ISRAEL

By Peter Harben and J. M. Harris
Peter W. Harben Inc. Mineral Consultancy, Las Cruces, New Mexico 88011, US (peterharben.com)

Violence in the Middle East is taking its toll in Israel. As violence surges, tourism has plummeted. The technology sector has also suffered from the general worldwide malaise in this sector and has lowered foreign investment. The shekel remains vulnerable as long as the security and military situations escalate. In the first quarter of 2002 the shekel depreciated 8.15% against the dollar and 7.99% against the basket of currencies. The military operation in Israel also has budgetary implications, and economists had called for a new round of cuts even before it began. Their concern was influenced by the deep recession, driving the state deficit above 8% of GDP this year. Last year the deficit soared to 4.6% of GDP, more than double the government's target of limiting it to 1.75% of GDP. With a reported IS500 million per month cost associated with the call-up of reservists, a large deficit has been projected. After the beginning of military operations in March 2002, there were warnings that some IS9 billion in cuts would be needed.

Fortunately, the very much alive Dead Sea animates the strong industrial mineral sector. Its mineral-rich saline waters have made Israel a major producer of potash, salt, bromine, magnesium, magnesia and numerous downstream products. The country is also a significant supplier of fertiliser and chemicals, with large-scale phosphate production. Commercial production is dominated by the subsidiary companies of Israel Chemical Ltd (ICL), in particular Dead Sea Works (potash and salt), Dead Sea Bromine (bromine and bromine derivatives), Dead Sea Periclase (magnesia-based precuts), Dead Sea Magnesium (magnesium metal), Rotem Amfert Negev (phosphates, phosphate chemicals and fertilisers), Rami Ceramic Industries (ceramics and refractories), Negev Industrial Materials, Fertilisers and Chemicals, and PAMA (oil shales).

Earlier in 2001, Dead Sea Works and Rotem re-organised their marketing and logistics divisions by merging the Rotem Amfert Negev marketing activities into the DSW Headquarters at Beer Sheva. Rotem has had a reasonable year with small losses on the domestic side and marginal profits as a whole.

The PAMA oil-shale research company has been closed, but oil-shale mining continues as before with the ongoing production of low-grade pet litter, a waste production from oil shale.

Anglo American plc has entered into an agreement to sell its UK subsidiary Cleveland Potash, which mines potash with by-product salt in northeast England to a subsidiary of ICL for US$45 million subject to regulatory approvals. Cleveland will become part of the ICL Fertilisers division headed by DSW.

At the beginning of 2001, DSW, through its subsidiary Ashly Chemicals, also increased its share in Iberpotash SA in Spain by purchasing the 20% owned by the Catalonian chemicals company, La Seda de Barcelona, thus giving DSW an 80% ownership share, with the Spanish sepiolite producer Tolsa holding 20%. Overall, DSW potash production in Israel and Spain is some 3.75 Mt/y, which makes it the fourth largest potash producer in the world contributing approximately 10% of world production. In Israel, DSW is also one of the lowest-cost potash producers in the world and its geographic location allows shipment westwards through the Mediterranean Sea and eastwards through the Red Sea. Rotem Amfert Negev Ltd produces 1.3 Mt/y of fertilisers, 340,000 t/y of P_2O_5 fertiliser-grade phosphoric acid, 80,000 t/y (as P_2O_5) of food-grade phosphoric acid, 4 Mt/y of phosphate rock, 50,000 t/y monopotassium phosphate, and 12,000 t/y of liquid detergents for the dairy products industry. Production is based on the Zin, Oron, and Arad phosphate-rock mines in the northern Negev.

Potash, phosphate rock, fertiliser-grade phosphoric acid, phosphate-based and compound fertilisers, and specialty fertilisers represent 40% of ICL's revenues. While ICL is a leading supplier of fertilisers in Europe and developing new advanced soluble fertilizers, it is expanding its markets overseas. Bromine and bromine compounds account for about 25% of its revenues; the group has elemental bromine manufacturing facilities in Israel and bromine compound production installations abroad. It operates the world's largest elemental bromine production plant at the Dead Sea in Sdom based on the richest known source of bromine in the world. Israel is the second largest producer of bromine in the world and largest producer of elemental brome; about 90% of production is for export and accounts for some 80% of the international trade in bromine compounds to over 100 countries.

ICL is also expanding and diversifying its chemical product lines into downstream value-added products that represent about 30% of sales. Magnesium chloride flakes and pellets have helped increase revenues, as have sales of aluminium chloride used as a catalyst in organic production processes. Through a joint venture with Volkswagen AG, it additionally produces pure magnesium metal and magnesium alloys, representing about 45% of sales, and accounting for about 9% of total primary magnesium production in the world. Lower prices for magnesium and high energy demands are challenges and the company is in the forefront of negotiations about the new gas findings in the Mediterranean.

Dead Sea Periclase has the capacity to produce 100,000 t/y of high purity, sintered magnesia at Mishor Rotem, as well as 13,000 t/y at the extremely high-purity fused magnesia plant operated by Tateho Dead Sea Fused Magnesia Co., a 50-50 joint venture between DSP and Tateho Chemical Industries Co. of Japan (TCI). Magnesium hydroxide for use in flame retardants is also produced and marketed by Dead Sea MFR, a 50-50 joint venture between DSP and sister company, Dead Sea Bromine Group.

Climate, topography and geographic conditions make Israel a prime location for turning seawater into salt. Israel Salt Industries operates highly mechanised solar evaporation plants that produce pure, high quality industrial and edible salts, and over 15% of annual production is exported to the Far East, Africa, and Europe from the three plants (Atlit on the Mediterranean, Eilat on the Red Sea, and Kalia on the Dead Sea) which process seawater into table salt as well as salt for the food industry, water softening, and for other industrial applications. Costing almost US$10 million, new evaporation ponds have been built at Ein Evrona north of Eilat for mainly export production. A US$3 million new salt washing and packing plant has also been completed at Eilat. The company has recently bought a significant interest in one of Israel's leading redistributors to the institutional market and intends to invest in further real estate projects

The domestic cement industry has faced problems with a decline in demand and cheap material coming in from Jordan and Turkey. One plant has closed and clinker only produced in the Ramle plants. Nesher Israel Cement Enterprises has been the country's cement producer and has traditionally accounted for over 7 Mt/y of cement. Production of flint clays and most kaolin has ceased so that only brown clays are mined (in the Ramon Crater). There is, however, an increase in production of the Mamshit clays (carbonatic), which supplies the raw materials for two tile plants, one of which is new in Yeroham and a joint Italian venture. With the opening of two flue-gas desulphurisation (FGD) units in Ashqelon, there has been an increase in the consumption of industrial limestone. Along with lime (at least 275,000 t), there is also production of gypsum (50,000 t), silica sand (230,000 t), crushed stone (35,000 t), and caustic soda (15,000 t). Diamond cutting and jewellery fabrication have also become significant and an exchange for rough diamonds in Tel Aviv was opened several years ago.

In principle the Israeli Government backs privatisation of state-owned companies and has undertaken significant structural reforms

towards a more open and market-oriented economy over the past few years. Nevertheless, the energy sector remains mainly nationalised and state regulated. About a quarter of Israel's energy demands is supplied by some 9.9 Mt/y of imported coal. Israel imports most of its oil needs too. Current output is less than 1,000 bbl/d and exploration has not proved successful, but drilling is being accelerated. Five billion barrels of oil reserves under gas reserves are possible according to Israel's Petroleum Commission estimates and over 400 wells have been drilled during the past 60 years.

Several companies have expressed interest in exploring. In 1996, oil was discovered near Arad and is flowing at the rate of some 600 bbl/d. The US$1.3 billion, 100,000 bbl/d, Egyptian-Israeli joint venture MIDOR refinery in Alexandria, Egypt began operations in April 2001, but in early June Israel's Merhav advised it had sold its share in MIDOR to the National Bank of Egypt, which makes the refinery completely Egyptian- owned. In early 2001, Egypt and Israel announced a deal whereby Egypt would supply US$3 billion worth of gas to Israel through 2012, but the political situation has perhaps clouded the agreement and others; although a final contract has to be signed, most details have been sorted out over the supply of 1.7 billion m^3 of natural gas and negotiations are in the final stages. ENI, a major gas producer in Egypt, has almost finished a US$150 million gas pipeline from offshore fields north of Port Said through the Sinai to El-Arish near the border the Gaza Strip; Gaza is almost totally dependent on the Israel Electricity Commission (IEC) for its electricity needs.

Several energy companies - Israel's Yam Thetis group, Isramco, BGF, and US-based Samedan - have discovered natural gas off the coast with initial perhaps rather optimistic reserves of 3-5 trillion ft^3. In August 2000 Isramco/BG announced the discovery of a large gas field 20 km offshore at its Nir-1 well and this may contain gas reserves of 274 billion ft^3; the Mari and Noa gas fields were also discovered offshore Israel in 2000 with combined reserves of nearly 1.5 trillion ft^3. In May 2001 Yam Thetis indicated it would invest US$235 million through 2003 in building a gas production and distribution system from its Mari field to the coast at Ashkelon, but did not plan to produce gas from its smaller Noa offshore gas field at the moment. Gas developments would prove especially helpful for magnesium production.

Gas may also have been discovered in Palestinian territorial waters off the Gaza Strip and BG has signed a 25-year contract to explore for it and set up a gas network in the Palestinian Authority; BG finished drilling a second gas well offshore Gaza in December 2000 which confirmed findings from the Marine 1 well, which had flowed at 37 million ft^3/, suggesting possible reserves of some 2 trillion ft^3.