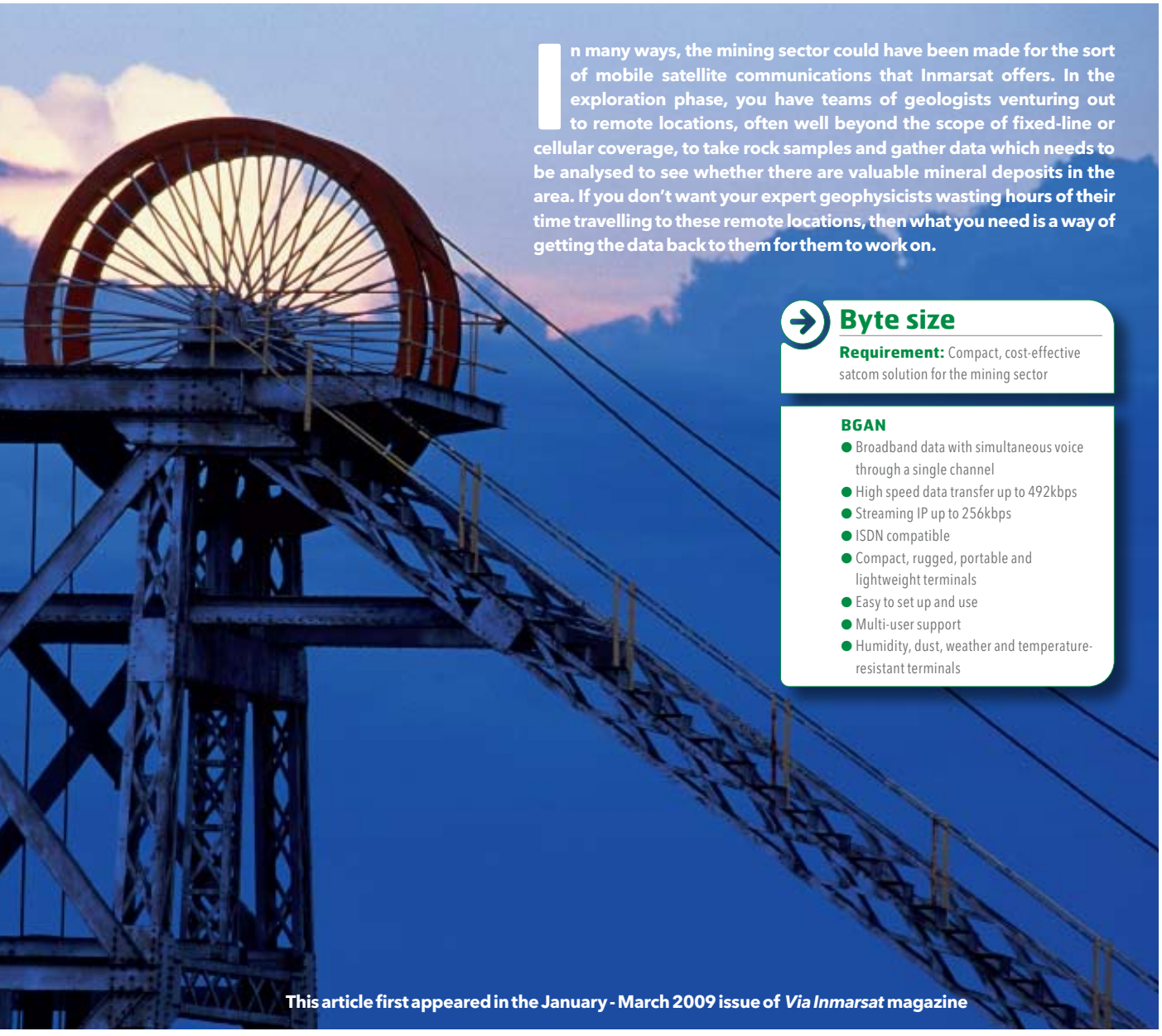
Rock star

A geological surveying company in Australia is using BGAN to send rock survey data back to head office-based geophysicists for analysis, saving valuable time and money.



In many ways, the mining sector could have been made for the sort of mobile satellite communications that Inmarsat offers. In the exploration phase, you have teams of geologists venturing out to remote locations, often well beyond the scope of fixed-line or cellular coverage, to take rock samples and gather data which needs to be analysed to see whether there are valuable mineral deposits in the area. If you don't want your expert geophysicists wasting hours of their time travelling to these remote locations, then what you need is a way of getting the data back to them for them to work on.

Byte size

Requirement: Compact, cost-effective satcom solution for the mining sector

BGAN

- Broadband data with simultaneous voice through a single channel
- High speed data transfer up to 492kbps
- Streaming IP up to 256kbps
- ISDN compatible
- Compact, rugged, portable and lightweight terminals
- Easy to set up and use
- Multi-user support
- Humidity, dust, weather and temperature-resistant terminals

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Subsequently, if the decision is taken to construct a mine, with BGAN, the mining company can establish a communications infrastructure within minutes, expanding on this to aid the construction process until fixed-line communications are established.

During the construction phase, for example, Inmarsat mobile satellite communications could be used to liaise with contractors and suppliers. They could also be used for telemedicine applications in the event of accidents or illnesses, and for voice communications between workers employed on different parts of the site.

There are potential applications for satcoms too, while the mine is operational, and during the closure phase, after the infrastructure has been demobilised, but when there may be a need, for example, for data transfer relating to the environmental impact of the mining activity.

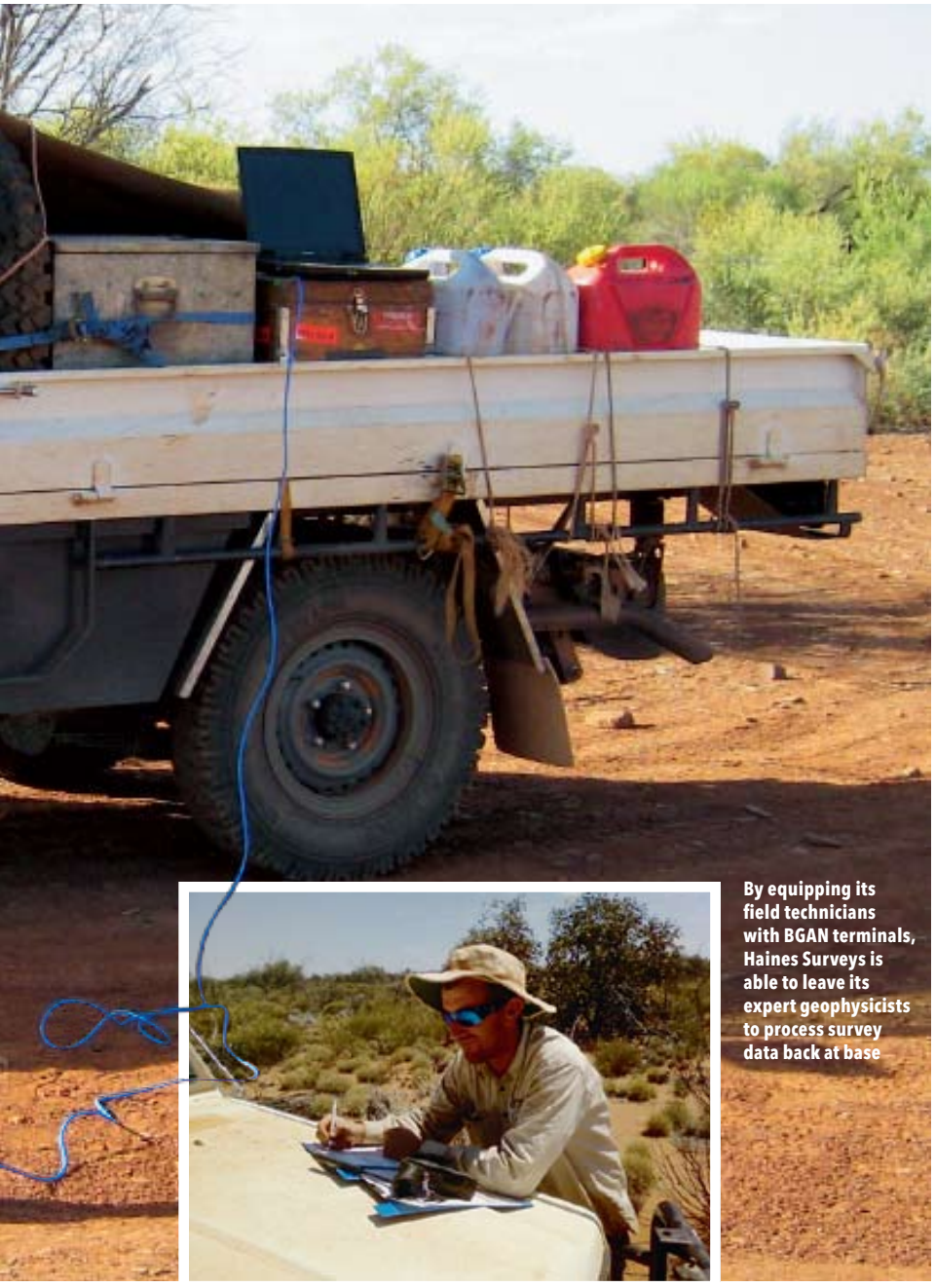
Exploration phase

In Australia, surveying company Haines Surveys is using BGAN with great success during the exploration phase. Haines undertakes geological surveys on behalf of clients in the mining industry. It sends its technicians out to remote parts of the Australian bush by car or helicopter, armed with "gravimeters". These are devices used to measure variations in the earth's gravitational field, which offer a clue to the likely presence of various types of mineral deposits. Based on these survey results, Haines can advise its clients where they should focus their efforts.

Up until a couple of years ago, the company sent its geophysicists out to conduct these surveys, as their specialist skills were needed to analyse the data returned. This was a time-consuming use of an expensive resource, but Haines had little choice. While the geophysicists were using satellite technology for voice calls, it was impossible to send the large volumes of data collected back to head office via the voice phone's low-bandwidth connection. The only alternative would have been to use less skilled personnel to conduct the surveys, and then hope that they could find somewhere with internet access. to send the data back to head office for analysis.

Then, in 2006, the company's service provider, AST Australia, recommended to Haines co-founder Richard Haines that he trial an HNS 9201 BGAN terminal for the remote transmission of data from the bush back to head office. Haines agreed, and the decision has revolutionised the way the company conducts its affairs.

"Haines immediately took to the portability and quality of the BGAN terminal," says AST Australia sales manager, Richard Coston. "There was a cost implication in sending the geophysicists out to the bush. BGAN is a much more cost-effective solution."Airtime is supplied by Stratos, together with The Stratos



By equipping its field technicians with BGAN terminals, Haines Surveys is able to leave its expert geophysicists to process survey data back at base

Advantage. Adopting this package, Haines has been able to benefit from value-added services, including Stratos Dashboard and Stratos Trench, that provide users with cost control, firewall management, full traffic information, pre-paid facilities, high security options, easy virtual private network (VPN) access, messaging services and full IP range.

Data analysis

Now, locally recruited field technicians handle the task of conducting the surveys, leaving the geophysicists free to analyse the data returned via BGAN. The geophysicists send detailed instructions out to the field technicians to tell them where they should focus their attention. Working in pairs, the technicians then carry out their surveying work, using the BGAN terminals to send the data back to head office immediately, direct from the survey site. On average, up to five teams of technicians send around 2MB of data each back to head office each day. Back at head office, the geophysicists analyse the data, and use it to create colour-coded, three-dimensional maps that show the geological strata of each survey location.

Richard Haines is in no doubt that the use of BGAN has benefited the company enormously. He tells *Via Inmarsat*: "Prior to BGAN, we simply used the Iridium satphone system, which limited us to very small files. What BGAN has done is enable us to send much larger files.

"An added benefit is that it also allows the field technicians to check things online, when necessary, from out in the bush."

Haines adds that there is no need for the company to carry out a formal return on investment (ROI) analysis of the cost of buying and running the BGAN terminals, because the cost effectiveness of the solution is crystal clear.

"The alternative would be that, instead of transferring the data from the bush, we would need a skilled person in the field processing the data," he says.

"You could argue that, by the time you take account of the extra training and the additional software that would be needed on the laptops used in the field, that could be pretty massive.

"By keeping the processing out of the field and in the office, we have made ourselves a lot more efficient."

Haines adds that the technicians have had no problems learning how to operate the BGAN terminals. "It's so simple, my eight year old child could do it," he says.

In the mining business, as in any other, time is money. Thanks to the BGAN solution, Haines Surveys now has a little more of each at its disposal.

Inmarsat *www.inmarsat.com/mining*
AST Australia *www.asta.net.au*
Stratos *www.stratosglobal.com*