MOROCCO

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Politically, 2003 was a testing year for Morocco's 32 million people. The country is firmly aligned with Europe and the US and whilst the alleged involvement of Moroccan nationals with activities linked to Al Qaeda was difficult enough, the suicide attacks on five targets in Casablanca on May 16 came as a terrible shock. They underlined the fact that, as well as having sophisticated industries and tourist facilities, Morocco also has 19% unemployment and people with politically exploitable frustrations.

However, after economic stagnation in 2002, favourable rainfall helped boost GDP growth in 2003 to an estimated 6%. With agriculture occupying 40% of the workforce but contributing only 15% of GDP, economic diversification and foreign investment remain priority goals. Services account for about 50% of GDP, with tourism being a major contributor. This year the government announced long-term plans for tourism projects to generate 80,000 new direct jobs and 100,000 indirect ones.

Good relations with the European Union remain crucial to economic progress. Even before the latest enlargement, Morocco's exports to EU countries, the value of which has almost doubled over the past ten years, accounted for 70% of the country's total exports. By value, textiles contributed 41% of sales to the EU, agricultural products 24% and machinery 14.3%. Elsewhere, however, minerals and mineral-based products were a significant component. Reciprocally, some 63% of Moroccan imports come from the EU. However, trade with the US may gain ground following US Senate Finance Committee approval of a free trade agreement with Morocco covering consumer and industrial products.

Mineral strategy

The need for economic diversification is well recognised within the minerals sector, both at the ministerial and the corporate level. A Ministry of Energy & Mines analysis, outlined by Minister Boutaleb early this year, counted varied geology, the wide range of minerals already exploited, the long mining tradition and knowledge base, and policies for training and resource evaluation as sector strengths. Weaknesses included inadequacies within the legislative, regulatory and organisational framework; lack of basic geological mapping in some areas; under-exploration, especially using modern technology and particularly within the Cadetaf zone; and scarcity of outcropping and near surface deposits.

Although actions to address some of these weaknesses, notably the lack of geological maps, have been in place for some time, sector development strategy has been redefined to include: adaptation of the legislative and regulatory cadre, developing production capacity and greater resource evaluation, implementing a development plan for small-scale mining, strengthening mining sector promotion and boosting marketing efforts – especially exploring new market opportunities. One organisational adaptation already effected is the merger of the former Bureau de Recherches et de Participations Minières (BRPM) and the Office National de Recherches et d'Exploitations Petrolieres (ONAREP) to create ONHYM. Amongst the regulatory measures is the formulation of a new Mining Code, which will cover a wider range of industrial minerals and ornamental stone, larger-scale exploration permit areas, the opening of the Cadetaf zone to mining companies, and removal of VAT and customs duties in respect of exploration and research activities. There will also be changes to regulations concerning personnel and sub-contractor companies.

The action plan envisages a global investment of DH7.6 billion in the period 2004/07, of which DH3.9 billion will go to new production developments and DH3.7 billion to improving resource evaluation. Promotional strategies include active encouragement of foreign interest, increasing media presentations of the country's mineral potential and investment opportunities, and forging assistance partnerships between ONHYM and other organisations (a policy actively pursued by the BRPM for some years).

Mineral production

Continuing world minerals market weakness made 2003 another difficult year for the mining sector. Total mine production recorded by the Ministry of Energy and Mines decreased by 2%, from 24.39 Mt in 2002 to 23.9 Mt. Reported mining sector turnover was DH18.3 billion, of which phosphate rock sales contributed 35%, phosphate derivatives 52%, other minerals 6%, and extracted metals and other processed mineral derivatives 7%. Investment in the sector totalled DH3.2 billion, of which 6% was spent on infrastructure and social facilities, 8% went to research, 28% to mineral evaluation and 58% to exploitation. Sector exports accounted for 18% of the national total in 2003.

More than 80 mining companies operate in Morocco, producing 20 different mineral products and employing in excess of 37,000 people. In addition, a large number of small- and medium-sized operators (PMEs) account for 12% of all mineral sector employment. However, the state-owned phosphates producer Groupe OCP accounts for the bulk of both mined ore and derivative products output. Metallic mineral and concentrates production is dominated by the private sector ONA Group through its mining holding company Managem. ONA is also a major shareholder in steel producer Sonasid and a partner in Lafarge Maroc, which supplies over 40% of Morocco's grey cement. As such, Managem has deployed its engineering unit, Reminex, in the design of the new cement works at Tetouan and a 600,000 t/y electric steel plant at Jorf Lasfar that Danieli is installing to supply Sonasid's two rolling mills. Tetouan II, with a capacity of 960,000 t/y, was completed and the old plant there, built in 1954, was shut in October 2003.

Phosphates

Groupe OCP operates three mining centres – Khouribga, Benguérir/Youssoufia, Boucraâ/Laâyoune – and two sites dedicated to converting phosphate rock to chemicals – Safi and Jorf Lasfar. Irrespective of market trends, maintaining employment in the phosphate industry through high production remains a government priority. Consequently Groupe OCP adopted the strategy of highly active marketing a long time ago and continues to develop the capacity flexibility needed to match changes in overall and specific geographic demand and in the required product mix.

Since the 1970s, OCP has been increasing its capacity for converting rock to phosphoric acid and fertilisers such that, whereas 88% of rock production was exported in 1980, more than 50% of output is now converted within Morocco. In mid-2003 OCP took another step to broadening its product range when the Group contracted Jacobs Engineering to provide basic engineering, design and construction support services for a di-ammonium phosphate (DAP) granulation plant, to be completed in 2005 with a capacity of 120 t/hr. To ensure a sufficient tonnage of required rock grades, OCP is developing new mines at Sidi Chennane in the Khouribga area and at the Youssoufia complex, plus a flotation plant for Ben Guerir.

In parallel, OCP has acted to reduce the impact of demand variations by building strong relationships with major customers who account for significant fractions of total deliveries. To meet its social obligations, while also containing operating costs, OCP provides programmes to enhance employee skills and involve them in managing equipment maintenance.

In 2003, phosphate rock production fell very slightly from 23.04 Mt to 22.88 Mt. Basic phosphoric acid output, on the other hand, increased marginally to 2.93 Mt, but purified acid production fell from 123,000 t to 97,000 t. OCP also reduced overall fertilisers output by 2.31% from 2.6 Mt to 2.54 Mt. DAP output fell most in tonnage and percentage terms – by 220,000 t (16.26%) and the limited production of ammonium superphosphate was also cut. But production of mono-ammonium phosphate, triple superphosphate and complex NPK fertilisers increased.

Other industrial minerals

Morocco's most important industrial mineral product, other than phosphate rock, is barites, with Comabar being the largest single producer, but PMEs contributing 68% of the total output. However, in 2003, production of barites and of all the other industrial minerals exported from Morocco fell, with the exception of bentonite which rose from 51,756 t in 2002 to 71,544 t. Talc output fell by 70%, smectic clays production by 65%, ghassoul extraction by 50%, barites by 27%, fluorspar by 14.5% and salt by 11.5%. Manganese dioxide mined by SACEM used to be the third largest export earner, but Ministry statistics indicate there was no production in 2003.

Metals

During the final year of ONA's 2001/03 strategic business plan, Managem continued to expand the scope of its activities despite difficult market conditions. Cie. Minière des Guemassa (CMG – Managem 70%) will augment production at Morocco's largest metallic ore mine, El Hajjar, in 2004 by initiating mining at the company's new satellite mine, Drâa Lasfar. This is located 35 km west of Marrakech and some 50 km by road from the Hajjar site. Mining at Drâa Lasfar, using the ascending cut-and-fill technique, is based on a resource of 7.79 Mt averaging 5.52% Zn, 2.3% Pb and 0.27% Cu and is expected to continue for at least ten years at the planned rate of 2,000-3,000 t/d. It is a trackless mine, equipped with drilling, loading and hauling machines from Atlas Copco. The German firms Siemag and Deilmann-Haniel supplied the production winding equipment and Sandvik Rock Processing the primary crushing and screening line. Ore will be trucked to Hajjar for beneficiation. Initially the new supply will more than offset the decline in Hajjar output to date, so that as well as modifying the concentrator slightly CMG has increased rated capacity to treat the blend of Hajjar and Drâa Lasfar ores.

The development of the CMG site as a centre for producing cobalt and niche metal derivative products by hydrometallurgical routes, as well as mining and processing zinc-lead-copper, made considerable progress during 2003. This was marked by a ceremony during January 2004, attended by the Minister of Energy and Mines and the Secretary of State for the Environment, as well as other dignitaries, when SGS presented Managem president Rachid Benyakhlef with ISO 14001 certification for all the operations on the site. In addition to the mine and concentrator, these include the R&D facility belonging to Managem's Reminex engineering unit and the hydrometallurgical units. CTT now converts the cobalt concentrates trucked from Bou Azzer to cathode at the CMG site – by roasting, leaching and SX-EW – as well as recovering cobalt from old tailings that is first converted to hydroxide at Bou Azzer. The complex also houses the Sommital copper sulphate manufacturing unit and the unit converting purchased calamine ore to zinc oxide, which was officially opened early in 2003. Managem has high hopes for the zinc oxide product, which is of very high quality and suitable for a range of downstream uses, and is working on further developments.

Elsewhere, Akka Gold Mining brought a new mining unit into production at Ifarar during 2003, and Managem had already improved performance at the El Hammam fluorspar mine and at Soc. Metallurgique d'Imiter's silver operation (such that SMI silver production overtook zinc as Managem's greatest revenue earner in 2001).

Managem has taken diversification a major step further by starting to build an international mining business. Underlying this strategy is the realisation that short- to medium-term growth potential within Morocco itself is limited by the absence of significant new ore bodies at this time. Through its interest in the Canadian junior mining company Semafo Inc, the Moroccan group manages the 60,000 oz/y gold Kiniero open-pit mine in Guinea, opened in April 2002. Two more Semafo gold ventures made progress in 2003, the 100,000 oz/y Samira project at Tiawa in Niger and Mana in Burkina Faso, where a scoping study prepared the way for a full feasibility study, with a construction start during this year a possibility.

Two other significant players in Morocco's non-ferrous metals sector are Cie. Royale des Asturienne des Mines, a subsidiary of the French group Nord-Est, and the Morocco-UAE investment vehicle Soc. Maroc Emirats Arabes Unies (SOMED). Asturienne owns 51% of Cie Minière de Touissit (CMT), which in turn partners SOMED in the lead and silver smelting company Soc. des Fonderies de Plomb de Zellidja based at Oued El Heimer in northern Morocco. SOMED also owns 80% of the secondary lead smelting firm Soc. Africaine des Metaux et Alliages Blancs.

SFPZ has invested US$20 million in improvements to the smelter, increasing its throughput capacity to 160,000t/y and high-grade lead ingot capacity to 100,000t/y. However, CMT shut the Touissit mine early in 2003, thereby becoming reliant on the newer Tighza lead-zinc mine, and reducing in-house feed to the Zellidja smelter to about 35,000 t. The feed shortfall must be made up, perhaps partly by buying concentrate from Guemassa but mainly by importing. Annual production at Zellidja is currently running at about 85,000 t of lead and 70,000 kg of silver. SFPZ typically exports more than 95% of its production. CMT now also owns the former Zgounder silver operation, which closed in 1977. Small tonnages of lead and zinc ores are mined by artisans, including those supplied to the CTT zinc oxide operation.

None of this progress enabled Morocco's producers to buck market trends in 2003, and output declined across the board. In contained metal terms, zinc production fell 24% to 136, 433 t, lead by 38% to 54,779 t and copper by just 1.5% to 17,539 t. Cobalt concentrate output also fell. Domestic conversion to metals also mainly declined: lead smelter output dropped 14.5% to 61,473 t, silver recovery by 27.5% to 200,528 kg, gold by 32% to 1.863 kg and cobalt cathode very slightly to 1,341 t. On the other hand, by-product arsenic and nickel recovery output rose by 26% and 15% to 6,872 t and 574 t respectively. Copper matte production also rose, to 2,500 t.

Minerals development

Government, parastatal agencies and domestic and foreign private sector firms are all active in the resource development process. The Ministry of Energy and Mines incorporates the Geological Survey and works closely with ONHYM. Groupe OCP remains responsible for the crucial phosphate industry.

ONHYM focuses on defining exploitable ore bodies, which are then tendered for development, and also provides exploration drilling and laboratory services for mining companies, and mine development services: for example a considerable part of the development at Drâa Lasfar was undertaken by the then BRPM. The present portfolio includes no less than 14 precious metal and 13 base metals prospects, and ONHYM is undertaking general exploration in a large area of the southeastern part of the Western Sahara.

Other significant activities within ongoing partnership programmes include: training programmes provided by JICA of Japan (Japanese International Co-operation Agency); the definition of copper targets by the partnership with Poland's Centrum Badawczo Projectowe Miedzi (CUPRUM); a range of geographical/geological and other studies with the Geological Institute of Poland; exchanges of information and personnel with the Polytechnic

University of Madrid; reconnaissance work on clay indications in three Tertiary basins with Italy's Caolino Panciera; and collaboration on mining services with the Iran Itok company.

Energy

At present, production of both oil and gas is very limited, to the extent that the cost of energy imports is in approximate balance with the value of mining sector exports. Nevertheless, Morocco has made strenuous efforts to extend electricity supply throughout the country and consumption is about 15 billion kWh. Of this, perhaps 15% is imported and the rest generated from a mix of hydro, oil-fired and coal-fired power stations. As oil and coal are also imported the price differential has up until now encouraged a switch from oil to coal, not only for power generation but also for other industrial uses. However in 2003 the government stated that it expects rapid growth in natural gas utilisation in future, towards 50% of the electricity generation market and also for industrial purposes such as drying phosphate rock. The necessary gas will be drawn partly from the Algeria-Tangier pipeline of the GME supply system that links North Africa and Southern Europe, partly by imports through terminals on the Atlantic coast, and partly it is hoped by exploitation of indigenous resources in the Gharb region.

However, known resources of both gas and oil are very limited and finding significant new reserves is ONHYM's main priority, in conjunction with international partners. One of the most recent of these is Canada's Stratic Energy, which will work in a consortium with US firms Heyco and Enercorp to explore for gas in two areas of northwestern Morocco.

Table following page.

Mineral sector production (t unless otherwise stated)

	2003	2002
Mined products	23,901,386	24,393,889
Phosphate	22,877,000	23,038,000
Anthracite	214	302
Lead (contained)	54,779	88,582
Zinc (contained)	136,433	178,476
Iron ore	4,019	8,736
Copper (contained)	17,539	17,799
Cobalt (concentrates)	16,178	16,896
Manganese dioxide		18,064
Barites	356,394	487,626
Fluorspar	81,225	94,910
Salt	236,443	266,903
Bentonite	71,544	58,754
Smectic clays	14,944	43,243
Ghassoul*	927	1,886
Talc	1,959	6,708
Other products	31,788	67,004
Processed products		
Phosphate derivatives		
Phosphoric acid	2,930,000	2,921,000
Purified phosphoric acid	97,000	123,000
Fertilisers	2,542,000	2,602,000
Of which: DAP	1,113,000	1,353,000
MAP	616,000	566,000
NPK compounds	242,000	219,000
ASP	28,000	32,000
TSP	523,000	432,000
Metals		
Lead	61,473	71,840
Silver	200,528	276,780
Gold	1,863	2,747
Copper matte	2,505	2,016
Cobalt cathodes	1,341	1,354
Nickel	574	498
Arsenic	6,872	5,469

Source: Ministry of Energy and Mines.
*Ghassoul – clay material with cosmetic properties.