

SAUDI ARABIA

*By the Deputy Ministry for Mineral Resources
Jeddah, Kingdom of Saudi Arabia*

The major objectives of the Deputy Ministry for Mineral Resources (DMMR) are to foster the development of the minerals sector so that it becomes a major contributor to national economic development, and to provide a fair and balanced fiscal and regulatory framework to national and foreign investors. The DMMR is the sole supervising agency for the application of the Kingdom's Mining Code.

DMMR is assisting investors by organising special symposiums designed to introduce the opportunities available in the mineral sector. Within Saudi Arabia, such symposiums have been held in Riyadh, Jeddah, Hail, Yanbu, Asir, Tabuk and in the Eastern Province. During 2003, DMMR also participated in the 'Geology of the Arab World' Conference in Cairo and the MEED Conference 'Investing in Saudi Arabia', which was held in London.

A permanent exhibition established by the DMMR demonstrates the role of the Saudi private sector in the mineral resource sector and its contribution to the economy. Visitors can see examples of the various products including gypsum, cement, ceramics, red bricks, rock wool, chemical products, lime-sand bricks, other ornamental stones and specimens of precious and base metals. Work has begun on a new, permanent exhibition hall for the reception of official visitors and potential investors.

The DMMR library contains geological maps and reports related to mineral locations in the Kingdom, together with reports produced by companies and agencies previously contracted to DMMR. A documentation centre for investors contains copies of all DMMR maps and reports and other geological, scientific and cultural publications. All 2,800 technical documents are being classified and indexed. This archive includes feasibility studies by DMMR on various potential mining projects; technical, environmental and economic studies by foreign companies holding mining leases; and technical and economic studies concerning exploration projects carried out by DMMR in co-operation with foreign partners. A Mining Investment Service Centre has also recently been established to assist existing and potential investors with all their requirements.

The new mining investment code reached the final review stage by all concerned ministries and organisations, and the executive regulations of the code are in the process of completion. Technical addenda for the comprehensive strategy for developing the mineral sector are also in preparation.

The DMMR's website (www.dmmr.gov.sa) has been launched and will be officially inaugurated shortly.

During 2003, a further 15 zones were reserved for mining activities, bringing the total to 155. These zones are reserved for such minerals as salt, silica sand, gypsum, bentonite, pozzolan, granite, marble, iron ore, phosphate, bauxite and silver, and cover a total area of more than 11,000 km². Nine existing mining reserve areas were re-surveyed. In the course of mining investment appraisal and follow-up, 700 field trips were undertaken by DMMR during the year, and 72 technical and environmental studies submitted by licensees were evaluated.

At the end of 2003, 32 reconnaissance permits to investigate all types of minerals were extant, and 23 exploration licences covering 121,000 km², were held by Saudi and foreign mining companies, for gold and other metallic and industrial minerals. Two new licences were issued, one to Saudi Arabian Mining Co (Ma'aden), for precious metals in the Hajar – Wadi Shwas areas, and one to the Saudi Industrial Development Co for gypsum at Awsagiyah. Ma'aden also holds exploration licences for precious metals at Ash Shaktaliyah, Al Orook, Maskah, As Siham, Shabah, Wursah, Zalim, Al Jardhawiyah and Ad Duwayah; for base metals at Jabal Sayid; bauxite at Az Zabirah; phosphate at Turayf and Wadi Sirhan; and industrial minerals at Jabal Sawdah. The Saudi Company for Precious Metals (SCPM) holds a licence for precious metals at Tawan, and Borman and Kanoo for base metals at Hamdah.

Following completion of a pre-feasibility study by Hatch Associates in April 2002, the Ma'aden signed an agreement for the execution of a full feasibility study with Bechtel International for the Az Zabirah integrated bauxite to aluminium project. The feasibility study will consider a 3.4 Mt/y bauxite mine, a 1.4 Mt/y alumina refinery and a 600,000 t/y aluminium smelter. This study is due to be completed in June 2004. In 2003, Ma'aden progressed satisfactorily towards agreement of a crude oil price enabling power to be generated at an advantageous price for the smelter.

Following the bankable level resource definition completed in 2002, Ma'aden carried out further extensive exploration and trial mining which identified 240 Mt of bauxite, or 40 years' supply, and still has a further 70% of the deposit to investigate. The site for the complex was selected at Ras As Zhor, 100 km north of Jubail. Plant arrangements were completed, together with supporting studies incorporating issues such as geotechnical investigations, environmental baseline and impact studies, surveys, etc. During the year, ANZ and Riyadh banks were appointed as the project financial advisors and Baker & McKenzie as the legal advisors.

During the year, the Ma'aden - Saudi Oger consortium signed a US\$9.4 million agreement with a consortium comprising the Canadian company, SNC Lavalin, and US company Jacobs, to prepare a bankable feasibility study for the Al-Jalamid Phosphate Project in the Northern Frontier Area. The feasibility study is expected to be completed at the end of 2004. The Kingdom's phosphate resources are estimated at 3,100 Mt, of which 500 Mt is proven reserves, 1,100 Mt is indicated resource and 1,500 Mt is inferred resource.

Production is expected to be achieved and distributed in international markets for the phosphoric fertiliser industry by 2008. During the year, ANZ and Riyadh banks were appointed as the project financial advisors and Baker & McKenzie as the legal advisors.

Ma'aden also signed a US\$5.9 million contract agreement with SNC Lavalin, as services consultant, for the Al-Amar mine project, located near the town of Al-Quwayyah, 210 km west of the city of Riyadh. Construction is expected to be completed by the end of 2005 with commercial start-up of the project beginning in 2006. Annual production throughout the mine life is expected to average 54,000 oz of gold, 84,000 oz of silver, 1,100 t of copper and 6,500 t of zinc.

Tertiary (Middle East) Ltd holds an exploration licence over the Ghurayyah granite in the northwest of the Kingdom near Tabuk, for tantalum, niobium, uranium, tin and rare-earth minerals, covering an area of 47 km². Tertiary has completed a preliminary economic and technical scoping study with encouraging results.

Petro-Hunt Middle East Ltd has exploration licences at Malaha-Najran in the southwestern part of the Kingdom and at Jabal Dhaylan along the Red Sea coast north of Yanbu. In the Malaha-Najran licence, the company continued its exploration for volcanogenic massive sulphide mineralisation in the southern Malahah Basin. The results of the drilling were considered positive and additional work, both at currently known prospects and in new areas, is planned. In the Jabal Dhaylan licence, the exploration target is carbonate-hosted zinc-lead mineralisation. Evaluation of the results from the drilling programme is in progress. Petro-Hunt also maintained an active reconnaissance programme during 2003 focused on generating new exploration targets in the Arabian Shield.

During 2003, 32 mining leases covering an area of 660 km² were in existence, 15 for cement raw materials; six for gold and accompanying metallic minerals; one for iron ore and ten for industrial minerals. Five new mining leases were issued during the year, to the National Mining Co for iron ore at Wadi Sawawin, the International Salt Mining Establishment for salt at Ras Al Qurayah, the Arabian Cement Co for clay at Harat Khulays, and to the Yanbu Cement Co for pozzolan at Ras Gharrah and for iron ore at Al Jamoum.

Ma'aden and SCPM currently operate four gold mines, at Mahd ad Dahab, Sukhaybarat, Bulgah and Al Hajar.

Three new small mine permits were issued during 2003, bringing the total extant to 30 and the total area to 27 km². These permits are for salt, clay, silica sand, barite, feldspar, diatomite, basalt, limestone, marble, iron ore, dolomite, gypsum and pozzolan. A total of 139 new building material permits (for aggregates, sand, granite, marble and other building materials) were also issued, bringing the total to 963 and the area covered to 240 km².

Mineral production in Saudi Arabia (2003)

Industrial Minerals	Production (t)
Limestone	
- Cement raw material	31,687,580
- Other industrial uses	559,198
Silica sand	364,341
Salt	1,398,695
Clay	
- Cement and ceramics	2,771,118
- Red bricks	630,882
Feldspar	62,000
Crushed marble	720,000
Haematite	369,618
Gypsum	
- Cement raw material	791,383
- Other industrial uses	841,321
Aggregates	123,832,000
Sand	
- Cement raw material	193,850
- Building material	28,300,800
Granite	785,700
Marble	95,040
Pozzolan	260,055
Basalt	86,700
Dolomite	38,650
Schist	
- Cement raw material	627,014
- Building material	3,000
Total industrial mineral production	203 Mt

Gold	Production (oz)
Mahd ad Dahab*	54,135
Sukhaybarat	43,385
Bulgah	135,961
Al Hajar **	48,466
Total gold production	281,947

* Mahd ad Dahab also produced 217,277 oz of silver

** Al Hajar also produced 342,223 oz of silver

For information concerning investment in the Kingdom's mineral sector, please contact:

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