INDIAN

PETROLEUM & PETROCHEMICALS

STATISTICS

1974

ECONOMICS & STATISTICS DIVISION

MINISTRY OF PETROLEUM AND CHEMICALS

GOVERNMENT OF INDIA

NEW DELHI

PREFACE

The Economics & Statistics Division of this Ministry has been bringing out an annual publication entitled 'Indian Petroleum & Chemicals Statistics' during the period 1968 to 1974 which contained basic economic and statistical data, covering various aspects of petroleum, fertilizer and other chemicals & pharmaceutical industries. Of late, due to strategic position occupied by these industries in industrial and overall economic development of the country, demand for more comprehensive and up-to-date statistics pertaining to these industries for meeting the requirement of their planning and administration, has been growing. In view of this and also to economise on the use of paper, from current issue onwards, it has been decided to divide this publication into three separate publications entitled: (a) Indian Petroleum & Petrochemicals Statistics, (b) Indian Fertilizer Statistics, and (c) Indian Chemicals & Pharmaceutical Statistics, enabling wider coverage with the addition of number of new tables in different sections of these publications.

The current issue of 'Indian Petroleum & Petrochemicals Statistics' is divided into four parts. Parts I & II respectively deal with various aspects of petroleum and petrochemicals industries; whereas Part III comprises financial statistics pertaining to these industries. Relevant Fifth Plan statistics have also been provided in Part IV. Weights & measures and conversion factors are given at the end of the publication under Appendix.

It is hoped that data contained in this publication would be of interest and value not only to various Ministries of the Government and the management of various petroleum & petrochemicals industries, but also to the Universities, research organisations and research scholars etc. We shall be grateful to have suggestions for improvement in general or for rectification of any error or ommission in the data presented.

The Staff and Officers of E & S Division have done valuable work in collection, tabulation and editing of the data brought out in this publication.

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October, 1975

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CHRONOLOGY OF SOME IMPORTANT EVENTS IN THE PETROLEUM INDUSTRY IN INDIA

(A) EXPLORATION AND PRODUCTION

(i) Assam Oil Company

1825: The earliest recorded reference of oil in Assam is found in the diaries of early explorers who penetrated into the thick jungles of upper Assam.

1866: Mr. Goodenough, a member of the Calcutta firm of Mokilliop Steward & Co. took notice of oil shows and in November secured rights over a large tract of land on both sides of the Buri Dihing river and came to Upper Assam to begin systematic drilling.

1867: On the 26th March Mr. Goodenough struck oil at Makum near Margherita at a depth of 118 ft. (36 meters).

1889: In September, the Assam Railways and Trading Company began drilling for oil near their station at Borbhil and in 1890 discovered oil at a depth of 662 ft. (202 meters). This field came to be known as Digboi.

1899: Drilling for oil in Digboi proved to be successful and the A.R.& T. Company formed a new company to look after their oil interests which was named as the Assam Oil Company Ltd. The Burmah Oil Company, who were exploring for oil in Burma and in Assam since 1915 acquired the oil interests of the Buddorpore Oil Company. This Company produced small quantities of oil from Budarpur in the Surma Valley of Assam. Maximum production was one thousand barrels per day in 1920 which dropped to 170 barrels per day (23.6 tonnes per day) in 1931. The field was abandoned in 1933.

1921: The Burmah Oil Company took over control of the Assam Oil Company which was then producing about 400 barrels per day (55 tonnes per day) of crude oil. It brought in much needed technical know-how, financial backing and up-to-date equipment. As a result the production improved to 1000 barrels per day (138.9 tonnes per day) by 1925 and to 3000 barrels per day (416.7 tonnes per day) by 1930.

1938: The Burmah Oil Company carried out seismic surveys at Nahorkatiya in Upper Assam to locate the best suitable site for drilling.

1952: A site for drilling was selected on the banks of the Buri Dihing river at Nahorkatiya in Upper Assam.

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1956: A site for drilling was selected near Moranhat in Sibsagar District. The well was drilled to 4190 meters which struck oil.

1969: In December, drilling wells was again started in Digboi oil field.

1970: Secondary recovery techniques such as gas injection and water flooding were being used in the Digboi oilfield while the feasibility to use thermal recovery method was being studied.

1971: AOC resumed drilling & completed 14 wells in Digboi oilfield.

(ii) Oil India Limited

1959: In February Oil India was incorporated (as Oil India Private Ltd.) as a rupee company with 66-2/3 per cent Burmah Oil Company participation and 33-1/3 per cent Government of India.

1961: On 27th July, the Second Supplemental Agreement was signed by which Oil India Limited, became a joint venture, in equal partnership, between the Government of India and the Burmah Oil Co.

1962: On 1st January, Oil India Ltd. set up a separate organisation with headquarters at Duliajan.

On 7th March, the 16 inch sector of Oil India's pipeline system was commissioned.

On 26th April, pumping of regular supplies of crude oil to the Gauhati Refinery started.

On 13th October, a dual completion well first of its kind in India, was completed at Nahorkatiya.

1963: On 8th March, Seismic surveys in the Dum Duma petroleum exploration licence area were commenced.

In February, the 14 inch sector of Oil India's pipeline from Gauhati to Barauni was operationally ready.

In April, crude oil conditioning plant, first of its kind in the world, was commissioned at Duliajan.

On 14th February, the first deviated well was drilled by the Company.

The first two exploratory wells in the Dum Duma petroleum exploration licence area, were spudded in.

1964: On 30th June, crude oil deliveries to the Barauni Refinery, Bihar, commenced.

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1965: Gas supplies to the thermal plant of the Assam State Electricity Board were started.

Pressure maintenance operations commenced with crestal gas injection into the gascap of a major oil pool in Nahorkatiya.

1966: Water injection was started in Nahorkatiya for pressure maintenance.

Digital computers were pressed into service for solving problems connected with underground reservoirs.

1967: All arrangements for starting drilling operations in NEFA were finalised.

1968: Drilling started in Ningru Petroleum Exploration Licence areas in NEFA.

1969: Kusijan well 2 was completed as an oil producer in Dum Duma Area.

1970: Kusijan well 3 was completed as a gas producer in Dum Duma. Regular oil production commenced from Kusijan well 2.

Gas injection for pressure maintenance was started at Moran field.

One of the steam drilling outfits commissioned in 1953, crossed its million foot mark of drilling.

1971: Reservoir Enginnering capability of the organisation was increased by the acquirement of a 3 Dimension 3 Phase reservoir simulation computer programme from McCord Associates Inc. of US..

Installation of 29 gas compressors under the Integrated Gas Scheme was completed at Nahorkatiya and Moran oilfields.

Oil was struck at Jorajan in the Dum Duma Mining Lease area.

The Memorandum of Association of the Company was amended to enable it to undertake extraction and sale of Liquified Petroleum Gas (LPG) from natural gas produced from its fields.

1972: Oil was discovered in a new structure at Tarajan and Jorajan well No.1 was completed as a successful oil producer.

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1973: Jorajan well Nos. 2 & 3 were completed as successful oil producers.

Oil was struck in NHK in a new structure and gas was discovered at Tengakhat (NHK) in Eocene formations which is the first such field in east of Jorhat.

Jorajan well Nos. 2 & 3 were completed as successful oil producers.

Oil was struck in NHK well No.262 in a new structure and gas was discovered at Tengakhat (NHK) in Eocene formations which is the first such field in east of Jorhat.

1974: Jorajan well Nos. 4 & 5 were completed as successful oil producers.

Exploratory drilling in Arunachal Pradesh was intensified through the commencement of drilling Kharsang well No. 2 and statisfactory progress of preparatory work for drilling Manabum well No. 1. A new deep drilling rig was acquired for intensification of drilling deep exploratory wells in Arunachal Pradesh.

Steps were taken in hand to expand, in stages, the capacity of OIL's pipeline to transport more of ONGC crude oil (upto 2.25 m.t.) to the Eastern sector refineries.

(iii) Oil & Natural Gas Commission

1947-1953: Reconnaissance and detailed geological Mapping were done in parts of Punjab, Himachal Pradesh, Kutch, Andaman and Nicobar Islands and Cambay by the Geological Survey of India.

1955: In September-October, a delegation visited the USSR and other European countries to study the oil industry.

In October, the Oil & Natural Gas Directorate was formed under the Ministry of Natural Resources and Scientific Research.

In December, Soviet Oil experts in exploration arrived in India.

1956: A number of experts visited India which included Dr. Levorsen, an American petroleum expert and Dr. Bentz, a West German Petroleum expert.

During April and May airborne magnetic surveys of parts of Western Rajasthan and the Indo-Gangetic Plains were made by the Canadian experts under the Colombo Plan.

In August, the Oil & Natural Gas Commission was set up.

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1957: In April, Jwalamukhi well No.1 was spudded in.

1958: In May, gas was struck at Jwalamukhi.

In July, Cambay well No.1 was spudded in.

In September, oil was struck in Cambay.

1959: In October, ONGC attained the status of a statutory body.

1960: In May, oil was struck at Ankleswar and drilling was commenced on Rudrasagar Structure.

1961: In January, oil was struck at Rudrasagar well No.1.

In June oil was struck in Kalol.

In September, trial production of crude oil from the Ankleswar oilfield was started. An agreement was signed with the French Petroleum Institute for exploration in Rajasthan.

1962: In February, an agreement was signed with the Soviet Union for the preparation of project reports and working drawing for the Gujarat Refinery.

The first special train of oil tank wagons left Ankleswar for Bombay.

In June production from Ankleshver oilfield was stopped up.

In December a contract was concluded with SNAM of ENI Group of Italy for drilling wells in Uttar Pradesh area.

1963: The Ankleshver crude oil production was progressively increased during the year. In January, offshore seismic surveys started in the Gulf of Cambay.

In March, drilling commenced on Nawagan structure in Gujarat.

In June, a contract was concluded with the C.G.G. of France for carrying out seismic exploration in Jaisalmer.
Oil was struck in Saund in Gujarat.
In July, oil was struck in Nawagan well No. 1 in Gujarat.

In August, the first well on the Lakwa structure in Assam was spudded in.

In December, a contract was concluded with RUDIS, a mining and industrial association of Yugoslavia for drilling wells in Assam. Another contract was signed with SNAM of ENI Group of Italy for drilling wells in Punjab area.

1964: Oil despatches from Ankleshvar were progressively stepped up during the year.

In February, a contract was entered into with a French Company, FORASOL for carrying out structural drilling operations in Jaisalomer.

By March, ONGC completed drilling of 200 wells.

In June, two contracts were signed for carrying out off-shore seismic surveys with the help of the specially equipped Soviet Ship Akademic Arkhangelskiy in the Gulf of Cambay and off the Madras coasts and other areas.

In August SNAM started drilling at Mohand in Uttar Pradesh.

In September, the Soviet Ship started its operations.

In October, SNAM started drilling at Janauri well No.2 in Punjab.

In December, production and supply of non-associated gas from Cambay to the Dhuwaran Thermal Power Station was commenced.

1965: In February, oil was struck at Lakwa in Assam by the Commission.

By March, the ONGC completed drilling of 300 wells.

In May drilling of first well on Kathana structure in Gujarat was commenced.

In September, supply of associated gas from Ankleswar to Uttran Thermal Power Station was started.

In October, drilling commenced on Baroach structure and Mehsana well No.1 in Gujarat. Oil was struck at Kathana well No.1 in Gujarat.

In November, drilling commenced on Surat, Jagadia and Jambusar structures in Gujarat.

1966: Oil production from Ankleswar was progressively stepped up further. Traces of oil and gas were found in Karaikal well No.1. During the first few months, first wells on Bakrol and Dholka structures in Gujarat were spudded in.

In August, Bodra well in West Bengal was spudded in.

1967: In January, drilling at Nagapattinam in Tamil Nadu State was started and supplies of crude oil from Kadi oil field in Gujarat were sent to the Gujarat Refinery.

In March, the first phase of trial production at Nawagam oilfield in Gujarat was inaugurated.

In May, the Water Injection Scheme for the Ankleshvar oil-field in Gujarat started functioning.

By August, the ONGC completed drilling of 500 wells.

In September, drilling on the Dikhumukh structure in Assam was started.

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In November, the ONGC completed the drilling of one million metre and the daily rate of production from the Ankleswar oil field and Kalol oil field was stepped up.

1968: In January, trial production of crude oil from Kosamba field in Gujarat, near Ankleswar oil field was started; and drilling was commenced on Geleki structure in Assam.

In February, drilling on Detroj, a new structure in Gujarat, was started.

In March, the National Iranian Oil Company, declared the oil find in the Rostam structure in the Persian Gulf as a commercial discovery, ONGC's share is one-sixth of the crude produced. Drilling was started at Ratanpur, North Kalol and Sobashan, in Gujarat.

In May, oil struck at Geleki, a new structure in Assam and trial production from Lakwa was started.

In June, oil struck in Kadi and Bakrol structures in Gujarat.

Drilling operations at Asjol and Paloj, (new structures) in Gujarat and Tirupundi in Tamil Nadu were started.

In July, the 17.5 Kms. cross country crude oil pipeline of 12" diameter connecting the Lakwa oilfield of the Commission with the Oil India Pipeline at Moran was commissioned and regular production from the Lakwa oil field was started. The first indigenous seismic unit was commissioned and the Commission also designed and fabricated a seismic amplifier, with about 98 per cent indigenous components.

Trial production from the Kadi oil field in Gujarat started.

In August, the rate of production from the Kalol and Nawagam oil fields in Gujarat was stepped up. Drilling operations at Sisva in Gujarat and Nagiajan in Assam were started.

By September, ONGC completed the drilling of 600 wells. Drilling operations at Nazira structure in Assam were started.

In October, rate of production of oil from Ankleswar and Nawagaw oil fields of Gujarat was stepped up. Trial production from Dholka oil fields in Gujarat was started.

In November, trial production from Kathana oil field in Gujarat and drilling at Hazira and vaso (new structures), in Gujarat started.

In December, production of crude oil from Ankleswar was stepped up.

1969: In January, the first well at Becharaji structure was spudded.

Oil production from Ankleswar was stepped up.

In March, the 15 kms. Kalol-Sabarmati pipeline was commissioned. Oil production from Ankleswar, Kalol and Nawagaw was stepped up further.

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In May, the first well at Valod structure in Gujarat was spudded in.

By June, ONGC completed drilling of 700 wells.

Exploratory drilling on four new structures namely: Borholla in Nagaland, Dumas, Tharad and Vaso-east in Gujarat was commenced.

In August, production from the Rostam field in the Persian Gulf was commenced. (The first of the seven blocks of the fixed platform meant for drilling India's first off-shore well would be based, was launched.)

In December, first exploratory well on Kawa structure in Gujarat was spudded in.

1970: In January, drilling on three new structures viz., Bagmara in Assam, Mohmadabad and Sorau East in Gujarat was started.

In February, the first well on a new structure Balol in Gujarat was spudded in.

On 14th March, the first well at Suruinsar, a new structure in Jammu and Kashmir State was spudded in by the Honourable Chief Minister of J&K.

On 19th March, the first off-shore well in the shallow waters of the Gulf of Cambay (Aliabet Island) was spudded in, by the Honourable Prime Minister of India. This was the first venture of its kind in India.

Oil was struck at Borholla, a new structure in Assam.

In April, the first well on Dinoj, a new structure in Gujarat was spudded in. ONGC completed drilling of 800th well.

In May, drilling on three new structures namely, Chidambaram in the Cauvery Basin, and Baad and Singiwara in Gujarat was commenced.

In June, the first well on watamau, a new structure in Gujarat was spudded in.

In July, drilling on three new structures namely Amguri in Assam and Dabka and Varsada in Gujarat was commenced.

In August, first well on Santhal, a new structure in Gujarat was spudded in.

In October, gas was struck at Dabka, a new structure in Gujarat.

In November, first well on Kanwara, a new structure in Gujarat was spudded in.

In December, drilling on three new structures namely, Deodar and Baola in Gujarat and Banamali in Assam was commenced.

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1971: In January, drilling was started on Rakanpur, a new structure in Gujarat. An agreement to supply associated gas from Kalol to M/s Mahendra Mills and M/s Navjivan Mills was finalised.

In February, drilling was started on four new structures viz., Delvada, Daswara, Amliala and Chaklasi in Gujarat. Drilling of India's first off-shore well on Shallow-waters was also completed during this month.

Sophisticated Digital seismic equipment and data processing system was put into operation in West Bengal.

A contract for procurement of a mobile self-elevating self propelled lack-up type platform was signed.

In March, drilling was started on two new structures viz. Kauka in Gujarat and Saliayamangalam in Tamil Nadu. The first off-shore well drilled at Aliabet, showed the presence of oil. An agreement to supply gas to the IFFCO was signed.

In April/May service contract with the OISA for drilling in Bombay area was signed.

On 12th May, 14" dia, 78 km. long Nawagam-Koyali sector of the Kalol-Nawagam-Koyali pipeline was commissioned. The rate of production of crude oil from Eastern Region was increased. An agreement for supply of associated gas from Kalol to M/s Metro Woods and Engineering Works was signed.

In June, drilling was started at a new structure Pandanallur in Tamil Nadu.

On 16th June, supply of gas to Naharhabi Tea Estate from Lakwa field was commenced.

By July, ONGC completed drilling of 900 deep wells. Oil/gas was discovered in Amguri, a new structure in Assam. A high power committee headed by Shri K.D. Malviya, former Minister of Mines & Fuel was set up by Govt. of India to look into the functions and organisation of ONGC and suggest the ways and means to improve its functioning.

On 28th August, $12\frac{3}{4}$" dia, 49 km. long Kalol-Nawagam sector of the Kalol-Nawagam-Koyali pipeline was inaugurated.

In September, drilling was started at Indrora, a new structure in Gujarat and gas was discovered in Baola, a new structure in Gujarat.

In November, oil was discovered in Santhal, a new structure in Gujarat.

In December, oil was discovered in Indrora, a new structure in Gujarat and drilling onKattumannarkoil, a new structure in Tamil Nadu was commenced.

1972: In January, drilling was started at North Balol, a new structure in Gujarat; and oil was struck at Indrora well No.1 in Gujarat.

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In February, drilling was started on two new structures viz., Devla and Linch in Gujarat and gas was struck in North Balol in North Gujarat and oil in Dabka structure in Broach district in Gujarat. A new oil Thermal Laboratory Was commissioned at Lakwa Group Gathering Station, for testing of oil samples was commissioned.

In March, drilling was started on Atali West, a new structures in Gujarat. Supply of associated gas from Kalol field to M/s Navjeevan Mills was also commissioned.

In April, drilling was started at Dungri, a new structure in Gujarat.

In June, drilling was started at two new structures viz., Balutri and Banni (Kutch) in Gujarat.

In July, drilling was commenced at Baramura structure in Tripura. Petrographic and Geo-chemical laboratories were commissioned at Madras. Oil was struck at Linch in Gujarat. Supply of associated gas to M/s Mahindra Mills from Kalol field and to Baroda Municipal Corporation from Ankleswar field was commenced. Water injection in Horizon-XII in Lakwa was commissioned. A bronze Shield, an Award of the invention and Promotion Board was presented by the Honourable President of India to ONGC for indigenously developing Air-Tube-Clutch assembly, in collaboration with M/s Banket and Brake Lining and Engineering firm of Dehradun.

In September, drilling was started at Anand a new structure in Gujarat and supply of associated gas to three private firms, viz., M/s Metro Wood Works, M/s Melamine and Fibres and M/s Calico Printing Company from Kalol field was commenced.

In November, drilling was started at Vithalpur, a new structure in Gujarat.

In December, drilling was started at West Unnava, a new structure in Gujarat.

1973: In January, drilling was started at Deragaon, a new structure in Assam. ONGC completed drilling of 1000th deep well.

On 17th February, an agreement was signed by ONGC with M/s Geophysical Service International, S.A. Dallas Texas, USA, for conducting about 2800 kms. of off-shore seismic reflection work.

On 24th February, a protocol was signed by Mr. D.A.Takeev, Dy. Minister for Oil, USSR, and Secretary to the Govt. of India, Ministry of P&C, on development of oil industry in the public sector in India for 1973-78 and forecast for the period 1978-83.

In March, drilling was started at Charali, a new structure in Assam. The self-propelled, self-elevating Jacking type of mobile drilling platform "Sagar Samrat" got made to order in Japan was handed over to ONGC at Hiroshima, Japan.

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On 8th April, a draft for service contract awarded by the Iraq National Oil Company (INOC) to the ONGC was signed by Dr. Abdullah Sayyas, Vice-President of INOC and Chairman, ONGC. Under the terms and conditions, the ONGC will render technical and commercial services to the INOC as a general contractor.

In May, drilling was started on Maraini, a new structure in Assam.

In June, drilling was started at Nirota, a new structure in Kutch area of Gujarat. At Baramura well in Tripura, a good flow of gas was observed during an open hole drill stem testing. Supply of associated gas from Kalol field to M/s Bharat Vijay Mills was commenced.

In July, drilling was started at Mayavaram, a new structure in Tamil Nadu. The presence of oil was observed in a well on the Charali structure, in Assam, during an open hold drill stem test. About 71 indigenous items as replacements to imported spares for use in the cementing section at Nazira were developed and put to successful field-tests.

In August, drilling was started at Mindhola, a new structure in Gujarat.

In October, drilling was commenced on the first off-shore deep well on Tarapur structure in the Arabian Sea adjoining the Gulf of Cambay, about 120 kms. north-west of Bomaby with the help of the self-propelled, self-elevating jackup type of mobile platform, named, "Sagar Samrat". Trial production of oil started from Dabka (South Gujarat).

In November, drilling was started at Calodra, a new structure in Gujarat. Drilling, indications of presence of gas were observed during open hold drill stem tests conducted in the well on the Tarapur structure in the Arabian sea adjoining the Gulf of Cambay.

For the first time in the history of oil exploration in India, oil was discovered in commercial quantities in the basement rocks in Assam while testing the fifth well (Borholla-7) in Borholla area. This oil find was in addition to the earlier discovered oil reserves in the basal sandstone lying just above the Basement.

In December, drilling was started at two new structures namely Puna and Sanao-Khurd in Gujarat.

One of ONGC's Diesel Mechanic working in Central Workshop at Baroda, was awarded Rs. 3000/- as a National Award declared by the Government of India for developing valve Lapping Machine for lapping the valve and of Internal Combustion Engines. It was the second highest award given to any inventor on the occasion of Independence Day.

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1974: During January, Charali structure in Assam was proved to be oil bearing and computer programme, similar to schulumberger Cori-Band programme, for well log evaluation was developed.

In February, drilling was started with 'Sagar Samrat' on the first well of Bombay High (Main) structure in the Arabian Sea, adjoining the Gulf of Cambay. Oil was struck during drilling at this well.

During March, 'Geoflex' was introduced as energy source for the first time by seismic crew in Iraq operations. On 24th March, the supply of gas to IFFCO was started for purging the line and test run.

In April, drilling operations were commenced at Wara, a new structure in Gujarat and well head installation at Indrora were commissioned.

During June, drilling operations were commenced at North Sarkhej, a new structure in Gujarat and a new structure vis Asjol was declared as oil bearing well head installation at Santhal-4 were also commissioned.

In July, ONGC completed drilling of 1100th well.

In August, trial production from Geloki oil field, Assam was commenced. The Sanand-GCS and gas line from Sanand GCS to Kalol CTF were also commissioned.

During September, drilling operations were started on Khambol, a new structure in Gujarat. Sanand GCS-Kalol CTF oil pipe line was commissioned and well head installation at Linch-1 was commissioned.

In October, precision gravity surveys were introduced for the first time. Seismic and Magnetic surveys for petroleum exploration in the Gulf of Kutch and in the Bay of Bengal by the foreign contractors were commenced.

In November, TNR-91 fast digital offline plotter was installed in Data Processing Centre for plotting of seismic sections.

In December, production from Dabka was resumed after isolating the gas producing horizons.

(iv) Indo-Stanvac Oil Exploration Project

1954: In April the Indo-Stanvac Oil Exploration project started exploration activities in partnership with the Government of India on a 75 : 25 basis covering a concession area of 10,000 sq. miles in West Bengal.

1959: The exploration project was abandoned after drilling 10 wells in the West Bengal basin all of which proved dry.

(B) REFINERIES

(i) The Digboi Refinery, Digboi, Assam.

1893: The Assam Railways and Trading Company erected a small refinery at Margherita, to refine the crude oil found at Makum and Digboi. This refinery was the first of its kind in the Indian Sub-Continent continued to be in operation for a few years and, had since changed its venue from Margherita to Digboi in its subsequent expansion and growth.

1900: The construction of a new Refinery at Digboi was started by the Assam Oil Company Ltd.

1901: Digboi Refinery went on stream.

1923: The entire refinery was rebuilt, and the refinery capacity was also enlarged.

1926: Two 4" product pipelines were laid between Digboi and Tinsukia.

1932: An Edeleanu plant - for giving Sulphur Dioxide treatment to Kerosene was installed and brought into commission.

A Dubbs plant for "Cracking" process was installed.

1934: Foster Wheeler Crude Oil Distillation unit was installed.

1938: Bitumen plant was installed.

1940: Lummus - Crude Oil Distillation unit was installed.

1950: A plant for fabrication of steel barrels was installed.

1953: Gasoline Extraction plant was commissioned.

1954: Foster Wheeler, Lube Oil Distillation unit was installed- which was the first of its kind to be installed in India.

Refinery was linked up with two pipe lines for the receipt of crude oil and gas from Nahorkatiya oilfield.

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1956: A new 6" line for the pumping of white oils to Tinsukia was installed. One of the old 4" line was replaced by a new one.

1970: Improvements in process techniques were introduced for the out turn of better quality Lubricating oils.

1971: First phase of the project for the improvement in refrigeration capacity of wax treating plant and the rejuvenation of Edeleanu plant for increasing production of Superior Kerosene were completed.

1972: To supplement the cooling water demand of the refinery a three-cell induced draught RCC cooling tower was commissioned.

The old 4" Red oil line for pumping Furnance Oil from Digboi to Tinsukia was replaced by a new 6" line.

1973: For increasing the production of Superior Kerosene, an additional electric power driven SO_2 Compressor was installed in the Edeleana Plant.

(ii) Burmah Shell Refineries Ltd., Trombay

1951: In the end of the year 1951 the Refinery agreement was signed.

1953: In February site development was commenced.

1955: On 30th January BSR came on stream and processed 1.8 million metric tonnes of crude in the year.

In June Bitumen production was commenced.

1956: In January Liquified Petroleum Gas manufacture was commenced.

In June MT-80 production was commenced.

w.e.f. 1.10.56 BSR surrendered duty protection on Motor Gasoline.

1957: In February, Aviation Turbine Fuel production was started.

In September, platforming unit was commissioned.

1959: w.e.f. 1.7.1959, BSR surrendered duty protection on High Speed Diesel, Light Diesel oil, Furnance oil and Bitumen.

1961: From February, regular production of Jute Batching Oil was commenced.

1962: BSR started processing of Ankleshwar crude together with Iranian Light crude.

1963: BSR processed 3.75 million tonnes of crude during the year.

MT-80 Sub-zero and Inferior Kerosene were also added to the range of products.

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1965: In March, SDP unit was commissioned to produce SDP 55/115.

In August, Gas supply to FCI was commenced.

In September, 93 Octane Motor Spirit was manufactured for the first time.

1966: Annual crude throughput crossed the 4 million tonnes mark (4.01 m.m.t.).

1967: From March production of Avgas 100/130 was started.

In August supply of chemical feedstock grade Naphtha to NOCIL was commenced.

In November supply of Hot Heavy Stock by pipeline to Tata Power Station was commenced.

1973: During 2nd half of the year BSR processed Govt. crude.

1974: In May/~~1971~~ were accorded 'Export House' status. BSR crude processing capacity reached a rate of 6 million tonnes per annum.

(iii) Esso Standard Refining Co. of India Ltd./ Hindustan Petroleum Corporation Ltd., Fuel Refinery.

1951: In November, an agreement was signed between the Govt. of India and the Standard-Vacuum Oil Company to set up an oil refinery at Trombay, Bombay.

1952: In July, the Standard-Vacuum Refining Company of India Ltd. was incorporated.

1954: On 29th July, the Stanvac refinery went on stream.

1956: Stanvac exported Motor Gasoline.

1957: The duty protection on Motor Gasoline was given up by the comapny. Stanvac started HHS fuel supplies to the adjoining Tata Trombay Thermal Power Station.

1958: Stanvac started manufacturing LPG and JBO.

1959: Stanvac started manufacturing Asphalt and cooperated in setting up the Standard Barrels manufacturing factory which started supplying asphalt drums to refinery.

1960: In September, Stanvac started exporting Indian expertise and 4 employees were sent to Philippines as set up Advisor to new refinery.

In November, duty protection on other petroleum products was also surrendered.

1961: Stanvac exported Asphalt.

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1962: In April Corporate name was changed to Esso Standard Refining Co. of India Ltd.

On 16th November processing of indigenous Ankleshwar crude was commenced. Esso Standard manufacturing for the first time in India SBP Spirit and Hexane.

1964: Esso started export of Naphtha.

1965: Esso started manufacturing - for the first time in India - FDA grade JBO Mineral Turpentine.

Esso started supplying raw material naphtha - to enable starting of new Trombay Fertilizer plant of FCI.

1966: Esso started raw material naphtha feedstock supplies to the new petrochemical plant of Carbide Chemical Company.

1967: Esso started manufacturing Industrial Asphalts.

1968: Esso started manufacturing - for the first time in India - speciality products (CS-330 and Petroleum Ether) - to substitute imports.

1969: Esso started supplying feedstocks to the new Lube India Ltd., Refinery.

Esso started manufacturing - for the first time in India - of Propane. To date, Esso is the only company manufacturing propane.

ESRC was completely Indianized in October - after departure of the last expatriate.

1970: ESRC manufactured Carbon Black Feedstock.

1973: Pentone & Rubber processing oil were manufactured and IOC crude was processed on refinery processing fee basis.

1974: In March, the Government of India acquired the entire Marketing assets of Esso Eastern Inc. in India and 74% interest in Esso Standard Refining Company of India Ltd. and the Lube India Ltd. On 15th July, the market assets were vested in Esso Standard Refining Company and the two companies were merged to form Hindustan Petroleum Corporation Ltd. (HPCL).

In July the Fuel Refinery completed 20 years.

(iv) <u>Caltex Oil Refining (India) Ltd., Visakhapatnam</u>.

1953: In March, an agreement was reached between the Government of India and Caltex (India) Ltd. to establish a refinery on the East Coast of Vizag.

1955: In February, the Caltex Oil Refining (India) Ltd. was incorporated.

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1957: In April, the Caltex Refinery went on stream at Visakhapatnam. Exports of Mogas and Fuel Oil were undertaken in the same year.

1959: In October, the duty protection on Motor Gasoline was surrendered by the Company.

1963: In April, duty protection on other products was surrendered. In May, manufacturing of LPG commenced.

1964: Caltex Refinery started export of Naphtha.

1969: Caltex Refinery exported Asphalt.

1973: During November - December CORIL commenced processing crude of IOC on a processing fee basis.

(v) Indian Oil Corporation (Refinery Division)

(a) Barauni Refinery, Barauni, Bihar.

1961: In June, a contract was signed with M/s Tiajpromexport Moscow for the design and supply of equipment and the supervision of erection and operation of the Barauni Refinery.

1964: In July, the first unit of the Barauni Refinery went on stream.

1966: In February, the second stage was commissioned.

1967: In November, the third stage comprising of Lube oil complex was completed.

1969: On 21st January, the expansion of Refinery was completed. Construction work for the coke calcination plant started.

1971: In June, Govt. approval for revamping of Barauni Refinery for processing of imported crude and expansion of refinery capacity was obtained.
In November the erection of coke calcination plant was completed and test review was conducted.
Sale of Phenol extract and slack wax was started,

1972: In December, processing of imported crude was started.

(b) Gauhati Refinery, Gauhati, Assa.

1962: On 1st January, the Gauhati Refinery went on stream.
1964: On October, Gauhati-Siliguri pipeline was commissioned.
1969. In November, production of ATF was commenced.
1971: In March, production of LPG was started.

(c) Gujarat Refinery, Jowahar Nagar, Gujarat.

1963: The technical report on setting-up of the Gujarat refinery was accepted and an agreement for supply of equipment from the USSR was signed.

1965: In October the first one Million tonne unit was commissioned.

1966: In May, the second million tonne unit was commissioned.

1967: On 28th September, the third million tonne unit for the expansion of Refinery capacity from 2 to 3 million tonne was commissioned.

1968: On the 17th December, the Udex plant was commissioned at the Gujarat Refinery for the extraction of Benzene and Toulene from reformed Naphtha.

1969: In July, a pilot plant was set up and commissioned at the Gujarat Refinery by the IIP to conduct investigations for the extraction of protein from petroleum.

(d) Haldia Refinery ~~Project~~

1967: In September, the decision to set up a refinery with French and Rumanian collaboration under the charge of Indian Oil Corporation was taken up by the Government of India.

1969: Contract for design, supply and rendering of technical assistance were executed separately with M/s Technip/Ensa of France and M/s Industrial export of Rumania.

1970: Contract for Fabrication and erection of all welded storage tanks awarded and work commenced in June, 1970.
In November, construction work on first phase of Refinery Township was commenced.

1971: During January, the construction of Process Unit Foundation and other civil works were started.
During November, work of erection of equipment, machinery piping and structures for the fuel part of the Refinery was commissioned.

1972: In February, construction of Refinery Township- second phase was started.
In March, work of erection of equipment, machinery, piping /and steel sturctures for the Lube part was taken up.
In May, electrical works in power plant process units and off sites was commenced.
During October, instrumentation work for fuel part of the Refinery was started.

1974; In December, LPG, SK & ATF upliftments were started. Trial runs of the Fuel Setter Units Completed.

(e) Mathura Refinery Project:

1973: In July, a Protocol on economic and technical cooperation between India and USSR in the construction of Mathura Refinery was signed.

In September, a contract for deputation of Soviet specialists for preparing Memorandum of Instructions was signed between Indian Oil Corporation and NEFTECHIMPROMEXPORT, MOSCOW.

In October (2nd), the Foundation stone was laid by the Prime Minister of India.

In December, a contract for preparation of Detailed Project Report, Analysis of crude oil, supply of equipment/material deputation of Soviet Specialists for rendering technical assistance in setting up the Refinery was signed.

1974: Process design Engineering Agreements signed. A letter of intent was issued to M/s CHEC for design, supply & erecting of the power plant.

(f) Cochin Refinery, Cochin, Kerala.

1963: On 27th April, the Formation Agreement was entered into between the Government of India, Phillips Petroleum Company of USA and Duncan Bros. Co. Ltd., Calcutta for setting up a Refinery in the South.

On 6th September, Cochin Refinery Ltd. was registered.

1966: On 23rd September, the refinery was inaugurated.

1968: The Formation Agreement of 27th April, 1963 was modified and expansion of the refinery capacity was agreed to.

1973: The expansion programme of the Refinery was completed during August 1973.

(g) Madras Refineries Ltd., Tamil Nadu.

1965: In December, the Madras Refineries Ltd. was incorporated as a joint venture of the Government of India, The National Iranian Oil Company and AMOCO.

1966: In November, a contract was awarded to M/s Snam Progetti for construction of the refinery.

1967: In January, the ground breaking ceremony took place.

In April, the construction and erection of the refinery was started.

1969: First crude oil tanker arrived.

In April, the refinery was commissioned.

In June, the first batch of products were delivered to IOC.

In September, the refinery was formally inaugurated by the President of India.

1971: Since February, the company has no expatriate employee.

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1972: In June, the designed crude throughput was achieved.

In September, New Jetty for use in fair weather was commissioned.

1973: On 4th February, Shipping Corporation of India's super tanker m.t. Jawaharlal Nehru arrived for the first time.

New products like Rubber Processing Oils, Ink Oil and Arke oils were developed.

(C) MARKETING

(i) Burmah-Shell

1903: The Asiatic Petroleum Company entered the Indian Market.

1921: The Burmah Oil Company entered the Indian Market.

1928: Burmah Shell came into existance on 6th January.

1958: Burmah-Shell started the use of special tankwagons for transportation of Bitumen.

In May, Burmah-Shell chartered Indian Flag Vessel "Desh Sewak".

1965: Burmah-Shell started use of special tank wagons for transportation of LPG.

1968: Burmah-Shell introduced locally developed HDPE containers for packing lubricants.

1972: Burmah-Shell commissioned a prototype aluminium alloy tank lorry for MS/HSD delivery to retail outlets.

1974: Burmah-Shell established a Fuel Advisory Cell for Promoting fuel economy through expert advice to fuel users.

(ii) Esso Standard Eastern Inc./Hindustan Petroleum Corporation Ltd.

1882: Esso's predecessor company in India, Standard Oil Company of New York, commenced supply of kerosene.

1931: Socony Vacuum Oil Company was formed with the merger of Standard Oil Company of New York and Vacuum Oil Company.

1933: On 7th September, Standard Vacuum Oil Company started operations in India.

1958: Marketing of LPG for domestic use was started in Bombay.

1962: On April 1, Esso came to India. Standard Vacuum Oil Company was reorganised and named as Esso Standard Eastern Inc.- which is solely owned by the Standard Oil Company, New Jersey.

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1965: On 15th September, an agreement was signed between the Government of India and Esso Standard Eastern on a 50:50 partnership for the construction of a jointly owned Lubricating base oil refinery at Bombay.

1970: On February 11, Lube India Ltd. was formally commenced for producing lubricating oil base stocks from feed stock supplied by ESRC.

1971: On January 1, corporate name was changed to Esso Eastern Inc.

1974: In March, the Government of India acquired the entire Market assets of Esso Eastern Inc. in India and 74% interest in Esso Standard Refining Company of India Ltd., and the Lube India Ltd.

On 15th July, the Market assets were vested in Esso Standard Refining Company and the two companies were merged to form Hindustan Petroleum Corporation Ltd. (HPCL).

(iii) Caltex (India) Ltd.

1937: Caltex started its operations in India by taking over the business of Taxas company (India) Ltd.

1959: In October, Caltex chartered an Indian flag tanker 'Desh Deep' for off-shore movement of its products.

1964: In April, Caltex chartered the Indian flag tanker 'Desh Bandhu' for crude service.

1972: In response to a request from Government of India 'Desh Bandhu' was initially surrendered by Caltex for a period of one year.

1973: The release of 'Desh Bandhu' was extended.

1974: The release of 'Desh Bandhu' was further extended to cover the balance period under charter to Caltex.

(iv) Indian Oil Corporation Ltd. (Marketing Division)

1959: On the 30th of June, the Indian Oil Company Ltd. was formed. Agreements were signed with Sojusneftexport, the Soviet Oil Export Organisation for importing Kerosene and HSD.

1960: During July, Indian Oil received its first import tanker from USSR at their Bombay Installation.

1961: During October, Indian Oil entered the Retail Market by commissioning its first Retail outlet at Cochin.

1962: During February, Indian Oil made its first shipment of petroleum products to Bhutan.

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During May, Indian Oil commissioned its first Inland Installation at Siliguri to receive products directly from the Gauhati Refinery by product pipeline.

On 16th November, an agreement was signed with Mobil Petroleum Company Incorporated, New York forming a 50:50 venture to set up a blending plant for Lubes.

1963: On 25th March, the Indian Oil Blending Ltd. was formed.

During April, Indian Oil made its first shipment of Petroleum products to Nepal.

1964: On 1st September, the Indian Oil Corporation was formed with the merger of the Indian Refineries Ltd. with the Indian Oil Company.

During October, Indian Oil entered the aviation market by commencing supplies to Defence.

On 29th October, the Blending Plants at Bombay and Calcutta were inaugurated.

1965: During May, Indian Oil started effecting bunker fuel oil supplies to the Indian Navy.

During November, Indian Oil entered the Civil Aviation field by supplying its first civil customer.

On 22nd October, Indian Oil introduced LPG from Barauni Refinery under the trade name of INDANE by entering the Calcutta markets.

1967: On 6th January, Indian Oil Corporation made an entry into the export market by shipping Motor Gasoline to Thailand.

During July, Indian Oil as part of its rehabilitation programme for ex-servicemen, offered its first INDANE distributorship.

1968: On 6th May, for the first time IOC exported Bitumen to Ceylon.

During September, Indian Oil (MD) established its first LPG bottling plant at Shakurbasti.

During October, Indian Oil loaded its first tanker at the new port of Haldia.

1969: On 30th April, LPG was introduced in Assam by IOC.

On 25th August, IOC began marketing LPG in Southern India.

Indian Oil entered Bulk LPG marketing for industrial use by making its first supply to an Industrial consumer at Ernakulam.

In August, Indian Oil commissioned its first LDO barrel outlet at an interior location, namely Mehmedabad, for ensuring adequate and timely supplies of fuel at controlled prices., for Diesel engines for agricultural operation. As at end of 1971, IOC increased this facility to 280 barrel outlets and 2 pump outlets spread all over the country.

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Two new products viz. Benzene and Toluene were added to the Marketing list of POL products of IOC.

On 24th October, a Subsidiary Company of IOC under the name of "Indian Oil International Ltd." was incorporated at New Delhi which will be trading in Nepal also.

Indian Oil Corporation became the largest marketing organisation in the petroleum industry by handling more than 50 per cent of the total petroleum trade of the country.

In July, marketing of products from Madras Refinery were commenced by IOC.

1970: On 12th January, IOC acquired majority interest in IBP by purchasing 60% equity.

On 4th April, Indian Oil's new blending plant at Madras was commissioned with all modern facilities to produce quality lubricants for the entire Industry demand in the Southern Region. This is the largest blending Plant in the country (140,000 tonnes/year capacity) and is entirely owned by IOC.

On 5th July, the first Retail outlet was commissioned at Coimbatore under the Corporation's scheme of Employment to unemployed Graduate.

As part of its programme of offering employment opportunities for unemployed graudates, Indian Oil commissioned its first INDANE dealorship under this scheme at Chingelput Tamil Nadu, during October.

1971: During April, Indian Oil commissioned a giant 45 Kl. Avn. refueller which was designed and developed by IOC and fabricated indigenously.

Lube Oil Imports on an industry basis were channalised exclusively through Indian Oil.

In December, IOC made its first export shipment of petroleum products to Bangla Desh.

1972: During the month of January, IOC introduced a scheme for the award of dealerships to rehabilitate war-affected defence personnel.

During March, supplies of crude oil to the Chittagong Refinery of Bangla Desh were arranged by IOC and offloading of the crude tanker in mid stream by lighters at Chittagong was done under the supervision of IOC personnel.

In April, IOC's drum plant at Madras started production of barrels for lubes and drums for bitumen.

In August, IOC sold its majority interest in IBP by the sale of the shares to the President of India in accordance with the presidential directive. As such, IBP ceased to be a subsidiary company of IOC.

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During September, IOC introduced for the first time in the country premium grade lubes with indigenous formulations under the brand name 'SERVO'.

1973: In July, IOC commenced marketing of LPG produced at Cochin Refinery and Bulk Bitumen sales were commenced by deliveries to Tamil Nadu Highways Department from Madras Refineries.

In August, in terms of the order of the Government of India and in pursuance of an agreement between IOC and Nepal Oil Corporation Petroleum business of Indian Oil International was taken over by the Napal Oil Corporation.

1974: In July, IOC terminated its agreement with MOBIL in blending/marketing of premium lubricants of MOBIL brands and replaced by range of its own premium SERVO brands of lubricants.

During August, a liquidator of Indian Oil International Limited, a wholly owned subsidiary of IOC, was appointed and the company is under the shareholders voluntary liquidation.

IOC also launched a programme for educating the consumers towards improving fuel efficiency in their respective plants. A group of IOC officers were trained in collaboration with the National Productivity Council and the Energy Conservation Division of DGTD.

In September, IOC acquired the 50% shareholding of IOBL held by MOBIL and IOBL became a wholly owned subsidiary of IOC.

During December, IOC added two new products to its product range by marketing Jute Batching Oil and Rubber Extender Oil.

(D) Lube plants

(i) Lubrizol India Ltd.

1965: On 2nd December, the Formation Agreement was signed between the Govt. of India and The Lubrizol Corporation of USA.

1966: On 20th July, Lubrizol India Ltd. was registered in the State of Maharashtra.

1967: In early 1967 land was acquired and in the month of October, construction work was started.

1968: On 25th November, the Plant was mechanically commissioned and production was commenced.

1969: On 16th January, the Plant was formally inaugurated.

1971: On 26th March entire management including the Managing Director was Indianised.

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1972: In February, the ground breaking for construction of the New Plant (Phase II stage I) was started.

1973: On 31st October, the Plant (Stage I of Phase II) was commissioned.

1974: In December, work on execution of new plants (Stages II and III of Phase II) was started.

(iii) Indian Oil Blending Ltd.

1962: On 16th November, Distributorship Agreement was signed between Indian Oil Corporation Ltd., Bombay and Mobil Petroleum Co. Inc., New York, as a result of which Indian Oil Blending Ltd. was established for manufacturing lubricating oils of Mobil and other Brands, with financial participation in the new company by Mobil Petroleum Co. Inc.

1963: On 25th March, Indian Oil Blending Ltd. was incorporated as a Public Limited Co. under the companies Act, 1956 at Bombay, with an authorised capital of Rs. 20 lakhs, out of which 10 lakhs were contributed by Indian Oil Corporation Ltd. and Rs. 10 lakhs by Mobil Petroleum Co. Inc. in Dollars.

1964: In May, two plants at Bombay and Calcutta were commissioned and trial runs were started with the installed capacities of 64,000 Kls for Bombay and 32,000 Kls for Calcutta plants per annum of Lubricating oils.

1966: On 1st November, a Supplementary Agreement was signed between Indian Oil Corporation Ltd. and Mobil Petroleum Co. Inc. for the construction of a Grease manufacturing plant attached to the Lube Plant at Bombay. The authorised capital was increased to Rs. 40 lakhs from Rs. 20 lakhs and the increase of Rs. 20 lakhs was also contributed equally by Indian Oil Corporation Ltd. and Mobil Petroleum Co. Inc. in Dollars.

1967: On 7th May, the Grease Plant was commissioned with an installed capacity of 50,00,000 pounds per annum.

1968: On 19th July, a Supplemental and Amendatory Agreement was signed between Indian Oil Corporation Ltd. and Mobil Petroleum Co. Inc. for technical assistance by Indian Oil Blending Ltd., for operating a Lube Blending Plant at Madras to be set up by Indian Oil Corporation Ltd.

1971: During the year 1971-72, the Company imported and installed at Bombay Laboratory one 900 Modol Porkin-Elmer Gas Chromatograph and one 290-B Atomic Absorption Spectrophotometer. Both these instruments are for research and development and are mainly to be used for import substitution programme.

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1972: The licensed capacities were enhanced to 150,000 Kls. and 70,000,000 Lbs. of grease for Bombay Plant and 1,00,000 Kls. of Lubes for Calcutta plant as per Industrial Licences dated 26.12.1972.

1974: The collaboration agreements between Indian Oil Corporation Ltd. and Mobil Petroleum Inc. of New York were terminated with effect from 19.7.1974 and the 50% of shareholdings of Mobil in Indian Oil Blending Ltd. were taken over by Indian Oil Corporation, as a result of which Indian Oil Blending Ltd. became a wholly-owned subsidiary of Indian Oil Corporation Ltd.

(E) RESEARCH & DEVELOPMENT
(Indian Institute of Petroleum, Dehradun.)

1959: In October, the Council of Scientific & Industrial Research took a decision to set up a Central Petroleum Research Institute.

1960: In June, an agreement for collaboration (5 years) was finalised with the Institute Francais du Petrole, France.

In September, the Institute started functioning in temporary laboratories in the Central Road Research Institute, New Delhi.

1961: In September, land was acquired at Mohkampur, Dehradun, for construction of Institute's premises.

1963: During April-June, the first laboratory building viz. the Technology Block at Dehradun was completed & occupied.

1964: In June, approval of United Nations Special Fund's Project for strengthening the Refining Division and creating a petrochemistry Division was obtained.

In August, first special post-graduate training courses in Petroleum Refining, and Utilisation of Petroleum Products in Engines was started.

1965: In June, Agreement of collaboration with the Institute Francais du Petrole, France was extended by six months, i.e. upto December, 1965.

In August, Second special post-graduate training courses in Petroleum Refining, and Utilisation of Petroleum Products in Engines was started.

1966: In January, IIP's scientists got Republic Day Award for developing a process on Reforming of Iomex and the Agreement of collaboration with the Institut Francais du Petrole, France was extended for another three years.

In March, a Seminar on Production and Utilisation of Hydrogen in the Petroleum Refining and Petrochemical Industries was arranged.

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In May, an Agreement was signed with the Institut Francais du petrole, France, for the manufacture of proteins from Hydrocarbon cuts.

In July, United Nations Special Fund's Project for strengthening the Refining Division and creating a petrochemistry division became effective.

In August, Third special post-graduate training courses in Petroleum Refining & Petrochemicals, and Utilisation of Petroleum Products in Engines and Industry was started.

During April-Sept. Training Seminars for Indian Railways' Engineers were organised.

1967: In June, a Pilot plant for producing proteins from petroleum was received as a gift from Institut Francais du Petrole, France.

In October, an agreement was signed with the Institut Francais du Petrole, France, for IIP-IFP Process for Hydrodesulphurisation and Hydrogenation of petroleum cuts.

During August'67 - April'68, Specialised training courses for Indian Oil Corporation Ltd. Refineries and Marketing Divisions' Engineers were conducted.

1968: In January, IIP's Scientist got Republic Day Award for development of a simple reflux splitter.

In May, Seminar and Summer School on Gas Chromatrography were organised.

In July, a Patent on "A wick sleeve to improve the non-smoking illumination when burning oil in a cylindorical wick lamp" was sealed.

In October, a Patent on "A process for the production of pure aromatics such as benzene, toluene, xylenes, naphthlene, etc. from pure and mixed alkylaromatic feeds with or without saturates" was sealed.

In November, a patent on "A process for the production of anhydrous or anhydrous lanolin from wool grease" was sealed.

In December, Pilot plant for proteins from petroleum was shifted to Gujarat Refinery.

IIP's process on re-refining of used I.C. Engines crankcase oils was released to M/s Ravi Enterprises, Vijayawada in February; to M/s Kapoor Sons, Jamshedpur in March; to M/s Bangla Bros., Saharanpur in April; to M/s Deepee Oil Co., Calcutta in June; to M/s Daulat Machinery Corporation, Delhi in August and to M/s Amar Nath Jaiswal & Sons, Ferozepur in December, 1968.

1969: In January, agreement of collabofation with the Institut Francais du Petrole, France, was extended for another three years, i.e. upto December, 1971.

In Feb., IIP-IFP Hydrodesulphurisation process was released to Madras Refineries Ltd., Madras.

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1974 : IIP's process on re-refining of used I.C. engine crank case oil was released to Capt. S.P.Dutt, Bombay, in February, to M/s Lube Oil Products P. Ltd., Lucknow; to M/s Unilube Petrochemicals, Vidisha; and to M/s Devika Industries, Rourkela, in March; to M/s S.K. Trading Co., Calcutta; and M/s Charan Engg. Corpn. Ltd. Polachi.

During April-July, specialised training course in Petroleum refining & petrochemicals technology for Enginners India Ltd's engineers was conducted.

During October, 74-January,75 specialised training course in Petroleum Refining Technology for Indian Oil Corporation Ltd's engineers was conducted.

IIP-IFP hydrodesulphurization and Catalytic reforming processes released to Mathura Refinery.

(ii) Research & Development Centre,
Indian Oil Corporation Limited.

1970: On 21st December the feasibility report was submitted.

1971: On 3rd September, land for the centre was acquired at Faridabad. On 23rd Sept. the feasibility report was approved by the Government.

1972: In November foundation stone for a temporary laboratory was laid.

1973 : The temporary laboratory was commissioned during the month of June.

1974 In April, the erection of Technical Block was commenced. On 6th December, an investment of Rs. 4.84 crores for this project was approved by the Government of India.

On 27th December, Technical Block was commissioned.

RESERVES OF CRUDE OIL & NATURAL GAS IN INDIA

	GUJARAT		ASSAM		TOTAL	
	Cruce oil (in million tonnes)	Natural Gas (in '000' Mn.Cu.Metres)	Crude oil (in million tonnes)	Natural Gas (in '000' Mn.Cu.Metres)	Crude oil (in million tonnes)	Natural Gas (in '000' Mn.Cu.Metres)
1966	62.73	23.09	90.27	40.06	153.00	63.15
1967	65.83	24.65	88.96	42.60	154.84	67.25
1968	64.92	21.80	76.08	41.54	141.00	63.34
1969	59.80	22.90	72.51	42.70	132.31	65.60
1970	56.38	19.66	71.46	42.82	127.84	62.48
1971	51.08	18.84	62.70	43.45	113.78	62.29
1972	52.28	16.88	72.90	45.25	125.18	62.51 **
1973	49.45	16.35	77.87	50.09	127.32	66.44 **
1974	48.45	16.18	76.05	51.68	124.50	67.86 **

** Including Reserves of 0.38 Thousand Mn. Cu. Metres in the Rajasthan State.

@ Proved and indicated balance recoverable reserves.

ONGC : Figures are as on Ist October of each year.

OIL & AOC : Figures are as on Ist January of each year.

GROWTH OF PETROLEUM INDUSTRY IN INDIA

Year	Production of Crude oil (000 Tonnes)	Refineries Crude charged (000 Tonnes)	Production of Petroleum Products (000 Tonnes)	Imports (Rs.Million) Crude	Products	Total	Exports* Rs. Million	Consumption @@ (000 Tonnes)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1960	451	6091	5747	405.7	410.2	815.9	46.1	7784
1961	513	6440	6090	393.1	476.1	869.2	37.6	8394
1962	1078	7003	6584	387.3	514.6	901.9	38.5	9521
1963	1652	8138	7650	417.8	548.1	965.9	55.0	10347
1964	2212	8932	8428	425.9	537.8	963.7	48.4	11361
1965	3022	9754	9113	403.8	447.3	851.1	39.2	12279
1966	4647	12036	11283	561.0	520.2	1081.2	87.6	12968
1967	5667	14430	13452	795.9	390.1	1186.0	142.3	14089
1968	5853	16096	14923	938.8	407.4	1346.2	82.5	15829
1969	6723	17495	16239	940.0	382.4	1322.4	107.7	17336
1970	6809	18459	17177	1023.6	305.3	1328.9	57.2	18735
1971	7185	19588	18229	1398.8	434.9	1833.7	25.5	20640
1972	7373	19672	18204	1442.5	566.9	2009.4	89.4@	22628
1973	7198	20518	19125	2445.6	1009.3	3454.9	53.5@	23687
1974	7490	20783	19303	9004.7	2097.9	11102.6	193.7@	22931

Note:- Data for consumption is under revision.

* Including re-exports of POL products

@ Excluding Crude Oil Exports.

@@ Including Refinery Boiler fuel (1962 on wards)

NUMBER OF DEEP DRILLING RIGS IN THE COUNTRY

As on 31st December of	ONGC	OIL	AOC	TOTAL
(1)	(2)	(3)	(4)	(5)
1960	10	4	-	14
1961	23	4	-	27
1962	31	4	-	35
1963	43	4	-	47
1964	43	4	-	47
1965	46	4	-	50
1966	50	4	-	54
1967	50	4	-	54
1968	50	4	-	54
1969	50	4	1	55
1970	55	4	1	60
1971	55	4	1	60
1972	55	4	1	60
1973	56	4	-	60
1974	56	4	-	60

STATUS OF WELLS @

(Number of Wells)

Company/Year	Oil	Gas	Dry	Under test	Injection	Other *	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
I. Oil India Ltd.							
1967	127	10	24	28	3	-	262
1968	206	11	28	25	3	-	273
1969	215	12	28	22	7	-	284
1970	224	13	29	23	9	-	298
1971	231	15	31	23	13	-	313
1972	240	17	31	24	14	-	326
1973	244	18	33	24	18	-	337
1974	249	18	34	26	20	-	347
II. Oil & Natural Gas Commission							
1967	265	44	115	85	18	-	527
1968	345	52	153	79	18	-	647
1969	430	63	182	68	18	-	761
1970	478	66	214	83	21	-	862
1971	504	70	252	82	22	-	930
1972	528	74	268	102	26	-	998
1973	548	77	284	114	28	-	1051
1974	590	79	312	134	28	-	1143
III. Assam Oil Co.							
1967	379	8	-	-	8	592	987
1968	373	8	-	-	8	598	987
1969	380	9	-	-	10	588	987
1970	377	7	-	-	8	606	998
1971	381	7	-	-	4	609	1001
1972	367	7	-	-	5	622	1001
1973	370	7	-	-	5	619	1001
1974	377	7	-	-	5	612	1001
TOTAL (I+II+III)							
1967	841	62	139	113	29	592	1776
1968	924	71	181	104	29	598	1907
1969	1025	84	210	90	35	588	2032
1970	1079	86	243	106	38	606	2158
1971	1116	92	283	105	39	609	2244
1972	1135	98	299	126	45	622	2325
1973	1162	102	317	138	51	619	2389
1974	1216	104	346	160	53	612	2491

@ As in the end of each year.

* Includes abodoned and shut down wells.

STATE-WISE ACHIEVEMENT OF GEOLOGICAL FIELD PARTIES SINCE INCEPTION UPTO DECEMBER,1974

STATES	GEOLOGICAL SURVEYS						
	Detailed (Sq. kms.)	Semi-detailed (Sq. kms.)	Traversing (line kms.)	Reconnaissance (Sq. km.)	Special studies (sq.kms.)	Neotectonic/ Geomorpholotical (sq.km.)	Reconnaitory traversing (line kms.)
1.	2.	3.	4.	5.	6.	7.	8.
Andhra Pradesh (including Tamil Nadu & Kerala)	3116	19694	1040	20964	-	222325	3300
Andaman & Niccbar	608	2265	463	1851	-	-	-
Assam(including Tripura,Mizoram, Arunachal Pradesh & Meghalaya)	7093	13493	7363	4262	-	-	650
Gujarat(including Kutch/Maharashtra and M.P.)	8258	42105	2764	11698	2926	-	-
Bihar	-	1259	64	-	-	-	-
H.P.	Included in Punjab.						
J & K.	1749	6959	1369	6663	70	-	-
Tamil Nadu	-	-	Included in Andhra Pradesh.				
Orissa	-	-	-	-	-	-	-
Punjab(including Himachal Pradesh	9710	8919	4930	4433	1489	-	630
U.P.	4658	10577	2054	313	4170	-	-
West Bengal	912	1062	276	2	-	-	-
Rajasthan	3584	20754	1361	4030	-	-	-
Nepal	194	8446	1087	-	-	-	-
Pondicherry	-	-	-	-	-	-	-
Kerala	Included in Andhra Pradesh						
Nagaland	25	345	283	-	-	-	-
Bhutan	-	850	84	100	-	-	-
OTHERS							
Off the Coromandal coast Palk Strait- Gulf off Cambay & Kutch/off the Arabian Sea Mouth of Ganges & Mahanadi Gulf of Mannar/off the Kerala Coast							
TOTAL O.N.G.C.	39907	136728	23138	54316	8655	222325	4580

STATEWISE ACHIEVEMENT OF GEOPHYSICAL FIELD PARTIES SINCE INCEPTION UPTO DECEMBER, 1974.

	Geophysical Surveys Seismic Line km.					
	Departmental			Contract		
	On land	Off-shore	Total	On land (a)	Off-shore (b)	Total
1	2	3	4	5	6	7
Andhra Pradesh	4929	-	4929	-	-	-
Andaman & Nicobar	-	-	-	-	-	-
Assam(including Tripura, Mizoram, Arunachal Pradesh and Mehgalaya)	11222	-	11222	-	-	-
Gujarat (inclusing Kutch/Maharashtra and M.P.)	37777	3358	41135	-	-	-
Bihar	1711	-	1711	-	-	-
H.P.		in Punjab				
J&K	1756	-	1756	-	-	-
Tamil Nadu	8035	-	8035	-	-	-
Orissa	1489	-	1489	-	-	-
Punjab (including Himachal Pradesh	4884	-	4884	-	-	-
U.P.	10668	-	10668	-	-	-
West Bengal	9871	-	9871	-	-	-
Rajasthan	2451	-	2451	2108	-	2108
Nepal	-	-	-	-	-	-
Pondicherry	-	-	-	-	-	-
Kerala	-	-	-	-	-	-
Nagaland	-	-	-	-	-	-
Bhutan	-	-	-	-	-	-
OTHERS						
Off the Coromandal Coast Palk Strait	-	-	-	-	5373(b)	5373
Gulf of Cambay Kutch/off the Arabian Sea	-	-	-	-	8070(b)	8070
Mouth of Ganges and Mahanadi	-	-	-	-	300(b)	300
Gulf of Mannar/off the Kerala Coast					700(b)	700
Arabian sea(Bombay High)	-	-	-	-	2838(b)	2838
TOTAL O.N.G.C.	94793*	3358	98151	2108	17281	19389

Contd.....

STATE-WISE ACHIEVEMENT OF DRILLING SINCE INCEPTION DECEMBER, 1974.

(Continued)

STATES	DRILLING 000 mts.			
	Departmental		Contract	
	W	M	W	M
(1)	(2)	(3)	(4)	(5)
Andhra Pradesh (including Tamil Nadu & Kerala)	-	-	-	-
Andaman & Nicobar	-	-	-	-
Assam (including Tripura, Mizoram, Arunachal Pradesh and Meghalaya)	221	754	-	-
Gujarat (including Kutch/ Maharashtra and M.P.)	874	1476	-	-
Bihar	1	3	1	5
H.P. (included in Punjab)	-	-	-	-
J & K.	1	4	-	-
Tamil Nadu & Pondicherry	16	38	-	-
Orissa	-	-	-	-
Punjab (including Himachal Pradesh)	5	18	2	10
U.P.	2	4	1	5
West Bengal	1	4	-	-
Rajasthan	8	9	6	11
Nepal	-	-	-	-
Kerala	-	-	-	-
Bhutan	-	-	-	-
Off-shore -(Bombay High)	4	8	-	-
OTHERS				
Off the Coromandal Coast Palk Strait	-	-	-	-
Gulf of Cambay & Kutch/off the Arabia Sea	-	-	-	-
Mouth of Ganges andMahanadi	-	-	-	-
Gulf of Manner/off the Karal Coast	-	-	-	-
TOTAL ONGC	1133	2318	10	31

(a) = By French CGG Party
(b) = By Russian Off-shore party
(c) = By G.S.I.

* = In addition 29 line kms. were done for Oil India Ltd. in Assam during 1969-70.

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* In addition 4765 line km. of Reflection and 3851 km. of Magnetometric surveys were also done by M/egg CGG of France in Bombay High on contract basis during 1971-72.

COMPANY-WISE PRODUCTION OF CRUDE OIL

('000' TONNES)

YEAR	AOC	OIL	ONGC	TOTAL	COMMULATIVE
1948	255	-	-	255	255
1949	258	-	-	259	513
1950	259	-	-	259	772
1951	269	-	-	269	1041
1952	263	-	-	263	1304
1953	269	3	-	272	1576
1954	278	30	-	308	1884
1955	272	75	-	347	2231
1956	307	89	-	396	2627
1957	277	163	-	440	3067
1958	214	225	-	440	3507
1959	202	248	-	450	3957
1960	179	272	-	451	4408
1961	184	319	10	513	4921
1962	188	556	334	1078	5999
1963	184	805	663	1652	7651
1964	170	1274	768	2212	9863
1965	158	1742	1122	3022	12885
1966	149	2143	2355	4647	17532
1967	134	2752	2781	5667	23199
1968	117	2771	2965	5853	29052
1969	112	3074	3537	6723	25775
1970	107	3070	3632	6809	42584
1971	98	3146	3941	7185	49769
1972	93	3183	4097	7373	57142
1973	84	3102	4012	7198	64340
1974	72	3080	4338	7490	71830

Growth:		
	I Plan (1951-55)	6.0%
	II Plan (1956-60)	5.5%
	III Plan (1961-65)	46.1%
	(1966-68)	24.7%
	(1969-73)	19.8%

PRODUCTION AND STATE-WISE UTILISATION OF NATURAL GAS IN INDIA

(Mn. Cu. Metres)

Year	Production	UTILISATION									
		ASSAM				GUJARAT					Grand total
		Internal use*	A.G.C.	Others	Total	U.P.H.	D.P.H.	GSFC & BI	Others	Total	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1961	171.38	169.20	-	0.20	169.40	-	-	-	-	-	169.40
1962	209.64	186.30	-	0.22	186.52	-	-	-	-	-	186.52
1963	240.90	171.13	-	0.20	171.33	-	-	-	-	-	171.33
1964	430.71	179.36	-	2.71	182.07	-	0.65	-	-	0.65	182.72
1965	736.63	181.68	21.38	5.81	208.87	9.83	127.02	-	-	136.85	345.72
1966	803.16	208.45	39.20	6.86	254.51	65.79	51.21	-	-	117.00	371.51
1967	1221.50	210.71	43.63	7.65	261.99	102.08	52.48	48.36	-	202.92	464.91
1968	1316.71	211.19	95.06	9.83	316.08	106.55	69.88	110.94	-	287.37	603.45
1969	1383.55	209.16	141.98	15.25	366.39	102.37	108.04	151.83	-	362.24	728.63
1970	1424.37	188.15	156.79	14.50	359.40	84.69	57.82	173.89	-	316.49	675.84
1971	1509.00	193.31	171.28	17.07	381.66	92.41	88.09	184.31	17.52	379.07	760.73
1972	1563.78	290.37	189.41	16.60	496.38	125.18	88.62	189.51	26.72	430.03	926.41
1973	1674.20	297.37	198.57	19.05	514.99	110.90	77.08	179.56	29.83	397.37	912.36
1974	1917.51	293.05	221.09	24.57	538.71	114.58	83.25	178.36	94.88	471.07	1009.78

* Including the gas returned to natural reservoirs and gas used by OIL and AOC for field operation etc.

Assam Gas Company., U.P.H. - Uttaran Power House, D.P.H. - Dhuwaran Power House

GSFC : Gujarat State Fertilisers Co. BI - Baroda Industries

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IV. REFINERIES

REFINERY CRUDE THROUGHPUT AND PRODUCTION OF PETROLEUM PRODUCTS

('000' Tonnes)

Year	Crude Throughput			Production		
	Public sector	Private sector	Total	Public sector	Private sector	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1948	-	253	253	-	185	185
1949	-	255	255	-	218	218
1950	-	251	251	-	211	211
1951	-	265	265	-	249	249
1952	-	258	258	-	235	235
1953	-	263	263	-	246	246
1954	-	699	699	-	655	655
1955	-	3335	3335	-	3024	3024
1956	-	4212	4212	-	3890	3890
1957	-	4830	4830	-	4447	4447
1958	-	5134	5134	-	4772	4772
1959	-	5436	5436	-	5152	5152
1960	-	6091	6091	-	5747	5747
1961	-	6440	6440	-	6090	6090
1962	241	6762	7003	193	6391	6584
1963	470	7668	8138	407	7243	7650
1964	911	8021	8932	778	7650	8428
1965	1549	8205	9754	1328	7785	9113
1966	3476	8554	12030	3186	8097	11283
1967	6359	8071	14430	5814	7638	13452
1968	7707	8389	16096	7085	7838	14923
1969	9514	7981	17495	8736	7503	16239
1970	10994	7465	18459	10137	7040	17177
1971	11198	8390	19588	10297	7932	18229
1972	11838	7834	19672	10842	7362	18204
1973	11484	9034	20518	10557	8568	19125
1974	15107	5676	20783	13997	5306	19303

% Growth	Crude Throughput	Production
I Plan	+ 67.8	+ 70.3
II Plan	+ 12.8	+ 13.7
III Plan	+ 9.9	+ 9.7
1966-68	+ 18.2	+ 17.9
IV Plan	+ 5.2	+ 5.3

REFINERY-WISE CRUDE CHARGED & TOTAL PRODUCTION OF POL PRODUCTS

('000' tonnes)

	AOC	BSR	ESRC/HCL	CORIL	GAUHATI	BARAUNI	GUJARAT	COCHIN	MADRAS	TOTAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1960										
Total Production	419	2661	1322	845	-	-	-	-	-	5747
Crude Run	449	2815	1948	879	-	-	-	-	-	6091
1965										
Total Production	483	3790	2482	1030	708	489	131	-	-	9113
Crude Run	493	3996	2600	1116	793	611	145	-	-	9754
1970										
Total Production	463	3235	2259	1083	628	2009	3189	2439	1872	17177
Crude Run	490	3448	2350	1178	700	2197	3439	2592	2065	18459
1972										
Total Production	498	3411	2397	1056	736	2070	3472	2201	2363	18204
Crude Run	534	3637	2523	1139	824	2286	3731	2349	2649	19672
1973										
Total Production	491	4282	2781	1013	693	2429	3365	1845	2226	19125
Crude Run	528	4481	2912	1113	771	2659	3581	1968	2505	20518
1974										
Total Production	491	3759	2963	1056	684	2574	3447	2243	2086	19303
Crude Run	533	3988	3153	1155	752	2817	3715	2345	2325	20733

REFINERY PRODUCTION - 1971 to 1974

'000 Tonnes

Products	1971	1972	1973	1974	% Variation 1973/1972	% Variation 1974/1973
I. LIGHT DISTILLATES	3111	3205	3404	3339	+ 6.2	- 1.9
on which						
L.P.Gas	195	227	259	278	+14.1	+ 7.3
Naphtha	1183	1278	1368	1649	+ 7.0	+20.5
Mogas	1615	1581	1647	1290	+ 4.2	-21.7
SBP Spirits/ Hexane	58	46	67	50	+45.6	-25.4
II. MIDDLE DISTILLATES	9368	9400	9805	10159	+ 4.3	+ 3.6
on which						
Kerosenes	2995	2813	2631	2052	- 6.5	-22.0
M.T.O.	58	91	106	79	+16.5	-25.5
H.S.D.	4356	4598	5039	6034	+ 9.6	+19.7
L.D.O.	1065	1010	1079	1084	+ 6.8	+ 0.5
J.B.O.	86	87	75	73	-13.8	- 2.7
III. HEAVY ENDS	5750	5599	5916	5805	+ 5.7	- 1.9
on which						
F.O.	2910	2308	2571	2884	+11.4	+12.2
LSHS	1006	1091	1044	1046	- 4.3	+ 0.2
H.H.S.	182	289	316	313	+ 9.3	- 1.0
Total Fuel Oil	4098	3688	3931	4243	+ 6.6	+ 7.9
Lube Oils	218*	308*	292*	396	- 5.2	+35.6
Bitumen	982	1090	1167	873	+ 7.1	-25.2
Petroleum Coke	145	133	131	132	- 1.5	+ 0.8
Wax	39	51	48	46	- 5.9	- 4.2
IV. TOTAL PRODUCTION	18229	18204	19125	19303	+ 5.1	+ 0.9
V. CRUDE RUN	19588	19672	20518	20783	+ 4.3	+ 1.3
* Excludes production of Lube Oil by LIL*	148	173	181			

PATTERN OF REFINERY PRODUCTION IN INDIA

(%)

Products	1960	1965	1970	1972	1973	1974
Light Distillates*	17.2	17.0	16.4	16.3	16.6	16.0
Middle Distillates	42.4	42.2	46.2	47.8	47.8	48.8
Heavy Fuel Oils	27.0	26.8	23.0	18.7	19.2	20.4
Bitumens	6.6	5.6	4.1	5.5	5.7	4.2
Lubes	0.4	0.4	1.3	1.5	1.4	1.9
Others	0.8	1.4	2.1	2.7	2.5	1.4
Total Production	94.4	93.4	93.1	92.5	93.2	92.7
RBF & Losses/Inventories	5.6	6.6	6.9	7.5	6.8	7.3
Crude Throughput	100	100	100	100	100	100
* Includes Gases	0.1	1.1	1.0	1.3	1.4	1.4

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ALL INDIA* TOTAL CONSUMPTION OF PETROLEUM PRODUCTS FROM 1948 to 1974

(In '000' Tonnes)

YEAR	TOTAL CONSUMPTION @	% GROWTH	YEAR	TOTAL CONSUMPTION @	% GROWTH
1948	2657	- 2.9	1961	8394	+ 7.8
1949	3125	+17.6	1962	9521	+13.4
1950	3319	+ 6.2	1963	10347	+ 8.7
1951	3888	+17.1	1964	11361	+ 9.8
1952	3741	- 3.8	1965	12279	+ 8.1
1953	3916	+ 4.7	1966	12968	+ 5.6
1954	4089	+ 4.4	1967	14089	+ 8.6
1955	4817	+17.8	1968	15829	+12.4
1956	5236	+ 8.7	1969	17336	+ 9.5
1957	5820	+11.2	1970	18735	+ 8.1
1958	6117	+ 5.1	1971	20640	+10.2
1959	6812	+11.4	1972	22628	+ 9.6
1960	7784	+14.3	1973	23687	+ 4.7
			1974	22931**	- 3.2

Note : Includes Refinery Boiler Fuel from 1962 onwards. Prior to that RBF consumption is not available.

* : Includes Sales to Nepal, Sikkim, Bhutan and International/Coastal Bunkers and International Airlines.

@ : Figures represent despatches from depots.

** : Provisional

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CONSUMPTION OF PETROLEUM PRODUCTS DURING THE YEAR 1972,1973 & 1974

(Figures in '000' Tonnes)

	Products	1972	1973	1974 (Prov.)	% Variation 1973/1972	% Variation 1974/1973
I.	LIGHT ENDS	3281.5	3491.3	3305.9	+ 6.4	- 5.3
	L.P. Gas	238.0	263.1	280.2	+ 10.5	+ 6.5
	Naphtha	1279.7	1453.6	1608.6	+ 13.6	+ 10.7
	Mogas	1585.9	1605.1	1268.7	+ 1.2	- 21.0
	SBP/Hexane	52.1	65.3	50.4	+ 25.3	- 22.8
II.	MIDDLE DISTILLATES	10517.1	11004.2	11243.4	+ 4.6	+ 2.1
	Kerosene	3506.4	3450.6	2871.3	- 1.6	- 16.8
	H.S.D.	4620.1	5192.6	6254.5	+ 12.4	+ 20.5
	LDO/MDO	1384.6	1360.1	1138.2	- 2.7	- 15.5
	J.B.O.	86.0	77.4	69.5	- 10.0	- 10.2
	M.T.O.	85.9	101.9	75.9	+ 18.6	- 25.5
III.	HEAVY ENDS	7605.0	7987.2	7194.7	+ 5.0	- 9.9
(a)	Fuel Oils	5549.5	5931.9	5572.5	+ 6.9	- 6.0
	F.O./T.D.O.	4163.4	4542.1	4209.4	+ 9.0	- 7.3
	L.S.H.S.	1091.6	1150.9	1122.1	+ 5.4	- 2.5
	H.H.S.	294.5	238.9	241.0	- 18.9	+ 0.9
(b)	Lubes & Greases	587.5	635.2	475.9	+ 8.1	- 25.1
(c)	Bitumen	1144.2	1134.2	872.5	- 0.9	- 23.1
(d)	Petroleum coke	171.1	132.8	133.6	- 22.4	+ 0.6
(e)	Wax	54.5	47.3	45.4	- 13.2	- 4.0
	TOTAL (I+II+III)	21403.6	22483.7	21744.0	+ 5.0	- 3.3
	R.B.F.	1224.1	1203.8	1187.3	- 1.7	- 1.4
GRAND TOTAL		22627.7	23686.5	22931.3	+ 4.7	- 3.2

Notes: R.B.F. figures are subject to revision

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SALES/CONSUMPTION AND MARKET PARTICIPATION OF OIL COMPANIES FROM 1960 TO 1974

Qty. : '000' Tonnes

YEAR		IOC	B/Shell	Esso/HPCL	Caltex	Others	TOTAL
1960	S/C	10	3638	2224	1237	560	7669
	%	0.2	47.4	29.0	16.1	7.3	100
1961	S/C	120	3645	2332	1284	875	8256
	%	1.5	44.1	28.2	15.6	10.6	100
1962	S/C	396	4093	2626	1447	626	9188
	%	4.3	44.5	28.6	15.8	6.8	100
1963	S/C	844	4231	2770	1546	608	9998
	%	8.4	42.3	27.7	15.5	6.1	100
1964	S/C	1301	4498	3024	1573	636	11032
	%	11.8	40.8	27.4	14.3	5.7	100
1965	S/C	2499	4368	2866	1469	666	11868
	%	21.0	36.8	24.2	12.4	5.6	100
1966	S/C	3823	4095	2737	1197	524	12376
	%	30.9	33.1	22.1	9.7	4.2	100
1967	S/C	4888	3948	2701	1281	530	13348
	%	36.6	29.6	20.2	9.6	4.0	100
1968	S/C	6377	4006	2639	1432	553	15007
	%	42.5	26.7	17.6	9.5	3.7	100
1969	S/C	7880	4026	2568	1286	582	16342
	%	48.2	24.6	15.7	7.9	3.6	100
1970	S/C	8958	4191	2544	1243	652	17588
	%	50.9	23.8	14.5	7.1	3.7	100
1971	S/C	10566	4116	2651	1312	844	19489
	%	54.2	21.1	13.6	6.7	4.4	100
1972	S/C	12265	4140	2721	1261	1017	21404
	%	57.3	19.3	12.7	5.9	4.8	100
1973	S/C	13685	4134	2440	1119	1101	22488
	%	60.9	18.4	10.8	5.0	4.9	100
1974 (Prov)	S/C	13634	3307	2387	967	1085	21744
	%	64.3	15.2	11.0	4.5	5.0	100

S/C = Sales/Consumption.

DELIVERIES MADE TO INTERNATIONAL/COASTAL BUNKERS FROM 1965 TO 1974.

('000' tonnes)

	Products	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
SHIPPING											
1. International Bunkers	F.O.	357.3	394.0	440.0	379.8	260.1	217.4	204.6	148.7	202.7	111.5
	H.S.D.	3.1	1.9	4.8	4.4	5.1	5.7	5.3	3.8	5.0	4.1
	L.L.O.	17.4	15.4	23.1	26.4	19.9	21.4	20.5	23.1	25.9	20.7
	TOTAL	377.8	411.3	467.9	410.6	285.1	244.5	230.4	175.6	233.6	136.3
2. Coastal Bunkers	F.O.	241.5	226.9	242.8	239.1	260.0	199.1	238.7	181.2	148.7	130.8
	H.S.D.	13.1	13.9	11.2	11.2	14.9	21.4	33.9	20.4	23.1	25.6
	L.D.O.	10.7	12.5	17.3	20.2	20.6	21.1	25.9	23.4	18.6	22.6
	TOTAL	265.3	253.3	271.3	270.5	295.5	241.6	298.5	225.0	190.4	178.2
3. Total Bunkers	F.O.	598.8	620.9	682.7	619.0	520.1	416.5	443.3	329.9	351.4	241.5
	H.S.D.	16.2	15.8	16.1	15.5	20.0	27.1	39.2	24.2	28.1	29.7
	L.D.O.	28.1	27.9	40.4	46.6	40.5	42.5	46.4	46.5	44.5	43.3
	TOTAL	643.1	664.6	739.2	681.1	580.6	486.1	528.9	400.6	424.0	314.5

N.B.: Excludes from above sales to foreign Bunkers on KNPC account by IOC.

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Statewise Sales/Consumption of major Petroleum Products during the year 1973(excl. Internationals & Coastal Bunkers)

(Figs. in '000' Tonnes)

States/Terr.	MOgas	Kero	A.T.F.	H.S.D.	L.D.O.	Fuel Oils	Others	TOTAL
A-STATES	[illegible]	[illegible]	17.	[illegible]	5[illegible]	[illegible]	[illegible]7	[illegible]3.
Andhra Pradesh	73.7	237.8	17.9	418.0	56.4	140.1	139.7	1083.6
Assam	52.1	122.4	22.2	97.0	25.9	124.3	32.1	476.0
Bihar	70.6	181.5	3.6	265.2	105.6	310.1	116.8	1053.4
Gujarat	108.4	321.0	18.7	351.1	383.3	1391.0	231.3	2804.8
Harayana	32.1	64.6	12.9	153.3	53.8	45.2	50.4	412.3
Himachal Pradesh	4.6	10.7	0.2	27.5	2.4	0.8	6.7	52.9
J & K	11.3	17.7	5.7	45.5	6.3	—	3.7	90.2
Kerala	76.9	125.0	3.4	179.3	6.5	214.4	126.6	732.1
M.P.	59.0	150.0	2.4	343.4	14.1	60.9	92.0	721.8
Maharashtra	285.5	659.9	335.8	553.2	127.1	1635.1	692.9	4289.5
Mysore (Karnataka)	112.7	191.8	15.7	348.5	30.4	166.7	56.1	921.9
Manipur	5.3	6.6	—	8.5	0.9	neg	5.5	26.8
Meghalaya	8.0	8.0	—	5.7	0.3	—	2.9	24.9
Mizoram	1.4	1.3	—	0.9	—	—	0.8	4.4
Nagaland	6.2	3.7	—	6.5	neg	0.1	4.5	21.0
Orissa	27.2	70.6	4.9	111.1	2.5	103.0	91.0	410.3
Punjab	70.8	123.6	37.7	362.7	81.7	25.7	91.9	794.1
Rajasthan	44.4	85.3	21.4	229.4	71.8	43.8	162.2.	658.3
TamilNadu	141.8	339.5	26.2	489.2	32.6	545.6	313.9	1888.8
Tripura	5.2	11.0	0.6	8.0	0.6	0.1	5.9	31.4

Contd....

Statewise Sales/Consumption of major Petroleum Products during the year 1973 (excl. International & Coastal Bunkers)

(Figs. in '000' Tonnes)

States/Terr.	MOgas	Kero	A.T.F.	H.S.D.	L.D.O.	Fuel Oils	Others	TOTAL
Uttar Pradesh	115.7	277.2	53.1	610.4	143.6	170.4	302.8	1673.2
West Bengal	139.1	303.8	59.5	302.6	99.1	455.0	129.2	1488.3
TOTAL (A)	1452.0	3313.0	641.9	4917.0	1244.9	5432.3	2658.9	19660.0
B-Union Territories								
Andaman & Nicobar	0.6	0.3	0.4	6.1	0.6	—	0.6	8.6
Chandigarh	7.3	7.6	23.9	10.2	3.0	2.4	11.8	66.2
Delhi	118.6	78.1	121.7	157.81	50.1	63.2	71.0	660.5
Goa	10.2	14.9	3.3	45.0	5.1	77.5	102.9	258.9
Pondicherry	2.5	5.9	—	7.2	1.4	1.4	1.1	19.5
TOTAL (B)	139.2	106.8	149.3	226.3	60.2	144.5	187.4	1013.7
TOTAL (A+B)	1591.2	3419.8	791.2	5143.3	1305.1	5576.8	2846.3	20673.7
C-Other Territories								
Bhutan	1.2	1.0	—	2.5	nog	—	0.8	5.5
Nepal	10.5	26.7	6.9	17.8	10.4	1.3	3.1	76.7
Sikkim	2.1	2.9	—	1.3	0.1	—	—1	6.4
TOTAL (C)	13.8	30.6	6.9	21.6	10.5	.3	3.9	88.6
GRAND TOTAL	1605.0	3450.4	798.1	5164.9	1315.6	5578.1	2850.2	20762.3

Note:- Figures represent despatches from depots situated in various States.

State-wise Per Capita Sales/Consumption of Major POL Products (Excl. International Bunkers)

(Kgs.)

States	1971	1972	1973	Compound growth rate 1973/1971
Andhra Pradesh	23.9	25.1	24.7	+ 1.7
Assam	31.3	30.0	30.7	- 0.9
Bihar	16.1	18.8	18.0	+ 5.7
Gujarat	83.2	94.7	100.8	+ 10.1
Haryana	34.2	30.5	39.6	+ 7.6
Himachal Pradesh	10.9	12.8	14.8	+ 16.5
J & K	17.4	19.2	18.8	+ 3.9
Kerala	33.1	32.6	34.1	+ 1.5
Madhya Pradesh	14.7	15.4	16.6	+ 6.3
Maharashtra	81.9	82.3	83.4	+ 0.9
Meghalaya	22.5	24.9	24.3	+ 3.9
Mysore(Karnataka)	25.3	28.8	30.3	+ 9.4
Nagaland	34.5	37.9	38.2	+ 5.2
Orissa	14.9	17.3	18.0	+ 9.9
Punjab	51.5	55.7	56.7	+ 4.9
Rajasthan	22.7	23.4	24.5	+ 3.9
Tamilnadu	37.4	42.2	45.2	+ 10.0
Uttar Pradesh	16.9	19.0	18.3	+ 4.1
West Bengal	29.4	33.0	32.5	+ 5.1
Delhi	144.3	161.0	140.0	- 1.5
ALL INDIA@	37.1	39.9	40.9	+ 5.0

N.B. Based on: (i) Depot-wise Sales/Consumption
(ii) International Institute of population studies, Bombay - Population projections for states
(iii) Registrar General, population projection for Delhi

@ = Actual consumption, including R.B.F. but excl. International Bunkers

= Include Mogas Kero., ATF, HSD, L.D.O., Fuel Oils, LPG, Naphtha & Bitumen.

Estimated Sector-wise consumption of Fuel Oils@

		1971 Consumption (000 tonnes)	1971 % to total	1972 Consumption ('000' tonnes)	1972 % to total	1973 Consumption ('000' tonnes	1973 % to total
1.	Road Transport	13	0.3	2	neg.	3	neg.
2.	Railways	57	1.1	60	1.1	61	1.0
3.	Waterways:						
	a) Coastal & Inland	449	9.0	330	6.0	354	6.0
	Bunkers	245	4.9	181	3.3	205	3.5
	b) International Bunkers	204	4.1	149	2.7	149	2.5
	TOTAL TRANSPORT	519	10.4	392	7.1	417	7.0
4.	Agriculture/Plantation.	199	4.0	175	3.2	222	3.7
5.	Power Generation	1289	25.9	1519	27.3	1648	27.8
6.	Iron & Steel	415	8.3	449	8.1	439	7.4
7.	Textile & Fibre	524	10.5	606	10.9	650	11.0
8.	Cement	148	3.0	171	3.1	204	3.4
9.	Ceramics & Glass	202	4.1	182	3.3	219	3.7
10.	Chemicals & Allied Industries	489	9.8	702	12.6	795	13.4
11.	Fertilisers	149	3.0	181	3.2	266	4.5
12.	Aluminium	120	2.4	123	2.2	110	1.9
13.	Sugar	41	0.8	60	1.1	59	1.0
14.	Minning & Querrying	52	1.1	54	1.0	35	0.6
15.	Engineering	248	5.0	292	5.3	361	6.1
16.	Others (Incl. DGH&D)	579	11.7	644	11.6	507	8.5
17.	TOTAL	4974	100	5550	100	5932	100

@ = F.O. Includes T.D.O., L.S.H.S. and H.H.S.

ESTIMATED SECTOR-WISE CONSUMPTION OF L. P. G.

	Sector	1971 Consumption '000'tonnes	1971 % to total	1972 Consumption '000'tonnes	1972 % to total	1973 Consumption '000'tonnes	1973 % to total
1.	Domestic	163	80.7	189	79.4	209	79.4
2.	Commercial	6	3.0	11	4.6	12	4.6
3.	Industry	33	16.3	38	16.0	42	16.0
4.	Others	neg	-	neg	-	-	-
5.	TOTAL	202	100	238	100	263	100

ESTIMATED SECTOR-WISE CONSUMPTION OF REFINERY GAS

1.	Industry	17	63.0	20	64.5	21	95.5
2.	Power-Generation	10	37.0	11	35.5	1	4.5
3.	Others	-	-	-	-	-	-
4.	TOTAL	27	100	31	100	22	100

ESTIMATED SECTOR-WISE CONSUMPTION OF NAPHTHA

1.	Fertilisers	806	72.8	983	76.9	1044	71.8
2.	Petro-Chemicals	217	19.6	210	16.4	313	21.5
3.	Others	84	7.6	85	6.7	97	6.7
	TOTAL	1107	100	1278	100	1454	100

ESTIMATED SECTOR-WISE CONSUMPTION OF H. S. D.

Sector	1971 Consumption '000' tonnes	1971 % to total	1972 Consumption '000'tonnes	1972 % to total	1973 Consumption '000'tonnes	1973 % to total
1. State Transport (incl. Municipal Transport)	3284		561	12.2	599	11.5
2. Other Road Transport (incl. Agriculture (Retail Trade)		77.8	3032	65.6	3359	64.7
3. Railways	517	12.2	559	12.1	581	11.2
4. Bunkers	40	1.0	24	0.5	28	0.5
5. Miscellaneous	380	9.0	444	9.6	626	12.1
TOTAL	4221	100	4620	100	5193	100

ESTIMATED SECTORWISE CONSUMPTION OF L. D. O.

1. Power	112	9.4	143	10.3	158	11.6
2. Bunkers	47	4.0	45	3.3	45	3.3
3. Rest (incl. Agr. and small scale Industries)	1031	86.6	1196	86.4	1157	85.1
TOTAL	1190	100	1385	100	1360	100

ESTIMATED SECTORWISE CONSUMPTION OF WAX DURING 1971-1973.

Sector	1971		1972		1973	
	consumption (000 Tonnes)	% to total	Consumption (000 Tonnes)	% to total	Consumption (000 Tonnes)	% to total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Candle Manufacturing	14	37.9	19	39.6	18	38.3
2. Water Proofing	4	10.8	6	12.5	6	12.8
3. Match Industry	5	13.5	4	8.3	2	4.2
4. Paper Waxing	3	8.1	5	10.4	6	12.8
5. Hard board	neg	-	neg	-	neg	neg
6. Misc.	11	29.7	14	29.2	15	39.9
7. TOTAL:	37	100	48	100	47	100

CONSUMPTION OF DIESEL OIL IN INDIAN RAILWAYS DURING 1960-61 to 1973-74.

Year	No. of diesel locomotives	Consumption of diesel oil (in Kls.)	Consumption per diesel locomotive (in Kls.)
(1)	(2)	(3)	(4)
1960-61	181	62771	346.8
1961-62	228	59444	260.7
1962-63	349	98481	282.2
1963-64	486	182328	375.2
1964-65	621	245633	395.5
1965-66	723	310813	429.9
1966-67	776	365582	471.1
1967-68	892	427126	478.8
1968-69	996	486084	488.0
1969-70	1091	536301	491.6
1970-71	1169	569025	486.8
1971-72	1288	626983	486.8
1972-73	1431	667414	466.4
1973-74	1532	683140	445.9

Source : For col. 2&3 Indian Railways Report and Accounts-1973-74.

FUEL CONSUMPTION IN GAS TURBINE & DIESEL POWER STATION IN INDIA 1972-73

S T A T E	GAS TURBINE & DIESEL POWER STATIONS		
	Oil Consumption (K.L.)	Power Generated (Million KWH)	Average Oil Consumption Litre/KWH generated.
(1)	(2)	(3)	(4)
Andhra Pradesh	11561(a)	23.28	0.50
Assam	4599(b)	260.34(c)	0.40
Bihar	1819	5.10	0.36
Gujarat	1923(d)	187.59(e)	0.34
Haryana	1298	3.27	0.40
Himachal Pradesh	111	0.29	0.38
Jammu & Kashmir	2578	8.94	0.29
Madhya Pradesh	80	0.16	0.50
Maharashtra	277	0.55	0.50
Manipur	3358	11.42	0.29
Nagaland	182	0.32	0.57
Orissa	370	0.70	0.53
Punjab	10070	36.56	0.28
Rajasthan	4183	10.53	0.40
Tripura	2526	5.81	0.43
Uttar Pradesh	2856(f)	5.84(g)	0.49
W.Bengal	3230	8.72	0.37
Uniion Territories			
Delhi	7154	23.67	0.30
Goa, Daman & Diu	1812	5.28	0.34
Laccadive,Minicoy & Aminidive	210	0.37	0.57
All India	61741	603.19*	0.36

(a) All diesel oil consumed by Gas Turbine Plant, Ernaganda.
(b) The gas turbines at Naharkatia consume natural gas. The figure represents therefore the diesel oil used only by diesel enquire stations.
(c) Includes 249.02 million KWH generated by gas turbine at Naharkatia.
(d) The gas turbines at Dhuraran consume natural gas. The figure represents the diesel oil used only be idesel engine s stations.
(e) Includes 182 million KWH generated by gas turbine at Dhuraran.
(f) Includes diesel oil consumed by gas turbine.
(g) Includes 4.24 million KWH generated by gas turbine at Muradnagar.

* Includes 431.02 million KWH energy generated by gas turbine consuming natural gas.

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FUEL CONSUMPTION IN STEAM POWER STATIONS 1972-73

State	Steam Power Station				Gross generation (Million K.W.H.)	Average Heat input in (K.Cal/KWH) generated	Average input of F.O. Litre/KWH
	Coal ('000') Tonnes	Furnace oil Kl.	Natural and other gaseous fuel Cu. Metre/M.T.	Total heat input (K.Cal. $X10^9$)			
1. Andhra Pradesh	1440.1	10,278	-	6745.90	2030.28	3322	0.005
2. Assam	-	3,400	-	20.74	2.4	8642	1.420
3. Bihar	1117.1	1,13655	-	6677.26	2041.29	3271	0.0567
4. Gujarat	887.1	867,327	142.06	16187.3	4430.31	3654	0.199
5. Haryana	76.0	-	-	321.81	102.77	3131	-
6. Himachal Pradesh	-	-	-	-	-	-	-
7. Jammu & Kashmir	29.2	-	-	181.04	25.00	7242	-
8. Karnatka	-	-	-	-	-	-	-
9. Kerala	-	-	-	-	-	-	-
10. Madhya Pradesh	2344.7	15,337	-	10617.81	3353.55	3166	0.0046
11. Maharashtra	2834.3	468,270@	8551 MT(Refinery gas)	19003.09	5957.82	3190	0.0785
12. Orissa	431.3	-	-	2076.58	639.17	3249	-
13. Punjab	28.3	-	-	125.34	27.28	4595	-
14. Rajasthan	47.8	4162	-	324.0	33.80	9585	0.124
15. Tamilnadu	2898.6@	105931	-	9008.31	2869.82	3139	0.037
16. Tripura	-	-	-	-	-	-	-
17. Uttar Pradesh	3114.1	26557	-	16223.5	4055.03	3999	0.0065
18. West Bengal	2665.0	31,486	-	15643.9	4294.15	3643	0.0073
19. D.V.C.	2230.5	35219	-	11700.2	4014.70	2914	0.0088
Union Territories :							
Delhi	913.25	40,077£	-	5500.10	1742.55	3156	0.025
Andeman & Nicobar Islands	11.83$	-	-	14.79	1.00	14790	-

@ : Includes 458,354 M.T. of furnace oil equivalent of low & high Sulphur pith.

@@ : Includes 2391,000 M.T. of lignite used in Neyveli Power station.

£ : Includes 3223 Kl. of diesel oil used

$: Wood fuel.

Source : Public Electricity Supply - All India Statistics - 1972-73

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CRUDE OIL AND PETROLEUM PRODUCTS IMPORTED DURING 1948 to 1974

Q = ('000 ' Tonnes)

V = Rs. Million

YEAR	PRODUCTS		CRUDE		TOTAL	
	Q	V	Q	V	Q	V
1948	2269		-		2269	
1949	2833		-		2833	
1950	2986		-		2986	
1951	3492		-		3492	
1952	3513		-		3513	
1953	3610		-		3610	
1954	3635		504	41.2	4139	
1955	2071		3026	243.1	5097	
1956	1807		3769	300.6	5576	
1957	1869		4438	381.2	6307	
1958	1824		4682	394.9	6506	
1959	1984		5006	389.6	6990	
1960	2032	410.2	5723	405.7	7755	815.9
1961	2481	476.1	5968	393.1	8449	869.2
1962	2984	514.6	6022	387.3	9006	901.9
1963	2909	548.1	6519	417.8	9419	965.9
1964	2956	537.8	6791	425.9	9747	963.7
1965	2880	447.3	6811	403.8	9691	851.1
1966	2207	520.2	7457	561.0	9664	1081.2
1967	951	390.1	8704	795.9	9655	1186.0
1968	933	407.4	10450	938.8	11383	1346.2
1969	1052	382.4	10702	940.0	11754	1322.4
1970	970	305.3	11665	1023.6	12635	1328.9
1971	1932	434.9	12688	1398.8	14620	1833.7
1972	3257	566.9	12310	1442.5	15567	2009.4
1973 *	3993	1009.3	13443	2445.6	17436	3454.9
1974 *	2949	2097.9	13972	9004.7	16921	11102.6

* Provisional

N.B. Imports of ATF from 1952 to 1955, Bitumen from 1948 to 1953 and Lubricants from 1951 to 1955 are not available and have not been included in the total imports. Value data for POL products prior to 1960 were also not available.

IMPORTS OF CRUDE OIL AND PETROLEUM PRODUCTS DURING 1971 - 1974

Q = ('000'Tonnes)
V = Mn.Rs.

I T E M	1971		1972		1973		1974	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
A. CRUDE OIL	12688	1398.79	12310	1442.49	13443	2445.57	13972	9004.70
B. PETROLEUM PRODUCTS								
I. Light Distillates	71	36.90	68	20.43	241	91.80	87	65.94
1. Naphtha	-	-	37	6.81	182	59.19	50	16.88
2. Others	71	36.90	31	13.62	59	32.61	37	49.06
II. Middle Distillates	878	210.95	1303	284.51	1630	562.53	1224	1040.09
1. Kerosene Superior	600	159.48	767	193.68	1003	378.77	852	727.44
2. H.S.D.	118	24.47	96	17.10	325	108.90	268	227.92
3. L.D.O.	158	26.55	422	69.61	302	74.86	104	84.73
4. Others	2	0.45	18	4.12	-	-	-	-
III. Heavy Ends	983	187.05	1886	262.00	2122	355.00	1638	991.85
1. Furnace Oil	863	96.08	1758	169.04	2026	280.90	1533	828.74
2. Lubes	120	90.97	128	92.96	96	74. 10	105	163.10
TOTAL (B)	1932	434.90	3257	566.94	3993	1009.33	2949	2097.88
GRAND TOTAL (A&B)	14620	1833.69	15567	2009.43	17436	3454.90	16921	11102.60

TOTAL EXPORTS OF PETROLEUM PRODUCTS SINCE 1954

YEAR	Quantity (Tonnes)	Value (Rs. Million)
1954	17586	12.73
1955	215967	35.49
1956	375694	51.24
1957	444821	69.37
1958	400952	63.24
1959	196371	43.20
1960	225061	46.13
1961	211254	37.64
1962	227169	38.50
1963	376249	54.99
1964	375158	40.37
1965	344680	39.16
1966	729703	87.56
1967	1057000	142.26
1968	558166	82.53
1969	738867	107.72
1970	412209	37.22
1971	151631	25.54
1972	109313	89.38
1973	154990	53.50
1974*	266310	310.70

** Include supplies to Nepal.

EXPORTS/RE-EXPORTS OF PETROLEUM PRODUCTS FOR THE YEAR 1971 TO 1974

Qty. '000' Tonnes
Value. Rs.million.

PRODUCT	1971		1972		1973		1974	
	Q	V	Q	V	Q	V	Q	V
LIGHT ENDS	140.68	21.23	3.99	8.44	13.60	5.50	130.74	127.00
Naphtha	81.66	9.81	—	—	4.46	1.90	123.69	120.90
Gasoline	59.02	11.42	3.99	8.44	9.14	3.60	7.05	6.10
MIDDLE DISTILLATES	6.54	1.67	89.18	67.32	140.84	46.72	56.46	49.50
Kerosene		—	49.05	32.73	56.13	18.78	38.53	33.50
A.T.F.		—	2.00	1.74	3.80	1.31	—	—
H.S.D	6.54	1.67	25.29	26.34	68.82	23.26	11.93	10.30
L.D.O.	—	—	12.84	6.51	12.09	3.37	6.00	5.70
OTHERS	4.41	2.64	16.14	13.63	0.55	1.28	15.21	17.17
F.O.	—	—	2.71	0.89	—	—	—	—
Asphalt/ Bitumen	2.19	0.49	9.41	5.15	—	0.17	9.39	7.30
Lubes/ Greases	—	—	0.60	1.74	0.07	0.39@	3.11	4.50
Base Oil	—	—	3.36	5.85	—	—	—	—
Wax	2.22	2.15	—	—	0.48	0.72	2.71	5.37
TOTAL POL PRODUCTS	151.63	25.54	109.31	89.39	154.99	53.50	202.41	193.67
Crude Oil	—	—	862.94	136.23	—	—	669.45	385.90
GRAND TOTAL							871.86	579.57

@ = Recoveries of river freight/Sales tax

x = Exclude supplies to Nepal.

EXPORT EARNINGS APRIL 1974 TO MARCH 1975

Qty (Q) = Tonnes

Value (V) = Rs. Lakhs

	Supplies Paid in Foreign Currency		Supplies Paid in Covertible Rupees		Supplies Paid in Non-covertible Rupees.		T O T A L	
	Q	V	Q	V	Q	V	Q	V
1. SHIPPING BUNKERS								
International F/Flags	16160	160.68	43758	373.38	-	-	59918	534.06
International I/Flags	328	5.97	167	10.11	56237	511.53	56732	527.61
Coastal F/Flags	-	-	5170	46.60	-	-	5170	46.60
Coastal I/Flags	-	-	-	-	141377	1117.00	141377	1117.00
T O T A L	16488	166.65	49095	430.09	197614	1628.53	263197	2225.27
2. CCP Bunkers	13249	34.90	-	-	1338	2.35	14587	37.25
3. ATF to International Airlines Bunkers (Excluding Air India)	70526	1154.00	216143	3434.70	13815	212.18	300489	4800.88
4. Export of POL Products.	169974	1632.09	1490	31.60	-	-	171464	1663.69
5. HIPL Crude	445019	404.03	-	-	-	-	445019	404.03
GRAND TOTAL	715256	3391.67	266733	3896.39	212767	1843.06	1194756	9131.12

Note:- Exports data exclude supplies to Nepal.

F/Flags = Foreign Flag Vessels

I/Flags = Indian Flag Vessels

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XI. MANPOWER

MANPOWER EMPLOYED IN THE PETROLEUM INDUSTRY IN INDIA

(Numbers)

Category	1971	1972	1973	1974
1. Exploration & Production	25850	25898	25593	26102
2. Refining*	11518	11619	11594	12093
3. Marketing	19739	19415	19322	19239
4. Others:				
i) IOC (Pipeline)	523	574	620	620
ii) ONGC(Pipeline)	324	286	278	228
iii) OIL (Pipeline)	439	434	429	425
iv) I.I.P.	602	621	603	644
v) E.I.L.	813	1162	1394	1641
TOTAL	2701	3077	3324	3558
GRAND TOTAL	59808	60009	59833	60992

CATEGORY WISE MANPOWER EMPLOYED IN THE PETROLEUM INDUSTRY IN INDIA

(Numbers)

Category	1971	1972	1973	1974
1. Executive/Managerial	4975	4992	6024	6488
2. Supervisory	6512	6770	6148	6078
3. Clerical	11336	11499	11282	12705
4. Workman	36923	36716	36359	35709
5. Total	59746	59977	59813	60973
6. Expatriates/Foreign Experts	62	32	20	19
GRAND TOTAL	59808	60009	59833	60992

NOTE:-

i) Staff employed as on 1st April of each year.
ii) Total does not include Staff employed on contract basis.

* Including IOC Head Office, Regional Office and R & D Centre.

MANPOWER EMPLOYED IN EXPLORATION AND PRODUCTION OF PETROLEUM INDUSTRY IN INDIA

(Numbers)

	Category	1971	1972	1973	1974
1.	Executive/Managerial	1813	1813	1838	1857
2.	Supervisory	2969	3074	3148	3281
3.	Clerical	3463	3477	3351	3490
4.	Workmen	17571	17522	17247	17463
5.	Total	25816	25886	25584	26091
6.	Expatriate/Foreign experts	34	12	9	11
	GRAND TOTAL	25850	25898	25593	26102

*MANPOWER EMPLOYED IN THE PETROLEUM REFINING IN INDIA @

1.	Executive/Managerial	565	563	640	899
2.	Supervisory	1138	1180	1196	1102
3.	Clerical	1294	1334	1389	1430
4.	Workmen	8505	8531	8363	8657
5.	Total	11502	11628	11588	12088
6.	Expatriates/Foreign Experts	16	11	6	5
	GRAND TOTAL	11518	11619	11594	12093

MANPOWER EMPLOYED IN MARKETING COMPANIES IN INDIA @

1.	Executive/Managerial	2450	2461	3288	3586
2.	Supervisory	1958	1946	1198	892
3.	Clerical	6103	6021	5943	7124
4.	Workmen	9217	8978	8888	7634
5.	Total	19728	19406	19317	19236
6.	Expatriates/Foreign Experts	11	9	5	3
	GRAND TOTAL	19739	19415	19322	19239

@ = Manpower employed by Companies directly.

N.B. (i) Staff employed as on 1st April of each year.

(ii) Total does not include staff employed on contract basis.

* (iii) Including IOC Head Office, Regional Office and R&D Centre.

INDEX NUMBER OF WHOLE SALE PRICES OF SELECTED PETROLEUM PRODUCTS IN INDIA

Y E A R	Aviation Spirit	Petrol	Diesel Oil	Kerosene	Lubricating Oil
1961-62	100.	100	100	100	100
1962-63	97.1	101.9	102.1	101.9	99.5
1963-64	111.8	120.2	128.9	135.6	96.0
1964-65	111.9	120.6	129.3	135.2	95.8
1965-66	117.4	127.0	110.9	146.6	103.4
1966-67	120.9	131.5	110.3	154.5	115.9
1967-68	132.0	144.5	119.3	154.9	123.3
1968-69	133.1	148.6	121.7	157.8	125.3
1969-70	147.8	160.0	122.8	172.1	133.1
1970-71	160.9	175.5	121.3	176.6	141.9
1971-72	194.9	204.5	123.9	186.0	139.7
1972-73	201.6	213.1	130.5	202.9	140.5
1973-74	279.8	313.9	159.7	235.2	193.4
1974-75					
April 1974	462.3	471.3	306.2	320.6	444.9
May 1974	462.3	471.3	306.2	320.6	438.2
June 1974	462.3	471.3	306.2	320.6	438.2
July 1974	462.3	471.7	306.2	321.5	438.2
Aug. 1974	462.3	472.1	306.2	322.4	438.2
Sept. 1974	462.9	475.8	306.2	331.5	438.2
Oct. 1974	463.4	479.4	324.2	340.5	438.2
November 1974	463.4	479.4	324.2	340.5	438.2
Dec. 1974	463.4	479.4	324.2	340.5	438.2
Jan. 1975	463.4	479.4	324.2	340.5	438.2
Feb. 1975	463.4	479.4	324.2	340.5	438.2

SOURCE: Indices compiled by the Economic Adviser, Ministry of Industrial Development and Internal Trade, Government of India.

IX. EXCISE & CUSTOM DUTIES & SALES TAX

REALIZATION OF EXCISE & CUSTOMS DUTIES FROM CRUDE OIL AND PETROLEUM PRODUCTS

(Rs. Lakhs)

PRODUCTS	ACTUALS			1974 - 75		1975-76
	1971-72	1972-73	1973-74	BE	RE	BE
A. EXCISE DUTIES						
1. Mogas	21966	22818	30723	41331	38500	38500
2. Kerosene Oil	12336	13791	14112	13000	13600	17600
3. Refined Diesel Oils & Vap.Oil.	26386	28379	29102	29500	29900	29200
4. Diesel Oil(NOS)	2187	2015	2304	3300	2500	2710
5. Furnace Oil	3175	2482	3001	3400	3000	2810
6. Asphalt / Tar	1251	1670	1602	1855	1500	1400
7. Petroleum Products (Others)	2662	4345	4684	5150	5200	5700
8. Blended or Compcun-ded Lubes & Greases	973	1148	1737	2000	4800	5200
9. Calcined Petroleum Coke.	83	94	120	100	350	400
TOTAL (A)	70839	76742	87385	99636	99350	103520
B. CUSTOM DUTIES						
1. Petroleum Crude	137	582	-	1140	-	1380
2. Mogas	828	575	764	1260	1120	1400
3. Kerosene Oil	2079	2830	3349	4830	4100	2900
4. Batching, Lubricating & Other Mineral Oils	1342	1238	1525	1290	1500	1700*
5. HSD & Vap Oil	573	807	1778	450	1400	2660
6. Indl. Fuel Oil	1378	2569	2187	600	1450	2000
TOTAL (B)	6337	8601	9603	9570	9570	12130
GRAND TOTAL	77176	85343	96988	109206	108920	115650

SOURCE:- Explanatory Memorandum on the Budget of the Central Government.

* = 1450 Lube Oils
340 Other Mineral Oils.

CENTRAL EXCISE DUTY AS ON 1.3.1975.

(Figures in Rs.)

Products	Unit	Excise Duty at 15° C				TOTAL (3) to (6)	Excise duty at 29.5° C				Total (8) to (11)
		Basic	Additional WGOP	Additional OPC	Additional DEVALUATION		Basic	Additional WGOP	Additional OPC	Additional DEVALUATION	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1. Avgas 100/130	KL	2100.00	41.80	4.75	35.00	2181.55	2063.67	41.08	4.67	34.39	2143.81
2. " 115/145	"	"	"	"	"	"	2062.20	41.05	"	34.37	2142.29
3. " 73	"	"	"	"	"	"	2063.04	41.06	"	34.38	2143.15
4. Motor Sprit 83	"	"	"	"	"	"	2064.30	41.09	"	34.41	2144.47
5. " " 93	"	"	"	"	"	"	2065.56	41.11	"	34.43	2145.77
6. Aviation Turbine Fuel	"	365.00	21.70	2.05	44.70	433.45	359.96	21.40	2.02	44.08	427.46
7. Kerosene Superior	"	"	"	"	"	"	360.04	"	"	44.09	427.55
8. " Inferior	"	50.90	55.85	0.10	31.75	138.60	50.28	55.17	0.10	31.36	136.91
9. High Speed Diesel Oil	"	361.05	22.90	0.85	33.70	418.50	356.63	22.62	0.84	33.29	413.43
10. Light Diesel Oil	"	95.55	51.95	0.80	31.85	180.15	94.47	51.36	0.79	31.49	178.11
11. Furnace Oil	"	100.00	21.05	-	17.70	138.75	98.99	20.84	-	17.52	137.35
12. Bitumen St.Gr(Bulk)	MT	30.00	40.30	34.75	20.45	125.50					
13. " " "(Packed)	"	75.00	"	"	"	170.50					
14. " Cutbacks(BS/RC)	"	75.00	27.00	47.80	25.20	175.00					
15. L.P.Gas	"	250.00	-	-	-	250.00					

STATEMENT SHOWING TAX RATES APPLICABLE ON PETROLEUM PRODUCTS IN DIFFERENT STATES AS ON 1-6-1975

Sr. No.	Name of the States / Name of the Products	Andhra Pradesh	Assam	Bihar	Chandigarh	Delhi	Goa, Daman & Deu	Gujarat
1.	Aviation Spirit	13.96%	30 Ps/Ltr.	15%	9 Ps/Ltr.	7%	11%	9% Duty Paid 20% Bonded
2.	Aviation Turbine Fuel	11.43%	30 "	15%	9 PPL	7%	11%	20%
3.	Motor Spirit	12.68%	30 "	[illegible]%	9 Ps/Ltr.	7%	11%	11%
4.	High Speed Diesel Oil	11.43%	11 "	15%	7 "	7%	11%	9%
5.	Light Diesel Oil	11.43%	11 "	12%	6%	5%	11%	5%
6.	Mosquito Larvicidal Oil	11.43%	7%	-	6%	5%	6%	5%
7.	Superior Kerosene	4.46%	3 Ps/Ltr.	5%	6%	Exempted	3%	3%
8.	Inferior Kerosene	4.46%	2 "	5%	6%	"	3%	3%
9.	Furnace Oil/Tea Drier Oil	4.46%	7%	7%	6%	5%	6%	3%
10.	Mineral Turpentine Oil	4.46%	7%	-	-	5%	-	5%
11.	Lube Oils	6.67%	10 Ps/Ltr.	7%	6%	5%	6%	3%
12.	Grease	6.67%	11 " KG	7%	6%	5%	6%	3%
13.	Petroleum Naphtha	6.67%	7%	7%	6%	5%	6%	5%
14.	Bitumen	4.46%	7%	7%	6%	5%	6%	5%
15.	Petroleum Coke	3%	3%	3%	3%	3%	3%	3%
16.	Indane (liquified Petroleum Gas)	5.56% *	7%	7%	6%	5%	-	12%
17.	Transformer Oil	4.46%	7%	7%	6%	5%	-	5%
18.	Tins & Containers	4.46%	6%	7%	6%	5%	-	3%
19.	H.B. Fluid	4.46%	10 PPL	-	-	-	-	8%

* 0 LPG in containers
0 LPG in Bulk attracts 4.46%

Contd.....

STATEMENT SHOWING TAX RATES APPLICABLE ON PETROLEUM PRODUCTS IN DIFFERENT STATES AS ON 1.6.1975.

Sr. No.	Name of the States / Name of the Products	Haryana	Himachal Pradesh	Jammu & Kashmir	Kerala	Madhya Pradesh	Maharashtra	Karnataka
1.	Aviation Spirit	9 Ps/ Ltr.	7 Ps/ Ltr.	8%	12%	8.74%	23%(Bonded) 9%(Duty paid)	12%
2.	Aviation Turbine Fuel	7%	7%	8%	8%	8.74%	30%(Bonded) 23%(Duty paid)	14%
3.	Motor Spirit	9 Ps/ Ltr.	7 Ps/ Ltr.	12 Ps/ Ltr.	55%	11.17%	11%	12%
4.	High Speed Diesel Oil	9 %	7 "	12 "	20%	9.94%	9%	14%
5.	Light Diesel Oil	7%	7%	8%	20%	13.17%	5%	14%
6.	Mosquito Larvicidal Oil	7%	7%	8%	4%	-	5%	3½%
7.	Superior Kerosene	7%	7%	2%	4%	7.56%	3%	4%
8.	Inferior Kerosene	7%	7%	2%	4%	7.56%	3%	4%
9.	Furnace Oil/Tea Drier Oil	7%	7%	8%	5%	8.74%	5%	6%
10.	Mineral Turpentine Oil	7%	7%	8%	4%	-	5%	-
11.	Lube Oils	7%	7%	8%	7%	8.74%	5%	6%
12.	Greases	7%	7%	8%	7%	8.74%	5%	6%
13.	Petroleum Naphtha	7%	7%	8%	5%	8.74%	5%	3½%
14.	Bitumen	7%	7%	8%	4%	8.74%	5%	3½%
15.	Petroleum Coke	3%	3%	3%	3%	3%	3%	3%
16.	Indane(Liquified Petroleum Gas)	7%	7%	Exempted	4%	8.74%	5%	6%
17.	Transformer Oil	7%	7%	8%	7%	8.74%	5%	6%
18.	Tins & Containers	7%	7%	8%	4%	8.74%	8%	4%
19.	H.B. Fluid	-	-	—	7%	8.74%	8%	3½%

...Contd.....

STATEMENT SHOWING TAX RATES APPLICABLE ON PETROLEUM PRODUCTS IN DIFFERENT STATES AS ON 1.6.1975.

Sr. No.	Name of the States / Name of the Products	Manipur	Orissa	Pondicherry	Punjab	Rajasthan	Tamil Nadu	Uttar Pradesh	West Bengal
1.	Aviation Spirit	15 PPL	8 Ps/ Ltr.	3%	15 Ps/ Ltr.	12%	21 Ps/ Ltr.	25 PPL	9%
2.	Aviation Turbine Fuel	15 PPL	5%	3%	6%	12%	21 Ps/ Ltr.	25 PPL	25%
3.	Motor Spirit	20 Ps/ Ltr.	15 Ps/ Ltr.	3%	15 Ps/ Ltr.	15%	21 Ps/ Ltr.	25 PPL	9.9%
4.	High Speed Diesel	15 Ps/ Ltr.	12 Ps/ Ltr.	3%	10 Ps/ Ltr.	12½%	15 Ps/ Ltr.	10 PPL	13%
5.	Light Diesel Oil	10 Ps/ Ltr.	12 Ps/ Ltr.	3%	6%	20%	15 Ps/ Ltr.	10 PPL	13%
6.	Mosquito Larvicidal Oil	10 PPL	5%	2½%	6%	7%	8%	4.2%	6.66%
7.	Superior Kerosene	3%	5%	Exempt	6%	7%	8½%	8.7%	5.53%
8.	Inferior Kerosene	3%	2%	"	6%	7%	8½%	8.7%	Exempted
9.	Furnace Oil/Tea Drier Oil	3%	5%	2½%	6%	7%	8%	4.2%	6.66%
10.	Mineral Turpentine Oil	-	5%	-	-	12%	-	4.2%	-
11.	Lube Oils	10 Ps/ Ltr.	8%	3%	6%	7%	8%	8.7%	6.66%
12.	H.B. Fluid	-	-	-	-	7%	8%	8.7%	-
13.	Greases	10 Ps/ Ltr.	8%	3%	6%	7%	8%	8.7%	6.66%
14.	Petroleum Naphtha	-	5%	-	-	-	8%	6.4%	6.66%
15.	Bitumen	-	5%	-	6%	7%	8%	8.7%	6.66%
16.	Petroleum Coke	3%	3%	3%	3%	3%	3%	3%	3%
17.	Indane (Liquified Petroleum Gas)	-	5%	-	6%	7%	8%	8.7%	6.66%
18.	Transformer Oil	-	-	-	6%	7%	8%	-	6.66%
19.	Tins Containers	-	5%	-	6%	7%	4%	8.7%	6.66%

PPL = Ps per litre.

Contd.....

IN ADDITION TO THE SALES TAX PAYABLE THE FOLLOWING TAX AMOUNTS ARE ALSO PAYABLE/RECOVERABLE

1.	BIHAR	: Additional Tax at 50 Paise eff.1.2.1974 for every Rs.100/- of the value of the bill is payable (on products under Sales Tax Act)
2.	HARYANA	: Surcharge at 2% on Sales Tax on all products under Sales Tax Act is payable.
3.	MADHYA PRADESH	: Turn over Tax at 0.4% of the value of the Bill on all products is payable.
4.	PUNJAB	: Additional Tax at 2% of the Sales Tax on products under General Sales Tax Act is payable.
5.	WEST BENGAL	: Surcharge at 10% eff. 20.4.1974 of Sales Tax on Sales Tax Products is payable.
6.	KERALA	: Surcharge at 5% of the Sales Tax is payable, but the same is not recoverable from the market.
7.	JAMMU & KASHMIR	: Surcharge at 5% of Sales Tax is payable but the same is not recoverable from the market.
8.	MAHARASHTRA	: Additional Sales Tax @ 6% of tax is payable but the same is not recoverable from the market. This does not apply to Kerosene.
9.	KARNATAKA	: Additional tax @ 10% of Sales Tax is payable and is not recoverable from the market.
10.	TAMIL NADU	: Surcharge at 5% on Tax is also payable which is recoverable. Additional Sales at 10% eff. 1.4.1974 of Tax is also payable which has to be borne by seller i.e. not recoverable.

Source: M/s. Indian Oil Corporation Ltd., BOMBAY

TONNAGE OF INDIAN TANKER FLEET

(DWT in '000')

Year*	Oil Tankers		Ore Oil Carriers		TOTAL	
	No. of tankers	D.W. Tonnage	No. of Ships	D.W. Tonnage	No. of Ships	D.W. Tonnage
(1)	(2)	(3)	(4)	(5)	(6)	(7)
		(A) Coastal Tankers				
1966	3	37.3	-	-	3	37.3
1967	4	60.4	-	-	4	60.4
1968	5	75.0	-	-	5	75.0
1969	5	75.0	-	-	5	75.0
1970	5	74.1	-	-	5	74.1
1971	5	74.1	-	-	5	74.1
1972	4	58.0	-	-	4	58.0
1973	3	47.9	-	-	3	47.9
1974	5	80.7	-	-	5	80.7
		(B) Overseas Tankers				
1966	5	221.2	3	61.8	8	283.0
1967	5	227.4	3	61.8	8	289.2
1968	5	229.8	5	144.6	10	374.4
1969	6	317.5	6	186.0	12	503.5
1970	7	409.9	9	381.5	16	791.4
1971	7	409.9	10	467.0	17	876.9
1972	8	427.6	10	467.0	18	894.6
1973	9	449.7	10	659.7	19	1109.4
1974	14	826.8	12	952.2	26	1779.0
		(C) All Tankers				
1966	8	258.5	3	61.8	11	320.3
1967	9	287.4	3	61.8	12	349.2
1968	10	304.8	5	144.6	15	449.4
1969	11	392.5	6	186.0	17	578.5
1970	12	484.0	9	381.5	21	865.5
1971	12	484.0	10	467.0	22	951.0
1972	12	485.6	10	467.0	22	952.6
1973	12	497.6	10	659.7	22	1157.3
1974	19	907.5	12	952.2	31	1859.7

* As on 31st December of Each Year.

SOURCE:- Ministry of Shipping & Transport.

INDIAN TANKER FLEET AS ON 31-12-1974

Owners	Name of Vessel	D.W. Tonnes	Year Build
(1)	(2)	(3)	(4)
1. Shipping Corporation of India	Lajpat Rai	48484	1965
	Desh Bandhu	36232	1964
	Jawahar Lal Nehru	87612	1969
	Lal Bahadur Shastri	87649	1970
	Nanak	34780	1956
	Gargi	57588	1964
	Netaji Subhash Bose	87980	1973
	Vivekananda	87980	1974
	Chhatrapati Shivaji	87980	1974
	B.R.Ambedkar	88041	1974
	Desh Deap	11226	1959
	Visvesvaraya	16400	1974
	Bhagat Singh	16480	1974
	Bellary*	85000	1969
	Bailadila*	85520	1971
	Barauni*	85000	1970
	Chanakya*	21615	1964
	Bhaskara*	21594	1965
	Leelavati	21615	1965
	Moti Lal Nehru*	112289	1973
	Gautama Buddha*	127468	1974
	Abul Kalam Azad*	112539	1974
	Jhansi Ki Rani*	75000	1974
2. Great Eastern Shipping Co.	Jag Jyoti	17610	1968
	Jag Prakash	25072	1974
	Jag Jwala	16010	1952
	Jag Laadki*	101500	1972
3. Ratnakar Shipping Co.Ltd.	Ratna Jayshree	59284	1966
4. Thakur Shipping Co.	Varuna Vahini	20460	1961
5. Scindia Steam Nav.Co.	Walchand*	103100	1973
6. Varun Shipping Co.Ltd.	Aryadoot	20637	1960

* Ore Oil Carriers.

SOURCE: MINISTRY OF SHIPPING & TRANSPORT.

SHARE OF TRAFFIC IN PETROLEUM PRODUCTS AND FERTILISER & FERTILIZER MATERIALS IN THE TOTAL TRAFFIC HANDLED AT VARIOUS MAJOR PORTS DURING 1969-70, 1970-71, 1971-72 & 1973-74 up to November,73.

Name of Major Port	YEAR	Total Traffic (Million Tonnes)	Of the traffic in Col.3, traffic in POL (Million Tonnes)	Fertiliser & Fertiliser raw material Mn. Tonnes	Total Col. (4+5)	PERCENTAGES Col. 4 to Col.3	Col. 5 to Col.3	Col.6 to Col.3
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
CALCUTTA	1969-70	6.28	1.49	0.23	1.72	23.73	3.66	27.39
	1970-71	5.96	1.40	0.13	1.53	23.49	2.18	25.66
	1971-72	7.30	1.86	0.19	2.05	25.48	2.60	28.08
	1972-73	6.62	1.98	0.38	2.36	29.91	5.74	35.05
	1973-74*	4.47	1.39	0.28	1.67	31.10	6.26	31.36
BOMBAY	1969-70	15.17	8.45	1.44	9.89	55.70	9.49	65.19
	1970-71	14.37	8.27	1.08	9.35	57.55	7.51	65.06
	1971-72	16.14	9.58	1.37	10.95	59.35	8.49	67.84
	1972-73	15.99	9.66	1.56	11.22	60.41	9.76	70.17
	1973-74*	11.63	6.64	0.36	7.00	57.09	5.4	60.19
MADRAS	1969-70	6.44	2.24	0.34	2.58	34.78	5.28	40.06
	1970-71	6.93	2.70	0.47	3.17	38.96	6.78	45.74
	1971-72	6.79	2.79	0.48	3.27	41.09	7.07	48.16
	1972-73	6.82	3.00	0.60	3.60	43.99	8.80	52.79
	1973-74*	4.93	2.36	0.30	2.66	47.87	6.09	53.96
COCHIN	1969-70	4.79	3.56	0.18	3.74	74.32	3.76	78.08
	1970-71	4.84	3.57	0.26	3.83	73.76	5.37	79.13
	1971-72	4.69	3.39	0.23	3.62	72.28	4.90	77.18
	1972-73	4.20	2.96	0.18	3.14	70.48	4.28	74.76
	1973-74*	2.59	1.75	0.15	1.90	67.57	5.79	73.36
VISAKHAPATNAM	1969-70	8.13	1.93	0.54	2.47	23.74	6.64	30.38
	1970-71	8.73	1.66	0.63	2.29	19.01	7.42	26.23
	1971-72	8.64	1.92	0.74	2.66	22.22	8.57	30.79
	1972-73	7.41	1.76	0.63	2.39	23.75	8.50	32.25
	1973-74*	5.18	1.28	0.51	1.79	24.71	9.85	33.56
KANDLA	1969-70	2.11	0.86	0.36	1.22	40.6	17.06	57.812
	1970-71	1.61	0.92	0.20	1.12	57.14	12.42	69.56
	1971-72	2.03	1.28	0.46	1.74	63.05	22.66	85.71
	1972-73	2.43	1.39	0.62	2.01	57.20	25.52	82.72
	1973-74*	2.10	1.12	0.31	1.43	53.33	14.76	68.09
MORMUGOA	1969-70	9.03	0.15	0.05	0.20	1.66	0.55	2.21
	1970-71	11.01	0.24	0.09	0.33	2.18	0.82	3.00
	1971-72	11.70	0.32	0.07	0.39	2.75	0.60	3.33
	1972-73	12.85	0.38	0.05	0.43	2.96	0.30	3.35
	1973-74*	8.07	0.39	0.01	0.40	4.83	0.12	4.95
PARADIP	1969-70	1.75	-	-	-	-	-	
	1970-71	2.16	-	-		-	-	
	1971-72	1.91	-	-		-	-	
	1972-73	2.20	-	-		-	-	
	1973-74*	1.83	-	-		-	-	
TOTAL	1969-70	54.42	18.68	3.14	21.82	34.32	5.77	40.09
	1970-71	55.61	18.76	2.86	21.62	33.73	5.14	38.87
	1971-72	59.20	21.14	3.54	24.68	35.71	5.98	41.69
	1972-73	58.34	21.13	4.02	25.15	36.22	6.89	43.11
	1973-74*	40.80	14.93	2.19	17.12	36.59	5.37	41.96

* = upto 30.11.73 Source: Annual Report of the Ministry of Shipping and Transport 1973-74.

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COASTAL MOVEMENT OF PETROLEUM PRODUCTS

(Quantity moved to Indian Ports)

('000' Tonnes)

Year	I/F	F/F	Total	Freight Paid (Rs.Million)
1968	754.71	2442.61	3197.32	60.04
1969	1089.76	1941.68	3031.44	54.20
1970	1131.23	1695.36	2826.59	65.79
1971	1190.04	1656.50	2846.54	82.79
1972	1452.89	1138.18	2591.07	75.50
1973(Prov.)	1452.06	1164.20	2616.26	86.96

N.B. I/F= Indian Flag Vessels

F/F= Foreign Flag Vessels

* = Includes Freight paid on Demurrage and Dead Freight paid.

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AFRA FREIGHT COSTS 1972,73 & 74

RAS TANURA TO BOMBAY

$ per long ton

	General Purpose (16,500-24,999 dwt)	Medium Range (25,000-44,999)	L.R.I. (45,000-79,999)	L.R.2 (80000-159999)	VLCC 160000 & above
1972					
January	1.87	1.66	1.38	1.21	
February	2.02	1.80	1.44	1.26	
March	1.95	1.81	1.45	1.27	
April	1.90	1.76	1.42	1.23	
May	1.89	1.70	1.35	1.15	
June	1.86	1.64	1.30	1.09	
July	1.87	1.63	1.27	1.10	
August	1.91	1.66	1.28	1.12	
September	1.91	1.66	1.29	1.11	
October	1.96	1.69	1.29	1.11	
November	2.02	1.73	1.32	1.13	
December	2.02	1.73	1.36	1.17	
Average,72	1.93	1.71	1.35	1.16	
1973					
January	2.21	1.90	1.45	1.25	
February	2.26	1.98	1.49	1.30	
March	2.30	2.02	1.55	1.37	
April	2.45	2.14	1.65	1.44	
May	2.43	2.20	1.73	1.53	
June	2.48	2.21	1.75	1.53	
July	2.78	2.39	1.75	1.55	
August	3.24	2.80	2.00	1.72	
September	3.63	3.04	2.22	1.96	
October	3.70	3.20	2.32	2.13	
November	3.95	3.45	2.49	2.39	
December	4.58	3.90	2.74	2.57	
Average,73	3.00	2.60	1.93	1.60	
1974					
January	4.20	3.50	2.50	2.25	1.55
February	3.97	3.19	2.21	1.83	1.46
March	4.09	3.39	2.25	1.78	1.45
April	4.02	3.36	2.18	1.80	1.42
May	4.01	3.33	2.18	1.82	1.42
June	3.97	3.34	2.18	1.75	1.41
July	3.84	3.26	2.14	1.66	1.39
August	3.64	3.21	2.16	1.67	1.41
September	3.41	3.03	2.08	1.62	1.39
October	3.28	2.95	1.97	1.55	1.34
November	3.41	2.96	1.97	1.54	1.30
December	3.51	3.02	2.06	1.57	1.34
Average,74	3.78	3.21	2.16	1.74	1.41

WORLD SCALE FLAT RATE
RAS TANURA TO BOMBAY

($ per long ton)

Date	Rate
1st Jan.1972	1.60
1st Feb.1972	1.68
1st Jan.1973	1.72
1st Jan.1974	1.79

* Available only w.e.f. January,'74.

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AFRA FREIGHT COSTS 1972,73 & 74

RAS TANURA TO MADRAS

$ per long ton

	General Purpose (16500-24999 dwt)	Medium Range (25000-44999)	L.R.1. (45000-79999)	L.R.2 (80000-159999)	VL CC * (160000 and above
1972					
January	2.98	2.64	2.20	1.93	
February	3.16	2.81	2.26	1.97	
March	3.05	2.84	2.28	1.99	
April	2.93	2.70	2.12	1.80	
May	2.96	2.65	2.12	1.80	
June	2.92	2.57	2.04	1.71	
July	2.93	2.55	1.98	1.71	
August	3.00	2.60	2.00	1.75	
September	2.99	2.60	2.02	1.74	
October	3.07	2.65	2.01	1.74	
November	3.16	2.70	2.06	1.77	
December	3.16	2.71	2.13	1.83	
Average,72	3.03	2.67	2.11	1.82	
1973					
January	3.42	2.94	2.24	1.93	
February	3.50	3.07	2.30	2.02	
March	3.56	3.12	2.40	2.12	
April	3.80	3.31	2.56	2.23	
May	3.75	3.41	2.67	2.36	
June	3.83	3.42	2.71	2.36	
July	4.29	3.69	2.71	2.40	
August	5.01	4.33	3.09	2.67	
September	5.61	4.70	3.44	3.03	
October	5.72	4.95	3.59	3.30	
November	6.12	5.33	3.83	3.69	
December	7.08	6.03	4.24	3.97	
Average,73	4.64	4.03	2.98	2.67	
1974					
January	6.35	5.31	3.78	3.40	2.35
February	6.01	4.83	3.35	2.76	2.21
March	6.20	5.13	3.41	2.69	2.20
April	6.08	5.09	3.30	2.73	2.15
May	6.06	5.04	3.31	2.76	2.15
June	6.02	5.06	3.30	2.65	2.14
July	5.82	4.93	3.24	2.52	2.10
August	5.51	4.86	3.28	2.53	2.13
September	5.17	4.59	3.15	2.45	2.10
October	4.97	4.46	2.99	2.34	2.02
November	5.17	4.49	2.99	2.33	1.98
December	5.32	4.57	3.12	2.38	2.02
Average,74	5.72	4.86	3.27	2.63	2.13

WORLD SCALE FLAT RATE
RAS TANURA TO MADRAS

$ per long ton

Date	Rate
1st Jan. 1972	2.55
1st Feb. 1972	2.63
1st Jan. 1973	2.66
1st Jan. 1974	2.71

* Available only w.e.f. Jan. 1974.

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AFRA FREIGHT COSTS 1972,73 & 74

RAS TANURA TO CALCUTTA

$ per long ton

	General Purpose (16500-24999 dwt)	Medium Range (25000-44999)	L.R.1 (45000-79999)	L.R.2. (80000-159999)	VLCC * (160000 and above
1972					
January	3.68	3.26	2.72	2.39	
February	3.88	3.46	2.77	2.42	
March	3.74	3.49	2.80	2.45	
April	3.65	3.39	2.72	2.37	
May	3.63	3.26	2.60	2.21	
June	3.58	3.15	2.50	2.10	
July	3.60	3.13	2.44	2.11	
August	3.68	3.19	2.46	2.15	
September	3.67	3.19	2.48	2.14	
October	3.78	3.25	2.47	2.14	
November	3.88	3.32	2.53	2.17	
December	3.89	3.33	2.62	2.25	
Average,72	3.72	3.28	2.59	2.24	
1973					
January	4.22	3.62	2.76	2.38	
February	4.31	3.78	2.84	2.49	
March	4.39	3.85	2.96	2.61	
April	4.68	4.09	3.15	2.75	
May	4.62	4.20	3.29	2.91	
June	4.72	4.21	3.34	2.91	
July	5.29	4.56	3.34	2.96	
August	6.18	5.34	3.80	3.29	
September	6.92	5.79	4.24	3.73	
October	7.05	6.10	4.43	4.06	
November	7.54	6.57	4.75	4.55	
December	8.72	7.43	5.23	4.90	
Average,73	5.72	4.96	3.68	3.29	
1974					
January	7.81	6.52	4.65	4.18	2.89
February	7.39	5.93	4.12	3.40	2.71
March	7.62	6.31	4.19	3.30	2.70
April	7.47	6.25	4.06	3.35	2.64
May	7.45	6.19	4.06	3.39	2.64
June	7.39	6.22	4.05	3.26	2.63
July	7.15	6.06	3.99	3.09	2.59
August	6.77	5.97	4.03	3.10	2.62
September	6.35	5.64	3.87	3.01	2.58
October	6.11	5.48	3.67	2.88	2.48
November	6.35	5.51	3.67	2.87	2.43
December	6.53	5.62	3.83	2.93	2.49
Average,74	7.03	5.97	4.02	3.23	2.62

* Available only w.e.f. Jan.74.

WORLD SCALE FLAT RATE
RAS TANURA TO CALCUTTA

($ per long ton)

Date	Rate
1st Jan.1972	3.15
1st Feb.1972	3.23
1st Jan.1973	3.28
1st Jan.1974	3.33

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Retail Outlets in India as on 1st Jan. of each year

(Number)

Year		B/Shell	ESSO/ HPCL	Caltex	I.O.C.	IBPC	A.O.C.	Total
1968	Nos.	3683	1955	1437	1516	229	119	8939
	%	41.2	21.9	16.1	16.9	2.6	1.3	100
1969	Nos.	3700	1948	1396	2131	223	124	9522
	%	38.8	20.5	14.7	22.4	2.3	1.3	100
1970	Nos.	3577	1922	1392	2655	233	129	9908
	%	36.1	19.3	14.0	26.8	2.4	1.4	100
1971	Nos.	3583	1928	1384	2968	249	144	10255
	%	35.0	18.8	13.5	28.9	2.4	1.4	100
1972	Nos.	3535	1923	1384	3129	297	150	10418
	%	33.9	18.5	13.3	30.0	2.9	1.4	100
1973	Nos.	3478	1920	1372	3274	391	155	10590
	%	32.8	18.1	13.0	30.9	3.7	1.5	100
1974	Nos.	3262	1887	1359	3349	442	164	10463
	%	31.2	18.0	13.0	32.0	4.2	1.6	100
1975	Nos.	3173	1868	1206	3550	480	164	10441
	%	30.4	17.9	11.6	34.0	4.6	1.5	100

Note: (1) % = Percentage -

(2) - Excluding Consumers retail outlets

CRUDE OIL & PRODUCTS PIPELINE IN INDIA

Pipelines	OWNED BY	Length in kms.	Diametre
1.	2.	3.	4.
1. CRUDE PIPELINES			
i) Digboi Oil Field-Digboi Refinery	A.O.C.	12	6"
ii) Digboi Oil Field-Digboi Refinery	A.O.C.	11	4"
iii) Nahorkatiya-Gauhati	O.I.L.	404	16"
iv) Gauhati-Barauni	O.I.L.	754	14"
v) Ankleshwar-Koyali	O.N.G.C.	94.8	16"
vi) Lakwa-Moran	O.N.G.C.	17	12¾"
vii) Kalol-Nawagam	O.N.G.C.	48.8	12¾"
viii) Nawagam-Koyali	O.N.G.C.	78.7	14"
ix) Sanand-Kalol	O.N.G.C.	12.6	8-5/8"
x) Sobhashan-North Kadi	O.N.G.C.	20.2	8-5/8"
xi) North Kadi-Kalol	O.N.G.C.	35.9	12¾"
xii) Nahorkatiya-Digboi	O.I.L.	35	8"
xiii) Haldia-Barauni	I.O.C.	524	12¾"
T O T A L CRUDE PIPELINE		2048.0	
2. PRODUCT PIPELINES			
i) Digboi Refinery-Tinsukia	A.O.C.	34	6"
ii) Digboi Refinery-Tinsukia	A.O.C.	37	6"
iii) Digboi Refinery-Tinsukia	A.O.C.	34	4"
iv) Gauhati-Siliguri	I.O.C.	425	8-5/8"
v) Barauni-Kanpur	I.O.C.	668	12¾"
vi) Koyali-Ahmedabad	I.O.C.	115	8-5/8"
vii) Haldia-Maurigram-Raj Bandh	I.O.C.	270	12¾"
T O T A L PRODUCT PIPELINES		1583	
3. GAS PIPELINES			
i) Cambay Dhuwaran	O.N.G.C.	24.9	14"
ii) Ankleshwar Utharan	O.N.G.C.	37.5	16"
iii) Ankleshwar-Baroda	O.NG.C.	96.6	14"
iv) Nawagam-Calico Mills Ahmedabad	O.N.G.C.	22.2	8-5/8"
v) Kalol-IFFCO Premises	O.N.G.C.	2.6	12¾"
vi) Kalol-IFFCO Premises	O.N.G.C.	2.6	8-5/8"
vii) Sanand-Kalol	O.N.G.C.	12.6	8-5/8"
T O T A L GAS PIPELINE		199.0	
T O T A L (1 + 2 + 3)		3830.0	

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Relative % meterage share of modernised modes of traction (diesel and electric) in India & abroad (in train kilometers expressed as %age of total

Name of the country	Reference year/years	Diesel	Electric	Total
(1)	(2)	(3)	(4)	(5)
1. Canada	1971	99.9	0.1	100.0
2. U.S.A.	1971	100.0	-	100.0
3. France	1971	37.3	61.8	99.1
4. Italy	1971	26.2	71.1	97.9
5. USSR	1970	47.7	48.8	96.5
6. U.K.	1971	66.4	33.6	100.0
7. West Germany	1971	31.8	61.1	92.2
8. Japan	1971-72	31.2	62.2	93.4
9. Thailand	1970	75.3	-	75.3
10. Indian Railways:	1960-61	2.6	5.2	7.8
	1967-68	16.5	12.6	29.1
	1968-69	18.6	14.0	32.6
	1969-70	20.1	15.2	35.3
	1970-71	22.1	15.5	37.6
	19-71-72	24.1	16.1	40.2
	1972-73	25.7	17.1	42.8

Traffic in mineral oils vis-a-vis total goods traffic on Indian Railways and average load of traffic

Year	Mineral oils traffic			Total goods traffic		
	Tonnes originating (millions)	Net tonnes Kms. (Million)	Average load (Kms.)	Tonnes Originating (Million)	Net tonnes (Kms.) (Million	Average load (Kms.)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1960-61	4.7	2560	545	156.2	87680	561
1965-66	7.5	4480	597	203.0	116936	576
1969-70	8.8	4958	563	207.9	128248	617
1970-71	8.9	5288	594	196.5	127358	648
1971-72	10.1	5966	591	197.8	133265	674
1972-73	10.2	6249	613	201.3	136542	678
1973-74*	10.0	6373	638	184.8	122354	662

* Provisional

Source: A review of the performance of Indian Govt. Railways

XXI. [illegible]

ESTIMATED WORLD CRUDE OIL AND GAS RESERVES
AS ON 1.1.1975.

	COUNTRY	OIL Billion Tonnes	OIL % of total	GAS Trillion Cu. Ft.	GAS % of total
1.	Total Western Hemisphere	11.6	11.9	402.7	15.8
	on which:				
1.1	U.S.A.	4.8	4.9	250.0	9.8
1.2	Venezuela	2.0	2.0	43.0	1.7
1.3	Canada	1.3	1.3	52.5	2.1
1.4	Ecuador	0.3	0.3	5.0	0.2
1.5	Mexico	1.9	1.9	15.0	0.6
1.6	Argentina	0.3	0.3	7.5	0.3
2.	Total Africa	9.3	9.5	315.0	12.3
	on which:				
2.1	Libya	3.6	3.7	26.5	1.0
2.2	Algeria	1.1	1.1	229.0	9.0
2.3	Nigeria	2.9	3.0	45.0	1.8
2.4	Egypt	0.5	0.5	3.5	0.1
3.	Total Middle East	55.1	56.4	672.7	26.3
	on which:				
3.1	Saudi Arabia	22.4	23.0	55.0	2.2
3.2	Kuwait	9.9	10.1	32.0	1.3
3.3	Iran	9.0	9.2	330.0	12.9
3.4	Iraq	4.8	4.9	27.5	1.1
3.5	Neutral Zone	2.4	2.5	7.5	0.3
3.6	Abu Dhabi	4.1	4.2	200.0	7.8
4.	Total Europe	3.5	3.6	202.8	7.9
	on which:				
4.1	West Germany	0.08	0.1	11.5	0.5
4.2	U.K.	2.1	2.2	50.0	2.0
4.3	Netherlands	0.03	neg	94.8	3.7
4.4	Italy & Socily	0.1	0.1	12.0	0.5
4.5	Norway	1.0	1.0	24.7	1.0
4.6	Yugoslavia	0.05	0.1	2.0	0.1
5.	Total Asia & Pacific	2.9	3.0	115.9	4.6
	on which:				
5.1	Indonesia	2.0	2.0	15.0	0.6
5.2	Australia	0.3	0.3	38.0	1.5
5.3	India	0.1	0.1	2.5	0.1
5.4	Pakistan	neg	neg	16.0	0.6
5.5	Brunei-Malaysia	0.3	0.3	22.0	0.9
6.	Total Free World	82.4	84.4	1709.1	66.9
7.	Total Communist World	16.2	15.6	846.0	33.1
	on which:				
7.1	Russia	11.4	11.7	812.0	31.8
7.2	Red China	3.4	3.5	25.0	1.0
7.3	Hundry	0.4	0.4	3.0	0.1
7.4	Others			6.0	0.3
	TOTAL WORLD	97.6	100	2555.1	100

SOURCE: Oil & Gas Journal, Dec.30,1974

Conversion factor used:
20,000 bbl/day= 1 mn. tonnage per year.

INDIAN

PETROLEUM & PETROCHEMICALS

STATISTICS

1974

ECONOMICS & STATISTICS DIVISION

MINISTRY OF PETROLEUM AND CHEMICALS

GOVERNMENT OF INDIA

NEW DELHI

PREFACE

The Economics & Statistics Division of this Ministry has been bringing out an annual publication entitled 'Indian Petroleum & Chemicals Statistics' during the period 1968 to 1974 which contained basic economic and statistical data, covering various aspects of petroleum, fertilizer and other chemicals & pharmaceutical industries. Of late, due to strategic position occupied by these industries in industrial and overall economic development of the country, demand for more comprehensive and up-to-date statistics pertaining to these industries for meeting the requirement of their planning and administration, has been growing. In view of this and also to economise on the use of paper, from current issue onwards, it has been decided to divide this publication into three separate publications entitled: (a) Indian Petroleum & Petrochemicals Statistics, (b) Indian Fertilizer Statistics, and (c) Indian Chemicals & Pharmaceutical Statistics, enabling wider coverage with the addition of number of new tables in different sections of these publications.

The current issue of 'Indian Petroleum & Petrochemicals Statistics' is divided into four parts. Parts I & II respectively deal with various aspects of petroleum and petrochemicals industries; whereas Part III comprises financial statistics pertaining to these industries. Relevant Fifth Plan statistics have also been provided in Part IV. Weights & measures and conversion factors are given at the end of the publication under Appendix.

It is hoped that data contained in this publication would be of interest and value not only to various Ministries of the Government and the management of various petroleum & petrochemicals industries, but also to the Universities, research organisations and research scholars etc. We shall be grateful to have suggestions for improvement in general or for rectification of any error or ommission in the data presented.

The Staff and Officers of E & S Division have done valuable work in collection, tabulation and editing of the data brought out in this publication.

D.P. Aggarwal

(D.P. Aggarwal)
Economist-cum-Statistician

New Delhi.

October, 1975

ESTIMATED WORLD NATURAL GAS PRODUCTION

Country/Area	1972 Billion (10^9) Cubic Ft.	1972 % of Total	1973 Billion (10^9) Cubic Ft.	1973 % of Total	% Change 1973/1972
1. Total Western Hemi-sphere	29,030	63.2	29,539	61.4	+ 1.8
of which:					
1.1 U.S.A.	22,897	49.9	22,854	47.5	- 0.2
1.2 Venezuela	1,668	3.6	1,741	3.6	+ 4.4
1.3 Canada	2,861	6.2	3,241	6.7	+13.3
1.4 Trinidad & Tobago	125	0.3	137	0.3	+ 9.6
1.5 Mexico	687	1.5	686	1.4	- 0.1
1.6 Argentina	230	0.5	242	0.5	+ 5.2
1.7 Bolivia	108	0.2	152	0.3	+40.7
2. Total Africa	361	0.8	341	0.7	- 5.5
of which:					
2.1 Libya	4	neg.	43	0.1	+975.0
2.2 Algeria	108	0.2	120	0.3	+ 11.1
2.3 Nigeria	32	0.1	60	0.1	+ 87.5
2.4 Egypt	161	0.4	30	0.1	- 81.4
3. Total Middle East	1,649	3.6	1,926	4.0	+ 16.8
of which					
3.1 Kuwait	202	0.4	51	0.1	- 74.8
3.2 Iran	1,430	3.1	1,689	3.5	+ 18.1
3.3 Iraq	4	neg.	155	0.3	+3775.0
3.4 Bahrain	9	neg.	20	neg.	+ 122.0
4. Total Europe	4,367	9.5	5,215	10.9	+ 19.4
of which:					
4.1 West Germany	590	1.3	590	1.2	-
4.2 U.K.	830	1.8	1,152	2.4	+ 38.8
4.3 Netherlands	2,081	4.5	2,590	5.4	+ 24.5
4.4 Italy & Sicily	482	1.1	487	1.0	+ 1.0
4.5 France	269	0.6	258	0.5	- 4.1
4.6 Yugosalvia	42	0.1	66	0.1	+ 57.1
5. Total Asia & Pacific	678	1.5	628	1.3	- 7.4
of which:					
5.1 Indonesia	137	0.3	129	0.3	- 5.8
5.2 Australia	111	0.2	149	0.3	+ 34.2
5.3 India	62	0.1	18	neg.	- 71.0
5.4 Pakistan	129	0.3	128	0.3	- 0.8
6. Total Free World	36,085	78.6	37,649	78.3	+ 4.3
7. Total Communist World	9,811	21.4	10,446	21.7	+ 6.5
7.1 U.S.S.R.	7,801	17.0	8,263	17.2	+ 5.9
7.2 Red China	140	0.3	158	0.3	+ 12.9
7.3 Hungary	145	0.3	148	0.3	+ 2.1
7.4 Rumania	1,169	2.5	1,303	2.7	+ 11.5
7.5 Poland	188	0.4	200	0.4	+ 6.4
7.6 Others	368	0.8	374	0.8	+ 1.6
TOTAL WORLD	45,896	100	48,095	100	+ 4.8

SOURCE: International Petroleum Encyclopedia - 1974.

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PRODUCTIVITY OF PRODUCING WELLS IN SELECTED FIELDS IN THE WORLD -1974

Country	Field	Discovery Date	Depth (Meters)	Wells F	Wells P	Daily average 1st 6 month'74 ('000' bbl)	Gravity (API)	t/w/d 1974
Algeria	Edjeleh	1956	580- 915	40	-	19.8	35.0	66.7
	Zarzaitine	1958	1403	25	-	80.6	42.0	416.8
	Hassi Messaoud North	1956	3355	108	-	222.0	49.0	255.9
	Hassi Messaoud South	1956	3355	145	-	338.1	49.0	290.3
Libya	Zelten	1959	1678-2318	125	-	212.8	40.0	222.8
	Gialo	1961	671-1922	4	157	203.1	35.7	169.1
	Samah	1961	2745	11	-	203.1	33.4	2504.2
	Sarir	1961	2745	68	-	162.6	37.2	316.7
	Intisar	1967	2867	15	-	203.7	39.5	1777.3
	Defa (Zetlen)	1969	1647-1800	73	-	156.8	35.6	287.9
	Nasser	1959	1678-2318	44	-	163.9	40.0	499.3
Iran	Agha Jari	1938	1982	50	-	1099.7	33.9	2738.9
	Ahwaz-Asmari	1958	2745	40	-	872.9	32.1	2994.3
	Gach Saran	1928	2135	30	-	911.6	31.2	4193.6
	Marun	1964	3355	35	-	1053.5	32.8	4106.4
	Darius-Offshore	1961	3355	12	-	97.2	34.0	1098.6
	Sassan ,,	1966	2288-2471	14	-	195.0	34.1	1889.1
	Rostam ,,	1966	2196-2989	8	16	29.0	38.7	159.1
Iraq	Kirkuk	1927	854-1231	50	-	930.3	36.0	2494.1
	Rumaila	1953	3294	30	-	620.6	35.0	2789.1
Neutral Zone	Khafji-offshore	1961	1372-2898	101	-	292.6	28.4	406.7
Saudi Arabia	Abqaiq	1940	2034	64	-	870.7	38.0	1801.9
	Berra(Partly-offshore)	64	2272	42	-	639.5	33.38	2041.0
	Safaniyah(,,-offshore)	65	1556	83	-	1019.1	27.0	1733.7
	Ghawar	1948	2044	378	-	4653.5	35.0	1659.8
Burma *	Chauk-Lanyawa	1902	1068	2	290	2.0	36.0	0.9
	Yenangyuang	1902	1525	-	200	4.0	36.0	2.7
India	All fields since	1890	92-3902		1545**	156.0	22.0 -48.0	13.6
Indonesia	Bangko	1970	458	-	34	111.9	31.1	454.2
	Minas	1944	732	-	193	420.4	33.3	297.2
	Attaka	1972	1281-2140	52	-	102.2	41.1	255.6

t/w/d/ = Tonnes/well/day * = Estimated ** = Flowing, pumping and shut in wells including wells used for injection purposes.

SOURCE:- Oil & Gas Journal 30th December, 1974.

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WORLD OIL REFINING CAPACITIES AT END 1974 AND 1973

MILLION TONNES PER ANNUM

COUNTRY / AREA	1974	1973	1974 Share of Total	% CHANGE 1974 over 1973	% CHANGE Annual Average 1969/1974
NORTH AMERICA					
U.S.A.	745	715	21.9%	+ 4.2%	+ 4.5%
Canada	88	93	2.9%	+ 5.2%	+10.3%
Mexico	37	37	1.1%	-	+ 6.7%
TOTAL NORTH AMERICA	880	845	25.9%	+ 4.2%	+ 5.1%
CARIBBEAN					
Venezuela	74	74	2.2%	-	+ 3.2%
Trinidad	23	23	0.7%	-	+ 1.9%
N.W.I.	45	45	1.3%	-	+ 2.4%
Other Caribbean	94	84	2.7%	+11.8	+21.9%
TOTAL CARRIBBEAN	236	226	6.9%	+ 4.4%	+ 8.2%
SOUTH AMERICA					
Argentina	35	31	1.0%	+11.9%	+ 9.8%
Brazil	46	39	1.3%	+15.9%	+14.8%
Other South America	18	17	0.5%	+ 3.2%	+ 5.1%
TOTAL SOUTH AMERICA	99	87	2.8%	+12.0%	+10.9%
TOTAL WESTERN HEMISPHERE	1215	1158	35.6%	+ 4.8%	+ 6.1%
WESTERN EUROPE					
Belgium	46	43	1.3%	+ 7.0%	+ 5.9%
Netherlands	97	90	2.8%	+ 7.7%	+ 7.7%
France	164	158	4.8%	+ 4.3%	+10.3%
W. Germany	149	145	4.4%	+ 2.2%	+ 5.2%
Italy	194	189	5.7%	+ 2.6%	+ 7.3%
U.K.	149	141	4.4%	+ 5.7%	+ 6.4%
Spain	50	50	1.5%	-	+16.8%
Other Western Europe	124	116	3.6%	+ 7.0%	+ 8.3%
TOTAL WESTERN EUROPE	973	932	28.5%	+ 4.4%	+ 7.8%
MIDDLE EAST					
Iran	33	32	1.0%	+ 3.1%	+ 1.7%
Kuwait	26	26	0.8%	-	+ 2.2%
Neutral Zone	4	4	0.1%	-	- 0.8%
Saudi Arabia	23	21	0.7%	+ 9.2%	+ 4.3%
Aden	8	8	0.2%	-	-
Bahrain	12	12	0.4%	-	+ 4.0%
Other Middle East	26	26	0.8%	+ 1.0%	+ 9.7%
TOTAL MIDDLE EAST	132	129	4.0%	+ 2.5%	+ 3.6%
AFRICA	62	53	1.8%	+15.4%	+12.4%
SOUTH ASIA	36	33	1.1%	+ 9.9%	+ 2.9%
SOUTH EAST ASIA	137	133	4.0%	+ 3.1%	+20.8%
JAPAN	254	242	7.4%	+ 4.6%	+12.2%
AUSTRALASIA	37	37	1.1%	+ 0.3%	+ 4.2%
U.S.S.R., E. EUROPE & CHINA	563	518	16.5%	+ 8.8%	+ 9.5%
TOTAL EASTERN HEMISPHERE	2194	2077	64.4%	+ 5.6%	+ 9.0%
WORLD (excl. U.S.S.R., E. Europe and China)	2846	2717	83.5%	+ 4.7%	+ 7.6%
WORLD	3409	3235	100.0%	+ 5.3%	+ 7.9%

SOURCE: THE BRITISH PETROLEUM COMPANY LTD. DUING 1974.

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WORLD OIL CONSUMPTION 1973 AND 1974

COUNTRY / AREA	MILLION TONNES 1974	1973	PERCENTAGE † 1974 Share of Total	CHANGE 1974 over 1973	CHANGE Annual Average 1969/1974
U.S.A.	785.4	818.0	28.6%	- 4.0%	+ 3.3%
Canada	88.1	83.7	3.2%	+ 5.3%	+ 5.0%
Mexico	31.1	29.6	1.1%	+ 5.0%	+ 7.6%
Caribbean	70.4	66.7	2.6%	+ 5.5%	+ 7.9%
South America	77.4	73.6	2.8%	+ 5.1%	+ 6.2%
TOTAL WESTERN HEMISPHERE	1052.4	1071.6	38.3%	- 1.8%	+ 4.0%
Belgium & Luxenbourg	27.5	31.5	1.0%	- 12.7%	+ 1.8%
Netherlands	35.4	41.3	1.3%	-14.3%	+ 1.5%
France	120.1	127.3	4.4%	- 5.7%	+ 7.7%
W. Germany	134.4	149.7	4.9%	-10.2%	+ 2.8%
Italy	100.7	103.6	3.7%	- 2.7%	+ 5.4%
U.K.	105.8	113.4	3.9%	- 6.7%	+ 2.0%
Scandinavia	51.1	55.9	1.9%	- 8.6%	+ 0.1%
Spain	38.2	36.3	1.4%	+ 5.3%	+13.0%
Other Western Europe	86.0	90.0	3.1%	- 4.5%	+ 7.1%
TOTAL WESTERN EUROPE	699.2	749.0	25.6%	- 6.6%	+ 4.4%
Middle East	69.7	64.6	2.5%	+ 7.9%	+ 8.1%
Africa	47.0	47.5	1.7%	- 1.0%	+ 3.8%
South Asia	31.5	33.2	1.1%	- 5.0%	+ 3.1%
South East Asia	79.2	74.7	2.9%	+ 6.1%	+ 8.8%
Japan	261.1	268.3	9.5%	- 2.7%	+ 9.1%
Australasia	33.9	32.8	1.2%	+ 3.2%	+ 4.5%
U.S.S.R.	341.8	317.7	12.5%	+ 7.6%	+ 7.2%
Eastern Europe	78.3	74.8	2.9%	+ 4.7%	+ 9.7%
China**	48.8	41.7	1.8%	+17.0%	+23.5%
TOTAL EASTERN HEMISPHERE	1690.5	1704.3	61.7%	- 0.8%	+ 6.5%
WORLD (Excl. U.S.S.R., E.Europe & China)	2274.0	2341.7	82.8%	- 2.9%	+ 4.9%
WORLD	2742.9	2775.9	100.0%	- 1.2%	+ 5.5%

Differences between production and consumption are accounted for by stock changes and unknown military liftings.

**Includes Albania, N.Korea, and N.Vietnam.

SOURCE: B.P. STATISTICAL YEAR BOOK - 1974.

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INLAND DEMAND FOR MAJOR PETROLEUM PRODUCTS.

COUNTRY / AREA	GASOLINES		MIDDLE DISTILLATES		FUEL OIL	
	Million Tonnes	Thousand B/D	Million Tonnes	Thousand B/D	Million Tonnes	Thousand B/D
U.S.A.	305.7	7095	187.8	3870	129.6	2360
Canada	28.1	655	27.2	570	17.4	315
Belgium & Luxembourg	4.1	95	9.2	190	8.5	155
Netherlands	8.8	205	7.3	150	3.4	65
France	20.5	475	41.8	860	36.7	675
W. Germany	23.9	555	57.6	1185	25.0	460
Italy	15.8	370	22.6	470	43.6	800
U.K.	24.7	575	25.6	530	37.3	685
Sweden	4.2	95	8.4	170	11.8	220
Japan	42.6	1015	48.7	1010	119.1	2210
Australia	9.8	230	7.6	155	5.5	100

IMPORTS AND EXPORTS 1974

CRUDE OIL & PRODUCTS

MILLION TONNES

COUNTRY / AREA	IMPORTS		EXPORTS	
	Crude	Products	Crude	Products
U.S.A.	172.0	143.4	-	12.1
Canada	40.9	2.7	39.1	13.4
Caribbean	60.8	3.0	54.2	115.5
Other Western Hemisphere	39.7	5.2	8.2	4.5
Western Europe	698.8	44.0	-	22.3
Middle East	6.2	0.6	945.5	47.0
North Africa	1.2	4.7	124.1	1.2
West Africa	0.8	1.3	124.1	0.6
E.&.S.Africa, S.Asia	33.4	8.8	-	0.3
South East Asia	50.9	16.1	58.2	8.9
Japan	239.4	28.7	-	1.5
Australasia	12.1	4.3	-	2.5
U.S.S.R., E.Europe & China	19.5	1.4	33.5	39.2
*Destination not known	15.1	4.8	-	-
TOTAL	1386.8	269.0	1386.8	269.0

* Includes quantities in transit, transit losses, minor movements not other wise shown, military use, etc.

SOURCE: THE BRITISH PETROLEUM COMPANY LTD. DURING 1974.

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Evolution of Govt. take for Main Gulf Crudes 1971-74.

(Dollars/barrel.)

	1971			1972	1973								
	Pre.15 Feb	15 Feb	1 June	20 Jan	1 Jan	1 Apr	1 June	1 July	1 Aug	1 Oct	16 Oct	1 Nov	1 Dec
Saudi Arabia													
Arabian Light	0.989	1.261	1.325	1.448	1.516	1.607	1.702	1.736	1.804	1.770	3.048	3.083	2.998
Arabian Medium	0.930	1.203	1.265	1.384	1.450	1.537	1.628	1.661	1.725	1.694	2.917	2.950	2.868
Arabian Heavy	0.843	1.106	1.169	1.302	1.367	1.449	1.535	1.566	1.627	1.597	2.754	2.785	2.708
Iran													
Iranian Light	0.983	1.250	1.313	1.430	1.497	1.588	1.683	1.717	1.783	1.750	3.172	3.208	3.119
Iranian Heavy	0.944	1.222	1.285	1.400	1.466	1.555	1.647	1.681	1.746	1.714	2.960	2.993	2.969
Kuwait													
Kuwait	0.958	1.231	1.293	1.406	1.472	1.559	1.650	1.683	1.747	1.716	2.939	2.972	2.890
Abu Dhabi													
Murban	1.005	1.272	1.337	1.458	1.527	1.620	1.717	1.752	1.821	1.787	3.582	3.623	3.521
Marine (Umm Shaif)	0.966	1.239	1.288	1.391	1.460	1.553	1.650	1.685	1.753	1.720	3.192	3.229	3.137
Zakum	-	-	-	-	-	-	-	-	-	-	3.451	3.492	3.391
Irad													
Basrah	0.933	1.245	1.303	1.419	1.487	1.578	1.671	1.705	1.772	1.739	3.002	3.036	2.952
Qatar													
Dukhan	1.052	1.316	1.381	1.493	1.546	1.641	1.740	1.776	1.847	1.812	3.443	3.482	3.384
Marine	0.924	1.196	1.260	1.351	1.464	1.556	1.651	1.686	1.754	1.720	3.215	3.252	3.160

Contd.....

Evolution of Govt. take for Main Gulf Crudes 1971-74

(Dollars/barrel)

	1974			
	1 Jan	1 July	1 Oct	1 Nov
Saudi Arabia				
Arabian Light	7.008	7.113	8.260	9.816
Arabian Medium	6.954	7.058	8.196	9.737
Arabian Heavy	6.881	6.984	8.110	9.631
Iran				
Iranian Light	7.133	7.240	8.407	9.996
Iranian Heavy	6.988	7.092	8.236	9.785
Kuwait				
Kuwait	6.966	7.070	8.211	9.757
Abu Dhabi				
Murban	7.578	7.692	8.931	10.640
Marine (Umm. Shaif)	7.162	7.271	8.439	10.029
Zakum	7.453	7.566	8.782	10.451
Iraq				
Basrah	7.010	7.115	8.262	9.817
Qatar				
Dukhan	7.432	7.544	8.759	10.428
Marine	7.162	7.270	8.440	10.033

NOTE:- Government take comprises 12.5% expensed royalty plus 55% income tax pre July'74, 14.5% expensed royalty plus 55% income tax effective 1st July'74, 16.67% expensed royalty plus 65.75 income tax effective 1st Oct'74 and 20% expensed royalty plus 85% income tax effective 1st Nov.'74 on the basis of full post price (with the exception of appropriate OPEC discount for the pre-Feb,1971 column). The estimates of production costs per barrel used are as given in the state-ment on page 115.

- Prior to 16 Oct. 1973 Govt. take in Abu Dhabi Marine(Umm. Shaif) was averaged out with Zakum which had no seperate posting at that time.

SOURCE: MEES dated 28.12.73, 19.7.74 and 15.11.74.

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Evolution of Tax-Paid Costs for Main Gulf Crudes 1971-74

(Dollers/Barrel)

	1971			1972						1973			
	Pre-15 Feb	15 Feb	1 June	20 Jan	1 Jan	1 Apr	1 June	1 July	1 Aug	1 Oct	15 Oct	1 Nov	1 Dec.
Saudi Arabia													
Arabian Light	1.099	1.371	1.435	1.548	1.616	1.707	1.802	1.836	1.904	1.870	3.148	3.183	3.098
Arabian Medium	1.040	1.313	1.375	1.484	1.550	1.637	1.728	1.761	1.825	1.794	3.017	3.050	2.968
Arabian Heavy	0.993	1.256	1.319	1.402	1.467	1.549	1.635	1.666	1.727	1.697	2.854	2.885	2.808
Iran													
Iranian Light	1.103	1.370	1.433	1.550	1.617	1.708	1.803	1.837	1.903	1.870	3.292	3.328	3.239
Iranian Heavy	1.064	1.342	1.405	1.520	1.586	1.675	1.767	1.801	1.866	1.834	3.080	3.113	3.089
Kuwait													
Kuwait	1.018	1.291	1.353	1.466	1.532	1.619	1.710	1.743	1.807	1.776	2.999	3.032	2.950
Abu Dhabi													
Murban	1.155	1.422	1.487	1.608	1.677	1.770	1.867	1.902	1.971	1.937	3.732	3.773	3.671
Marine (Umm Shaif)	1.166	1.439	1.558	1.691	1.760	1.853	1.950	1.985	2.053	2.020	3.492	3.529	3.437
Zakum	-	-	-	-	-	-	-	-	-	-	3.751	3.792	3.691
Iraq													
Basrah	1.053	1.360	1.423	1.539	1.607	1.698	1.791	1.825	1.892	1.859	3.422	3.456	3.372
Qatar													
Dukhan	1.172	1.436	1.501	1.633	1.716	1.811	1.910	1.946	2.017	1.982	3.613	3.652	3.554
Marine	1.174	1.446	1.510	1.651	1.684	1.776	1.871	1.906	1.974	1.940	3.435	3.472	3.380

Contd.....

Evolution of Tax-Paid Costs for Main Gulf Crudes 1971-74

(Dollers/Barrel)

	1974			
	1 Jan	1 July	1 Oct.	1 Nov.
Saudi Arabia				
Arabian Light	7.108	7.213	8.360	9.916
Arabian Medium	7.054	7.158	8.296	9.837
Arabian Heavy	6.981	7.084	8.210	9.731
Iran				
Iranian Light	7.253	7.360	8.527	10.116
Iranian Heavy	7.108	7.212	8.356	9.905
Kuwait				
Kuwait	7.026	7.130	8.271	9.817
Abu Dhabi				
Murban	7.728	7.842	9.081	10.790
Marine(Umm Shaif)	7.462	7.571	8.739	10.329
Zakum	7.753	7.866	9.082	10.751
Iraq				
Basrah	7.130	7.235	8.382	9.937
Qatar				
Dukhan	7.602	7.714	8.929	10.598
Marine	7.382	7.490	8.660	10.253

NOTE:- Tax paid costs are made up of Govt. take as on pages 88-89 plus cost of production given in the statement at page 115.

SOURCE:MEES dated 28.12.73, 19.7.74 and 15.11.74.

LOWEST POSTED PRICES OF POL PRODUCTS AT BANDAR MAHSHAHR ¢ / AG

Date of Change (W.e.f.)	Light Distillates					Middle Distillates				Others
	Avgas 115/145	Avgas 100/130	Avgas 93 Octane 73		Avgas 83 Octane	Turbine Fuel -58F	Kero-sine	Diesel Index 53-57	Indl. Diesel ($/bbl)	Light Fuel (£/bbl)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
25.7.67	16.0	14.7	12.7	9.3	7.3	9.5	8.9	6.8	2.70	1.52
5.9.68	"	"	"	"	"	"	"	"	"	1.50
28.3.69	"	"	"	9.0	7.1	"	"	6.6	2.62	1.42
20.10.70	"	"	"	"	"	"	"	"	2.80	1.50
19.2.71	"	"	13.6 a)	"	"	"	"	"	2.72	1.52
23.2.71	16.7	15.4	"	9.7	7.8	10.2	9.6	7.3	3.02	1.82
14.5.71	"	"	"	"	"	"	"	"	3.10	1.90
3.6.71	16.9	15.6	"	9.9	8.0	10.4	9.8	7.5	"	"
10.6.71	"	"	13.7	"	"	"	"	"	3.20	2.02
21.9.71	"	"	"	"	"	"	"	"	"	1.95
21.1.72	"	"	13.8	"	"	"	"	"	"	"
26.1.72	17.1	15.8	"	10.1	8.1	10.6	10.0	7.8	"	2.02
3.2.72	17.2	15.9	14.1	10.2	8.3	10.7	10.1	"	3.32	2.07
3.1.73	17.4	16.1	"	10.3	"	10.9	10.3	8.1	"	"
5.1.73	"	"	"	10.4	8.4	"	"	8.2	"	2.17
(Effective Jan1)										
10.1.73	17.6	16.3	14.7	10.6	8.7	11.1	10.5	"	3.42	2.20
23.2.73	"	"	"	"	"	"	"	"	3.45	2.22
2.4.73	"	"	"	"	"	"	"	"	"	2.23
5.4.73	18.0	16.7	"	10.9	8.9	11.3	10.7	8.4	"	"
6.4.73	18.5	17.2	15.2	11.5	9.5	11.8	11.2	9.0	3.57	2.27
(Effective Apr.1)										
7.6.73	"	"	"	"	"	"	"	"	3.58	"
11.6.73	20.3	19.0	17.0	13.2	11.3	12.5	11.9	9.6	3.65	2.32
2.7.73	20.5	19.2	17.2	13.5	11.6	"	"	9.7	"	"
(Eff.On and Since July 1)										
9.7.73	20.6	19.3	17.3	13.6	11.7	12.7	12.1	9.8	"	"
11.7.73	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	"	3.87	2.32
2.8.73	20.8	19.5	17.5	13.8	11.8	13.1	12.5	10.3	4.05	2.35
8.8.73	"	"	"	"	"	"	12.6	"	"	"
9.8.73	"	"	"	13.9	11.9	"	"	"	4.12	2.40
17.10.73	21.0	19.7	17.7	14.0	12.1	"	12.8	"	4.14	"
25.10.73	"	"	"	14.1	"	13.4	"	10.6	4.15	"
30.10.73	"	"	"	"	"	"	"	"	"	"
31.10.73	21.3	20.0	18.0	14.4	12.4	14.4	13.8	11.5	4.42	"
1.11.73	23.0	21.7	20.2	16.0	14.1	17.1	16.8	14.3	5.80	3.29
14.11.73	23.5	22.2	"	16.6	14.6	17.8	17.3	14.9	"	14.6
26.11.73	23.8	22.5	20.5	16.8	14.9	"	"	14.9	5.82	"
6.12.73	"	"	20.8	"	"	"	17.5	"	"	"
10.12.73	24.1	22.8	"	17.2	15.2	18.6	18.0	15.3	5.90	3.35
14.12.73	24.3**	23.0**	21.0 **	17.3**	15.4**	"	18.3	15.7**	6.16	3.75

Contd.....

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
14.1.74	24.3	23.0	21.0	17.4	15.4	18.9	18.3	15.7	6.25	3.78
18.1.74	36.5	35.0	33.0	28.0	26.0	30.5	28.5	26.5	10.40	8.70
4.2.74	36.7	35.4	33.5	28.5	26.0	31.0	30.0	28.0	11.35	9.00
1.4.74	36.8	35.5	"	29.5	27.0	"	"	"	"	"
2.4.74	"	"	"	29.7	27.7	"	"	"	"	"
25.4.74	40.5	39.0	37.0	33.2	30.2	"	"	"	"	"
6.6.74	"	"	"	"	"	"	"	"	"	9.10
7.7.74	40.7	39.4	37.5	"	"	"	"	"	"	9.20
18.7.74	"	"	"	"	31.3	"	"	"	11.36	"
13.8.74	"	"	41.0	"	"	"	"	"	"	"
20.8.74	45.9	43.9	"	"	"	"	"	"	"	"
1.10.74	"	"	"	"	"	"	30.7	28.1	"	9.25
15.10.74	46.1	44.3	41.1	33.5	31.5	32.0	"	"	11.50	9.30
21.10.74	47.6	45.6	45.0	34.5	32.5	32.5	31.5	29.5	11.77	9.55
1.11.74	"	"	"	"	"	"	32.2	29.6	"	9.60
2.12.74	50.0	48.0	"	"	"	"	"	"	11.85	"
5.12.74	"	"	"	35.0	"	33.5	"	"	"	9.65
6.12.74	50.6	48.6	47.5	35.9	34.0 b)	33.7	33.4	30.8	12.11	10.05
27.1.75	"	"	"	"	"	34.1	33.8	31.1	"	"

NB:- No change upto 10.4.75.

53-57= H.S.D.
Indl.Diesel = L.D.O.
Light Fuel = Furnance oil

a) Effective Feb. 15, 1971
* " on and since Dec. 3,1973
** " on and since Dec.12,1973
(b) " on and since Dec. 1, 1974

Source : Platt's Oilgram

RETAIL PRICES INCLUDING DUTY AND TAXES OF SOME SELECTED PRODUCTS IN DIFFERENT COUNTRIES AS ON 31 - 7 - 1974

1. MOTOR GASOLINE REGULAR

COUNTRY	¢ / US Gallon		
	Retail Price	Duty	Taxes
Canada (Ottawa)	57.2	-	22.0
USA (New York)	59.9	1.3	13.0
France (Paris)	131.8	-	75.6
Germany West (Bonn)	126.5	6%	64.8 + 11%
Italy (Rome)	169.0	7%	115.2
Netherland (The Hague)	136.8	-	85.8
U.K. (London)	125.0	NA	63.0
Kenya (Nairobi)	95.4	19.2	21.5
Iran (Tehran)	33.6	-	-
Saudi Arabia (Jidda)	12.2	NA	NA
Burma(Rangoon)	73.0	40.0	-
India (New Delhi)	151.8	96.9	9.8
Indonesia (Djakarta)	41.0	-	NA
Japan (Tokyo)	136.1	28.4	45.4
Pakistan (Islamabad)	79.9	33.6	34.1
Phillippines (Manila)	61.0	0.7	16.2
Sri Lanka (Colombo)	154.2	-	42%
Singapore (Singapore)	96.7	49.2	-
Thailand (Bangkok)	64.0	24.0	5.5%
Australia (Sydney)	59.1	24.3	-

Contd.....

SOURCE: International Petroleum Annual-1973.

RETAIL PRICES INCLUDING DUTY AND TAXES OF SOME SELECTED PRODUCTS IN DIFFERENT COUNTRIES AS ON 31-7-1974

2, HOUSE-HOLD KEROSINE

COUNTRY	¢ /US Gallon		
	Retail Price	Duty	Taxes
Canada (Ottawa)	31.4	-	-
USA (New York)	54.0	0.3	-
France (Paris)	83.3	-	41.3
Germany West (Bonn)	44.2	NA	NA
Italy (Rome)	37.9	7%	4.3
Netherland (The Hague)	65.0	-	7.6
U.K. (London)	62.0	NA	2.4
Kenya (Nairobi)	54.0	7.0	-
Iran (Tehran)	13.2	-	-
Saudi Arabia(Jidda)	10.5	NA	NA
Burma (Rangoon)	52.0	20.0	-
India (New Delhi)	48.6	18.5	-
Indonesia (Djakarta)	11.8	-	NA
Japan (Tokyo)	49.1	1.4	-
Pakistan (Islamabad)	25.2	1.6	13.8
Philippines (Manila)	47.0	0.7	2.8
Sri Lanka (Colombo)	46.7	-	23%
Singapore (Singapore)	120.8	1.6	-
Thailand (Bangkok)	45.0	6.0	5.5%
Australia (Sydney)	40.0	-	-

Contd.....

SOURCE: INTERNATIONAL PETROLEUM ANNUAL-1973.

RETAIL PRICES INCLUDING DUTY AND TAXES OF SOME SELECTED PRODUCTS IN DIFFERENT COUNTRIES AS ON 31 - 7 - 1974.

3. MOTOR LUBRICATING OIL

COUNTRY	$ /US Gallon Retail Price	Duty	Taxes
Canada (Ottwa)	592.0	-	9.0
USA (New York)	340.0	2.0	6.0
France (Paris)	668.0	-	101.0
Germany West (Bonn)	1237.3	6%	65.5 + 11%
Italy (Rome)	942.0	6%	166.0
Netherland (The Hague)	665.3	-	26.5
U.K.(London)	480.0	NA	2.4
Kenya (Nairobi)	445.1	11.7	18.5
Iran (Tehran)	78.0	-	-
Saudi Arabia (Jidda)	280.0	NA	NA
Burma (Rangoon)	167.0	35.0	-
India (New Delhi)	404.5	290.0	20.2
Indonesia (Djakarta)	NA	-	NA
Japan (Tokyo)	1621.6	12%	-
Pakistan (Islamabad)	177.6	30.7	0.1
Philippines (Manila)	175.0	2.9	16.8
Sri Lanka (Colombo)	398.3	-	23%
Singapore (Singapore)	447.5	34.1	-
Thailand (Bangkok)	411.0	12.0	5.5%
Australia(Sydney)	340.0	-	-

Contd.....

SOURCE: International Petroleum Annual-1973.

DETAIL PRICES INCLUDING DUTY AND TAXES OF SOME SELECTED PRODUCTS IN DIFFERENT COUNTRIES AS ON 31 - 7 - 1974.

4. BUNKERS 'C' FUEL

	$/US Barrel		
	Retail Price	Duty	Taxes
Canada (Ottawa)	910.1	-	NA
USA (New York)	1075.0	-	-
France (Paris)	1232.8	-	40.8
Germany West (Bonn)	1192.8	3.5%	92.4 + 11%
Italy (Rome)	1138.1	5%	153.5
Netherland (The Hague)	1143.8	-	130.0
U.K.(London)	1512.0	NA	101.0
Kenya (Nairobi)	1212.5	-	-
Iran (Tehran)	282.7	-	-
Saudi Arabia (Jidda)	900.9	NA	NA
Burma (Rangoon)	1764.0	29.4	-
India (New Delhi)	1449.8	216.9	5%
Indonesia)(Djakarta)	459.1	-	NA
Japan (Tokyo)	1101.6	37.5	-
Pakistan (Islamabad)	739.2	52.1	395.2
Philippines (Manila)	1386.0	29.4	63.0
Sri Lanka (Colombo)	1171.2	-	23%
Singapore (Singapore)	1419.2	90.1	-
Thailand (Bangkok)	1218.0	42.1	1.7%
Australia(Sydney)	1095.8	-	-

Source:- International Petroleum Annual - 1973.

. /

Posted Airfield Prices of Jet A-1 Fuel at major International Airports as on 1.1.1975

Country/Airfield	Jet A-1 Price USC/USG	RS/KL
AUSTRALIA		
Sydney	33.02	690
Perth	33.02	690
BAHRAIN	51.01	1065
BELGIUM		
Brussels	62.46	1302
EGYPT		
Cairo	61.00	1271
ETHIOPIA		
Addis Ababa	69.50	1450
FIJI		
Nandi	58.61	1223
FRANCE		
Paris (Orly)	55.00	1147
GERMANY		
Frankfurt	62.58	1305
HOLLAND		
Amsterdam (Schiphol)	58.50	1220
IRAN		
Tehran	55.29	1152
ITALY		
Rome (Fimicino)	59.00	1231
KENYA		
Nairobi	61.00	1271
KUWAIT	47.35	988
LEBANON		
Beirut	61.00	1271
MALAYSIA		
Kuala Lumpur	57.64	1202
MAURITIUS		
Plaisance	53.50	1115
SINGAPORE		
Paya Lebar	52.61	1096
SWITZERLAND		
Geneva	66.24	1382
TRUCIAL STATES		
Abu Dhabi	52.59	1096
Sharjah	58.26	1215
UNITED KINGDOM		
London - Heathrow	54.85	1144

$ = Rs.7.8927

Source : Air India.

IUSG=3.78533 litres

KEY CRUDE OIL PRICE POSTINGS AROUND THE WORLD
(In $ per barrel, effective dates of change)

Crude and Gravity		1970 Aug.31	1970 Sep 1	1971 Feb 15	1971 Mar 20	1971 Jun 1	1972 Jan 20	1972 Apr 1	1973 Jan 1	1973 Apr 1	1973 June 1	1973 July 1
Persian/Arabian Gulf Crudes												
Arab light	34	1.800	...	2.180	...	2.285	2.479	...	2.591	2.742	2.898	2.955
Arab Berri	39	...	...	2.255	...	...	2.554	...	2.666	2.817	...	...
Arab Medium	31	1.590	...	a2.085	...	2.187	2.373	...	2.482	2.626	2.776	2.830
Arab Heavy	27	1.470	...	a1.960	...	2.064	2.239	...	2.345	2.481	2.623	2.674
Iran light	34	1.790	...	2.170	...	2.274	2.467	...	2.579	2.729	2.884	2.940
Iran heavy	31	1.630	...	a2.125	...	2.228	2.417	...	2.527	2.674	2.826	2.881
Kuwait	31	1.590	...	a2.085	...	2.187	2.373	...	2.482	2.626	2.776	2.830
Abu Dhabi												
Umm Shaif	37	1.860	...	2.225	...	2.331	2.529	...	2.642	2.796	2.955	3.013
Murban	39	1.880	...	2.235	...	2.341	2.540	...	2.654	2.808	2.968	3.026
Zakum	40	1.905	...	2.270	...	2.376	2.474	...	2.687	2.841	3.000	...
Iraq Basrah	35	1.720	...	2.155	...	2.259	2.451	...	2.562	2.711	2.865	2.921
Qatar Marine	36	1.830	...	2.200	...	2.305	2.501	...	2.614	2.766	2.923	2.980
Qatar Dukhan	40	1.930	...	2.280	...	2.387	2.590	...	2.705	2.862	3.025	3.084
Oman	34	1.810	...	2.220	...	2.325	2.521	...	2.634	2.786	...	...
Mediterranean & African Crudes												
Arab light	34	2.170	2.370	2.370	3.181	...	a3.370	3.341	a3.451	3.677	3.884	4.033
Iraq Kirkuk	36	2.210	2.410	2.410	3.211	...	a3.402	3.373	a3.484	3.712	3.921	4.070
Libyan	40	2.130	2.530	b2.550	3.447	...	a3.673	3.642	a3.777	4.024	4.252	4.416
Nigerian	34	2.170	2.420	2.420	3.212	...	3.212	3.424	a3.561	3.787	4.003	4.135
Indonesian crude (Official Selling Prices)												
Sumatra light	34	1.700	...	1.700	c2.210	...	d2.260	2.960	q2.960	3.730	...	...
Venezuelan Crudes (Reference Prices)												
Tia Juana	26	2.011	...	2.016	2.664	2.647	2.647	a2.921	a3.094	a3.524	...	3.752
Tia Juana	31	2.193	...	2.198	2.739	2.722	2.722	a3.055	a3.249	a3.744	...	3.972
Oficina	35	2.339	...	2.344	2.799	2.782	2.782	a3.231	a3.396	a3.937	...	4.165
United States (Representative Postings)												
East Texas	Flat	3.40	c3.60	3.60	...	...	3.60	...	3.60	3.85	...	...
W.Texas Sour	32	2.98	c3.23	...	...	f3.29	...	...	...	3.54	...	...
Louisiana	37	3.44	c3.69	...	...	...	...	...	...	g3.94	...	...

a. Additional changes made in intervening period. b. Jan. 1,1971. c. Apr.1,1971. d. Oct.1,1971.e.Nov.23 f. Jun.16,1971, g.Apr.23,1973. h. Aug.26,1973, p.Dec.20,1973, q.Apr.1, 1972, r. Sulfur premium included NA. not available * posted prices for crude not subject to government price controls. Controlled crudes (about 60% of output) are posted at $ 5.200/bbl.

KEY CRUDE OIL PRICE POSTINGS AROUND THE WORLD

(In $ per barrel, effective dates of change)

Crude and Gravity		1973 Aug.1	Sep.1	Oct.1	Oct.16	Nov.1	Dec.1	1974 Jan.1	July.1	Nov.1	1975 Jan.1
Persian/Arabian Gulf Crudes											
Arab light	34	a3.066	...	3.011	5.119	5.176	5.036	11.651	11.651	11.251	11.251
Arab Berri	39	...	...	3.086	5.682	5.741	5.596	12.351	12.351	11.951	11.951
Arab medium	31	a2.936	...	2.884	4.905	4.957	4.822	11.561	11.561	11.161	11.161
Arab heavy	27	a2.775	...	2.725	4.653	4.684	4.557	11.441	11.441	11.041	11.041
Iran light	34	a3.050	...	2.995	5.341	5.401	5.254	11.875	11.875	11.475	11.475
Iran heavy	31	a2.989	...	2.936	4.991	5.046	5.006	11.635	11.635	11.235	11.235
Kuwait	31	a2.936	...	2.884	4.903	4.957	4.822	11.545	11.545	11.145	11.145
Abu Dhabi											
Umm Shaif	37	a3.126	...	3.070	5.537	5.599	5.446	12.086	12.086	11.686	11.586
Murban	39	a3.140	...	3.084	6.045	6.113	5.944	12.636	12.636	12.236	11.836
Zakum	40	a3.171	...	3.115	5.965	6.031	5.864	12.566	12.566	12.166	11.766
Iraq Basrah	35	a3.031	...	2.977	5.061	5.117	4.978	11.672	11.672	11.272	11.272
Qatar Marine	36	a3.092	...	3.037	5.503	5.564	5.412	12.013	12.013	11.613	11.613
Qatar Dukhan	40	a3.200	...	3.143	5.834	5.899	5.737	12.414	12.414	12.014	12.014
Oman	34	3.113	...	3.058	5.738	5.802	5.643	12.298	12.298	12.298	12.298
Mediterranean & African Crudes											
Arab light	34	a4.184	...	4.205	7.149	7.228	7.032	13.647	13.647	13.247	13.247
Iraq Kirkum	36	a4.223	...	4.243	7.213	7.293	7.096	NA	NA	NA	NA
Libyan	40	a4.582	...	4.604	4.604	9.061	9.061	15.768	15.768	15.768	15.768
Nigerian	34	a4.291	...	4.287	4.287	8.404	8.339	14.691	14.691	14.691	14.691
Indonesian Crude (Official Selling Prices)											
Sumatra light	34	...	...	4.750	4.750	6.000	6.000	10.800	12.600	12.600	12.600
Venezuelan Crudes (Reference Prices)											
Tia Juana	26	a4.164	4.492	a4.925	4.925	7.261	7.462	r13.776	14.312	14.312	13,540
Tia Juana	31	a4.410	4.760	a5.203	5.203	7.563	7.762	r14.356	14.906	14.906	14.134
Oficina	35	a4.628	4.996	a5.447	5.447	7.802	8.004	r14.876	15.506	15.506	14.735
United States (Representative Postings)											
East Texas	Flat	h4.20	...	4.20	4.20	4.20	p4.20	*10.000	*10.000	*10.600	*11.200
W.Texas Sour	32	h4.04	...	...	...	...	p5.04	...	...	...	...
Louisiana	37	h4.29	...	...	...	...	p5.29	...	...	...	...

a. Additional changes made in intervening period. b. Jan.1,1971, c. Apr.1,1971, d. Oct.1,1971, e.Nov.23,1970, f.Jun.16,1971,g.Apr.23,1973,h.Aug.26,1973, p.Dec.20,1973, q.Apr.1,1972, r. Sulfur premium included.

NA. not available * posted prices for crude not subject to government price controls. Controlled crudes (about 60% of output) are posted at $ 5.200/bbl.

WORLD SCALE FREIGHT RATES (Percentage)

Period	General purpose (16500-24999 d.w.t.)	Medium range (25000-44999 d.w.t.)	Large range 1 (45000-79999 d.w.t.	Large Ran 2 (80000-159999 d.w.t.)	VLCC 160,000 and above
(1)	(2)	(3)	(4)	(5)	(6)
1970					
January	110.6	97.4	75.3	67.5	
February	115.4	102.2	78.6	68.9	
March	111.7	102.2	78.0	69.4	
April	111.3	100.2	78.0	69.6	
May	113.5	105.2	82.0	72.2	
June	117.2	107.4	82.2	73.0	
July	118.4	105.0	80.9	72.4	
August	124.1	110.4	82.0	73.5	
September	136.4	125.9	92.1	79.6	
October	146.6	139.3	99.8	85.4	
November	157.5	148.1	103.9	90.3	
December	170.4	156.8	109.7	95.2	
1971					
January	168.5	152.4	114.7	97.9	
February	158.8	142.8	111.2	94.7	
March	143.0	133.5	107.8	90.7	
April	133.8	130.3	109.6	91.2	
May	130.3	125.7	106.3	89.5	
June	123.6	119.1	103.2	90.2	
July	118.8	114.7	101.4	88.8	
August	114.6	110.5	99.3	86.1	
September	116.1	111.2	97.0	83.4	
October	117.6	109.3	95.6	81.3	
November	116.3	107.8	91.4	80.9	
December	118.4	107.6	87.9	79.4	
1972					
January	116.7	103.5	86.4	75.8	
February	120.1	107.0	85.9	74.8	
March	115.8	107.9	86.6	75.7	
April	113.1	105.0	84.3	73.3	
May	112.5	100.9	80.6	68.5	
June	110.9	97.6	77.5	65.1	
July	111.4	96.9	75.4	65.2	
August	113.9	98.7	76.2	66.6	
September	113.6	98.7	76.7	66.3	
October	116.9	100.6	76.6	66.2	
November	120.2	102.8	78.4	67.3	
December	120.3	103.2	81.0	69.6	

Period	General purpose (16500-24999 d.w.t.)	Medium range (25000-44999 d.w.t.)	Large range (45000-79999 d.w.t.)	Large range 2 (80000-159999 d.w.t.)
(1)	(2)	(3)	(4)	(5)
1973				
January	128.6	110.5	84.1	72.7
February	131.4	115.3	86.6	75.8
March	133.7	117.3	90.1	79.6
April	[illegible]	[illegible]4.6	96.1	83.8
May	141.0	128.1	100.4	88.7
June	143.9	128.5	101.8	88.7
July	161.4	138.90	101.7	90.3
August	188.5	162.8	116.0	100.2
September	210.9	176.6	129.2	113.8
October	215.0	186.0	135.0	123.9
November	229.9	200.3	144.9	138.7
December	266.0	226.5	159.5	149.4
1974				
[illegible]OT				VLCC
January	234.5	195.8	139.6	125.5 86.8
February	221.8	178.2	123.6	102.0 81.5
March	228.7	189.4	125.8	99.2 81.1
April	224.4	187.8	121.9	100.6 79.2
May	223.8	186.8	122.0	101.7 79.4
June	222.0	186.8	121.6	97.8 78.9
July	214.6	181.9	119.7	92.9 77.8
August	203.3	179.4	120.9	93.2 78.7
September	190.6	169.3	116.3	90.5 77.5
October	183.4	164.6	110.2	86.5 74.6
November	190.7	165.5	110.3	86.1 72.9
December	196.2	168.8	115.0	87.9 74.7
[illegible]7				
[illegible]	[illegible].7	[illegible].0	[illegible]	

WORLD TANKER FLEET AT END 1974 (10 000 Long Tons D.W.and over)
(EXCLUDING 41.2 MILLION D.W.T. COMBINED CARRIERS)

BY FLAG AND OWNERSHIP

FLAG	OWNERSHIP					
	Oil Company	Private	Government	Other	Total 1974	Total 1973.
	MILLION LONG TONS DEADWEIGHT					
Liberia	19.8	53.8	-	0.3	73.9	59.2
Norway	0.5	23.4	-	-	23.9	21.2
U.K.	21.0	11.0	0.2	-	32.2	27.8
Japan	3.8	25.4	-	-	29.2	26.1
U.S.A.	4.3	4.6	1.5	-	10.4	9.5
Panama	4.0	4.4	-	-	8.4	7.6
France	8.4	3.3	0.1	-	11.8	9.6
Greece	-	13.9	-	-	13.9	12.6
Other Western Europe	13.0	18.6	0.1	0.1	31.8	26.0
Other Western Hemisphere	5.7	0.2	0.2	-	6.1	5.2
U.S.S.R., E. Europe & China	-	-	6.6	-	6.6	5.4
Other Eastern Hemisphere	2.9	4.5	0.1	-	7.6	5.4
TOTAL	83.4	163.2	8.8	0.4	255.8	215.6

Source : B.P. Statistical Year Book 1974

INTER-AREA TOTAL OIL MOVEMENTS 1974

From \ To	U.S.A.	Canada	Other Western Hemisphere	Western Europe	Africa	South East Asia	Japan	Australasia	Other Eastern Hemisphere	Destination not Known*	Total Exports
				MILLION TONNES							
U.S.A.	-	1.7	3.3	4.2	0.2	0.2	1.9	0.6	-	-	12.1
Canada	51.5	-	-	1.0	-	-	-	-	-	-	52.5
Caribbean	123.0	21.7	7.7	16.3	0.5	-	0.5	-	-	-	169.7
Other Western Hemisphere	6.7	-	6.0	-	-	-	-	-	1.6	4.5	12.7
Western Europe	11.7	-	-	-	3.7	-	0.8	-	36.0	15.4	22.3
Middle East	52.8	18.8	60.8	505.4	24.1	63.9	201.6	13.7	12.1	-	992.5
North Africa	11.4	0.7	6.1	91.2	0.5	-	3.3	-	-	-	125.3
West Africa	40.1	0.7	14.5	63.0	-	1.5	4.8	-	-	-	124.6
South East Asia	15.6	-	2.1	0.2	-	-	47.1	2.1	-	-	67.1
U.S.S.R., E.Europe & China	1.6	-	8.2	52.5	3.2	-	6.2	-	1.0	-	72.7
Others Eastern Hemisphere	1.0	-	-	-	-	1.4	1.9	-	-	-	4.3
TOTAL IMPORTS	315.4	43.6	108.7	733.8	32.2	67.0	268.1	16.4	50.7	19.9	1655.8
				THOUSAND BARRELS DAILY							
U.S.A.	-	30	60	75	5	5	35	10	-	-	220
Canada	1025	-	-	20	-	-	-	-	-	-	1045
Caribbean	2320	430	155	320	10	-	10	-	-	-	3245
Other Western Hemisphere	125	-	120	-	-	-	-	-	-	-	245
Western Europe	240	-	-	-	80	-	15	-	35	95	486
Middle East	1025	400	1265	10195	490	1320	4050	285	715	305	20050
North Africa	230	15	130	1915	10	-	70	-	255	-	2625
West Africa	795	15	305	1300	-	30	100	-	-	-	2545
South East Asia	315	-	45	5	-	-	990	45	-	-	1400
U.S.S.R., E.Europe & China	30	-	160	1010	60	-	120	-	20	-	1400
Other Eastern Hemisphere	20	-	-	-	-	30	40	-	-	-	90
TOTAL IMPORTS	6125	890	2240	14840	655	1385	5430	340	1025	400	33330

SOURCE:- BP Statistical review of the world oil industry 1974.

* Includes quantities in transit, transit losses, minor movements not otherwise shown, military use, etc.

ESTIMATED G.N.P. AND PER CAPITA G.N.P. OF OPEC COUNTRIES

COUNTRIES	Estimated G.N.P. at Current Prices (MN$)				Per Capita G.N.P. ($)			
	1969	1970	1971	1972	1969	1970	1971	1972
Abu Dhabi	NA	NA	NA	NA	NA	NA	NA	NA
Algeria -@	4011	4638	5168	6026	300	322	350	396
Indonesia	7629	9401	9963	11783	66	78	80	92
Iran	[illegible]04	10581	[illegible]677	15662	336	371	422	508
Iraq -@	2909	2932	3611	NA	329	324	370	NA
Kuwait	2752	3027	4302	NA	4906	4036	5279	NA
Libya	2910	3117	3916	4122	1556	1608	1948	1978
Nigeria	NA	NA	NA	NA	NA	NA	NA	NA
Qatar	NA	NA	NA	NA	NA	NA	NA	NA
Saudi Arabia	2727	2980	3235	4633	378	407	418	579
Venezuela	9492	10180	11170	14159	946	980	1036	1267

@ Gross Domestic Product
SOURCE: Annual Statistical Bulleton OPEC Statistical Unit-1973.

TOTAL & PER CAPITA REVENUES FROM OIL OF OPEC COUNTRIES

COUNTRIES	Total Oil Revenues (MN$)					PER CAPITA OIL REVENUE				
	1969	1970	1971	1972	1973	1969	1970	1971	1972	1973
Abu Dhabi	191	229	436	551	NA	2385	2696	4364	3673	NA
Algeria	267	272	324	613	NA	20	19	22	40	NA
Indonesia	238*	292*	376*	616*	812*	2	2	3	5	6
Iran	923	1109	1874	2396	NA	33	39	62	78	NA
Iraq	479	513	850	575**	432**	54	57	87	57	41
Kuwait	782*	834*	1076*	1540*	1793*	1394	1111	1321	1925	2080
Libya	1175	1351	1805	1563	NA	628	697	898	750	NA
Nigeria	196@	246	824	349	NA	NA	NA	15	15	NA
Qatar	118	122	199	255	NA	1384	816	1208	1500	NA
Saudi Arabia	959	1214	1945	2779	4216	133	166	251	347	527
Venezuela	1256	1409	1715	1961	NA	125	136	159	176	NA

* Relate to Financial years _ 1969-70, 1970-71, 1971-72, 1972-73 and 1973-74.

** Revenues from foreign companies only.
@ Financial year 1969-70

SOURCE: Annual Statistical Bulleton of OPEC Statistical Unit-1973.

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World Primary Energy Consumption 1960-1980

	North America *		Western Europe		Japan		Other Areas		World @	
	MTOE	%	MTOE	%	MTOE	%	MTOE	%	MTOE	%
1960										
Solid Fuels	253	22.5	363	60.7	41	53.2	97	33.2	754	36.1
Oil £	516	46.0	205	34.3	30	39.0	169	57.9	920	44.0
Natural Gas	332	29.6	11	1.8	1	1.3	20	6.8	364	17.4
Primary Electricity	21	1.9	19	3.2	5	6.5	6	2.1	51	2.5
TOTAL	1122	100	598	100	77	100	292	100	2089	100
% World	[illegible]		28.6		[illegible]7		14.0		100	
1970										
Solid Fuels	330	19.0	299	29.1	59	23.1	131	23.7	819	23.0
Oil £	769	44.4	623	60.8	186	72.9	345	62.5	1923	53.9
Natural Gas	598	34.5	72	7.0	3	1.2	62	11.2	735	20.6
Primary Electricity.	36	2.1	32	3.1	7	2.8	14	2.6	89	2.5
TOTAL	1733	100	1026	100	255	100	552	100	3566	100
% World	48.6		28.3		7.1		15.5		100	
Growth % p.a. 1960-1970	4.4		5.5		12.7		6.6		5.5	
1973										
Solid Fuels	360	18.7	257	22.2	54	16.1	147	21.7	818	20.0
Oil £	892	46.2	730	63.0	269	80.3	430	63.4	2321	56.6
Natural Gas	626	32.5	135	11.6	5	1.5	84	12.4	850	20.7
Primary Electricity.	51	2.6	37	3.2	7	2.1	17	2.5	112	2.7
TOTAL	1929	100	1159	100	335	100	678	100	4101	100
% World	47.0		28.3		8.2		16.5		100	
Growth % p.a. 1970-1973	3.6		4.2		9.5		7.1		4.8	
1974										
Solid Fuels	351	18.6	253	22.4	55	16.6	155	22.3	814	20.1
Oil £	864	45.8	679	60.1	261	78.9	431	61.9	2235	55.3
Natural Gas	617	32.7	157	13.9	8	2.4	91	13.1	873	21.6
Primary Electricity	55	2.9	40	3.6	7	2.1	19	2.7	121	3.0
TOTAL	1887	100	1129	100	331	100	696	100	4043	100
% World	46.7		27.9		8.2		17.2		100	
Growth % p.a. 1970-1974	2.2		2.4		6.7		6.0		3.2	

Continued :

World Primary Energy Consumption 1960-1980 (Continued)

	North * America MTOE	%	Western Europe MTOE	%	Japan MTOE	%	Other Areas MTOE	%	World @ MTOE	%
1977										
Solid Fuels	385	19.1	255	20.9	63	16.9	170	23.2	873	20.1
Oil £	960	47.8	712	58.4	287	77.2	436	59.4	2395	55.2
Natural Gas	595	29.6	205	16.8	12	3.2	105	14.3	917	21.2
Primary Electricity	70	3.5	48	3.9	10	2.7	23	3.1	151	3.5
TOTAL	2010	100	1220	100	372	100	734	100	4336	100
% World	46.4		28.1		8.6		16.9		100	
Growth % p.a. 1974-1977	2.1		2.6		4.0		1.8		2.4	
1980										
Solid Fuels	455	19.8	250	18.3	70	15.9	180	21.5	955	19.3
Oil £	1156	50.4	787	57.7	334	75.9	505	60.5	2782	56.4
Natural Gas	584	25.4	263	19.3	21	4.8	120	14.4	988	20.0
Primary Electricity	100	4.4	65	4.7	15	3.4	30	3.6	210	4.3
TOTAL	2295	100	1365	100	440	100	835	100	4935	100
% World	46.5		27.7		8.9		16.9		100	
Growth % p.a. 1977-1980	4.5		3.8		5.9		4.3		4.4	

Notes :-

MTOE = Million tons oil equivalent

* = U.S.A. and Canada

@ = Excluding Soviet Bloc and China but includes net exports form these areas. Represents net consumption and does not include stock changes, oil afloat, etc.

£ = Consists of all oil products including refinery fuel and loss.

KHOSLA

Comparative Transportation Costs Persion From Persian Gulf to Rotterdam in Various Sizes of Tankers 1974, 1977 and 1980

Year of Delivery / Size of Tanker (DWT.)		20000	30000	50000	70000	120000	250000
	Mileage (round trip)	22338	22338	22338	22338	22338	22338
	Days at sea	64.2	60.1	60.1	60.1	60.1	60.1
	Days in port	2.5	2.8	3.1	3.4	3.8	4.5
	Total Voyage Days	66.7	62.9	63.2	63.5	63.9	64.6
	Trips per annum	5.17	5.48	5.46	5.43	5.40	5.26
	Cargo (tons per trip)	18725	28175	47465	66995	115700	241100
	Voyage Costs ($000)						
1974	Fixed direct costs	177	182	209	227	269	408
	Capital costs	153	163	221	274	394	741
	Bunkers	137	197	271	298	382	656
	Port charges	13	16	23	29	46	81
	Total	480	558	724	828	1091	1886
	Cost per ton of cargo ($)	25.63	19.81	15.25	12.36	9.43	7.82
1977	Fixed direct costs	246	253	289	313	368	549
	Capital costs	269	287	409	502	725	1380
	Bunkers	149	215	296	325	417	718
	Port charges	17	22	30	39	61	107
	Total	681	777	1024	1179	1571	2754
	Cost per ton of cargo ($)	36.38	27.58	21.58	17.59	13.58	11.42
1980	Fixed direct costs	336	345	393	426	497	736
	Capital costs	337	357	506	630	866	1650
	Bunkers	162	234	322	354	455	784
	Port charges	22	28	39	50	79	139
	Total	857	964	1260	1460	1897	3309
	Cost per ton of cargo ($)	45.77	34.21	26.55	21.79	16.40	13.72
	1974 Worldscale Equivalent						
1974	Fixed direct costs	92.8	63.5	43.2	33.3	22.8	16.6
	Bunkers and port charges	78.7	74.3	60.8	47.9	36.3	30.1
	Total direct costs	171.5	137.8	104.0	81.2	59.1	46.7
	Capital costs	80.3	56.9	45.8	40.2	33.5	30.2
	Total cost	251.8	194.7	149.8	121.4	92.6	76.9
1977	Fixed direct costs	129.1	88.2	59.8	45.9	31.2	22.4
	Bunkers and port charges	87.1	82.6	67.5	53.3	40.6	33.6
	Total direct costs	216.2	170.8	127.3	99.2	71.8	56.0
	Capital costs	141.2	100.1	84.7	73.6	61.6	56.2
	Total cost	357.4	270.9	212.0	172.8	133.4	112.2
1980	Fixed direct costs	176.2	120.2	81.3	62.5	42.2	30.0
	Bunkers and port charges	96.6	91.4	74.8	59.2	45.4	37.6
	Total direct costs	272.8	211.6	156.1	121.7	87.6	67.6
	Capital costs	176.8	124.5	104.7	92.3	73.5	67.2
	Total cost	449.6	336.1	260.8	214.0	161.1	134.8

SOURCE: PETROLEUM ECONOMICS LONDON.

Basic Tanker Operating Data and Performance Characteristics

Size							
Summer deadweight tons		20000	30000	50000	70000	120000	250000
Approximate gross registered tonnage		12500	18500	29000	39500	64000	130000
Approximate net registered tonnage		7500	12000	17500	26000	43000	100000
Dimensions							
Draught fully taken	(feet)	30	35	39	42	53	65.5
Length between perpendiculars	(feet)	530	540	685	760	850	1085
Beam: Extreme breadth	(feet)	72	85	100	110	130	170
Type		Motor	Motor	Motor	Motor	Motor	Steam Turbine
Performance							
Speed (knots)	loaded	14.0	15.0	15.0	15.0	15.0	15.0
	ballast	15.0	16.0	16.0	16.0	16.0	16.0
	average	14.5	15.5	15.5	15.5	15.5	15.5
Fuel consumption (HFO/Diesel tons/day):							
	at sea (fuel/diesel)	27*/2	43*/2	60*/2	66*/2	85*/2	154
	in port (fuel/diesel)	3*/2	6*/2	13*/2	18*/2	28*/2	60
Operating days per annum		345	345	345	345	345	340
Building Costs ($ per [illegible])							
1974 delivery		280	210	170	150	125	110
1977 delivery		490	370	315	275	230	205
1980 delivery		615	460	390	345	275	245

* Interfual 1500 Seconds Redwood Viscosity.

SOURCE: PETROLEUM ECONOMICS LTD. LONDON

AVERAGE COST OF CRUDE OIL TO COMPANIES WITH EQUITY INTEREST IN PRODUCTION

($/bbl)

Type of Crude	Prices as on	Posted Price	Tax-paid Cost	Bridging Price	Phase-in Price	93% Posted Price	94% Posted Price	94.846% Posted Price	Average cost to Companies	Arms-length Price
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1.Saudi Arabia-34°API	End 72	2.479	1.557	-	-	-	-	-	1.557	1.95
	1.1.73	2.591	1.625	2.056	1.975	-	-	-	1.721	2.10
	1.4.73	2.742	1.716	2.162	2.066	-	-	-	1.815	2.30
	1.7.73	2.955	1.845	2.312	2.195	-	-	-	1.948	2.77
	1.10.73	3.011	1.879	-	-	2.800	-	-	2.091	3.00
	16.10.73	5.119	3.157	-	-	4.761	-	-	3.527	4.76
	1.1.74	-	7.117	-	-	-	10.952	11.053	9.337	10.84
	1.6.74	-	7.117	-	-	-	-	-	9.396	10.84
	1.7.74	-	7.222	-	-	-	-	11.053	9.440	10.84
	1.10.74	11.651	8.372	-	-	10.835	-	-	9.798	10.84
2.Kuwait-31°API	End 72	2.373	1.468	-	-	-	-	-	1.468	1.85
	1.1.73	2.482	1.534	1.941	1.874	-	-	-	1.634	2.00
	1.4.73	2.626	1.619	2.041	1.959	-	-	-	1.725	2.20
	1.7.73	2.830	1.743	2.185	2.083	-	-	-	1.861	2.65
	1.10.73	2.884	1.776	-	-	2.682	-	-	2.002	2.85
	16.10.73	4.903	3.000	-	-	4.560	-	-	3.390	3.50
	1.1.74	11.545	7.027	-	-	-	10.85	-	9.178	10.74
	1.6.74	11.545	7.027	-	-	-	-	10.95	9.203	10.74
	1.7.74	11.545	7.130	-	-	-	-	10.95	8.703	10.74
	1.10.74	11.545	8.271	-	-	10.74	-	-	9.440	10.74

Contd..... /

AVERAGE COST OF CRUDE OIL TO COMPANIES WITH EQUITY IN PRODUCTION

($ /bbl.)

Type of Crude	Prices as on	Posted Price	1st Tranche Price	2nd Tranche Price	3rd Tranche Price	4th Tranche Price	93% Posted Price	94% of Posted Price	94.864% of Posted Price	Average cost to Companies	Arms-length Price
3.Iran-34° API (Iranian Light)	end 72	2.467	1.549	-	-	-	-	-	-	1.549	2.00
	1.1.73	2.579	1.617	2.058	1.977	2.108	-	-	-	1.720	2.15
	1.4.73	2.729	1.705	2.161	2.065	2.211	-	-	-	1.812	2.35
	1.7.73	2.940	1.833	2.310	2.193	2.360	-	-	-	1.943	2.82
	1.10.73	2.995	1.866	-	-	-	2.785	-	-	2.086	2.88
	16.10.73	5.341	3.289	-	-	-	4.967	-	-	3.692	3.70
	1.1.74	-	7.249	-	-	-	-	11.162	-	9.421	11.04
	1.6.74	-	7.249	-	-	-	-	-	11.265	9.478	11.04
	1.7.74	-	7.356	-	-	-	-	-	11.265	9.525	11.04
	1.10.74	11.875	8.528	-	-	-	11.044	-	-	9.924	11.04

Tax-paid Costs: The operating costs, royalty tax rates used in the calculation of tax-paid costs (or 1st Transfer Price in the case of Iran) are as follows:-

Period	Operating Cost (¢/bbl)			Royalty (%)	Tax (%)
	Saudi Arabia	Kuwait	Iran		
End 72-30th June'74	12	6	11	12½	55
1st July'74-30th Sept 1974	12	6	11	14½	55
1st Oct.'74-31st Dec 1974	12	6	11	16-2/3	65.79 (65.75 for Kuwait)

Contd..... /-

AVERAGE COST TO COMPANIES

Saudi Arabian

1. Until the end of 1972 the operating companies owned 100% of production so the cost of crude to the companies was same as the tax-paid cost.

2. From 1st Jan.'73 to 31st Aug.'73, the average price is based on 75% of production as equity crude at tax-paid cost, 18.75% of production at 'bridging' price and 3.75% of production at 'phase' in price.

3. For The period 1st Oct.'73 to 31st Dec.'73 the average price has been worked out on the basis of 75% of production as equity crude at tax-paid cost and 22.5% of production as buy-back crude at 93% of the posted price.

4. From Jan.'74 onwards the average price is based on 40% equity at tax-paid cost and 55% buy-back crude which was priced at 94% of posted price upto the end of May'74, at 94.864% at posted price during June to Sept'74 and at 93% of posted price in oct'74.

Kuwait

1. For end 1972 and 1973 the average price for Kuwait has been calculated on the same basis as for Saudi Arabian crude except in 1973 when the remaining quantity of 2.5% of production was also available to the companies presumably at market price.

2. For 1974, the average of Kuwait crude has also been worked out using the tax-paid costs and buy-back prices on the same basis as in the case of Saudi Arabian crude; but due to different stages of implementation of participation Agreement, the percentages of equity participation crude were 39.98/51.46 on 1.1.74, 39.39/40.09 on 1.6.74 54.01/37.81 on 1.7.74 and 46.51/41.86 on 1.10.74.

Contd..... /-

Iran

1. Until the end of 1972, the members of the consortium lifted the oil, at tax-paid cost.

2. For 1973 the average price was the weighted average of the four four tranches in the proportions indicated below:-

Tranche Price	Proportion Jan. July '73	Oct. '73
1st	76.0	76.0
2nd	19.0	-
3rd	3.8	-
4th	1.2	-
93% of posted price	-	24.0
TOTAL	100.0	100.0

3. In 1974 the share of equity and participation crudes have been taken as 44.5% and 55.5% respectively. The equity crude has been priced at 1st Tranche price and participation at buy-back price. The buy-back prices have been taken on the same basis as for in the case of Saudi Arabian crude.

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Source - Petroleum Economics Ltd. London

Estimates of Tanker Supply and Demand Balance 1972-1980

Million dwt.

Size Group 000 dwt	0-45	45-80	80-160	160-300	300 +	1) Minimum Total Demand	2) Maximum Total Demand	Mean Total Demand
1972 Tanker Demand (Canal closed)	43.9	28.1	56.3	52.8	8.2	189.3	189.3	189.3
Tanker Supply	52.7	39.7	42.8	59.0	2.3	196.5	196.5	196.5
Surplus/(Deficit)	8.8	11.6	(13.5)	6.2	(5.9)	7.2	7.2	7.2
1975 Tanker Demand(Canal open)	41.6	25.0	49.1	73.4	29.0	218.1	255.0	236.6
Tanker Supply	51.0	40.0	62.0	131.7	11.8	296.5	296.5	296.5
Surplus/(Deficit)	9.4	15.0	12.9	58.3	(17.2)	78.4	41.5	59.9
1977 Tanker Demand (Canal open)	41.0	27.5	41.5	67.6	41.1	218.7	300.0	259.4
Tanker Supply	49.3	39.4	85.3	171.9	43.8	389.7	389.7	389.7
Surplus/(Deficit)	8.3	11.9	43.8	104.3	2.7	171.0	89.7	130.3
1980 Tanker Demand(Canal open)	43.4	35.9	48.7	69.9	56.5	254.4	335.0	294.7
Tanker Supply	42.0	40.5	92.0	183.5	62.0	420.0	420.0	420.0
Surplus/(Deficit)	(1.4)	4.6	43.3	113.6	5.5	165.6	85.0	125.3

1) Minimum total tanker demand on basis current model assuming Suez Canal open from 1975.

2) Maximum total tanker demand on basis of estimates made in 1973 assuming Suez Canal closed throughout.

SOURCE:- PETROLEUM ECONOMICS LTD. LONDON

ESTIMATED COST OF PRODUCTION OF MAIN GULF CRUDES

¢ per barrel

Country/Crude	1971	1972	1973	1974
Saudi Arabia				
Arabian Light	11	10	10	10
Arabian Medium	11	10	10	10
Arabian Heavy	15	10	10	10
Iran				
Iranian Light	12	12	12	12
Iranian Heavy	12	12	12	12
Kuwait				
Kuwait	6	6	6	6
Abu Dhabi				
Murban	15	15	15	15
Marine (Umm Shaif)	20	30	30	30
Zakum	30	30	30	30
Iraq				
Basrah	12	12	12	12
Qatar				
Dukhan	12	14	17	17
Marine	25	30	22	22

SOURCE: MEES dated 28.12.73

SULPHER CONTENTS OF MAIN GULF AND AFRICAN CRUDES

Country	Crude	API°	Sulpher % by weight
Saudi Arabia:	Arabian Light	34	1.7
	Arabian Medium	31	2.4
	Arabian Heavy	27	2.85
Iran:	Iranian Light	34	1.35
	Iranian Heavy	31	1.6
	Darius	33	2.44
Kuwait:	Kuwait	31	2.5
Abu Dhabi:	Murban	39	0.75
	Marine (Umm Shaif)	37	1.3
	Zakum	40	0.95
Iraq:	Basrah	35	1.95
	Kirkuk	36	1.95
	Rumalia	35	2.1
Qatar:	Dikhan	40	1.17
	Marine	36	1.4
Libya:	Nofoora	30.6 - 39.2	0.09- 1.04
	Sarir	35.6 - 38.6	0.15-0.18
Nigeria:	Nigerian (Robert-Kiri)	38.4	0.12
Algeria:	Algerian (Hassi Messaond)	42.8	0.15

SOURCE:- MEES dated 28.12.73 & International Petroleum Encyclopedia 1973.

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I M F O I L F A C I L I T Y - 1974

(i) Loans @ to the 1974 Facility

O E C D - Members	Ammount $ Mn.	% Total
Abu Dhabi	120.0	3.3
Iran	696.0	18.9
Kuwait	480.0	13.1
Nigeria	120.0	3.3
Saudi Arabia	1,200.0	32.7
Venezuela	540.0	14.7
TOTAL	3156.0	86.0
OTHERS		
Canada	309.6	8.4
Netherlands	180.0	4.9
Oman	24.0	0.7
TOTA	513.6	14.0
TOTAL 1974 FACILITY.	3,669.6	100.0

(ii) Borrowings @@ from the 1974 Facility

O E C D - Members	Account $ Mn.	% Total
Italy	810.0	27.0
Spain	355.4	11.9
Yogoslovia	186.2	6.2
Turkey	135.8	4.5
New Zeland	131.2	4.4
Greace	124.2	4.1
Iceland	20.6	0.7
TOTAL	1,763.4	58.8
OTHERS		
India	240.0	8.0
Pakistan	150.0	5.0
Chile	142.2	4.7
Korea	120.0	4.0
Israel	74.4	2.5

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
	Methyl Isobutyl Ketone.	"	-	-	-	-	-	-	1	3700	1344	1	3700	1289
	Isopropanol	"	-	-	-	-	-	-	1	1500	1541	1	1500	1512
	Phenol	"	-	-	-	-	-	-	2	16000	13072	2	16000	11513
	Phthalic Anhydride	"	-	-	-	-	-	-	3	12300	4197	3	15300	8486
	Polyethylene Glycol	"	-	-	-	-	-	-	1	1000	780	1	1000	713
	Propylene	"	-	-	-	-	-	-	2	37000	39207	2	42000	37245
	Styrene	"	-	-	-	1	14000	5274	2	24000	15052	2	24000	11947
	Toluene	"	4	-	1106	6	2418	2360	9	25755	14444	9	25755	14609
	D.M.T.	"	-	-	-	-	-	-	1	24000	3863	1	24000	12745
	Ortho-Xylene	"	-	-	-	-	-	-	1	21000	3920	1	21000	11749
	Mixed Xylene	"	-	-	-	-	-	-	1	2500	874	1	2500	2159
	Vinyl Chloride	"	-	-	-	-	-	-	1	30000	22321	1	30,000	18340
2.	SYNTHETIC FIBRE													
	Nylon Staple Fibre	"	-	-	-	-	-	-	1	1800	50	1	1800	6
	Nylon 6-Filament Yarn.	"	-	-	-	3	1140	1478	7	13926	11329	7	15736	10036
	Nylon Tyre Cord.	"	-	-	-	-	-	-	2	3790	1817	2	3790	841
	Polyester Filame-Yarn	"	-	-	-	-	-	-	5	2166	1808	5	1590	1238
	Polyester Staple Fibre	"	-	-	-	1	2001	1764	4	18750	12950	5	21350	7028
3.	SYNTHETIC RUBBER													
	Synthetic Rubber	"	-	-	-	1	22	14	1	30000	20866	1	30000	17018

Continued .....

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
4.	PLASTICS													
	THERMOSETS :													
	M.F. Moulding Powder	"	-	-	-	-	-	-	3	500	210	3	600	102
	M.F. Moulding Powder	"	4	3414	2134	5	4512	3360	3	6200	5015	3	6200	4506
	U.F. Moulding Powder	"	4	957	366	3	1074	1228	4	2850	2055	4	3100	1646
	C.A. Moulding Powder	"	-	-	-	1	4200	1100	2	5800	1576	2	7200	1366
5.	THERMOPLASTICS													
	Polyethyline H.D.	"	4	-	-	-	-	-	1	20000	23001	1	20000	24616
	Polyethylene L.D.	"	1	3556	4213	2	11200	13501	2	19000	28127	2	19000	26546
	Polystyrene	"	1	5436	3676	2	7836	5984	2	17500	13759	2	17500	9848
	P.V.C. Resin	"	-	-	-	3	9600	12179	5	64700	48486	5	64700	47432

Continued ....

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
5.	DYESTUFFS	Tonnes												
1.	Azo Dyes.	"	-	-	-	-	-	-	6	3431	2470	6	3431	2561
2.	Acid Direct Dyes other then Azo.	"	3	1397	1189	9	1685	1310	9	509	340	7	467	197
3.	Basic Dyes.	"	2	75	50	4	440	303	6	1137	637	5	987	853
4.	Disperse Dyes.	"	-	-	-	-	-	-	6	505	250	7	605	222
5.	Fast Colours Bases	"	2	764	453	3	863	524	7	1409	1072	6	1364	954
6.	Food Colours.	"	-	-	-	-	-	-	1	109	44	2	109	44
7.	Ingrain Dyes.	"	-	-	-	-	-	-	3	225	58	3	295	80
8.	Naphthols.	"	3	1069	860	3	1273	1020	4	1285	1234	4	1280	1295
9.	Oil Soluble Colours	"	-	-	-	-	-	-	4	176	70	3	176	46
10.	Optical Whitening Agents.	"	4	198	165	6	330	381	6	845	756	6	378	703
11.	Org. Pigment Colours.	"	3	504	199	7	950	619	6	2567	1988	8	2403	2087
12.	Pigment Emulsons	"	-	-	-	-	-	-	3	1850	2755	4	1300	2254
13.	Reactive Dyes.	"	-	-	-	2	60	54	5	845	1069	7	962	1206
14.	Stabilised Ajoics	"	-	-	-	3	335	150	4	685	113	2	585	72
15.	Sulphur Dyes.	"	2	1832	1491	2	2290	1640	2	2598	1045	3	2502	571
16.	Vat. Dyes.	"	2	482	475	4	882	825	5	1509	1327	5	1509	1308
17.	Solublised Vat.	"	3	202	105	3	169	119	5	370	95	4	370	120
	TOTAL	"									15323			14,573

ESTIMATED CONSUMPTION OF ORGANIC CHEMICALS IN INDIA DURING 1973-74

(Tonnes)

ITEMS (1)	Actual Production (2)	IMPORTS (3)	Exports (4)	Estimated Consumption (5)
1. Acetone	18883	-	500	18375
2. Benzene	71503	170	2021	69652
3. Butadiene	6235	-	-	6235
4. Butyl Acetate	3891	108	-	3999
5. Butyl Alcohol	5824	32	1543	4313
6. Diacetone Alcohol	3852	-	-	3852
7. Diethylene Glycol	776	-	-	776
8. Dichloro Ethane	33263	-	-	33263
9. Dripolene A & B	4910	-	-	4910
10. Ethylene	71454	-	-	71454
11. Ethylene Oxide	10364	-	-	10364
12. Mono Ethylene Glycol	7944	1614	-	9558
13. 2-Ethyl Hexanol	7376	-	-	7376
14. Isopropanol	1413	-	-	1413
15. Methanol	24165	12662	-	36827
16. M.I.Ketone	1309	-	-	1309
17. Phenol	12754	96	-	12850
18. Phthalic Anhydride	5695	5635	-	11330
19. Polyethylene Glycol	717	-	-	717
20. Propylene	36499	-	-	36499
21. Styrene	16262	-	-	16262
22. Toluene	15591	-	-	15591

N.B. Col.5 = Col.2 + Col.3 - Col.4

SOURCE: For Col. No.2 Mfg. units and Cols. 3 and 4 from Monthly Statistics of Foreign Trade of India.

ESTIMATED CONSUMPTION OF SYNTHETIC FIBRES AND SYNTHETIC RUBBER IN INDIA DURING 1973-74

(Tonnes)

ITEM	Actual Production	Imports	Exports	Estimated Consumption
(1)	(2)	(3)	(4)	(5)
A. SYNTHETIC FIBRES				
1. Acrylic Fibre	-	763	-	763
2. Nylon-6-Filament Yarn.	10200	-	-	10200
3. Nylon Industrial Yarn/Tyre Cord.	1204	-	-	1204
4. Nylon Staple Fibre	-	-	-	-
5. Polyster Filament Yarn.	1312	-	-	1312
6. Polyster Staple Fibre.	10431	637	-	11068
B. CRUDE RUBBER, SYNTHETIC AND RECLAIMED	23338*	6624@	3296@	26666

N.B. Col.5 = Col.2+Col.3 - Col.4

* SBR only.

@ Includes SBR, Natural Rubber and Reclaimed Rubber.

SOURCE: Col.2 Mfg. units and Cols.3 & 4 Monthly Statistics of Foreign Trade of India.

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CONSUMPTION OF SBR BY END PRODUCTS

A. AUTO TYRE UNITS	1974
1. Firestone	1146
2. Ceat	1506
3. Dunlop	2344
4. Inchek	312
5. Goodyear	464
6. MRF	933
7. Premier	408
8. Modi	37
SUB TOTAL	7150
B. OTHERS	
1. Footwear	3825
2. Cycle Tyres & Tubes (Other than 'A' above)	710
3. Retreading material (other than 'A' above)	1550
4. Industrial Rubber Products	700
5. Others	1576
SUB TOTAL	8361
GRAND TOTAL	15511

SOURCE:- M/s. SYNTHETICS & CHEMICALS LIMITED, BOMBAY.

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ESTIMATED CONSUMPTION OF PLASTICS IN INDIA DURING 1973-74

(Tonnes)

	ITEM	Actual Production	Imports	Exports	Estimated Consumption
	(1)	(2)	(3)	(4)	(5)
1.	M.F.Moulding Powder	168	-	-	168
2.	P.F.Moulding Powder	5033	20	146	4912
3.	U.F.Moulding Powder	2012	23	31	2004
4.	C.A.Moulding Powder	1603	103	-	1706
5.	Polyethylene L.D.	27480	5991	269	33202
6.	Polyethylene H.D.	22886	6170	27	29029
7.	Polystyrene Moulding Powder.	14377	626	163	14840
8.	P.V.C. Resin	48005	1588	620	48973

N.B.: Col. 5 = Col.2 + Col.3 - Col.4

SOURCE: Col.2 Mfg. units & Cols.3 & 4 Monthly Statistics of Foreign Trade of India.

PRICES OF NYLON YARN SOLD TO ACTUAL USERS

Denier	Quality	Agreed ex-factory selling prices in Rs. per Kg.	
		From 1.3.72 to 31.3.73	From 1.4.73 on wards.
12/1/0	SD	82.00	86.95
15/1/0	SD	74.00	78.90
20/1/0	SD	70.00	74.85
20/1/0	TWINKLE	95.00	100.10
30/10/0	SD(W)	68.00	73.05
32/10/0	SD(W)	68.00	73.05
32/10/0	SD(K)	70.50	80.55
40/10/0	SD(W)	62.00	66.75
40/10/0	SD(SP/K)	64.50	69.25
40/10/0	FD(K)	69.00	73.35
76/17/0)	SD	60.00	69.90
76/20/0)	SD		
90/20/0	SD	53.00	62.35
100/20-24/0)			
101/20-24/0)	SD	51.00	60.85
105/20-24/0)			

SD= Semi Dull K = Knitting
FD= Full Dull SP= Special
W = Weaving

NOTE: The Prices include Excise Duty.

SOURCE: Textile Commissioner, Bombay.

EX-WORKS PRICES (BULK, EXCLUDING EXCISE DUTY) OF SELECTED PETROCHEMICALS

(Prices Rs./Tonne as on:)

Item	Manufacturers	1.1.69	1.7.69	1.1.70	1.7.70	1.1.71	1.7.71
1.	2.	3.	4.	5.	6.	7.	8.
1. Polyethylene LD	UCI	3950	4700	4700	5130	5130	5130
,,	ACCI	4194	4126	4792	4792	4792	4792
2. ,, HD (Natural Colour)	Polyolefins Inds. Ltd.	3797	4059	4016	4016	4212	4329
3. Monomer	Polychem Ltd.	-	4103	3970	-	3331	3186
,,	Hindustan Polymers Ltd.	-	4250	4250	-	4250	4250
4. PVC (Resin)	NOCIL	3700	3700	3350	3200	3100	3100
,,	Chemicals & Plastics India Ltd.,	3700	3500	3000	3000	2900	2900
	Calico Ltd.	3650	3650	3200	3000	2825	2825
5. Dioctyl Phthalate	UCI, Ltd.	7450	6600	6600	7000	7300	7300
	IOC, LTD.	-	6150	7500	7500 (as on 1.1.70)	7150 (as on 1.1.71)	7150
	HCL, Bombay	6750	6500	7150	7400	7400	6606
6. 2-Ethyle Hexanol	NOCIL	Not in Production		5200	5200	5200	5200
,,	UCI, Ltd.	5500	5500	4900	5000	5300	5300
7. Ethylene Glycol	NOCIL	3800	3800	3800	4700	4700	4300
8. Phenol	HCL, Bombay	2920	3100	3100	3100	3300	3393
9. Ethylene Oxide	NOCIL	6600	6600	6600	8050	8050	6600 (in consumers cylinders)
10. Synthetic Rubber	Synthetic & Chem. Ltd.						
-S-1500/502		5150	5150	4400	4400	4400	4400
-S-1712		4650	4650	3900	3900	3900	3900
-S-1958		6800	6800	6800	6800	6800	6800
11. Di Butyl Phthalate	IOC , Bombay	-	-	7100	NA	7000	NA

UCI = Union Carbide India Ltd.,

NOCIL= National Organic Chemicals Industries Ltd.,

\- = Not Available

HCL = Herdillia Chemicals Ltd.,

IOC = Indian Organic Chemical Ltd.,

ACCI = Alkalies & Chemicals Corpn. of India Ltd.,

SOURCE: Manufacturing Units.

EX-WORKS PRICES (BULK, EXCLUDING EXCISE DUTY) OF SELECTED PETROCHEMICALS

(Prices Rs./Tonnes as on:)

Item	Manufacturers	1.1.72	1.7.72	1.1.73	1.7.73	1.1.74	1.7.74	1.1.75
1.	2.	3.	4.	5.	6.	7.	8.	9.
1.Polyethylene LD	UCI	5400	5400	5400	5770	6140	9425	9425
,,	ACCI	4792	4798	4798	5122	5122	6169	8087
2. ,, HD (Natural Colour)	Polyolefins Inds. Ltd	4329	4346	4346	4671	4671	7613	7744
3.Monomer	Polychem Ltd.	3293	3864	3907	4082	4060	9196	9250
,,	Hindustan Polymers Ltd.,	-	-	-	-	-	9800	9100
4.PVC (Resin)	NOCIL	3100	3100	3100	3650	3800	6000	6000
,,	Chemicals & Plastics India Ltd.,	3050	3350	3350	3600	4200	6000	6000
	Calico Ltd.	2825	2825	2825	2825	2750*	5200*	5300*
5.Dioctyl Ph-thalate	UCI , Ltd.	6000	6250	6250	8900	1300	14800	11700
	IOC, Ltd.	4650	4500	4300	7900	11650	13500	8600
	HCL, Bombay	5612	5433	5798	8520	9458	13500	10800
6.2-Ethyle Hexanol	NOCIL	5200 (as on 1.7.71)	4900	4900	4900	5200	8300	8300 (as on 1.1.75)
,,	UCI, Ltd.	4900 (discontinued)	5300	5300	5400	7700	-	-
7.Ethylene Glycol	NOCIL	4300	4300	4300	4300	4550	6800	6800
8.Phenol	HCL, Bombay	3502	3451	3522	4473	6184	8700	8700
9.Ethylene Oxide	NOCIL	6100	6100	6100	6100	6350	[illegible]	8750
10.Synthetic Rubber	Synthetic & Chem. Ltd							
-S-1500/502		4400	4400	4400	4400	4400	4950	4950
-S-1712		3900	3900	3900	3900	3900	4450	4450
-S-1958		6800	6800	6800	6800	6800	7400	7400
11.Di Butyl Ph-thalate	IOC, Bombay	5900	6250	6150	9900	16150	15750	15550

* = 0685 grade

UCI = Union Carbide India Ltd.,

NOCIL = National Organic Chemicals Industries Ltd.,

\- = Note Available

HCL = Herdillia Chemicals Ltd.,

IOC = Indian Organic Chemicals Ltd.,

ACCI = Alkalies & Chemicals Corpn. of India Ltd.,

SOURCE: Manufacturing Units.

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Demand of Methanol during V Plan.

(Qty. in thousand tonnes)

Product	1974-75	1975-76	1976-77	1977-78	1978-79
Formaldehyde	26	30	34	38	40-45
Pharmaceuticals	6	7	8	9	10
DMT	3	4	4	4	8
Intermediates	6	7	9	10	12
AV/Defence	3	3	3	4	4
Solvents	3	4	4	5	6
Fertilizers	-	1	6	13	25
Total	47	56	68	83	105-110
Production Estimates	35	35	35	35	35
FCI, Trombay					
Haldia	-	-	-	-	20
Assam Petrochemical	-	-	-	-	7
Total	35	35	35	35	62
Deficit	12	21	33	48	43-48

Demand of Methanol during V Plan.

(Qty. in thousand tonnes)

Product	1974-75	1975-76	1976-77	1977-78	1978-79
Formaldehyde	26	30	34	38	40-45
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Solvents	3	4	4	5	6
Fertilizers	-	1	6	13	25
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FCI, Trombay					
Haldia	-	-	-	-	20
Assam Petrochemical	-	-	-	-	7
Total	35	35	35	35	62
Deficit	12	21	33	48	43-48

IMPORTS OF SELECTED PETRO-CHEMICALS AND DYESTUFFS INTO INDIA DURING 1972-1973 and 1973-1974.

Q = Tonnes
V = Rs. in Mn.

S.No.	Industry/Products	1972 - 73 Qty.	1972 - 73 Value	1973 - 74 Qty.	1973 - 74 Value
1.	ORGANIC CHEMICALS (EXCL.PESTICIDES VIZ.BHC)				
1.	Benzene	18.49	0.1	170.0	0.52
2.	Toluene	5.1	0.02	0.6	neg
3.	Methyl Alcohol(Methanol)	17.6	0.1	12662.1	9.82
4.	Butyl Alcohol(Butanol)	62.6	0.4	32.3	0.30
5.	Ethylene Glycol	926.4	2.0	1614.4	4.53
6.	Ethyl Alcohol (Undenatured)	2993.8	24.9	16865.0	20.70
7.	Ethyl Alcohol Denatured	-	-	1.9	0.11
8.	Acetone	neg	neg	-	-
9.	M.I.Ketone	-	-	-	-
10.	Carbolic Acid (Phenol)	2429.9	5.9	95.5	0.21
11.	Phthalic Anhydride	3793.8	4.6	5635.0	17.22
12.	Butyl Acetate	81.6	0.4	108.1	0.53
13.	Others (Excl.Pesticides viz. BHC, DDT & Ethylene Dichloride.	-	698.6	-	774.16
	TOTAL	-	737.0	-	823.10
2.	PLASTIC MATERIALS REGENERATED CELLULOSE & ARTIFICIAL RESIN.				
1.	P.F.Moulding Powder	35.6	0.2	19.8	0.19
2.	U.F.Moulding Powder	33.7	0.1	23.0	0.06
3.	Polyethylene L.D.	1594.3	3.6	6169.6	19.22
4.	Polyethylene H.D.	3160.9	5.8	5990.8	17.99
5.	Polystrylene M.Powder	647.6	1.3	626.4	2.12
6.	PVC - Resin	750.0	2.6	1537.6	6.33
7.	C.A.Moulding Powder	142.4	1.4	102.6	0.41
8.	Others	-	99.7	-	105.75
	TOTAL		114.7		152.07

Q= Tonnes
V= Rs. in Mn.

S.No.	Industry/Products	1972-73 Qty.	1972-73 Value	1973-74 Qty.	1973-74 Value
3.	SYNTHETIC & REGENERATED FIBRE				
	1. Polyamide Fibre	531.0	3.7	324.8	2.42
	2. Polyester Fibre	2566.2	16.5	636.9	4.92
	3. Acrylic Fibre	260.3	1.7	762.5	6.24
	Others	-	27.3	-	11.81
	TOTAL		49.2	-	25.30
4.	CRUDE SYNTHETIC & RECLAIMED				
	Rubber	6922.3	36.6	6624.3	38.79
5.	SYNTHETIC ORGANIC DYESTUFFS NATURAL INDIGO AND COLOUR LAKES				
	1. Acid dyes (Azo & non-azo	85.3	4.3	75.1	4.7
	2. Direct dyes (,,)	34.7	1.1	20.8	1.11
	3. Basic dyes (,,)	63.5	3.4	54.9	3.8
	4. Sulphur dyes	81.2	1.7	70.3	1.92
	5. Disperse dyes	107.7	4.6	96.2	5.32
	6. Organic pigment	45.4	2.7	93.8	5.31
	7. Mordant dyes	11.3	0.4	4.6	0.16
	8. Reactive dyes	42.6	2.1	61.4	3.19
	9. Azoic dye component	56.2	2.6	37.5	1.55
	10. Solubilised vat dyes	0.3	0.1	1.1	0.13
	11. Vat dyes	176.1	7.6	167.89	7.59
	12. Food colours	2.2	0.1	1.6	0.15
	13. Optical Whitening agents	12.5	0.5	16.3	1.33
	14. Ingrain dyes	16.6	0.8	6.6	0.50
	15. Natural Indigo	21.8	0.4	72.4	2.91
	TOTAL	757.4	32.4	780.4	37.69

Source : Monthly Statistics of Foreign Trade, March, 1974.

EXPORTS OF SELECTED PETRO-CHEMICALS AND DYE-STUFFS FROM INDIA DURING 1972-73 AND 1973-74

Q = Tonnes
V = Rs. in Mn.

S.No.	Industry/Products	1972 - 73		1973 - 74	
		Qty.	V	Qty.	V
1.	**ORGANIC CHEMICALS (EXCL. PESTICIDES - VIZ. BHC**				
1.	Methyl Alcohol (Methanol)	5.7	neg.	0.2	neg.
2.	Benzene	4753.0	1.8	2020.8	1.92
3.	Butyl Alcohol	2491.8	1.8	1542.6	1.82
4.	Ethylene Glycol	-	-	-	-
5.	Ethyl Alcohol undenatured	42.4	neg.	34.0	0.03
6.	Acetone	65.0	0.1	507.6	0.35
7.	Others (Excl. Pesticides viz. BHC)	-		-	48.51
	TOTAL		28.2		52.63
2.	**PLASTIC MATERIALS, REGENERATED CELLULOSE AND ARTIFICIAL RESINS.**				
1.	M.F. Moulding Powder	-	-	-	-
2.	P.F. Moulding Podder	4.0	neg.	146.0	0.97
3.	C.A. Moulding Powder	-	-	-	-
4.	Polyethylene L.D.	3.2	neg.	269.0	2.65
5.	Polyethylene H.D.	432.2	1.8	27.1	0.41
6.	U.F. Moulding Powder	2.0	neg.	30.9	0.12
7.	Polystyrene Moulding Powder	235.3	0.7	163.0	0.65
8.	P.V.C. Resins	-	-	620.2	3.26
9.	Others	-	7.7	-	7.49
	TOTAL		10.2		15.55

Q = Tonnes
V = Rs. in Mn.

S.No.	Industry/Products	1972-73 Qty.	1972-73 Value	1973-74 Qty.	1973-74 Value
3.	CRUDE RUBBER (SYNTHETIC & RECLAIMED				
	1. Synthetic Rubber			200.0	1.74
	2. Others	1081.4	1.5	3096.00	11.77
	TOTAL	1081.4	1.5	3296.0	13.51
4.	SYNTHETIC & RECLAIMED FIBRE	305.7	0.6	226.6	0.36
5.	SYNTHETIC ORGANIC DYESTUFFS, NATURAL INDIGO AND COLOUR LAKES				
	1. Acid dyes (azo and non-azo)	234.9	3.4	292.5	4.02
	2. Direct dyes (,,)	257.5	5.2	241.1	5.83
	3. Basic dyes (,,)	208.6	4.4	391.6	9.35
	4. Sulphur dyes	803.8	6.0	967.8	16.28
	5. Disperse dyes	37.1	1.3	3.8	0.25
	6. Organic pigments	570.3	7.9	734.8	14.03
	7. Reactive dyes	82.5	2.9	57.1	2.77
	8. Azoic dye components	180.3	3.2	360.1	10.06
	9. Vat Dyes	194.9	8.9	197.8	13.97
	10. Food colours	7.0	0.3	24.4	0.28
	11. Optical whitening agents	129.5	1.6	155.9	1.82
	12. Ingrain dyes & natural indigo	7.9	0.1	1.1	0.02
	TOTAL	2714.3	45.2	3428.0	79.59

Source : Monthly Statistics of Foreign Trade
March, 1974.

PRODUCTION OF NON-CELLULOSIC DISCONTINUOUS FIBRES IN SELECTED COUNTRIES OF THE WORLD 1968 - 1972.

('000' Tonnes)

Country	1968	1969	1970	1971	1972*
(1)	(2)	(3)	(4)	(5)	(6)
1. Canada	19.32	23.00	20.95	25.49	22.10
2. France	68.68	81.55	93.48	115.76	130.49
3. Germany Dem.Rep.	16.00	17.60	26.40	27.90	29.50
4. Germany FDR	166.62	213.47	220.38	268.79	324.22
5. India	4.72	5.72	5.33	5.99	6.50
6. Italy	105.30	131.18	142.36	174.71	187.12
7. Japan	388.05	446.59	571.24	633.93	613.84
8. Netherlands	26.90	35.70	33.20	38.10	44.90
9. Poland	30.55	33.82	36.33	38.70	39.38
10. Spain	20.44	30.47	35.32	44.75	69.60
11. U.S.S.R.	35.53	39.09	51.44	70.77	81.37
12. U.K.	124.10	135.49	170.30	166.14	177.54
13. U.S.A.	710.90	798.80	813.30	954.80	1171.50

* Provisional

Source : U.N.Statistical Year Book-1973.

PRODUCTION OF NON-CELLULOSIC CONTINUOUS FILAMENTS IN SELECTED COUNTRIES OF THE WORLD 1968-1972

('000' Tonnes)

Country	1968	1969	1970	1971	1972*
(1)	(2)	(3)	(4)	(5)	(6)
1. Argentina	14.49	18.60	18.08	23.71	25.48
2. Australia	15.00	19.60	25.10	26.50	29.50
3. Brazil	16.30	18.30	28.20	33.40	53.20
4. Canada	49.53	52.62	52.44	60.14	58.10
5. Czechoslovakia	14.72	17.20	19.56	20.09	20.52
6. France	63.71	74.71	81.74	97.19	103.81
7. Germany Dem.Rep.	10.00	12.50	13.60	14.10	24.00
8. Germany Fed.Rep.	194.79	239.08	276.60	335.22	316.68
9. India	5.32	8.09	10.34	10.93	12.10
10. Italy	90.86	105.58	99.00	127.00	137.91
11. Japan	297.35	359.72	456.71	530.69	502.82
12. Netherlands	50.70	56.70	56.80	66.60	67.80
13. Spain	19.95	26.88	28.17	31.28	37.80
14. Switzerland	24.10	27.90	32.70	39.50	50.00
15. U.S.S.R.	94.18	103.44	115.08	132.29	157.19
16. U.K.	144.29	155.89	166.61	191.20	196.43
17. U.S.A.	753.90	801.40	813.50	992.40	1257.90

* Provisional

Source : U.N.Statistical Year Book-1973.

PRODUCTION OF PLASTICS & RESINS IN SELECTED COUNTRIES OF THE WORLD 1968 - 1972

('000' Tonnes)

Country	1968	1969	1970	1971	1972 *
(1)	(2)	(3)	(4)	(5)	(6)
1. Australia	166	197	225	256	291
2. Belgium	242	496	605	...	...
3. Czechoslovakia	203	213	245	270	297
4. France	1008	1319	1519	1765	2100
5. Germany Dem.Rep.	306	328	370	420	458
6. Germany Fed. Rep.	3108	3776	4170	4605	5289
7. India	61	81	93	103	110
8. Italy	1520	1445	1670	1709	1938
9. Japan	3496	4303	5154	5206	5573
10. Netherlands	772	964	1150	1305	1526
11. Poland	163	199	224	257	299
12. Sweden	205	265	294	304	...
13. U.S.S.R.	1291	1453	1673	1864	2042
14. U.K.	1234	1319	1449	1447	1608
15. U.S.A.	7421	8471	8712	9570	8894

* Provisional

Source: U.N.Statistical Year Book-1973.

CAPITAL EMPLOYED AND PROFITABILITY OF PETROLEUM COMPANIES

Items	Exploration and Production			Refining (Rs. Lakhs)			Marketing		
	1971	1972	1973	1971	1972	1973	1971	1972	1973
1. Authorised capital	5000	5000	5000	6875	6875	6875	5606	5564	5564
2. Equity-capital	16120	16315	16315	4657	4657	4657	3768	3664	4089
3. Loans - a) Total	11853	10937	9974	5260	4650	4894	3614	2937	2655
b)Foreign	1305	1117	903	2682	2206	1396	1456	1441	1638
4. Net Worth	23201	24067	25308	7842	8399	9387	3959	3823	3660
5. Capital employed	22625	23789	26565	13290	12965	14113	7669	8011	7402
6. Working capital	4605	4575	5645	3617	3859	5592	4503	4887	4491
7. Sales/Operating Income	9440	10050	14771	19634	20665	30645	65593	71870	77995
8. Profit	2897	2532	4341	2240	1408	2141	1858	2164	2445
9. Net Profit	1773	1208	2978	1440	915	1247	591	546	647
10. Dividend declared	260	264	264	925	681	508	372	481	456
11. Percentage of:-									
i)Net Profit to Equity	11.00	7.40	18.25	30.92	19.65	26.78	15.68	14.90	15.82
ii)Profit to capital employed	12.80	10.64	16.34	16.85	10.86	15.17	24.23	27.01	33.03
iii)Net Profit to Net Worth	7.64	5.02	11.77	18.36	10.89	13.28	14.93	14.28	17.68
iv)Sales to capital employed	41.72	42.25	55.60	147.74	159.39	217.14	855.30	897.14	1053.70
v)Total loans to Equity	73.53	67.04	61.13	112.95	99.85	105.09	95.91	80.16	64.93
vi)Foreign loans to capital employed	5.77	4.70	3.40	20.18	17.02	9.89	18.99	17.99	22.13

CAPITAL EMPLOYED AND PROFITABILITY OF PETROLEUM COMPANIES

(Rs. Lakhs)

Items	Combined			TOTAL		
	1971	1972	1973	1971	1972	1973
1. Authorized capital	9238	8500	8500	26719	25939	25939
2. Equity-capital	7877	7712	8370	32422	32348	33431
3. Loans - a) Total	6665	5227	7735	27392	23751	25258
b) Foreign	1019	1009	885	6462	5773	4822
4. Net Worth	15594	17156	17849	50596	53445	56204
5. Capital employed	18448	16255	18683	62032	61020	66763
6. Working capital	4657	2519	5668	17382	15840	21396
7. Sales/Operating Income	90843	105403	130039	185510	207988	253450
8. Profit	4114	5116	3263	11109	11220	12190
9. Net Profit	3045	1938	994	6849	4607	5866
10. Dividend declared	516	526	404	2073	1952	1632
11. Percentage Of :-						
i) Net Profit to Equity	38.66	25.13	11.88	21.12	14.24	17.55
ii) Profit to capital employed	22.30	31.47	17.47	17.91	18.39	18.26
iii) Net Profit to Net Worth	19.53	11.30	5.57	13.54	8.62	10.44
iv) Sales to capital employed	492.43	648.43	696.03	299.06	340.85	379.63
v) Total loans to Equity	84.61	67.78	92.41	84.49	88.88	75.53
vi) Foreign loans to capital employed	5.52	6.21	4.71	10.42	9.46	7.22

Profitability analysis of
OIL & NATURAL GAS COMMISSION
During Fourth Plan period

(Rs./lakhs)

ITEM	1969-70	1970-71	1971-72	1972-73	1973-74
(1)	(2)	(3)	(4)	(5)	(6)
1. Authorised Capital	-	-	-	-	-
2. Equity Capital	12434	12710	13320	13515	13515
3. Loans a) Total	7880	9113	9053	8558	8043
b) Foreign	673	532	405	327	236
4. Net Worth	16030	17026	19258	20186	21279
5. Capital Employed	19679	15163	17346	18778	22042
6. Working Capital	4134	4154	4089	4041	5356
7. Sales/operating Income	3908	3925	4940	5095	8160
8. Profit	1433	1188	1484	911	2682
9. Net Profit	1194	941	1223	688	2448
10. Dividend declared	-	-	-	-	-
11. Percentage of					
i) Net Profit to Equity	9.6	7.4	9.2	5.1	18.1
ii) Profit to Capital employed.	7.3	7.8	8.6	4.9	12.2
iii) Net Profit to net worth	7.4	5.5	6.4	3.4	11.5
iv) Sales to capital employed.	19.9	25.9	28.5	27.1	37.0
v) Total loans to equity	63.4	71.7	68.0	63.3	59.5
vi) Foreign loans to capital employed.	3.4	3.5	2.3	1.7	1.1

SOURCE: Annual Report on Central Government Undertakings by Bureau of Public Enterprises.

Profitability analysis of
INDIAN OIL CORPORATION
During Fourth Plan Period

(Rs./ lakhs)

ITEM	1969-70	1970-71	1971-72	1972-73	1973-74
(1)	(2)	(3)	(4)	(5)	(6)
1. Authorized Capital	8500	8500	8500	8500	8500
2. Equity Capital	7118	7118	7118	7118	7118
3. Loans a) Total	7525	7063	6462	4996	2486
b) Foreign	673	642	1019	1009	885
4. Net Worth	11015	12093	14789	16503	17134
5. Capital Employed	17343	17023	17440	15376	17772
6. Working Capital	3465	3234	3938	1927	5041
7. Sales/Operating Income	63700	72362	86513	99924	124454
8. Profit	2723	2514	3942	4953	3171
9. Net Profit	2247	2032	2998	1908	931
10. Dividend declared	498	498	498	498	356
11. Percentage of					
i) Net Profit to equity	31.9	28.6	42.1	26.8	13.8
ii) Profit to Capital employed.	15.7	14.8	22.6	32.2	17.8
iii) Net profit to net worth.	20.4	16.8	20.3	11.6	5.7
iv) Sales to Capital employed	367.3	425.1	496.1	649.9	700.3
v) Total loans to Equity	105.7	99.2	90.8	70.2	32.2
vi) Foreign loans to capital employed.	3.9	3.8	5.8	.6	6.0

SOURCE: Annual Report on Central Government Undertkaings by Bureau of Public Enterprises.

Profitability analysis of
COCHIN REFINERIES LTD.
During Fourth Plan Period

(Rs./lakhs)

ITEM	1969-70	1970-71	1971-72	1972-73	1973-74
(1)	(2)	(3)	(4)	(5)	(6)
1. Authorized Capital	1500	1500	1500	1500	1500
2. Equity Capital	700	700	700	700	700
3. Loans a) Total	1486	1296	1091	1217	1875
b) Foreign	1122	976	829	663	495
4. Net Worth	1100	1354	1292	1243	1245
5. Capital Employed	2570	2576	2334	2230	2703
6. Working Capital	399	570	424	515	1112
7. Sales/Operating Income	3950	3742	4060	4073	3788
8. Profit	343	332	248	101	49
9. Net Profit	248	249	175	40	2
10. Dividend declared.	147	130	112	100	-
11. Percentage of					
i) Net Profit to equity	35.4	35.6	25.1	5.1	0.3
ii) Profit to Capital employed	13.3	12.9	10.6	4.5	1.8
iii) Net Profit to Net Worth	22.5	18.4	13.6	3.2	0.2
iv) Sales to Capital employed.	153.7	145.3	173.9	182.6	140.1
v) Total Loans to equity	212.3	185.1	155.9	173.9	170.7
vi) Foreign loans to capital employed.	43.7	37.9	35.5	29.7	18.31

SOURCE: Annual Report on Central Government undertakings by Bureau of Public Enterprises.

Profitability analysis of
MADRAS REFINERIES LTD.
During Fourth Plan Period

(Rs./lakhs)

ITEM	1969-70	1970-71	1071-72	1972-73	1973-74
(1)	(2)	(3)	(4)	(5)	(6)
1. Authorized Capital	1350	1350	1350	1350	1350
2. Equity Capital	1288	1288	1288	1288	1288
3. Loans a) Total	2335	2450	2151	1791	1431
b) Foreign	1097	938	864	729	594
4. Net Worth	850	1326	1678	2191	2713
5. Capital employed	3679	3765	3822	3982	4154
6. Working Capital	84	460	839	1282	1745
7. Sales/Operating Income	2657	4372	5543	6530	14193
8. Profit	(-)192	563	650	689	769
9. Net Profit	(-)367	404	513	570	671
10. Dividend declared.	-	-	116	155	155
11. Percentage of					
i) Net Profit to equity	(-)28.5	31.4	39.8	44.3	52.1
ii) Profit to Capital employed.	(-) 5.2	15.0	17.0	17.3	18.5
iii) Net Profit to Net Worth	(-)43.2	30.0	30.6	26.0	24.7
iv) Sales to Capital employed.	72.1	116.1	145.0	164.0	341.8
v) Total loans to equity	220.1	190.2	167.0	139.1	111.1
vi) Foreign loans to Capital employed	29.8	24.9	22.6	18.3	14.3

SOURCE: Annual Report on Central Government Undertakings by Bureau of Public Enterprises.

Profitability analysis of

LUBRIZOL INDIA LTD.

During Fourth Plan Period

(Rs./lakhs)

ITEM	1969-70	1970-71	1971-72	1972-73	1973-74
(1)	(2)	(3)	(4)	(5)	(6)
1. Authorized Capital	75.0	75.0	75.0	75.0	75.0
2. Equity Capital	59.9	60.0	60.0	60.0	60.0
3. Loans: a) Total	155.8	175.5	189.3	192.0	118.0
b) Foreign	-	-	-	-	-
4. Net Worth	83.2	114.9	152.6	189.0	230.0
5. Capital employed	247.0	299.2	348.4	341.0	361.0
6. Working Capital	160.8	215.2	264.3	258.0	218.0
7. Sales/Operating Income	325.8	438.3	648.2	576.0	675.0
8. Profit	38.6	72.2	121.9	115.0	111.0
9. Net Profit	18.6	32.3	43.0	43.0	57.0
10. Dividend declared	-	-	3.6	4.0	4.0
11. Percentage of					
i) Net Profit to Equity	30.7	53.8	71.6	71.7	95.0
ii) Profit to Capital employed.	15.5	24.1	35.0	33.7	30.7
iii) Net Profit to Net Worth	22.1	28.1	28.2	22.8	24.8
iv) Sales to Capital employed.	131.9	146.5	186.1	169.0	186.98
v) Total loans to equity	260.1	292.5	315.5	320.0	196.67
vi) Foreign loans to Capital employed.	-	-	-	-	-

SOURCE: Annual Report on Central Government Undertakings by Bureau of Public Enterprises.

Profitability analysis of

LUBE INDIA LTD.

During Fourth Period Plan

(Rs./lakhs)

I T E M	1969-70	1970-71	1971-72	1972-73	1973-74
(1)	(2)	(3)	(4)	(5)	(6)
1. Authorized Capital	550	550	550	550	550
2. Equity Capital	480	480	480	480	480
3. Loans: a) Total	1062	1199	1019	822	623
b) Foreign	1034	1186	989	814	307
4. Net Worth	414	480	854	1028	1133
5. Capital employed	1476	1756	1980	1930	1864
6. Working Capital	(-)57	318	643	652	642
7. Sales/Operating Income	0.5	1033	1771	2154	2405
8. Profit	(-)57	238	562	345	217
9. Net Profit	(-)66	66	445	260	102
10. Dividend declared	-	-	72	82	-
11. Percentage of					
i) Net Profit to Equity	(-)13.7	29.9	92.9	54.1	21.2
ii) Profit to Capital employed	(-)3.9	13.8	28.4	17.9	11.6
iii) Net Profit to Net Worth	(-)15.9	29.9	52.2	25.3	9.0
iv) Sales to Capital employed	neg	58.8	89.4	111.6	129.2
v) Total loans to Equity	221.2	249.8	212.3	171.3	129.8
vi) Foreign loans to Capital employed.	70.1	67.5	49.9	42.2	16.5

SOURCE: Annual Report on Central Government Undertakings by Bureau of Public Enterprises.

FIFTH PLAN TARGETS AND ACHIEVEMENTS DURING THE YEAR 1974-75 OF SELECTED PETROLEUM AND PETRO-CHEMICALS.

Industry/Item	Unit	Fifth Plan Target (1978-79) Capacity	Production	Achievements 1974-75 Capacity (As on 1.1.75	Production	Production 1968-69	Production 1973-74
1.	2.	3.	4.	5.	6	7.	8.
A. PETROLEUM							
i) Oil Exploration & Production of Crude.	Mr.Tonnes	-	12	-	7.7	6.06	7.19
ii) Refinery Products including lubricants.(*)	"	39	34.6	22.6	19.58	15.4	19.56
B. PETRO-CHEMICALS							
i) D.M.T.	'000 Tonnes	54	50	24	13.4	-	5
ii) Caprolactum	"	22.5	20	20	6.4	-	-
iii) Methanol	"	-	60	37.5	29.1	-	24
iv) Thermoplastic Resins	Mn.Cu. Metres	325	280	N.A.	N.A.	-	128
v) Synthetic fibres	'000' Tonnes						
a) Nylon filament & Staple fibre	"	23	21	16.6	11	6.5	11
b) Nylon tyrecord & Other Industrial yarn	"	10	9	3.8	1.4		2
c) Polyaster filament & Staple fibre	"	59	43	22.9	11	-	15
d) Acrylic Fibre	"	16	14	-	-	-	-
vi) Synthetic Rubber	"	55	48	30	18	26	23

Notes: * Capacity is in terms of crude throughput.
Anticipated level of production of crude oil in 1975-76 is 8.4 million tonnes.

SOURCE: Draft V.Plan. Data for col. 5,6&8 have been compiled in E&S Division for all the items except for thermoplastic Resins which is reproduced from the Draft V Plan (Vol. II)

PLAN OUTLAY FOR CENTRAL INDUSTRIAL & MINERALS PROJECTS FOR 1975-76

(Rs. Crores)

	Ministry/Department	Budgetary Support	Extra-Budgetary resources	Plan outlay	% to total
1.	Department of Steel	199.92	71.80	271.72	17.7
2.	Department of Mines	91.30	17.00	108.30	7.1
3.	Department of Coal	229.00	1.00	230.00	15.0
4.	Department of Industrial Development	64.76	10.65	75.41	4.9
5.	Department of Heavy Industry	44.15	14.85	59.00	3.8
6.	Department of Civil Supplies & Cooperation	13.55	-	13.55	0.9
7.	Department of Fertilizers & Chemicals	290.95	15.57	306.52	20.0
8.	Department of Petroleum	169.90	197.85	367.75	24.0
9.	Ministry of Commerce	8.14	0.48	8.62	0.6
10.	Department of Economic Affairs	5.17	-	5.17	0.3
11.	Department of Banking	6.96	-	6.96	0.5
12.	Department of Revenue and Insurance	0.38	-	0.38	Neg.
13.	Ministry of Shipping & Transport	29.90	-	29.90	1.9
14.	Department of Atomic Energy	42.76	2.00	44.76	2.9
15.	Department of Electronics	5.99	-	5.99	0.4
	TOTAL	1202.83	331.20	1534.03	100.0

SOURCE:- Annual Plan 1975-76

ANNUAL PLAN OUTLAY FOR 1975-76 FOR VARIOUS PROGRAMMES/ACTIVITIES OF THE MINISTRY OF PETROLEUM AND CHEMICALS (DEPARTMENT OF PETROLEUM)

(In lakhs of Rs.)

S.No.	Programme/Activity	Name of the Undertaking responsible for execution of the Programme/Activity	Annual Plan Outlay for 1975-76	Extra Budgetary Resources for financing the Plan Outlay for 1975-76	Government Budgetary Support for financing the Plan Outlay for 1975-76.	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)
		A. PETROLEUM AND PETROCHEMICAL INDUSTRIES :				
1.	Exploration & Exploitation of Oil& Natural Gas Reserves.	(i) Oil & Natural Gas Commission.	16691.00	14481.00	2210.00	The fugures of extra Budgetary resources in Col.5 include Rs.5290.00 lakhs as contribution from Oil Industry Development Fund.
		(ii) Oil India Ltd.,	3400.00	500.00	2900.00	
		TOTAL	20091.00	14981.00	5110.00	
2.	Petroleum Refining & Marketing and Distribution of Petroleum Products.	(i) Indian Oil Corporation Ltd.	4650.00	3550.00	1100.00	The figures of extra budgetary resources in Col.5 includes Rs.650.00 lakhs as contribution from Oil Industry Development Fund.
		(ii) Cochin Refineries Limited.	30.00	...	30.00	
		(iii) Madras Refineries Limited.	374.00	374.00	...	
		(iv) Hindustan Petroleum Corporation Ltd.	150.00	150.00	...	
		(v) Lubrizol India Ltd.	80.00	80.00	...	
		TOTAL	5284.00	2454.00	1130.00	

Contd .....

1.	2.	3.	4.	5.	6.	7.
3.	Production of Petrochemicals and other allied products.	i) Indian Petrochemicals Corporation Ltd.	9500.00	650.00	8850.00	The figures of extra budgetary resources in Col.5 includes Rs.150.00 lakhs as contribution from Oil Industry Development Fund.
		ii) Bongaigaon Refinery & Petrochemicals Ltd.	1700.00	...	1700.00	
		iii) Petrofils Cooperative Limited.	200.00	...	200.00	
		TOTAL	11400.00	650.00	10750.00	
	Total Department of Petroleum		36775.00	19785.00	16990.00	
4.	Production of Chemicals	i) Hindustan Organic Chemicals Ltd.	101.00	101.00	...	

SOURCE: PERFORMANCE BUDGET - 1975-76.

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A P P E N D I X

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CONVERSION FACTORS USED IN THE OIL TRADE

Linear and square measures

1 inch	=	0.0254 metre
1 foot	=	0.333 yards
	=	12 inches
	=	0.305 metre
1 yard	=	3 feet
	=	36 inches
	=	0.914 metre
1 metre (m)	=	1.094 yards
	=	3.281 feet
	=	39.37 inches
	=	0.001 Km
1 Kilimetre (Km)	=	1000 metres
	=	0.621 miles
1 statute mile	=	1760 yards
	=	1.609 Km
1 nautical mile	=	6080 feet
	=	1.15152 statute miles
1 square foot	=	0.093 square metre
1 square yard	=	9 square feet
	=	0.836 square metre
1 square metre	=	1.196 square yards
	=	10.764 square feet
1 acre	=	0.405 hectare
	=	4840 square yards
1 hectare (ha)	=	0.01 square Km
	=	2.471 acres
1 square Km	=	0.386 square mile
	=	100 ha
1 square mile	=	2.590 square Km
	=	640 acres
	=	259 ha

Cubic measures

1 Cubic inch	= 16.387 cubic centimetres
1 pint	= 0.5683 litre
1 litre	= 1000 cubic centimetres = 61.024cubic inches = 1.7597 pints = 0.26417 American gallon = 0.21997 Imperial gallon = 0.035314 cubic foot
1 hectolitre	= 100 litres
1 American gallon	= 231 cubic inches = 3.7854 litres = 0.83268 Imperial gallon = 0.133681 cubic foot = 0.0238095 American barrel = 0.0037854 cubic metre
1 Imperial gallon	= 277.42 cubic inches = 4.5461 litres = 0.160544 cubic foot = 1.20094 American gallon = 0.028594 American barrel = 0.0045461 cubic metre
1 Cubic foot	= 28.317 litres = 7.4805 American gallons = 6.2288 Imperial gallons = 0.17811 American barrel = 0.028317 cubic metre
1 American barrel	= 9702 cubic inches = 158.99 litres = 42 American gallons = 34.9726 Imperial gallons = 5.6146 cubic feet = 0.15899 cubic metre
1 cubic metre	= 35.315 cubic feet = 1000 litres = 264.17 American gallons = 219.97 Imperial gallons = 6.2898 American barrels
1 Kilolitre	= 1000 litre = 6.2898 American barrels
1 gross ton (shipping)	= 100 cubic feet or 2.83 cubic metres of permanently enclosed space.

III

WEIGHTS

1 oz	=	28.35 grammes
1 lb	=	0.453592 Kilogrammes
	=	0.009 cwt
1 Kg	=	2.20462 lb
	=	0.01 quintal
1 cwt	=	112 lb
	=	50.802 Kg.
1 metric ton	=	0.98421 long ton *
	=	1.10231 short ton *
	=	2204.6 lb
1 English or long ton	=	1.01605 metric tons
	=	1.12 short tons *
1 short ton	=	0.892857 long ton *
	=	0.907185 metric ton *
	=	2000 lb

* These conversions are based on the assumption that all weights are weights in air, which isthe correct basis for computing bulk commercial quantities of petroleum.

POWER AND HEAT UNITS

1 hp (horsepower)	=	550 foot poundsper second
	=	0.746 Kilowatt
	=	1.014 PS (or Cheval Vapeur)
1 PS (Pferdestaerke) or CV (Cheval Vapeur)	=	542 foot pounds per second
	=	0.986 hp
	=	0.736 KW
1 KW (kilowatt)	=	1000 watts
	=	1.340 hp
	=	1.359 PS or CV
	=	737 foot pounds pwr second
1 Therm	=	100000 Btu (British thermal Units)
	=	25200 Kilo calories
	=	25.2 thermies
	=	29.3 Kilowatt hours
1000 Kilocalories (large calores)	=	3968 Btu
	=	1.163 Kilowatt hours
	=	1 thermie
1 Kilowatt hour	=	3411 Btu
	=	1.340 hp hours
	=	859.6 Kilocalories
1 Foot pound per second	=	0.00136 Kilowatt
	=	0.00182 hp
	=	0.00184 PS or CV

Specific Gravity : Volume per ton

Degrees API	Specific gravity	Barrels per * Metric ton	Barrels per * Long ton
25	0.904	6.98	7.09
26	0.898	7.02	7.13
27	0.893	7.06	7.18
28	0.887	7.10	7.22
29	0.882	7.15	7.27
30	0.876	7.19	7.31
31	0.871	7.24	7.36
32	0.865	7.28	7.40
33	0.860	7.33	7.45
34	0.855	7.37	7.49
35	0.850	7.42	7.54
36	0.845	7.46	7.58
37	0.840	7.51	7.63
38	0.835	7.55	7.67
39	0.830	7.60	7.72
40	0.825	7.64	7.76
41	0.820	7.69	7.81
42	0.816	7.73	7.85

* Approx. figures at 60°F.

Specific gravity ranges

	Specific gravity	Barrels per metric ton
Crude oils	0.80-0.97	8.0-6.6
Aviation gasolines	0.70-0.78	9.1-8.2
Motor Gasolines	0.71-0.79	9.0-8.1
Kerosines	0.78-0.84	8.2-7.6
Gas Oils	0.82-0.90	7.8-7.1
Diesel Oils	0.82-0.92	7.8-6.9
Lubricating oils	0.85-0.95	7.5-6.7
Fuel oils	0.92-0.99	6.9-6.5
Asphaltic bitumens	1.00-1.10	6.4-5.8

Calorific value of fuels

Rough gross values in Btu per lb

Crude oil	18300-19500
Gasolines	20500
Kerosines	19800
Benzole	18100
Ethyl alcohol	11600
Gas oils	19200
Fuel oils (Bunker)	18300
Coal (Bituminous)	10200-14600

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PRODUCT CONVERSION FACTOR

(Conversion Factor from Volume @ Temp. to tonnes)

Products	Litres to Metric Tonnes	Tonnes per ....K.L.	American Barrels to Metric Tonne
Aviation Spirit 100/130	1421	0.7037	8.94
Aviation Spirit 115/145	1449	0.6901	9.11
Aviation Spirit 73 ON U/L	1432	0.6983	9.01
Motor Spirit 79 R	1427	0.7008	8.98
Motor Spirit 80 MT	1427	0.7008	8.98
Motor Spirit 93 R	1386	0.7215	8.72
Motor Spirit 95 ON	1359	0.7358	8.55
Motor Spirit 83 ON	1411	0.7087	
JP - 4	1384	0.7225	8.71
JP - 5	1273	0.7855	8.01
Aviation Turbine Fuel	1288	0.7764	8.10
Naphtha	1467	0.6817	9.23
Power Alcohol	1286	0.7776	8.09
Benzol	1154	0.8666	7.26
SBP Spirit/Hexane	1457	0.6863	9.16
Mineral Turpentine (Laws &140/205)	1302	0.7680	8.19
Liquified Petroleum Gas	1785	0.5602	11.23
Superior Kerosene	1285	0.7782	8.08
Inferior Kerosine	1265	0.7905	7.96
Power Kerosine (Vap. Oil)	1251	0.7994	7.87
High Speed Diesel	1210	0.8263	7.61
Light Diesel Oil	1172	0.8532	7.37
Malariol B	1172	0.8532	7.37
Special Larvicides	1175	0.8511	7.39
Furnace Oil	1071	0.9337	6.74
Tea Drier Oil	1071	0.9337	6.74
Hot Heavy Stock/LSHS	1017	0.9833	6.40
Refinery Gas/Ref. Boiler Fuel	1071	0.9337	6.74
Lubricants/Greases	1114	0.8977	7.01
Jute Batching Oil/Wash Oils	1167	0.8569	7.34
Wax/Aromex/P.Coke/Chemicals	1114	0.8977	7.01
Bitumen	1002	0.9980	6.30
HPP/Alcohol Mixture	1414	0.7072	8.89
Methanol Mixture	1106	0.9042	6.96
Carbon Black Feed Stocks	1134	0.8818	7.13
Carburettor Testing Fluid	1388	0.7205	8.73
Benzene	1121	0.8921	7.05
Toluene	1143	0.8749	7.19
Demineralised Water	1002	0.9930	6.30
Shell Glass Kleanzit	1003	0.9970	6.31
Miscellaneous	1114	0.8977	7.01

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VOLUME PER METRIC TON OF PETROLEUM PRODUCTS

	Kilolitre M^3	Imperial Gallons	U.S.Gallons	Barrels
Liquified Pet.Gas	1.8519	407.365	489.213	11.648
Aviation Spirit	1.3699	301.332	361.873	8.613
Natural gasolines	1.3514	297.265	356.990	9.496
Motor Spirit	1.3514	297.265	356.990	8.496
Kerosene	1.2346	271.569	326.137	7.764
Jet Fuel	1.2346	271.569	326.137	7.764
Distillate Fuel Oil	1.1494	252.845	303.647	7.231
Lubricating Oil	1.1111	244.415	293.522	6.988
Fuel Oils n.o.s.	1.0989	241.727	290.301	6.911
Residuel Fuel Oils	1.0526	231.551	278.071	6.623
Asphalt and Bitumen	0.9615	211.515	254.013	6.050

METRIC UNITS

Linear

10 millimetres	=	1 centimetre
10 centimetres	=	1 decimetre
10 decimetres	=	1 metre
10 metres	=	1 decametre
10 decametres	=	1 hectometre
10 hectometres	=	1 kilometre

AREA

100 sq. millimetres	=	1 sq. centimetre
100 sq. centimetres	=	1 sq. decimetre
100 sq. decimetres	=	1 sq. metre
100 sq. metres	=	1 sq. decametre
		1 sq. acre
100 acres	=	1 hectare
		1 sq. hectometre
100 hectares	=	1 sq. kilometre

WEIGHTS

10 milligrams	=	1 centigram
10 decigrams	=	1 decigram
10 decigrams	=	1 gram
10 grams	=	1 decagram
10 decagrams	=	1 hectogram
10 hectograms	=	1 kilogram
100 kilograms	=	1 quintal
1000 kilograms	=	1 metric tonne

CAPACITY

10 millilitres	=	1 centilitre
10 centilitre	=	1 decilitre
10 decilitres	=	1 litre
10 litre	=	1 decalitre
10 decalitres	=	1 hectolitre
10 hectolitres	=	1 kilolitre

VOLUME

1000 cu.millimetres	=	1 cubic centimetre
1000 cu.centimetres	=	1 cubic decimetre
1000 cu.decimetres	=	1 cubic metre.

Approximate calorific values

1 kg of:	= kcals or	kg of hard coal	kg of crude oil
hard coal	7,000	1	0.7
lignite	2,000	0.28	0.2
Crude oil	10,000	1.43	1
fuel oil	9,800	1.40	0.98
natural gas	7,700	1.10	0.77
1 kw-hr electricity	2,800	0.40	0.28

Crude-oil conversions (for world average gravity)

To convert these into these	Metric tons	Barrels	Kilo litres	1,000 Imp. gallons	1,000 U.S. gallons
	Multiply by				
Metric tons	1	7.30	1.16	0.2555	0.306
Barrels	0.137	1	0.159	0.035	0.042
Kilolitres	0.863	6.29	1	0.22	0.264
1,000 Imp.gallons	3.92	28.6	4.55	1	1.20
1,000 U.S. gallons	3.26	23.8	3.79	0.83	1

ABREVIATIONS USED IN PETROLEUM INDUSTRY

L.P.G.	:	Liquified Petroleum Gas
Mogas	:	Motor Gasoline
Avgas	:	Aviation Gasoline
K.S.	:	Kerosene Superior
K.I.	:	Kerosene Inferior
M.T.	:	Mineral Turpentine
A.T.F.	:	Aviation Turbine Fuel
H.S.D.	:	High Speed Diesel
L.D.O.	:	Light Diesel Oil
F.O.	:	Furnace Oil
T.D.O.	:	Tea Drier Oil
L.S.H.S.	:	Low Sulphur Heavy Stock
H.H.S.	:	Hot Heavy Stock
Lub. Oil	:	Lubricating Oils
Pet. Coke	:	Petroleum Coke
J.B.O.	:	Jute Batching Oil
Ref. Gas	:	Refinery Gas
A.O.C.	:	Assam Oil Company
O.I.L.	:	Oil India Limited
O.N.G.C.	:	Oil & Natural Gas Commission
I.I.P.	:	Indian Institute of Petroleum
I.O.C.	:	Indian Oil Corporation
nog	:	Negligible
-	:	Nil
../N.A.	:	Not Available

X

LIST OF PRODUCTS INCLUDED AMONG LIGHT/MIDDLE DISTILLATES.

A. LIGHT DISTILLATES (including Gases)

1. Motor Gasolines
2. Aviation Gasolines
3. Naphtha
4. SBP Spirit/Solvent Oils
5. Hexane
6. Benzene
7. Toluene
8. L.P.G.
9. Refinery Gas

B. MIDDLE DISTILLATES

1. Kerosines
2. ATF/Jet A-1
3. Vaporising Oil
4. Mineral Turpentine
5. Aromex-Ionex
6. H.S. D.
7. L.D.O./M.L.O.
8. J.B.O.

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CONVERSION FACTOR TABLE

UNITS	1,000 metric tons Oil*	1,000 bbl Oil*	b/d*	Billion BTU	Billion Kilocalories	Million kw-hr	Million kw-hr+	1,000 metric tons hard coal eq.	Million cum natural gas ‡
1,000 metric tons oil*	.....	7.300	20.0	42.705	10.762	12.516	3.868	1.479	1.169
1,000 bbl oil*	0.137	.....	2,740	5.850	1.474	1.715	0.530	0.203	0.160
B/d oil*	0.050	0.365	.....	2.135	0.538	0.626	0.193	0.074	0.058
1,000 U.S.gallons oil*	0.003	0.024	0.065	0.139	0.035	0.040	0.013	0.005	0.004
Billion BTU.....	0.024	0.172	0.472	.....	0.252	0.293	0.906	0.035	0.027
Billion kilocalories...	0.094	0.684	1.874	3.968	.....	1.163	0.359	0.137	0.109
Million kw-hr-- output basis.....	0.081	0.588	1.611	3.412	0.860	.....	.....	0.118	0.093
Million kw-hr-- input basis+	0.261	1.903	5.215	11.040	2.782	.....	.....	0.382	0.302
1,000 metric tons HCE	0.682	4.980	13.642	28.881	7.278	8.465	2.616	.....	0.790
1,000 metric tons Lignite	0.455	3.321	9.100	19.264	4.855	5.646	1.745	0.667	0.527
Million cum natural gas ‡	0.847	6.250	17.125	36.546	9.216	10.699	3.319	1.271	.....
MMcf natural gas ‡	0.024	0.177	0.485	1.035	0.261	0.303	0.094	0.036	0.028
Million cum/day natural gas ‡.....	0.309	2.281	6.251	13.339	3.364	3.905	1.211	0.464	0.365
Mcfd natural gas ‡.....	0.009	0.065	0.177	0.378	0.095	0.111	0.034	0.013	0.010

*Crude and products - 5,850,000 BTU/bbl. +@ 30.9% efficiency -11,040 BTU/kw-hr. ‡ 1,035 BTU/cu ft.

CORRIGENDUM (REVISIONS/ADDITIONS)

Page No.	Year	Reference	For	Please Read
38	-	Last row (Growth rates	19.8 %	4.30 %
39	-	Col 4 (heading)	A.G.C.	Assam Gas Company.
45	1974	ICC	13934	13998(including suppliesto Nepal)
43	1974	Total	21680	21744
53	1972	Col. 4	Data do not represent full coverage	
58	1964	Column for value	40.37	48.37
58	1970	Column for value	37.22	57.22
58	1974	Star on the year together with the foot note may be deleted.		
58	1974	Qty.	266310	202409
58	1974	Value	310.70	193.68
64	1975-76	BE(Customs Duty, Item No. 4)	1700	1790
66	Heading of the table		Statement showing tax Rates	Statementshowing Sales Tax Rates
85.	-	Source of the data reported at the end of the Table.	The British Petroleum Company Ltd.during 1974.	B.P.Statishcal Year Book-1974
87.	.	-Do-	- Do-	- Do-
	-			
63.	1974-75	Aviation Spirit	Blank	464.0
63	1974-75	Petrol	Blank	477.2
63	1974-75	Diesel Oil	Blank	315.2
63	1974-75	Kerosene	Blank	331.7
63	1974-75	Lubricating Oil	Blank	438.8
63	1974-75	Please add following figures for March, 1975.		

476.8 (Aviation Spirit)	495.4 (Petrol)	324.2 (Diesel Oil)	340.5 (Kerosene Oil)	438.2 (Lubricating Oil)