

POSSIBLE DAMAGE TO HOT SPRINGS (cont'd):

the tunnel would be in the order of 1/1000 to 2/1000 of an inch. No allowance is made in this calculation for the very considerable reduction of the vibrations which would result from the use of delay action detonators and the other above mentioned methods of reducing vibrations. Amplitudes of this order are much too small to disturb even the most fragile rock.

It is possible that parts of the hot water channels may pass nearer the tunnel site and therefore receive stronger vibrations than those at the springs, but even these would be much too weak to displace any but minute rock fragments.

The most convincing proof that the blasting will not damage the springs is seen in the manner in which they survived the Hebgen, Montana, earthquake. This was a truly gigantic shock, rating 7.1 on the Richter scale, and sent its vibrations around the world. It caused fluctuations of the water level in wells as distant as Puerto Rico and Hawaii, and at a well in Idaho a rise and fall of 10 feet were recorded. The vibrations at Radium from this quake were hundreds of times greater than any which will result from tunnel blasting.

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