VENEZUELA

By Gerald M Ellis

For many years Venezuela was best known in terms of natural resources as the leading Latin American producer of petroleum and petroleum by-products. One metal was also prominent, namely iron. The iron ore deposits in the Orinoco area established Venezuela as an important steel producer, and the industry benefited from abundant cheap energy in the form of oil and hydroelectricity resources. Subsequently, Venezuela has also become an important producer of bauxite-alumina-aluminium. It also produces nickel, gold and coal and small quantities of diamonds.

Despite the abundant mineral wealth, Venezuela's political scene is cause for concern and if the country is to realise its full economic potential much will depend on whether all the political factions can be reconciled. In April 2002, there was a major political upheaval prompted by an attempted military coup which ousted President Hugo Chavez for 48 hours. A small number of military officers were won over by business and opposition groups to remove the president. A majority of the military proved loyal to the President, however, and the coup failed. President Chavez was restored to power, having still enjoyed overwhelming support from the poorest classes.

Shortly after the failed coup, a leading labour union organisation, strongly supported by the middle-classes and backed by business and industrial groups, and a few in the military, staged a series of protest marches. The aim was to force the President to resign or to hold a referendum (more than one million signatures were obtained).

Venezuela's Constitution allows for a referendum to be called at the mid-point of a presidential term and this falls due in August 2003. The opposition, however, was insisting on the president's resignation or a referendum, long before the scheduled date.

Former US President Jimmy Carter, and the secretary general of the OAS, Cesar Gaviria, travelled to Venezuela in a bid to resolve the crisis. The recommendation was that a referendum be held.

In the meantime, the protests continued and led to a national oil strike with a consequent dire impact on the economy. The strike lasted from December 2 until February 2003, and crude production was paralysed, as were refining activities and exports. In 2003, the country began a recovery period. Political opposition ceased but not entirely, and the county was waiting until August 2003 when a decision will be taken on whether or not to hold a referendum or whether President Chavez should serve out his full term.

The minerals industry is the single most powerful sector that could build Venezuela's economy. Whether the country's economic development flourished or struggles will depend on which way the political parties wish to lead the country.

Bauxite-Alumina-Aluminium

Bauxite, alumina and aluminium production in Venezuela is controlled by the state-owned holding company CVG. Its Bauxilum division is responsible for bauxite mining and alumina refining, and aluminium is produced by CVG's two smelters, Alcasa and Venalum.

Last year, bauxite output had been scheduled to reach about 5.1 Mt but actual production is believed to have been nearer the 2001 level of 4.6 Mt. Production capacity at Los Pijiguaos is now expected to be expanded to 6.0 Mt/y by the end of 2003.

Alumina production was affected by the national oil strike but at the time of writing, 2002 output had not been confirmed. It was expected to be similar to the 2001 output of 1.8 Mt. In that year, the Chamber of Mines reports that 527,000 t were exported. Bauxilum has signed a US$260 million contract with Pechiney to continue with a programme to expand capacity.

CVG is seeking to expand aluminium capacity through the addition of a new potline at each of its two smelters for a total cost of US$1.2 billion. The expansion would lift total smelting capacity from 590,000 t/y to 990,000 t/y. Alcasa would have five potlines after the expansion and Venalum would have six.

Last year, CVG extended the deadline for selecting a partner for the fifth potline at Alcasa. Construction had been scheduled to begin in December, 2002, with production expected in the year 2004. Early in 2003, the contract was awarded to Glencore International AG of Switzerland, with Fluor Daniel as the possible constructor and Pechiney providing technology. The potline could cost US$500 million and will raise Alcasa's output to 450,000 t/y from the current 210,000 t/y.

Elsewhere in the sector, Russia and Venezuela held a round of talks in 2002 to explore potential co-operation possibilities. Russian Aluminium (RusAl) mentioned the possibility of providing technology and know-how to Venezuela 's Minister of Energy and Mines, and the exchange of bauxite mining and processing technologies. RusAl would be interested in any future privatisations of state-owned aluminium assets in Venezuela. The talks included the possible development of bauxite mines, alumina refineries, and aluminium smelters.

Following the expiry of a supply contract in March 2002, CVG suspended shipments of aluminium to Japan in April, but these were resumed in November after a new supply contract was agreed. The venture involves Venalum (80%) and a group of Japanese companies (20%) including Showa Denko KK, Kobe Steel Ltd, Sumitomo Chemical Co. Ltd, Mitsubishi Materials Corp., Mitsubishi Aluminium Co. Ltd, and Marubeni Corp. Venalum had sought to introduce changes in the contract to help tide it through financial difficulties. Venalum had also suffered the impact of the national oil strike and had to suspend operations in December before securing gas supplies on December 30. Output was expected to be 436,000 t for 2002. All pots at the smelter were in operation at end of the year as were those at the Alcasa smelter.

Iron Ore sector

Domestic demand for iron ore in 2002 did not meet expectations but output was maintained and amounted to about 16.7 Mt of which some 9 Mt were exported. The briquetting and pelletising plants operated below capacity, reflecting weaker demand.

Sidor, Posven, Comsigua, Orinoco Iron, Opco, Toppca and Siderurgica de Venezuela (Sivensa) are the principal producers. The Venezuelan Chamber of Mines reported that CVG-Ferrominera Orinoco has contracted the services of the Spanish-Canadian group, Met Chem-Duro Felguera to construct a beneficiation plant to process and convert 12 Mt/y of low-grade iron ore into 8 Mt/y of high-grade concentrate. The plant will cost about US$200 million. Operations by the country's largest steel producer, Sidor, and the hot-briquetted iron producer, Sivensa, had to be suspended for a time due to the general strike that paralysed the oil and gas industry.

Gold

Gold exploration and mining grew in importance in the late 1980s and early 1990s and numerous foreign companies were attracted to the sector. However, disputes over ownership and mineral title generated adverse publicity and served to deter major investment and Venezuela's gold potential has still to be realised fully.

Prior to the national oil strike, the government had announced a new mining plan aimed at increasing and diversifying the country's mining industry, and one of the goals was to increase annual gold output to 15 t (482,300 oz) from the current 9 t (289,300 oz).

This would be achieved by developing new mines and modernising regional mining laws. Government institutions would implement the regulations established in the so-called Land Title Law. This was one of a package of 45 laws signed by President Chavez, and one causing concern to some land owners whose mineral rights could be affected.

During 2002, Hecla Mining of the US was selected as preferred lessee of the Block B assets of CVG Minerven, the gold mining company controlled by the Venezuelan Government. CVG Minerven divided its assets into three blocks, A, B, and C. It is retaining Block A which contains the Colombia, Union and Sosa Mendez mines, plus the Caratal processing plant. Block C contains exploration concessions and old mines. Block B comprises the former Chile mine and associated gold deposit (estimated to be able to sustain a 100,000 oz/y operation), former mines at Laguna, Panama and Santa Rita, plus a number of other concessions. The Chile, Laguna and Panama mines produced 1.5 Moz of gold between them from 1921 until their closure at the end of World War II. A successful bidder for the Block B assets would also be given an option to acquire the Peru processing plant, located in the Block B area.

Hecla will be required to invest US$22 million over three years. The final terms of the lease contract were to be negotiated. Once agreement is reached, Hecla will pay CVG-Minerven US$500,000, followed by US$2.25 million in two instalments over the following year. CVG-Minerven will receive, in addition, a sliding royalty of 2-3 % on future production.

In 2002, Hecla produced 240,000 oz of gold, including 167,000 oz at its existing underground mine in Venezuela, La Camorra. During the year, the company reported encouraging results from its exploration programme at La Camorra, where drilling has tested ground 100 m below the area of known reserves on the Betsy and Main veins in the current mining area. Intersections from the first hole drilled on the Betsy vein included 2 m averaging 51 g/t Au. The wedge off the drill hole confirmed that assay. The 12-hole programme is intended to expand the overall resource at the property. A definition-drilling programme was then begun to convert resources to reserves for mine planning.

The government has awarded Las Cristinas, a major gold concession hosting probably one of the world’s largest undeveloped gold deposits, to Crystallex International Corp. Las Cristinas contains an estimated 12 Moz of gold and Crystallex was awarded the necessary permit to develop the deposit in September 2002. It will cost an estimated US$500 million and when fully operational the project should produce 40,000 t/d of ore. It appears that Crystallex was selected because it was considered the best prospect for a rapid scale-up of production.

Las Cristinas still faces an ownership dispute. Vannessa Ventures of Vancouver claims that it still holds the mining permit for Las Cristinas, purchased from Placer Dome when the latter lost the property. Vannesa began planning to bring a mine into production but CVG refused to recognise the Placer Dome-Vannessa sale which, it said, violated the terms of the original contract on the concession. Crystallex had been contesting Placer Dome’s rights since 1986, claiming it was the rightful owner of Las Cristinas concession.

Elsewhere in Venezuela, Crystallex conducted feasibility studies on two underground deposits in its Tomi concession. Together, they contain 435,700 t averaging 12.67 g/t Au. Both deposits can be mined at a rate of 350 t/d at a cost of US$137/oz (including extraction, processing and transportation). The capital costs would amount to US$15.28 million. The ore would be processed at the company’s Revemin plant.

Gold Reserve of Spokane, Washington, has the Brisas gold-property adjacent to Las Cristinas and expressed satisfaction at the government’s decision to award Las Cristinas to Crystallex, belieiving that this would move the project forward. The company said it would be open to combining the efforts of both properties. Brisas/Las Cristinas constitute a single, large-tonnage, low–grade gold-copper deposit 5 km long and 0.5 km wide containing more than 622 t (20 Moz) of gold and more than 1.8 Mt of copper. Venezuela's Mines and Energy Ministry has approved Gold Reserve's operating plan for Brisas but considers the property suitable for development in tandem with Las Cristinas. Brisas is estimated to contain proven and probable reserves of 234.8 Mt at 0.79 g/t Au and 0.14% Cu, based on a US$300/oz gold price and a US$0.80/lb copper price.

During 2002, Bema Gold sold its 45% controlling stake in Lo Increible to Crystallex International. This deposit has reserves of 11.4 Mt averaging 3.14 gt Au.

The state-owned mining company, CVG-Minerven, commissioned SNC-Lavalin of Canada to conduct a feasibility study for modernising the Colombia gold mine and Caratal processing plant in eastern Venezuela's El Callao district, with the twin objectives of lowering mining and processing costs to below US$200/oz and increasing annual production to 4,200 kg (135,000 oz). The study includes calculating underground reserves and resources, and evaluating the extraction methods and metallurgical processes. The study was due for completion in October 2003. SNC-Lavalin would also oversee the modernisation. Canada's Export Development Corp. could assist with financing.

Nickel

Nickel reserves at Loma de Niquel are estimated at 40.7 Mt at an average grade of 1.6% Ni, based on a cut-off grade of 1.2% Ni, sufficient for a mine life of 30 years. Operations at the US$550 million project began in 2001. Ore-processing capacity is about 1.2 Mt/y. Production of ferro-nickel last year amounted to 28,000 t, similar to the preceding year. All ferro-nickel is exported. Loma de Niquel ferroniquel is a joint venture between Anglo American (majority owner and operator) and Jordex Resources. Venezuela's Grupo Federal and the IFC are minority partners.

Diamonds

During the year, the Ministry of Energy and Mines granted a mining exploitation concession to the Toco-Tec consortium for a large kimberlitic deposit in the Guaniamo district of Bolivar State. It is considered to be the largest such body discovered so far in Latin America, and has been mapped and explored in the past by geologists from the Geological Department of the Ministry. Diamond production was close to 150,000 ct in 2001 and was expected to be the same for the year 2002.

Industrial minerals

Production in this sector matched the levels of the preceding year. Several private companies produce cement: Cementos de Mexico SA de CV (Cemex), Holderbank Management & Consulting Ltd, Lafarge of France, Consolidada de Cementos, Fabrica Nacional de Cementos, and Cemento Andino. In addition to domestic use, cement was exported to various South American countries and the Caribbean, as well as to Europe.

A local company, Molisan/Amerifel, exploits feldspar deposits and plans to increase its production capacity to meet the demand from Venezuela's thriving ceramic tile industry and strong demand from overseas.
Clay deposits are exploited by more than 60 local industries that manufacture ceramic tiles for construction, roof tiles, bricks, sanitary ware, and decorative pieces.

Sizeable limestone deposits are quarried for use in cement manufacture, agricultural and smelting industries and for pre-mix concrete. The country also has large deposits of silica and quartz, and production is geared towards glass manufacture. Granite is used in the dimension stone and decorative-ornamental industry, and as crushed rock for the construction industries. Sand and gravel deposits are also exploited and used in the construction sector. Phosphate deposits are mined for the production of phosphoric acid and fertiliser manufacture.

Coal
Venezuela possesses coal resources in excess of 8,700 Mt. There are 34 registered and updated coal-mining concessions granted by the Ministry of Energy and Mines, and expansion of the sector could see Venezuela reach annual production of 20 Mt within five years. Washington Group operates the Paso del Diablo mine, owned by Carbones del Guasare, and in 2001 it produced 7 Mt of the 8.7 Mt total national output. Washington Group has also signed a contract to manage Carbones de la Guajira's Mina Norte mine which currently produces 1.2 Mt/y. Development of a new project, Cosila, was expected to begin in 2002. It is located in the Guasare region and will produce 2 Mt/y.

Carbozulia, a subsidiary of the state-owned oil producer PDVSA, manages coal mining in the State of Zulia and plans to relaunch several projects, including the construction of a deep-water port in the Gulf of Maracaibo. A feasibility study was under way in 2002 involving work on associated railroads.

The government is planning to auction mining rights to coal deposits in two areas: Naricual, in Anzoategui State, and Cerro Pelado in Falcon State. The aim is to attract companies that wish to explore and develop coal resources for eventual use in power generation.

In the past, companies from Europe and South America have been interested in securing mining rights for coal properties in northwest Falcon State where the coal is of high calorific value.

Hydrocarbons
During 2002, in addition to the Ministry of Energy and Mines and the State company, Petroleos de Venezuela SA (PDVSA), the following foreign oil companies were involved in exploration and development: Ameriven, Arco, Chevron, ChevronTexaco, ConocoPhillips, Cosa Ingenieros Consultores, ExxonMobil, Lasmo Venezuela BV, Perez Companc, Petrobras of Brazil, Pluspetrol, Repsol-YPF of Spain, Samson, Shell, Statoil of Norway, Tecpetrol

of Argentina, Teikoku Group of Japan (Teikoku, Japan National Oil Corp., Mitsui Corp. and Totsu –Soken), TotalFinaElf of France, Trio Placer, and Veba Oel of Germany.
In early November 2002, Venezuela was producing at some 20% above the limit that had been established by OPEC. In addition, the output had been expected to increase by 50,000 bbl/d to reach a total of 3.126 Mbbl/d for November and 3.166 Mbbl/d in December. The national strike that began at PDVSA on December 2 had a serious effect on production, processing and exports. By the end of the first month of the strike, refining and resulting exports were down some 90% from normal. It was apparent to PDVSA, as well as to the foreign operators, that field production would be forced to shut owing to lack of storage capacity.

The national strike by PDVSA workers and management overshadowed all other aspects of the Venezuelan oil industry and many of the government's activities for all of the last month of 2002 (and into the first two months of 2003). As of the end of October 2002, a new time frame for the opening of bids for a US$90 million Barbacoas-Margarita Island gas pipeline tender had not been released by the Ministry of Energy and Mines. In spite of the most difficult economic situation, the Ministry continued operating and was able to make two very important announcements. At the end of November, it disclosed that it had signed a framework agreement for the Mariscal Sucre natural gas project. And on February 8, 2003, two of the five Plataforma Deltana gas blocks were awarded.

The national strike had a major impact on the oil companies. PDVSA lost as much as US$50 million/mth, and private foreign firms were also affected. The chairman of Conoco Phillips stated that his company stood to lose between US$30 and US$50 million/mth. Production by PDVSA reached a low of 200,000 bbl/d in late December, 2002. As of early 2003, following the end of the strike, the production was up to 1.2 million to 1.9 million bbl/d. This increased production was due to the arrival of foreign technicians and lesser experienced workers to replace the striking PDVSA employees. A major reorganisation of PDVSA was announced: several thousand workers and managers were fired and the government stated that it could save 51% of previous operating costs. Ministry officials stated that it could take several months for daily output to reach 3 Mbbl. As of April some reported that it was at 2 Mbbl/d.

In spite of the political situation, exploration and development continued during the year. Early in the year, the Ministry awarded two of the five Plataforma Deltana gas blocks to two different foreign operators, and rejected an offer for a third block. Block 2 was awarded to ChevronTexaco, and Block 4 was awarded to Statoil. Negotiations were in hand with BP for the rights to Block 1, and a deal was expected with ExxonMobil for Block 5 during the first quarter of 2003. The awards for Blocks 2 and 4 were not finalised, pending the approval by the Ministry of the operators' work plans.

PDVSA began a 130 km^2 3D seismic survey in the Bare Carina area of the Guarico Sub-basin of the East Venezuela basin on June 29. The Trio Placer

Consortium was to begin gathering 3D seismic data over its Yucal Placer Norte and Yucal Placer Sur blocks located in the Guarico Sub-basin of eastern Venezuela in April, 2002. The 330 km^2 seismic was carried out by CGG of France through its local subsidiary ExGeo. Pluspetrol planned geological and geophysical studies in two blocks, Barbacoa and Tiznado. This work was being undertaken in April with a budget of US$8-10 million.

Drilling projects were continued prior to, and during, the national strike.

- There were four exploratory wells under way by PDVSA
- There were three offshore development wells in three fields
- There were 245 onshore development wells by PDVSA
- Lasmo Venezuela drilled in three fields
- Teikoku drilled in five fields
- TotalFinaElf drilled in three fields
- Samson drilled in two fields
- Trio Placer drilled in one field
- Repsol-YPF drilled in one field
- PDVSA drilled nine wells in Guafita field plus
- 46 wells in Hamaca field plus
- 69 wells in Lagunillas field plus
- 19 wells in Lama field plus
- nine wells in Lamar field plus
- 41 wells in Tia Juana field plus
- Seven wells in Urdaneta field and
- 19 distributed over several fields.

Crude Oil Production

2002	2,661,702
2001	3,247,956
2000	2,891,000
1999	2,800,000
1998	3,120,000