Exploration technology and partnerships in Central Asia

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Rio Tinto is a global mining company with operations involved in the exploring for, mining and processing of metals and minerals in over 40 countries. Our rich history has highlighted the tangible benefits of using modern technology at all stages of our work. In addition the value of local knowledge and experience should not be forgotten and in that respect, Rio Tinto seeks opportunities to work in partnership with host governments and local companies.

The exploration for new resources is important for the future sustainable growth of the company as well as the future resource security of the country. In mature exploration terrains such as Kazakhstan, significant volumes of exploration have been conducted and it can be observed that the easy deposits have been discovered. This is also true globally, in an example of copper discoveries over time there is clear evidence to suggest that new discoveries are more likely to come from depth. This brings technical challenges for the discovery but also for the evaluation and development of these resources.

Deep penetrating geophysics and deep drilling techniques are the key technical advances that are allowing effective testing of deep targets. These alone are not enough however, and companies need to ensure that they get the maximum information from each drill hole to justify the increased cost. Prediction of proximity to mineralisation is more important than ever at depth. Once discovered deep deposits need innovative technology for effective and economic development. Block cave technology allows bulk tonnage production from underground operations. It is however, a challenging mining technique with high up-front costs and a risk of sterilising the ore body if the technology is not applied correctly. These examples of technology in copper can be effectively applied to all other commodities which Rio Tinto works with.

Active partnerships are also of great importance to Rio Tinto. A good partnership is based on a relationship with each side bringing strong benefits to the joint venture or agreement. Simple JV’s such as that proposed between Rio Tinto and Tau-Ken Samruk are one important element and lead to the creation of World class companies leveraging local experience and opportunity with best practise approach and technology. In addition, we see value in a proactive relationship and partnership with the Ministry, the Mining Association and with contractors. This allows effective transfer of technology, approach and experience to enhance the mining and exploration sector of Kazakhstan and enhance Rio Tinto’s ability to successfully operate in the country. As an example the opportunity to partner with the Ministry to leverage the value of Kazakhstan’s exploration data to create future discoveries through the digitisation and creation of integrated GIS which is transferred back to the Ministry to attract further investment in the sector can be a value accretive partnership for both parties.

There are also less tangible partnerships, those between Rio Tinto and local universities and colleges providing opportunities for students and graduates as well as the opportunity for Rio Tinto to provide learning materials and experience to students. Only with this approach will a new generation of staff be developed for future mining operations.
Working out from the strong base of Kazakhstan Rio Tinto is seeking to extend these partnerships and this approach into the neighbouring countries of central Asia. Rio into has recently established its office in Tashkent and is negotiating a partnership with the State to allow Rio Tinto to explore and the partnership to jointly develop any discoveries made. Early stage discussions are also underway in Kyrgyzstan and a review is being undertaken in Tajikistan.

In summary, Rio Tinto is committed to creating partnerships to not only utilise but also effectively transfer technology and experience. The foundation being set in Kazakhstan through our proposed partnerships with Tau-Ken Samruk and MINT provide a platform for effective communication and bring benefits to both Rio Tinto and Kazakhstan. This model will be mirrored in neighbouring countries. Rio Tinto’s goal is to be the partner of choice in central Asia.