

## ALEX COPELAND

It is with great sadness we report the death of Alex Copeland. He died from lung cancer in hospital in Adelaide on Thursday 16<sup>th</sup> of April. The diagnosis of lung cancer, made last year, came as a shock to all of us, particularly Alex, as he had not been a smoker.

Alex's geophysical career spans over more than 40 years, starting in 1968 when, straight from school, he joined Fairey Aerial Surveys based in Maidenhead UK. He initially trained as a cartographic draughtsman but later transferred to their newly formed airborne geophysics department, working as a data compiler. One of Alex's tasks was flight path recovery, plotting the path of the aircraft from tracking film onto map. As much of this work was undertaken on site (along with other data QC) Alex was soon working away from home on a variety of projects. Derek Minter remembers him as a popular crew member, hard working, competent and sociable. In 1974 Alex worked in Nigeria on a large airborne survey based out of Enugu for nearly a year. Derek says the project struggled with aircraft and electronics problems but to his great credit Alex saw it through to its conclusion.



**Figure 1** : Alex, second from left, with the Fairey Aerial Surveys team and DC3 in Nigeria, 1974 (Photo from *Fairey Aerial Survey History* site <http://www.faireysurveys.co.uk>)

Alex had a reputation of something of a boy racer and Doug Morrison recalls being terrified when driving with him in Africa. Doug claims he was not alone in that regard although they all found that a few beers helped ease the fear. Having beer in the car also came in handy one night when their favourite orange VW hunting car caught fire on route to the movies, with Alex driving.



**Figure 2** : Alex reviewing bush medicine in Nigeria about 1975 (Photo Derek Minter)

He left Fairey to join Geometrics in 1975 as a data compiler, initially in Zambia but then transferring to the US before coming to Australia in the late '70s. It appears he did have time between the data compilations to model for Geometrics' new seismograph as shown in Figure 3. Doug Morrison recalls a time in the late '70s when Alex helped him unload and stack tons of paperbark fencing and spent a few hours helping start construction of the fence at his old home at Lane Cove Sydney and that Alex was dating Mark Baigent's sister at the time - a small geophysical world!

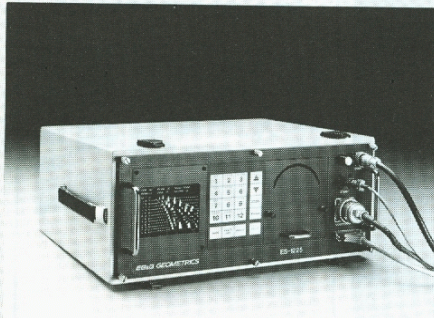
Already an excellent navigator Alex qualified as a commercial pilot in 1979 and undertook some survey flying for Geometrics in their Piper Navajo aircraft.

His work with Fairey and Geometrics, took him all over the world. This formed a template for later life as Alex loved to travel, so much so that although he had lived in Australia for over 30 years and wanted to become an Australian citizen, he claimed that could not qualify because he could never reach the minimum continuous period required to be physically in Australia. Wherever he travelled he left a trail of people with Alex stories. He had friends all over the world.

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The '1225 uses the CRT to simultaneously display seismic traces, control settings, and menus to assist you in survey design and operation. A non-volatile memory retains field parameters until you change them. And, the '1225 is quite possibly the most reliable seismic instrument built. The entire system is designed using large-scale integrated circuitry and only one printed circuit board, eliminating failure-prone interconnections. The printer and CRT have been field-proven for literally thousands of hours, and all mechanical switches have been replaced by a rugged, weather-proof keyboard.

## **Lightweight and portable**

The ES-1225 is half the size and weight of other 12-channel seismographs. It's convenient to hand-carry or backpack, and

light enough that one person can carry a full system, including seismograph, cables, geophones, sledgehammer, and still have room for lunch!

## **Half the price**

We worked hard to bring down the cost of this instrument. It's half the price of other 12-channel systems, and just a little more than a 1-channel seismograph with accessory plotter. But despite its low cost and reliable operation, the lightweight ES-1225 is ideal for *both* refraction and reflection surveys.

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**Figure 3** : Alex posing for the camera with the "new" Geometrics seismograph. (Thanks to Doug Morrison for the scan)

He moved to Adelaide in 1982 for a new start and joined Shell Australia as a field assistant in their Adelaide office. While not providing many stamps in his passport this job did give him a close up look to outback Australia and importantly provided him with bush driving skills, a critical tool to have for a Pom in the Australian outback. This required a tempering of the racing car driving style of his time in Africa. When Shell closed their South Australian exploration office in 1986 Alex set up an exploration service company, initially providing field assistants, camping and vehicle support. His first job in this role was in assisting me in acquiring seismic refraction data for the new Olympic Dam borefield just south of Lake Eyre. It was June and we slept in swags at what was then the end of the Borefield road. A road train was trucking water to Olympic Dam and operated 24 hours a day on about a one hour return cycle. Although we were camped on the open gibber plain only 100m away from the turning circle and stand pipe we all slept soundly thanks to hard work and the Coopers Real Ale Alex had brought. Showers were taken, in the open, between road train visits, under the standpipe. The showers might not have been very long and certainly were not warm but we did use a lot of water and got wet very quickly! The highlight for Alex and his crew was the last day when I “disposed” of the 250kg of unused explosives with a relatively short blasting cable.

In 1987 Alex was joined by Peter Elliot and they formed Search Exploration Services focussing on contract ground geophysical surveys. He and Peter later parted ways with Pete taking the Zonge equipment and Alex the Scintrex gear. He used the Scintrex IP equipment for several years building Search’s reputation as a hard working, reliable geophysical contractor. However like many Australian geophysicists, he started to realise that equipment designed and built on the other side of the world wasn’t giving him the best answers in Australia, where electrically, the overburden often looked like sea water. At this stage he could have done as most other contractors do and look for an off the shelf solution. Undaunted or perhaps not realising the cost both in time and money in building his own system, he decided to do just that and with help from Phil Palmer on the hardware side and John Paine on the software side he built what is arguably the best IP system in the world and certainly the best system for Australian conditions. He took his systems all over the world.

I recall a job in Tunisia where Alex proudly told me that the crew I was using would have a newly rebuilt Volkswagen racing engine powering their 30 kV generator. It lasted 15 minutes before seizing. Off it went to the local mechanics coming back a week later, working. Again it lasted 15 minutes in the field before seizing. By this time Tony Walsh, the crew leader, was getting a roasting remotely from Alex, whilst scouring the wreckers of Tunis for a replacement engine. This time the mechanic took a closer look and discovered that the racing engine had been modified so that the oil intake had been shortened and did not reach the bottom of the sump. Depending on the angle the truck was parked on the engine either had oil or not and the crew had unfortunately chosen to park it with the intake in air. Alex quickly acknowledged his mistake and accepted that just because it has “racing” in front of it and works on flat tracks it need not work in survey situations and equipped his crews with turbo charged diesels which they still use today.



**Figure 4** The Search crew in Tunisia with their shiny new but seized, motor generator.

Alex always managed to add a touch of class to what would otherwise have been a pretty ordinary field job. Lisa Vella recalls that while working at Carrapateena, in 2007 and despite the relative isolation, Alex managed to produce a few good bottles of red wine for dinner each night. She went on to say, "Alex was a fine and decent man. Always kind and ready to help a younger Geophysicist in need. He was a very good mentor and endlessly enthusiastic about his work and the world around him. All the while innovating with a smile on his face. There was no fanfare with Alex, just a quiet belief in himself and his company, enabling Search to develop one of the best IP systems in the world."



**Figure 5** : Alex explaining the Survey at Carrapateena with Lisa Vella and Jim Hanneson looking on(photo Lisa Vella)



**Figure 6** Alex set up for comfort on survey in PNG (Photo Regis Neroni)

Alex was a keen rugby player playing at all levels for the Old Collegians Rugby club in Adelaide from 1982 through to the 1990s. He was a prolific try scorer and played in 7 Golden Oldies Rugby World Cups as well as helping to organise the 1999 event in Adelaide. Old Collegians provided a fertile recruitment ground as many of Alex's field crew had rugby backgrounds.

He leaves behind his partner of over 30 years and business manager Gerry Bown and great sadness in all those who knew him. He will be missed.

Kim Frankcombe

With help from, Derek Minter, Doug Morrison and Lisa Vella