

Hawaiian Volcano Observatory Record Book 1935

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.

IN BY
APPL 3/20/78

Thomas A. Vassar

Edward G. Wingate

John Doerr

1935

Jan. 1

Notes by TAJ, EGW EGW, HHW (Waesche)
HY Yasunaka, Doerr

Nov. 25

Mauna Loa eruption

L(#)
1936

CW
RIB - Baldwin

KJW

LL

HLK

HM

WP

HLK

1937

1938

BEM

SS

PB

GEO

CK

JK

Ben Moorman
BEMjr

RH
FMB

CW

MG

JC

JEM

GF

1939

?
Christ
Christ

These initials to be identified
if possible

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Date
Tuesday	January 1, 1935
Wednesday	" 2, "
Thursday	" 3, "

January 1

9:25 a.m.

9:28 a.m.

Deep clank or snap heard twice near the Sept lava lake area.
 Four principal border fumes E, NE, N, & NW taluses.
 A few rocks fell at North.

January 2

After strongish eq. about 6:50 a.m. was at pit 8:30, 10:30 a.m.,
 2:00 and 3:50 p.m., but nothing happened. The tilts were
 W Sta stg SW
 N Sta stg SE
 E Sta very stg SE

The yellow stained place WNW at edge of floor was much brighter
 yellow and giving blue fume. Noticed a radial crack, smaller than the
 others, but long, in the floor E of the very long S crack.

There are cracks not noticed before E of lake area and the edge
 swellings are more pronounced in appearance.

The 2 cracks, in edge of Kilauea crater SW, E of the normally
 steaming 1919 crack of Mauna Iki rift, were both steaming .

T.A.J.

Measured cr. point 37 after noon, found no change.
 No slides in Kilauea Iki or Chain-of-Craters.

A.E.J.

Some rocks in K. Iki park laborers.

T.A.J.

January 3

9:45-10:15 a.m.

No change in pit. Examine SW rift belt edge of Kilauea Crater.
 Find 5 outcrops of hot vapor & moss & ferns, therefore not new,
 and no new cracks, at main rift chasm, the next one east (which also
 steams farther SW,) and 3 more, which do not steam in the back country SW.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Date
Tuesday	January 8, 1935
Wednesday	" 9, "
Thursday	" 10, "
Friday	" 11, "

January 8
10-12 a.m.

Flurry of excitement because I thought a big change in cracks SE. Heavy rain. Many steam tails on bottom. None at cones or at most of lake oval. Heavy steam W sulphur, NW talus, E talus.

Cracks afterwards reported by Craik breaking cement of parking place curbs. Big engulfed place S rim is new since I was last there. On the cracks wh. trend toward tourist stand. Measured all east cracks with Yasu. Changes, but some of them are closing.

T.A.J.

January 9

Very humid at pit, some rain.

No slides were noted, the fume and steam was quite strong. Tilt was little.

January 10

Fume as viewed from Uwekahuna at 8:45 a.m. appeared somewhat denser than usual.

No rock falls or avalanches were noted, tilt was slight.

January 11

Craik reports a fresh crack near the tourist stand rail 1/3 of the way from the center post towards the southwest post. He also reports new cracks in and near the (S) at the east end of the parking area. He reports the northern one warm.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Thursday	Date	January 17, 1935
	Friday		" 18, "
	Saturday		" 19, "
	Tuesday		" 22, "

January 17

At noon, no apparent fume from Pit. Kona wind strong.

A.E.J.

January 18

From 2 to 2:30 p.m. January 18, Mr. Craik spent the time at the Pit. During that time there were two small slides and two cracking sounds. One began about 2:15, and the other at 2:30. The one at 2:30 lasted about half a min. Two slides preceded the cracking sounds.

Craik

January 19

Crack at sixth post from SW end of tourist stand measured 3 mm. At 9:20 heard a dull sound, probably in Pit, while at crack point 36 on W side. The sound appeared to be in the direction of C.C.C. Camp. Browns reported a noise (dull) from crater about this time. Small clouds have been forming over M. Loa summit all morning, above snow line. Fume in Pit light-less than usual.

January 22

9:45 a.m.

Fume seems moderate again. Standing near cr. point 36 heard a dull sound in direction of Tourist stand, as though a rock had fallen a few feet in broken area at bottom of cliff. Heard a larger boom while at SE station in Pit direction, at 9:02 a.m. Nothing recorded. Faint sound at 9:30 a.m. while at Tourist Stand. A few rock-trickles took place. Dull sound in direction of E end of lake 9:41. Dull sound from SW bay at 9:56 a.m. Dull sound from NW side of Pit floor at 9:58 a.m. 7 rock-falls and small slides took place in $\frac{1}{2}$ hours

A.E.J.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Date
Monday	January 21, 1935
Tuesday	" 22, "
Friday	" 25, "

January 21
9:05 a.m.

Fall of rocks near SW tunnels.
Radial cracks on floor SE appear widening. Note one transverse.
Crack from SSE radial to S radial. Yellow patch WNW strongly
fuming. The marginal ridge all around is strong & cracked.

T.A.J.

January 22
10:09 a.m.

Moderate sized slide noted between the lookout and the Kau rift.

Lamb

January 25
8:30 a.m.

The blue fume has so definitely increased at yellow patch edge floor
WNW that its jets are now seen from W sta rising rapidly behind the
WNW buttress. The edge of the yellow patch is barely seen from here.

9:40 a.m.

From S edge: The yellow alum bank WNW is growing larger, and has
been washed by rain. Fumes vigorously.

The alum bank on NW talus has pink, red, yellow, white & gray
salts rotting the pumice. All this recalls the red solfatara 1918-
19-21. There is hot lava below.

One snap heard NW.

The base of N talus has almost ceased to fume: cannot detect
it. E talus is the ~~the~~ main source of fume.

The radial cracks are very conspicuous; count 11 on Eastern half
of floor. They are surely increasing.

JOURNAL

Day	Date
Saturday	January 26, 1935
Sunday	" 27, "
Monday	" 28, "

January 26

9:40 a.m.

New slide S corner covering wall in streak from 100 ft below edge.
Dump on S talus & floor.
Fume jets very dry.

January 27

8:43 a.m.

Test of snaps Hal.

8:45 a.m.

Snap E

8:45:5 a.m.

Snap SE

8:53 a.m.

Snap SE

8:55 a.m.

Small, N

8:56 a.m.

Small, E

8:58⁺a.m.

Small, NE

8:59 a.m.

2 small, SE

9:01 a.m.

Small SE

9:01⁺a.m.

Small NE

9:025

Small SE

East

The sound is like a single clanking blow of a distant hammer.
It seems as tho^t it might be continuous if heard with a microphone.

With calm NE ly, sunshine, the W base of N talus fumes distinctly.
Yesterday nothing. All ten other places are fuming. The fume in pit as
a whole not seen HVO, visible Uwek.

9:05 a.m.

Loud E etc.

About 9:40 and 10:03 slides at dust streak south wall.

After sunlight covered N & NW taluses, fume hard to see.

January 28

8:19 a.m.

Rocks slipping at N talus. 4 faint snaps heard in 7 minutes.

T.A.J.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

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JOURNAL

Day Tuesday Date January 29, 1935
 Thursday " 31, "

January 29

Fume and steam at Pit moderate with mod. SW wind.
Heard a few rocks fall from time to time about 9:40 a.m. Cracks
across parking area unchanged.

January 31

9-9:20 a.m.

A few rocks were heard falling from NW & E walls of Pit. A slide
tract was observed on the NW wall through the middle of the lava fall.
A few of the dull thuds were noted.

The Pit Seismograph has shown unusual NE tilt the last two day-
corrected.

Heard a hissing noise as steam escaping, or short gravel fall
perhaps on talus or possibly a truck dumping gravel on road. Direction
from tourist stand towards SW bay.

A.E.J.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Date
Sunday	February 3, 1935
Monday	" 4, "
Tuesday	" 5, "
Wednesday	" 6, "
Thursday	" 7, "

February 3
12:40 p.m.

Large reddish avalanche cloud from NE side of pit. Renewed at 12:50. Continued more weakly until 1:05. About place where E fume rises.

T.A.J.

From 1:30 to 2:30 there was continuous dropping of rocks and some small slides.

The big slides had fallen from above the east end of the canoe sill apparently from the intrusive mass and from the south wall where a slide scar had been seen on January 31st. Two small tremors were noted on the pit seismograph record.

The sulphur bank under the west wall was brilliant yellow and considerable blue fume was issuing from that point. The day was humid and cloudy with wind from NE.

E.G.W.

February 4

5:09 p.m.

Fume and steam moderate. No results of yesterday's slide. Only a record.

Wingate reports small slide in SW corner of Pit.
Workers report occasional rock falls all day.

February 5

New slide has occurred in SW bay, about the location of one ten days ago,; fresh dust on wall and floor, rocks still falling at 9 a.m., rocks falls heard in direction of NE corner.

Slides have occurred from E wall & corner in last 24 hours.

February 6

Fume light, at times puffs of quite dense fume occur. Soldiers report a slide about 7 p.m. 2/5/35 somewhere in Pit. This morning rocks were heard falling from both the NE & SW corners.

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JOURNAL

Day	Saturday	Date	February 9, 1935
	Sunday		" 10, "
	Tuesday		" 12, "

February 9

Fume in Pit appeared about as usual, rising in puffs.

All the sliding areas appear quite fresh.

Stones, from the walls were noted well out on the lava, for some distance on both sides of the tourist stand. Also a small fresh slide halfway up, just east of the tourist stand.

A.E.J.

February 10
9:30 a.m.

Rocks drop S wall.

Make a study of edges of 1934 floor. The following places have overlap of fallen debris on new lava:

N base W talus.

Buttress E of SW tunnel.

Base of S talus.

Base SE wall.

N base E talus.

Middle Canoe Sill.

N talus.

NW talus.

WNW wall.

There are new boulders in several places on the floor border ridge, good survey points.

February 12
8:58 a.m.

Heard a sound not identified. After 0.23" rain at HVO, 0.03 at Pit, misty forenoon, remarkable change in distribution of vapor. Abundant on NNW talus & pumice, and at NW yellow spot. Latter very fummy. Very little NE. Base of E talus much less. Fume much from pit as a whole.

9 a.m.

Slight rock fall south. Thud heard 9:02 a.m. Vapor S talus & wall
Vapor SE talus & wall. Vapor W talus & cascade wall.

Wall W of SW tunnel. None at talus E of tunnel. Definite fume in real volume coming from yellow solfatara. WNW. Many small fume jets floor edge NNW talus.

T.A.J.

Day	Wednesday	Date	February 13, 1935
	Thursday		" 14, "

February 13

At approximately 3:25 p.m. February 12, the noise of a rock slide in Halemaumau was heard at the Park Naturalist's office at Uwekahuna. The crater was filled with clouds hence the location of the slide could not be determined from Uwekahuna. On arriving at the Halemaumau parking area at 3:30 p.m., five minutes after the first slide was heard, another slide occurred. Running to the lookout at the edge of the pit I could see a heavy cloud of dust rising up the southeast wall of the pit. For ten minutes small rocks trickled down that wall. At 3:40 p.m. a large mass of rock fell from the southeast wall. The displaced mass fell from the thin-layered zone just below the massive layer down from the top of the wall. As this slide material reached the bottom of the wall a heavy cloud of dust rolled out over the floor of the pit. In less than five minutes the pit appeared to be filled with dust. Rocks continued to trickle down the wall for about ten minutes at the end of which period another slide started from the same location. This was the fourth of a series of four distinct slides in a period of 25 to 30 minutes. After the fourth slide rocks trickled down the wall for a few minutes.

Shortly after 4 p.m. I walked around the south end of the pit with Superintendent Wingate. In the area just above the region of the slides we noticed what appeared to be fresh cracks in the sand and ash 20 to 30 feet back from the edge of the pit, and just above the region of the slides.

The scars of the slides can be seen on the wall of the pit and a fresh dust deposit on the floor of the pit in the vicinity of the southeast talus.

John E. Doerr, Jr.
Park Naturalist

February 14

In conversation with five soldiers at 10 a.m. on this date they related the story that while they were at the pit, which was approximately 9 a.m., there was an earthquake followed by several slides. One boy declared he saw a crack in the bottom of the pit open up while he was there. I, with Bill Williams, went to the pit and there was still a little sliding and we noticed several cracks that seemed very sharp and which I did not notice before.

Merel S. Sager
Assoc. Archi.

JOURNAL

Day	Date
Saturday	February 16, 1935
Sunday	" 17, "
Monday	" 18, "

February 16

Very few rocks falling during period 8:30-10 a.m.
Fume quite strong for a time in the NW part of the Pit. No cessation of fume in East part.

A.E.J.

February 1710:10 a.m.
from W.

Cold (Min 45°) & clear. Very little vapor in pit.

NW talus faint fume.

None seen at yellow place.

Both fume & vapor at small NE talus middle canoe sill.

Usual fume & vapor at E talus noise of triple metallic clank from base E wall.

11 a.m. from SE The recent falls E have been from red spot over Canoe Sill above N side of E talus. The debris adds to that talus 2 small heaps, dry, at N base, near the solfatara.

The recent falls S, have put debris back of 1934 slump scarp and at SW base of S talus.

The E lobe of floor appears more swollen & cracked.

11:05 a.m.

Snap NE.

February 18

9:05 a.m.

Falls of rock S. Note SE wall scar, white, below area S of Tourist Stand.

Dry day and fume very slight.

10:43 a.m.

Avalanche making red dust from half way up wall, on to small talus NE, middle Canoe Sill.

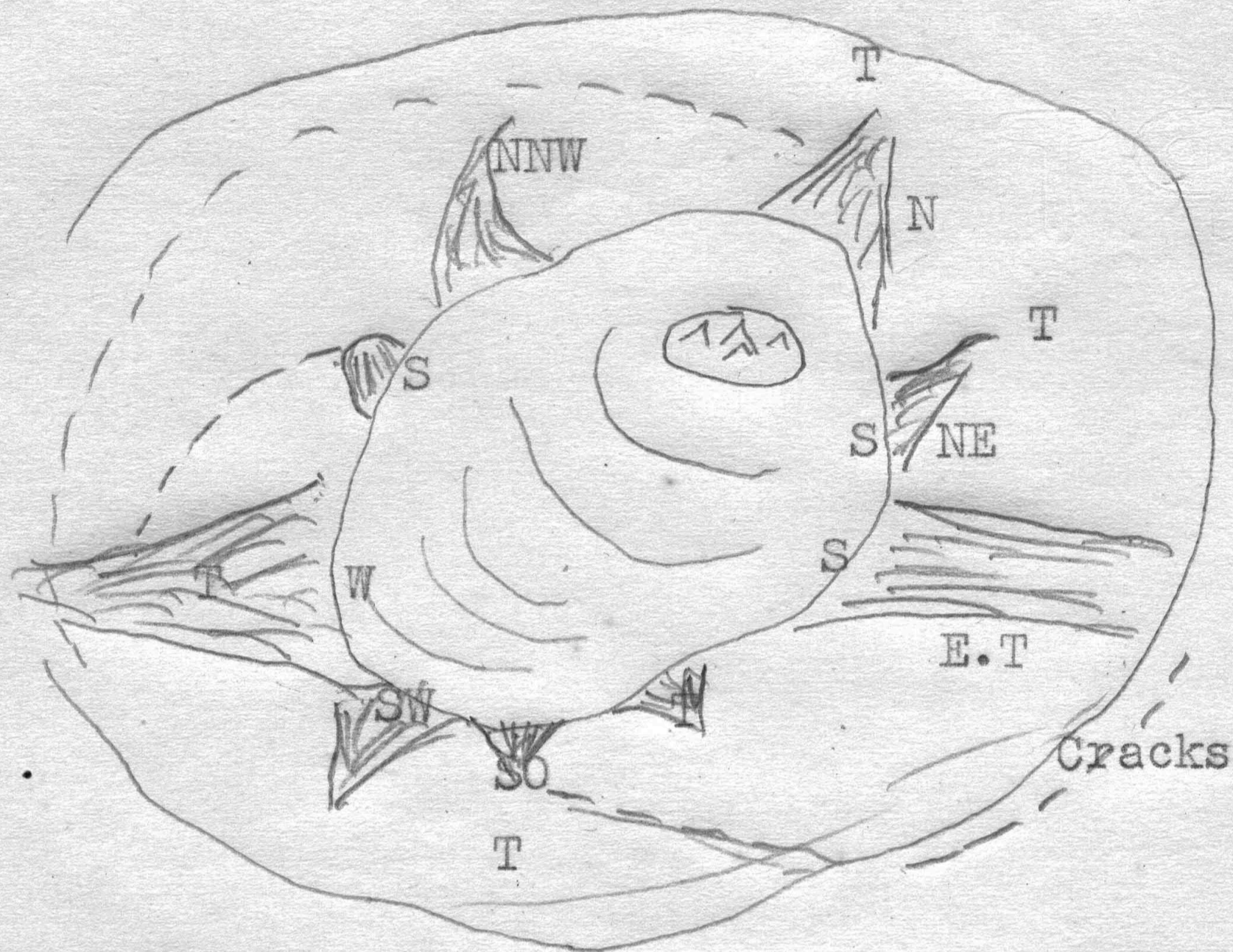
Examined rim cracks over SE scar. No movement in dirt detected.

February 25

8:52 a.m.

Fall of rocks NE. Heard one snap 8:40. Note symmetry of the 5 solfataras at edge of floor around the lake basin of 1934.

February 25
 (cont'd)



T= Talus
 ---- cracks

S all fuming this morning.

In the morning light the cracks appear to have increased their gaping around floor edges notably NW, SW,

The crescent of stain in front of NNW talus is a depression, with cracks in front of it & the floor outside a plateau. Everywhere the floor is a plateau apparently, above the wall valley. The cracks are tensional at the edge of floor plateau. The floor appears to be a big upraised flat, swollen above the border dike.

T.A.J.

February 27
 11:50 a.m.

Small, noisy, slide from NW buttress.

R.Craik

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

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JOURNAL

Day	Friday	Date	March 1, 1935
	Monday	"	4, "
	Tuesday	"	5, "
	Wednesday	"	6, "
	Thursday	"	7, "

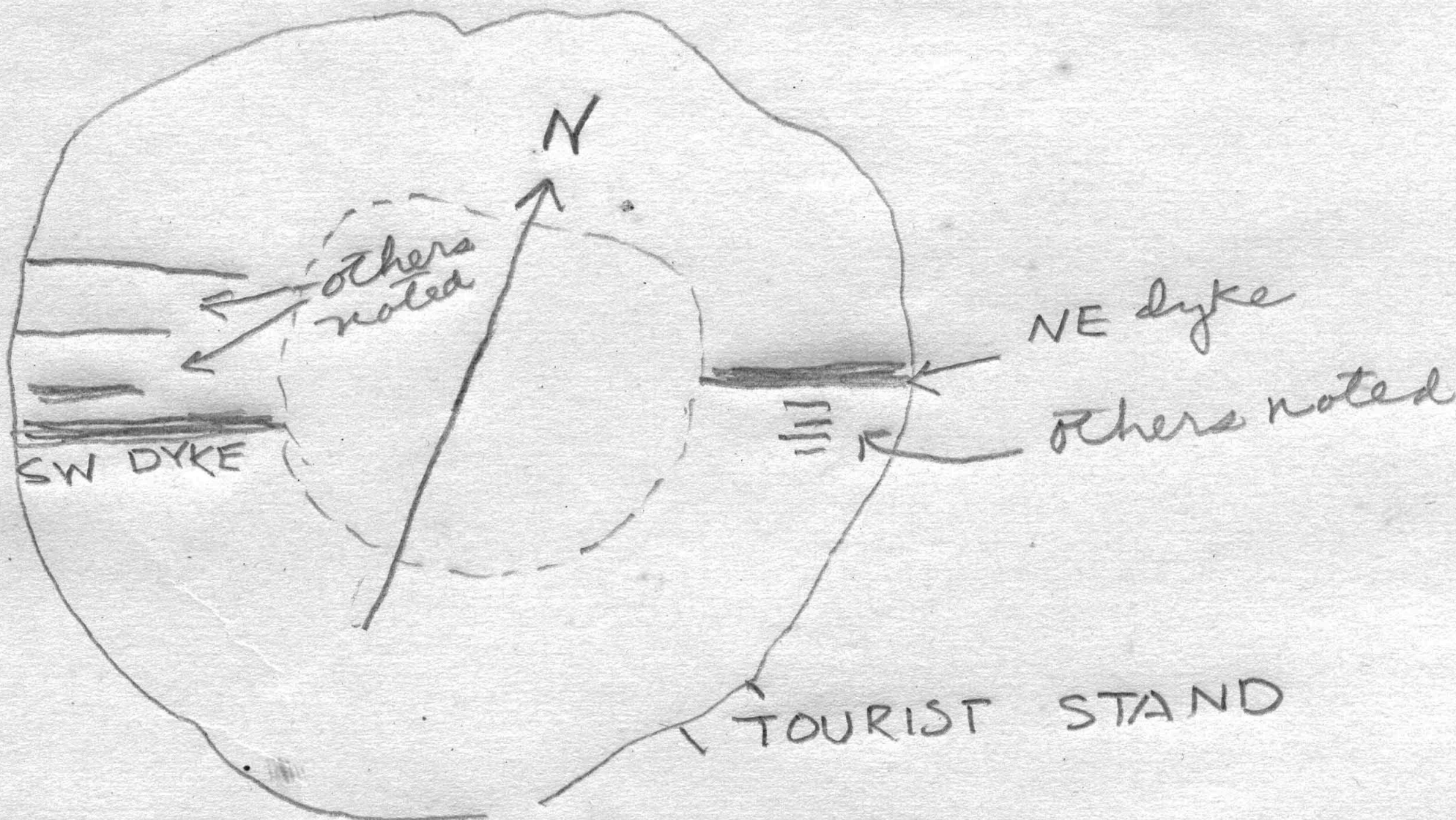
March 1 Noisy slide 2 p.m. under tourist stand.

March 4 Slide in pit at 9 a.m. while working at station.

March 5 Small slide in Pit at 9:10 a.m.
 Rainfall 1.8 inch., much steam rising from Pit floor.
 Eight small quakes on Pit seismograph record, only one recorded above a tremor at HVO.

March 6 A few rockfalls were noted after 9 a.m.
 A slide occurred in the NE corner of the Pit at 9:28 a.m.
 Fume appears much as usual.
 Steam is still rising from floor of Pit, though the number and size of the steam plumes is much diminished.
 (Nearly $7\frac{1}{2}$ inches of rainfall at Pit in past 4 days)

March 7 A few rocks falling about 9:20-9:30 a.m. One or two small Pit shocks on Pit record. Fume as usual.
 Dykes in walls of Pit quite noticeable.



JOURNAL

Day	Date
Friday	March 8, 1935
Sunday	" 10, "
Saturday	" 16, "
Thursday	" 21, "

March 8

Two dull thuds were heard one toward lava fall at NW one toward 1932 cone at W before 9 a.m. At 9 a.m. a steam blow was heard lasting about 3 sec. towards SW bay, probably half-way down extrusion of crack(4). Sounded more like steam than one heard about a month ago. Few rockfalls heard at 9:05. Five records of Pit shocks during previous 24 hours.

March 10

Two small slides have occurred from under each end of the tourist stand, probably 200 feet out from each end and from well down the Pit walls.

March 16

Very little rock movement has occurred this a.m.

In the past 24 hours a slide has occurred from the W top over the recent lava fall.

A small slide has fallen from the pink spot just south and under the tourist stand, during past week.

Slides have also occurred in the E bay and over the N end of the Canoe sill, during past week.

The cracks in the floor of the Pit, pointing to just East of the tourist stand appears wider.

A.E.J.

March 21
8:40 a.m.

5 fuming places at taluses around 1934 lake.

8 places where showers of rock are on floor between taluses.

Sulphur stain WNW now visible from W sta out on floor at the swelling cracks.

No snaps heard during 15 minutes.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Date
Saturday	March 23, 1935
Monday	" 25, "
Tuesday	" 26, "

March 23
9:02 a.m.

Avalanche, noisy, reaches floor, S corner of pit.
Fresh cracks in the soil 15 feet back from the edge above S talus.
Extends a long way.

T.A.J.

2:25 p.m.

Soldiers report in the half hour following the slide at 2:25 p.m.
two other small slides fell from the W & N walls.

A.E.J.

2:30 p.m.

I wish to report that at approximately 2:30 p.m. March 23 a large
slide occurred on the south wall of the pit. Judging from the clouds
of dust, the rock material left the wall near the top and in close
proximity to the large crack on the south wall. This slide was distinctly
heard from the museum at Uwekahuna.

John E. Doerr, Jr.
Park Nat'st.

March 25

8:35 to 8:45 a.m. While walking from W tilt sta to NW B.M. heard two dull or faint
explosion sounds from the direction of the C.C. Camp. Could not
determine whether from the Pit or outside. ch. 5 min. apart.

9:20-9:30 a.m. 3 more explosions while on way to NE station. This time they are
definitely away from Pit. Toward C.C.C. and chain of craters.

March 26

9:05-9:15 a.m. Very quiet in Pit. Fume quite noticeable from sulphur spot NW
floor of pit. More at SE corner.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

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JOURNAL

Day	Date
Thursday	March 28, 1935
Saturday	" 30, "
Sunday	" 31, "

March 28 Slide heard at 9:40 and 10:20 a.m.

March 30 Fume and steam noticeable wind light. No slides were heard.

A.E.J.

March 31 Big slide recorded on Pit and HVO seis 8:15 p.m. March 30. Fell 100 ft below top of SW wall dust over S end of Pit floor. Much larger at Pit seis.

Yasu & Jones.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Date
Tuesday	April 2, 1935
Thursday	" 4, "
Friday	" 5, "
Saturday	" 6, "
Sunday	" 7, "
Monday	" 8, "

April 2
5:07 p.m.

Noisy slide from bench above canoe sill running through notch-
N boulders reached floor.

E.G.W.

April 4
11:20 a.m.

Small slide fell from S notch.

A.E.J.

April 5

Very quiet between 5:10 & 5:45 p.m. At 5:46 a moderate slide fell from SE wall about 50' N of tourist lookout. This was followed shortly after by 2 small slides, one over canoe sill, and one from above SW talus.

E.G.W.

April 6
9 a.m.

Fresh cracks in sand S edge of pit over scar 165 ft long 20 ft back ready to fall. Big stones on floor below. NNW solfatara very hot fuming & yellow.

April 7
9 a.m.

A slight dribbling of stones down W wall. NE wind at Volcano House, wind eddies various at W side of pit.

April 8
9:30 a.m.

Small sliding W & S. More S slides reported since yesterday.

T.A.J.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Date
Wednesday	April 10, 1935
Thursday	" 11, "
Sunday	" 14, "
Monday	" 15, "
Tuesday	" 16, "

April 10

Good-sized slide at 9:15 a.m. from 400-500 feet (East) of tourist stand 200 ft. below top. Noisy. Large amount of wet material fell from the Boss at that place.

No portion of the wall is east of the tourist stand: NE yes.

April 11
8:20 a.m.

Although it is a dry sunny forenoon, the fume at the 5 northern edge places of floor is quite conspicuous.

T.A.J.

April 14

At Milolii, a middle-aged Hawaiian in a recently built house by ironwood grove told me of coconut stumps, submerged at mid tide 200 ft north of schoolhouse. He told me of a 2 ft Kau (very hard wood) stumps in 4 or 5 ft of water at Pahoa about 4 miles south of Milolii.

He also told of the church being in the ironwood grove, but has now been moved 200 ft back to higher ground. The dock used to be above high tide but now high tides completely submerge the flooring. This appears to represent rather recent sinking of the coast line. The church and stump incidances point to sinking in the last two generations?

He also said that it was a tradition that in the past land reached out several hundred feet to a mile to the west, where it is now all ocean.

April 15

Fume appeared moderately dense from Uwekanuna.

April 16

Large slide down the NW buttress at about 1:35- p.m.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

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JOURNAL

Day	Wednesday	Date	April 17, 1935
	Saturday		" 20, "
	Sunday		" 21, "
	Monday		" 22, "

April 17

Small slide from E corner of Pit at 8:55 a.m.
 Fume & steam very dense above and from NW sulphur spot. Quite noticeable from N sulphur spot, while thin fume alone appears to be rising from E corner.
 Conditions very humid at Pit.

A.E.J.

April 20

away Large amount of sliding from NW Buttress. Lava fall is almost obliterated by fresh dust. Several small quakes during a.m., sliding still going on.

Big slide at 9 a.m. over NE end of fall. Big rocks got to bottom first. Crack at 36 has opened. Pit full of steam & fume & mist.

Fume very dense and heavy at NW Sulphur spot. Fume at N Spot more noticeable than from spot at East. Second slide at 9:02 from 3/4 way up, N end of lava fall.

9:50 a.m.

Small slide NW, hardly any fume from E. At 10 large puff of fume from E.

Small quake rang bell at 1:36 p.m. Small cloud of dust rose above N side of Pit at 1:40 p.m.

Wingate reports continuous trickling in the afternoon with larger slides at 3:05 & 3:15.

Another after 6 p.m.

April 21

Yasu visited pit before 10 a.m.

A.E.J. at 11 a.m.

Wingate nearly all afternoon.

Reports indicate that rock trickling went on all day, but no larger slides occurred.

April 22

Yasu reports hearing rock trickling in Pit, but nothing else of note.

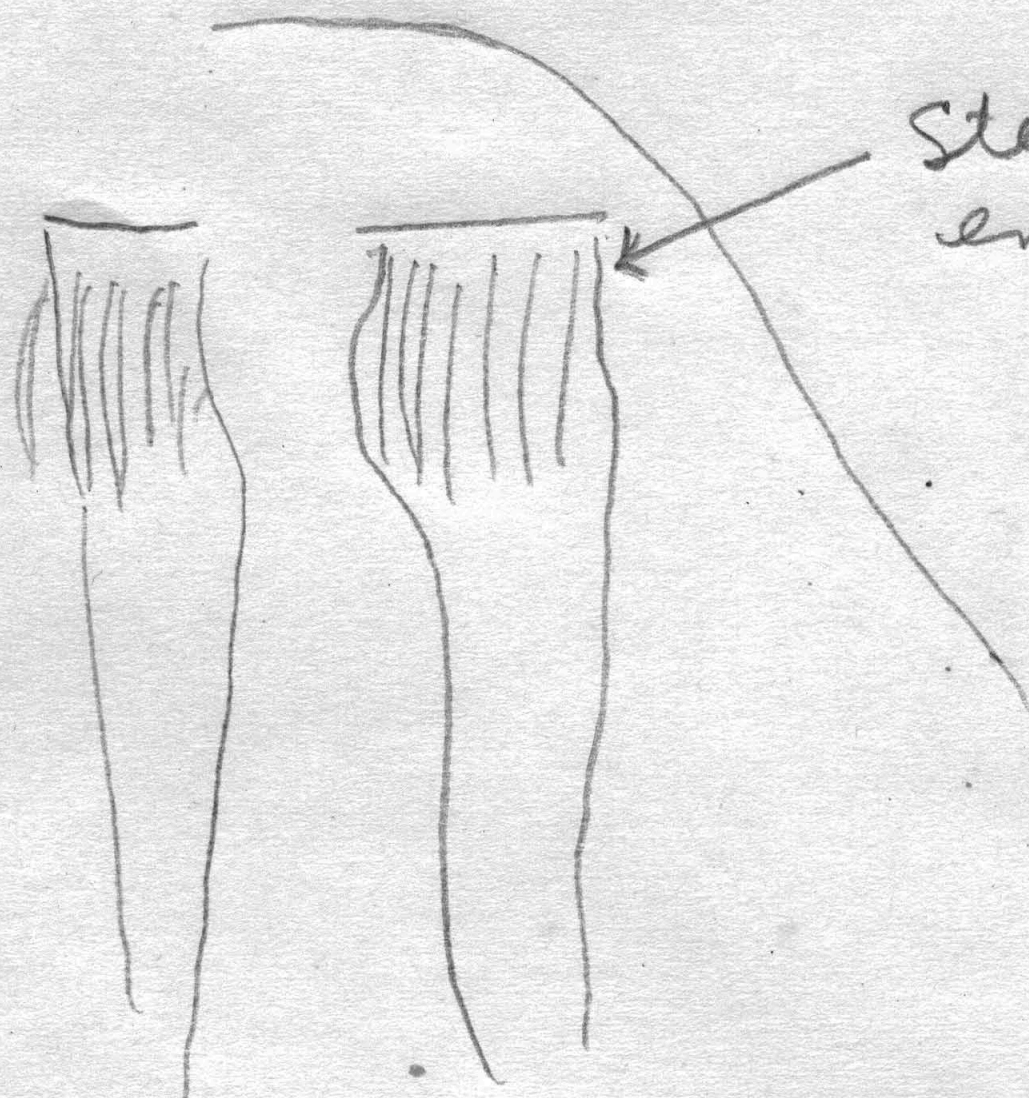
Slides at 11:13 & 11:17 $\frac{1}{2}$.

Dust above Pit at 11:25 a.m. Slide during noon hour.

Day Tuesday Date April 23, 1935
 Wednesday " 25, "

April 23

Small slides from NW buttress at 8:50, 9:30, and 9:48 a.m.



Steam this a.m. at S.W.
 end of crack. Sept. 6, 1934.

A.E.J.

April 24
9:30-10 a.m.

The avalanches of April 20 have made a big change in the W rim of Halemaumau.

250 feet of the rim have fallen, the block outside of the big steam hole.

The depth E-W of the part gone averages about 20 feet.

The big steam is gone. There are a few mossy steaming cracks farther back.

The lava cascade is fallen, gone, all the way from its N end to the W talus except the low cascades at yellow solfatara. Two streams of the lava on the talus remain. The new talus below is enormous. It extends practically $\frac{1}{2}$ the way from the W talus to the Yellow Solfatara, and overlaps the floor 100 feet with boulders & dust. The W talus, widened by the recent falls E of the SW rift caverns, is now twice as wide at base as it was in August 1934.

The wall is working all the time with never-ending small slides. That means 5 days. It looks as tho the crushing release of the remaining block on rim, were about to make that block go. It hangs out and the dirt on top is all cracked.

The dirt back inland is not cracked. Today the only place of much fuming is at base of E talus. It is a dry day, sunny, and hard to see any fume at the other places.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date April 24, 1935
 Thursday " 25, "

April 24
 (cont'd)

There are NE-wind eddies under the WNW block, which loosen the dirt. Blasting could now start a trail here for 100 feet of depth, with no steam. Beyond that there is a good ledge. The addition to the talus has made the bottom a long gentle slope. The trail should follow the 1st crack S of the avalanche.

Yellow self. not so bright probably dust. 11:05 a.m. rocks fall NE.

T.A.J.

Re: Lowering of Coast of West Hawaii, from Miloi south for several miles. It is possible that the lowering of the coast coincides with the formation of the Mamalu Pali through the Kahuku Ranch. At least it may have been one of the more recent movements on this fault. The Hawaiian traditions mention the fact that there had been land for some distance out to sea, probably a mile, but they do not mention whether it had been seen after Hawaiians settled here, or surmised from the remaining stumps and roots of trees that are now under water. It seems that the wood would not have lasted many generations. Since the probability is that no one was killed, or mention would be made in the legends, the sinking may have taken place in small steps over a period of several years.

Judging by the Mamalu Pali, no raised beaches, the total amount of sinking is quite considerable (600 feet) and if the high side has also lowered, land might well have extended out to sea $3\frac{1}{2}$ miles, beyond the present shore.

The drop may have extended to Kealakekua Bay.

April 25

Spent the morning levelling about the Pit. SW points have elevated slightly.

Rocks were falling from time to time on both the WNW & ESE sides. A large piece fell from about 400 feet E of tourist stand, from point 75 below rim that has been crumbling, about 10:45 a.m. a small one fell in that locality about 8:30 or 9 a.m.

Fume was noticed at both NW sulphur and East Bay.

Elevations were found to have increased over those of 4/3/35. The increase was $\frac{1}{2}$ to 1 cm from crack 18 to SW B.M. to point near SW rift depression.

0:47 p.m. a cloud of dust arose above the Pit. Yasu heard the noise of falling rocks while in the shop at 0:45.

A.E.J.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Friday	Date	April 26, 1935
	Saturday		" 27, "
	Sunday		" 28, "

April 26
8:50 a.m.

Steady dust & pebble slide on buttress between new south scar and SW caverns.
Rocks trickling down NW scar.
Fume at the 5 northern places.
Vapor at cascade crack in W talus and on two south taluses.

T.A.J.

April 27

2 slides 8:58 & 59 a.m. (seen by A.J.)
Slide 0:45 p.m. mod. dust cloud
" 1:10 p.m. " " "

A.E.J.

April 28
8:40 a.m.
8:52 a.m.

Rocks falling more or less continuously at W scar. One fall at the E side of pit.
Noisy fall NW.

T.A.J.

2:25 p.m.
2:32 p.m.

Big slide at NE wall. Thick dust comes up.
Small slide on E wall. Next one about 2 min. later. Lt dust comes up.

H.Y.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Monday
TuesdayDate April 29, 1935
" 30, "April 29
8:15 a.m.

SSW scar up wall is working all the way to the top.
Fresh stain of dust on floor in belt p.m. base of SSW scar to region W of E talus. Rather sharp boundary W side of this dust belt, which is pink. SSW scar working in spells a few minutes apart p.m. 8:15 to 9:15. At 9:16 the big block of 1921 columnar lava top of wall, which has been standing out at top of scar, fell and made a good avalanche. Dust stain spreads to W. Block broke up in falling. Pit suffused with dust. Rather small addition made to rocks on floor. Roar & cauliflowers. Dust on wall until we left at 9:20 a.m.

Small rock trickling at NW scar, and one fall heard NE.

T.A.J.

12:45 p.m.

Dust from a large slide just north of the tourist stand was seen rising from the pit.

At one time the dust covered about three-quarters of the area of the pit. About 10 minutes previous there had been a small slide from the west wall.

E.G.W.

April 30
8:40 a.m.

One or two rocks falling SSW. Scar extends farther W around a dark buttress near the top SSW wall.
Much fume at yellow solfatara NW.

T.A.J.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

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JOURNAL

Day	Date
Wednesday	May 1, 1935
Thursday	" 2, "
Friday	" 3, "

May 1

Foreman Craik reports that while he was at Halemau this afternoon between 1:40 p.m. to 3:30 p.m. there were crackling sounds in the pit at intervals of from 5 to 10 minutes apart, with a number of small slides on the north side. A heavy slide which occurred at 3:15 p.m. filled the pit with dust. Another slide quite noticeable, occurred at 3:20 p.m.

E.G.W.

May 2

Fume quite noticeable at 8:30 a.m. less later.
Rock trickling appeared to be going on from all sides of the Pit, but the amount of tilting was 2 mm. or less.

A.E.J.

5:10 p.m.

Avalanche from NE wall made thick dust come up.

H.Y.

May 3

9:30-10:30 a.m.

About 9:30 large fall of rocks heard.
While in SE cellar, avalanche tremor on instruments 9:45 a.m.
Inspection after 10 a.m. showed that the buttress over the S extension of the E talus is working. Repeated falls of rock in E gulch and also from S side of the buttress on the side of the Tourist Stand.
Craik has reported snapping noises in floor lately, and avalanche are reported for yesterday.
Fall 10:30 N side of buttress. 10:38 S side of buttress.
No cracks in dirt above. Small balanced pinnacle on top of buttress
10:43 another slide from pinnacle N-ward.

T.A.J.

JOURNAL

Day	Date
Saturday	May 4, 1935
Sunday	" 5, "
Monday	" 6, "

May 4

Avalanches from E wall

Time-- 9:47 a.m.)
 10:02 a.m.) Dust was very thick
 10:10 a.m.)

H.Y.

6:40 p.m.

Slide dust at E.

T.A.J.

May 5

Big avalanche about noon which made thick dust come up from E wall.

H.Y.

May 6

From the N rim observed rocks falling on NW rim somewhat more to the N than on previous days.

9:15 a.m.

9:29 a.m. Unusually high and straight puff of vapor from vent on SW rift. Counted seconds, expecting to locate by speed of sounds. No noise heard.

9:36 a.m. Rocks continuously falling on SW and NW rim.

9:45 a.m. Rock falling on NE. Noticed large patch of dust, extending on floor of pit from NE rim straight across to cone.

9:58 a.m. Shooting-off and cracking of NW rim. Large echo.

10:05 to 10:10 Landslide on W and NW rim, to the N of lava cascade. Continuous dribbling. Much dust.

10:45 a.m. Arrived on W rim. Calm. Much fume.

11:10 a.m. Still calm. Leaving for tourist stand.

10:20-11:30 Absolutely calm.

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JOURNAL

Day	Tuesday	Date	May 7, 1935
	Thursday		" 9, "
	Friday		" 10, "
	Saturday		" 11, "
	Sunday		" 12, "

May 7
8:45 a.m. Much fume, both from NW and NE vents.
Rock crumbling on SW and NE rim.

May 9
9 a.m. Very calm. Very abundant fume rising from 3 solfatara, although atmosphere very dry. No sign of recent rockfalling.

May 10
8:45 a.m. Abundant fume from NE vent. Whole pit full of haze.
4:01 p.m. Rock trickling on SW and W scars
Noticed bell #1. Set it back.

May 11
8:45 a.m. Rock crumbling and dribbling down W and SSW. Scars (mostly W)
12:25 p.m. Dust arising continuously. Strong wind. Fume low.
6 p.m. From the Hotel, noticed large and long landslide sending up much dust on ENE.
Wingate reports he witnessed large rock fall on W side.

May 12
8:50 a.m. Approaching W side, noticed dust cloud. Small rocks falling.
9:38 a.m. Large rock fall on E, slightly to N of tourist stand.
9:58 W side. Wind makes observation of sound difficult.
10:20 a.m. Left for hotel.
12:50 p.m. From Hotel, noticed large dust-cloud rising above W side of Pit. The cloud spreads out, filling the whole Pit.

JOURNAL

Day	Monday	Date	May 13, 1935
	Wednesday		" 15, "
	Thursday		" 16, "

May 13
 9:38 a.m.
 12:45 p.m.

Rock falling SW, W and NE.
 Avalanche from SW, but below big fissure.
 Went all around. No signs of fresh opening. Floor unchanged.
 From Hotel, avalanche on NE.

Verhoogen

1:30 p.m.)
 2:30 p.m.)

Big noise in the pit the noise was just like thunder. Reported by working boy of Nat. Park.

May 15

About 5:40 a.m., heard big noise from the direction of the pit. I was at my house.

Verhoogen reports that he heard a big noise about 7:20 a.m.

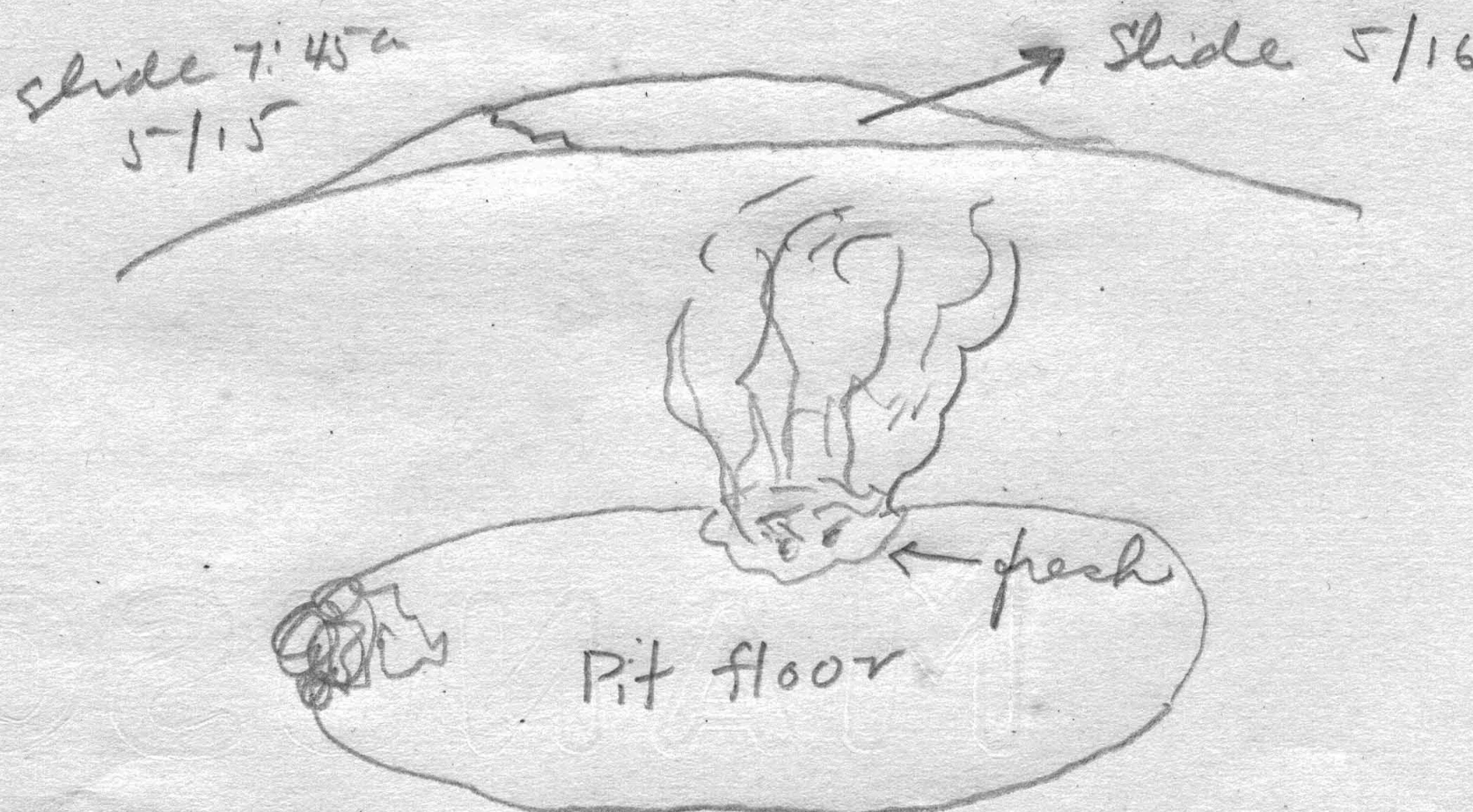
7:54 a.m.

We all heard a big avalanche which occurred just out on the edge of crack #26 and saw it also. *Crack #26*



May 16

Mrs Jaggard reported that she heard a big noise and saw thick dust caused by avalanches rise from the Pit. Time was 12:41 by the seis.



H.Y.

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JOURNAL

Day	Date
Monday	May 20, 1935
Tuesday	" 21, "
Monday	" 27, "
Tuesday	" 28, "
Thursday	" 30, "
Friday	" 31, "

May 20

Slide at 9:55 a.m. and 3:25 p.m.

May 21

Slides in Pit at noon and at 4:25 p.m.

XXX

May 27

10:30 a.m.

10:24 a.m.

Fall of rock at SSW scar, W, side. 10:25 another at NW scar. Distinct 2 new talus cones under SSW scar and pink stain far out on floor.

Note lava veneer over protuberance of lower wall E of SW rift caverns, where the bedding is covered.

Note steam from rock wall top of E talus, bottom of E gulch. There is a buttress of fresh gray rock hanging out over the new E talus cone, next S of old E talus, and marking the middle part of new E scar.

The wall valley at base of E talus has big boulders but none has gone over the ridge. The ridge chasms and the 5 radial cracks here appear bigger than ever. This is a deep valley along the base of the old E talus. The new E talus cone has buried up the wall valley and the ridge. It is wothy of

Note: that the N & NW taluses are now motionless: the N talus was active October 1934.

May 28

8:45 a.m.

The 5 solfataras from E to NW are all fuming. There is a crack across rampart under SW caverns I have not noticed before.

All the wall crack chasms SW & NW seem to have opened a little in last few months.

2 thuds heard. No rocks falling in 15 min. Fume greatest at yellow solfataras NW. Puffing up.

May 30

9:10 a.m.

After mod. rainy night, the 5 fuming places are puffing.

May 31

After only slight rainfall, at 9:50 a.m. the 5 fuming places are inconspicuous. A few rocks heard falling.

T.A.J.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

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JOURNAL

Day	Monday	Date	June 3, 1935
	Thursday		" 5, "
	Saturday		" 8, "
	Sunday		" 9, "
	Monday		" 10, "

June 3
9:50 a.m.

SW wind. Cloudy. Thin rising fume at N corner? of 1934 lake.
Abundant fume at yellow solfatara NW edge floor.
Gravel falling at NW talus: more of the edge slab N side of
NW scar has fallen and a large remnant appears ready to fall.
At middle of SSW scar a column on edge is hanging out.

T.A.J.

June 6

Heard a noisy slide in Pit at 10:56 a.m.

June 8

Good-sized (moderate) slide fell from a high position, 400-500
feet E of the tourist stand at 10:50 a.m. a tremor was recorded
on the Pit seis at that time.

A.E.J.

June 9
6:35 a.m.
9 a.m.

Avalanche appears to be E gulch.

Rock wall ENE working above high E talus. Fresh wet scar high on
wall & peak red debris on talus. Fume abundant at the NW yellow sol-
fatara & visible at the 4 other places.

12:52 p.m.

Wingate reports slide over E talus.

June 10
8:50 a.m.

Fume from the 5 vents. At W rim can smell the sulphur dioxide,
probably from yellow solfatara. Wind NE increasing. Clear & dry weather.

T.A.J.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

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JOURNAL

Day	Date
Friday	June 14, 1935
Saturday	" 15, "
Sunday	" 16, "
Monday	" 17, "
Friday	" 21, "

June 14

Condiserable dust was seen rising out of Pit, from Uwekahuna, at 9 a.m.

. More dust at 9:05.

Sliding was seen at 9:15 E wall large slide fell from E buttress 400 ft E tourist stand at 9:25.

A.E.J.

June 15

Dust at 3:30 p.m. slide

June 16

Slide dust at 5:30 p.m.

T.A.J.

June 17

Sliding and dust clouds between 4:15 and 5 p.m. west wall of pit over 1934 cascade.

H.H.W.

June 21

Noisy rockfalls or small slides were heard in the Pit about
 9:50 a.m.
 2:00 p.m.
 2:55 p.m. while levelling.

A.E.J.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

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JOURNAL

Day	Date
Saturday	June 22, 1935
Tuesday	" 25, "
Wed-Thur	" 26-27 "
Friday	" 28 "

June 22

Heavy fume noticed at solfatara of NW floor edge 10:30 a.m.
Yasunaka reports nothing unusual week ending June 23.

June 25

Awakened by earthquake at 12:45 a.m. Considerable motion prolonged over several seconds.

June 26-27

No change noted.

H.H.W.

June 28

Big quake felt at SE station at the Pit.
Big slide from SE wall. Quake felt by Park laborers working by Pit.

H.Y.

Uwekahuna clock stopped by earthquake at 9:02 a.m.
Needle off NW-SE boom on Uwekahuna seis.
Earthquake and slide 9: a.m., dust clouds over W or SW edge. 9:30
dust seen from slide over canoe sill.

H.H.W.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

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JOURNAL

Day Friday Date June 28, 1935
 Saturday " 29, "

June 28
 (cont'd)

11:57 a.m.

At the SE station: After the quake tilt changed about .17 mm. off to NW side.

Time clock stopped.

Lt slide on just top of north bay.

H.Y.

Slight smell of fume at 10:15 a.m. near SW B.M.

2 p.m.

Drove up to SW.B.M. one crack opened 0.5 since last Saturday (50.50)
 Fume very strong, smelled like something dead.

3 p.m.

Fume seems to be coming continuously from NW sulphur spot.

Sliding from S almost continuous in afternoon.

Annunciator dismantled. Inspected the Chain-of-Craters as far as Makaopuhi but saw no slides. On return to Halemaumau noted fume again.

A.E.J.

Continuous fume from NW sulfur spot in spite of very strong winds
 2:45 p.m. Fresh sliding evidence noted under tourist stand. Strong odor of sulfur noticeable.

June 29

What appears to be a small fresh crack about 100' NE of NE Rim of Pit about 50' to 60' in length, June 29, 1935

Cracks along N & NE show opening by new breaks along old fills.
 Pit very quiet at 10:30 a.m.

Dust seen from Observatory rising from NE-N edge of pit 4:35 p.m.

H.H.W.

While levelling between cr. 36 and NW B.M. found numerous fresh hair cracks in fills of old large cracks.

A.E.J.

June 30

Pit very quiet between 10 a.m. and 1 p.m.

H.H.W.

Dust cloud reported in Pit, (slide) at 3:10 p.m. by Baldwin.

A.E.J.

11:55 a.m.

Slide on NE wall.

H.H.W.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

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JOURNAL

Day	Monday	Date	July 1, 1935
	Tuesday		" 2, "
	Thursday		" 4, "
	Saturday		" 6, "
	Sunday		" 7, "

July 1

Pit very quiet between 11:00 a.m. and 1:00 p.m. At 12:50 several unusually strong puffs of fume from NW sulfur spot.

H.H.W.

5:40 p.m.

I saw a slide in the Pit from the Obs grounds which looked as though it occurred from the N wall.

H.Y.

July 2

At 2 p.m. while levelling the fume was quite noticeable. (see page 49 in level book.

Only one or two rock-falls were heard during the day.

July 4

Earthquake at 10:00 p.m. rang bell #1 but not felt while writing at desk.

July 6

Moderate slide on SW wall of Pit 9:45 a.m.

At 12:30 p.m. strong odor of sulfur and heavy fume foot of talus NE Bay.

July 7

Dust clouds from slides seen at Pit at 11 a.m., 1:20 p.m., 3 p.m. and 3:25 p.m. also 5:50 large slide.

Slides at 5 to 10 min intervals between 8 and 9. At times S fumes quite strong.

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Hawaiian Volcano Observatory

JOURNAL

Day	Monday	Date	July 8, 1935
	Tuesday		" 9, "
	Wednesday		" 10, "
	Thursday		" 11, "
	Saturday		" 13, "

July 8
9:45 a.m.

Dust of slide NW end of Pit.

Avalanche 10:37 and 10:45 a.m. from W wall dust look like side must be normal.

1 p.m.

Booming noise, 1 fairly strong heard by C.C.C. boy at Pit about 1 p.m.

July 9

Dust cloud seen over NW and W end of Pit at 8:55 a.m. and 10:10 a.m. Small slides continuous a.m. and fume from small S spot rather intense.

Dust cloud 1:05 p.m.

H.H.W.

July 10
1:07 p.m.

Avalanche at Pit. Dust looks as though from N wall.

H.Y.

July 11

Dust 9:10 a.m. from slide in Pit.

Hilo Tribune Herald reports 2 sharply felt quakes in Kona at 10 a.m. and 6:47 p.m.

Fume very thick at 9:20 a.m.

July 13

Strong fume in Pit as seen from Uwekahuna at 8:40 a.m. and again at 8:40 a.m. and again at 12:45 p.m. from Hotel.

Sulfur spot at edge of floor directly below tourist stand noticeably more yellow.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Monday	Date	July 15, 1935
	Tuesday		" 16, "
	Wednesday		" 17, "
	Saturday		" 20, "
	Sunday		xxxx21xxxx

July 15

Dust on lava floor caused by sliding.
Fume moderate at both NW & NE solfataras.
Slide scars of fresh slides over N talus.

July 16

Very large slide E wall of Pit causing unusually large dust cloud at 11 a.m. Record as tremor, HVO.

12:53

Large dust cloud 4:30 p.m. Record as tremor.

1 p.m.

Slide Uwekahuna near Sulfur Bank (Rt)

1:38

Slide. Same, from near crater rim.

1:43

Slide Same.

2:05

Slide at NE talus slope. Steam coming from Puka above talus slope.

2:05

Slide at NE talus.

Slide at Point 6

July 17

Slide in Pit.

9:40 a.m.

H.H.W.

Saw small slide at NW wall from SW tilt cellar.

Fresh dust on floor from big slide of NW wall yesterday.

H.Y.

July 20

Dust on floor at NE talus, (Fume very light 10:30 a.) also at W, talus and N Buttress.

Slides E talus and N Buttress at 11:25 a.m.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Date
Sunday	July 21, 1935
Thursday	" 25, "
Sunday	" 28, "
Wednesday	" 31, "

July 21
9:45 a.m.

Dust from slide in Pit.

H.H.W.

July 25
9:36 a.m.

Pit steaming from all over the floor and NW wall. Steam amount largest on E side. Fume appears to be much thicker than at other times. Rainfall at night was 1.76.

H.Y.

July 28

Pit very quiet and fume very light morning of July 28 about 10 a.m.

July 31

Pit very quiet between 10 and 11 a.m. At 10:30 several strong puffs of fume, at 10:45 a.m. no fume visible. Day clear and windy. Small slide N Buttress 10:50 a.m.

H.H.W.

JOURNAL

Day	Date
Friday	August 2, 1935
Saturday	" 3, "
Wednesday	" 7, "
Thursday	" 8, "

August 2

Pit very quiet at 10:45 a.m. Fume from NW solfatara mod. to strong. Very small trickle of rocks from N Buttress.

August 3
10 a.m.

Small sulfur spot under tourist lookout brighter and larger.

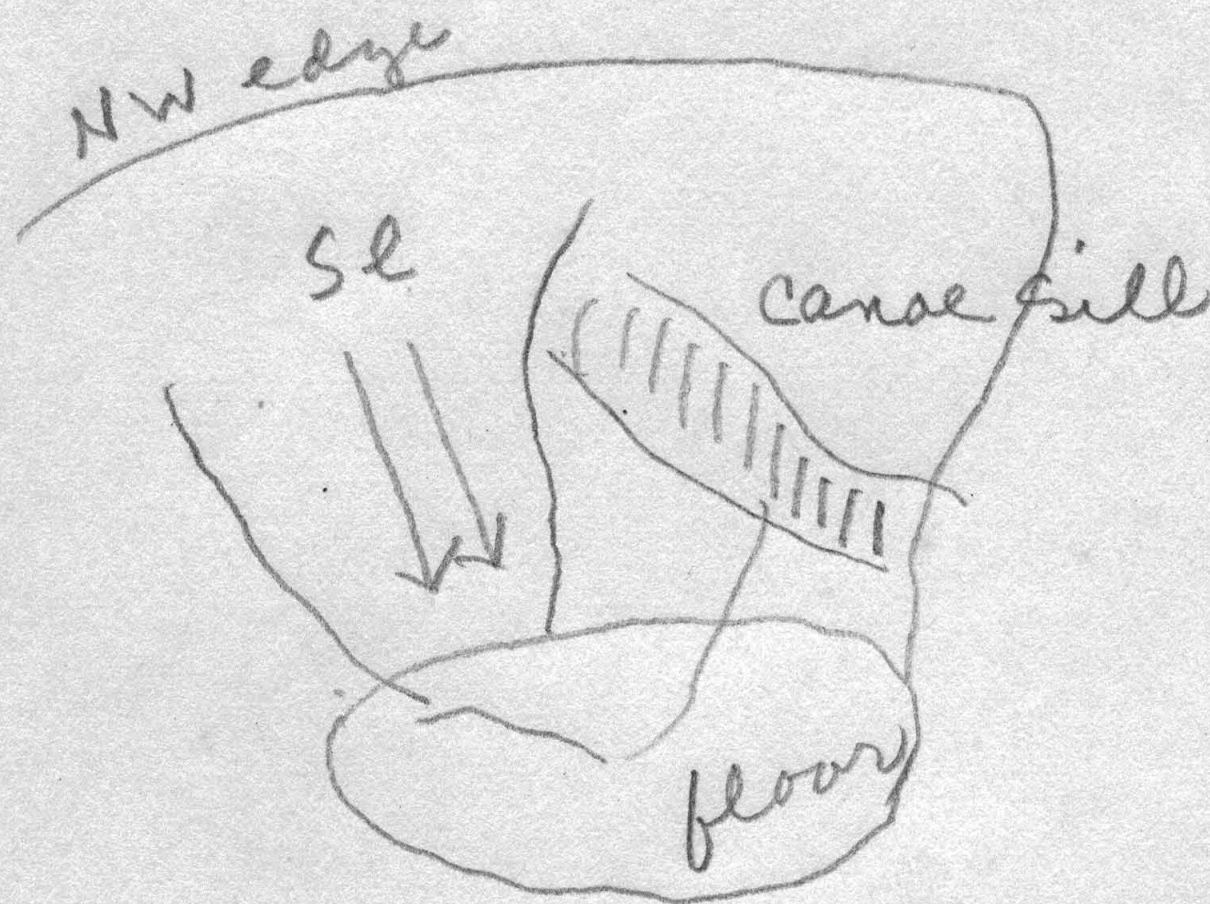
August 7
10:15 a.m.

New? yellow sulfur spot at foot of NE talus. Slide N 5:52 p.m.

H.H.W.

August 8

9:56 a.m. avalanche from NW: wall dust was normal: 3 minutes after get another small slide.



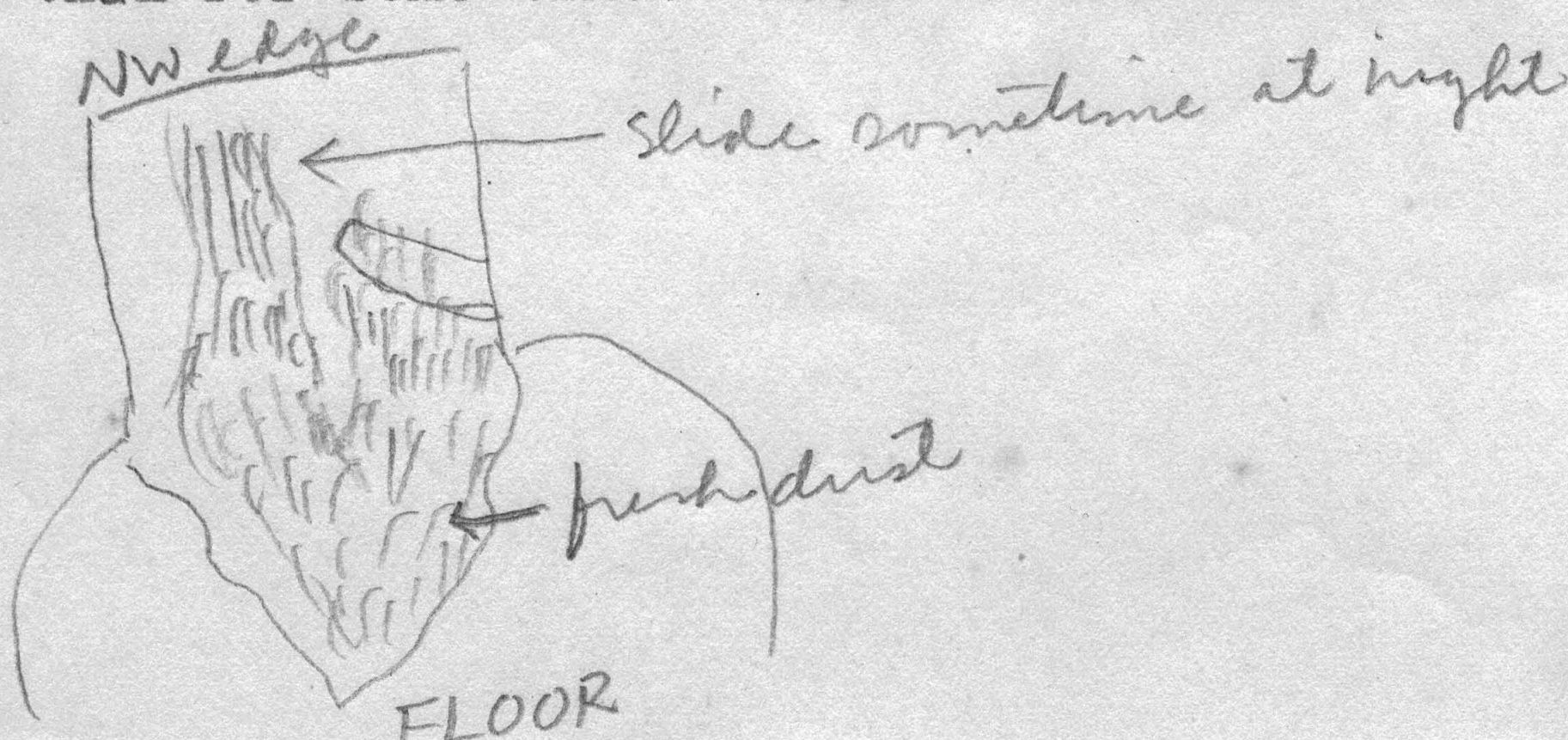
"sl" had a big slide night before shows scar.

T.A.J.

9:56 a.m.

Big avalanche from NW wall sometime during the night. Big piece of fresh dust on the floor.

Slide from NW wall, with normal amount of dust coming up. About 3 minutes afterwards another small slide. Fume appears to be thicker than for some time. Rock trickles all the time.



H.Y.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Friday	Date	August 9, 1935
	Saturday		" 10, "
	Monday		" 12, "
	Tuesday		" 13, "

August 9
10:20 a.m. Looked into Pit from W edge. From the NW wall (I think) rock was trickling all the time.

H.Y.

August 10
10 a.m. Heavy fume & vapor . Rain & fog.

T.A.J.

10 a.m. Heavy fume and vapor from both solfataras, NE talus, and wall over NE talus (vapor only?) Also vapor over cascade of 1934 eruption. Humidity high, rain and fog.

August 12
2:55 p.m. Slide N buttress.
3:15 p.m. Rather heavy fume puff at this time.

H.H.W.

August 13
8:40-8:50 a.m. Dry morning. Fume puffing up vigorously at NW yellow solfatara. Fume present at the usual 4 places around N end of pit but almost invisible. Last evening fume in interior visible both W & E. Sunset last night showed fume over Mokuaweoweo.

T.A.J.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

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JOURNAL

Day	Date
Thursday	August 15, 1935
Saturday	" 17, "
Sunday	" 18, "
Monday	" 19, "

August 15

At 8:30 a.m., August 15, Mr. Sager reported that Mr. Lycurgus told him at 6:30 a.m. he had seen dust from a very large slide rising from the pit. Mr. Sager and I then went to the pit and found that a small portion of the W wall of the south end of the long scar left by heavy sliding a few months ago over the west talus had fallen. There was some small sliding and trickling of rocks while we were at the pit: Time 9-9:30 a.m.

E.G.W.?

9:33 a.m.	Slide from rim over 1934 cascade.
11:50 a.m.	Slide same place.
2 p.m.	Slide same place.
2:33 p.m.	Big slide from same vicinity.
	Observed while running levels around Pit.
	Levels indicate probable lowering of N.W.B.M. with ref. to Spit B.M.

August 17

9:30-11 a.m.

Pit very quiet while measuring cracks.

H.H.W.

August 18

9 a.m.

Small slide on SW wall. Slight dust coming up. Fume looks very thin. Rocks trickling from N wall.

August 19

9:36 a.m.

Avalanche from above N bay. Noisy slide but small. Rocks trickling on Wwall above cascade.

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JOURNAL

Day	Tuesday	Date	August 20, 1935
	Wednesday		" 21, "
	Thursday		" 22, "
	Friday		" 23, "
	Saturday		" 24, "
	Monday		" 26, "

August 20
9:10 a.m.

Small avalanche on north wall with dust coming up.

August 21
9:03 a.m.
10:18 a.m.

Ranger Lamb saw a small avalanche from Uwekahuna. At that time I saw thin dust come up which looked as though it came from the N wall. Normal slide from above N bay.

H.Y.

August 22
9-10:30 a.m.

Pit quiet, fume normal.

August 23
10:10 a.m.

Fresh talus material below tourist lookout on floor of Pit. Yellow sulfur spot near same locality seems brighter and larger.

August 24

Saw nothing unusual while measuring cracks around Pit a.m.

H.H.W.

August 26
9:40 a.m.

Fume & vapor very slight in pit this morning. Vapor outside Pit also slight.

Slide from N wall yesterday sometime after I had left. Rocks on floor looked very fresh.

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JOURNAL

Day	Thursday	Date	August 29, 1935
	Friday		" 30, "
	Saturday		" 31, "

August 29 Fume very slight for last two days but this morning when I looked
8:07 a.m. in from SW edge it began to come up strong.

H.Y.

August 30 Slide N side of pit makes pink dust.
12:40 p.m.

T.A.J.

12:45 p.m. Large cloud of dust from slide over NW edge of Pit. Seen from
Volcano House.

H.H.W.

August 31 Slide from N wall yesterday. Dont see any changes but rocks
trickling continuously this morning.

H.Y.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Date
Sunday	September 1, 1935
Monday	" 2, "
Tuesday	" 3, "

September 1 At 8:55 a.m. a 4-motor army plane makes circuit of Kilauea and de-
9 a.m. parts N.

Fume from yellow solfatara NW abundant, visible because calm weather, light E'ly wind. Fume visible floor edge at base NW bank, at E talus and probably N & NE. Top crack of border ridge of floor at NW self appears to have widened. One snap 9 a.m., and light trickle of stones 9:05 W. Otherwise pit very still. Weather hot, calm, sunny.

September 2 14 vapor places. Rainy morning, walls wet. Heavy blue fume over
8 a.m. NW solfatara. Dry places on 8 talus slopes. Much steam up W wall.

The ring of the 1931-32 cone has two yellow solfataric spots on opposite sides, at the 2 horns of the emergent crescent, and just where 2 streams of the border wall crack erupted late in September 1934.

September 3 No change but walls dry.

Note: N talus is opp. S talus, both at end of buttress. E talus opp. W talus both at other end of buttress & cracks. E talus has extended S, W talus has extended N. NW talus sulphur opp long sulphur spot SE. Yellow self NW opp new sulphur spot SE. Fume N end E talus opp the 1931 cone. Small NE talus & heat spot opp small talus & heat spot, one W of dike, other E of cavern dike. Does the plug rock open opp side? Talus marks circ. balance?

This question should be examined in other craters, and especially Mok & Kil. Is the hot sulphur ~~bank~~ bank by Gravel Spit opp Volc Hse sulph bank?

T.A.J.

2:40 p.m. Dust cloud over NW edge of pit indicating slide.
2:55 p.m. Same.

H.H.W.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Wednesday	Date	September 4, 1935
	Saturday		" 7, "
	Sunday		" 8, "
	Monday		" 9, "

September 4 Looked from N edge toward E bay, half-way up. First heard noise
9:37 a.m. of rocks and then saw a small avalanche.

H.Y.

September 7

1:05 p.m.

At 1:05 p.m. dust was observed from what appeared to be a comparatively large slide at the NE corner of the pit.

E.G.W.

2:09 p.m.

Small avalanche from NE wall. Very thin dust came up. When I looked, rock was trickling.

H.Y.

September 8

10 a.m.

Nothing unusual noted in or around Pit.

1:30 p.m.

Dust around E edge of Pit seen from Hotel.

H.H.W.

September 9

10:05 a.m.

From W

Long narrow scar of a slide from top to bottom ENE across the columnar part of Canoe Sill, midway between E & NE taluses. Fresh debris on the floor.

E solfatara fuming hardly any fume seen from here anywhere else including the NW yellow solf. Sunny weather NE wind. No white vapor detected anywhere on the talus slopes or walls.

Slight rock trickle heard. Not located.

10:45 a.m.

From SE. No vapor detected E solf: variable at NW solf. Sometimes not a trace.

T.A.J.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

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Day	Date
Tuesday	September 10, 1935
Wednesday	" 11, "
Saturday	" 14, "
Tuesday	" 17, "
Thursday	" 19, "

September 10 At 4:45 p.m. September 9 I noticed dust from what apparently was a small slide rising from the northeast end of the pit.

Also at 9:45 a.m. Sept 10 Foreman Craik saw another small slide at the north end.

E.G.W.

September 11 Looked out from NW edge this morning. NE wall shows fresh rocks
10:18 a.m. on floor from afternoon slides of Sept 7.

When I was looking into pit, rocks started to trickle. Noise sounded as tho from E wall.

H.Y.

September 14 Fume very light.
9:50 a.m.

September 17
11:45 a.m. Dust cloud over N edge of Pit.
11:55 a.m. Same and larger.

H.H.W.

September 19 Normal ~~avalanche~~ E side of pit.

H.Y.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

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JOURNAL

Day	Friday	Date	September 20, 1935
	Saturday		" 21, "
	Sunday		" 22, "

September 20 Series of slides N corner of Pit.
9:30 a.m.

September 21 Sulphur patch edge floor under Tourist Stand appears hotter,
10:10 a.m. greenish yellow, bright. T.J.
1:45 p.m. Avalanche cloud & noise. This slide was seen by Dr. Jaggar
like the N slides of Pit. Mrs. Jaggar heard the noise at home.

H.Y.

2:30 p.m. Wind SE. Fume rising vigorously at NW solfatara.
There are 13 places where hot vapor rises at edge of floor.
There are 7 stained greenish or yellow.
There are 9 where dry heat or vapor up talus marks a vent.
There are 10 places where rock talus overlaps 1934 floor.
There are 3 crescent scars making ridges in floor opp. 1932 cone.
The NNW talus bank of pumice is the only place of yellow-pink
stain above floor level.
There are 3 sulphur yellow places: NW, NNW. and ESE.
The 1932 cone summit is rusty yellow.
There are 7 slide scars from top to bottom of wall.
There are 9 definite radial cracks in floor from 1934 lake basin.
The green & white stained belt of border cracks in floor back of
1934 rampart SE, is very long & conspicuous & base of small talus
there is dry, pink & hot & has not been added to my avalanches. This
crack is at the margin of intrusion dike inwards, towards pit center.
A few rocks dribbling N & W.

September 22 With light SE wind at the pit, clear weather, the fume is
8:40 a.m. strikingly conspicuous rising above the Pit at the NW yellow solfatara.
Pit bottom & walls entirely quiet & motionless.

T.A.J.

JOURNAL

Day Wednesday
MondayDate September 25, 1935
" 30, "September 25
10 a.m.

Small avalanche on east wall. Light dust came up.

September 30

9:45 a.m.

9:48 a.m.

9:51 a.m.

10:40 a.m.

Big avalanche on east wall about 100 ft below the edge. Made a big noise but thin dust, due to the wall being wet by yesterday's rain.

Slide. Smaller than first.

Same.

Saw fresh rocks on floor after the slides.

Fume starts coming up under the tourist lookout where the sulphur is.

Rainfall for the pit yesterday 1.73"

H.Y.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

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JOURNAL

Day	Tuesday	Date	October 1, 1935
	Wednesday		" 2, "
	Thursday		" 3, "

October 1

Quake of Oct. 1, 10:37 a.m. felt in Pahala.

H.H.W.

This morning 6-6:35 a.m. big noise and avalanche on W wall, reported by boys working for Nat. Park.

H.Y.

12:35 p.m.

Slide from N side of E buttress. Black dust. A few cracks in dirt at edge W. A few slides N & E during forenoon.

T.A.J.

October 2

10:35 a.m.

Rocks dribbling NW. Then slide at S corner of pit from near top. Dry weather. Fume faintly detectable NW & E.

T.A.J.

October 3

9:30 a.m.

Rocks trickling from N wall.

H.Y.

5:15 p.m.

Some sliding NE Bay of Pit.

H.H.W.

PHOTOGRAPH RECORD

Day Tuesday

Date October 1, 1935

time	sta	subject	no	pl	scr	stop	ex	cam
<u>October 1</u>								
12:15 p.m.	W sta.	To Canoe Sill (sunlight)	1	commercial panchrom.	B	f/11	1	5 x 7
"	"	WNW talus (sunlight)	2	"	"	"	"	"
								T.A.J.

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Day	Friday	Date	October 4, 1935
	Saturday	"	5, "
	Monday	"	7, "
	Tuesday	"	8, "
	Wednesday	"	9, "

October 4
9:37 a.m.

Signs of big avalanche some time last night or this morning when there was an earthquake. Dust on floor is fresh. Big piece from NE wall. No fume coming up from sulphur spot under Tourist Lookout this morning.

H.Y.

October 5

Crack in N wall at tourist stand opened 1.5 mm. Material caved in leaving large hole in floor of tourist stand as well as points to N of N wall.

10:32 a.m.

Small slide NE Bay.

11:20 a.m.

Slide same.

October 7

4:45 p.m.

Dust cloud over NE edge of Pit from slide.

H.H.W.

October 8

Dust over pit from slide at 2:55 and again at 3:50 p.m.

H.H.W.

October 9

Slide from yesterday was NE wall. Some fresh rocks on floor this morning.

H.Y.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

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JOURNAL

Day	Date	October 12, 1935
Saturday	October 12,	1935
Thursday	" 17,	"
Friday	" 18,	"
Tuesday	" 22,	"
Thursday	" 24,	"
Thursday	" 31,	"

October 12

11 a.m.

Fume from small solfatara very noticeable.

11:30 a.m.

White salt deposit noticeable at top of 1934 cascade where heavy steam clouds were in evidence.

October 17

Small slide from SW wall at 12:20 p.m. and 12:50 p.m.

October 18

12:15 p.m.

Small slide from NW wall.

H.H.W.

October 22

9:50 a.m.

Rocks heard falling WNW.

Dry overcast forenoon. Fume not detected anywhere, owing to the dryness.

October 24

8:45 a.m.

Altho no rain the day before, much fume at yellow solfatara. The visible sulphur seen from W sta has greatly increased.

T.A.J.

October 31

9:45 a.m.

There is fresh dust on floor this morning, indicating that there must have been a slide yesterday or last night from the NE wall. Steady trickle of rocks from N wall this morning.

H.Y.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

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JOURNAL

Day	Friday	Date	November 1, 1935
	Saturday		" 2, "
	Sunday		" 3, "
	Monday		" 4, "

November 1
8:38 a.m.

Simultaneously rocks fell at NE & W scars. Was there a quake?

T.J.

There was one at 8:17 a.m.

H.H.W.

November 2
10 a.m.

Continuous small slides from NE wall of Pit.

H.Y.

10:45 a.m.

Slide NW wall of Pit.

H.H.W.

12-1:30 p.m.

Much dust in pit.

T.A.J.

12-3 p.m.

Dust over N and NE walls indicating almost continuous sliding from noon to 3 p.m.

H.H.W.

November 3

Small slide from NE wall of Pit 9:42 a.m.
continues to fall.

Small rocks

9:53 a.m.

Moderate slide from same wall.

November 4

9:59 a.m.

Slide from E wall. First was small, while second one at 10 a.m. was larger in noise and size than the first one.

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JOURNAL

Day	Date
Tuesday	November 5, 1935
Wednesday	" 6, "
Friday	" 8, "

November 5 This morning continuous sliding from NE wall at Pit.
 9 a.m. Moderate slide
 9 a.m. " "
 9:40 a.m. Small "
 9:55 a.m. Moderate "
 10:15 a.m. The following slides were seen from the Observatory
 11:53 a.m. Moderate slide
 12:55 p.m. Small "
 3:18 p.m. Earthquake rang #1 bell. Slide at the pit indicated by dust cloud showing up from NE side of Pit.
 3:46 p.m. Earthquake rang #1 bell. Light dust cloud rose from Pit on the same side as above.

H.Y.

2:20 p.m. Large slide from below NE Δ station.
 1:30-5 p.m. Continuous sliding from NE wall of Pit.

H.H.W.

Slide about 200 feet below crack #34; Slide between yesterday and this morning. Made a black spot on the wall. Continuous sliding this morning, both moderate and small.

November 6 Moderate slide NE wall of the pit.
 9:22 a.m. Moderate slide.
 9:30 a.m.

November 8 Normal (mod?) slide at pit. Rising dust indicates NE wall.
 2:20 p.m.

H.Y.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

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JOURNAL

Day	Date	November 16, 1935
Saturday	"	17, "
Sunday	"	18, "
Monday	"	20, "
Wednesday	"	21, "
Thursday		

November 16 Small rockfall over NE talus.
9:30 a.m. Heavy fume from small spot under tourist stand.

H.H.W.

November 17 After all day rains there is vapor at all the solfataras and at
8:55 a.m. numerous places of the floor & walls of Halemaumau. Also N side of
1934 lava lake basin.
From HVO this a.m. heat convection cloud was most pronounced over
west side of pit.

(Week of M.L. outbreak)

November 18 There was no fume but some vapor places in the pit; marked contrast
9 a.m. from yesterday. Clearing cloudy weather, small rainfall.

T.A.J.

November 20 Slide sometime this morning at NW wall. Slide seems to have started
9:55 a.m. about 150 feet below the edge. Nothing on floor; just the fresh mark on
the wall.

November 21 Slide with the quake of this morning. Looks as though from N wall;
10:12 a.m. some fresh dust on floor.
Continuous rock trickle from W wall all the time.

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JOURNAL

Day	Friday	Date	November 22, 1935
	Saturday	"	23, "
	Sunday	"	24, "
	Monday	"	25, "

November 22

9:48 a.m.

9:54 a.m.

No change in pit apparently from yesterday morning.

Rocks start trickling from N wall.

Fresh Pele's hair all over the crater & Uwekahuna from Mauna Loa outbreak.

2:15 p.m.

From Uwekahuna I heard a big noise and saw a slide from SE wall. Slide started about 200 feet below the edge.

H.Y.

November 23

Slide from N wall at 9:58 a.m.--dust seen from Uwekahuna.

No fume visible at first, then faint puff from W Sulfur Spot 10:57 a.m.

Clear and mod. NE wind.

Continuous trickles of rock over N talus.

Fume normal at 11:30 a.m.

November 24

9:25 a.m.

9:55 a.m.

Small slide on W wall rocks trickling all the time.

Second slide from W wall.

November 25

10 a.m.

10:55 a.m.

Very slight fume at Pit this morning. Continuous rock trickel at this time.

Normal (MOD?) slide on W wall. Dust comes up very thick.

H.Y.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Tuesday	Date	November 26, 1935
	Wednesday		" 27, "
	Thursday		" 28, "
	Saturday		" 30, "

November 26 Little or no fume from NW yellow sulfur spot visible at 9:45 a.m.

H.H.W.

November 27 Had a "normal" avalanche at the Pit. Report by Mr. Wingate.
8:40 a.m.

November 28 Small avalanche at pit. Light dust came up. Second slide was
1:35 p.m. moderate. Dust was very thick. Seen from Obs. dust indicated slide
from W wall.

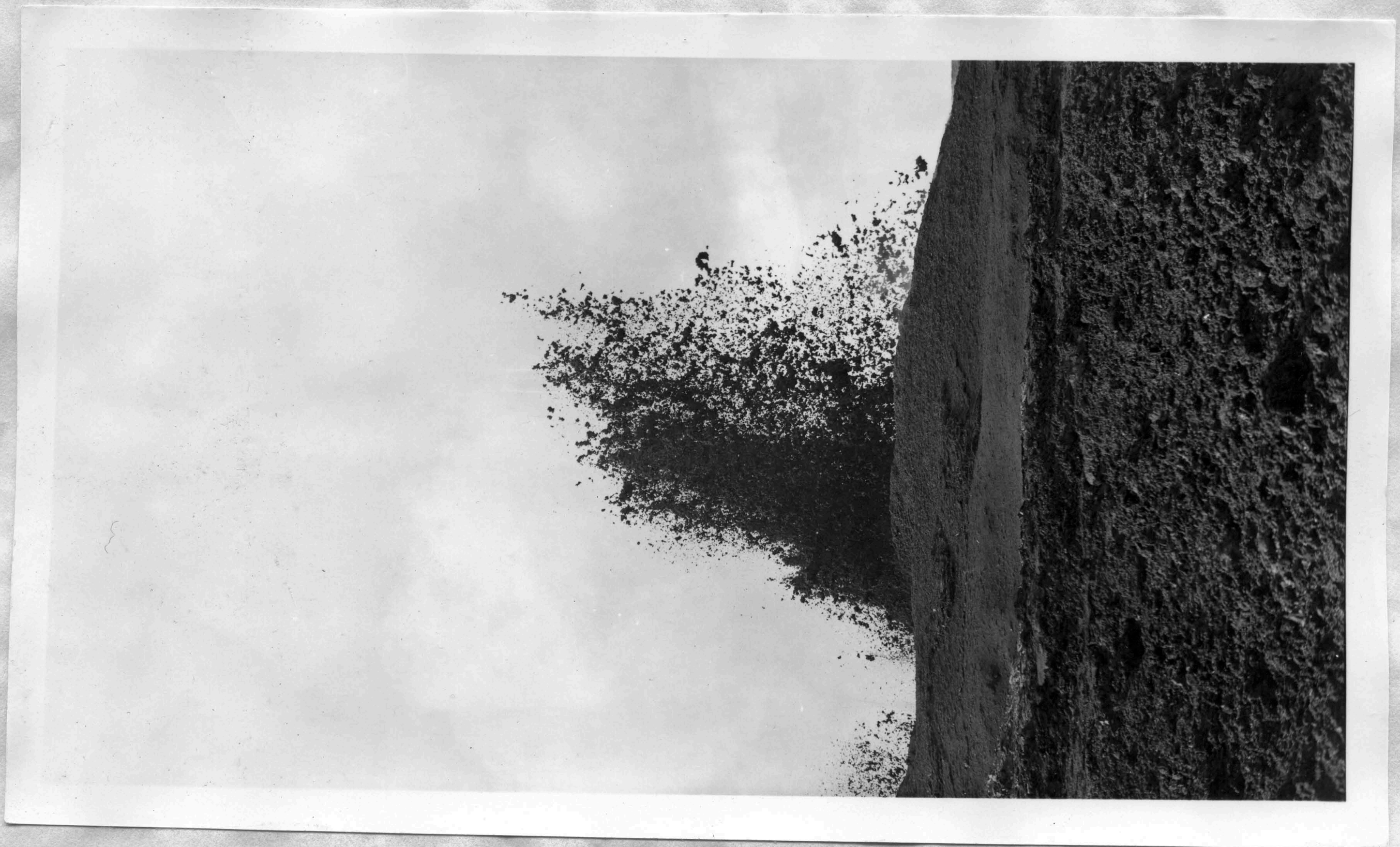
November 30 "Normal" slide at W wall on 10:36 a.m. Second small slide was at
11:09 a.m.
11:09 a.m. Slide from NW wall. Big noise with slide dust coming up thick.
10:00 a.m. Very slight fume this morning; after 11 a.m. fume started coming up.

H.Y.

Mauna Loa eruption



35-182 Front of aa flow of Mauna Loa eruption, in Humuula Saddle.
Nov. 25, 1935. HNP Photo.



35-217
Lava fountains at vents of Mauna Loa eruption. Nov. 1935
Photo: E. G. Wingate, HNP

JOURNAL

Day

Date Nov. 1935

Mauna Loa eruption



25-211 Lava fountain at vents of Mauna Loa eruption, Nov. 1935
Photo: E. G. Wingate, HNP



Mauna Loa lava flow in forest, Humuula, November 1935

Photo: E. G. Wingate

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Tuesday	Thursday	Friday	Date	December 3, 1935	" 5, "	" 10, "	" 13, "

December 3 Little or no fume visible at NW Sulfur Spot. Fume comparatively
10:20 a.m. strong from SE sulfur spot. (Strongest noticed to date).

H.H.W.

December 5 Last night's earthquake was felt at the C.C.C. Camp. Reported by
Mr. Christ.

H.Y.

10 a.m. Fume normal and continuous trickle of rocks from W, NW, and N
walls of Halemaumau.

December 10 No fume visible on Mauna Loa.

December 13 Following a slight earthquake this morning at 9:30 a.m., some
sliding was heard in Halemaumau at an undetermined point but thought to
be from the E wall.
Fume was issuing from SE sulfur spot and new sulfur was noted W of
this spot and farther out on the floor of the Pit. Also new Sulfur noted
at SE edge of floor.

H.H.W.

9:30 a.m. Double quake, felt by I.P. Jaggar at N.P., rang No. 1 annunciator
bell, pronounced record on vertical component.
Very strong with detonation dismantled pit seis. (Waesche)
Either a long preliminary or 2 quakes with very slight preliminary.
If a long prelim it is 50 to 100 miles. The period however is not
long.

10:30 a.m. Strong NE wind, M.L. profile clear, hardly any top fume seen from
this side. Parker Ranch reports Boy back from front: no motion there,
though there was slight revival yesterday. Glow still strong in rivers

T.A.J.

12:49 & 12:55 p.m. Dust from slides was seen rising from the NNW side of Hale.

E.G.W.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

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JOURNAL

Day	Date
Saturday	December 14, 1935
Thursday	" 19, "
Saturday	" 21, "
Sunday	" 22, "
Thursday	" 26, "
Friday	" 27, "
Saturday	" 28, "

December 14 A local quake with short preliminary, rang No. 1 annunciator,
2:35 p.m. registered on vertical.
8:48 p.m. Teleseism, 5 min prelim, 2400? miles, western Aleutians? moderately
large.

T.A.J.

December 19 Fume became strong again after being slight for three days past.
9:50 a.m. Rocks trickling from the E wall, the first I heard in a week.
At a point below SE wall where the long crack is located, the
sulphur seems to be getting thicker and thicker.

December 21 There was a slide sometime last night from the NE wall as there is
10 a.m. fresh dust on wall .

H.Y.

December 22 Avalanche dust NE.
12:55 p.m.

T.A.J.

December 26 Small slide on E wall.
9:58 a.m.
10:03 a.m. Big noise and rocks trickle from N wall.

December 27 Small slide from NE wall.
9:45 a.m.

December 28 Small slide on N wall.
10:23 a.m.

H.Y.