

The final explanation of the explosion of the oxygen tank in Apollo 13 was disclosed several months later. To change the liquid oxygen at -183°C into gaseous oxygen, a small electrical heater is built into the tank which operates intermittently, whenever the demand arises. A contact-breaker is therefore incorporated into the electrical heating circuit. The breaker has two platinum contact points. As the launch was delayed over several months, during which constant tests of all equipment had been carried out, these contact breaker points had welded together and a continuous heating of the liquid oxygen took place, which as a result led to the explosion. Once the cause had been determined through lengthy detective work, which was only possible by analysing the voluminous paper and computer records accompanying all spacecraft tests, a small redesign avoided any repetition.

My comments from hospital must have stood me in good stead with the Editors of the *Daily Telegraph*, because when I applied for a month's leave to attend my eldest daughter's wedding in New Zealand, it was readily granted. I could only finance such a tour by writing a report about "New and Unusual Mineral Resources in South Africa and New Zealand" for the firm of Metal Traders in the City of London. I started in Israel because I knew a mineral expert there who could help me to locate new resources in South Africa, a country with which he had kept in close touch.

I also interviewed Professor Ari Ben Menahem of the Weizmann Institute in Israel, then one of the leading earthquake investigators, and my story was later published in the newspaper. Like many other Israeli scientists, he wanted to make his point by telling a parable from the Bible. "A rich old farmer was lying on his death-bed and told his two sons that there was a treasure buried on his land; but before he could reveal its location, he died. His two sons started to dig and continued for years, but never found the treasure. But their digging made the land fertile and they became rich." Ben-Menahem's 'digging' consisted in transferring the volumes of seismic recordings issued by the US Coast and Geodetic Survey to his computer and by their analysis he hoped to find indicators which might lead to earthquake predictions. But he was not lucky.

To travel east from Israel was not easy in 1970, and I had to go through Teheran, New Delhi, Bangkok, Singapore, Darwin to Sydney. This time my flight from Sydney to Wellington in New Zealand was not eventful like my previous one, 15 years earlier. [See Title 46] I arrived in good time for the wedding and afterwards devoted myself to the task of interviewing geologists and other knowledgeable scientists. I had a minor handicap on the whole journey, as after my hernia operation I was not allowed to lift my luggage and frequently had to ask for help. The reply was often: "What a pom, he can't even carry his own bags!" But my appeal was always answered.