Hawaiian Volcano Observatory Record Book 1952

This volume is one of a series of record books maintained by the Hawaiian Volcano Observatory (HVO) from 1912 through early 1966. The pages for this volume were duplicated from the original set housed at HVO. Volunteer Ben Gaddis scanned the record book at HVO using a flat-bed scanner at a resolution equivalent to 600 dpi. Ben Gaddis also processed each of the scanned pages by cropping and by adjusting the exposure and contrast using a photo editing program. The 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

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Date

KILAUEA ERUPTION

1952

JOURNAL NOTES AND PICTURES

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Friday Date June 27, 1952

Notes on Beginning of Eruption:

Louise Fox says that at 2335 she went into the living room to smoke a cigarette, before going to work at KMC switchboard.

About 2340, after finishing cigarette, she went into bedroom. She then heard a loud whistling roar (Probably gas escaping at pit). She returned to the living room, alarmed, then saw the glow at the pit. Called Obserhansley.

LaVieve and John Forbes were at dance at KMC. Glow was seen from there at about 2340, and immediately called to John's attention by Col. Rushton, C.O. John and LaVieve went immediately to Uwekahuna, where LaVieve telephoned me, about 2350. I reached Uwekahuna about 2400.

At 2350, John Forbes reports the SW fountain was visible above rim of pit from Uwekahuna.

At 2400, I could still see some incandescent fragments being thrown above rim, and occasional blocks of pumice falling on crater floor beyond and bursting, making red spots.

June 27, 1952, Friday

Kilauea in eruption.

Reached Halemaumau at 1210 p.m. Fissure NESW across Halemaumau about 2/3 way across pit from SE side. All way across and 50 feet up NE wall. Biggest fountain at SW edge, about 400 feet high, rest 50-100 feet. Lava over whole floor of pit. 1934 cones buried. Heavy pumice fall on road on SW edge of crater. Also several minor fountains near NW edge of floor. Lava appears to be spreading from there as well as fountain chain. These are about over 1934 cones.

Showers of spatter from big fountain strike SW wall and form cascade back.
Temporary sinkholes developing near edge of floor, with small fountains.
Long surges sweep outward from fountain chain.

June 28, Saturday

0115 Fountains dying down some. SW fountain now about 250 feet.

0140 Pyrometer readings on fountains near NE edge -
1010°, 1008°, 1015°.
On lava in hot breaks near E edge of flow -
980° 990°.

0310 From NE edge of pit nearly over end of fountain chain - Temp. on fountains nearly - 1040°, 1045°, 1035°, 1020°, 1040°.
SW fountain about 100 feet high.
Sw fountain dead except for occasional very small bursts. Do SW 150 feet of fountain chain. Next 150 feet very weak.
Very heavy pumice fall at Sw edge of crater. Choking SO_2 gas.
Pumice fragments up to 10 inches. This was at 1200.

0340 Picture #9 on pack 2, -. Fountains at S_W end retreating rapidly
Nearly pau over SW ¼ of floor. SW half became very weak.

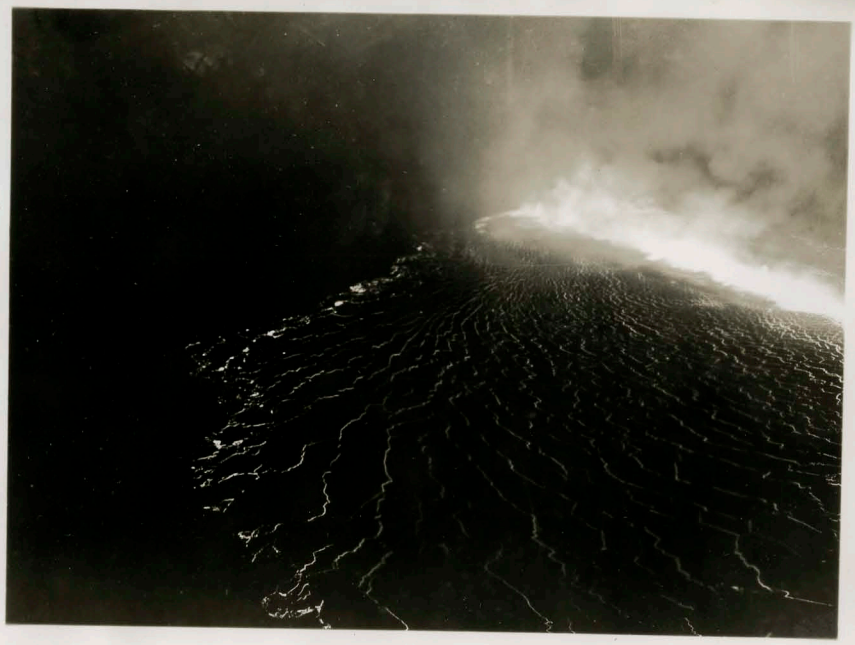
Gordon A. Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date June 28, 1952



520628-1. About 2:30-3:00, Fountains and crack pattern in floor of Halemaumau (Eruption started 2329 on 27th) Ph: Wentworth.

520628-2. Same. Ph: Wentworth.

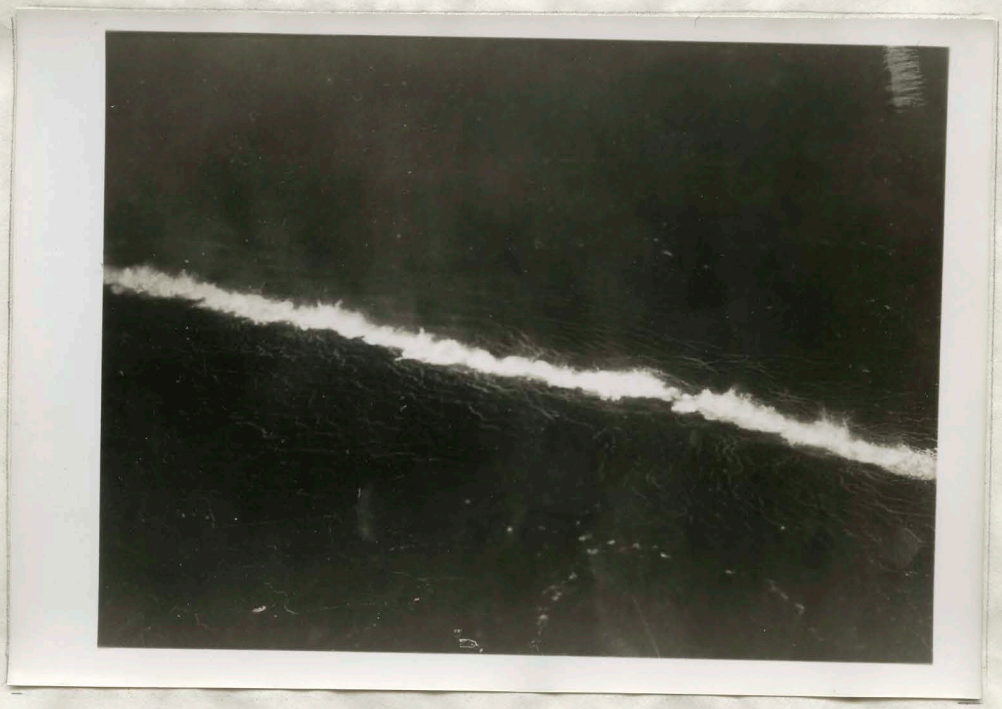
DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

JOURNAL

Hawaiian Volcano Observatory

Day Saturday Date June 28, 1952

520628 - 3. About 2:30-3:00, Fountains and crack pattern in floor of Halemaumau, (Eruption started 2329 on 27th) Ph: Wentworth



520628 - 4. Same, Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date June 28, 1952

520628-5. About 2:30-3:00, Fountains and crack pattern in floor of Halemaumau, (Eruption started 2329 on 27th) Ph: Wentworth

520628-6. Same. Ph: Wentworth.

520628- 7. Northeast end of rift fountains and pattern
Ph: Wentworth

520628- 8. Southwest end of rift line, waning.
Ph: Wentworth

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date June 28, 1952

June 28, Saturday

0350 Sw half pau except for occasional small bursts. Picture #10.

0400 Temperature on NE fountains - 1010°, 1030°, 1005°, 1035°. High temperatures are better. Fume absorption causes lower ones.

SW half pau. Next ¼ only very small fountains. NE ¼ fountains about 50-75 feet high.

0410 Active fountains nearly restricted to NE 1/8. A few small sporadic fountains in next 1/8. Fountains near NE edge about 50 feet length. Temperatures - 1020°, 1020°.

0415 Small fountains resuming in SW ¼. Very little gas from these. Still lots of gas from the NE fountains.

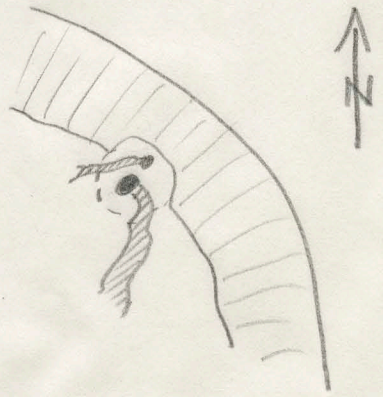
0500 Fountains restricted to 3 blowing vents at base of NE talus, and new small fountains at SW, with a few sporadic very small ones between. Very little fume now.

0515 Temperature readings

NE fountains	SW fountains
990°	1015°
1020°	1020°
1010°	1010°

0615 Strong heaving dome-type fountain at SW end. Crusts being sucked in a foundering around edge. About 25 feet across, about 15 feet out from wall. Another about 10 feet across playing spasmodically about 50 feet farther out.

0620 Double spurting fountain in small cone at NE end, throwing about 30-50 feet high. Sluggish lava stream speed about 5 miles per hour, flowing from breach in SE wall of conelet. Another small vent about 50 feet NE blows occasionally and is putting out a trickle of lava down the NW side of the cone. These fountains are roaring, throwing fragment burst of spatter as high as 60 feet, and putting out more blue fume than SW fountain.



Two small fountains about 200 feet SW of the conelet spurt sporadically.

Gordon A. Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

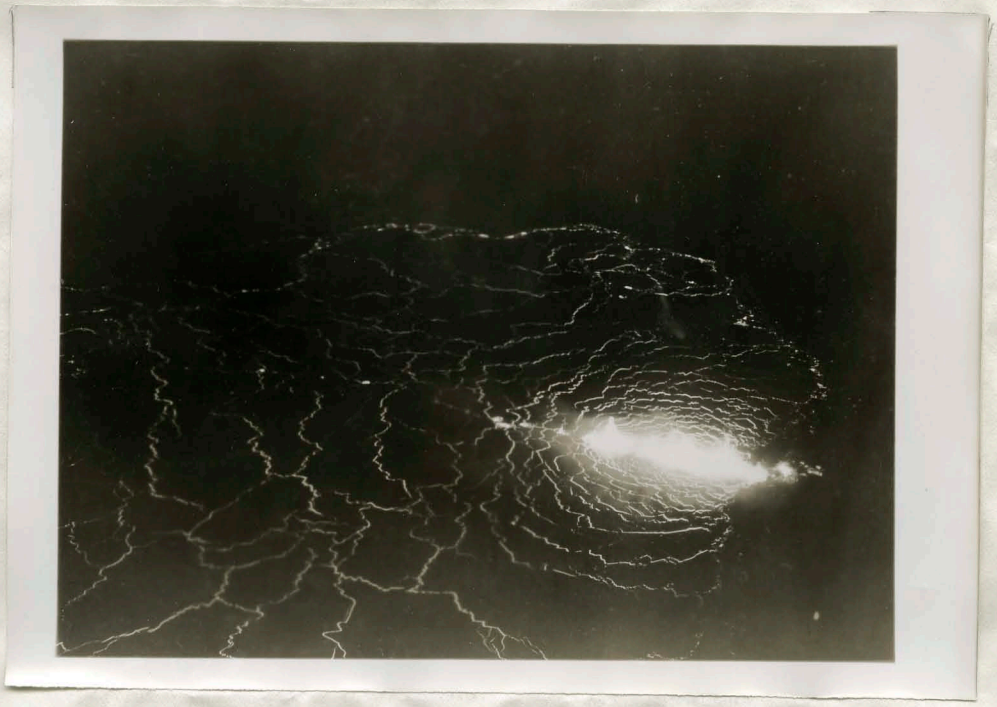
JOURNAL

Day Saturday Date June 28, 1952

520628-9. Southwest end of rift line, waning.
Ph: Wentworth

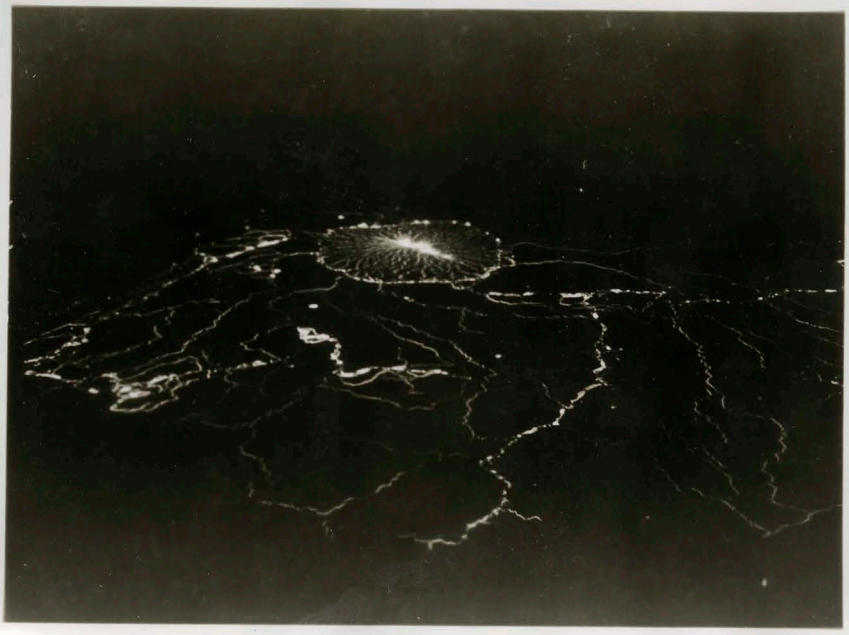
520628-10. Halemaumau, eruption, about 3:30-4:00 a.m. Fountains and pattern at NE end. Ph: Wentworth

520628- 11. Crack Pattern. Ph: Wentworth

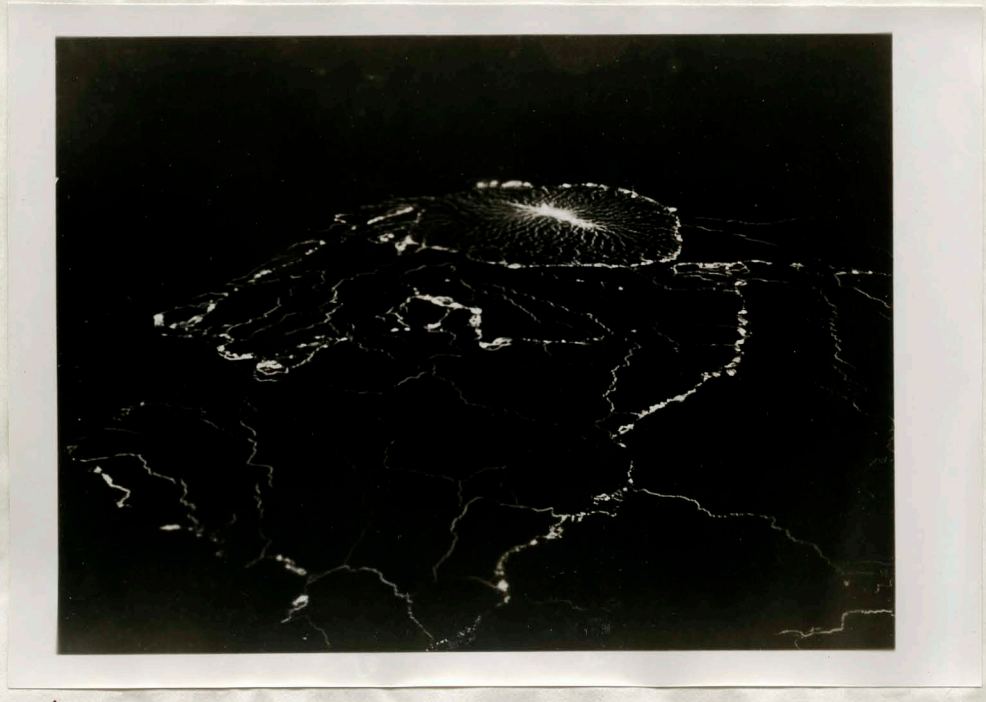


520628- 12A. Fountains at NE end. Ph: Wentworth

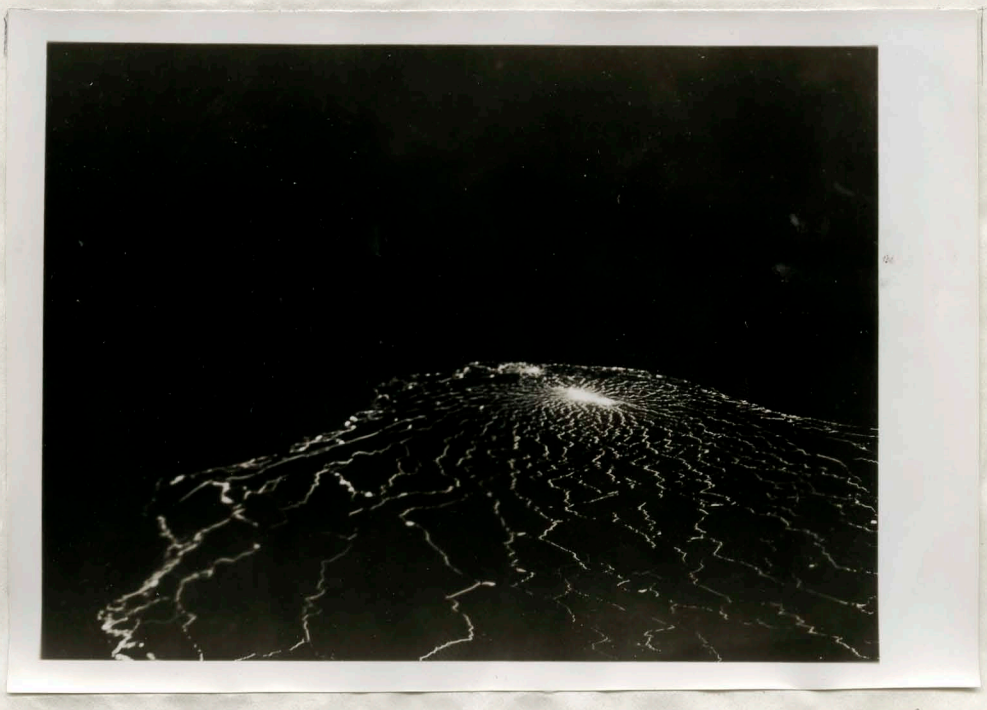
520628- 12B. Fountain and spreading lau at SW end.
Ph: Wentworth



520628- 13. Same. Ph: Wentworth.



520628- 14. Fountain and spreading lau at SW end.
Ph: Wentworth



520628- 15. Center of inflow and crack pattern at SW end.
Ph: Wentworth.

520628 - 16. Center of inflow and crack pattern at SW end.
Ph: Wentworth.

520628- 17. NE end of floor with patterns. Ph: Wentworth

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date June 28, 1952

June 28, Saturday

Occasional crusts founder along fissures, followed and accompanied by small fountains.

0715 SW dome fountain reaches heights occasionally as much as 50 feet.

Stadic.

Station A	4.40		
	1.70		2.70
Pit BM		6.70	
		2.95	
Station B			3.75

Pit BM

Station A - Point W.of SW fountain
Hor. 234°10'
Vert. 18°00'

Station A - NW corner
Hor. 276° 40'
Vert. 15° 40'

Station A - Station B 351.00

Station A

Pit BM to NW corner
Hor. 287° 48'
Vert. 15° 11'

Pit BM to corner W of SW fountains
Hor. 256° 35'
Vert. 20° 22'

Station B

Pit BM to corner W of SW fountains
Hor. 55° 16'
Vert. 16° 40'

Pit BM to NW corner:
Hor. 97° 30'
Vert. 16° 07'

1030 SW fountain about same as at 0630. NE fountains smaller.

1100 Small flow of aa developing from upper NE vent. Everything else thus far is pahoehoe.

1200 NE fountains very small. SW fountains much larger than at 1030 and more explosive with more fume. Main fountain about 100 feet across, flinging spatter about 75 feet high. Fairly typical flinging fountain now. A small nearly continuous fountain about 50 feet NE and a spasmodic one about 100 feet farther. concentric ridges of crust spreading out about 500 feet radius.

Slump scarp 10-15 feet high around rim, has been slowly increasing in height all morning.

1500 150 feet fountain chain about 300 feet out from SW wall, playing about 150 feet high. Small sporadic fountains in area of SW fountain at 1200. Much more fume than at 1200. NE fountains about same as at 1200.

Gordon A. Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date June 28, 1952

520628-18. About 9:30 a.m. View of floor to southwest.
Ph: Wentworth

520628-19. Same. Ph: Wentworth.

520628- 20. To southwest end and southeast side of floor and pit.
Ph: Wentworth.

520628- 21. To southwest end of floor.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date June 28, 1952

520628- 23. Floor at Northeast from east.
Ph: Wentworth.

520628- 24. About 5:00 to 7:00 p.m. View to Southwest end of floor from east side. Ph: Wentworth

520628- 25. Floor from east, SW at upper left, NE at right middle.
Ph: Wentworth.

520628- 26. Same. Ph: Wentworth.

520628- 27. Floor from east, SW at upper left, NE at right middle.
Ph: Wentworth.

520628- 28. Same. Ph: Wentworth.

520628- 29. Floor from east, SW at upper left, Ne at right middle.
Ph: Wentworth.

520628- 30. Same. Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date June 28, 1952

520628- 31. Floor from east, SW at upper left, NE at right middle.
Ph: Wentworth.

520628- 32. Same. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date June 28, 1952

520628-33. Floor from east, SW at upper left, NE at right middle.
Ph: Wentworth

520628-34. About 02:00. Fountains of "curtain of fire", much fume.
Ph: Macdonald

520628 - 35. About 02:00. Fountains and lake pattern; much fume.
Ph: Macdonald

520628-36. About 02:00. "curtain of fire" across floor of Halemaumau.
NE side of pan (see #37). Ph: Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

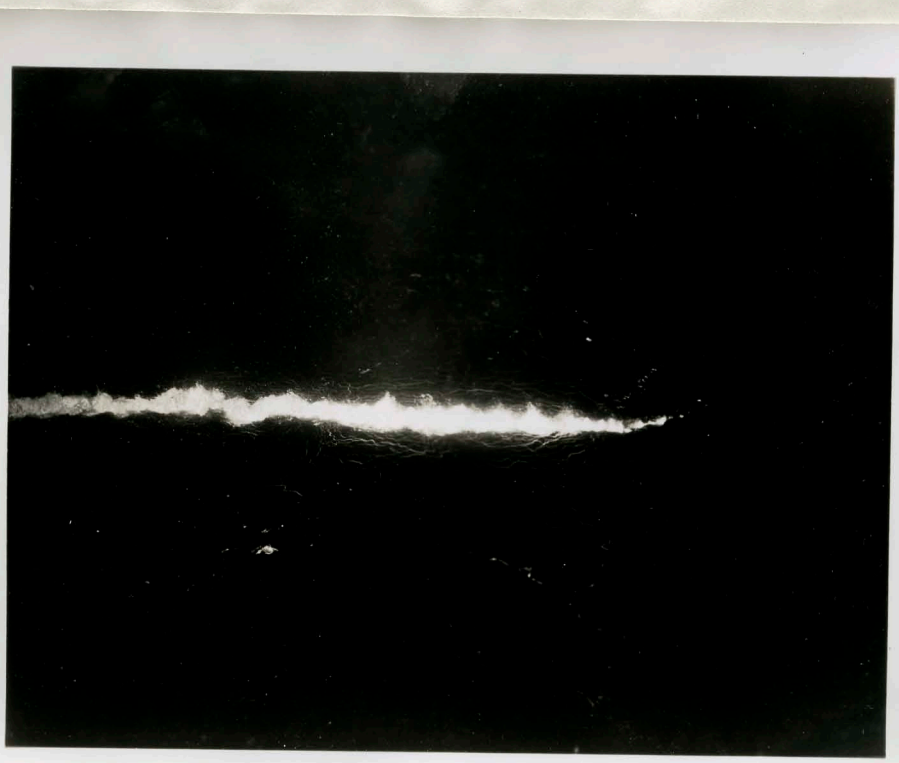
JOURNAL

Day Saturday Date June 28, 1952

520628 - 37. About 02:00. "Curtain of fire" across floor of Halemaumau (SWside). Pan with #36. Ph: Macdonald

520628 - 38. 02:15. Curtain of fire, from SE rim of Halemaumau. (Looking toward SW edge). Ph: Macdonald

520628- 39. Time: 03:15. Curtain of fire from SE rim of Halemaumau. (SW end of curtain) Ph: Macdonald



520628- 40. Time: 03:15. Curtain of fire in Halemaumau, NE end of curtain, seen from SE rim. Ph: Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

JOURNAL

Hawaiian Volcano Observatory

Day Saturday Date June 28, 1952

520628-41. Time: 03:30. Fountain chain in Halemaumau looking SW from NE rim of Halemaumau. (Shows SW end of chain) Ph: Macdoanld

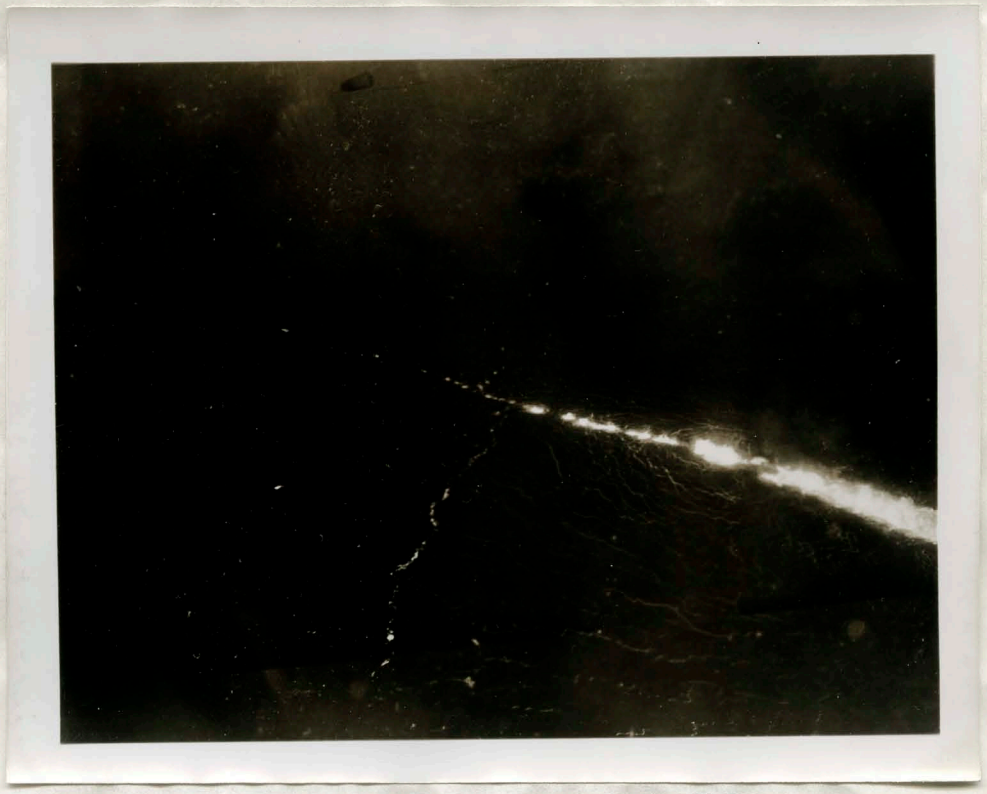
520628-42. Time: 03:30. Fountain chain in Halemaumau, seen from NE rim of Halemaumau, showing NE end of chain. (Pan with #41). Ph: Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date June 28, 1952

520628- 43. Time: 03:40. SW end of fountain chain in Halemaumau, from SE rim; showing decrease in activity. Ph: Macdonald



520628- 44. Time: 03:50. SW end of fountain chain in Halemaumau, seen from SE rim; showing decrease in activity (cf. #430. Ph: Macdonald

520628-45. Time: 04:00. Sw end of fountain chain in Halemaumau, showing decrease in activity, seen from SE rim. (Cf. #43 & 44).
Ph: Macdonald

520628-46. Time: 04:10. Fountain chain in Halemaumau, from SE rim, showing decrease in activity. (Cf. #43,44, 45). Ph: Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date June 28, 1952

520628-47 Time: 04:20. Fountains at NE edge of floor. Ph: Macdonald

520628-48 Time: 05:00. SW portion of floor of Halemaumau from SE rim. Shows small fountains resuming activity in SW area. Ph: Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date June 28, 1952

Poor print + backwards - Jaggar

520628-49 Time: 06:30. SW portion of floor of Halemaumau from SE rim, just after daybreak on June 28, 1952. Shows SW sinkhole fountain. Ph: Macdonald

520628-50 Time 06:30. SW portion of floor of Halemaumau. Shorter exposure than 520628-49. Ph: Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date June 28, 1952

520628-51 Time: 0700. SW sinkhole fountain, from S rim of Halemaumau.
Ph: Macdonald.

520628-52 Time 07:15. NE edge of Halemaumau floor, from E rim.
Ph: Macdonald

520628-53 Time 07:20. SW edge of Halemaumau floor, and dome fountain, from SE rim. Note waves in lake. Ph: Macdonald

520628-54 Time: 07:20. Similar to 520628-53. Ph: Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date June 28, 1952

poor print

520628-55 Time: 07:30. SW portion of floor of Halemaumau, from SE rim, showing dome fountain. Ph: Macdonald

poor print

520628-56 Time: about 12:00. Ne edge of Halemaumau floor, from E rim, showing NE cones and fountains. Ph: Macdonald

poor print

520628-57 Time: 1500. SW portion of floor of Halemaumau, showing fountain chain. Ph: Macdonald

520628-58 Time: 15:10. SW portion of floor of Halemaumau, from SE rim, showing fountain chain. Ph: Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

JOURNAL

Hawaiian Volcano Observatory

Day Saturday Date June 28, 1952

520628-59 Fountains in Halemaumau, from SE rim, early evening, June 28, 1952.
Ph: Macdonald

Can get better print me

520628-60 Fountains in Halemaumau, from SE rim, evening of June 28, 1952.
Ph: Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date June 28, 1952

June 28, Saturday

At a point on the fissure about ¼ way across floor from NE edge, lava flows into a sinkhole, with sporadic fountaining. Crusts are broken up as they move in, and on reaching the sink tilt on edge and plunge under.

At many other places from time to time the crust is rifted open, often repeatedly on the same line. There also crust fragments are drawn in, tilt up and plunge under. This is generally followed by a row of tiny fountains, lasting only a few seconds, over the place where the crust sank.

2330 Temperature measurements on main SW fountains:
1030°, 1010°, 1015°, 1030°

Fountains playing almost steadily to 150 feet, many flings reaching 300 feet.

Very active sinkhole at SW wall on active fissure. River about 25 feet wide flowing into it, crusts upending and plunging down, with small edge fountains.

Sink-hole about ¼ way SW from NE edge, described this p.m. still very active.

Vents at NE edge, upon cone have built gun-barrel conelets and are blowing explosively, throwing ejecta to heights of 150 feet. Banners of pale yellowish-bluish flame play over them, some almost constantly, but most intermittently.

June 29, Sunday

0130 Temperature measurements:
Main SW fountain 1030°, 1020°, 1025°
NE fountains 1000°

0133 Strong upsurge of fountain activity at SW.

0500 Same as earlier

1400 Much the same as at 0500, but upper vent on NE is largely sealed off and not putting out either lava or spatter. Sinkholes at SW edge and ¼ NE very active. Latter is a spouting fountain in its own right but fountaining much augmented just after big crusts plunge under.

Sporadic sinkholes along the line of the original fissure, with crust moving in toward them have produced a puckered cicatrice all the way from the ¼ NE sinkhole to the big SW fountain.

Spattering of fountains at SW sink hole are starting to build a conelet against wall of pit.

Occasional crust rifting and foundering elsewhere on floor, with small sparkling temporary fountains.

Slum scarp at W edge largely reburied by new lava.

Nearly circular crust island about 150 feet across lies about 50 feet W of NE sinkhole, seems to have drifted SE from narrow crust bench at NW edge.

Gordon A. Macdonald

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Sunday Date June 29, 1952

520629-1 Kilauea, 9:30 a.m. SW end fountain, from south end of rim.
Ph: Wentworth

520629-2 Kilauea, 9:30 a.m. SW end fountain, from south end of rim.
Ph: Wentworth

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Sunday Date June 29, 1952

520629-3 Kilauea, 9:30 a.m. SW end fountain, from south end of rim.
Ph: Wentworth

520629-4 Same. Ph: Wentworth

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date June 29, 1952

520629-5 Kilauea, 9:30 a.m. SW end fountain, from south end of rim. Ph: Wentworth

520629-6 Same. Ph: Wentworth

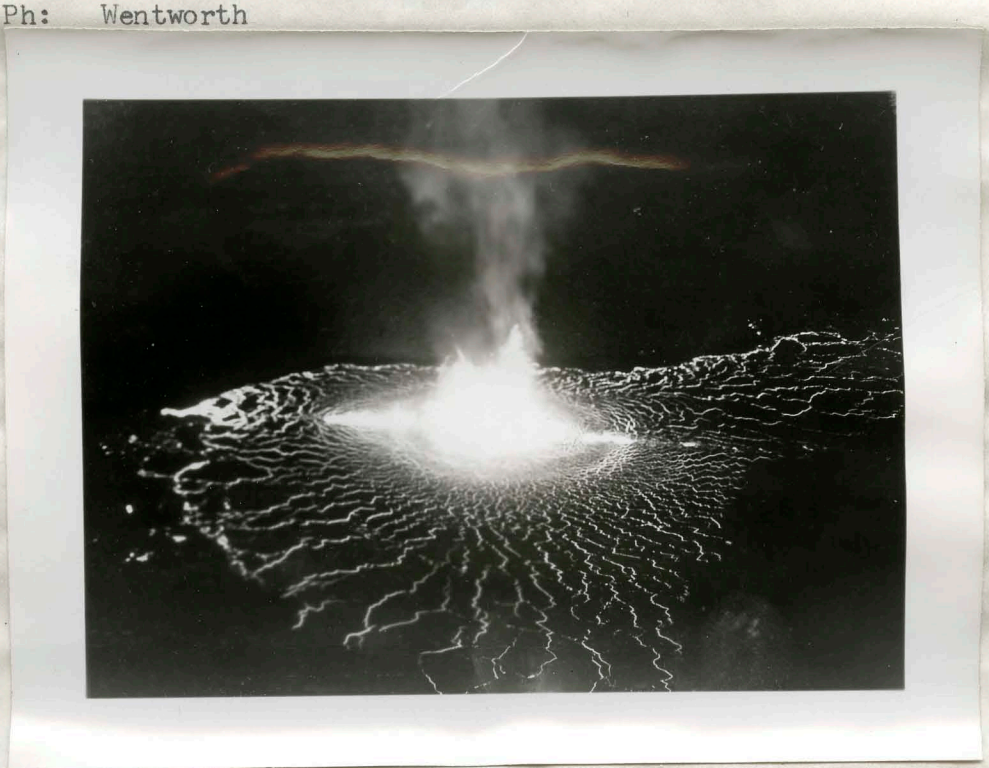
DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date June 29, 1952

520629-7 Kilauea 8:30 p.m. Southwest end with fountain crack pattern
Ph: Wentworth



520629-8 Kilauea, 8:30 p.m. Southwest end with fountain crack pattern, with ripples. Ph: Wentworth

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date June 29, 1952

June 29, Sunday

2230 Activity much the same as last night and this p.m. but big fountain seems to be a little higher. Est. 100-150 feet for "solid" fountain, up to 200-250 feet for highest fling. Both sinkholes active, and occasional crust foundering and minor fountains on floor elsewhere. Small sluggish pahoehoe flow advancing from near NW corner, at edge, back over earlier flow.

Highest vent at NE end is not fountaining and only rarely has even spatter from it, but has nearly continuous pale blue flame banner probably 3 to 5 feet long.

Circular crust island has moved a little farther SE and is nearly SW of NE sink.

Temperatures on big fountain: 1030°, 1035°, 1040°.

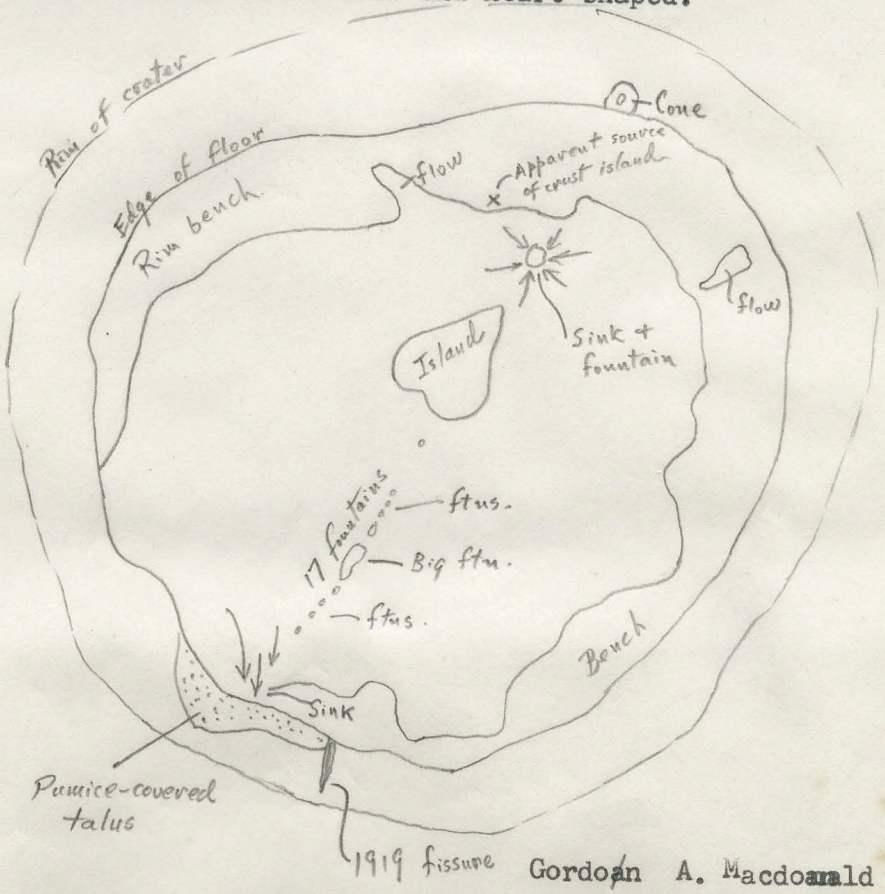
2300 Fountain activity spreading toward SW end, with occasional small fountains against wall.

June 30, Monday

0030 Small bright spot on E wall of NE conelet, apparently caused by melting thru of cone wall. A few minutes later a small pahoehoe flow started to develope from this puka.

0100 Cone walls of NE conelet breaking down with a small floow of lava from the cone. Simultaneously the NE fountains increased in height to about 150 feet.

1300 Fountain much like last, except NE fountains small and cone has built up again. Little lava flow visible from NE cone. Both sinkholes very active. A bench of rocked up contorted pahoehoe crusts has formed around much of the circumference area about 200 feet wide. Occasional little lava streams overflow bench, usually breaking up within the bench. Crust island has moved a little SW from position last night and enlarged a little. Now about 200 feet wide and heart shaped.



Gordon A. Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

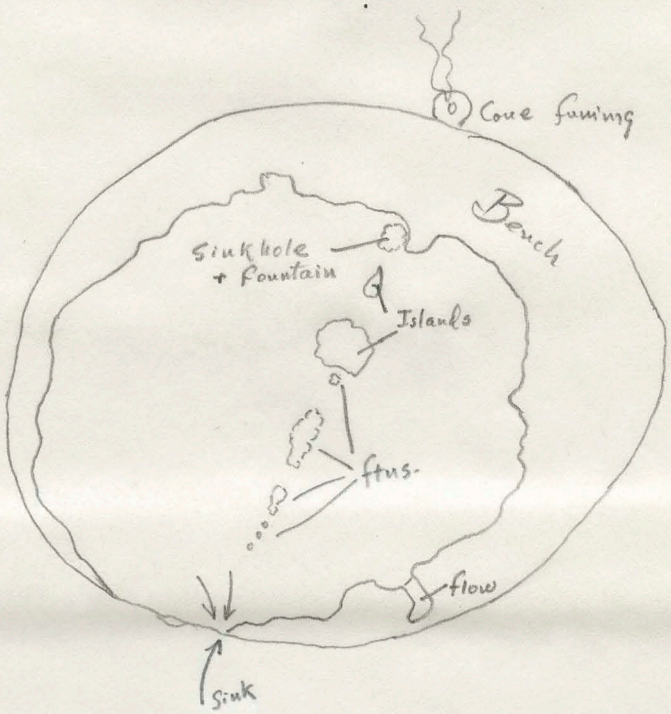
Hawaiian Volcano Observatory

JOURNAL

Day Monday Date June 30, 1952

June 30, 1952, Monday

1825 Main fountain of this a.m. has died down some to height of about 75 feet, and fountains NE of it are now the biggest - average height about 100 feet with some flings exceeding 200 feet. Crust island has moved SW, and is now about 2/3 way from NE sinkhole to present big fountains, leaving behind the pointed tail of this a.m.



1830 NE cone has practically sealed off. Only a little weak fling from it. Both sinks still active but NE sink less active than this a.m. and fountain in it smaller and less continuous.

1845 Top of NE cone caved in, revealing glowing interior, fountains now flinging scattered spatter to height of 30 or 40 feet.

Crust island is disappearing, partly by crumbling off of edges and partly by overflow. Just before this started the island moved over the NE most small fountain of the central group.

Level of central portion seems to be rising, with small overflows over the crust bench in several sectors.

2300 Temperatures - main fountains:

1030°, 1025°, 1030°, 1035°

NE sinkhole - 1010°, 1010°

Activity about same as this p.m. River at SW sink is faster - est. speed 7-8 mile per hour. Main fountains average 100, some flings to 250+. NE cone more active explosive throwing spatter about 100 feet in thin showers. Pale blue flame at upper vent.

Overflows of small dribble flows over crust bench.

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

JOURNAL

Hawaiian Volcano Observatory

Day Monday Date June 30, 1952

Very poor print

520630-1 Fountains and SW sinkhole, in Halemaumau, from SE rim; late afternnon, June 30, 1952. Ph: Macdonald

520630-2 Sinkhole, in NE portion of floor of Halemaumau, from SE rim; late afternoon, June 30, 1952. Ph: Macdonald

520630-3 Sinkhole, and dome at NE edge of Halemaumau floor, from SE rim; late afternoon, june 30, 1952. Ph; Macdonald

poor print

520630-4 Fountains, and sinkhole at SW edge of Halemaumau floor, from SE rim, late afternoon, June 30, 1952, Ph: Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Tuesday Date July 1, 1952

July 1, 1952, Tuesday

0739 About same as last evening. The NE cone has nearly sealed in again. The lava stream at the SW is going too fast for the sinkhole, and part is spilling E along foot of talus in a sluggish flow.

Photo # 1, pack 5.

1130

P. table	Vert. L's	Read	Corrected
SE Pit BM	Level	29° 22'	
Top NE cone		08° 23'	
E base of NE cone		06° 55'	22° 27'
NE sink fountain		05° 55'	
NW corner		14° 31'	14° 51'
Base NE big fountain		07° 06'	
Top NE big fountain		08° 31'	
Top of highest fling		14° 26'	
Edge of floor of SW sink		12° 00'	
1919 crack at top of talus		12° 18'	
S edge of triangle rock		13° 34'	15° 48'

Jim Tobin estimated fill of 8-10' from 08 to 1600 yesterday, based on burial of conspicuous large boulder at far edge.

Crack measurements:

Tourist wall	61.9+
Crack just N	120.8
Far end	181.5

Station 2	Vert. L's
NW corner	12° 24'
SW sink edge of floor	14° 50'

Station 3

Top of NE cone	28° 20'
Base of NE cone	30° 45'

Station 5

S corner	19° 26'
E edge	22° 25'

1530 Small fountains (2) just NE of biggest SW fountain are getting bigger. NE cone had nearly sealed off, top collapsed in just now. A small flow over crust bench just E of it. The latter is much contorted fractured and reached up all the way around the floor. E of NE cone a pressure ridge 15-20 feet high parallels pit wall about 100 feet out. NE sinkhole appears to be no longer acting as a sink, but the two little fountains in it are still very active.

2250 Temperature on big fountains:

1020°
1020°
1010°
1025°
1025°

Gordon A. Macdonald

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Tuesday Date July 1, 1952

520701-1 3:30 a.m., SW fountains from NE

Printed backwards

520701-2 7:30 p.m., Southwest fountains from SE.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Tuesday Date July 1, 1952

July 1, 1952, Tuesday

2250 NE "sinkhole" fountains is starting to build a cone. Temperature on fountains is about 1025°.

SW sinkhole active. Main fountains throwing almost as high as this p.m.

NE "sinkhole" fountains are now spurting and throwing spray to heights of 75-100', rarely 150'.

Just W of NE end of main fountains a crust island about 100' long seems to be grounded since the pyromagma rising and falling in the fountains surges rises and falls on its edges without corresponding rise and fall of the island repeatedly exposing and hiding a brightly glowing line at it's base.

Much new cracking all around rim of pit.

Gordon A. Macdonald

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

Day Tuesday Date July 1, 1952

520701-3 7:30 pm., Southwest fountains from SE.

520701-5 Fountains near SW edge of Halemaumau floor, from SE rim; 07:30 a.m., July 1, 1952. Ph: Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date July 2, 1952

July 2, 1952, Wednesday

0720 Eruption much as before. NE cone nearly sealed in, but putting out flows at E base. Area between pressure ridge and talus has been flooded with new smooth pahoehoe for about 700 feet E of cone.

"Sinkhole" fountains are still building the beginnings of a cone but this is widely breached on E side and flows from it are covering older lava of lake and crust bench. This began at 1600 yesterday. Main fountains about same size as before. Some fling goes up at least 250 feet.

0730 SW sinkhole weak with occasional small fountain bursts in it.

1055 SW sinkhole reversed. Became a large fountain.

1130 Fountain at former SW sinkhole throwing ejecta to 200 feet, rarely as much as 300. Building cone against SW wall. Central fountains small, throwing rocket like bursts as high as 250 feet, but average height only about 50 feet. Loud detonations with big bursts.

Station 12 Vert. L to top of W talus - 18° 42'

1400 Same as last entry. A big flow is moving E from the SW fountain along the wall. Looks about 10 feet thick. Another advancing to the NE between a pressure ridge on crust bench and the central fountains.

1420 Whole central floor seems to be heating up. Flow NE of SW fountains is overflowing pressure ridge in places and sending tongues over the crust bench.

Station 14 Vert. L's
Top N talus - 12°30'
Top NE talus - 09° 55'

1530 Overflows from lake over bench all around N and W edges. A rapid tongue moving E from E side of NE cone. SW fountains still strong.

Gordon A. Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date July 2, 1952

520702-1 About 8:00 p.m., Fountains and crack pattern from south lookout point, looking about north.

520702-2 Ditto

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date July 2, 1952

July 2, 1952, Wednesday

1545 SW fountain stopped. Died down, and spurted up again 3 times, last at 1545.

1550 SW fountain dead. Central chain small. NE very weak, largely sealed.

1615 Notes to 2030 from B. J. Loucks.
2 fountains at center SW, 25-30 feet. 8 small ones SW of them. To NE were 4, 10-15 feet high. Shortly after small fountain about half way from center chain to NE. Only 5-10 feet. By 1815 intermittent and pau 1900.

1900 Upper NE cone started up, a small flow to E. Central lake spreading SW engulfed SW fountain site all the way to wall. A little glow on NE floor where pressure ridge reaches wall.

2015 Old lower NE cone nearly covered by spatter from upper NE cone. A new flow to W from upper cone. Fountains increasing since 1700, now up to 250 feet for high fling.

2030 Small dust slide on NE rim near 1st observation platform.

2200 SW fountain much like last night. NE fountain small but active. NE "sinkhole" fountain also small but active. Temperature on main fountains, 1010°, - 1025° C. SW sinkhole sluggish.

July 3, 1952, Thursday

0730 Central fountain playing to about 100 feet, 10 small ones to SW of it and 3 small ones NE. Main fountain itself is double. Some flings up to 150 feet. NE cone sporadically active with weak bursts to about 50 feet. NE "sinkhole" fountain same, and cone about 20 feet high nearly sealed over. Central lake area is actively overflowing 600 feet wide at N end. SW sinkhole sluggish with occasional weak fountain bubbling.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Wednesday Date July 2, 1952

520702-3 About 8:00 p.m., Fountains and crack pattern from south lookout point, looking about north.

520702-4 About 8:00 p.m., pan to eastward.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Wednesday Date July 2, 1952

poor print
good neg.

520702-6 SW fountain, seen from SE rim of Halemaumau; 11:00 a.m., July 2, 1952. PH: Macdonald

Good neg.

520702-7 Fountain at SW edge of Halemaumau, seen from SE rim, 11:05 a.m., July 2, 1952, Ph: Macdonald

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

Day Wednesday Date July 2, 1952

Good neg.

520702-8 Fountain at SW edge of floor of Halemaumau, from S rim: about 11:15 a.m., July 2, 1952. Ph: Macdonald

Good neg.

520702-9 Fountain at SW edge of floor of Halemaumau, from S rim; About 11:15 a.m., July 2, 1952. Ph: Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

JOURNAL

Hawaiian Volcano Observatory

Day Thursday Date July 3, 1952

520703-1 About 4:00 a.m., Fountains and crack pattern from south lookout point.

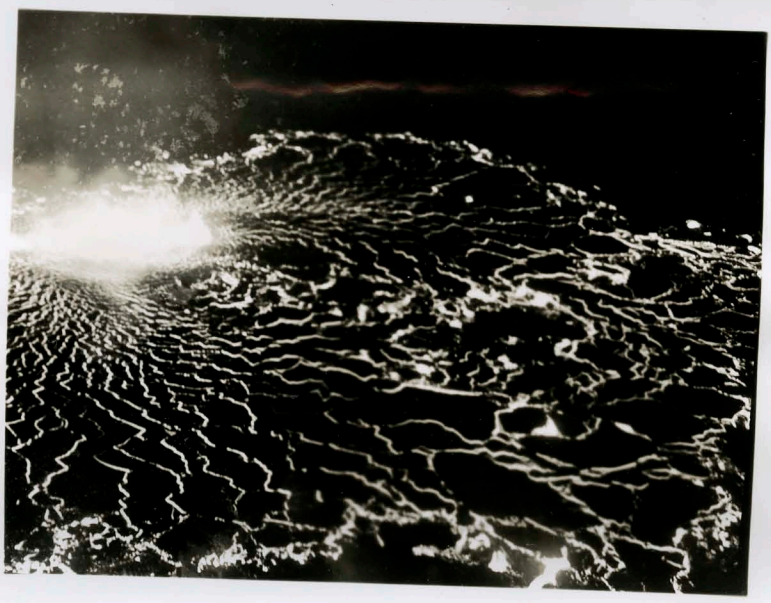
520703-2 Ditto

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

JOURNAL

Hawaiian Volcano Observatory

Day Thursday Date July 3, 1952



520703-3 About 4:00 a.m., pan to eastward.

520703-4 About 10:00 -1200 a.m.? Views of walls of Halemaumau.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date July 3, 1952

520703-5 About 10:00 - 12:00 a.m.? Views of walls of Halemaumau.

520703-6 Ditto.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date July 3, 1952

520703-7

520703-8 Fountains in Halemaumau, near SW edge of floor, from SE rim; about 15:00, July 3, 1952. Ph: Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date July 3, 1952

July 3, 1952, Thursday

0730 Kaipo Roberts reports that at 0530 the SW fountain rapidly grew in size, reached height of 400 feet. Other fountains became explosive like yesterday. Lasted until 0700, then died down. Central fountains also got small, and are now (0800) growing again.

1200 Plane table at station 20 - Fume and shreds of pumice up to 6 inches long falling around us occasionally.

		Vert. ∠'s
Station 23	Top of "Sinkhole" cone	- 16° 55'
	Base of " "	- 17° 25'
Station 24	Floor at edge (E)	- 18° 51'
SE tilt cellar	reading S 50° E 17.5	
	reset to 0	

Transit at SE-BM. Notes by J. C. Forbes Instruction G. A. Macdaonald

W corner	14° 51'	
NW corner	14° 33'	
NE sinkhole fountain		
Top of cone	22° 41'	(cone 15' high)
Base of cone NE side	23° 3'	
Cone NE edge floor		
Top of cone	20° 25'	(cone 30' high)
E base of cone	21° 21'	
SE edge of floor	24° 33'	
S^W sinkhole	17° 25'	
Main fountain base	22° 1'	(160' high)
Top of fling, Main fountain	17° 5'	
Edge of lake at SE side	32° 34'	
Bottom of lake at SE side	32° 58'	

2215 Conditions like this afternoon. Weak sporadic fountaining at SW sinkhole. Temperature of central fountains 1020°.

2240 Fountain at S^W sinkhole becoming larger. Up to about 100 feet. Central fountain also becoming a little larger and hotter. Temperature now 1030°.

2345 S^W fountain reaching heights of 400 feet according to El. Bohlin.

July 4, 1952, Friday

Fountain continued big until 0330. Played steadily, like a firehose jet, to heights of about 400 feet, with occasional bursts passing well above rim of pit, -600'. At 0330 died down suddenly, within a few minutes. Central fountains much like in other big spasm, very noisy, with long rocket bursts. At 0330 Kaipo Roberts counted 16 fountains 25 to 50 feet high. These gradually increased until at 0730 they are reaching 200 feet occasinnally, with cores about 100 feet.

G.M. M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Friday Date July 4, 1952

July 4, 1952, Friday

During the big burst from 2330 to 0330 the whole central floor and part of the marginal bench was inundated with new flows. The level appears to have risen a few feet in past 24 hours.

Pumice was falling on road during big burst from 2330 to 0330.

1230 Set up on Pit SE B.M. Vert. L's with transit:

NW corner	14° 28'
West edge	14° 46'
S edge	24° 46'
NE floor, E base of cone	20° 38'
Top of northern cone	19° 50'
Top of next cone	20° 10'
Top of NE sinkhole cone	22° 13'
Base of cone	23° 30'
Edge of floor-SW sinkhole	16° 50'
Base of main fountain	21° 31'
Top of fountain cone	20° 30'
Top of highest fling	16° 33'

1300 Main fountains lowish - core about 75 feet, highest fling about 200 (see angles above). SW sinkhole alternately moderately active and sluggish; with sporadic fountaining up to 10 feet. Much of central floor was flooded by last nights' burst.

NE cones show almost no lava activity - only rarely weak cinder ejection, fuming strongly. NE "sinkhole" cone nearly sealed in, but glowing throat visible thru hole in top, and occasional weak cinder ejection.

1500 Bohlin reports SW fountain picking up, has reached height of 100'.

1530 Reached edge of pit. Sw fountain 250 feet high. By 1545 it was 400 feet high, with a few ejecta carried above pit rim by up draft. Central fountains very active shooting long string-like "rockets" as high as 250 feet with loud detonations. Observed big balloons of lava rising like a ball until almost detached from underlying, then bursting to release a big puff of gas. Fume predominantly blue, as usual, but much brown fume also in this stage.

A flood of lava from the SW fountain flooding NE over near end of central fountain chain.

1555 SW fountain dying down.

1605 SW fountain about 100 feet average

1616 SW fountain about 50 feet on average. Central fountains returning to normal, similar to this a.m.

1625 SW fountain picked up, briefly, playing to heights of about 200 feet.

1630 Sw fountain very small, except for brief resurgences.

G.M.M.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Friday Date July 4, 1952

520704-1 About 8:00 a.m., view of walls

520704-2 Ditto

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Friday Date July 4, 1952

520704-3 2:45 p.m., To SW fountain, fogged, bellows leak
Ph: Wentworth

520704-4 Ditto. Ph: Wentworth

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

Day Friday Date July 4, 1952

520704-7 8:00 - 9:00 p.m., SW end of Halemaumau (bellows leak).
Ph: Wentworth

520704-8 Ditto. Ph: Wentworth

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Friday Date July 4, 1952

July 4, 1952, Friday

2100 Fountains moderately active in center of floor, 75 - 100 feet, several flings to 150 feet. SW fountain small, sinkhole moderately active.

Too much rain to use pyrometer.

2300 Same.

July 5, 1952, Saturday

0330 SW fountain started to build up.

0400 Tony Mederios says SW fountain grew big, for about one hour. Height about 200 feet. Very noisy and explosive. Central fountain also very active. Some bursts up to 300 - 350 feet. Reached peak at 0410. (Burt Loucks)

0500 SW fountain quit, sinkhole formed, lava pouring into it rapidly.

0700 SW fountain picking up again.

0715 Central fountain playing to about 75-100 feet in cone, some flings going as high as 250 feet. SW fountain active but small. Island just W of central fountain built up to height of about 25 feet, by spatter from fountain. This island has slowly moved down W side of fountain chain for last 3 days, getting higher. Island is grounded and swells reveal bright line on its side.

NE cone throws out a little weak spatter from time to time from inner cone. "Sinkhole" cone fuming strongly but no spatter. Likewise outer NE cone.

As often earlier, whirlwinds on pit floor pick up fragments of hot crust up to 3 or 4 feet across and lift them 15 or 20 feet into air, go spinning across surface.

Transit at Pit SW benchmark:

NW corner	14° 22'
W edge	14° 33'
SW corner	16° 25'
N edge of SW talus	
Top of slump scarp	16° 31'
Bottom of " "	16° 45'
South edge	24° 40'
Island W of main fountains:	
Base	20° 12'
Top	19° 40'
Edge of floor at E side of NE cone	20° 25'
Top of W talus	8° 43'

G.A.M.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

Day Friday Date Jyly 4, 1952

520704-9 8:00 - 9:00 p.m., SW end of Halemaumau (bellows leak).
Ph: Wentworth.

Saturday 5, 1952

520705-2 2:00 - 3:00 p.m., views of pit, for phototopo test.
Ph: wentworth

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date July 5, 1952

520705-3 2:00 - 3:00 p.m., views of pit, for phototopo test.
Ph: Wentworth.

520705-4 Ditto. Ph: Wentworth

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date July 5, 1952

520705-5 2:00 - 3:00 p.m., views of pit, for phototopo tests.
Ph: Wentworth.

520705-6 Ditto. Wentworth

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

Day Saturday Date July 5, 1952

520705-7 2:00 - 3:00 p.m., views of pit, for phototopo test.
Ph: Wentworth

520705-8 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date July 5, 1952

520705-10 Fountains near SW edge of floor of Halemaumau, from SE rim; about 10:00, July 5, 1952. Ph: Macdonald

520705-11 Fountains near SW edge of floor of Halemaumau, from SE rim; about 10:00, July 5, 1952, Ph: Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date July 5, 1952

July 5, 1952, Saturday

1600 NE cones inactive except for heavy fuming. Central fountain playing to 100-150 feet, with rare bursts as high as 250-300 feet. SW sink moderately active.

A pool of lava accumulating in the portion of the floor near the fountains, standing about 10 feet higher than the marginal part of the floor just below pit SE benchmark.

1610 Overflow started at latter locality, pahoehoe flows cascading over the rampart separating the central pool from the crust bench, and spreading over the marginal moat.

1700 Pool around SW sinkhole fountain has subsided about 10 feet, leaving a slump scarp around its S and W margins.

1715 Lava has risen again in the SW pool, covering slump scarp.

1830 NE cones became active again. Top of inner cone fell in.

2100 Inner NE cone throwing spray of incandescent cinder to height of about 150 feet. Small flow on E side of cone. Central fountains and rest of floor much like this p.m.

Temperature - Main fountains:

2015
2020
2020
2030 2030 2030

July 6, 1952, Sunday

0730 Central fountains playing to about 100 feet with some flings up to 200 feet. SW fountains small, with small pond around them at higher level than rest of floor - about 10 feet.

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date July 6, 1952

July 6, 1952, Sunday

0745 SW fountains starting to build up. Pond around them starting to overflow to E. Fountains reached height of 150 feet, with rare bursts up to about 250 feet. Some long rocket bursts up to 200 feet. Loud cannonading, many loud explosive bursts being accompanied by release of puff of yellow - brown gas, which changes to bluish on rising a short distance.

NE cones show some glow but no ejection. Fairly heavy fuming.

0820 SW fountains have died down to 15-25 feet.

1500 Earl Ingerson and Jack Murata collected gas at Sulphur Bank.

1620 Conditions much like this morning and yesterday afternoon. Pool of lava around fountains, with abrupt scarp like edge about 10 feet high. I got the impression the pool is not appreceiably thicker than this scarp is high. Crust is much heavier than yesterday. Spatter from fountains tends to stay on it instead of sinking quickly. Small cone is forming at edge of crust island just E of E end of main fountain chain. Island just W of ditto has been built up some by spatter.

1645 Small island W of main fountain has moved NW about 100 feet since yesterday p.m.

Many driblets of pahoehoe overflowing the bench at the edge of the central lava pond.

NE cones have partly collapsed, destroying the beautiful heehive shape of yesterday. Fuming strongly.

2200 Activity much like this afternoon. Some glow visible at NE cones, and a small flow on the bench E of them.

Highest temperature at central fountains: 1028° (several readings)

Much flooding in central part of pit. Spatter heap E of fountains about 35 feet high.

July 7, 1952, Monday

0700 Activity much like last night. Fountains in center, playing to average height of 50-75 feet, with occasional bursts to 150 - 200 feet. SW fountains low, about 25-50 feet. NW cones fuming only.

1400 Activity much like yesterday and this morning. Central fountains about 50 feet high, some flings to 150 feet. Spatter heap on E side has grown to an arcuate rampart about 150' long, about 20' high (See transit L's)

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date Jyly 6, 1952

520706-1 About 9:00 - 9:30 a.m., Phototopo shots from Station 28.
Ph: Wentworth.

520706-2 Ditto. Ph: Wentworth

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date July 6, 1952

520706-3 About 9:00 - 9:30 a.m., Phototopo shots from Station 28. Ph: Wentworth.

520706-4 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date July 6, 1952

520706-5 About 9:00 - 9:30 a.m., Phototopo shots from Station 28.
Ph: Wentworth.

520706-6 Ditto. Ph: Wentworth

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Sunday Date July 6, 1952

520706-7 8:00 - 9:00 p.m., Floor, center to southwest.
Ph: Wentworth.

520706-8 Ditto. Ph: Wentworh.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date July 6, 1952

520706-9 8:00 - 9:00 p.m., Center of floor.
Ph: Wentworth

520706-10 Ditto. Ph: Wentworth

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date July 6, 1952

520706-11 8:00 - 9:00 p.m., Center of floor.
Ph: Wentworth

520706-13 Earl Ingerson and Jack Murata collecting gas smaples at Sulphur Bank: 15;00, July 6, 1952. Ph/ Macdonald.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Sunday Date July 6, 1952

520706-14 Jact Murata and Earl Ingerson collecting gas samples at Sulphur Bank, about 15:00, July 6, 1952. Ph: Macdonald

Monday, July 7, 1952

520707-1 Uwekahuna, Observation area at HVO.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Monday Date July 7, 1952

520707-2 View to Halemaumau. Ph: Wentworth.

520707-3 To North Rim. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Monday Date July 7, 1952

520707-5 Fountains in middle and SW portion of floor of Halemaumau; from E rim; about 14:00. Ph: Macdonald

520707-6 Fuming cone at NE edge of Halemaumau floor, from E rim; about 14:00. Ph: Macdonald.

520707-7 Ditto. Ph: Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Monday Date July 7, 1952

July 7, 1952, Monday

2300 Activity much as in afternoon.

Temperature on Main fountains

1025
1030 1030
1020
1040 1040 1040
1038

July 8, 1952, Tuesday

0745 Central fountains playing to average height of 50-75 feet, some bursts up to 150 feet. Building cone around S and SE sides. Only a small remnant of the cone segment on E side remains. A small segment also forming on W side. Lava flooding ENE from cone. Fountains SW of main fountains low, - average about 25 feet.
NE cones not even fuming.

1230 Arc of small fountains at SW end. Half a dozen, with biggest at N end.

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Tuesday Date July 8, 1952

520708-1 N portion of floor of Halemaumau, from SE rim; panoramic with 5207078-2. 12:30. Ph: Macdonald.

520708-2 Central portion of floor of Halemaumau from SE rim; panoramic with 520708-1 and 520708-3. 12:30. Ph: Macdonald.

520708-3 Central and SW portion of floor of Halemaumau, from SE rim; panoramic with 520708-1 and 520708-2. 12;30. Ph: Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date July 9, 1952

July 9, 1952, Wednesday

0718 Condition much like last p.m. Some glow visible at NE fountains. Overflow during night reached NW wall, burying old lava channel visible on bench in NW sector for past 48 hours.

Kapapala cowboys report steam on SW rift. On July 20 Dick Johnston visited area and found steam just SE of Puu Kou, but states that steam seen from Ainapo house must have been between Puu Kou and Kamakaia Hills.

1530 Set flags on rim stations 5 and 23.

1600 Overflow started on NW side.

1725 Overflow has practically reached the wall of the NW corner.

Central fountains have built cone wall on SSE side, about 40 feet high. Small fountains just SW of central fountains also are starting to build spatter cones.

A large fragment of cone has moved into main fountain pit and is lying directly against E edge of fountains. It is being repeatedly covered by red spatter. It rocks majestically in the fountain bursts at times.

2000 Temperature readings central fountains: 1010° to 1030°
The latter several times.

2125 Temperature readings repeated: 1015° - 1030°

July 10, 1952, Thursday

0715 Conditions much like yesterday. Cone at central fountain has built up to a height of about 60 feet on S side. Lava streams spilling E and N from it. Average height of fountains about 50 feet, some bursts up to 200 feet.

Lava ring about 10 feet high encloses pond around SW fountain. Fountains between SW and central fountains are building a row of spatter cones.

Overflows on E, N and NW parts of pit floor, reaching wall on NW.

G.A.M.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Wednesday Date July 9, 1952

520709-1 2:00 p.m. , Floor of Halemaumau and fountains. Ph: Wentworth.

520709-2 Ditto. Ph: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Wednesday Date July 9, 1952

520709-3 2:00 p.m., Floor of Halemaumau and fountains. PH; Wentworth.

520709-4 Ditto. PH: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Wednesday Date July 9, 1952

520709-5 2:00 p.m., Floor of Halemaumau and fountains. Ph: Wentworth.

520709-6 Bitto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date July 9, 1952

520709-7 Central portion of floor of Halemaumau, form SE rim; panoramic with 520709-8 and 520709-9; 20:00. Ph: Macdonald.

520709-8 SW portion of floor of Halemaumau, from SE rim; panoramic with 520709-7 and 520709-9; 20:00. Ph: Macdonald.

520709-9 Northern portion of floor of Halemaumau, from SE rim; panoramic with 520709-7 and 520709-8; 20;00. Ph: Macdonald.

July 10, 1952, Thursday

0715 continued,
Small flows still issuing from NE cone area, moving out parallel to pit walls.

1000 Temperature measurements at Sulphur Bank - Standard conditions

Vent #2	203°F.
Steam well	205°F.

1200 Large fragment from E rim of central cone, about 40 feet long, fell into fountain pit.

1225 Small flow issuing from S flank of cone around main fountains. A little fountain at the head of this flow spouts sporadically to 5-10 feet height.

1600 Some fragment visible in fountain pit from station 12, rocking around in fountain blasts.

2120 Temperature measurements:

Main fountain	1030°
lava near NE edge of main central pond	970°
lava in driblet flow on bench about 50 feet from edge of main pond	900° C
SW fountain	1030°

Intermittent pale bluish flame at 2 nearly sealed in vents just SW of main fountains.

1630 Plane table at S base. W. Benson, Inst.

2200 Main fountains playing to average height of about 50 to 75 feet, with some bursts up to 250 feet.
SW pool is isolated from main pool. Main pool is overflowing on all edges, but most prominent overflow is on NW edge, reaching wall of pit. There seems to be much less overflow from SW pool. SW fountains are about 25 feet high, with some bursts as high as 100 feet

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date July 10, 1952

520710-1 8 p.m., night views of floor and fountains from south lookout. Ph: Wentworth.

520710-2 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

JOURNAL

Hawaiian Volcano Observatory

Day Thursday Date July 10, 1952

520710-3 8 p.m., night views of floor and fountains from south lookout. Ph: Wentworth.

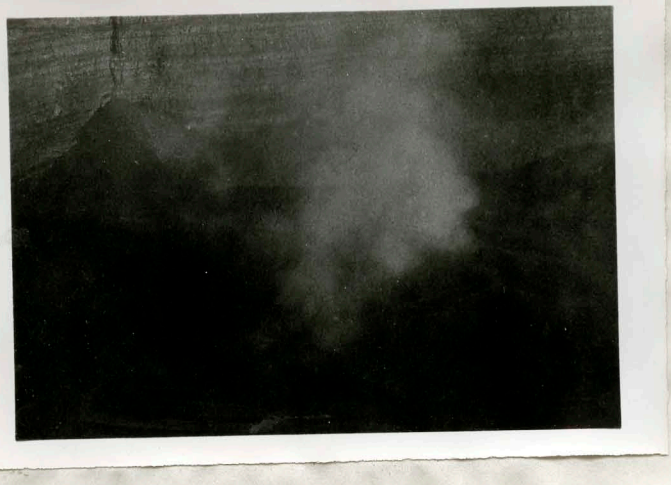
520710-4 Ditto. Ph: Wentwor th.

JOURNAL

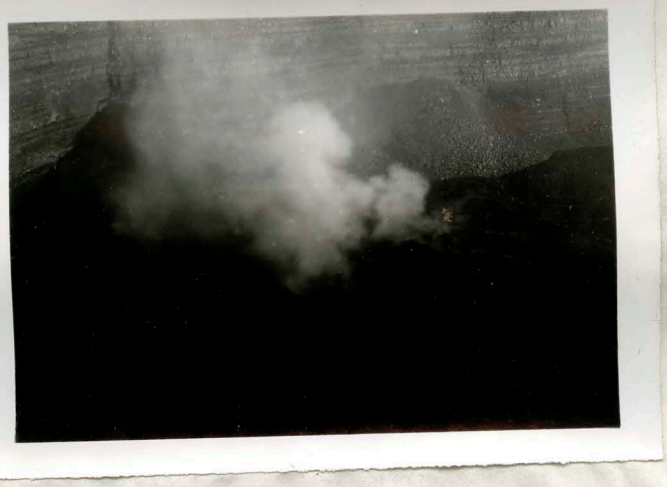
DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Thursday Date July 10, 1952

520710-5 8 P.m., night views of floor and fountains from south lookout. Ph; Wentworth.

520710-6 Ditto. Ph: Wentworth.



520710-7 SW portion of floor of Halemaumau, from SE rim; 07:15.
Ph: Macdonald.



520710-8 SW portion of floor of Halemaumau, from SE rim; 07:20.
Ph: Macdonald.

520710-9

Ditto. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Friday Date July 11, 1952

July 11, 1952, Friday

0730 Much like yesterday. Central cone has grown a little. Overflows on NE bench.

1210 New fountain broke out with loud detonation, throwing 100 feet high. Located in NE part of SW fountain pool about 200 feet NE of main SW fountain. Lasted high only a couple of minutes. By 1213 it was down to average height of about 25 feet, remained that way to 1315, when we left.

July 12, 1952, Saturday

0730 Much the same as last few days. Central cone larger, and a new cone growing around fountain pit about 300 feet SW of main cone.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date July 10, 1952

520710-10 SW portion of floor of Halemaumau, from rim station 12, on NW rim; 16:00. Ph: Macdonald.

520710-11 Floor of Halemaumau, from rim station 8, on N Rim; 16:15. Ph: Macdonald.

520711-1 SW portion of floor of Halemaumau, from SE rim 07:30, July 11, 1952. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date July 12, 1952

520712-1 8:00 a.m., oblique views of floor. Ph: Wentworth.

520712-2 Ditto. Ph: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Saturday Date July 12, 1952

520712-3 8:00 a.m., oblique views of floor. Ph: Wentworth.

520712-4 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

JOURNAL

Hawaiian Volcano Observatory

Day Saturday Date July 12, 1952

520712-5 8:00 a.m., oblique views of floor. Ph: Wentworth.

520712-6 11:30 a.m., Oblique views with 10" Protar, all seem fogged. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date July 12, 1952

520712-7 11:30 a.m;, Oblique views with 10" Protar, all seem fogged. Ph: Wentworth.

520712-7a Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date July 12, 1952

520712-8 11:30 a.m., Oblique views with 10" Protar, seem fogged.
Ph: Wentworth.

520712-9 11:30 a.m., Topopan, right to left, from Station 28.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date July 12, 1952

520712-10 11:30 a.m., Topopan, right to left, from station 28
Ph: Wentworth.

520712-11 Pan. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date July 12, 1952

520712-12 Pan. Ph: Wentworhh.

520712-13 11:30 a.m., Topopan, right to left, from station 1.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date July 12, 1952

520712-14 11:30 a.m., Topopan, right to left, from station 1.
Ph: Wentworth.

520712-15

Pan. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date July 12, 1952

July 12, 1952, Saturday

1100 Sw pool is true lava lake we believe. Constant sinkhole at NE end, around a permanent fountain. Apparently a gradual outward movement over all or most of the rest of the lake, with occasional crust foundering and marked downflow at various points all around the rim. At these places short-lived rim fountains are formed and have built a lava ring by their spattering. Rim looks 5 to 10 feet high.

1300 Level at NW edge has risen 2-3 feet since 1100.

2100 Fountains bigger and more active than any time since July 5. Central fountain throwing many bursts to 250 feet, some to 300 feet high. Laterallly as far as bench on W. side and about 500 feet NE. Top of high bursts intersects line of sight to top of W talus. SW fountains up to 100 feet, occasionally 150 feet. Much flooding over crater floor, especially from central fountains (see diag. Prev. pg.).

Max. Temperature: Central fountains 1030°
SW fountains 1030°

July 13, 1952, Sunday

2200 Temperatures (Max. readings):

Main fountains	1030°
SW fountains	1030°
Grotto fountains just SW of Main cone	1030°
Lava overflow at NE edge of central pond.	935°

Earlier today (about 1600) sinkhole at N edge of Sw pond was very active. Now moderately active.

Central fountains playing to average height of about 100 feet with some throws as high as 300 feet. The cone wall is about 60 feet high. Two strong rivers issuing at NE and SW ends of cone, much as yesterday (See sketch, July 12).

July 14, 1952, Monday

0730 Much like yesterday, except fountains a little smaller. SW pond draining under the lava ring on E side, sending flow NE. Much white fume from "sinkhole" fountain at NE end of SW pond, and from edge of floor just E of 1919 fissure.

Fountain just SW of main cone is playing in a partly roofed over grotto of its own building.

G.A.M.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Saturday Date July 12, 1962

520712-16 Pan. Ph: Wentworth.

520712-17 7:30 p.m., Night obliques of Halemaumau floor.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date July 12, 1952

520712-18 7:30 p.m., Night obliques of Halemaumau floor. Slightly out of focus. Ph: Wentworth.

520712-19

Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date July 12, 1952

520712-20 7:30 p.m., Night obliques of Halemaumau floor.
Ph: Wentworth.

520712-21 Ditto. Ph: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Saturday Date July 12, 1952

520712-22 7:30 p.m., Night obliques of Halemaumau floor.
Ph: Wentworth.

520712-24 SW portion of floor of Halemaumau, from SE rim; 07:30.
Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date July 12, 1952

520712-25 Central portion of floor of Halemaumau, from SE rim; 07:15. PH; Macdonald.

520712-26 SW portion of floor of Halemaumau, from SE rim; 07:15. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Monday Date July 14, 1952

July 14, 1952, Monday

0730 continued,

I get the impression of somewhat less fluidity than earlier.

Sinkhole at NE edge of Sw pond not active. Sluggish flows are moving away from the fountain there.

1500 W tilt cellar N 5° E 9.5
reset to S 1.0

2145 From SE rim max. temperatures:
Main fountains 1030°
SW fountain 1030°

2230 From W rim
Main fountains 1055°
SW fountain 1045°

Note - El Bholin says E wall of main cone broke down at 0815 this a.m., forming gap thru which a big flow is issuing eastward.

General overflow from SW pond both E along S wall, and westward, this afternoon and evening. This evening central pond overflowing toward NW.

Some bursts of main fountains at least 350 feet high.

July 15, 1952, Tuesday

0715 Fountain roar audible plainly from Uwekahuna.

0730 Conditions much like yesterday. Central fountains playing to average height of about 100 feet, with some bursts to 250 feet. Loud explosive bursts.

A big tongue of lava is moving out over the bench on the east side of the central pond, directly toward the tourist area.

Other fountains active but rather small.

Four rivers now pouring from central cone.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Monday Date July 14, 1952

520714-1 7:45 p.m., Night obliques of Halemaumau floor.
Ph: Wentworth.

520714-2 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Monday Date July 14, 1952

520714-3 7:45 p.m., Night obliques of Halemaumau floor.
Ph: Wentworth.

520714-4 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Monday Date July 14, 1952

520714-5 7:45 p.m., Night obliques of Halemaumau floor.
Ph: Wentworth.

520714-6 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Monday Date July 14, 1952

520714-7 Fountains on floor of Halemaumau, seen from W rim about 150 feet N of rim station 18. 15:00. Ph: Macdonald.

520714-8 Fountains on floor of Halemaumau, seen from W rim about 150 feet N of rim station 18. 1500. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Monday Date July 14, 1952

520714-9 Fountains on floor of Halemaumau, from W rim about 150 feet N of rim station 18; 15:15. Ph: Macdonald.

520714-10 Fountains on floor of Halemaumau, from W rim about 150 feet N of rim station 18; 15:20. Ph: Macdonald.

520714-11 Fountains and flows on floor of Halemaumau, from W rim about 150 feet N of rim station 18; about 22:00. Ph: Macdonald.

520714-12 Like 520714-11. Ph: Macdonald.

520714-13 Like 520714-11. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Monday Date July 14, 1952

~~520714-13 Like 520714-11. Ph: Macdonald.~~

520714-14 Like 520714-11. Ph: Macdonald.

520714-15 Like 520714-11. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Monday Date July 14, 1952

520714-16 Like 520714-11. Ph: Macdonald.

520714-17 Like 520714-11. Ph: Macdonald.

520714-18 Like 520714-11. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Monday Date July 14, 1952

520714-19 Like 520714-11. Ph: Macdonald.

520715-1 8:00 p.m., Night obliques of Halemaumau floor. Tuesday, July 15. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Tuesday Date July 15, 1952

July 15, 1952, Tuesday

0730 continued,

Kapapala Ranch cowboys report seeing smoke on Kilauea SW rift early on mornings of July 9, 10 and 11, makai from a point 1½ miles down the highway from the old halfway house ("Potato House").

Hiked to Puu Koa with Bill Benson. Could see no sign of smoke or anything else unusual on rift.

New Pele's Hair on ground in vicinity of Puu Kou. It is reported falling at Corps Construction camp on new highway on night of June 27.

2200 From tourist area

Temperature on main fountains	1030° C
From W rim near old rim station 18	1055° C

New beehive cone has built at N edge of SW pond. Is about 30 feet high. Throwing spray bursts to height of about 100 feet, but most only 10 - 25 feet. Main fountains generally play to about 50-75 feet, with occasional very high bursts as much as 350 feet. Four lava rivers active. SW fountain weak.

July 16, 1952, Wednesday

0700 SW fountains, including "beehive", inactive. Main fountains and fountain just SW are active, about like last night. Four lava rivers spilling from central cone over central floor. Central pond overflowing into old SW pond, and also overflowing bench on SE and NW sides. A small multiple fountain active just ENE of "beehive".

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Tuesday Date July 15, 1952

520715-2 8: 00 p.m., Night obliques of Halemaumau floor.
Ph: Wentworth.

520715-3 Ditto. Ph: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Tuesday Date July 15, 1952

520715-4 8:00 p.m., Night obliques of Halemaumau floor.
Ph: Wentworth.

520715-5 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Tuesday Date July 15, 1952

520715-6 8:00 p.m., Night obliques of Halemaumau floor.
Ph: Wentworth.

520715-7 Fountains on SW part of floor of Halemaumau, from SE rim, showing flow moving out over bench on S[illegible] side of lake. 07:30. Ph: Macdonald

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date July 16, 1952

July 16, 1952, Wednesday

2000 Temperature on Main fountains,
Tourist area, SE rim 1030° C

2130 Temperature from W rim near Sta. 18
Main fountains 1055°
Fountain SW of main ftns. 1055°

Wall between main fountain pit and one just SW has broken down. Fountain just SW of main fountains is very active, and lava streams are pouring both SE from it and NW into main fountain pit.

July 17, 1952, Thursday

0730 Conditions much like last night. Central fountains very active, average height about 75 feet. Some bursts much higher. Last night a few went as high as 350 feet. Central fountain pit and the one just SW are now connected by a wide open gap.
SW fountains occasionally spurt weakly.

July 18, 1952, Friday

0730 Activity much like yesterday. Central and SW central fountains very active. Average height 50-75 feet, with occasional bursts to 200 feet.
A big flow is moving out from the S edge of the SW pond, over the bench along the foot of the S wall of the crater.

2000 Temperature measurements from SE rim
Main fountains 1030° C
Fountain just SW 1030°

Activity much like that for past several days. Main fountain throws to average height of about 75 feet, same bursts up to 300 feet.

2100 Temperature from S rim
Main fountains 1050°
SW central fountain 1048°
Soarce aperture of small flow overflowing S bench 1038°

520715-8 Fountains and lake in Halemaumau, from W rim about 150 feet N of rim station 18. 22:00. Ph? Macdonald.

520715-9 Ditto. Ph: Macdonald.

520716-1 SW portion of floor of Halemaumau, from SE rim; panoramic with 520716-2, 520716-3, and 520716-4. 07:00. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

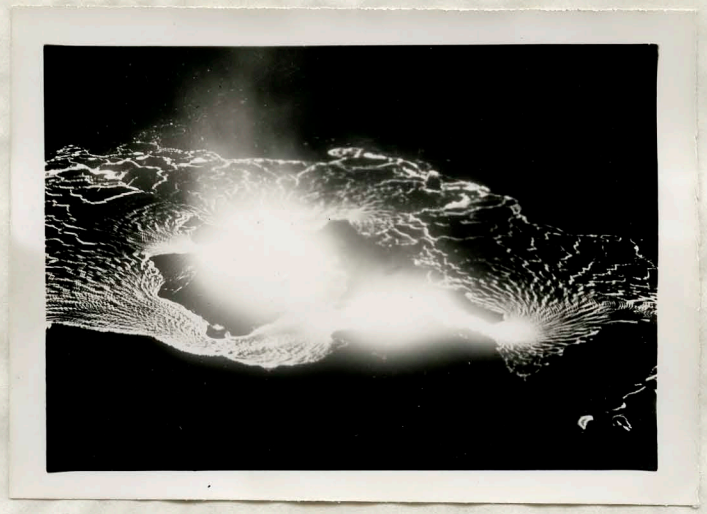
Day Wednesday Date July 16, 1952

520716-2 SW portion of floor of Halemaumau, from SE rim; panoramic with 520716-1, 520716-3, and 520716-4; 07:00. Ph: Macdonald.

520716-3 Central portion of floor of Halemaumau, from SE rim; panoramic with 520716-1, 520716-2, and 520716-4; 07:00. Ph: Macdonald.

520716-4 North-central portion of floor of Halemaumau, from SE rim; panoramic with 520716-1, 520716-2, and 520716-3; 07:00. Ph: Macdonald.

520716-5 Fountains and lake from W rim of Halemaumau, about 150 feet No. of rim station 18; 21:30. Ph: Macdonald.



520716-6 Ditto. Ph: Macdonald.

520716-7 Ditto. Ph. Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Friday Date July 18, 1952

520718-1 7:30 p.m., Night obliques of Halemaumau floor.
Ph: Wentworth.

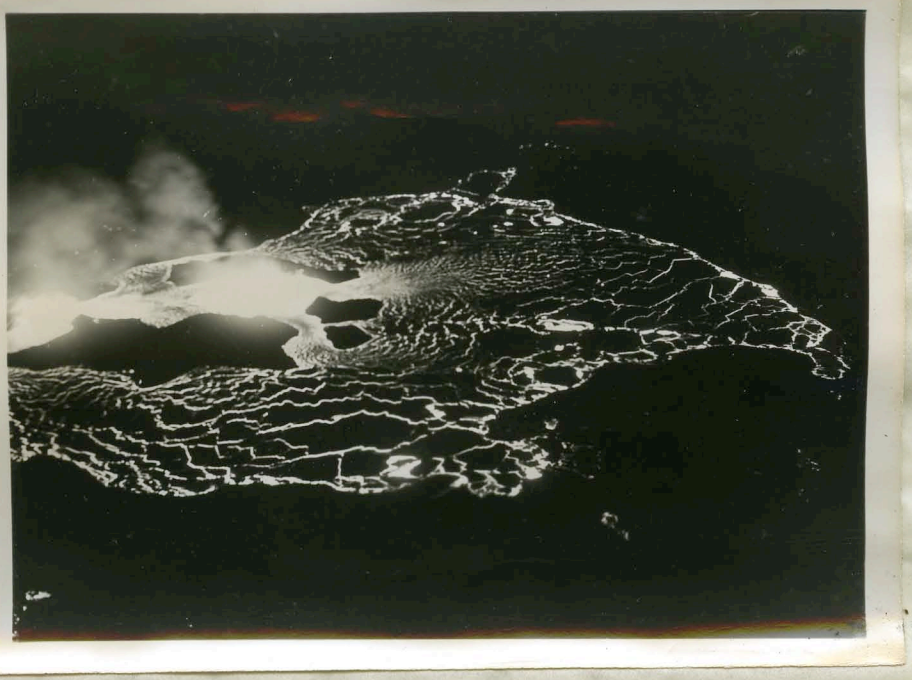
520718-2 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Friday Date July 18, 1952



520718-3 7:30 p.m., Night obliques of Halemaumau floor
Ph: Wentworth.

520718-4 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

JOURNAL

Hawaiian Volcano Observatory

Day Friday Date July 18, 1952

520718-5 7:30 p.m., Night obliques of Halemaumau floor.
Ph: Wentworth.

520718-6 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Friday Date July 18, 1952

520718-7 NW side of Halemaumau, 11:00 a.m., photopan.

520718-8 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Friday Date July 18, 1952

520718-9 NW side of Halemaumau, 11:00 am.m., photopan.
Ph: Wentworth.

520718-10 Oblique to Halemaumau floor.
Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Friday Date July 18, 1952

520718-11 Oblique to Halemaumau floor.
Ph: Macdonald.

520718-11a SW central portion of floor of Halemaumau, from SE rim;
07;30, Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date July 19, 1952

July 19, 1952, Saturday

0730 Activity much like yesterday. Central lake has built up rampart about 15 feet high on S and SE sides, and liquid surface stands way above black bench. Overflows on NW, NE, and E sides.
Four lava rivers pouring from central cone.

0750 Crack # 21 - 122.1 cm.

July 20, 1952, Sunday

0730 Central and SW central fountains active. Lava flooding out of cone thru a large gap on NE side, and less actively thru smaller gaps at E, S, and W sides.
Crack " 21 - 122.1 cm.
General note on small temporary fountains:
They can occur anywhere on the lake surface, but are by far commonest at two general locations - ie. at the edge of the lake and, along lines where flows from different gaps in the cones merge. They almost always, if not always, accompany or closely follow foundering of a block of crust. Along the edge of the lake the small fountains have built a wall, or dike, that confines the central lava lake at a level several feet above the surrounding bench, about 15 feet today and yesterday on the SE side.

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Friday Date July 18, 1952

520718-12 South portion of floor of Halemaumau, from SE rim, showing big flow moving out over bench at foot of S wall of crater; 07:30. Ph: Macdonald.

520718-13 Fountains and lake, from S rim of Halemaumau; showing small flow overflowing S bench; 21:00. Ph: Macdonald.

520719-1 July 19, 1952. 07:30. SW portion of Halemaumau floor from SE rim. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date July 20, 1952

July 20, 1952, Sunday

2050 Temperature readings from tourist area:

Main fountain	1040°
SW central fountain	1040°
SW rim near station 18	
Main fountain	1050°
Central SW, fumy	1040°

General overflow of central lake began about 1215 today. Flows moved outward to, or near to, the pit walls all around the NW, N, and NE sides. This continued until late at night, - after 2300. NE central cone (at site of old sinkhole) obliterated.

July 21, 1952, Monday

1650 Overflow began at SW end, sending flow westward between pit wall and margin of SW lobe of lava lake. Some overflow continues toward NW and N walls, and has all day.

2015 Temperature from Tourist area;

Main fountain	1030°

2130 Temperature from SW rim near sta. 18:

Main fountain	1055°

July 22, 1952, Tuesday

0730 Activity essentially unchanged. Active flows over N part of floor.

July 24, 1952, Thursday

0730 Activity much the same as for past week. Overflows to N and NW.
Chester's figures:

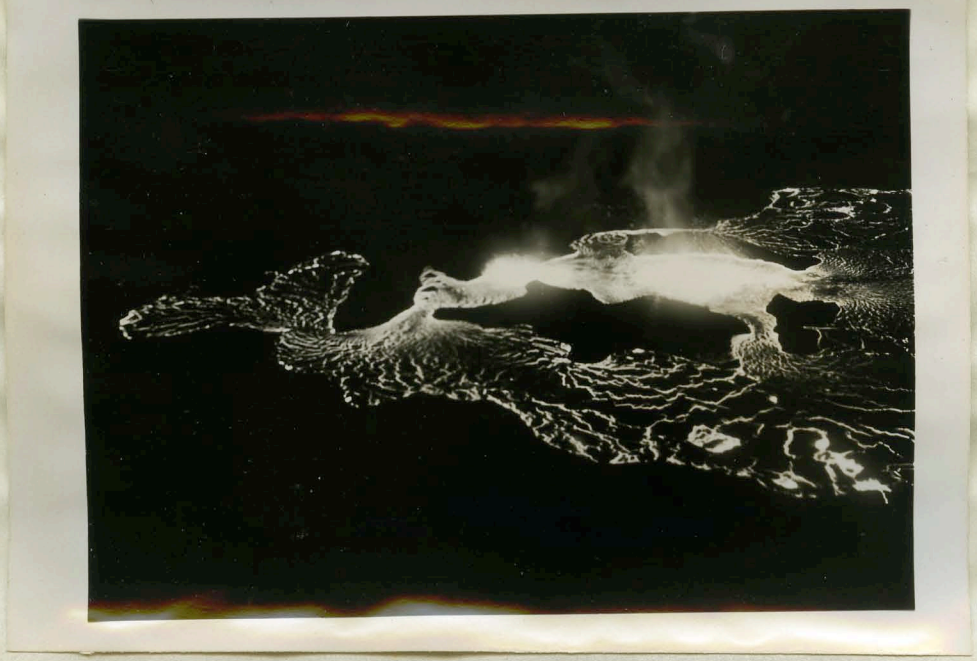
Area of pit floor	
July 1 - -	104.4 acres
July 16 -	113.8 acres
Area within rim	203. acres
370 million gr cal/	cubic yard
1.5 million BTU/	" "

July 1 - 1,000,000 yds^3 - about 6. feet of rise of floor
July 16- 1,000,000 yds^3 - About 5.4 feet of rise of floor
One inch of lava will evaporate 1 inch of rain.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date July 20, 1952



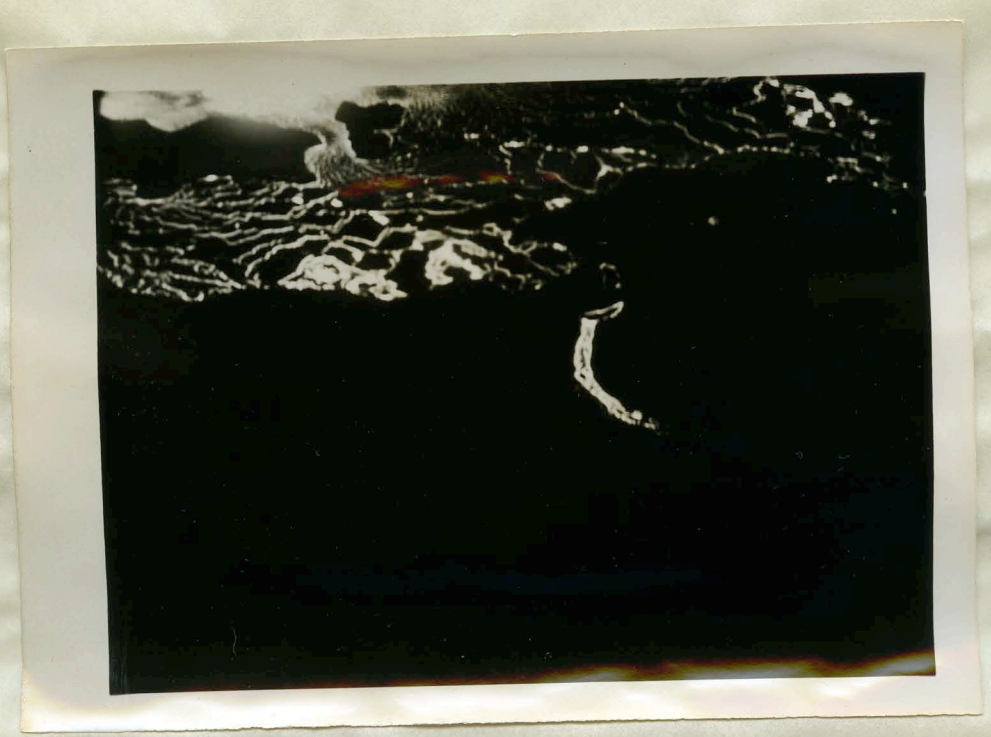
520720-1 7:30 p.m., Oblique views of Halemaumau floor.
Ph: Wentworth.

520720-2 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date July 20, 1952



520720-3 7:30, Oblique views of Halemaumau floor.
Ph: Wentworth.

520720-4 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

JOURNAL

Hawaiian Volcano Observatory

Day Sunday Date July 20, 1952

520720-5 7:30 p.m., Obliques views of Halemaumau floor.
Ph: Wentworth.

520720-6 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date July 20, 1952

520720-7 7:30 p.m., Oblique views of Halemaumau floor.
Ph: Wentworth.

520720-8 Ditto. Ph: Wentworth.

520720-9 07:30. SW portion of floor of Halemaumau from SE rim. Panoramic with 520720-10. Ph: Macdonald.

520720-10 07:30 Central portion of floor of Halemaumau, from SE rim. Panoramic with 520720-9. Ph: Macdonald.

520720-11 12:00. Halemaumau from end of Mauna Loa truck trail. Essentially the same as 520720-12 and 13. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date July 20, 1952

520720-12 12:00 Halemaumau from end of Mauna Loa truck trail, near Mauna Loa seismograph station. Showing fume. Ph: Macdonald.

520720-13 Ditto. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Monday Date July 21, 1952

520721-1 2:00 p.m. Oblique daytime views of Halemaumau floor, fogged. Ph: Wentworth.

520721-2 Ditto. Ph: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Monday Date July 21, 1952

520721-3 2:00 p.m. Oblique daytime views of Halemaumau floor.
Ph: Wentworth.

520721-4 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Tuesday Date July 22, 1952

527022-1 07:30. SW part of floor of Halemaumau, from SE rim.
Ph: Macdonald.

520723-1 7:30 plm. Night obliques of Halemaumau floor. Wednesday, July 23.
Ph: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Wednesday Date July 23, 1952

520723-2 7:30 p.m. Night obliques of Halemaumau floor.
Ph: Wentworth.

520723-3 Ditto. Ph: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Wednesday Date July 23, 1952

520723-4 7:30 p.m. Night obliques of Halemaumau floor.
Ph: Wentworth.

520723-5 Bitto. Ph; Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date July 20, 1952

520723-6 7:30 p.m. Night obliques of Halemaumau floor.
Ph: Wentworth.

520724-1 July 24, 1952. 07:30. SW portion of floor of Halemaumau, from SE rim. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Friday Date July 25, 1952

July 25, 1952, Friday

0700 Activity much like past 10 days.

2100 Temperature from SE rim tourist area
Main fountain 1030° C
Temperature from
Station 25 on S rim 1045°
Iron stake on SW rim 1055°
(All Max. readings)

July 26, 1952, Saturday

0745 Activity much like past 10 days.
Crack #21 - 122.1 cm.

July 27, 1952, Sunday

1500 Crack # 21 - 122.1 cm.
Time of rise of gas cloud from fountain diagonally to SW rim - 24-34 sec.
Time of movement of waves from fountain NE gap in cone - 8sec.

Rate of lava flow out of central cone

S gap	50	feet	in	25	seconds
N gap	"	"	"	60	"
E gap	"	"	"	70	"
NE gap	"	"	"	85	"

July 28, 1952, Monday

0730 Activity much the same as for past 10 days.
S floor has risen to cover top of lower 1919 cave. Rose bodily, without overflow.

0745 Large landslide on NW wall.

July 29, 1952, Tuesday

0715 Activity much the same as for past 10 days.

2000 Average interval between big bursts of fountains, about 8 seconds.
Average travel time of waves from central fountain to E cone gap - 9 sec.
Wave lenght about 40 feet.

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date July 26, 1952

520726-1 8:00 p.m. Oblique night views of Halemaumau floor.
Ph: Wentworth.

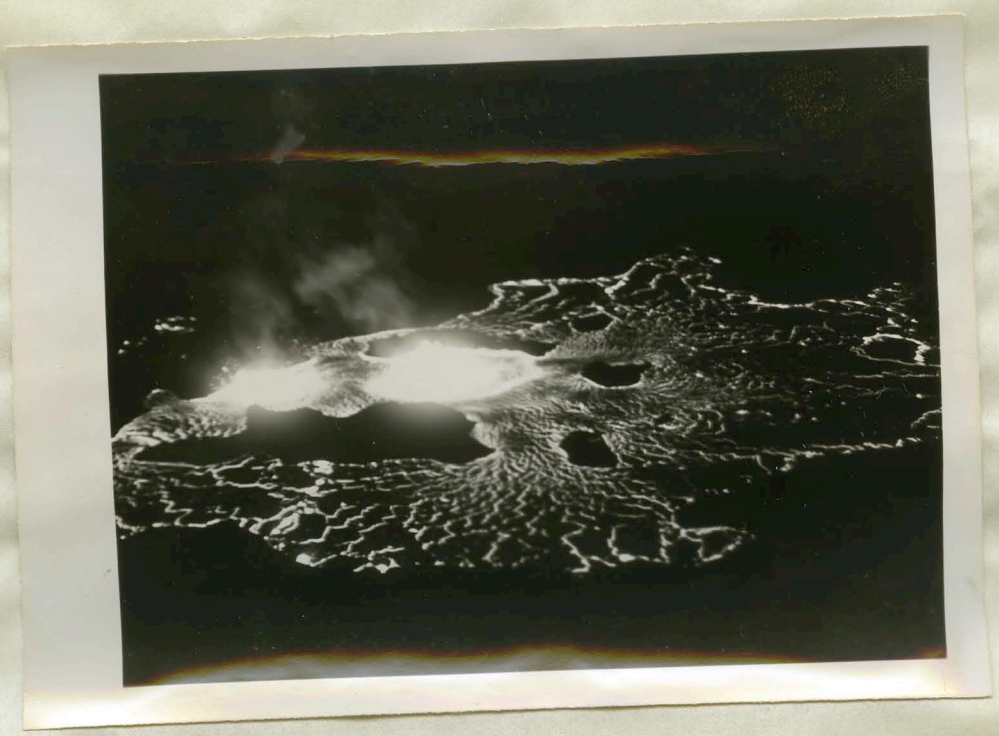
520726-2 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date July 26, 1952



520726-3 8:00 p.m. Oblique night views of Halemaumau floor.
Ph: Wentworth.

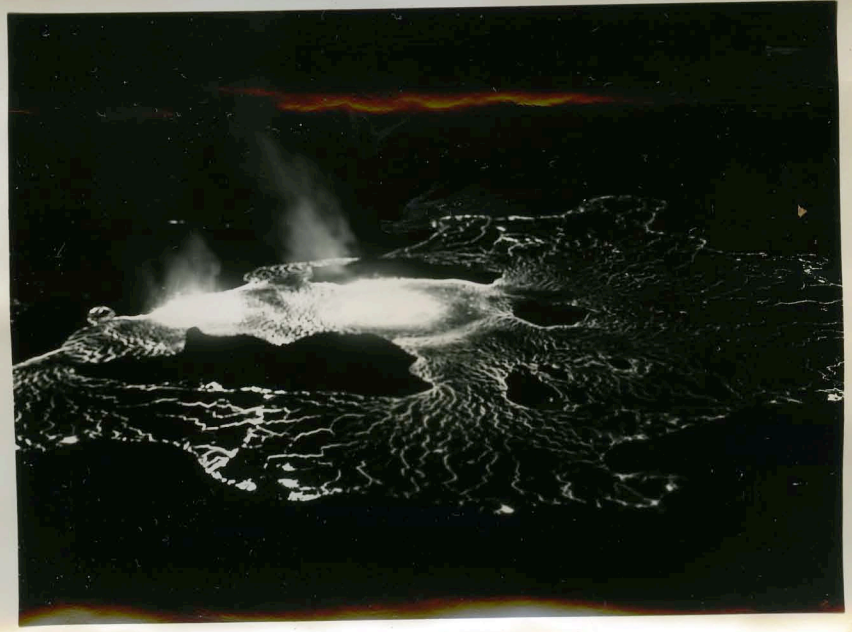
520728-1 8:00 p.m. July 28, 1952. Oblique night views of Kilauea floor.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Monday Date July 28, 1952



520728-2 8:00 p.m. Oblique night views of Halemaumau floor.
Ph: Wentworth.

520728-3 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Monday Date July 28, 1952

520728-4 07:45. Large landslide on NW wall of Halemaumau, seen from SE rim. Ph: Macdonald.

520729-1 July 29, 1952. 07:15. SW portion of floor of Halemaumau, from SE rim. Ph: Macdonald..

520729-2 2100. Lava lake and cone segments in Halemaumau, from SW rim near rim station 18. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Tuesday Date July 29, 1952

July 29, 1952, Tuesday

2100 Temperature Measurements:

SW rim near station 18, Main fountain	1055° C
Tourist area, SE rim	1040° C

Several small dribble flows along the edge of the floor, at or close to the wall of the pit. All way around. Apparently hot lava rising between the wall and the crater fill.

Some bursts of main fountain as high as 400 feet. Fountains are noisely explosive.

July 30, 1952, Wednesday

0745 Activity much like that for past 10 days, the fountains seem to be gradually decreasing in average height.

No surface overflows of central pond, but whole floor has been rising bodily. At NW edge floor has risen about 8 feet in past 2 days, bringing up on top of it the debris of the landslides of July 28.

Dribble flow at foot of NE talus this morning.

2300 Fountains noisily explosive. Detonations clearly audible at Volcano House, 2 miles away.

Temperature from SE rim Tourist area - 1040°C

Average height of fountains 40-50 feet, occasional explosive bursts to 300 feet.

Lava in fountain pit does not appear any more viscous than formerly. Rate of wave travel from main fountain to E cone gap - 9 seconds.

0700 to 0800 Conspicuous steam cloud on NE rift of Mauna Loa, a little above 12,000 foot altitude. Seem from Volcano Observatory.

Later in day Kulani workers on cross-island road reported "smoke" at summit of Mauna Loa.

0730 Steam visible on SW rift of Kilauea from Hawaii Volcano Observatory. Location just to right of and close to, Kamakaia Hills, between them and Puu Kou.

July 31, 1952, Thursday

0745 Halemaumau activity much like last 10 days. Fountains still noisily explosive, and detonations still audible form Volcano House this a.m.

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Tuesday Date July 29, 1952

520729-3 2100. Lava lake and cone segments on floor of Halemaumau, from SW rim near rim station 18. Ph: Macdonald.

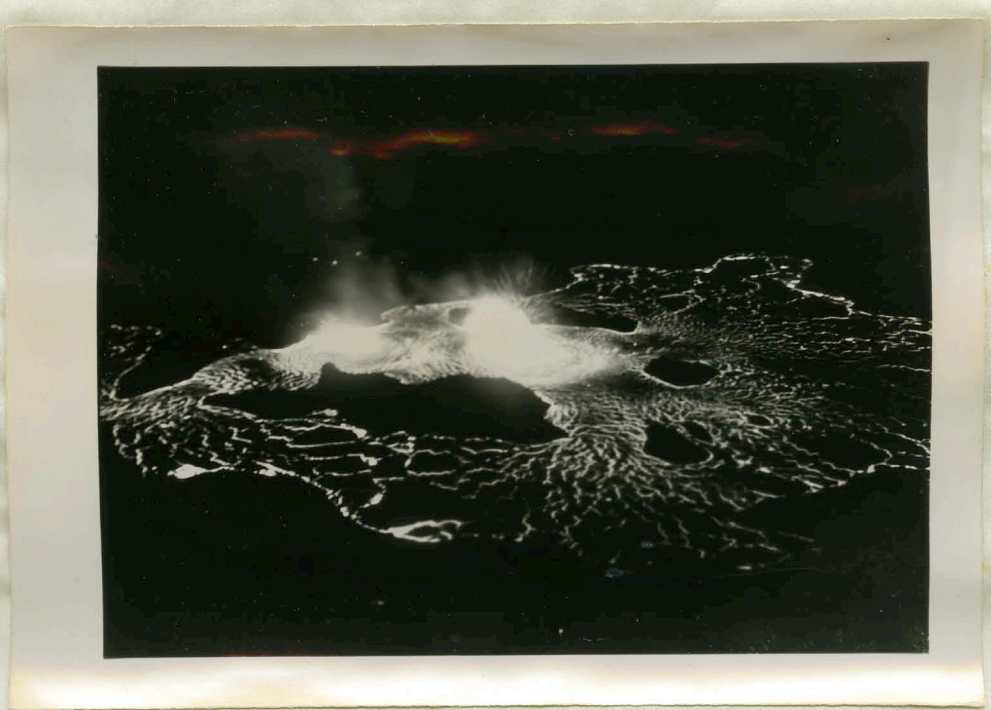
520729-4 21:00 Ditto. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date July 30, 1952

520730-1 8:00 p.m. Night obliques of Halemaumau floor.
Ph: Wentworth.



520730-2 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date July 30, 1952

520730-3 8:00 p.m. Night obliques of Halemaumau floor.
Ph: Wentworth.

520730-4 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date July 31, 1952

July 31, 1952, Thursday

2000 Activity much the same but some explosive bursts over 400 feet high, and one threw glowing ejecta at least 25 feet higher than the rim on the opposite side of the pit, - must have been more than 500 feet high.
150 feet of Kodachrome movies from SE rim of pit.

August 1, 1952, Friday

0800 Activity much the same as for past 2 weeks.
Crack # 21 - 122.1 cm.

August 2, 1952, Saturday

0730 Activity unchanged.

2100 Temperature reading from SE rim (Tourist area) 1030° C

August 3, 1952, Sunday

Activity the same

2100 Temperature reading for S rim 1030° C

2130 Temperature reading from tourist area 1030° C

August 6, 1952, Wednesday

0730 Activity unchanged.
Northrup Castle reports burst from central fountain passed rim last night about midnight.

1945 Temperature of central fountain, from tourist area - 1030° C
Burst from central fountain reached rim.

August 7, 1952, Thursday

0745 Activity unchanged.

2030 Temperature from Tourist area 1030° C

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date July 31, 1952

520731-1 8:30 a.m. Halemaumau station 2, near level pan.
Ph: Wentworth.

520731-2 Ditto. Ph: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

Day Thursday Date July 31, 1952

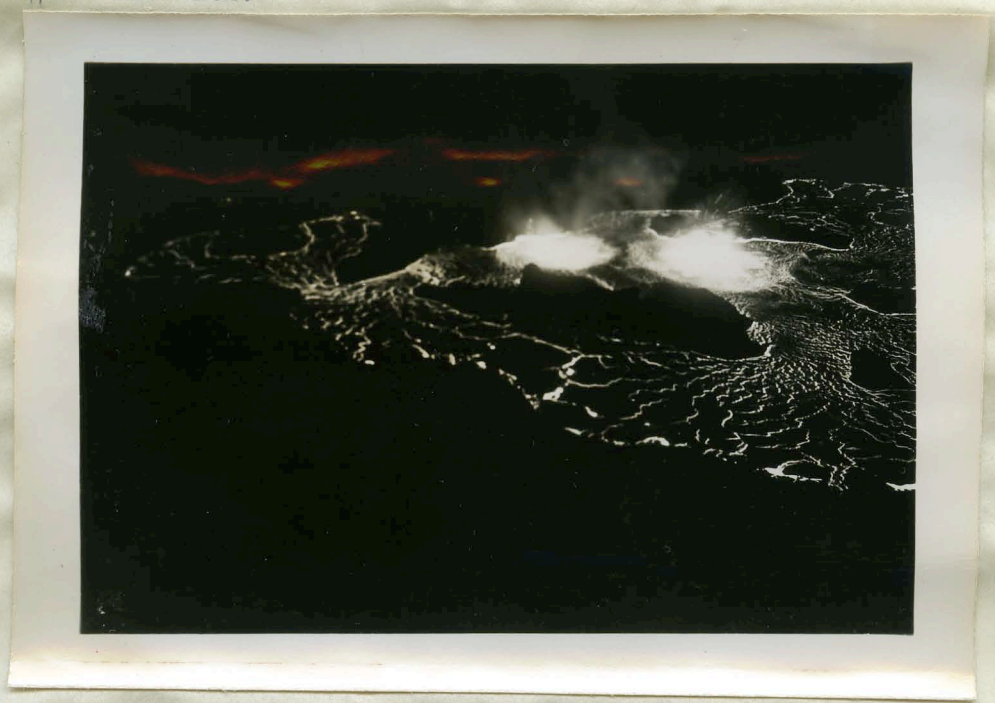
520731-3 8:30 a.m. Halemaumau station 2, near level pan.
Ph: Wentworth.

520731-4 8:30 a.m. Level pans of Halemaumau from station 28.
Ph: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Thursday Date July 31, 1952

520731-5 8:30 a.m. Level pans of Halemaumau from station 28.
Ph: Wentworth.



520801-1 August 1, 1952, Friday. 8:00 p.m. Night oblique of Halemaumau floor. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Friday Date Aug. 1, 1952

520801-2 8:00 p.m. Night oblique of Halemaumau floor.
Ph: Wentworth.

520801-3 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date August 2, 1952

520802-1 07:30. SW portion of floor of Halemaumau, from SE rim. Ph: Macdonald.

520802-2 Ditto. Ph: Macdoanld.

520803-1 August 3, 19521 21:00. Lava lake, fountains and cone segments, in Halemaumau, from S rim near station 26. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date August 3, 1952

520803-2 Lava lake, fountains and cone segments, in Halemaumau, from S rim station 26 (21:00). Ph: Macdonald.

520803-3 Same as 520803-2. Ph: Macdonald.

520803-4 Same as 520803-2. Ph: Macdonald.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Sunday Date August 3, 1952

520803-5 21:00 Laya lake, fountains and cone segments, in Halemaumau from S rim station 26. Ph: Macdonald.

520803-6 Same as 520803-5. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Monday Date Aug. 4, 1952

520804-1 7:00 p.m. Night oblique of Halemaumau floor.
Ph: Wentworth.

520804-2 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Monday Date Aug. 4, 1952

520804-3 7:00 p.m. Night oblique of Halemaumau floor.
Ph: Wentworth.

520804-4 Ditto. Ph: Went owth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Wednesday Date August 6, 1952

520806-1 8:00 p.m. Night oblique of Halemaumau floor.
Ph: Wentworth.

520806-2 Ditto. Ph: "entworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date Aug. 6, 1952

520806-3 8:00 p.m. Night oblique of Halemaumau floor.
Ph: Wentworth.

520806-4 Ditto. Ph: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Wednesday Date August 6, 1952

520806-5 8:00 p.m. Night oblique of Halemaumau floor.

520806-6 11:00. Halemaumau from Volcano Observatory at Uwekahuna; showing fume cloud. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date Aug. 6, 1952

520806-8 11:00 . Halemaumau from Volcano Observatory at Uwekahuna; showing fume cloud. Ph: Macdonald.

520806-9 Same as 520806-8. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date August 7, 1952

August 7, 1952, Thursday

2030 Continued,

One burst from central fountain reached rim. But in general activity seem to be somewhat decreased.

N margin of lake has retreated 50 to 75 feet, and overflows from new margin are spilling into the area between it and the old margin.

Dribble flows around edges of floor.

Large slice of W cone slid off this pm. It rocked around in the central fountain pit for several hours; was still visible, nearly submerged, at 1730, but was gone at 2000.

Kilauea continues active, with central fountains feeding a molten lava lake. Noisy, explosive, fountains average about 40 feet high. Some bursts exceed 400 feet, and last night one reached 550 feet.

August 9, 1952, Saturday

0745 Activity moderate. Lava in fountain pit gives the impression of becoming more viscous.

East island has moved slightly southward toward the big SE cone segment.

Kaipo Roberts and Bradford Sumner report a 600 foot bursts of the central fountain at 1610 yesterday.

August 10, 1952, Sunday

0900 Activity moderate. Lava in fountain pit appears definitely more viscous.

The three small east islands have drifted southward, apparently a unit, until the largest of the three is in contact with the large SE cone segment. Old SE river is choked off and NE and N rivers larger.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Thursday Date August 7, 1952

520807- 1 8:00 p.m. Night obliques of Halemaumau floor.
Ph: Wentworth.

520807-2 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date August 7, 1952

520807-3 8:00 p.m. Night obliques of Halemaumau floor.
Ph: Wentworth.

520807-4 Level pan from station 28. Ph: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Thursday Date August 7, 1952

520807-5 Level pan from station 28. Ph: Wentworth.

520807-6 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date August 7, 1952

520807-6 Level pan from station 28. Ph: Wentworth.

520807-7 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date August 7, 1952

520807-8 Level pan from station 28. Ph: Wentworth.

520810-1 3:00 p.m. Day view of Halemaumau floor. Ph: Wentworth.
(Sunday, August 10, 1952)

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date August 10, 1952

August 10, 1952, Sunday

0900 Continued,

The whole SE cone segment seem to have shifted W to bring it closer to the W segment, and narrow the S river. Cones are building up again on both sides, suggesting that they have moved in on both sides toward the fountains, or that the bottom of the fountain pit has become sufficiently solid to support an inward growth of the cone segments. Much more spatter than formerly is hitting on the cones.

The sill at the edge of the fountain pit appears to be shallow, not more than a few feet deep, and lava is moving out over it in surges into the rivers propelled by big fountain bursts. The same surges sweep as much as 20 feet up the wall of the W cone segment.

1600 Activity same.

2100 Temperature from Tourist area 1020° C

N river plunges over cascade at edge of fountain pit, - speed 10 feet per second. Inclination about 20°, width about 20 feet.

Temperature from S rim 1027° C

August 11, 1952, Monday

0730 Central fountain very small and intermittent. SW fountain much larger, - about size of former central fountain. Building cone rapidly All rivers from fountain pit still active, and flowing fast.

2000 Temperature from Tourist area 1010° C

Temperature from S rim 1018° C

Central fountain built up again late this a.m., so this p.m. and now it is again somewhat bigger than SW fountain.

E. river became blocked this afternoon. Other 3 are still going.

Average height of main fountain is about 35-50 feet, some bursts reach 250-300 feet.

August 12, 1952, Tuesday

1430 Stop watch timing of speed of flow in E cascade:

30 readings on crust fragments near middle of stream, top to base of cascade -- range 0.9 to 1.6 second

average 1.3 second

Scaled from map - width of stream 21 feet

length of cascade 27 feet

Stop watch on speed of E cascade:

Crust fragments near middle of stream, top to bottom of cascade-

Average of 25 readings - 1.5 seconds.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Sunday Date August 10, 1952

520810-2 3:00 p.m. Day view of Halemaumau floor. Ph: Wentworth.

520810-3 Ditto. Ph: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Sunday Date August 10, 1952

520810-4 3:00 p.m. Day view of Halemaumau floor. Ph: Wentworth.

520810-5 16:00. SW portion of floor of Halemaumau, from SE rim.
Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Monday Date August 11, 1952

520811-1 10:00 a.m. Level panorama from station 28.
Ph: Wentworth.

520811-2 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Monday Date August 11, 1952

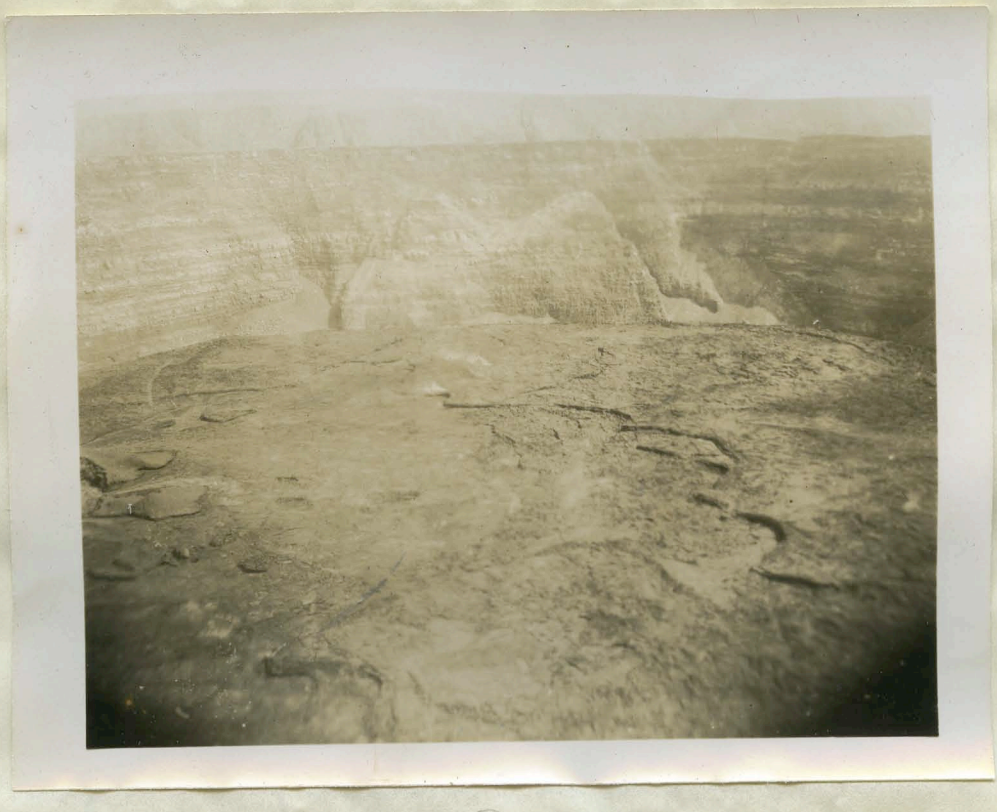
520811-3 10:00 a.m. Level panorama from station 28.
Ph: Wentworth.

520811-4 Ditto. Ph: Wentworth.

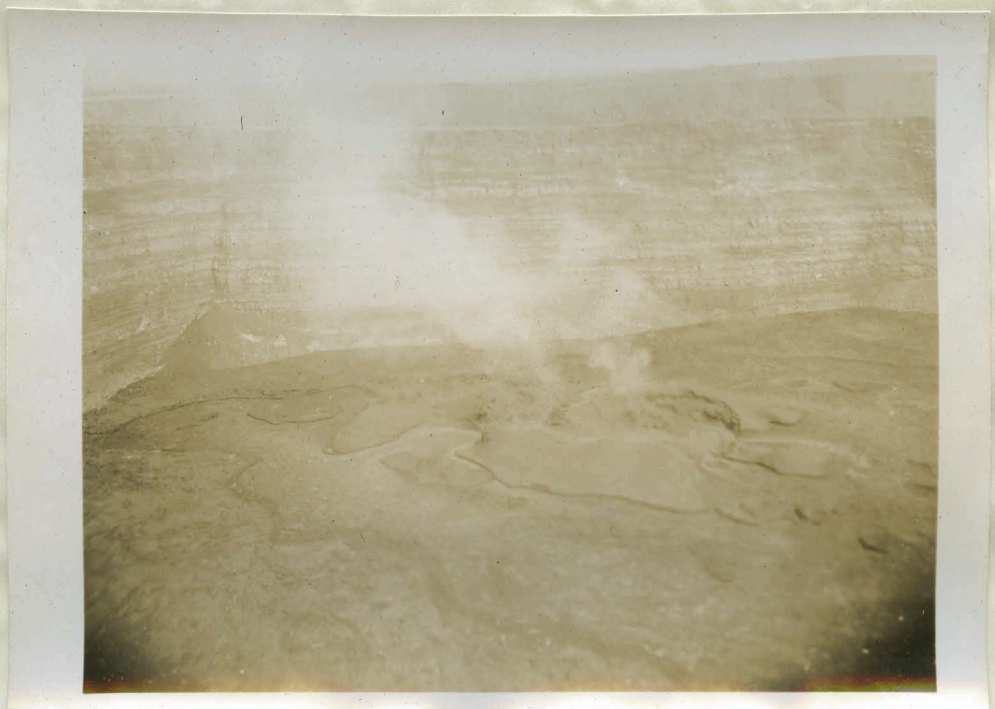
DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Monday Date August 11, 1952



520811-5 Panorama from station 28, stereoro to previous 2, 3, 4, approx. Ph: Wentworth.



520811-6 Ditto. Ph: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Monday Date August 11, 1952

520811-7 Panorama from station 28, steoro to previous 2, 3, 4, approx.
Ph: Wentworth.

520811-8 10;00 a.m. Level panorama from station 5.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

JOURNAL

Hawaiian Volcano Observatory

Day Monday Date August 11, 1952

520811-9 10:00 a.m. Level panorama from station 5.
Ph: Wentworth.

520811-10 Ditto. Ph: Wentworth.

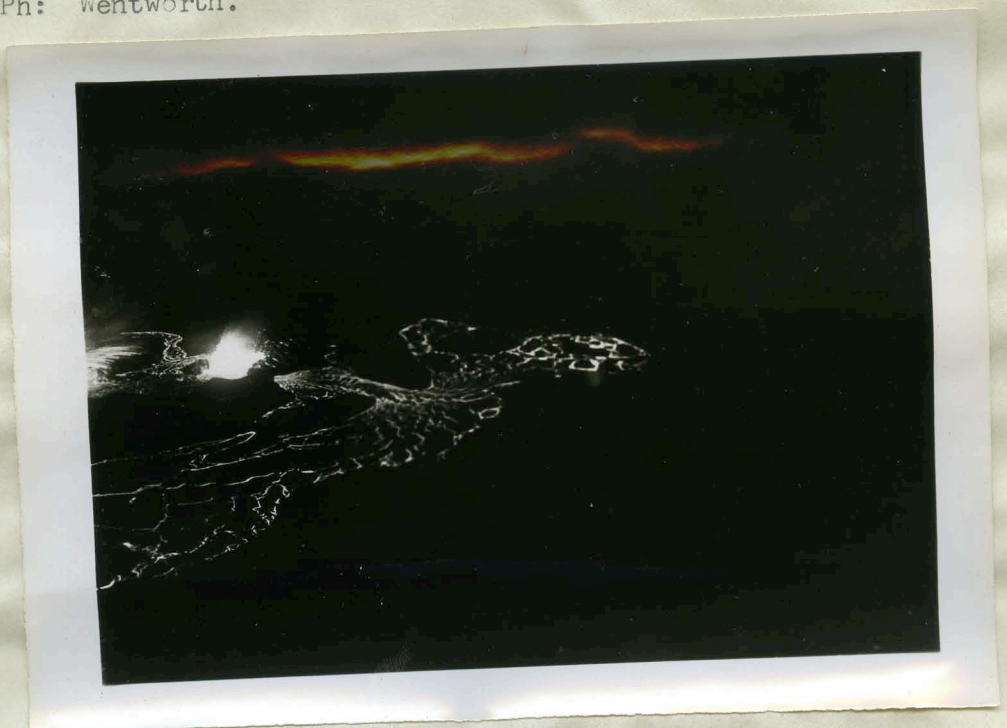
DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Monday Date August 11, 1952

520811-11 10:00 a.m. Level panorama from station 5.
Ph: Wentworth.



520811-12 7:30 p.m. Night obliques of Halemaumau floor.
Ph: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Monday Date August 11, 1952

520811-13 7:30 p.m. Night obliques of Halemaumau floor.
Ph: Wentworth.

520811-14 Ditto. Ph: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Monday Date August 11, 1952

520811-15 7:30 p.m. Night obliques of Halemaumau floor.
Ph; Wentworth.

520811-16 07:30. SW portion of floor of Halemaumau, from SE rim.
PH; Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Monday Date August 11, 1952

520811-17 07:30. SW portion of floor of Halemaumau, from SE rim.
Ph: Macdonald.

520813-1 August 13, 7:00 p.m. Night obliques of Halemaumau floor.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date August 13, 1952

August 13, 1952, Wednesday

0600 Activity much like yesterday. W. river is clogged, essentially stagnant. E and S rivers still very active. Speed of S river with stopwatch: 25 feet in 3.5 seconds, - average of 20 readings, on crust fragments near center of river. Width of river 24 feet-.

Crack # 21 - 122.2 cm.
Crack # 5 - 121.9 "
Crack # 6 - 62.55 cm.

Assuming a depth of 6 feet for the E cascade, and 9 feet for the S river (the approximate depth of the similar-sized W river where it is drained this a.m.) the volumes flowing out of the control fountain pits are:

E cascade 6.9 yds/sec. (speed)
x14 (cross-section area)
96.6 cu. yds/sec.

S river 2.4 yds/sec. (speed)
x 24 (cross-section area)
57.6 cu. yds/sec.

Total 154 cu. yds/sec. or 13 million cu. yds/day.
The total fill is much less than this, - ergo most of this must be reciruclating.

2000 Temperature reading from Pit SE BM.
Both fountains 1007° C

August 14, 1952, Thursday

2030 Temperature from Tourist area:

Fountains	1005° C
Rapid overflow at SE edge	990°
From S rim - SW fountain	1020°

SW fountain large, -average height about 50 feet, with some bursts up to 350 feet.

Central fountain replaced by row of 4 small fountains across fountain pit along line of original fissure.

South river and cascade became blocked about mid-afternoon and all flow from fountains is now issuing through E cascade, causing much flooding over N and E parts of the lake.

August 15, 1952, Friday

Activity like yesterday.

S river still blocked. Southern part of lake drained, leaving an irregular basin about 20 feet deep. Lake lava appears to have drained down into underlying rock, but no obvious sinkhole, just a general recession leaving a ring-shaped basin around the old south island. The floor is fairly smooth but much cracked pahoehoe.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date August 13, 1952

520813-2 7:00 p.m. Night obliques of Halemaumau floor.
Ph: Wentworth.

520813-3 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date August 13, 1952

520813-4 7:00 p.m. Night obliques of Halemaumau floor.
Ph; Wentworth.

520813-5 14:00. SW portion of floor of Halemaumau, from SE rim.
Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date August 13, 1952

520813-6 14:00. SW portion of floor of Halemaumau, from SE rim.
Ph: Macdonald.

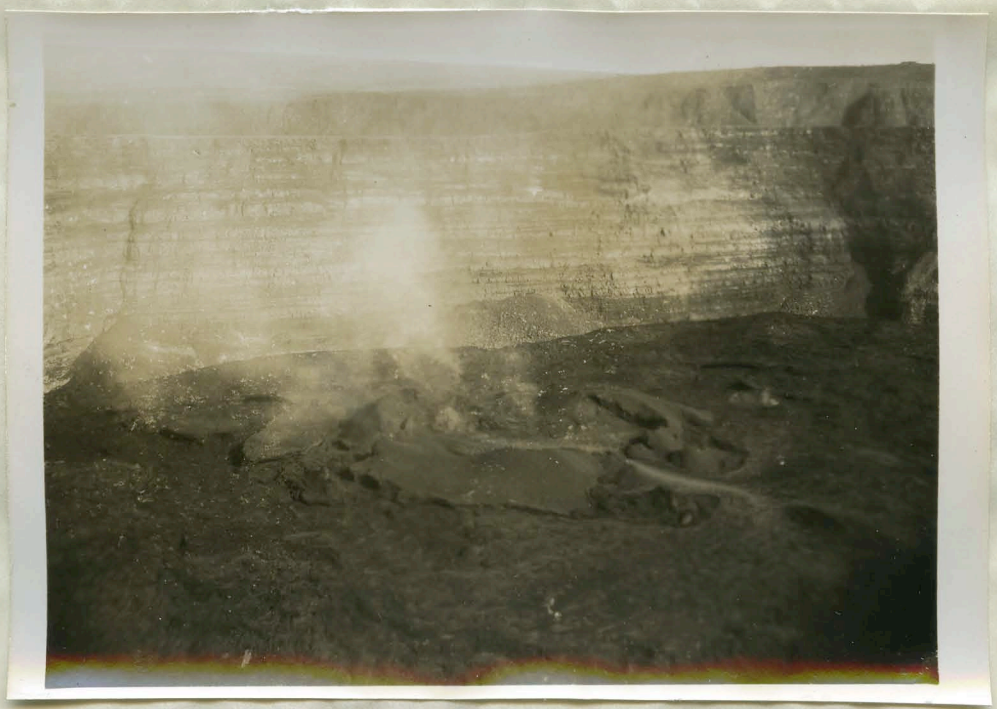
520815-1 8:30 a.m. Level panorama from station 28.
Ph: Wentworth. (Friday, August 15)

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Friday 5 Date August 15, 1952

520815-2 8:30 a.m. Level panorama from station 28.
Ph: Wentworth.



520815-3 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Friday Date August 15, 1952

520815-4 8:30 a.m. Level panorama from station 28.
Ph: Wentworth.

520815-5 Level panorama from station 3.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Friday Date August 15, 1952

520815-6 Level panorama from station 4.
Ph: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Friday Date August 15, 1952

520815-7 Level panorama from station 3,
Ph: Wentworth.

520815-8 "itto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date August 16, 1952

August 16, 1952, Saturday

0745 Activity like yesterday.

1330 Activity like this a.m. SW fountain very low nearly inactive at times. Central fountain somewhat bigger than this a.m.

1400 Discharge from central cone suddenly increased. Gap at east cascade widened from about 15 to about 20 feet. Flooding over whole central lake area followed. The lava (pahoehoe) gradually extended in all directions until by 1500 it had overflowed and passed the lake boundary of Aug. 5 on the NE edge, and was approaching the same margin at the NW. On the S a tongue was invading the old S bay.

1500 Flooding continuing, but advance slowing down.

2245 Temperature from tourist area
Fountains 995° C

August 17, 1952, Sunday

2200 Temperature from tourist area 998° C

Large fragment from NE wall of cone fell in and partly blocked the E gap. Level of lava in pits raised.

Flood of lava to NE started at 2215.

For the past several days I have had the definite impression that the lava is coming mostly from the central fountain and not much from the SW fountain, which is largely just gas release.

Thoughts on the gas cloud:

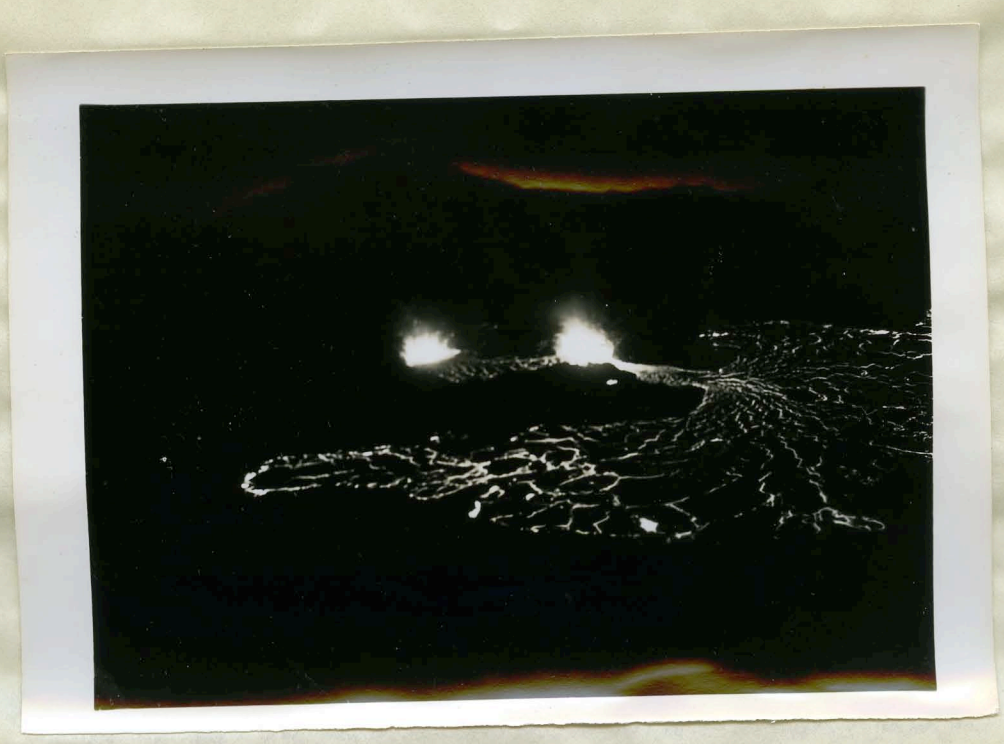
The gas issuing from the fountains is pale yellowish brown in color. Ray Fosberg suggests that it may be colloidal sulphur. Within a few feet of the top of the fountains it starts to change to a pale bluish-gray color, and the change is completed within 100 feet of the fountain top, generally less. The change is gradual, and its appearance suggests some chemical reaction. The most probable seems to be ozidation to SO_2 as it mixes with air. Turbulence results in an admixture of the brown and gray fume in irregular streaks in the zone of transition. The blue fume gives no evidence of anything but SO_2, The odor of which is strong. Steam clouds rising from the talus near the floor of the pit evaporate as they rise and disappear generally within 40 feet of the vent. The blue fume does not appear to evaporate, but rather to become more and more diluted until it fades from sight. If there is water in the fume cloud it does not condense. There is no sign of condensation on cold objects in the cloud. The cumulus cap that commonly forms at the top of the fume cloud over the pit could well result entirely from rising humid air.

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date August 16, 1952



520816-1 8:00 p.m. Night oblique of Halemaumau floor.
Ph: Wentworth.

520816-2 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date Aug. 16, 1952

520816-3 8:00 p.m. Night oblique of Halemaumau floor.
Ph: Wentworth.

520817-1 Sunday, Aug. 17, 09:30. Cones and flow in SW portion of Halemaumau, from SE rim. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Monday Date August 18, 1952

August 18, 1952, Monday

0800 Fountains much like yesterday. SW fountain biggest. One lava river flowing out the E gap.

1700 Old south river has been reestablished. The lava from the fountain pit overflowed the wall about 1500, is now refilling the old south lobe of the lake, drained last week.

North fountain pit isolated from south. Still overflowing to E, flowing under a bridge of spatter.

The lava in the North fountain pit appears very viscous.

The activity in Halemaumau continues much like that of last week. Two fountains play to average heights of 25 feet, with occasional bursts as high as 400 feet. A lava river cascading from the east side of the central cone feeds a lake on the north and east sides of the cone. Conspicuous clouds of steam are rising from the talus banks at the southwest edge of the crater floor.

2030 Like this afternoon.
South river is also issuing from a tunnel at the side of the cone.

Temperature readings

Tourist area	1000° C
South rim	1008° C

2230 Kaipo Roberts reports activity started to die down greatly, and by midnight was apparently dead.

By 2:30 a.m. Aug. 19 plenty activity again, according to soldier staying at KMC who was at the pit at that time.

August 19, 1952, Tuesday

Central fountain very small and sporadic, but southwest fountain still strong. At 2:30 pm. Monday a flow broke through the south edge of the cone and reestablished the south river. This morning a large volume of lava is escaping through the South river and has completely refilled the southern drained portion of the lake. The east river is still active but sluggish, fed largely by lava cascading into the central fountain pit from the southeast fountain.

0745 Central fountain very small, SW fountain about like last 10 days. Big flow of lava thru south river and whole south part of old lake refilled. Lava cascading from south fountain pit into central pit. No movement apparent on surface of east river, but some under flow probable because there is quite a lot of overflow at north lake margin.

1100 Central fountain very weak and sporadic.

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date August 17, 1952

520817-2 09:30. Cones and flow in SW portion of Halemaumau, from SE rim.
Ph: Macdonald.

520819-1 8:00 p.m. Night obliques of Halemaumau floor.
PH: Wentworth. (Tuesday, August 19)

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Tuesday Date August 19, 1952

August 19, 1952, Tuesday

1130 to 1200 Central fountain inactive. East river inactive. No more cascade from SW fountain into central pit.

1700 SW fountain the same, with good flow thru south river. Central fountain almost inactive, but occasional small explosive showers of ejecta. Active lake area about the same as for past several days.

2100 Temperature from tourist area 1000° C.
Only SW fountain active. Some bursts reach 350 to 400 feet.

August 20, 1952, Wednesday

South fountain and lava river continue essentially unchanged. North fountain was inactive most of yesterday, but resumed weak activity early today. During the past week the level of Halemaumau floor has risen 12 feet, increasing the average depth of the fill from this eruption to 270 feet and the volume to 54 million cubic yards.

0800 SW fountain much like yesterday. Central fountain again active, though weak. South river active with good flow. East river again active but sluggish.

2100 Temperature from tourist area 995° C
SW fountain active, but small. North fountain almost inactive.

August 21, 1952, Thursday

0630 North fountain dead, smoking heavily. South fountain averages about 15 feet high, with a few bursts up to about 200 feet. South river still flowing but volume much diminished. Front of flow reaches only about half way up the East side of the cone.
A dribble flow at SW wall.

0800 Mr. Oberhansley reports the north fountain began to revive, gradually Bursts grew gradually bigger, and cone partly fell in, reopening the fountain pit.

Kilauea continues active. North central fountain inactive, and smoking heavily. South fountain playing to average height of 15 feet, with occasional bursts as high as 200 feet. A small lava river is pouring from the south side of the cone and spreading northeastward around the base of the cone.

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

JOURNAL

Hawaiian Volcano Observatory

Day Tuesday Date August 19, 1952

520819-2 8:00 p.m. Night obliques of Halemaumau floor.
Ph: Wentworth.

520819-4 11:30. Cones and flow in SW portion of Halemaumau, from SE rim.
Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date August 20, 1952

520820-1 10:30 a.m. Level pans from station 28.
Ph: Wentworth.

520820-2 Ditto. Ph: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Wednesday Date August 20, 1952

520820-3 10:30 a.m. Level pans from station 28, Ph: Wentworth.

520820-4 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date Aug. 20, 1952

520820-5 Level pans from station 4. Ph: Wentworth.

520820-6 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date August 20, 1952

520820-7 Level pans from station 4. Ph: Wentworth.

520821-1 Thursday, Aug. 21, 11:00. SW portion of floor of Halemaumau, from SE rim. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date August 21, 1952

August 21, 1952, Thursday

1100 SW fountain small, throwing umbrellas and strings.
North fountain back and vigorous, throwing big bursts to an average height of about 25 feet, with ocassional showers to 200 feet.
In SW fountain pit there is flowage from north fountain toward SW fountain. No detectable flowage in south river. A few glowing spots on east wall of north fountain cone seem to indicate some leakage of lava thru the cone, but no real river.

1800 Activity like this morning, but a small stream of lava is now issuing from the side of the cone east of the northern central fountain. Edge flows are present near foot of west wall of crater.

2030 Temperature measurement from Tourist area 1000° ~~100°~~ C
Activity like earlier. Small flow on east side of cone extends only about 250 feet. Many glowing spots on lake active last night around east side of cone, suggesting underflow of new lava.

August 22, 1952, Friday

North-central fountain resumed activity Thursday morning. Friday morning both fountains are active, playing to an average height of about 20 feet, with some bursts as high as 200 feet. Small lava flows are active on the east and south sides of the central cone, and at the southwest wall of Halemaumau crater. Another small flow is issuing from a new vent 300 feet southwest of the central cone.

0630 Both fountains active, about equal in size, - ie. average height about 20 feet, but with some bursts up to about 200 feet. A very small flow is issuing from east flank of cone, and this south river is flowing out for about 200 feet, but weak.
Temperature readings from Tourist area are erratic, - 950° to 980° C.
A small lava flow is issuing at a location about 300 feet SW of the two fountains in line with them, and spreading over the W portion of the old south pond. Very weak fountain bursts to height of 2 or 3 feet occur at the vent rarely. Saw several in half an hour.

0815 Same, but fountains smaller, and small vent and flow SW of old beehive cone are no longer active.

1530 Both central fountains very small, and lava in pits appears very viscous. Small lake about 100 feet across, just south of cone, fed from south fountain.
A prominent edge flow at west edge of floor, extending along wall about 500 feet and about 100feet wide. It is 10 feet or so higher than the adjacent floor.

2100 Like this p.m., but fountains even smaller.
Temperature reading from Tourist area 990° C

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date August 23, 1952

August 23, 1952, Saturday

Two central fountains continue active, but small, averaging about 10 feet high with a few bursts as high as 150 feet. There are no visible lava flows from the fountains and the lava in the fountain pits appears very viscous. A sluggish flow is active. (Activity is unlikely to continue at the foot of the southwest wall of the crater, more than a few days longer).

0630 Fountains very small, - average 10 feet and with some bursts to 150 feet. Lava appears much more viscous. Two central fountains active. No outflow of lava from central fountains. The edge flow at SW wall still glows weakly.

1215 Much the same. Active lava lake about 100 feet wide and 200 feet long in pit NE of SW fountain. North fountain is playing in a pit occupied almost entirely by the fountain, with very little lake around it. No other active lava visible on floor of pit.

2100 Same as at noon.
Temperature reading from tourist area 990° C

August 24, 1952, Sunday

1000 North fountain dead, has built a small spatter cone in the crater of the larger cinder cone, and is smoking moderately.
South fountain still active, feeding a small lake as yesterday. fountain is very small, playing intermittently to 5 or 10 feet, with a few bursts going as high as 50 feet.
No other active lava visible.
Very strong wind in whole Volcano area, with big dust clouds in Kau Desert and south end of caldera.

August 25, 1952, Monday

Activity is very weak. The two small fountains have built spatter conelets around themselves and only occasionally throw showers of glowing fragments above the mouths of these conelets. A small lake of molten lava lies in the crater of the central cinder cone, fed by the southern fountain. The eruption appears nearly over.

0630 Two small fountains enclosed in spatter conelets in the craters of the central cinder cone, barely throwing over the edge of the conelets. (See above for description in release)

1400 Like this morning. Still some sluggish movement in the lake, fed apparently largely from the North fountain.

2000 Two fountains active in spatter conelets. North fountain more active, with many bursts 15 -20 feet above cone and rare ones as much as 100 feet, covering conelet slopes with glowing spatter.

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date August 21, 1952

520821-2 11:00. SW portion of floor of Halemaumau, from SE rim. Ph: Macdonald.

520821-3 Same as 520821-1. Ph: Macdonald.

520825-1 Monday, Aug. 25, 14:00. SW portion of floor of Halemaumau, from SE rim. P: Macdonald.

August 25, 1952, Monday

2000 continuted:

S fountain shoots only occasionally. Between bursts a pale yellow blue banner of flame plays amost constantly above the mouth of the conelet.

Temperature on glowing throat of the north cone 990°C

Lake in crater between fountains is fed by both fountains.
Small glowing spots on Halemaumau floor both east and southwest of central cone.

August 26, 1952, Tuesday

Conditions unchanged since yesterday. Occasional bursts of incandescent spatter are thrown out onto the slopes of the conelets surrounding the fountains. A small lake of molten lava lies in the center of the large cinder cone between the two spatter conelets. Crust foundering occasionally results in small fountains in the lake.

0730 Unchanged from last night.

August 27, 1952, Wednesday

Two lava vents still weakly active, throwing occasional bursts of glowing fragments to a height of about 10 feet. Last night some bursts reached as high as 100 feet. Sluggish lava flows from both fountains still feed a small lava lake between them.

0745 Still very weak activity at both vents. Occasionally weak fountains bursts throw glowing spatter to heights of 10 feet or so (C1K.W. says that last evening these rarely reached as much as 100 feet from north fountain). Weak flow from both vents into central lake, and a small flow barely spilled over the lip of the south conelet for a few minutes about 8 a.m. The lake is much diminished in size, to about 50 x 150 feet.

August 28, 1952, Thursday

Drove up Kulani Road to summit of Mauna Loa. Hiked to rest house with Jean-Claude de Bremaecker and John Macdonald.

August 29, 1952, Friday

Hiked to North Bay and across floor of Mokuaweoweo with Jean-Claude.

Gases at solfataras north of 1940 cone are largely SO_2. Deposits are largely acid salts. No sulfur observed.

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Monday Date August 25, 1952

520825-2 14:00. SW portion of floor of Halemaumau, from SE rim. Ph: Macdonald.

520904-1 Sept. 4, Thursday, 08:00. SW portion of floor of Halemaumau, from SE rim; showing small lava lake and north and south conelets. Ph: Macdonald.

520909-1 Sept. 9, Tuesday, 08:00. Conelets and lava lake in SW portion of Halemaumau, from SE rim. Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Friday Date August 29, 1952

August 29, 1952, Friday

Continued No changes in Mokuaweoweo since last visit.

August 30, 1952, Saturday

Hiked to Red Hill - same party.

August 31, 1952, Sunday

Hiked to end of truck trail. Rode to Kilauea. Same party.

September 1, 1952, Monday

Activity shows a distinct increase over that of a week ago. Two vents are active, throwing showers of incandescent fragments to heights of 150 feet. Occasional overflows send small lava streams down the sides of the conelets. An active lava lake covers an area of about ¼ acre between the vents. Strong fountains play occasionally in the lake, reaching heights of about 15 feet. Present appearances suggest that activity may continue indefinitely.

September 2, 1952, Tuesday

Activity continues like yesterday, with loud roaring gas release. The northern vent is blowing puffs and smoke rings which occasionally rise as high as the rim of the crater. Last night showers of glowing fragments could be seen going to a height of 150 feet. The lava lake is still active.

September 3, 1952, Wednesday

1100 Top of north cone fell in. Fountain now occasionally visible. Very loud roaring and whistling gas release.
Small flow is oozing out over crater floor at east base of central cone.
North of central cone, about 400 feet north of north spatter conelet and fountain, a new small fountain is playing on crater floor, spurting 5 or 6 feet.

2100 Spectrograph at SE rim, on flame banners from north vent. Showers of incandescent fragments up to 200 feet high. Flows on crater floor behaving much like real lakes. Crust starts to break up and founder at one locality, and the break-up rapidly spreads over the rest of the "lake" revealing a bright surface with intense radiation. This rapidly dulled and crusted over.
Around midnight observers reported edge flows around the west wall, the first for a couple of weeks.

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date September 4, 1952

September 4, 1952, Thursday

0800 Activity much like yesterday except quieter. The flows outside cone are dark and stagnant. A little glow is visible inthe west edge flow.

1700 North cone inactive except for fuming. South cone like last several days. Lava lake active, with level about 7 or 8 feet below rim.
Two flows of yesterday on the floor east and north of the cone are dead, but edge flow at NW corner is still active, and a new flow is very active on the floor west of yesterdays north flow. Started about noon.

September 5, 1952, Friday

0800 Activity continues much like yesterday. During the night small lava flows have developed along the foot of the SW and NW walls of the crater, and are still glowing this morning. Another new flow only about 100 feet across, lies at the outer south edge of cinder cone at the position where the south river formerly issued. The new flow on the crater floor NW of the cones, that started about noon yesterday, is still active.

1400 Activity same. Roaring gas release is much less than yesterday. The lake level rises and falls about 5 feet.

2030 Activity the same. Showers of incandescent fragments going as high as 150 feet.
The two vents appear to alternate in activity, the activity of one decreasing while that of the other increases. This alternation is a fairly long-period affair, on a period of 2 or 3 hours. At the same time there are short-period changes that seem to affect the two essentially simultaneously. Thus while the general activity of one vent is slowly dying down and that of the other slowly increasing, both vents commonly give unusually big bursts either at the same instant or within 1 or 2 seconds of each other.

September 6, 1952, Saturday

0800 Kilauea activity continues unchanged with the small lava lake still active between the blowing vents in the crater of the central cinder cone. The flow on the floor NW of the cones is still moving slowly.

September 7, 1952, Sunday

1000 Much like yesterday but weaker. No signs of glow on floor outside cones. Lake surface about 5 feet below rim, largely crusted over and immobile. North cone blowing puffs of yellow gas and liberating gently large clouds of white gas. Rarely a few solid ejecta. South cone similar but showers of hot ejecta thrown up every minute or two.

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Monday Date September 8, 1952

September 8, 1952, Monday

0800 Conditions in Halemaumau continue unchanged since last week. Two vents and the small lava lake are still active in the crater of the central cinder cone. Both vents are throwing occasioanl ahowers of glowing fragments to heights of 150 to 200 feet. (As seen last night.) At night pale flames 5 to 10 feet high are visible playing intermittently at the vents.

1600 During the day a small pahoehoe flow has broken out on the crater floor SE of the cone. Its source is close th the place of emergence of the old east river. It extends down the SE edge of the cone about 400 feet southward, and is about 250 feet wide.

2000 The above described flow is glowing brightly, but sluggish movement is only rarely visible.

September 9, 1952, Tuesday

0800 Activity of the two vents and lava lake in the crater of the central cinder cone remains unchanged. The new flow that broke out on the floor of Halemaumau southeast of the cone yesterday continues active this morning. Some red tongues at its edge.

1630 Conditions same except no glow visible in flow SE of the cone.

September 10, 1952, Wednesday

Two blowing conelets and the lava lake continue active in the crater of the central cinder cone. Fountains up to 15 feet high spurt sporadically in the lake.

0800 Conditions essentially unchanged from yesterday p.m. South vent is puffing and throwing showers of glowing fragments. North vent also, but less strong. Lake is active. North glow visible anywhere on floor outside cone.

2000 North vent very active, throwing showers of ejecta to 250 feet and covering conelet with red ejecta. Lake also very active.

September 11, 1952, Thrusday

0700 North vent very active, like last night. Conelet now built to a height of about 60 feet from base, slightly overtopping the rim of the big cinder cone.

Lake very active, with a persistent fountain at a sluggish sinkhole at south edge.

1700 Same as this morning.

2200 Ruth reports activity the same.

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Tuesday Date September 9, 1952

520909-2 08:00. Conelets and lava lake in SW portion of Halemaumau, from SE rim. Ph: Macdonald.

520914-a Sunday, Sept. 14, 19:30. Halemaumau floor. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Friday Date September 12, 1952

September 12, 1952, Friday

0800 North vent and lava lake same as yesterday. South vent fuming strongly, but no lava bursts observed.

A new flow is spreading over the floor NE of the cone, fed by two small fountains 5-15 feet high about ¼ way from cone edge to NE wall and approximately on the line of the original fissure. Flow area is now about 500-x 300 feet, spreading rapidly.

For past several days vapor, apparently steam, has been issuing from top of upper cone in 1919 dike in SW wall.

Activity of the north vent and lava lake continues the same. The south vent is fuming heavily but is throwing out no glowing lava. A new lava flow is spreading over the floor of Halemaumau northeast of the central cinder cone, fed by two spurting fountains 5 to 15 feet high. The flow already has an area of 150,000 square feet and is spreading rapidly.

1400 Fountain at south edge of small lake in crater of central cone is playing in a grotto under the bank. It definitely is at a sinkhole. There is slow flowage toward it extending all the way across the lake.

September 13, 1952, Saturday

0730 Activity of the north vent and lava lake remain the same. The south vent is fuming heavily. A small amount of activity remains visible in the central part of yesterday's new flow north of the cinder cone.

September 14, 1952, Sunday

Early p.m. - Ruhle reports both vents and lava lake active, and some visible glow on floor NW of cinder cone, where small flow has developed.

2000 Both vents active, north vent throwing bursts to about 150 feet and covering conelet with glowing ejecta. Glowing spots visible on floor NW of cone, and at south edge (outer) of cone. Pale flames visible at both vents.

September 15, 1952, Monday

0715 Both vents and lava lake active. The latter is building a small flat conelet around itself by spatter of edge fountains and overflow. Permanent fountain on south edge has built a high wall about 10 feet high above itself. Sulfur and white salts are being deposited on the spatter conelets at the blowing vents.

A conelet about 10 feet high at the NW edge of the south lava pool of early August, is fuming conspicuously. This is the site of the vent that liberated the small lava flow on August 22.

G.A.M.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Sunday Date September 14, 1952

520914-1 19:30. Halemaumau floor oblique.
Ph: Wentworth

520914-2 Ditto. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Tuesday Date September 16, 1952

September 16, 1952, Tuesday

0800 Two vents and lava lake active in central cinder cone. Last night a new flow broke out along the foot of the west wall. This is still active. See release below. Haole Sumner says that this flow was here at 8 p.m.

The lava lake and two blowing vents in the crater of the central cinder cone continue active. Last evening a new flow broke out at the foot of the western wall of Halemaumau and spread along it for a distance of 1500 feet. The flow is still active this morning.

September 17, 1952, Wednesday

0800 Activity in the central cinder cone remains the same. New lava is again being poured over the floor of Halemaumau northwest and northeast of the cone. These two small flows started some time last night. There is a loud hissing of escaping gas apparently from the south conelet.

1630 No sign of glow in the flow NE of the cone. The flow NW of the cone is active, with many glowing toes. The flow at the W wall has revived again, and shows glow at several places.

September 18, 1952, Thursday

0800 Both the west wall flow and the flow on the floor NW of the cone appear dark and stagnant. Activity in the crater of the central cone continues like yesterday.

1630 A little glow visible in the west edge flow. The flow NW of the cone is weakly active, with several glowing spots and one small spreading tongue.

September 19, 1952, Friday

0745 Two conelets and lava lake in crater of central cinder cone are active. North conelet, which has been the most active for the past two weeks, is mostly fuming quietly, and lava lake activity is rather quiet. The south conelet, which has been rather quiet for two weeks, has become noisely explosive, with bursts of glowing ejecta reaching heights as great as 250 feet.

The flow on the floor northwest of the central cone shows occasional small glowing tongues.

Between 8 and 9 am. this morning a hole broke thru the N side of the base of the S conelet. It is now throwing big sporadic fountain bursts thru this opening into the area just west of the lava lake, as much as 150 feet high. Still some high bursts from the top also up to 200 feet high.

E.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Friday Date September 19, 1952

September 19, 1952, Friday

Continued Still some glow in the flow NW of the cone.
A new flow is developing at the south edge of the floor near the 1919 dike. This started about 10:45.

1115 A new small vent bursts out with a loud roar of escaping gas, on the floor of Halemaumau jsut outside south edge of the big cinder cone. Threw a small amount of ejecta for a couple of minutes, and some small driblet flows poured out.
The circulation in the lake had reversed and is now from south to north fairly rapid with a fuming sinkhole at the north end.

September 20, 1952, Saturday

0230 Copious overflow from small lava lake producing a flow southward thru the south cone gap (site of old south river). This turns NE just south of the cone and is advancing rapidly toward the visitors area. Flames from North conelet 20 feet long, and some bursts of glowing ejecta up to 150 feet. Mr. Tao at the Volcano House says the big glow started between 1:30 and 1:50 probably about 1:45.

Temperature of cascade pouring out of lake - 980° C

0430 Activity the same

0730 Activity the same.
The flow at the south edge is still active.

1012 Overflow started at NE edge of lake, lake rim gradually giving way as lava flowed over. River comes out to NE of cone merges with lava from south river spreading north around east side of cone.

1630 North river has become stagnant. Lava is rising at north edge of lake, flowing across lake and out at south cascade. Hydraulic jump at base of cascade, sheet of downflowing lava sliding under lava in head of river

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date September 20, 1952

520920-1 04:30. Overflow of lava lake, from SE rim of Halemaumau.
Ph: Macdonald.

520920-2 04:30. Same.
Ph: Macdonald.

520920-3 12:00. Overflow of lava lake; from SE rim of Halemaumau.
S and NE rivers active. From near Rim station 25.
Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date September 20, 1952

September 20, 1952, Saturday

1630 Continued: North conelet is blowing puffs of gas, and occasionally bursts of red-hot ejecta. No appreciable gas liberations at lake. The conelet vent probably is acting as a chimney to top off the gas from the lava that is rising in the lake.

2100 Over flow to south continues, but a good deal weaker. Glow still visible in most of new flow east of the cone, but no signs of movement.

September 21, 1952, Sunday

0200 George Ruhle reports overflow is ended, and the only activity is in the small lava lake andfume from conelets.

0800 Russ Apple reports the same. North conelet is puffing gas, but no hot ejecta visible.

1300 Same as last, exeept that the flow at the south edge is again weakly active, with several small tongues of red lava moving. The lake is only moderately active, about 5 feet below its bank, with slow movement from north to south and a fountain playing sporadically at the sinkhole at the south edge. North conelet is puffing out belches of yellow gas, but south conelet is fuming quietly.

1600 Paul Rockwood says activity the same with occasional showers of incandescent ejecta from the north conelet.

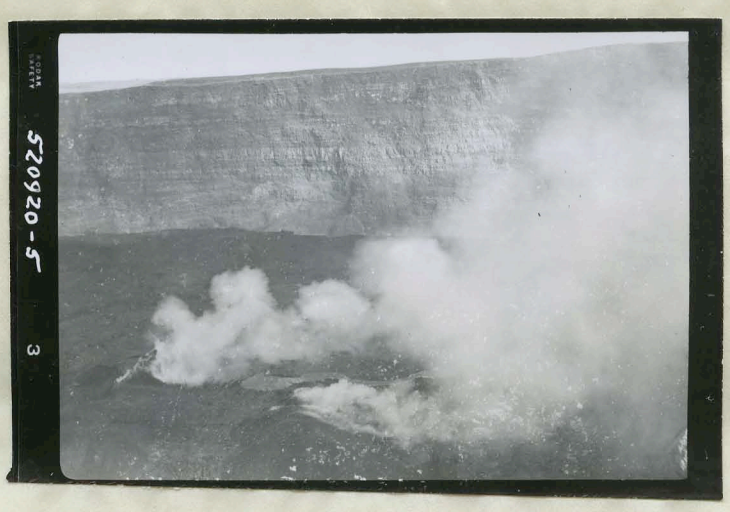
September 22, 1952, Monday

0750 Activity the same. Circulation in the lava lake is from the north edge to the SW edge adjacent to the south conelet, where down plunge occurs accompanied by persistent edge fountains.

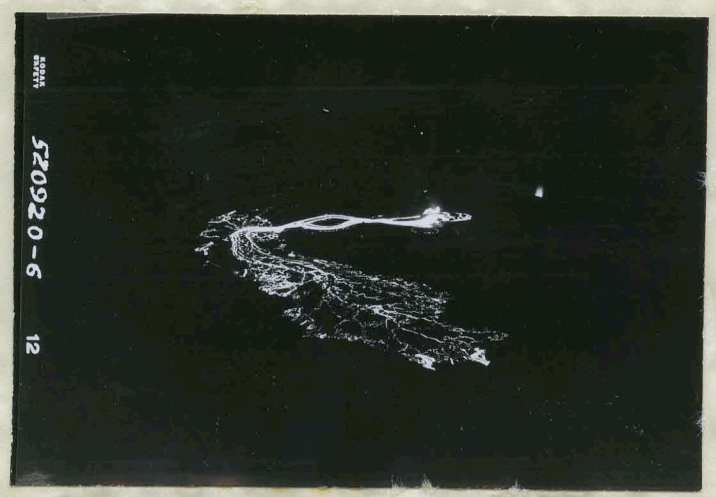
1700 Activity like this morning. A small sulfur -covered spatter cone, about 10 feet high, on the floor NW of the big cinder cone, shows small glowing spots and occasionallly throws out a few hot fragments.

The big overflow of the lava lake that began Friday night continued until late Saturday evening. The volcano has now returned to its former condition, with the two conelets and small lava lake in the crater of the central cinder cone. Much of the northeast and south sides of the cinder cone were buried by Saturday's overflows. The south conelet is fuming quietly but the north conelet is puffing out yellow gas, which quickly changes to a bluish-white color, and throwing up occasional small showers of red-hot cinders.

520920-4 12:00. Overflow of lava lake, both S and NE rivers active, from SE rim of Halemaumau, near rim station 25.
Ph: Macdonald.



520920-5 16:30. Overflow of lava lake; south river only active; from SW rim of Halemaumau near rim station 18.
Ph: Macdonald.



520920-6 16:30. Overflow of lava lake, seen from SE rim of Halemaumau.
Ph: Macdonald.

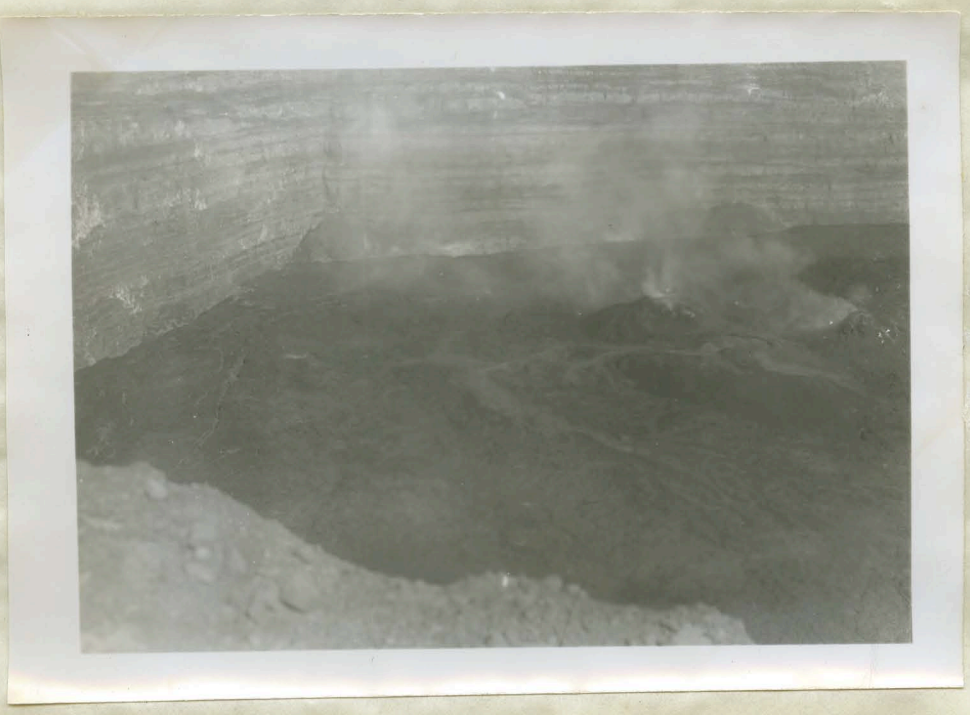
DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date September 20, 1952

520920-1-ckw 09:30. Halemaumau floor from tourist lookout.
Ph: Wentworth.



520920-2-ckw 09:30. Same. Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

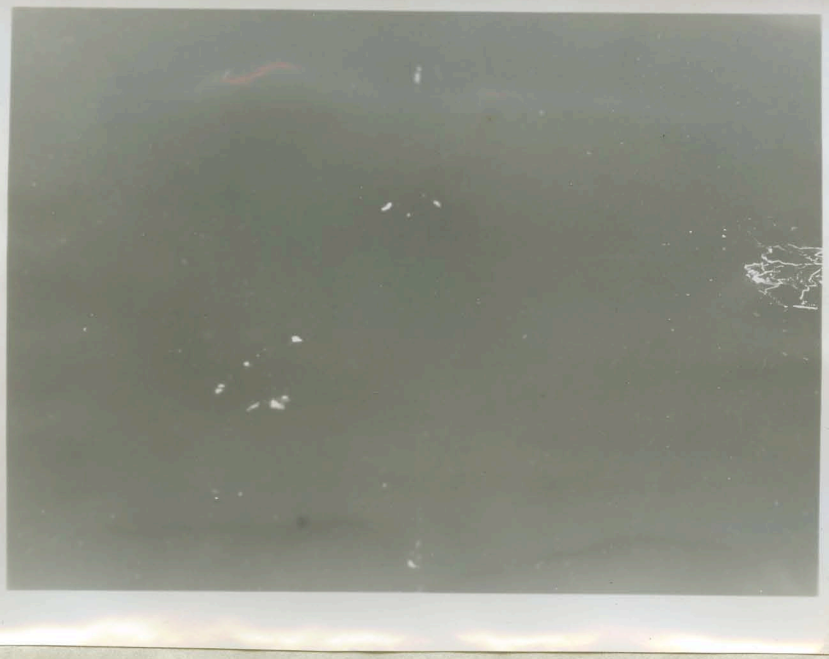
Day Saturday Date September 20, 1952

520920-3-ckw 09:30. Halemaumau floor from tourist lookout.
Ph: Wentworth.

520920-4-ckw 20:00. Halemaumau floor and lava flow.
Ph: Wentworth.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Saturday Date September 20, 1952



520920-5-ckw 20:00. Halemaumau floor and lava flow.
Ph: Wentworth.

520920-6-ckw 20:00. Same.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Tuesday Date September 23, 1952

September 23, 1952, Tuesday

0800 Activity continues like yesterday but few explosive burst from the north cone were observed.

September 24, 1952, Wednesday

0800 Activity of the two conelets and lava lake in the crater of the central cinder cone remains unchanged.

September 25, 1952, Thursday

0745 Activity same as yesterday.

2100 Taxi driver reports 2 small overflows of lava lake, visible the next morning.

September 26, 1952, Friday

0800 Conditions like yesterday.

1530 Mr. Chas. Bell of Pacific Chemical and Fertilizer Co., reports that top 20 feet of north conelet blew off, followed by 3 or 4 bursts of ejecta to a height of about 400 feet. This was followed by a violent oscillation of the lava lake, which receded to a depth of 15 or 20 feet. Activity then returned to normal in both cone and lake.

1700 Activity like this a.m., except top of cone being missing allows incandescent ejecta to be much better seen. Bursts are going about 75 feet above cone and many fragments fall on the flanks. Lake is normal.

2030 Activity in general like this afternoon. North conelet throwing many bursts to 50 feet and occasional ones to 150 feet. The driblet spire NW of the cone is active, throwing gobs of hot lava as high as 25 feet, as also is another vent between it and the cone (at north edge of the big cone).

A new boca has opened on the east flank of the north conelet near its base, and is throwing glowing fragments as high as the top of the cone.

September 27, 1952, Saturday

Activity in Halemaumau continues much the same. Yesterday afternoon about 20 feet of the top of the north conelet was blown off, followed by three or four explosive bursts estimated by observers to reach a height of 400 feet. The lava lake showed violent agitation, and its level sank about 15 feet. Activity soon returned to normal, with the north conelet throwing bursts to heights of 50 to 150 feet. A new explosive vent opened on the east side of the conelet briefly last night.

G.A.M.

520924-1 08:00. Fume column and cumulus cloud over Halemaumau, from old HVO benchmark at Volcano House.
Ph: Macdonald.

520924-2 08:00. Same.
Ph: Macdonald.

520925-1 Thursday, Sept. 25, 07:45. Conelets and lava lake in SW portion of Halemaumau, from SE rim.
Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date September 27, 1952

September 27, 1952, Saturday

0730 Activity much like last night tho a little quieter. The new boca on the east side of the north conelet is sealed in, but still fuming.

1140 Chester reports the lava lake overlfowed at 4 places, sending out flows 25 to 60 feet long. The overflow was pau by 1150.

1615 Elroy Bohlin reports an edge flow broke out at foot of NW wall, advanced rapidly both ways.

1700 One end of flow is about 150 feet SW of the pod-shapped intrusive directly under the NW rim station; the other end is almost directly under the NE rim station. Still advancing both ways, but slowly. Average width about 100 feet. Some spill-overs onto central crater floor for distances of 25 - 75 feet, near point of origin of flow, about 400 feet NE of the pod-shaped intrusive.

1715 No more signs of the edge flow spreading SW. It is still advancing slowly at the NE end.

1945 Similar to this p.m. NE end of edge flow has advanced about 100 feet farther.

2000 Activity at cone increasing. Fountains around lake getting bigger and becoming explosive. Throwing hot fragments to heights of 50-75 feet. The cone is throwing to about 150-200 feet.

2035 Violent blast from N conelet, throwing fragments above level of rim, height of about 550 feet. Followed by a dozen or so similar blasts, gradually decreasing in height. Spatter falling all over conelet, making flanks glow brightly, Lava lake violently agitated, but level stays about the same. Spasm over by 2045.

2050 Lake level falling. Cone is now relatively quiet. Lake shows rather violent agitation. Level dropped about 10 feet, then stabilized Two brightly glowing stalactite-hung grottoes revealed under NW and west banks. Stabilized about 15 feet below rim.

September 28, 1952, Sunday

1100 Activity like usual. North conelet throwing occasional bursts to heights of 25 feet. Lake shows some surging, but otherwise only moderately active. Level about 10 feet below rim. Very little glow visible in last night's edge flow, only 4 small tongues near the source about 600 feet north of line to NW rim station.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Tuesday Date September 30, 1952

520930-1 07:30. Conelets and lava lake in the SW portion of Halemaumau, from SE rim.
Ph: Macdonald.

521001-1 Wednesday, Oct. 1, 1952. 21:00. Lava lake and N. conelet; from SE rim of Halemaumau. Attempt to show flame at N conelet.
Ph: Macdonald.

521001-2 21:00. Same.
Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Monday Date September 29, 1952

September 29, 1952, Monday

0820 Activity normal. Bursts from north conelet are noisy. A small dribble flow is issuing at the base of the dribblet spire on the floor NW of the cone.

1715 Same as this morning.

2030 Activity same as earlier today. Two small blow-holes are open at the north and west bases of the north conelet respectively, and throwing occasional bursts of small red-hot fragments as high as 100 feet. At both blow-holes and the summit of the conelet pale flames are visible. Set up spectrograph, but too much fume to shoot.

September 30, 1952, Tuesday

0730 Activity like last night, but both small blowholes seem to be inactive. Can see no movement in the small flow NW of the cone.

2000 C.K.W. reports that lava lake activity is as usual. North conelet moderately active, throwing up globs that land on outside of cone, and showers of smaller fragments that occasionally reach 150 feet.

October 1, 1952, Wednesday

0900 Activity normal. Lake moderately active with slow circulation from north to south and fountains 5-10 feet high at south edge. North conelet throwing occasional bursts up 50-75 feet, and puffs of yellow gas turning blue-white within 50 feet. South conelet quietly liberating blue-white fume.

2100 Spectrograph at SE rim

1. Scale -10 seconds
2. Flame, North conelet - 4 minutes
3. " " " 15 "
4. " " " 45 "
5. Scale - 10 seconds.
6. Helium spectrum - 2 minutes
7. Scale - 5 seconds

October 2, 1952, Thursday

0900 Activity same as usual.

October 3, 1952, Friday

0800 Activity continues unchanged.

1700 Ditto, but a loud roaring escape of gas, apparently from south conelet.

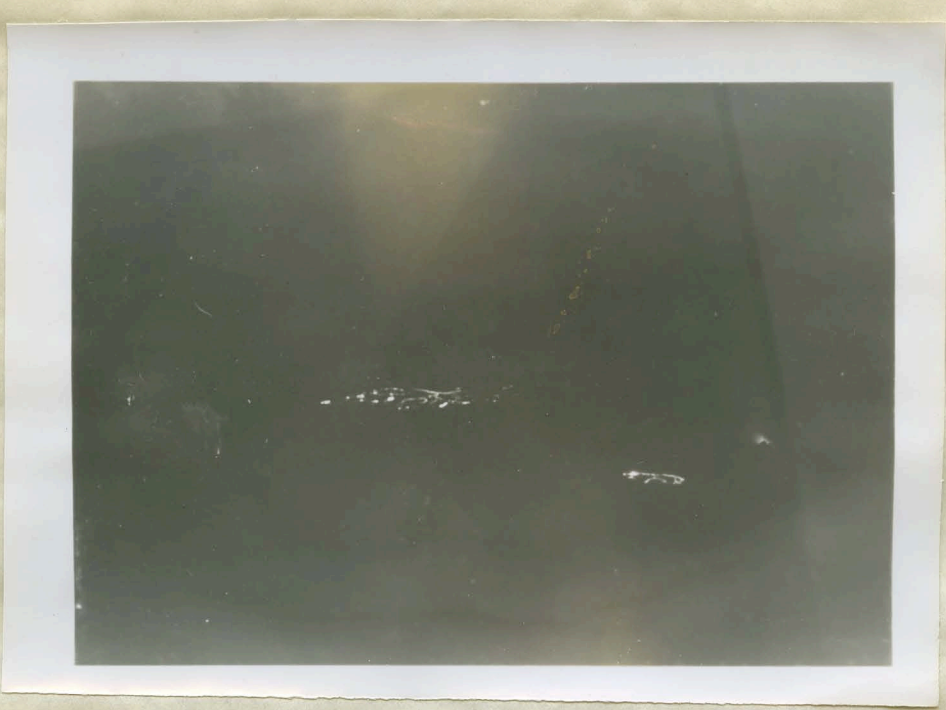
G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

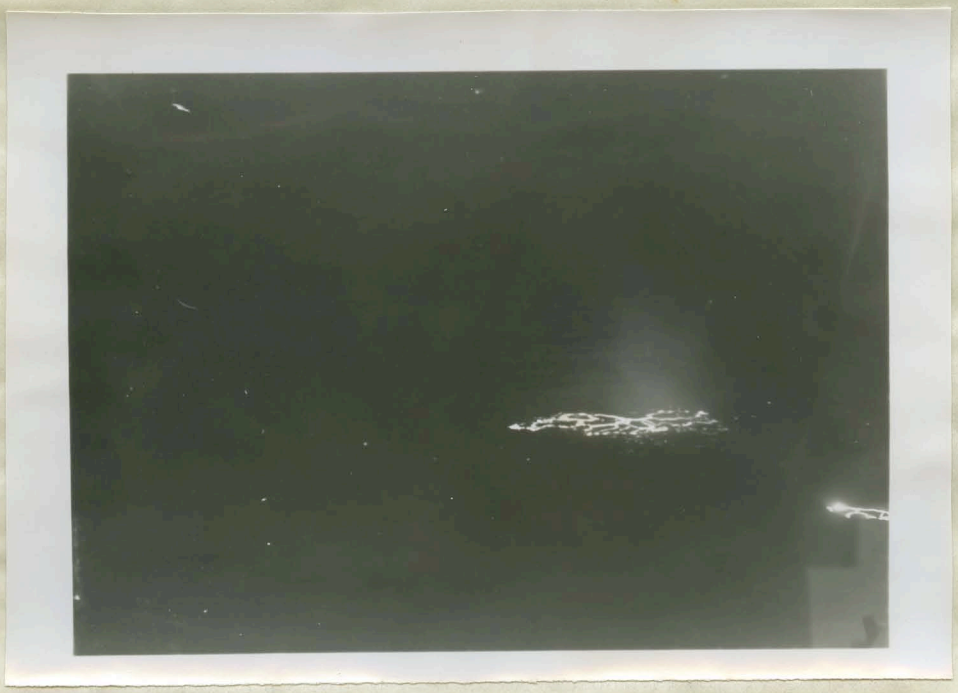
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date October 4, 1952



521004-1 19:00. Halemaumau floor.
Ph: Wentworth.



521004-2 19:00. Same.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date October 4, 1952

October 4, 1952, Saturday

0800 During the night, - probably early this morning, a flow started at the foot of the SW wall of Halemaumau. It is still advancing actively. The SE end is about under the south rim station and other end about under west rim station.

Like other rim flows, it is quiet without fountaining at source. Undoubtedly because lava is degassed at central conduit, gas issuing at central cones.

Harmonic tremor picked up yesterday. Is increase of activity at conjurection (Sept. 19-20) and apposition (now) coincidental? I suspect it is not!

Activity in central under cone is unchanged.

2100 Activity little changed. Glow in edge flow all the way to the ends, but no movement visible. Much glow in area directly behind south conelet. This is the source area of the flow.

October 5, 1952, Sunday

0900 Activity at central conelets and lake continues unchanged. There is no sign of glow or movement visible in the SW edge flow this morning.

Gradual up-dowing of the central part of the crater floor results in a moat around the edge at the foot of the wall, which tends to confine the edge flows. At east wall where there have been no edge flows, and less pronouncedly elsewhere, a pressure ridge has formed parallel to the wall and is being heaved slowly upward and outward with much fracturing of the crust.

1615 Several explosive bursts from north conelet threw glowing fragments to height of about 450 feet. Reported by Col. Andrew Spalding.

October 6, 1952, Monday

0800 Activity normal. Lava lake and north conelet active. South conelet smoking.

October 7, 1952, Tuesday

0800 Activity unchanged. Lava lake moderately active, surface about 10 feet below rim of ring, which stands 5-to 15 feet above surrounding floor in crater of large cinder cone. North conelet puffing brown gas, quickly changing bluish white, and throwing occasional bursts of fragments a few feet above top of cone. South conelet fuming quietly.

October 8, 1952, Wednesday

0800 Activity unchanged.

1730 Ditto.

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date October 11, 1952

521011-1 08:30. Topopan from station 28.
Ph: Wentworth.

521011-2 08:30. Same.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Friday Date October 10, 1952

October 10, 1952, Friday

1030 Activity the same as for past several days.

October 11, 1952, Saturday

1000 Activity the same.

October 12, 1952, Sunday

1000 Activity unchanged.

1330 Activity unchanged.

2000 Between 1400 and 1600 this p.m. and edge flow broke out at the SE edge of the floor nearly beneath the tourist area. Spread South to just east of the 1919 fissure by 1900, and north to a point about ½ way to the NE corner. Still spreading a little at 2000. Flow is narrow, - average about 100 feet.

Lava lake activity about normal. North conelet throwing occasional showers as high as 200 feet.

Loud wistling from vent with glow spot NW of the north conelet, probably at the yellow driblet spire. -- Confirmed next a.m.

Note -- South end of flow is nearly under south rim station. North end of flow is under stake at rim station #2.

Origin of flow is at edge of floor nearly under crack measuring station 5.

October 13, 1952, Monday

0800 Conelet and lake activity the same. Central part of S^E edge flow is still active, tongues spreading over floor toward center of crater.

Noted distinct odor of H_2S at tourist station this a.m.

October 14, 1952, Tuesday

0800 Activity the same. Some movements and glow in cental portion of the S^E edge flow.

1500 Ditto. Both ends of S^E edge flow show some movement and glow. North end of the flow is now under the north rim station.

October 15, 1952, Wednesday

0800 Activity the same. Some movement at scattered points along the whole length of the SE edge flow.

G.A.M.

521011-3 08:30. Topopan from station 28.
Ph: Wentworth.

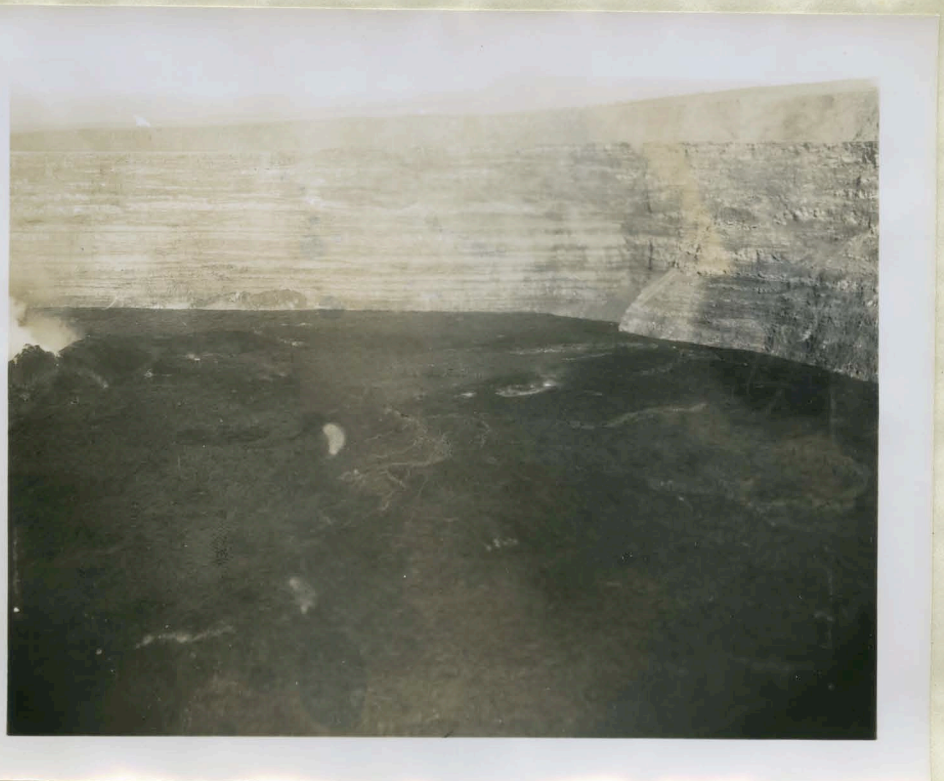
521011-4 08:30. Same
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date October 11, 1952

521011-5 08:30. Topopan from Station 3.
Ph: Wentworth.



521011-6 08:30. Same.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date October 11, 1952

521011-7 08:30 Topopan from Station 3.
Ph: Wentworth.

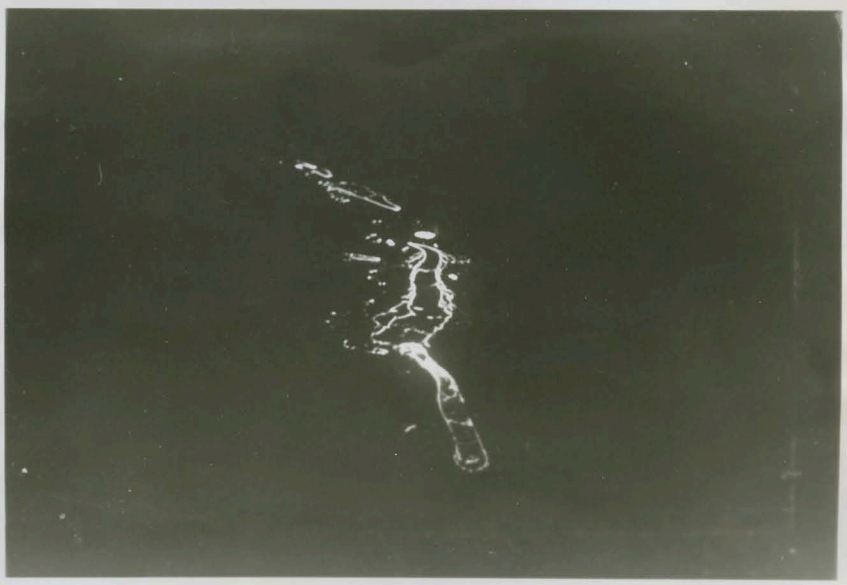
521011-8 08:30. Same.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date October 12, 1952

521012-1 20:00. Southeastern margin of Halemaumau floor showing new margin flow, from west of station 28, ca. beyond south base.
Ph: Wentworth.



521012-2 20:00. Same.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date October 12, 1952

521012-3 20:00. Southeastern margin of Halemaumau floor showing new margin flow, from west of station 28, ca. beyond south base.
Ph: Wentworth.

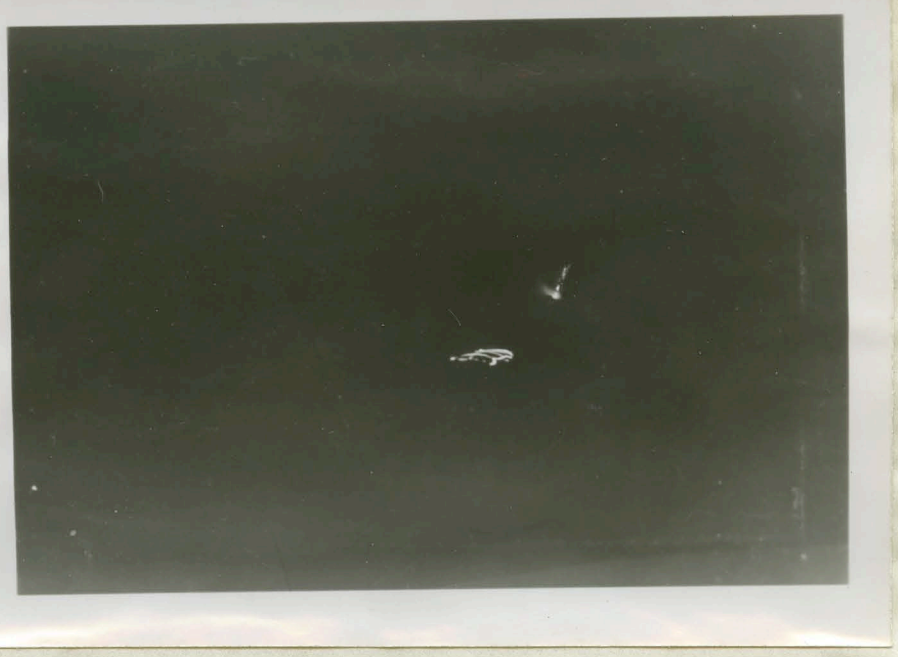
521012-4 20:00. Same.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

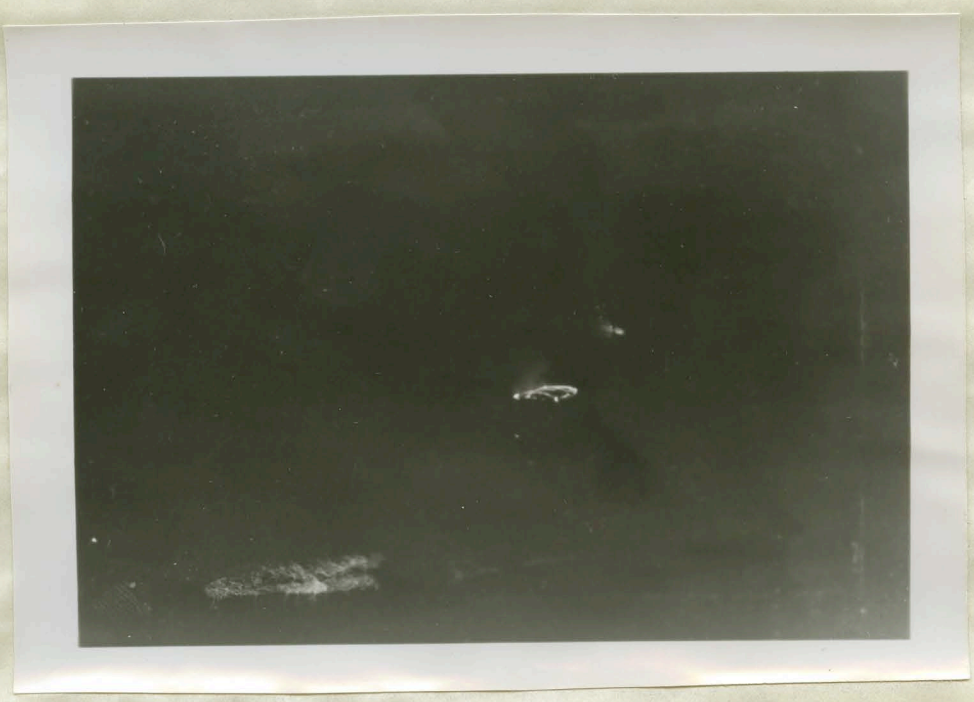
Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date October 12, 1952



521012-5 20:00. Lake and vents.
Ph: Wentworth.



521012-6 20:00. Same.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Wednesday Date October 15, 1952

October 15, 1952, Wednesday

2000 LaVieve and John Forbes report activity the same. Some glow at many places on the SE edge flow, but no sign of movement.

October 16, 1952, Thursday

0845 Lava Lake moderately active. Both conelets smoking and north one throws up occasional small bursts of ejecta. No sign of activity in the SE edge flow.

1730 Temperatures at Sulphur Bank.
Vent #2 - 202° F
Steam Well 204½

October 17, 1952, Friday

0900 Conditions unchanged. No sign of activity in SE edge flow, but Ruhle says there was a lot of glow in it last night, especially in the central portion. Level of lava lake about 10 feet below rim.

October 18, 1952, Saturday

1500 West tilt cellar S 12° E 7.0
Activity the same. A glowing area nearly circular, about 50 feet in diameter, West of the lava lake and in the swale between the cones.

October 19, 1952, Sunday

0930 Activity unchanged. The glowing spot on the west side of the cones is still there, looks like the end of a flow from the lake.

1400 Ditto. Much fume.

October 20, 1952, Monday

1030 Conditions unchanged at Halemaumau.

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Tuesday Date October 21, 1952

October 21, 1952, Tuesday

1000 Plane table at Halemaumau.
Conditions unchanged. Glowing spot at west side of cone still there, and fuming quite a bit, but not much glow showing.

October 22, 1952, Wednesday

1130 Activity unchanged.

1700 Same

2100 Same. North conelet throwing occasional showers of fragments to height of about 150 feet. Glow visible in hot spot at west of cone.

October 23, 1952, Thursday

2010 Conditions in Halemaumau essentially unchanged. North conelet not throwing up quite as much cinder as last night, but lake appears a little more active. One small glowing spot in last edge flow near foot of SE wall about 500 feet south of tourist observation area.

October 24, 1952, Friday

0845 Activity unchanged. No more sign of glwo in SE edge of flow.

1640 Same. Quite a little glow in west pool.

2100 Same. North conelet throwing ejecta to heights up to 150 feet.

October 25, 1952, Saturday

1100 Activity the same.

October 26, 1952, Sunday

1200 Activiey essentially the same. The lake is rather quiet, no fountains observed around edge and no crust rifting. North conelet is fuming copiously and puffing occasionally, but no ejecta observed.

1205 A little activity in lake. Crust rifting, but almost no fountaining.

G.A.M.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Monday Date October 27, 1952

521027-1 09:45. Central cones and lava lake in Halemaumau, from SE rim, Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Monday Date October 27, 1952

October 27, 1952, Monday

0945 Activity like yesterday. Very little ejecta seen being thrown up at north conelet. There is still slow circulation from north to south in the lava lake. The surface crusts move southward at an average rate of about 40 to 50 feet per hour, and sink at south edge followed by fountains 10-15 feet high. Crust is thicker at south edge than on northern part of lake, and tends to pull away from north bank and be very thin close to north bank.

Two hot spots, nearly circular, on west and south sides of the cone, about 35 feet across. Both fuming, and sulfur stained, and show glow at night. One is on the course of the old south river, about 170 feet south of the lake. The other is ~~no~~ on the course of westward overflows from the lake in the west gap of the big cinder cone, about 100 feet west of the lake. The south hot spot has been developing for about 6 weeks, the west one for about 2 weeks.

October 28, 1952, Tuesday

0820 Conditions appear identical with those of yesterday.

1630 Activity the same. No ejecta observed from cone in 20 minutes.

A pressure ridge is again forming around the east and NW edges of the floor, on the recent edge flow. The ridge is now buckled up about 10 feet in places, with a moat a foot or two up to 20 feet wide between it and the wall. There is some formation of pressure ridge along the SE and south edges also.

October 29, 1952, Wednesday

0800 Activity the same as yesterday. Has there been some collapse of the center of the floor, producing in facing scarps near the SW and NE ends? Check with transit.

October 30, 1952, Thursday

1300 Activity unchanged.

October 31, 1952, Friday.

0900 Fume is less dense and bluer than it has been for the past 3 or 4 weeks.

1400 Top of north conelet has fallen in since yesterday. Fountain bursts are plainly visible for the first time in more than a month. Lake activity moderate, level about 10 feet below brim.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date November 1, 1952

November 1, 1952, Saturday

1200 Activity in Halemaumau unchanged from yesterday. Lake is moderately active, with fountains under south bank. Level is about 15 feet below the brim. North conelet fuming heavily and throwing occasional bursts of ejecta as much as 50 feet above rim, but most bursts are down in the crater. Conelet is quite solidly veneered. There must have been a lot of voluminous bursts of very fluid spatter at and directly after the time of breakdown of the top of the conelet early yesterday, the ejecta coalescing to form the solid veneer, with some little driblet flows.

Break-down of top of north conelet occurred sometime between late evening on Oct. 30 and 8 a.m. Oct. 31.

Fume is very light and pale blue in color, scarsely visible from the Volcano House. This is first very pale fume for more than a month.

November 2, 1952, Sunday

1100 Activity like yesterday, but top of north conelet has collapsed more. Cone is now only about 25 feet high, and the crater is wide open and broad, about 80 feet across rim to rim. In it a noisy fountain is throwing stringy blobs and showers of incandescent fragments to a height as much as 50 feet or 60 feet. Very little light fume from north conelet. South conelet is fuming about as always.

Some time during the night the north conelet overflowed, sending sheets of liquid lava down all sides, but especially the north and south. On the south side the sheet of liquid trickled over the bank into the lava lake. On the north side and NE side it got just beyond the old remnants of the big cinder cone.

1500 Activity similar to this morning. From south rim station the lava pool is visible in the north conelet. Level appears to be about 10 feet higher than in lava lake, surging strongly about 5 feet. Fountaining appears nearly constant but only occasional bursts are high enough to be seen from the tourist area.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date November 2, 1952

November 2, 1952, Sunday

2100 Activity similar. Fountain bursts occasionally as high as 150 feet above conelet. There are showers of ejecta. Also occasional "ropes" thrown up to about 50 feet above cone.

Temperature on fountain bursts from
SE rim 965° C
On lake fountain 990° C

November 3, 1952, Monday

0900 Activity like yesterday but much weaker. Only rarely do fountain bursts show above the cone rim. Lava lake very quiet and level unusually low - about 20 feet below rim.
Fume very light, and pale blue.

1720 Activity in Halemaumau like this morning.

November 4, 1952, Tuesday

0802 Called Hilo police station, talked with Sgt. Pavia(?), asked for Chief Paul or Ast. Chief Martin. They were not available. Left a message for them that there had been a very large earthquake, distant several thousand miles, recorded here starting at 7:07, and still continuing; that it was one of the biggest I have seen recorded at this station; that depending on where its origin was it might cause a tidal wave, and that police should be alert for a possible warning from the C. & G. S. Told the sergant there was no couse for immediate alarm, because although I didn't know the place of origin of the quake it would be at least 3 hours from now before any possible tidal wave would reach Hilo. Asked to have one of their chiefs call me.

0815 Called Harry Blickhahn, inquired about earthquake, and gave him the same general message.

1100 Halemaumau North conelet quiet. Occasional explosive bursts in its crater can be heard, and rarely red ejecta are thrown over the rim. Lava lake moderately active, with level about 10 feet below rim.

2130 Activity has increased. North conelet in fairly strong activity, with many bursts to 50 feet and occasional fountain bursts up to 150 feet high.

November 5, 1952, Wednesday

Measuring wave heights and examining "tidal wave" damage in Hilo.
Heights shown on Hilo map--
All the damage observed was the result of gentle flooding, or of rapid run-back of the water as the wave receeded. No sharp crest or "bore" front was reported from the bay, tho an 18" bore was reported in the Wailoa estuary.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date November 2, 1952

521102-1 09:00. Cones and lava lake on floor of Halemaumau, from SE rim.
Ph: Macdonald.

November 5, 1952, Wednesday

Continued:
Damage: Coconut Island bathhouses extensively damaged, and one span of Coconut Island bridge collapsed.

Boats damaged in boat yard at east edge of Wailoa estuary, and others washed onto banks of estuary above Kam. Ave. bridge near back of Iron works.

Flooding over new coast highway east of Ponahawai St., but not over Kam. Ave.

Flooding in Liliuokalani Park.

Flood and minor structural damage at Naniloa Hotel.

Water rose as high as pump station at east band of Wailuku River mouth. No damage.

Sampan washed 200 feet inland across road at west edge of "Radio Bay". Flood damage in adjacent buildings of Vocational School.

At head of Radio Bay and at east bank of mouth of same (Ocean View Inn) flood damage. A small house on a bar in Radio Bay was badly damaged by washing out and collapse of underpinning.

At Capt. Wichland's home nearly opposite end of Pier 2, much flood damage.

At piers - New pilot boat landing destroyed, water rose about 2 feet above pier floor, damaging freight on dock, and washing some into bay.

Only minor flooding east of end of breakwater, no property damage.

2210 Bohlin reports bright glow at Halemaumau, seen from Volcano Road below 29 mile. Big cumulus, brightly illuminated.

Spectators at Halemaumau report fountain in north conelet built up until it reached the level of the rim of Halemaumau. Violent agitation of the lava lake, but no overflow of the conelet. Abundant spatter all over conelet. Caused bright glow. Lasted only about 10 minutes.

November 6, 1952, Thursday

0815 Lava lake essentially inactive. Only minor red glow from time to time at NE edge. Surface about 20 feet below rim.

North conelet active, with many fountain bursts going 50 feet above cone.

2100 Big glare on cumulus cap. Seen as far as Mountain View. Paul Rockwood was at Haemaumau, reports big fountain bursts in lava lake, with much agitation of surface and breaking up of crust, causing glow.

2115-2145 Activity normal.

2200 Another very brilliant glow, with pine-tree cloud. Spectators report fountain in north conelet rapidly grew bigger until bursts reached level of rim of pit, then lava rose in conelet and overflowed on all sides, spilling into lake, veneering whole conelet, and sending tongues out on N and NE sides to just beyond big cinder cone. Violent agitation of lava lake. Whole thing lasted less than 15 minutes. All over by 2215.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Friday Date November 7, 1952

November 7, 1952, Friday

Activity normal all morning. North conelet throwing blobs and spray intermittently to a height of about 50 feet rarely 100 feet. Lava lake active but quiet.

1437 At noisy explosive fountain burst at north ~~eade~~ edge of lava lake, throwing spray to height os 75 feet, violently agitating surface of lake and breaking up crust.

1438 Another blast like last. This was followed by other smaller bursts. Activity of north conelet remains the same. This may well be what causes the big but short-lived flare-ups in glow at night.

1500 to 1600 Activity normal. Lake rather quiet.

2300 John Forbes reports activity normal.

November 8, 1952, Saturday

1000--1030 Activity normal. Sporadic fountaining in north conelet, occasionally reaching a height of about 50 feet above cone rim. Lava lake rather quiet but one crust break-up, with crust moving southward and sinking at south edge.

A hump of lava formed at the NW edge of the lake basin by flow of Nove. 6 makes present lake crescent-shaped. Pool must be very shallow to be filled to and above surface by the small amount of lava that trickled into it.

1100 Paul Rockwood reports big fountain burst at north conelet. Big blobs thrown up to 50 or 75 feet, falling on outer slopes to form small rootless flows. This accompanied about 10 minutes of strong tremor on seismograph and also a big gas release making a conspicuous cloud.

November 9, 1952, Sunday

0400 15 minutes of very strong tremor. No spectators of burst that I know of, but conelet shows new overflow reaching about to the base of the conelet.

1000 Very quiet. No sign of activity either in connelet or lake.

1040 Lava Lake active. Crust broke up with foundering at south edge. Still no activity at the conelet.

GAM

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date November 6, 1952

521106-1 Interior of boathouse off Lihiwai Street showing derangement after tsunami of November 4, 1952. (Hilo)
Ph: Wentworth.

521106-2 Same.
Ph: Wentworth.

521106-3 Interior of boathouse off Lihiwai Street, Hilo, showing derangement after tsunami of November 4, 1952.
Ph: Wentworth.

521106-4 View of overturned boat at boathouse off Lihiwai Street, Hilo, after tsunami of November 4, 1952.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date November 6, 1952

521106-5 Overturned boat and boathouse after tsunami of November 4, 1952, Hilo.
Ph: Wentworth.

521106-6 Same.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Thursday Date November 6, 1952

521106-7 08:15. Cones and lava lake in Halemaumau, from SE rim.
Ph: Macdonald.

521106-8 08:45. Cones and lava lake in Halemaumau, from S rim.
Ph: Macdonald.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Saturday Date November 8, 1952

521108-1 View of Kealakekua cliff from the south.
Ph: Wentworth.

521108-2 Same.
Ph: Wentworth.

521108-3 View of Kealakekua cliff from the south.
Ph: Wentworth.

521108-4 Same.
Ph: Wentworth.

521108-5 View of sand pit at Thurston house lots, Kailua, showing high water mark possibly due to tsunami.
Ph: Wentworth.

521108-6 Same.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Sunday Date November 9, 1952

521109-1 View northward along coast from houselots, Puako.
Ph: Wentworth.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

JOURNAL

Day Monday Date November 10, 1952

November 10, 1952, Monday

0830 Little activity. Small glowing spot in lake. No fountains visible in north conelet, but occasional explosions audible. Weak fuming.

1500 Sudden big increase in amount of fume, correlating with period of augmented tremor on seismograph. At pit- activity like this a.m.

2100 Lava lake shows glow, and moderately strong glwo from conelet. No fountains either visible or audible.

November 11, 1952, Tuesday

1000 One small glowing spot visible at west edge of lava lake. North conelet fuming quietly.

2100 One small glowing area in lava lake. Weak glow from north conelet. No fountaining.

November 12, 1952, Wednesday

1330 No activity detectable except weak fuming.

2030 Only 3 small glowing spots visible, at top of south conelet, and at the west and south solfataras. No glow visible at north conelet.

November 13, 1952, Thursday

0930 No activity detectable except weak fuming.

November 14, 1952, Friday

1200 Conditions at Halemaumau like yesterday.

November 15, 1952, Saturday

0800 Conditions at Halemaumau unchanged.

2000 Same three glowing spots on floor.

November 16, 1952, Sunday

0800 Conditions like yesterday. No sign of activity. Quiet moderate fuming of south conelet and west and south solfataras.

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory

JOURNAL

Day Monday Date November 17, 1952

November 17, 1952, Monday

0820 Conditions in Halemaumau like yesterday.

November 19, 1952, Wednesday

1300 No change in Halemaumau.

JOURNAL

DEPARTMENT OF THE INTERIOR, U. S. GEOLOGICAL SURVEY
Hawaiian Volcano Observatory
Day Wednesday Date December 10, 1952

521210-1 09:00. Cones and site of lava lake on central southwest portion of floor of Halemaumau, from SE rim.
Ph: Macdonald.