

Bridge.

Southern Marianas II.

6/9

1946

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
DI-6

APPROVED DECEMBER 1941

Ft Oscar Calvo - Chocoma -

" Ferdinand Stippich - American Expedition.





Bridge - Piper - Rogers -  
6/8/46

Timian Islands  
Profile along 8th Ave -  
Page 1

Scale -  
# 1/31680  
V 1/3168

8th Ave Riverside Drive 10.8

Rd. N. to Kiln

Rd to quarry East.

110th St.

100th

21.65



2 65

Mill. Goat Rd

86th ave

Rd to Jap-strip

Riverside Drive -

Sea level - 5.

Timian  
Profile across - 8th Ave  
Page 2

N  
S.L.  
Ushi Pt.



Timian Islands  
Profile along - Broodway -  
from Ushi Point - to the last docks -  
①

3.00

Circle 116<sup>th</sup> st,

Shrine — ←

113<sup>th</sup> st,

Sink hole to west,

96<sup>th</sup>

Broadway



86<sup>th</sup>

72d

64<sup>th</sup>

42<sup>nd</sup>

8.8



Brooklyn

3



Canal St

W. Bldg

S. 1st - Beach

Brady 9

W. Sea level.

Dir West from  
R. side 2' 100'

West End Dr.

8th Ave

sink.

Edge of bluff.  
Base " "

110<sup>th</sup> St

Laso Hill.

Laso Hill.

Timian.  
Profile on 100<sup>th</sup> St



Base Upper Bluff

nd

Top 2<sup>nd</sup> Bluff  
Base 2<sup>nd</sup> "

Broadway 2100' ←

shore

Reef

Sea level E

100<sup>th</sup> St.

W.

Riverside Dr

West End Ave

8th. Ave ←

Profile on 8th. St. - 54 ft  
Broadway.

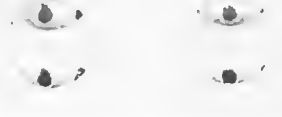
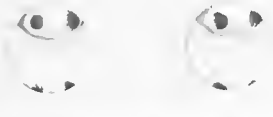


BoWay- ←

Traverse shifted 0.5 mi S to 172nd St -  
Up 10'



Set to Broadway from East 125th



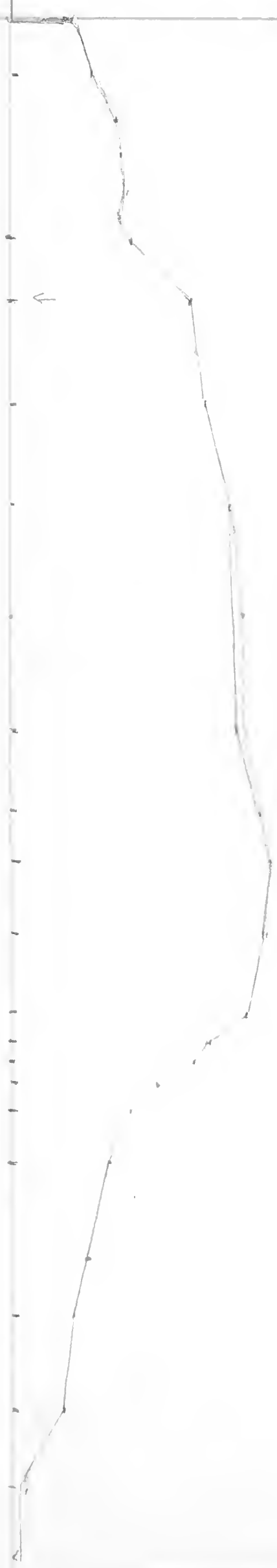
*Schwartzkopf Photos*

8th Ave on  
Top Hill



Bowry

2nd Ave



Profile on 2nd Ave

Mar 22 1884

H. 205 p. 1



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 Capt. Coffey went down  
up to Sabana and checked 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 went along top of  
cliff for about 100 yds. At this point a  
steep trail leads down over cliff to large  
spring at elev 350m (alt 1100') -

This spring flows from a large cave in sand.

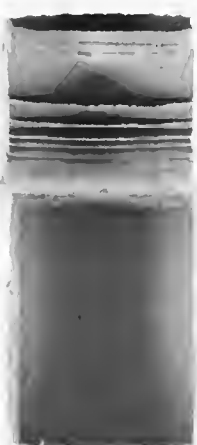
A 6" and an 8" pipe carry water to large  
iron storage tank - from which a 6"  
line carries water to Rota and Sonson -  
This line is not in top of canyon. It  
has been dropped at least part of  
distance - and by way of pipe line at  
Sonson.

No pipe seen going east.

A pump house containing a 1 cylinder  
gas engine geared to a two cylinder  
horizontal pump. This is connected to

a 1 1/2" line that carried water to hospital  
village at Salama

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







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. ~~Have them red. 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 vitriolite? 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 these tent 3 locs on photos -~~  
~~particularly # 56.~~

Salpica

21-7-46

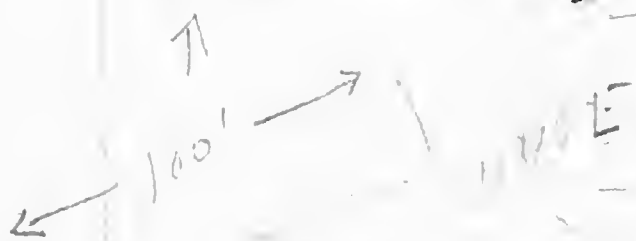
Tuff at entrance to Quarry Spg - N. 50° E  
20 SE.

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. set on outside extends

1100' or 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 side of

15' diameter pit contains  
two pits of diameter  
each 5-6' and 5-8' high.



extending 10 or 50 into opening  
limestone is brownish blue -  
very fine grained, with conchoidal  
fracture. soft - some white  
earthy much brecciated.  
Space between beds filled with  
clay and manganese. Mn in  
beds some 2-3" across -  
apparently good quality.

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

11 other pieces of clothing

Food for 2 weeks -

Carriage for 10 days -

15 minutes to be used for the purpose of the above -

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 - 2905 N. East side of Valley. Photo 16 Elev abt. 160'
- S-17 Limestone a few feet down hill (west) of preceding - Sheet 2 1240E - 2905 N - Photo 16.
- S-18 Red limestone. Small quarry on old Road to Karraberra Pass. Elev. abt 300. Sheet 2 1395 E - 2965 N. 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, 1361 E - 2958 N - Photo 16
- S-21 Bedded, medium grained tuff. Sheet 5 along road Charan-Kanca to Abster field on steep grade 0.4 mi NW of Koblar. Sheet 5 - 0565 E - 1598 N. Photo 11,
- S-22 Coarse grained bedded, tuffaceous agglomerate. Just east of S-21 - Sheet 5 - 0572 E - 1601 N 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 rail road 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 Ng  
junction with Western Base Rd. Sheet 4  
1282 E - 2505 N - Photo 15, 16  
28-a fine grained 28-b coarse grained over

lying 28-a

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

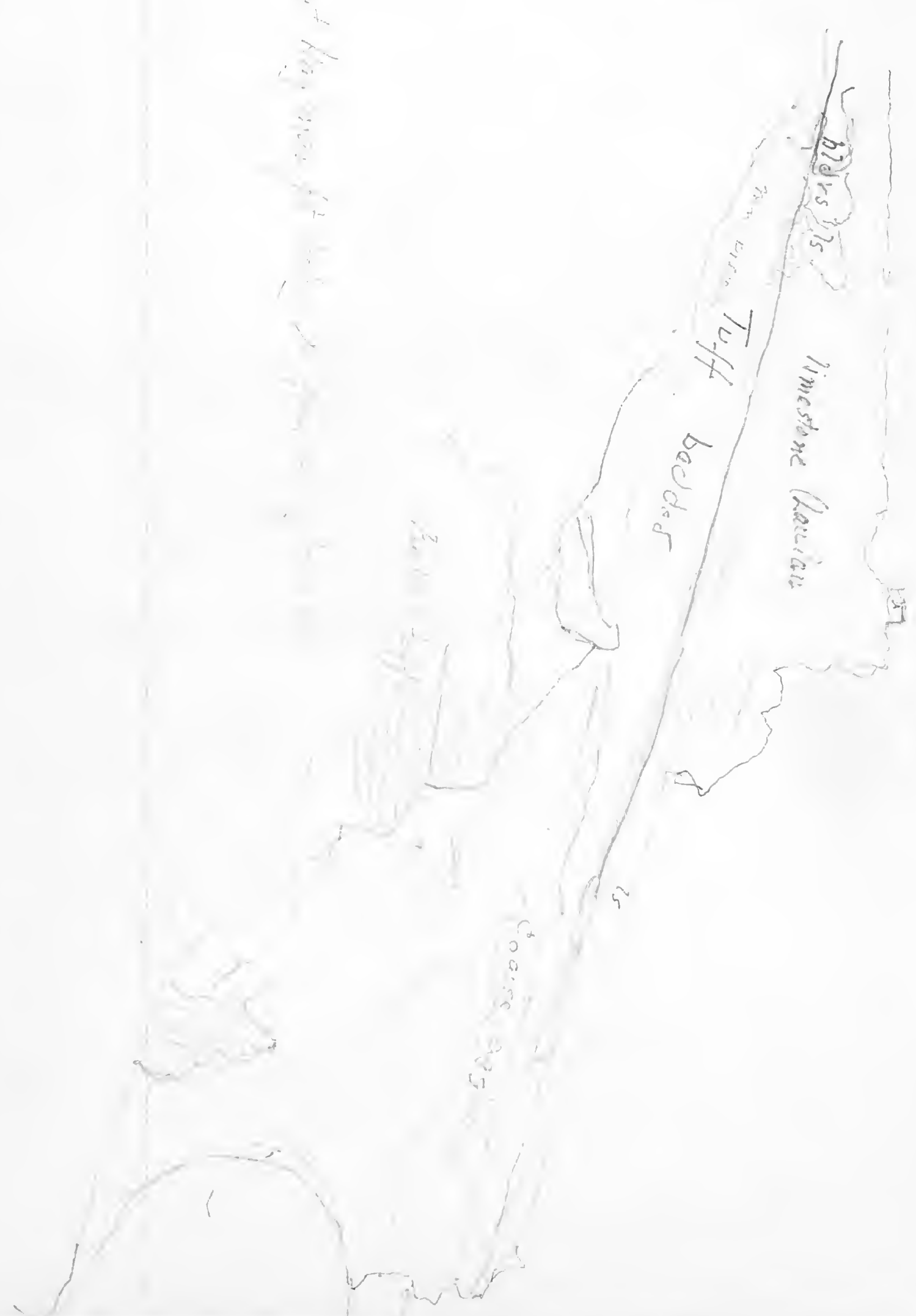
S-29a Manganese from veins in S-29 -

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 Doushanyuan  
a formation - Various localities on road  
leading to Radio Hill, west side of Range  
Sheet 2 photo 16

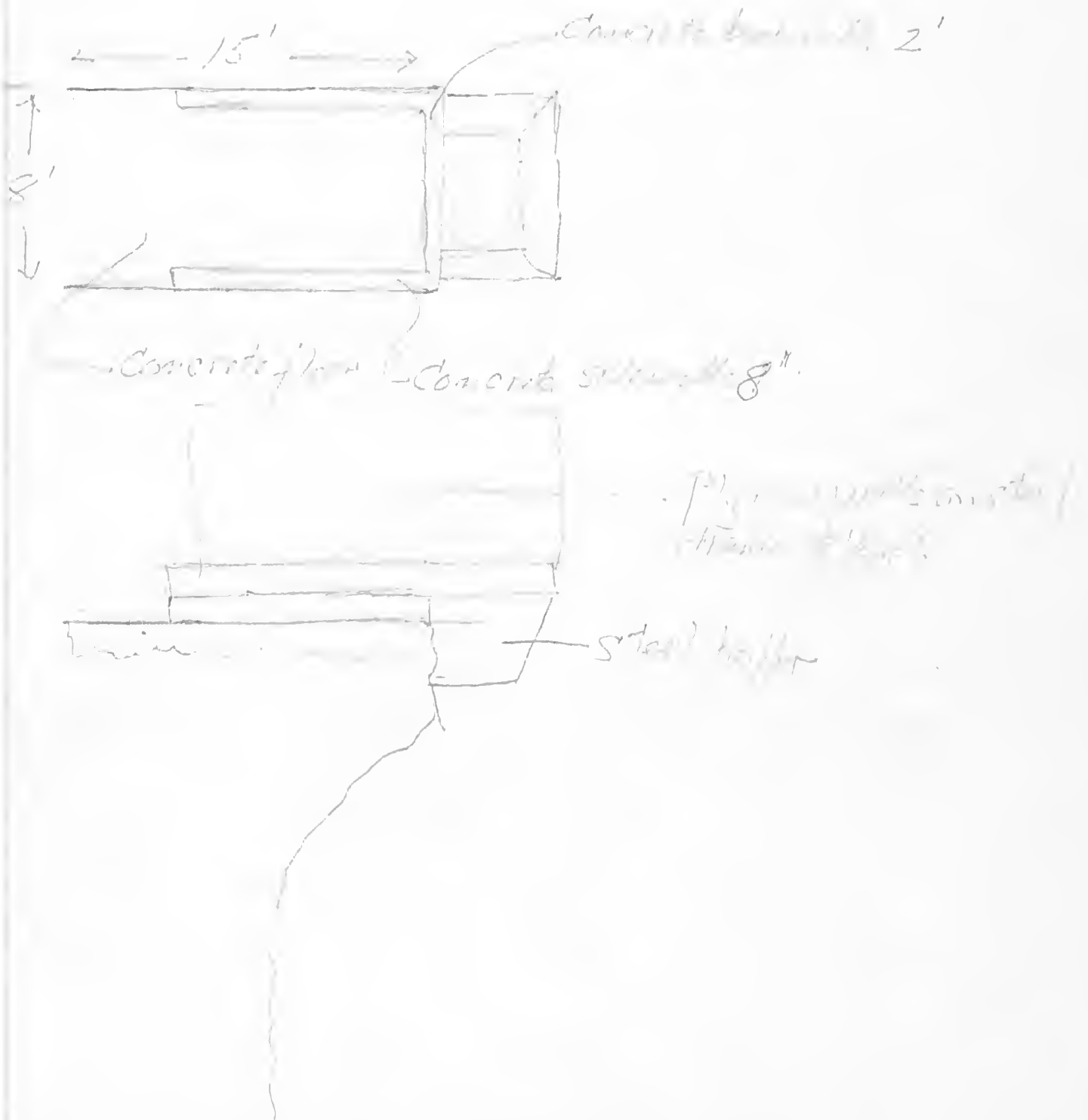
S-33 Limestone fragments from conglomerate layers  
in Doushanyuan fault - Quarry on road to  
Isley Field - Sheet 3 - 0830 E - 1730 N.  
Photo 16



North of Kingman for miles in front of the hills

26/1/1902

At Ritzgating - remain in old bunks 1 hr 15 min  
 foundation some type wash base - also dump  
 into deep water - can with possibly American  
 off ship's deck at the point.  
 dump the material in water





S-34 Limestone quarry on road to Skyfield just south of S-33 - Sheets 3-5 - 0830 E - 1700 N. Tapochau ls. 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 - 1860 W - Photo 25

S-37 Limestone - Rorogattan Pt at edge of cliff about 60' above sea. Marianos ls? 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 - Donnay - and possibly some of the Denshinyama beds on the west side. Although Tayauma 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 numerous boulders 1' and more in diameter - the latter completely unsorted - 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 Tayauma) but I suspect you agree I imagine that it will prove to be of the same age as the limestone under Kagman field. The ledge caps the south face of the hill - and is 15-20' thick. It begins to thicken and plunge on the eastern side - capped by a layer of at 1500 to 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 the limestone is made up of the Donnay tuff - mostly fine grained yellowish,

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

In the main the sequence dips NE and

is in accord with the mapping is though there is local faulting within the hills.

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

is a small shell bed and there is a small shell bed passing by 20 feet on the bluff at 1460 E - 1888 N.

MM.

Suspect that the fault on the west side of Kagman is a hinge fault with the Kagman block upthrown

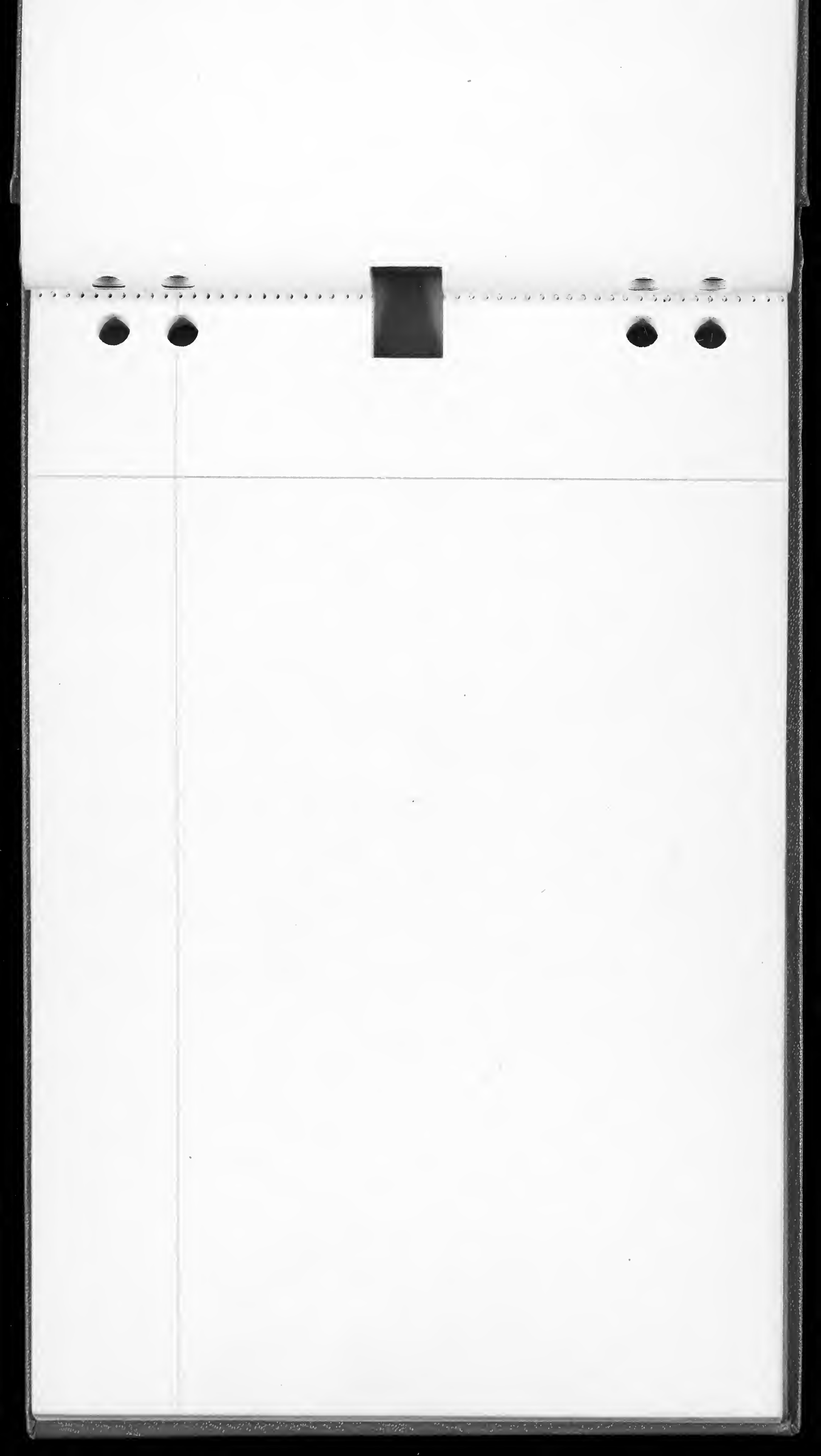
on the south and down three or four miles on the NE. The long steep termination in Kagman Pt -

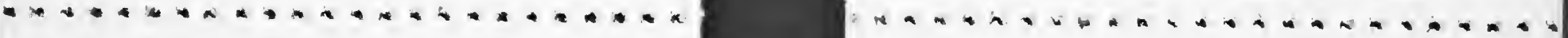
seems to be the logical continuation of this fault.

On the South face of Kagman the upper middle section and the limestone terrace appear like a part

of the limestone of the Plateau - West shown on island map of Bluff Pt.







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Timian 6/9

1 } 2 }	Panoram 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

Jobi 5-10,000 tons plus



