

Algeria

ALGERIA sits between Morocco and Tunisia at the top of Africa with its northern coastline running for 1,200 km along the Mediterranean Sea. It is the second largest country in Africa and the tenth largest in the world, although 85% of its 2.382 million km² land mass is the almost uninhabited Sahara Desert in the south. The capital is Algiers.

POLITICS

Algeria's official title is the Democratic and Popular Republic of Algeria. Its chief of state is the military-backed President Abdelaziz Bouteflika who was elected in April 1999. Bouteflika remained the subject of criticism from international human rights campaigners, for alleged executions and his failure to prevent massacres. Algeria has been plagued by internal conflict and terrorism during the last decade, sparked by the annulment of a 1991 election won by FIS (Islamic Salvation Front). In September 1999 a referendum on peace passed with 98% of the vote and a subsequent amnesty program promoting national reconciliation saw the dissolution of the armed wing of the FIS as well as several other armed militant groups. However, violence between the military and armed militants persisted, with more than 100,000 deaths from the conflict. President Bouteflika continued in attempts to improve the national economy, focussing on the promotion of foreign investment in areas including oil, gas, mining and power generation. Along these lines, the Government held trade negotiations with the UN. Such programs failed to have any significant effect on widespread domestic problems of high unemployment and poor living standards. In January 2004 Algeria assumed a two year seat on the UN Security Council. Tensions existed between Algeria and Morocco over their shared border and the narcotic trade from Morocco into Algeria. In 2004 Bouteflika was re-elected for a second term and faced Berber unrest, large-scale unemployment, housing shortages as well as the continued need to diversify the petroleum based economy.

PEOPLE

Algeria's population of just over 32 million people consists almost entirely of Arabs and indigenous Berbers. The major religion is Sunni Islam, with less than 1% of the population Jewish or Christian. The two official languages are Arabic and Tamazight, and French is also spoken. The literacy rate is increasing and stood at 70%. Life expectancy is higher than the average for north Africa at 71.22 years of age for men and 74.34 for women.

ECONOMY

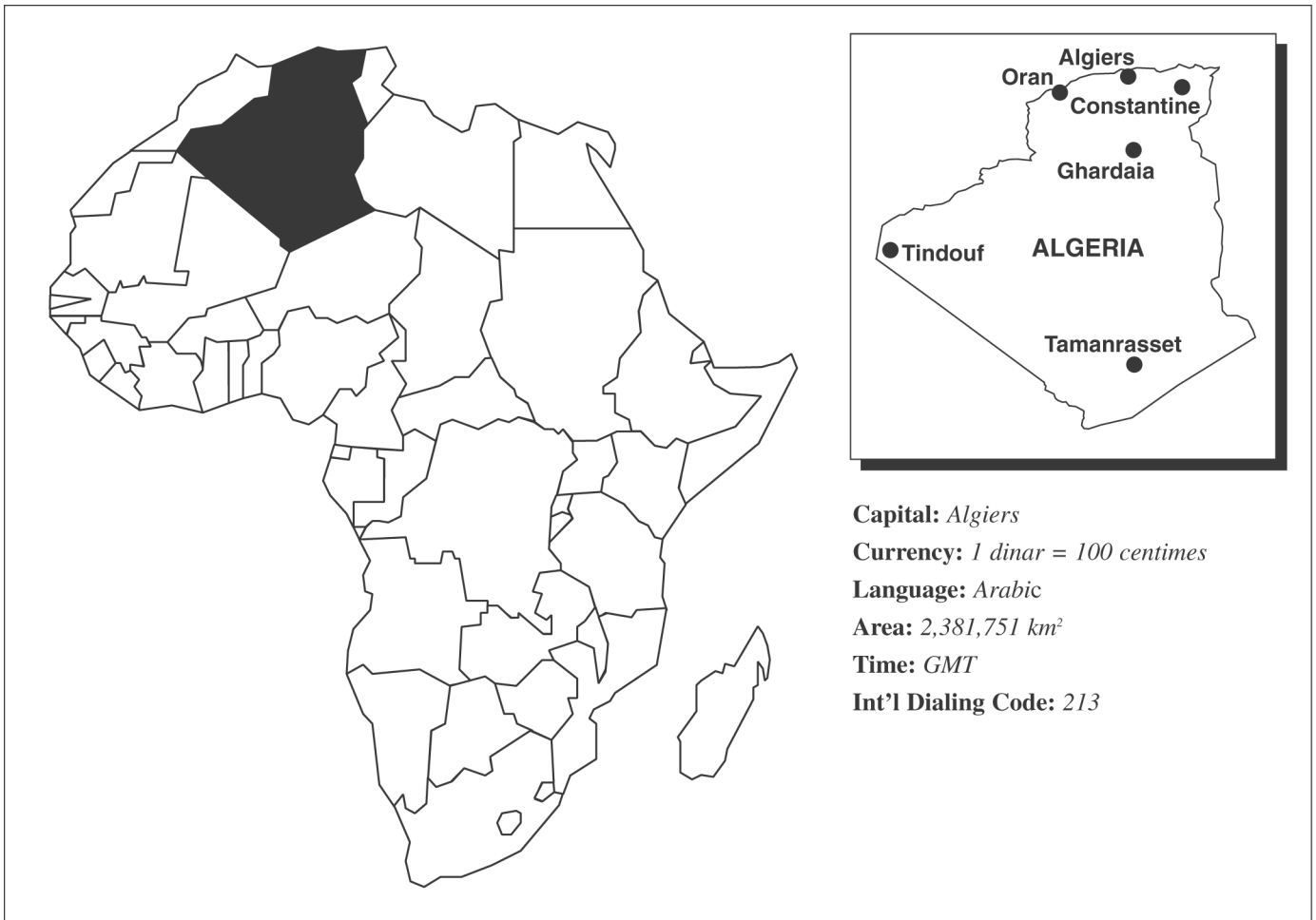
Algeria has a centrally planned economy that is partly private in structure and is heavily dependent on oil and gas revenues. The GDP is growing more slowly than the population is increasing but, nevertheless, is one of the highest in Africa. From 2000, the country's finances had benefited from substantial trade surpluses, record foreign exchange reserves and reductions in foreign debt. The real GDP rose, largely due to higher oil output and increased government spending. The Government continued in attempts to diversify the economy by seeking foreign and domestic investment although this had, had little impact on reducing the high unemployment or on improving living standards.

NATURAL RESOURCES

Algeria's main natural resources are petroleum, natural gas, iron ore, phosphates, uranium, lead and zinc. It has one of the world's largest known reserves of natural gas, estimated at 3,200 billion cubic metres. The petroleum resources are the third biggest in Africa, behind Libya and Nigeria, but at the current rate of production the reserves could be depleted within three decades. Algeria's estimated uranium reserves are the tenth largest in the world. Located near the Moroccan border are iron-ore reserves estimated at two billion tonnes, but the remote location and border conflicts with Morocco have so far prevented exploitation.

MINING

The government has begun to concentrate on the considerable potential of the mining industry. The Ministry of Energy and Mines is responsible for eight principal enterprises: ORGM, the national office for geological and mining exploration; FERPHOS, the iron and phosphate enterprise; ASMIDAL, the fertiliser enterprise; ENASEL, the national salt enterprise; ENOF, the non-ferrous and industrial minerals enterprise; ENAMABRE, the national marble enterprise; ENOR, the gold enterprise; and ENG the national aggregates enterprise. In 1999, there were also about 250 publicly-owned medium mining operations and about 1,200 small private operations. On the exploration front, the whole country has now been mapped and covered by aerial photography at a scale of 1:50,000 as part of \$1 billion



spent on exploration and development in recent years and five vast geological provinces have been identified. The country's estimated 1.5 million km² of mineral domain remains vastly under explored.

MINING REGULATIONS

One of the Ministry's main objectives is to intensify exploration in the country, particularly with joint venture partners. A mining law code now in place is designed to promote the development of foreign partnerships, and this legislation is in the process of being revised in order to attract further international investment. The Department of Mines and Geology, located in the Ministry of Energy and Mines, ensures the implementation of the mining laws and the regulations for exploration and production. The rates of mineral duty are defined for three geographical areas, according to the nature of the produced mineral substances. The current rates of royalty for the ores range between 0.25% and 2%.

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Gold

AMESMESSA (see also Tirek)

Location: 60 km south of Tirek.

Ownership: GMA RESOURCES PLC 52% (through Enterprise d'Exploitation des Mines D'or (ENOR)); private interests 48% (through state-owned companies - Algerian Insurance, Bank of Algeria and Sonatrach Oil).

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Geology: Amesmessa lies in the SW part of the Tuareg Precambrian shield overlain in discordance by lower to middle Proterozoic formations. The region is composed of two structural patterns. To the west, mafic to felsic granulites as well as various types of gneiss, schist and marble occur forming a strongly metamorphosed Archaean greenstone complex (Ouzzal block); to the east, gneiss and quartzites of lower to middle Proterozoic age outcrop and are intruded by gabbros, diorites and granodiorites of Pan African age (530-620 million years). The boundary between the two blocks is marked by a 200 km long and 2-3 km wide mylonitic shear zone. Throughout this mylonite zone, numerous gold bearing showings were identified including Amesmessa, Tirek, In Allrene, Derreg and Timeg. At Amesmessa, gold mineralisation occurs in vein zones consisting of quartz and altered mylonites and can be 10m thick. The vein zones strike N-S and dip 60-70 degrees west. Strike length varies from 100m to 1 km with an average thickness of the economical interval being 0.8m to 2m. The gold occurs as free gold and sulphides do not exceed 5% of the mineralisation.

Resources/reserves: At 1993, gold reserves of 3.6 Mt at an average grade of 14 g/t for 1.623 Moz.

Comment: The Amesmessa gold deposit was discovered by SONAREM in 1978. A JV operating company, ENOR, was formed in 1997 with the object of mining the Amesmessa and Tirek (see separate entry) deposits. ENOR was granted the authority to explore and mine inside a 1,400 km² area including the Derreg, Timeg and Inalllerene deposits. Having commissioned the Tirek mine in January 2002, ENOR aimed to build a new stand-alone operation, producing around 90,000 ozpa, at Amesmessa by end 2004. In May 2002, it issued a call to tender for a company to further develop Tirek and also exploit Amesmessa. Gold Mine of Algeria Pty Ltd (GMA) was named as the successful bidder in July 2002 and would become ENOR's main shareholder. In its submission, GMA proposed to invest US\$12 million to double Tirek's capacity, create a 650 tpd operation at Amesmessa and as well, conduct exploration on the broader 1,400 km² permit. During 2003, GMA and ENCOR finalised the deal with GMA expected to list on the AIM, at which time it would pay GBP2.3 million, followed by the remaining GBP5 million over the following three years. As at mid 2003, the focus was on expanding production at Tirek and no further exploration results from Amesmessa had been reported. GMA Resources plc took over Gold Mines of Algeria during 2003, and effectively acquired a 52% interest in Amesmessa on 1 July 2003. Mining took place during the second half of the year from shallow open cut trenches on veins 12, 15 and 18. An Option Study was conducted during February 2004, and at the end of February the company announced the decision to proceed to a BFS level on a 300,000 tpa plant at the property.

TIREK (see also Amesmessa)

Location: 400 km SW of Tamanrasset.

Ownership: GMA RESOURCES PLC 52% (through Enterprise d'Exploitation des Mines D'or (ENOR)); private interests 48% (through state-owned companies - Algerian Insurance, Bank of Algeria and Sonatrach Oil).

Management office: Colin Ikin, chief executive officer, GMA Resources plc, 30 Farringdon St, London, England EC4A 4HJ. Ph: (020) 7544 5677. Fax: (020) 7544 5565.

Geology: Tirek lies in the SW part of the Tuareg Precambrian shield overlain in discordance by lower to middle Proterozoic formations. The region is composed of two structural patterns. To the west, mafic to felsic granulites as well as various types of gneiss, schist and marble occur forming a strongly metamorphosed Archaean greenstone complex (Ouzzal block); to the east, gneiss and quartzites of lower to middle Proterozoic age outcrop and are intruded by gabbros, diorites and granodiorites of Pan African age (530-620 million years). The boundary between the two blocks is marked by a 200 km long and 2-3 km wide mylonitic shear zone. Throughout this mylonite zone, numerous gold-bearing showings were identified including Amesmessa, Tirek, In Allrene, Derreg and Timeg. At Tirek, the mineralised bodies are composed of quartz veins showing clear-cut contacts. Hydrothermal wallrock alteration is very light and gold is found as free gold in association with sulphides (2%-3% of mineralisation). The gold bearing veins are oriented N-S and 20-30 degrees NE with a dip of 75-80 degrees west.

Resources/reserves: At May 2002, free dig reserves of 36,594t at 16.95 g/t, open pit reserves of 205,206t at 13.53 g/t and underground reserves of 161,941t at 22.32 g/t gold were defined.

Operation: Open-cut.

Treatment: Gravity-CIL.

Plant capacity: 50,000 tpa.

Comment: The discovery of gold occurrences in the massif Ahaggar (Hoggar) dated back to the 1970s. The Tirek and Amesmessa (see separate entry) gold deposits near the border of Algeria and Mali were discovered by SONAREM in 1971 and 1978 respectively. Geological evaluation was carried out from 1983 to 1992 by Enterprise Nationale de Recherche Geologique et Miniere (EREM) and then by l'Office National de Recherche Geologique et Miniere (ORGM). A pre-feasibility study was initiated in 1989 and a feasibility study was conducted by Canadian consultant group, SIDAM, in 1992. JV operating company ENOR was formed in April 1997 with the object of mining the Amesmessa and Tirek deposits. ENOR was granted the authority to explore and mine inside a 1,400 km² area including the Derreg, Timeg and Inalllerene deposits. Gold occurred in narrow, very steeply dipping quartz veins. Seventy veins had been reported at Tirek, of which 33 had been subjected to detailed work, and exploratory drifts driven at the 40m level. Tirek was officially opened in January 2002, having begun operations in July 2001. It was built with the assistance of South Africa's Metallurgical Design and Management (Pty) Ltd, which designed, supplied and constructed the 200 tpd gold plant. Ore was free-milling and treatment involved a two-stage crushing, single-stage milling, gravity concentration via a Knelson concentrator, and a CIL plant. By July 2002, the operation was producing gold at about 2,090 ozpm at an average run of mill grade of about 15 g/t. The aim was to produce 33,702 oz in the first full year. While currently an open-pit operation, with a series of pits being worked from about 5m to 40m depth, an underground mine, costing in the order of US\$2.6 million, was planned for 2005/06. Based on current reserves, Tirek had a seven-year mine life, although it was expected that this would be expanded given the project's considerable upside potential. In May 2002, ENOR had issued a call to tender for a company to further develop Tirek and also exploit the Amesmessa project. An Australian consortium, Gold Mine of Algeria Pty Ltd (GMA) was named as the successful bidder in July 2002 and would gain control of 52% of ENOR by paying GBP8.3 million before 2006. GMA's objective was to expand the Tirek operation over the next three years; pursuant to this aim, GMA was completing a mine development plan during 2003. ENOR's target for 2003 was production of 22,444 oz gold (increasing from 15,211 oz in 2002). GMA Resources plc took over Gold Mines of Algeria during 2003 therefore effectively acquiring its 52% interest in Tirek on 1 July 2003. A major exploration drilling program commenced during the December 2003 quarter with work carried out on preliminary geological resource models, mine plans and schedules. A processing plant option study was also commissioned. By the end of March 2004, 20,000m of RC drilling had been completed, with only 1,500m still to be completed to finish the first stage of the exploration program.