

UNITED KINGDOM

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The GDP for the UK for 2001 was £990.7 billion, compared with £944.7 billion for 2000. The underlying rate of inflation, at the year-end, was 1.9% (2.0%), the government's target being 2.5%; the interest base-rate decreased to 4.0% (6.0%), the lowest for 38 years; the Sterling Index was 107.9 (105.4) and the exchange rate was £0.69/US\$ (£0.60) and £0.61/Euro (£0.63). The balance of payments decreased from £20.6 billion to £16.2 billion. The Public Sector Net Cash Requirement remained in surplus at £2.8 billion (£37.3 billion). Unemployment decreased slightly from 1.6 million to 1.5 million.

The approximate value of minerals produced for 2000, the most recent figure available, was £27.7 billion (£19.49 billion for 1999), with oil contributing £16.13 billion (£10.26 billion), natural gas (including liquids) £7.72 billion (£5.76 billion), coal £0.92 billion (£1.08 billion), industrial and construction minerals £2.4 billion (£2.37 billion) and metals remaining at less than £1 million.

In June, a general election returned a Labour Government, but with a slightly reduced majority.

Shortly afterwards, the government set up a group to review the long-term energy objectives. Currently, natural gas accounts for 37% of primary energy consumption, oil for 35%, coal for 16%, nuclear power for 11% and hydro-power and other renewable energy resources for the remaining 1%.

The government's Aggregates Levy, designed to recycle quarrying raw materials, was due to come into effect on April 1, 2002 at the rate of £1.60/t of material extracted.

The European Commission will be proposing an extension to European Union (EU) environmental legislation to cover mining

operations with three priority actions: "to improve the safety of mines relating to industrial risk-management, management of mining waste and integrated pollution prevention and control". Such measures are subject to approval by the EU Council of Ministers and the European Parliament.

Euromines, which has its headquarters in Brussels, was founded 11 years ago and has among its objectives the influence of mining legislation. It has increased its membership to 25. UK membership includes The Mining Association of the UK, Rio Tinto, Anglo American and Billiton International Services.

The British Geological Survey (BGS) unveiled, in December, the world's first digital geological map of an entire country, the UK, 200 years after William Smith produced the world's first geological map in the UK. The multi-million pound digital map identifies various geological hazards including radon, subsidence and flood risk areas.

The merger between UK's Billiton plc and Australia's BHP Ltd., at a value of US\$30 billion, took place on June 29. The BHP Billiton group's headquarters will be in Melbourne with BHP Billiton Ltd registered in Australia, and BHP Billiton plc registered in London, with a "significant corporate management centre" there.

Coal

For 2001, coal production was 31.08 Mt (31.97 Mt in 2000), consisting of 17.91 Mt (17.61 Mt) from deep mines, 13.41 Mt (13.56 Mt) from opencast operations and 616,000 t (797,000 t) from other sources. Imported coal was 23.44 Mt and exports amounted to 661,000 t.

UK Coal plc, which was called RJB Mining until mid-2001, mined 15.4 Mt (15.2 Mt) from its 13 underground mines and 4.2 Mt (3.9 Mt)

from 13 surface mines. The company made a loss, before tax, for the year of £26.5 million (compared with a profit of £17.8 million in 2000, which included a £53.3 million credit from UK Coal Operating Aid), underground operations having an operating loss of £25.0 million (profit of £15.8 million after the £53.3 million UK Coal Operating Aid), and surface mines making a profit of £17.3 million (£10.3 million). Capital expenditure amounted to £71.3 million (£27.7 million); major items included equipment for the Daw Mill, Maltby, Rossington and Kellingley collieries. Employees numbered 7,376 (7,247) of which mining operations accounted for 5,843 (5,789). The company commenced its Project 105 designed to increase productivity and reduce costs from the current average of £1.28/GJ to £1.05/GJ by 2003.

Owing to problems with opening a new face at Daw Mill Colliery, near Coventry, overall production was 1 Mt below UK Coal's target. Underground results were further affected by a £15.8 million write-off relating to the West Edge development at the Prince of Wales Colliery, near Pontefract, West Yorkshire. It is the oldest UK coal mine, having started in 1860, and is due to close later in 2002.

Hatfield Coal Co.'s Hatfield colliery, near Doncaster, South Yorkshire, was closed in August, only to be re-opened in October by RJB Mining's former chief executive Richard Budge's new company, Coal Power Ltd.

Scottish Coal (Deep Mine) Co.'s Longannet mine in Fife, the only deep coal mine in Scotland, experienced difficult geological conditions during the year, and closed at the end of March 2002 with the loss of 500 jobs, owing to around 77.6 million litres of water flooding into its workings under the River Forth. Reserves of 30 Mt of low-sulphur coal remain, but the cost of re-opening is put at £50 million, with further risk of flooding. The mine had received £40 million in government grants. In 1947, there were 190 collieries in Scotland employing 87,000 men. Several opencast mines remain in operation.

Coal producers have approached the government for permission to access new coal reserves as opencast mining will cease in five years, and some 20 Mt of cheaper coal are being imported. The future of Britain's coal reserves is one of the commitments in a new framework set out jointly by BGS and The Coal Authority.

In the Authority's annual report to March 2001, it is recorded that 55 (50) coal mining licence applications, including 4 (0) for underground, were received; 49 (45) licences were granted during the period. The remaining tonnage licensed for operating underground mines was 415 Mt (426 Mt) and for operating opencast mines 37 Mt (43 Mt). Mine water treatment forms a major part of the Authority's long-term liabilities. To date, 13 schemes in coal-mining areas have been completed and four new schemes planned.

On February 5, 2002, the government published its review for the support of Clean Coal Technology (CCT), which highlighted the removal and storage of CO₂ to reduce the future environmental impact of coal combustion for power generation. At the same time, a CCT conference, hosted by CoalTrans, was held in London.

In Northern Ireland, the Australian company Aulron has approved £400,000 of expenditure to complete an environmental impact assessment, in addition to other plans and studies, for its 680 Mt Ballymoney lignite deposit; negotiations on the terms of a mining lease are due to commence shortly. Antrim Coal continues to hold a prospecting licence for its Crumlin deposit. Owing to local opposition, the Anglo Pacific Group has withdrawn its application for two lignite licences for areas west of Lough Neagh.

Industrial Minerals

For the year ended December 31, 2001, Cleveland Potash Ltd's Boulby mine near Whitby, Cleveland, hoisted 2.67 Mt (2.85 Mt) of potash ore to yield 890,000 t (1 Mt) of potash; in addition, 401,000 t (509,000 t) of

salt were hoisted. Production was less than planned owing to operational difficulties in the first half of the year, and poor quality in the second half. The mining of some 3 Mt of potash ore to yield in excess of 1 Mt of saleable product is planned for 2002. The 3-D seismic survey planned for 2001 for ground to the south of current workings was postponed owing to the foot and mouth outbreak.

A gas-fired combined heat and power plant, the largest of its type on a single site in the UK, is being installed to reduce usage of heavy fuel oil and CO₂ emissions. Insoluble waste from processing potash will commence to be returned to the mine in 2002, thereby reducing discharges into the North Sea.

Working areas of the mine are under both land and sea, and extend more than 12 km; depths in excess of 1,300 m are in the onshore area, and are planned to go deeper. The mine employs some 870 personnel.

Anglo American, which has been associated with the mine since 1969, announced towards the end of the year that Cleveland Potash is to be sold to Dead Sea Works, a subsidiary of Israel Chemicals Ltd for US\$45 million; the sale is expected to be completed in the first half of 2002.

French-based Imerys Minerals produced, for 2001, 1.98 Mt (2.1 Mt) of kaolin and 372,000 t (403,000 t) of ball clay from its southwest England operations - adverse weather, mining problems and an extended breakdown of the main calcining furnace affected operations in the first six months. As some 10% of its output is not of sufficient quality for paper manufacturing, the company is to restructure its Cornish operations. The lower-quality business is to be transferred to its operations in Brazil to enhance conversion facilities in Cornwall for the paper grade, and will involve the loss of 15% of its workforce.

Imerys invested £10 million in its UK operations for pit development, refining improvements, a new calcining plant and

replacement of a ceramic plant dryer; the majority, £6 million, went into the development of the Karslake and Blackpool pits. The company and Watts, Blake, Bearne (WBB), which also has ball clay and kaolin operations in the southwest, have abandoned their Slaugh Moor proposal for waste disposal.

On October 1, WBB merged with Sibelco Minerals and Chemicals to form WBB Minerals, which has now become the UK's leading industrial minerals supplier, with a total sales volume of 11 Mt/y of white and red firing clays and industrial sands. The company is now based at Sandbach, Cheshire, the WBB staff having relocated from Newton Abbot, Devon.

The Department of Trade and Industry has blocked the merger of Belgian-based SCR Sibelco SA with Fife Silica Sands and Fife Resources Ltd; the two companies were acquired in 2000. With its earlier acquisition of Hepworth Minerals and Chemicals, Sibelco's volume share of the 1.84 Mt/y glass sand market rose to between 75 and 90%.

M-I Minerals sold around 55,000 t (42,000 t) of barytes from its Foss mining operation near Aberfeldy in Perthshire, Scotland, the increase being mainly owing to greater demand from the oil industry and new outlets in the lower-grade filler market. No decision has yet been made concerning the re-application for permission to mine the nearby Duntanlich barytes deposit.

At the beginning of 2001, Steetley Bentonite and Absorbents Ltd (SBA), a producer of fuller's earth, near Woburn, Bedfordshire, had its planning application turned down to extract material from a 54 ha southern extension to the deposit containing 320,000 t with a life of 10 years; the company is to appeal. US Amcol International Corp. is to sell the export part of its cat litter business to SBA, the leading supplier of UK cat litter.

Lawrence Industries, an importer of high-value mineral products, particularly clays, was

sold for £9.5 million in October by its parent chemical group, Amberley plc, to Phipps & Co. Ltd, which has interests in oil exploration as well as precious and base-metal projects.

Baker Refractories UK is to close its Steetley operations in Worksop, owing to Corus's steelworks closures. Dolomite for the plant is sourced from nearby Lafarge's operations at Whitwell, Derby.

Hazardous waste could soon be stored in part of the Salt Union's Winsford salt mine in Cheshire; proposals were submitted to a planning inquiry in November. US Salt Holdings has acquired British Salt's 825,000 t/y vacuum salt plant from Staveley Industries.

In Northern Ireland, the only mining activity, under licence, was of salt at Carrickfergus and bauxite on a small scale at Ballymena.

Steel

For the year to December 31, 2001, imported iron consumption was 14.03 Mt at 57.1% Fe (14.64 Mt at 54.9% Fe in 2000) together with 1.07 Mt of pellets at 63.8% Fe (2.2 Mt at 64.6% Fe); imported Mn ore consumption fell to 3,781 t at 10% Mn (35,720 t at 17% Mn). Corus UK crude steel production amounted to 11.24 Mt (12.82 Mt); output from other UK producers was 2.30 Mt (2.34 Mt). Most of Corus's 1 Mt of UK scrap requirements were bought in the UK. Around 1,000 t of haematite was produced from the Florence mine at Egremont, Cumbria.

The Anglo-Dutch Corus Group is to sell its overseas aluminium interests, likely to amount to £1 billion, after another heavy loss by the group which amounted to £419 million (£940 million); the proceeds could be used to repay some of the debt which stood at £1.6 billion. However, the group is to continue with its rationalisation programme involving the loss of 4,000 UK jobs by 2004; 6,000 jobs have gone to date.

Capital expenditure amounted to some £43 million (£100 million over 15 months previously). The major UK project completed

was the £6 million uprating of the narrow hot rolling mill at Brinsworth. In progress was the £7 million Scunthorpe bloom caster enhancement and the £6 million Trostre, South Wales, reconfiguration of the electrolytic tinning line.

An explosion in No.5 blast furnace at Port Talbot, South Wales, occurred in November, and will be repaired at a cost of £75 million. Production will cease at Ebbw Vale, South Wales, in the summer.

Corus UK has signed an agreement amounting to an 80% reduction, £13 million per annum, in the business use of energy tax which came into effect from April 2001.

Other Metals

In the year to June 30, 2001, Australian MIM Holdings' subsidiary Britannia Refined Metals produced, at its Northfleet plant in Kent, 243,172 t (233,414 t) of refined lead and 11.5 Moz (14.3 Moz) of silver. At the Wakefield plant, 16,164 t (16,081 t) of lead alloy was produced. The company's Avonmouth smelter produced 78,430 t (85,060 t) of refined zinc and 30,838 t (36,164 t) of crude lead. The Avonmouth zinc smelter suffered from poor plant reliability and production interruptions owing to maintenance and refurbishment. MIM is looking at exiting its downstream zinc-processing operations in Europe, including Avonmouth.

For 2001, British Alcan's aluminium smelters produced 201,484 t (161,319 t); Lochaber, near Fort William in Scotland, produced 40,053 t (39,980 t) and Lynemouth in Northumberland 161,431 t (119,713 t).

The joint operation of Rio Tinto (51%) and US-based Kaiser Aluminum Corp. (49%) at the Anglesey Aluminium smelter at Holyhead, North Wales, produced 139,300 t (143,000 t). Kaiser has filed for voluntary bankruptcy, but its interest in the subsidiary Anglesey operation is not affected.

On September 24, the South Crofty tin mine, near Camborne, Cornwall, was re-opened

after its closure in March 1998. The new company, Baseresult Holdings Ltd, has commenced dewatering. The 1:6 gradient Tuckingmill decline is to be extended by 1.2 km to intercept Cook's Shaft at the 195 Fathom Level, where tin mining will recommence. The mine buildings are to be refurbished and the mill operation is to be transferred from the former Wheal Jane tin mine, near Truro.

Total nickel production in all forms by Inco Ltd of Canada was 10% lower than last year owing to unexpected production interruptions, both at its Clydach plant in South Wales, and at its parent operations at Sudbury, Ontario.

Oak Consortium of Switzerland has taken over Fynegold's (a subsidiary of Caledonian Mining Corp.) Cononish deposit near Tyndrum on the Perth/Argyll border in Scotland.

In January 2001, Strongbow Resources Inc. announced that trenching in the Glenlark area of its Curraghinalt deposit in Northern Ireland had located disseminated to semi-massive Zn-Pb-As sulphide mineralisation; a 9.5 m interval gave 4.89% Zn, 0.75% Pb, 3.78 g/t Au and 22.53 g/t Ag. Strongbow's two licences expired in December; new applications are being made.

Conroy Diamonds and Gold has intersected some gold mineralisation in all of its eight additional prospect holes to supplement two previous holes at its property in Co. Armagh. In one of the holes an intersection of 5.49 g/t Au over 7.46 m, which included 9.53 g/t Au over 3.56 m, was recorded. The Armagh property is 6.5 km along strike from the company's Tullybuck/Lisglassan gold property across the border in Co. Monaghan in the Irish Republic where a European research team led by the BGS, investigating new technologies for predicting high-grade ore, has identified "a new structural orientation not previously observed". This could have implications for the company's Armagh area as well.

Oil and Gas

For 2001, production of crude oil from the UK Continental Shelf (UKCS) was 106.55 Mt (114.57 Mt) from 144 (135) fields. Liquefied natural gas (LNG) output was 8.39 Mt (8.36 Mt), production of dry gas was 55,427 Mm³ (59,234 Mm³) from 96 (82) fields, and 56,823 Mm³ (55,128 Mm³) of wet gas from 17 (16) fields. Ten (six) new offshore oilfields and six (three) gasfields, of which two were wet, commenced operations. Twenty-four (26) exploration and 36 (33) appraisal wells were drilled. Field approvals granted for gas, oil, condensate and incremental projects were 33 (22). Gross capital expenditure increased from £3.2 billion to around £4 billion.

In the government's recent budget (April 17, 2002), it was announced that a supplementary 10% levy, representing a 33% tax increase, was to be made on North Sea oil and gas projects from April 2003. However, an increase from 25% to 100% would be made in capital allowances for North Sea exploration and production operations in the first year, and consultations would be held concerning the abolition of the 12.5% royalty on the gross output value of a North Sea oilfield, and which is charged on fields given development consent before April 1, 1982. The North Sea has generated some £160 billion for the government.

In December, the Clair oilfield in the West of Shetland area and operated by BP and partners was given government approval some 24 years after it was discovered. New technology has made the project more viable as it had suffered from geological problems hampering early drilling operations. Around £650 million will be invested, and the field is due to produce in 2004.

Also, improved technology could give a new lease of life, under government licensing plans, for Argyll, the UKCS's first commercial oilfield some 320 km southeast of Aberdeen. It commenced operations in 1975 and closed in 1992, and could yield another 25 Mt of oil, more than twice its earlier yield.

BG Group's Blake, Eglin/Franklin and Rosetta fields came on-stream. The company made an oil discovery, Buzzard, 100 km northeast of Aberdeen, and could be one of the largest finds in the North Sea in the past 10 years, with recoverable reserves of over 53 Mt of oil in the part of the structure tested. The group, with its partners, has received government approval to develop the £270 million Juno project, and to drill three further wells in the Armada fields. The Maureen field was decommissioned. BG sold its Storage segment and associated assets for £421 million in November.

The Group's proven developed reserves of gas in northwest Europe amounted to 35.23 billion m³ (41.21 billion m³), and for oil, condensate and natural gas liquids were 12.52 Mt (5.7 Mt).

At the year-end, Centrica's Morecombe's proven and probable gas reserves stood at 67.49 billion m³ (76.38 billion m³); the company's total gas reserves were 77.34 billion m³ (85.16 billion m³), and oil reserves remained at 1.2 Mt.

Onshore oil production was 2.94 Mt (3.25 Mt) from 29 (29) fields, dry gas 413 Mm³ (530 Mm³) from 11 (10) fields and wet gas 141 Mm³ (145 Mm³) from 26 (26) fields. One (nil) new onshore oilfield came on-stream, but again there were no new gas fields. Five (eight) exploration and one (six) appraisal wells were drilled. For a further year, no new onshore oilfield approvals were granted but two (one) onshore gas field approvals were made.

In Northern Ireland, there remain eight petroleum licences. The seven licences issued to S. Morrice and Associates/Priority Oil and Gas have been assigned to Evergreen Resources.

The Association of Coal Mine Methane Operators (ACMMO), which numbers 18, is concerned with the extraction and use of methane from disused deep coal mines, of which there are over 900 in the UK. These are

estimated to release, uncontrolled, into the atmosphere some 300,000 t/y of coal-mine methane (CMM), equivalent in its effect to around 6.3 Mt of CO₂. According to ACMMO, an equivalent amount of CMM has a global warming potential 21 times that of CO₂. Since 1999, CMM has been used commercially for UK power generation and industrial fuel. Only those sites supplying gas for 6 to 9 MW are regarded as being feasible for commercial development.

The Coal Authority reports, for 2000/2001, that 11 (four) CMM applications were made.

UK Mineral Production ('000 t)

Commodity	1999	2000	2001*
Coal	37,077	31,198	32,128
Natural Gas (oil equiv.)	99,065	108,499	106,069
Crude Petroleum (inc. condensates)	137,125	126,244	117,614
Lead/Iron	2	2	1.3
China/Ball clay (sales)	3,235	3,445	-
Other clays and shale	11,975	11,499	10,652
Limestone and dolomite	100,631	97,417	95,760
Chalk	9,667	9,213	9,000
Slate	361	479	480
Sandstone	15,485	14,900	14,650
Silica sand	4,092	4,095	4,100
Sand/gravel (land/marine)	100,953	101,621	104,670
Igneous rock	53,155	54,113	53,190
Gypsum (natural)	*1,800	*1,500	1,500
Rock salt	*1,500	*1,700	1,900
Brine salt	*4,200	*4,200	4,200
Fluorspar	*40	*36	50
Barytes	59	54	66
Potash (KCl)	825	966	890
Peat ('000m ³)	1,653	1,626	-
Miscellaneous	14	9	8

*British Geological Survey estimate.

Source: UK Minerals Yearbook 2001, British Geological Survey.