



## Earth's physical resources: extracting coal & oil

### *Open cast mines*

#### **Narrator**

This fault is a typical mining hazard. Its four-metre throw would stop a mechanised face. A fault like this provides a ready pathway for one of the miners' main enemies: water. It's just a pumping problem here, but undergrounds a major hazard. Underground or at the surface, miners need to know what's in front of them. Let's consider the investigations that must precede the development of an opencast mine. Only drilling will give precise information. Any single borehole from surface will reveal the depth, thickness, and quality of seams present. It will also reveal the nature of inter-seam sediments. A series of boreholes will allow structure, coal reserves, and stripping ratios to be calculated, and hazards to be anticipated. Only after a clear picture has emerged can the mining operation be planned and executed. Access roads, topsoil dumping, overburden removal, coaling – that's coal extraction – and restoration must all take place in the right sequence for an opencast site to be successful.