

# ALGERIA

*By Omar Chabane*

**A**lgeria is the second-largest country in Africa covering some 2.4 million km<sup>2</sup>, and with a population of 32 million. In April 2004, presidential elections took place and President Abdelaziz Bouteflika was re-elected with a comfortable majority for a second five-year term. The next five years will undoubtedly provide a good opportunity for Algeria, finally, to end its isolationism and press ahead further with its reforms.

During the 1990s, the country suffered a number of political uncertainties and the economy was adversely affected by falling oil prices. The country was obliged to revalue its currency in 1994 and embarked on a structural adjustment plan in co-operation with the International Monetary Fund. There has been a slow recovery, and more discipline has been introduced through progressive economic measures aimed at organising industry. In the past few years, Algeria has also made sound progress on the diplomatic and political fronts, and has established co-operation agreements with other countries.

At present, negotiations are in hand with the World Trade Organisation on future admission, and Algeria is also succeeding in promoting partnership with the European Union and with the so-called Euro-Mediterranean region countries. The overall aim is greater co-operation with the rest of the world, and more openness and partnership so as to accelerate Algeria's smooth entry into the global economy.

## **The minerals sector**

Algeria possesses abundant and diversified mineral resources, and mining dates back to Roman times. More recently, the French controlled Algeria's mines during the colonial period from 1830 until 1962 and, following independence, the mines were first expropriated and then nationalised in 1966. The rationale was that the mining sector is strategic and should be controlled by the state, and that mining revenues would help finance Algeria's successive economic development plans.

Today, Algeria boasts one of the highest GDPs in Africa, based primarily on the production and export of petroleum and natural gas. Hydrocarbons account for 30% of GDP and more than 95% of export earnings.

The downstream oil industry is well developed, with five refineries and a burgeoning petrochemicals industry centred primarily on Skikda, Arzew and Annaba. Algeria also has the fifth-largest reserves of natural gas in the world, estimated to be 3,200 billion m<sup>3</sup>. The country is the world's second-largest exporter of natural gas and MEDGAZ, a project for a gas pipeline between Algeria and Spain, has been listed as a priority programme by the European Union.

In terms of non-fuel minerals, Algeria produces substantial quantities of iron ore, phosphate, pozzolana, other industrial minerals and marble, as well as mercury and minor base metals. Important operations include: the 3 Moz Tirek Amesmesa gold mine; the 2,400 Mt Djebel Onk phosphate mine; the 5,000 Mt Quenza and Bou Khrada iron-ore mines; plus several industrial mineral mines producing salt, bentonite and barite. Base metals production is not a major aspect of Algeria's mineral production. El Abed lead-zinc mine ceased operating in December 2002 and the government has been seeking investors to take on the Ghazaouet zinc mine and processing plant in the far northwest of Algeria. The complex is 25 years old, and its original 40,000 t/y capacity has been reduced in recent years to 31,000 t/y as a result of poor maintenance and the unavailability of spare parts.

The relatively minor base metals production in Algeria does not reflect the potential for future mining. The Oued Amizour lead-zinc deposit in northwest Algeria, comprises brecciated, stockwork, and minor massive sulphides in felsic volcanic rocks of mid-Miocene age. The total resource is 30 Mt averaging 5.74% Zn and 1.39% Pb over an average thickness of 98 m, and a central core zone is estimated at 10.89% Zn and 3.04% Pb over an average thickness of 50 m. Following relinquishment of the property by Breakwater Resources, the government was seeking new investors but it is not known if this has been successful. At the Chaabet el Hamra, lead-zinc deposit, there are some 5 Mt of reserves averaging 5% metal content.

An increase in phosphate production at the Djebel Onk phosphate mine from 2.5 Mt/y to 4.5 Mt/y and the production of 1 Mt/y of phosphoric acid, together with ammonia, were the subject of feasibility studies initiated early in 1999 as part of a proposed joint venture between the Algerian Government and Spanish fertiliser producer Fertiberia SL. Reserves at Djebel Onk are in the order of 2,400 Mt averaging 24% P<sub>2</sub>O<sub>5</sub> and the infrastructure is reportedly good. The mine is located 300 km south of Annaba.

In addition to existing salt production, investment in three further projects in the north of the country is being sought; El Meghaier, El Outaya and Arbal, contain reserves of 1,500 Mt and potential of 2,000 Mt. Partners are sought to extend the capacity up to 1 Mt/y.

The bulk of the country's iron ore is extracted from the Ouenza and Bou Khadra mines near the Mediterranean coast. The main haematite-rich orebody at Ouenza is reported to be 2 km long and 500 m wide. Production of hot briquetted iron is foreseen at Ouenza and Bou Khadra, and also at Gara Djebilet and Mecheri Abdelaziz in the west. Reserves in these two areas already total some 3,500 Mt. Ouenza and Bou Khadra have been estimated to contain about 5,000 Mt of high-grade haematite.

A number of gold prospects have been identified in the Hoggar region of southern Algeria by Office Nationale de la Recherche Géologique et Minière (ORGM) and the parastatal company, Entreprise D'Exploitation des Mines D'or (Enor). These prospects are now the focus of attention by foreign

companies. Mostly hosted by major northerly trending structures in the Pan-African terrane of Hoggar, they appear to have significant potential.

The main focus is on the development of resources in the Tirek - Amessmessa area close to the border with Mali in southwest Algeria. At Tirek, 20 t of gold have been identified at an average grade of 17 g/t Au. The Tirek mine is owned by Enor and a substantial shareholder (34.12%) is the parastatal oil company Sonatrach. Mining of the deposit (consisting of a series of high-grade quartz veins) officially commenced in January 2002 using open-pit methods. Development costs were US\$9 million, with the plant being designed and constructed by the South African company MDM. A series of pits are being exploited to depths of between 5 m and 40 m but underground mining is anticipated within about five years. During the first few months of production the ore grade averaged 12 g/t Au.

At Amessmessa, gold resources have been estimated at 70 t averaging 14 g/t Au. The Algerian Government is actively seeking partners to develop a mine that is expected to produce close on 100,000 oz/y.

At the Tiririne-Harane gold project, located near the Niger border 450 km east of the town of Tamanrasset, reserves are estimated at 481,000 t at a grade of 17.0 g/t Au. The various deposits comprise vein swarms hosted by meta-sediments. Also located in the Hoggar area, and some 300 km southwest of Tiririne, is the In Abegui goldfield, where stockworks and quartz-vein mineralisation occupy ten discrete zones. The project covers 20 km<sup>2</sup>, and exploration has consisted of 7,800 m of drilling, some 220 m of pitting, about 6,300 m<sup>3</sup> of trenching and 570 m of underground development. The probable and possible resources at In Abegui total 566,000 t averaging 6.02 g/t Au.

The minerals sector is regarded as strategically important by the government because it supplies the country's other industries with vital raw materials, provides the major source of export revenues, is a major employer and aids regional development. Apart from hydrocarbons, important export revenues accrue from phosphate, salt, mercury, marble, ammonia and various fertilisers' products.

Although the mining sector is still under state control, this situation is expected to change rapidly and the government has set up a general scheme and framework governing economic and industrial activities:

- Public companies, although owned by the State, are responsible for their management, balance sheets and results. They must act in accordance with commercial regulations and laws, and the general director or chairman reports to a board of directors.
- The government has created 28 Sociétés de Gestion des Participations (SGPs), headed by three executive directors, to oversee the financial performance of the various companies in their portfolio, and the SGPs have shareholdings in these companies.

The SGPs, in turn, reporting to the State Participation Council (CPE) which meets periodically under the chairmanship of the Head of Government. In the wake of the April 2004 elections, a new minister has been appointed in charge of participation and promotion of investments, Mr Yahia Hamlaoui.

In recent years, there has been an emphasis on greater efficiency and this has led to many redundancies and the closure of loss-making plants. Trade restrictions on the domestic market have been lifted, with competitive prices now available for a large range of items, and foreign trade is no longer a state monopoly.

All mining activity now comes under the Somines SGP, an industrial and commercial group that replaces Sidmines Holdings, which has been dissolved.

Somines oversees the extractive industry (mineral products and building materials); the chemical industry (fertilisers and pesticides); and the metallurgical industry. Somines acts in accordance with the 2001 Mining Law regulations covering organisation, management and exploration, and the fiscal incentives available for investors.

### **SOMINES Group and its present portfolio**

Somines' portfolio comprises seven companies and their subsidiaries namely :

- Asmidal (fertilisers)
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- Enof (non-ferrous metals)
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- Moubydai (pesticides)
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- Enasel (salt)
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- ENG (sand and aggregate)
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- Enamarbre (marble)
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- Ferphos (iron and phosphate)
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### **Mineral reserves** (Table 1)

Several companies in the Somines portfolio are likely to be privatised in the near future including subsidiaries of Enamarbre and Entreprise Nationale des Granulats (ENG). To facilitate this, Somines is setting up a new division called 'Partnership and Privatising'. P&P will steer privatisation programmes and their implementation, and will also oversee procedures related to legal and financial matters, seek partners and eventually finalise privatisations.

## Exploration

The government is aware of the country's heavy dependence on hydrocarbons and is keen to exploit Algeria's other mineral resources. For example, there is potential for the discovery of manganese and copper (Ougarta district), copper, molybdenum and gold in the Reguibat district, and also tin, tungsten, uranium and diamonds. The state-run geological survey, Office Nationale de la Recherche Géologique et Minière (ORGM) has commenced a substantial and systematic exploration programme in the Hoggar and during 2002 it reported the discovery of micro-diamonds and kimberlite indicator minerals near the village of Silet.

Private-sector exploration is encouraged and any legal entity can apply for a prospecting licence, and any legal entity possessing the relevant financial and technical capabilities can apply for an exploration licence. These are issued on a first-come-first-served basis if the area has never been explored. Further information can be obtained from the Ministry of Mines and Energy at: [www.mem-algeria.org](http://www.mem-algeria.org)

**Table 1 Reserves**

<b>Product</b>	<b>Reserves</b>	<b>Annual capacity</b>
Salt (excluding sea salt)	1,000 Mt	300,000 t
Marble	35 million m <sup>3</sup>	45,000 m <sup>3</sup>
Mercury	10,000 t	800 t
Clay (kaolin)	15.2 Mt	30,000 t
Feldspath	4.2 Mt	-
Barite	400,000 t	60,000 t

Table 2 following page (over two pages).

**Table 2 Mineral production**

		<b>2002</b>	<b>2003</b>	<b>Growth rate %</b>
Gold ore	kg	369	365	-1.1
Iron ore	'000 t	1,200	1,378	14.8
-Ferphos	'000 t	143	202	41.3
- Ispat	'000 t	1,057	1,176	11.3
Phosphates	'000 t	741	905	22.1
Pozzolana	'000 t	451	500	10.9
Lead concentrate	t	8,576	2,796	-67.4
Mercury	flasks	8,902	5,089	-42.8
Barite	t	51,773	45,659	-11.8
Bentonite	t	27,178	26,485	-2.5
Bleaching clay	t	3,521	3,579	1.6
Kieselguhr	t	3,185	2,335	-26.7
Kaolin	t	9,505	19,258	102.6
Calcite	t	15,261	21,959	43.9
Dolomite	t	6,203	2,603	-58.0
Salt	'000 t	238	241	1.5
Marble blocks	'000 m <sup>3</sup>	23	24	2.0
-Public sector	'000 m <sup>3</sup>	18	16	-11.4
-Private sector	'000 m <sup>3</sup>	6	8	45.1
Marble slabs	'000 m <sup>2</sup>	215	180	-16.1
Marble derivative	t	108,682	105,249	-3.2
Calcium carbonate	'000 t	146	163	12.1
Aggregates :	'000 m <sup>3</sup>	11,691	13,769	17.8
-ENG	'000 m <sup>3</sup>	4,777	5,295	10.8
-Enamarbre	'000 m <sup>3</sup>	32	32	-0.5
-Enof	'000 m <sup>3</sup>	1,909	1,929	1.0
-Private sector	'000 m <sup>3</sup>	4,973	6,513	31.0
Ashlar	M <sup>3</sup>	2,032	1,945	-4.3

## Mining Annual Review 2004

Limestone	'000 m <sup>3</sup>	2,525	2,674	5.9
Clay	'000 t	1,660	1,840	10.9
Gypsum	'000 t	335	364	8.7
Sand	'000 t	392	495	26.5
Tufa	'000 t	522	685	31.1