

DEPARTMENT OF NATURAL RESOURCES DIVISION OF WATER RESOURCES

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Prof. Jack Oviatt Department of Geology Kansas State University Manhattan, Kansas 66506

Dear Jack:

Thanks for the map of the Weber River Basin. I'm glad to see someone working on that country. Your map has a lot of detail; I don't have any comments except on the subject of rock avalanches which, as you know, I learned something about in rebuilding Smith-Morehouse dam.

Your landslide unit (ms) includes several rock avalanches, including the one at Smith-Morehouse and the big one you describe in the South Fork. I think there may be some others as well. I would like you to take a closer look at the fan-shaped deposit on the south edge of the Weber River valley at the mouth of Commissary Fork in Section 21, T.1 N., R.8 E., which you have mapped as gt. It is a monolithologic deposit of angular guartzite rubble, much like the "red till" rock avalanche deposit at Smith-Morehouse dam. Its topography suggests to me that it flowed into place, rather than being pushed. A striated scar at the head of Commissary Fork is a good candidate for a source.

It turns out that the radiocarbon age of the Smith-Morehouse rock avalanche is close to the date determined for the penultimate earthquake on the Bear River Fault Zone, which is only 16 miles to the east (West, 1988, in USBR seismotectonic studies for Meeks Cabin and Stateline dams). If there are a number of rock avalanches in the eastern Uintas, it would be interesting to know whether they are contemporaneous. If they are contemporaries, it would be interesting to know whether they coincide with known paleoearthquakes. What are the chances you could get some money for age dates on some of these rock avalanches?

Sincerely,

Benjamin L. Everitt Chief Geologist

Bill Lund cc:

