

Hilo Hotel

IN THE HEART OF DOWNTOWN HILO, HAWAII, U.S.A.

February 4th, 1953

Dear Schuyler:

That I'd write and tell you that I got over to Hawaii again. This time I had the opportunity to go up Mauna Loa with a group of fellows from the weather bureau who wanted to make some meteorological tests.

We left Hilo airport at 5:30am. The road leads up thru Kulani prison at 5500 feet where we had breakfast. At 7:30 we left there and shortly thereafter came to the first lava flow. These flows are all quite recent (last few hundred years) so no plants of any kind grow on them as there has not been sufficient time to change them into soil. At this point the road changed into a trail. It was made by a bulldozer which merely pushed the big chunks out of the way and pounded and crushed down the smaller pieces with its treads. The truck we had was something made by Dodge on a design for the army. It had four wheel drive and big fat tires. Even so, it was rough going at times because the trail was so loose that often the wheels spun like on marbles. In any case we continued on upward at about 10 to 15 miles per hour. We stopped at 8300 feet and 11,500 feet to make some measurements. Then we went on up to the end of the trail which was at the northwest side of Mokuaweoweo crater and about a mile from the rim. Here we got out and walked.

In about 20 minutes we arrived at the rim just below the highest point at 13,680 feet. This was about 1:30pm. Mokuaweoweo crater is much different than Haleakala crater. The former is only about $1\frac{1}{2}$ miles across and about 3 miles long which is much smaller. The bottom is flat as a pancake and jet black with ripples. It looks like someone had been boiling a kettle of tar. One place there is a small cinder cone a few hundred feet high. The walls of the crater are nearly vertical, being about 1000 feet high on the west and about 600 feet high on the east. These cliffs add to the appearance of a boiling kettle. However when we were there no sign of activity could be seen.

The top of this mountain is big and flat so that ^{no} one place could be found to secure all the horizon from merely the height of a man. Thus I took a panorama of pictures at two places. These were about $\frac{1}{2}$ mile apart along the west rim. At one place I could get everything except southwest. The other place I could get everything except north-

east. Combining these should give the entire horizon. One easily looks over the east rim of crater ~~to~~ top of west side.

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The situation is quite different than I thought. The whole mountain is immense. The geologist said it had more volume than any other single mountain mass in the world. It seems that a long time ago (million years perhaps) the crater was full and ran over the high west side. These flows are the ones we walked upon. They are light red brown and the corners all smoothed off. This change in color plus the weathering show them to be very old. At a few places small patches of lava dust less than an inch thick and a few square feet area could be found. These are the products of weathering. Most is blown off by the wind. There is no cinder or ash of any kind present which means that the lava fountains in the crater are not sufficiently strong to send up jets above the edge of the rim. If they had been the trade winds would certainly blown a lot of spatter over where we could find it. On the way back to truck I walked down side of mountain about a mile and then back in a big loop. No where could I find any cracks or faulting. This means that the mountain is very solid along the west edge. Naturally no new flows could be found if there were no vents. The rock of Mauna Loa is similar to Haleakala except that it is more porous and much like pumice. It occurs in two kinds. The Pahoehoe is more liquid and such flows are relatively smooth and easy to walk upon. The Aa is much rougher and cuts up ones shoes. I brought a sample back with me. Lower down on the north and northeast sides several cracks could be found where new flows came out. The road got across these by pushing in chunks and filling with crushed lava. In any case the top of Mauna Loa appears quite safe. Apparently no foundations will be broken by cracks or faults and no equipment will be ruined by lava fountains. The main danger would be fumes blown over by the trade winds plus the possibility of being cutoff on the road up by flows lower down which might come out of the cracks on side. The top is sufficiently large to put up any conceivable type of structure and install an airport too! This place has possibilities for the future. Now it is much too hard to get to. We left there about 4pm and arrived at Kulani about 6:30pm. Its a long hard drive and I was never so happy to get back to prison in all my life! We ate dinner there and then came on back to Hilo, arriving at about 8pm. It is the kind of trip one doesn't want to miss but neither does one want to do it often.

In a couple of months we intend to make another junket up Mauna Kea. That mountain is slightly higher and much more steep. I'll tell you about it when we get back.

Best regards,