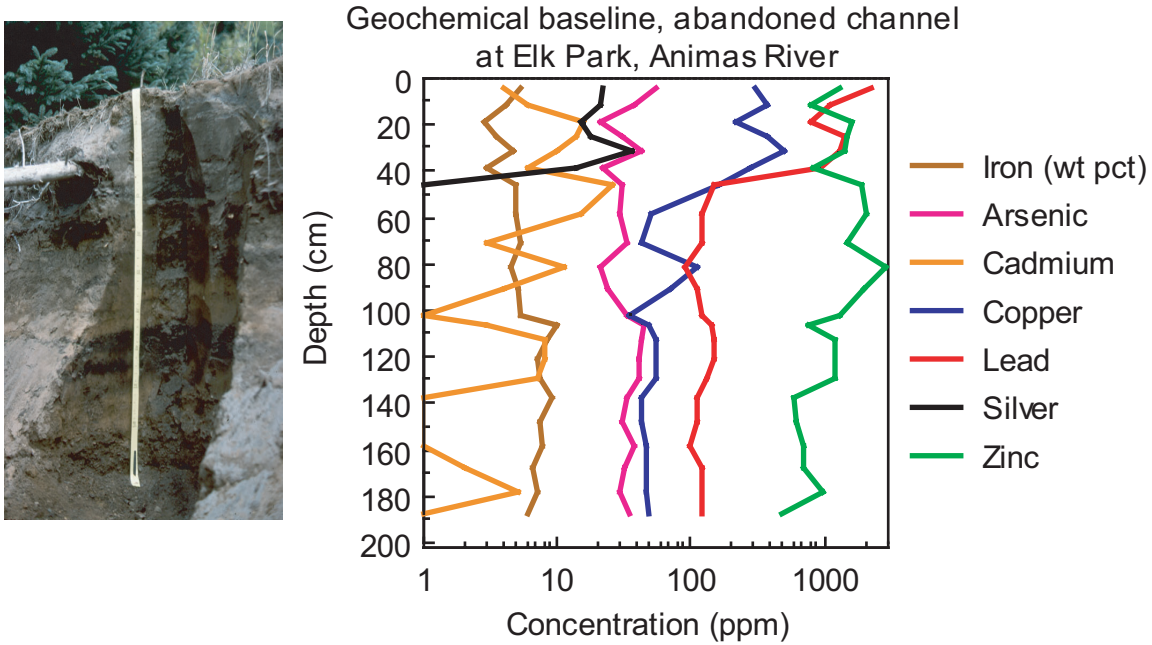

Figure 7. Overbank deposits along an abandoned channel of the Animas river in Elk Park. The bed of the abandoned channel is about 1 ft above the low-flow level of the Animas River; consequently, the channel is probably flooded annually during spring runoff. The overbank deposits represent high-flow deposits that accumulated both prior to and after mining. The uppermost 42 cm (16 in.) represent flood deposits from the 1911 Gladstone flood as shown by the presence of fluvial tailings deposits, random orientation of large logs in the deposit, and elevated abundances of silver, lead, copper, and manganese in the section. Beneath the Gladstone flood deposit, concentrations of zinc, cadmium, and to a lesser extent copper are elevated due to downward mobility of these metals from the Gladstone flood deposit due to weathering. The age of the blue spruce (upper left of photo), which is rooted in the Gladstone flood deposit is 27 yr on the basis of a tree-ring count. At a depth of 87 cm (34 in.), we date a charcoal layer at 1,190–1,130 yrs B.C. using ^{14}C methods. Below 100 cm (39 in.), concentrations of iron and deposit-related trace elements are essentially constant. These data represent the pre-mining geochemical baseline at Elk Park prior to historical mining in the Animas River watershed upstream from Silverton (Church and others, 2000).