Hawaiian Volcano Observatory Record Book 1915

This volume is one of a series of record books compiled by the Hawaiian Volcano Observatory (HVO) from 1912 through early 1966. The pages for this volume were transferred by HVO to the Bishop Museum, in Honolulu, Hawai‘i, in 1972 and are held at that institution (accession number 1972.265). In 2010, HVO entered a cooperative agreement with Bishop Museum to scan many of the record books in their repository. The scanning was done by HVO volunteer Frances Wong using a flat-bed scanner at a resolution equivalent to 600 dpi. The raw scans were then delivered to HVO volunteer Ben Gaddis, who processed each of the scanned pages by cropping and by adjusting the exposure and contrast using a photo editing program. The scanned and photographed pages for this volume were then combined to form this digital version of the record book. Quality control and posting was done by Tim Orr of the U.S. Geological Survey Alaska Volcano Observatory.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Date

ABBREVIATIONS

A camera ..... Anderson
A ing or A. ..... ingento A
Al V. or A.V. .... Al Vista
Alex ..... Alex Lancaster
aper. ..... aperture

B. ..... ingento B screen
B & J ..... Burke & James

C. M. ..... crag mass
cam. ..... camera
chan. ..... channel
C. camera ..... Century

D.K. ..... Devil's Kitchen
D.P. ..... double Protar
Dall. ..... Dallmeyer
dist. ..... distance

E.S.S. ..... E.S.Shepherd
ex. ..... exposure
elev. ..... elevation

F.B.D. ..... F.B.Dodge
F.P. ..... focal plane
fum. ..... fumarole
F.C. ..... front combination Zeiss Anastigmat lens
ft. ..... fountain
f. or F. ..... F system of stops

Green Hg-CO_2 ..... Green mercurial with compressed CO_2
G. (camera) ..... Graphic
G. (screen) ..... Wratten G
Gl. ..... glycin
grot. ..... grotto

Hale. ..... Halemaumau
h.i. ..... height instrument (5 feet when not specified)
hor. ..... horizontal angle
H.O.W. ..... H.O.Wood
H.V.O. ..... Hawaiian Volcano Observatory

I.H. ..... Instrument House
ing. ..... ingento
I.P.M. ..... I.P.Maydwell
I.P.J. ..... I.P.Jaggar
Iso. or I. ..... isochromatic

Kil. ..... Kilauea
K2 ..... Wratten K2
K2 cel'id ..... Wratten K2 celluloid

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Hawaiian Volcano Observatory

JOURNAL

Day Date

loc. ..... location
lev. ..... level reading
M.L. ..... Mauna Loa

N.R.H. ..... New Rest House
N.F. ..... New Faithful
no. ..... number
N & G ..... Newman & Guardia
N.C. ..... non-curling

O.F. ..... Old Faithful
O.R.H. ..... Old Rest House

penin. or pen. ... peninsula
prob. ..... probably
pt. ..... point photographed or located
pl. ..... plate
pan. ..... panorama
P. (camera) ..... Premo
P. (film) ..... panchromatic
Q.P. ..... quarter plate

R. or rod. ..... rodinal
ramp. ..... rampart

stag. ..... stagnant
stalac. ..... stalactites
sta. ..... station
scr. ..... screen
spat. ..... spatter
S. pan. or S.P. .. Seed panchromatic
s.h. ..... stadia hair

t. ..... time
ther. ..... thermometer
temp. ..... temperature
tele. ..... telephoto
T.A.J. ..... T.A.Jaggar
Tech. Sta. or T.S. Technology Station hut at Halemaumau

U.S. ..... uniform system of stops
vert. or V.A. .... vertical angle
vz ..... Zeiss 5x screen
V. ..... 5x screen
V.H. ..... Volcano House

wea. ..... weather
Woll. ..... Wollensak
W.P. ..... Wratten panchromatic
W.M. ..... Wratten M
W.A. ..... wide angle

X. ..... 10x screen
5xzz ..... Zeiss 5x screen
3x ..... ingento 3x screen
Z.T. ..... Zeiss Tessar
Z. Ana. ..... Zeiss Anastigmat

1915

Jan. 6		368
Jan, 12		390
Jan. 23	Hannon	444
Jan. 30	Hannon	436
Feb. 7		440

Incandescent patterns
Smoke

A. M. Hannon

Feb. 24	Sidney Powers	460
March 8		460
March 16		460
March 17		470
March 22	Powers	422
March 31		510
April 7	Hannon Am M. Hannon	500
April 14		500
April 25	"	525

1915

A. M. Hannon

May 1			508
May 5			
May 13			558
June 16			484
June 16			486
June 21			490
June 24			484
July 6			480
July 20			470
Aug. 9			469
Aug 17			474
Aug. 27			417

Smoke Incandescence

Aug. Views into pit

1915

Sept. 1		380
	Floor of pit	
Sept. 4 Sept. 8		371
Sept.		366
Sept. 10, 12	Powers	
Sept. 29		473
Sept. 26	Japanese killed Keanakakoi in overturned car	
October 19,		475
~~Oct~~ Nov. 8		467

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Friday Date January 1, 1915.
Saturday " 2, "

Jan. 1. Reported active and fumes thin but less so than yesterday.

Jan. 2. Fumes very thin and humidity 49 (!) at 4 p.m. (97 in morning).

11 a.m. High NE wind. Fumes obscure. Streaming from E arm. Crag has receded from wall and crag area very much smaller NW. Great folds of flows NW. NW pond boiling vigorously. Noises puffing and streaming. Terrace near lake level between lake and crag slope. Lake only one foot down. Pot boiling at source of flow W end. Much new talus on floor E and SE. Due to wind?

Mauna Loa same night and day.

T.A.J.

KILAUEA DAY SHEET

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Hawaiian Volcano Observatory

Day Saturday Date January 2, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
11a.m.	E	N	0					
	E	Point of bend	39 49	41 49	-5′		368	
	E	Crag	20 50	31 09	-3′		342	
			(corrected 345', 23' above lake)					
	S chan.	N	0					5' below
	" "	S	-57 4			7 ft.		
	S "	SW	75 46					
	" "	Point of bend	- 1 43	26 21	-5'		358	
			(h.i. being 10' below normal, elev. = 368')					
	" "	Crag	2 42	19 55	-5'		347 (corrected)	

T.A.J.

			no	pl	scr	stop	ex	cam	

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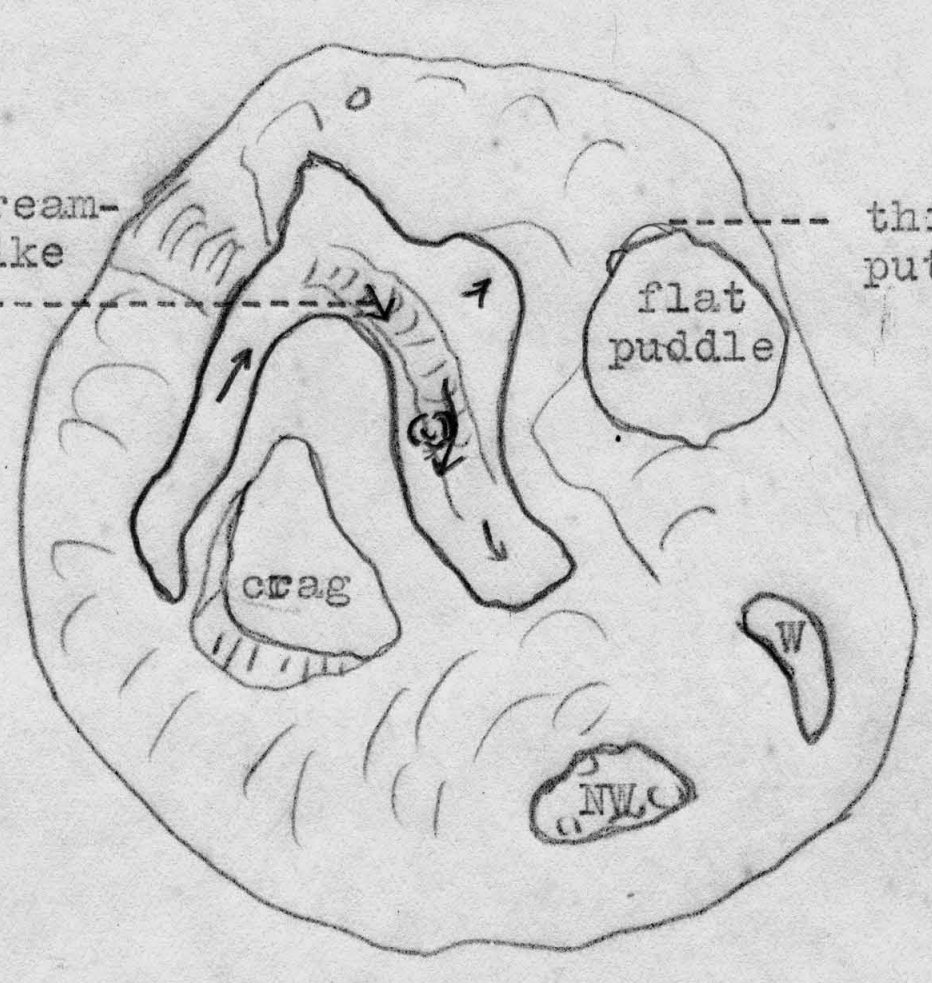
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Sunday Date January 3, 1915.

Fumes extraordinarily thin over Halemaumau in the morning.
11:30 a.m. From SE station. Seeing poor, Talus seen yesterday on SE floor now buried under new flows.

11:45 a.m. From O.R.H. Pond W, pond NW, lake. More encroachment on crag area. NW pond larger. If rising continues the two ponds and lake will merge. Heat on edge strong.



Noise splashing and pounding. Hissing to the SW. Fumes opaque. Slide from W wall N of niche at 11:30; another at 12:30. SE cove no longer double.

T.A.J.

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KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Sunday Date January 3, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	

			no	pl	scr	stop	ex	cam
12:20p	1894 ledge	SE part of floor	1		vz	F 16	½	(13)
		Lake (fumy)	2		"	"	½	(14)

T.A.J.

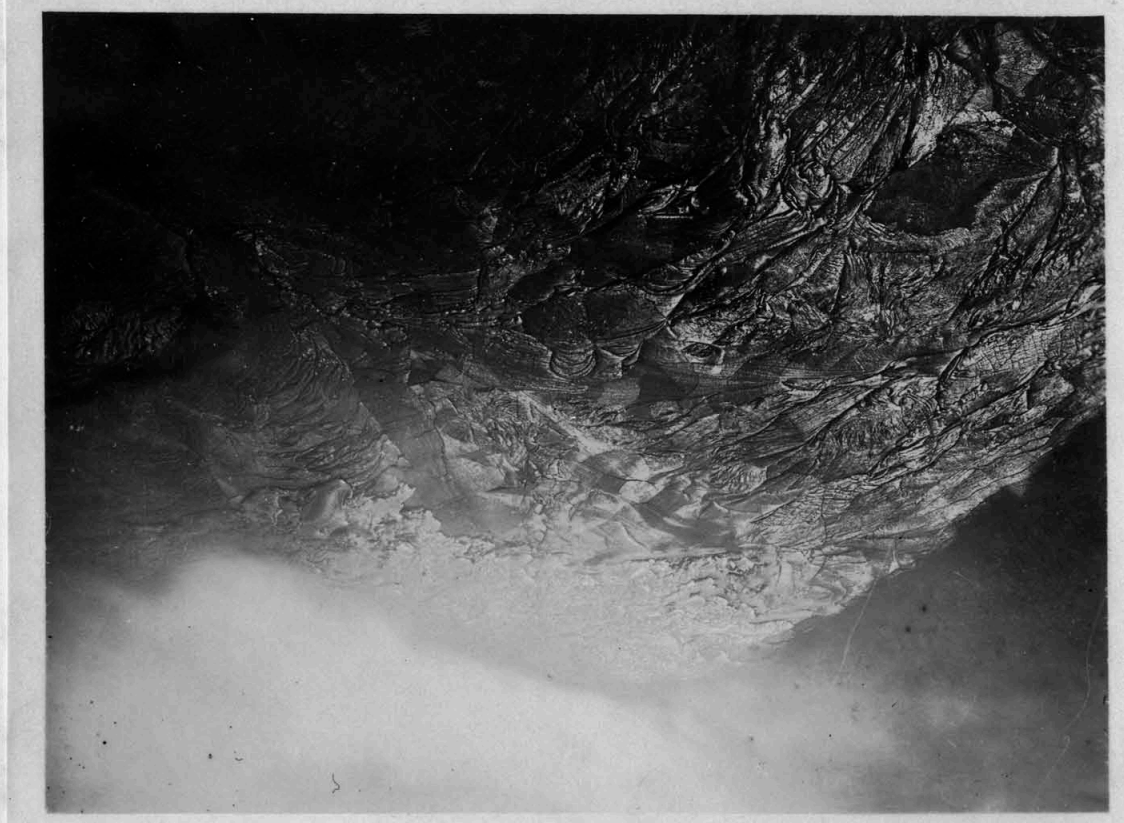
1915, Jan. 3

foe

#2



#1



Massachusetts Institute of Technology
Hawaiian Volcano Observatory

JOURNAL

 Day Tuesday Date January 5, 1915.

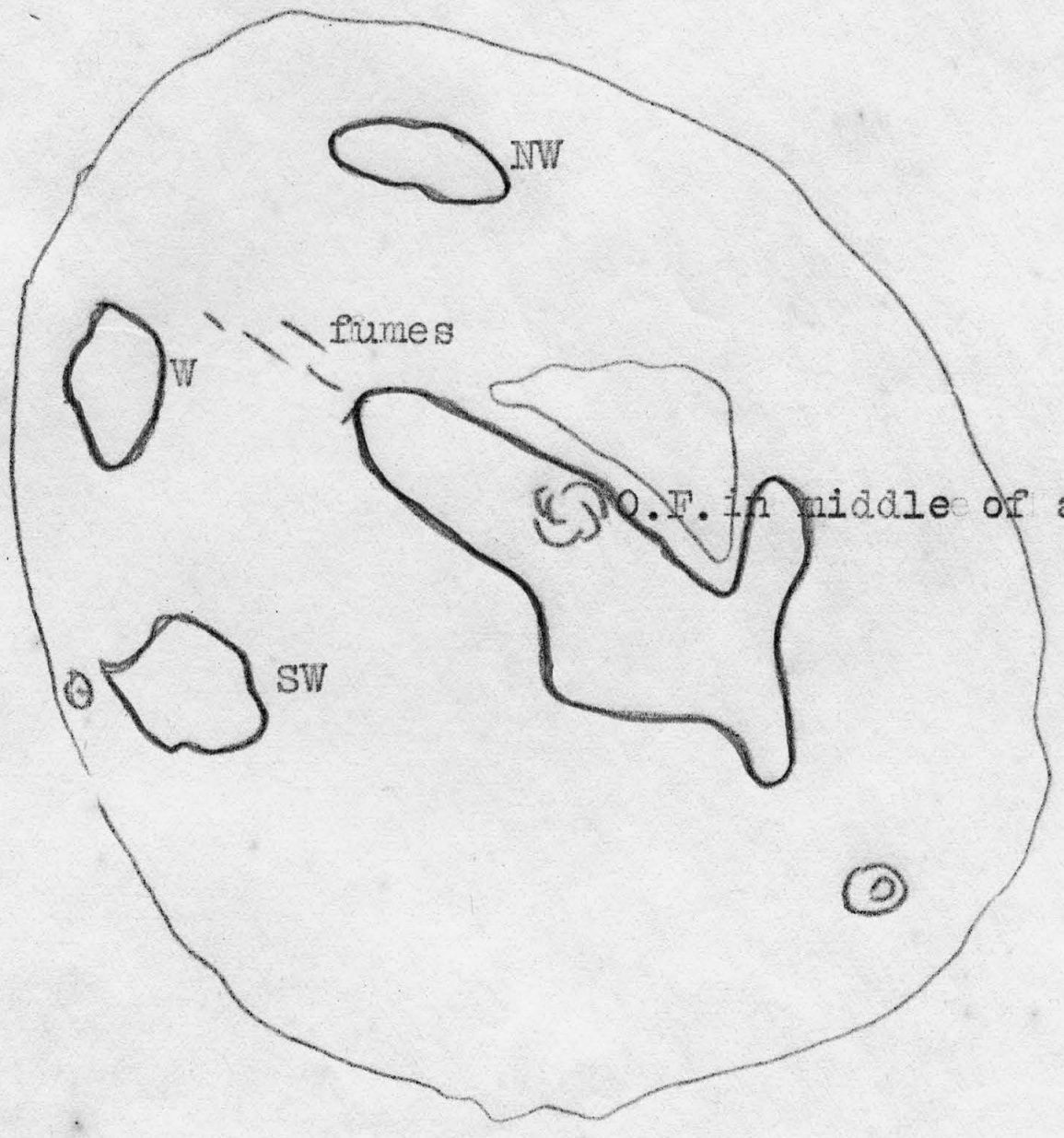
11 a.m. From S and SE. Fine view of whole pit from S. Streaming from E to W. Pot E with shell cover and brilliant hard boiling within. Pot splashing off end of S cove. New festooned flow from S cove. Four foot wall above lake on crag side, two foot wall S. Pond SW, W and NW all about same size - 100± feet long; symmetrical; in a semicircle about W end of lake. Ponds boiling sluggishly a foot or two down.
SE cove deep and pointed. Crag high as ever. From time to time big fountains against S wall of SW pond burst up explosively, then enter on time of quiet.



SW pond from S sta.

NW pond does not appear to have recently flowed -- lava dusty. New flows from SE cove. Fumes from floor W from W end of lake. SW fumarole and crag strongly fuming, also small fumarole SE edge floor.

From S station at noon:-



JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

 Day Tuesday Date January 5, 1915.

9 to 10 p.m. Flow SW moving E. W pond breaks up and overflows a little. Streaming E to W in lake 2½ miles an hour. Flow conceals SW pond. Lake four feet down. SE cove stagnant. E arm crusted. Streaming changes, sometimes against W end, sometimes against N bank. O.F. big -- 40 feet high. Lines of travelling fountains from O.F. to W end. Flame SE cove and E pot; and a flaming pot under fumarole in S talus.
NW pond streams W to E.

T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date January 6, 1915.

3 p.m. Large pond with sunken crust SW, 20 (?) feet deep. Lake down 10 or 12 feet. Very active bubble fountains. Swift W streaming E arm free mostly. Heavy splashing out from under S wall SW pond. Cascade continuous down W corner SW pond apparently from SW cone. W pond crusted. NW pond active. E pot active. Fumes respirable. Streaming into S cove. Lake and E cove wider? O.F. big. Beginning of sinking? Sluggish trickle bottom SW pond.

4:20 p.m. SE station. Cascade SW now pooling and flowing in bottom of SW pond. The spouting hole throws up 40 feet sometimes. Lines of travelling fouhtains from O.F. westward. Lake a little higher.

T.A.J.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date January 6, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
3p.m.	SE	N	0					
	SE	Point bend	17 48	35 16	-4'		369	
	SE	Tip end E arm	6 53	28 25	-5'			
	SE	W end lake	36 18					
	SW	" " "	82 41					
	SE	SE end of lake	14 33					
	SW	" " " "	48 47					
	SE	N side lake O.F.	23 30					
	SW	" " "	71 12					
	SE	S cove	35 58					
	SW	" "	58 00					
	SE	Splash E cor. SW pond	56 20					
	SW	E end SW pond	58 52					
	SE	Cascade W cones SW "	53 21	27 22	-7'			
	SW	W end SW pond	76 09					
	SW	Point bend	59 36	24 13	-2'		368	
	SW	Inner end E arm ca.	66 31					
	SW	Middle W pond	105 25					
	SW	" NW "	94 18					
	SW	Extreme W end floor	119 31					
	SW	Tangent SE	25 44					
	SW	S	0					

T.A.J.

			no	pl	scr	stop	ex	cam	

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Thursday Date January 7, 1915.
Friday " 8, "

Mauna Loa.

Jan. 7. Glow last night and white cotton tuft of fume on summit this morning apparently blowing westward. No change in glow or fume last two weeks. Yesterday afternoon about 2 p.m. streamers of cloud rose in tufts from the higher cone region of NE slope, quickly disappearing and not colored like fume. Probably rain clouds.

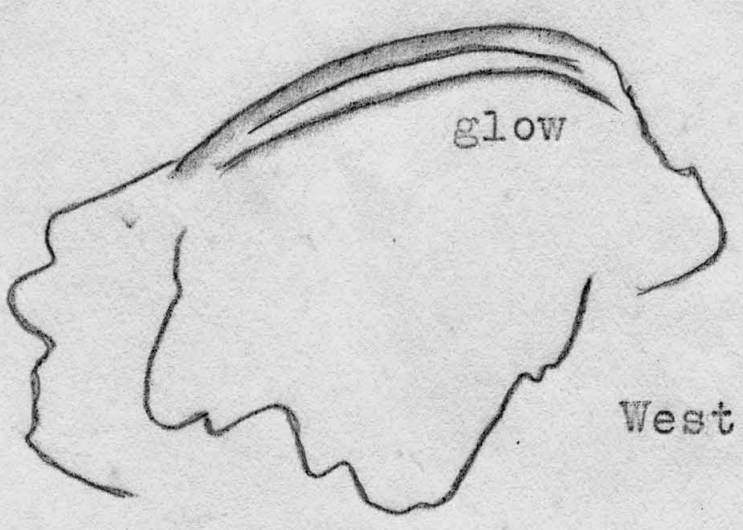
Jan. 8. Between 1 and 2 p.m. streamers of light cloud form, mostly above snow line; some over Mokuaweoweo itself along NE rift. Same as yesterday. At 3:30 these white jets were still at work near the two upper cones. Fume over Mokuaweoweo blowing away W.

T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Saturday Date January 9, 1915.

3:30 p.m. From SE station. Only change is marked cracking around lake and sinking. Lake 15 feet down. Cracks S side SE cove, NE side E arm and along base of NE wall. Large crack ten feet back from whole SW shore of lake, extended westward into smoking cracks in floor. Arm and coves free from skin mostly. A few bubble fountains west. Streaming slow, E to W. E cone seething - same. SW pond down, crusted - same. Very slight splashes into its SW bottom. NW pond active. Dim glow west. SW glow hole in talus. A few stones on E and SE floor. Crag appears very high. SW cone smoking. Cracks from SW pond to W pond. W pond shore exposed only on W side. Cold overflows E side.



West Pond, from SE sta.

9 to 10 p.m. W pond surface broke up, welling out a little eastward. Flames E pot and SW chimney.

Mauna Loa.

The same. Good column of fume blowing S, rising high. Bright glow and some fume evening, blowing SW.

T.A.J.

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KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Saturday Date January 9, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	
			no	pl	scr	stop	ex	cam	
3:45p	SE	Lake and E cone.		W.P.		F 16	1/5		
		(For record; poor light and fumes.)							
								T.A.J.	

1915, Jan. 9.



Jag

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Sunday Date January 10, 1915.
Monday " 11, "
Tuesday " 12, "

Jan. 10. 11 to 12 a.m. From SE station. Same as yesterday. Streaming E to W. E cone same. Cracks same. Depth same, 15 ft. New flow of last night straight from W pond to SW pond. SW pond spitting. Crag high. SW fumarole glowing. Fume thin.

Mauna Loa. No fume visible at all, blowing away. NE wind. Brilliant day. Fume seen in Kona.
Evening clear air and no glow.

Jan. 11. Rain. Bright glow. More fumes.

Mauna Loa. Same. No fume or glow.

Jan. 12. 10:45 a.m. From SE. More fumes, seeing poor. Pool larger. Approximately 20 feet down. Slides high talus W of S station. Blowing in SW pond. Glow hole S talus fuming more. Some stones on SE floor. Cracked block on SW border lake lower. Rapid streaming under W end lake. New line of smoke between SE cove and E pot. Lava in E pot streaming rapidly southeastward. Lake and E arm wider generally by caving. SW pond down and black. Activity high of fountaining near O.F. Noises that of fountains and of blowing and rumbling. E arm lengthened! Crack westward from SW cone. Increase smoke in pit from E pot, SW fumarole, W cracks and crag.

Mauna Loa. No fume. No glow.

T.A.J.

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KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Tuesday Date January 12, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
11a.m.	S	SE	0					
	SE	N	0					
	SE	W end stalactite	30 24	26 55	-4	753	383	
	S	" " " ca	64 56	25 7	-5	819	385	
	SE	Spot on floor S of SE cove	22 24	44 16	-4	371	363	
	S	" " " " " "	38 40	31 14	-5	594	362	
	SE	Point bend	17 28	36 41	-3	523	391	
	S	" "	46 6	28 11	-4	726	390	
	S	Cliff top over point		26 17	+4			
	SE	End E arm ca	8 55					
	S	" " " ca	49 33					
		(cannot see end)						
	S	Tangent W end lake	71 4					
	S	" E " SE cove	33 46					

T.A.J.

Length of E arm 250' ca.
" " lake 495'

no	pl	scr	stop	ex	cam

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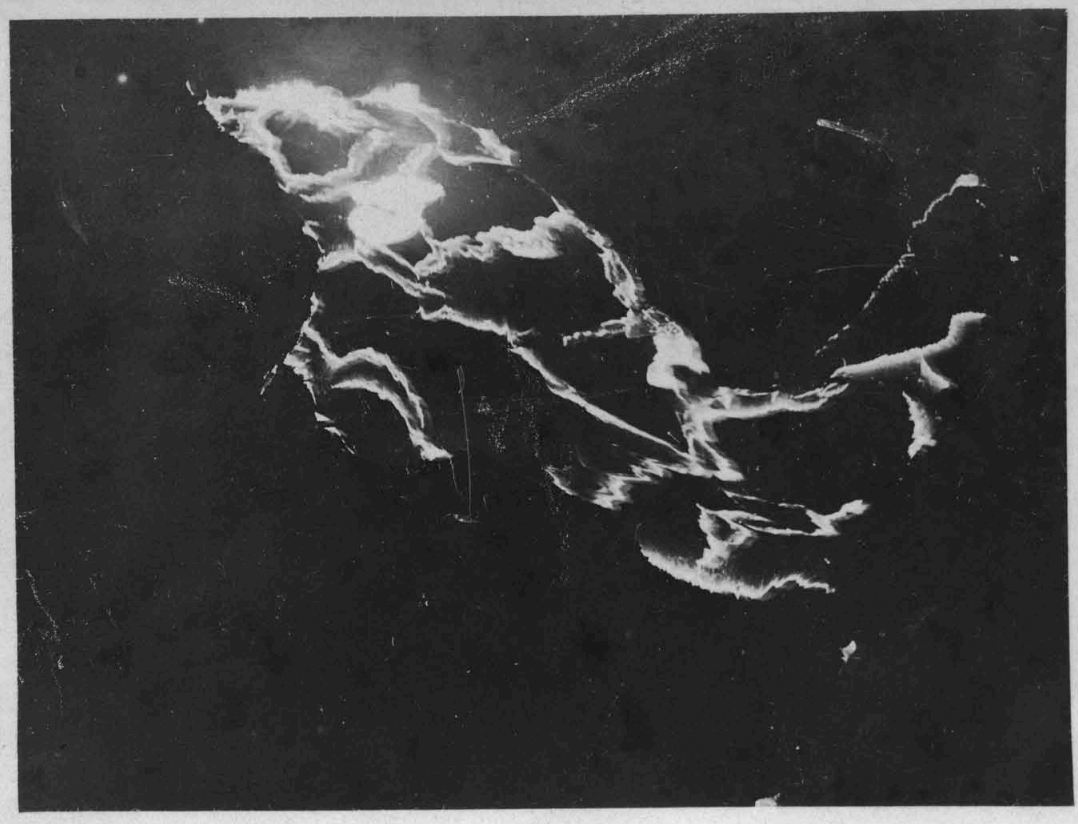
KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Wednesday Date January 13, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	

1915, Jan. 13.



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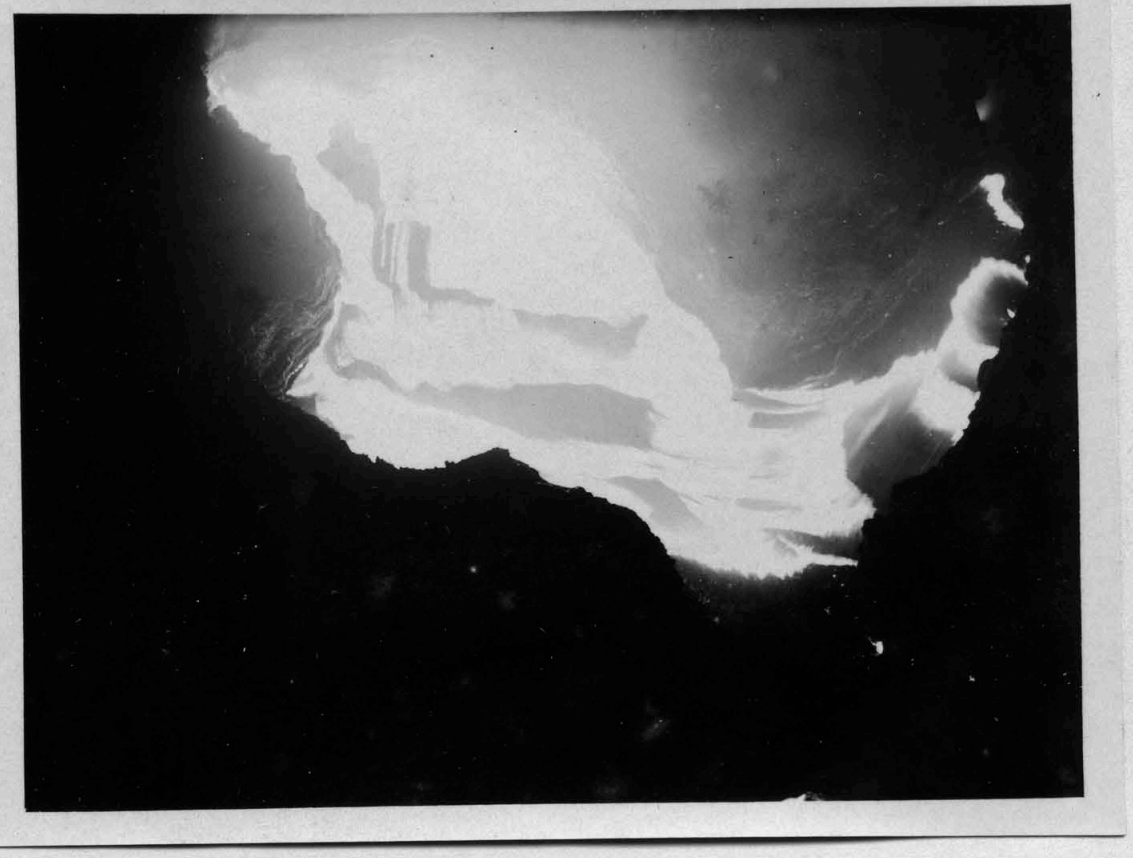

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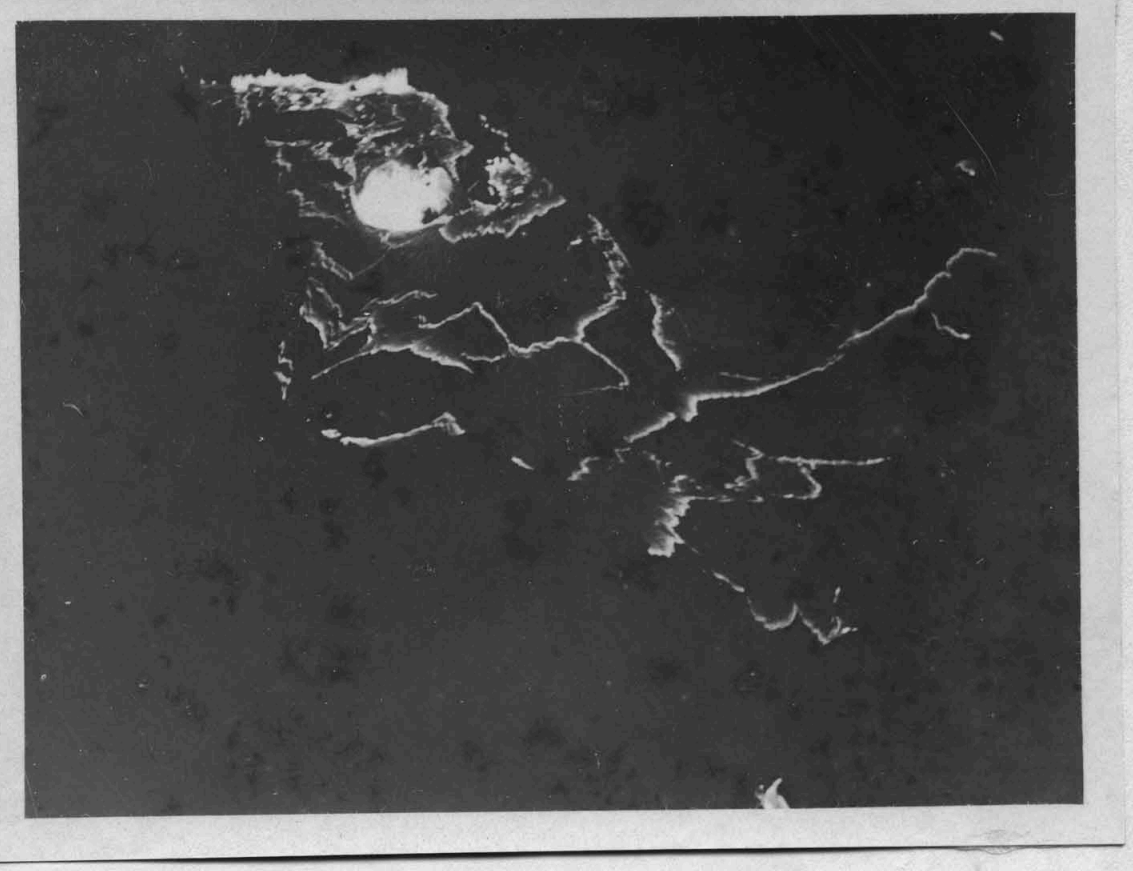


#3

Tag

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date January 13, 1915.
Thursday " 14, "

Jan. 13.
6 to 7 p.m. From SE station. Lake appears down 35± feet. Travelling fountains from O.F. west. Heavy curtains and stalactites on bombarded overhang west. Active stream from inner end E arm to lake, westward and into S and SE coves. E pot has collapsed and is irregular and larger with lava streaming southeastward in it. Pot streaming west and flaming under crag NE above head of E arm.
W and NW ponds down same as lake. From O.R.H. the NW pond seen streaming westward and radially from a skin patch on its surface. W pond dimly glowing and fuming strongly.
SW pond has occasional spatter in its bottom both sides.
The sinking of the floor of these ponds illustrates well the formation of pits like the Devil's Throat. And their formation over places which began as pots in a line and spatter cones is instructive.
S talus chimney glows and fumes. O.F. breaks in large domes. Streaming moderately rapid. Crack with glow inside near SW cone. Noises rumbling and of fountains.
Supports under platform of old instrument house bent outward suggesting a subsidence of the cracked ground but it may be artificial.
No avalanches heard.
Along the W wall, while there is overhang, the cavernous space goes in only a foot or two. On the other hand there is undoubtedly a deeper narrow chasm at W end and end of SE cove opposite cracks fuming above which extend W and SE. Except in places liable to collapse on subsidence and so reveal themselves, and usually revealed anyway by fuming cracks and active pots, the lake liquid does not extend outward under the floor.

Mauna Loa. Night -- no glow.

T.A.J.

Jan. 14. 8 a.m. Perfectly calm. Kilauea fume rising high and spreading into a mushroom. No sign of wind above.
Mauna Loa. 8 a.m. No trace of fume.

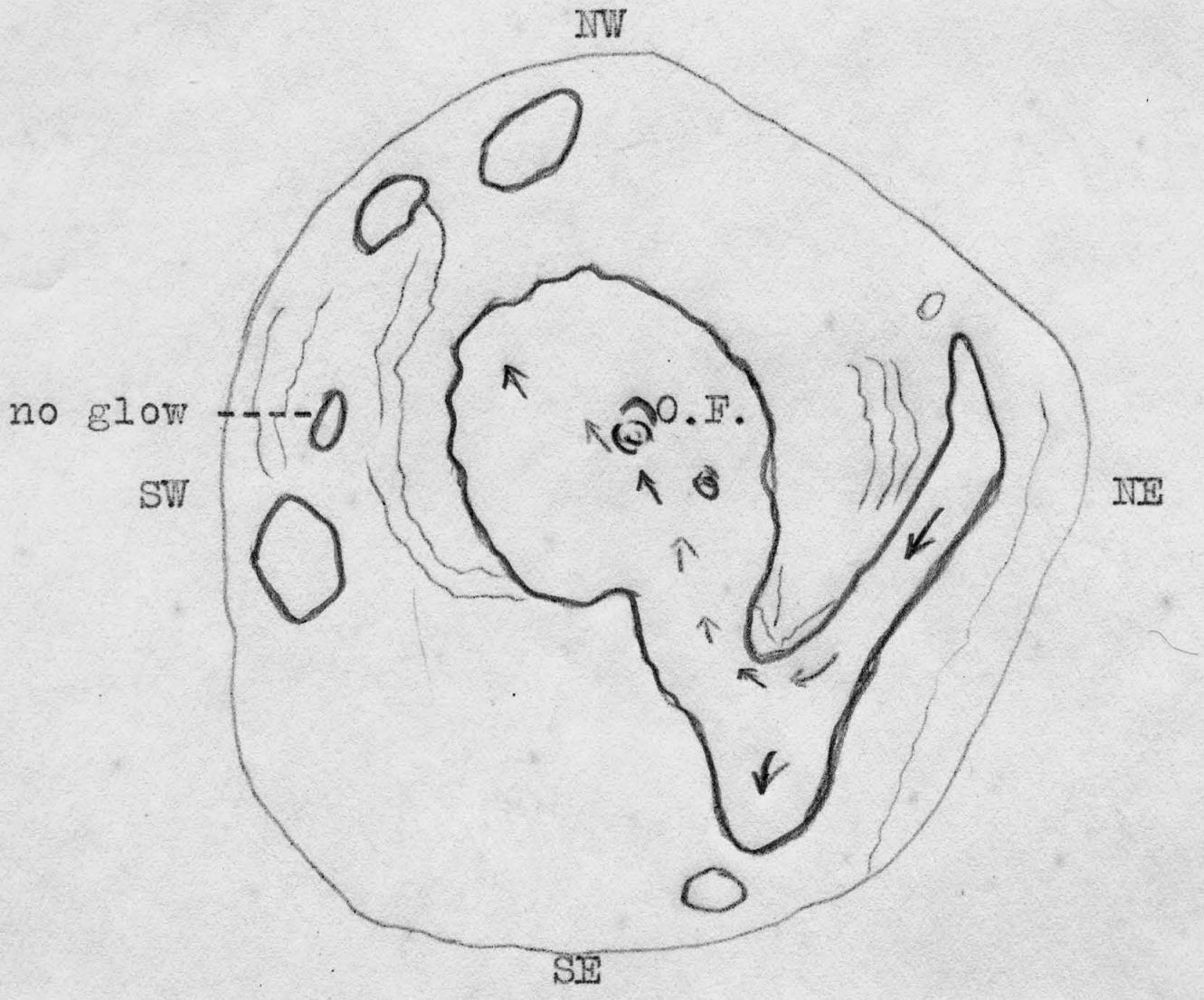
T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Friday Date January 15, 1915.

2:30 p.m. From SE station. Lava about 30 feet down. Lake active. Much rumbling. Glow in NW, W and SW ponds. Many long cracks on floor.

From SE:-



4 p.m. From S station. Floor between the SW and W stations seems to have sunk a little leaving a long crack running from the lake toward the small pool under the W station. There are many smaller cracks. There are many big boulders on the floor but were not heard to fall at this time.

Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Saturday Date January 16, 1915.
Sunday " 17, "

Jan. 16. 2:55 p.m. From SE station. Lake active with many fountains playing at the same time. Streaming still from E arm into SE cove and toward the west in the main lake.

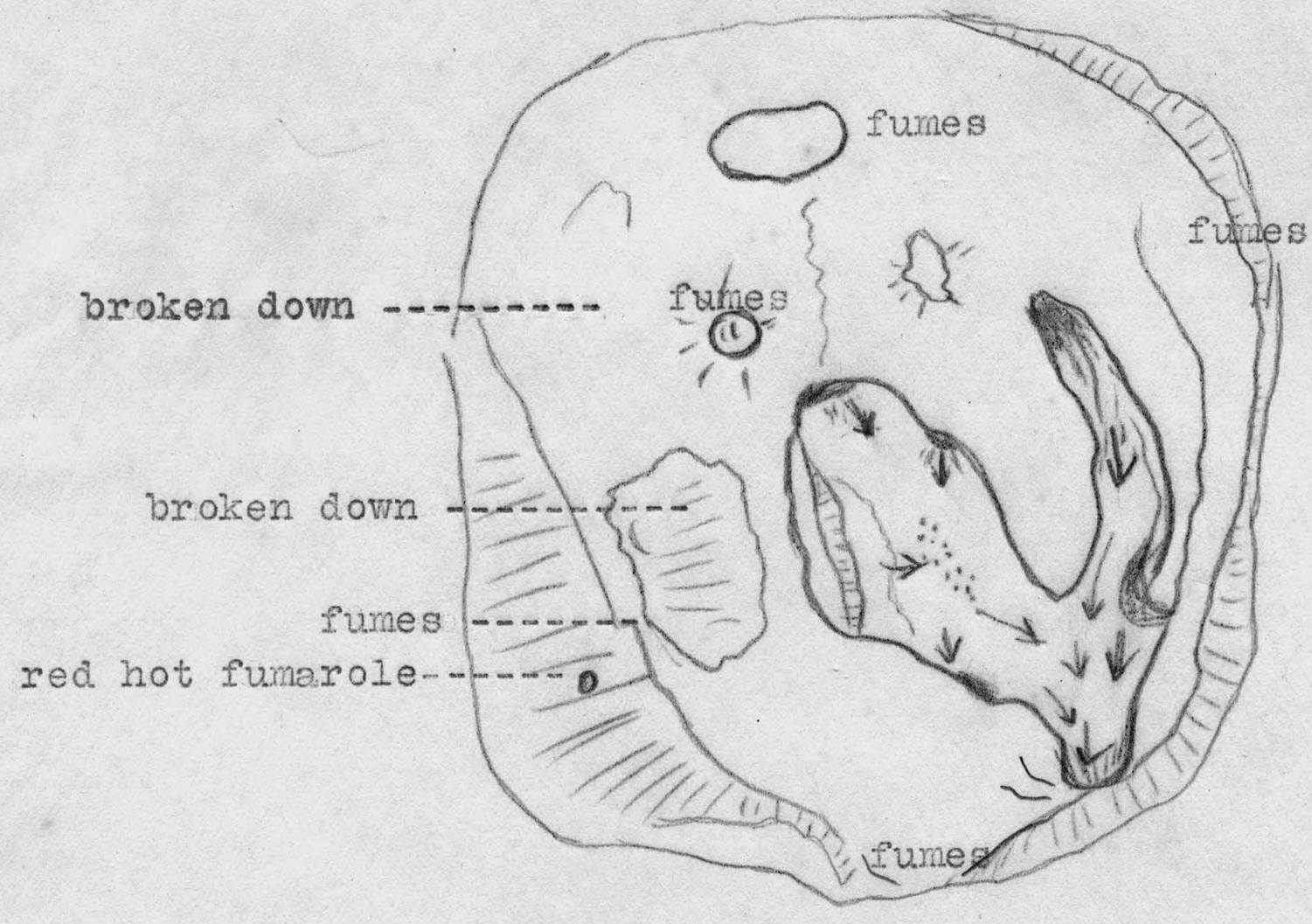
3:5 p.m. A slide of large rocks from SW wall. Did not last long. E pot has not yet joined to the lake but there is a long crack running from it to the E arm. There appears to be a tunnel under the floor between these two through which lava is pouring into another hole in the side of the cliff. The lava in the lake is about 30 feet down.

Alex.

Jan. 17, Evening. H. O. Wood reports conditions unchanged. Streaming E to W. Good seeing SE; fair all around. Glow bright at night. Lava 30+ feet down. E pot not yet joined to lake.

T.A.J.

From S station:-



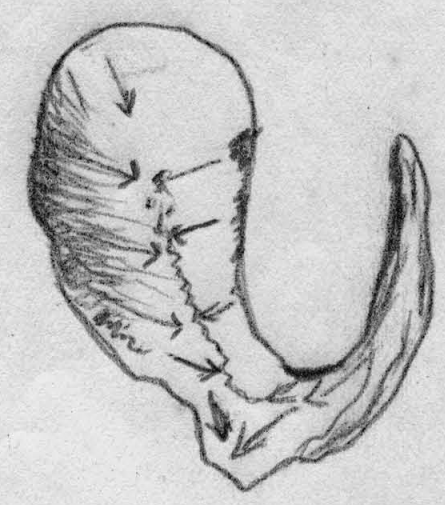
2:10 p.m. Lake and E arm both flowing to SE. SE ledge has fallen in and very fast flow down here. This is only down flow. Very fast flow out from N end of E arm, cherry red for half the length of arm. O.F. keeps up constant boiling of small bubbles, only occasionally stopping, then breaks large as usual. Lake about 40 feet down.

3:05 p.m. Strong flow over top of lake crust from W side of lake. Down flow all along E side of lake. Small flow from lake E and large from E arm into SE cove which is very hot with large greenish-blue flame five feet high.

3:15 p.m. Lake has come up at least three feet covering lower ledge of E slide.

3:20 p.m. Lake up four feet. Masses of folded crusts piling up against SE by E ledge with thick yellow fumes coming out of SE cove and cracks to S of SE cove. Flow continues from W side of lake.

3:35 p.m.



In 15 minutes lake has gone down five feet above high mark. Judging from shining lava left on sides, it was 5 feet high on W side and 4 feet on E. Crust went down (as indicated in sketch) in long SE-NW crack in lake crust with no boiling in general.

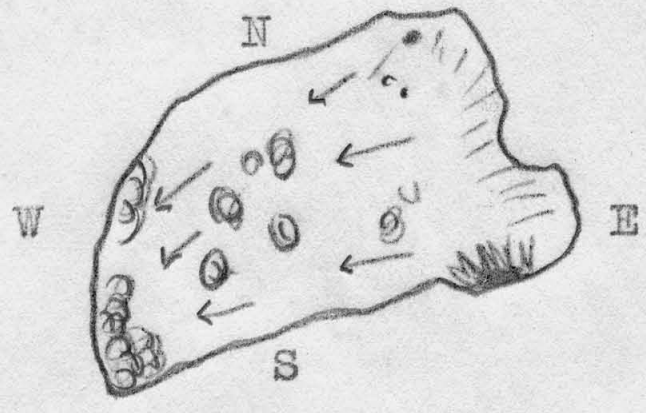
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

 Day Monday Date January 18, 1915.

3:40 p.m. Found Alex at E station. We threw stones into crust of SE cove. They made scarlet spots of several seconds duration.

4:30 p.m. At N station. West pond very hot with flow from E. Boiling hard at west end. 40 feet down.



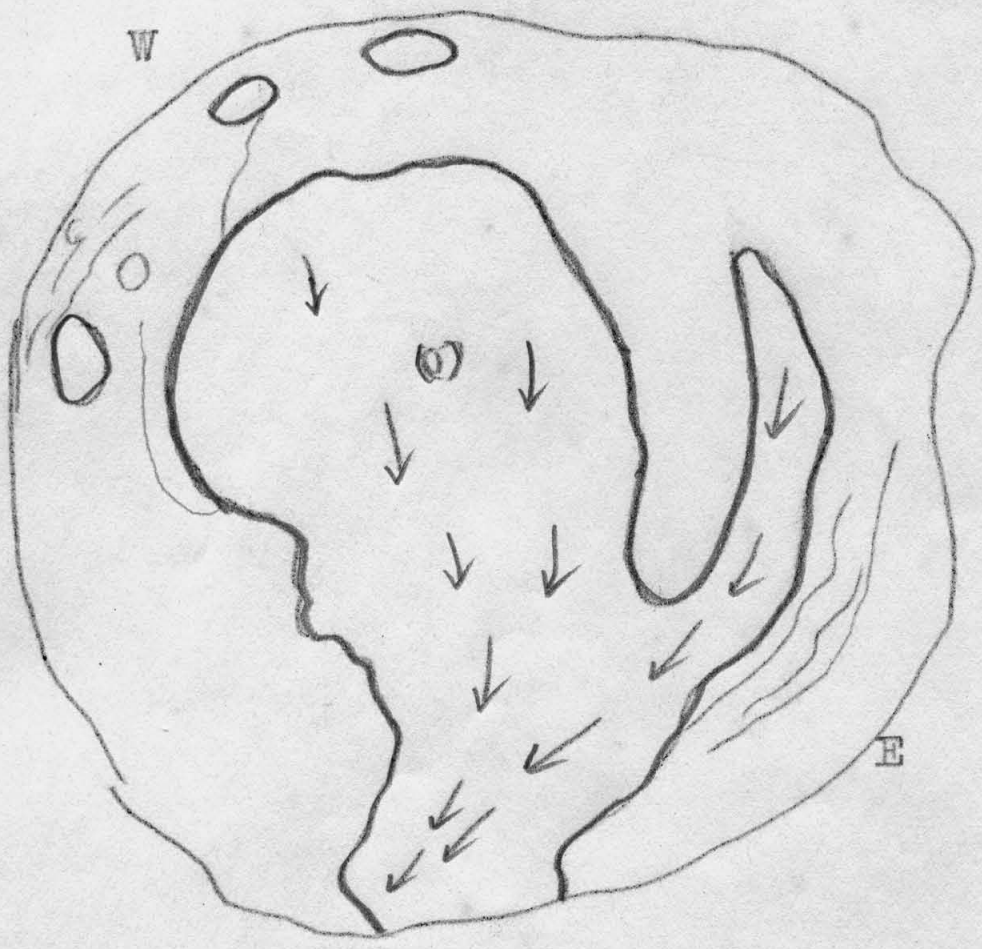
Such thick fumes cannot see SW end of pit; cannot detect any glow.
From E to S high pit edge is giving off pungent yellow fumes. Between SE and S stations the fumes were so hot from cracks that the paper on which the notes were made was scorched.

A. M. Hannon.

Mauna Loa. Nothing.

Alex's notes:-

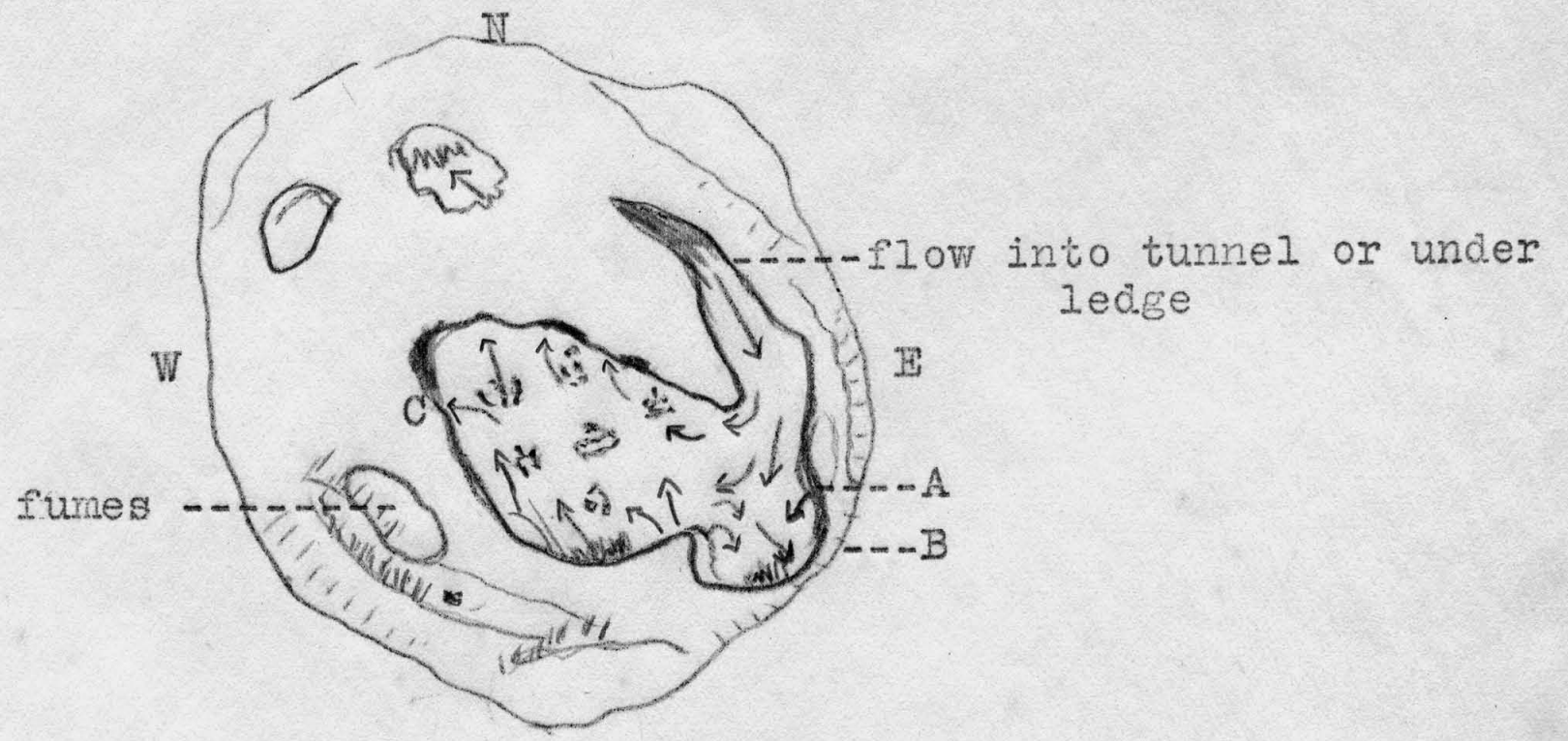
3:10 p.m. From E station. The bridge of floor between the lake and the E pot has fallen in, making a very large channel. It looks about 200 feet across. The direction of streaming has changed. It is coming from the main lake and the E arm toward the SE where the two streams join and flow into the SE cove. It looks as if the lava was pouring into a cave in the cliff wall under the SE station.
The lake is very active with boiling fountains throwing up lava high in the air with much noise.



JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Tuesday Date January 19, 1915.

2:50 p.m. From S station. Lake about 40 feet below NE ledge.



3:05 p.m. Flow as shown in sketch above -- ten miles per hour out of E arm. Part of flow out of arm but most goes in under E ledge and seems to come out again at A. Fast flow into SE cove. Flow from S side of lake.

3:15 p.m. Big slide (of old ledge) into lake at SE cove (B). Lava boiled but crusts did not seem to follow down any faster than before.

3:25 p.m. Noisy slide into lake at C on W side of lake.

3:35 p.m. On way over to S station found old rim fissure giving off fumes too hot to put hand near. Strong wind from NE by E. Ever since I came to pit, lake has been fountaining almost as large as O.F. in several places. O.F. breaks as large as usual. Lake very noisy. Very dense yellowish fumes, strong odor.

4:25 p.m. Some of ledge of W pond fell into lava. Pond has been boiling hard, about like yesterday. Flow in pond is toward the west.

A. M. Hannon.

From Alex's notes:-

2:45 p.m. SE station. Height of lava in lake seems to be about the same, but the direction of streaming has changed. It is coming from the inner end of the E arm, running around the curve toward the W end of lake and also into the SE cove where it seems to be pouring into a big hole in the side of the cliff.

2:55 p.m. E station. Quite a large piece of the floor fell into the lake.

3:06 p.m. Another block fell in at same place.

3:18 p.m. SW station. Another quite large block fell in.

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

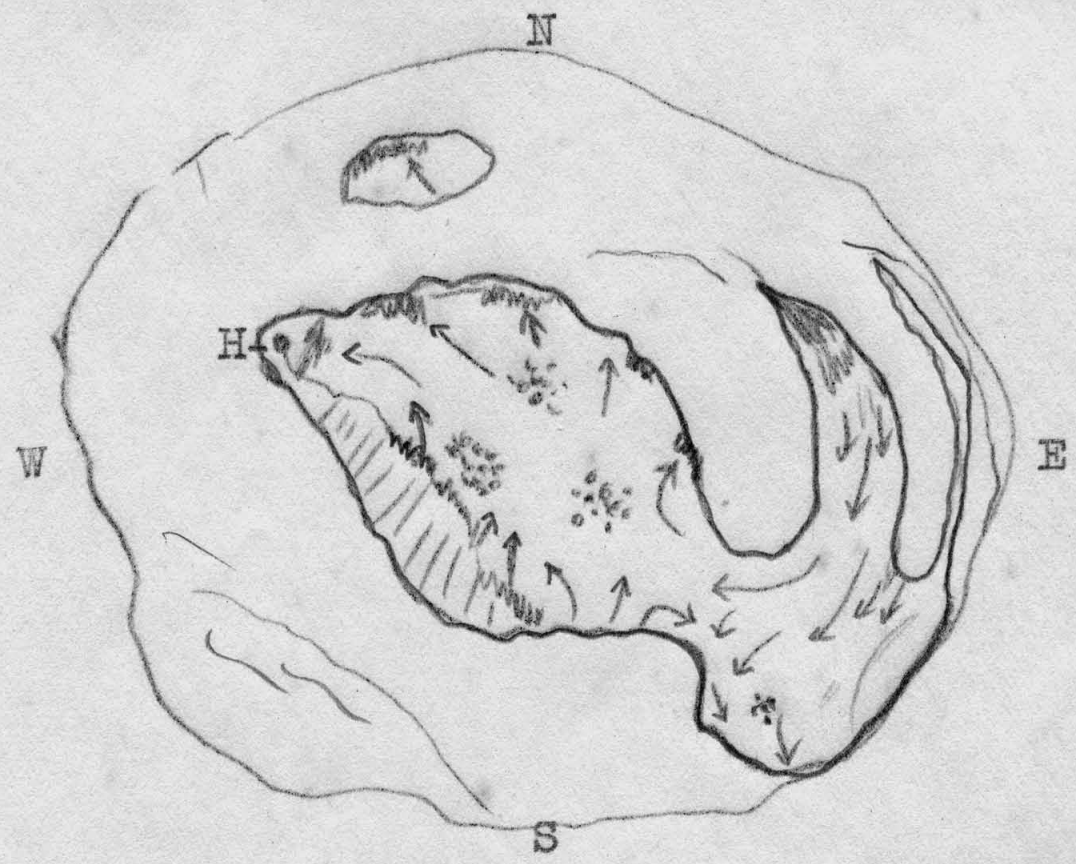
JOURNAL

Day Wednesday Date January 20, 1915.

2:30 p.m. From O.R.H. Lava in lake has dropped down about 40 feet below the level of the floor. Very active with boiling fountains all around the pool. Streaming very fast, about 15 or 20 miles an hour, in the same directions as yesterday.

Alex.

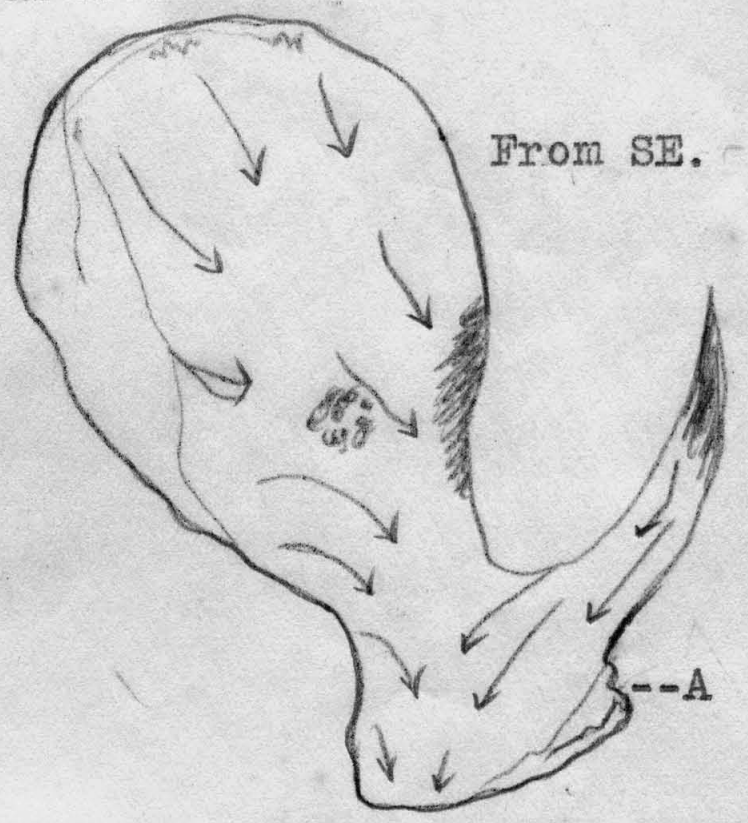
3:35 p.m. From S station.



Thick fumes. Lake about 35 feet or more down below NE ledge. Spatter cone at H, NW end of lake, three feet above lake level. Lava cascades every few minutes into lake. Cannot tell if real cone or hole in ledge. Several fountains like O.F. One keeps breaking close to W ledge slide. Another near N ledge. Flow out of E arm about five miles per hour at head. Does not flow under its E ledge as fast as yesterday. Flow into SE cove, from under S ledge Eward. Long slide SW. Many baby fountains in E arm half way to lake. Pit very noisy.

4:15 p.m. Very fast flow E arm, 10 miles an hour Many baby fountains splashing. Lake flow very slow or none. Only O.F. breaking. Flow is starting towards east.

4:20 p.m. From SE station. Tremendous surging against ENE ledge breaking off large pieces. Pit rim, SE station vibrates up and down. Small slide at A into lava. Lake flow has reversed and is flowing east. Lake has risen 3 feet.



4:45 p.m. The surging worked W along N ledge, getting smaller all the time. The flow followed it and now the flow is about the same as at 3:35; that is, west. Felt vibration on pit rim from 4:21 to 4:23.

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date January 20, 1915.

Not enough vibration to cause any grinding noises but seemed large enough to cause avalanches although heard none from main pit wall.

5:05 p.m. North pond flow to west. Occasional small fountain. Main lake still flows to west and has several regular fountains (about 20 seconds interval) like O.F. and many baby fountains.

A.M.Hannon.

8:00 p.m. From S and SE stations.
Lake appears at least 60 feet down. Streaming toward O.F., W to E in E arm, and E in SE cove. SE cove and pot now all one. Activity high at place of continuous fountaining S of O.F. No avalanches. S talus fumarole glowing and flame. NW pond active and deep. SE cove against old whitish rocks of Halemaumau wall.

T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Thursday Date January 21, 1915.

5 to 6 p.m. From S and SE stations.
Lake 60 feet down. Streaming out of SE cove and out of E arm westward. Glowing torrent pouring from cavern at extreme N end of E arm. Glow spots up wall W end of lake and end of E arm. Flaming SW chimney. Glow in SW crack on floor. NW pond glowing. Crag surface now looks flat as though it had settled back.
Spatter levels of new black lava along wall N of main lake as though stand had been same with slight fluctuations for some time.
New big boulders on floor S (have been there since Jan. 18). Noise plashing. Activity normal. No slides. Saw bit of edge of cliff fall in W end of lake.

T.A.J.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Saturday Date January 23, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
3p.m.	W	SW	0					
	W	SE boulder on floor	43 20	25 48	-6		386	
	W	Point bend	72 40	28 9	-6		454	
	W	W end lake top cliff	82 55					
	W	S cor. SE cove	64 21					
	W	South cove	64 6					
	S	SW	360					
	SE	SW	360					
	S	Boulder	-73 38	49 43	-4	315	373	
	S	Point	-79 41	30 43	-4	732	435	
	S	Top cliff at bend	-77 21	25 13	-4	765	366	
	SE	" " " "	-64 27 ca					
	S	SE cove	-94 38					
	S	W end	-55 01					
	S	S cove	-66 57					
	S	Rock bend	-80 47	30 9	-5	755	439	
	SE	" "	-67 31	39 59	-5	525	443	
	S	Stalac.E arm, inner bend	-79 26	24 56	-5	898		
	SE	" " " "	-73 52					
		(bend in arm beyond)						
	S	SW chimney	-40 45	47 14	-5	303	329	
	SE	" "	- 4 01	31 53	-5	534	334	
	S	Crag	-71 55	20 42	-5			
								T.A.J.

Height of floor over lake	65'
" " N crag	74'
Length of lake	513'
" " E arm	420' ca
Width of lake at S cove	160'
Depression SW chimney (chimney 45' above floor)	330'
Depression of floor	379.5'
" lake	444.5'
" summit crag	366'

T.A.J.

no	pl	scr	stop	ex	cam

Massachusetts Institute of Technology

JOURNAL

Hawaiian Volcano Observatory

Day Saturday Date January 23, 1915.
Sunday " 24, "

Jan. 23.
3¼ p.m. Glow W pond. Deep. NW pond active. Fan pattern on lake E to W. Vortex in S cove counter-clock. Very heavy discharges O.F. Golden torrent E arm. Spatter bank collapses N wall. Acrid smoke N and O.R.H. SW fumarole breathable W station. Heard one clinking rock fall. Occasional high spurts W fountains. Noise of fountaining strong. Every now and then noisy spurt in NW pond. Smoke all along W from crag. Smoke at SE border floor. Pit smoky.

T.A.J.

Jan.24.
6:10 p.m. Flaming glow cracks along edge floor SE and some glow spots on the floor. Crusts E arm and SE cove. Streaming E to W and into SE cove. Streaming out from under skin E arm. NW pond same. SE chimney same.

T.A.J.

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KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Sunday Date January 24, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	
			no	pl	scr	stop	ex	cam	
6:10 p	S		1	W.P.		6.3	1		
"	"		2	"		"	12		
								T.A.J.	

1915, Jan. 24.



Jap

#2



1

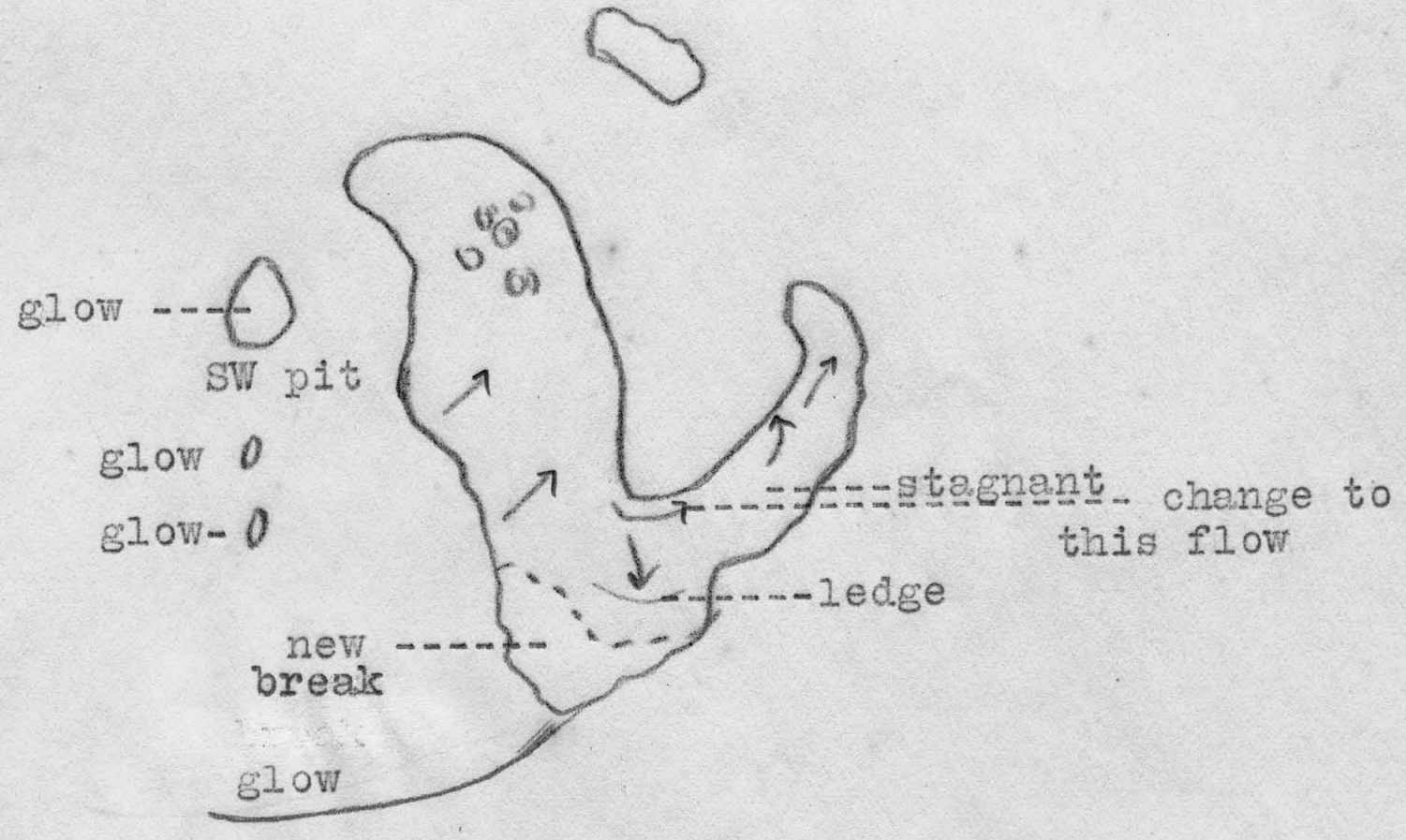
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Monday Date January 25, 1915.

4 p.m. SE and E stations. East part of main lake and most of E arm crusted.

5:30p.m. East arm active. Noises plashing.
From O.R.H. End of SE cove separated from its entrance which appears to be at a lower level. E arm streaming N. Small active pond deep in bottom NW pot. Streaming W.

6 p. m. From SE station:-



E arm pit heads under O.R.H. almost. Hence crag now a peninsula. Slight blowing in NW pond.

T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Tuesday Date January 26, 1915.

3 to 4 p.m. Glimpse from NE station of two deep channels at entrance to SE cove, collapsed amphitheatre there and apparently a bridge separating pot at head of SE cove from entrance. Noise like rock falls from crag. Streaming west. Rumbling. Occasional explosive eruptions O.F. Smoke and glow west pond. Flames and glow cracks SE. Spooned depression in floor E from SW pond. NW pond skinned, streaming west.
Fumes: on floor SW of lake, E of NW pond, W of NW pond, around W pond (now a pit tumble), SW pond region, SE edge of floor, crag, W end E arm pit, and S side of SE cove.
High fumarole (whiter) SW and a similar one S.
Landslip into NW pond at 4 p.m. Bare whitish old pit wall bounds SE cove E.

T.A.J.

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KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Tuesday Date January 26, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	
			no	pl	scr	stop	ex	cam	
3p.m.	NW	NW pond	1	W.P.	5 xz		1/5		
	"	W pond	2	"	" "		"		
	"	Head E arm	3	"	" "		"		
	W	Lake	4	"	" "		1/2		
	W	S chimney(blue fume)	5	"	" "		"		
		S fumarole(white fume)							
								T.A.J.	

1915, Jan. 26



#3



#1



#4



#5

Jag

1915, Jan.



#2

Jag

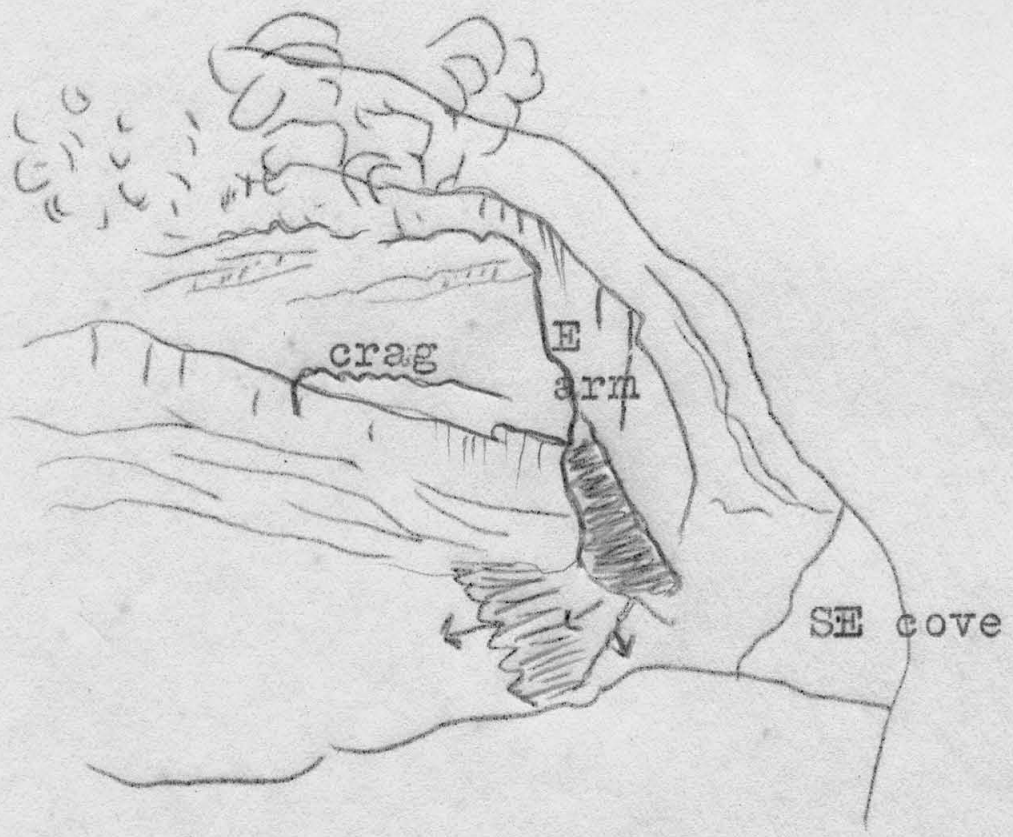
Massachusetts Institute of Technology
Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date January 27, 1915.

9 to 10 a.m. Conditions same. One small tinkling slide south talus. Crack NE of crag smoking nearly to N side main lake as though crag block were going to become an island by toppling out SE.

From S station:-



Not cavernous around lake. Rising skins.

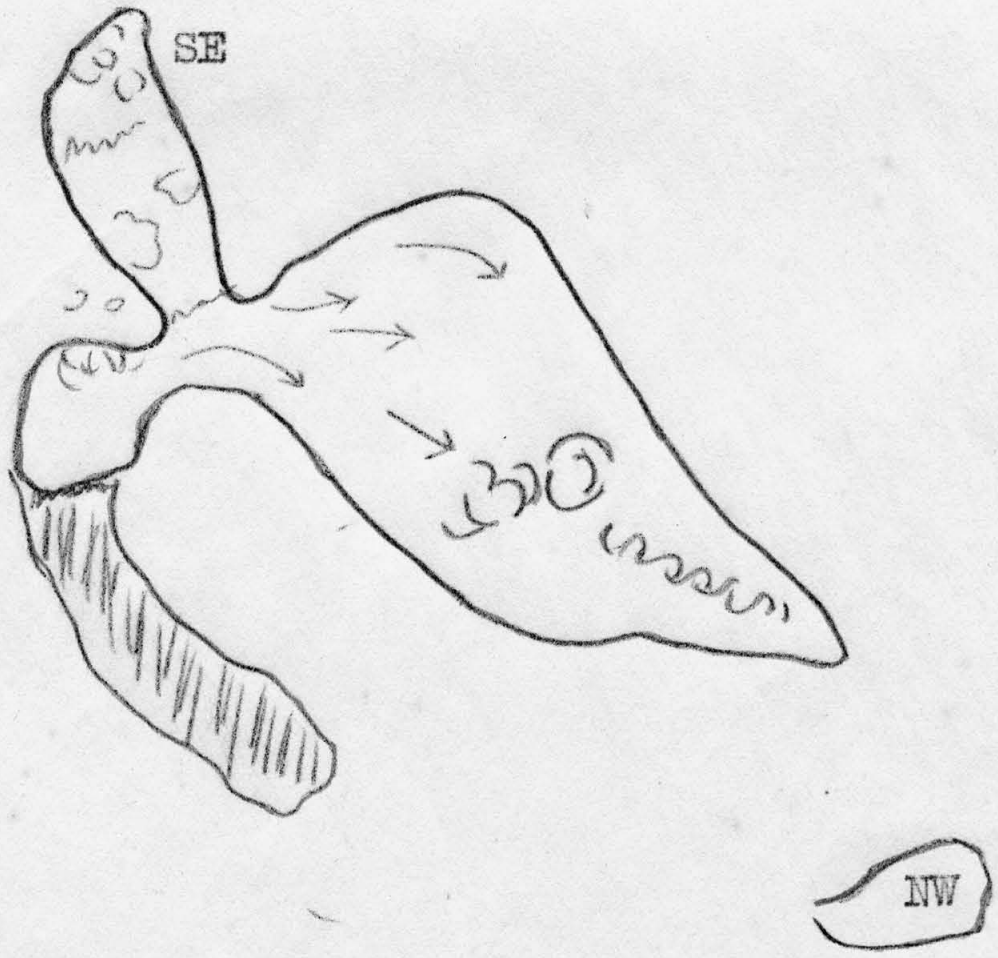
T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Thursday Date January 28, 1915.

5:30 to 6 p.m. From NW station. Inner pond with bubble fountains in SE cove. Bubble fountains also NW pond. Fan from E arm gate westward. Inside entrance E arm, splash is high E side. Blowing from hole in E ledge back of this splash. O.F. and bubble fountains W end of lake. Fumes to-day have seemed a little less, but bad at pit. Some splash near head of E cove, the rest crusted. Occasional extra heavy bursts O.F. Some violent fountaining E wall of NW pit.

From O.R.H.:-



T.A.J.

40

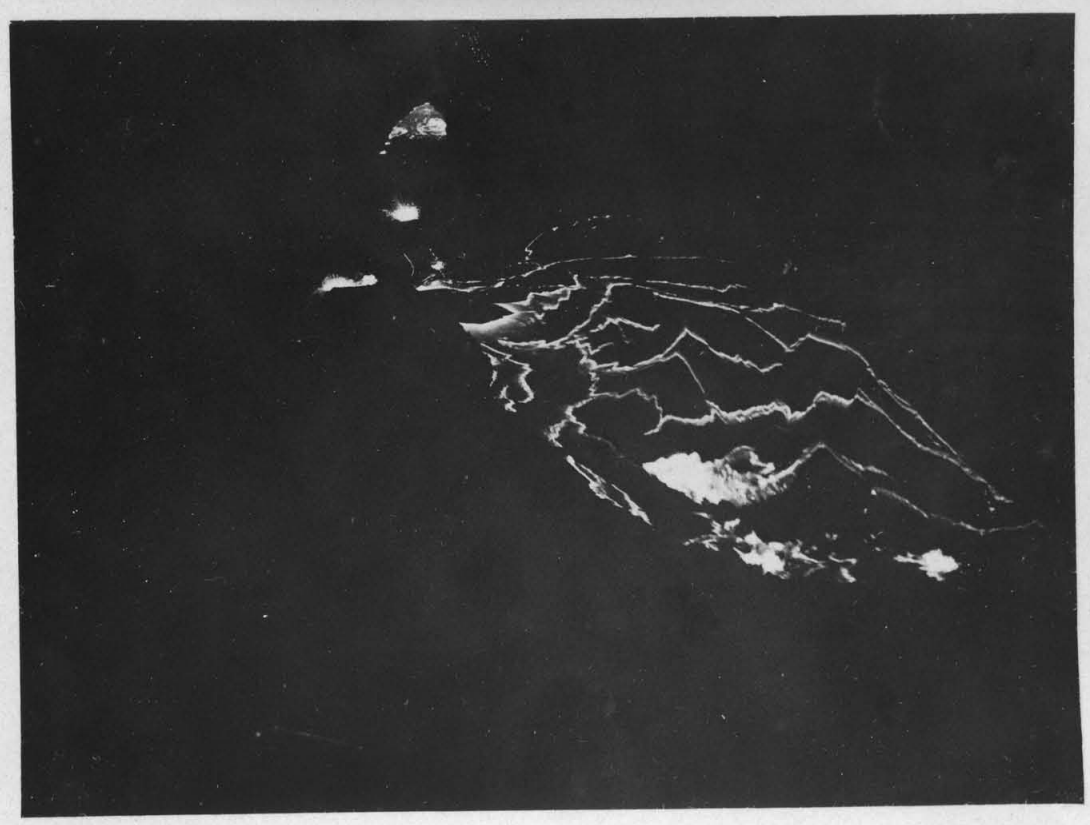
KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Thursday Date January 28, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	
			no	pl	scr	stop	ex	cam	
6p.m.	NW	Lake, fumes	1	W.P.		6.3	1		

T. A.J.

1915, Jan. 28.

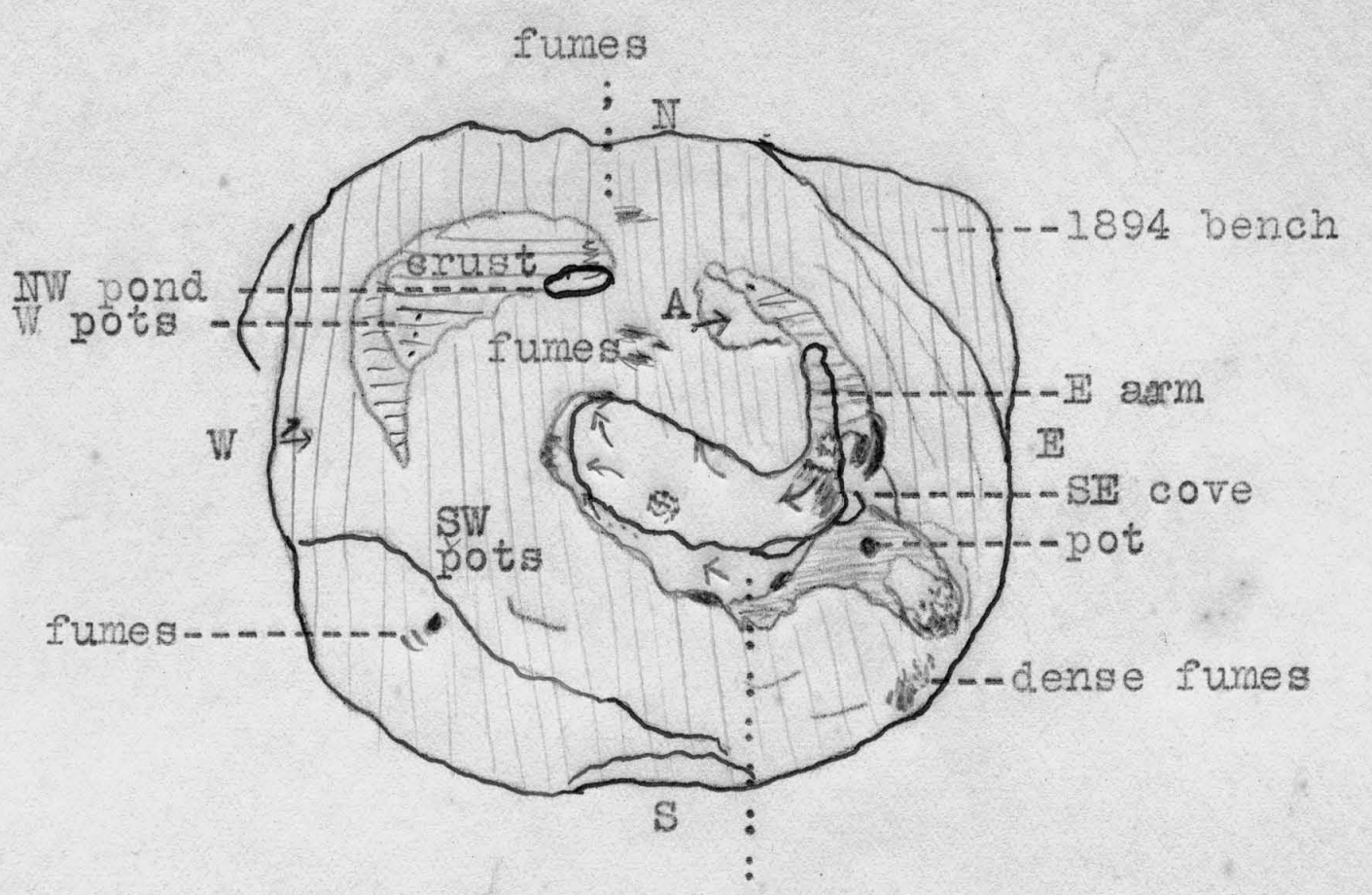


Jaf

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Friday Date January 29, 1916.

4:10 p.m. From S station.



Ink lines are drawing made early last month.
Only one little spot of fire in N end of E arm. Only flow in lake starts S end of E arm and spreads fan shape, then sinks at west end of lake. Medium fast flow. Very little noise. Lake seems about 70 feet under crag.

4:35 p.m. One avalanche from under W station on to floor. NW pond very quiet with flow to N. Three or four bright cracks in floor S and SW.

4:40 p.m. Part of N crag at A fell in. No fumes E on crag now. Crag fumaroles are now directly S of N station. Strong of sulphuric acid.

4:50 p.m. Lake is getting noisy and NW pond has a small fountain breaking every 30 seconds with flow to E.
No flow from N of E arm (frozen).
Very large quantity of Pele's hair around pit and on path on floor down from Volcano House.
SE cove is a pond with small fountains all over it and with surging at S which spatters lava across pond to its N wall. Its strongest flow is from E to W.
No action from the crack between SE pond and E arm which last night was exploding lava and burning blue flame.

5:10 p.m. Fumes from crag not so strong or thick as those from S of SE pond and those coming from NE wall at place where cave was filled with lava. Strong fumes from N end of NW pond. Some Pele's hair comes up from SE cone or pot or the very strong surging in E cove of E arm.

A. M. Hannon.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Saturday Date January 30, 1915.

10:45 a.m. Conditions same. Crag not smoking from peak. Streaming E arm to W. Noise plash. No slides. Approximately 50 feet down. Smoke NE edge and all the other places. Measurements show that N edge of lake has migrated back and crag lower.

T.A.J.

Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Saturday Date January 30, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
10:45 a	SE	NE	299 16					
	S	SE	0					
	SE	Fum. NE edge of floor	-9 42	28 07	-2		365	
	S	" " " " "	41 47	20 58	-4		366	
		(height of edge floor over lava = 71 feet.)						
	SE	NW stal. main lake	-38 36	29 19	-2		436	
	S	" " " "	64 44					
	SE	Crag	-20 50	26 40	-2		376	
	S	"	50 59					
		(height of crag over lava = 60 feet)						
	SE	Top cliff N side lake	-29 32	30 12	-2		396	
	S	" " " " "	54 31					
		(height cliff = 40 feet)						

T.A.J.

			no	pl	scr	stop	ex	cam	

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Massachusetts Institute of Technology

JOURNAL

Hawaiian Volcano Observatory

Day Sunday Date January 31, 1915.

11:15 a.m. About this time heard what sounded like one long slide W end pit.

11:45 a.m. From S station. Wall about 50 feet high. Streaming out of E arm W and into SE cove. Fan arrangement of skins from entrance of E arm westward. Apparently, from this point of view the inner pit, elongating itself westward around the N rim of the floor from the head of E arm, has joined with the E end of the NW pond-pit.
SW pond area has sunk leaving a bench of floor back of it to the SW. Fuming cracks in floor out from SE border elongating themselves southward. Turbulent lines of meeting fountaining from O.F. westward. Noise plashing. No new talus material SE. Spatter rim around lake five or six feet higher than present level.

12:05 p.m. Landslip inner end SE cove extending cove in direction SE fuming cracks; great cauliflower masses of salmon red fume shot up. Quantities of blue fume after the brown.

T.A.J.



Sketch of salmon-colored clouds as seen from Volcano House
by A. M. Hannon.

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KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Sunday Date January 31, 1915

t	sta	pt	hor	vert	lev	dist	elev	h. i.	

			no	pl	scr	stop	ex	cam	
11:45a	S	Lake	1	W.P.	vz	11.3	1/2		
"	S	NW pond & E arm meet'g	2	"	"	"	"		
"	S	SW slope & NW pond	3	film	"	"	"		
12:05p		Mass of red fume SE	4	"	"	"	1/10		
"		" " " " "	5	"		"	1/25		
		Hot cave	6	"		F 8	1/40		
		Pit near Little Beggar	7	"		"	"		
		Pele's Kitchen	8	"		"	"		
								T.A.J.	

1915, Jan. 31.



#3



#2



#1

Iaq

1915, Jan. 31.



Top

#5



#4

1915, Jan. 31.



#6



#7



#8

Jan 9

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Monday Date February 1, 1915.

2:40 p.m. Fountaining in different parts of the lake. Streaming from NE through the channel around the curve and toward the W cove. Lava is about 40 or 50 feet below the rim. Wind very strong and pit soon filled with fumes so no good view of lake was had for long.

Alex.

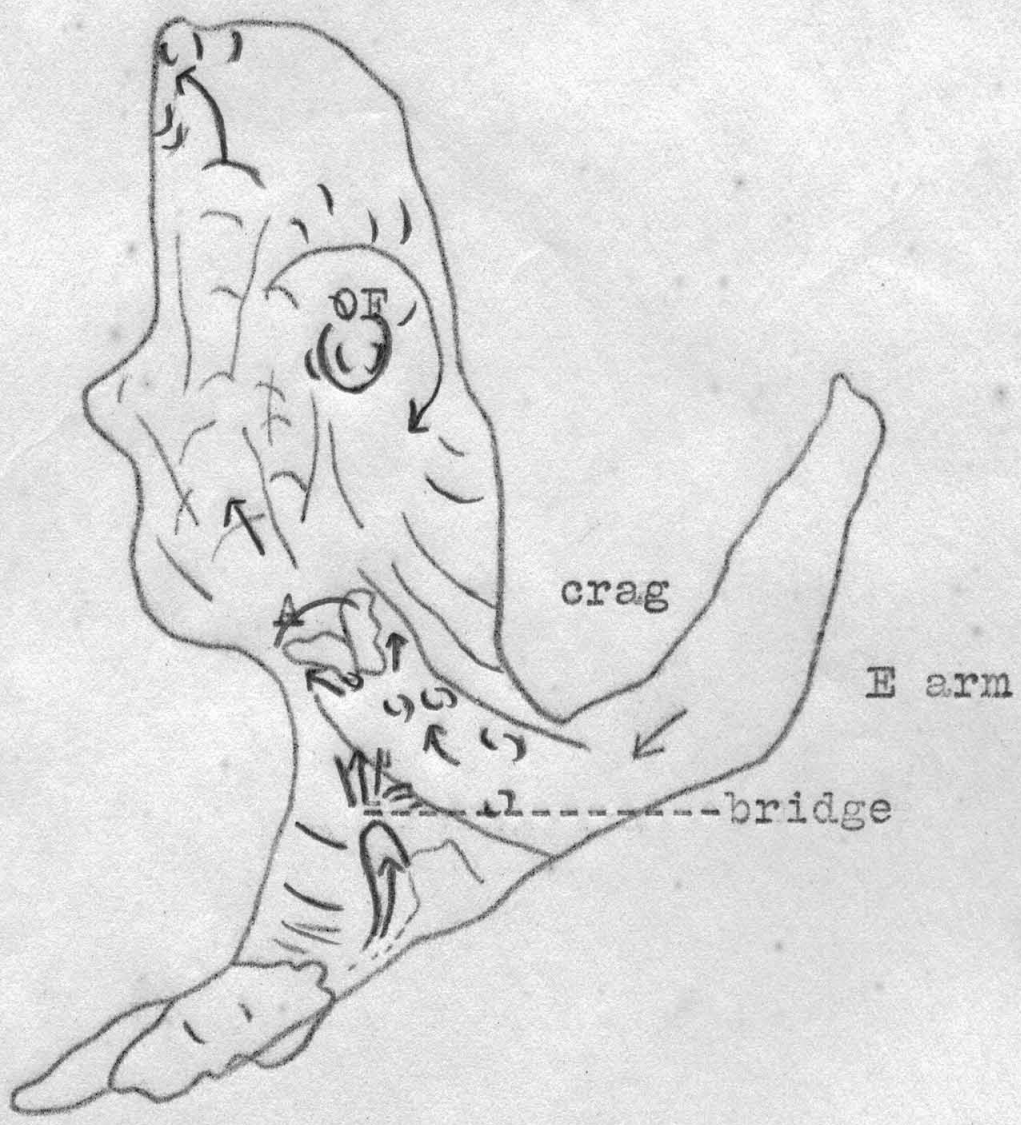
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Tuesday Date February 2, 1915.

Afternoon Demosthenes reported rapid streaming and very hot pool.

8:30 p.m. Streaming and whirlpool. Torrent wide and rapid, perhaps 10 miles an hour out of E arm to S cove, then W and N in a broad whirlpool clockwise around Old Faithful. Heat strong, noise plash, many bubble fountains in the torrent which reached its greatest speed, with a standing rapid, opposite the SE cove.
Extension crack glowing in floor above head of SE cove. Fumes heavy. No avalanches. Could not determine whether rising or sinking but mechanism suggests sinking.

From E end 1894 ledge:-



A - this part of stream looked <u>arched</u>, cakes of skin parting and slipping down right and left.

T.A.J.

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KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Tuesday Date February 2, 1915.

t	sta	pt		hor	vert	lev	dist	elev	h. i.	

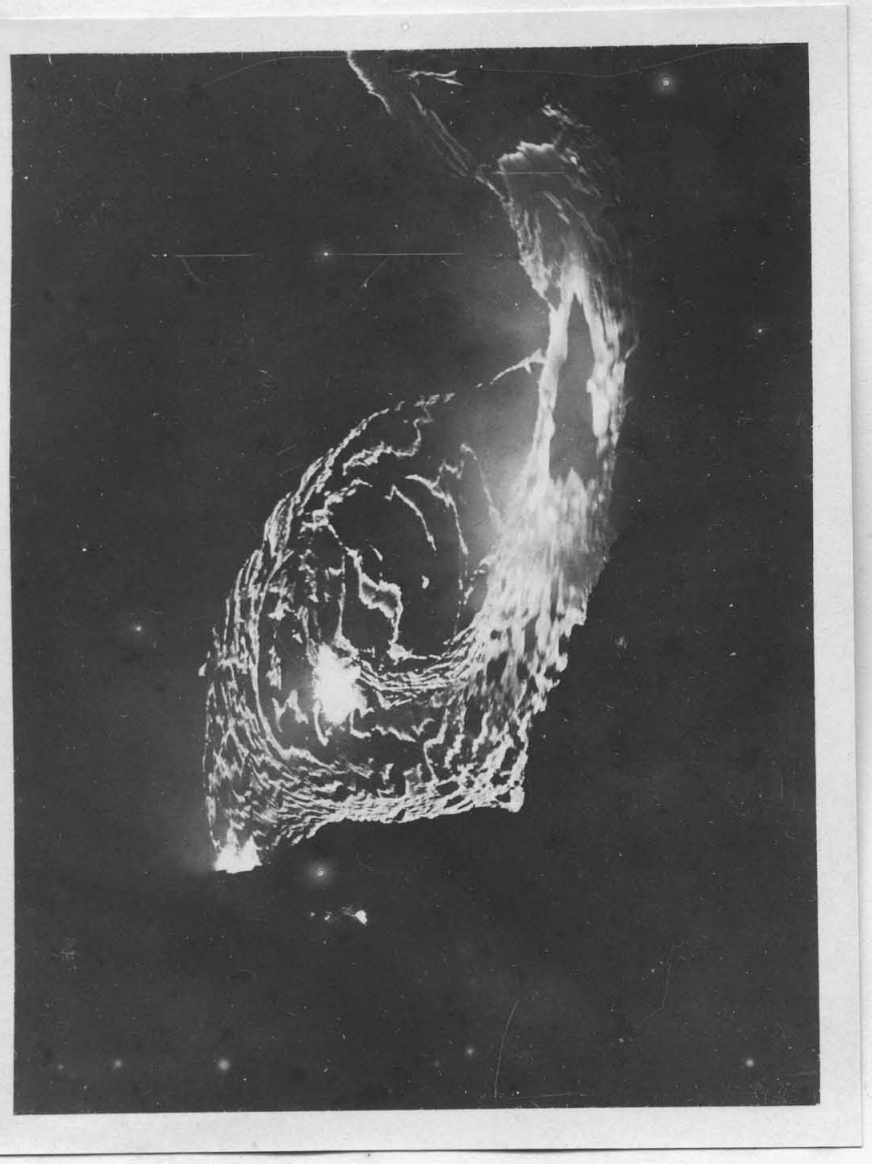
1915, Feb. 2.



#2



#5



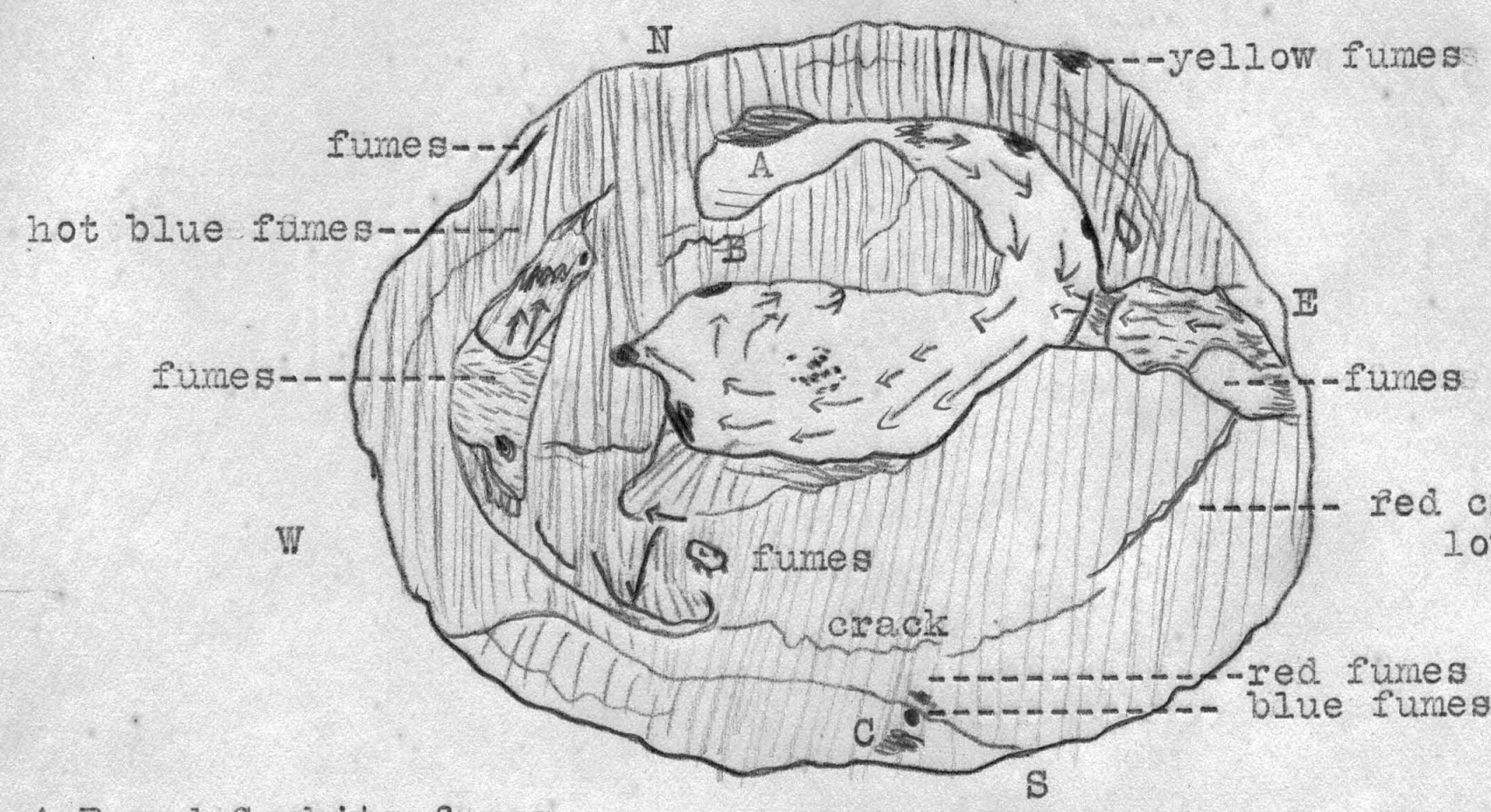
#1



#3

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date February 3, 1915.



A,B and C white fumes.

11:00 a.m. Loud blowing hole NW pond. Pele's tear came up. Will give it to Dr. Jaggar.
Lava flow under a low natural bridge from SE cove to lake.
Fumes not so thick as last week.

12:25 p.m. Small collapse of NW pond, west ledge. Yellow fumes where fall went into pond. Pele's hair coming up from NW pond's blow hole located on NE edge.

A. M. Hannon.

Fume from Volcano House <u>brown</u>.

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Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Thursday Date February 4, 1915.

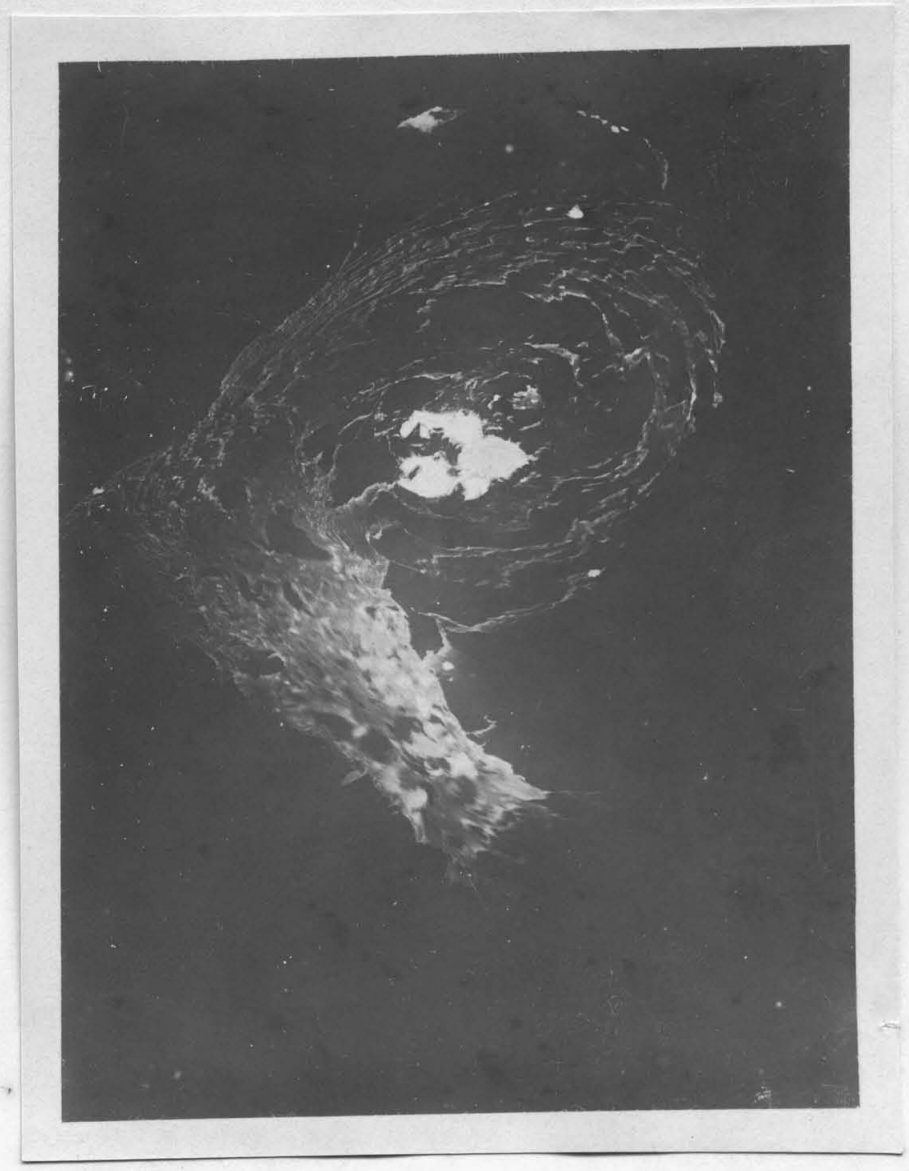
t	sta	pt	hor	vert	lev	dist	elev	h. i.	

			no	pl	scr	stop	ex	cam	
5p.m.	1894		1			6.3	1		
	ledge								
	"		2			"	1/10		
	"		3			"	1/30		
	SE		4			"	1/5		
								T.A.J.	

1915, Feb. 4



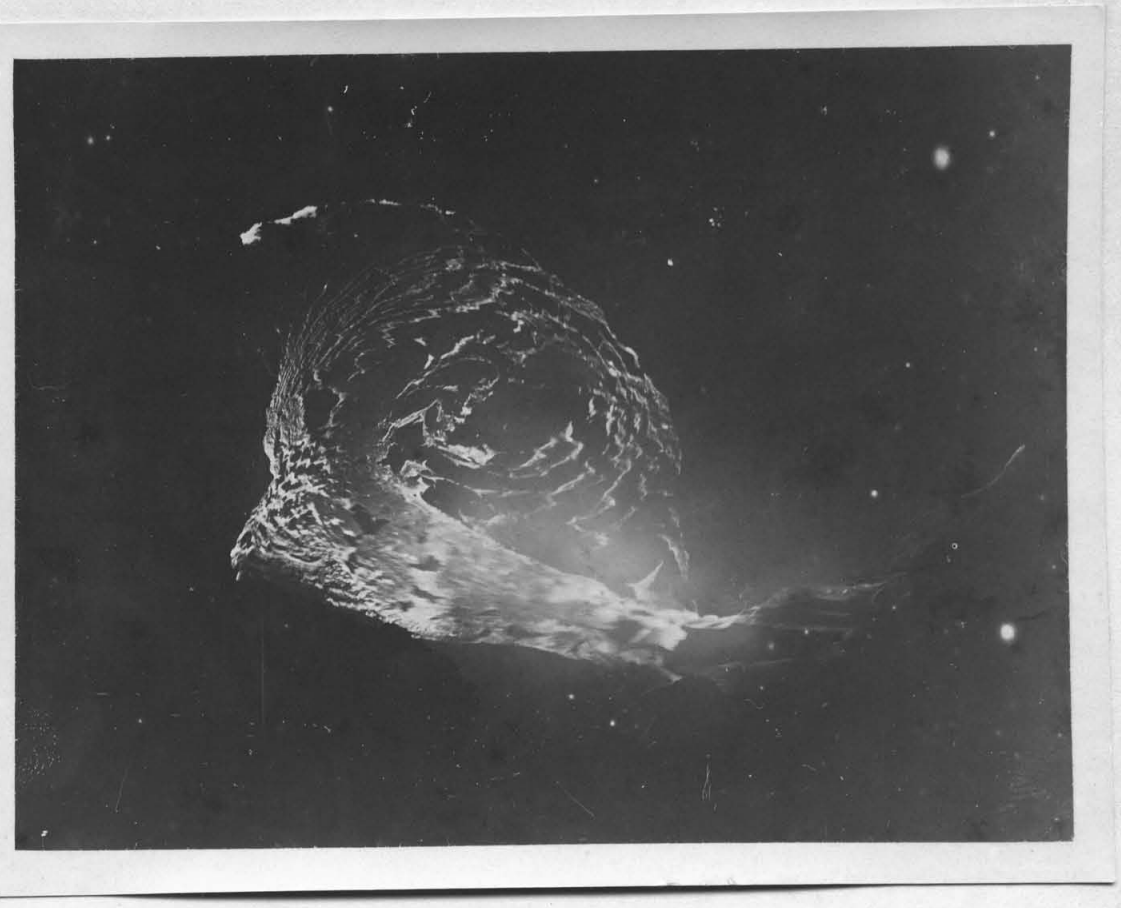
#1



#2



#3



#4

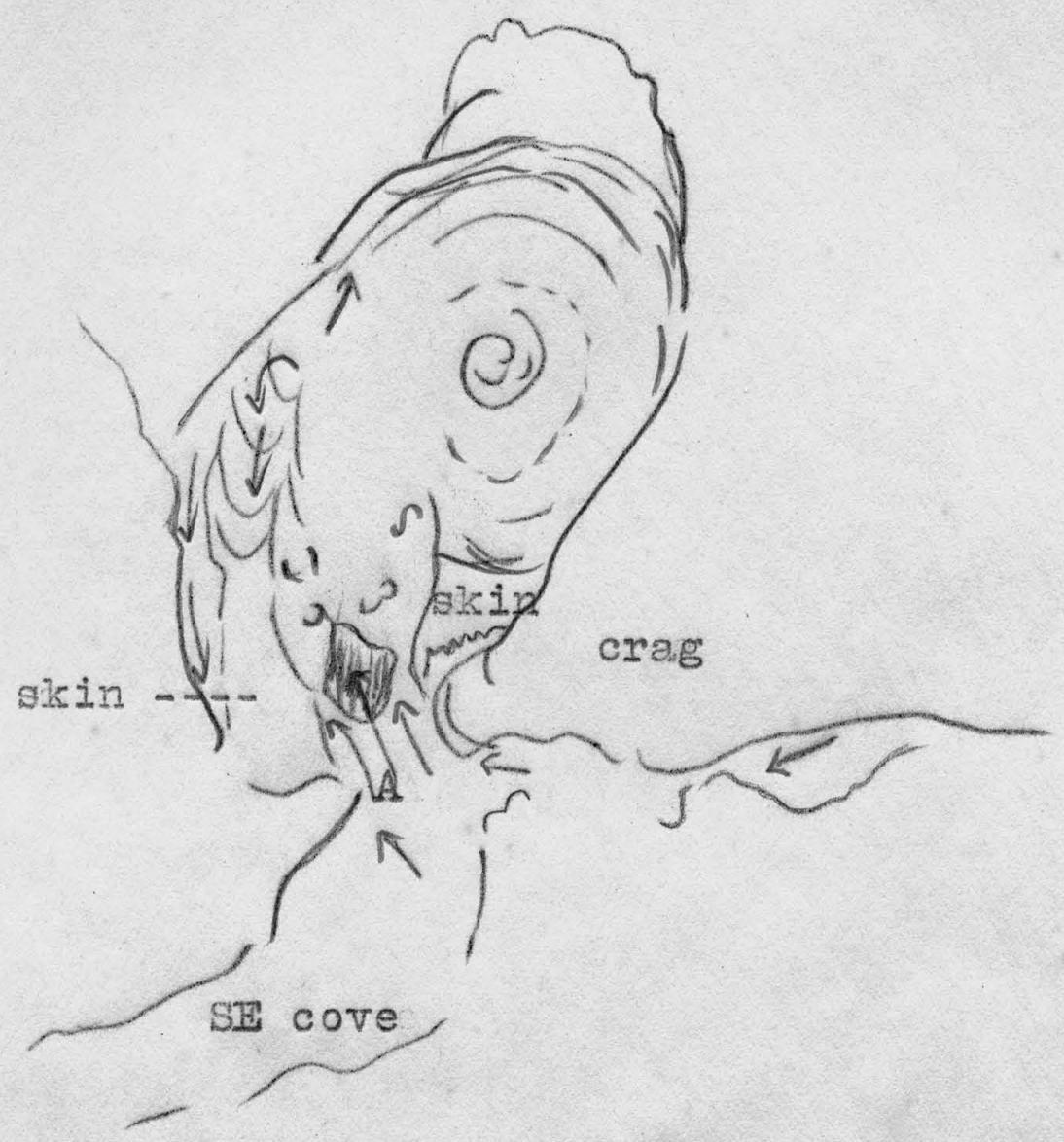
Jag

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Thursday Date February 4, 1915.
Friday " 5, "
Saturday " 6, "

Feb. 4. 5 p.m. Looking down from E 1894 ledge:-



At A rapid with standing waves. Some strong rumbling.
6 p.m. Small fall SE cove.

Feb. 5. 2:30 p.m. NE gale. No seeing. Noise normal. Fumes and sand flying.

Feb. 6. 6 to 7 p.m. Much smoke. Faint seeing S, SE and E. Pool stagnant. Engulfment going on in O.F. Heard heavy tumbles, apparently into lake NW. No marked streaming. From S saw that there is now a sharp crag between SE and S coves and a great tumbled slope down into S cove backed on the S by a bench remnant of the floor. Glow spots in this slope and along SE fumaroles.

T.A.J.

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

KILAUEA DAY SHEET

Day Sunday Date February 7, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
5p.m.	SE	NE	0					
	SE	W cor. new crag betw. S and SE coves	37 50	46 37	-4	377	402	
	× SE	SW edge of lake	46 46	36 05	-4			
	E	NE	0					
	E	NW corner lake	44 06	36 19	-4	581	428	
	S	SE	0					
	S	SE crag	41 24	35 01	-4	568	400	
	S	NW corner lake	57 30	28 52	-4	813	449	
		Depth of lake about 440 feet						
		" " SE crag 400 "						
								T.A.J.

			no	pl	scr	stop	ex	cam	

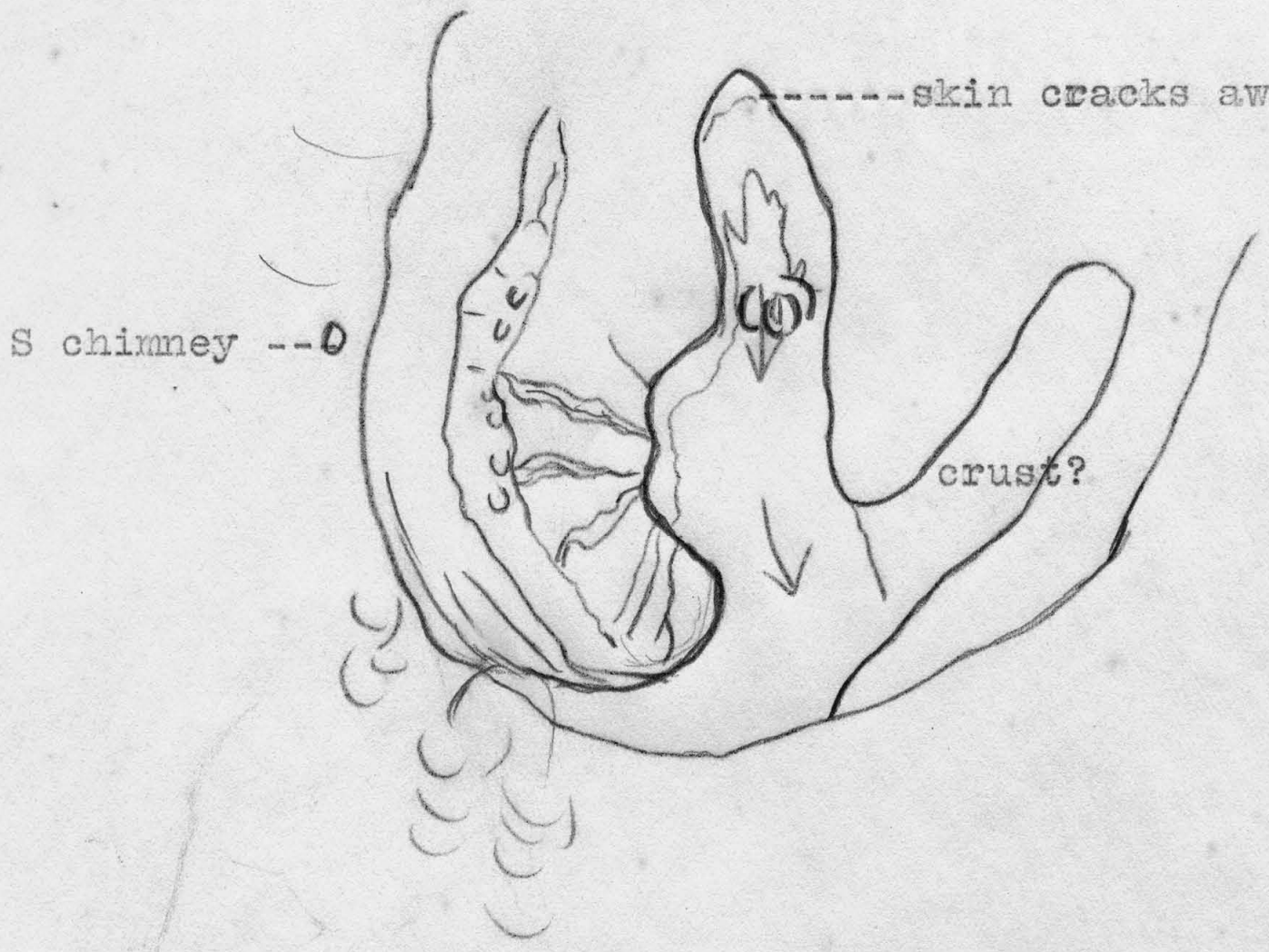
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Sunday Date February 7, 1915.
Monday " 8, "

Feb. 7.
5 p.m. High wind. Streaming from W to E. Large skins. Crust over W end. Streaming from ragged edge. Appears to be rising. Great tumbled area SE. NW pond still glows.

From SE:-



T.A.J.

Feb. 8.
7 p.m. From SE. Conditions essentially the same as February 7. Streaming February 6, 7 and 8 from W to E. W end skinned. Fountains sometimes im groups travelling east. Quiet large skins mostly. E arm crusted. Glow at SW cone locality. Smoke at SW pit locality. S chimney flaming brightly and forming a filagree crust. Wall N of lake appears 50 feet. Whole lake active but not greatly so. Smoke very dense from SE cracks and SE cove. No glow discernible in SE cove but a flare (flame?) in bench between SE cove and E arm. At entrance of E arm lava stagnant. General effect rising or stationary.

T.A.J.

60

Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Monday Date February 8, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	
			no	pl	scr	stop	ex	cam	
7p.m.	SE	Lake		W.P.		6.3	1		
								T.A.J.	

1915, Feb. 8.



Jag

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Tuesday Date February 9, 1915.

4 p.m. From S station. Fumes heavy. Only glimpses of lake with violent fountain groups. Some fountaining noise heard NW. Only seeing south. No changes visible.

T.A.J.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Tuesday Date February 9, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	
			no	pl	scr	stop	ex	cam	
4p.m.	S	New fallen SE part of and SE cracks (daylight)	floor	W.P.	vz	16	1	T.A.J.	

1915, Feb. 9



Jaf

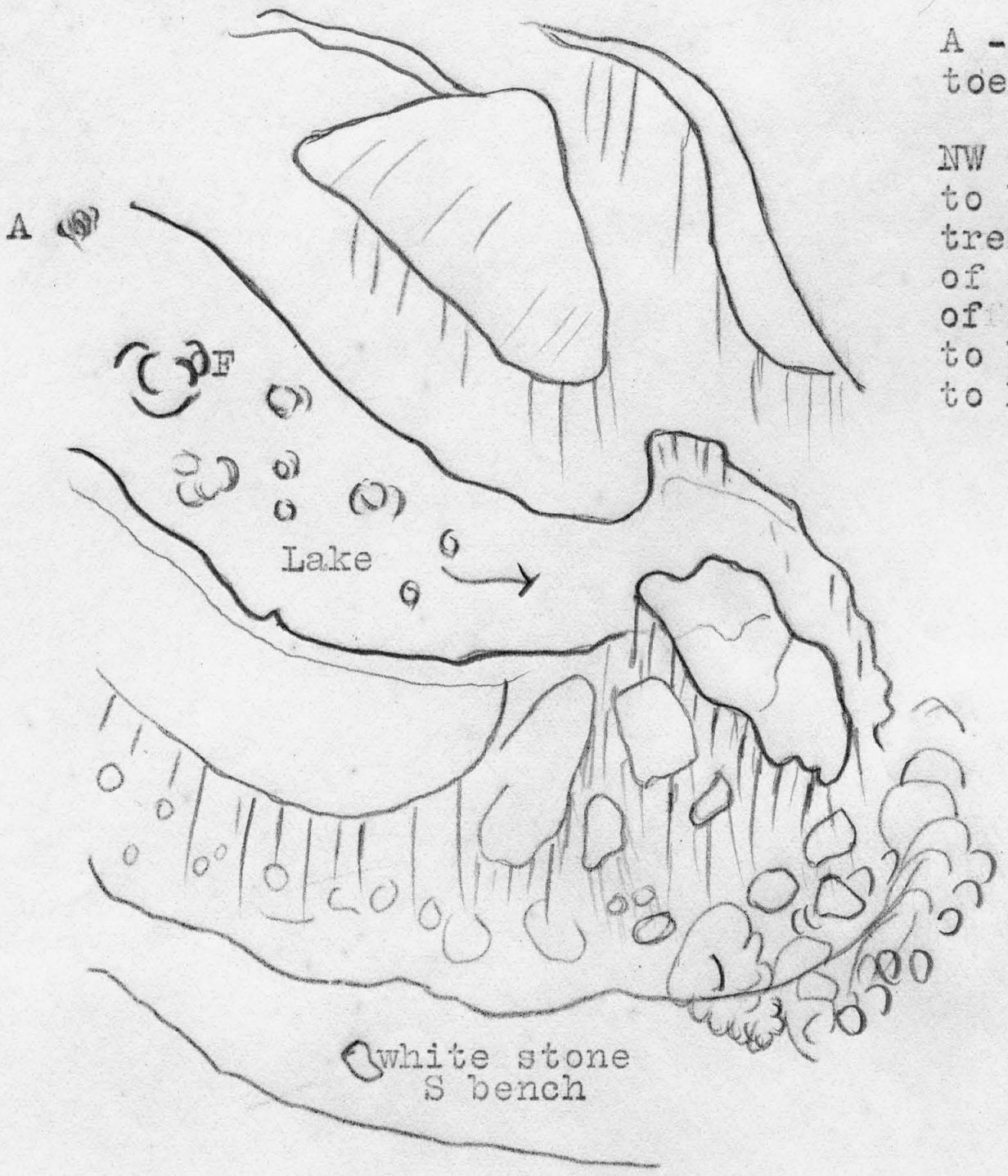
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Thursday Date February 11, 1915.

S station.

10:30 a.m. to 11:30 a.m. Lake roaring with many continuous fountains. Appears high within walls. Dim seeing. Heat from lake strong. Light NE wind. S chimney very hot, flaming to blue fume. Rising - overlapping skins on shore. Streaming W to E. Mass of S subsided floor crags makes a cracked ridge between the lake and a deep crevasse-valley under the black ledge. The black ledge goes clear around W end with tumbled ground below it. North crag still in place; same general shape. Pit-edge seen W extending eastward toward NW pit. Lake appears to have a rampart around it, a new inner floor. Comcentric benching south: high 1912 bench, then that of July 1912, then high 1914 bench, ridge of 1915 collapse and present 1915 rampart. Whole S fumarole gray-blue and very hot. SE is white and SW moderately white.
Inrush with turbulent travel and bubble fountains toward SE cove. E arm wider, NE wall bench narrower. E arm full of debris. Bubble fountains all over pool. Activity recalls 1912. Pounding against N wall. Skin edge zigzag west. Five or six large fountains bursting at once. N wall appears 60 feet high. NW pit continuous with W pond.. Streaming is against crumpled skins E end.

11:30 a.m. From S station:-



A - two blowing grottoes west end.

NW trench seen clearly to be a wide continuous trench backed with spots of the raw red old wall of Halemaumau. Appears to be continuous thru to E arm.

T.A.J.

66 Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Thursday Date February 11, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
			no	pl	scr	stop	ex	cam
10:30a	S	SE corner	1	W.P.		F 16	1/25	Panorama
	"	Lake	2	"		"	"	"
	"	SW part	3	"		"	"	"
	"	S fumarole	4	"		"	"	"
	"	SW wall	5	"		"	"	"

T.A.J.

1915, Feb. 11

#4



#3



#2



#1



1915, Feb. 1



#5

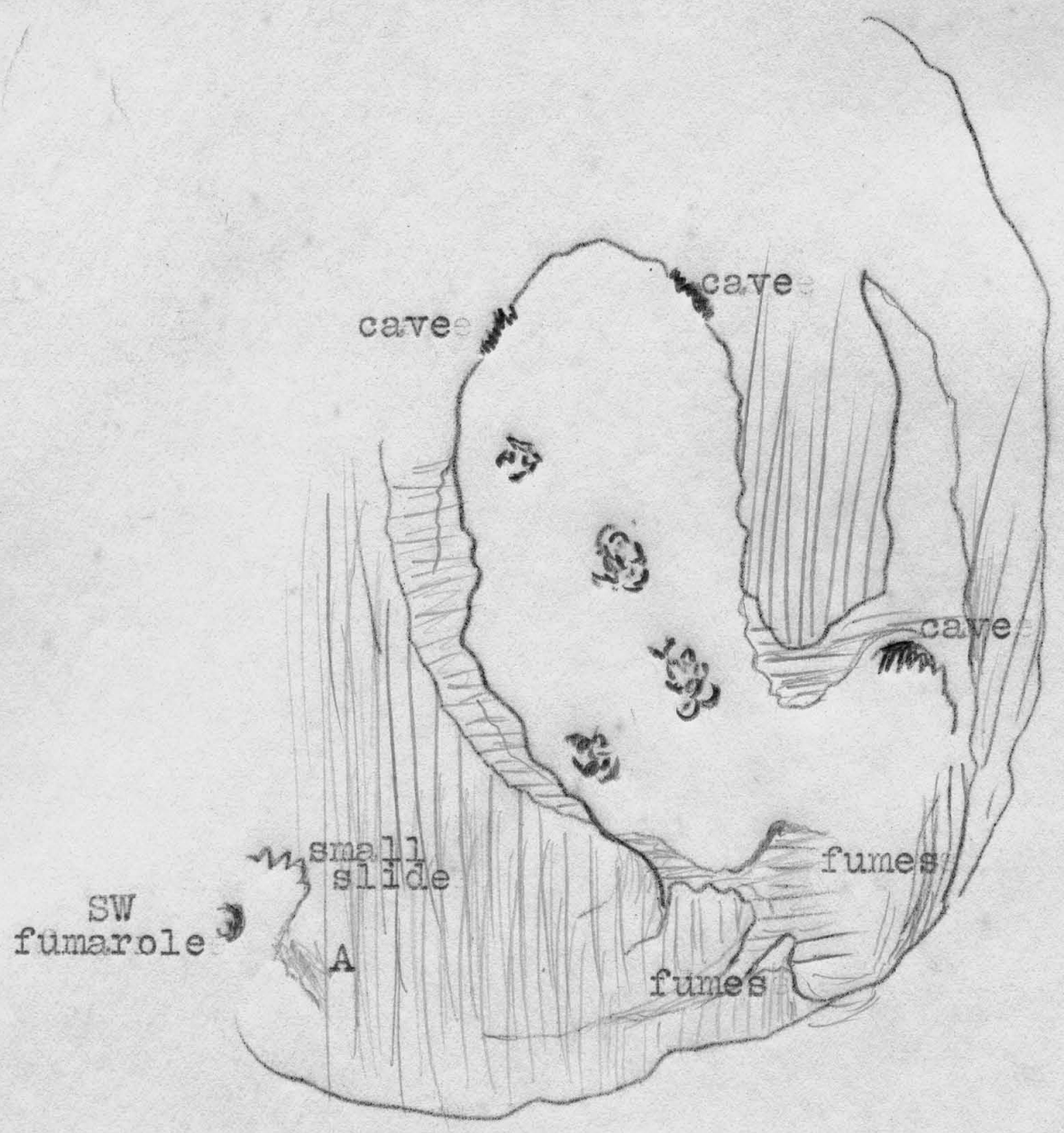
Jap

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Saturday Date February 13, 1915.
Sunday " 14, "

Feb. 13. 3 p.m. From S station.



Stationary lake with three large and several small fountains. SW fumarole seems about 30 feet above floor. Small slide of rocks from below SW fumarole on to floor. Lake 10 feet below new ledge.

A - Very hot blue fumes.

Feb. 14. Visitors reported good seeing and conditions just about the same as yesterday.

A. M. Hannon.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Monday Date February 15, 1915.

2:55 p.m. From SE station. Very fumy, difficult to get a good view of the pit. Several fountains. O.F. active. A great deal of fountain noise, rumbling and blowing. Streaming toward the W cove.

3:30 p.m. From S station. Streaming has changed. Is now flowing toward the east rapidly. Travelling fountains, and many baby fountains all over the lake.

3:50 p.m. From SE station. The lava is down about five feet below the third floor. Pool very active with streaming still toward the east.

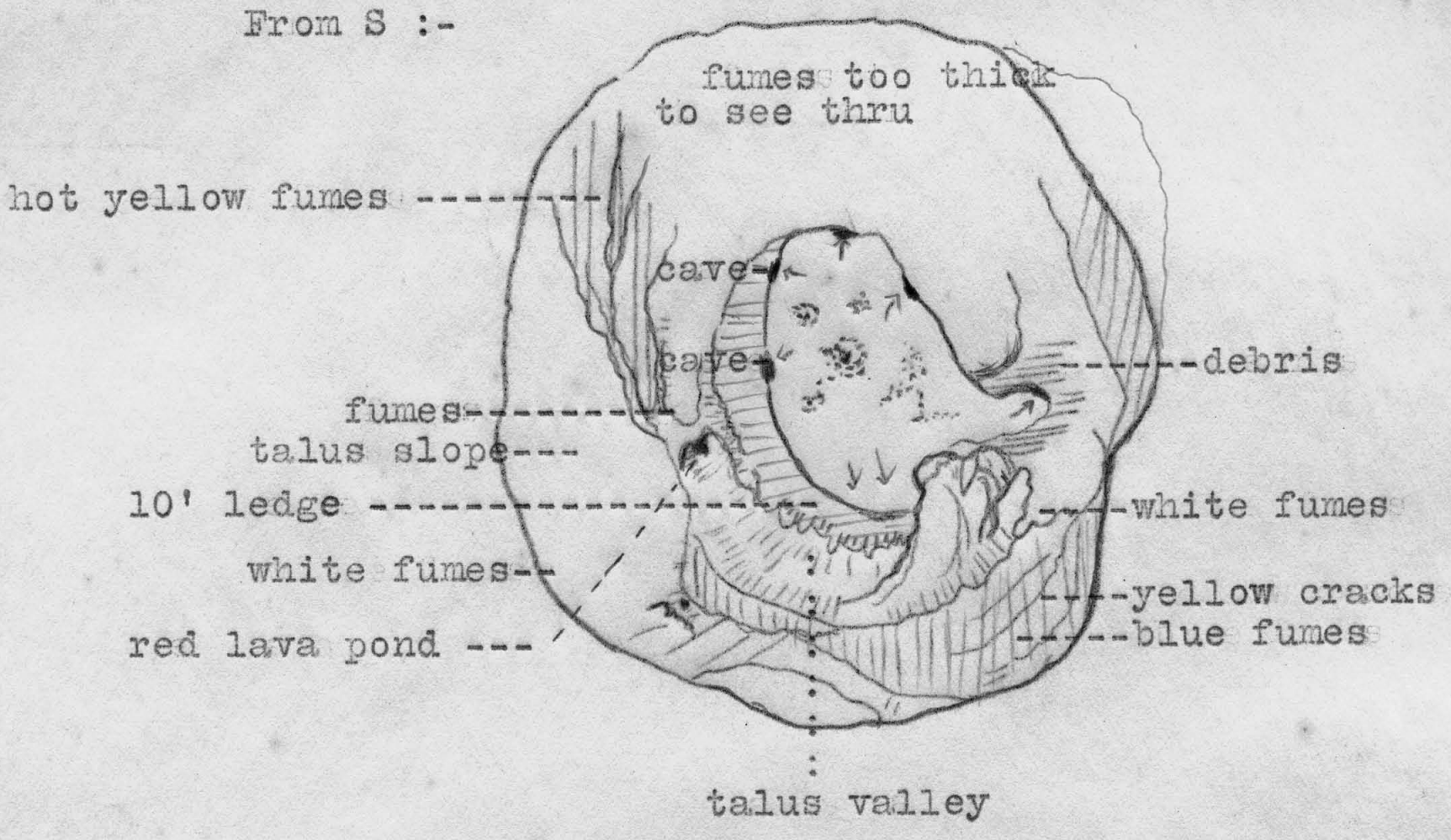
Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Tuesday Date February 16, 1915.

11:25 a.m. Very thick white fumes. Lake making steady boiling noise. Lake about ten feet below first ledge. High NE wind. Best seeing S and E sides.

From S :-



11:50 a.m. Several fountains nearly as large as O.F. are playing. Very little flow in lake (see arrows above).

12:10 p.m. Lake is now flowing slowly to west with steady playing of fountains. South red fumarole very hot; blue fumes and heat waves flaring twenty feet. Fumes on crag above, dense white. Red lava pond west of lake. Flow too fast to crust over.

12:35 p.m. Blowing noise from gas near NW wall. Block of main red wall 50 by 20 feet (?) has slid down into SE cove directly under E station.

1:00 p.m. Have not heard any slide or splitting noises, however red lava pond is down many feet lower than half an hour ago. There is a spine, 30 feet high, of old black ledge standing upright on S shore of this pond. When first seen there were no fumes but now I can only catch glimpses of the pond through the fumes that its shore is making. Its N shore is 30 -foot bank of old ledge. Other sides formed by slides.
Main lake has kept up constant boiling noises ever since I have been here to-day. Much surging in the NW caves on edge of lake.

1:40 p.m. Walked around to all the northern stations but fumes too dense to see there, and they were painful to eyes, nose and throat.

A. M. Hannon.

Worst fumes yet.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Wednesday Date February 17, 1915.
Thursday " 18, "
Friday " 19, "

Feb. 17. 4:05 p.m. From SE station. Strong wind. Poor seeing on account of smoke. A glimpse showed the lake to be active with several fountains playing at once and many baby fountains. Could not discern the depth of lava in lake.

Feb. 18. 8:10 p.m. From SE station. Had a good view. Many large and many small fountains. Streaming from west cove toward east and around the bend toward the northeast.

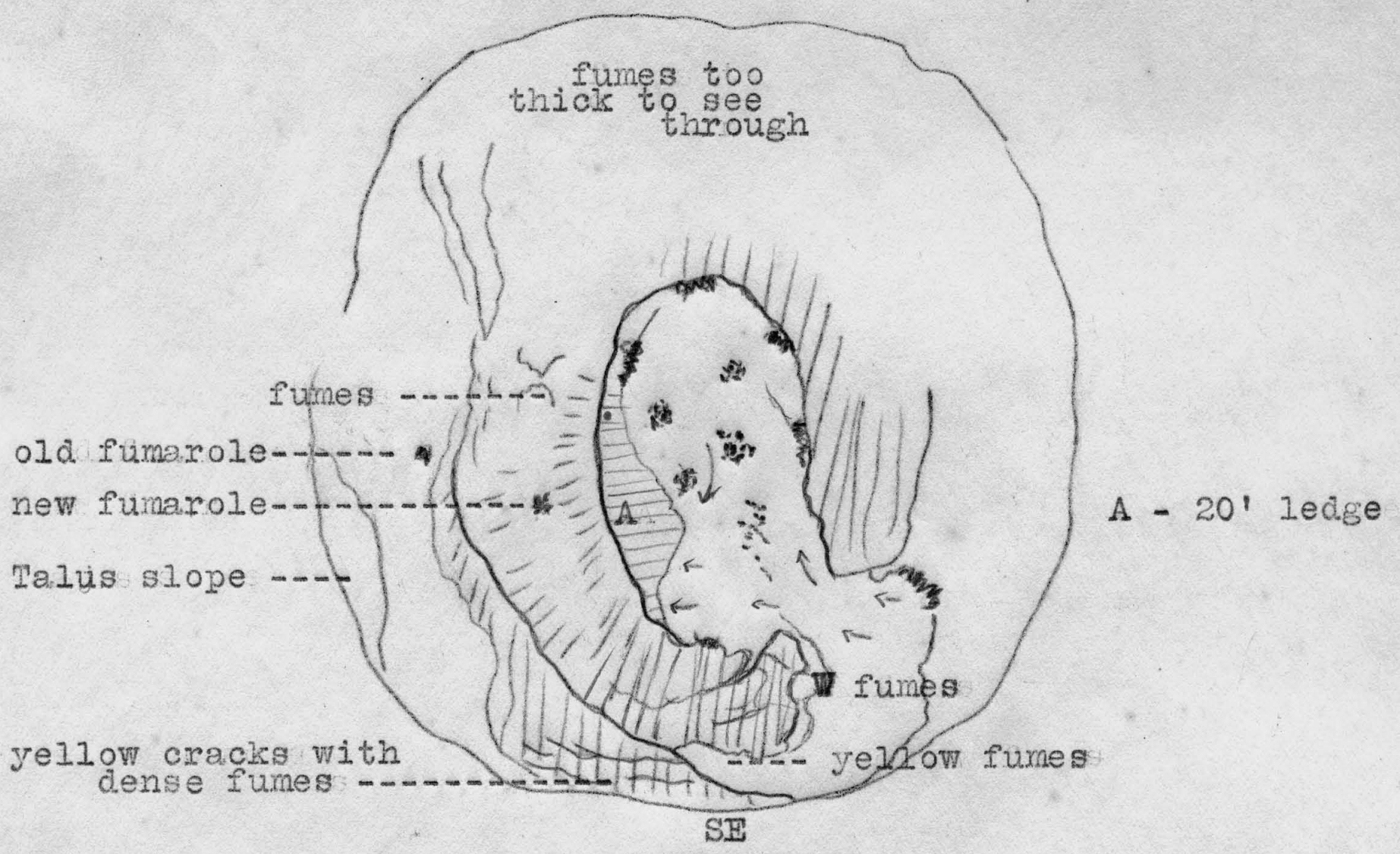
Feb. 19. 3:15 p.m. From SE station. Lava in lake down about five feet below the third floor. Many baby fountains and some travelling fountains going along with the streaming toward the west cove. O.F. active. The hole under the SW station about 50 feet above the first floor is sending out sprays of lava . Much blue flame coming out of the cracks in the floor SE.

Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Sunday Date February 21, 1915.

10:45 a.m. From SE station.



Seeing good at E, SE and S.
Gas vent blowing near SW cove. Old fumarole not so hot; very little fumes. Pele's hair coming up from gas vent. New fumarole opens in debris valley; not much fume. It is east of old fumarole. Fumes only where new pond was last week. It has caved in at this place.

11:35 a.m. A <u>real</u> burst of blue fume just came up out of old fumarole. In face of 15 mile wind formed a mushroom cloud above top of pit.

11:40 a.m. Gas action from old fumarole sends jet about 20 feet high.

12:15 p.m. Old fumarole is again almost inactive with very little of sides still red hot. Lake has continued steady boiling with four fountains (about O.F. size) breaking and boiling. O.F. has had about 20-second intervals. Lake appears to have come up about three feet. Gas blowing not so loud as at 10:45. Lake level about 20 feet under ledge marked 10 feet on plan of Tuesday, February 16.

A. M. Hannon.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Monday Date February 22, 1915.
Tuesday " 23, "

Feb. 22. 3:20 p.m. From position between the E and the SE stations. Pit full of smoke. Got a view of lake and found it active, especially in the S cove. Could not see well enough to tell how far down was the lava.
4:15 p.m. Got another view. Lava streaming toward the S cove with many travelling and baby fountains making a great deal of noise.

Feb. 23. In the morning the lava was level with the bench but at 3:15 p.m. from the SE station it was seen to be 5 feet down. South cove very active. Many fountains on west side. Still very fumy.

Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

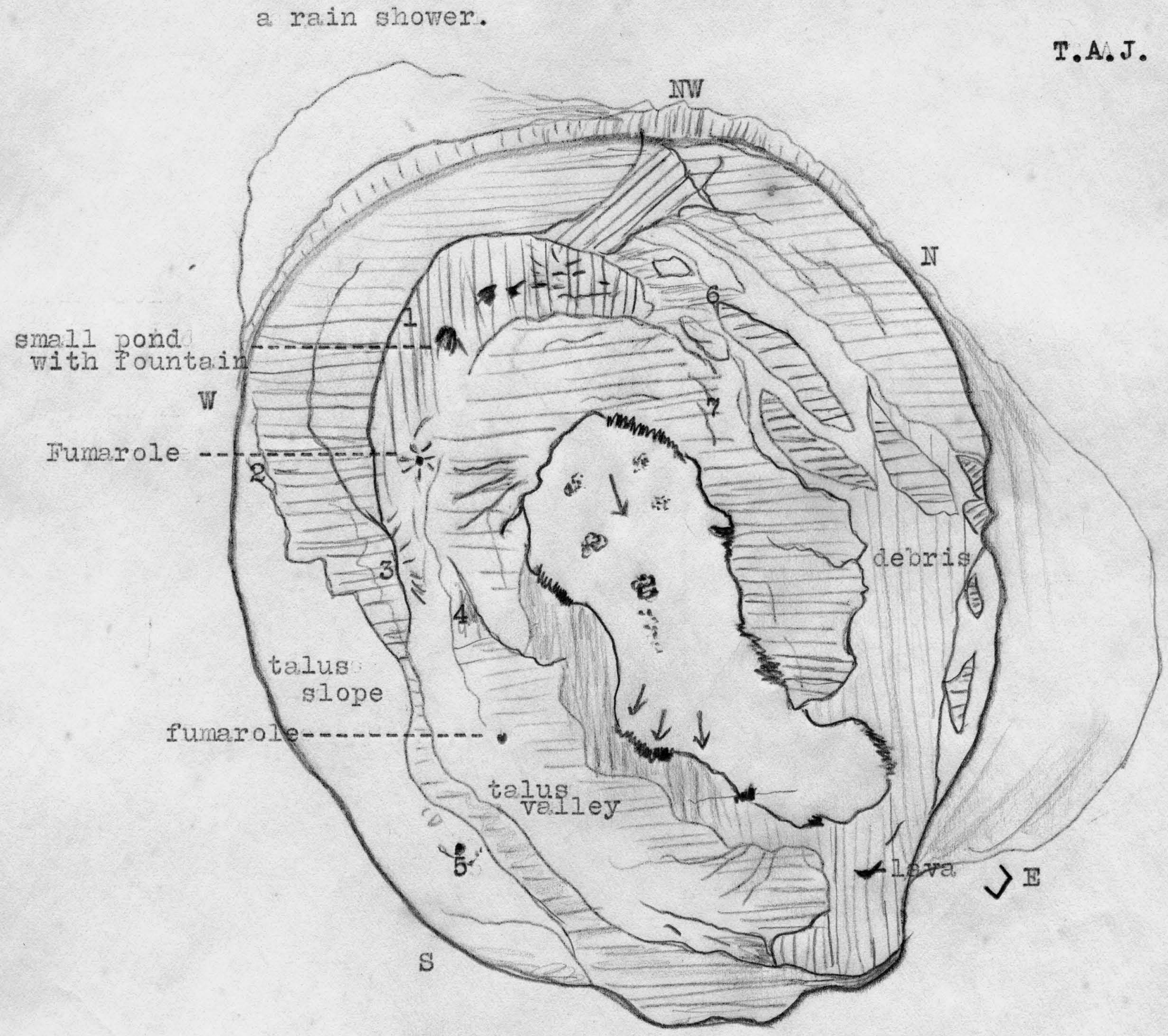
 Day Wednesday Date February 24, 1915

10:30 a.m. Wind SE. W stations open.
Blue fumes S chimney and SW pond. Splashing lava in tumble of W pond. Streaming W to E at first.

12:30 p.m. Divergent streaming with travelling fountains E to W near O.F. W pond lava hisses occasionally. Noise plashing and much continuous fountaining. Stalactites SE and E submerged after noon. Crag much as before.

Evening. Mr. Hannon reports many flames in W and NW pond region, and large sheet of flame seen through a rift in the skins on the lake formed after the chilling effect of a rain shower.

T.A.J.



Fumes at Points 1, 2, 3, 4, 5, 6 and 7.

Sketch made by A. M. Hannon in morning.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

 Day Wednesday Date February 24, 1915

8:30 p.m. to 10:30 p.m. NW pond has frozen over with red cracks all over surface. There were eleven vents blowing steady blue flames and three vents spattering lava. Hard rain came down at 9 p.m. making hissing noise on lava and thickening crust. Crust cracked and a blue flame over a hundred feet long and nearly height of N crag (80'?) played at least a second. Rain absorbed some kind of acid from fumes above pit which smarted when it got into the eyes.

A. M. Hannon.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Wednesday Date February 24, 1915

t	sta	pt	hor	vert	lev	dist	elev	h. i.
10:30a	SW	S	0					
	SW	SE stalactites	51 44	30 45	-5	775	462	
	W	S	0					
	W	SE stalactites	39 28	29 11	-5	852	476	
	SW	Pt. near bend NE, under crag	60 13	29 00	-6	829	460	
	W	" " " " " "	48 16	29 50	-5	833	477	
	SW	Summit crag	69 00	22 14	-6	862	353	
	W	" "	57 07	24 56	-5	793	371	
	SW	Tip crag cliff over lava at bend	62 19	24 18	-7	830	376	
	W	" " " " " " "	50 02	26 21	-5	819	406	
	SW	W end lake top cliff	84 55					
	W	" " " " "	62 29					
	SW	S white boulder on 1914 bench edge	32 44	33 26	-5	562	373	
	W	" " " " " " "	18 30					
	SW	Stalac. Curtain entrance E arm	56 58	27 53	-6	865	458	
	W	" " " " "	46 50					
	SW	Red boulder SW cor. 1914 bench	104 06	42 58	-6	386	362	
	W	" " " " "	30 26ca					
	SW	Top inner bench SE	52 13	32 04	-6	689	433	
	W	" " " "	37 37	30 07	-5	804	472	
	SW	Top second bench S	52 53	34 15	-6	631	432	
	W	" " " "	34 03	31 41	-5	729	457	

			no	pl	scr	stop	ex	cam
11a.m.	SW	Crag	1		vz	F 16	½	
	W	S fumarole	2	W.P.	"	"	"	
	W	W pond area	3	"	"	"	"	
	W	SW pond area	4	"	"	F 8	1/10	

T.A.J.

1915, Feb. 24

#4



#3



#2



#1



JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Thursday Date February 25, 1915

7 p.m. From S station. Sudden rise since yesterday. S chimney flaming. Fountaining and spurting lake. Large skins across E middle part and E end and SE cove. Spurting fountains through skin SE, S and E. Lake much wider, encroaching on S talus. Glowing pool around O.F. Pounding on NW end. NW pond a few active fountains in crust. Streaming SE to NW and toward SE and E banks -- the large skin being the parting zone. Fumes heavy S fumarole., SE arm and cracks. Sparkling flow area between S cove and E end is dull red. Spurts 80 feet high from S and E fountains through skin. Rim glow in SE arm. Noises blowing and rumbling. Large dark skinned area changes shape.

T.A.J.

80 Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Thursday Date February 25, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.

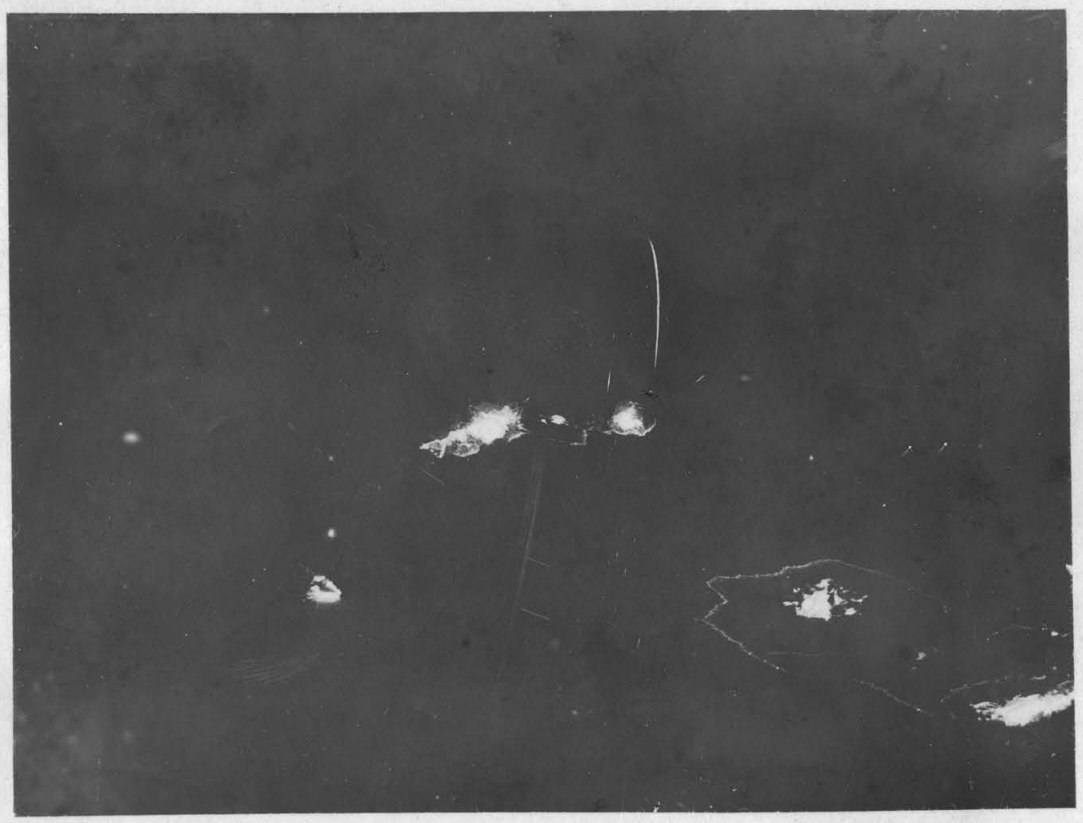
			no	pl	scr	stop	ex	cam
7p.m.	S	Lake	1	W.P.		6.3	$\frac{1}{2}$	
	S	The spurts S and E	2	"		"	1/30	
								T.A.J.

1915, Feb. 25.

80a

boat

#2



#1



JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Sunday Date February 28, 1915.
Monday March 1, 1915.

Feb. 28. 2 p.m. Between E and SE stations.
Lava two feet below the second bench. Very active in the west cove with several big fountains playing at one time near the entrance of the cove. A small cone under the first floor is blowing loudly.

2:30 p.m. From SE station.
Lava is sinking. Has gone down about five feet. Is streaming toward the SE cove, boiling and rumbling.

3:05 p.m. From SW station.
Direction of streaming changed; is now running toward the west cove, with travelling fountains. Under the NW station the floor has sunk down about 50 feet. On it there are two large cones blowing loudly and occasionally sending out lava spray. These cones are about 30 or 40 feet high with large holes in the top.

Alex.

Mar. 1. 2:40 p.m. From S station.
Lava down about 10 feet below the third floor. Very few fountains in the center of lake but more in the NW cove. Streaming is from the E toward the NW and the SW.

3:30 p.m. From W station.
Under the NW station the floor has sunk down about 50 feet. There are four cones about 25 to 30 feet high on this floor which are occasionally spitting lava.
Under the SW station on the second floor two new cones are being built.

3:45 p.m. From W station.
Floor between lake and NW wall of pit has sunk down about 50 feet leaving a chasm 50 or 60 feet wide between it and the wall. Many new cracks here from which thick blue fume arises.

Alex.

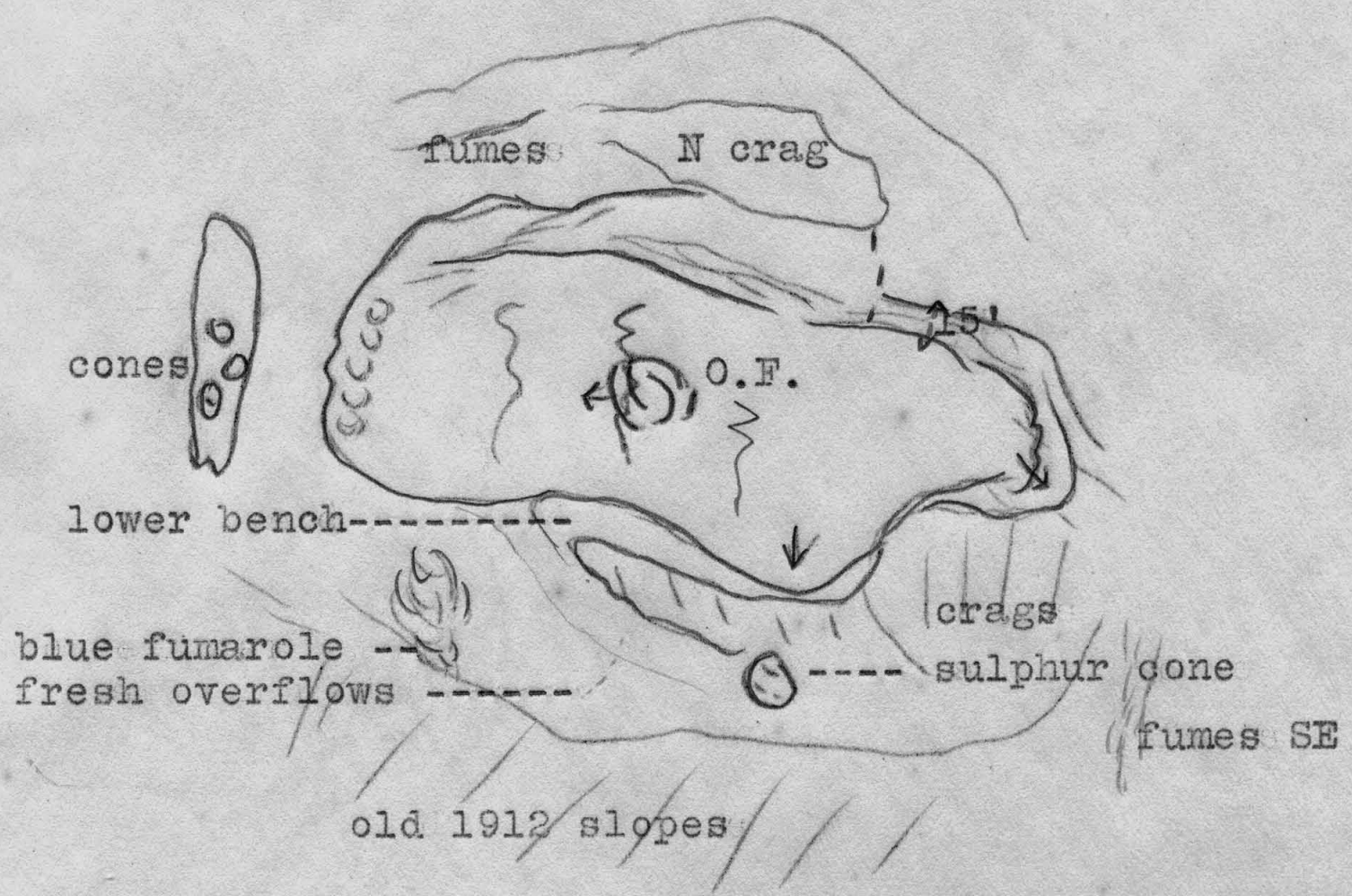
Massachusetts Institute of Technology
Hawaiian Volcano Observatory

JOURNAL

Day Tuesday Date March 2, 1915.

2:30 p.m. SE wind. Seeing W and SW only. View of W end and W end of lake. Noisy fountaining. Pit of tumble against bare red wall of Halemaumau W. Amid the tumble a lower pool and two cones. The southermost 15 to 20 feet high and glowing. The floor remnant between this W pit and lake is growing narrow, a causeway likely to collapse at any time. Lake streaming westward from skin area E of O.F. and apparently eastward on the other side. Blowing noise and travelling fountains. Lake 15 feet below lower bench.

From SW station:-

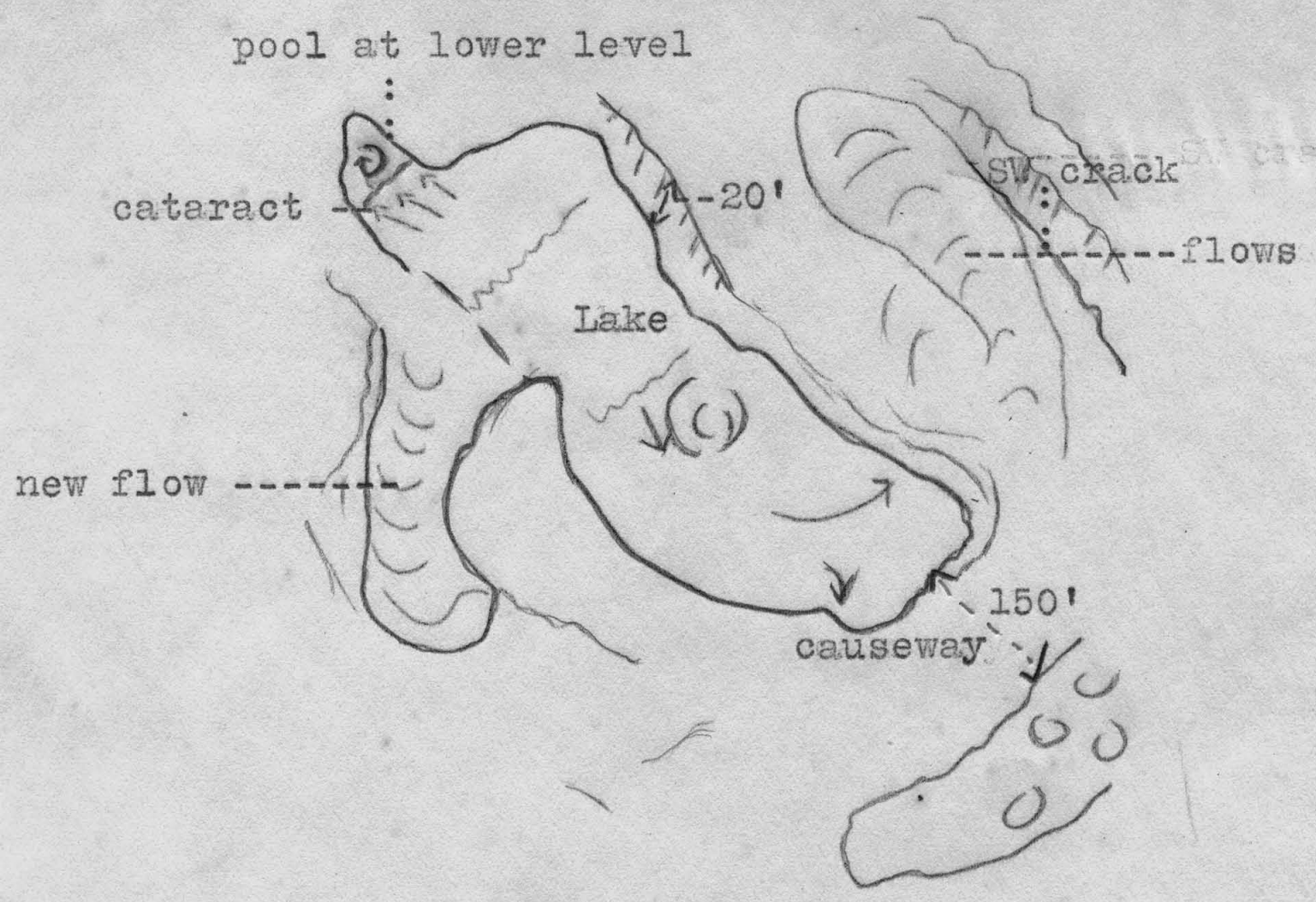


T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date March 3, 1915.

4:15 p.m. From N station.



Good seeing. Torrent pouring into SE cove with churning pot at lower level. This skinned and came up to lake level and quieted at 4:30. New flow of last week's rise from lake into E arm. Cracked crags between E arm and NW trench. They are connected only by crevasses. Marked wide crevasse back of crags SW. High sulphur cone S. Glowing lava cones in WNW trench. N crag not much changed. Pool appears 20 feet below bench, rising however at 4:30. One glow cone in middle of E arm.

T.A.J.

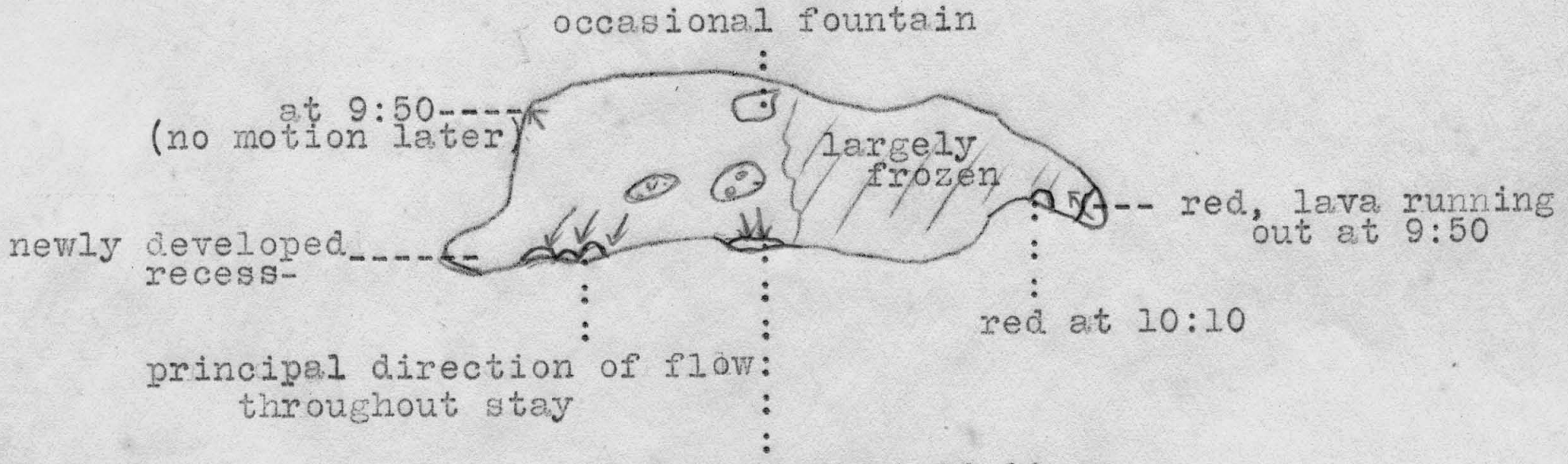
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Thursday Date March 4, 1915.
Friday " 5, "

Mar. 4. 4:30 p.m. Observers report that the lava is running actively from NE to W. Little fountain on NE which later became place of outflow. No lava running into E end.

Mar. 5. 9:50 to 11:30 a.m. From S station:-



Rapid movement to SW; later to S. Cracks in E end of lake. Many small fountains in central W part.
At 11:15 lake very quiet and scums over; slight streaming at E end to E.

Evening. Reported running in E end. Splashing fountains on west.

Lake below S station --------466 feet.
S fumarole on 1914 shelf ---440 feet.

Powers.

85

Massachusetts Institute of Technology

JOURNAL

Hawaiian Volcano Observatory

Day Saturday Date March 6, 1915.

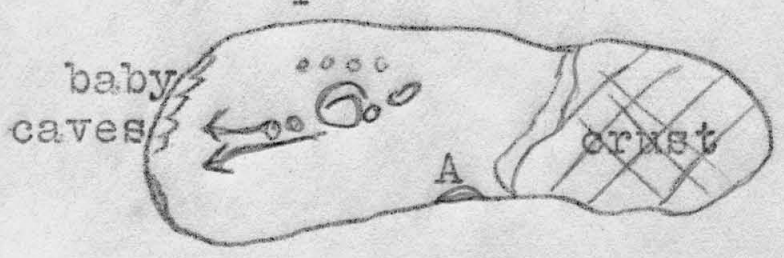
2:20 p.m. Between E and SE stations.
Lake about 15 feet below the third floor. Five or six large fountains playing at the same time with many baby fountains. Streaming to the W and NW.
Loud noise of boiling and rumbling.

3:07 p.m. SE station.
The new cone on the second floor is blowing occasionally and making a little noise. Fifty feet above this the cone between the S and SW is sending out blue flames. Streaming now toward the NE. Thick fumes from under SW and W stations.

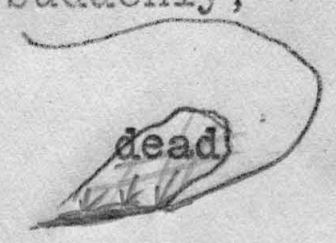
3:30 p.m. From W station.
A small pool of molten lava NW, 25 by 40 feet, is boiling and bubbling. The two large cones to the left of it glowing.

Alex.

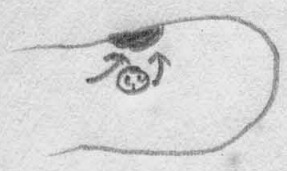
4:15 p.m.



4:25 p.m. small splash developed at "A" and lava ran in. This cave developed suddenly, splashed violently and sucked in three-fourths of crust of E end of lake.



Then at 4:31 stopped completely.
Talus fumarole and floor fumarole smoke as usual; former blue smoke for a time.



At 4:30 cave developed on N bank and lava sucked in with travelling fountains. Great splashing and crusts go in.
Stopped at 4:38.
On NW a curtain fountain with some splashing.
5:00 p.m. runs in on NW.
5:12 p.m. runs in on SW.
5:15 p.m. splashing at N again.
Lake developed in NW (not seen).

Powers.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Sunday Date March 7, 1915.
Monday " 8, "

Mar. 7. Violent splashing at west end reported in late afternoon. Rest of lake very quiet.

Powers.

Mar. 8. 9:50 a.m.
Splashing under SW side; light splashing at W. Large amount of fumes from S talus pot.

10:00 a.m. Fountains run SW and caves splash there. Splashing fountains at SE continue all morning. Lava appears to be 25 feet down.

W  E

10:45 a.m. NE side lake quiet. One little splash on extreme NW. Lake on NW 40 by 50 feet. Lava runs in at N and down at SE.

12:10 p.m. Splashing all along W side.

Lake below SW station ----- 460 feet
Below 1915 shelf on S ----- 32 feet

Powers.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

 Day Tuesday Date March 9, 1915.

8:15 p.m. From O.R.H.
Small pool under NW station boiling lazily, then crusted with pulsing and spattering then brilliant spatter fountain action followed by collapse of crust, cessation of spattering and boiling at 8:30 p.m.

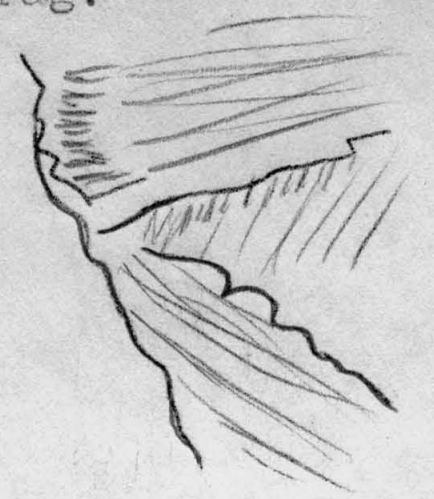
8:30 p.m. Very high S cone has appearance of of spattering but uncertain. Heavy spatter fountain action practically continuous and very noisy -- very heavy surf-pounding sound. SW illuminated fumarole behind crag fumes rising very vigorously. Fairly steady boiling fountain action in region W of O.F. and middle part of fire lake.
Streaming SE, S and W from under N crag. Lazy and decadent (or possibly incipient) glow hole near wall N of crag under N station. Also one near floor level near SE margin of lake. Pulsing blue flame flaring from high S cone-chimney. Vigorous boiling fountains along narrow E arm at intervals. NW pool shows irregularly rythmic crusting and boiling -- vigorous spattering sporadic.

8:45 p.m. Extremely vigorous spatter action against segment of SW wall of chief lake. Sinking action, general appearance of stalactites. Rapid recovery of elevation within three minutes. Fluorescence of fumes from NW pool is both blue and brown by light of pool.

8:50 p.m. Trembling communicated to the walls. Crusts floating and tearing. Some are very thin, being rippled and showing through thousands of points of illumination.

8:53 p.m. Main lake practically crusted over entirely for overa minute, only lines of dull red tearing and minutest of marginal fountains, followed by general tearing and flow.

8:56 p.m. Flow pattern from O.R.H. - near point of crag:-



NW pond three times the size it was on March 7 and more active than for one month -- according to Mr. Hannon. S cone chimney 25 to 30 feet above old floor (Dec. floor).

9:00 p.m. NW pond from O.R.H:-



Lower level in triangular area spitting up into pond. Flame near talus edge at SW of floor (new pond). Fumes growing less copious and less pungent or acrid according to Mr. Hannon. He also says that the depth is about as on March 7 apparently or perhaps a little lower.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

 Day Tuesday Date March 9, 1915.

At E near wall two blow holes in floor, one several days old. The other is the larger and opened since Sunday, March 7. ?25 feet below floor. Not much rising and sinking during some hours on this evening.

10:15 p.m. Very vigorous spatter action NW pool -- 60 or 70 feet high.

H. O. Wood.

89

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Tuesday Date March 9, 1915.

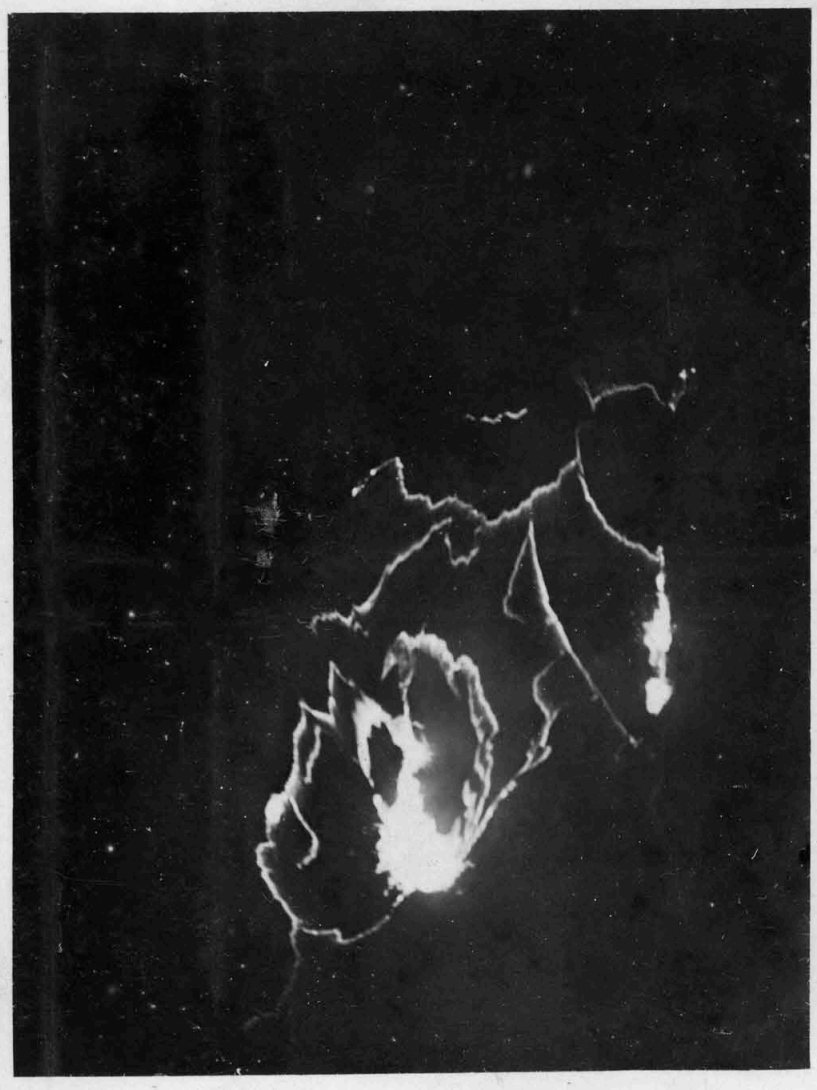
t	sta	pt	hor	vert	lev	dist	elev	h. i.	

1915, Mar. 9

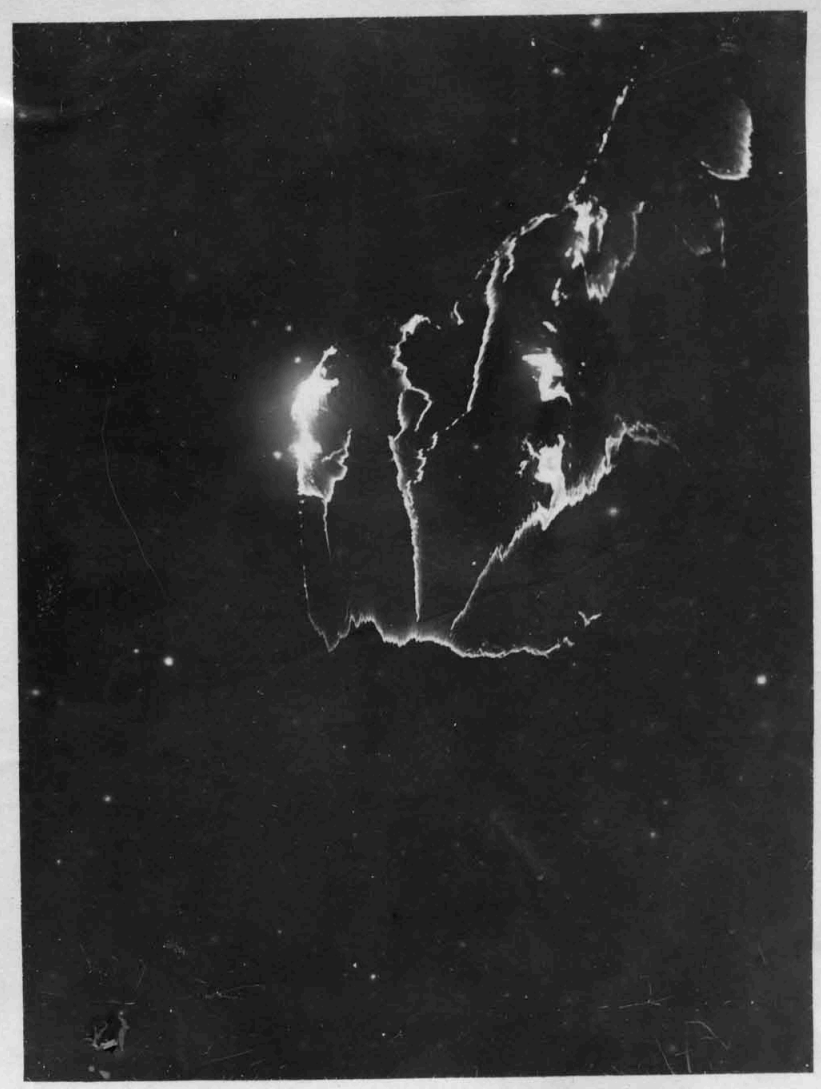


Beevers

#2



#1



#3

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date March 10, 1915.

5:40 p.m. From east A frame. (SE station)
Active boiling fountains play at O.F. place and under NW margin of main lake. Streaming W and S. East part frozen over. High floor at E end badly fissured. SW fumarole glow only. Plashing sound of boiling instead of beating of surf. Stalactites under NW margin 10 feet long. SW glow-fumarole is in peripheral crack back of subsiding block.

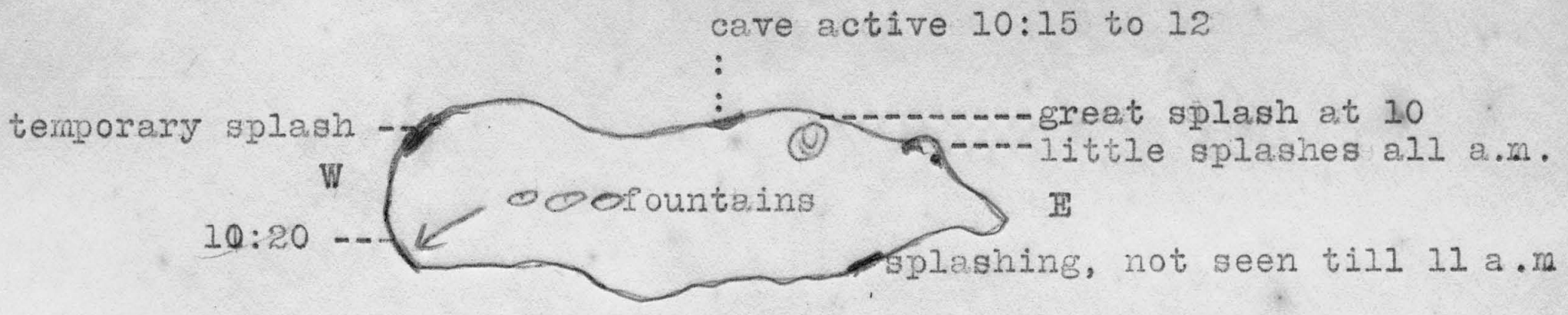
6:00 p.m. Brief sinking phase.

H. O. Wood.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Thursday Date March 11, 1915.

9:40 to 11:15 a.m.

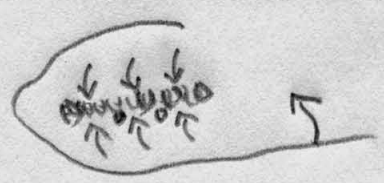


Pounding surf noises on E end. Splashing fountain noises strong as usual.

10:15. Lower south fumarole smokes violently. Lake becomes quiet, splashing at NE and running in at SW. NW lake almost dead with cave to south splashing. One redn crack in main cave.

10:30. Great splashing and lava runs in oh west. Runs rapidly out of south side of lake.

10:45. Goes down in a line of baby fountains.



Big spatter cone near NW lake which was very active recently, now dead. Other cones also dead. NW splashing cave S of NW lake about 465 feet below W station.

8 to 9 p.m. Porter reports small avalanche on N somewhere and great activity on W side. NW lake very active.

Powers.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Friday Date March 12, 1915.

4 p.m. From NW station.
Streaming toward SE cove and NW cove. A few large fountains in the center of lake and many baby fountains following along with the streaming.

4:30 p.m. From O.R.H.
Lava about ten feet below the third floor.
NW pool about 60 feet aquare. Bubbling going on in this pool but no fountaining.
The two cones between NW and W blowing out sparks.

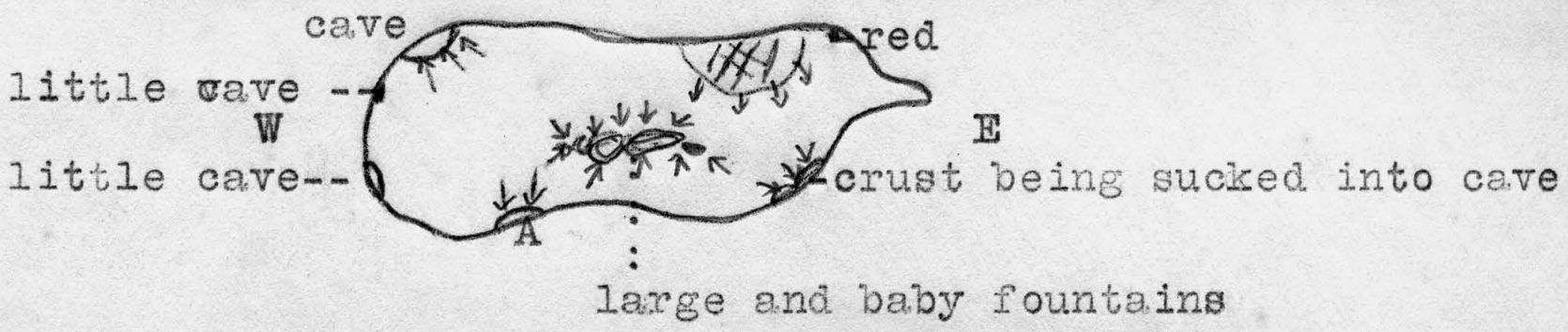
Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

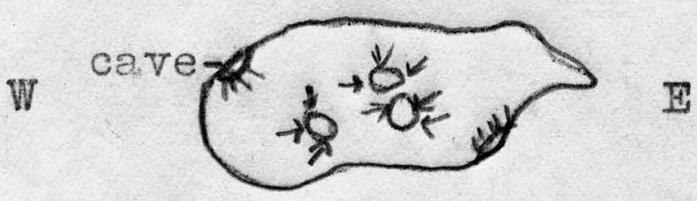
 Day Saturday Date March 13, 1915.

9:30 a.m. Noise of splashing fountains and surf noise. No red fire seen in upper S fumarole. Neither S fumarole smoking as much as at times. Strong NE wind. Lake about 20 feet below rim (?). Rising?



9:40 a.m. Runs in at "A" instead of middle; baby fountains.

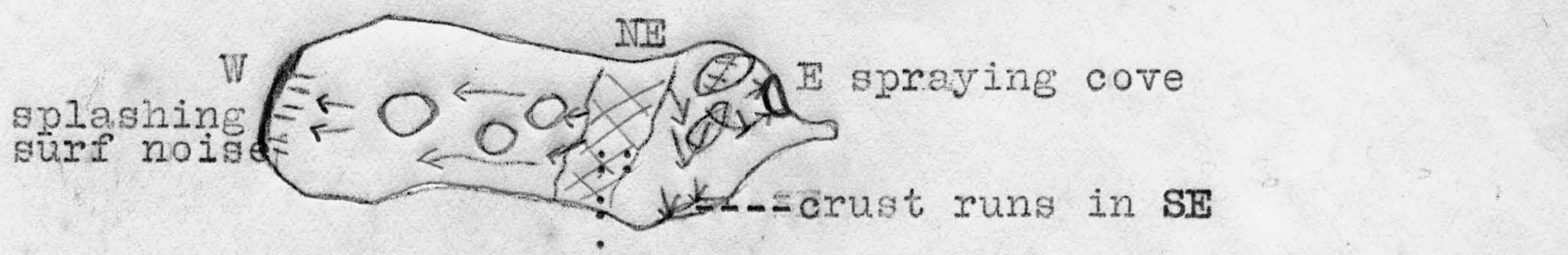
9:45 a.m. Two or three fountains splashing.



9:50 a.m. Violent splashing cave develops under N wall and thunders with surf noises during remainderof observation. Baby fountains on S side; some larger fountains. Crust sucked under on SE, W lake red on N side. Splashing heard.

9:55 a.m. A spraying cave develops on NE of main lake. Caves on W become quiet and lava runs into lake from W and E, running into SW cave; and some runs in on W and S and NE.

5:35 p.m.



Great fountaining. Baby fountains develop all over middle W part of lake. W lake not seen. Fire in cracks on SW side in 1914 floor caved. Fire in both S fumaroles. Almost continual fountaining for a minute; then a half minute lull with baby fountains; then three fountains break about 10 to 20 second intervals. One fountain very large (30' diameter?). Lava rises on NE side and runs W and E.

5:45 p.m. Red splashing cave at E end. Spraying from SE violent pro tempore -- lumps of red lava thrown 30 feet.

5:50 p.m. Big fountains in center of lake, and many baby fountains. Lava runs out of cave NE. Crusts swallowed up rapidly.



Powers.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

 Day Saturday Date March 13, 1915.

3:05 p.m. Pool active with many large fountains in center. Lava streaming toward NW cove and is down about 10 feet below the third floor. O.F. active.

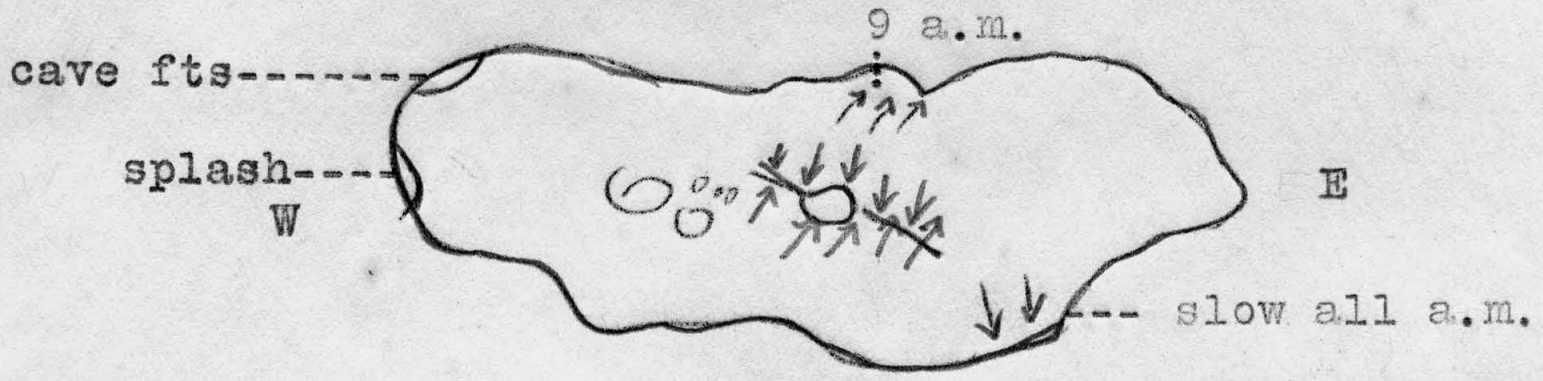
3:40 p.m. From S station.
Saw only two active places -- one at the W and the other at the NW cove. They were throwing lava to quite a distance. The two cones on the second floor are blowing. Much blue fume in the pit. Same noise of boiling and rumbling.

Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Monday Date March 15, 1915.

8:50 a.m. Both S fumaroles smoking violently. Lake very quiet. Runs in two splashing caves on SE side (low splashes). Baby fountains in center with slight splash.



9:00 a.m. Starts to run into N instead of center. Keeps running in on N and fountains migrate.

9:10 a.m. Flow to N ceased. SE flow quiet. Two splashing fountains in center, two caves on W. No surf noises.

9:15 a.m. Travelling fountains make for W.

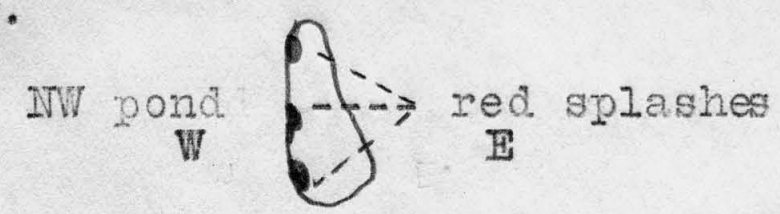
10:15 a.m. Lava streams to E, five minutes an hour rate. All fountains migrate rapidly. Runs in on SE in two fountains. NW pond active. Splash on W. Some slight hissing noises momentarily.

10:30 a.m. Steady splash with no surf.

10:35 a.m. Pronounced surf noises on NW, S, and in SE pond. Also splash in cove on N again. Little SE pond very active.

11:00 a.m. NE cave splashes violently.

11:15 a.m. NE cave quiet. Lava runs in S from W. Fountains on S side. Splash on N recommences.



11:20 a.m. Violent streaming out of S end of NW pond under NE side. Slight talus falls. Brown fumes.

11:23 a.m. Violent talus fall commences. 1914 shelf against Halemaumau wall gives way. After crash pond streams slowly to N. Baby cave on N side of pond.

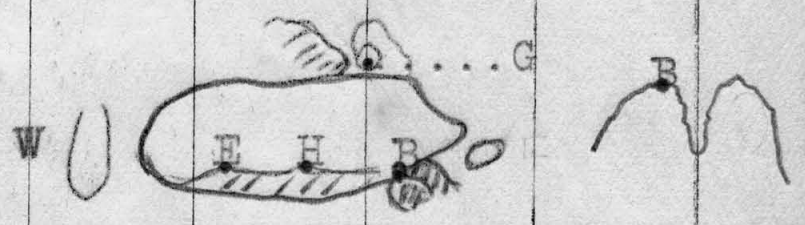
11:30 a.m. Main lake splashes with surf noises all along NE and N sides. Little SE pond separated by 20 feet from main lake.

Powers.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Monday Date March 15, 1915.

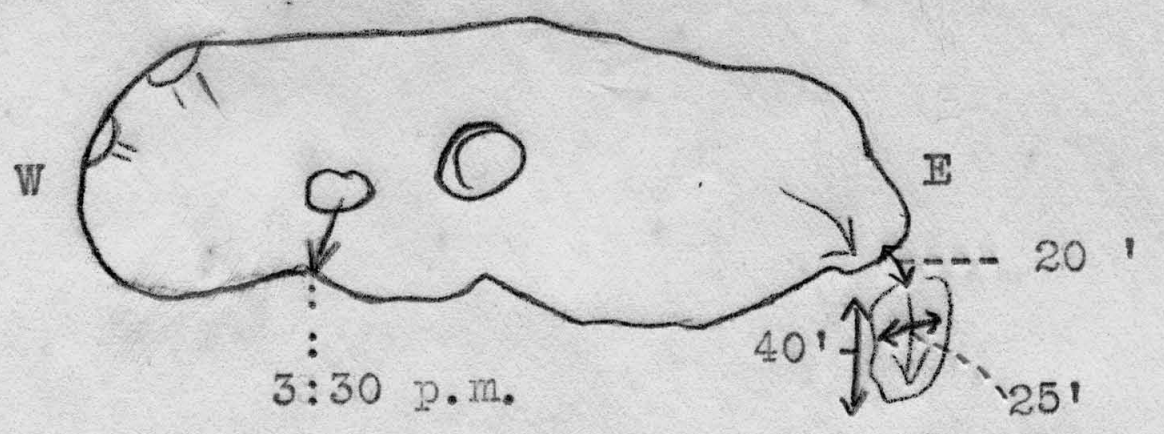
t	sta	pt	hor	vert	lev	dist	elev	hxxx
a.m.	S	W cave stalactites					469	
	SE	" " "					466	
	S	N " "					475	
	SW	" " "					470	
	W	" " "					484	
	SW	ENE" "					485	
	SW	NW pond					490	
	W	" "					514	
		Dimensions lake -- 150' by 500'						
								
	SE	B. Upper 1914 crags SE of lake					404	
	S	" " " " " " "					398	
		485 - 400= 85' below 1914						
	SE	D. SE pt, main crag					390	
	S	" " " " "					387	
	SW	" " " " "					390	
		485 - 390= 95' below crag						
	SE	E. Point oh center S lowest 1915 ledge(same level as H)					445	
	S	" " " " " " " "					440	
	SW	" " " " " " " "					445	
		485 - 445= 40' below ledge 1915						
	SE	G. Point on NE cove floor- white pebble on floor					457?	
	SW	" " " " " " " " "					440 prob'y	
	SE	H. Point W of center S lowest 1915 ledge(same level as E)					455	
							Powers.	

			no	pl	scr	stop	ex	cam	

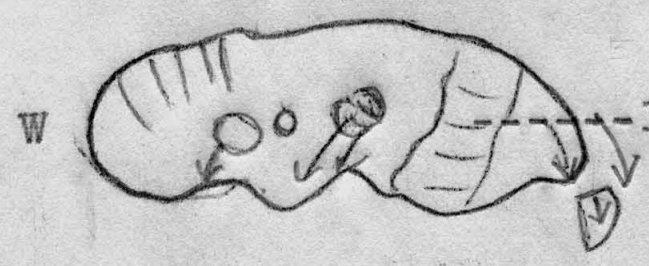
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Tuesday Date March 16, 1915.

2:45 p.m. From SE station.

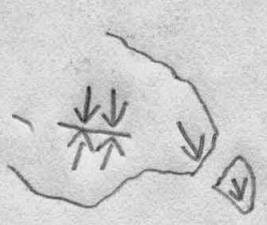


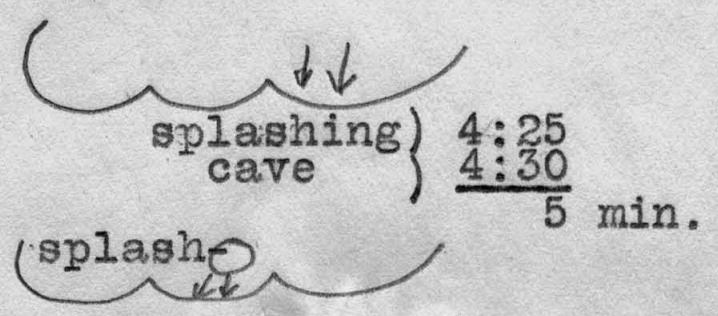
One fountain splash in N end NW pond. Main lake surf noises. Fountains splash constantly in center. Rest of lake quiet.



Lava runs under natural bridge into SE pond and under 1914 ledge on S.

4:25 p.m. Crust swallowed up





In SE pond spray 30 feet high. Splashing in S cove of lake for five minutes.

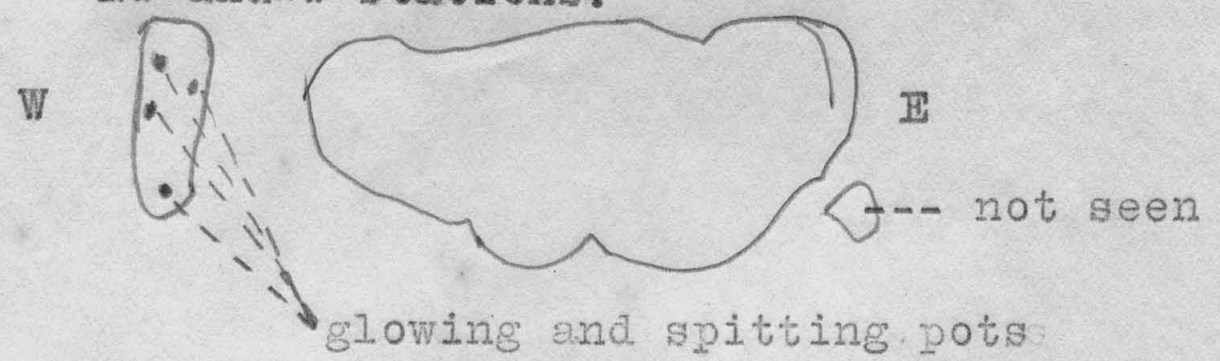
4:35 p.m. NW and SW caves splash. Lava runs quietly to SSW and E. Large fountain area in center of lake.

Powers.

JOURNAL

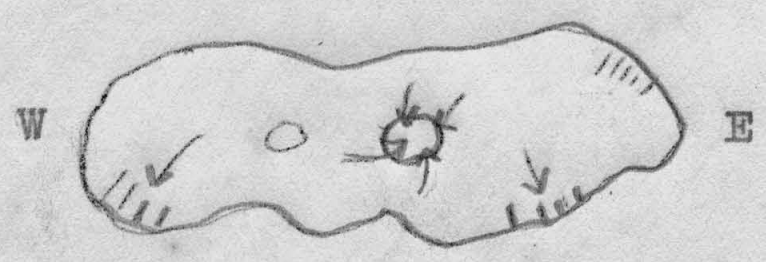
Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date March 17, 1915.

NW and W stations.

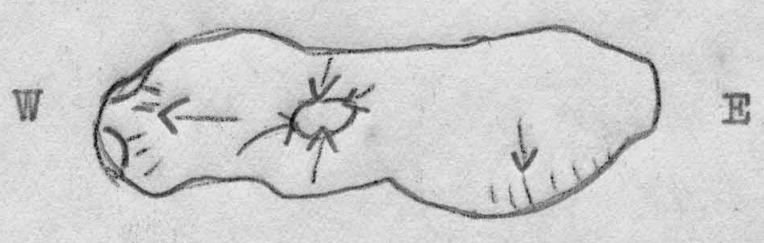


NW pond is frozen over. It extends W to the Halemaumau wall. There has been a fall of old floor on S side of little pond. The pond has engulfed some of the talus on the N side and migrated W and NW. Now 230 feet long. Main lake 490-510' by 150-180'. Violent splashing and surf noises as usual in main lake. One on the NE, SW and SSE.

3:30 p.m.



4:30 p.m.



Powers.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date March 17, 1915

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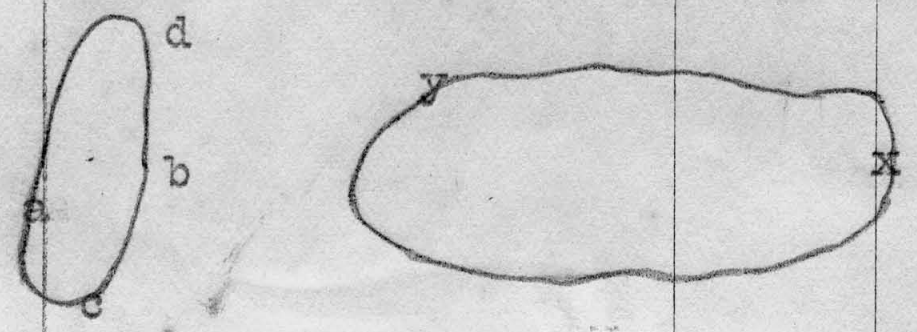
								
	NW	a NW pond					453	
	W	" " "					458	
	NW	b " "					422	
	W	" " "					430	
	SW	" " "					445	
	N	" " "					452	
	N	c " "					453	
	W	d " "					403	
	SW	" " "					412	
	SW	x Lake					482	
	N	" "					453	
	NW	y "					475	
	N	" "					474	
		z					455	
						Powers.		

			no	pl	scr	stop	ex	cam	

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Thursday Date March 18, 1915
Friday " 19, "

Mar. 18.

2:35 p.m. From N station.
Had a fine view of small pool. It appears about 100 feet long and about 60 or 70 feet wide. There is a cone on its right which is blowing out spray very high.
In the lake only one place active, at the NW.

3:03 p.m. From O.R.H.
Boiling around the edge of the E end of lake. A few fountains in the middle of the little pool. This pool is about 70 feet long and 60 wide. Lava is running into a small cove on its left bank.
Lava in the lake is down about 10 feet below the third floor. Streaming toward the NW cove.

3:00 p.m. From O.R.H.
Saw the lava in the small pool rise and overflow its bank, running along quite a distance on the floor.
Fountains boiling in the middle of the pool.

3:50 p.m. From O.R.H.
NW pond has overflowed and run into a little cone. The flow spread to about 20 feet and lasted half an hour.

Alex.

Mar. 19.

3:04 p.m. From O.R.H.
NW pond down about 5 feet below the surrounding floor. Fountains boiling in the middle of it. The cone on the right blowing spray high in the air.

3:15 p.m. From O.R.H.
Lake down about 20 feet below the third floor. Very active with many large fountains playing. Streaming toward the NW cove and toward the E through a channel and under a bridge into a small pool at the side of the wall.
The little pond is full of baby fountains.

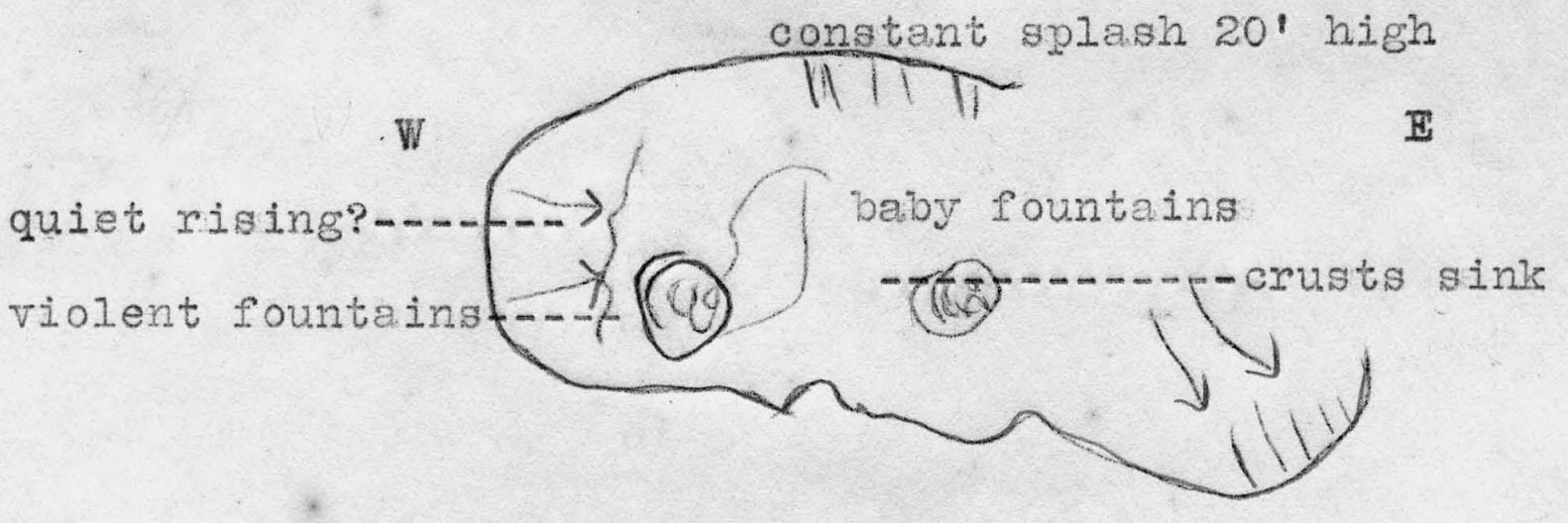
3:50 p.m. From SE station.
Lava streaming rapidly through the channel toward the E cave with many baby fountains in the stream.

Alex.

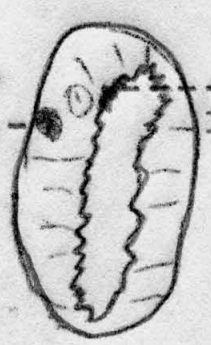
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Saturday Date March 20, 1915.

2:30 p.m. From S station.
Lava runs east with baby fountains and splashing cave on north with surf noises. Heavy fountains in W end of lake.
Continual noise.
Fog, smoke, rain and wind.



NW pond from SW:-



Hissing noises in pond at N end. Baby glows and tiny splashes. These hissing noises recur.
Red pot in NW pond against 1914 wall near where 1914 talus fell down.
Pond streams N slowly. A large part of it has ffrozen leaving glowing pot.

3:00 p.m. The E end of main lake not seen but lava runs in that direction. Runs out of W end; bubbles in center and toward W; runs to N, SE and E. The stream to E runs at six miles an hour sucking in crusts. Many baby fountains in center, in O.F. region and farther W.

Powers.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Sunday Date March 21, 1915.

12 noon. From O.R.H.
Had a good view of NW pond. Boiling all around the sides and a few fountains playing in the middle. Cone on its right blowing out hot lava spray quite high.

12:20p.m. From SE station.
Main lake very active, many large fountains. Lava running toward the E and into a cave in side of cliff making a great deal of noise. Surface of lake 15 feet below its banks.

Alex.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Monday Date March 22, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
12	N	Lake at SE cove					500	
noon	NW	" " " "					500	
	N	NW pond - S end					483	
to	N	" " - middle					483	
	NW	" " - S end					483	
2:00	NW	" " - middle					483	
p.m.	W	N central pt of crag					397±	
		(On Jan.30,'15, T.A.J.'s measure 376' down.						
		Maximum height crag 438'.)						
		Main lake below 1915 ledge					55	
		Dimensions NW pond				30 x	260	
		(About 30 feet below former level of Mar.17.)						
		Main lake including E arm				170 x	560	

Powers.

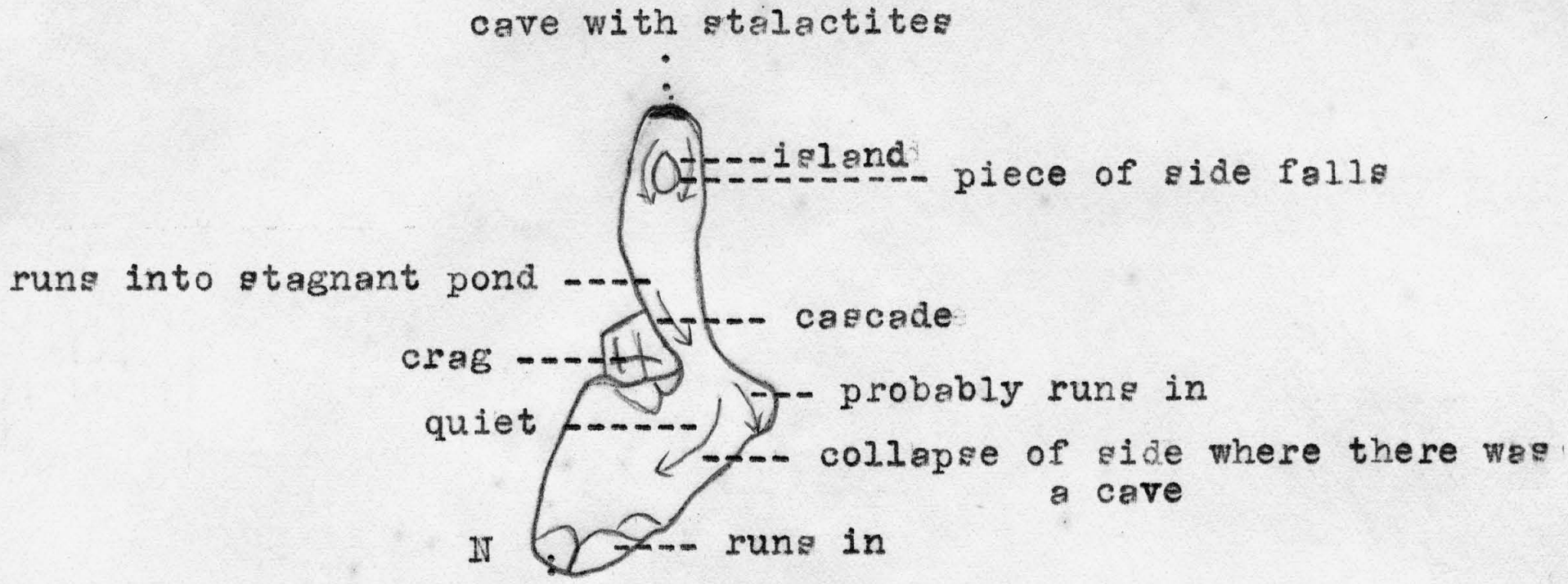
			no	pl	scr	stop	ex	cam	

JOURNAL

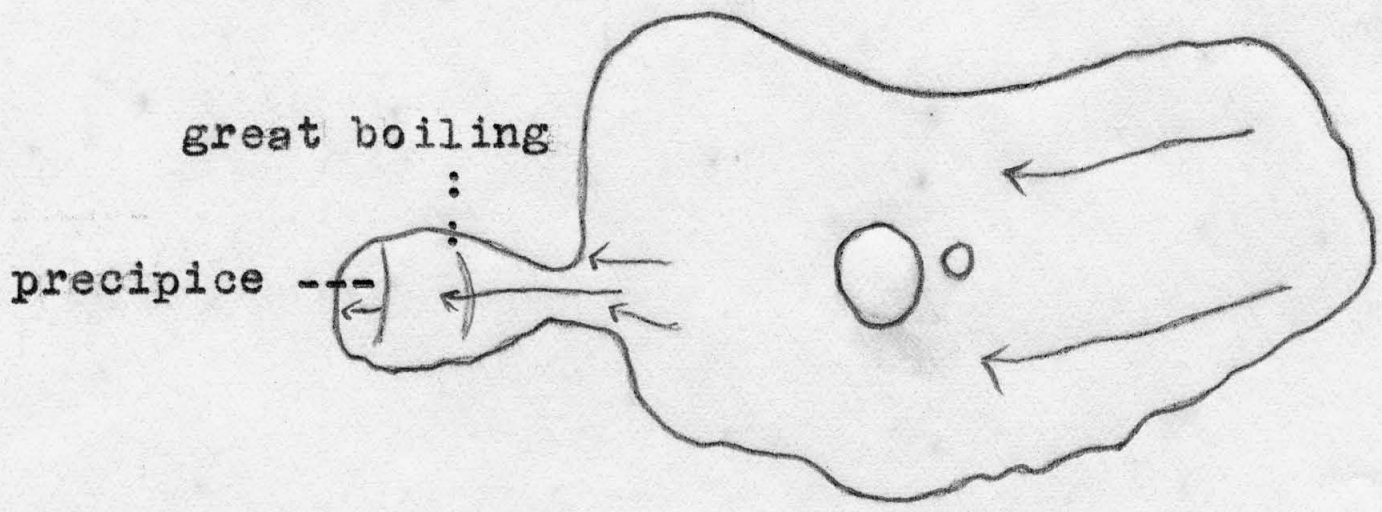
Massachusetts Institute of Technology
Hawaiian Volcano Observatory

 Day Wednesday Date March 24, 1915.

From NW station.



Pond down 10 feet. Torrent 12 miles an hour.
Huge current runs under shelf on N.



Powers.

2:50 p.m. From NW station.
Small pool very active. Rapid streaming out of the cave around a peninsula and into little cone side of cliff. Pool down 10 feet below floor.

3:00 p.m. Avalanche S side main lake. Lake down 10 feet. Large fountains in center. Lava running through the channel to the E cave, boiling and making much noise.



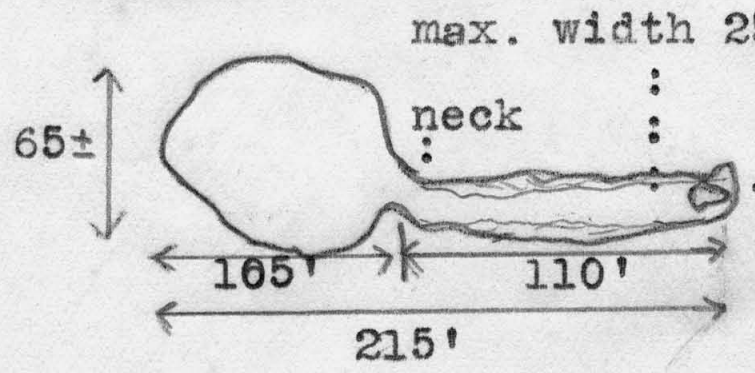
Alex.

3 to 4:15 p.m. From N and NW stations.

Depth main lake 500' below NW.
Depth NW pond at S end, from which lava ran 495' below N.
The drop in the lava to the N end is about 4'± .
Width of neck into which main lake flows on extreme E 20'.
(measured 18 ')

Streaming to E neck falls.

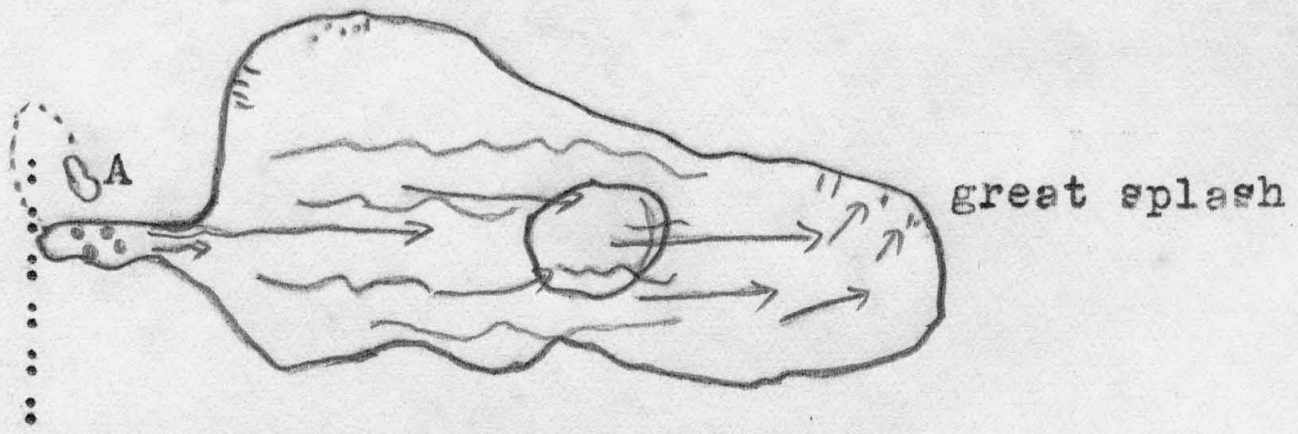
NW pond:-



Neck 10 feet wide.
(Wider in the evening)

Island 15 feet long.

9 to 10 p.m.



Site of former arm; no longer in existance?
A -- separate pool, very active.

Old Faithful breaking at intervals of 10 and 50 seconds, to heights of 20 feet and more. In the afternoon it broke to height of 35 to 40 feet and very large.

Powers.

JOURNAL

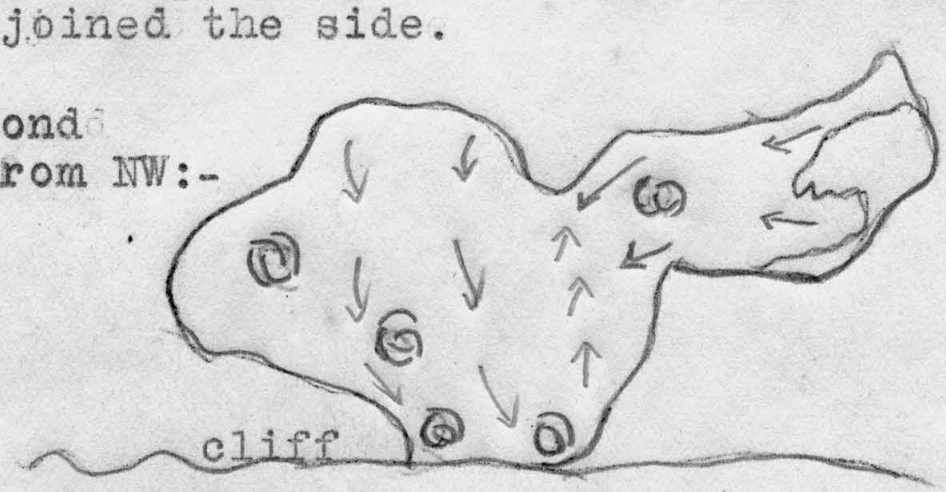
Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Thursday Date March 25, 1915.
Friday " 26, "

Mar. 25.

2:25 p.m. From NW station.
Good view of small pool. Very active with several fountains playing at once. Stream of lava coming out of W cave and running rapidly toward NW. Pool down about 10 feet. Shape of pool changed since yesterday. The island has joined the side.

NW pond from NW:-



2:30 p.m. There was an avalanche E, falling into the channel. Did not last long.

3:20 p.m. From O.R.H.
View of main lake. Very active in SE cove. Streaming toward the E and SE cove. Many large travelling fountains going in the same direction making much noise. Lava down 15 feet below third floor.

3:55 p.m. From SE station.
Lava running through the channel at rate of 15 or 20 miles an hour. The mouth of channel is about 60 feet wide; it is over 100 feet long. The lava is rushing through very fast, emptying into the E cave. A few travelling fountains going along with the stream.

Alex.

Mar. 26.

2:20 p.m. Between the E and SE stations.
Main lake very active with many large fountains, S cove very active. Lava still down about 15 feet below third floor. Streaming toward the E and toward the W cove.

4:00 p.m. From O.R.H.
Pool of molten lava under NE station, boiling and running under a thick crust and emptying into the lake.
The NE arm is about 200 by 30 or 40 feet. Many baby fountains.

3:25 p.m. From NW station.
NW pond very active. Lava running under NW walls. Appears to be a cave there into which the lava pours. Surface still about 10 ft. below the floor.

Alex.

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date March 27, 1915.
Sunday " 28, "

Mar. 27.

2:48 p.m. From O.R.H.
NW pond active at NW. The tunnel at the W where the lava came out is buried by rock tumble. There has been another avalanche on the NW side of pond leaving a hole in side of cliff.
Main lake about same depth. Many large fountains boiling at same time. Streaming toward NW and E.

Alex.

Mar. 28. Noon and again at 6:30 p.m.
Lake large. Slow streaming W to E. E arm arched over and streaming into it. Inner pool torrent inward (N) from under arch with many bubble fountains. Rotation within counter-clockwise. Travel fountains eastward from O.F. O.F. as usual.
W pond long. Active. Skinned over - puffing at W edge. One small avalanche W wall. S chimney glowing. General tumble of talus and benches as of three weeks ago except that the N crag has fallen away on the lake side so that its upper surface is now a narrow causeway.
Some puffing W pond. Walls over lava appear about 100 or 80 feet high.

T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Monday Date March 29, 1915.
Tuesday " 30, "

Mar. 29.
2:40 p.m. From 1894 bench below the E station.
Many large fountains in lake travelling along with the lava stream toward the E. There was a large fall of rock from under the NE station which filled up the little pool there. The lake is down about 15 or 20 feet below the floor.

3:00 p.m. From O.R.H.
NW pond active, with several fountains and boiling place at side of wall. W cave broken through with the lava running fast from there.

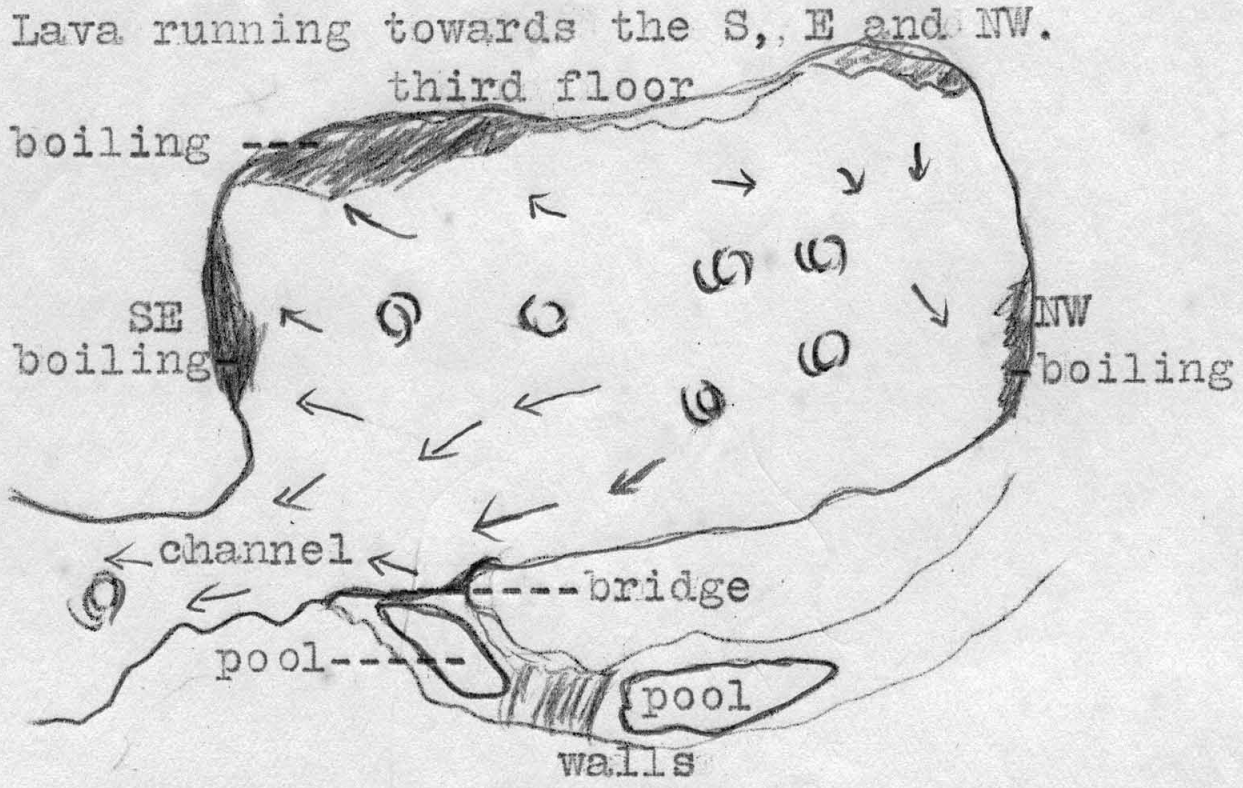
3:10 p.m. There was a small avalanche from the S bank of lake, about twenty feet falling in.

Alex.

Mar. 30:
2:27 p.m. From O.R.H.
Lake active with several large fountains. Splashing from S cove, throwing the lava out over the lake and making a loud noise. Streaming toward the S and through the channel toward the E. The lava is 10 feet below the third floor on the SW side.

2:45 p.m. From O.R.H.
Had a view of NW pond. Another avalanche has covered the W cave, but there is great activity NW and many fountains in the middle.
The small NE pool is very still. Only a few glowing places.

3:22 p.m. From 1894 bench under E station.
Lava running towards the S,, E and NW.



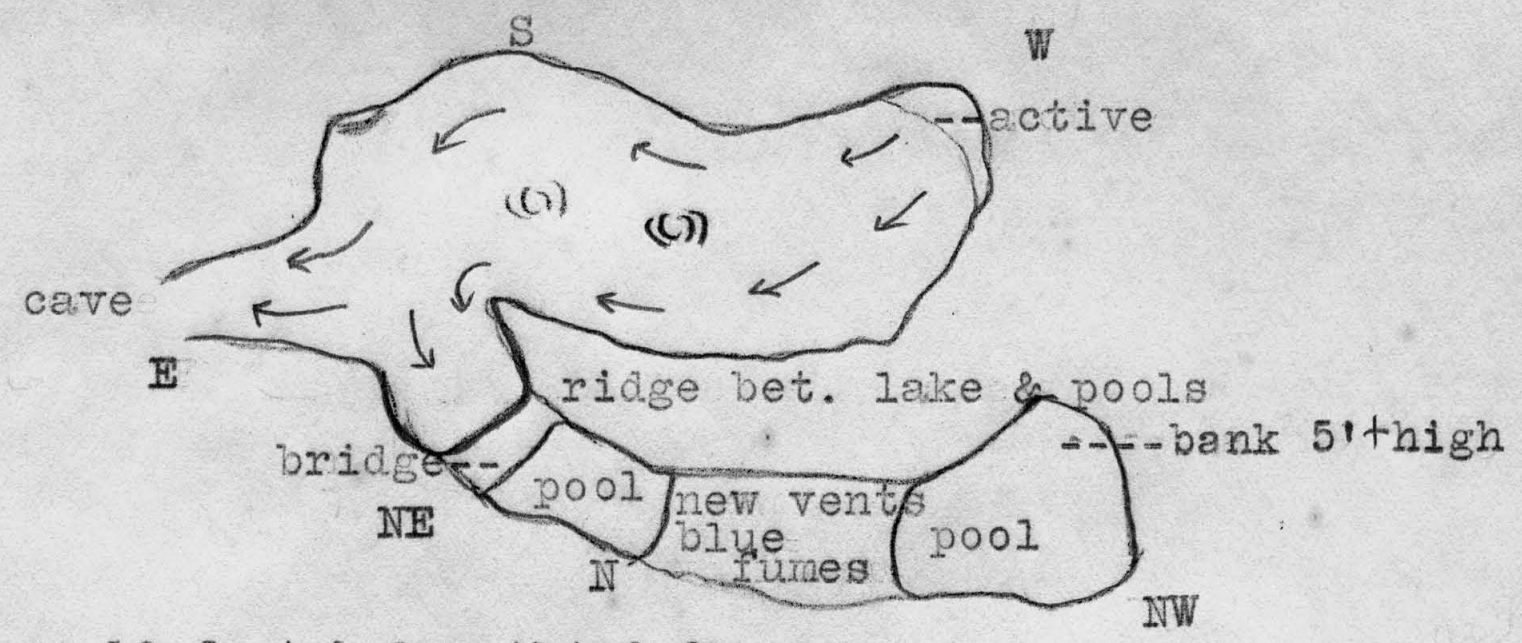
3:45 p.m. From SE station.
Large hole on second floor under SW station from which thick blue fumes were rising.

Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date March 31, 1915.

2:30 p.m. From O.R.H.
Small avalanche under SW station.



Lava 10 feet below third floor.

2:40 p.m. From O.R.H.
Saw another avalanche from under SW station. Made loud noise.

2:54 p.m. From O.R.H.
Another small avalanche under E station.

3:00 p.m. From O.R.H.
Several fountains boiling in the lake. Lava is running toward the E and another stream around the bend through a small channel toward the NE, going very fast.

3:08 p.m. Another small avalanche under S station.
NW pond very active. Full of baby fountains all travelling toward the N side. Lava only about two or three feet below the third floor.

Alex.

3:45 p.m. Small avalanches frequent. Travelling fountains. Eastward streaming. E pot crusted. E cavern cove with rapid inrush.
Streaming northward in NW pond.
Three small avalanches between 3:45 and 5 p.m.

T.A.J.

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

KILAUEA DAY SHEET

Day Wednesday Date March 31, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
3:45p	NW	W	0					
	N	NW	0					
		(Set up 3' SE of NW sta.)						
	NW	S end NW pool	12 26	51 43	-2	402	510	
	N	" " " "	34 26	36 43	-3	678	505	
	NW	Crag	79 38	35 57	-4	531	386	
	N	"	84 ?	49 00	-3	344	396	
	NW	Inner end E cove	74 03					
	N	" " " "	102 41					
	NW	S cove	59 08					
	N	" "	85 39					
	NW	Entrance E arm	75 22					
	N	" " "	99 30					
	NW	N end W pool	35 18					
	N	" " " "	35 43					

Length lake ESE-WNW		490'
Width	about	250
Length W pond		175
Width	"	70
Length of bottom pit at lava level ESE-WNW	"	800
Width at lava level including NE trench & crag	"	425
Depth to summit crag		391
Depth to lava surface, both NW pond & main pool		507

T.A.J.

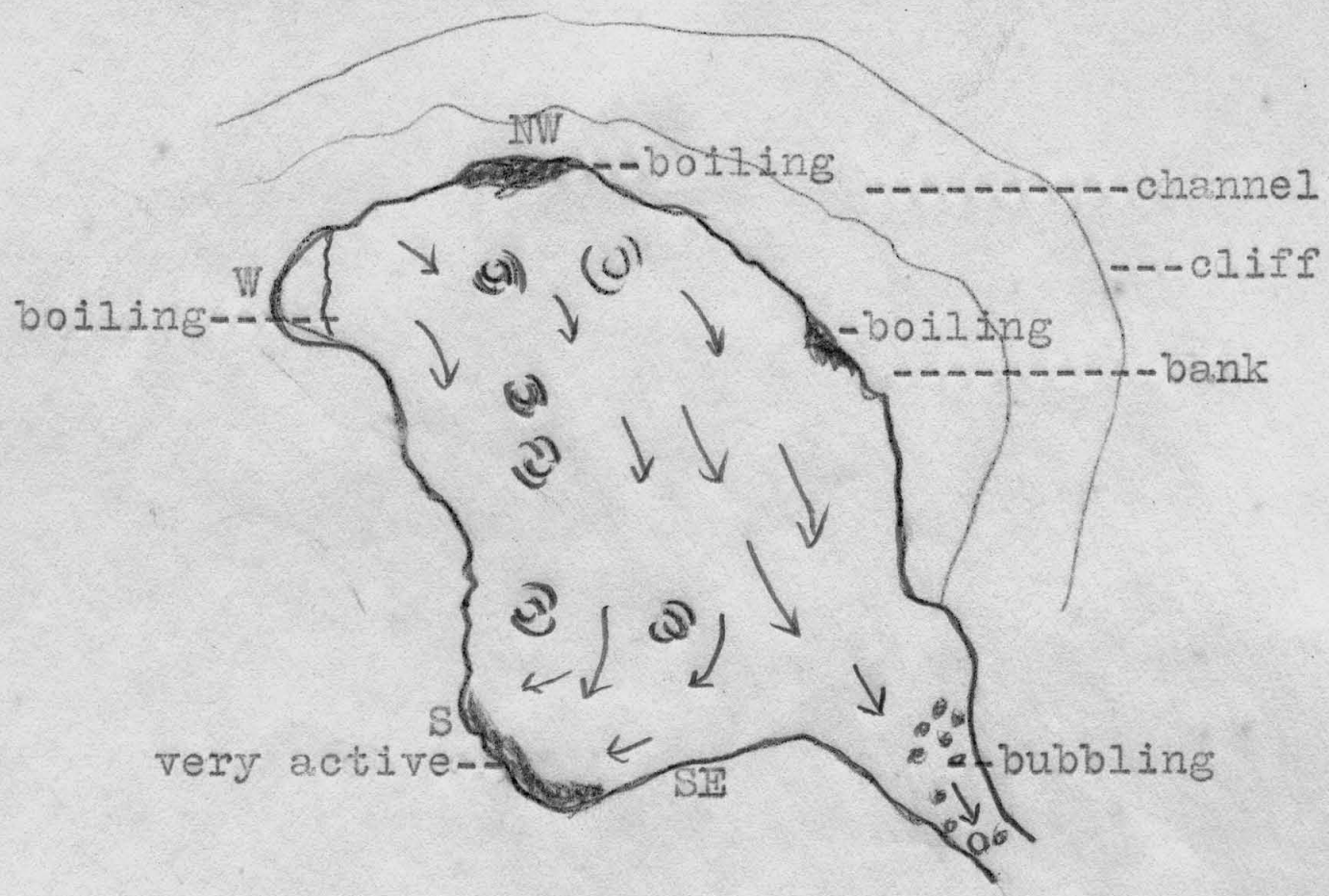
			no	pl	scr	stop	ex	cam	

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Thursday Date April 1, 1915.

2:53 p.m. From E station.
Lake down about 15 feet below third floor. Streaming toward SE cove and E cave, with travelling fountains in the stream.

3:30 p.m. From SE station.
Direction of streaming has changed. Is now running toward the S cove.



4:10 p.m. There was an avalanche directly under 1894 bench lasting three seconds.

Alex.

8 to 9 p.m. From SE station.
NW pond active. Lake streaming to a line N-S of travelling fountains S of O.F. southward, inward, radially from W, N and E. Quiet skin of rising E of O.F. E of skin a rapid rush into E cove where there was a downsuck and a pot showed from SE station back of a bridge in site of former SE cove. S chimney very active flare and a pressure of rising fume rushing up. At this S chimney from time to time rocks rolled down hollow between the two remnants of 1912 bench S. Lake as a whole rather quiet skins with zigzag partings. Noises of plashing of travelling fountains and sometimes high spurts and bombardment. S bank spurting up 50 feet. Appears sinking. Wall N under crag appears fully 100 feet high or more. Dense fumes E, SW and N. Glow bright. Recently the outlying fume vents NE of Halemaumau very acrid.

T.A.J.

113 Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Thursday Date April 1, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	

1915, Apr. 1



Sag

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Friday Date April 2, 1915.
Saturday " 3, "
Sunday " 4, "
Monday " 5, "

Apr. 2.
2:30 p.m. From E station.
No changes to be seen in lake. Very active. Streaming rapidly toward E. About same level.

Alex.

Apr. 3.
Evening. Mr. Hannon reports that NW pond is still active. One rock fall into lake from S side of crag. Very brilliant.

Apr. 4. No essential change.

Apr. 5. No report.

T.A.J.

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

JOURNAL

Day Tuesday Date April 6, 1915.

Noon — Dim seeing from S station. Smoky. Lake boiling vigorously and noisily about O.F. Streaming very sluggish, mostly eastward. Lake appears 15 to 20 feet below inner ledge. No avalanches heard during one hour. Scars of fresh falls over SE arm E wall of Halemaumau. The group of crags SE in place. A new block appears fallen from W lower bench of 1912 S. Five or six large new white boulders on 1914 floor bench below chimney. S chimney very active and fumes gushing under pressure. SE corner 1914 floor no longer a line of fuming cracks but fumes rise from below the bench. All the cracked portion of former photographs (Jan. 31) gone. W end remnant 1914 bench still clinging and continuous to SE.

9:15 p.m. — Torrent into E. Several pots E big flaring flames. S chimney red and puffing. SW pot glows inside. Picture same as a week ago. Streaming W to E. A line of travelling fountains into S cove. Streaming into S cove and E cove. Lake 25 feet below lower ledge. Dark skins tearing and being engulfed in O.F. and in E cove. No avalanches.

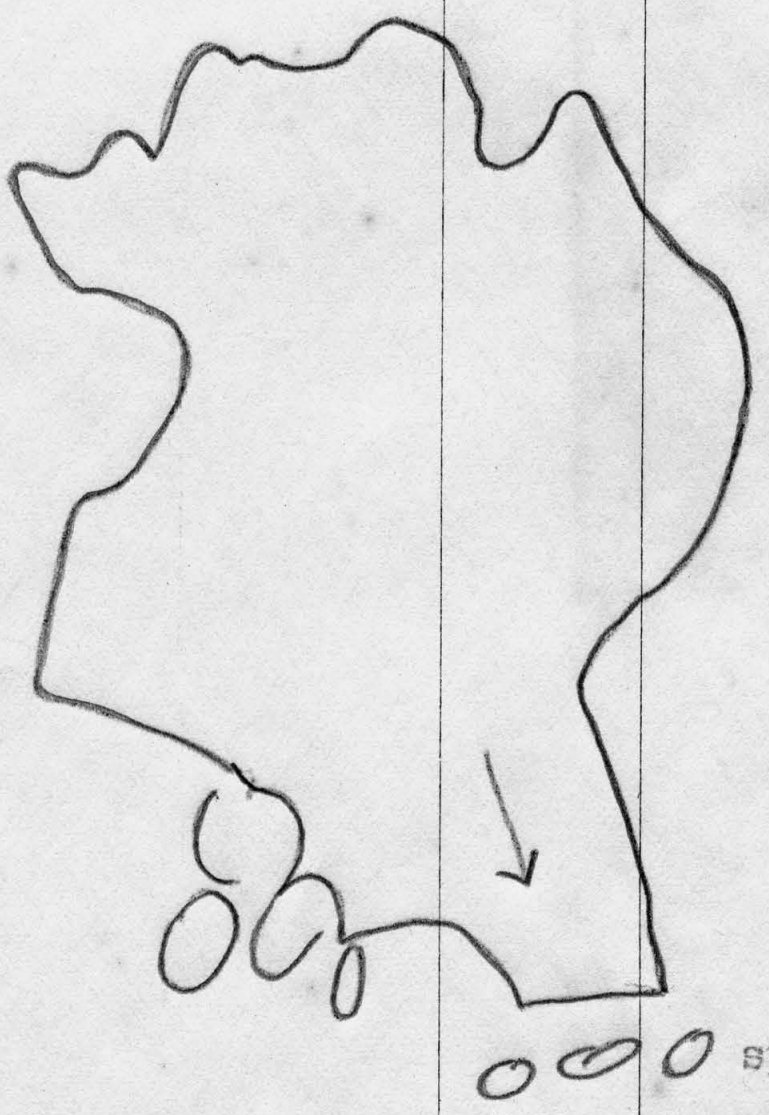
T.A.J.

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

KILAUEA DAY SHEET

Day Tuesday Date April 6, 1915.

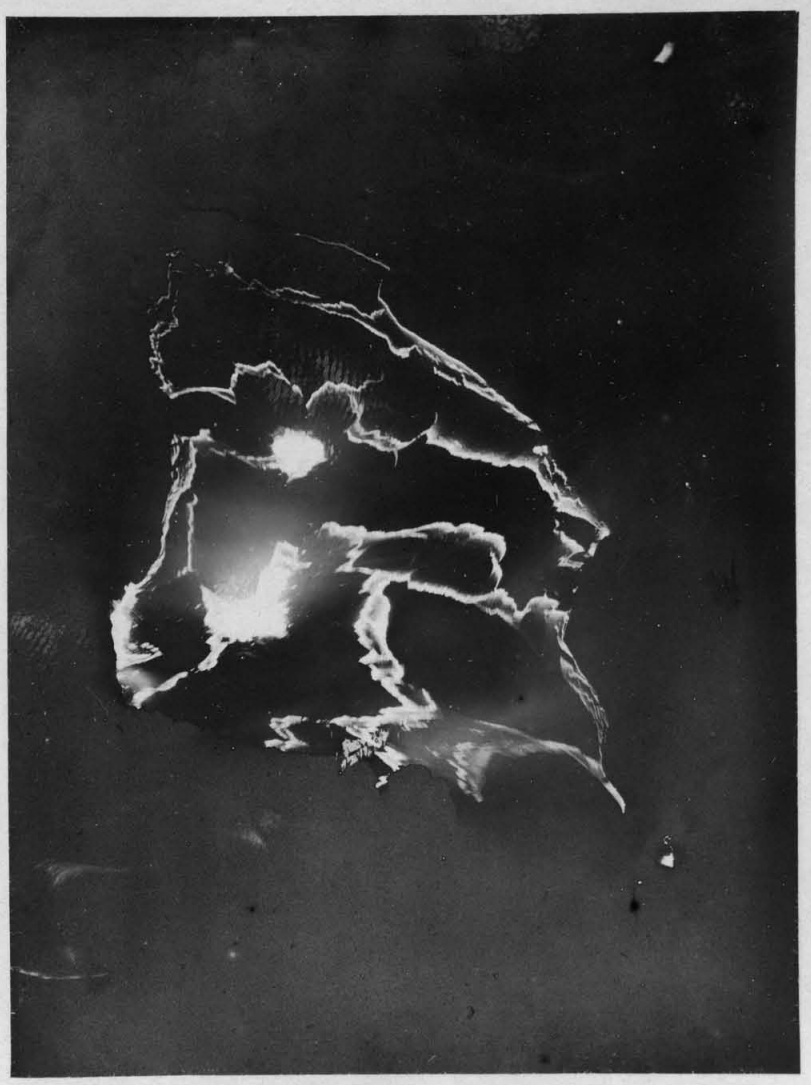
t	sta	pt	hor	vert	lev	dist	elev	h. i.
		From SE:-						



Shape for identifying photograph.

			no	pl	scr	stop	ex	cam
9:15 p	SE	Lake		W.P.		6.3	1	T.A.J.

1915, Apr. 6.

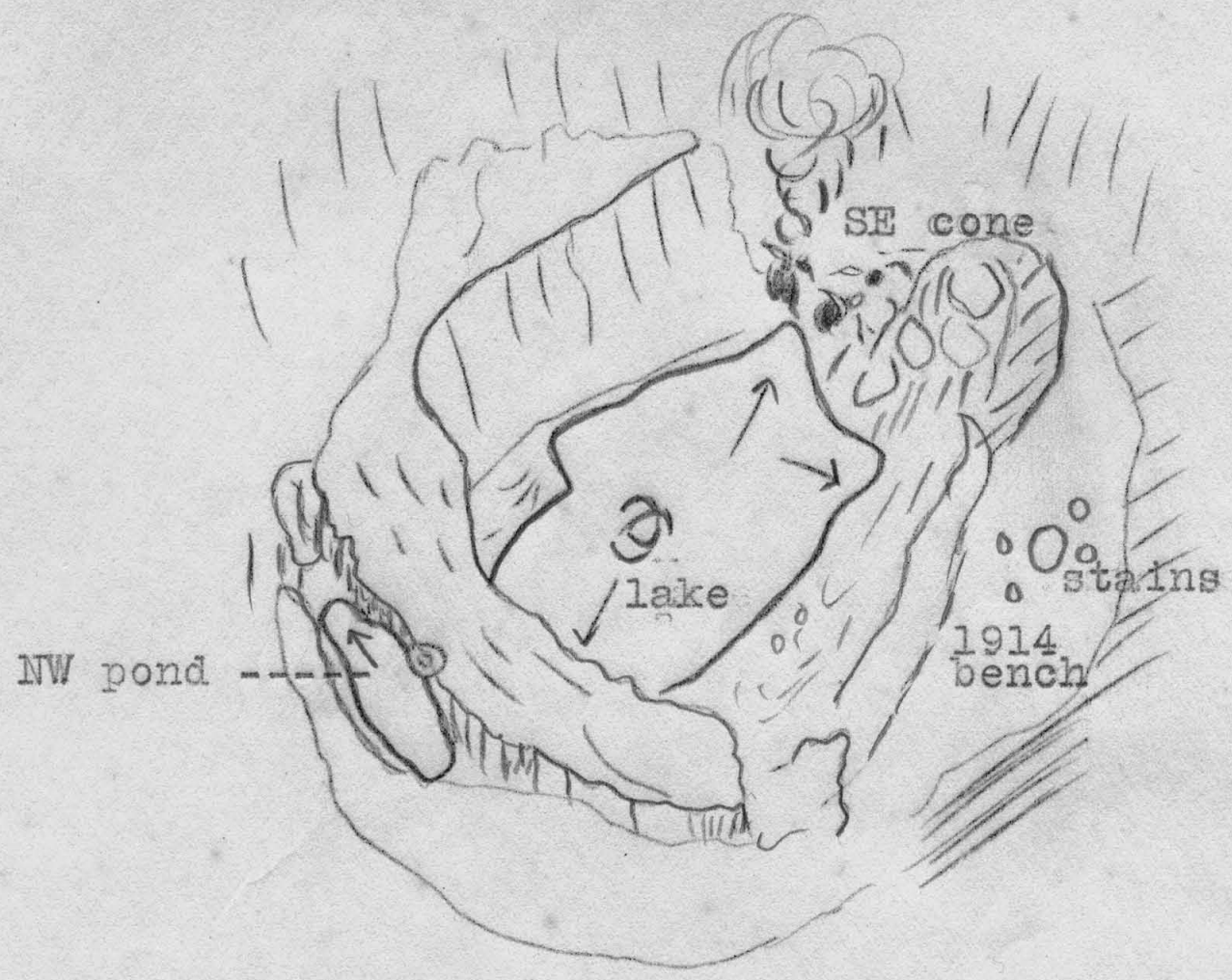


Jag

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date April 7, 1915.

11 a.m. From W station.



Ten feet below inner ledge.
Noon rise. Eastward streaming. Noises splash.
NW pond active. Moderate rush into S cove and E cove.

Craggy cavities above E cove with glow and flames high above lake level. Splashing against overhang W end with stalactites. Noon rise stops splashing temporarily. No avalanches.

NW pond from NW station:-

flame holes-  -- large glistening spatter dome

Streaming eastward.

T.A.J.

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Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Wednesday Date April 7, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
11a.m.	SW	S	0					
	W	SW	0					
	SW	NW embayment	79 11	31 49	-1	796	492	
	W	" "	88 48	37 51	-4	655	508	
		(Mean 500. Dif. two Sta. 16')						
	SW	Crag	68 54	23 01	0	914	385	
	W	"	83 55	25 48	-4	836	402	
		(Dif. two sta. 17')						
	SW	White stone S floor	31 21	34 00	-5	557	376	
		Same as before.						
	W	" " " "	42 30	26 07	-4	803	393	
		(Dif. two sta. 17')						

			no	pl	scr	stop	ex	cam
11a.m.	SW	Crag and lake		W.P.	vz	11.3	1/5	T.A.J.

1915, Apr. 7.



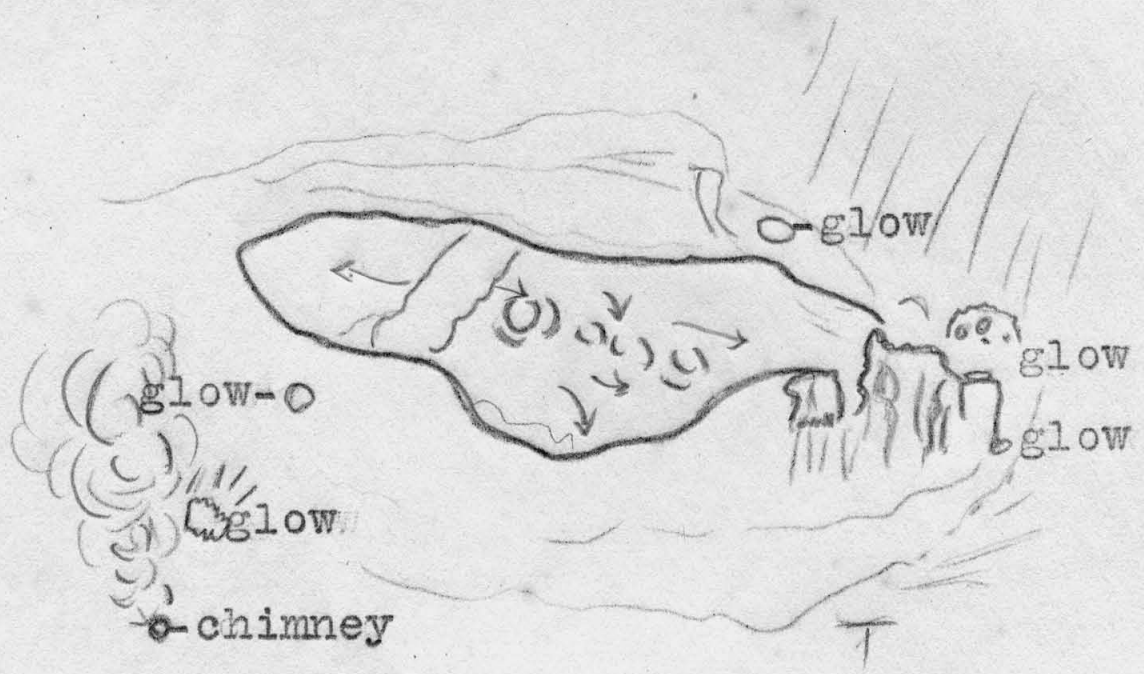
Jaf

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Thursday Date April 8, 1915.
Friday " 9, "

April 8.
8 to 11 p.m. From S station.



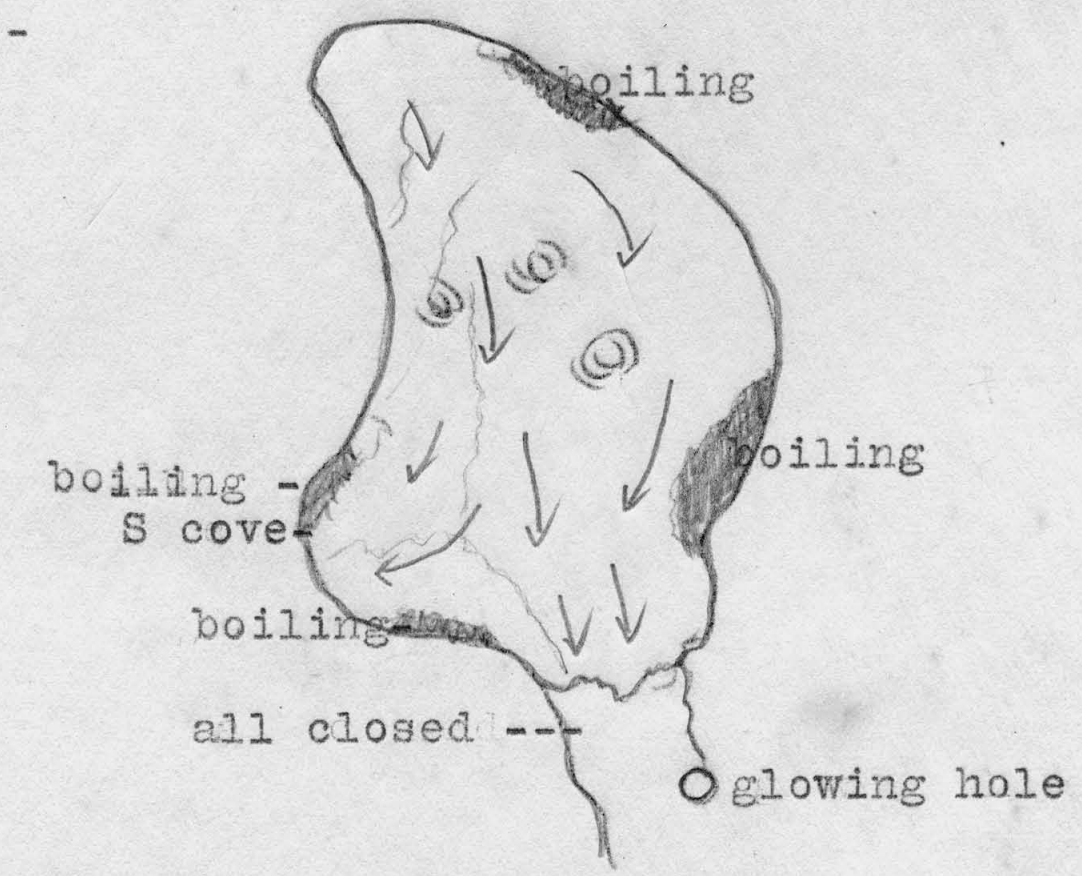
Clear seeing. Appears high. Mostly eastward streaming.
Spatter cone E. Glow in E arm and NW pit.
One rock fall east.

T.A.J.

April 9.
2:12 p.m. From E station.
Lava in lake appears to be about 10 feet below the third floor. Running toward S cove. Many big fountains.

3:56 p.m. The lava in lake has risen to within five feet of the third floor. Very active and noisy.

From E:-



4:15 p.m. The black crust from both sides sucked in at the center of the lake.

Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Saturday Date April 10, 1915.

2:30 p.m. From SE station.
Lake has gone down; is now 15 feet below the third floor. Streaming toward the east cove with many travelling fountains and much bubbling.

2:52 p.m. From W station.
Lava in NW pond boiling up and streaming N into a cove. Very active NW, throwing out lava for quite a distance.

3:05 p.m. From W station.
Lava in lake has commenced to rise. Is streaming rapidly under a bridge and emptying into a large hole under the E station. There is a large cone on the second floor which looks to be about 10 feet high. Occasionally rocks could be heard falling on the N.

Alex.

Mauna Loa notes.

North of Puuwaawaa. 11 a.m. to noon.
Hannon (Haworth's party) saw white cloud which hugged the ground along the line of the 1859 flow, north side, for several miles mauka of road. Rainstorm fell through it without affecting it. May have been meteorological.
Three earthqaukes in last fortnight in Kona.

T.A.J.

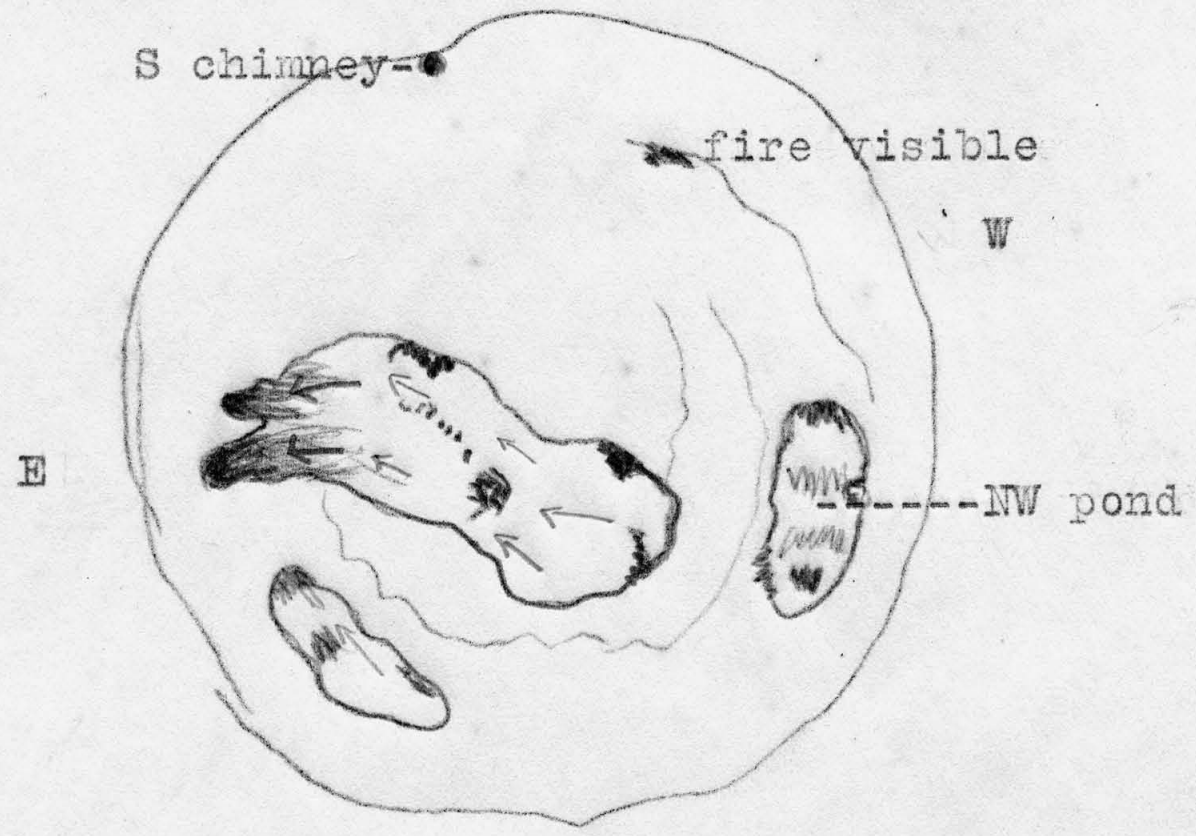
Massachusetts Institute of Technology

JOURNAL

Hawaiian Volcano Observatory

- 1 - Day Monday Date April 12, 1915.

11:00 a.m. Fumes very strong and thick. Lake level about the same as last week. NE arm of lake has large pond with active fountain in middle. No flow. Main lake has strong flow to SE which enters two arms at 20 miles an hour with loud roaring. S chimney no blue fumes and no fire; only yellow fumes. NW pond active, streaming to NE.



2:00 p.m. Same action in all pits. Some clinking of falling pieces of crag into lake. Pele's hair coming up.

3:00 p.m. Small one-minute avalanche just W of S station. Cascades out of SE end of lake same as at 11 a.m. Can see no change in level of lake.

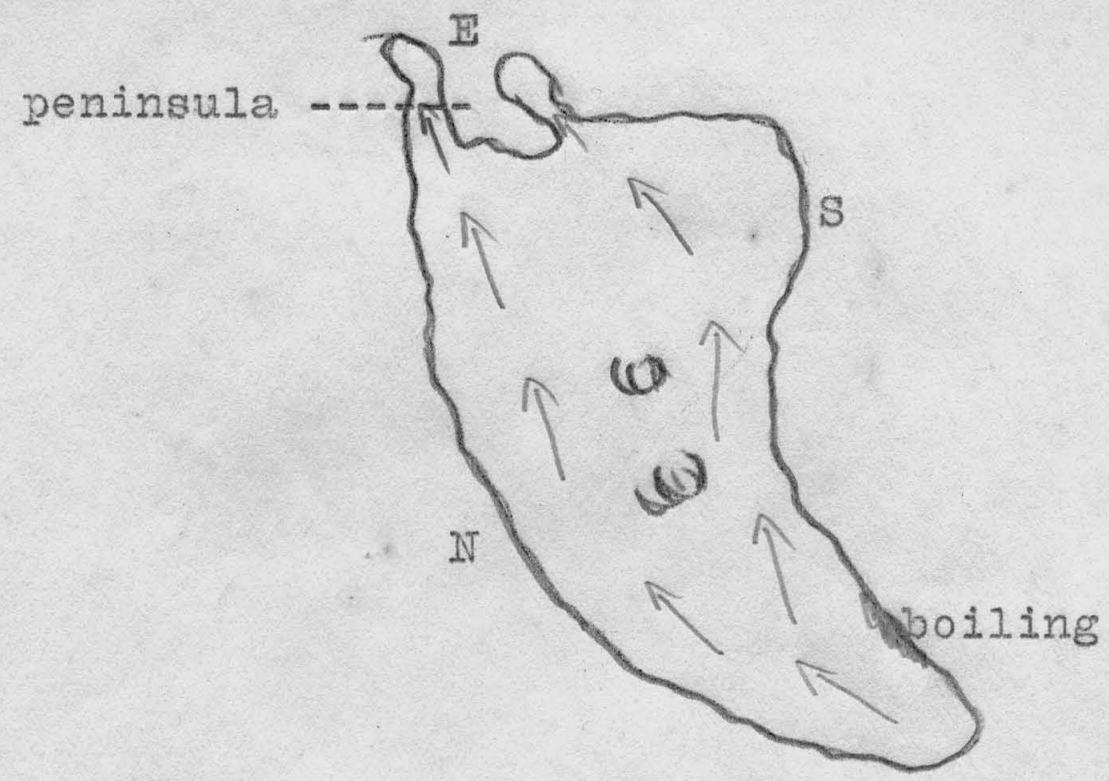
A. M. Hannon.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

 Day Monday Date April 12, 1915.

2:15 p.m. From O.R.H.
Lava in main lake 10 feet below the third floor. Active and noisy. Streaming from W to E very rapidly and dividing into two branches and appears to be going into two caves under the E station.



NW pond very quiet -- only two small glowing holes to be seen.

2:22 p.m. There was an avalanche under the SW station; did not last long.

2:34 p.m. There was another avalanche about in the same place.

2:54 p.m. Avalanche under S station. Many big boulders went down.

3:38 p.m. Rock fall from a place between the S and SW stations. Some of the 1912 bench went down.

4:03 p.m. NW pond began to break up and become active.

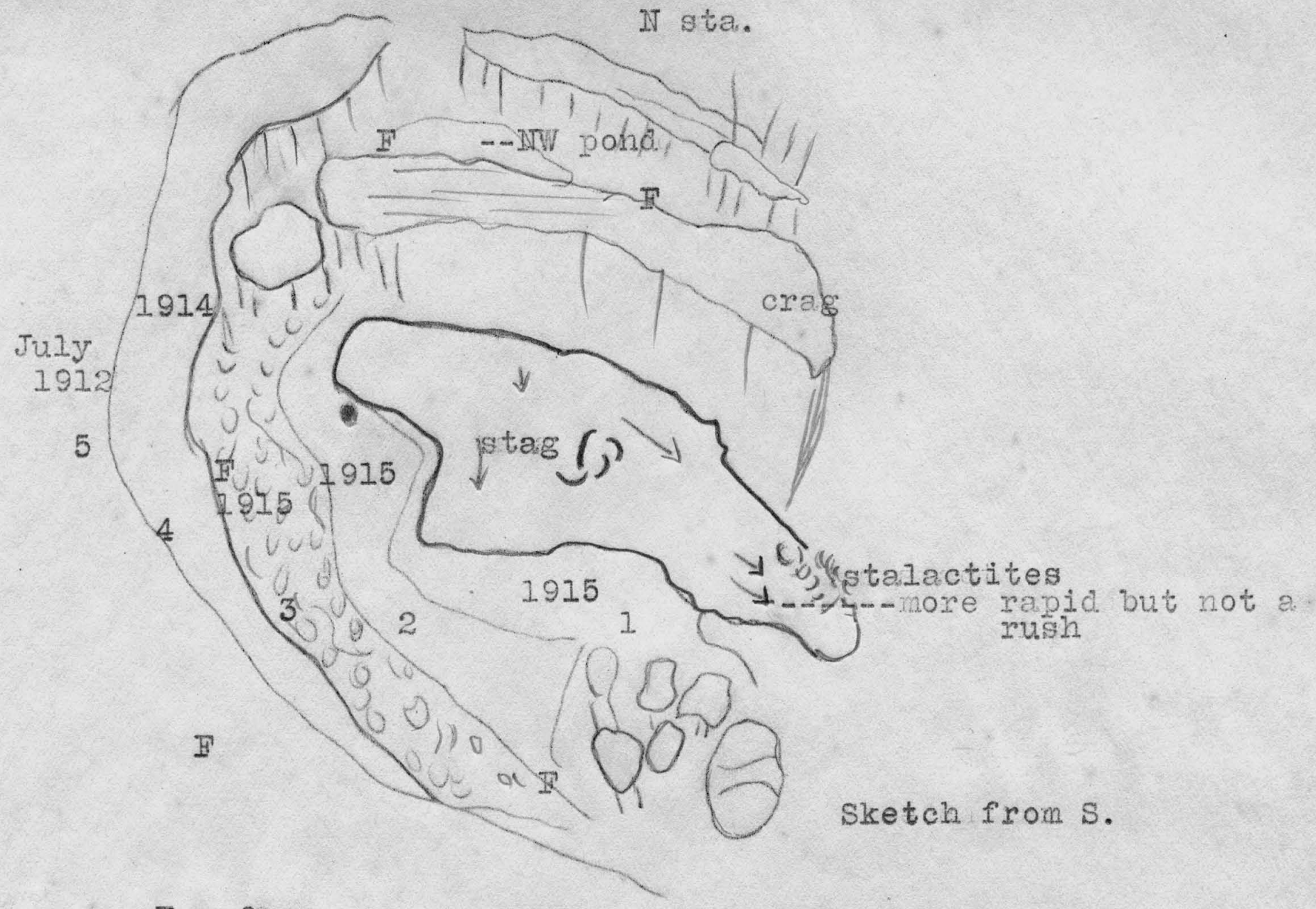
Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

 Day Tuesday Date April 13, 1915.

11:50 a.m. S to W stations.



Sketch from S.

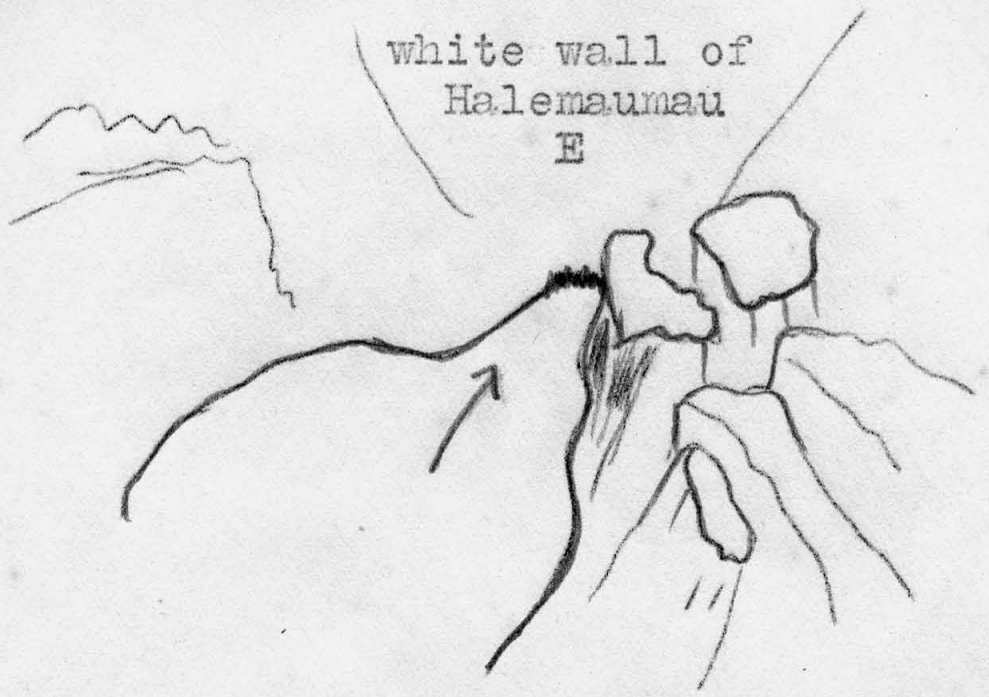
F - fume.
1, 2, 3, 4, 5 -- five benches SW.

Noise rumbling and splashing. Lake appears 15 feet below lower bench. Three benches now below 1914 floor; first, the broken ground, now a distinct bench; second, the SE crags and pinnacles; and third, the lower bench.
Hear no avalanches. No strong puffing noticed S chimney. Puffing white fumes SW pot. Crag narrower N. From SW the NW pond seen to be surging hard and streaming against its NW wall, with blowing and rumbling. Stalactites there. NW pond appears larger and lower. Lake rising (?) at noon.

NW pond from W station:-

From W station.
Fumes appear moderately thin from pit as a whole. No trace of big spatter cone seen from here.
Bombardment and stalactite grotto at E end of lake is in actual wall of Halemaumau.

E end of lake from W station:-



T.A.J.

2: 35 p.m. From O.R.H.
Lava in lake streaming toward the east, cascading rapidly into a big hole. Surface about 15 or 20 feet below the third floor. Large and baby fountains. SE cove very active, throwing out spray on the surface of the lake. The cascade at the E end sounds like a waterfall.

2:48 p.m. NW pond boiling and lava streaming from the west to the north into a cave.

3:17 p.m. From NW station.
Many small avalanches. Cascading east continues.

Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Wednesday Date April 14, 1915.
Thursday " 15, "
Friday " 16, "

April 14.

3:15 p.m. Lake appears higher. Lower bench submerged or fallen in. Noise plash. Streaming E to W. Quiet skin over E end. Boiling in SE pot. S chimney an open black hole, fuming and flaming. Thick fumes SE and SW. Crag fallen off thin edge to SE so that thin edge has migrated back northwestward.
Mr. Haworth is engaged in rigging a cable from S station to NW.

6:00 p.m. Streaming E and pouring into E pot.

8:00 p.m. Streaming west.

T.A.J.

April 15.

8:00 p.m. From O.R.H. and NW station.
Avalanches S and N. Tremendous cataract E into void. NW dull. Streaming eastward. Hissing on shore SW. Glowing pond visible in E arm trench.

T.A.J.

April 16.

3:10 p.m. From E station.
Small avalanche under SW station.

3:15 p.m. Lake down about 10 feet below third floor. Streaming toward E. Many large and some baby fountains.

4:30 p.m. Six large fountains in a straight line travelling toward the S cove.
NW pond very quiet.

4:35 p.m. Great boiling activity in SE cove. Lava being thrown out a long distance on to the surface of the lake.
East cove very noisy. Lava shooting high into air.

Alex.

Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Wednesday Date April 14, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
3:15 p	SE	NE (I. 2' toward pit)	0					
	E	NE (I. 2½' " SW station + W)	0					
	SE	NE shore lake	30 15	36 05	-1			
	SE	S cove	47 26	46 05	-2	478.5	497	
	E	" "	69 06	47 17	-1	465.5	504	
		Mean depth 500.5 feet.						
								T.A.J.

			no	pl	scr	stop	ex	cam	

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day **Saturday** Date **April 17, 1915.**

10:00 a.m. A very heavy collapse movement involving high portions of the S and S^{W} talus took place, raising a cloud of brown dust seen plainly from the Volcano House. A visible dust coating settled down on the fresh black ledges of recent date. This readjustment nearly obliterated the active, high SSW fuming chimney, choking it with large talus blocks. Thin fume continued to rise from it but it appeared shifted nearer to the center of the pit. All <u>small</u> landmarks on the S side appeared changed but the larger features were not conspicuously altered. Notably the fissured crags S of the chief lake at its east end remained as before. The bench beneath that associated with these crags had disappeared after the movement ceased. The bench between the chief lake and the NW pool had warped down, with widened fissures, and apparently (and this was observed by Messrs. Porter, Horswell and Haworth also, who had been working by the edge throughout the week) the magma surface had risen so that, viewed from the S station, a good view of the NW pond was afforded. A magma rise, relative to the N crag, of fifty feet since the day previous was estimated by Porter and Horswell. Rising was evident from 11 a,m. until 1:20 p.m. with only trivial talus readjustments. This rising was in the main lake and was practically continuous. The surface action of the main lake was unusually quiet and crumpled skins covered the greater part, streaming very slowly and quietly eastward. Occcasional miniature flows welled out and <u>overflowed</u> the crusts. For several hours there was no fountain action, even O.F. being quenched. The NW lake was very active, being continuously free of crusts or skins and flowing with an irregular swirling motion suggestive of rapid rising. But there was hardly any fountain action. Against the suggestion of rising but in front of a very active cave under the cliff at the NW was a curtain of heavy stalactites, 10 to 15 feet long in the larger instances.
The main lake appeared to all the witnesses wider than at any recent time, owing to the disappearance of the ledge mentioned, but its length appeared practically unaltered. After the collapse movement the action was very monotonous.

H. O. Wood.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Sunday Date April 18, 1915.
Monday " 19, "

April 18.

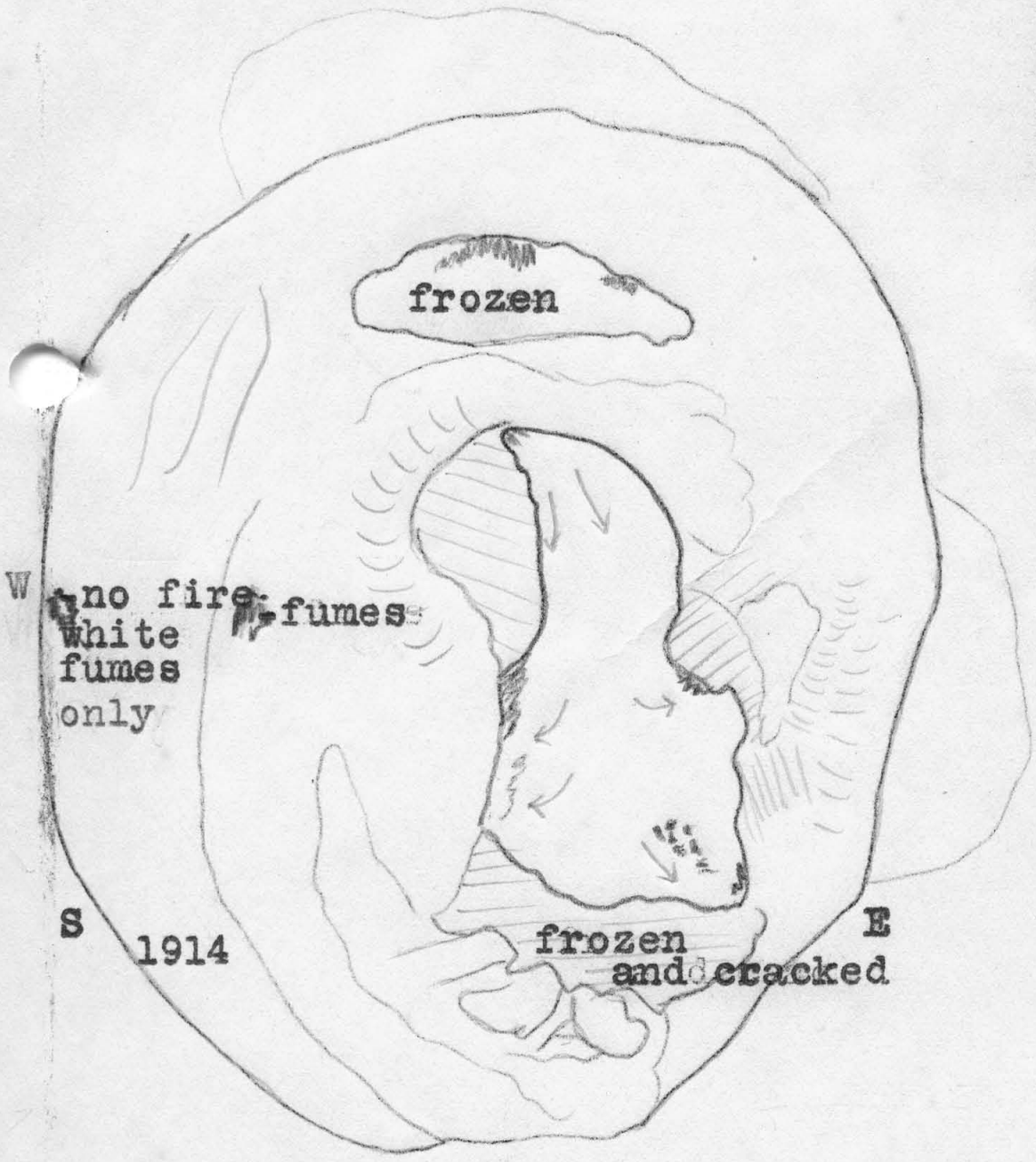
2:02 p.m. From S station.
Lava in lake level with third floor. Streaming toward the NE side and toward the E cove, many large travelling fountains in stream.

2:40 p.m. Lava rising and beginning to overflow the third floor. Active on the NE side right under the 1914 bench. O.F. active. Baby fountains.

2:50 p.m. An avalanche into the lake from the high bank of the 1914 bench, causing a great splashing of the lava in the lake.

Alex.

April 19.



From SE.

11:50 a.m. NW pond boiling; no fountains. Lake very quiet except a little surging at S. Does not join to SW pond as reported by kite men.
E end of crag has been avalanching to S and N. Partly broken in two.
Flow in lake to E. O.F. seldom comes up and then very small. Much of lake frozen and cracked with fire showing through some cracks. Would guess 5 or 10 feet down. Avalanche that covered S chimney has white fumes but not so much as before.
Few rolling rocks but no avalanches.

11:45 a.m. Very slight rise is going on in lake.

A. M. Hannon.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day **Tuesday** Date **April 20, 1915.**

12 noon. From W and NW stations.
Crag broken at narrows. Lake 30 feet below lower bench. Sluggish; crusted SW; boiling S of middle. Crust of SE and E coves high above lake. Benches more tumbled. A few rock tumbles heard. Smoky; seeing rare. Noise a mild fountaining. Fumes N not difficult to breathe. NW pond small and sluggish.

T.A.J.

1:50 p.m. From E station.
Avalanche under NW station.

2:08 p.m. From SW station.
Streaming in lake toward E cove. Travelling fountains.

2:12 p.m. Avalanche on NE side. NW pond boiling with many fountains. Streaming toward the N.

2:55 p.m. Another rock fall between the S and SW stations.

2:57 p.m. From O.R.H.
Avalanche into NW pond causing it to boil up.

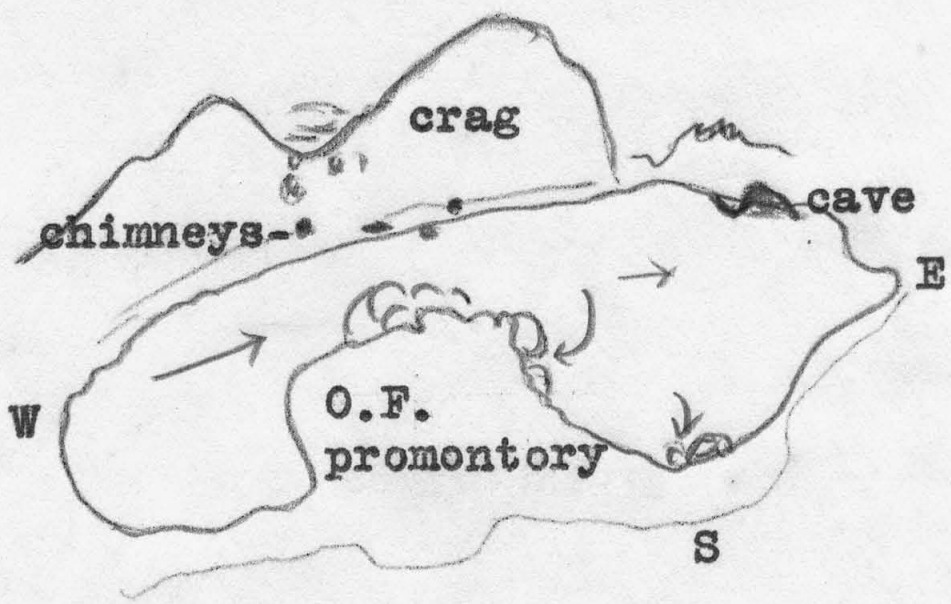
3:00 p.m. Lava in lake 10 feet below the new third floor. Still streaming E. Pool appears to be getting smaller and narrower. Many small rock falls in different places in pit.

Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date April 21, 1915.

Noon. Lake narrower. Wide new floor-terraces S. Streaming E. Cavern E end. Whole W half 1912 S bench is down over the site of S chimney which is fuming -- happened April 17. Splashing over bank NW side NW pond. Lake active. Rain and fume stopped survey. Noon rise and quiet. Three glow places N wall over lake. Occasional rocks fall and one short slide. Entrance E arm high over lake. Behind the partition a pit in E arm. O.F. appears to be under a rocky cone, a promontory from the S. This promontory is part of a lower shelf ten feet above the lake and there appears another about thirty feet higher.



Lake from southwest.

T.A.J.

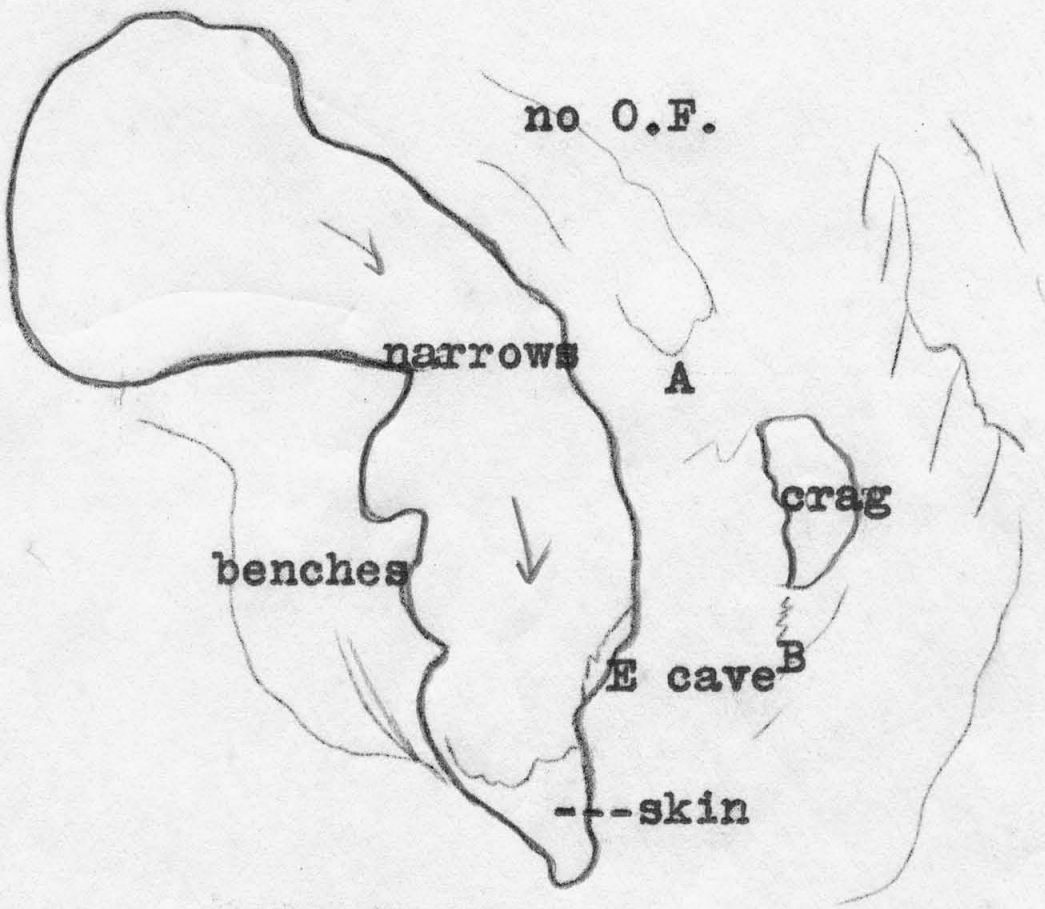
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day **Thursday** Date **April 22, 1915.**

10:30 a.m. **Fall of rocks.**

11:00 a.m. **SE station intersection on yesterday's reading. 530 feet down.**
No O.F. visible; narrows almost divide E and W halves of lake; sluggish; eastward streaming; bombardment E cave and NW end. Large bench fills whole S cove and peninsula from it at W end of opposite S cove.
Lake lower than yesterday. Much crusted. Now diminishing in area by crusting.

From SE:-



Numerous rock falls, mostly at A. Some at B. Crag high but small. SE cove and E arm trenches contain much debris and no ponds. Much fume.
From the position of points by survey the lake basin appears to have migrated westward, and the summit of the crag has migrated west twenty-seven feet since April 1. W end is 75 feet W of W end of lake of April 1.

T.A.J.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wed. & Thurs Date April 21 & 22, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
Apr. 21.								
Noon	SW	S	0					
	W	SW	0					
Apr. 22.								
11a.m.	SE	NE	0 (Inst. 3! toward pt. bet. SW & S sta.)					
	SW	1914 bench W end	106 52	25 11	0			
	"	Cave E end E side	59 43	32 51	0	821	527	
	SE	" " " " "	27 15					
	SW	Top crag N	69 59	23 15	0	906	387	
	W	" " "	84 36					
	SE	" " "	23 18	29 13	0	694	387	
	SW	W end lake	89 23					
	SE	" " "	46±					
	SW	S white rock 1914 bench. (Not same one?)	33 41	34 51	0	547	381	
	SE	S white rock 1914 ben.	78 06					
	SW	E end lake	54 21					
	SE	" " "	29 16					
	SW	S promontory (O.F.)	72 22					
	SE	" " "	38 50	38 09	0	677	530	
	SW	NW corner lake	81 40	34 05	0	741	499?	
	SE	" " "	39 25					
		(place not identified)						
	SW	Cave E end (W side)	61 04	32 43	-1	820	525	
	W	" " " " "	73 23					
	SE	" " " " "	27 15					
	SW	Inner edge pit SW (W point S cove)	66 15	37 01				
	SW	New glow chim. N of lake (highest)	75 24	32 18	-3			
	SW	SE crags	43 16					
	SE	" "	37 54					
	SW	W splash	84 21	36 18				

Length of lake.....460 feet
Width at narrows..... 60± "
" " widest.....150± "
30' shorter and 100' narrower than on March 31.

			no	pl	scr	stop	ex	cam
Apr. 22.								
11a.m.	SE	Crag and lake	1	W.P.		f/16	1/15	
	"	S benches	2	"		"	"	
	"	S station and fallen S bench	3	"		"	"	
								T.A.J.

1915, Apr. 22



#1



#2



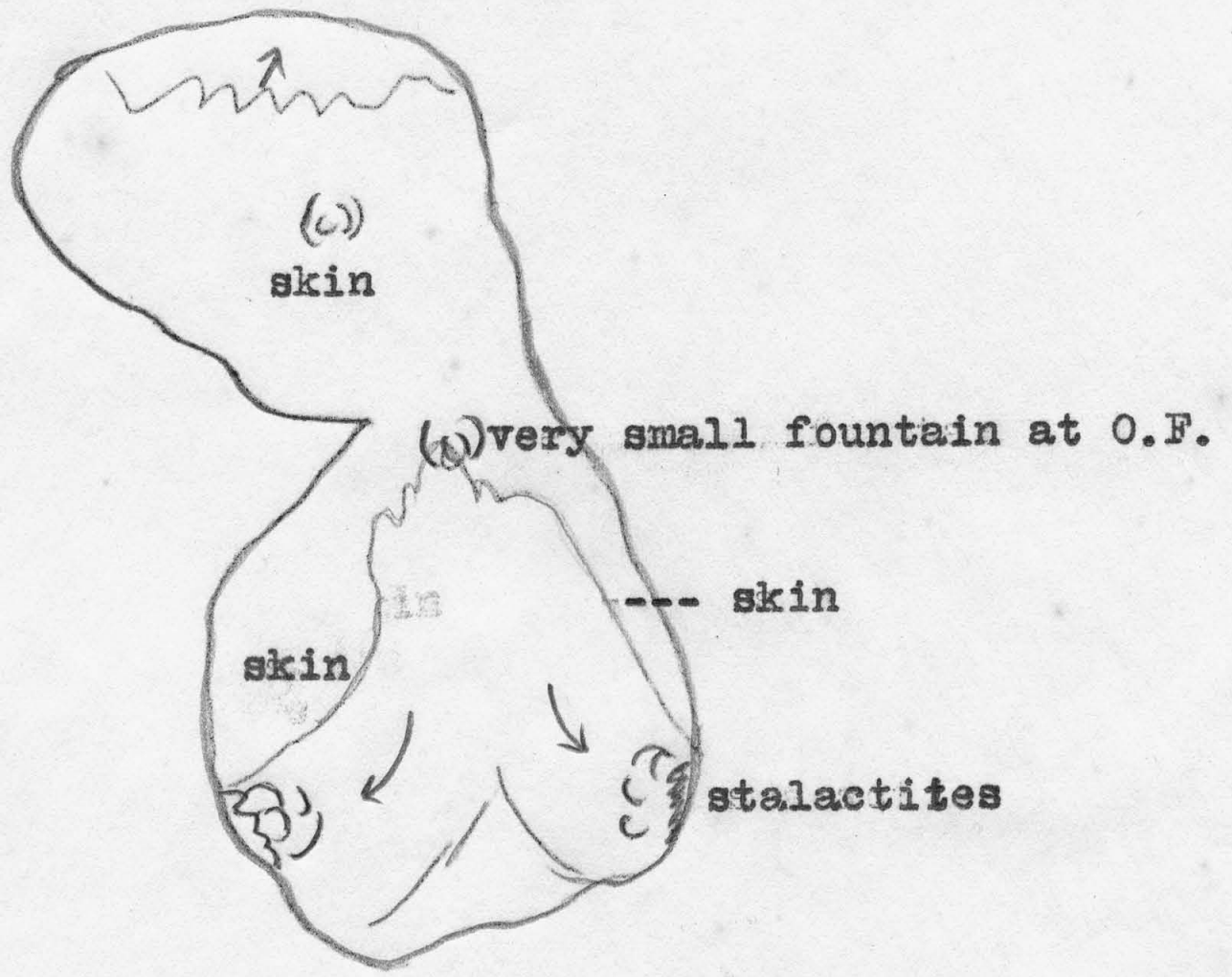
#3

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day **Friday** Date **April 23, 1915.**

3:30 p.m. From SE station.
Peninsula smaller and straits wider than yesterday. Crust over middle. Glow E and W. Bombardment S cove and E cave. Heavy falls from SW bank of lake and from crag N. Crag smaller than yesterday. Streaming E and S.

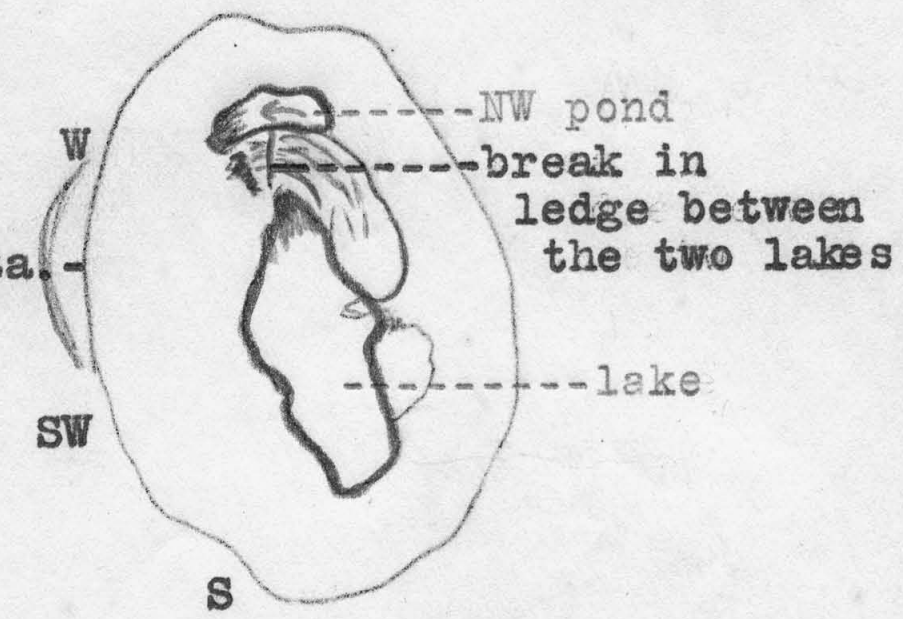
3:50 p.m. Streaming W from middle skin in W part.



Lake from southeast.

NW pond active.

Settlement between SW and W sta.-



T.A.J.

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

KILAUEA DAY SHEET

Day **Friday** Date **April 23, 1915.**

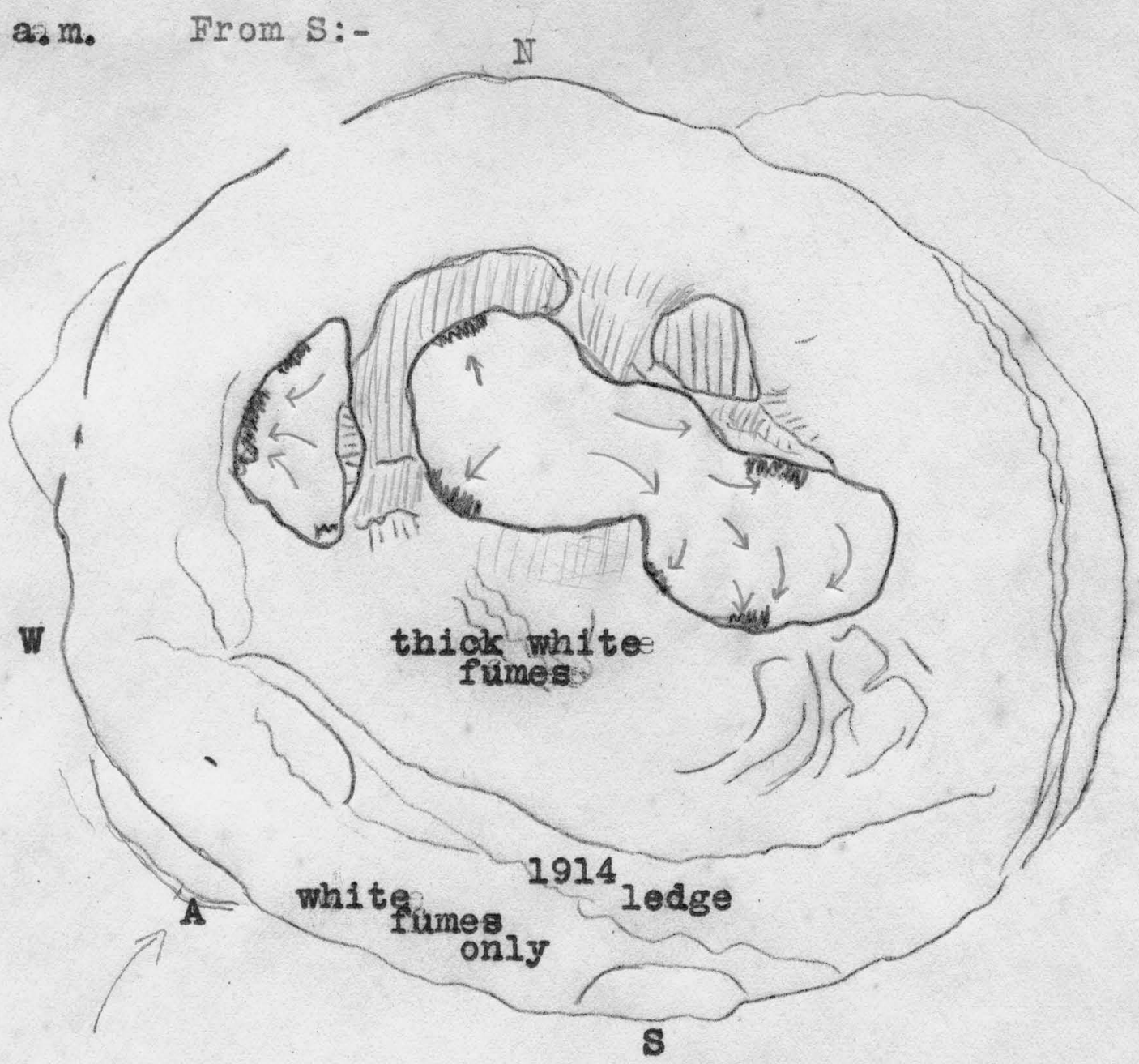
t	sta	pt	hor	vert	lev	dist	elev	h. i.
3:30p	SE	S	360					
	SE	E side E cave	-93 48	45 02	0	522	522	
		(See intersection April 21 and 22)						
								T.A.J.

			no	pl	scr	stop	ex	cam	

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day **Saturday** Date **April 24, 1915.**

10:20 a.m. From S:-



NW pond very active. Flow to S.
Lake flow to SE. O.F. not seen for four days.
Lake level about 540 feet. Some rocks falling off N crag.

11:30 a.m. Small avalanche W of NW pond. Pit very quiet.
Crack in main pit edge between W and SW stations (at A) has in last three days opened over two feet and segment toward crater has gone down 18 inches. Placed new markers where others had fallen into crack through its getting wider.

A. M. Hannon.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Wednesday Date April 28, 1915.
Thursday " 29, "
Friday " 30, "

April 28.
10 to 11 a.m. Very smoky and rainy. See NW pond; stalactites on N wall; streaming W to E.
See W end of lake streaming E. Little noise, mostly splash of NW pond. No avalanches. No appearance of greater depth. Measurement not secured.

T.A.J.

April 29.
3:30 p.m. From NW station.
NW pond very active. Lava splashing over its sides. Very noisy.

4:00 p.m. Lava in lake is within two feet high of, being level with third new floor. Streaming toward E cove. Many large travelling fountains.

4:45 p.m. A small pool about 10 feet long by 5 wide seen on the third floor just under the S station, occasionally boiling up. No avalanches.

5:00 p.m. From Sstation.
Lake at the same level as on Thursday. Streaming from middle toward the NW cove and toward the E cove. Very active at times at S, throwing lava high into the air.

Alex.

Glow at night this week dull and smoky.

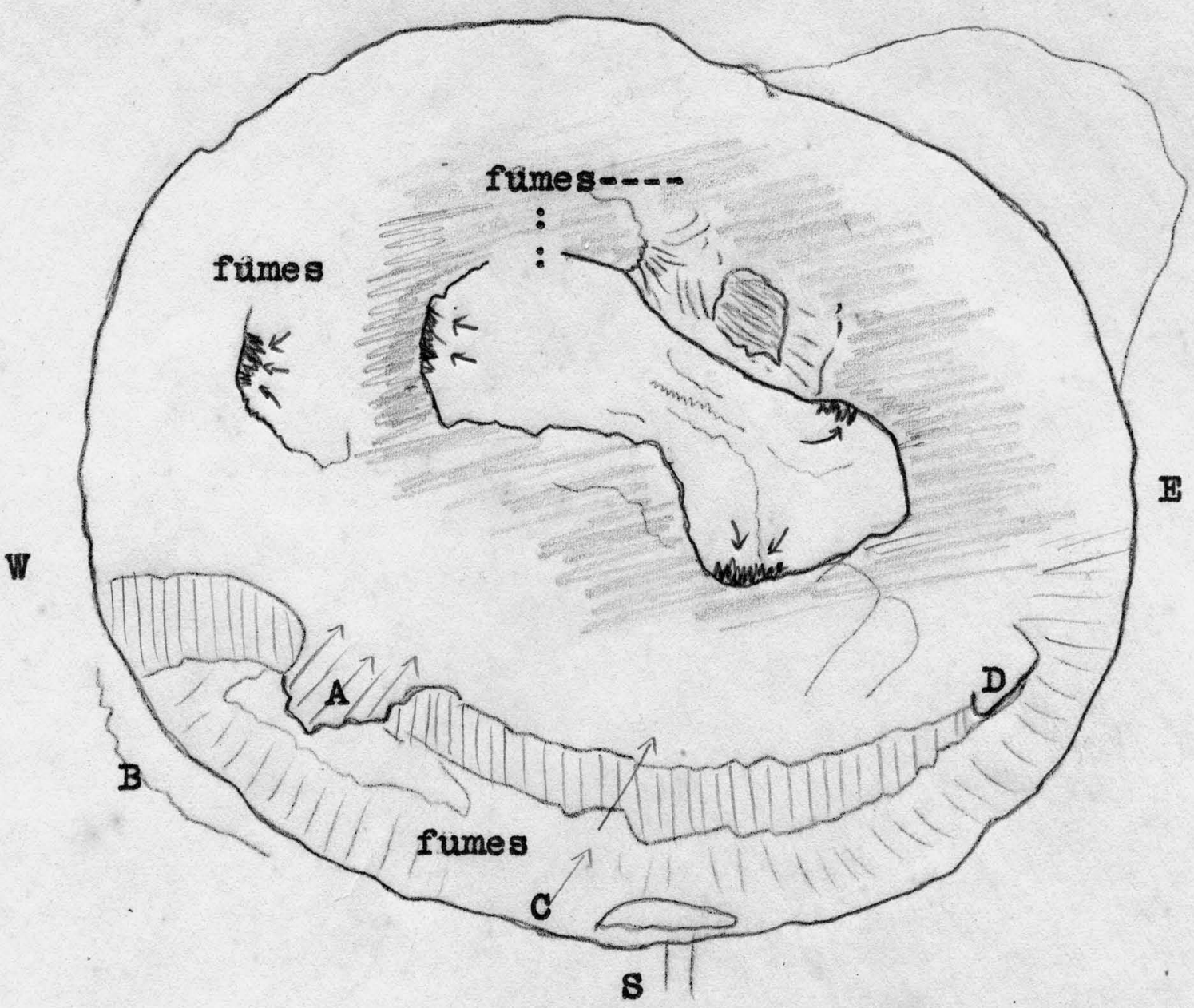
April 30.
4:52 p.m. From S station.
Streaming in NW pond toward the N. Many fountains playing at once.

Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day **Saturday** Date **May 1, 1915.**

11:00 a.m. From S:-



Lake flowing very slowly to SE. Skins seem to be very thick and fold up in high ridges (about 5'?) when flow passes through narrow part of lake.
NW pond surging in cave to W. Cannot see N end of pond for thick fumes.
There has been a fair sized slide of old white ledge and 1914 ledge under SW station at A. At B, between W and SW, marker shows a movement of four inches SSW and two inches tilt towards crater. A few rocks from main pit wall W of S station (C) rolled over slide.
Has been a small cave in 1914 ledge at D under SE station.

11:40 a.m. Have not seen O.F. Some blowing to NW, fumes too thick to locate place.

A. M. Hannon.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

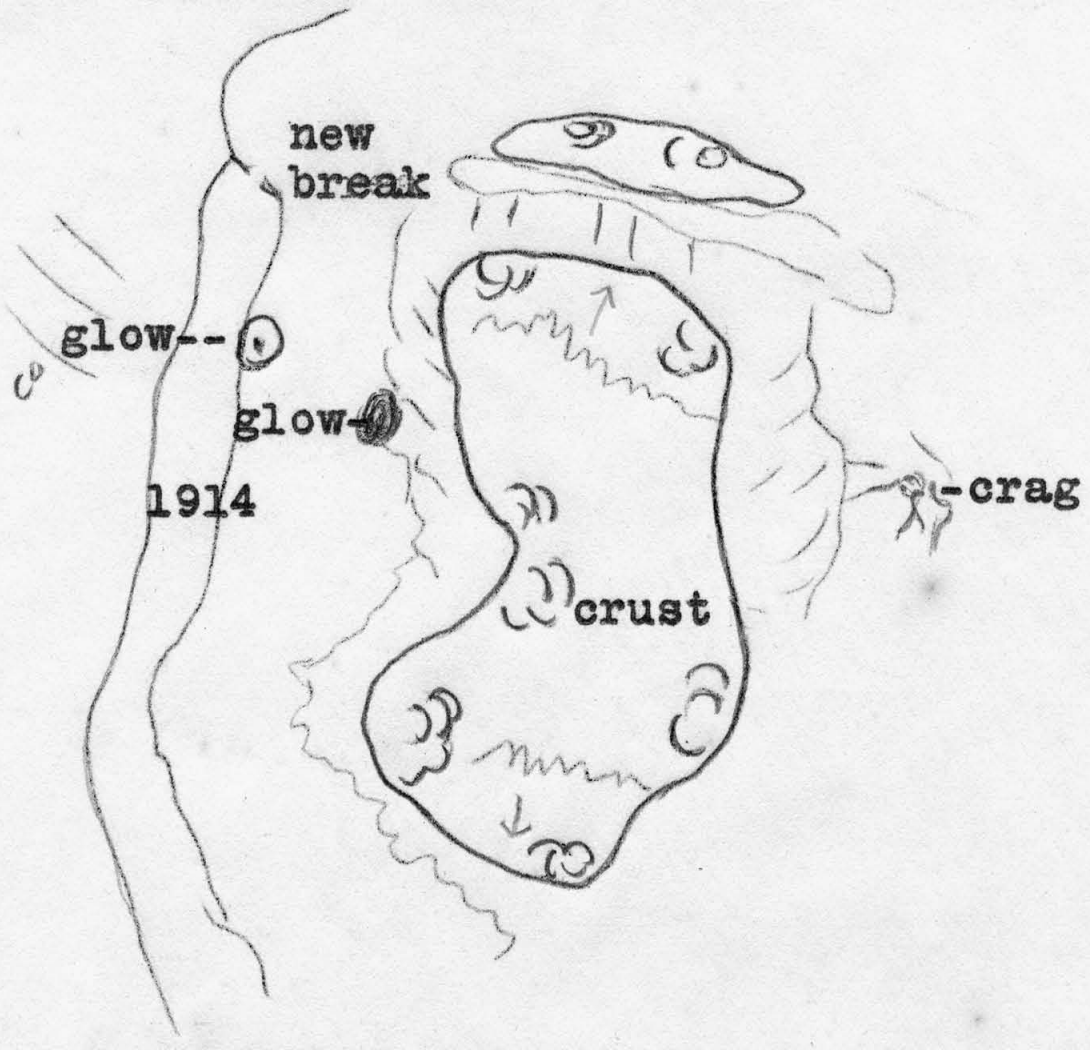
Day Saturday Date May 1, 1915.
Sunday " 2, "

May 1.
2:45 p.m. From SW station.
NW pond very active, with much noise. Lava level with floor around it. No avalanches.

3:04 p.m. From S station.
Fumes so thick could see only NW cove of lake. Very active in this cove. Rumbling noise heard. No avalanches.

Alex.

May 2.
8 to 9 p.m. From SE station.



Fumy. Alternations of strong hissing and spurting from five or six border fountains in holes through a general crust and quieter times with larger pools and rising.
NW pond visible from SE, pounding and hissing on its W wall.
This blowing pot activity a new feature and very strong.
Bright, continuous fountains spurting high and building border benches.
Lake appears not low -- 490 or 500 feet? Bee-hive filagree cones SW -- two of them. Fumes only at SW chimney.
Glow in talus W of crag. Crag very small. Partition between main lake and NW pond low but intact. No O.F.

T.A.J.

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

KILAUEA DAY SHEET

Day **Sunday** Date **May 2, 1915.**

t	sta	pt	hor	vert	lev	dist	elev	h. i.	
			no	pl	scr	stop	ex	cam	
9p.m.	SE	Four or five spots of fountaining(fumy)	1	W.P.		6.3	1	T.A.J.	



Jag

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Monday Date May 3, 1915.
Tuesday " 4, "
Wednesday " 5, "

May 3. In the morning the conditions same; blowing and isolated active pools in crust. Fumes. Little seeing.
In the evening rain.

May 4.
3 to 4 p.m. Hannon's markers have fallen in again in SW crack indicating a gaping of more than an inch in three days.
SW wind. Partial openings E and N. Lake skins, a few border fountains. Streaming E. No marked blowing. Plashing. No change observable in level. Much and strong fumes; drizzle. No measure possible.

May 5. Clear morning and seeing from S.
Haworth and Porter succeeded in lowering moving picture camera in a stiff tripod to the rock ledge near lake and operating crank with a loop of steel kite wire run over a pulley as a very long belt from the rim to the tripod. The lower wheel was connected to the camera by flexible shafting allowing independent adjustment of the camera within its tripod cage.

3:15 p.m. New spatter ledge 15 feet above lake. Active westward streaming. Black polygonal skins. Vigorous rumbling bombardment N, NW, W, S and E end. Stalactite caves and curtains W, NW, E and S(?), and in NW pond, which is large. (Subsidence after noon rise?) NW pond active in caverns only and crusted. Appears higher than main pool. Very strong pounding.
Point S covered with lava splashes. Glow points on N bank. Crag high and peaked. SE crags with radial fissures still in place. Yellow sulphur stain E end of 1914 ledge.

4:15 p.m. Divergent streaming into S cove and to NW. Some suggestion of O.F. returning at long intervals. Immense chasm SW interrupting 1914 ledge and notching July ledge of 1912. Strong bubble fountaining.

Glow bright and pit clear at night.

T.A.J.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day **Wednesday** Date **May 5, 1915.**

t	sta	pt	hor	vert	lev	dist	elev	h. i.
3:15p	S	SE	0					
	SW	S	0					
	S	S boulder 1914 ledge	49 59	50 08	+2	326	390	
	SW	" " " "	33 34	34 43	0	666		
	S	NW splash (rt)	65 04	29 55	0	895	512	
	SW	" "	82 23					
	S	E cave	40 39	37 54	+1	663	514	
	SW	" "	53 26					
	S	W cave	70 10	30 04	0	883	508	
	SW	" "	86 31					
	S	Top crag	50 39	23 54	0			
	S	NW pond	76 51	25 50	0	1059	508	
	SW	" "	101 16					

Depth of lake from S station.....511 feet.
" NW pond " " " .....508 "
" bowlder on S 1914 ledge from S station ..390 "
Length lake WNW-ESE ;.....470 "
" basin at lava level from NW pond W side to main lake E end .....675 "

T.A.J.

no	pl	scr	stop	ex	cam

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date May 6. 1915.
Friday " 7. "

May 6.

2:42 p.m. NW pond active. Streaming from W to E. Good seeing of this pond from O.R.H.

2:50 p.m. From O.R.H.
Splashing in lake at S, W, NW and E, at the same time. Much rumbling. Streaming to E and S. Half of the lake is crusted over. Level with third new floor.

3:07 p.m. Boiling violently at S cove, where part of the bank fell into the lake. Spouting 40 or 50 feet in the air at the W cove. Nine fountains going at one time.

3:30 p.m. From W station.
Lake crusted over with five boiling places.

3:35 p.m. NE pool active.

3:40 p.m. Lava has commenced to rise and is flowing over on the floor.

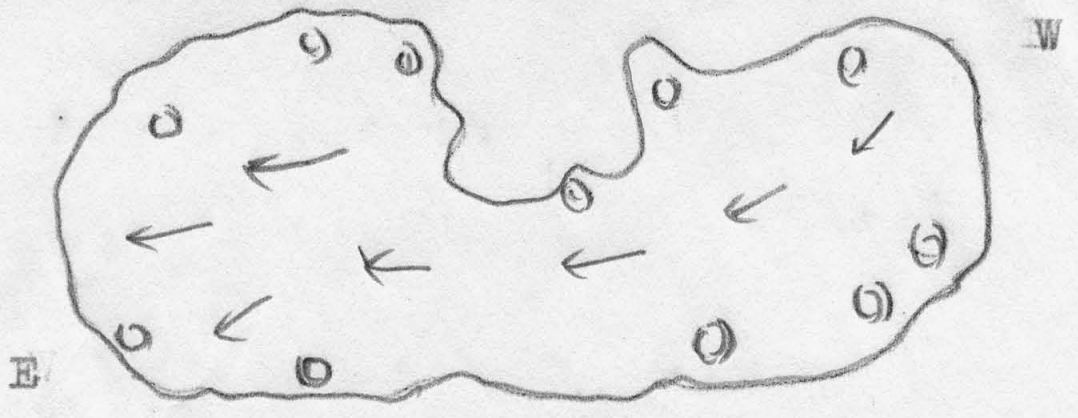
Alex.

May 7.

2:30 p.m. From S station.
Fountains in NW pond spouting 40 or 50 feet in the air. Lava has risen about 20 feet and the pool is 300 or 400 feet long.

2: 46 p.m. Lava in lake has risen. Border fountains. Streaming toward the E. Rumbling.

3:45 p.m. From O.R.H.
Lava overflowing lake and running into NE pool. The lake appears to have risen about 20 feet during the afternoon. Great rumbling and blowing accompanying the rise.
NW pond very active.



Alex.

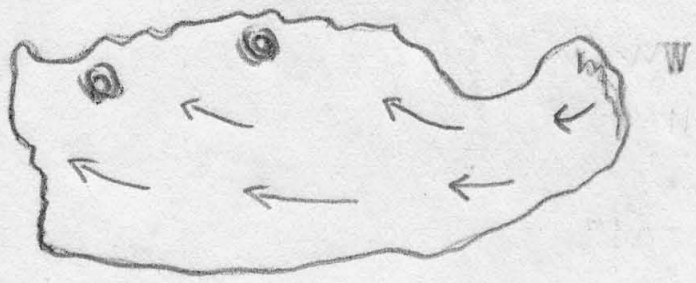
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

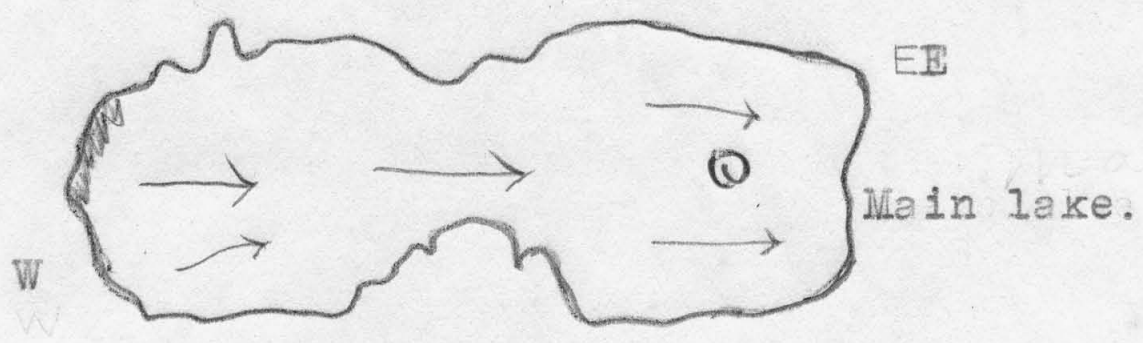
Day Saturday Date May 8, 1915.
Sunday " 9, 1915.
Mon., Tues., Wed., May 10, 11 & 12.

May 8.
2:44 p.m. From NW station.
Lake down about five feet below the third new floor. Lava still streaming toward the E. No fountains.
NW pond very quiet.

NW pond:-



3:22 p.m. From SW station.
Only one fountain seen in lake -- at E side.



3:55 p.m. From S station.
New floor around the lake. Lava rising and more active. Still streaming E. Middle of lake looks to be only 100 or 150 feet across.

Alex.

May 9.
8 to 10 p.m. From S and SE stations. Congressional party present.
Lake streaming slowly E. Two flame chimneys in E arm. Two filagree flaming heaps E cove. Bombardment S. Stalactites NW. O.F. doubtful. Travel fountains headed SE. No conspicuous change in level. Inrush NE grotto. The chimneys look like rising recently.
Activity in NW pond.

May 10, 11 and 12. Fumes said to be thin in appearance. Glow not bright on night of Wednesday, May 12.

T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Thursday Date May 13, 1915.
Friday May 14, "

May 13. Fumes sharp. SE crag has collapsed to a talus slope on SE side. SW filagree cone replaced by a smoking pot. Lowerr bench broad and 15 feet above lake. Bubble fountains NE. NW pond looks low. Small cavern overhang W side. Recent bench high against N crag. N crag crumbly looking and low. Lake narrow again in middle. S point broad. Two boiling pots in E arm. O.F. resumed -- 90 to 20 seconds. Longitudinal cracks large in bench between pools. High level glow crack above NW pond. Much Pele's hair rising.

T.A.J.

May 14.
10:30 a.m. From SE and S stations.
Practically same as yesterday. Bubble fountains travelling E and S. Lava 8 or 10 feet below ledge.
NW pond sluggish; crusted; glow at edges.
S fumarole in talus very slight.
Noise blowing and fountaining. Glow in E arm. High glow W of talus W off crag. Skins being engulfed in E central part of lake. Big cavity in 1914 bench and 200-foot bench SW, a subsidiary pit 100 feet across. "Wet dirt" spots steaming top of S talus and green wet sulphur at fumarole E end 1914 bench. O.F. opposite point, at W end of line of bubble and travelling fountains, breaks every 20 to 40 seconds. Fountainimg all in E half of pool. W half rapid skins. Heavy bombardment into W side of point. Tip of point broken off since yesterday. Lake wider and higher. Heat on face SE and S stations. Rising. High glow and sulphur S end of NW pond.

T.A.J.

Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day **Thursday** Date **May 13, 1915.**

t	sta	pt	hor	vert	lev	dist	elev	h. i.
	SE	S	360					
	S	SE	0					
	SE	Bowlder 1914 ledge S	-42 39	46 57	-1			
	S	" " " "	49 52					
	SE	NE corner lake (Vert. was 36 05 Apr.14 when depth was 500)	-92 47	42 03	0			
	SE	N crag (29 13 when crag was 387 & lake 527 Apr.22)	-96 16	29 10	0			
	SE	N stalactites lake	-86 45	35 04	0			
	SE	Top SE crag bench	-83 40	52 15	0			
	SE	Top lower bench at pt. (The vert. was 38 09, depth 530' & dist. 677' Apr. 22)	-77 36	39 36	0			

With dist. 677' and vert. 39 36, the elev. would be 558'.

Wind came up from E and filled pit with fumes and prevented intersections.

T.A.J.

			no	pl	scr	stop	ex	cam	

JOURNAL.

Massachusetts Institute of Technology.
Hawaiian Volcano Observatory.

Day Sunday Date May 16, 1915.
Monday " 17, "
Tuesday " 18, "

May 16.
1:52 p.m. From E station.
Streaming in lake toward the E with travelling fountains.
Lava down 10 feet below new third floor. Loud rumbling.

2:15 p.m. From SE station.
Seven large fountains in lake at one time. O.F. active.
Thick blue fumes rising S under 1912 bench. Much noise.

2:40 p.m. From S station.
NW pond active.

Alex.

May 17.
2:17 p.m. From S station.
Lake about 25 feet below third floor. Still streaming E.
Many large fountains in middle, some travelling in the stream. Very noisy.

2:35 p.m. From SW station.
NW pond quiet, only one glowing hole.

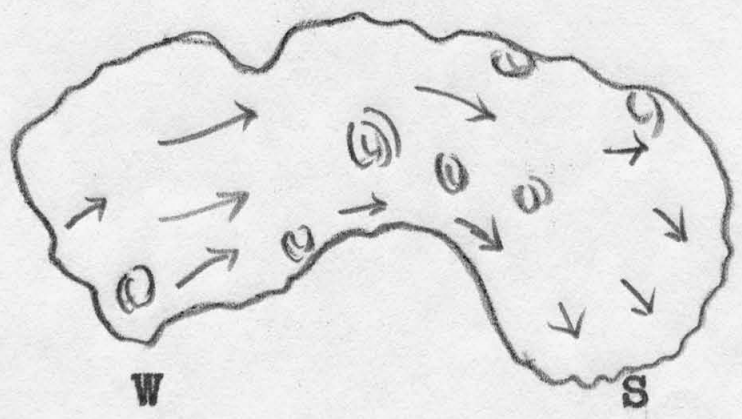
2:47 p.m. From SW station.
Many border fountains in lake and some in the center.
Rising.

Alex.

May 18.
3:00 p.m. From SE station.
Streaming toward the SE in lake. Many large fountains in middle, few of them travelling with the stream. Down about 15 feet below third floor.

3:25 p.m. Rising very fast.

3:48 p.m. Lava in lake streaming rapidly SE. Still rising. Very noisy. Too much smoke to see NW pond.



Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Wednesday Date May 19, 1915.
Thursday " 20, 1915.
Friday " 21, 1915.

May 19.

2:55 p.m. From S station.
Lake down about 15 feet below the third floor. Streaming toward the SE, with many baby and a few large travelling fountains.

3:35 p.m. From S station.
Part of the SW bank fell into the lake with great commotion, causing the lava to boil violently.

3:55 p.m. Lake full of baby fountains and very active along the borders. Very strong wind blowing; pit so full of smoke that no view of NW pond to be had.

Alex.

May 20.

2:42 p.m. Half of the third floor has collapsed into the lake. Lava about 12 feet below the remainder of the ledge. Streaming toward NE with many large and some baby fountains in middle. Lake is getting wider.
The hole under the SW station below the first floor is getting larger and sending out thick blue fume.

3:28 p.m. From S station.
Lake has risen. Is now only 5 feet below floor. Active around the sides.

3:35 p.m. From SW station.
Lava in lake has worked its way under the E floor and made a tunnel and formed a small cone on top.

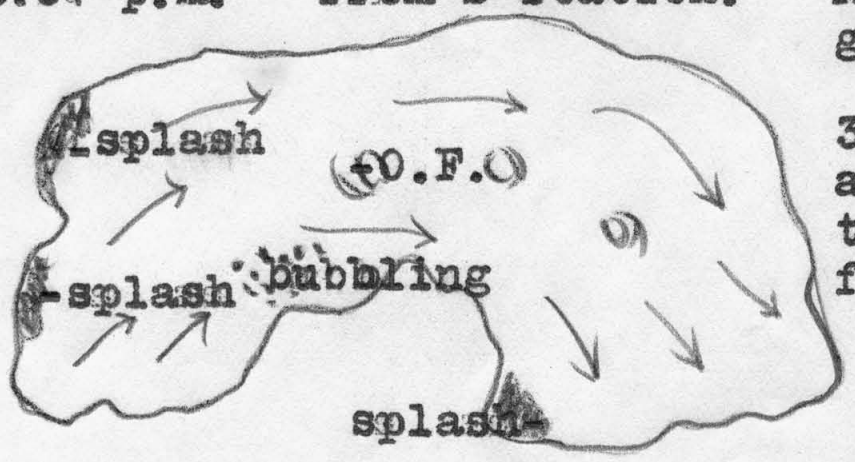
3:40 p.m. Lava has risen two feet more.

Alex.

May 21.

2:37 p.m. From SE station.
Lake down 10 feet below floor. Streaming toward SE with many travelling fountains. O.F. active.
Crevice under SE station smoking thickly

2:57 p.m. From S station. Rising. High peak on NE side lake is gone.



3:08 p.m. NW pond active, boiling all around edge. A few central fountains. Lake still rising. Noisy fountain action.

Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

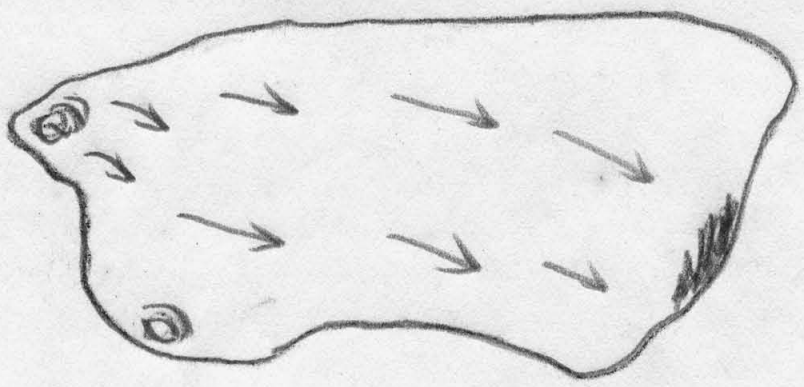
Day Saturday Date May 22, 1915.
Monday " 24, "

May 22.
3:47 p.m. From S station.
Streaming in lake toward the E through a channel under the E station. Lava 5 feet below third floor. Large fountains playing.
NW pond very active with fountains in middle and splashing around the sides.

Alex.

May 24.
2:37 p.m. From O.R.H.
NW pond high with activity same as on the 22nd.

3:20 p.m. From W station.



NW pond. Travelling fountains. Streaming from N to WNW.

3:30 p.m. From SW station.
Lake 10 feet below rim. Active around the sides and a few fountains in center. Lava flowing E.
A small pool formed between NE and E; active.

3:50 p.m. A small avalanche under the NE station.
From NW pond to NE flow an area has subsided from 15 to 20 feet. The fissure on the upper rim of pit between SW and W stations shows subsidence of 2½ feet and a width of 3 feet.

Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Tuesday Date May 25, 1915.
Wednesday " 26, "
Thursday " 27, "

May 25.
6 to 7 p.m. From S station.
Lake active; streaming W to E; crust over W end. Large stalactite grotto in NW pond. Bombardment in main lake E and S. O.F. in action. Glow cones in E arm and SE arm, glowing pot SW a deep pit. Neavy white smoke below second bench (from the lake) SSW. Lower bench appears at S point tipped back (S) from the lake, the point developing into a crag, which would become an island if flooded with lava. The N crag is now a knife-edge.

T.A.J.

May 26.
2:35 p.m. From E station.
Lake appeared to be down 20 or 25 feet below the third floor. Fountain action in center and at sides. Streaming toward E.

3:20 p.m. From SE station.
Lake full of baby fountains all going along with the streaming E. Much noise.
Little pool NE boiling and spurting.

Alex.

May 27.
2:35 p.m. From SE station.
Large piece of the bank on NE side of the lake fell in with great commotion, causing the lava to boil and send up many large fountains. Streaming E still. Level the same as yesterday.

3:12 p.m. From S station.
The only active place in the lake was in the middle but there were many small and large fountains there.
A few small avalanches under the N station.

Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Friday Date May 28, 1915.
Saturday " 29, "
Monday " 31, "

May 28.

2:38 p.m. From SE station.
Lake about 10 feet below third floor. Streaming E with many travelling and baby fountains.

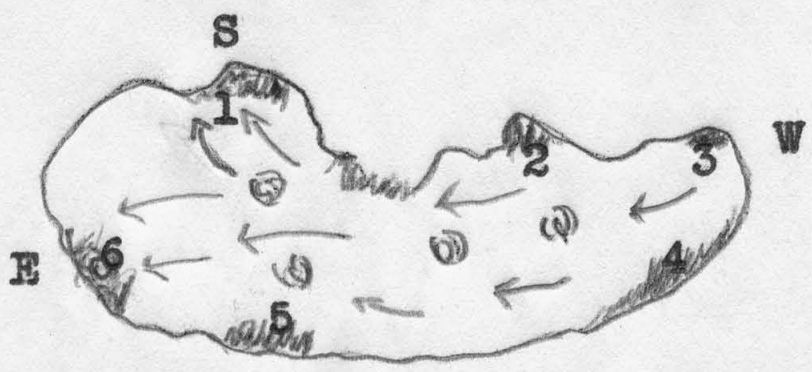
2:54 p.m. From SW station.
NW pond level with floor. Five fountains boiling and throwing up lava 30 or 40 feet. Streaming from W to N.

4:00 p.m. From SE station.
Lava in main lake has risen to the level of floor and is beginning to overflow. Large fountains travelling E with much noise.

Alex.

May 29.

2:08 p.m. From O.R.H.
NW pond very active and level with floor. Very violent spurting, occasionally throwing lava up on the banks. Streaming from W toward NW cove where there is great activity.
Lava in main lake about 3 feet below third floor. Streaming from W to the S cove and to E cove, with travelling fountains. Rumbling and boiling.



1, 2, 3, 4, 5 and 6 boiling.

3:00 p.m. From O.R.H.
A few small avalanches under E station.

3:55 p.m. From SE station.
Lava in lake level with floor. Boiling and rumbling loudly.

Alex.

May 31.

2:49 p.m. From SE station.
Conditions in lake about the same except that the lava is two feet below the floor. Most activity on NE side.

3:45 p.m. Small avalanche under N station. Lava in lake level with floor. Many large fountains.

Alex

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Tuesday Date June 1, 1915.
Wednesday " 2, "
Thursday " 3, "

June 1.

2:45 p.m. From N station.
Lava two feet below floor. Streaming still toward E, with travelling fountains.

2:58 p.m. From N station.
NW pond boiling and blowing. Streaming from W to N into a cave under the 1914 bench, which has sunk.

3:30 p.m. Between E and SE stations.
Part of bank of main lake NE fell into the hot lava.

3:52 p.m. Small avalanche under E station.
No change in condition of lake.

Alex.

June 2.

7:50 a.m. From SE station.
Lake level with floor. Active, throwing lava spray on to floor. Streaming the same.

9:40 a.m. From SW station.
NW pond very active, boiling, rumbling and puffing.
No avalanches.

Alex.

June 3.

2:52 p.m. From SE station.
Lava in main lake about 3 feet down below third floor.
Very active at peninsula, throwing lava all over it and building up a spatter rampart. Streaming from W and from E and running under the peninsula.

3:05 p.m. From S station.
NW pond quiet. Glow around the edges. Puffing sounds to be heard.

3:45 p.m. From S station.
No change in lake.

Alex.

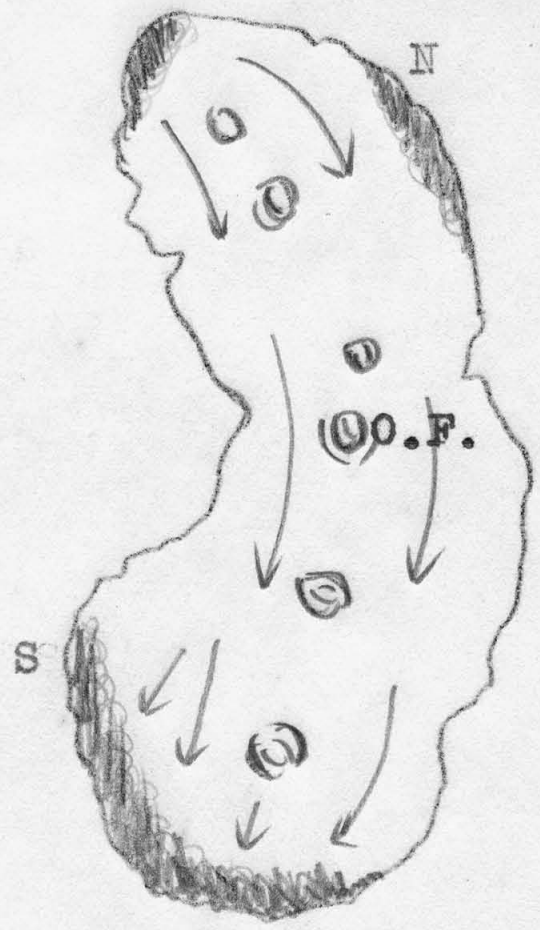
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day **Saturday** Date **June 5, 1915.**
Monday " **7,** "
Tuesday " **8,** "

June 5.
2:30 p.m. From O.R.H.
Lava in NW pond level with floor. Very active around the sides where it is building ramparts. A few boiling fountains in center. Rumbling loudly.

3:00 p.m. From SE station.



Lava in main lake is level with third floor but it is evident that it has been overflowing at the W. Nearly a half of the floor is covered with fresh lava.
Streaming toward SE. Lake very active.

Alex.

June 7.
3:43 p.m. From E station.
Lava in lake about 5 feet below third floor. Only two fountains in middle but around the sides there are many boiling places.

4:00 p.m. From SE station.
NW pond rumbling and puffing. Streaming toward the N cave with many fountains, some throwing lava to a great height.
A blowing cone formed on the floor under the E station against the wall. It is about 5 feet high.

Alex.

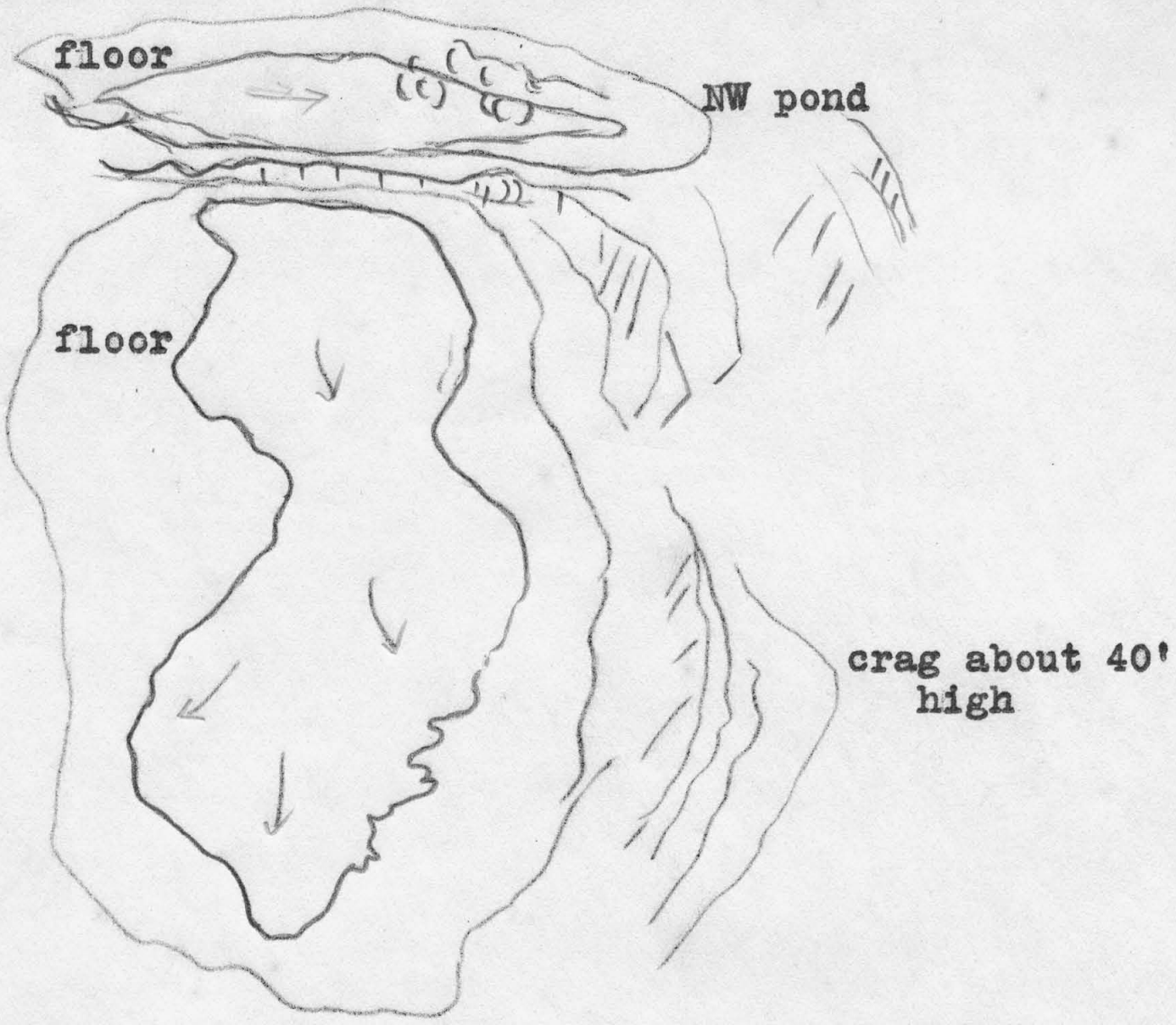
June 8.
3:08 p.m. From E station.
No change in level of lake, but streaming is now toward the W. Many large fountains in center. Rumbling.
NW pond active, spouting lava 30 or 40 feet up. Noisy.

Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day **Wednesday** Date **June 9, 1915.**

4:15 p.m. **From SE station.**
Lake up. Platform of overflows widest SW. Division bench between NW pond and lake very low. NW pond also has a platform. SW pot with glow cone within. N crag very low. Platform around lake nearly through notch to NE trench W of crag. Streaming W to E and in NW pond SW to NE. Bombardment and spatter knobs NE and E. Polygonal skins. Very little central fountaining. No O.F.



Main Lake from SE.

Lake 460± feet down. 1914 bench at W end more broken away and at E end. SE crags still in place. Glow cone in SE trench. Fumes thin. No fume at all at S chimney locality. Fume under W end of 1912 50-foot bench S station. 1912 200-foot bench and above more slid down and caved away. This is the June rise.
Fumes E, SE, SW, N?

T.A.J.

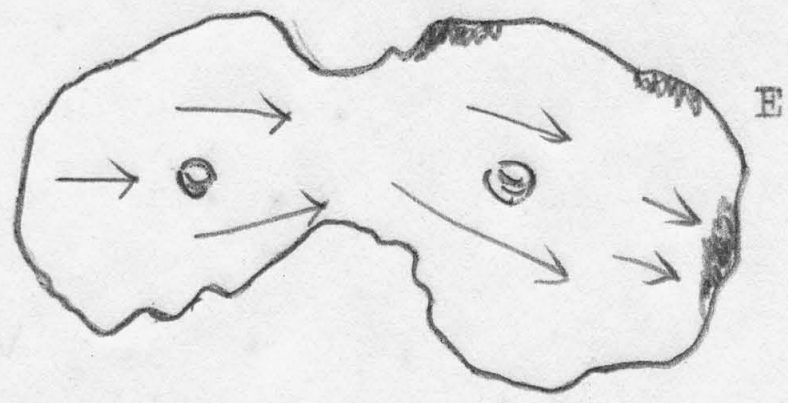
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Thursday Date June 10, 1915.
Friday " 11, "
Saturday " 12, "

June 10.
12:55 p.m. From SE station.
Lake only one foot below floor. Boiling at edges. Streaming still E.

2:10 p.m. From SE station.
Lake now level with floor. Many large fountains in middle and a few around sides.



Could not see NW pond on account of smoke but could hear much rumbling and boiling from that locality. No avalanches.

Alex.

June 11.
2:07 p.m. Lake 5 feet below floor. Streaming the same. Few fountains. Loud roaring and rumbling and occasionally strong puffing.

2:35 p.m. From SE station.
Overflowing on W side, halfway across third floor. Streaming the same.

3:10 p.m. From SW station.
NW pond quiet. Lava nearly level with floor around it.

Alex.

June 12.
2:40 p.m. From E station.
Lava 3 feet below third floor. Conditions in lake otherwise the same.

3:30 p.m. From Sstation.
Lava almost overflowing in main lake. Much noise.
NW pond throwing lava up 30 or 40 feet.

Alex.

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Massachusetts Institute of Technology

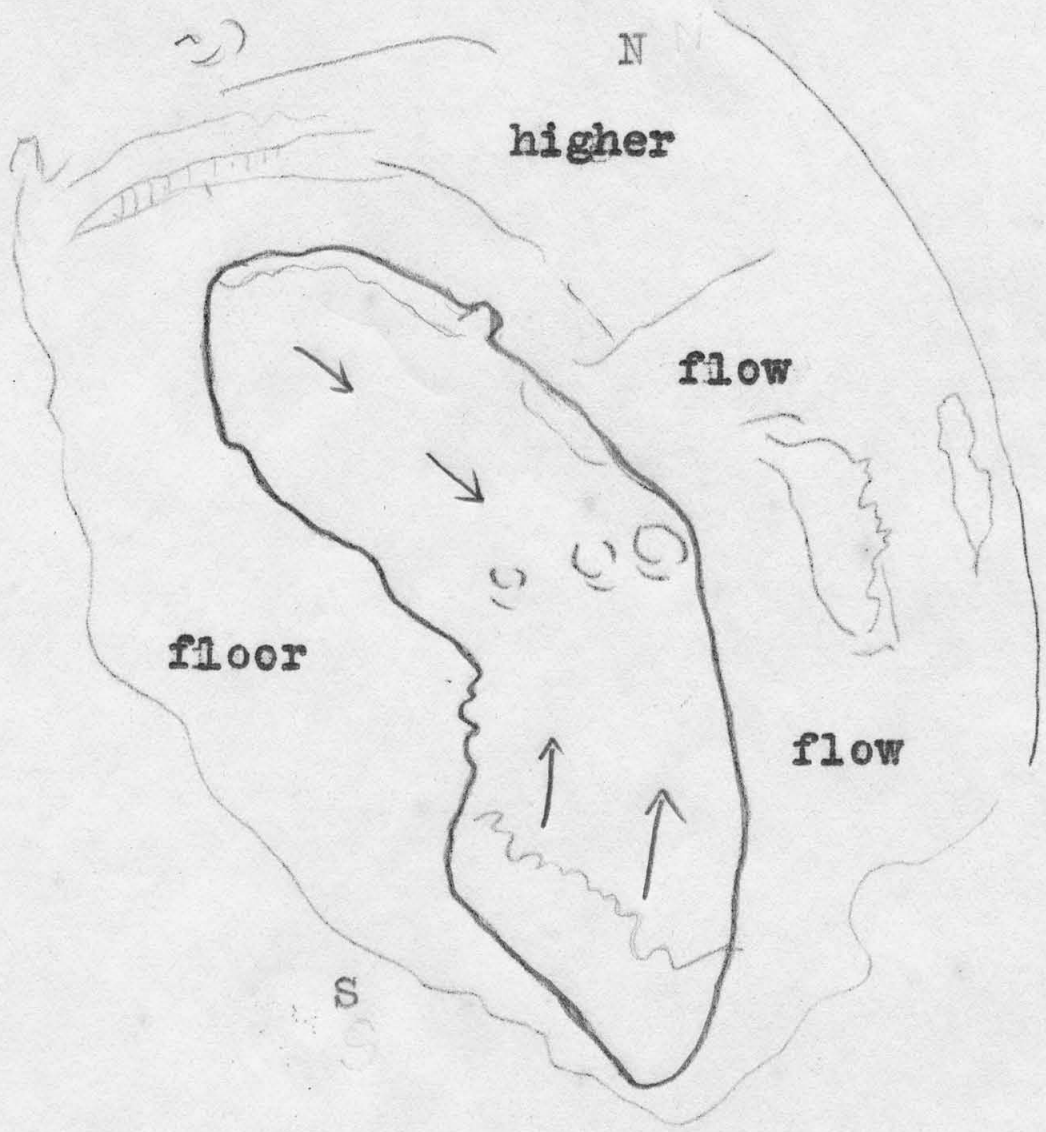
JOURNAL

Hawaiian Volcano Observatory

Day **Monday** Date **June 14, 1915.**
Tuesday " **15,** "

June 14.
Afternoon. **High wind. In lake steady hot fountaining, travelling, bubble and sporadic like O.F. Great flows on both sides and around N crag filling NE trench with wide flow. N crag about 20 feet high. Bench between the two lakes not more than 10 feet high. Streaming W to E. Blue fumes under W end of 50-foot bench S station. Noise splashing of fountains. Heat on face. NW pond active. High wind makes fumes obscure view. Fumes appeaf thin as seen from Observatory. Lake 55 feet below bench.**

From SE:-



June 15.
8:00 a.m. **From Volcano House fume from Halemaumau appears much thicker. Rainy afternoon and evening.**

T.A.J.

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Massachusetts Institute of Technology

Hawaiian Volcano Observatory

KILAUEA DAY SHEET

Day **Monday** Date **June 14, 1915.**

t	sta	pt	hor	vert	lev	dist	elev	h. i.
	SE	N	0					
	S	SE	0					
	SE	Stalactites W end	31 08	29 56	+2	838	479	
	S	" " "	68 37	28 50	+2	884	482	
	SE	Top S point	32 31	38 00	0	597	465	
	S	" " "	58 51					
	SE	Bowlder 1914 bench	67 43	47 18	0	363	393	
	S	" " "	49 50	50 19	-3	324	391	
	SE	SE crag	27 23	51 40	0	322	397	
	S	" "	36 12	36 54	+3	541	404	

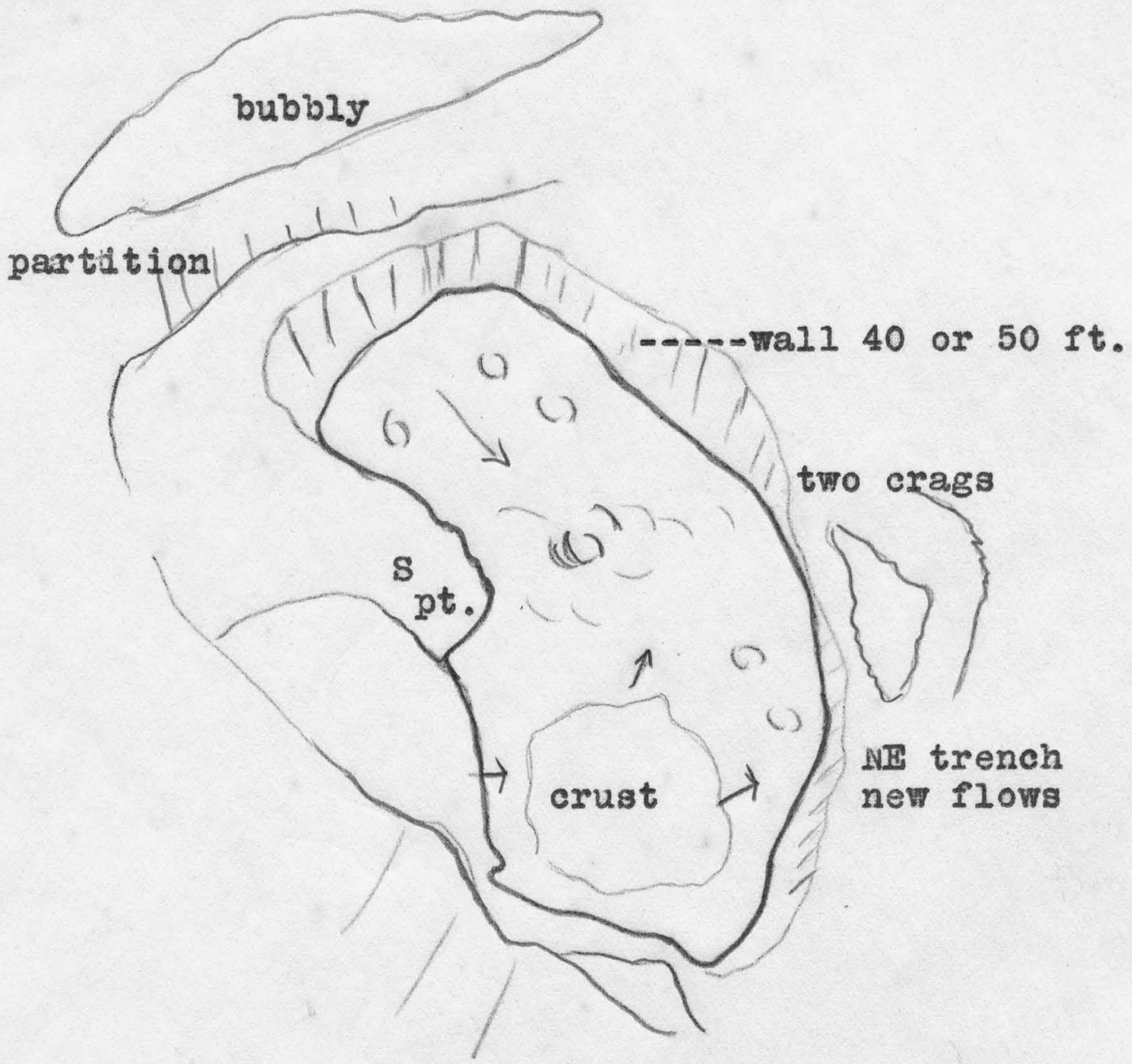
			no	pl	scr	stop	ex	cam	
4:30p	Kil. Iki.	Kilauea & Mauna Loa (See #1 June 22)		W.P.		11.3 hand	1/50	T.A.J.	

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day **Wednesday** Date **June 16, 1915.**

11:50 a.m. **Windy and smoky; seeing poor. Distinct fall of about 40 feet to judge by the benches around lake. West half of lower bench down with S point. N crag double. Partition high between pools. Lake big by infall. Streaming toward a central fountaining area. Many baby fountains. No avalanches.**

From SE:-



The measurements of June 14 and June 16 check very well but reveal a singular condition if correct.

June 14 --	Lake below SE rim	480'
	Overflow bench	465'
	Second bench SE crag	401'
	1914 bench S	392'
June 16 --	Lake below SE rim	484'

Lake has a wall around it at least 30 feet high as though sunken within the overflow bench but the measurements appear to imply that there has been bodily elevation of the benches, and little change in the lake.

T.A.J.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date June 16, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
11:50a	S	SE	0					
	SE	NE	0					
	S	N side lake	53 26	31 16	+4	800	482	
	SE	" " "	30 00	37 16	+3	643	486	
								T.A.J.

			no	pl	scr	stop	ex	cam	

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

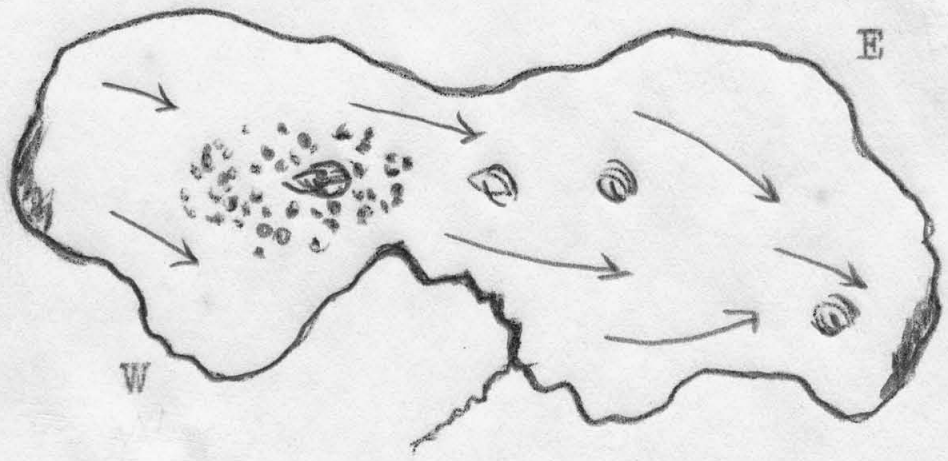
Day Thursday Date June 17, 1915.
Friday " 18, "
Saturday " 19, "

June 17.
Noon — No marked change. Streaming fast W to E from W end to middle zone of perpetual fountains across lake. E of there sluggish skins with eastward drift. Cliff around lake about 25 feet high N, E and SE. Ten feet high from S point W. Probably the SE crag and SE part of lower bench have been uplifted. But the partition and N crags are also high. NW pond apears large and active. Smoky and poor seeing. Occasional large fountain at W end of line of steady fountaining -- O.F.? 30 seconds interval.

T.A.J.

June 18.
2:04 p.m. — Lava about 20 feet below third floor. Many large and small fountains. Streaming toward the E. Boiling and rumbling sounds. No avalanches.

From SE station.



2:46 p.m. — NW pond active with large fountains sputting up high. Much noise.

Alex.

June 19.
3:00 p.m. — From S station.
No change in condition of lake. NW pond quiet; glowing around edges only.

Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Monday Date June 21, 1915.

Noon. From H. V. O. fumes appear thick and white.

1:45 p.m. Stalactites, 30-foot wall E end of lake. Crag high. W partition high. Two pots to lake level with lava boiling in NE trench. Cone glowing on bench at E end. Two benches south.
W pond sluggishly boiling.
Streaming from W and E against N bank. Violent turbulence succeeded by quiet. Splashing on bank NE, NW and S cove. Perpetual fountaining O.F. locality. O.F.? Very smoky. 30-foot wall over W pond.

9:00 p.m. Flame SW chimney. Streaming E to W. O.F. appears to be present. NW pond an oval pool. Streaming NE.

T.A.J.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day **Monday** Date **June 21, 1915.**

t	sta	pt	hor	vert	lev	dist	elev	h. i.
1:48p.	SE	NE	0					
	S	SE	0					
	SE	NW splash	40 52	29 48	-4	857	490	
	S	" "	69 19	28 40	0	902	490	
	SE	S point	40 52					
	S	" "	58 32					
	SE	E end	29 44					
	S	" "	38 48					
	SE	N lump	30 12					
	S	" "	56 54					
	SE	W end lake	43 11					
	S	" " "	70 50					

Length of lake 480 feet
Width of S point 175 "

T.A.J.

			no	pl	scr	stop	ex	cam	

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Tuesday Date June 22, 1915.

8:00 p.m. Crust over W end lake. Streaming W to E. Cliff like yesterday. NW pond appears low and streaming to NE. Three E holes and SW all glowing. Three benches S (including SE crag.) Middle line of fountains. Isthmus 40 feet high. Noise splash. Smoke thin.

T.A.J.

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

KILAUEA DAY SHEET

Day Tuesday Date June 22, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	

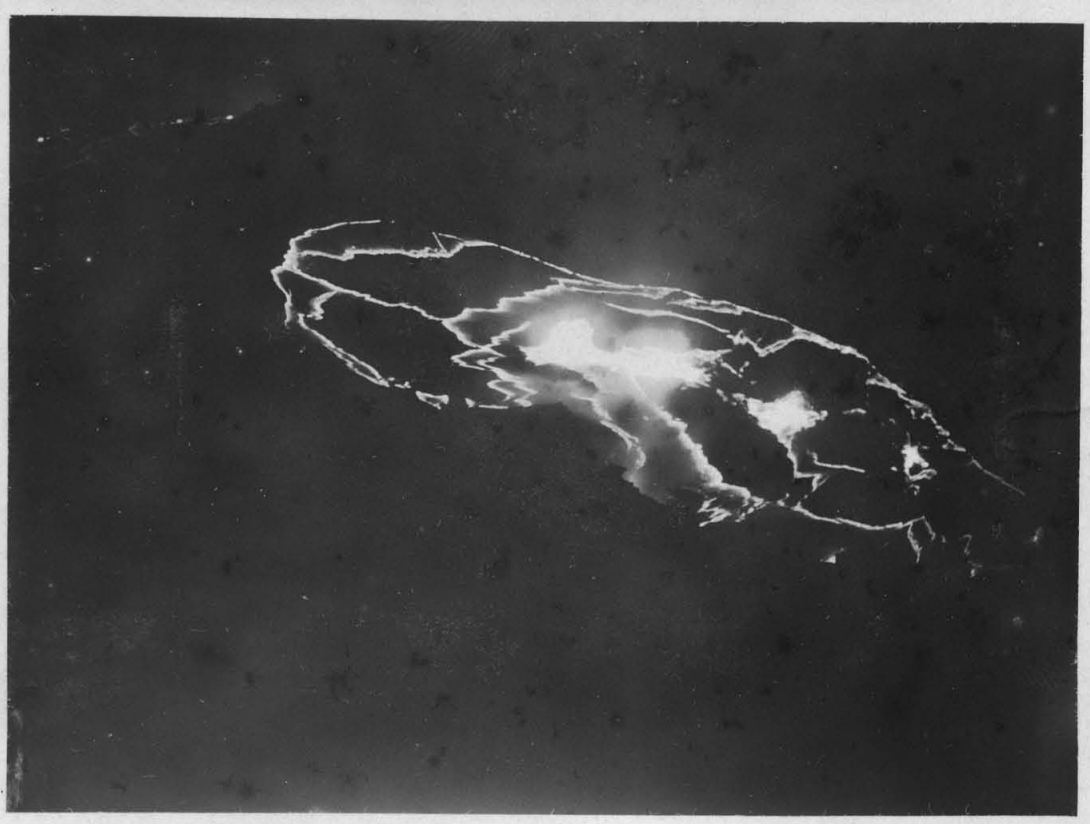
			no	pl	scr	stop	ex	cam	
8p.m.	SE	Lake	1	W.P.		6.3	1		
	S	"	2	"		"	1		
		(#1 double exposure. See June 14.)							
								T.A.J.	

1915, June 22



June 14, '15. 4:30 p.m.

#1 June 22, '15.



#2

Jaf

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Thursday Date June 24, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
Noon	S	SE	0					
	SW	S	0					
	S	E end splash	40 06	38 01	0	625	487	
	SW	" " "	51 48	31 36?		796	487	
	S	N splash	53 00	31 02	0	801	479	
	SW	" "	68 12	30 47		818	485	
		Average depth below S side of pit 484 feet.						
								T.A.J.

			no	pl	scr	stop	ex	cam	

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Thursday Date June 24, 1915.
Friday " 25, "
Saturday " 26, "
Sunday " 27, "

June 24.
Noon. Smoke thinner. Everything appears the same. Lake about 25 feet down. Streaming E. Splashing N and E. New rock falls on recent flow bench W of N crag. W pond pounding in a cave at its NE end. Splash changes to NW side large lake and spatter rampart falls in. O.F. apparently present. Knobs of spatter E end. Glow in NE trench.

T.A.J.

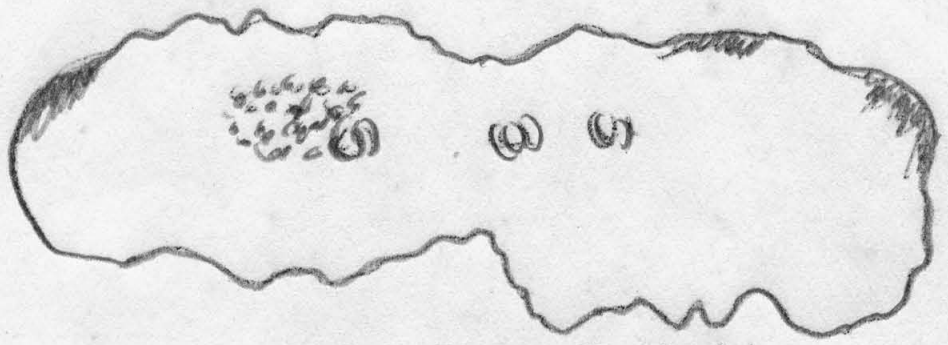
June 25.
3:20 p.m. Lava had been flowing over edge of NW pond. Large border fountains making a great deal of noise. View from O.R.H.

3:35 p.m. From SE station.
Lava in lake level with third floor. Many large fountains. Two small cones under E station, blowing loudly.
(Probably 470 feet this day. T.A.J.)

3:50 p.m. From SE station.
Lake overflowing. Great fountain activity in middle.

Alex.

June 26.
2:27 p.m. From E station.
Lava in lake about 10 feet below floor. Streaming toward NE cove and toward E cove. Large noisy fountains in middle.



Lake from S station.

3:10 p.m. From S station.
NW pond down about 5 feet. Only one boiling place--under NW station.

Alex.

June 27.
2:35 p.m. Lava in lake 5 feet down. One fountain in middle and one active place SE. NW pond level with floor; active NW.

3:50 p.m. Lava in lake nearly level with floor. Large travelling fountains. Streaming E. Boiling and rumbling.

Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Monday Date June 28, 1915.
Tuesday " 29, "

June 28.
3:00 p.m. From a distance the fumes appear thin but are very troublesome at the pit.



Bombardment, rumble and perpetual fountaining. Lake 25 to 30 feet down. Was much higher last Friday according to Alex.

4:00 p.m. Violent ebullition of bubble fountains in NW pond due to cave-in. Fresh spatter and overflow W end of lake and spatter rim N and E.
Fresh spatter and overflow around NW pond.
Everything else the same. An open pot in E bench.
Heavy fumes NE, E and SW. Strong insuck to N and NE banks with violent fountaining and accelerating current suggests subsidence. Baby fountains!

T.A.J.

June 29.
2:40 p.m. Lava in lake about 30 feet down. Streaming toward NE cove and toward E cove. O.F. active. Few large fountains and many baby ones.

Alex.

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

KILAUEA DAY SHEET

Day Monday Date June 28, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
3p.m.	S	SE	0					
	SW	S	0					
	S	E grotto lake	41 03	36 08	+3	668	485	
	SW	" " "	53 49	30 48	+2	820	486	
	S	Grotto W side NW pond	77 00	24 50	+3	1054	483	
	SW	" " " " "	101 02	31 48	+2	791	487	
	S	W end lake	72 08					
	SW	" " "	88 17	34 30	+2	700	479?	
	S	N grotto lake	59 29	29 48	+4	848	482	
	SW	" " "	75 19	31 23	+3	795	482	
		Average depth 484.1 feet.						
								T.A.J.

			no	pl	scr	stop	ex	cam	

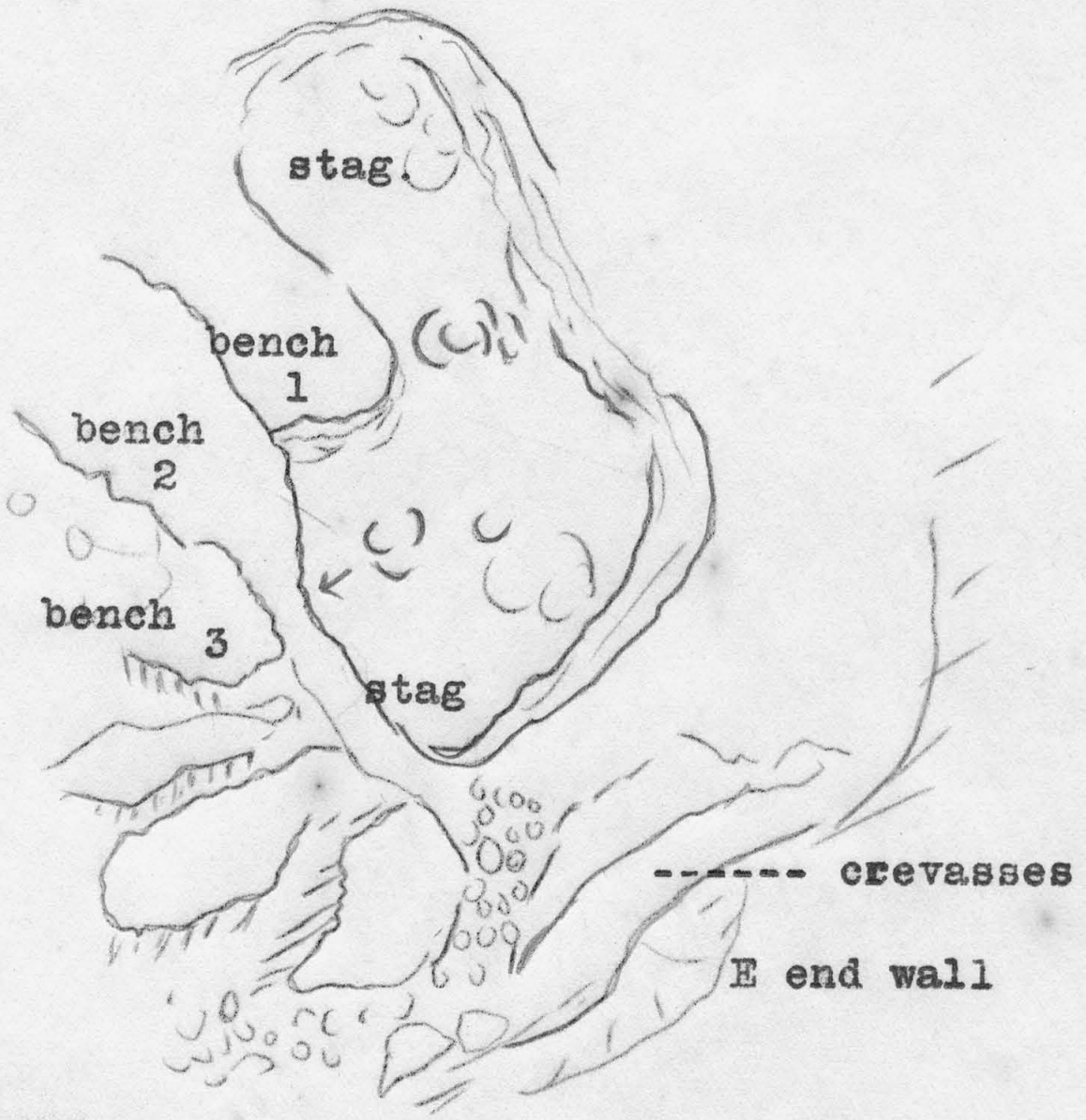
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Thursday Date July 1, 1915.

11:15 a.m. High NE wind. Smoky. No conspicuous changes except a collapse from E wall of Halemaumau into SE trench widening trench and burying E spatter cone on bench.

From SE:-



Hardly any streaming. Hot large steady fountains in four or five places. Noise only plashing. Seeing poor. At S point cliff over lava is 15± feet. In general level appears about the same.
Cannot see W pond.

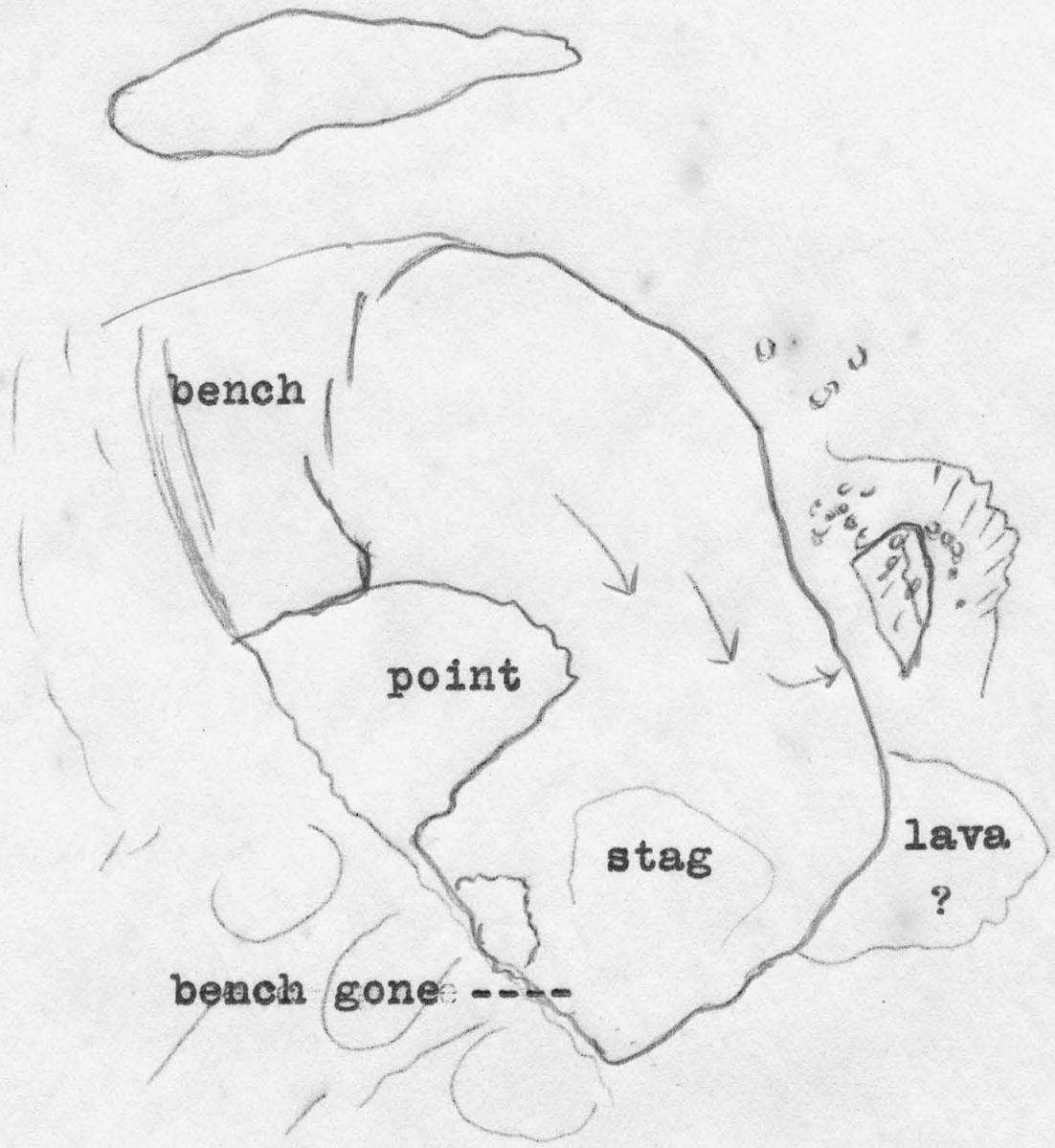
T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day **Friday** Date **July 2, 1915.**

10 a.m. More caved debris at E end. Glow hole in middle of it. Glow hole spitting SW -- a splashing pot well above lake 60±feet. SE bench over lake has caved in since yesterday. Can see only two N crags, back one highest. Streaming E fountains and skins. New debris around N crags; floor has sunk and cracked. W pond blowing and bubbling, sounds as though caving. No more than 10 feet below low SW bench. SW hole less fumes.

From SE:-



Lava appears to have worked into the E arm by collapse. The bench blocks are cracking and tipping on all sides in great confusion especially E, SW and NE. Now wrinkled skins and hot plashing pool appears rising.
No marked change in level. W pond bubbling on W shore. Blowing border grottoes. Smoke S talus and under S high bench gone. Smoking less to-day all over but humidity low. The block parted from wall NE back of N crag is now the dominant N crag and the old N crag has sunk to a low stool in front of it; much new talus there (from S). New spatter rims since yesterday.

T.A.J.

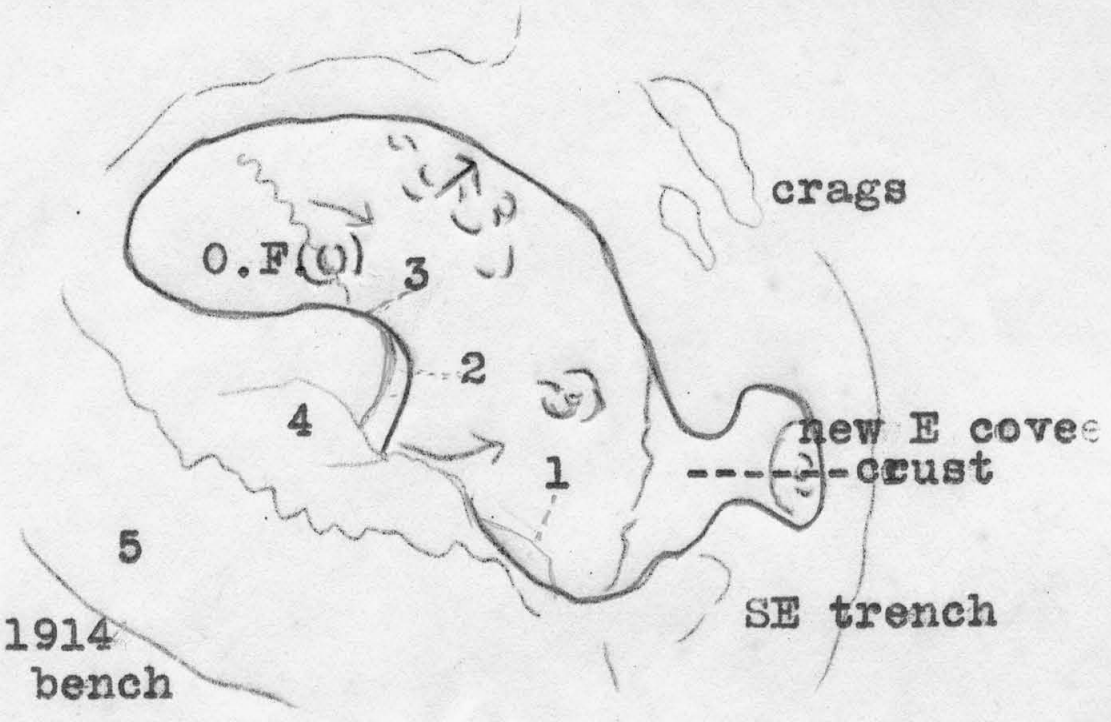
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Monday Date July 5, 1915.
Tuesday " 6, "

July 5. Appears same in morning. Fifteen feet down from S point ledge.

July 6.
9 a.m. From S:-



Benches 1, 2, 3, 4 and 5.

Skin over W end. Streaming E. Streaming rapid out of corner E of S point. Pot E has changed to a cove of lake. Caving into SE trench from wall appears greater. W pond same as before and active. Two N crags still in place.

Afternoon. Lava was cascading into a void at the E end, 60 or 70 feet down carrying floes.

8 to 10 p.m. Pouring in from E cove. Active rising and very hot activity with much fountaining.

11:15 p.m. After vigorous inflow for hours, outflow into E cauldron begins slowly again. At S station: pit becomes fumy as wind veers to E. Is this barometric?
Fume SW chimney. Very intense fountaining N bank. O.F. appears active. Rumble in W cavern of W pond. Small rock slide SE heard 11:15 just as outflow began into E cove.

From S:- T.A.J.



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KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day **Tuesday** Date **July 6, 1915.**

t	sta	pt	hor	vert	lev	dist	elev	h. i.
9a.m.	SE	NE	0					
	S	NE	0					
	SE	N splash	32 48	35 43	+4	672	481	
	S	" "	19 33	30 54	+3	805	479	
		Depth 480 feet.						
								T.A.J.

			no	pl	scr	stop	ex	cam	

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Wednesday Date July 7, 1915.
Thursday " 8, "

July 7.
5 to 7 p.m. Streaming E. Cascading 20 feet down into a void in E cove, churning and whirling within. O.F. bursting at intervals. Fountains mostly in middle near O.E. Flaming cone E bench. W pond same, splashing cavern W.
Major noise roar of E cascade. Skins migrate E and break and rush down cascade. Smoke to-day and yesterday W end S bench. Stalactites NW side lake and NW pond. Fumes troublesome to seeing and to breathe.

T.A.J.

July 8.
9 a.m. Lake 30 feet down. Spatter rims. Slow streaming E. Hard bombardment with rumbling in grottoes of W pond. Boiling W end, middle and a little E. Splashing E cove. Smoke rose from SE crag, middle second bench, SW pot and under S high bench. Deep cleft at SE end. Rifts in NE floor remnant. Slow streaming into E cove.

Noon. From H. V. O. fumes appear small and thin. But humidity is <u>very low</u> to-day.

T.A.J.

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KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Thursday Date July 7, 1915. July 8, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	

			no	pl	scr	stop	ex	cam
July 7.								
7p.m.	S	Lake (fumy)		W.P.		6.3	1	
July 8.								
9a.m.	S	West end.	1	W.P.		F11.3	1/15	
								T.A.J.



1915, July 7.

1915, July 8



Tag

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

JOURNAL

Day **Friday** Date **July 9, 1915.**

3 to 7:30 p.m. Lakes as usual in outline. Afternoon rather quiet and evening rather active. Intermittent vigorous fountain action at various spots eventually covering all parts of larger lake. Streaming and counter-streaming E and W fron central region.
At 6:30 cascade streaming into NE bay and at 7:00 into SE cove. Surging in W pond.
At 7:15 infall of bank at SW end large lake followed by intense action and then more quiet.
No specially characteristic phenomena.

H.O.W.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Monday Date July 12, 1915.
Thursday " 15, "
Friday " 16, "

July 12.
2:52 p.m. From SE station.
Lava in lake down about 40 or 50 feet below third floor. Many large and many small fountains going along with the lava stream from W to NE cove.

3:10 p.m. Also streaming from SW cove toward E cove with many large fountains and much noise.

4:55 p.m. Lava at about the same level but the streaming is now in one direction only, toward the E cove. Still very active. Small pool quiet. Only a few glowing places around edge.

Alex.

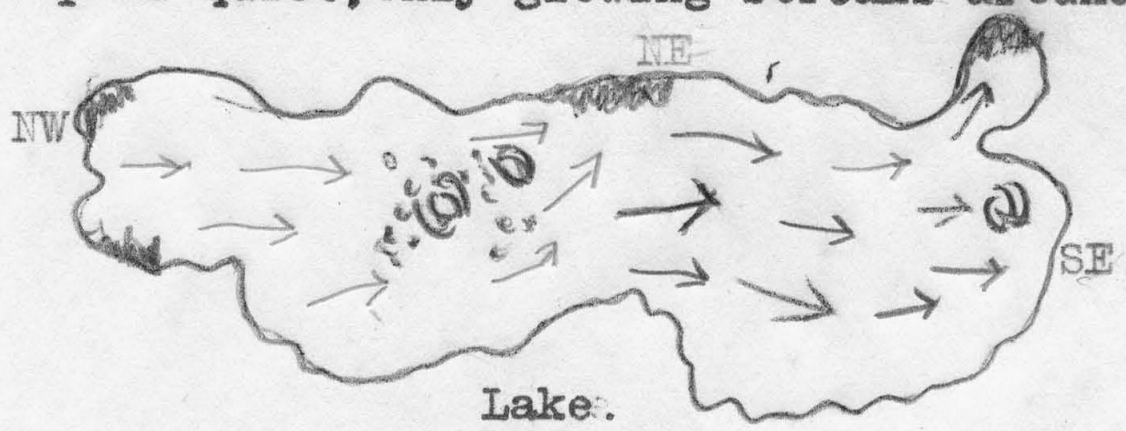
July 15. H.O.W. reports no change.

July 16.
2:22 p.m. From E station.
Lava in lake risen to within 5 feet of the third floor.

2:30 p.m. Lava is sinking; now 10 feet below bank. Streaming toward E still. Active.

2:30 p.m. From SE station, the lava appears to be level with floor at the W end and 2 feet below at the E end. Blow hole under SW station occasionally spouting lava 25 or 30 feet. O.F. active. Fresh lava on floor at W side lake. Most active place is NE cove where lava is being thrown up 20 or 30 feet into the air.

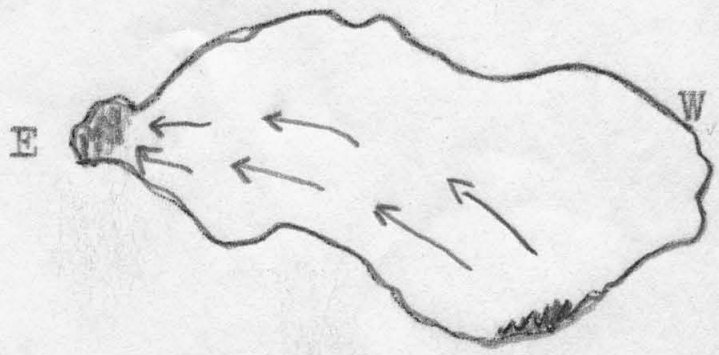
3:03 p.m. From S station.
Small pool quiet; only glowing streaks around edge.



Lake.

3:35 p.m. Small pool is about 50 by 150 feet. Has two boiling places, NW and N. Small pool from W sta:-

3:45 p.m. From O.R.H.
Small pool has become active, many spots of the surface boiling.
Lake about the same. SW cone still spouting loudly.



Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

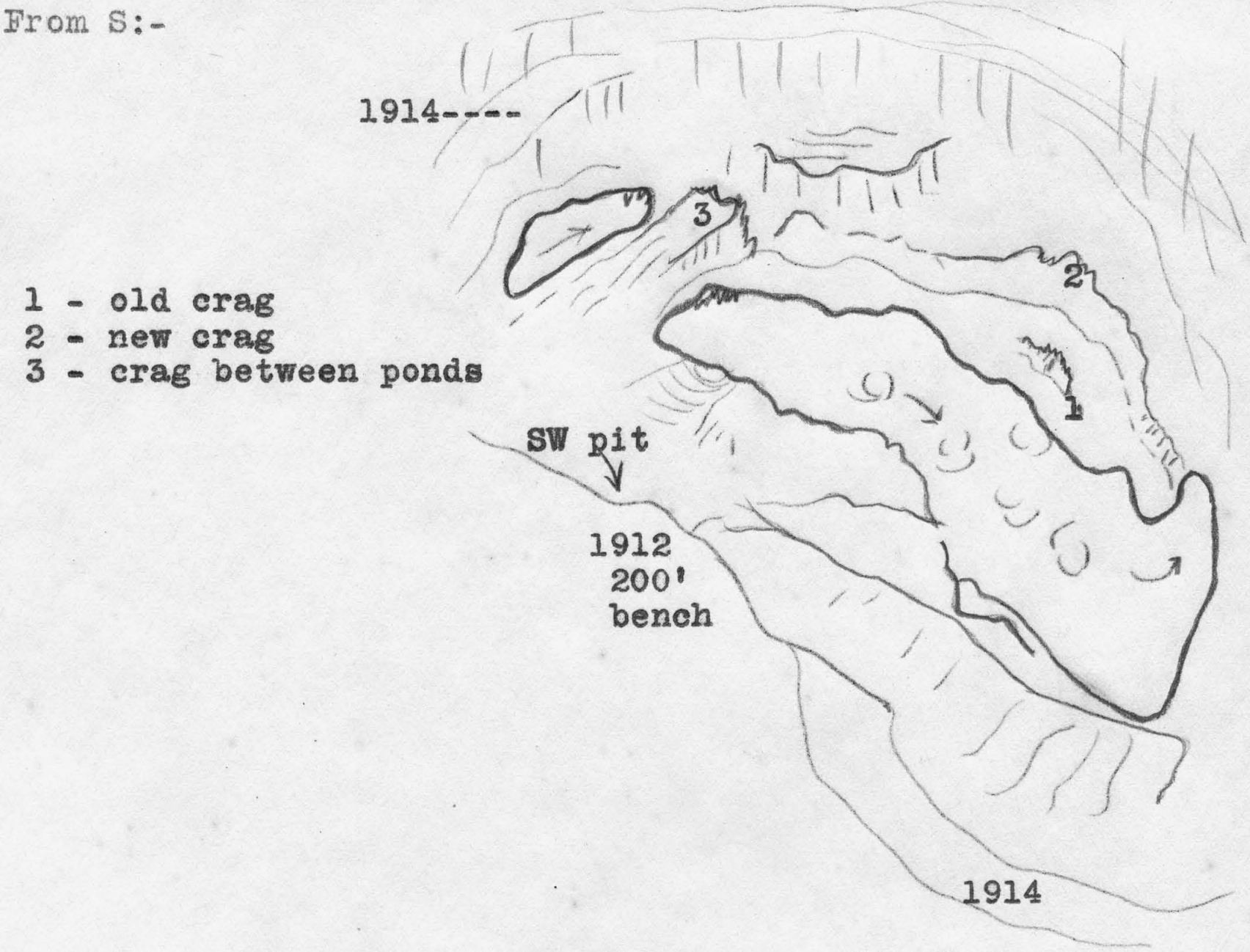
Day Saturday Date July 17, 1915.
Monday " 19, "
Tuesday " 20, "

July 17. H.O.W. reports lava a little higher.

July 19.
12 noon. Rain. Since last week larger piles of glowing lava SW pit and E bench. Lake large. Streaming W. Small point NE. About 15 feet below lower bench. No apparent difference in height. One avalanche reported E.
Light NE wind.

July 20,
9:30 a.m. New overflows NE and SW. Flow into cove at E end. Noise plashing. O.F. violent at times. Rose rapidly from 15 feet below ledge to 5 feet below ledge. Streaming E.

From S:-



1 - old crag
2 - new crag
3 - crag between ponds

T.A.J.

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KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day **Tuesday** Date **July 20, 1915.**

t	sta	pt	hor	vert	lev	dist	elev	h. i.
10a.m.	SW	S	0					
	S	SE	0					
	S	W pond	76 54	24 24	+4	1052	472	
	SW	" "	100 58					
	S	NE bank	45 38	33 14	+4	717	467	
	SW	" "	59 00					

Depth general 470 feet below S station.

t	sta	pt	no	pl	scr	stop	ex	cam
		(New finder)						
9:30 a	S	SE crags	1	W.P.		F 11.3	1/10	
	S	W end	2	"		"	"	
	S	1894 bench (upright)	3	"		"	"	
	S	" "	4	"	vz	"	½	
	SW	S bench	5			11.3	1/10	
								T.A.J.

1915, July 20.











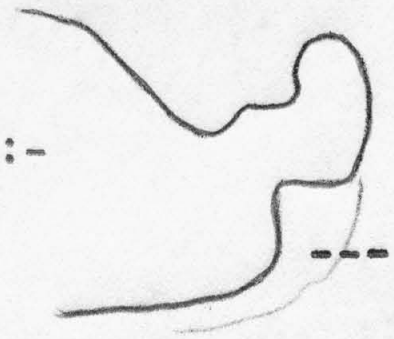
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Wednesday Date July 21, 1915.
Thursday " 22. "

July 21.
9 a.m. Little change. Cove at E end appears more like this:-

From S:-



--- this bench now above lava

Lava 15 to 20 feet down. Rumble and fountain plash. Stalactites. Little streaming, mostly toward permanent fountains in middle. Grottoes NE, N and NW and W and N ends of W pond. Strong white smoke S point and bench next above as though these places were ready to cave in. Spatter cones SW pit and E bench. Wall over lake higher N and NE than at S point. E cove quiet. Fumes moderate. Skins appear thin and fountaining hot and active. Crag No. 3 on diagram of July 20 is the dominant crag in the bottom area now. The SE crags have not changed and the two NE crags are still there. The space SE of SE crags between them and the wall is full of tumbled blocks and gravel.

T.A.J.

July 22.
1 p.m. From SE station.
No changes marked. Sharp cliff around lake 10± feet. S point slipped down and also SW end making two new lower benches. "Doughnut" orifice to E spatter cone. Noise plash. Slight fuming under S high bench. Bombardment against S point. SW pit now shallow and full of debris. E cone is also in a gravelly pit. Streaming E. Thick skins E and W; fountaining middle.

T.A.J.

T.A.J.

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Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Thursday Date July 22, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	

1915, July 22



#1



#2

Tag

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Friday Date July 23, 1915.
Saturday " 24, "

July 23.
2:30 p.m. From SE station.
Lava in lake about 5 feet from top. Streaming E. Only one fountain playing -- O.F.

2:37 p.m. From SE and S stations.
Lava has risen to within two feet of the floor. Many large travelling fountains. Streaming still E. Cone under SW station blowing loudly.

3:45 p.m. From S station.
Lava level with floor; overflowing NE bank.

4:10 p.m. Lava has begun to sink; is now about a foot below the banks. Fountaining vigorously with great noise.

Alex.

July 24.
2:35 p.m. From SE station.
Lava in lake only one foot down.
Active around the sides, lava being thrown up on the banks
Fresh overflow on the W side covering about a half of the third floor.
NW pond very active. Many fountains in middle and a few border ones.
Two blow holes formed on the third floor which occasionally shoot out spray.



Alex.

Mauna Loa. A party headed by Mr. Alfred Castle ascended Mauna Loa and saw fumes rising from the southern part of the crater Mokuaweoweo. The cone built by the great fountain off December 1914 was not fuming.

T.A.J.

Massachusetts Institute of Technology

JOURNAL

Hawaiian Volcano Observatory

Day **Monday** Date **July 26, 1915.**

4 p.m. From S station. Fumes look thin.
Lake hotter and higher. More gas pressure. Overflows all over W end lower bench. Overflow cascade, across partition on to W end lower bench, from NW pond at its S end. Blowing cones enlarged and overflowed E and SW. New blowing cone back of new flows lower bench SW. Streaming slow and various. Many quiet skins. Sharp puffs SW cone and hissing E end. Fountaining against N bank and around borders. Block at point N entrance to E cove has dropped down; smoking chasm behind it. General streaming eastward. High glow spots above E cove. Pounding against W wall NW pond. Blowing noises around shores at spouting places, middle skins quiet polyhedra.

5 p.m. Overflowed benches and W pond overflowed into lake. Fresh flows glowing at 9 p.m.

T.A.J.

KILAUEA DAY SHEET

1912 Massachusetts Institute of Technology

Hawaiian Volcano Observatory

Day Monday Date July 26, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	
			no	pl	scr	stop	ex	cam	
4p.m.	S	E end	1	W.P.		11.3	1/8		
"	S	W end	2	"		"	"		
9p.m.	S	Lake	3	"		6.3	1		
"	SSW	W pond	4	"		"	"		
10p.m.	S	Flow from W pond	5	"		"	1		
								T.A.J.	

1915, July 26.



#1



#2

Taf

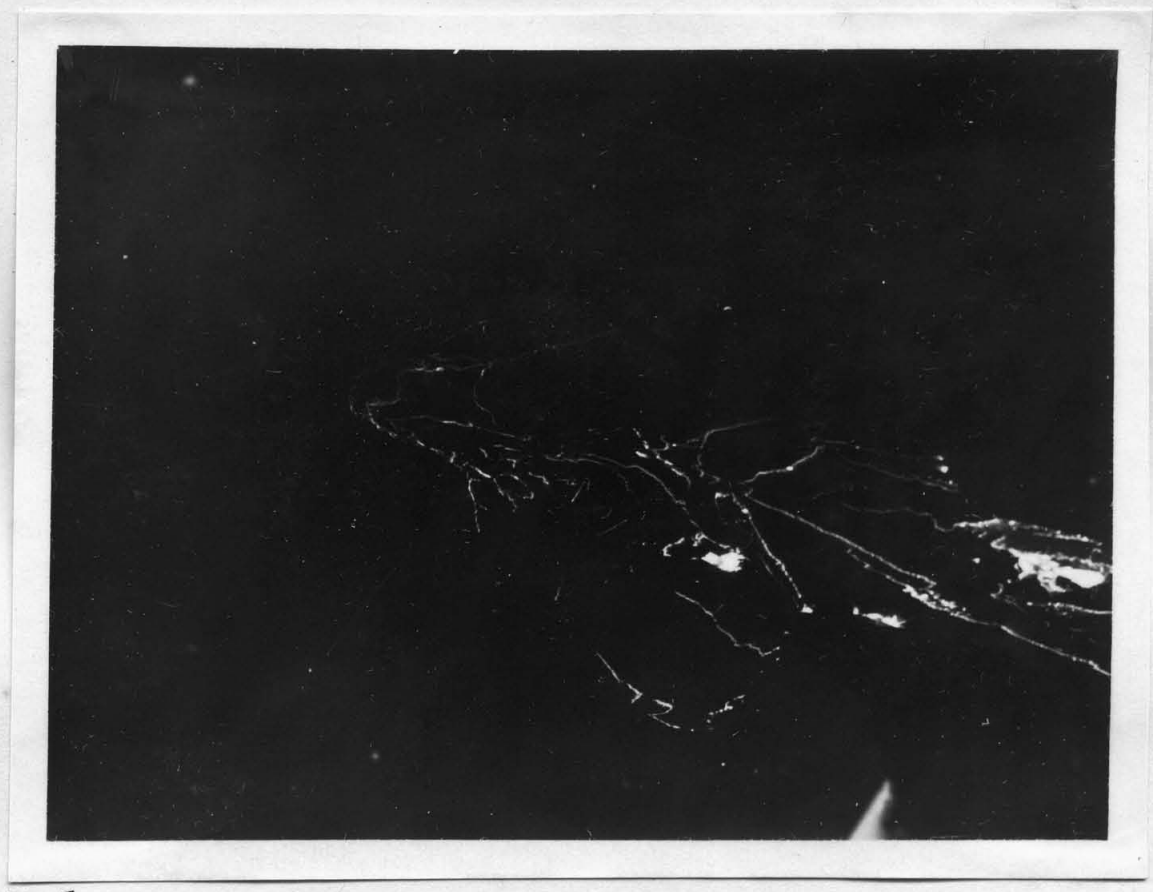
1915, July 2



#3



#4



#5

Jag

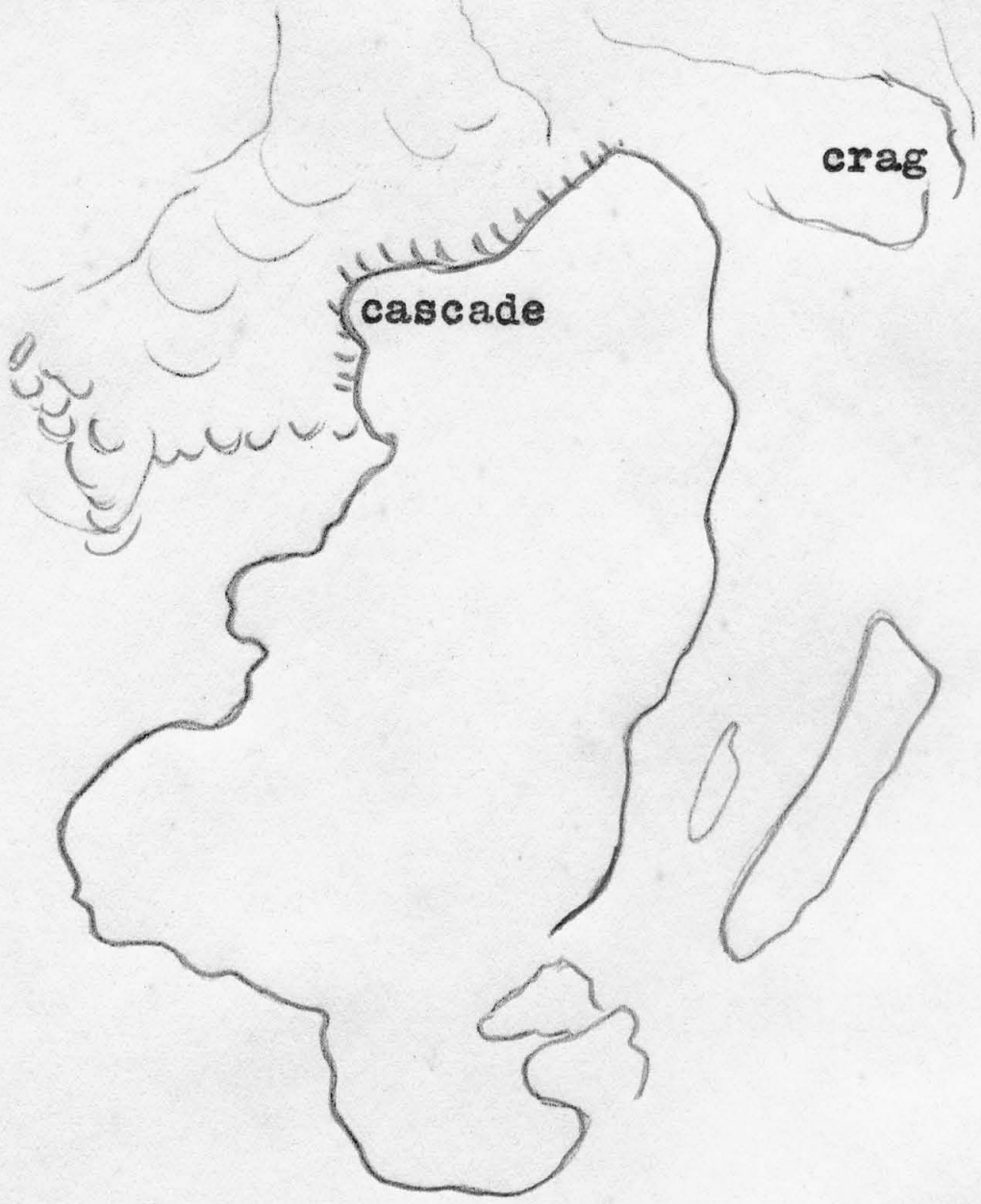
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Tuesday JDate July 27, 1915.

3 to 4 p.m. Great rising activity. E pot now a small crusted oval pond in bench above lake level. (?) Lake streaming skins eastward. Border fountaining mostly. Great flows pouring around S end partition bench from W pond and flooding SW benches high over lake and cascading into lake with fall of two or three feet at cascade. Wide cascade -- 50 or 60 feet.
SW pot belching great splashes of lava from an oval mouth and lava flowing down slope toward lake. Noise of puffing, belching, thudding and plashing. SE, two N and partition crags all in place.
Conditions a repitition of December 31 last.

Lake from E station:-



T.A.J.

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Massachusetts Institute of Technology

Hawaiian Volcano Observatory

KILAUEA DAY SHEET

Day Tuesday Date July 27, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
3.05 p	E	NE	0					
	SE	N	0					
	SE	Small S cove	36 00	40 07	+3	516	434	
	E	S cove	64 52	41 58	0	490	440	
	SE	SW pot	52 07	34 08	+3	638	430	
	E	" "	73 12	32 56	0	673	434	
	SE	SW cascade lake level	37 37	31 07	+3	722	433	
	E	" "	57 00	32 43	0	682	437	

			no	pl	scr	stop	ex	cam
3:05 p	S	Flow W end	1	W.P.		11.3	1/10	
	S	E end	2	"		"	"	
	SE	W flows	3	"		"	"	
								T.A.J.

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1915, July 27



#3



#1



#2

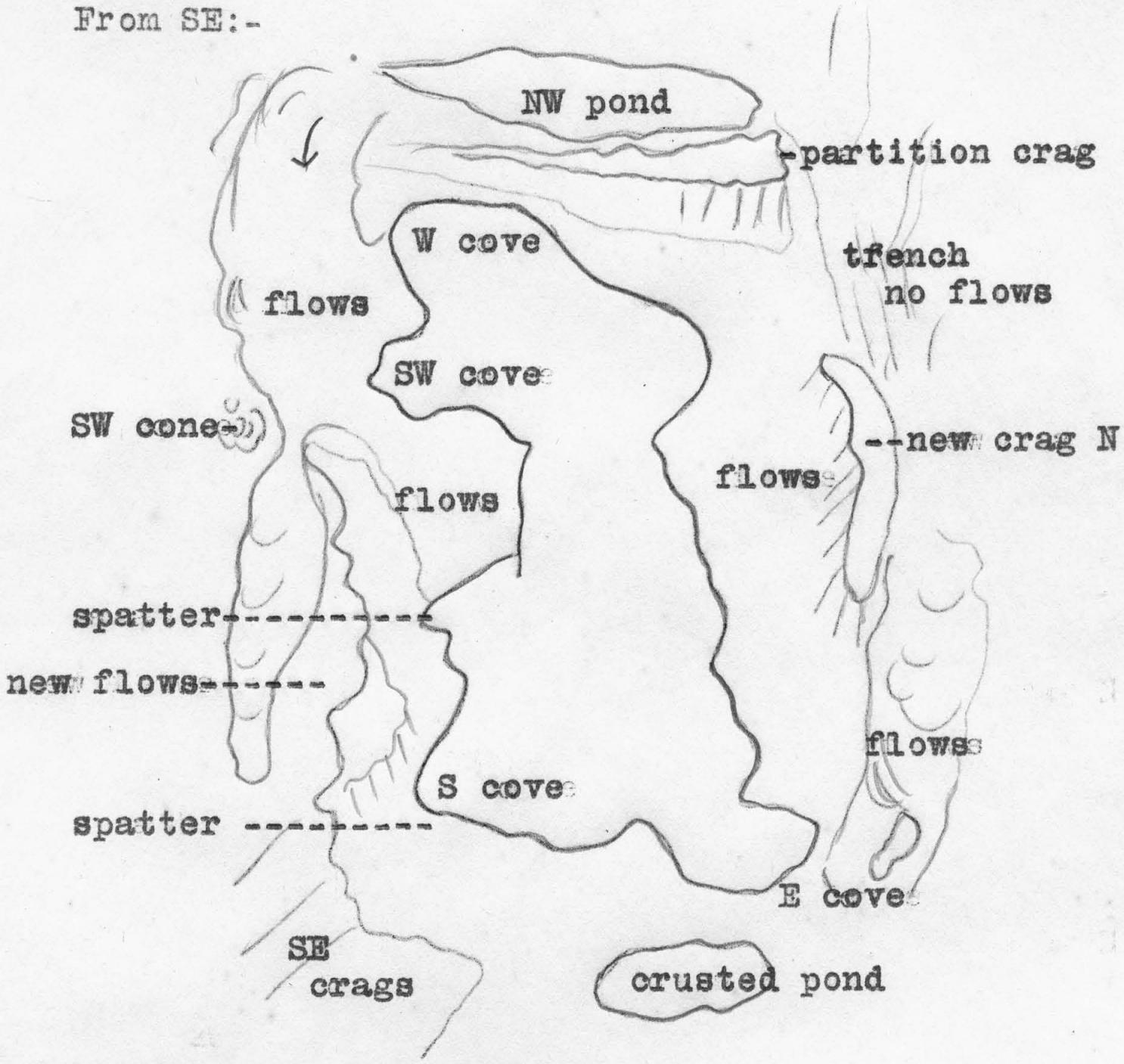
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day **Wednesday** Date **July 28, 1915.**

10:30 a.m. Fumes thinner than at any time since last December. Higher than yesterday. (?) Small crag N buried under flows. This the end of the 1914 crag. Large new flows E arm trench. New flow E back off SE crags from the main W flow through depression in front of SW cone. Lake at present 4 feet down and flows all crusted. Wide sweep of flows from W pond to SW bench. Two S coves merging by collapse of point between. Streaming sluggish northward. Splashing N bank, S cove and elsewhere. Occasional puffs from SW cone. Noises mild plash and puff. Small flow welling up crack in flows of NE trench.

From SE:-



Midnight. No flows reported. SW cone splashing.

T.A.J.

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Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Wednesday Date July 28, 1915

t	sta	pt	hor	vert	lev	dist	elev	h. i.
10:30a	SE	N	0					
	E	N	0					
	SE	SW cascade	37 39	31 04	+4	722	432	
	E	" "	48 55	32 51	+2	681	437	
		Mean E sta. 435'						
		SE " 432'						
	SE	Small S cove	36 17	40 51	+4	501	432	
	E	" " "	57 58	42 12	+2	478	433	

			no	pl	scr	stop	ex	cam
	SE	New flow E from SW cone	1	W.P.	vz	11.3	½	
	SE	Lake	2	"	"	"	"	
								T.A.J.

1915, July 28



#1



#2

Fog

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date July 29, 1915.

9:30 a.m. From SE station.
Three-foot bench N and one foot S over lake. Looks as though S side were subsiding; N side rising under weight of S flows. Brilliant morning, good seeing.
Streaming N and E. Collapse N bank. Fountaining strong N. Some travelling fountains. Smoke mostly from SE crags.
NW pond streams N.
Sluggish stream N in E pond at N end.
Occasional hiss SW cone -- now a cone, white sublimates.
Last night at midnight no flows seen in motion. No sign of very fresh flows this morning. Flows in NE arm appear from direction of E pond. Trench crack without flows back of N crag between it and clinging N bench. Probably entire SE and S crag bench has subsided. Today the SW cone appears to check with the measurements and to be same level as lake shore. Probably NW pond and lake same level.
Yesterday's measures will serve for today.
Much bubble fountaining N shore. Fumes thicker than yesterday. Has the culmination passed?
Glow spots above E cove.

T.A.J.

Massachusetts Institute of Technology

Hawaiian Volcano Observatory

KILAUEA DAY SHEET

Day Thursday Date July 29, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	
			no	pl	scr	stop	ex	cam	
9:30a	SE	W and SW flows	1		vz	11.3	½		
	SE	N side lake and crags	2		"	"	"		
	SE	N crags and N bench	3		"	"	1/3		
	SE	Lake including E end	4		"	"	"		
	SE	W pond	5		"	"	"		
								T.A.J.	

1915, July 29



#1



#2



#3

#4



#5

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day **Friday** Date **July 30, 1915.**
Saturday **" 31, "**

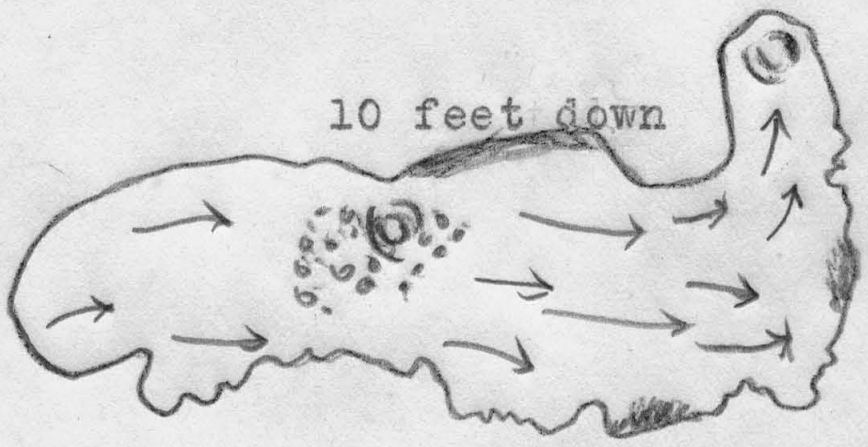
July 30.
2:30 p.m. From SE station.
Lava about 5 feet below the third floor. NE cove very active, throwing lava up high. Streaming toward E cove. SW cone blowing loudly. NW pond quiet. Surface of lava two feet below rim of this pond.
O.F. active.

Alex.

July 31.
2:20 p.m. From E station.
Lake active. Streaming still toward the E cove. Lake about 10 feet down. SW cone blowing loudly.

2:40 p.m. From NW station.
Many fountains in NW pond which is 5 or 10 feet below the level of the floor. Streaming from W cove to N cove.

3:21 p.m. From S station.



Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Sunday Date August 1, 1915.
Monday " 2, "

Aug. 1. Mauna Loa.
H.O.Wood reports light fume effect over Mokuaweoweo in the evening.

Aug. 2.
5 p.m. From S station.
Cliff 12 feet high over lake and over NW pond. Slow eastward streaming. Perpetual bubble and blowing fountains migrating NE from O.F. locality. O.F. very violent in multiple domes sometimes.
O.F. intervals:-

0	20-30
25	15
50-55	15
65 very heavy	15
30	20
15	40
20-25	15
	25

Some acceleration of rate of streaming inside of E cove.
Window over E cove; pot in NE arm. Glowing cones NE arm, E bench, SW and on new flows S of lake. SW cone flaming and spitting. Hump in new flows where remnant of old N crag underlies them. Noises blowing, fountaining and rumble. Grottoes NW, N, and E cove -- stalactites. Blue fumes SW cone. Fumes in general a little heavier than last week. Heaviest smoke SE trench.
W pond streaming N; quiet skins. Spatter rims upper 10 feet of cliff showing that last few days oscillation of lava but no overflows.
Pool rising; diminished rumble between 5 and 6 p.m.
Nothing new in shape or quality of the lakes to photograph. Yellow stain in trench back of SE crags. NE and NW crags the same. Fumes from under W end high S bench.

From SE station.
SW cone has a rugged triangular hole six feet in diameter with stalactites hanging within and splashing lava surges up and slops out at intervals.
E pond has glow each end; middle part all black folded crusts.

T.A.J.

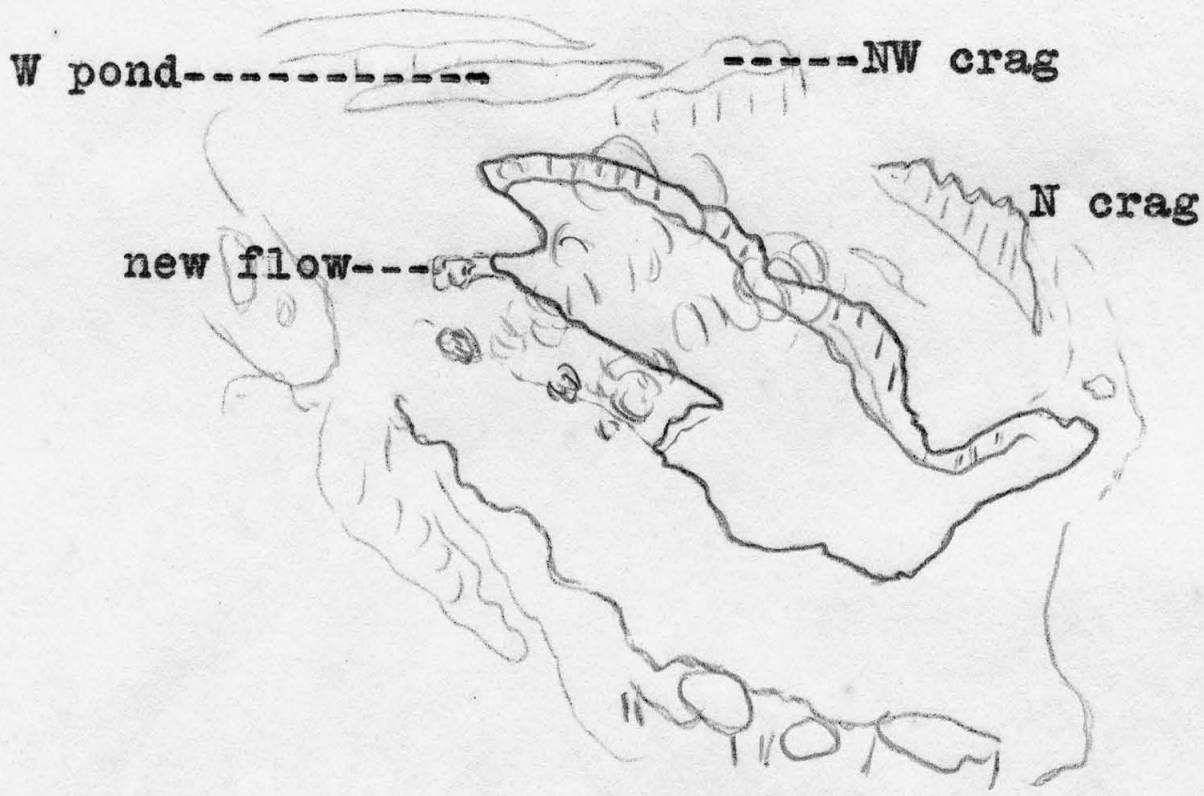
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Tuesday Date August 3, 1915.

9:30 a.m. From SE station.
One new overflow SW bench. SW cone large and orifice closed except crack. Streaming E. Many fountains N. W pond quiet streaming N. Both pools 10 or 12 feet down like yesterday. Much cracking along fume line edge second shelf S bench. S bench low. N wall higher.

From S:-



T.A.J.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Tuesday Date August 3, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
9:30 a	SE	NE	0					
	S	SE	0					
	SE	N point lake	34 43	32 17	-2			
	S	" " "	58 23ca					
	SE	Glow crack summit SW cone	62 10	33 40	-2			
	S	" " " " "	75 58					
	SE	S point	41 50	39 03	-3			
	S	" "	56 00	34 22	0			
	SE	NW grotto	41 22	26 55	-3			
	S	" "	70 14					
	SE	Grotto S cove	44 25	44 53	-3			
	S	" " "	48 36					
	SE	Stalac. W side SW cove	46 15	30 43	-3			
	S	" " " " "	69 40					
	SE	Pt. N entrance to E cove	25 54	43 46	-3			
	S	" " " " " "	42 23					
	SE	White spot glow-cone S bench	51 00	35 03	-3			
	S	" " " " "	66 13					
	SE	Bottom white spot under N crag	22 30	31 40				
	S	" " " " "	50 46					
	S	Window E cove	39 44					
	S	E tangent lake	38 00					
	S	S tangent W pond	78 52					
	S	N end W pond	69 26ca					
	S	S tang. new flows from W pond	85 30					

T.A.J.

			no	pl	scr	stop	ex	cam	

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Wednesday Date August 4, 1915.
Thursday " 5, "
Friday " 6, "

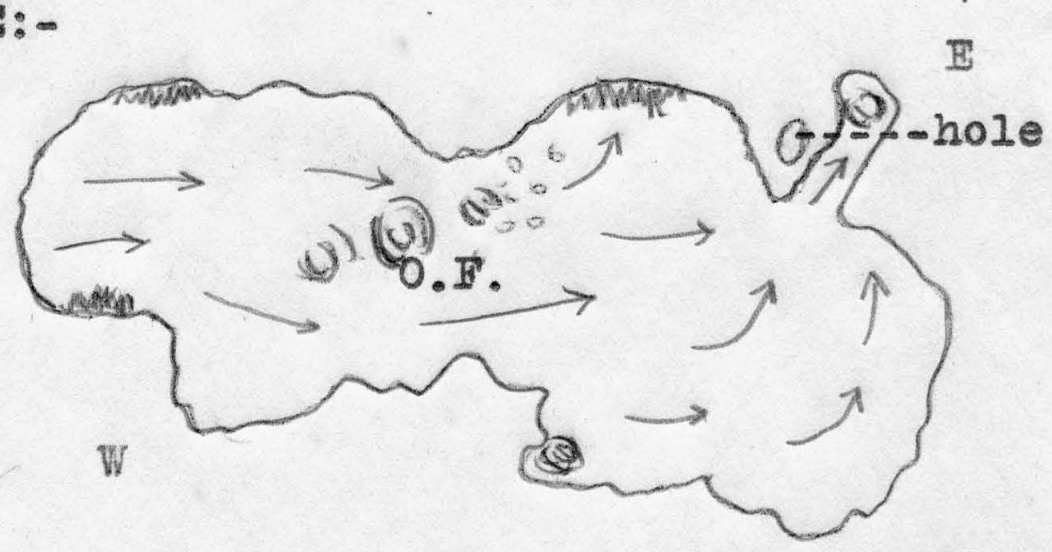
Aug. 4.
6 to 7 p.m. With Dr. Wm. H. Welch of Baltimore.
Lake crusted over W end. W pond moderately active against W bank and streaming N.
Streaming various in lake to perpetual fountains near N bank. O.F. erupting. Streaming eastward from western crust and later both E and W from this crust as a pond in the crust opened against W end. Flames from line of vents in S benches. Flame and fume from collapsed hole in summit of SW cone. Window in NE arm and a glow cone farther N in NE arm. Noises plashing. Lake appears about 12 to 15 feet down.
Fumes troublesome though moderate in volume as seen from H.V.O.

T.A.J.

Aug. 5. A very dry morning (relative humidity 76) and yet fumes appear thick.

T.A.J.

2:15 p.m. From SE station.
Surface of lake about 155 feet below rim. O.F. active.
Streaming E. NE cove active.
NW pond quiet.
Lake from SE:-



3:25 p.m. From S station.
No change in condition of the lake. Stream pouring noisily through tunnel at E cove.

Alex.

Aug. 6.
3:05 p.m. From W station.
NW pond very quiet; no glow visible except in the N cove toward which the lava is streaming.

Alex.

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date August 7, 1915.
Sunday " 8, "

Aug. 7.
2:40 p.m. From SE.
Lava in lake about 20 feet down. Many travelling fountains in middle. Streaming eastward.

Alex.

Aug. 8.
11 a.m. From S station.



"a" slopes down into lake; on right an inclined plane no cliff.
"b" is a cliff 12± feet high over "a". "a" is the S point which has subsided bodily into the lake.
"c" The N shore has also subsided from a cliff to a slope by downslips along many cracks parallel to lake shore.
The whole N platform is cracked. The E cove is wider and the N point of E cove may break away. New lava films overlap downsunken shores at "a" and "c".
Glow in insunken top of SW cone and N end of E pond.
Streaming into E cove. Stagnant slow skins over E end of lake. Fountaining N and W and bubble fountains S point. Fountains W side of W pond.
Noise plash. At present rising apparently. Streaming N from SW bank, eastward in E part of lake, toward shore westward in S cove. At E and W ends cliff over lake 15 feet high. Also W pond.
Fumes dense from E end. Much fume in NE trench.

T.A.J.

Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day **Monday** Date **August 9, 1915.**

t	sta	pt	hor	vert	lev	dist	elev	h. i.
11a.m.	S	SE	0					
	SE	N	0					
	SE	N stalactites	23 20	34 40	+4	674	463	
	S	" "	56 23	29 53	0	808	462	
	SE	S point	33 29	40 54	0	543	469	
	S	" "	55 52	36 19	-2	638	468	
								T.A.J.

			no	pl	scr	stop	ex	cam	

all

Massachusetts Institute of Technology

JOURNAL

Hawaiian Volcano Observatory

Day Monday Date August 9, 1915.
Tuesday " 10, "

Aug. 9.
11 a.m. W end collapsing in half circle. Much subsidence. Streaming N and E. S point was four or five feet high over lake. Many cracks SW bench.

Aug. 10.
9 p.m. From SE station.
W crag caving into lake. Great falls. Slow eastward streaming. At time of great fall streaming was W for a minute or two. Island(?) at N entrance to E cove. Flame in E arm. Many flames.

T.A.J.

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KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day **Tuesday** Date **August 10, 1915.**

t	sta	pt	hor	vert	lev	dist	elev	h. i.	
			no	pl	scr	stop	ex	cam	
9p.m.	SE	Lake		W.P.		6.3	1	T.A.J.	

1915, Augst 0.



Fig.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date August 11, 1915.

10 to 11 a.m. At first crust and fountain pools around border. Flooding S bench. Avalanche from N crag. Whole W end enlarged. N point E cove a peninsula with narrow neck. Noises blowing and plash. Sank 3 feet while watching, leaving S bench 3 feet high while cliff over lake at other points was 20 or more feet. Big SW cone an open crater. A 20-foot cliff around oval of SW bench.
W pond splashing.
By 11 a.m. crusts in lake broke up. Thin skins formed which drifted eastward.

T.A.J.

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Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

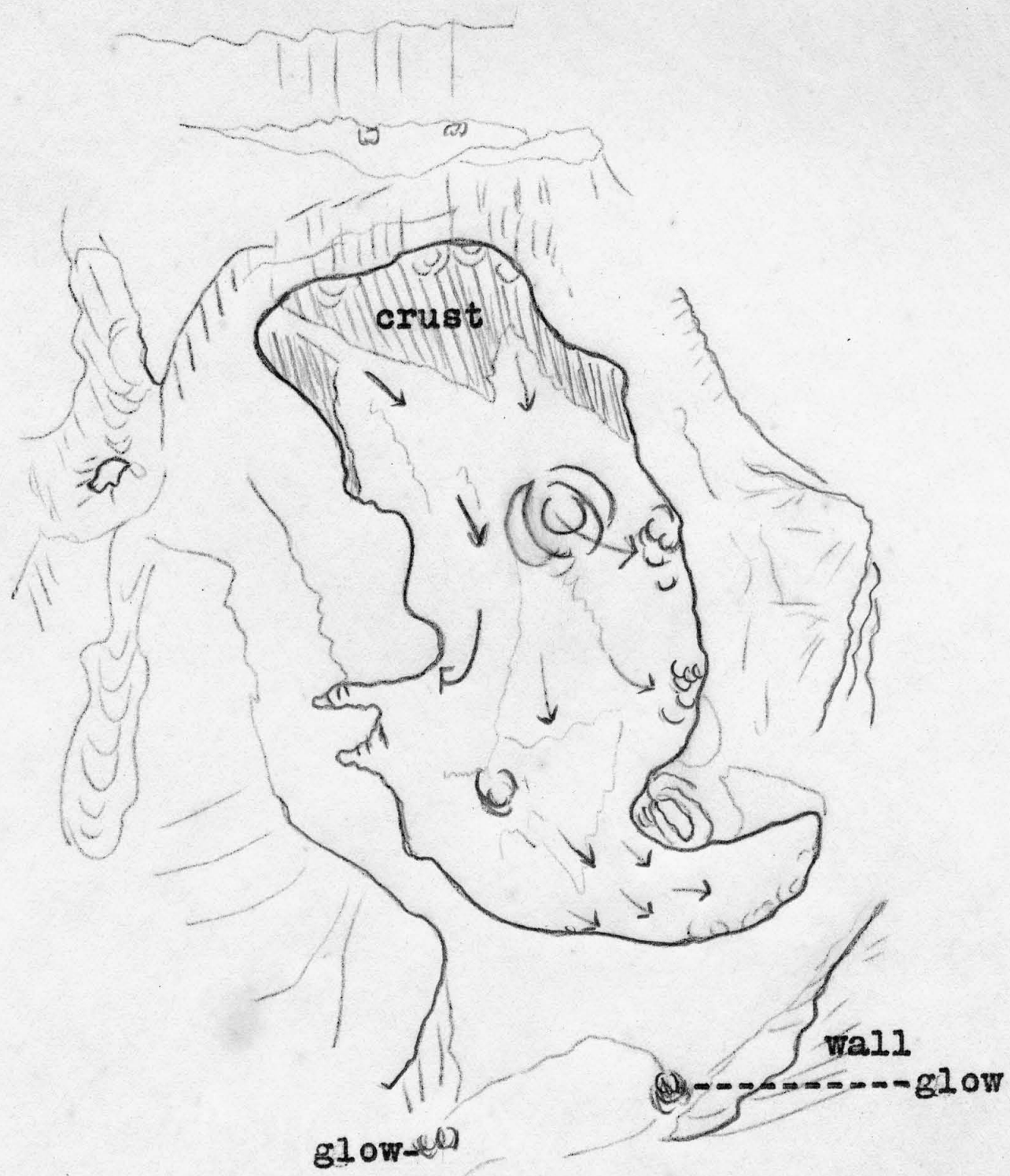
Day Wednesday Date August 11, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	
			no	pl	scr	stop	ex	cam	
X	11a.m.	SE	Lake		W.P.		11.3	1/15	
								T.A.J.	

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day **Friday** Date **August 13, 1915.**

2:30 p.m. From SE station.



Streaming E from crust W end. Rush into E cove. Noise plash. Walls 30 feet high. S and N banks 6 feet high. Pools in crust W end. Bombardment N bank and E cove. Slight spurting SW cone, now high over lake level. Two glow cones at site of E pond. W crag saddle has crumbled to a knife edge and shape of crag changed and lowered. Like a river eastward, cf. last December and January. Blue fumes from S banks and SW cone pit, and white fumes from SE crags and cliff S of W pond. W end of lake still wider than two days ago. The rush into E cove is in pulsations every ten or fifteen minutes with quiet times between.
W pond splashing.

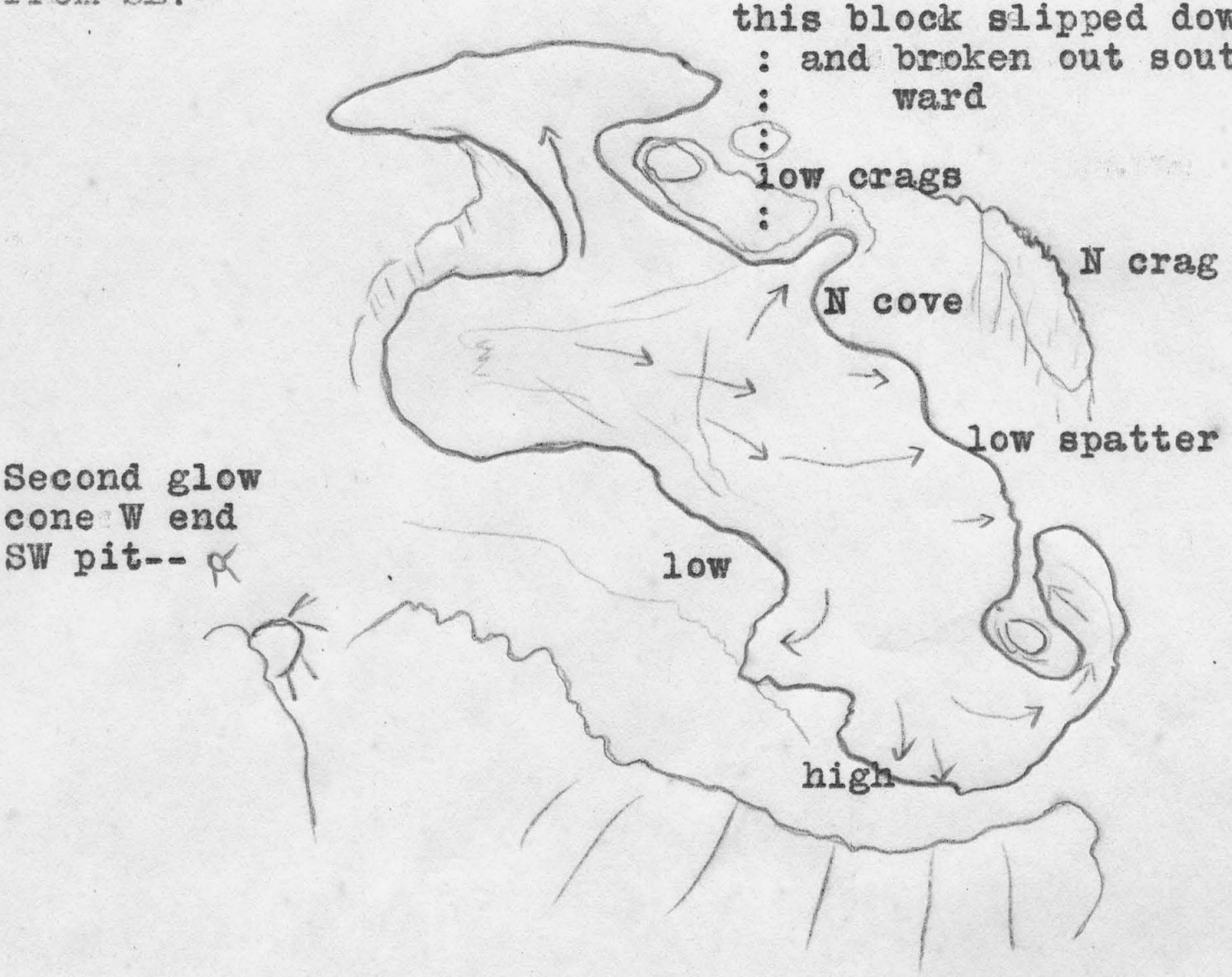
T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Saturday Date August 14, 1915.

3 p.m. From SE station.
The saddle between the two lakes has fallen in and the lakes are one. The NW grotto has fallen in and made a finger cove, into which the lava rushes. E cove and W pond-cove relatively quiet. Peninsula at E cove still connected by isthmus N. Bombardment and overspatter NE bank. Continuous fountain middle E end.

From SE:-



T.A.J.

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

KILAUEA DAY SHEET

Day Saturday Date August 14, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
		(New transit)						
3:15 p	S	SE	0					
	SE	NE	0		+5			
	SE	E point N cove	35 46	32 13	0	722	453	
	S	" " " "	60 20?					
	SE	Stalac. W bend W pond	43 10	23 46	0	1057	462	
	S	" " " " "	76 44					
	SE	N entrance E cove	23 41	45 26	0	454	461	
	S	" " " "	40 34	33 54	0	696		
	SE	Notch next peninsula, W of it	25 11	41 52	0	512	458	
	S	" " " " "	44 18					
	SE	N crag	22 16	29 34	0	716	405	
	S	" "	50 51					
	SE	SW cove	50 50					
	S	" "	75 55					
	SE	Inner end N finger	34 40					
	S	" " " "	61 44					
	SE	S point	41 18					
	S	" "	55 48					
	SE	W side S cove	45 28					
	S	" " " "	56 05					
	SE	E side SW cove	47 06					
	S	" " " "	69 07					
	SE	E end E cove	17 33					
	S	" " " "	37 44					
	SE	N notch crater SW cone	61 03	33 10	0	638	416	
	S	" " " " "	74 41					
	SE	N side strait to W pond	41 54					
	S	" " " " " "	71 20					
	SE	S side strait to W pond	43 31					
	S	" " " " " "	73 51					
	SE	N end W pond	ca36? 39					
	S	" " " "	69 36					
	SE	S " " "	48 53					
	S	" " " "	80 10					

Length of lake.....690'
Width " " .....150'
Length of W pond.....225'

Mean depth.....458'
SW cone over lake 42'
N crag " " 53'

t	sta	pt	no	pl	scr	stop	ex	cam
2:30p	SE	Lake	1	W.M.		11.3	1/15	
"	"	"	2	"		"	1/10	
3p.m.	"	"	3	"	vz	"	½	
3:15p	"	SW cone	4	"	"	16	"	

T.A.J.

1915, Aug. 14.



#1



#3



#2



#4

Jag

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Sunday Date August 15, 1915.

10 to 12:30 a.m. Very smoky. Occasional seeing from SE station. Lake down about 10 feet or more since yesterday. Cannot see W pond. Strait to W pond now a cove of lake and bench crust over strait. Spatter ramparts all around and stalactites. Rampart 10 feet high E cove. Bombardment N shore. Streaming E and N from SW cove. N finger narrow and stagnant, curved to W at its inner end. Noises plash, rumble and long hiss occasionally from SW cone. No sign of any more tumbles. Merely general subsidence and more crusting and higher immediate spatter banks

T.A.J.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Sunday Date August 15, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.

			no	pl	scr	stop	ex	cam
10a.m.	SE	E end lake	1	W.M.		11.3	1/10	
	SE	W " "	2	"		"	"	
	SE	E " "	3	"		"	"	
								T.A.J.

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1915, Aug. 15.



#1



#3



#2

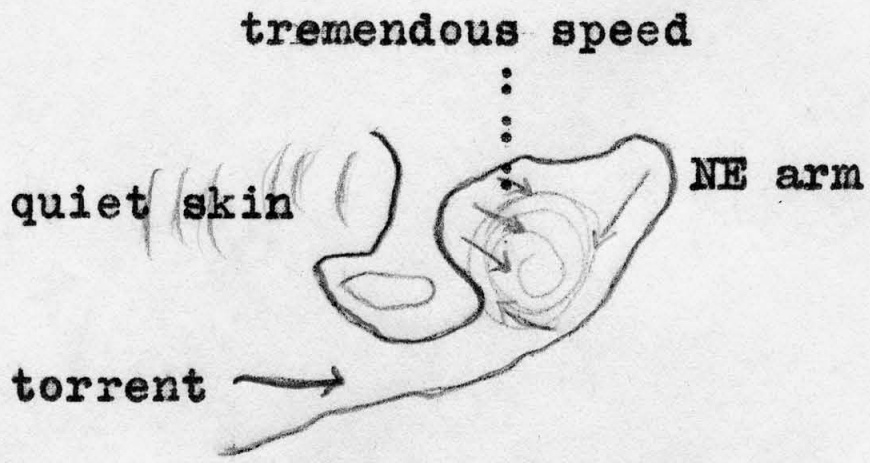
Jag

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Monday Date August 16, 1915.

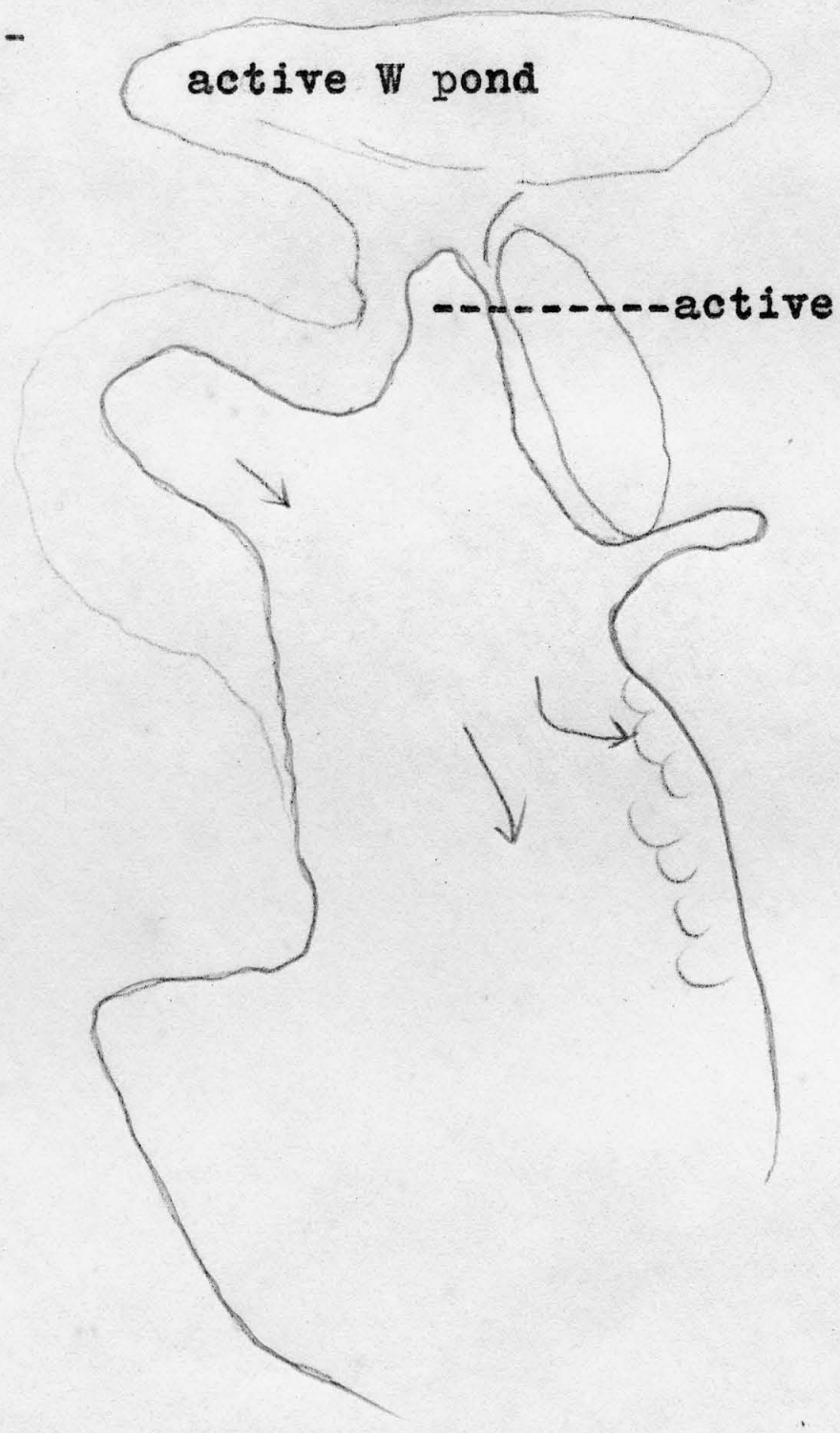
11 a.m. From SE station.
Streaming SW to N and E. Rush into E cove, cataract, thus:-

From SE:-



Streaming in cove from three directions and whirlpool. Cataract under isthmus of peninsula. W end cove opposite straait, cove in SW embayment, N finger narrow. Activity in W pond. Straitt a bench.

From SE:-



Very smoky. Fresh NE wind.

T.A.J.

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Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Monday Date August 16, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
11a.m.	SE	N (loc. off 2 days ago)	0					
	SE	S point	31 18	39 40	+2	555	459	
	SE	SE crag #	26 24	51 04	+02			
	SE	SW cone	51 14	33 22		638	419	--THree feet lower than on Aug. 14

#Cf. old measures.

T.A.J.

			no	pl	scr	stop	ex	cam	

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Tuesday Date August 17, 1915.

4:30 p.m. From SE station.
Very smoky. Still lower.
Dim from NW station; view of active border W pond.
E side of S point caving back. SW cove and cove into W strait more defined with deep banks. N finger a narrow cleft. Streaming E from SW to N bank. Stalactites S point and N bank. Streaming into W strait. E cove quiet

From SE:-



Quiet skins over most of lake. Noise plash. No glow seen in southernmost of two E pond pots. Northern one a large round lava pot. SW pit appears deeper. Large fountaining place begins near E end.

4:45 p.m. Rush into E cove begins, showing that the downsinking of E cove recurs from time to time as formerly.

T.A.J.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Tuesday Date August 17, 1915.

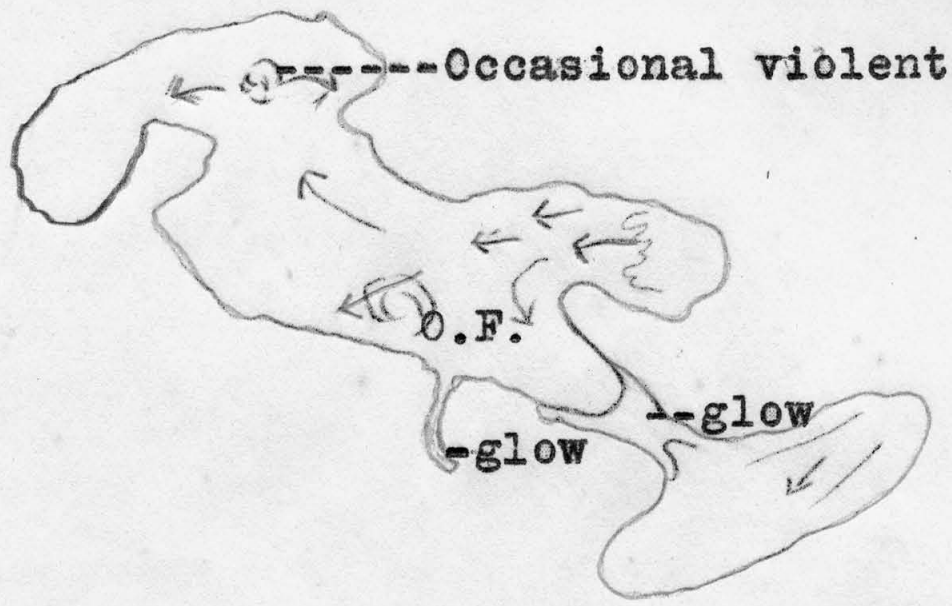
t	sta	pt	hor	vert	lev	dist	elev	h. i.
4:30p	SE	S point		40 32		555	474	
		16 feet lower than on the 14th.						
								T.A.J.

			no	pl	scr	stop	ex	cam	

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date August 18, 1915.

6 to 8 p.m. Smoky all stations. No marked change. Streaming from SW cove. No rush into E cove, but moderate activity. From O.R.H.:-



Occasional blowing SW. Bank appears 15 feet high S point. No continuous connection of moving lava seen through strait to W pond. W pond quiet skins, N streaming. Too much smoke for night photo.
Seeing through smoke SE and N.

T.A.J.

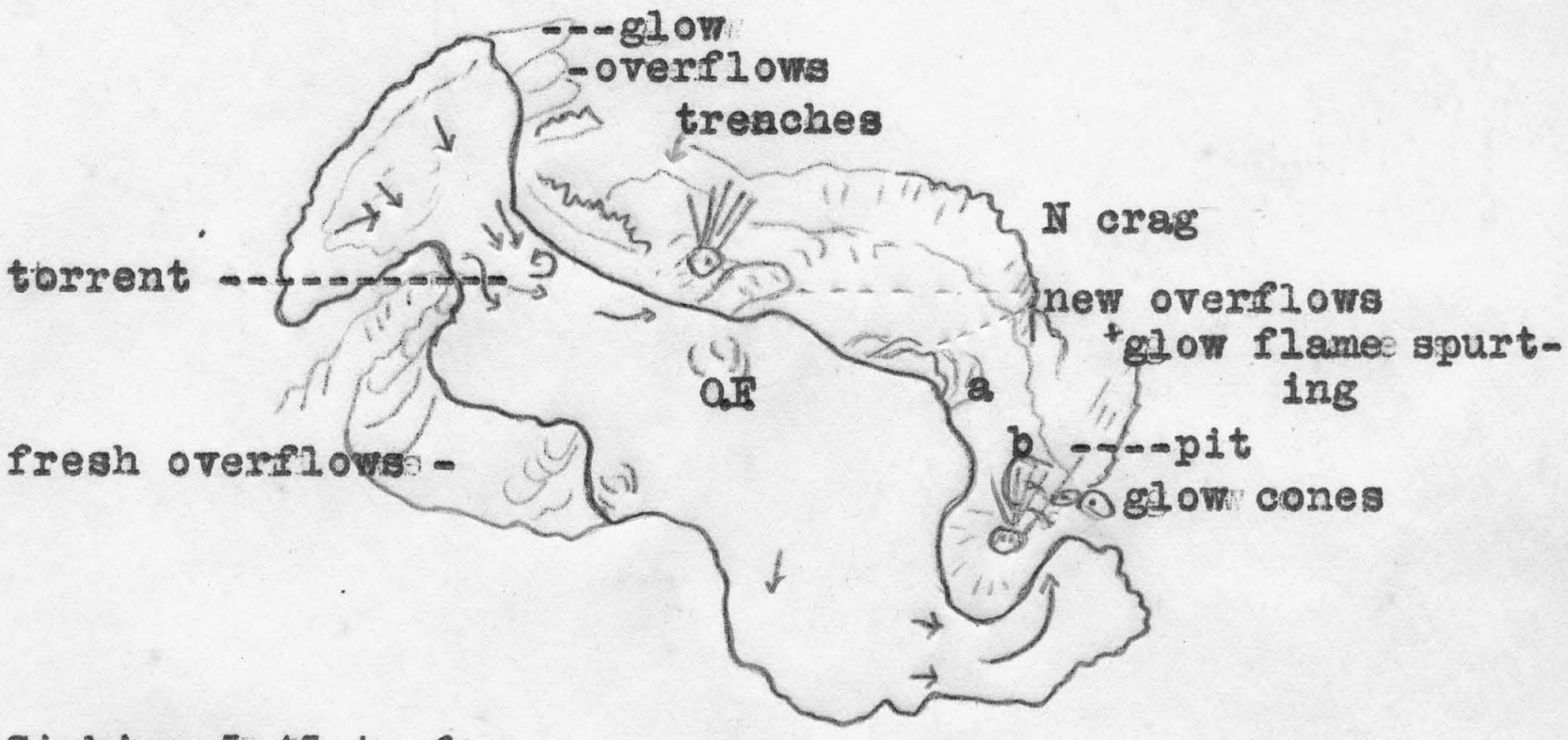
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

 Day **Thursday** Date **August 19, 1915.**

6 p.m. From S station.
Fumes this morning appeared thin and diffuse. Confirmed now by finding marked rise of 20 to 25 feet. Broad torrent pouring from W pond to lake and blowing pots E point and N finger. Steady continuous hiss about SW cone. Occasional violent hisses at the blowing pots. High gas pressure. Blowing pots spurting 60 to 100 feet.

From S:-



Sinking 5:45 to 6 p.m.
Rising 6 to 6:15 with overflows as shown.
Flow "a" seen to join "b" surrounding blowing cone. Both blowing holes building cones rapidly. Great flows over N bench and SW bench.

6:20 p.m. The west river broader but much slower, streaming from ragged skin over S end of W pond. Cooling skins over E end. Entire N bench flooded. Renewed subsidence at 6:25 increases speed of flow in E cove and W channel. Line of border fountains N bank. Tremendous spurts E blow hole. Some in NE trench blow hole. Lava splashing up in N finger pot. Fountaining N and S ends W pond.

9 to 11 p.m. Same mechanism in alternations of rising and falling: twenty minutes rise, ? minutes (longer?) fall. Low at 9 p.m. Seeing SE. Torrent rapid and narrow from W pond sloping down to lake. Lake lava streams W to meet torrent, overlapping it with a surface layer as in photograph of whirlpool 1913. Sputts from E blowing cone moderate, blue flame there. About 10 p.m. rising in progress; overflows on benches.
At 10:30 tremendous rise, cataracts overflow into trench NE from E cove and N bench, from N bench northwestward into voids among the crags. Then the lava backed up. Streaming reversed in W channel, and the W pond overflowed its N end and poured a torrent into N trench. Main lake a great flood of overflows in all directions with zigzag glow lines and quiet skins. Performance just as in February-March 1913. Must have risen 20 feet while we watched and fully 40 feet

above level of yesterday.
At 10:50 sudden change to sinking. Lake resumed its W to E river-like quality. Greatest spurting and gas pressure during rising. Current slow during rising. Fountaining less during rapid rise.
11 p.m. sinking when we left.

T.A.J.

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Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day **Thursday** Date **August 19, 1915.**

t	sta	pt	hor	vert	lev	dist	elev	h. i.	
			no	pl	scr	stop	ex	cam	
		Plates W.P. and W.M.							
9	S	E end	1			6.3	1		
	S	W "	2			"	"		
to	S	Whole lake	3			"	"		
	S	" "	4			"	60		
10:30 p.m.	S	E end spurt	5			"	1/20		
								T.A.J.	

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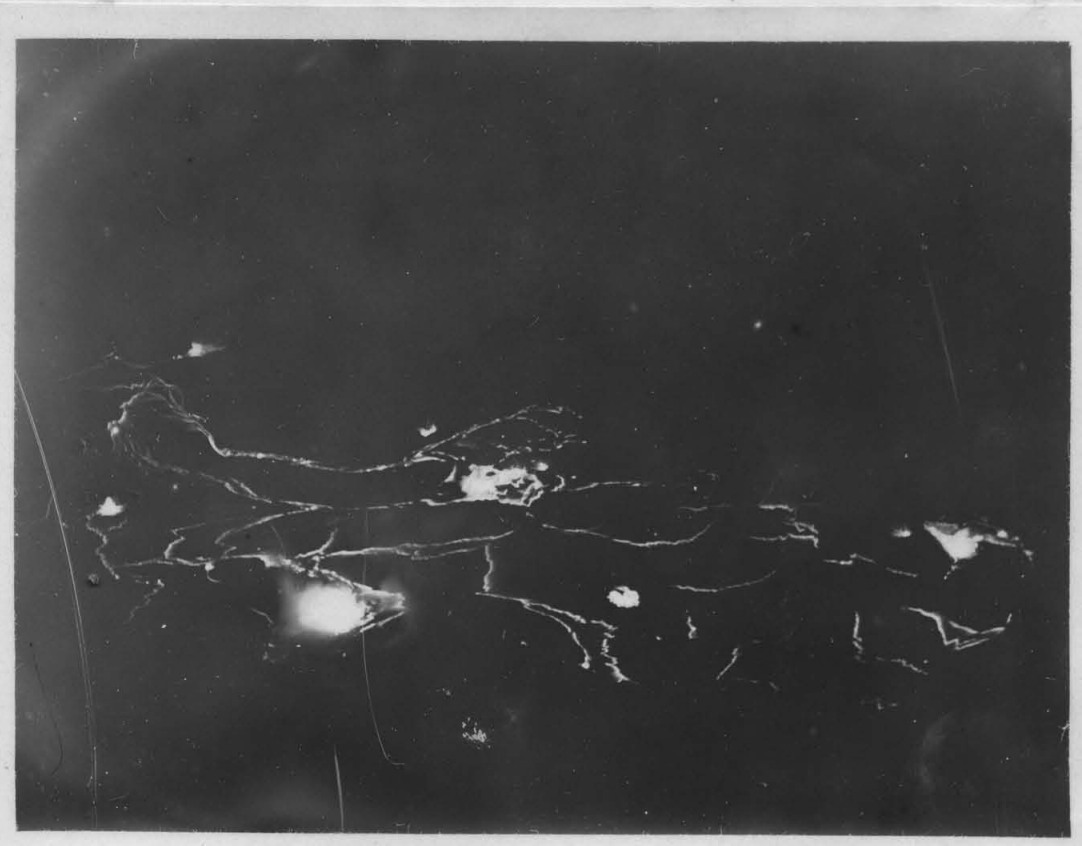
1915, Aug. 19.



#1



#2



#3



#6



#4

Tag

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Friday Date August 20, 1915.
Saturday " 21, "

Aug. 20. Still active with much change of direction of streaming. Some sinking. Fumes a little more.

Aug. 21.
12 noon. Fumes much less. Rising. Rapid river from W pond. Lake brimming. Hiss SW continuous. Rhythmic hiss E. Border overspatter; cones N and S, and N end W pond. N crag surrounded by new floor. Two smoking remnants of W crag. E blowing cone a round lens with small hole in summit; and quiet. E cove brimming and stagnant, surrounded by flat floor. Main shape of lake the same but broad new floors N, SW, and whole length NE trench from E cove to N end of W pond. Streaming E to W. O.F. small and insignificant. Heat great. Fresh overflows of last two hours NE, N and SW and end of E cove. Very violent blowing from E cove. Undermined cavern and glow under NE cliff in NE trench.
12:30 p.m. Slight subsidence followed by rising. Change in speed of torrent.

T.A.J.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Saturday Date August 21, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
11:30a	S	SE	0					
	SE	N	0					
	SE	S point	34 21	37 53	+2	551	428	
	S	" "	57 00	33 50	0	638	427	
	SE	N spatter	21 24	36 01	+2	588	426	
	S	" "	51 17	29 52	0	752	430	
	SE	SW cone	52 48	33 14	+2	626	409	
	S	" "	74 48	36 36		551	409	
	S	N crag (?61 00)	?51 00	24 04		ca908	ca403	
	S	SE crag	34 25	35 06				

			no	pl	scr	stop	ex	cam
11:30 a	SE	Lake	1	W.P.		11.3	1/15	
	SE	Pan. SW	2	"		"	"	
	SE	" N	3	"		"	"	
	SE	Cascade instan.	4	"		8	1/25	
								T.A.J.

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1915, aug. 21.



#1



#4



#2



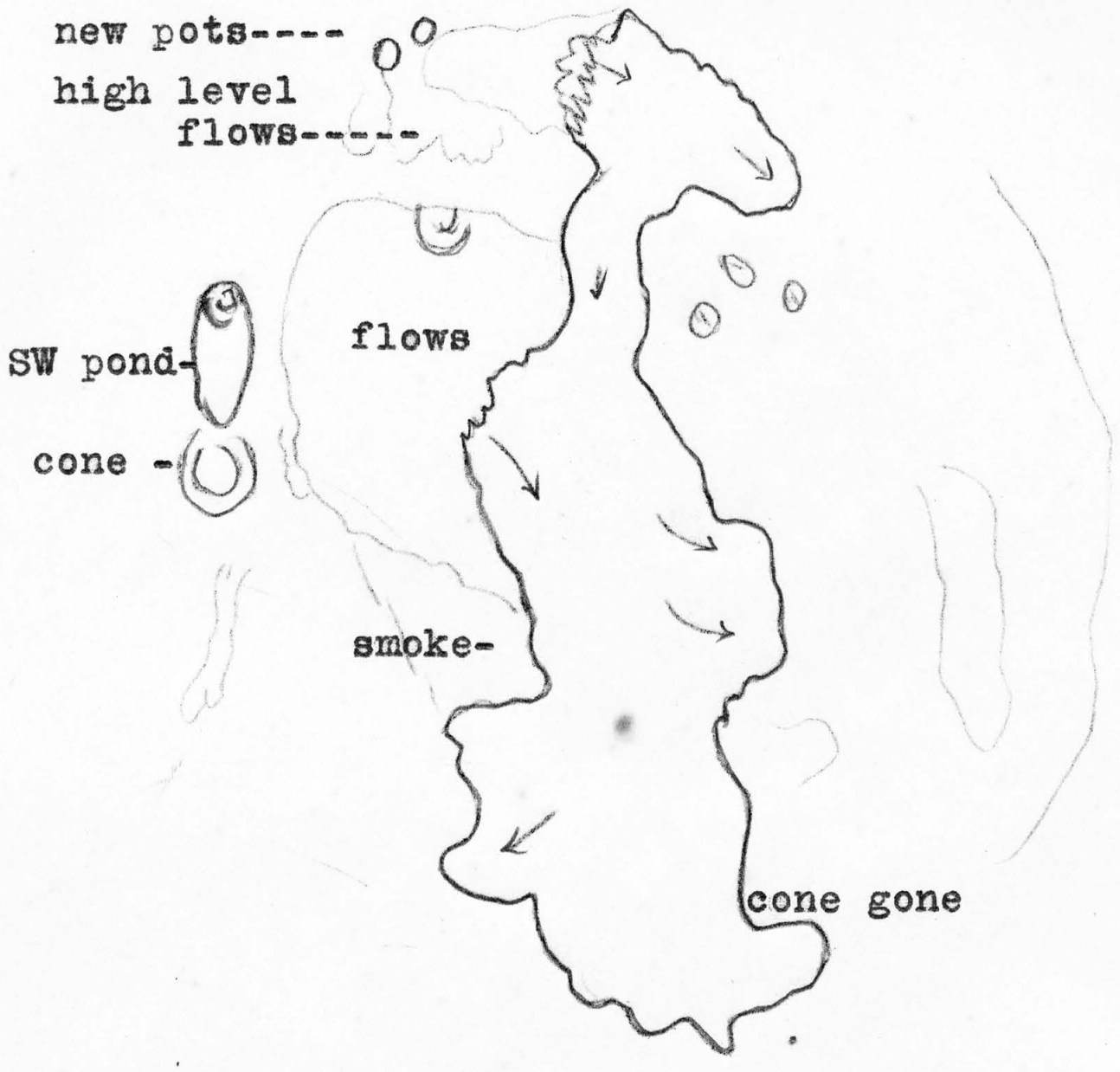
#3

Jag

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Sunday Date August 22, 1915.

5 p.m. From SE station.



Lake brimming. Noise plash and blow. N bank eaten back by bombardment. Streaming E. E cone gone and point receded.
SW pit now a pond with fountain W; mostly crust.
River still from W pond, backs up during rising spell.
Rising at 5 p.m.; begins sinking at 5:15 p.m.
Glow cavern still NE. High level source of flows eastward S of W pond. The river still between walls. Lake about on level of base of SW cone. SW pond probably same level. Puffing at intervals SW. Oversplash ramparts S, N, SW, E and end of E cove and N end of W pond. Also W end of SW pond. Major bombardment N.
Great blocks of skin float down river eastward and skins fan out in lake to the E.

T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Monday Date August 23,1915.

9 to 10 p.m. W pond from NW station at 10 p.m.:-



Subsidence? Tumultuous and changing streaming and fountaining. Island broken away from point N entrance to E cove. Streams E both sides of island and tumultuous inrush back of island on its NE side. New hole with spatter in SE ledge. SW cone spattering and high. W end SW pond glowing. Fountain W side SW cove. SW cove otherwise crusted. Crag over W end of a new bay in N bank. Two pots glowing and sputtering at ends of E pond. W river backs up and reverses current every little while. Vortex N side W torrent near its mouth. Pit fumy. Noise plash and puff. Streaming and pattern and island action <u>like day and night photo of time of sudden rise and fall in spring of 1913.</u>
S point appears 10 or 15 feet high.
Island result of subsidence and rising alternating over block which made peninsula before? Plastering?

At 10:30 p.m.:- SW cone



Sketch from NW sta.

T.A.J.

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KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Monday Date August 23, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	

1915, aug. 23.



#2



#3



#1



#4

Jag

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Tuesday Date August 24, 1915.

7 p.m. From SE station.
Slight sinking. Flows pouring around SW cone from SW pit. Flow from a pot S of W pond into W pond. Fresh flow glow cracks in N trench and between S side of river and SW benches. This SW slope S side of river has seen much overflowing of late from a cone or pot S of W pond which drains both into W pond and into SW cove, while the original promontory S side of river still persists.
Streaming E around island.
Glow pots gone from E bench and from SE bench. S point appears 20 feet high.
Line of travelling fountains down E middle. O.F. hardly recognizable.

T.A.J.

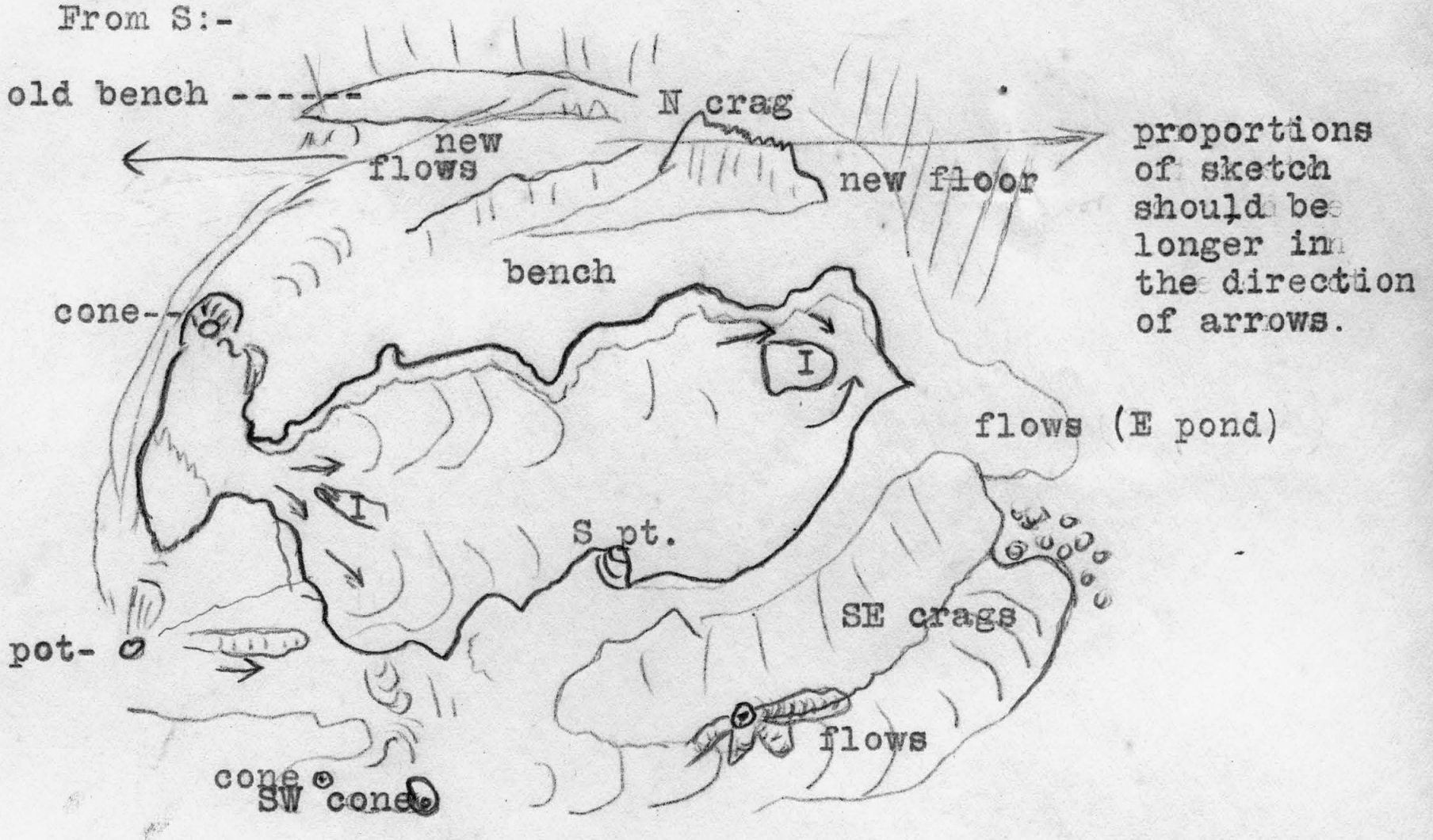
Massachusetts Institute of Technology
Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date August 25, 1915.
Thursday " 26, "

Aug. 25. Fumes appear a little thicker in the daytime.

Aug. 26.
8:45 a.m. Rising. Extensive overflows from lake since night before last. SE valley back of SE crags full of a wide flow from lake. Overflows from SW pond to SW cove of lake. SW cone a beehive 15 feet high, glow hole, "doughnut" top. S cone back of W end of SE crags new, with small radial festooned trickles away from it. A small talus only between E pond and new flows in SE valley. S point high by spatter. Spatter bench now around lake 6 feet high. Straight slope with sluggish moving flow on it E from W pot. Sheaf-like flow moving N into W pond from W pot, passing under a bridge of crust. Large beehive half-cone N end of W pond, bombarded. S half of W pond skinned over. Last remnants of W crags covered with new flows. New flows in E pond bay glowing. Conelet in SW pond; this pond has no definition now -- is merely a bay in the floor of new flows. Same is true of E pond.
Streaming E. Fountaining and blowing. N crag high. Considerable floor of overflow between SE crags and lake. Small island nucleus divides river like a shoal, apparently block from SW promontory now submerged.
From S:-



9:15 a.m. Temporary subsidence. E half of cone N end W pond fell in. Walls around lake 10 feet high.
There is a yellow stained cave or niche in the old wall at its base SE, 20 feet high; probably the orifice of the old SE chimney so persistent all last year.

T.A.J.

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Massachusetts Institute of Technology

Hawaiian Volcano Observatory

KILAUEA DAY SHEET

Day Thursday Date August 26, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	
			no	pl	scr	stop	ex	cam	
8:45a	E of S	Pan. W end lake	1		vz	11.3	1/5		
		" E "	2		"	"	"		
	SW	SE crags & E end	3		"	"	"		
	"	N crag & lake	4		" "	"	"		
	"	W pond	5		"	"	"		
		(shows W pot, flows, bridge, & incipient isl. in river)							
10a.m.	S	The E island	6			16	1/20		
								T.A.J.	

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1915, aug. 26.







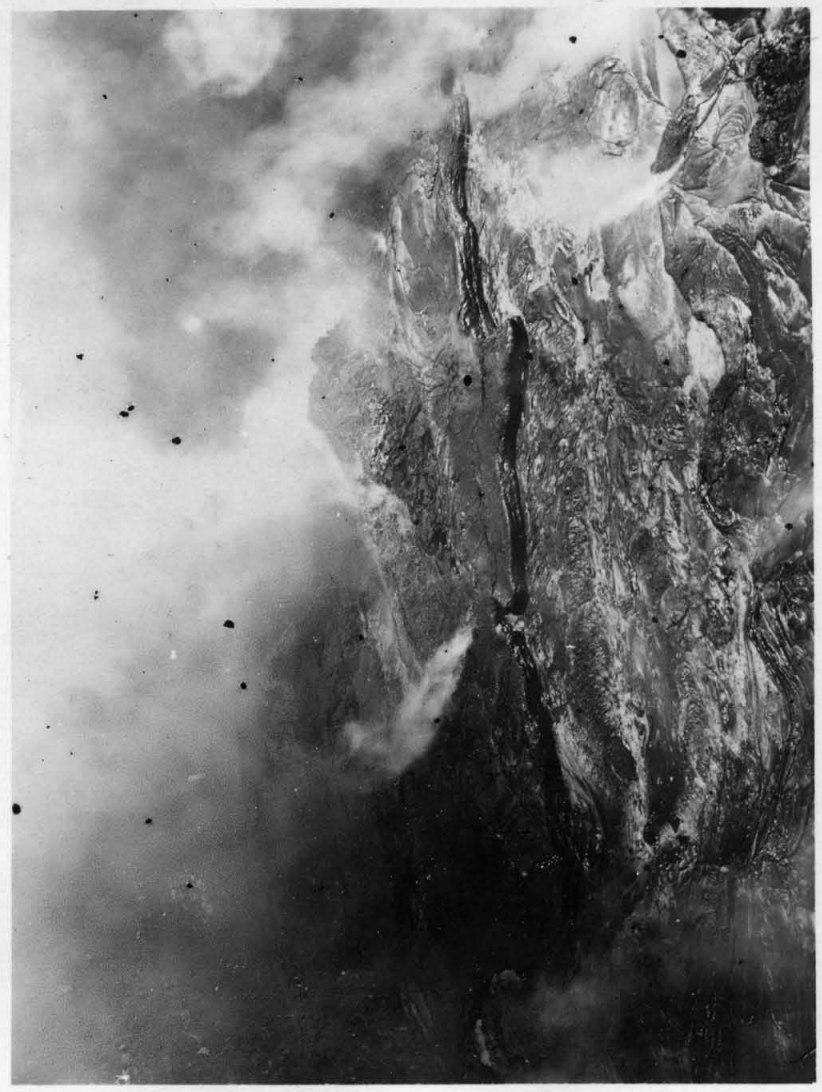
1915, Aug. 2



3



5



4

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

JOURNAL

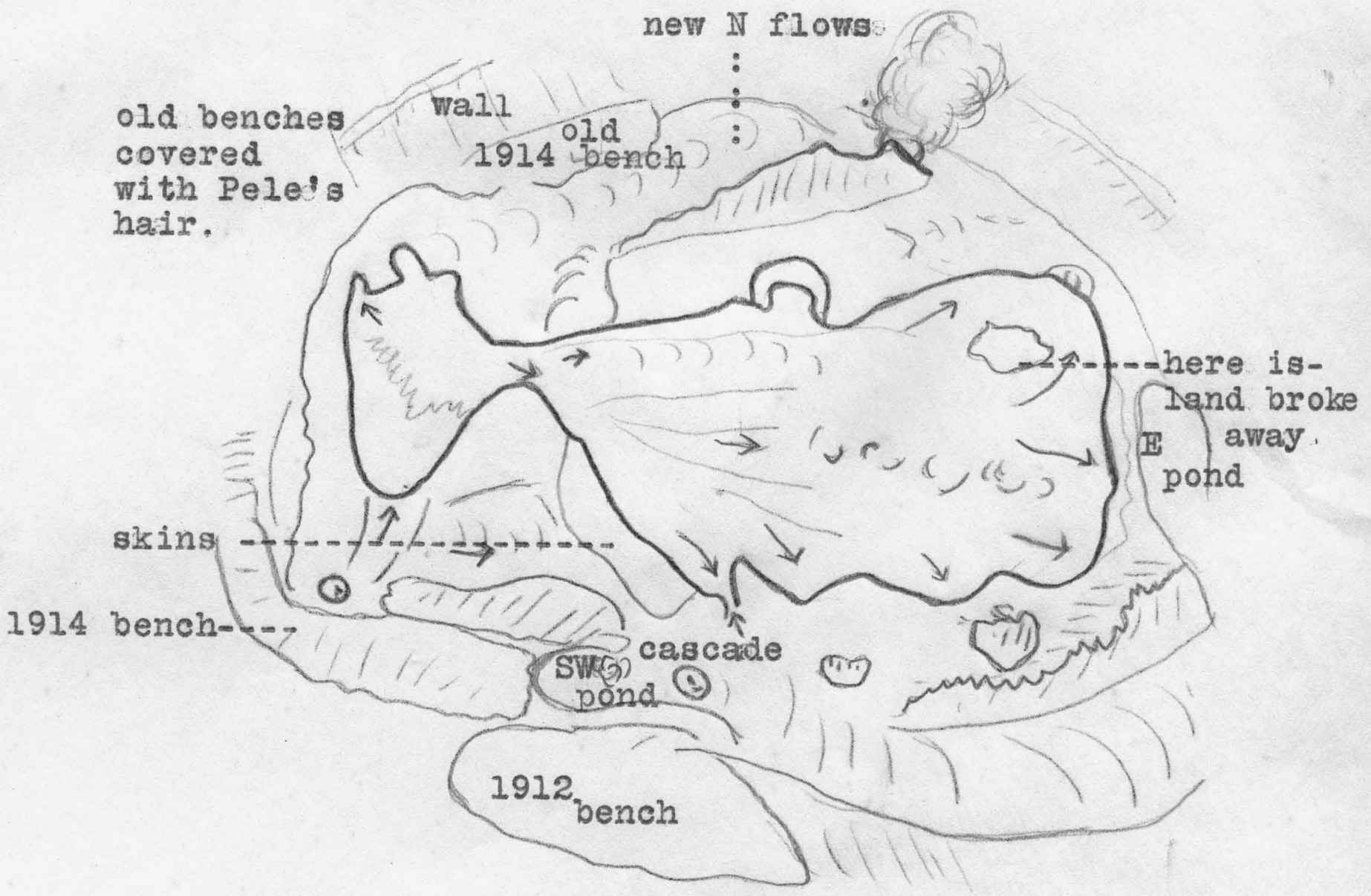
Day Friday Date August 27, 1915.

9:25 a.m. Great rise. Thin fumes.
Sinking slightly to 11 a.m.

12:20 p.m. Thinnest fumes seen this year. New flows from W pot (now a cone) N and E. Rising from 11 a.m. to 12:30 p.m. Great heat on faces. W cone appears to be main source and highest one. Steady stream from W cone into W pond and river from W pond E. Streaming E. Steady small cascade into SW cove of lake from SW pond, (or from under SE flows?). Great new floods of flow in SE valley from a rise of lake apparently not from SW pond, or from a backing up of SW pond by a rise of lake. E pond separated from the lake by the lake spatter ramparts.

12:30 p.m. Crusts of E pond break up and lava wells up. Most of morning three or four foot bench around lake. Flood new lava glowing from N end W pond back of N crag. Large spatter cones NE corner lake, N end W pond (three grottoes), N side lake, and spatter rampart all along S and E banks. Lake greatly widened S of island. Noise plash and pound, and occasional hissing.

1:00 p.m. Sinking. From W station:-



Late evening reported overflowing the island.

T.A.J.

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Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Friday Date August 27, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
9:30a	NW	(set up 4' toward pt. E of W sta.) to W sta.	0					
	"	W pot	12 42	40 24	+5	468	397	
11:25a	W	(4' toward E sta.) to SW	0					
	"	W pot	104 00					
9:30a	NW	S end W pond	14 54	46 24	+5	412	431	
11:25a	W	" " " "	108 40					
9:30a	NW	Wside W pond	14 36					
11:25a	W	" " " "	114 55					
	NW	N end W pond	43 41					
	W	" " " "	105 54					
	NW	S entrance strait	34 50					
	W	" " "	96 48					
	NW	N " "	38 18					
	W	" " "	97 43					
	NW	1st cove SW	32 31					
	W	" " "	91 34					
	NW	2nd " "	33 37					
	W	" " "	81 39ca					
	NW	3rd " " cascade	?45 29	35 11	+3	592	416	
	W	" " " "	71 09	39 48	0	517	430	
	NW	SW point	47 16					
	W	" "	73 37					
	NW	Cove E of SW point	48 54					
	W	" " " " "	68 31					
	NW	Fum. N base SE crags; bench level	57 29	28 39	.0	722	404	
	W	" " " " " "	61 45					
	NW	SE corner lake	62 34					
	W	" " "	61 03					
	NW	SE knob lake	65 19	27 00	0	823	417	
	W	" " "	61 19					
	NW	NE " "	76 40	29 22	0	922	518	
	W	" " "	71 50					
	NW	NE end island	74 00					
	W	" " "	71 36					
	NW	W " "	71 10					
	W	" " "	72 06					

(continued)

			no	pl	scr	stop	ex	cam
9:25 a	NW	SE crags. Island large	1	W.P.		11.3	1/15	
9:36 a	"	N crag & island. Half off island fallen in.	2	"		"	"	
	"	W pond	3	"		"	"	
Noon	W	Pan. SE	4			"	"	
"	"	" W	5			"	"	
								T.A.J.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

- 2 - Day Friday Date August 27, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
NW	NW	N knob lake	66 13	72 15				
began	W	" " "	78 15					
at	NW	Half-crater next N knob	66 51					
9:30 a	W	" " " "	81 06					
	NW	Tangent floor N	97 26					
	W	" " "	94 10					
W	NW	N crag ca.	86 25					
at	W	" " "	87 12	24 17	-4	887	401	
11:25a	NW	Spouting pot NE, (bench level)	78 36	30 20	0	918	536	
	W	" " "	74 33					
	NW	W end N crag area	72 22					
	W	" " " " "	92 19					
	NW	Fountain SW pond	34 53	31 06	0	436	263	
	W	" " "	60 21					
	NW	W end SW pond	30 16					
	W	" " " "	56 58 ca					
	NW	SW cone summit	40 38	28 49	0	515	283	
	W	" " "	55 50					
	NW	W outlier SE crags	51 17					
	W	" " " "	60 11					
	NW	W end SE crags	51 34					
	W	" " " "	55 25					
	NW	SE spouting cone	53 25	25 22	0	723	341	
	W	" " "	52 55					
	NW	SE talus (new flow level)	62 40	21 53	0	942	376	
	W	" " " "	49 49					
	NW	White boulder 1914 bench	53 10	22 04	0	974	392	
	W	" " " "	44 47					
	NW	E end 1914 bench	62 37					
	W	" " " "	47 29	21 02	+1	743	285	
	NW	W " " "	38 18					
	W	" " " "	52 40					
	NW	E " 1912 200-ft bench	40 40	23 12	0	597	255	
	W	" " " " "	38 31					
	NW	W " " " " "	?42 10	24 06	0	564	252	
	W	" " " " "	48 51					T.A.J.
		(continued)	no	pl	scr	stop	ex	cam

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

KILAUEA DAY SHEET

- 3 - Day Friday Date August 27, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
NW	NW	Top SW talus	21 48	11 05	0			
began	NW	" SSW "	37 54	6 24	0			
at	W	" " "	16 22					
9:30 a	NW	W end 1912 60-ft bench	43 32					
	W	" " " " "	20 52					
	NW	E " " " "	50 47					
W	W	" " " " "	28 29					
at	NW	E end SE crag ca.	69 24					
11:25a	W	" " " " "	58 33	22 23	0			
	NW	SE fum. bench level	67 58					
	W	" " " "	61 21					
	NW	E " " " (ca N end E pond)	74 25	27 05	-3	798	407	
	W	" " " " " " "	67 38					
	NW	E side stream N from W pot	21 38					
	W	" " " " " "	101 31					

Length lake	700 feet.
Width "	220 "
Floor	780 x 730 feet
Depth	416 feet
" 1914 bench S	392 "
" to W pot	396 "
" to floor	407 "

T.A.J.

			no	pl	scr	stop	ex	cam	

248

1915, Aug. 27



#3



#1



#2

249

1915, Aug. 2



#4



#6

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Saturday Date August 28, 1915.

10 to 11 a.m. Since the previous day the flows of E pond and SE valley merged back of SE crags. Flow in SE valley is <u>westward</u> into SW cove. At SW cove cascade running into lake from joint flow from under crusts of SW pond and SE valley. Round pot boiling sluggishly in SW pond, occasional great belch. Ribbon river from W cone to W pond. W end lake brimming, E end two to four feet below bank. Large spatter cone N bank and N end of W pond. Major line of fountaining and bombardment into this cone. Rim glow-cone SE. Cones NE bank, E pond, SE valley, SW and W.

<u>Note</u>. Streaming from W cone, SW pond, SE cone, E cone, under crust all the time into the lake, under surfaces which appear frozen.

More encroachment on SE talus. W outlier of SE crags now covered. Smoke SE crag, S fumarole crag near lake, N crag, SW pond margin. Blue fumes from spatter cones. E, SE and SW cones knobby; quiet. Island smaller. Hissing E end. W pond and W cone now on same level. W pond 50 feet below 1914 bench. General streaming east. Lake laps up SW cove over cascade farther,

T.A.J.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Saturday Date August 28, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	

				no	pl	scr	stop	ex	cam
10 a	From SE rim E of S station:-								
		E end	(sun)	1		vz	11.3	1/3	
		Middle	"	2		"	"	"	
		W end	(clouds)	3		"	"	"	
									T.A.J.

1915, Aug. 28



#1



#2



#3

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Sunday Date August 29, 1915.

9 to 10 a.m. Lake still rising - same rate. Fumes thin veil. Crags more submerged. SE valley floor overlaps bench of 1914. There are now five cones sources of border flows: E, S, SW, WSW (the fountain of SW pond) and W. The flows also NE and N appear to follow around edge of pit back from lake rampart and to have risen ffrom fissures except at N end of W pond where overflow from lake has taken place. The S promontory of W pond now ill defined - submerged. W cone still sends stream N, and W pond a river E. Whole W end is overflowed but not E, N, or S. Here the border filling is fed from border vents. SE crags now three islands in floor, largest E. W end of N crag area all submerged in flows. N spatter cone longer E-W. NE spatter cone is gone. Island has been flooded and is square and flat. Lake brimming. Overflow W, oversplash S, overspatter E and N. N spatter of W pond not high. Smoke ffom crags and talus at end of SW pond. This and the "east" pond were no longer ponds but were coves in the floor with cone feeders.
W end appears 25 feet below 1914 bench. Great splash vomit out of SW cone seen once. Stream still flowing from under crusts into SW cove. W pond and SW cove crust over and streaming out from under zigzag edges. Streaming E, bombardment E and N. Noise quiet plash and puff. N lower bench remnant of 1914 which was brown with Pele's hair and shows in photographs of two days ago now submerged. Bench remnants appear more collapsed over SW cove and W of SW pond. Two spatter cones S bank. Flows entirely around E end N crag.

11 a.m. Great overflow reported.

6 to 7 p.m. From S station.
Overflooding in progress by overflow of crusted flows, cracking and welling up. SW cove has collpased on lake side and a spindle shaped torrent vomiting from it lakeward. Flow advances by cracking and welling from this torrent eastward through whole length SE valley on to E bench. Another flow from N end W pond advances around N bench by same process. NE edge of lake overflowing. Island gone. Submerged.

T.A.J.

254

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Sunday Date August 29, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	
			no	pl	scr	stop	ex	cam	
9a.m.		From SE rim E of S station:-							
		W end (sun)	1		vz	11.3	1/3		
		Middle "	2		"	"	"		
		E ende "	3		"	"	"		
								T.A.J.	

1915, Aug. 29.



#3



#2



#1

256

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Monday Date August 30, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.

			no	pl	scr	stop	ex	cam
9:30a	SE	W end	1		vz	11.3	1/3	
		E "	2		"	"	"	
								T.A.J.

1915, Aug. 30



#1



#2

Iaq

Massachusetts Institute of Technology

JOURNAL

Hawaiian Volcano Observatory

Day Monday Date August 30, 1915.
Tuesday " 31, "

Aug. 30.
9:30 a.m. Fumes thin. Lake brimming. Stream from lake cascading into SW cone. Crags more submerged. Flows moving by flooding and cracking S and N benches. Island submerged. Overflows NE. Cracks welling S bench. SW pond bay bigger. White rocks talus SE 1914 bench surrounded by new lava. Streaming E. N spatter cone gone; also N end W pond. Largest spatter now E and S.

T.A.J.

Aug. 31.
8 p.m. Flooding and rising today. Fumes thin. SW cone built up again, vomiting spasmodically N and W. A flow northward from E of SW cone. Glowing fresh flows everywhere. Crags still more submerged. Large blue flames E bank and above large spatter grotto N end W pond and elsewhere. Very conspicuous to-night. Streaming N and slowly E. Lake overflowing NE bank.
Seeing from SE station.



Flames violet blue, under pressure, and about two to four feet high and bent in the wind. An immense banner N end W pond.

T.A.J.

Massachusetts Institute of Technology

Hawaiian Volcano Observatory

KILAUEA DAY SHEET

Day Tuesday Date August 31, 1915.

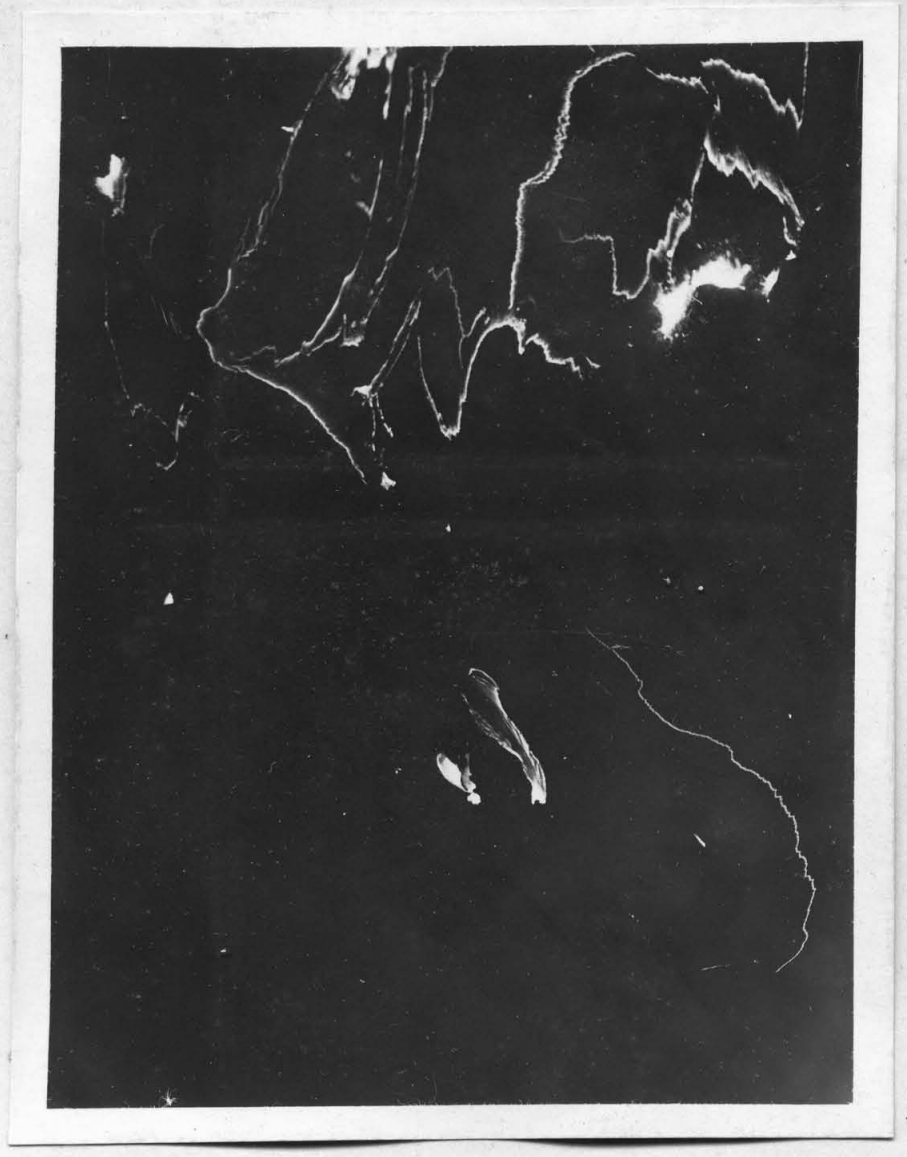
t	sta	pt	hor	vert	lev	dist	elev	h. i.	
			no	pl	scr	stop	ex	cam	
8:30p	SE	Lake	1	W.P.		6.3	1		
	"	SW side	2	"		"	"		
								T.A.J.	

260

1915, Aug. 31.



#1



#2

JOURNAL

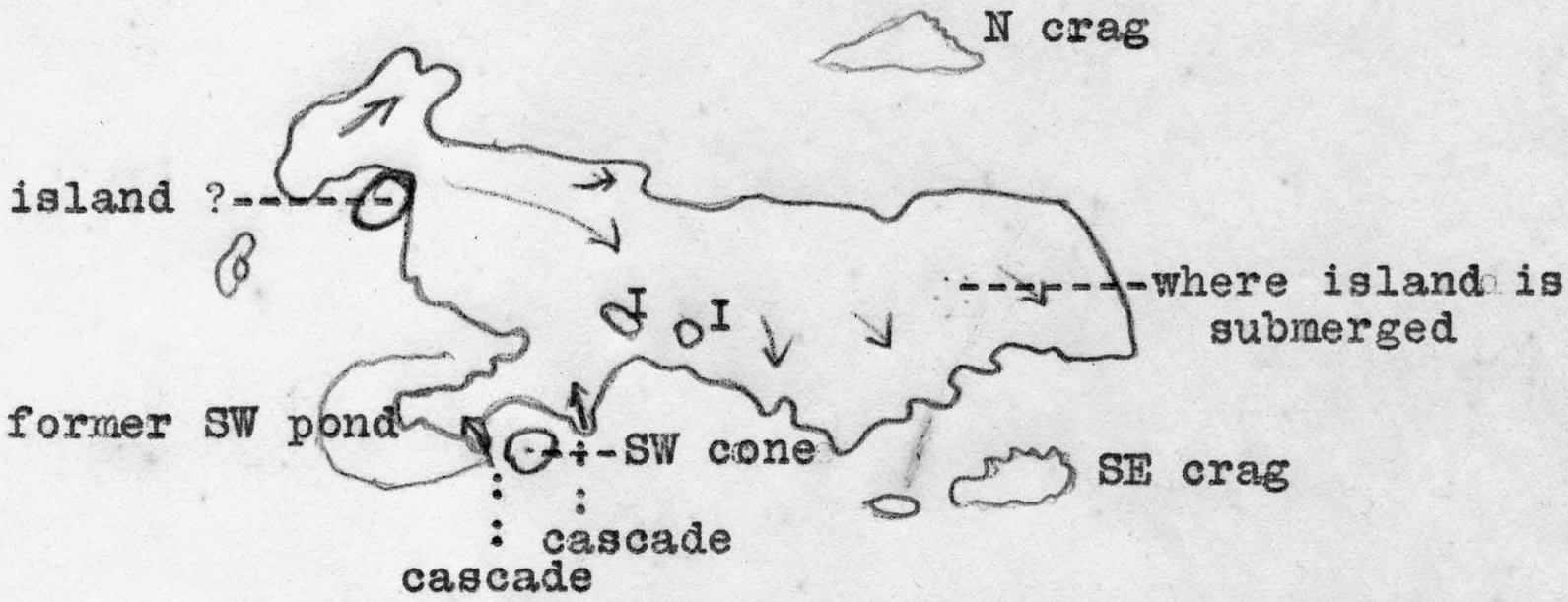
Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date September 1, 1915.

9 a.m. Rising continues. Fumes only SE talus, SE crag and N crag. Lake brimming and enlarged E and SW. White boulders 1914 bench S all covered. New flows crackling. Streaming E. Spatter rampart S, SE, N and N side W pond. Last flows SE, overflows from SW cove. SW cone reformed. SW pond is the SW cove now. Crags N and SE small and only 15 or 20 feet high. W 1914 bench only 15(?) feet high. Splashing fountain in W cone.

9:30 a.m. Rising. Flow cracks in SE valley. Cascade from it to SW cove and SW cone to SW cove.

10 a.m. Lake sinking three or four feet; reveals new outlines E cove, W end and SW cove. Greatly enlarged -- probably shallow niches like the 1894 niche of Halemaumau W.

From S:-



12 noon. Down about five feet.

T.A.J.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

- 1 - Day Wednesday Date September 1, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
10a.m.	S	SE	0					
to	SW	S	0					
noon	S	E end lake	35 36	25 05	+3	762	355	
	SW	" " "	54 27					
	S	S cove	44 20					
	SW	" "	49 18					
	S	E entrance SW cove	68 00					
	SW	" " " "	70 26					
	S	Cascade from SE valley to SW cove(bench level)	73 41	32 54	+5			
	SW	" " " " " " "	68 00					
	S	Summit SW cone	77 00	33 00	+4	569	363	
	SW	" " "	67 33					
	S	S end W pond	82 21					
	SW	" " " "	104 37					
	S	W side W pond	76 18	19 53	+5	1068	384	
	SW	" " " "	100 41					
	S	NW grotto W pond	70 38	19 50	+5	1083	388	
	SW	" " " "	95 09					
	S	NE cove W pond	67 27					
	SW	" " " "	89 48					
	S	N point river	70 25					
	SW	" " "	89 43					
	S	NW splash	62 12	23 42	+5	874	380	
	SW	" "	78 50					
	S	N spatter cone (point)	54 12					
	SW	" " " "	69 09					
	S	S end E cove	33 40					
	SW	" " " "	51 48					
	S	N " " "	38 45					
	SW	" " " "	58 54					
	S	SE cone	56 12	39 27	+5	460	376	
	SW	" "	47 34					
	S	Floor SE valley	48 40	46 53	+5	358	382	
	SW	" " "	36 10					
	S	Top N crag	49 16	21 11	+5	546	130	
	SW	" " "	70 42					
	S	Base N crag	47 42	22 28	+5	923	379	
	SW	" " "	68 45					
		(continued)						

			no	pl	scr	stop	ex	cam	

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

KILAUEA DAY SHEET

 Day Wednesday Date September 1, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
	S	Base S talus	71 06					
	SW	" " "	37 06					
	S	Cascade W from SW cone	77 42					
	SW	" " " " "	71 42					
	S	W end SW cove	83 40					
	SW	" " " "	80 10					
	S	Pt. W entrance SW cove	74 17					
	SW	" " " " "	78 57					
	S	S end island(?) S side river	77 43					
	SW	" " " " " "	92 14					
	S	N end of above point	74 26					
	SW	" " " " "	92 55					
	S	W cone splash	83 32	22 22	+4	636	260	
	SW	" " "	103 30					
	S	W end floor	83 33					
	SW	" " "	105 47					
	S	N edge floor	51 42					
	SW	" " "	77 18					
	S	SE limit floor ca.	15 56					
	SW	" " " "	29 42					
	S	Pt. W entrance to SW bay	83 39					
	SW	" " " " " "	86 50					
	S	" E " " " "	80 26					
	SW	" " " " " "	69 12					
	S	SE crag ca	32 00					
	SW	" " "	42 24	24 40	0	792	362	

Floor 930' NW to SE by 630' SW to NE.
Lake 720' long E-W by 200' to 300' wide.
Depth S station to Lake 380'.

T.A.J.

			no	pl	scr	stop	ex	cam
9a.m.	From	rim E of S station:						
		E end	1	W.P.	vz	11.3	1/3	
		Middle	2	"	"	"	"	
		SW end	3	"	"	"	"	
	SW	SE crag	4		"	16	"	
	"	Middle	5		"	"	"	
	"	West	6		"	"	"	

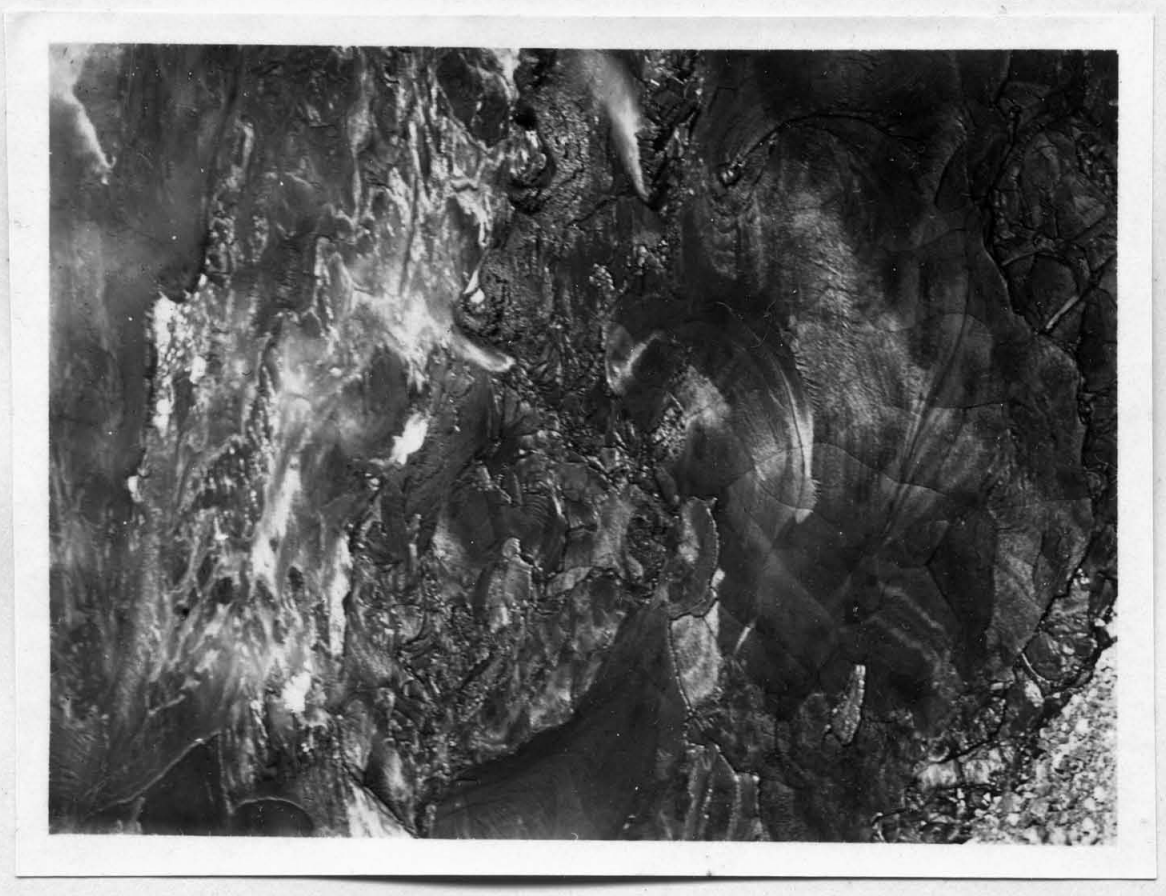
T.A.J.

1915, Sept. 1.



Lava

#1



#2



#3

1915, Sept. 1.



#4



#5



#6

Massachusetts Institute of Technology

JOURNAL

Hawaiian Volcano Observatory

Day Thursday Date September 2, 1915.

11:30 a.m. Fumes very thin. No great changes. Second photo shows main changes. Formerly point at E entrance to SW cove, now one large islet with a splashing grotto under its S side and a stream flowing eastward between it and S bank. Very large and broad spatter cone bombarded on the N bank. Four large spatter cones border S cove. E cove larger, extended nearly to E wall. Glistening new black flow from SW cove, three-quarters of the way through SE valley. This from a rise of last night apparently which rise also overflowed the SW islet. SW cone open on NW side belching out a flood and a cascade pouring from SE valley, from under new flow, into cove. Lake now about two feet down. No change in crags or general height of floor. No cracks marking subsidence yet. E end brimming, W end a little down. New backed up overflows, of same time as SE flow apparently, from S end W pond to W cone. Streaming as usual N in W pond, E in lake. Bubble fountains in stream to N spatter. O.F. during this rise cannot be said to have had any regularity. A fountain bursts every few seconds W of the violently fountaining inrush at the N spatter cone but it is irregular and more frequent than the normal O.F. This locality may be said to be a nearly incessant O.F. A heavy fountain dome burts occasionally under the S side of the SW islet.

T.A.J.

Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Thursday Date September 2, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	

1915, Sept. 2.



Jag

#1



#2

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Saturday Date September 4, 1915.

11 a.m.
to
12 p.m.

Lake from SW station:-



a - Steep cascades. b - torrent into SW cone.

S cone splashing. Fresh crusted flow W of it cascading into cracks SW. Cascade pouring into SW cone, which is fractured.
Floor at 11 a.m. 10 feet below 1914 bench and lake 10 feet below bank.
At 12:30 lake 5 feet below bank. E pond down and definite.
SW pond a cove of lake.
Boatswain bird burnt up by falling on lava skins.

T.A.J.

270

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Saturday Date September 4, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.	

			no	pl	scr	stop	ex	cam
				old				Kodak
X 11a.m.	SE rim	Lake W	3	film	3x	US 8	1/5	5x7
XX	"	" NW	4	"	"	"	"	"
XX	"	" N	5	"	"	"	"	"
X	"	" E	6	"	"	"	"	"
	"	Lake (sinking)	1	new fm.	"	16	"	"
	"	"	2	" "	"	"	"	"
	"	"	3	" "	"	"	"	"
	"	"	4	" "	"	"	"	"
Noon	SW	Lake (rising)	5	" "	"	US 32	1/2	"
	"	"	6	" "	"	"	"	"
								T.A.J.

1915, Sept. 4.



2



1

1915, Sept. 4.



3



4

1915, Sept. 4.





JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Sunday Date September 5, 1915.
Monday " 6, "

Sept. 5.

Brimming in afternoon.

6:30 p.m. Streams E and W from S cone. S and SE floor covered, glowing and flaming. Cascade down into SW pot from lake. Lake wider and no higher. Bank 10 to 15 feet high. Five or six fountains spattering strongly. No blowing. Stalactites N grotto.

From SW:-



Sept. 6.

6:30 p.m. General arrangement same. Banks 5 feet high. Glowing flows all over SE floor. Flow pouring W from S cone; and E also. This appears to flow <u>into</u> chasm of SW cone. SW cone on the other hand is now sending out a golden stream into SW cove. SW cove otherwise skinned over. E end all skinned over, bright lines. Streaming E from W pond and W ffrom E skins; N against N bank; and against SW point.
Grotto N end W pond. Glowing skins over E pond. N and SE crags unchanged. Height 1914 bench W above lake unchanged. Is SE valley becoming a pond ? Five or six standing fountains in middle part of lake. <u>Small</u> island off SW cove still in place.

6:45 p.m. Eastward flow in E cove and fountain middle E end.

T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

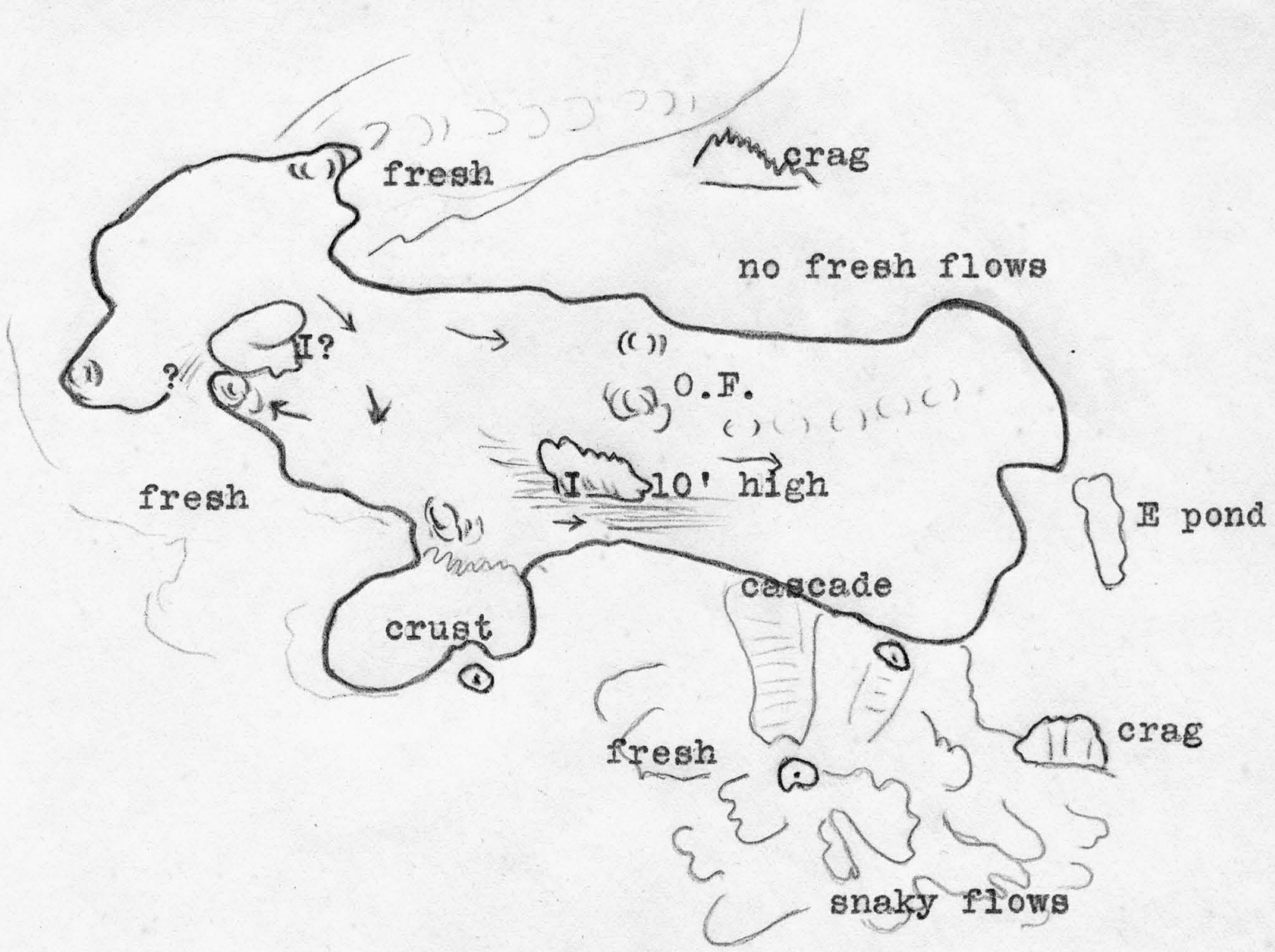
Day Tuesday Date September 7, 1915.
Wednesday " 8, "

Sept. 7.
8 to 9 p.m. Bubble fountains E cove. Motley pattern of E flowing skins. High gas pressure; hissing; travelling fountains. SW cone spurting spray high every 30± seconds. Stream develops and cascades into lake from S cone, and cascades into hole in bench. New glowing flows all over S platform. Flow moving over N platform from N end of W pond. Streaming in lake dividing around island. Island larger than day before. Bank about one foot high. Fountains and border grottoes spurt spray and flame! SW cove crusted. S end of W pond crusted

T.A.J.

Sept. 8.
10 to 11 a.m. Lake one foot down; rising.
11:30 a.m. Sinking. Island in middle, of balloon shape like Perret's balloon craft. Rigid. No bombardment on N shore. Streaming E. O.F. breaking 40 to 60 seconds. No hard blowing like last night. Some hissing E. Stream from S cone cascading over bank into lake. Main smokes SE corner, SE crag and N crag. Splash N end W pond. W pond enlarged S. S promontory of river nearly island. Overflows W end of recent date. E pond rises and falls with lake.

Noon. Lake from SW station:-



T.A.J.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date September 8, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
10-11 a.m.	S	SE	0					
	SW	S	0					
	S	N grotto lake	62 13	23 21	+3	858	367	
	SW	" " "	78 10	25 47	+3	775	371	
		Mean depth 369'.						
	S	E end island	60 56					
	SW	" " "	67 40					
		Length island 45'.						
	S	W knob island	64 11					
	SW	" " "	71 30					



Middle island

t	sta	pt	no	pl	scr	stop	ex	cam
10-11 a.m.	S	E end: E cove & crags (focus wrong)	1			16	1/5	Kodak 5x7
	S	Middle; S cone & flow; isl.; N crag. (focus wrong)	2			"	"	"
	S	W end; SW cove, 2 isls., W pond. (focus correct)	3			"	"	"
	S	W end	4		3x	"	1/2	"
	S	Middle	5		"	"	"	"
	S	E end	6		"	"	"	"
								T.A.J.

1915, Sept 8.



Fig 4



Fig 3

1915, Sept 8.



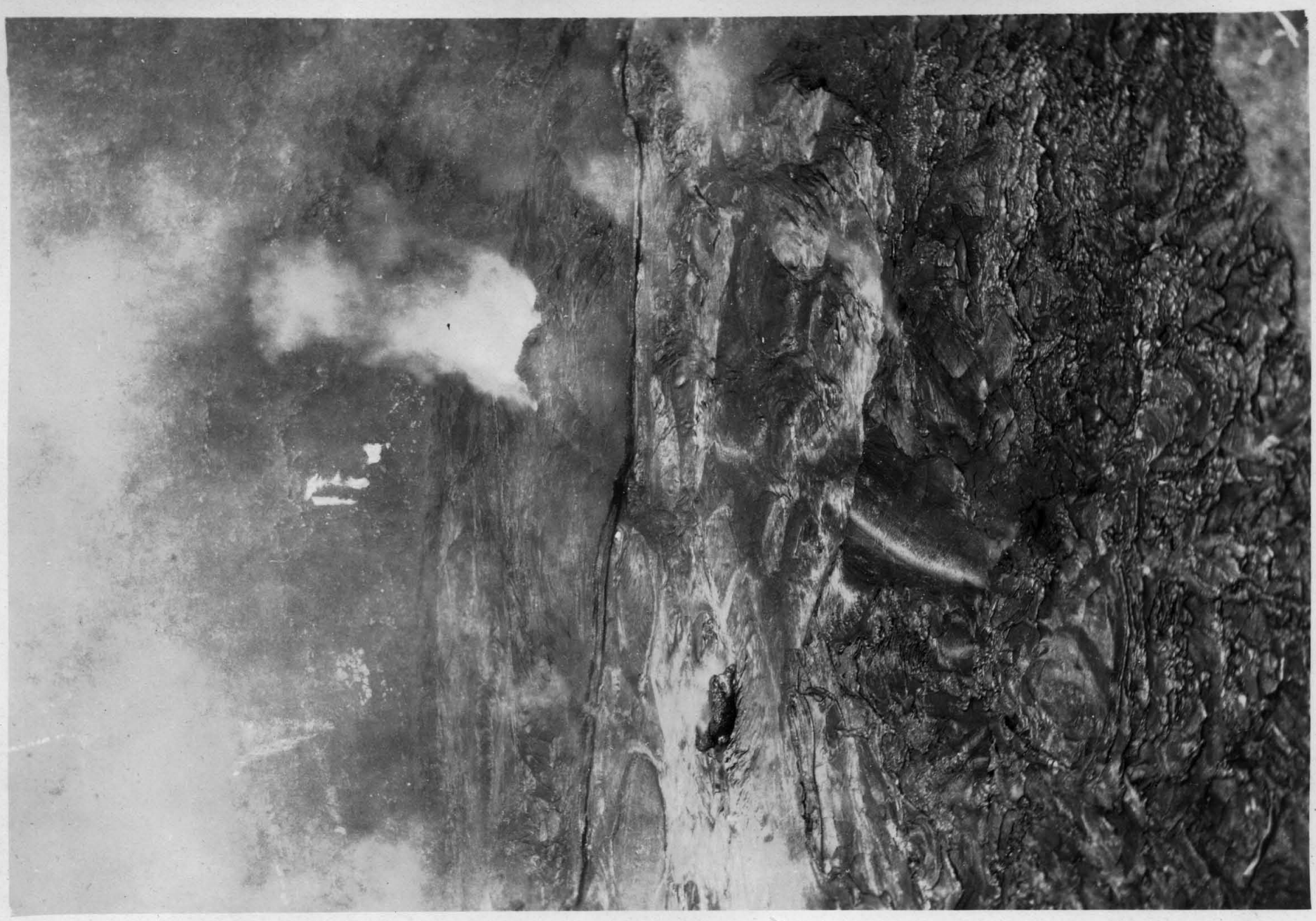
2



4

1915, Sept. 8





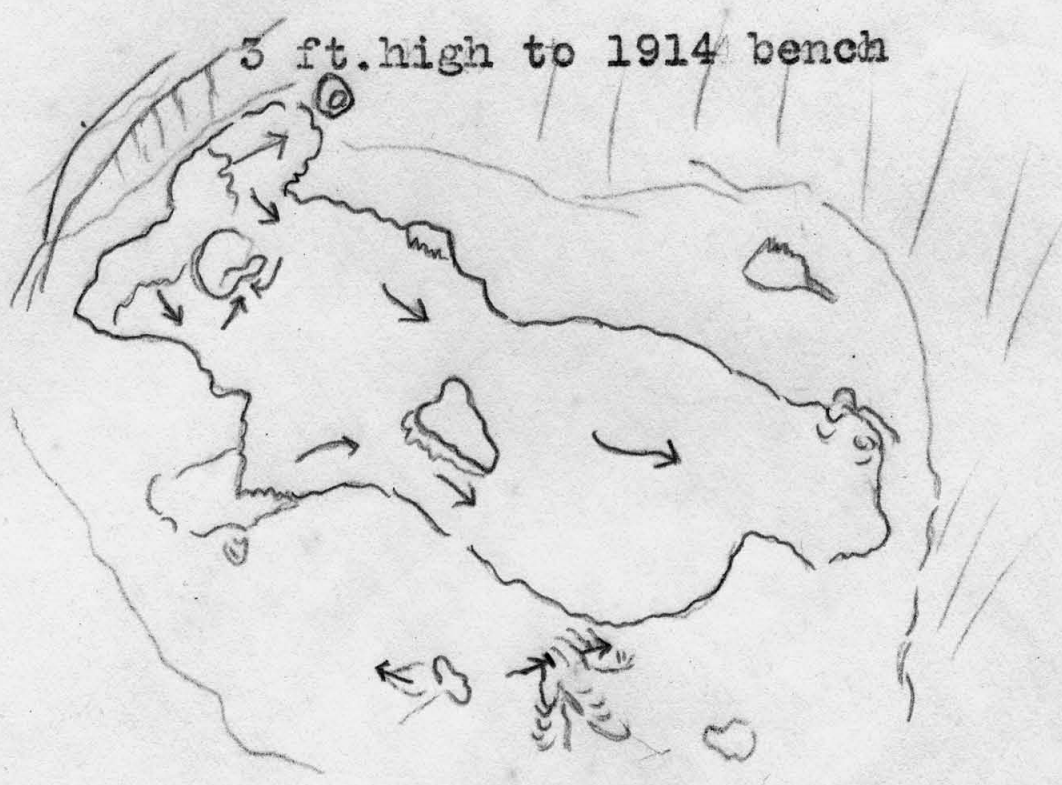
Massachusetts Institute of Technology
Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date September 9, 1915.

11 a.m. to 12 m. Rising. New overflows W. Cone with splashing lava built complete over oven N end W pond. Promontory S entrance W pond now an island. SW cove masked with new overflows. SW cone quiet. S cone a heaving pot with trickling overflows. The orifice just back of S bank where flow cascaded in now a source of radial overflows; stream still pouring into it from S cone. SE crag smaller. E pond masked by flows. N crag same.
Streaming E both sides of W island which is large with grotto and spatter ridge on E side and piled up skins on W side. Flows over S end of W December bench. Middle island different shape from yesterday.

From S:-

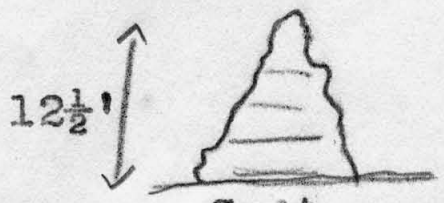


T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Friday Date September 10, 1915.

9:30 a.m. Lake two feet lower than yesterday, (4 or 5 feet below rim). A long arm has developed on the N, just like former E arm of January - March, 1915; and a crag 18½ feet above lake starts to rise between this arm and the lake, with an apparent subsidence in the continuation of the bench E of the crag. Crag cracked at the junction with the floor. Streaming toward the E, with splashing coves at the end. East pond not visible -- covered by fresh flows. Eastern arm of SW arm frozen over. The S bench has apparently subsided slightly as the lake in rising at 11:30 spills over on this bench. This bench also flooded last night from SE arm.
South cone, 14 feet above lake, quiet; a new pot, 7± feet above lake, N of here, near edge of lake; SW pot, 2 feet above lake, quiet.



Sect.

Middle Island.
(Different shape from yesterday.



Plan.



Sect.

West Island.



Plan.

Middle island	20' x 35'		
West island	45' x 60'		
Lake	180'-250' x 720' max length		
North arm	150' from end of crag		
Southwest arm	100'		
N crag	29'± above lake		
S bench at edge of talus	7' above lake		
11 a.m. Lake	366' below E, S and SW stations		
(Measured at middle island.)			
Lake surface at W end	1' higher		
W side of top crag	18½'	above lake	
Summit W island	39'	" "	(?)
Summit middle island	12½'	" "	
SW pot	2'	" "	
Temporary pot S of lake about	7'	" "	
S pot	14-'	" "	

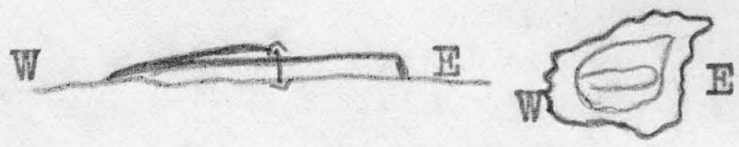
Powers.

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

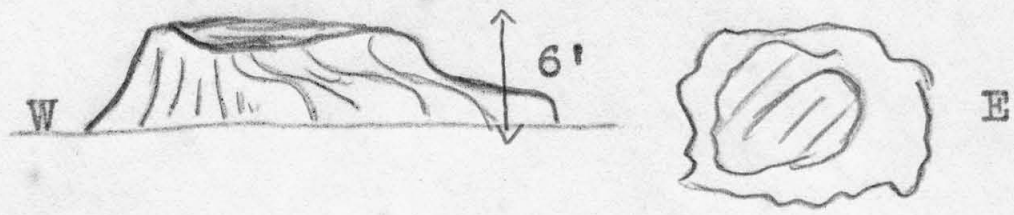
JOURNAL

Day Saturday Date September 11, 1915.

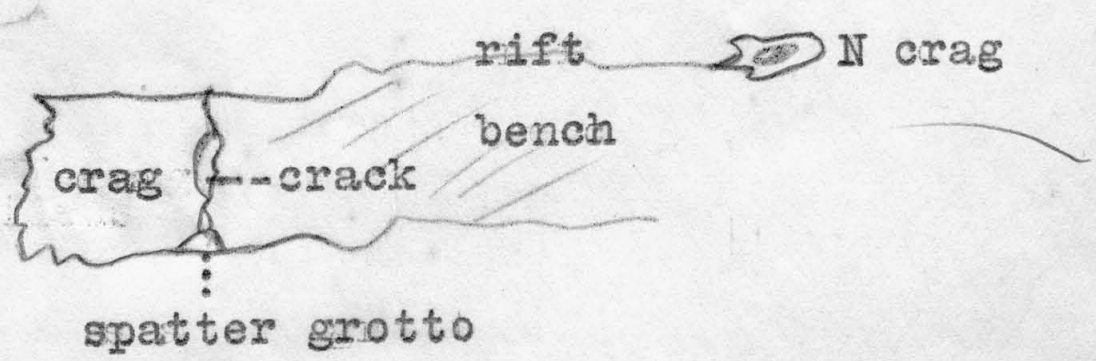
10 a.m. Lake brimming on S; little wall on N. Rising. West island has subsided and almost disappeared. Lava occasionally splashes against it.



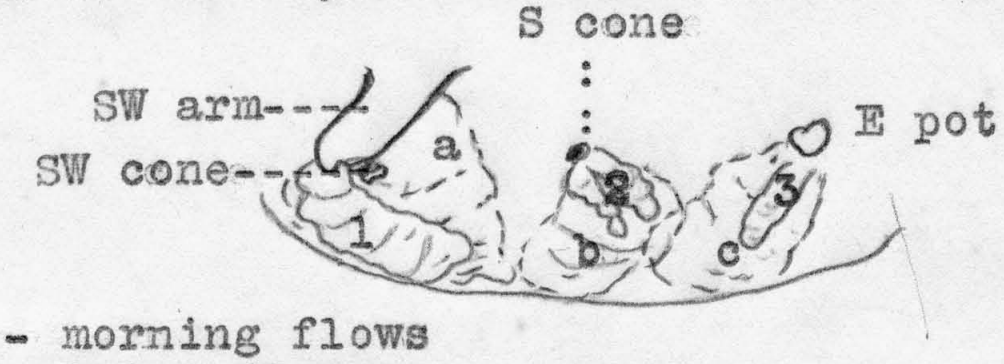
Middle island changed.



Crag relatively lower (13'-14' high) because lake higher than yesterday. Crack with bench widens. Spatter grotto on S side of this crack, at lake's edge.



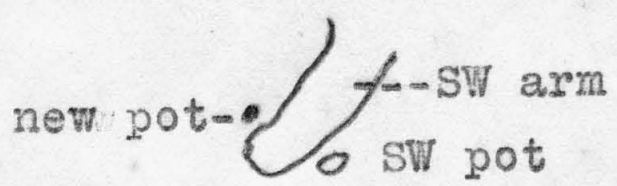
NW arm: floods pour in from W and run over floor.
Smoke from under 1912 talus; under 1912 ledge (S station), N crag, W crag crack, rift between N and W crags, floor W of SW arm and S of S cove.
Violent torrent pours out of S cone over flow to south at 10:35 a.m.. Later, a flow out of site of E pond, pouring southward. Later, flows over S floor from SW arm.



1, 2, 3 - morning flows
a, b, c - later flows

Gas hisses quite steadily out of S cone for long periods; hisses loudly and spasmodically out of SW cone.
Temporary pot just S of S cove of lake disappears. The SE crag has disappeared -- swallowed up by floods, probably from site of E pond.

2:45 p.m. Lake dropped 2 feet. Slight talus fall high up, E of 1912 crag and at W station. Gas hisses from S and SW pots. New pot developed just W of SW arm:



More overflows. This noon the main lake flooded the floor S. This afternoon the SW arm floods floor, and then S pot and E pot flood floor. Old Faithful breaks irregularly at intervals of 10 - 35 seconds, with 20 seconds as most frequent interval.

S. Powers.

JOURNAL

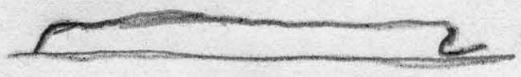
Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Sunday Date September 12, 1915.

3 p.m. Lake 4 or 5 feet below yesterday. (6' below rim.)
Islands both remained fixed; i.e. emerged.

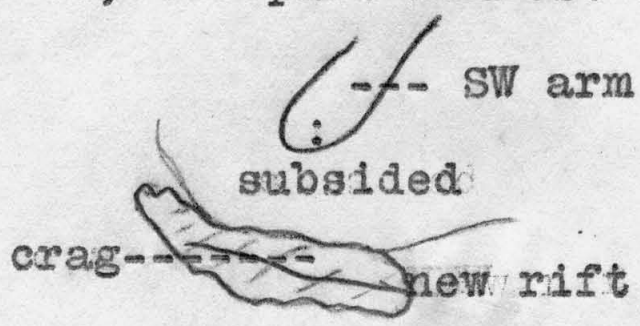


Middle island.

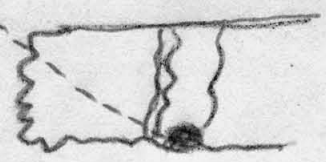


West island.

SW arm sunk down, showing true outline. There is a slope from the S side of this arm to the lake. With this subsidence, the tilted piece of 1912 tumbled crag has developed a rift through it, the part nearest bench being tilted down.



Spatter walls have developed at S and SE sides of lake; also at crack back of crag.
South floor flooded last night from site of E pond and probably from S cove of main lake.
All pots glow but are quiet in this subsiding phase.
New smoke hole in hanging talus just under W station.
Crag spatter cone developed yesterday smokes more today.



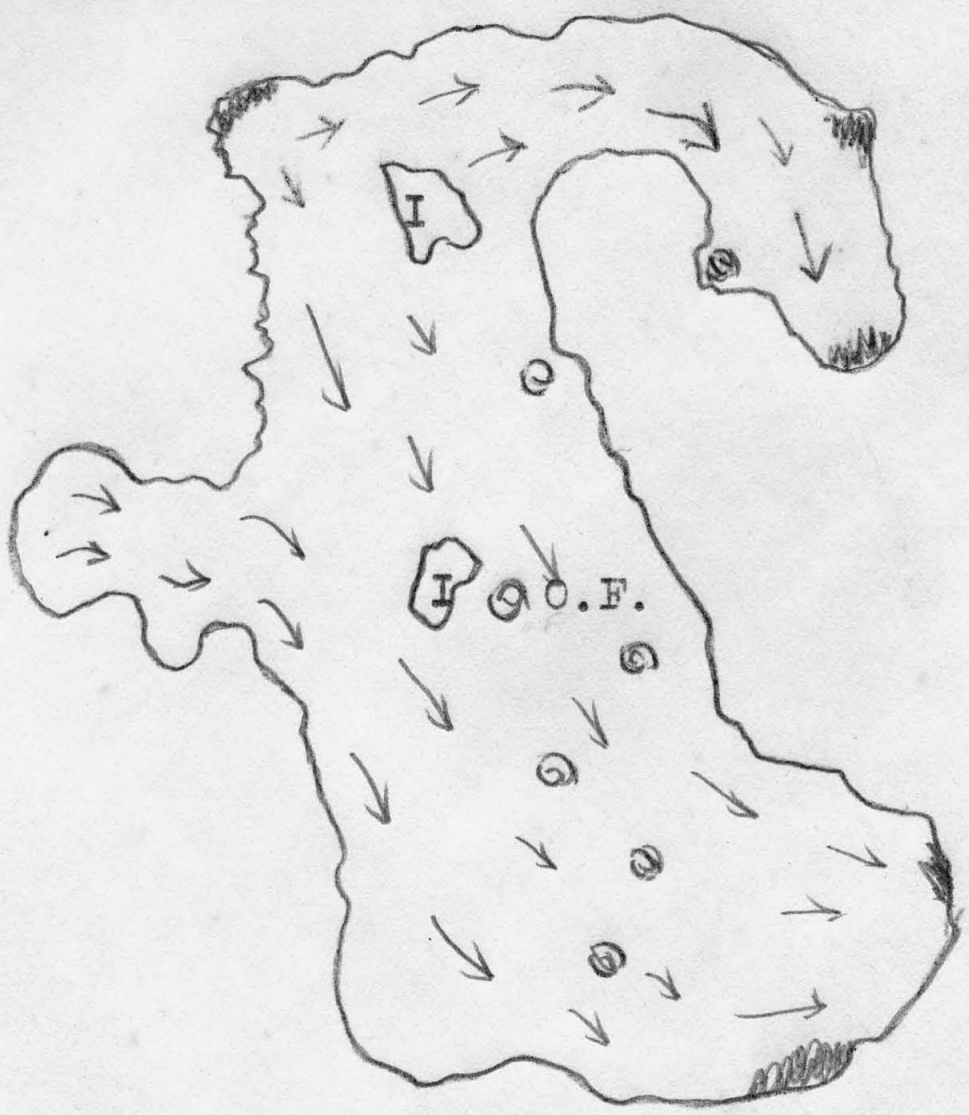
A little gas hisses.

S.Powers.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Monday Date September 13, 1915.

2:25 p.m. From E station



Streaming as shown in sketch. Several border fountains and many large travelling fountains.
Lava only one foot below 1914 bench.
Flow from hole under SE station lasting for nearly half an hour.

3 p.m. From SE station.
East pond opened and flowed on to the surrounding bench.

3:35 p.m. From E station.
Lava sank a little until it was about three feet below the remnant of the 1914 floor at W end.

Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Tuesday Date September 14,1915

The lava stood from three to five feet below the level of the southern platform. In the main lake there was quiet streaming to the eastward and to the northeastward near the E end. Doming fountains breaking around and under the island near the center were the most vigorous manifestations seen. This island was reduced in area and obviously much undermined. There was quiet streaming into the main lake out of the SW arm. In the N arm there was quiet streaming toward the E where near the end there was an area of vigorous boiling. The smoke, while exceedingly thin, was issuing from a dozen or more places on the floor and at its margin, with one high fumarole under the S station. The fumes were very sharp and hot. The cones and pots were all in quiet action, and only the deep-toned surf noise attracted attention. The E pond, thinly skinned over, was heaving lazily.

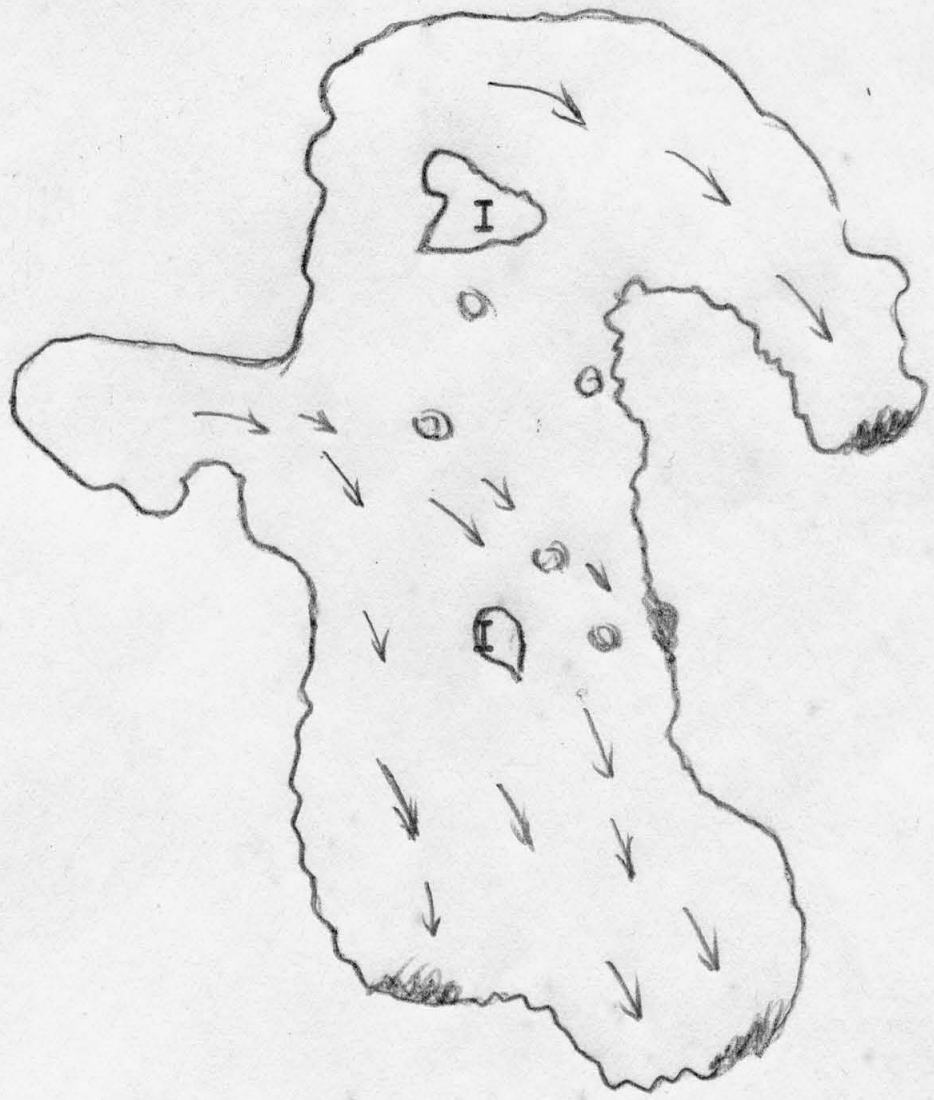
H.O.W.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date September 15, 1915.

1:57 p.m. From E station.
The lava was about five feet below the 1914 floor. Large fountains travelling eastward. Fresh flow on the floor at the SW side, glow could still be seen in the cracks of its crust. Occasional loud blowing from two cones.

From SE station:

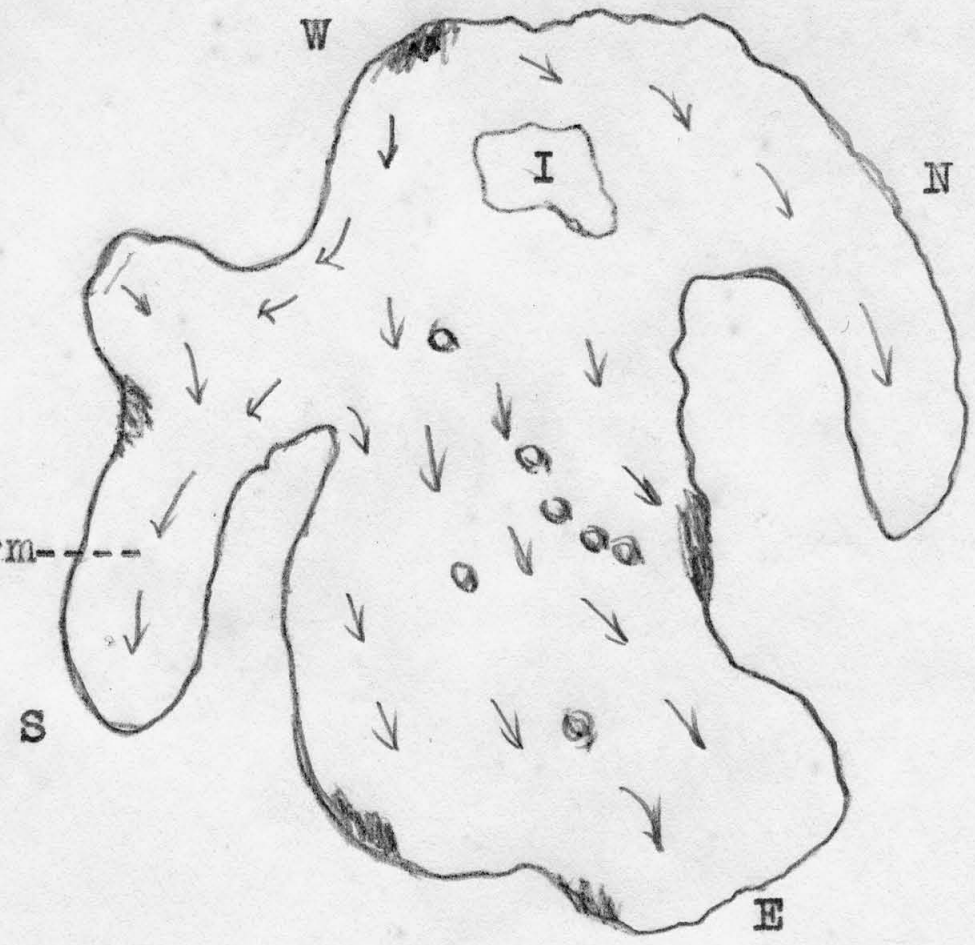


Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Friday Date September 17, 1915.

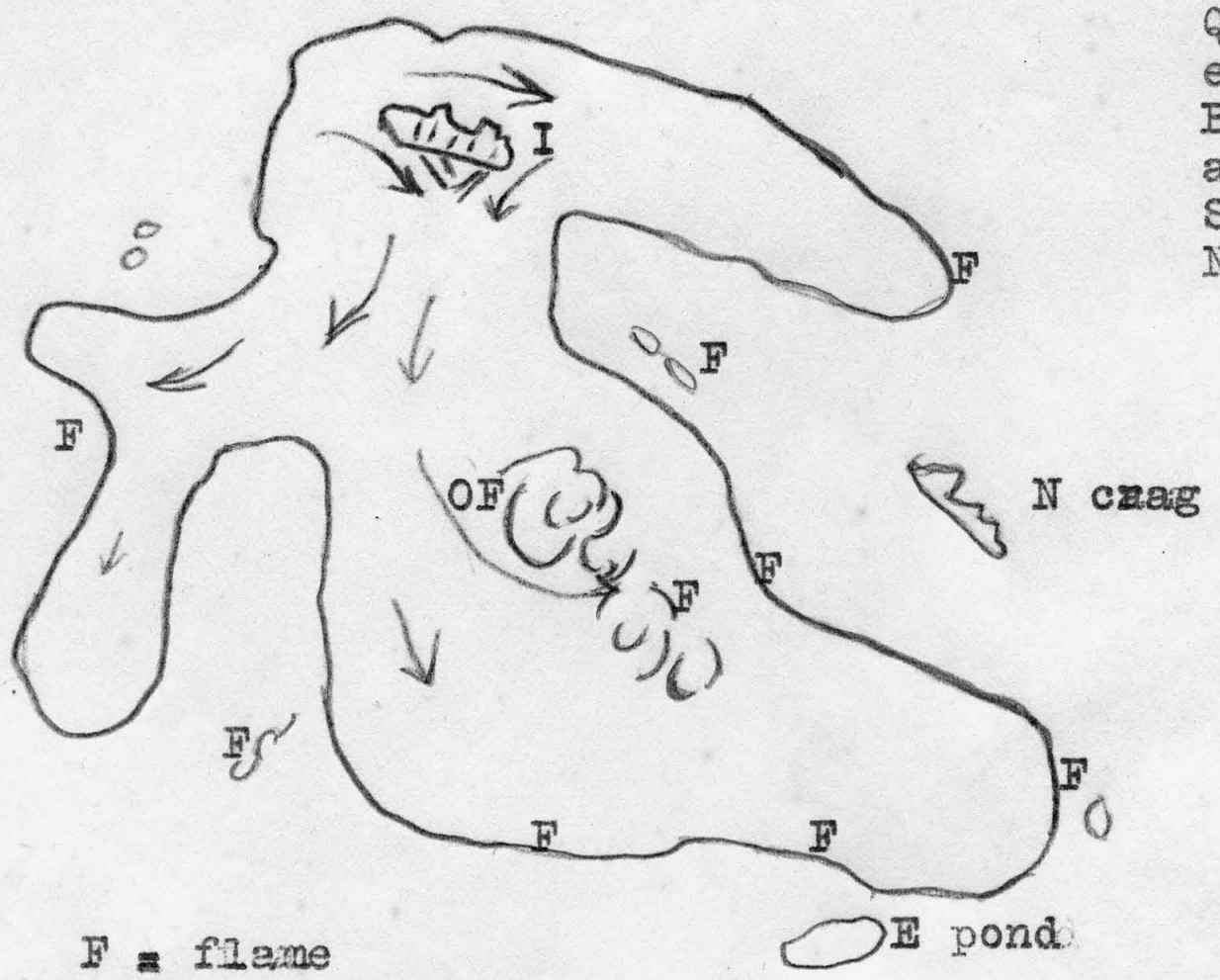
2:52 p.m.



3:12 p.m. Liquid lava about three feet below the floor. Streaming eastward in all three arms. Many fountains boiling loudly.

Alex.

9 p.m. From SE station.



Quiet skins. Lake enlarged N and S. Bank 10 feet high above liquid lava. SE crag gone. Noise plash.

F = flame

T.A.J.

Massachusetts Institute of Technology

JOURNAL

Hawaiian Volcano Observatory

Day Saturday Date September 18, 1915.
Sunday " 19, "

Sept. 18.

4 p.m. to 6 p.m. Much the same. Bank 15 feet high. Great fall of rock N. Second (middle) island has reappeared. Two glowing pools in E pond. SW cove, E extension quiet. Current E. O.F. in action.

6:15 p.m. Current began to rush into end of N arm W pond as though subsidence there was in excess of that of main lake.

Sept. 19.

8 p.m. to 9 p.m. Same except middle island gone, probably by slight rise and also collapse. Much overhang on island yesterday and similar N shore fell. Flames all around and from central fountains. O.F. working. Travelling fountains moving eastward occasionally. Narrow crust on shore W end and streaming from it E. E end stagnant heavy blankets. Almost all fountains cease occasionally, except grottoes. SW cone now a violent flaming and spurting grotto. N arm from W pond occasionally shows inrush with strong spurting and flaming at grotto. When this happens temporary sinking probably; always accompanied by strong gas spurting from N grotto main lake. Flaming pot W end SW cove. Glow cracks NE end lake, on bench. E pond glowing quietly. E arm of SW cove quiet, steady blue flames at E end. Noise rumble, blow, plash and spatter. Much spattering of "dross" on skins. Skins heavy - outlined by zigzag glow lines. W island persists. W bank appears five feet high; N bank and bank over E arm SW cove 10 or 12 feet high.

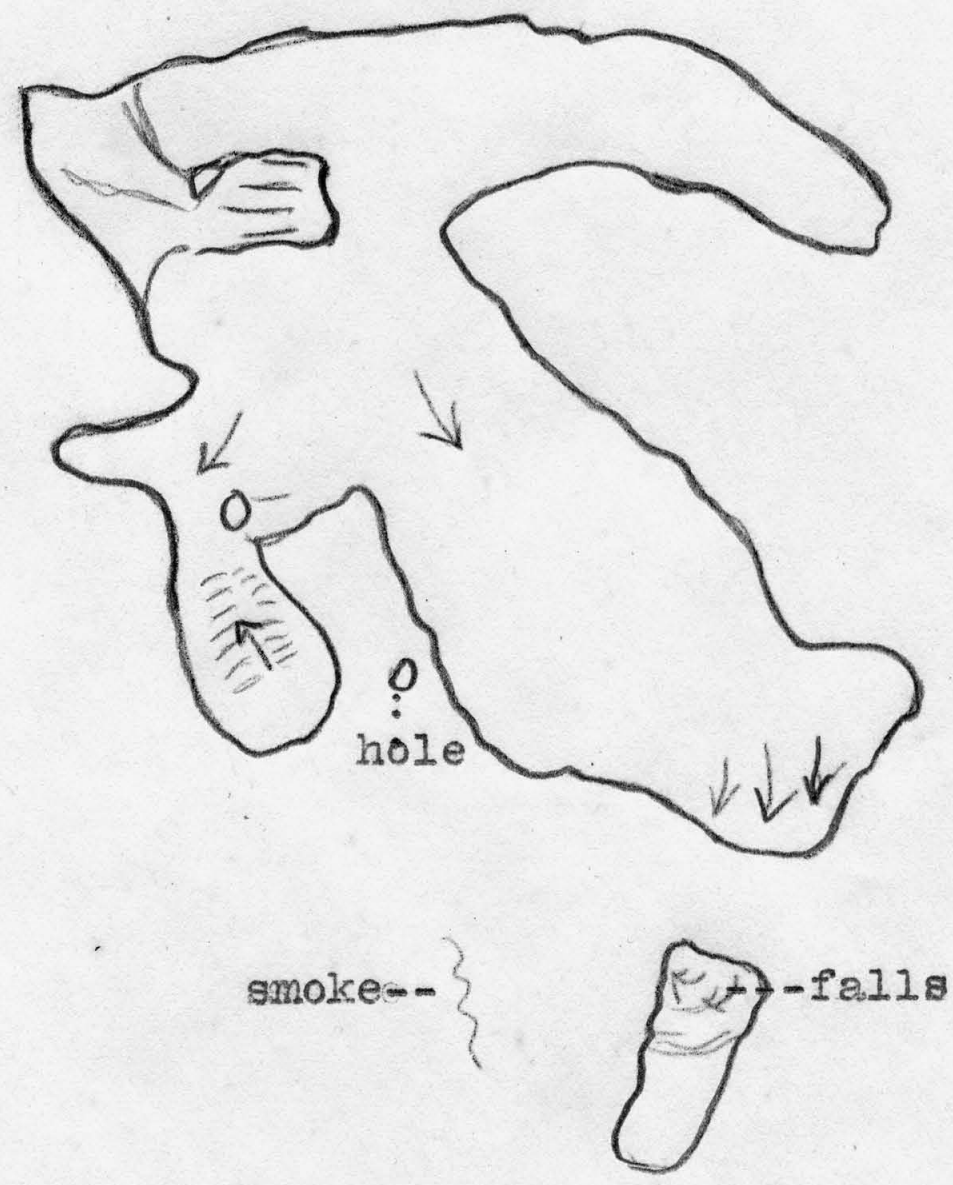
T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Tuesday Date September 21,1915.

3:15 p.m. Rapid fall. Wall over lake 25 feet high. W island a peninsula again. Lava of E pond has withdrawn faster than lake and tremendous cataract is pouring under an arch from S side E cove into void of E pond. E arm SW cove half crusted. Streaming W.
Main lake streaming W to E. Streaming under bank SW cone.
Fumes N bench and E pond greatly increased. Latter blue fume below condenses above.
No marked cracking yet in benches. Very small remnant of N crag fuming. N bank has recently fallen in.
From S station:-



From SE station the E pond seen to be a churning pot of lava in its bottom, probably 40 feet below the lake level, and a small cascade pours into the pot from the S side as well as the great cataract from the north.
Little noise from cataract!



East pond.

Mauna Loa.
This morning smoke from Dewey crater reported from Puu Oo.

T.A.J.

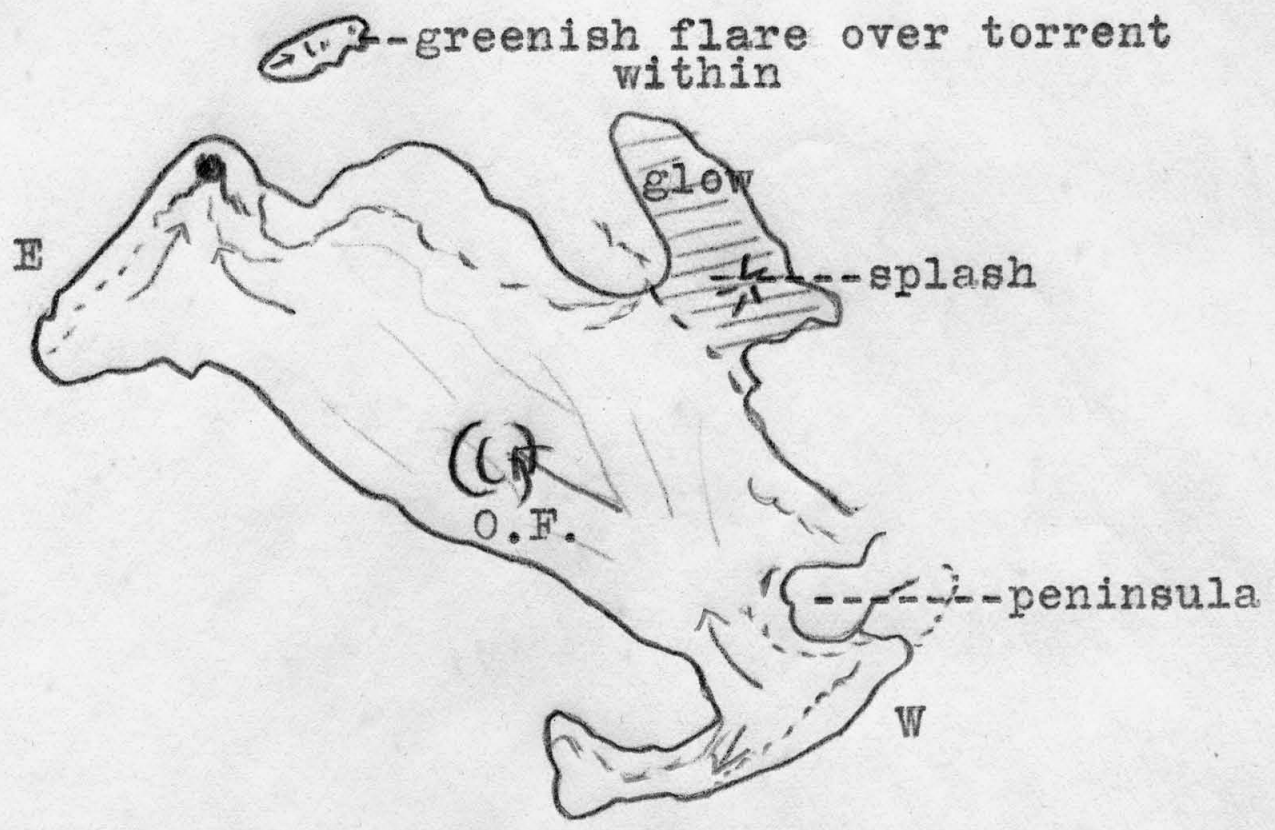
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date September 22, 1915.

9 a.m. Still going down. Smoke very troublesome. One trickle in E arm of SW cove. Stream from lake to site of former SW cone. Walls 30(?) feet high. Cataract into E pond same as yesterday.
Streaming eastward. Lake quiet. Travel fountains. Smoke all along top of N bank and from remnants N and SE crags and from E pond (pit). One small tinkle of slip in S talus and one sudden noise as of something falling into lake. Skins and crusts heavy.

8 to 10 p.m. Much the same but SW cove changed in that site of SW cone appears to be constructing by occasional violent splashes from fissures and all flowing into cove has ceased; cove crusted. Obtained view from O.R.H. (N) and saw round grotto S corner E cove with lava pouring down in a cascade from the lake. Churning more level inside. The appearance SE station same as in morning but not quite so steep a fall.

From O.R.H.;- (by memory)



(W pond longer and wider than this in proportion.)

T.A.J.

KILAUEA DAY SHEET

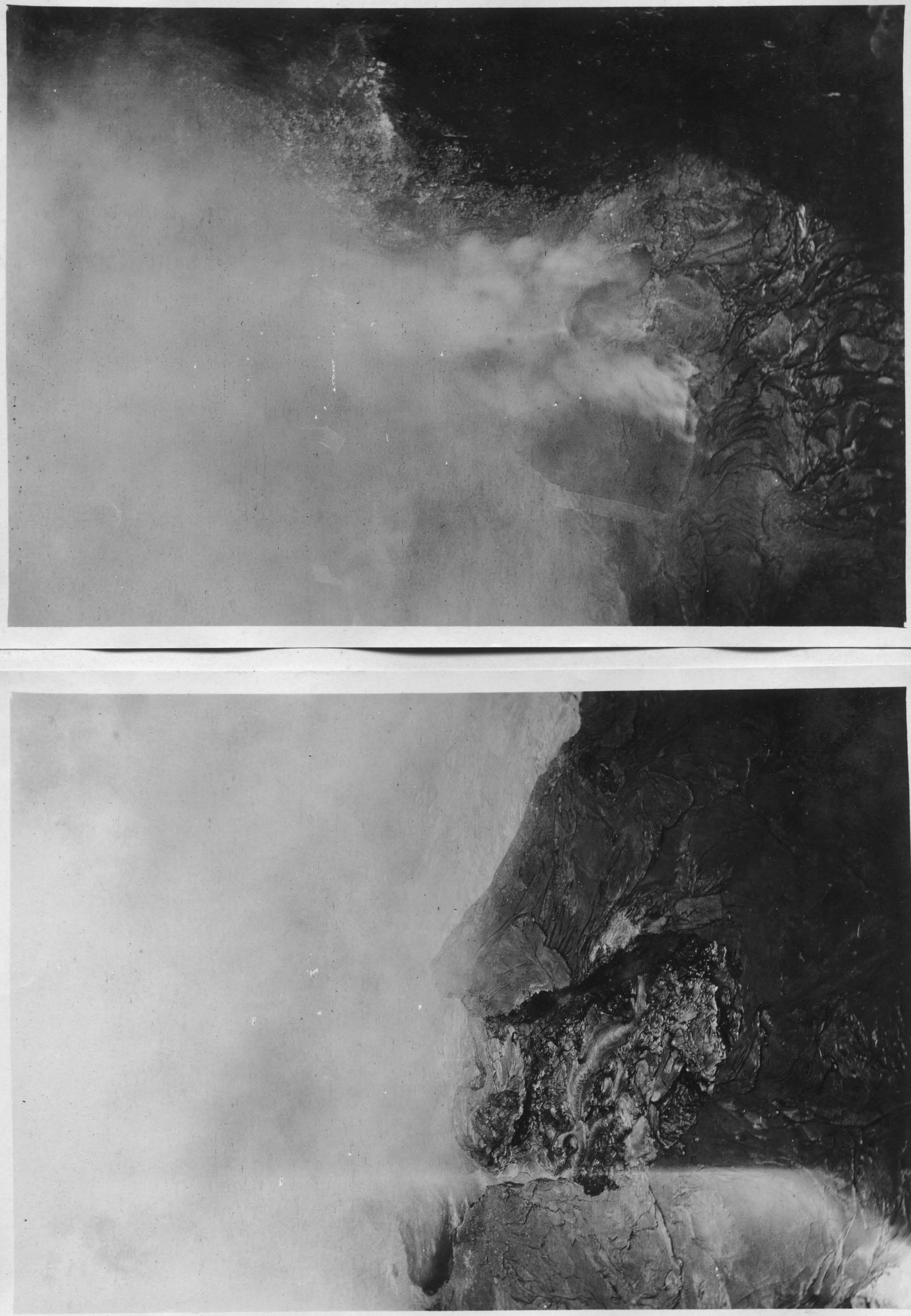
Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date September 22, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
9a.m.	SE	E (loc 3' to S sta.)	0					
	S	SE	0					
	S	N point E cove	42 44	26 12	+6	788	384	
	SE	" " " "	42 21	35 16	+6	544	383	
	S	S " " " (bench)	37 17	27 11	+7	670	341	
	SE	" " " " "	45 00	39 50	+6	411	341	
	S	E edge E arm SW cove (bench)	53 42	42 05	+7			
	SE	" " " " " "	92 49	41 30	+6	319	281	
	S	SE corner E cove	33 22					
	SE	" " " "	33 40					
	S	N end E pit	31 03					
	SE	" " " "	38 29					
	S	S " " "	27 04					
	SE	" " " "	41 43					
	S	S cove	47 27					
	SE	" "	68 18					
	S	S promontory	63 00					
	SE	" "	72 54					
	S	E arm SW cove	55 04 (53 09?)					
	SE	" " " "	91 42					
	S	SW cone point	76 45					
	SE	" " "	(?) 6 20					
	S	SW cove	81 11					
	SE	" "	84 41					
	S	N point W river	70 00					
	SE	" " " "	62 52					
	S	Remnant SE crag	32 10					
	SE	" " "	57 44					
	S	" N "	49 09					
	SE	" " "	42 49					
	S	S side river	74 46					
	SE	" " "	69 20					
	S	Top W peninsula	77 00					
	S	Stream E arm SW cove (bottom cove)	58 00	39 46	+6			
	SE	" " " " "	86 52	ca				

			no	pl	scr	stop	ex	cam
	E of S	E end	1	film	3x	F 16	½	5x 7
	" " "	SW end	2	"	"	"	"	"
	SE	E end	3	"	"	"	"	"
	"	SW end	4	"	"	"	"	"
	"	W "	5	"	"	"	"	"
	"	S sta. direction	6	"	"	"	"	"

T.A.J.

1915, Sept. 22



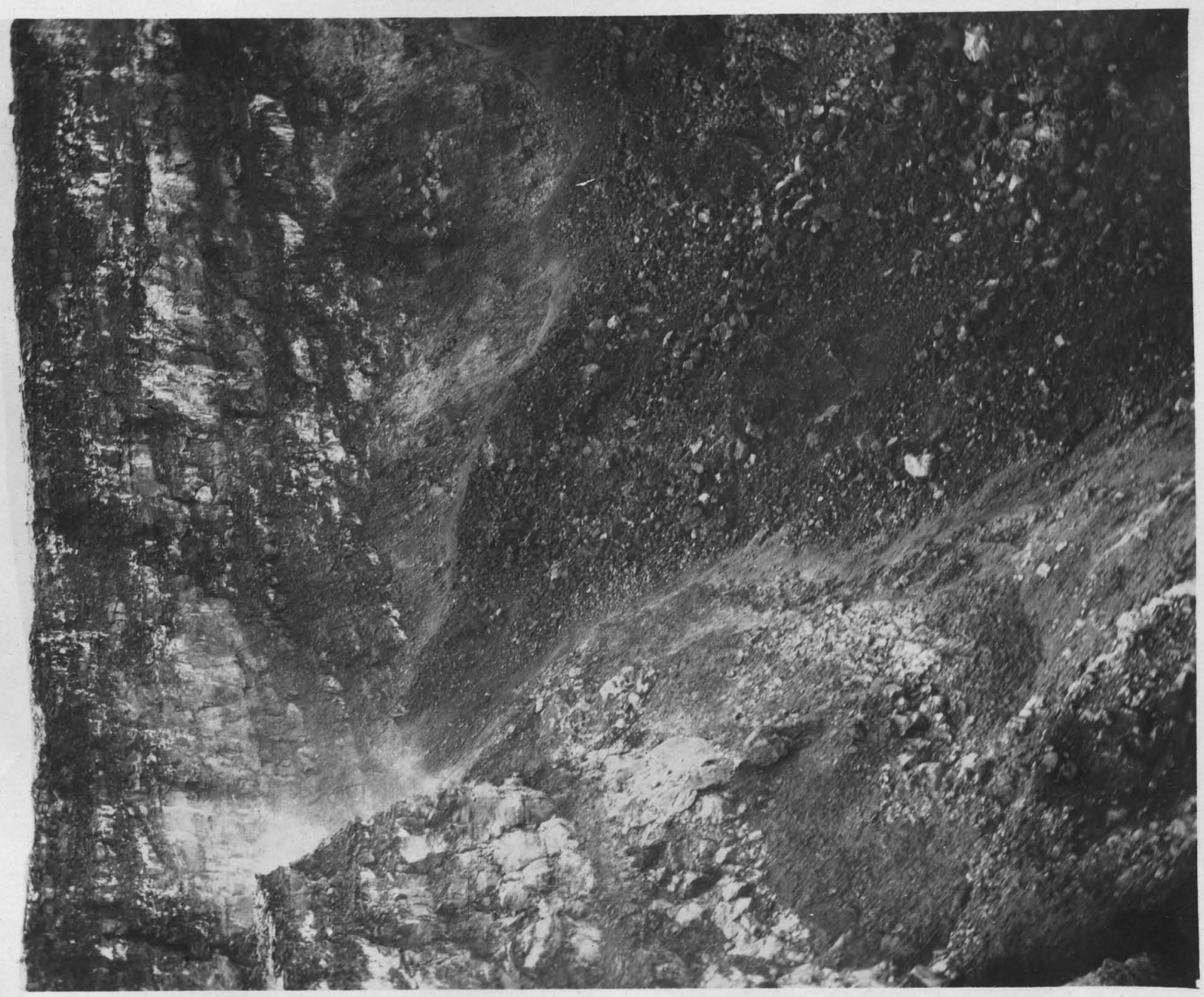
1915, Sept. 22





1915, Sept 22





JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Thursday Date September 23, 1915.
Friday " 24, "
Saturday " 25, "

Mauna Loa. Sept. 23.

5:40 p.m. Clear and calm on Mauna Loa. Three marked jets NE rift.
Light fume over summit.
Cold and NE wind at H.V.O.

T.A.J.

Sept. 24.
2:12 p.m. SE station Halemaumau.
Lava down about 45 or 50 feet below the 1915 bench. Seven large fountains at one time. Fume from lake seems thicker.
SW cove quiet and crusted.
E cascade still pouring into E pond. No avalanching

Alex.

Sept. 25.
2:30 p.m. SE station.
Strong wind. Pit full of fumes - poor seeing. Lava about 50 feet below bench. Many fountains and eastward streaming. E pot seething with small bubble fountains. Broken rocks could be seen on the bench at the E - fallen from the high walls. Torrent into E pot stopped. No avalanching heard.

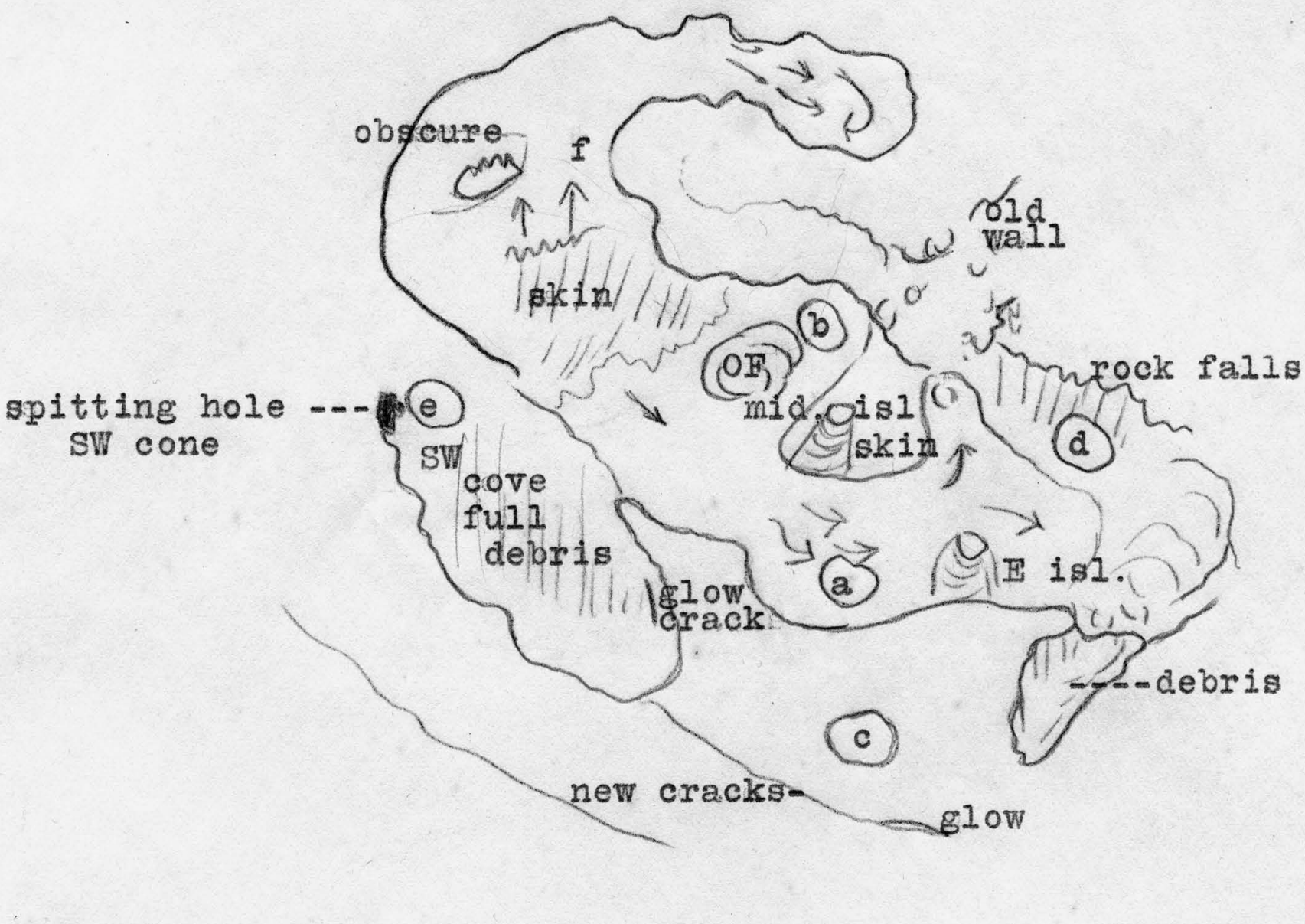
Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Sunday Date September 26, 1915.

5:30 p.m. Clearly a great crisis between Sept. 25 and 26. Great subsidence. E pond has collapsed - arch gone - black debris and smoke. Lake much lower. Streaming E in general region of main lake, W in W pond.
E island and middle island have reappeared as high pinnacles. N bench tumbled back to the wall rock. Great fall into lake from E part N bench. S talus working.
O.F. fountaining. Many shore crusts and river-like streams.
Remnant of W island could be seen.

From S station:-



T.A.J.

Japanese killed in overturned Ford at sharp turn in road Keanakakoi Gulch. Road bend here too abrupt.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Monday Date September 27, 1915.

5 to 6 p.m. S and SE stations.
Lake lower. Streaming eastward in E, westward in W.
Sketch of Sept. 26:-
d - wall much higher.
c - bench slumped down.
a - a cascade eastward meeting a slow stream westward which overlaps it in E pool.
b - space N of O.F. crusted.
e - not spitting.
f - scattered pots in crust.

Heard a few rock falls NE bank lake and W high talus.
Whole lake more crusted and lower.

T.A.J.

Attempted an ascent Puu Oo trail to explore proposed route of trail to Mokuaweoweo with L.A. Thurston, Lieut. W. Philoon, D. Bowman and Dent of Ainahou Ranch. Bowman was thrown and trampled, ribs broken by ugly horse, necessitating return.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Tuesday Date September 28, 1915.

2:30 p.m. E station.
Two northern avalanches heard, each about three seconds long. Strong wind. Much smoke.
Bank of lake about 60 or 70 feet high. Eastward streaming. Many fountains.

2:50 p.m. Another avalanche from under NW station.

3:5 p.m. SE station.
A large part of bench sunk down about 10 feet. under SE sta.

3:25 p.m. Three islands standing in lake. Part of bench NE stands as peak 50+feet high. Islands appear 20 to 30 feet high. NE floor crumbling to large bowlders. Very smoky.
There were about fifteen avalanches, all small and most from the crumbling bench NE.

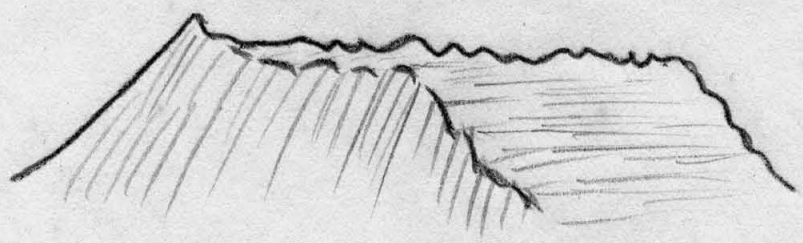
Alex.

Depth about 480 feet. Subsidence 16 feet per day for six days between Sept. 22 and Sept. 28.

T.A.J.

Mauna Loa. Keawewai water-hole.

Bearings: Water-hole in line with Waldron's Ledge and S end of Puu Huluhulu = N. 50 W. mag.
Water-hole from Puu Koae = N. 13[illegible]W. mag.



This is the saw-tooth cone next E of Ulaula.

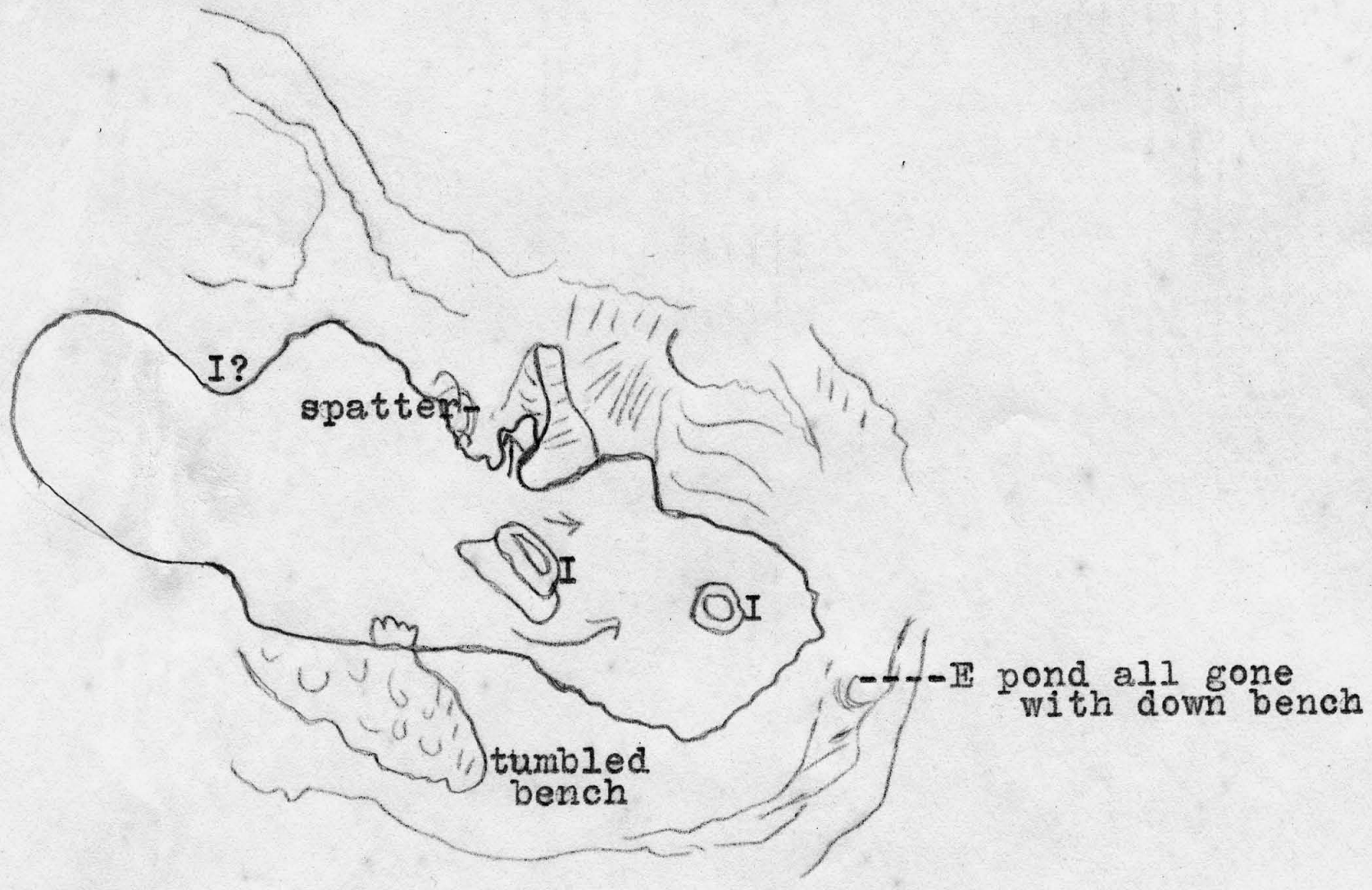
T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date September 29, 1915.

9:45 a.m. Lake higher. S bench lower. Islands lower. Collapse through from O.F. pool to N arm. Inrush into small N cove. Noise plash and blow. New spatter levels, and spatter lump on N side show some rising recently.

From S:-



W bench collapsed and collapse and cracking in all benches all around. Much smoke S, E and N. Cannot see details of W end. One small rock fall into lake. Some crusted areas. O.F. not working. W pond and N arm appear to have greatly enlarged and a break through from the O.F. pool to the N arm leaves a new island large and high, made of the former N promontory.

T.A.J.

300

Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Wednesday Date September 29, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
9:45 a	S	SE	0					
	SE	E	0					
	SE	NE cove	51 08	37 34	+5	617	472	
	S	" "	50 52	31 00	+6	794	473	
								T. A. J.

			no	pl	scr	stop	ex	cam	

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Thursday Date September 30, 1915.

2 p.m. SE station.
Lake about 40 feet below second floor. Boiling in many places. Streaming eastward from middle island.
The eastern island appears much lower than the middle one.
Blue fumes rising rapidly from cracks in broken bench SE.
E island about 2 feet high and middle isl. about 10 ft. high.

3 p.m. Lava beginning to rise very fast. Blow hole SW about 20 feet above the lake emitting loud noise. The NE bench has largely fallen away.

3:17 p.m. Still rising. No avalanches heard.

Alex.

Evening. Mr. Short reports heavy rock falls from N bench.

T.A.J.

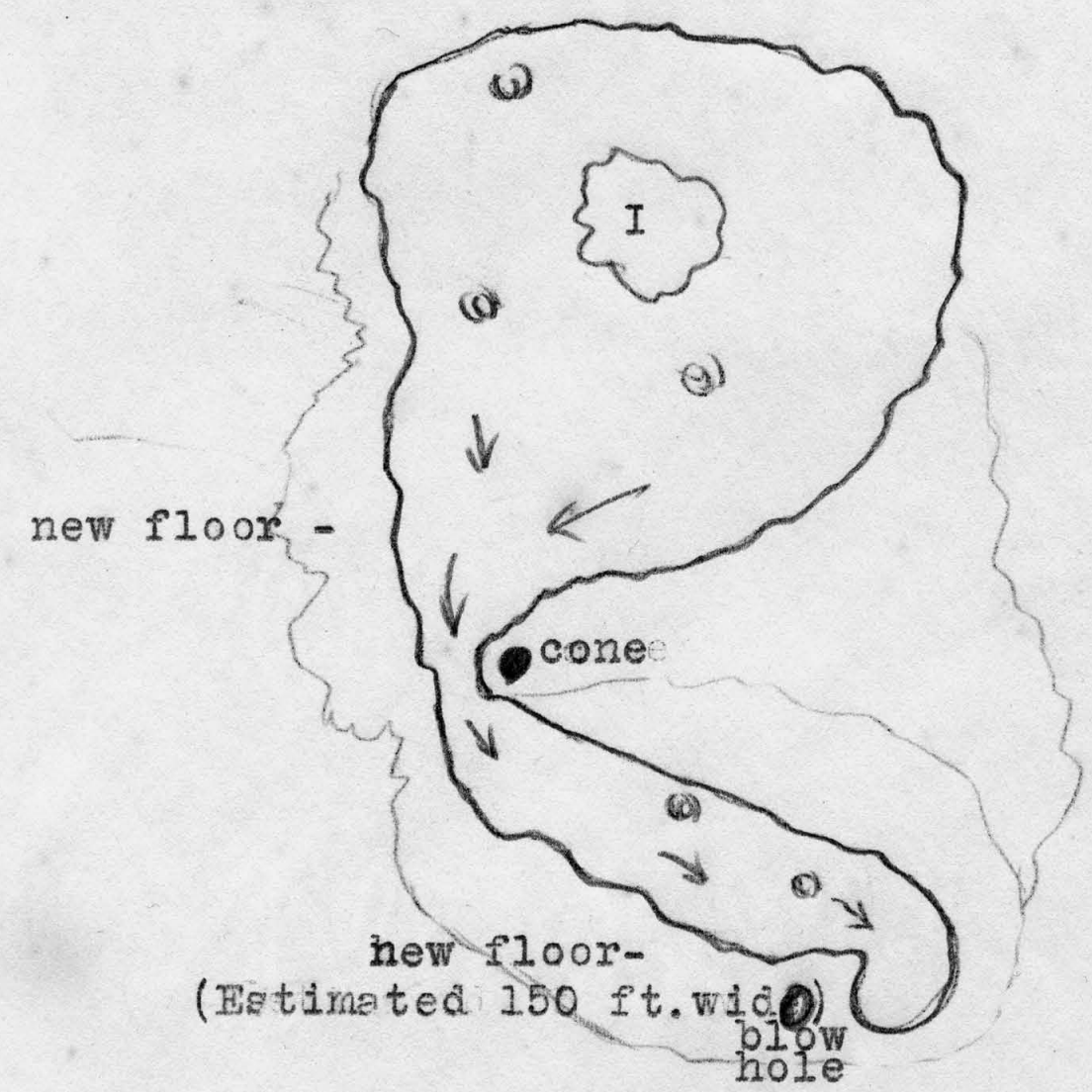
Massachusetts Institute of Technology
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date October 2, 1915.

2:17 p.m. SE station.
New bench around lake. Strait between new floor and cone is narrower. Lava streaming through it toward E. Lake about five feet below new bench. Many fountains. Blue fumes in pit under SE station thick. Blowing SW and NE. Rocks falls occasionally heard.

From SE:-



Alex.

Massachusetts Institute of Technology

JOURNAL

Hawaiian Volcano Observatory

Day Sunday Date October 3, 1915.
Monday " 4, "

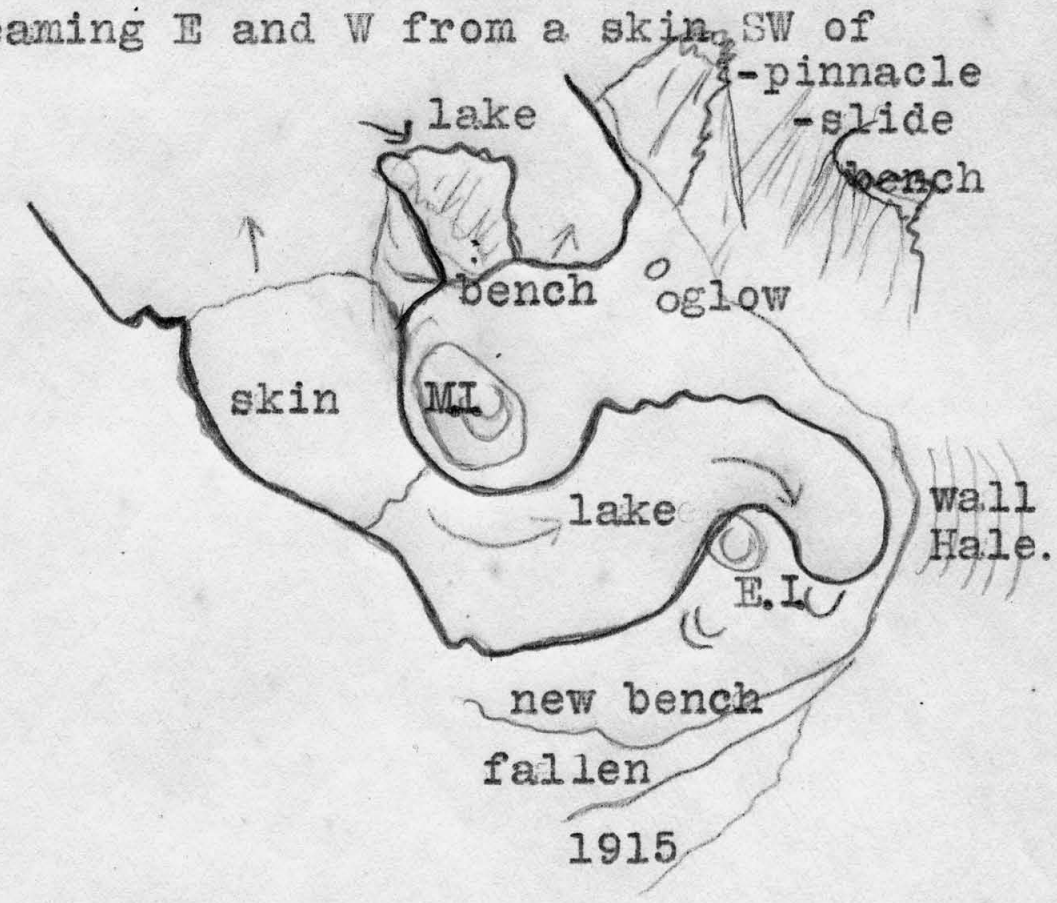
Oct. 3.
Afternoon. H.O.W. reports level with lower rim. Snapping sounds.

Evening. Sharp hiss at intervals SW.

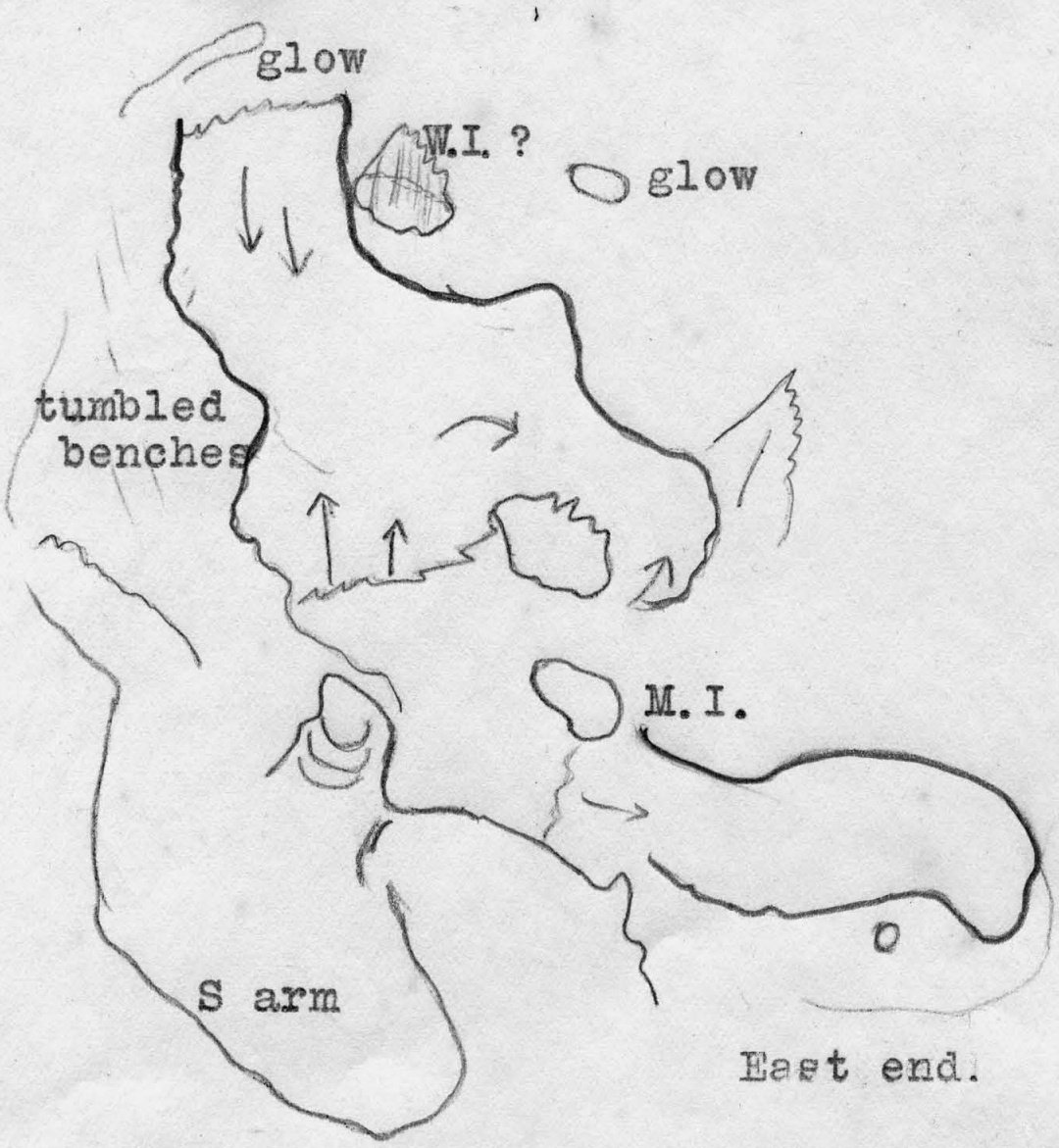
T.A.J.

Oct. 4.
11 a.m. Noise plashing. Much smoke, dense; white, yellow and blue at E end. Hot solfatara SE (site of E pond). Lake three feet below new lower bench with spatter rims. Slow inrush SW with bubble fountains.
Middle island a peninsula from the N bank and higher than E island. This small and near E end, crusts S of it. Broken pinnacle off end of what was S promontory. S arm and SW cove now merely tumble of red debris. S end of W bench all fallen away. Hot fumaroles inner end S arm and on bench E of it. Streaming E and W from a skin SW of middle island.

E end of lake from S:-



West end



West end very actively plashing but very hard to see. Whistling hiss now and then - location doubtful. S talus sliding in two places.
Heavy yellow fumes W end.
Fumes N bench.

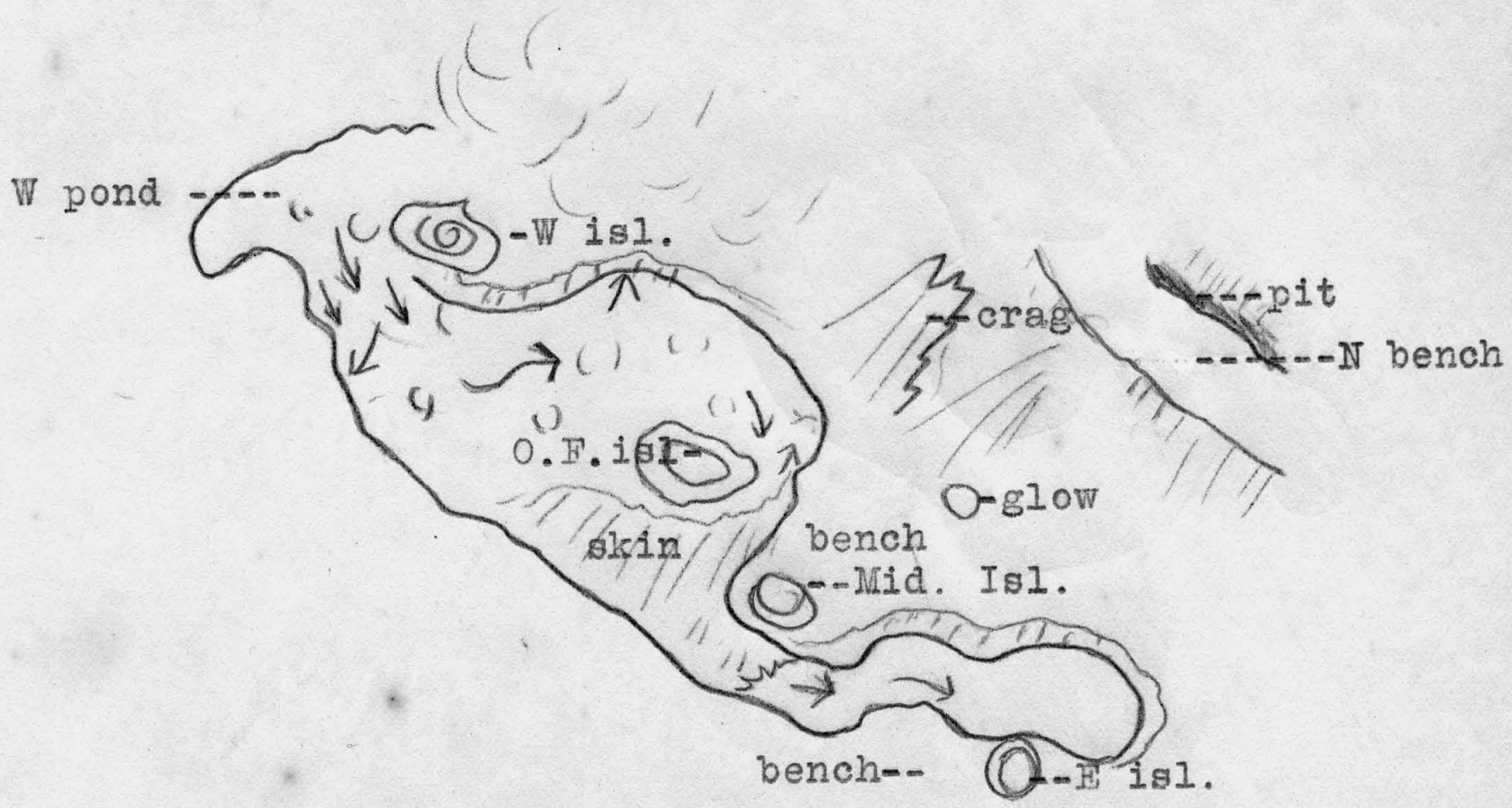
T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Tuesday Date October 5, 1915.

11 a.m. East end of S rock slide working. Lake 10± feet below lower bench. Activity much the same as yesterday. High S talus working. Appears to be a pit in top of N bench. Middle island now a knob on end of a platform peninsula from N. S island a low knob at end of platform peninsula from S. O.F. island really surrounded by melt. Slight noon rise with bubbling. Streaming activity from W end to O.F. pool. West island also a promontory from N. West pond with river from it E again definite. Smoke SW bench, S bench over lake, SE, N crag, N bench, W bench.

Lake from S station:-



T.A.J.

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Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Tuesday Date October 5, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
11a.m.	SE	N	0					
	S	SE	0					
	SE	Point middle island	29 11	42 14	+8	493	445	
	S	" " "	50 32	35 36	+4	633	451	
								T.A.J.

			no	pl	scr	stop	ex	cam	

Massachusetts Institute of Technology

JOURNAL

Hawaiian Volcano Observatory

Day Wednesday Date October 6, 1915.
Thursday " 7, "
Friday " 8, "

Oct. 6.
6 p.m. Smoky. Same only more sluggish and crusted. West end crusted. Flames in various places. Area S of middle island and W of there crusted. Stream from there E. Stream W from crust W of there. Stream E from W pond. These last two meet and flow against NW bank. Glow hole still at E end of site of S arm. S talus working.

T.A.J.

Mauna Loa.

Mr. Burdick, Territorial Engineer, made reconnaissance of trail up Mauna Loa.

Oct. 7.
2:40 p.m. SE station.
Lava level with new floor. Many fountains in middle of lake. Streaming eastward. Blue fumes thick SE.

2:50 p.m. For three seconds rocks heard sliding W; a few small slides there later.

Alex.

Oct. 8.
2:25 p.m. SE station.
Lake lower. Banks about five feet high. Rapid streaming in E channel. Bubble fountains at E end.
Thick fumes rising. Appears to have been a large slide from wall of pit SE.
2:45 p.m. High peaked peninsula seen toward N.

Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Saturday Date October 9, 1915.
Sunday " 10, "
Tuesday " 12, "

Oct. 9.
2:20 p.m. SE station.
Lake 10 feet below the lower bench. Streaming through channel toward the E. Seeing poor because of dense fumes. Strong wind.

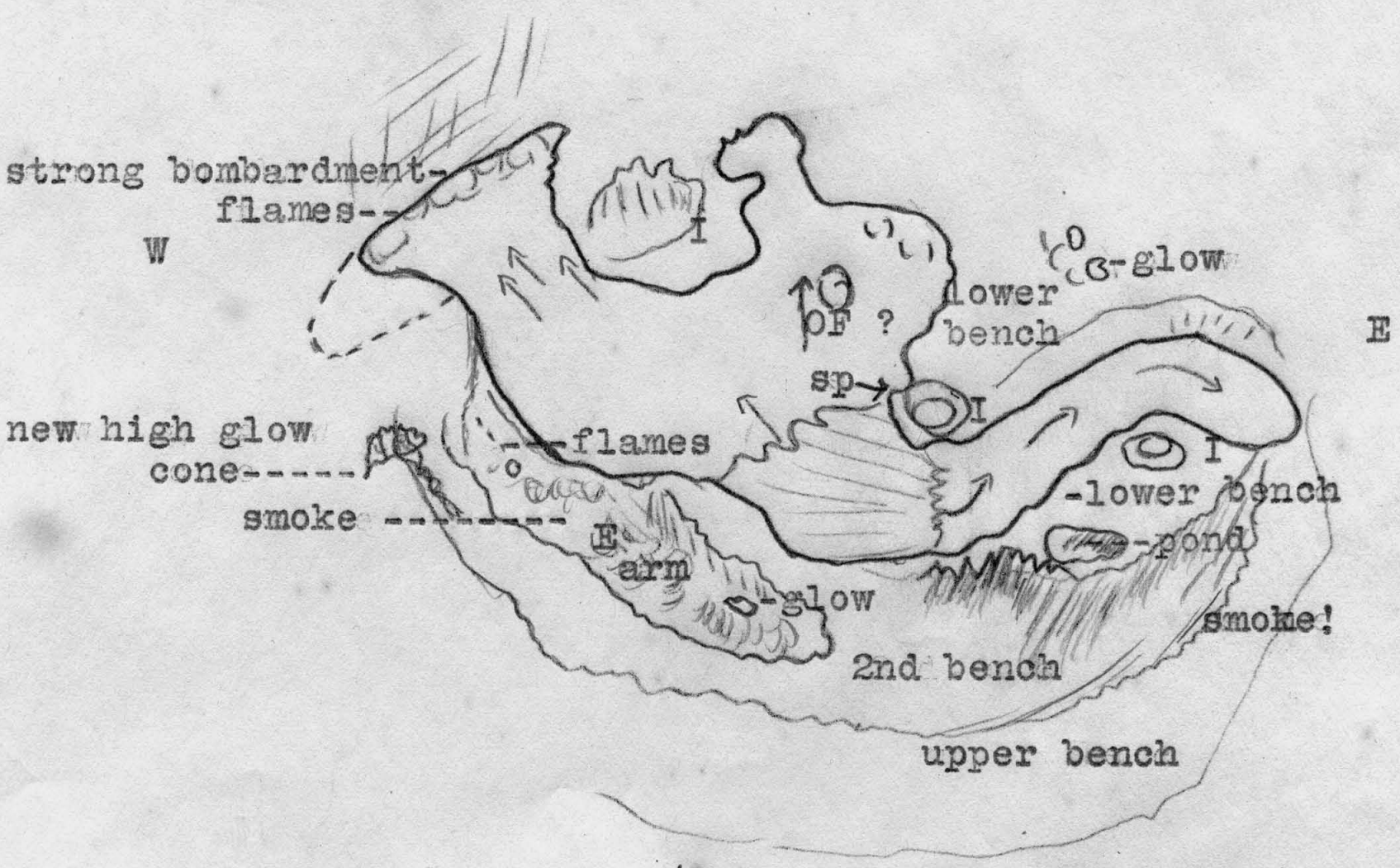
Alex.

Oct. 10. Seeing bad - fumes still very dense. Glow on smoke cloud in evening as seen from H.V.O. very dim.

T.A.J.

Oct. 12.
5 to 6 p.m. This evening some improvement in seeing. Good view from the S. Strong flow <u>westward</u> through channel to W pond with violent bombardment on W bank of W pond. Flow eastward from crust S of middle island. Latter and E and W islands still in place. NE wall over lake appears about 20 feet high. O.F. not playing definitely but perpetual fountaining in its location. New SW glow cone at top crack where SW bench has broken and sunk. One rock tumble into lake heard. Some stalactite caverns. The reversed west flowing streaming and the high glow and flames all suggest a rise. Also the good seeing. Dense fumes E, SW, W and N. There is a deep N arm E of western island.

Lake from S at 6 p.m.:-



(E-W dimensions too short.)

Vigorous spatter for a short time at "sp".

T.A.J.

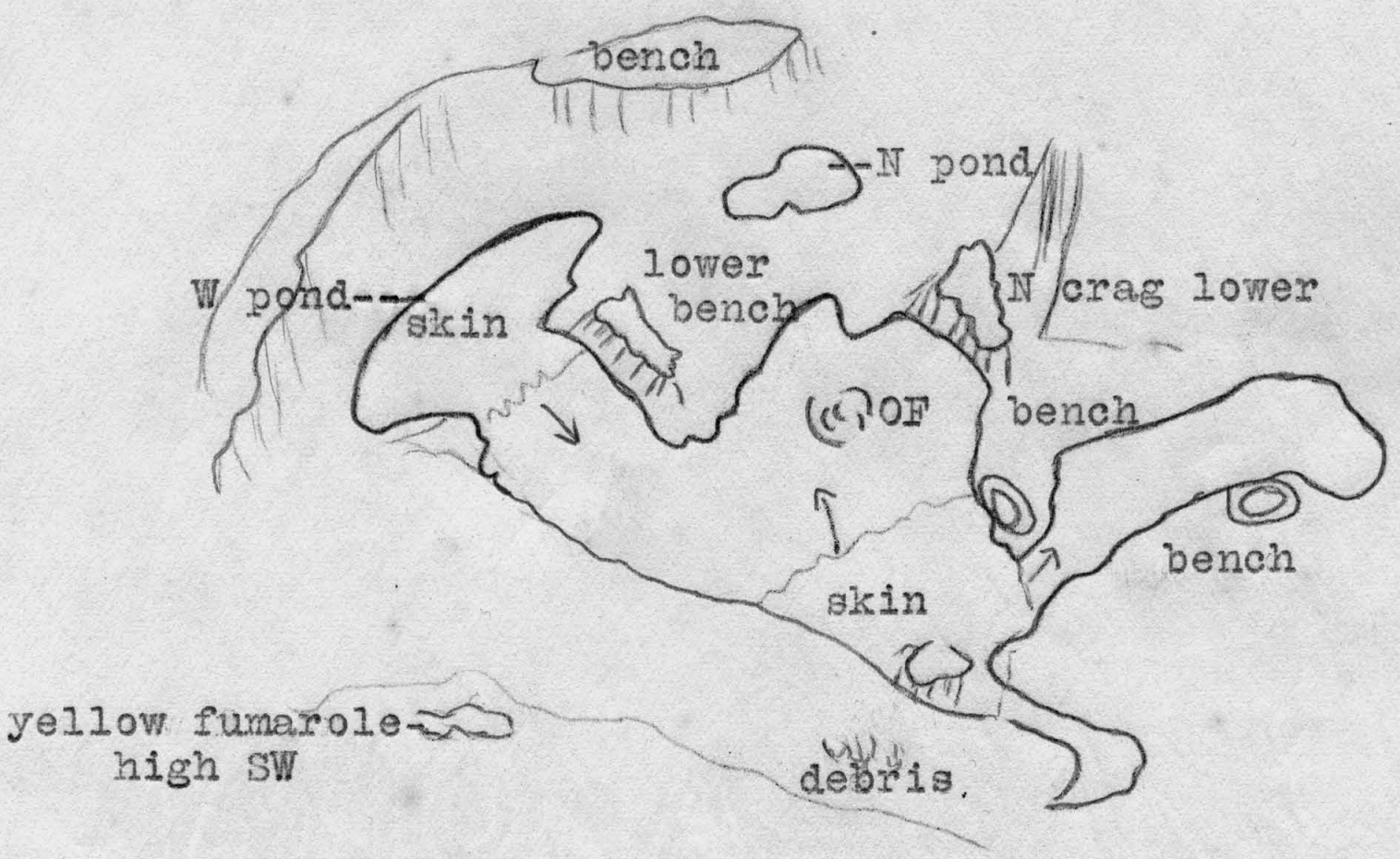
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Wednesday Date October 13, 1915.
Friday " 15, "

Oct. 13.
2 p.m. SW station.
Wind E. Stagnant. Conditions same but more sluggish. Streaming in W channel from W to E. O.F. in action with bubble fountains in intervals and splashing noise. Lake about 8 feet below lower bench. Spatter rims above lake. Streaming E at E end; W and E to O.F. pool, N in O.F. pool. Much new talus on August bench S. Much smoke. Noise only plashing. Some distinct flaring in the evening. N pond breaks up occasionally.

From SW:-



T.A.J.

Oct. 15,
2:30 p.m. SE station.
Rocks avalanching W for about three seconds. Banks of lake five feet high. Many large and small fountains.

2:50 p.m. A second awalanche of short duration heard NW. Thick fumes SE. Small active pool formed in the SE lower bench about 10 feet long and 6 feet wide.

Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Saturday Date October 16, 1915.
Sunday " 17, "
Monday " 18, "

Oct. 16. Dense brown smoke rising from crater. Strong wind.

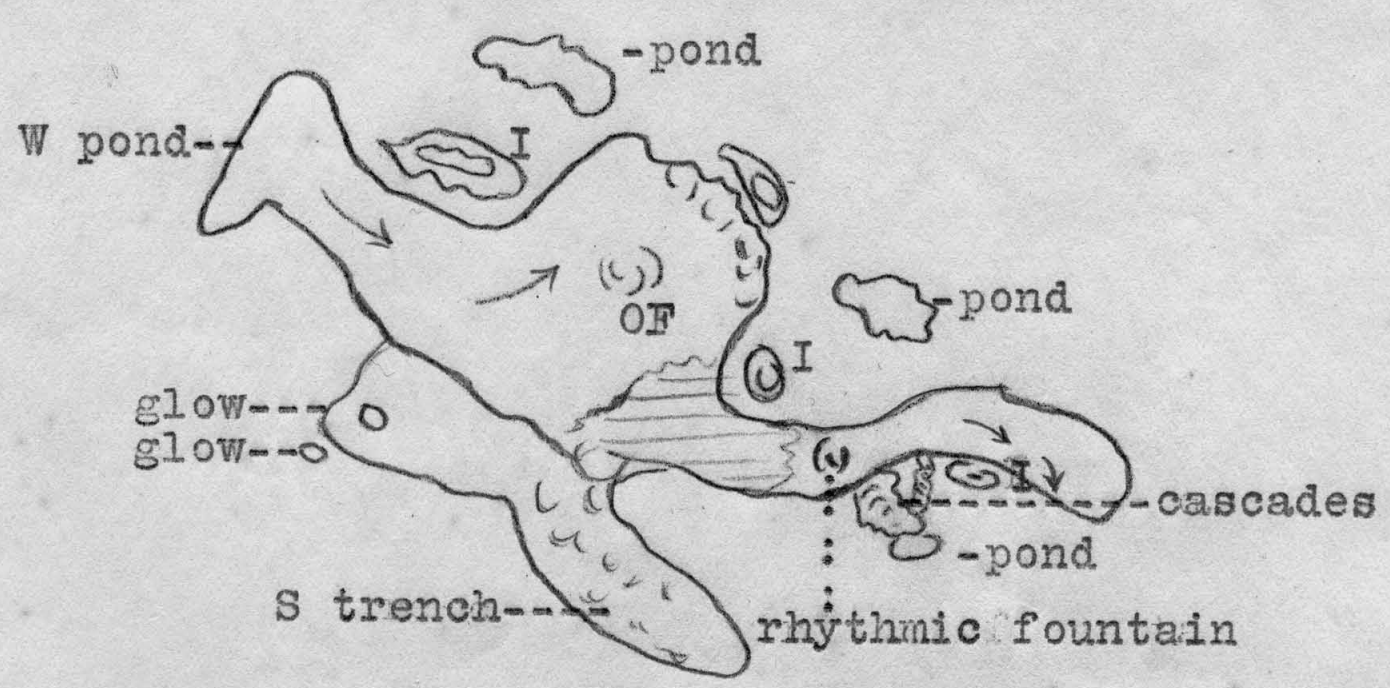
Oct. 17. Still smoky. Poor seeing reported.

T.A.J.

Oct. 18.
3:07 p.m. SE station.
Lake only one foot below lower bench. Many large and small fountains playing at the same time. Streaming eastward. SE pot in bench spurting vigorously throwing lava spray 25 or 30 feet high. No avalanching heard though there were signs of recent caving in high wall of pit under E station.

Alex.

8:00 p.m. From S:-



Active but smoky. Pond SE overflowed and flow cascaded into the lake apparently 10 feet down. Appears rising. Occasional sinking accelerations of streaming E pool.

T.A.J.

Massachusetts Institute of Technology

JOURNAL

Hawaiian Volcano Observatory

Day Tuesday Date October 19,1915.

10:30 a.m. Lake appears higher than last week. Pond NE (in crust). Noises plash and blow . N crag lower. O.F. at work. Streaming E from W pond and from crust S of middle island. N streaming in middle pool. Crag at entrance S niche lower. Bubble fountaining and blowing in E pool. Two glow-holes SW at different levels. Yellow sulphur stain on upper one. Lower bench not more than 35 feet high. Fresh overflows on bench S.

T.A.J.

KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Tuesday Date October 19, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
10:30a	S	SE	0					
	SE	N	0					
	SE	Shore middle island	24 36	42 21	-11	518 (was	475 450'	Oct.5)
	S	" " "	49 40	34 53	-9	679	474	
								T.A.J.

			no	pl	scr	stop	ex	cam	

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Wednesday Date October 20, 1915.

10 a.m. Rising? About same in general. Rapid streaming and fountaining E. New overflows on lower bench E and S. Islands look low. N crag very much lower.
SW lower cone (in old SW cove niche) glowing, spitting, and occasional sharp hiss. O.F. very noisy. Much spattering on banks and blowing noise.
NE gale and rain.
A crag hanging out from 1915 bench at E end. NE pot in bench churning and splashing.

T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Friday Date October 22, 1915.
Saturday " 23, "

Oct. 22.
2:45 p.m. SE station.
A bridge of heavy crust between the middle pool and E pool. Torrent streaming from under this crust into E pool. Lake about five feet below lower bench. Boiling noisily on NE side. Occasional blowing sounds. Many cracks in bench S. No avalanches heard. Fountain activity all over lake.

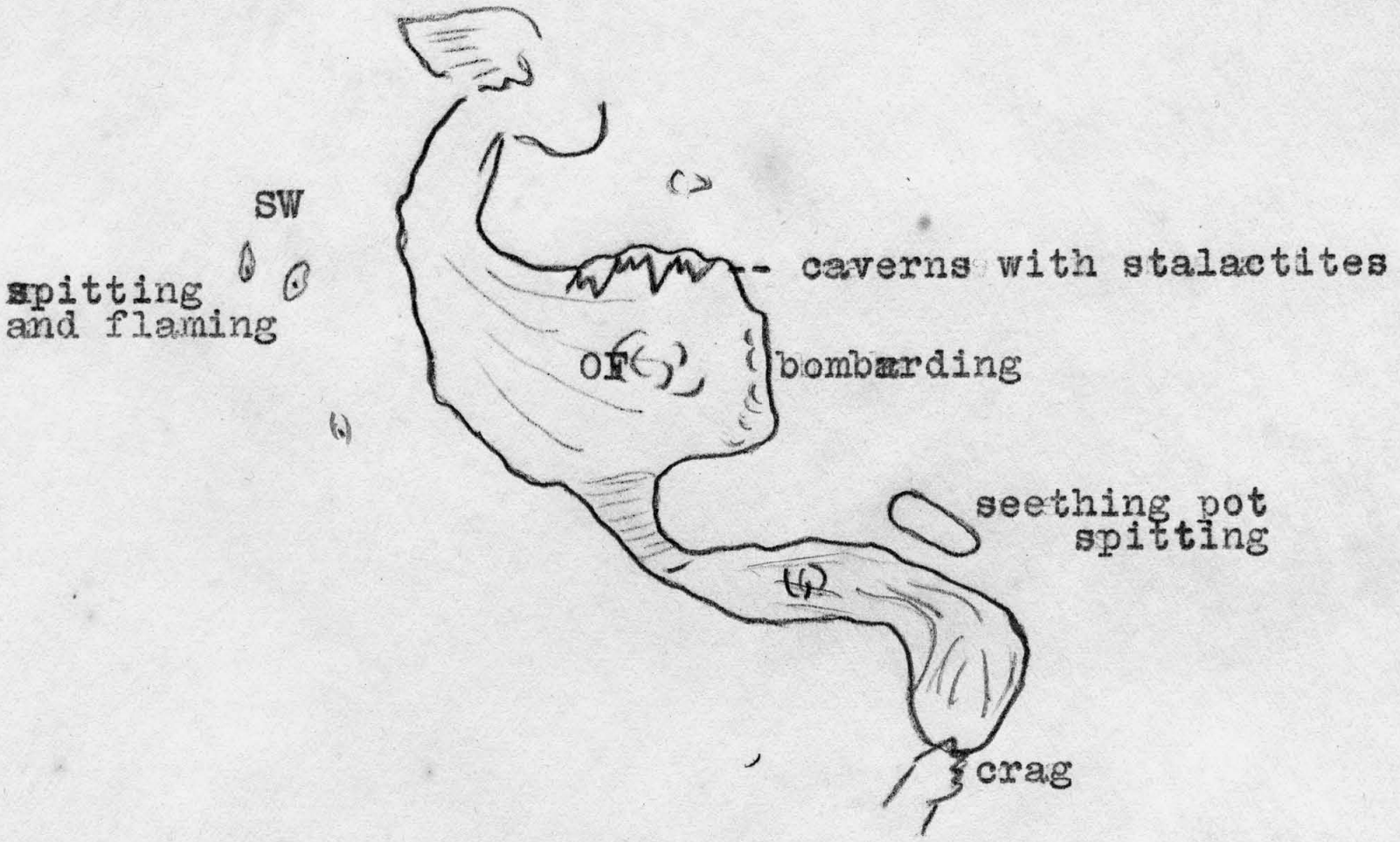
Alex.

Oct. 23.
2:55 p.m. SE station.
Lava only two feet below bench. Lake active especially at NE. Noisy and smoky. Streaming through channel to the E.

3:10 p.m. Heavy avalanche of bench material NE. Lasted nearly five minutes. Pit full of dust and smoke.

Alex.

8:00 p.m. SE station.



Smoky. Two great streamings; one from W into the middle toward N bank and one from middle eastward. O.F. active. NE pot larger. Lava in lake appears higher. Activity of rapid streaming suggests sinking however.

T.A.J.

JOURNAL

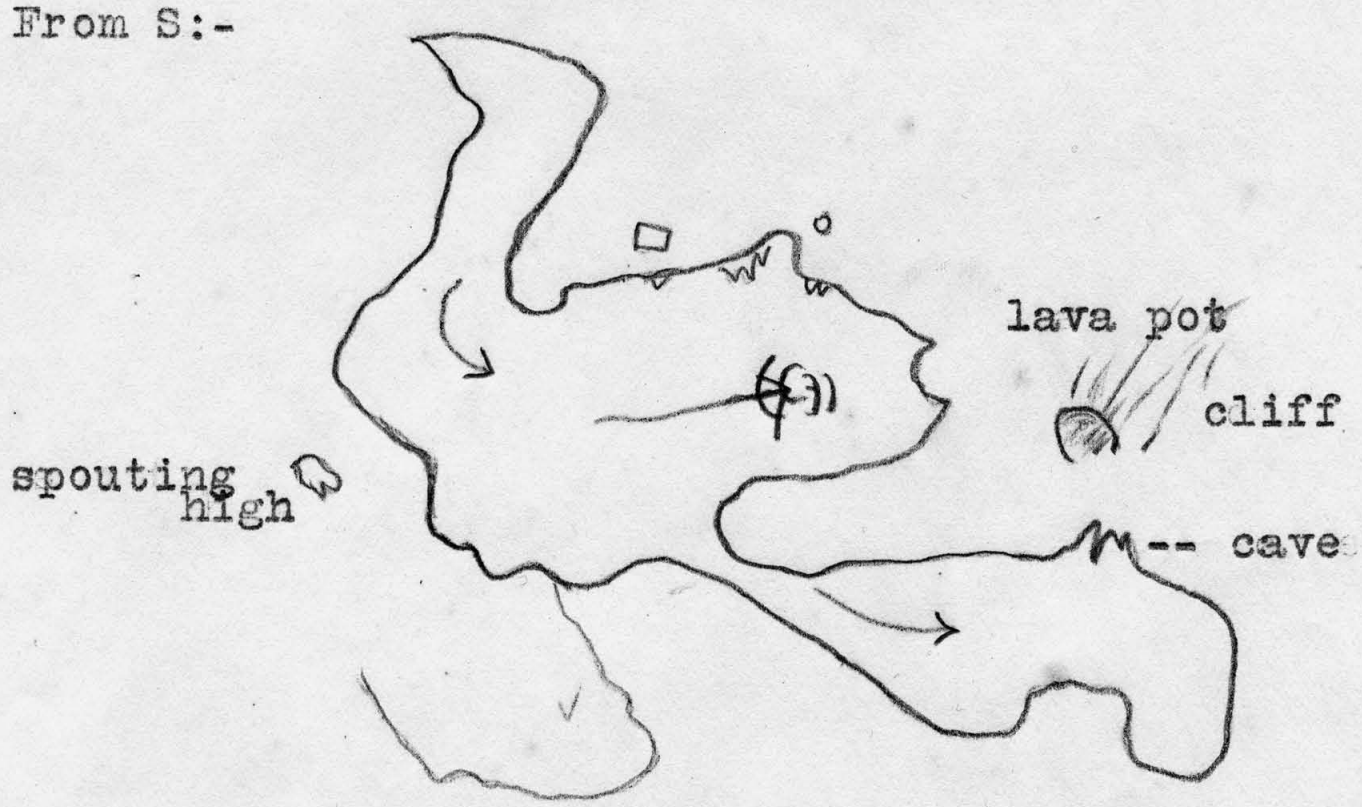
Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Sunday Date October 24, 1915.
Monday " 25, "

Oct. 24.
8:00 p.m. SE station.
About the same; very dim; much fume. The NE pot only a glow spot. Heavy bombardment N side middle pool. Opposite NE pot site is a cavern in the bank of the lake. Streaming active.

Oct. 25.
6:00 p.m. Lake appears lower. Cavern NE higher. A pit of lava beyond with a cdiff in front of it as seen from the SE station.

From S:-



Stalactite caves. Square pot N of W island. Streaming eastward. Seeing fair. No changes in general form or condition.

T.A.J.

Massachusetts Institute of Technology

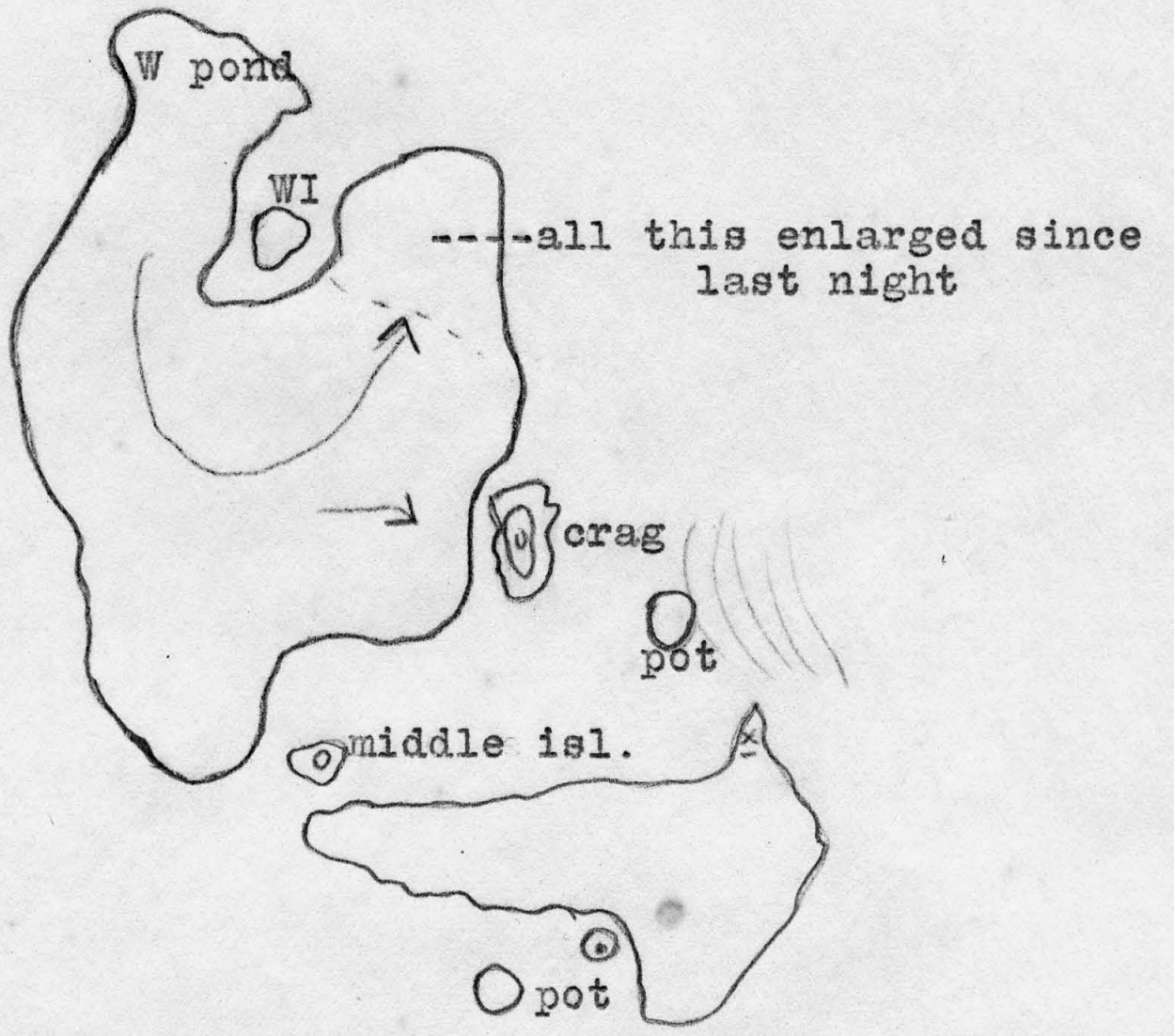
JOURNAL

Hawaiian Volcano Observatory

Day Tuesday Date October 26, 1915.
Wednesday " 27, "

Oct. 26.
9:15 a.m. Conditions the same. Bench 55 feet high. Pots in bench NE and SE. Much blowing in grottoes E. N crag very low. Middle and E island mere humps. Middle pool wider NW -- separating off W island more. Streaming E in both pools. Lower bench SE and S.

From SE station:-



Oct. 27.
9:30 p.m. Fumes of late from some vent E of E station disagreeable with H_2SO_4. Pit shows rising. NE pot gone by overflow and burial under its own flows. E island gone. Now only a flat bench peninsula. Middle island a very small hump. New flows on bench SE, NE, and S. SE pot still visible. Noises quieter than yesterday. Smoke dense but can see E streaming, W river, NW bay. E streaming as usual in E pool; and NE grotto and N crag bombardment. Fresh spatter rims around lake. Lake two feet down.
For safety released Haworth's cable with cold chisel.

T.A.J.

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KILAUEA DAY SHEET

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Tuesday Date October 26, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
9:15 a	S	SE	0					
	SE	N	0					
	S	Grotto NE	44 35	30 23	+8	780	453	
	SE	" "	12 28	39 21	+4	552	451	
								T.A.J.

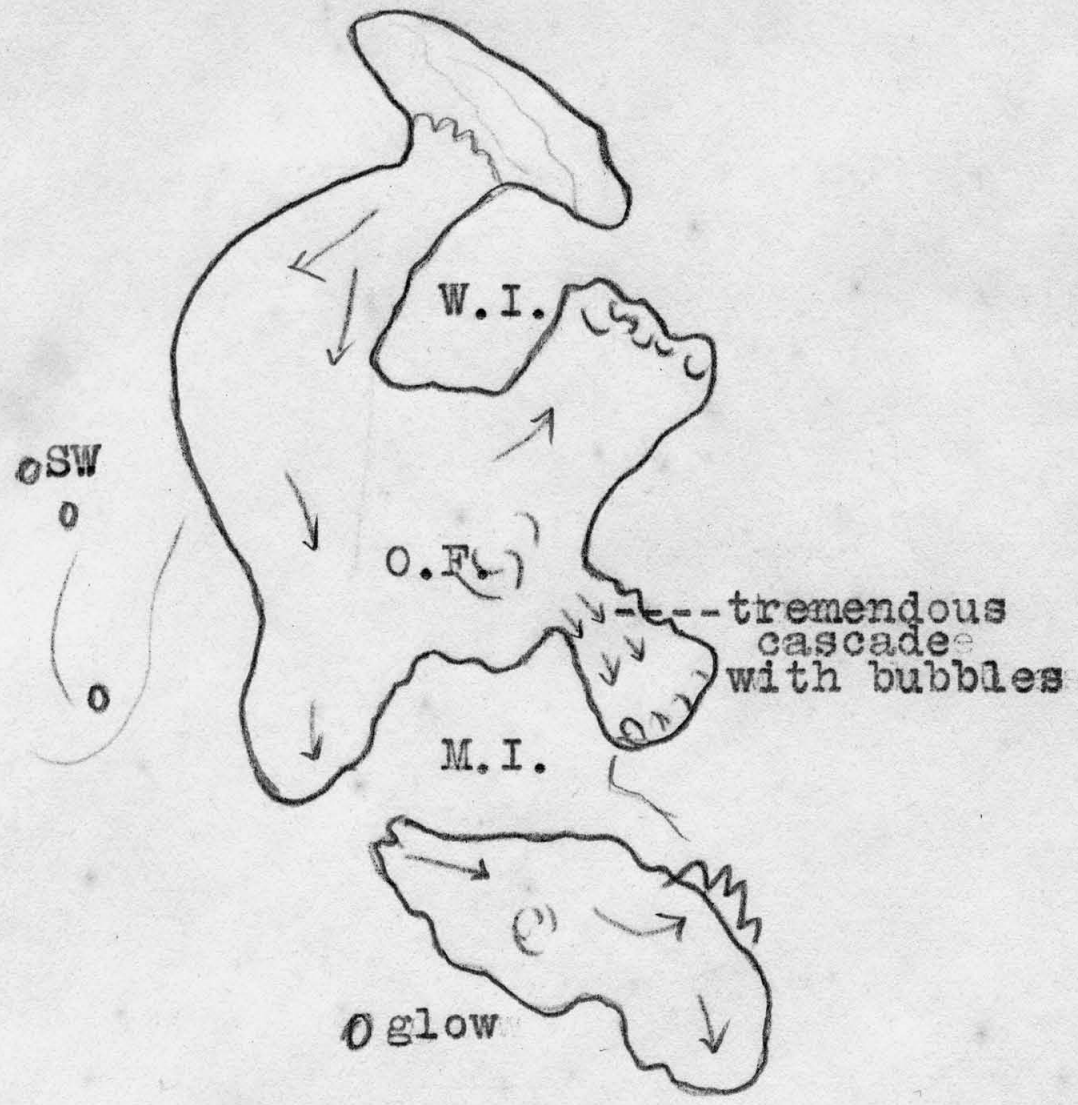
			no	pl	scr	stop	ex	cam	

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Thursday Date October 28, 1915.
Friday " 29, "
Saturday " 30, "
Sunday " 31, "

Oct. 28.
8:00 p.m. From SE station.



Whole lake visible. Torrent cascade pouring from middle pool into NE pot; drop 10 to 15 feet; swirling cauldron below; bridge must have broken through. Middle and west islands both almost isolated again. Cavern N side E pool; looks as though this, too, separated by only a narrow bridge from NE pot. Is sinking again in progress?

Oct. 29 - 30. No visits to pit. Very heavy rain. Pit appears smoky.

Oct. 31.
3:00 p.m. High NE wind blows fume down into pit. Seeing poor. Dim views show great activity, E pool wider, SE pot splashing, cascade from middle pool into NE pot still at work, changes to a slower stream from time to time as the pot seems to fill up. At 3 p.m. a slow stream: at 3:15 p.m. a cascade, etc. Hiss now and then SW. When cascade began heard rocks sliding on the S talus. Lake has been overflowing SE bench and at 3 p.m. the splashes of bombardment in NE pot splashed clear over the narrow isthmus which separated this pot (now an arm of middle pool) from the E pool.

T.A.J.

JOURNAL

Massachusetts Institute of Technology

Hawaiian Volcano Observatory

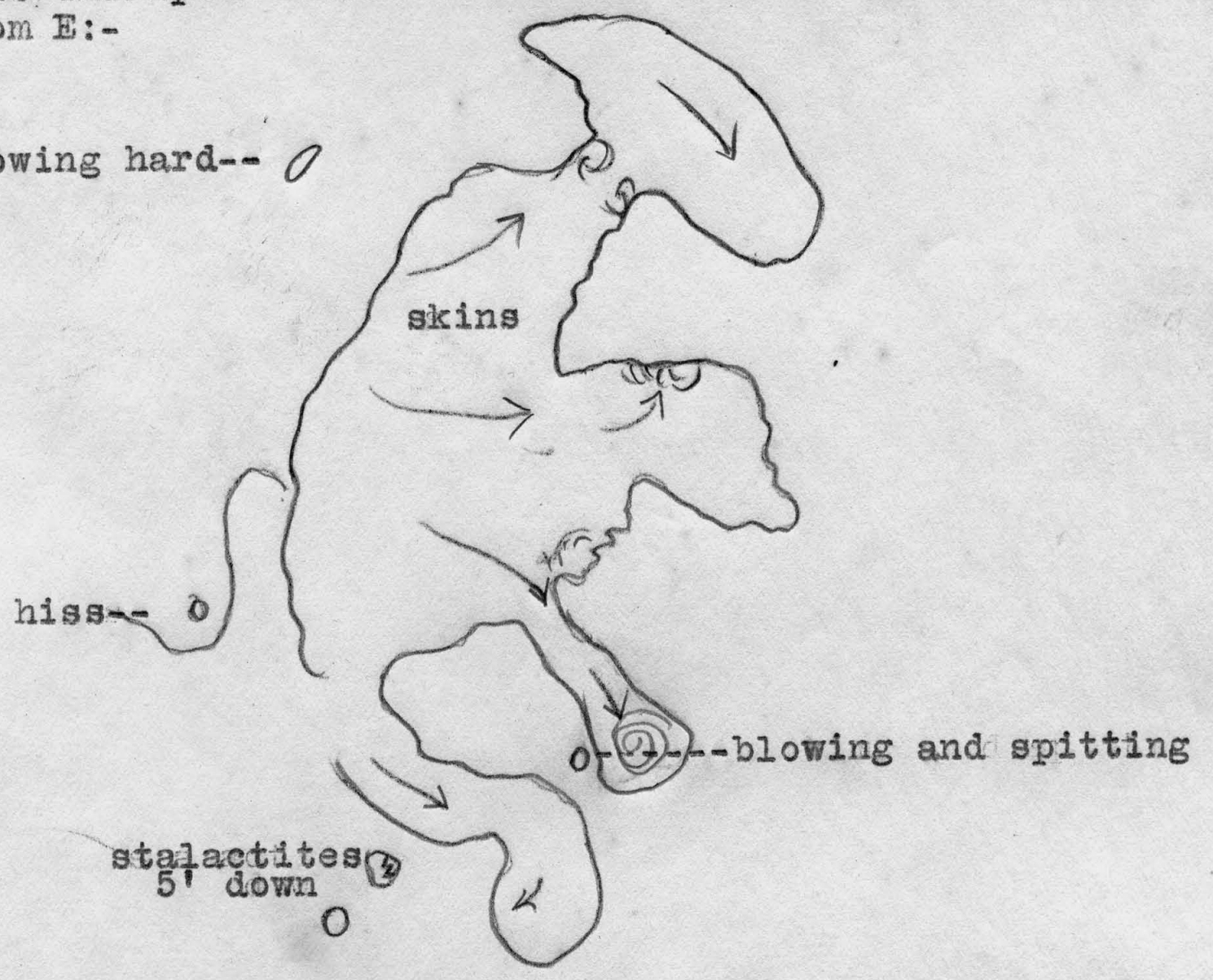
Day Monday Date November 1, 1915.
Tuesday " 2, "

Nov. 1.
6:30 p.m. High wind N. Very dim seeing E. Cascade at intervals into NE cauldron. Prolonged blows at intervals SW. SE pot full of lava. W end and O.F. turbulent. No bridge across strait S of middle island; E arm continuous with middle pool. Streaming eastward.

T.A.J.

Nov. 2.
6 p.m. Much better seeing. Heavy blowing SW. Appears rising. Streaming westward in W channel. O.F. in action. NE cauldron crusted and dark. Suddenly lake overflowed this crust and whirlpool started in in cauldron.

6:10 p.m. This whirlpool action ceased and cauldron skinned over. From E:-



6:15 p.m. Lava in NE cauldron sank faster than lake and cascading began. E pool also went down. Spitting hole S bank of NE cauldron. Westward current in W channel stagnated and in a few minutes was slowly eastward. NE cauldron filled and quieted and grew dark. Then in a few minutes it sank again and cascading recommenced. This process continued rhythmically; cascading beginning every ten minutes and lasting two.

6:30 p.m. O.F. out of action. Blue flames NE cauldron; spit hole on its bank out of action. N crag now a mere spatter bank. Pot NW of W island. Noises plashing and blowing.

T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Wednesday Date November 3, 1915.
Thursday " 4, "
Friday " 5, "
Saturday " 6, "
Sunday " 7, "

Nov. 3. Heavy rainstorm -- five inches.

Nov. 4.
8 p.m. Drizzle. Seeing SE fair.
Lake down about 15 feet below bench. NE caldron streaming in but not cascading, and the lava in it so low down that the view of it is partially cut off by the ledge in front..
E arm streaming against north bank. Large crust over N middle part of central pool, against point dividing the two bays.
Heavy bombardment against near end of W island promontory. Two or three pots splashing NW of this W island as though connection W pond to NW bay were nearly or quite through. Two pots in bench SE. Occasional strong puff SW, from what appears to be a filagree cone. W pond largely skinned over. Streaming E in W channel, N in NW arm, NE in NE arm, E in E channel, away from shore mostly along SW shore.
Query:- Is a general subsidence common after a heavy rain?

Nov. 5.
6 p.m. Evidence in S talus that sliding of the tumble of fragments had been going on carrying the talus cones to a lower level and leaving scored sulphur-streaked rock visible beneath.
W side middle island bombarded and eaten into along a series of scallops, the largest re-entrant making a nearly circular spouting horn in which the liquid lava was splashing and spurting at a level somewhat above that of the lake.
O.F. was not in action.

Nov. 6.
Evening. Conditions similar. Middle island isolated from N bank by narrow stream which is sweeping through from NE caldron to E arm.

Nov. 7. H. O. Wood reports no change. Channel NE of middle island again crusted over.

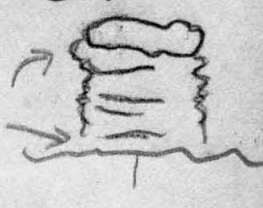
T.A.J.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

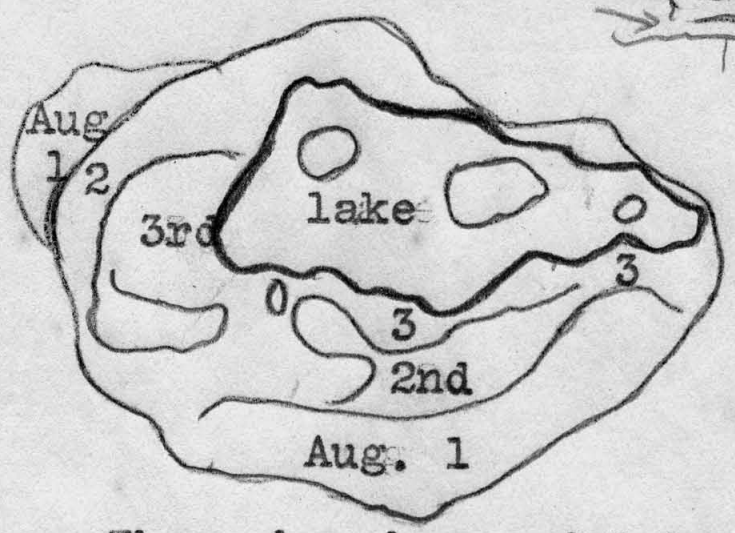
Day Monday Date November 8, 1915.
Tues. & Wed. " 9&10, "

Nov. 8.
2 p.m. Clear seeing S and SW stations.
West island long and isolated; middle island slight bridge;
east island isolated, flat topped, vertical walled:



From SW:-

Lake down. Rocks sliding on talus E and S. Remnant August bench W high up.
Noises of plashing and occasional rock sliding.
Streaming everywhere eastward.



Three benches and lake.

From S station (survey):-



W island 20 feet high.
Middle island 10 feet high.
E island 10 feet high.

Nov. 9 and 10 - Severe storm.

T.A.J.

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Massachusetts Institute of Technology

KILAUEA DAY SHEET

Hawaiian Volcano Observatory

Day Monday Date November 8, 1915.

t	sta	pt	hor	vert	lev	dist	elev	h. i.
2 p.m.	SW	S	0					
	S	SE	0					
	S	Point middle island	50 44	35 28	+13	658	467	
	SW	" " "	59 12					
	S	NE caldron	51 31					
	SW	" "	68 18					
	S	E end	37 40					
	SW	" "	53 54					
	S	W end middle W shore W pond	76 37	23 41	+13	943	386	
	SW	" " " " "	96 01					
	S	NW cavern	61 03	27 07	+10	913	466	
	SW	" "	79 29					
	S	E end W island	68 12					
	SW	" " " "	82 17					
	S	W " " "	73 22					
	SW	" " " "	93 02					
	S	S shore smoke bench level (middle S shore)	64 03	34 49	+10	653	450	
	SW	" " " " " " "	67 26					
	S	W corner middle isl.	56 05					
	SW	" " " "	65 10					
	S	N " " "	54 50					
	SW	" " " "	68 07					
	S	NE strait " "	47 36					
	SW	" " " "	62 15					
	S	General E island	41 08					
	SW	" " "	56 36					
	S	Point E of NW bay	62 16					
	SW	" " " W "	79 03					
	S	W summit middle island	71 13	25 07	+10	921	427	
	SW	" " " "	89 25	30 36	+12	737	431	

W island 140 feet long
Middle island 100 " "
E island 30 " "
Length of lake 600 "
Width " " 250 "
Depth to " 467 "

T.A.J.

no	pl	scr	stop	ex	cam

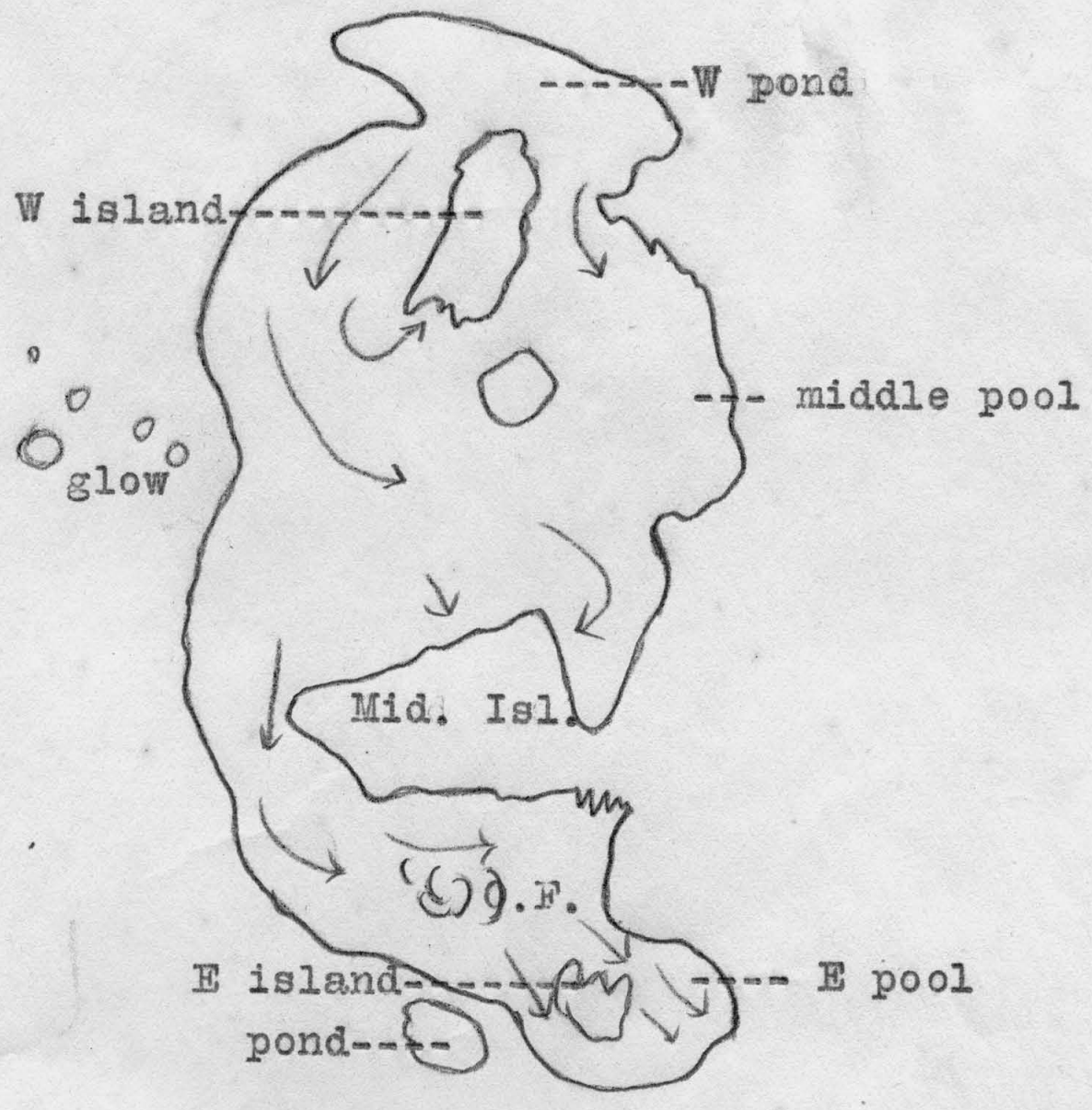
Massachusetts Institute of Technology
Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date November 11, 1915.

7:30 p.m. After 20.5 inches of rain in forty-eight hours great fume cloud, largely water vapor, rising in immemse cauliflowers over crater. The ring of outlying fumaroles particularly dense. Great increase of fumes of white water vapor in SW wall, top of S talus, all over 360-foot bench of Aug. 1915, and in general in the border fumaroles SE, E and N. Lake very active, high gas pressure, occasional good seeing SE. Strong blowing from higher and lower SW vents, the higher flaming continuously and rocketing, the lower spurting. There is a row of glow-holes from these SW chimneys to the lake. S talus sliding from time to time. A steady crackling noise such as is made by a running cascade of lava is heard but cannot determine the source. Appears to be about middle island.
Middle island joined by a NE bridge. E and W islands isolated. O.F. not in action, but a rhythmic fountain plays in the E pool. River eastward from W pond to middle pool and from latter to E pool.
A remnant of the E point of W island makes a separate island forty feet from it to the east; and the W island is much smaller than on November 8.
SE pot now a small pool.

Lake from SE station:-



T.A.J.

Massachusetts Institute of Technology

JOURNAL

Hawaiian Volcano Observatory

Day Saturday Date November 13, 1915.
Monday " 15, "
Tuesday " 16, "
Wednesday " 17, "

Nov. 13.
2:30 p.m. SE station.
Strong fountain action. Many small travelling fountains going in the direction of the streaming which was eastward. Rumbling sounds. Cone on the floor under E station about 15 or 20 feet high. Lava surface down about five feet below the floor. Shrill blowing from hole SW.

Nov. 15.
3:30 p.m. From SE station.
Lava in lake risen level with third floor. Large travelling fountains going eastward with the streaming. Hole SW now a cone. Still blowing loudly.

3:40 p.m. Many bubble fountains on surface of lake.

Nov. 16.
1:30 p.m. Lava has risen so as to overflow the second bench. The E cone submerged; the peninsula is gone and the lake is a single pool of boiling lava. Lava within three feet of reaching the level of the first bench. No islands to be seen. SW blow-hole still blowing loudly and occasionally spurting lava spray. Twenty-two large and many small fountains could be seen at one time. Streaming is toward the SE into a whirlpool. Thick blue fumes rising from a place 100 feet above the first bench at the south.

Nov. 17.
2:25 p.m. From SE station.
Lava surface about three feet below the second bench. Streaming toward the E. Lake active. Pit noisy. New blow-hole on bench S which is spurting out lava spray every few minutes with considerable noise.
An island about 50 feet long and 25 or 30 feet wide has appeared on the W side. It is about 100 feet away from the bank.

Alex.

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date November 18, 1915.
Friday " 19, "

Nov. 18.
2:30 p.m. SE station.
Overflowing on SE where there is a spouting cone. Also on the S side where the flow is going toward the W and around a small cone, then into lake. Much of the bench covered with fresh lava. Streaming from W toward the E and SE. There has been a slide from under the E station leaving quite a hollow in the wall.

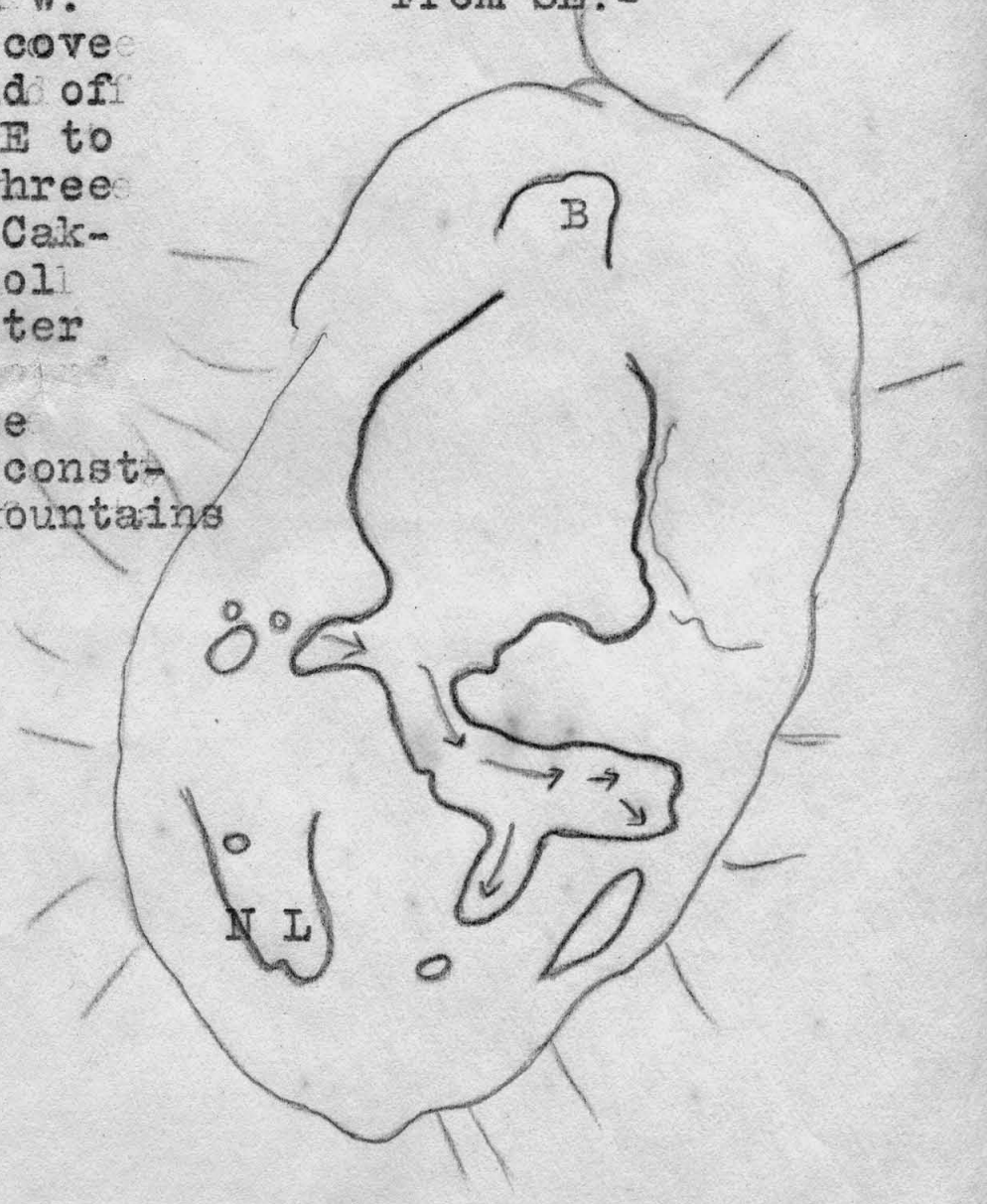
3:05 p.m. A small cascade of lave pouring into the pool at the NW, causing a great boiling and splashing.

Nov. 19.
2:10 p.m. E station.
Large flow coming from a cone under the SW station running into the large pool. On the W side the old floor of 1915 is covered with fresh lava. The only part not so covered is under the S station. The wall under the E station has split open making a gap from which fumes are issuing. On the NE side a large part of the 1915 bench has sunk leaving holes from which fumes are rising.

Alex.

General overflowing S, E and W. Consistent streaming from S cove into main pool and around end of peninsula to N and NE, also E to E cone. Sputter pot at S, three at SW. Boiling pool at W. Caking and streaming in main pool in various directions. Spatter action at numerous places around N and W margins. Lake overcrusted a good deal but constantly breaking up. Doming fountains at intervals but few boiling fountains.

From SE:-



H.O.W.

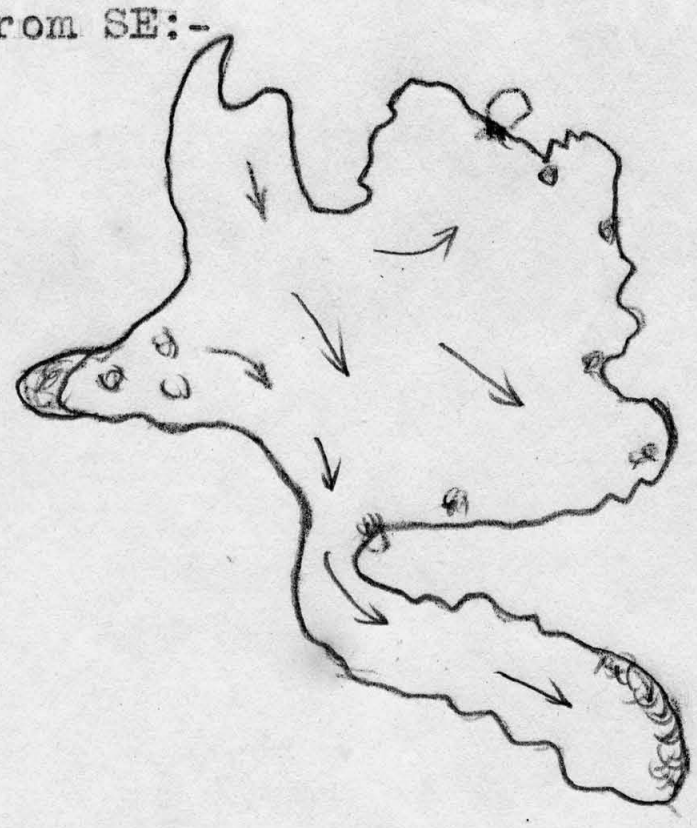
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Saturday Date November 20, 1915.
Sunday " 22, "

Nov. 20.
2:22 p.m. SE station.
Bench recently covered with new flows. Three spatter cones SW spouting lava. A few fountains N side of lake. Most of lake covered by thin skins moving around the peninsula and toward the ENE being engulfed in a boiling area. Surface of lava level with banks.

From SE:-



Nov. 22.
2:17 p.m. SE station.

Old peninsula gone.
Lava streaming from NW rapidly to the E cove but there were few fountains. Surface about three feet below the bench. Crusted over. SW cone blowing and spouting.

2:40 p.m. A small new pool NE. Bench from NW around to the E covered with fresh lava.

From SE:-



Alex.

JOURNAL

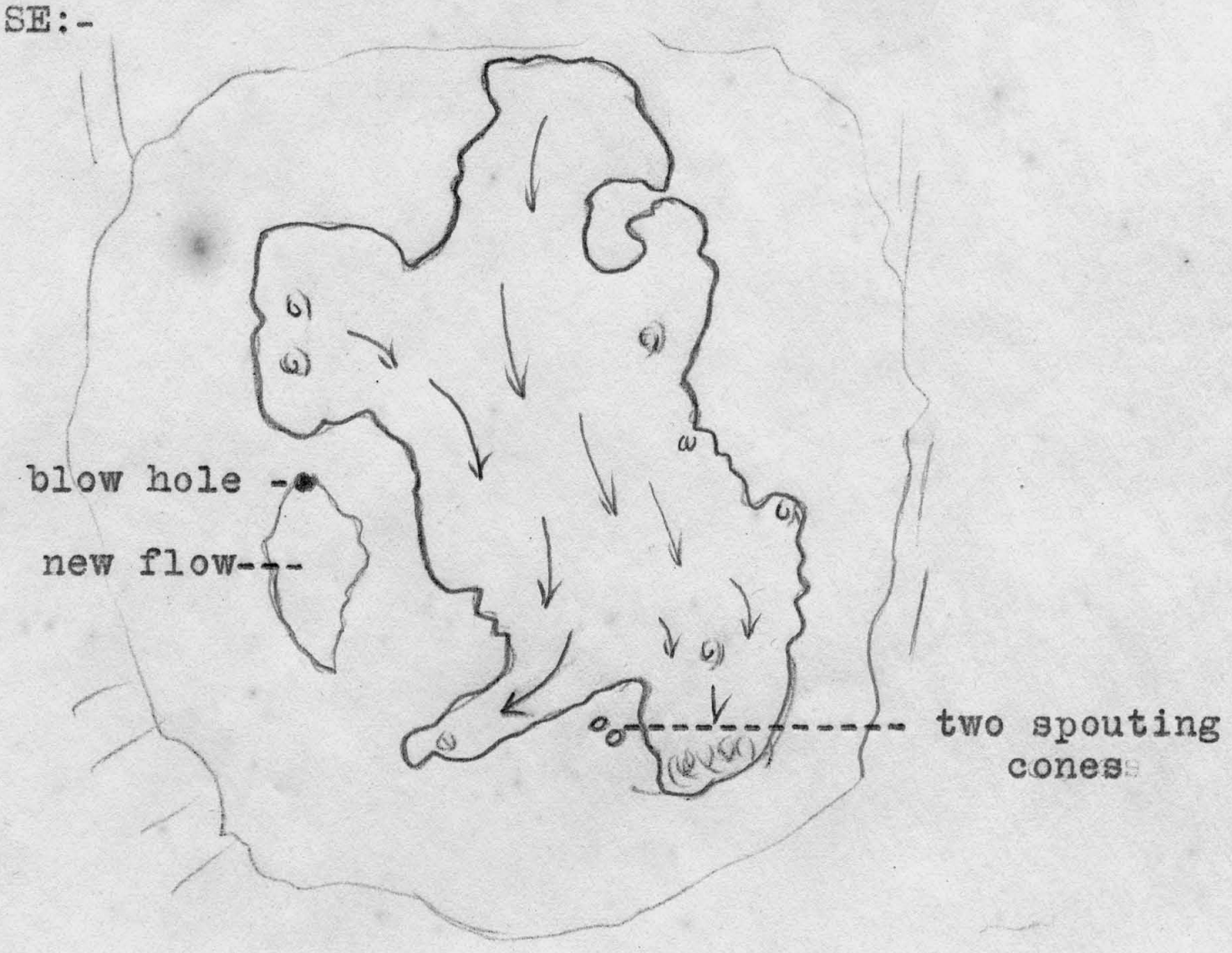
Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Tuesday Date November 23, 1915
Wednesday " 24, "

Nov. 23.
2:30 p.m. SE station.
Lava level with the bench around the lake. Many large fountains. Streaming from W to E. Several small cones on floor blowing.

Nov. 24.
2:25 p.m. SE station.
Lava surface about five feet below banks. Lake covered with thin skin and only two places with fountain activity--NE and E. Streaming as usual. SW cone blowing loudly and occasionally emitting jets of spray. Much blue fume rising from under the SE station; other fuming places around the sides of pit.

From SE:-



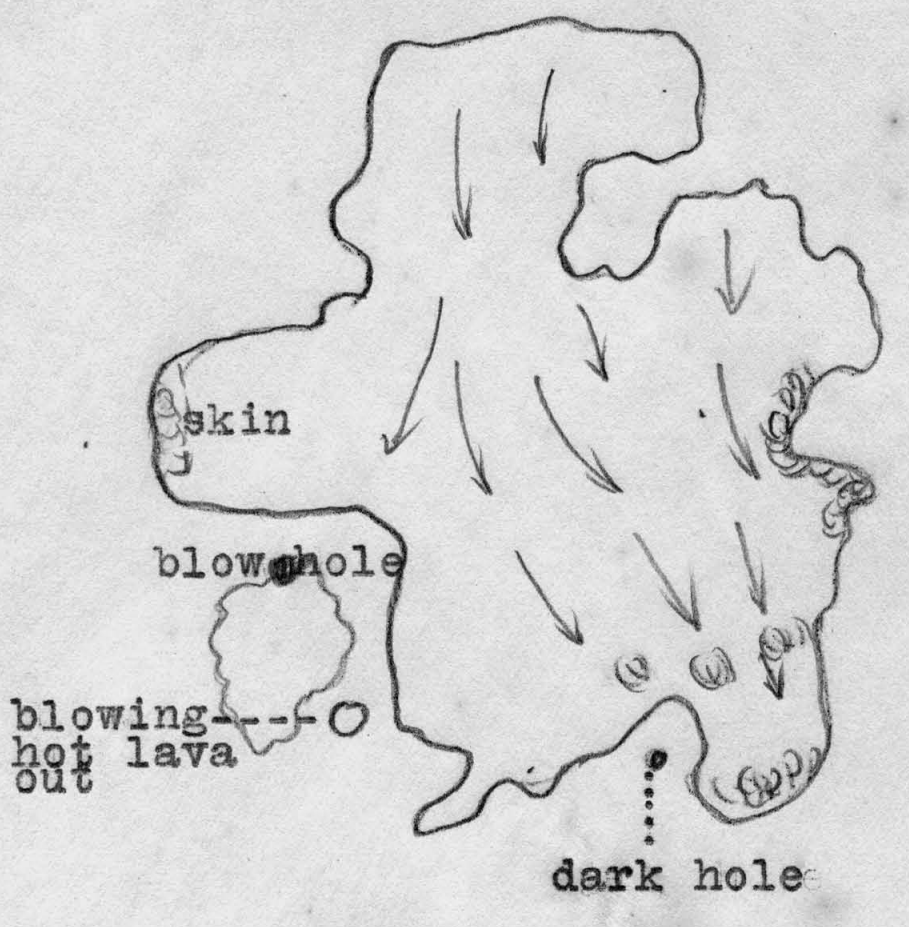
Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Thursday Date November 25, 1915.
Friday " 26, "

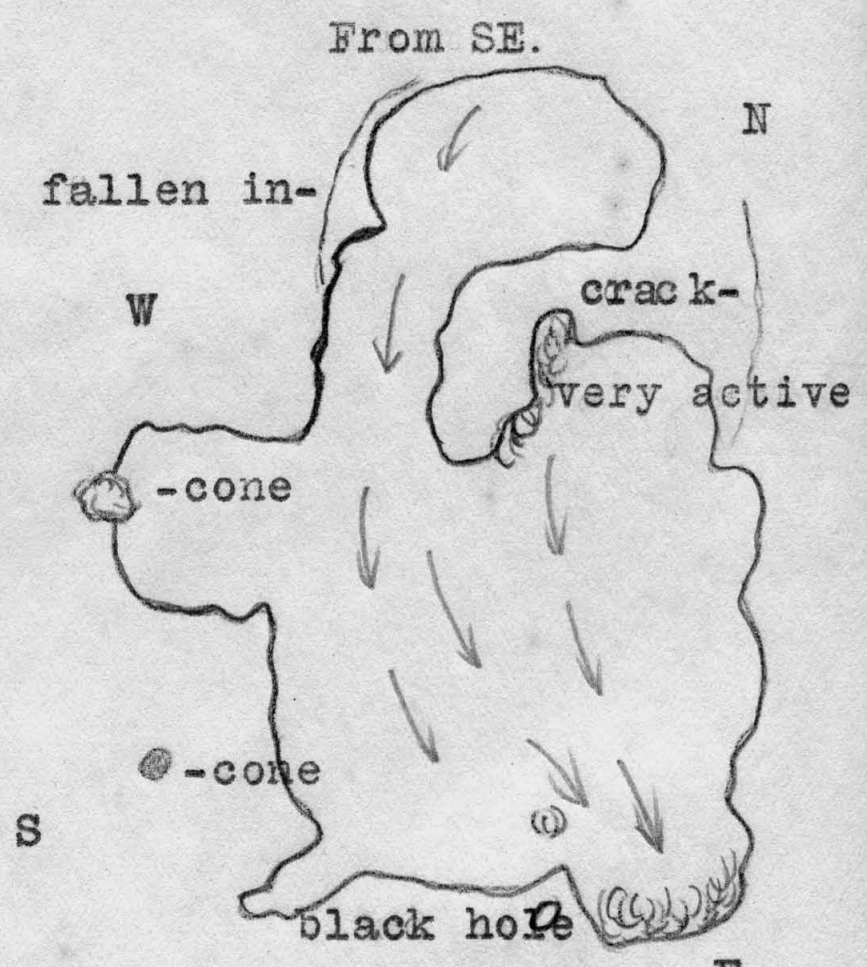
Nov. 25.
2:40 p.m. SE station.



Lava down about 10 feet below the floor. Surface covered with thin black skin. Only three boiling places in E cove & NE cove. NE crags subsiding.
Blow holes quiet.

Nov. 26.
2:35 p.m. SE station.

Lava down about 15 or 20 feet below the bench. Active in two places only -- E cove and NE side of peninsula. Streaming still toward the E. Cones very quiet. Thick blue fumes issuing from the tops of the cones. Much fume rising NE.
Black skin over most of lake.



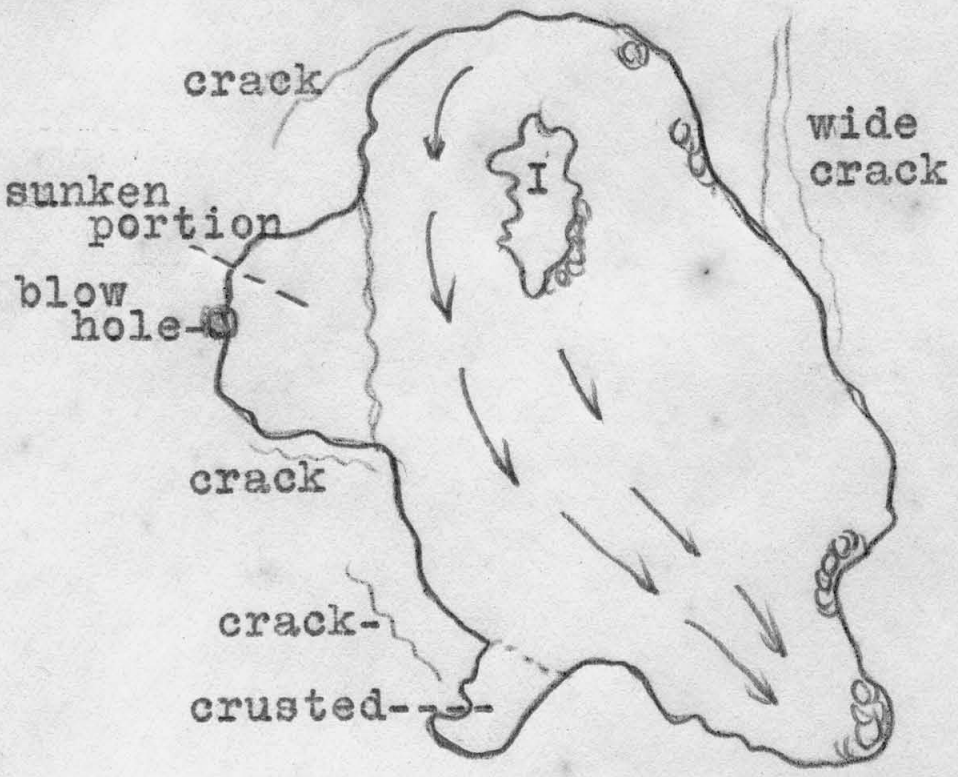
Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Saturday Date November 27, 1915.
Monday " 29, "
Tuesday " 30, "

Nov. 27.
2:15 p.m. SE station.

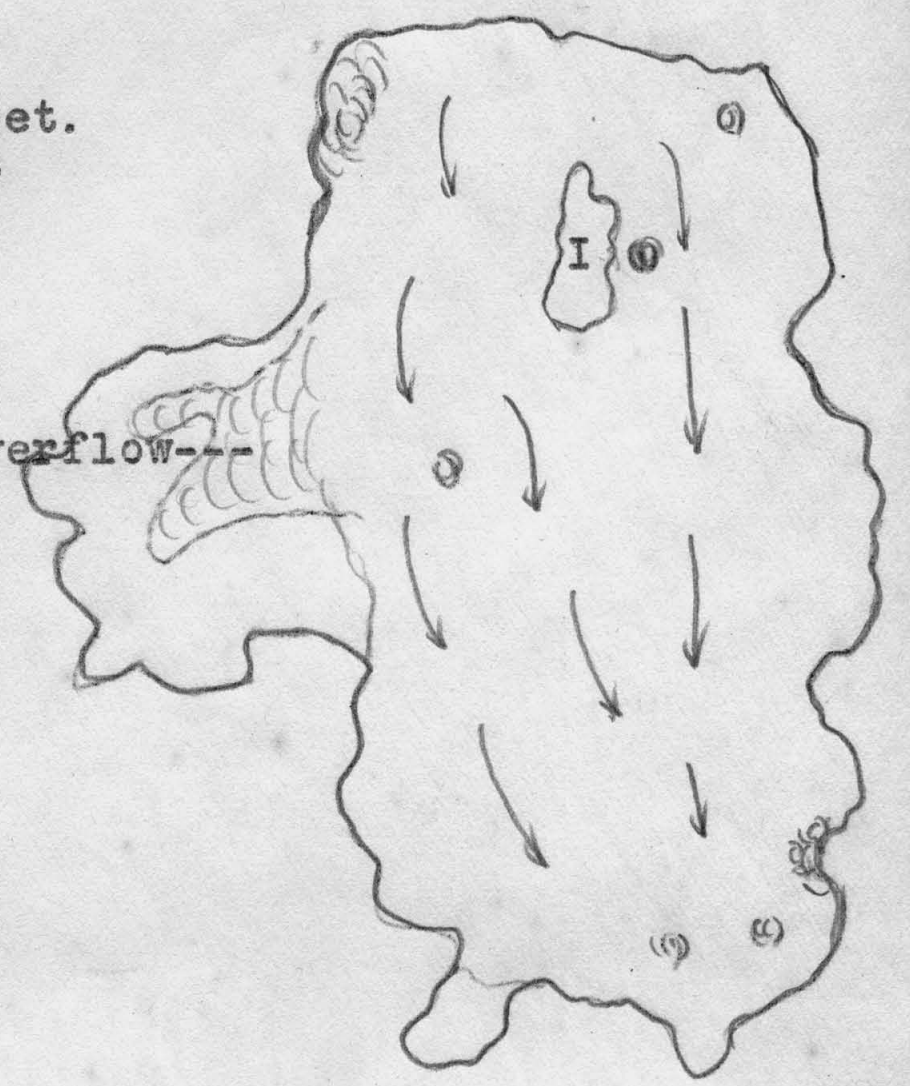


Lava has fallen to a depth of 35 or 40 feet below the bench. A part of the peninsula at the N side of lake has broken off and now forms an island. A large portion of the E bank has also fallen into the lake. Very thick blue fumes coming from under E station. No avalanches heard.
A niche SW has sunk down 20 feet.

Nov. 29.
2:30 p.m. SE station.
Level of lava in lake about the same. Only two places active. Streaming still toward the E. Blue fumes from under the E station and from many other places. Considerable part of the NE bank and a small portion of the E bank has collapsed. The floor between the E and the NE stations has sunk down some.
A small rock fall heard at 3 p.m. at the W side of pit.

Nov. 30.
2:20 p.m. SE station.

Lava has risen some 15 or 20 feet.
Many large fountains playing at the same time. Streaming E.
S cone a smoking chimney.
Blue fume still rising thickly from E. Lake continues to rise.



3:10 p.m. Overflowing on SW side of lake.

Alex.

JOURNAL

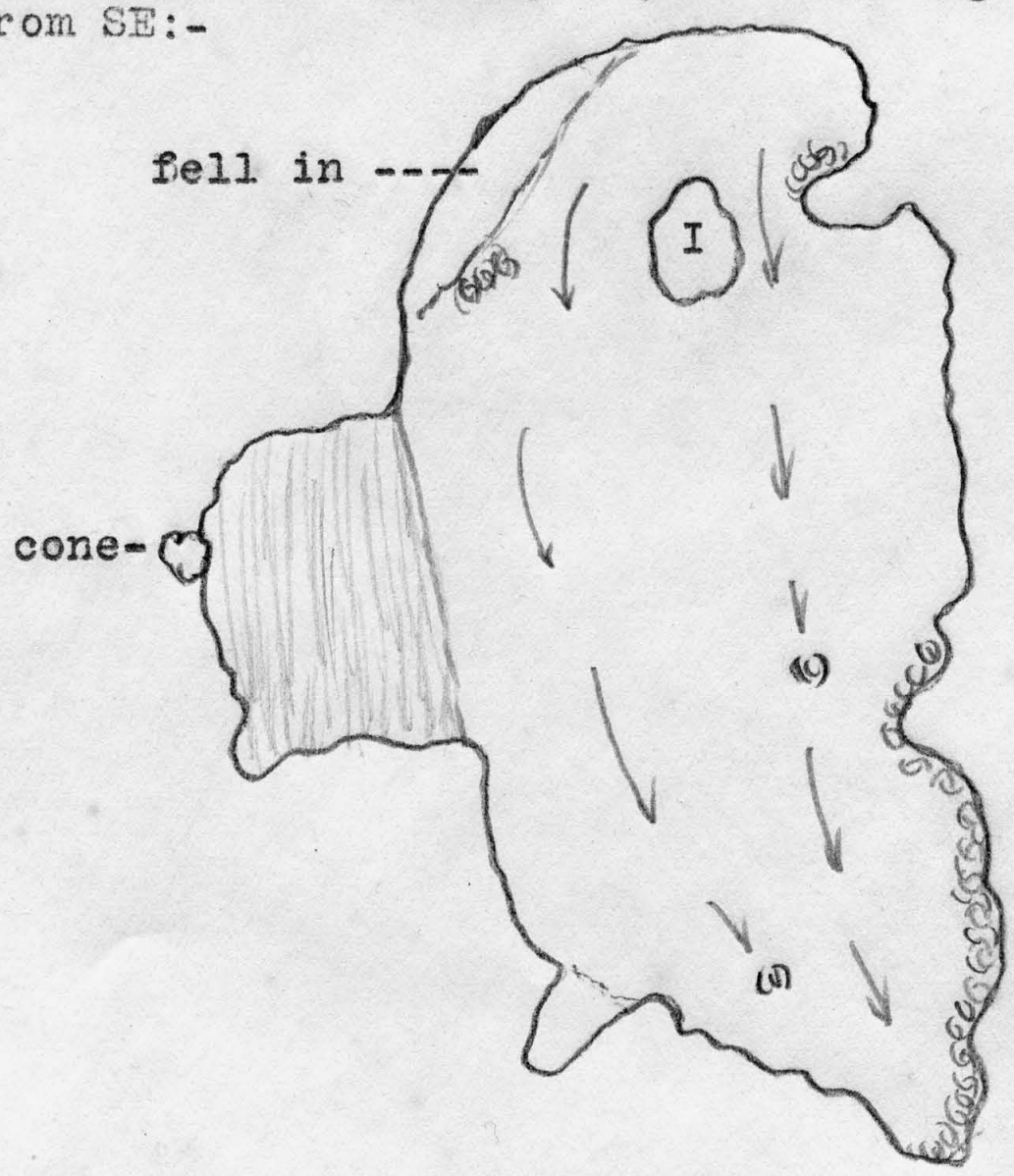
Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Wednesday Date December 1,1915.
Thursday " 2, "
Saturday " 4, "

Dec. 1.
2:25 p.m. SE station.
Lava about 25 feet below the bank of the lake. Lake covered with black skin, with only three fountaining areas. The island is being undermined. Fountain action in two places on its margin. Streaming not changed.

Dec. 2.
2:15 p.m. SE station.
Fumes too thick to see the height of the banks of the lake. Fountaining at entrance of E cove and many baby fountains.
From a position between the E and SE stations a better view of the lake was obtained. Lava appeared to be at about the same level. Activity greatly increased -- large fountains in different places. Much rumbling. Blue fumes under E station seem much denser.

Dec. 4.
2:10 p.m. SE station.
Streaming eastward. Many travelling fountains. Lava 15 feet below surrounding bench. A new peninsula formed N by the collapse of a portion of the bank. Rising in progress. Almost level with the sunken part SW.
A boiling pot on bench ESE. ENE side boiling vigorously and rumbling loudly. A portion of the island fell, W & NW, into the lake causing a great boiling of the lava.
From SE:-



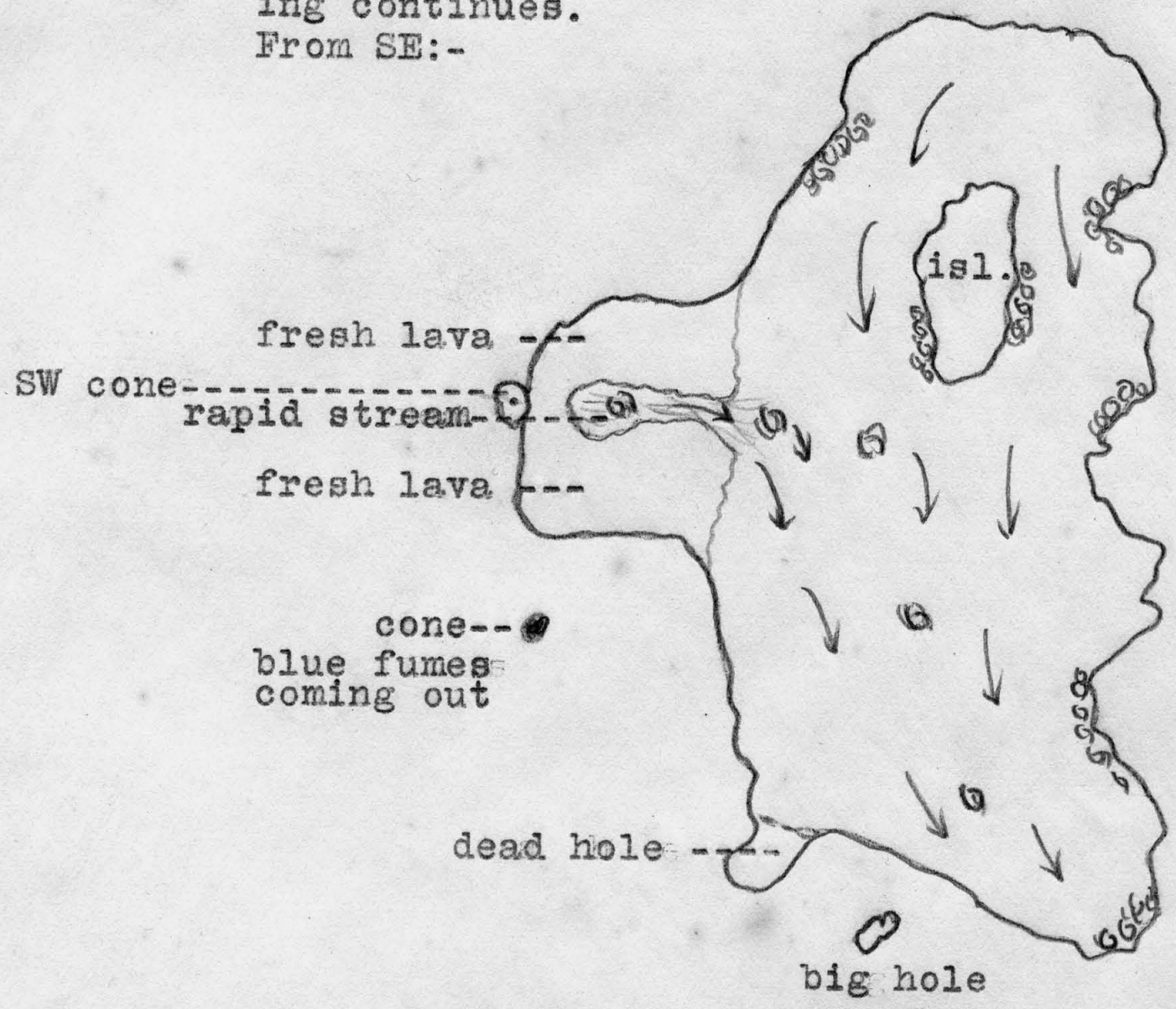
Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Monday Date December 6, 1915.

2:15 p.m. SE station.
Lava within four feet of margin of lake. Very active. Rapid stream off lava beginning near the SW cone and running across the sunken place SW and pouring into the lake. SW cone blowing out jets of lava and making a loud noise. Thirteen fountains could be counted in the lake at one time. Streaming still eastward. Rising continues.
From SE:-



Alex.

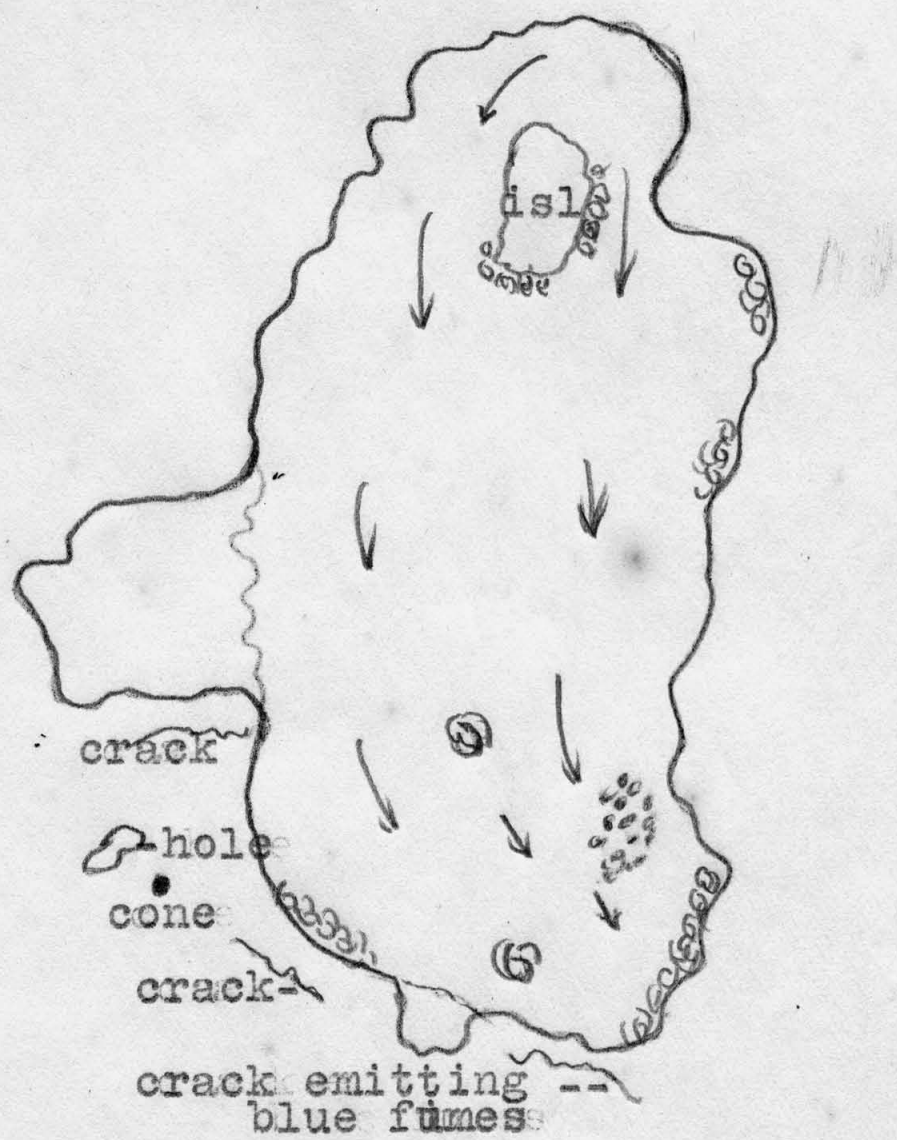
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Wednesday Date December 8, 1915.
Thursday " 9, "

Dec. 8.
2:25 p.m. E station.

Sketch from SE:-



Lava three feet below banks. Fountain action on margin of island. Fountains boiling NW. Fumes getting thinner around outside of lake. Streaming from NW to E cove.

Dec. 9.
2:35 p.m. From SW station.

Molten lava within one foot of being level with bench around lake. Very active around borders but few fountains in middle. Peaks under NE station have sunk down. Rapid streaming to the E. Rising. The peaks are only small mounds now.



Alex.

JOURNAL

Massachusetts Institute of Technology
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Day Friday Date December 10, 1915.
Saturday " 11, "

Dec. 10.
2:15 p.m. From SE station.

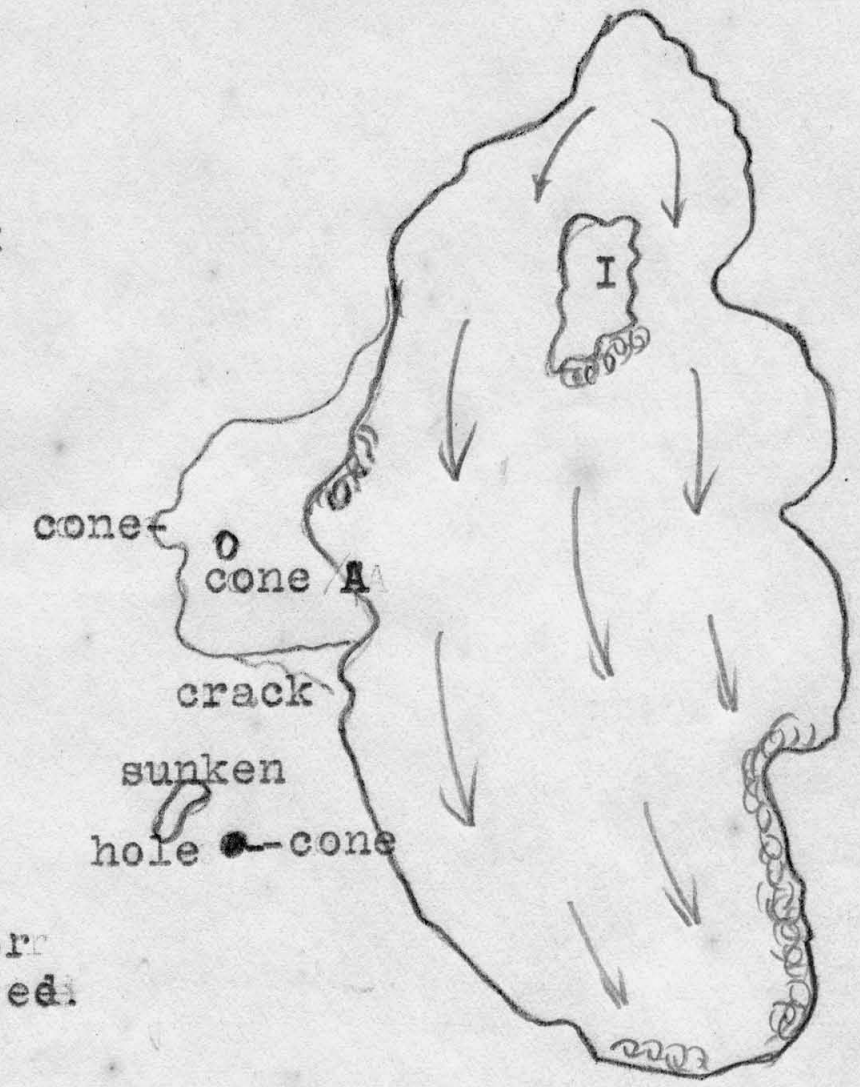
Lava about five feet below the bench. No central fountains, only in E cove and on NE side. Streaming E.

2:50 p.m. From SW station.
Under E station a long crack in the wall about 100 feet above the floor in which glow could be seen and from which much blue fume was rising. Spatter cone "A" SW built up to height of 15 or 20 feet.

3:00 p.m. Lava risen to within one foot of bench. Active between NE and E.

3:20 p.m. From SE station.
On the NE side of lake lava is level with floor, the floor there being slightly depressed.

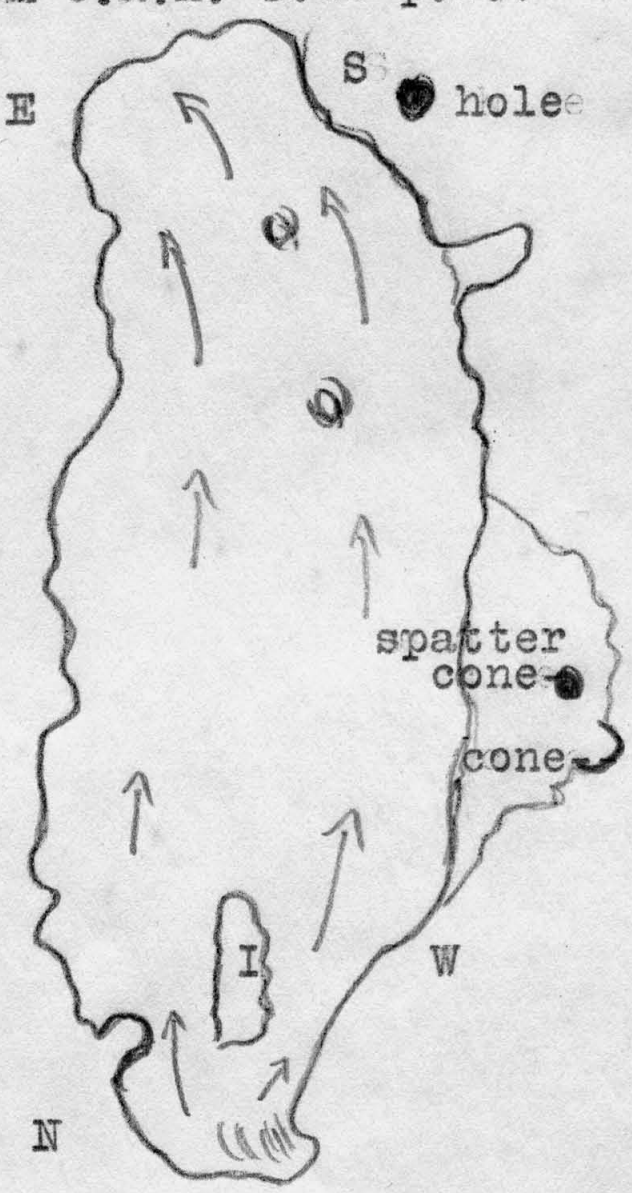
From SE:-



Dec. 11.
3:00 p.m. From O.R.H.
Lava down about five feet. Very active E cove. Streaming the same. Island much smaller.

3:30 p.m. Surface of lake skinned over. Cones around lake smoking. Rushing currents past the island and also into E cove.

From O.R.H. 3:45 p.m.:-



Alex.

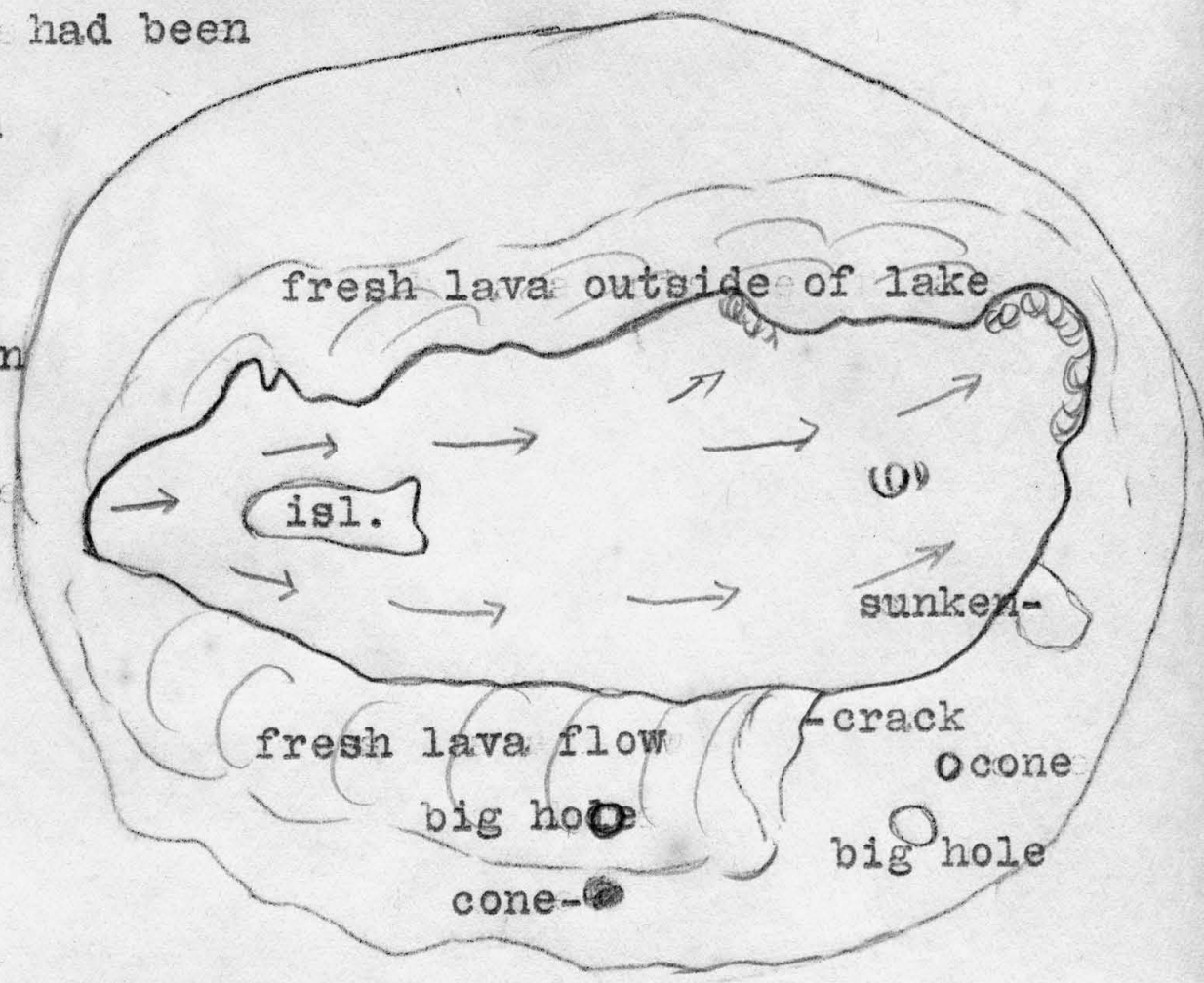
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Monday Date December 13, 1915.
Tuesday " 14, "

Dec. 13.
2:35 p.m. S station.
Could see that lake had been overflowing on the W side. The sunken place is filled up level with the top. Big round hole under SW cone. Surface of lava down about 3 feet on NW and 5 feet on the E. Very active between the E and NE. Streaming to the E. Boiling and rumbling. Fumes thin.

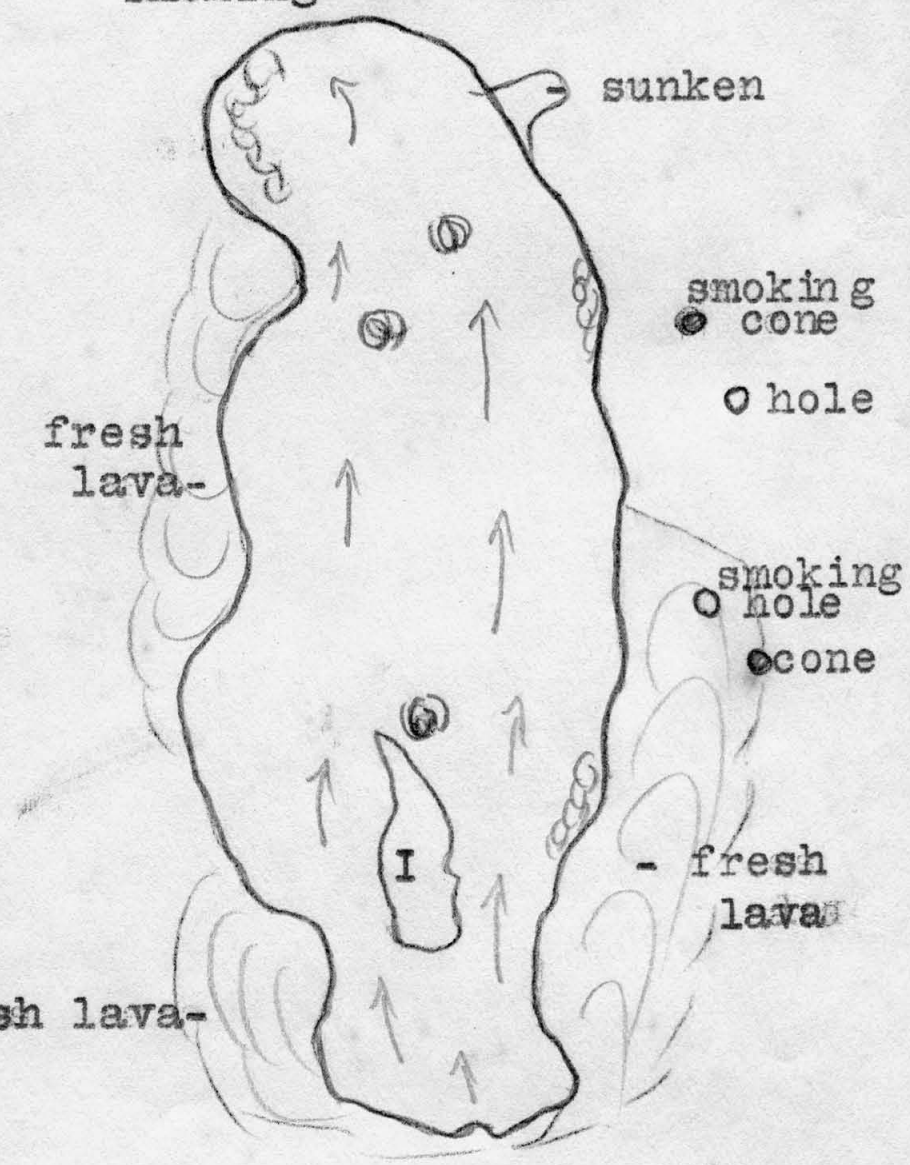
Sketch from SW:-



Dec. 14.
2:15 p.m. From O.R.H.
Lava within one foot of the bench around lake. Fountaining ENE. Streaming the same. Fresh glistening lava on bench both sides of pool. Around the island the surface of lake covered with black skin. Cone SW blowing with occasiohal jets of lava.

3:05 p.m. From O.R.H.
Lava 5 feet below banks. Increased activity. Boiling SW and NE and many large fountains going with the stream.

From O.R.H.:-



Alex.

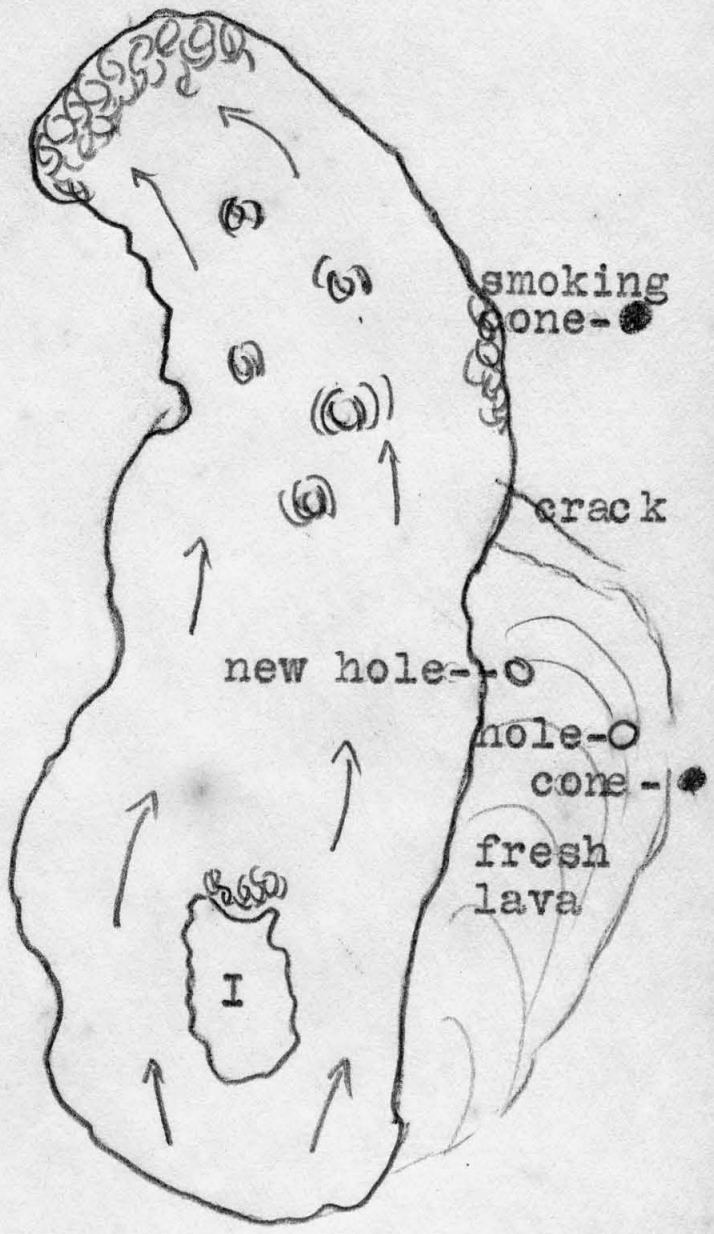
JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

Day Wednesday Date December 15, 1915.
Thursday " 16, "

Dec. 15.
2:25 p.m. From O.R.H.
Lava about 10 feet below the bench around lake.
Several large central fountains; border fountains NE and E. Streaming the same.
Cones quiet - only smoking. Fumes seem a little more dense. A new place WNW from which fumes are rising.

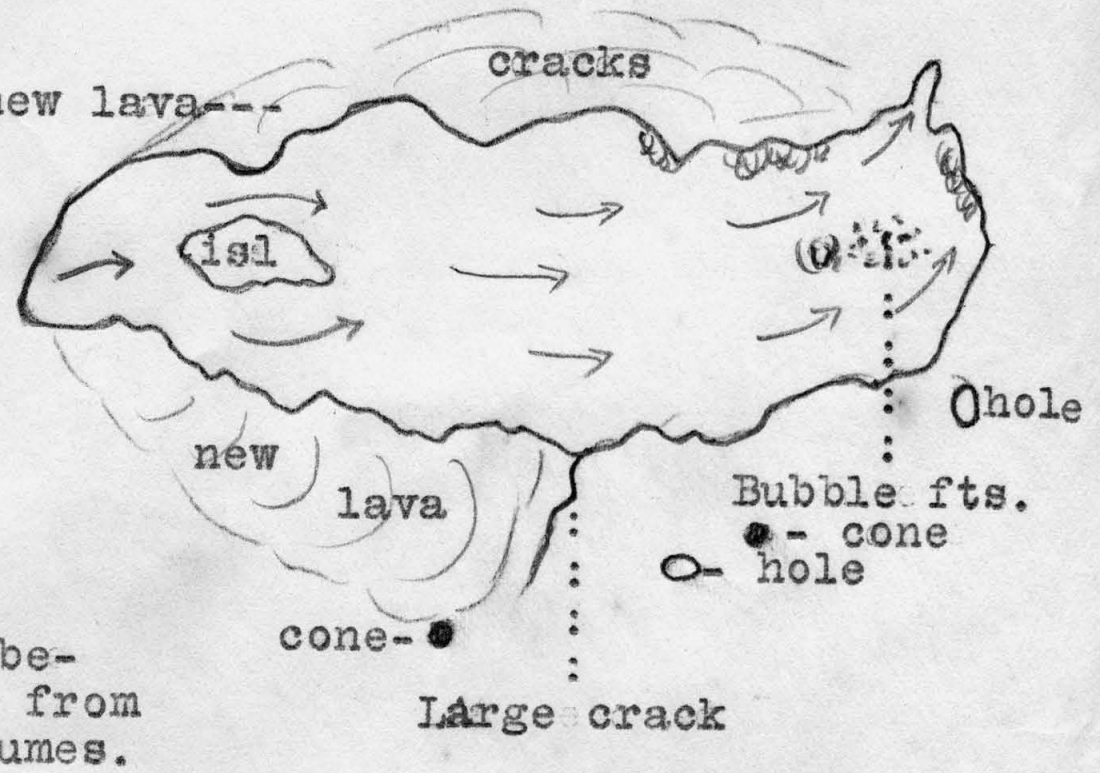
Sketch O.R.H. 2:40 p.m.:-



Dec. 16.
2:35 p.m. SE station.

Lava 5 feet below the surrounding bench.
Very active on shore of island and toward the E cove. Streaming the same. Baby fountains at entrance E cove. Loud rumbling.
Cone formed on top of island smoking like a chimney.
Bench NE of lake full of cracks from which blue fumes are rising.

From S station 3:25 p.m.:-



S station.
There has been a slide between SE and E stations from the wall. Dense blue fumes.

Alex.

Massachusetts Institute of Technology

JOURNAL

Hawaiian Volcano Observatory

Day Friday Date December 17, 1915.
Saturday " 18, "
Monday " 20, "

Dec. 17.
2:25 p.m. S station.
Fumes thick. Poor seeing. Lava appeared about 5 feet below floor on NE side and about 10 feet on the SW. East cove very active. Large fountains at entrance of E cove. No other fountain action for three quarters of the lake is covered with black skin. Streaming still toward the E cove.

Dec. 18.
2:17 p.m. E station.
Lava about 15 feet below floor. Large part of bank between NE and E has fallen into the lake.

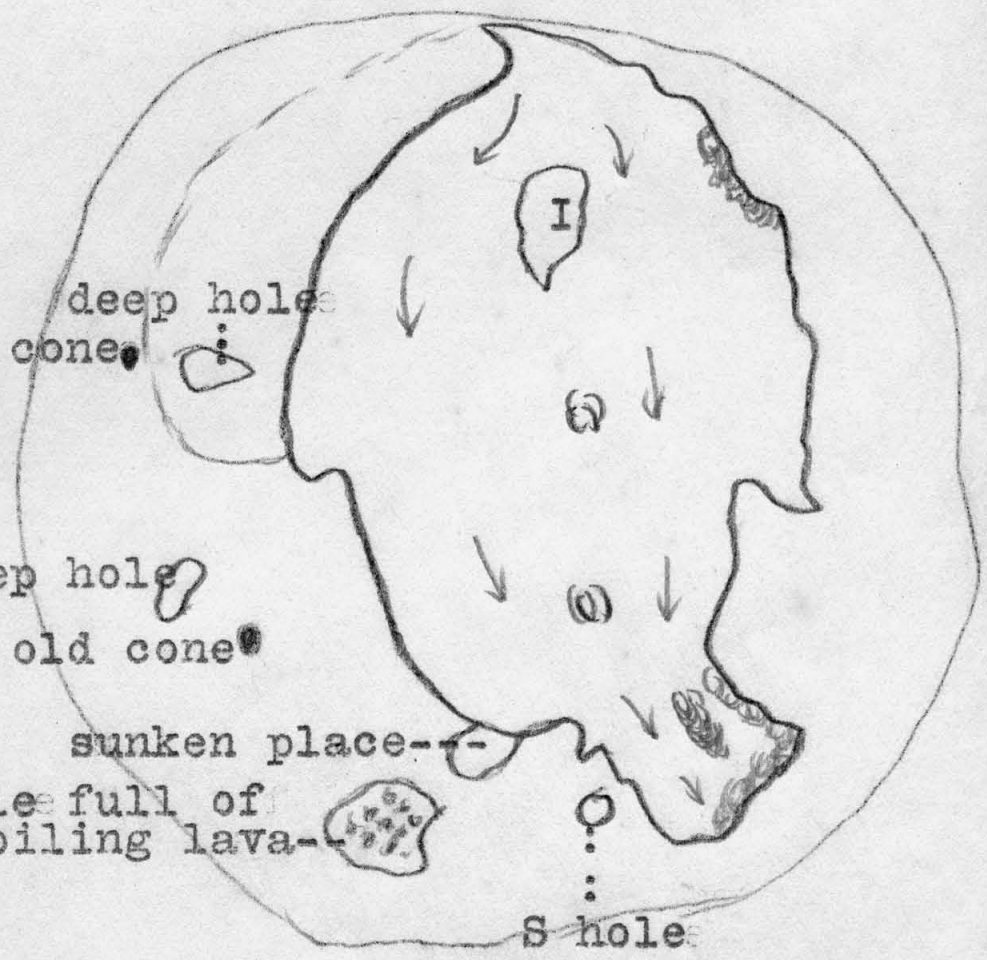
2:40 p.m. SE station.
On SW side of lake bank is nearly 30 feet wide. About 100 feet had dropped into pool, making it wider.

3:00 p.m. S station.
Floor under the E station has sunk on side of wall leaving a large hole in which lava could be seen boiling.
No change in pool.

Dec. 20.
2:35 p.m. SE station.

Lava about 10 feet below the bench. Very active in E corner. Many baby fountains boiling. Streaming unchanged. Bank under E station has fallen into pool and nearly half of that on NE side has also. Very few central fountains. On the floor about 30 feet from the edge of lake there is a large hole in which lava can be seen boiling. On the SW another large hole from which blue fumes rise. Fumes thick NE.

From SE:-



Alex.

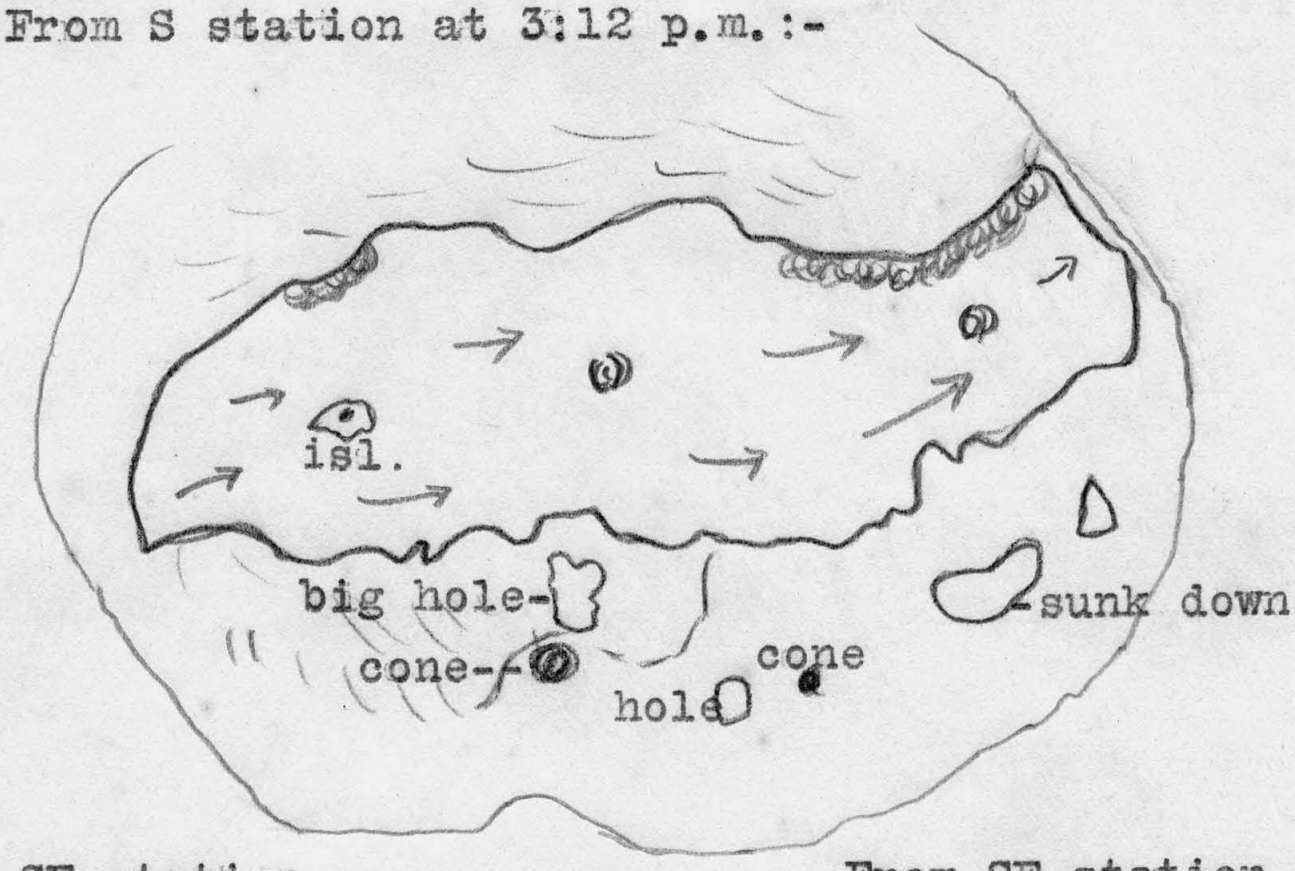
Massachusetts Institute of Technology
Hawaiian Volcano Observatory

JOURNAL

Day Tuesday Date December 21, 1915.
Wednesday " 22, "

Dec. 21.
2:35 p.m. S station.
Lava about 15 or 20 feet below the floor. Active E and NE with many small fountains; a few large fountains in other places. Small island nearly gone. Cone SW has collapsed leaving a small round hole. Fumes dense but the most of them are on the NE side. Bank at E side has fallen in and the molten lava is right up to the wall.

From S station at 3:12 p.m.:-



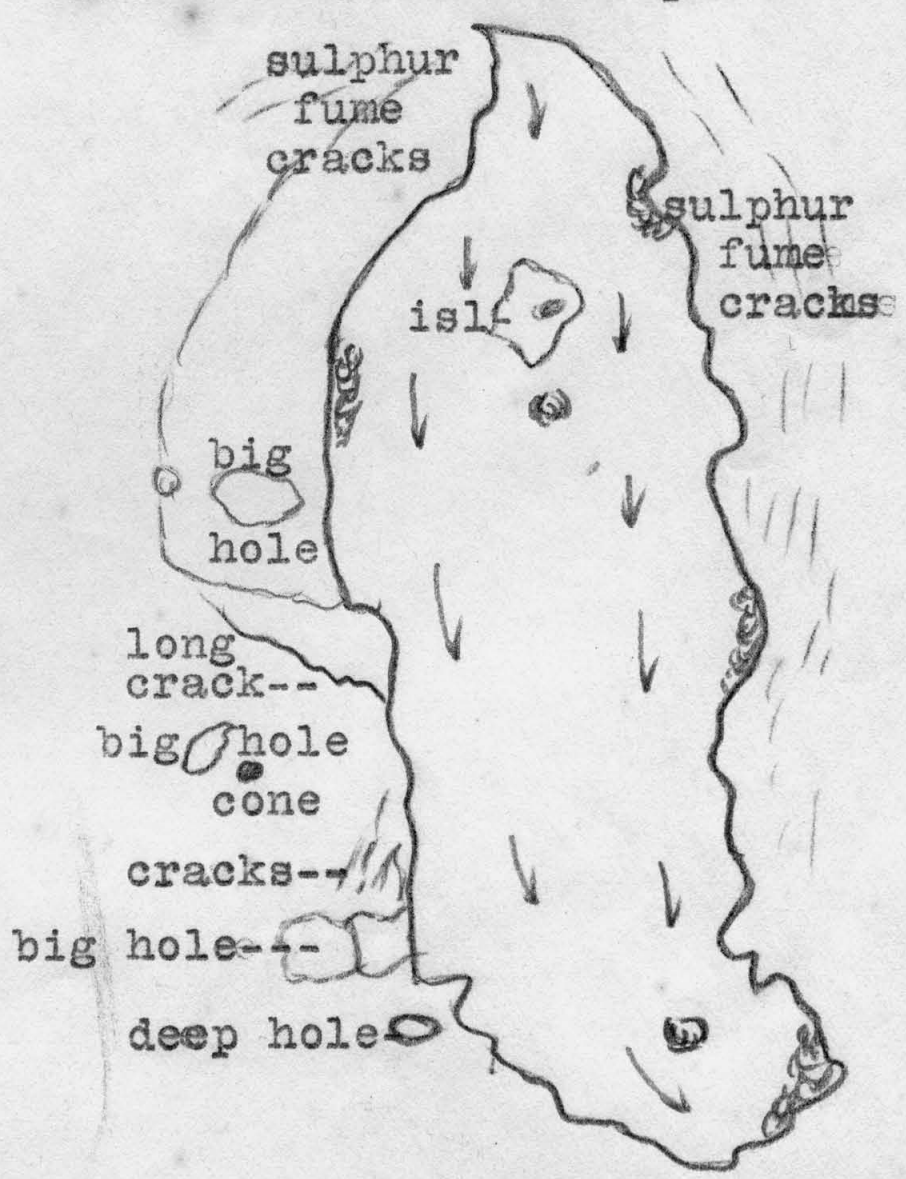
Dec. 22.
2:18 p.m. SE station.

Lava about 15 feet below banks. Active. Many baby fountains. Streaming unchanged.

3:25 p.m. SE station.

Lava has risen five feet. Many large fountains in center of lake.

From SE station 2:55 p.m:-



Alex.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory
Day Thursday Date December 23, 1915.

2:30 p.m. S station.
Lava about 15 or 20 feet below the banks of lake.
Poor seeing. Much smoke and variable wind.
Some large fountains seen. Streaming unchanged.
Island nearly gone.

3:00 p.m. S station.
Quite a long piece of the NE bank fell into pool.

3:20 p.m. S station.
About 75 or 100 feet of the NW bank fell into the lake causing violent boiling.

Alex.

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Hawaiian Volcano Observatory

Day Date Dec. 24 to 27, 1915.

From December 24 to 27, 1915, there were no observations made at the pit, Halemaumau, because of a heavy Kona (southerly) storm.

JOURNAL

Massachusetts Institute of Technology
Hawaiian Volcano Observatory

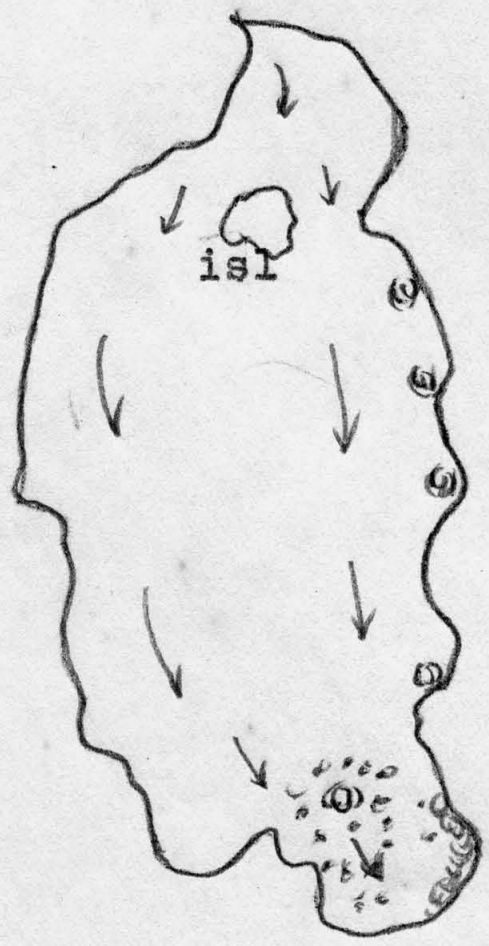
Day Tuesday Date December 28, 1915.
Wednesday " 29, "

Dec. 28.
2:30 p.m. SE station.
Lava about 10 feet below floor on NE and 15 feet on SW. Many large fountains in center of pool. SW cone blowing loudly.

3: 05 p.m. SE station.

Fall of rocks lasting about three seconds from wall SW.
A few fall from SE.
Fumes very thick.
Abundant rock falls chiefly SW.

From SE:-



Dec. 29.
1:12 p.m. SE station.
Lava at about the same level. Streaming in same direction. There has been a large slide of rock under the S station and some from under the SE. Fumes dense. SW cone blowing loudly. Many large fountains boiling and rumbling. Many small fountains going along with the stream toward the E cove.

Alex.

Massachusetts Institute of Technology

JOURNAL

Hawaiian Volcano Observatory

Day Thursday Date December 30, 1915.
Friday " 31, "

Dec. 30. A tendency to rising was observed with the usual streaming and boiling. Jets of lava were flung regularly from the apex of the SW cone, -- once to a height estimated at 75 feet.

Dec. 31. The surface seemed to be at a standstill at a few feet below the floor. The jet action continued, with a loud, deep, muffled, explosive sound, like that of a distant blast.

From Weekly Bulletin, H.O.W.