



STATE DEPARTMENT OF GEOLOGY
AND MINERAL INDUSTRIES

702 WOODLARK BUILDING
PORTLAND 5, OREGON

January 7, 1947

To : Wally Lowry
From: H. M. Dole

Dear Wally:

as you suggested

Thank you for your letter of December 31. I believe that the ash which the Christie Pumice utilizes is an early ash fall and does not represent that derived from the older pumice of Crater Lake. This is based on the fact that it is fresh (as determined by you), its thickness, and its wide spread distribution as shown in the log of the well north of Chemult. I guess I had the impression that it was derived from the older pumice because I did not consider an earlier fall and its relations were definitely older than the younger pumice. If you would make this change on my report that is on file at the Portland office it would be appreciated.

I am quite surprised that the silt which underlayed the pumice contained sponge spicules. As far as I know the sediments which Allison finds beneath the pumice does not contain them. Am I wrong in this? This brings to mind something which may be of interest to your "bug" man. When I was working the sediments of the Fossil Lake area I found some ostracods. I separated them from the sediments and Allison should have these at Corvallis, if you are interested.

Best regards to Dottie and you for the New Year.

Sincerely,

H. M. Dole

HMD/ar

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December 27, 1946

To : F. W. Libbey
From: H. M. Dole

Dear Mr. Libbey:

This is in reply to your letter of December 12 in regards to the volcanic ash Mr. Christy puts in his pumice shipments and the lava "capped" hill west of the S.P.R.R. cut.

Sample # CG 235 is taken from one of the pits from which the volcanic ash is procured. I believe this sample is representative but I wouldn't guarantee it as the ground is frozen at the present and is harder than hell. An analysis of this ash which Mr. Christy had made is included in my report on this property. (By-the-way, I don't think Mr. Christy is in this operation any more. Although he still hangs around and seems to act as general supervisor, I believe the ownership is vested in the two Wisby boys and Mrs. Christy. I'm not too sure what the real setup is, though).

SEE LETTER JAN 7, 1947
FROM DOLE - ATTACHED

This ash, I believe represents the fines derived from the weathering of the "Older Pumice" of C.L. prior to the deposition of the "Younger Pumice" and has been deposited in the flats bordering the hills mainly by wind action. Although it seems to have occasional pebbles of pumice (up to $1\frac{1}{2}$ ") scattered all through it without any sign of sorting it is predominately fines, as shown by the screen analysis (and a poor choice of screen sizes, in my estimation). That this ash might represent an independent fall must not be overlooked. Next summer if someone is in that vicinity it might be worth while to look into this further. The depth of the ash varies from a few feet up to 10' and the overburden from a few inches to a foot.

Now about the lava flow near the summit of the hill west of the S.P.R.R. cut:
The hill shows on the topog sheet of the Chemult Quadrangle in the SW $\frac{1}{4}$ of Sec. 8, T27S, R8E. It is 150' high and is elongated in an ENE-WsW direction. I do not think this is a lava capped hill. Rather, I believe it is the end of a lava flow or a pressure ridge (although it probably is too high for the latter) that has been covered by drifting pumice. Lava shows near its crest but I attribute that to uncovering by wind. According to Mr. Christy (and not confirmed by myself) lava is exposed along the southwestern base of the whole hill. Also, pumice occurs to a depth of several tens of feet on

the north-eastern slope. In the flat a few tens of feet north of the hill a test pit was dug to 60 feet--all in pumice and ash (according to Mr. Christy). The pit still exists but is filled to within 20' of the surface--confirmed. Sample # GG 236 is from two outcrops near the summit on the NE corner of the hill very close to the 4900' contour. Sample # GG 237 is from the lava escarpment to the east of this hill. They were chipped from outcrops running up the hill about where the small "L" is in the name "Corral Spr" on the topog map. Perhaps Wally can make thin sections of these and see what the relations are.

I am sending another sample up with this batch as GG 238 which may or may not be of interest to you. It is a sample of clay (or, perhaps, soil) which occurs below the pumice at the Chrystallite operation. This, also, was frozen when I took it so I may not have obtained a representative sample. This was taken in the nearly mined out pit, at the base of the pumice and top of the clay. Also, enclosed is a log of a dug well at the northern limits of Chemult about 1 mile south and west of the plant. As you will note from this log the depth of the clay below the pumice is about 5'. The debris from the well was spread on the ground and I got one of the diggers to point out to me what was taken out and the depth.

See confidential sheet.