Health and safety

Progress report on the road to safety

Given the lip service paid to safety in the E&P industry, it’s surprising to find that Rod Thonger is running practically the only dedicated HSE management consultancy for seismic operations worldwide. He spoke to Andrew McBarnet about the industry’s continuing attempts to improve its safety record.

Currently employing 25 specialists, Thonger’s UK-based GSR and Thonger Safety Associates have been around since 1987. The period coincides with a considerable, even dramatic, change in HSE perceptions, standards and performance among oil companies and contractors.

‘There’s been a tremendous improvement in standards over the last 20 years, particularly on the seismic contracting side internationally where virtually every contract has HSE standards laid down,’ Thonger says. ‘But the domestic situation is still lagging behind in some countries.’

The few publicly available statistics support Thonger’s assessment. The most reliable figures come from the International Association of Oil & Gas Producers (OGP), formerly the Oil & Gas Forum, which claims the most comprehensive database in the upstream E&P industry. Its most recent report, for the year 2000, covered 39 companies which had worked a total of 1634 million hours in 71 countries, making it the largest safety database ever put together. Its conclusions echoed a familiar refrain in which the number of fatalities has remained worryingly constant over the last 10 years, while the overall safety record has shown more or less consistent improvement.

According to the OGP findings, 119 company and contractor personnel died in 2000. The worst incident was a pipeline explosion in which 19 contractor lives were lost in Nigeria. The fatal accident rate was 7.3 company and contractor lives lost for every 1000 million hours worked, a slightly worse outcome than in 1999. The most common fatalities for company and contractor personnel were the result of vehicle accidents and explosions and burns. In the previous five years, air crashes had accounted for the greatest number of deaths. In 1998, one crash in South America claimed 65 lives.

While the fatality rate has shown no sign of decline, the report finds that the long term improvement in lost time injury (LTI) frequency continued. The 2000 LTI figure of 1.88 per million hours worked was 41% lower than 10 years ear-
lier, a record low. On a functional basis, exploration activity (which includes seismic operations) saw contractors perform 42% better than the 1997–99 average, with the greatest improvement in South America. OGP calls this a noteworthy achievement. It notes that company exploration performance in 2000 deteriorated significantly compared with the 1997–99 average. Ironically, South America was the cause, but elsewhere in its report, OGP identifies the region as a conspicuous problem area for safe E&P operations.

Thonger thinks it is remarkable that the seismic business comes out as well as it does, given the nature of some operations, especially on land when 3000 people can be working in the jungle or some other equally unfriendly environment. However, he is less sanguine about the future, suggesting that oil industry consolidations and a shortage of experienced staff to go round may reverse the progress which has been made – ‘it is very easy for the figures to increase when the effort slackens.’ Moreover, the inroads being made into the international market by seismic companies previously confined to domestic operations raises issues of compliance with accepted international safety standards.

One seriously underestimated hazard, according to Thonger, is the safety of aviation services to the industry, brought into sharp relief by the recent air crash in Nigeria which killed a number of oil company personnel. GSR has just added a third aviation specialist to its team to meet demand from clients for inspection and auditing of air transport operators worldwide. ‘The sort of thing we find,’ says Thonger, ‘is a pilot who has logged a respectable 3000 hours. This looks good on paper until you realize that the hours were logged over a period of 30 years. Then you begin to wonder…’

In addition to GSR’s own clients, Thonger has since 1993 been associated with ECL, the UK geoscience services company, which markets GSR services to its clients. In the last few months GSR’s agenda has included providing services such as: four land HSE advisors in Indonesia, and others to Iran, Kazakhstan and Sudan; environment QC’s in Indonesia, Iran and Pakistan; aviation advisors to Bolivia and Iran; a marine advisor to a boat offshore Nigeria; vessel HSE audits in Azerbaijan, Indonesia, South and West Africa, Guadeloupe, the Netherlands and Trinidad; airline and helicopter audits in Nigeria, Equatorial Guinea and Cuba; corporate HSE management system support in France; and HSE management courses in the UK.

Thonger admits that there’s more safety work about at the moment, but puts this down mainly to the cyclical nature of the industry. GSR offers three types of HSE management system. The corporate version is designed for any type of company based on the OGP model, which is the accepted industry standard and deals with issues of leadership and commitment through to implementation, monitoring, audit and review. Specifically for oil companies, GSR has a system for use when managing seismic acquisition projects, which covers pre-qualification and selection of contractors, through the actual work to final close out. The third HSE management system is for contractors on field projects with the emphasis on identifying and controlling any major hazards for individual crews.

In addition, GSR gets involved in HSE audits reviewing and reporting on safety aspects of seismic operations: aviation services aimed at reducing risk, particularly in field operations in less-developed areas and at sea; driver training (defensive and off-road) when required; and HSE management courses.
Thonger’s strategy for HSE is based on the experience he gained with UK-based Seismograph Service (SSL), which Schlumberger acquired from owner Raytheon in the early 1990s. It is ‘very much a management approach instead of counting the lifeboats’, he says, but his introduction to the safety arena was unconventional. For a start, he joined SSL having originally embarked on an engineering course before switching to the world of chartered accountancy. His career-defining moment came after six years of accountancy training in London. A chance encounter with an SSL man in a country pub when visiting his mother resulted in an introduction to the company and a job as assistant party manager in Gabon working on a Shell contract. ‘I liked the sound of three months on, and then a month off with a pocket full of money, particularly with my overdraft at the time.’ Thonger says he never regretted exchanging the concrete jungle of the city for the green jungle of Gabon, where he worked for two seasons, by now party manager in charge of all the camp arrangements. Assignments in Egypt, Cameroon, the UK and New Zealand followed.

It was in 1984 while in New Zealand as party chief that he got the call to his ‘vocation’. Management in London had noticed that he took the trouble to circulate minutes of safety meetings and pass on warnings and advice about operational hazards encountered. In no time he was brought back to the Holwood head office outside London and put in charge of company safety. Thonger says that his appointment coincided with the beginnings of new expectations regarding the safety of contractor operations, instigated notably by Shell. Thonger found himself visiting crews around the world, passing on the message, and ultimately introducing a new safety set up within SSL. After three years, he wanted to return to operations, but when that didn’t happen, he decided to take the plunge and set up his own HSE consultancy. It was a move that had its own hazards: a family (three small children) and a mortgage. ‘It was quite a risk,’ Thonger admits, ‘but I thought we could offer something to oil companies and contractors.’ And so it proved. The first job came from Amoco, auditing an SSL crew working a mere 20 miles from his home! In his consultancy work over the years since, he says that GSR general manager Neil Cave and ‘Lynne in the office’ have provided invaluable assistance in helping to maintain what he regards as a remarkable team working in the field serving the HSE needs of the oil industry worldwide – ‘a great bunch of guys.’

It is not entirely clear why oil companies in the late 1980s initiated the move to better safety standards. This was before the Piper Alpha disaster and the influential Cullen Report on Offshore Safety which followed. Thonger mentions specific individuals who just thought it was important, but identifies a number of general reasons which can combine to put safety at the top of the agenda. Typically, these would be operational efficiency, avoiding the cost of accidents (the hidden expense can amount to anything between 30 and 50 times the visible or insurance recoverable costs), legal and contractual requirements, corporate reputation and moral obligation. HSE may also have got swept into the general corporate movement in the 1980s towards quality management systems.

These days Thonger believes that the industry is edging towards a new phase in the bid to further improve HSE standards by looking increasingly at the safety culture of companies and the need for changes in behaviour. Initiatives such as the Step Change in Safety launched by UKOOA in...
1997 and work by OGP and IAGC (in which Thonger is active) have all helped to bring HSE standards to this point. He says all companies have managements that have absorbed various levels of HSE culture and made commitments to safety programmes, but each E&P function – production platforms, drilling rigs, seismic ships and seismic land crews – presents very different risk factors in terms of a safe place to work, safe equipment, safe procedures and a trained labour force. In effect, there is a residual risk which goes beyond any management system or procedure. This is where behavioural programmes come in. They address the fact that people are thought to be responsible for 80–90% of all accidents. Thonger qualifies this by stating that accidents have direct, indirect and root causes. ‘Even in a driving incident, the individual may be under pressure to do something in a hurry, is worried about holding on to his job, and so on. In other words, it’s not necessarily his fault, and the accident could have been avoided with the right behavioural approach in place.’

In a paper presented in March to an SPE Conference in Kuala Lumpur, Thonger illustrated the potential for change by drawing a parallel with Grand Prix motor racing where up until the mid-1980s two or three drivers would be killed during each season. He says that the industry recognized that many of the deaths were totally unnecessary as a result of poorly engineered circuits, untrained marshals, and cars designed only to carry driver and fuel to the finishing line. In addition, the huge growth in sponsorship meant that manufacturers and sponsors were anxious to avoid fatal accidents appearing on TV screens around the world. Viewers might like spectacular accidents but they don’t want people hurt, Thonger argues. In 2000 the sport’s governing body Federation Internationale de L’Automobile (FIA) even introduced Formula Zero as an initiative to reduce fatalities and injuries on the track and on the road, and has reportedly had some success in lobbying for safer road cars.

In his conclusion, Thonger states that ‘oil field activity, hazardous though it is, could not be said to be more hazardous than motor racing, and yet their current commitment has led to the extraordinary result that in the early 1960s, there was one fatality or serious injury per 10 accidents, now there is one per 300 accidents. Both have grown cultures of accident prevention and have a public commitment to continuous improvement. We in the oilfield industry should not be afraid to look outside for advice and we may be surprised at where our ideas for improvement come from.’

He is realistic enough to appreciate that behavioural programmes will work best where there is a steady workforce with an expectation of continuing work. In projects with a high level of short term workers, or where the management has less control, which is sometimes the case in less developed countries, Thonger advises that the main emphasis will continue to be on engineering and management solutions to ensure safe working conditions.

The comparison with the motor racing world may seem something of a leap, but not for Thonger, whose current pride and joy at home is a newly acquired Lotus 7 classic road racing car which he takes out for ‘track days’ – so far accident free.