36 Breccia bed in Donnay tuff. Kagman Point
near crest at SE tip - Manginose was
mined from this bed by Japs -
Sheet 4 - 1460 E - 7860 W - Photo 25

S-37 Limestone - Rorogattan Pt at edge of
cliff about 60' above sea. Mariana Is?
Sheet 4 1580 E - 2018 N - ~~Sheet~~ Photo 25

Saipan

27/7/46

Kagman Point. Sheet 4.

The point rises steeply above flat to west, and appears to be an up faulted block. It is composed primarily of tuff-Dormay - and possibly some of the Denshinyama beds on the west side. Although Tayama maps andesite here and names the Hagman andesite from this area, I failed to find any exposures which could unquestionably be referred to that formation. In ascending the steep hill on the western face - found beds of coarse and fine conglomerate, the pebbles primarily of igneous origin - all well rounded. Layers of coarse and fine alternating the former containing unweathered boulders 1' and more in diameter - the latter completely weathered - pebbles and all and the whole section resembling the section of the Denshinyama beds seen along the road on the west side of Radio Hill.

At the summit of the hill is a thin layer of coral limestone (Laulau according to Tayama) but I suspect younger. I imagine that it will prove to be of the same age as the limestone under Kagman field. This ledge caps the south face of the hill - and is 15-20' thick. It begins to thicken and plunge on the eastern side - capping the long spur at 1500 E - 1900 N. and finally reaching the sea just north of the third point on the east coast. Counting from the south. 1520 E - 1938 N.

The whole east face below this limestone is made up of the Dormay tuff - mostly fine grained yellowish,

9mm.

gray - well stratified water lens with some layers of massive calc. conglomerate.

In the main the sequence dips NE and

maintains concordance with the overlying ls. though there is local faulting within the seq.

On the east face at the extreme south tip of the plateau - about 40-50' below the upland in a

2-3' bed of limestone conglomerate carrying fragments of shells - The upper part of the

sequence is a small scale fault and there is a small scale fault

passing by 20 fms on the north at 1460 E - 1838 N.

Suspect that the fault on the west side of Kagman

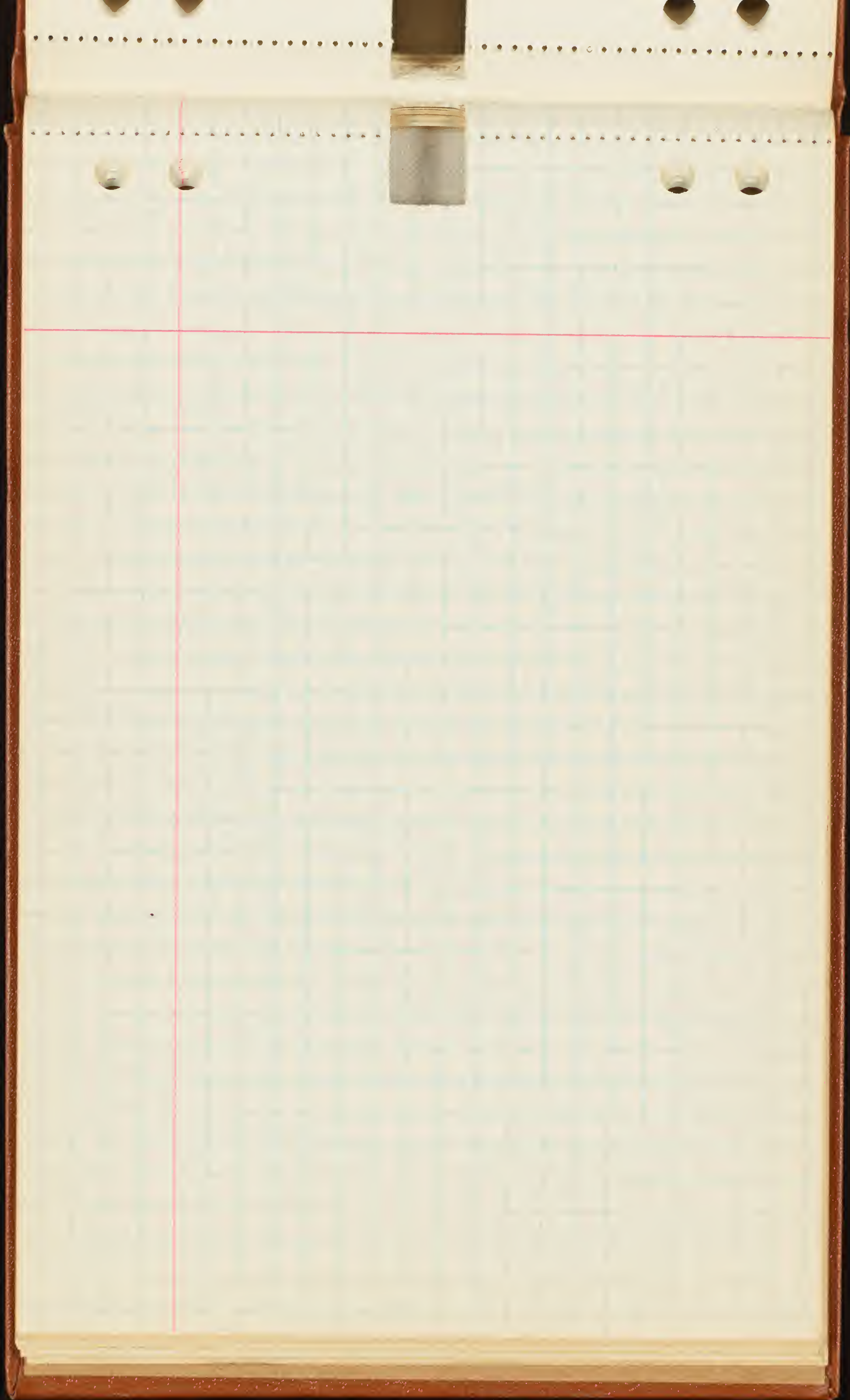
is a hinge fault with the Kagman block upthrown on the south and down thrown to the NE.

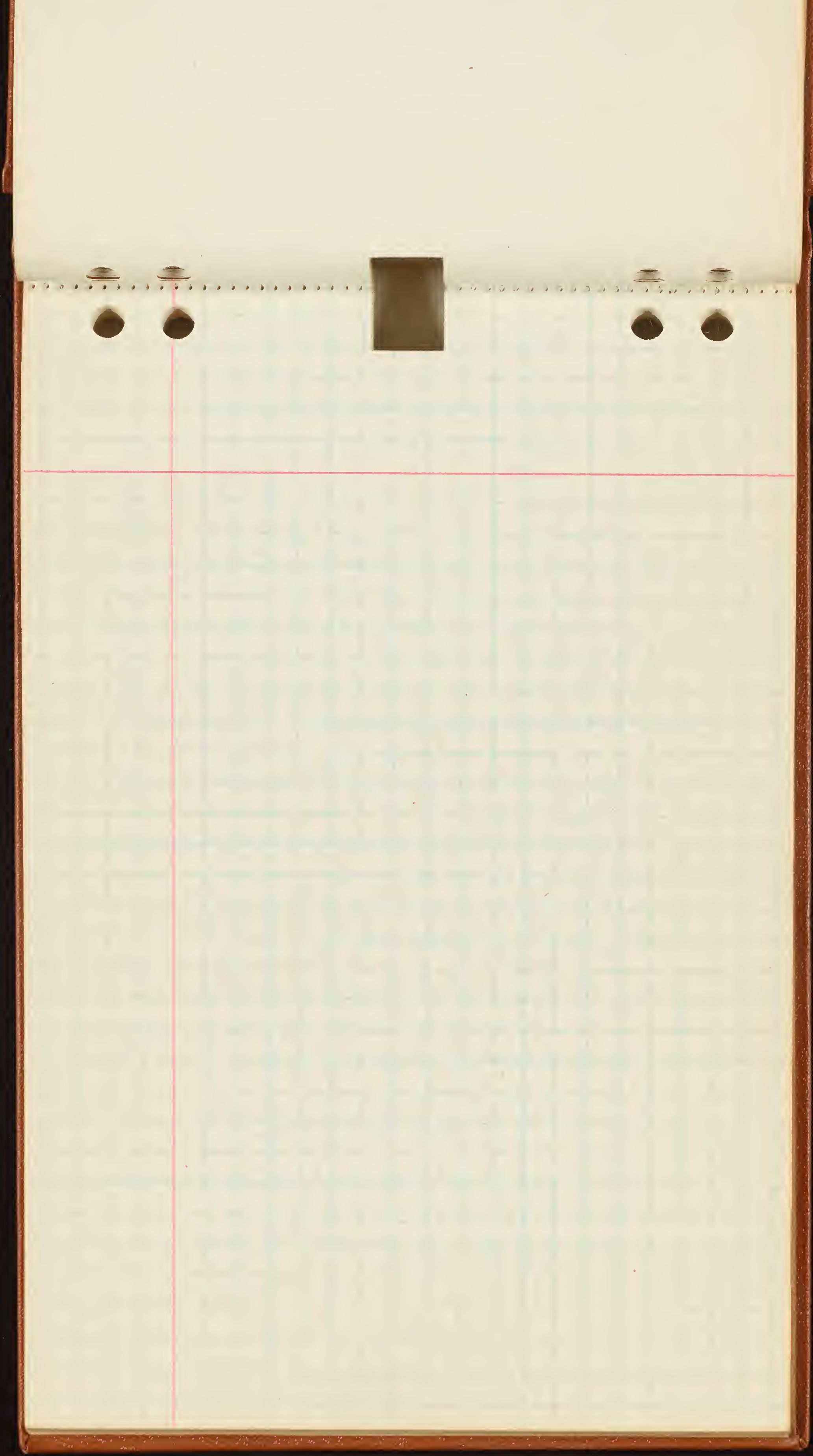
The long steep termination in Kagman Pt. - seems to be the logical continuation of this fault.

On the South face of Kagman the topography is nearly smooth

and the limestone terrace appears to be a fault - the limestone of the plateau -

West shown on island map of Bluff Pt.





Vision 6/9

- | | | | | |
|------------|-------------------------|------|------|----|
| 1 }
2 } | Panorama from Laso Hill | 1/50 | 16 | -G |
| 3 }
4 } | Same - | 1/50 | 16 | a. |
| 5 }
6 } | " | 1/50 | - 12 | a |

Stock piles on Sensoval - 35,000 tons

Pop-Sons and Fanna 146
Outside

Tobi 5-10,000 tons plus.

