

TRINIDAD AND TOBAGO

By J. M. Harris

Peter W. Harben Inc. Mineral Consultancy, Las Cruces, New Mexico 88011 US (peterharben.com)

Since the tied elections of last December, there has been something of a political impasse in Trinidad & Tobago. Prime Minister Patrick Manning, of the People's National Movement, has come under pressure and has promised to convene parliament before April 9, 2002, for the first time since November 2001; both Manning and opposition leader Basdeo Pasday are at loggerheads over power-sharing proposals and the incumbent President wishes fresh elections.

Nevertheless, Trinidad & Tobago has enviable attributes. The most southerly of all the islands in the Caribbean sub-region with Trinidad itself lying just 11 km off the Venezuelan coast, the country is the Caribbean's largest producer of oil and gas which has enabled it to become the most industrialised Caribbean nation. Indeed, although its oil production is slowly declining, it has become one of the major natural gas development centres in the world. With eight ammonia complexes, five methanol units, a urea plant and an iron and steel facility, Trinidad is also the world's leading exporter of ammonia and potentially the leading exporter of methanol. In addition, Lake Asphalt of Trinidad & Tobago Ltd. has mined reserves in the southwest from the largest natural asphalt lake in the world. Gifted with these superlatives, the country consists of 23 islands with Trinidad the largest at 4,828 km² and Tobago at 200 km². Trinidad is also located at the triple junction formed by the meeting of three geological plates and is consequently one of the most geologically complex areas of the world. Not surprisingly then it has been called the graveyard of geologists not to mention the tiger of the Caribbean.

There are about 50 active quarries and the demand for construction aggregates has increased dramatically. An important outlet for limestone is Trinidad Cement's plant on the western coast near Point Lisas. (In February

Mexican cement producer Cemex Ltd withdrew its buyout offer for all the shares in Trinidad Cement Ltd and its subsidiaries after an objection by the Trinidadians; one of the world's four largest cement producers, Cemex's 20% stake in Trinidad Cement Ltd made it the single largest shareholder.) Blue-coloured limestone and sand and gravel of various grades are quarried in the Northern Range for use in construction, while plastering or red sand is quarried in central Trinidad and used as a low-grade filler material and as a construction finishing material. Yellow-coloured limestone is also quarried in the south central portion of Trinidad, while clay from the central and southeastern area is used for blocks, tiles and pottery. Other economic minerals include andesite, argillite, porcellanite, fluor spar, graphite, gypsum, sand and gravel, quartz gravel, and sandstone.

The country's oil revenues account for about a quarter of GDP, although crude oil reserves, at an estimated 686 million barrels, are expected to last only another decade. The government has encouraged new exploration based on estimates that deep-water blocks off the east coast of Trinidad could contain up to 1 billion barrels of oil, but there is also a major effort to discover more oil onshore. Between the summer of 2000 and 2003, 16 exploration wells will have been drilled. One hundred and five development wells were drilled last year, a 22% increase over 2000. In February 2001 it was announced that Trinidad and Tobago will be mapping its last major open offshore acreage in the 'ultra-deep' region off the east coast, with plans to offer blocks for competitive bidding after completion of a seismic survey.

Estimated oil production for this year is 117,430 bbl/d and total expenditure will increase to US\$1,000 million dollars, thus exceeding last year's estimated expenditure by 57%; 2001 oil

production continued to decline by 5%, averaging 113,350 bbl/d. Drilling activity increased by 19% with a total of 156 wells spudded in 2001. Exploration activities also increased by 33% from 2000 with the drilling of 16 exploratory wells and with an increased focus on marine exploration drilling; companies involved have been FP, EOG Resources, BHP Billiton, Exxon, British Gas, Conoco and Trinidad Shell Exploration and Production Ltd. BHP Billiton declared commercial discoveries in the Kairi 1 and the Canteen 1 wells in Block 2c; results from Canteen-1 confirm a significant oil find, the fourth BHP Billiton discovery in the area, and the company hopes to fast track the development which could be in production within two to three years given the relatively shallow water and proximity to the coast; BHP Billiton holds a 45% interest in Block 2c and other partners include TotalFinaElf (30%) and Talisman Energy (25%). BP also plans to invest more than US\$2.7 billion over the next five years; BP's Trinidad and Tobago unit is BPTT; during the past five years more than US\$2,200 million has already been invested. Land operations have involved Petrotrin, Lease and Farmout Operatorship, Primera Oil and Gas Ltd, Trinidad Exploration and Development Ltd, Tracmac Moruga Energy Resources Ltd, New Horizons Exploration Trinidad and Tobago Ltd, and Vintage Petroleum. Total oil production from land averaged 25,142 bbl/d, about a 6% decrease from 2000. Petrotrin contributed 78% of total production.

In 2000 the total oil and gas production was 385,751 bbl/d, which increased by 3% to 397,436 bbl/d in 2001 and in 2002 it is forecast that the figure is estimated to increase to 437, 828 bbl/d. Indeed from 1990 to 2001 the total oil and gas production increased by some 50%. Gas sales for the country increased by 0.1 billion ft³/d on the year 2000 figure to average 1.5 billion ft³/d last year. Total gas production for 2001 was about 1.6 billion ft³/d. Proven reserves of

natural gas are 559 billion m³. Over the past decade domestic natural gas demand has doubled owing mainly to new construction and expansions of methanol, ammonia and iron reduction plants, and is projected to double again by 2005. The Atlantic plant is reputed to be the largest single-train plant ever constructed and the first LNG producer in the region. It was built in a record 6.5 years and Atlantic intends to triple capacity. In January 2000 the government approved the construction of two additional gas trains which will make the complex the fourth largest in the world.

Over 1.3 Mt of methanol are exported with triple that amount of ammonia. The Titan Methanol plant came fully on stream last year. New ventures should lift fertiliser capacity to 4.5 Mt/y. Companies investing in fertiliser and methanol have included Norsk Hydro of Norway, Ferrostaal and Helm of Germany, Methanex of Canada, and Farmland and Mississippi Chemical of the US. Canada has been a major investor and the Potash Corp. of Saskatchewan, which acquired Arcadian, now PCS Nitrogen, has three ammonia plants and a fourth under construction at the Point Lisas Industrial Estate petrochemical complex.

The country's major non-oil exports are iron and steel. Point Lisas is expanding in response to industrial growth and hosts the Nucor iron carbide plant and the DR-based steel-maker Ispat. Norsk Hydro, whose Agri division has been in Trinidad since 1991 and employs 320 employees, mainly in ammonia production, has planned to build another aluminium smelter near its existing ammonia plant; the US\$1,500 million plant should begin production this year and the project is part of the division's strategy to double production capacity of primary aluminium from 1995 to 2005. The available production capacity would be 237,000 t/y with an equal increase in a second step production later.