Chapter Seven

The Road Ahead

This type of close-in data may be a key to increasing our ability to identify smaller events. At present, seismologists do not know very much about how higher frequency energy waves propagate through the Earth's crust. One of the matters they will therefore be looking into is the possibility that P-type body waves of much higher frequency than have been used before, may be used to identify low energy nuclear events, even though these waves tend to weaken rapidly over distance.

Dr. North stresses that no nuclear detonations or deliberate detonations of conventional explosives will be needed in the course of this Canadian research. There are many little earthquakes, mine blasts and rock bursts from various sources that can be used.

One fact that is not in dispute is that the task of verification, already complex enough, will be even greater if more close-in data must also be analysed.

The Bottom Line

What is the bottom line? Most scientists who have studied these matters agree that, from a technical point of view, any treaty to ban nuclear tests must be based on a genuine desire by all parties to make it work. It would be extremely easy for any nation in almost any part of the world to test a sub-kiloton nuclear device without fear of detection, even if international sensors were to be deployed within its own territory. Whether a factor of this sort stands in the way of successfully negotiating a ban on underground nuclear testing is a matter that politicians and diplomats, rather than scientists, will be in a better position to decide.