

3 Minute interview with Brenton Smith – IMIU Director - Risk Engineering

Q. How has the mining industry changed over the years? In your view what still needs to change?

The industry and its operations have become ever larger. This has resulted in ever larger concentrations of risk, and hence the increasing need to manage risk effectively. When I started in the mining industry back in 1974, risk was seen as a necessary evil attached to mining. The accident statistics were poor, and as the operations increased in size, they became progressively less insurable as the property and machinery losses across the mining industry mounted. The level of risk in mining probably reached its zenith in the early 1990's and, thankfully, has improved steadily since.

What still needs to change? I think mining companies still need to be more assertive in understanding their risks. My perception is that many mine managers do not appreciate just what a single – and almost invariably preventable – loss can do to their business.

Q. You were instrumental in developing IMIU's Mining Risk Assessment Model (MinRAM) – why is it so different to other models used?

It is different because:

- The MinRAM focuses solely on the hazards that are particular to mining.
- It was developed by engineers drawn solely from the mining industry. Our collective experience exceeded 80 years.

It enabled the quantification and rank of risk at a time when loss data for the mining industry was scarce. Its unique feature is the IMIU Risk Exposure Number which enables us to rank the relative commercial attractiveness of every mining operation brought to us. Currently we have rankings for 305 mining operations.

Q. You have assessed many mining operations all over the world. Is there any particular operation that stands out to you? If so why?

There are several, and all for different reasons.

Cerro Matoso (BHP Billiton in Columbia) – This was in 1997 and the second operation that I surveyed for IMIU.

Columbia was wracked by the drug wars and I did not have any great expectations for the management of risk. What I found was an operation that was a risk leader. After this I have never pre-judged an operation based on its location or recent history.

Newcrest – As a company Newcrest has always actively sought to identify risks and then ensured that they did not become company killers. Currently they probably have the most sophisticated risk management program amongst mining companies.

Los Pelambres (Antofagasta Minerals in Chile) – From the outset Minera Los Pelambres has sought to actively reduce its property and machinery risks. Its world class maintenance program is now minimising the risk exposure associated with its 175,000tpd operation. It is also in a spectacular Andean setting.

Mponeng (AngloGold Ashanti in South Africa) – It has one of the highest rates of adoption of the recommendations presented to them by the IMIU engineers. Well done guys!!

Implats (Impala Platinum in South Africa) – Implats was always regarded as high risk due to the high MFL estimate as a result of an explosion in one of its autoclaves at its Base Metal Refinery. A process change dramatically reduced the MFL estimate, making Implats much more attractive to insure.

Freeport Indonesia – The sheer scale of the operations and the spectacularly beautiful terrain in which the mine is located make this an outstanding operation to visit each year. They are also doing a good job of managing their risks!! Probably world leaders in fire protection in process plants.

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Q. SX fires have been expensive for insurers and prompted two papers from you. What is the essence of these?

The two papers on fires in SX plants were based on my observations in the mining industry, and the copper mining industry in particular. The papers were aimed at assembling the relevant information for mine managers about the hazards in SX plants. We also aimed to show that the hazards were manageable, and therefore insurable, with the appropriate level of fire prevention and fire protection. The new SX plant at Spence in Chile built by BHP Billiton is the best we have seen to date from a risk reduction perspective. The most heavily protected plant is at Olympic Dam in South Australia – but then it deserved to be after being destroyed twice in two years under its previous owners.

Q. Getting to mining sites can be difficult – what is the strangest journey you have experienced?

The best bit of flying I have seen was a spiral dive in a 10 seater from around 10,000ft through a narrow deep cylindrical gap in the clouds that revealed the runway directly below. The pull out and landing were textbook perfect. The view through the front window on the way down was spectacular. I was very pleased that the pilot had a lot of grey hair!

Q. In your view, what is the best part of your job?

Best can be divided into 'most interesting' and 'most satisfying'.

The most interesting part of my job is seeing first-hand how each of the management teams tackles the unique set of challenges presented by their particular orebody. Every orebody is unique in shape, geological setting, grade and mineralogy and the interpretation of these determines the mining layout and the plant used to process the ore.

The most satisfying is being able to assist onsite managers to identify and reduce the low probability, high consequence risks. I get a real buzz when I hear about losses avoided through our discussions and recommendations. Loss avoidance not only improves our results – it improves theirs as well!

Q. What is your idea of a perfect evening?

Sitting in the cockpit of a yacht in a quiet anchorage watching a warm sun recede after a vigorous day of sailing while sharing a well earned sundowner with the best sailing companion I know – my wife.

Q. You like sailing. Is there a particular route that you would love to sail?

'Like' is too soft a word – sailing is my passion outside of work. We are cruisers and want to spend months at a time mooching around coastlines. East coast of Australia and up through the islands is an obvious choice. The Med has always had a fascination for us after sailing in Turkey several years ago. Main criterion is somewhere warm!!

