

THE MINERAL INDUSTRY OF

PAKISTAN

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The gross domestic product (GDP) growth rate was predicted to be 6% in fiscal year 1997-98 (July 1 to June 30). The GDP growth in fiscal year 1996-97 slowed to 3.1%. Agriculture was the largest contributor to the country's economy. Growth in industry was only 3.3%. Inflation was 12%; petroleum and utility prices increased 40% since June 1996. The budget deficit was reported to be 5.3% of GDP in fiscal year 1996-97. Foreign exchange reserves stood at only \$1.1 billion. Imports were stagnant, owing to a lack of demand for machinery and raw materials and, thus, new investment.

The Government's reform proposals, to be ratified by Parliament, called for the reduction of taxes across the board, lowering the maximum import tariff from 65% to 45%, and slashing the general sales tax on services from 18% to 12.5%. The plans, however, would impose a 3% general sales tax on the retail sector. The personal income tax rates also were to be cut. The International Monetary Fund endorsed the proposals.

A new petroleum policy to attract foreign investment in offshore exploration would charge less than 3% duty on imported machinery and equipment. It included the introduction of production-sharing agreements and a mechanism to link petroleum prices to those in Singapore to encourage investment in oil refining. The policy also abolished the 30-year state monopoly on imports of petroleum products, such as bunker oil, diesel, fuel oil, and kerosene. The measures to deregulate product distribution were intended to increase competition, encourage efficiency, and reduce opportunities for corruption.

Under the Government's privatization program, a 26% interest in Sui Northern Gas Pipelines, which distributes natural gas in Punjab and the Northwest Frontier Provinces, was sold; the transaction was completed before November 1997. The Government also planned to sell a 26% stake in Sui Southern Gas Co., which distributes gas to an estimated 1.1 million customers in Sind and Baluchistan Provinces. The company might be restructured before the sale, and noncore activities, such as liquefied petroleum gas (LPG), meter manufacturing, and civil construction work, might be formed into separate units and sold individually. Plans to restructure the Water & Power Development Authority (WPDA) included the possibility that its seven area electricity boards would be incorporated as limited companies.

BHP of Australia continued its drilling program in the Chagai district of western Pakistan, and the first-stage results identified a new copper-gold porphyry system (Mining Magazine, 1997). The prospect is in the same district as the Saindak Mine, which was idle because of a shortage of funds. In July 1996, operations ceased when Saindak Metals ran out of working capital. Saindak Metals extended the closing dates for its tender request for a \$30 million working capital loan and for the sale of 16,000 metric tons (t) of blister copper. Tranfigura of Switzerland offered to provide spare parts, fuel, and technical assistance to restart production activities and

approached the Ministry of Petroleum and Natural Resources for the purchase of 12,000 t of blister copper from Saindak Metals. Later, Saindak Metals sought to lease its open-pit mine, concentrator, and smelter for 10 years to a contractor. The company also planned to set up a management company for the production and export of copper and gold for 3 years. The complex has a capacity to treat 12,500 metric tons per day (t/d) of ore, producing 20,000 metric tons per year (t/yr) of blister copper, 1.47 t/yr of gold, and 2.76 t/yr of silver (Metal Bulletin, 1997).

Minorco Services, Pakistan Mineral Development Corp., and Northern Areas Administration signed an agreement to explore for gold, platinum, and other metals in the Gilgit and the Baltistan region of Pakistan. Minorco planned to analyze the samples and integrate the data with satellite imagery to select the most prospective 20,000 square kilometers of the region.

Engro Chemical Pakistan completed financing of its fertilizer expansion project at a cost of \$59 million. The project would increase capacity at the ammonia/urea plant from 750,000 to 850,000 t/yr. Toyo Engineering Corp. of Japan was responsible for project engineering.

Some coal projects were given final approval to proceed by the Government. They included a contract between Sind Coal Authority (SCA) and Smith Associated Power & Mining (SAPM) of the United States to develop mines at Lakhra to supply a 450-megawatt (MW) powerplant (Coal Age, 1997) and a project between SCA and Consolidated Electric Power Asia (CEPA) of Hong Kong to evaluate proposals to develop mines with required capacity to feed a 3,960-MW lignite-fired powerplant. SAPM planned to invest \$600 million in coal exploration and the construction of the powerplant, which was expected to be operational by 2001.

Osterreichische Mineralolverwaltung AG (OMV) of Austria received approval from the Government for a development plan for the Miano Gasfield in Sind Province. OMV would be the operator of the gasfield with a 17.6% interest. Oil & Gas Development Corp. (OGDC) has a 52% stake in the venture, and Pakistan Petroleum and Hardy Oil & Gas of the United Kingdom each hold 15.2%. Production at 2.83 million cubic meters per day (Mm³/d) would begin by early 1999. OGDC invited companies to prequalify for gas development project in Sind Province to expand the capacity of gas facilities in the Qadirpur field. The facilities had a capacity of 6.65 Mm³/d of gas and were to be expanded to produce 11.32 Mm³/d. The completed facilities also would produce 800 barrels per day (bbl/d) of condensate and 2,000 bbl/d of water. OMV also won two oil exploration licenses, one in the Shah Bandar block and the other in a block on the Indus Delta. The company has a 95% interest in the blocks, and the Government, the remaining 5%.

Pakistan signed an agreement with Turkmenistan, Unocal Corp. of the United States, and Delta Oil Corp. of Saudi Arabia to start construction of a \$2 billion natural gas pipeline from Turkmenistan

to Pakistan through Afghanistan. The pipeline would run 1,464 kilometers (km) to Multan in central Pakistan. The consortium would be structured by October 1998, and construction would start by December 1998. Completion of the pipeline was scheduled for 2000. Pakistan would receive 28.3 Mm³/d of gas by 2001.

Union Texas Pakistan, a subsidiary of Union Texas Petroleum of the United States, planned to spend \$50 million on exploration and \$40 million on operations during 1997. The company planned to start drilling its first exploration well in the Eastern Sind block and was Pakistan's major producer of crude oil. The company intended to invest \$250 million in the next 3 years for oil and gas exploration, production, and marketing. Meanwhile, Lasmo Oil of the United Kingdom was to invest \$14 million in oil exploration projects offshore and onshore Pakistan (Journal of Commerce, 1997). The company acquired a 95% interest and operatorship of Bela South, Bela North, and Kirthar West concessions, with OGDC holding the remaining 5%. Lasmo was drilling on the Kirthar concession as operator and 47.5% interest holder. The other partners are Shell Pakistan Ltd. (47.5%) and OGDC (5%). Lasmo also has been operator and 18.42% interest holder in Kadanwari Gasfield, which was brought into production in 1995.

A \$886 million oil refinery was being built at Mahmood Kot, near Multan in Punjab Province, by Pak-Arab Refinery (Parco). JGC Corp. of Japan was awarded an engineering, procurement, and construction contract worth \$614 million. The refinery would have a capacity of 100,000 bbl/d and was expected to be completed in 2000. About 60% of the refinery's crude oil requirements was expected to be imported from United Arab Emirates (UAE). ANZ Grindlays arranged \$600 million debt financing, and Parco was to provide equity of \$177 million. Parco is 60% owned by the Government and 40% by International Petroleum Investment Co. of the UAE. State Privatization Commission was seeking Arab buyers to divest the Government's stake. In a separate development, Petroleum Refining & Petrochemical Corp.'s project to build an oil refinery in Baluchistan was put on hold until the Government released details of reforms to the petroleum policy. The refinery would have a planned capacity of 6 million metric tons per year (Mt/yr) and be a joint venture with the National Iranian Oil Co. Attock Refinery Ltd. and Pakistan Refinery Ltd. signed two separate agreements worth \$110 million for further expansion and upgrading of refineries.

The Government would allow three private oil companies to import directly and market petroleum products. Pakistan imported from 4 to 6 Mt/yr of petroleum products at a cost of \$1 billion. One-third of the overall demand was met from domestic sources. The Government was to double its imports of crude oil over the next 12 months and was looking to buy LPG and other petroleum products from the UAE. Port Qasim Authority (PQA) signed an agreement with Keloil of Malaysia for the construction of a LPG terminal having a capacity of 3 Mt/yr. PQA also issued letters of intent for LPG terminals to Fauji Oil Terminal Co. and Termco, a consortium of Shell International Petroleum of the United Kingdom, Shell Nederland Raffinaderij BV of the Netherlands, and the local Lifeline.

Mobil Oil Pakistan Ltd., a wholly owned subsidiary of Mobil Corp. of the United States, planned to invest \$60 million in Pakistan's lubricant oil and LPG markets. The project would be a 70-30 joint venture with the Army Welfare Trust, the welfare and commercial

wing of the Pakistan Army. The venture was upgrading a recently acquired lubricant-oil-blending plant near Karachi. Mobil Oil Pakistan had invested \$10 million in production and marketing of industrial-quality lubricants.

At least 16 private thermal power projects with a total capacity of 2,900 MW were under various phases of construction in Punjab and Sind Provinces. Seven were expected to come on-stream in 1997. Pakistan State Oil and Pakistan Railways entered an agreement to transport 1 Mt/yr of fuel oil for the seven upcoming thermal powerplants. The railway was expected to transport from 1,500 to 3,000 t/d of fuel oil. A 1,300-MW powerplant near Karachi, funded by the World Bank and nearly completed, would give Pakistan a surplus of 1,000 MW during the monsoon season and the country offered to sell surplus power to India.

AES of the United States had two oil-fired powerplants under construction in Pakistan. One is at Lal Pir, and the other, Pak Gen; both have a generating capacity of 337 MW. El Paso Energy International Co. of the United States began construction of a 151-MW, \$170 million combined cycle powerplant at Kabirwala, Punjab Province, under a build-own-operate structure. The company would have a 42% interest in the plant; Fauji Foundation of Pakistan, 45%; and Asian Development Bank, 13%. OGDC would supply natural gas to fuel the plant, and WPDA would purchase power from the plant under a 30-year contract beginning in November 1998. Hub Power Co. commissioned its fourth and final generator, and the private power project was supplying 1,200 MW to the national grid through a power-purchase agreement with WPDA. Enron of the United States sought a 51% interest in Kohinoor Energy Ltd.'s 120-MW thermal powerplant in Punjab Province at a cost of \$36 million. Kohinoor Energy is part of Pakistan's Saigol Group. National Power of the United Kingdom bought a 26% stake in Kot Addu Power Co. in 1996 and later a further 10% interest in 1997.

CEPA awarded a \$1 billion engineering, procurement, and construction contract to Mitsubishi Heavy Industries of Japan and Black & Veatch International of the United States for the first phase of its planned powerplant at Keti Bandar, 96 km north of Karachi, in Sind Province. The coal-fired powerplant would have a total capacity of 1,320 MW and use coal imported from Australia. A second phase using indigenous coal was also planned to expand capacity to 5,280 MW. CEPA expected debt financing to include export credits from the Export-Import Banks of the United States and Japan. Southern Corp. of the United States has an 80% stake in CEPA, and Hopewell Holdings of Hong Kong has the remaining 20%. The Government, however, terminated the multimillion dollar agreement because using imported coal was contrary to the original deal. Lack of physical work on the project and high transmission costs also contributed to the termination. Later, CEPA was given until January 1998 to submit a new proposal and until September 1998 to achieve financial closure. In addition to building the powerplant, CEPA proposed undertaking the construction of a transmission line.

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TABLE 1
PAKISTAN: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity	1993	1994	1995	1996	1997 e/
METALS					
Aluminum, bauxite, gross weight	4,845	4,570	3,057	4,056	4,500
Antimony ore:					
Gross weight	--	--	40 e/	--	--
Sb content e/	--	--	6 2/	--	--
Chromium, chromite:					
Gross weight	22,154	6,240	17,000 e/	27,987	30,000
Cr content e/	7,400	2,810	7,650	12,594 2/	13,500
Iron and steel:					
Pig iron e/	1,200	1,045 2/	1,100	1,500	1,400
Steel, crude	1,100 e/	344	409	416	450
do.					
Lead, refined, secondary e/	3,000	3,000	2,500	2,000	2,000
INDUSTRIAL MINERALS					
Abrasives, natural, emery	666	178	132	135	150
Barite	26,336	20,320	15,360	18,582	19,000
Cement, hydraulic	8,321	8,100	8,586	8,900 e/	9,000
Chalk	4,770	5,597	7,170	6,545	7,000
Clays:					
Bentonite	7,991	11,180	5,759	15,290	12,000
Fire clay	132,278	133,643	139,548	122,936	130,000
Fuller's earth	20,941	15,335	12,862	13,415	14,000
Kaolin (china clay)	37,179	47,894	30,746	54,860	55,000
Other	1,728,380	647,324	198,199	200,525	200,000
Feldspar	17,034	15,335	21,163	32,572	30,000
Fluorspar	5,100 e/	13,351	2,753	363	500
Gypsum, crude	534,565	607,279	313,868	503,915	550,000
Magnesite, crude	4,157	4,464	16,891	3,202	4,000
Nitrogen, N content of ammonia	1,445,700	1,505,100 r/	1,492,500 r/	1,606,200 r/	1,548,600 2/
Phosphate rock:					
Gross weight	13,822	15,042	10,460	10,000 r/ e/	8,000
P2O5 content e/	4,300	2,560	1,780	1,700 r/	1,400
Pigments, mineral, natural, ocher e/	6,196 2/	6,000	6,000	6,100 r/	6,200
Salt:					
Rock	895	847	935	940 e/	935
Marine	14	13	17	18 e/	17
Total	909	860	952	958 e/	952
Sand:					
Bajri and common	377,859	490,623	175,572	166,380	170,000
Glass e/	167,644 2/	170,000	170,000	165,000	165,000
Sodium compounds, n.e.s.:					
Caustic soda	81,381	93,600	100,000 e/	108,900	110,000
Soda ash, manufactured	186,216	184,636	200,000 e/	215,400	220,000
Stone:					
Aragonite and marble	384,553	389,741	471,761	571,765	575,000
Dolomite	192,575	225,697	198,051	161,754	170,000
Limestone	9,074	9,096	9,769	14,870	15,000
Other (reported as "ordinary stone")	50 e/	4	6	7 e/	10
do.					
Strontium minerals, celestite	1,684	2,320	1,625	2,500 e/	2,000
Sulfur:					
Native	410	545	195	200 r/ e/	150
Byproduct, all sources e/	27,000	27,000	27,000	27,000	27,000
Total e/	27,410	27,545	27,195	27,200 r/	27,150
Talc and related materials, soapstone	46,846	37,151	35,043	34,095	34,000
MINERAL FUELS AND RELATED MATERIALS					
Coal, all grades	3,305	3,082	2,997	3,345	3,000
Coke	670 e/	701	720	735	750
Gas, natural: e/					
Gross production	583,545 2/	590,000	595,000	598,000	600,000
Marketed production (sales)	500,000	500,000	500,000	500,000	500,000
do.					
Natural gas liquids e/	85	85	80	80	80
do.					

See footnotes at end of table.

TABLE 1--Continued
 PAKISTAN: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity	1993	1994	1995	1996	1997 e/
MINERAL FUELS AND RELATED MATERIALS--Continued					
Petroleum:					
Crude e/	21,467 2/	22,000	23,000	23,500	24,000
Refinery products: e/					
Gasoline	7,300	7,400	7,500	7,500	7,600
Jet fuel	4,500	4,500	4,500	4,600	4,600
Kerosene	3,300	3,300	3,300	3,500	3,500
Distillate fuel oil	13,600	13,800	14,000	14,000	14,200
Residual fuel oil	12,300	12,400	12,500	12,600	12,600
Lubricants	1,300	1,300	1,300	1,400	1,400
Other	4,200	4,300	4,300	4,300	4,400
Total	46,500	47,000	47,400	47,900	48,300

e/ Estimated. r/ Revised.

1/ Table includes data available through July 21, 1998.

2/ Reported figure.