

MONGOLIA

*By D. Turbat General Manager
Mine Info LLC*

Mongolia is a very big country in terms of territory, sandwiched between the Russian Federation and China. However, the population of the country is less than 2.5 million people, and major economic activities are mainly derived from the country's natural resources. Mining has been playing an extremely important role in economic development. Originally the mining sector had been a major recipient of investment from former Comecon countries, and joint ventures such as Erdenet, Monrosvetmet, MongolBolgargeo and MongolCzechmetall discovered, and put into operation, a number of mines throughout the country.

Economic overview

Major products of the mining industry are coal (mainly for domestic use with very minor exports to China), copper and molybdenum concentrates (from Erdenet), fluor spar (dominated by Monrosvetmet) and gold. The mining sector contributes more than 10% to GDP, more than 30% of export earnings and provides employment for a large number of people.

Recent developments

The biggest mineral export commodities are copper and molybdenum concentrates from the Erdenet mine located in the north of the country. Another traditional output is fluor spar, and Monrosvetmet has maintained its leading position in this segment, although small-scale miners are gradually gaining momentum.

Gold mining has recently emerged as a major economic activity, and output by placer gold producers has grown from 1,800 kg in 1993 to a record 13.7 t in 2001. However, the future of the placer gold operations will depend very much on successful exploration for new deposits, and statistics shows that each year the amount of new gold reserves accepted by the Council of Mineral Resources has been lagging behind the production level. There are some serious reservations about the sustainability of the current level of production from placer operations in the long term owing to environment considerations and low investment in exploration.

Placer gold mining is gradually maturing, and those companies with accumulated expertise and more solid financial and institutional strength are dominating the sector. According to statistics, ten major producers mine more than 70% of the total output. The current state of affairs in the Mongolian gold sector are shown in Tables 1 and 2.

Another recent development is related to the re-entry of major Western companies into Mongolia's mining sector. Rio Tinto and BHP (now BHP Billiton) were the pioneers in 1997, but low commodity prices on international

markets forced them to cut costs and close offices in Mongolia. The Canadian company, Cameco, was the first major to step into the Mongolian market after the recovery of the gold price, through the purchase of a 51.8% interest in AGR, an Australian junior company holding a mining licence on the Boroo hard-rock gold deposit. WMC and Anglo Gold followed Cameco. The Canadian company is planning to put the Boroo deposit into operation by late September, 2003, and it will be the second hard-rock gold mine in Mongolia after Bumbat.

Recent positive changes in exploration and mining activities are obviously related to the recovery of international gold prices, but another very important factor here is the major discovery of copper and gold at the Oyu Tolgoi (Turquoise Hill) property in South Gobi. Successful exploration conducted by Ivanhoe Mines attracted the attention of the international mining community, and the response from junior companies was immediate: there has been unprecedented growth in applications for new exploration areas, combined with an enormous intensification of activity to acquire mineral rights on a secondary market. The significant growth in applications, licences granted and mineral rights transfers are shown in Table 3. The financial community is recognising the value of mineral rights, and more than 180 mineral licences have now been pledged by different agreements and used as collateral by lending institutions.

Intensive drilling at Oyu Tolgoi by Ivanhoe Mines and an expansion of exploration activities by Cameco, Gallant Minerals and junior companies, have resulted in significant growth of revenue for service providers like drillers, laboratories, logistics companies etc. Major Drilling entered the Mongolian market in 2002 thus indicating the significance of Mongolia's mineral exploration market.

The discovery of Oyu Tolgoi in South Gobi gave a significant boost to exploration work in the area. With further advancements at Oyu Tolgoi, continued drilling on Kharmagtai, Oyut Ulaan, Saran Uul and other projects in the region, potential investors are expressing interest in the Tavan Tolgoi coking-coal deposit. The licence-holder, Energy Resources Co., is in negotiations with a number of potential investors.

The government realises the importance of the sector for the future economic growth of the country. The Minerals Law (Mining Code) of Mongolia is one of the most liberal laws of its kind in the world, providing security of tenure for the licence holders and very transparent processing of applications. The liberal nature of the law offers an excellent legal environment for new entrants and existing participants.

The next couple of exploration seasons will be very important for the future development of the sector, and industry observers are reasonably optimistic about the ability of Mongolia to maintain the gained momentum.

Table 1: Gold Production (t)

| Year | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|--------------------|------|------|------|------|------|------|------|------|------|
| Gold Production* | 1.1 | 1.8 | 4.1 | 5.4 | 8.7 | 10.0 | 10.1 | 11.4 | 12.1 |
| Gold Production** | 1.1 | 1.8 | 4.5 | 7.0 | 8.5 | 9.5 | 10.2 | 11.8 | 13.7 |
| Gold Production*** | n/a | n/a | n/a | n/a | 6.6 | 10.0 | 10.1 | 10.1 | 12.0 |

* According to government data.

** According to the statistical authority.

*** According to the mineral resource authority.

Table 2: List Of Major Gold Producers (kg)

| No | Name of business Entities (Property name) | 1998 | 1999 | 2000 | 2001 |
|----|--|---------|----------|----------|-----------|
| 1 | Altan Dornod Mongol LLC (Ar naimgan, Bayangoliin golidrol, Ulziit teel) | | 4.30 | | 2,611.42 |
| 2 | Mongol Gazar LLC (Kharguit) | | 60.92 | 1,702.90 | 1,567.32 |
| 3 | Shijir Alt LLC (Tuuliin golidrol) | 1274.80 | 1274.80 | 1,186.00 | 1,453.43 |
| 4 | Erdes Holding LLC (Ikh shariin gol) | | | | 546.66 |
| 5 | Erel LLC (Bayangoliin denj, Oult) | 2547.80 | 2277.82 | 1,387.04 | 502.90 |
| 6 | MAC LLC (Bayangoliin denj) | 533.86 | 704.30 | 711.67 | 414.04 |
| 7 | Gatsuurt LLC (Burgastai, Biluut, Nars) | | 1,004.39 | 106.60 | 386.50 |
| 8 | Seligdar Mongolia LLC (Yalbag, Khuiten) | | | | 333.90 |
| 9 | Mongol Alt JSC (Toson, Tsagaan bulag, Ogoumor, Tosongiin jalga) | 200.90 | 207.30 | 221.30 | 324.73 |
| 10 | Monpolymet LLC (Tosongiin golidrol, Tosongiin denj) | 261.85 | 265.78 | 269.76 | 280.09 |
| 11 | Shoroon Ord Mining LLC (Ikh shariin gol) | 321.47 | 265.11 | 620.70 | 279.34 |
| 12 | Zolotaya Victoria (Tariitiin Gol, Dood Kharganat) | | | | 216.68 |
| 13 | Argos LLC (Tsamkhag, Oulont) | | | 143.40 | 215.50 |
| 14 | Datsan trade LLC (Burgastai) | 3.23 | 265.67 | 279.55 | 191.23 |
| 15 | Khailaast JSC (Khailaast) | 261.40 | 157.17 | 74.80 | 164.80 |
| 16 | Buurgent LLC (Yalbag, Khers gol) | | 28.90 | 152.73 | 147.56 |
| 17 | Uolz Gol Cooperative (Tsagaan Chouluut Khudag) | 42.53 | 62.03 | 123.90 | 147.12 |
| 18 | Ikh temuulel LLC (Bayangoliin denj) | 90.67 | 78.70 | 163.60 | 145.36 |
| 19 | Tsogt Onon LLC (Khar nuden Sairiin khudag, Mukhar ereg, Ovor chuluut, Jargalantiin am, Bayan-Ovoo, Galuut) | | | | 145.31 |
| 20 | Boronzon Trade LLC (Altan sudal) | | 148.10 | 170.30 | 137.16 |
| | Total | | | | 10,211.04 |

Table 3: Indicators of the activities of the Geology and Mining Cadastral Office as of May 15, 2003

| | Indicators | Unit of meas. | Before 1997 | 2000 | 2001 | 2002 | To May 2003. | Total |
|---|-------------------------------|---------------|-------------|---------|---------|----------|--------------|-----------|
| | Licences issued prior to 1997 | # | 382 | | | | | 382 |
| | Licence field in hectares | '000 ha | 15,700 | | | | | 15,700 |
| 1 | Licence fees | Mln.tgs | | 1,286.8 | 1,353.5 | 2,615.1 | 1,142.4 | 9,565 |
| | A. Mining | Mln.tgs | | 451.1 | 509.1 | 613.1 | 160.31 | 3,127.31 |
| | B. Exploration | Mln.tgs | | 835.7 | 844.4 | 2002 | 982.09 | 6,437.69 |
| 2 | Newly issued licences | # | 382 | 832 | 1,149 | 1,283 | 453 | 5,425 |
| | A. Mining | # | 180 | 87 | 91 | 123 | 44 | 771 |
| | B. Exploration | # | 202 | 745 | 1058 | 1160 | 409 | 4,654 |
| 3 | Licence area | '000 ha | | 5925 | 8682.5 | 23,707.1 | 4,995.7 | 66,955.25 |
| | A. Mining | '000 ha | | 0.4 | 11.8 | 14.21 | 4.3 | 81.61 |
| | B. Exploration | '000 ha | | 5,924.6 | 8,670.7 | 23,692.8 | 4,662.4 | 66,874.6 |
| 4 | Transfer applications | # | | 172 | 277 | 473 | 251 | 1,555 |
| | A. Mining | # | | 37 | 60 | 59 | 17 | 294 |
| | B. Exploration | # | | 135 | 217 | 414 | 234 | 1,261 |
| 5 | Applications for pledge | # | | 30 | 34 | 57 | 29 | 183 |
| | A. Mining | # | | 23 | 26 | 52 | 26 | 155 |
| | B. Exploration | # | | 7 | 8 | 5 | 3 | 28 |
| 6 | Valid licences | # | | 1,759 | 2,317 | 3,033 | 3,331 | 3,331 |
| | A. Mining | # | | 429 | 499 | 593 | 630 | 630 |
| | B. Exploration | # | | 1,330 | 1,818 | 2,440 | 2,701 | 2,701 |