

Hawaiian Volcano Observatory Record Book 1928

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

Day		Date	January 1, 1928
	Sunday		
	Monday	"	2, "
	Tuesday	"	3, "

January 1
6 p.m.

Much avalanche tremor recorded, and occasional big avalanches today. One this a.m. strongly recorded on seismograms. Does the tremor make the avalanche or the avalanche the tremor?

Now the pit shows fresh dry debris on all the taluses, and slides are tumbling from time to time. The walls are drying off. It is very noticeable how solfataric, decomposed and red stained are the two upright zones at each end of the NE. sill. These appear surely to be old wall-cracks, and the sill marks the bottom profile of an old pit.

January 2
3:30 p.m.

Avalanches heard last night and this morning, and dust seen over pit off and on all day.

Walls now dry. Slides and single rocks falling. Much trickling of slides at north.

Wilson photographed pit this forenoon.

White stain around central cone. NW. talus overlaps lava floor of 1927 clear out to the breakdown around edge of lava pool.

The east wall of pit overhangs. There is much starting of single rocks from high walls in various places. In bright sunlight of a beautiful sunny day there is only a little steam in the usual places, and none of the cracks in lava floor appear new or unusual.

There are fresh cracks in wet earth back from the rim south and east.

T.A.J.

10:30 a.m.

Avalanches, small rock falls, SW., W., and NW. walls almost continuous from 9:45 a.m.

R.M.W.

January 3
5:30 p.m.

A few small slides, mostly N., NW., and S. No changes.

T.A.J.

Day	Wednesday	Date	January 4, 1928
	Saturday		" 7, "
	Sunday		" 8, "

January 4
11:45 a.m.

There is an almost continuous sliding of small rocks from the west, northwest, and north walls. These will start by a big rock giving away high up. The whole wall then "smokes" with rising dust. Some of these slides were next south of west boss, some next south of NW. talus, and some at west end of big sill.

The July floor is overlapped with debris all around. The S. wall is wet because it does not get the winter sun. Steaming very slight. The niche at top of NW. talus is buried by the building up of the top of the talus cone.

The only conspicuous sulphur now is in the northernmost cone of the floor.

Day clear, brilliant sun, northeasterly light wind, and smell of smoke of forest fire, making haze.

January 7
3 p.m.

Walked around to west side of pit by way of south side. At the WNW. station new cracks for 50 feet back from rim have opened since the Christmas rainstorm. Fern and grass sods freshly broken and large deep cracks 3 feet or more wide give up hot steam.

The WNW. and NW. stations are in place. The SSW. and SW. stations are not there. The west wall looks very unstable. The lava bottom still has its border toes and natural edge at base of SW. talus, but nowhere else.

Numerous small slides.

T.A.J.

1:52 p.m.

Two small falls simultaneously at different parts of pit.

January 8
2 p.m.

Nothing unusual at pit. One small slide NW. side, one N. side; sound of small trickle on E. side almost continuous, probably due to sun drying of wall.

R.M.W.

JOURNAL

Day	Monday	Date	January 9, 1928
	Tuesday		" 10, "

(1)

January 9

10:30 a.m.

At pit in a.m. Made surveys to connect "Tourist" for elevation and position; used level and transit.

Avalanching frequent over NW. talus. Saw one at about 10:30 to 10:35 a.m.; one on N. rim, others over NW. 10:37, 10:50, 10:59, 11:13. Saw a large one when we got home at 12:58 p.m.--lots of dust. Working of the walls almost continuous. NW. side most active.

R.M.W.

1 p.m.

Big slides from NW. corner of pit at 1 p.m. Dust there often all day.

Wilson measures relation of SE. station B.M. to "Spit." Finds it 0.4 ft. down in 8 months. Hodges finds E. cracks still opening.

Yasunaka and Tahara get compressor truck and remove it from crater.

Between 12 and 1:30 p.m. Yasunaka reports 6 big avalanches NW.

T.A.J.

10-12:30
forenoon

Nearly continuous sliding from N. and NW. walls. The slides were mostly small, but occasional large ones sent up quantities of dust.

Measurements taken on this date of the long tangential crack which parallels the east rim show progressive differences up to nearly 5 inches, over the measurements of December 29. The greatest widening is taking place where the crack joins the pit wall.

R.B.H.

January 10
3:45-5 p.m.

Visited pit. One avalanche rather large about 3:40 p.m., just as we were leaving there were two about 2 minutes apart--say, 5 and 5:02 p.m.

R.M.W.

PHOTOGRAPH RECORD

Day Tuesday

Date January 10, 1928

time	sta	subject	no	pl	scr	stop	ex	cam
9:40 a.m.				Panch		f8		6 $\frac{1}{2}$ x 8 $\frac{1}{2}$ R.M.W.

Day	Tuesday	Date	January 10, 1928
	Wednesday		" 11, "

January 10
4:30-5 p.m.

There was a series of heavy avalanches at the northwest, and some sliding on all sides of the pit. The WNW. wall was clearly undermined and falling just under the heavy steam and opening cracks seen on the WNW. rim at the WNW. flag on January 7.

A large wet place in the high wall was over wet new fallen fragments below. There were fresh dry fragments on the SSW. talus, and much new material on the N. and NE. taluses.

Avalanches had been heard and the dust seen all day.

January 11
12:26 a.m.
1 a.m.

There was a prolonged avalanche roar, and on the seismograms a big tremor. Just at this time red glow appeared over Halemaumau.

When the pit was reached about 1 a.m., there were three glowing areas on the July lava floor of 1927; a long curved western band, a small central pudding, and a smaller fiery pot at the site of the north floor cone.

It was evident that new lava had spouted up, and moreover there was in the moonlight a light colored area over the whole northwest floor area to the south of central cone and beyond, evidently the dust stain of a big avalanche, the avalanche of 12:26 a.m.

There had been some sort of bright incandescence at the beginning, making a moderate rosy glow over the pit, but this entirely disappeared in 20 minutes. At 1 a.m., the glowing areas were the usual filigree of cooling flows, with a hint of blue fume at the northern cone vent, but without observed motion. The wet spot in the wall was extended up to the top as the scar of the recent avalanche. There was steam on the face of the wall next to the north. There was no hissing or fountaining anywhere. Sliding continued from all sides, particularly northwest.

T.A.J.

12:50 a.m.

Called by T.A.J.; reached pit about 1:25 a.m. Returned to Observatory at 3:20 a.m. The fire in the pit didn't amount to much. No flow visible. The 25 or 30 people that had assembled soon had enough of the sight and came away.

7 a.m.

To Uwekahuna. Old record off 7:05 a.m., new on at 7:09. Found one pen stuck, and so got only one component recorded of night's disturbances.

8:10 a.m.

At pit. Took photograph. Big avalanche from NW. wall. All of NW. bay of lake is covered. New steam coming from cone #3. Weight of avalanche debris on July, 1927, floor squeezed up remnant liquid lava. Sketch:

R.M.W.

January 11
(Continued)

Sketch by R.M.W. showing area of squeezed up lava:

9 a.m. to
12 noon.

After 9 a.m. the writer spent the forenoon walking around the pit by south and west.

The main new flow was semi-pahoehoe or "sharkskin" lava in a crescent around the south side of the northwest pool of July, 1927. It lay just outside of the sunken crust of that circular pool, which had been surrounded by a raised bank separated by cracks from the subsided inner portion. The new lava had come up these cracks in three places, the flows merging outside of the bank in the crescent described. The crescent was about 500 feet long. At its northeast end, near the center of the pit, was a small ragged lava patch which had flowed from a similar source eastward.

All of this appeared to have been occasioned by the landslip of the northwest talus conoid. This landslip had ridden over and weighted down the whole of the northwest crusted pool, breaking up the crust, as shown about the edges, and apparently discovering live lava below, which was squeezed up and out from the border cracks. Apparently this "lava floor," seemingly dead since last July, was really a stagnant crusted lava puddle still liquid below, in its 70 feet, more or less, of depth.

The northwest floor area was all covered with lobate heaps of red rock fragments and boulders, the lobes convex to the southeast. The northwest talus was completely stripped, revealing a rock slope at a flat angle below. The landslip of the talus cone (as on Nov. 28, 1927), had been precipitated by an immense avalanche from the edge of the pit NNW., carrying away the NNW. flag, and making a new deep notch in the pit edge where the opening cracks had predicted collapse.

The north cone seen glowing had merely sent up a little trickle of black lava, stimulated by the same landslide pressure on the crust as at the other places. All of this history checked with the observed facts of the last week, to the effect that subsidence, southwest tilt, opening of rim cracks, and many slides, pointed to a collapse rather than a rising. The collapse revealed and squeezed up a little remnant lava. There was no harmonic tremor and no hissing was heard, both of these being characters of gas-charged lava when it is vigorously tumescing and ready to make fountains.

During the day the slides seemed to subside. No incandescence could be seen in daylight.

T.A.J.

PHOTOGRAPH RECORD

Day **Wednesday** Date **January 11, 1928**

time	sta	subject	no	pl	scr	stop	ex	cam
8:10 a.m.		New lava, still in shade, but sunny above		Panch K2 filter	K2	F 64	25	6½ x 8½ R.M.W.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Date
Thursday	January 12, 1928
Saturday	" 14, "
Wednesday	" 18, "
Tuesday	" 24, "
Thursday	" 26, "
Saturday	" 28, "

January 12
9 a.m.

Strong NE. wind. Thick dust over S. crater floor and Kau Desert. Thin dust fills the pit.

R.B.H.

January 14
3 p.m.

Nothing new. Walls wet. Avalanches have stopped as though it were the instability of the west pool and NW. talus that occasioned all the uneasiness of Jan. 1 and thereabouts.

January 18
11:45 a.m.
1:10 p.m.

Nothing new. Bright weather with strong NE. wind. No avalanches.

Some dust arose from a slide at NW. corner.

January 24
5 p.m.

Nothing whatever new could be detected in bottom of Halemaumau. There was a little dust rising from NW. rim about noon.

T.A.J.

January 26
1 p.m.

Dust from slide N.

R.B.H.

January 28
3:15 p.m.

Nothing new at pit. A little sliding today. Walls dry. Weather fair. Sulphur E. and SE.

T.A.J.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

PHOTOGRAPH RECORD

Day Thursday

Date January 12, 1928

time	sta	subject	no	pl	scr	stop	ex	cam
12 noon	Obs. pier	Dust cloud in crater (Sun)		Panch	G filt.	f 13	4	6½ x 8½
								XX

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Date	February 8, 1928
Wednesday		
Tuesday		" 13, "
Friday		" 17, "
Saturday		" 18, "

February 8

3 p.m.

5 p.m.

Light dust rose NE.

A rock fell N. Otherwise all quiet at Halemaumau. Very little steam, but the wet steaming places are very conspicuous on the talus slopes.

Some fresh scars NE., also E. and N.

Crack at SE. trail crossing has widened.

February 13

11:30 a.m.

Halemaumau pit presents the quiet appearance prevalent the last few weeks. New fine material on the taluses denote light slides NE., N., NW., and SW. Avalanche dust on the E. was reported observed at 9:30 a.m. yesterday.

Crack measurements show pronounced widening from 14-ton boulder to pit rim.

R.B.H.

February 17

Light avalanche dust cloud NE. 8:30 a.m., again NW. at 10:15 a.m.

H.Y.

February 18

1:30 p.m.

Avalanche dust clouds at intervals all morning.
Big cloud N.

R.B.H.

3 p.m.

Considerable avalanching during the forenoon.

Went to pit. Saw one moderate avalanche on the way, but there were none after arrival at the pit. Stayed till about 4:30 p.m., but saw no additional activity. Scars show that most of the slides are NW. Bright sunny day.

February 19

Noon

Went to pit about noon, thinking there might be avalanching, but there was none observed during the day. Clouded up, and there was an electrical storm of some size shortly after noon down towards Pahala and over the lower Kau Desert. The cloudiness seems to have checked the avalanching.

R.M.W.

Day	Monday	Date	February 20, 1928
	Wednesday		" 22, "

February 20

9 a.m.

Avalanches were noted at 8 and 8:30 a.m. Made preparations to go to the pit, and just before leaving H.V.O. saw large avalanche, apparently in three parts, the three slides all occurring within about 5 minutes. The dust rose high, and against the clear sky was visible from Hilo. Capt. Block, Commanding Officer at Kilauea Military Camp, radioed to Honolulu headquarters that pit was in action, but later corrected himself. Other people, in Hilo and elsewhere, started the rumor that the pit was active.

9:45 a.m.

Arrived at pit, and stayed till noon. Took a few pictures, but saw only a few minor avalanches, notably at 10:30, 10:53, 11:10, and 11:07 a.m. Got a picture of one. The big 9 a.m. slide coated the NW. bay of the floor with red dust, and the floor of the crater, on the Uwekahuna side, was also coated with reddish dust that fell from the high dust clouds. Fine clear day.

R.M.W.

8 a.m.

Large dust cloud N. corner. Hung in air at least 20 minutes. Other avalanche clouds followed, one just before 9 a.m. reaching a tremendous height, visible in Hilo, according to a phone call from the Tribune-Herald. It started rumors of an eruption as the dust was thought to be smoke.

9:30-11 a.m.

At pit with R.M.W. watching for further avalanches and ready with cameras, but only a few smaller avalanches and slides occurred, chiefly at N. and NW.

Other dust clouds seen p.m. Last night numerous seismic tremors may mean many avalanches.

Crater floor has much red dust NW. of pit and on NW. pit floor.

R.B.H.

February 22

Big roar of an avalanche 3 a.m. Slides NE. at 8:30 a.m.

T.A.J. and R.B.H.

2 p.m.

The places that the big recent avalanches have carried away are the N. and NE. corners up to the top and especially the west end of the big sill and the rock adjacent to it. The taluses below these two places are fresh.

There is little motion today. The east and southeast sulphur spots are yellow. The flat surface that made a bench of the west end of the big NE. sill is no longer there.

T.A.J.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

JOURNAL

Hawaiian Volcano Observatory

	Saturday	February 25, 1928
Day	Sunday	February 26, 1928
	Monday	" 27, "
	Wednesday	" 29, "

February 25
2 p.m.

Nothing new at pit. No motion seen in walls. The two east sulphur spots are yellow. Northeast wind.

T.A.J.

February 26
11:30 a.m.
to 1:15 p.m.

Took pictures at pit. Fine cloudless day till afternoon. Only saw one fall of rocks that made dust, but that was very small. Pit very quiet.

R.M.W.

2 p.m.

Earthquake at 1:50 a.m., another about 7:15 a.m. Slide at 1:40 p.m. N. corner. NW. and N. niches working. N. floor still covered with red dust. Nothing else.
Wilson photographs pit a.m.

T.A.J.

February 27

Avalanche NE. 8:20 a.m.

R.B.H.

February 29
3:15 p.m.

Nothing new. Sulphur a little brighter colored at the east. Dust is occasionally seen from small slides.

T.A.J.

PHOTOGRAPH RECORD

Day Sunday

Date February 26, 1928

time	sta	subject	no	pl	scr	stop	ex	cam
11:30 a.m. to 1:15 p.m.		Pit						R.M.W

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Date	March 4, 1928
Sunday		
Tuesday	" 6,	"
Wednesday	" 7,	"
Saturday	" 10,	"
Tuesday	" 13,	"
Wednesday	" 14,	"

March 4
3-3:20 p.m. At pit with R.M.W. All quiet save a slide in lower NE. corner at 3:10 p.m., and noise of rocks dropped by people standing on N. rim. No changes.

March 6
11:25 a.m. Thin dust from a slide seen drifting away from N. corner. Again at noon.

R.B.H.

March 7
12 noon No change in pit. Rocks trickling on N. wall, and small slide S. at 12:20 p.m. Took some experimental photographs.

T.A.J.

March 10
11:20 a.m. Dust from slides NE. seen. Other dust observed from H.V.O. at 3 p.m.
4:25-5 p.m. Several slides seen in the pit, all from midwalls NE. and NW., sometimes occurring simultaneously and filling the pit with thin dust.

March 13
1:50 p.m. Avalanches sent up dust off and on during the forenoon, concentrating at the northeast corner.
Long avalanche roar heard from the Observatory, and a thick cloud of dust rose northeast, finally obscuring the pit and gradually thinning out after more than a half hour.
3 p.m. More dust NE.

R.B.H.

March 14
Thin dust a.m. occasionally, and a new scar is on SE. wall high up.

T.A.J.

PHOTOGRAPH RECORD

Day Wednesday

Date March 7, 1928

time	sta	subject	no	pl	scr	stop	ex	cam
12 noon		Pit						
		SW rift	1	filmpack		f11	1/25	P
		SW talus	2	"		f11	1/40	"
		NW & N taluses in shadow	3	"		f8	1/25	"
		NE corner	4	"		f11	1/25	"

T.A.J.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Sunday	Date	March 18, 1928
	Wednesday		" 21, "
	Saturday		" 24, "
	Wednesday		" 28, "

March 18
4:15 p.m.

No slides occurring; all is quiet. S. cone now steams more than center one.

A lot more material has fallen on SE. floor area since last visit. SE. sulphur spot is entirely obliterated. E. sulphur spot is dim.

Large scars are new on NE. wall, and NNE. wall is streaked from stripping.

14-ton boulder is much nearer rim because rim has receded by cave-ins. The NE. rim has so changed that the "bay" there is not so noticeable.

Stones stirred a little N.

March 21
9:45 a.m.

All very quiet and peaceful at Halemaumau. No stones falling and little steaming. Taluses very dry and no rain all the week. No slides either.

March 24
9-9:30 a.m.

Pit is quiet. A few stones stirred NW. and NE. and SW. The latter plainly visible and making dust. Steaming is as usual.

Measured cracks.

March 28
8:30 a.m.

The pit seems quiet, but a little more steam escapes because of recent light rains. One floor vent, on the site of the twin fountains of last July, emits very dense, flocculent vapor.

8:40 a.m.

A small slide heard at the N.

Two other floor vents, at the foot of N. talus, one of them being site of a July fountain, also send out steam.

2 p.m.

Dust from an avalanche N. seen from H.V.O.

R.B.H.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Wednesday	Date	April 4, 1928
	Friday		" 6, "
	Saturday		" 7, "
	Sunday		" 8, "
	Tuesday		" 10, "

April 4
9 a.m.

SW. wall has been avalanching, as shown by its dusty surface extending top to bottom. Looks like rim blocks had been tumbling in. Stones fell there just now.

SSW. talus nearly overcaps S. cone. Very little steam. Slides have also occurred NE. and E.--small scars there.

April 6
8:55 a.m.

S. and center cones steaming profusely. Other vents also quite active. SW. wall is still a bit uneasy---one fall heard.

April 7
7:06 a.m.

12:15 p.m.

Heavy avalanche sent up a big dust cloud and made a strong seismograph record. The seismogram shows a well defined earthquake a few minutes later. Can they have any possible relationship?

Avalanche N. or NW. Others NE. at 1:30 p.m.

R.B.H.

7:07 a.m.
7:12 a.m.

7:14 a.m.

Roar from pit lasting at least a minute.
Dust cloud rising (thin) and rolling along crater floor to the N. and up on ledge of Kilauea.

Heavier dust and second roar. Shorter duration.

I.P.J.

April 8
3:15 p.m.

Slides NE. at noon.
SW. wall very dusty and may be location of avalanche yesterday a.m. Heard slides N., NW., and SW.
Center cone looks as though it had collapsed.

April 10

Whitish dust seen over N. corner at 9:25, 10:25 a.m., and 4 p.m. Possibly it was there other times.

R.B.H.

JOURNAL

Day	Wednesday	Date	April 11, 1928
	Friday		" 13, "
	Monday		" 16, "
	Wednesday		" 18, "
	Saturday		" 21, "
	Monday		" 23, "

April 11
8:50 a.m.
11:25 a.m.

A rock slide in N. corner without making dust. Walls restless N. and NW. and SW.--debris is new. Little steam. Thin gray dust NW.

April 13
10 a.m.

Pit quiet and dry. A few stones stir occasionally on N. wall, where there is a scar in the center.

Very little steam, and largest fumarole is at center of SW. talus.

Dusty slides N. corner, on sill. Heard a few rocks on far sides.

April 16
10 a.m.

Wind too strong to hear sounds in Halemaumau. Walked by S. station. New crack movements there should be watched.

April 18
10 a.m.

Halemaumau is quiet. Two cones steaming, but no sliding. No sulphur spots, but yellow stain lies at edge of E. talus. New black boulders on S. talus.

April 21
9:20 a.m.

Streak from slide at S. corner extending midwall and full length of talus.

Nothing new at cracks by S. station.

10 a.m.

Small slide N. corner. White salts prominent SW. where slides occurred a few weeks ago.

Measured cracks.

April 23
9:45 a.m.

Can see dusty path made by slides from W. rim. White rocks lie on S. and SSW. taluses.

The red N. wall is becoming salt coated.

All quiet, little steam; only one or two rocks fell.

R.B.H.

JOURNAL

Day	Wednesday	Date	April 25, 1928
	Saturday		" 28, "

April 25
8:50 a.m.

Noisy avalanche S. wall, low. Another just after. By the looks of fresh debris, there have been several slides. Rocks also rolled N. and other places.

S. slides come from a broken ledge midwall. No new surface cracking at S. rim.

April 28
10:30 a.m.

Pit is quiet. No falls. For some time the SE. sulphur patch has had a suggestion of returning, which now seems quite definite in a small yellow patch.

Slide at N. corner. N. wall has been sliding--white coated debris on talus.

R.B.H.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Wednesday	Date	May 2, 1928
	Saturday		" 5, "
	Sunday		" 6, "
	Monday		" 7, "
	Wednesday		" 9, "
	Friday		" 11, "

May 2
8:45 a.m.

SE. sulphur patch not distinguishable today. A new scar center of N. wall. White salts there before are now gone.

After two wet days steam has increased, particularly at a wet patch on the NNW. wall. A few rocks fell at N. corner.

May 5
9:50 a.m.

Very windy. N. wall has had more slides. Wet spot NNW. still persists. Dust N. and NW.

May 6
4:20 p.m.

Dust seen N. from a slide.

May 7
9 a.m.

Measured cracks.

Pit quiet. Steam at S. and center cones and N. cone vent. Wilson said twin cone vent steamed yesterday. Steaming places are: Below edge E. rim. Back of N., NW., and W. rims. Middle NNW. wall. Middle and S. top of SW. talus. Middle NNE. talus. Three places SE. talus. Below E. end NE. sill. Two floor fumaroles foot of N. talus. Both wall edges of NW. talus.

A few minute rock trickles heard.

May 9
9:50 a.m.

Dark red surface of N. wall indicates peeling. All the former white salts gone. Slow trickle there now.

Cones are steaming.

Note that big SW. talus is the only one which has not changed in the past year or more. The edge of July (1927) lava floor here is the only place not overlapped by debris.

May 11
6:13 p.m.

Avalanche N. made seismograph tremor.

R.B.H.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Saturday	Date	May 12, 1928
	Monday		" 14, "
	Tuesday		" 15, "
	Wednesday		" 16, "
	Saturday		" 19, "
	Monday		" 21, "

May 12
8:50 a.m.

Stones trickled W.
Pit is dark from rains--SW. wind yesterday. Steam vents all a trifle more active.

A streak of gray debris on red N. talus must be the one of 6:13 p.m. yesterday.

11:50 a.m.

Avalanche dust N.

May 14
12:15 p.m.

Slide at west corner. W. wall is dusty.

Not much steam.

Heard rocks N. and SW.

May 15
3 p.m.

Avalanche dust over NW. corner.

May 16
8:30 a.m.

New debris top of NW. talus. Stones heard NW. and W. Steaming places on taluses and walls are conspicuous.

May 19
10 to
10:20 a.m.

Pit is quiet, and no sounds heard. Yellow stain is discernible at site of SE. sulphur spot. Alec reports slide S. corner two days ago.

Lots of sailors present from U. S. fleet.

May 21
9:45 to
11 a.m.

Circuit of pit made.

Odors of spicy sulphur N. Much change in rim contour from slides. Slide upper N. corner at 10:55 a.m.

SE. sulphur patch growing.

R.B.H.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day	Date
Tuesday	May 22, 1928
Wednesday	" 23, "
Friday	" 25, "
Saturday	" 26, "
Monday	" 28, "
Wednesday	" 30, "

May 22
 9:05 a.m. Strong wind at H.V.O.
 11:35 a.m. Thin dust in pit.
 Large slide NE. corner.
 R.M.W. reports avalanches p.m., one N.

May 23
 8:40 a.m. Mr. Flannery, tending refreshment booth near Halemaumau, reports slides at S. making noise and dust yesterday about 9 a.m. Slide now SW.
 9:10 a.m. Rocks fell NW.
 Cracks were measured, but little difference found over results of May 7.
 11:15 a.m. Dust from slide NW.
 Several avalanches N. or NW. during p.m. One large one W., with much dust, made seismograph record at 4:48 p.m. Large one N. reported about 4 p.m.

May 25
 7:30 a.m. S. Kilauea floor very dusty, and desert so thick with dust clouds that the whole horizon is hidden view. Very strong NE. wind.

May 26
 11:40 a.m. Rainy and windy--no sliding. N. wall streaked from center down, and talus has new red dirt.
 Slides at S. corner have again obliterated SE. sulphur patch.

May 28
 9:15 a.m. Halemaumau quiet. S. cone steams.

May 30
 9 a.m. Quiet and sunny. Very little steam; most conspicuous being at center of SW. talus.
 Rumor of extraordinary crack widening at 14-ton boulder, but measurements showed little or no difference in a week.

R.B.H.

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	Saturday		" 2, "
	Sunday		" 3, "
	Wednesday		" 6, "
	Saturday		" 9, "
	Monday		" 11, "

June 1
10 a.m.

SE. sulphur patch has reappeared.
Quiet and sunny day. Very little steam.

June 2
1:45 p.m.
2:15-2:30 p.m.

Dust cloud at 11:30 a.m. reported by I.P.J.
Avalanche dust cloud rose in a large compact cloud.
Another dust cloud; others during the afternoon.

June 3
2:45 p.m.

Slide streaks N. and E. New red debris covers N. talus.
Raining, and red wall colors are conspicuous.

June 5
3:45 p.m.

Slides at noon NW.
Slides at the NE.

June 6
11:30 a.m.

No changes to be seen in pit. Birds chirping loudly
somewhere in upper E. wall.
Very slight odor of free sulphur SE.

June 9
10 a.m.

Strong NE. wind. Dust in desert.
A small slide occurred low down S. wall.
Almost no steaming after a long dry spell.
Avalanche dust reported seen yesterday at 11:30 a.m.

June 11
10 a.m.

Can see nothing new. Numerous rusty spots on floor indicate hot areas.
One light trickle of rocks S.
Steaming is extremely slight.

R.M.W.

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	Sunday		" 17, "
	Monday		" 18, "
	Wednesday		" 20, "
	Saturday		" 23, "
	Monday		" 25, "
	Wednesday		" 27, "

June 13
9:40 a.m.

All quiet. Only a little steam--NW., NNE., S., and SW. taluses, and S. cone.

June 16
8:45 a.m.

Halemaumau was never more quiet. One or two very light slips of rocks heard. Both cones and usual talus vents steam thinly.

R.I. Bladwin, Park Ranger, reports formation of a few new sulphur crystals in crack of 1923 flow makai Chain of Craters Road.

June 17
3 p.m.

Dust NE. reported at 12:30 p.m.
Thin dust rose NE.

June 18
9:30 a.m.

Green-yellow stain plain at floor edge of SE. talus, with a little steam. The solfatara on E. talus edge does not change. Cracks were measured. A very slight widening has taken place at 14-ton boulder.

June 20
8:50 a.m.

Slide on W. wall made noise and dust. N. wall has peeled pinkish; thin dust seen.
Very high wind makes observations difficult.

June 23
8:50 a.m.

No changes in pit. N. wall has peeled slightly.

June 25
9:30 a.m.
9:45 a.m.

With R.M.W. Nothing new. A little slide NE. Greenish stain over SW. tunnels appears new. A slide of rocks on SE. talus.

June 27
9:20 a.m.

N. and NE. walls of taluses dark from recent rains. Steam vents are all slightly more active.

R.B.H.

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Sunday		
Wednesday		" 4, "
Saturday		" 7, "
Monday		" 9, "
Wednesday		" 11, "
Monday		" 16, "
Wednesday		" 18, "

July 1
4:30 p.m.

W. R.M.W. No sounds in pit and no changes. Rains have deepened wall colorings. Late afternoon light causes poor visibility, but a scar on N. wall looks fresh.

R.B.H.

July 4
11 a.m.

Streak from a slide on N wall of Makaopuhi. Baldwin reports this looked very fresh yesterday.

R.B.H.

July 7
10 a.m.

Considerable steam rising from Halemaumau following a night and morning of rain.

R.B.H.

July 9
9:30 a.m.
9:37 a.m.

Gray debris lies between NNE & NE talus.

Rocks N--soldiers

R.B.H.

July 11
10 a.m.

No conspicuous changes. N wall very red, and one bright scar shows. Talus also red. A reddish scar shows on lower edge of NE sill between N and NNE taluses.

R.B.H.

July 16
9:15-10:40 a.m.

At pit w. RMW taking pictures and some triangulation preparatory to mapping Halemaumau. Quiet all the while with only one or two rockfalls; one at the SE center wall where there is a large scar.

R.B.H.

July 18
9:25 a.m.

Pit is quiet. Not much white salts except on two areas on S. wall. There is also a lack of steaming. One fall of rocks heard SW. about 9:30

R.B.H.

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Wednesday	"	25, "
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Friday	"	27, "
Monday	"	30, "
Tuesday	"	31, "

July 19
7-7:21 a.m. Avalanches from S. corner making dust were noted at 7:00
and 7:21 a.m.

R.M.W.

July 20
4 p.m. Avalanche N.E. making dust, reported by H.Y.

R.B.H.

July 21
9:30 a.m. No decisive changes. Two dusty scars on NE wall.

R.B.H.

July 25
9:25-9:45 a.m. High wind and no sounds distinguishable. N wall is quite
red from wetting.

R.B.H.

July 26
afternoon Steam jets quite active all over crater floor on this
cloudy afternoon.

R.B.H.

July 27
9 a.m. Steam very dense from Halemaumau in heavy mist.

R.B.H.

July 30
10 a.m. Measured cracks. Some slight differences found. Number
14 point has unusual amount of steam.
Pit shows no changes. Wind is too strong to hear sounds.

R.B.H.

July 31
3:05 p.m. Avalanche dust NW. RMW says men are dropping rocks.
(field glasses)

R.B.H.

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	Saturday		" 4, "
	Sunday		" 5, "
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	Wednesday		" 8, "
	Thursday		" 9, "
	Saturday		" 11, "

August 1
9:20 a.m.

No changes except N wall has fresh surfacings. No sounds except one or two faint noises of stones sliding.

Saw fresh cracks by S station noticed by Wilson.

There are still numerous patches of the buff colored 1924 ash on S crater floor.

R. H.

August 3
6:53 p.m.

Much dust from an avalanche, filling pit orifice ()

R. H.

August 4
10 a.m.

A very few light slides occasionally. No noteworthy changes, however.

R. H.

August 5
11 a.m.

No changes seen.

R.H.

August 6
9:40 a.m.
12:30 p.m.

Can see nothing new.

Dust NE from an avalanche.

R.H.

August 8
10 a.m.
10:15 a.m.
2:44 p.m.

One or two sliding at N corner.

Noisy avalanche N making dust.

Avalanche on NE wall. Visible for 3 minutes.

R.H.

R.I.B.

August 9
2:40 p.m.

Much dust N.

R.H.

August 11
10 a.m.
3:15 p.m.

New debris lies atop S talus. Almost no steam activity.

Thin dust N corner.

R.H.

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Day	Date
Monday	August 13, 1928
Wednesday	" 15, "
Saturday	" 18, "

August 13
9:50 a.m.

All still; no changes. Buried boards of a destroyed structure still in place at SE rim.

R.H.

August 15
9:15 a.m.
1:40 p.m.

A small slide fell from NE rim. No changes noted.

Thin dust rose N.

R.H.

August 18
9:50 a.m.

A few rocks fell N. That wall and talus have the appearance of having had many small slides.

Another light fall of stones NE.

Platform and two tents set up at pit edge for kahuna ceremonies tonight in connection with Cook Sesquicentennial.

10 a.m.

Two large boulders lay balanced on north end of the big sill, close together. Remarkable that they stay in such a precarious position.

Another stony slide N.

9:30-11 p.m.

Pageant to Pele. Much avalanche all the while.

Pageant Notes

Sizable avalanche 9 p.m. Douglas reports one about 10 minutes previous.

Pageant starts 9:30 with appearance of troupe of about 25 people in costumes of yellow and black. Men carry bamboo torches.

1. Song of the Islands, dance by 7 girls, each girl in turn presenting a lei offering to Madam Pele.

2. Bamboo chant by girls seated on platform.

3. Descriptive dance by Baby Beamer and little niece.

4. Hula by Mrs. Hall.

5. Hawaiian song (Kuhio Bay?) by troupe of five, with string instruments. Encore. (Movies and stills taken by use of brilliant flares.)

6. Pele dance, by Baby Beamer.

(There has been constant avalanching, and dust fills the air. Rumbling at times drowns out the exercises, and causes much nervousness among spectators.)

7. Chant with gourds. (Loud avalanching)

8. Song by troupe of five. (Ditto above) Yodle encore.

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Day	Date
Saturday	August 18, 1928
Sunday	" 19, "
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9. Dance by Baby Beamer, gourd accompaniment. (Avalanche)
10. Song by group, gourd accompaniment. (Avalanche)
11. Hula dance by four chanting. (Big avalanche)
12. Sketch by two purported to be defying Pele, in Hawaiian. (Avalanche)
13. Ensemble chorus.

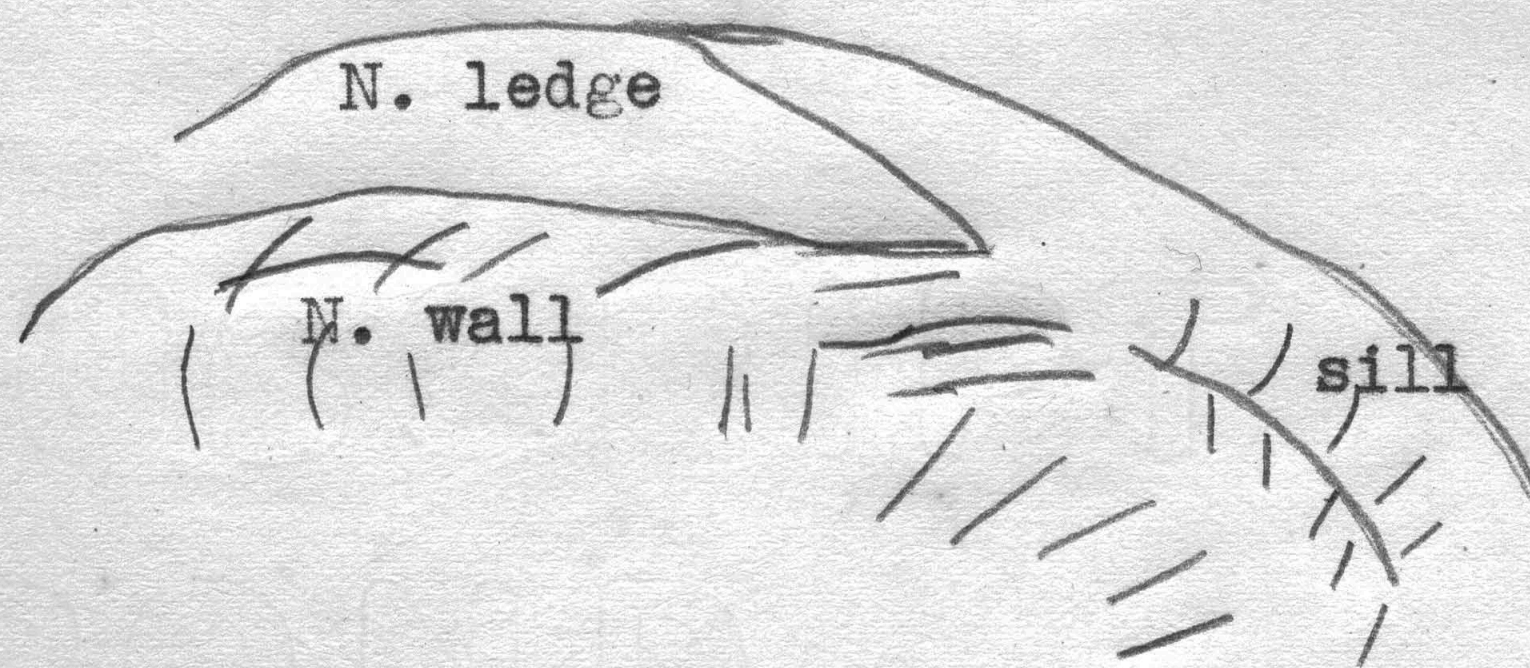
(Earthquake at 10:47 causes extra loud avalanching, doing much to hurry spectators away.)

Mr. Gandy reports small group of Hawaiians praying by the side of Halemaumau about 8 p.m. August 21, entreating Pele to come back. Party consisted of a woman claiming to be fourth descendant of Pele; and son and daughter. Newspapermen also there.

R. H.

August 19
8:50 a.m.
9:20 a.m.
12 noon

Big cloud of avalanche dust. Report of others occurring about 6:30.
b Dust is continuous.
At pit. Air very dusty. N wall working steadily and is coated gray (usually red) from high slides.
Walked to NNE rim. The gray debris is from N rim. Red debris slides down niche at end of sill. Appears as though the ledge N is the origin of all present activity. Dust everywhere.



R.H.

August 20
8 a.m.

Red dust rising N and drifting E.

R.H.

10 a.m.

At pit at 10 a.m. Noted nothing unusual about condition on floor of pit except heavy coatings of dust on floor.
During avalanche at 10:29:42 earth trembled and dirt sifted into crack 10 ft. from rim. Later dirt sifted into crack when there was no avalanche. Other fresh cracks were noted 75 ft. from the rim.
Two avalanches of magnitude noted. One at 10:29:42 and one at 11:10:45. Other trickling and minor slides noted almost constantly.

R.I.B.

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	Thursday	"	23, "
	Friday	"	24, "
	Wednesday	"	29, "
	Thursday	"	30, "
	Friday	"	31, "

August 21
9:50 a.m.

All quiet. One small slide N.

On N side all of cracked area has gone in except a small section which appears ready to fall. Many new cracks. Some emitting steam; others are not steaming, but the rocks are very hot--first noticed heat through canvas shoes.

R.H.

August 23
3:40 p.m.

Salmon colored dust rising N rather steadily. Dust from earlier slides also noted in a.m.

R.H.

August 24
10:15 a.m.
11 a.m.
12:10 p.m. ~~2~~
4 p.m.

Very large red dust cloud from N wall.

At pit. A few slides N, at times more or less constant. More avalanche dust.

Dust at intervals shows N wall is quite restless.

R.H.

August 29
9-9:15 a.m.

Pit quiet and very dusty. One or two slides heard at N wall. Streak of a boulder seen down S. talus. Hardly any steam. Most conspicuous SSE.

A little gray dust N seen yesterday a.m. from H.V.O.

R.H.

August 30
1:10 p.m.
3:30 p.m.

Thin dust fills NW half of pit. Some seen this morning.

~~Thin dust fills NW half of pit. Some seen this morning.~~

Thin dust NW seen at various times this afternoon and later.

R.H.

August 31
9:45 a.m.
10:15 a.m.
11:07 a.m.
4:20 p.m.
5:45 p.m.

Pit quiet. Much new debris streaks N talus.

One slide N making gray dust just as seen yesterday. Noticed chlorine odor NNE, N rim cracks may have widened but am not sure.

Slide N; 11:12 another.

Dust from avalanche. Another cloud seen, previously.

Avalanche dust seen by Mrs. Catton.

R.H.

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Day	Wednesday	Date	September 5, 1928
	Thursday	"	6, "
	Monday	"	10, "
	Wednesday	"	12, "
	Thursday	"	13, "
	Saturday	"	15, "

September 5
9:25 a.m.

New debris shows on N talus in contrast to dust coatings elsewhere. A small rockfall N. just now. Scattered new salt coatings on N. wall. No other changes.

Yasunaka and Tai On are preparing site for pit seismographs

R.H.

September 6
8:30 a.m.

Avalanche dust NW.

R.H.

September 10
10:15 a.m.

Measured E cracks. N wall quiet. Red surface is clear of dust and salts, probably washed by recent rains. NNE wall has prominent rills not heretofore noticed; appear to be effect of recent erosion.

10:48 a.m.

One small slide broke niche just over sill and above N talus peak.

R.H.

September 12
10:10 a.m.

Light rain and moderate NE wind.
No changes seen. Rainbow across pit bottom.

R.H.

September 13
4:30 p.m.

Dust rising from N corner of pit.

R.H.

September 15
10 a.m.

There are fresh coatings of white salts on the pit walls, the most prominent being on the reddish N wall. N talus is speckled with new white and red debris.

Yellow stained areas of pit floor are again showing, as dust coatings become washed away.

With R.M. Wilson inspected new seismograph installation near pit. Found building in need of ventilation because of moisture.

R.H.

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Day	Date
Monday	September 17, 1928
Wednesday	" 19, "
Wednesday	" 26, "

September 17

9:45 a.m.

9:55 a.m.

10:05 a.m.

12:45 p.m.

All very quiet and still at Halemaumau. N wall still has very conspicuous coatings of white salts. Peculiar whirring sound accompanying a very light fall SW. Must be inside tunnels. A light fall of stones N. Avalanche made considerable roar. (RMW at pit seis. station)

R.H.

September 19

9:50 a.m.

A light steady rain at Halemaumau, and steam vents are all mildly active. White salts of N wall have gone. Dry cracks on the floor must be very hot. Red and gray wall colorings are very conspicuous.

R.H.

September 26

10:30 a.m.

Tai On reports no changes in Halemaumau and conditions all very quiet.

R.H.

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Day	Date
Monday	October 1, 1928
Tuesday	" 2, "
Wednesday	" 3, "
Thursday	" 4, "
Saturday	" 6, "

October 1
9:50-10:15 a.m. R.M.W. reports pit very quiet. Bright sun, light SW. wind. Pit looks dusty. SW cone steams steadily but slight, and an occasional wisp comes from center cone. Mid-streak of SW talus steams steadily and stronger than seems usual for dry weather.

R.H.

October 2
9:45-10:15 a.m. After hard S. rain, pit is washed clean of dust, so that two or three loud rock falls could not be accurately located by looking for disturbed dust. Walls are of brilliant red color, and floor is black. There is very noticeable steaming at the sites of all 4 July 1927 fountain vents.

R.M.W.

October 3
9-9:45 a.m. Pit quiet, though two small rock falls were heard, but not seen. Steaming still evident at the sites of the 4 cones; particularly flocculent at the small bore hole in the pit floor marking the site of the small twin fountain of July 7, 1927.

R.M.W.

October 4
With Mr. Worrall Wilson of Seattle.
No slides in pit. Slightly increased steaming in South talus. No changes noticed. There is dust from August avalanches on the pit floor. The recent tremors shown by the pit seismograph may coincide with occasional avalanches. It is important to check this up.

T.A.J.

October 6
11 a.m. 2nd Hot area on Mauna Iki. Temperatures with 550° C. Thermometer with nitrogen inside.
1st vent 260° C.
2nd vent 275° C. (527° F.) where a stick caught fire.

~~XXXX~~

11:15 a.m. Thin gray dust from a slide rose NE.

R.H.

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Day	Date
Saturday	October 6, 1928
Sunday	" 7, "
Monday	" 8, "
Thursday	" 11, "
Saturday	" 13, "
Thursday	" 18, "

October 7
12 noon

One or two falls heard W and NW. N wall shows fresh peeling and salt coatings. N talus has new debris.
From U.O. saw bright fresh strip on SE wall.

R.H.

October 8
10:45 a.m.
12:40 p.m.

Nothing new at Halemaumau. S cone not steaming. (Tai On)
Avalanche dust N.

R.H.

October 11
8 a.m.
8:40 a.m.
4:15 p.m.

Avalanche dust NW. (H.Y. at U.O.)
Dust E or SE (thin)
Big dust NE.

R.H.

October 13
3 p.m.

Much gray dust. Concentrated NNE. Hyles says origin was N. followed a few minutes by a slide S.

R.H.

October 15
11:30 a.m.

Much steam rising after a night and forenoon of rain.

R.H.

October 18
9:35; 9:40; 9:45 a.m.
10:00 a.m.

(Hyles) Avalanches
Dust rose N rather steadily, once or twice in a straight column which would spread out.

R.H.

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Wednesday		" 24,	"
Tuesday		" 30,	"
Wednesday		" 31,	"

October 20
11:20 a.m.
2 p.m.

Thin dust fills the pit. Also various times after noon.

Fresh debris on SW., S., SE. inner slopes. Pit very dry.
Only vapor at center cone and at SE, S taluses.

R.H.

October 24
9 a.m.

Tai On reports no changes, a fresh spot on N talus, and an invisible fall of rocks W. No steaming.

R.H.

October 30
10:35 a.m.
10:40 a.m.

Thin dust rose E.

Dust continues, a little more thickly, over NE rim.

R.H.

October 31
11:35 a.m.
2 p.m.

Thin dust rises NE and spreads.

Dense steam rising from Halemaumau after a forenoon of rain.

R.H.

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Day	Date
Friday	November 2, 1928
Monday	" 5, "
Thursday	" 8, "
Wednesday	" 14, "
Monday	" 19, "

November 2

Numerous avalanches heard by T.A.J. last evening 9-10 p.m.
One big one noted by R.M.W. at 10:30 p.m.

8:30 a.m.

Yasunaka, from Uwekahuna, marked avalanche dust N. or NW.
(gray dust).

An Army officer reports a slide Wednesday at noon.

R.H.

November 5

4 p.m.

Thin dust fills pit, as a haze.

R.H.

Whole week

Earthquakes

Week ending November 7, 8 a.m. 17 of

One at 10:30 p.m. November 1 caused by a big avalanche. Felt by the dog, which jumped up and growled. Heard by residents. A registration at 2:37 a.m. the same day has the waxing and waning phase of an avalanche. Microseismic. Are strong throughout week. Now decreasing and approaching normal. Tilt moderate N.

R.H.

November 8

3:25 p.m.

Thin dust fills whole of pit.

R.H.

November 14

9:15 a.m.

Pit is quiet. Strong NE wind. N wall has gray markings over the red area.

Steaming is not unusual despite rains of the past days.

SW talus has the usual wet steam streaks, and the curved streak across its top is particularly prominent.

R.H.

November 19

10 a.m.

Tai On reports fresh red scar on NE wall and new debris below. Steaming is about the same.

R.H.

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	Wednesday		" 21, "
	Thursday		" 22, "
	Saturday		" 24, "
	Monday		" 26, "
	Wednesday		" 28, "

November 20
9:10 a.m.

Quiet at Halemaumau. One light fall of rocks N. Wind is S.

R.H.

November 21
10 a.m.

Tai On reports no changes, cone steaming.

R.H.

November 22
2:45 p.m.

Dense steam rises from pit, merging with low clouds. Steam jets active over whole of Kilauea floor.

R.H.

November 24

11:45 a.m.

18 shocks registered this a.m. Mrs. Jaggard felt 4 in 5 minutes.

R.H.

Pit remarkably quiet and dry. No fresh falls in evidence. No trace of any effects of the earthquakes of 5 plus a.m.

T.A.J.

November 26
8:20 a.m.

Yasunaka reports slide making dust NE.

R.H.

November 28
9:15 a.m.

Tai On reports no changes. Center cone steams.

R.H.

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Day	Date	December 3, 1928
Monday		
Tuesday	" 4,	"
Wednesday	" 19,	"
Thursday	" 20,	"
Sunday	" 23,	"
Monday	" 24,	"
Friday	" 28,	"

December 3
10:55 a.m. Big avalanche at north, spreading column of dust NW to SE rose from pit.

T.A.J.

10:30-11 a.m. Much dust from slides N and NE.

R.H.

December 4
10:30 a.m. Slides of yesterday were from N rim. Red N wall is heavily coated with white salts, but many white fragments are over whole of N talus. Much of the new debris is lying between N and NW taluses. Extraordinarily little steaming anywhere. Measured cracks. A strip of rim S of #4 point has fallen, but point has not widened.

R.H.

December 19
11:30 a.m. Two fresh spots noticed. One just above top of N talus; one in midwall above NNE talus. A few rockfalls were heard.

E.M.B.

December 20
10:30 a.m. No changes observed. Much steam SSE talus and S cone. N wall salt coated.

R.H.

December 23
3 p.m. E.M.B. observed dusty slide on N wall.

R.H.

December 24
10 a.m. Tai On reports no changes at Halemaumau. Cones are steaming.

R.H.

December 28
9:45 a.m. Tai On reports new steam cracks on NE side of center cone, and fresh avalanche scar on N rim.

R.H.