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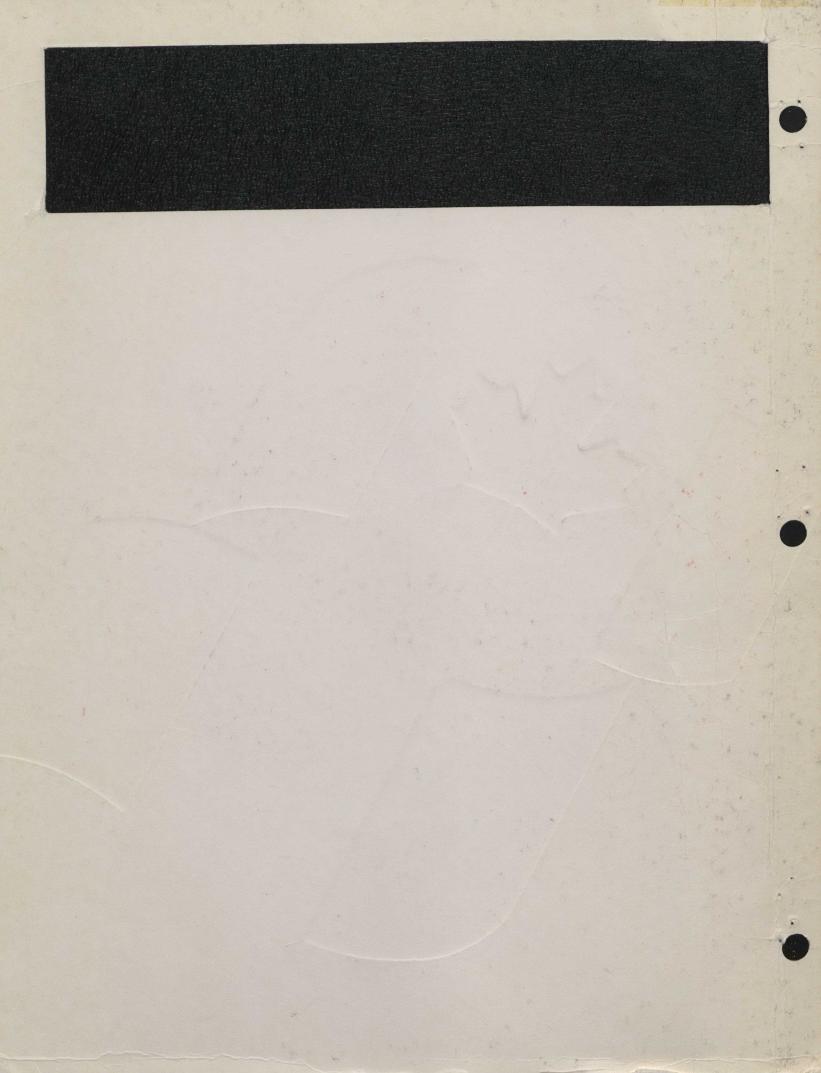
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Market study on the oil and
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Market Study on the Oil and Petroleum Industry in Mexico.



PREPARED BY THE COMMERCIAL DIVISION,
CANADIAN EMBASSY MEXICO.



Market Study on the Oil and Petroleum Industry in Mexico.

This market guide booklet has been prepared with the problems inherent to the initiating exporter in mind. However it is not exhaustive; individual circumstances, interest and needs will dictate how companies should tailor their approach and strategy to the Mexican market. While every attempt has been made to ensure accuracy in this study, no responsibility can be accepted for errors or omissions.

Further assistance can be obtained by addressing requests directly to the Commercial Division of the Canadian Embassy in Mexico City located at Calle Schiller No. 529, Colonia Polanco, 11560 México, D.F. Telephone 254-32-88, telex 177 1191 and fax (sending from Canada) 011 (525) 545-17-69; or the Latin American Division Department of External Affairs, Industry Science and Technology Canada, 125 Sussex Drive, Ottawa, Ontario K1A 0G2, Phone 9950460 Fax (613) 996-06-77.

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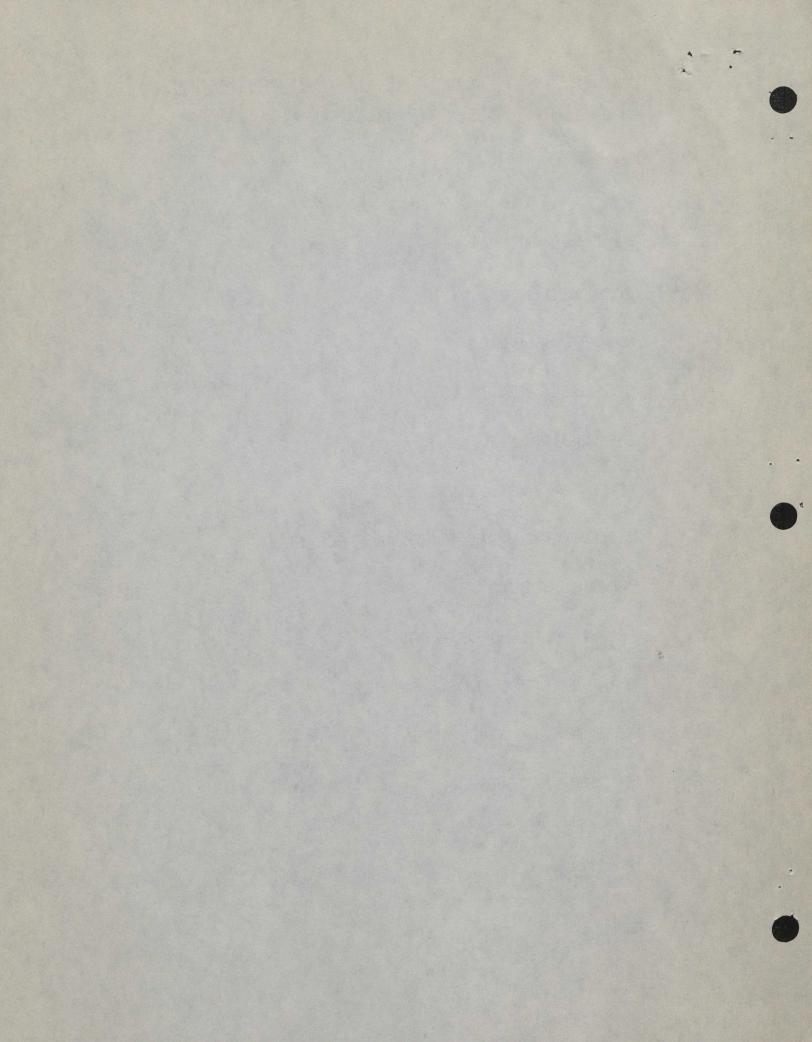
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MARKET STUDY ON THE OIL AND PETROLEUM INDUSTRY IN MEXICO

INDEX

1.	BACKGROUND	2
2.	ECONOMIC ENVIRONMENT	2
3.	MARKET ASSESSMENT	3
4.	BEST SALES PROSPECTS	6
5.	END USER PROFILE	7
5.1	PEMEX'S ACTIVITIES DURING 1989	. 8
5.1.1	EXPLORATION, DEVELOPMENT AND RESEARCH	8
5.1.2	PRIMARY PRODUCTION	9
5.1.3	INDUSTRIAL TRANSFORMATION	10
5.1.4	TRANSPORTATION AND DISTRIBUTION	12
5.1.5	RESEARCH AND DEVELOPMENT	12
5.2	PROJECTED ACTIVITIES	12
6.	MARKET ACCESS	14
	APPENDIX	. 16
	MAPS	



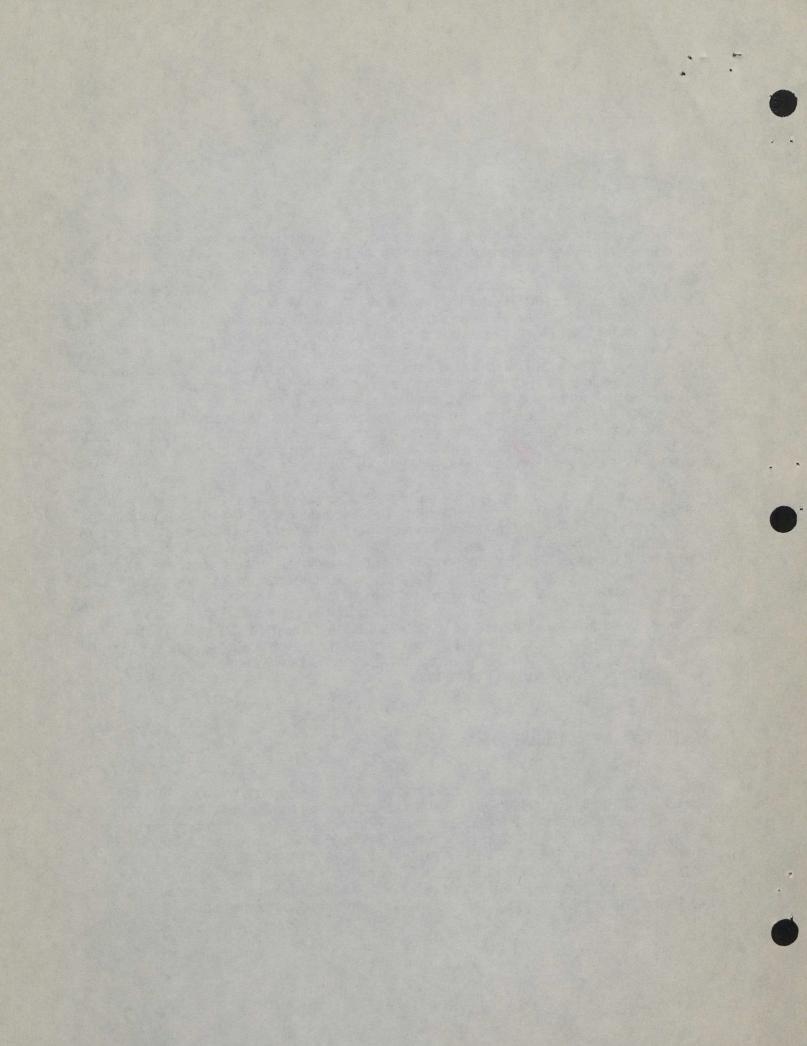
BACKGROUND

The first oil production took place in Mexico in 1876. The government of Porfirio Díaz allowed many privileges to foreign companies, and by 1910, British and U.S. companies held concessions over extensive petroleum producing areas. During the next decade, petroleum production experienced an extraordinary development, growing from 3.9 million barrels in 1910 to 193.4 million barrels in 1921, when Mexico became the second world producer. At the same time, however, the foreign companies paid virtually no rights or taxes on this production, they were quickly exhausting existing wells with unrestricted exploitation while offering extremely low wages and labour conditions considerably below those offered in other countries. The post-revolutionary government made several efforts to improve this situation, by declaring all underground resources to be national property and granting new concessions both to national and foreign companies. At the same time, a spontaneous tendency towards mexicanization occured: local hydrocarbon consumption increased from 11% to 40% of total production, thus limiting exports, while an increasing amount of crude oil was being processed locally, albeit using very simple processes.

Influenced by labour management disputes and a growing sense of resource nationalism, the Mexican government of Lázaro Cárdenas expropiated the overwhelmingly foreign dominated industry (U.S., British and Dutch) in a move considered very bold at the time. It then successfully created a single company, Petroleos Mexicanos (PEMEX) to encompass the complete spectrum of hydrocarbon resource exploration, development, storage, transportation and marketing. Major initial difficulties related to political pressures, and to labour and technology problems and shortages existed but, by the early 1940's, PEMEX had developed a degree of corporate coherence and started to function effectively. Between 1948 and 1975, oil and gas production increased 513%, local consumption of hydrocarbons grew 632%, oil and gas reserves increased 364% and refining capacity by 406%. At present, Mexico is the world's fifth largest crude oil producer.

2. ECONOMIC ENVIRONMENT

Over the past two years, Mexican economic policy has featured a tough anti-inflationary program called the Economic Solidarity Pact, combining traditional austerity measures (tight fiscal and monetary policies) and unorthodox measures (price, wage and exchange rate controls). The program has been successful in reducing inflation, from an annual 159.2% in 1987 to 51.7% in 1988 and an 20.3% by 1989. The general criteria for Mexico's macroeconomic policy in 1990, are to consolidate and fortify the progress made in price stabilization, to reaffirm gradual and sustained economic recuperation, to increase investment, both national and foreign, and to improve living standards.



Mexico's gross domestic product (GDP), after increasing 3.7% and 2.7% during 1984 and 1985 respectively, diminished by 3.5% in 1986. In 1987, it increased a moderate 1.5% and an additional 1.1% in 1988. Domestic economic activity recovered for the third consecutive year in 1989 with an estimated growth rate of 3.0% in 1989 to reach \$200 billion (1). With an 84.5 million population, per capita GDP is estimated at Cdn\$2,550. During the 1990-1994 period GDP is expected to maintain an average annual growth rate of 2%-3%.

In an effort to revitalize and open the Mexican economy, the Mexican Government undertook a series of structural changes, including the accession to the General Agreement on Tariffs and Trade (GATT) on August 24, 1986 leading to an extensive trade liberalization process: import permits were eliminated on all but 325 of the total 11,960 tariff items based on the recently adopted Harmonized System. Official import prices are no longer applicable, nor the 5% export development tax, and import duties were lowered from a maximum of 100% in 1982 to 20% in January 1988. The automotive and computer industries are also being opened up to allow free entry.

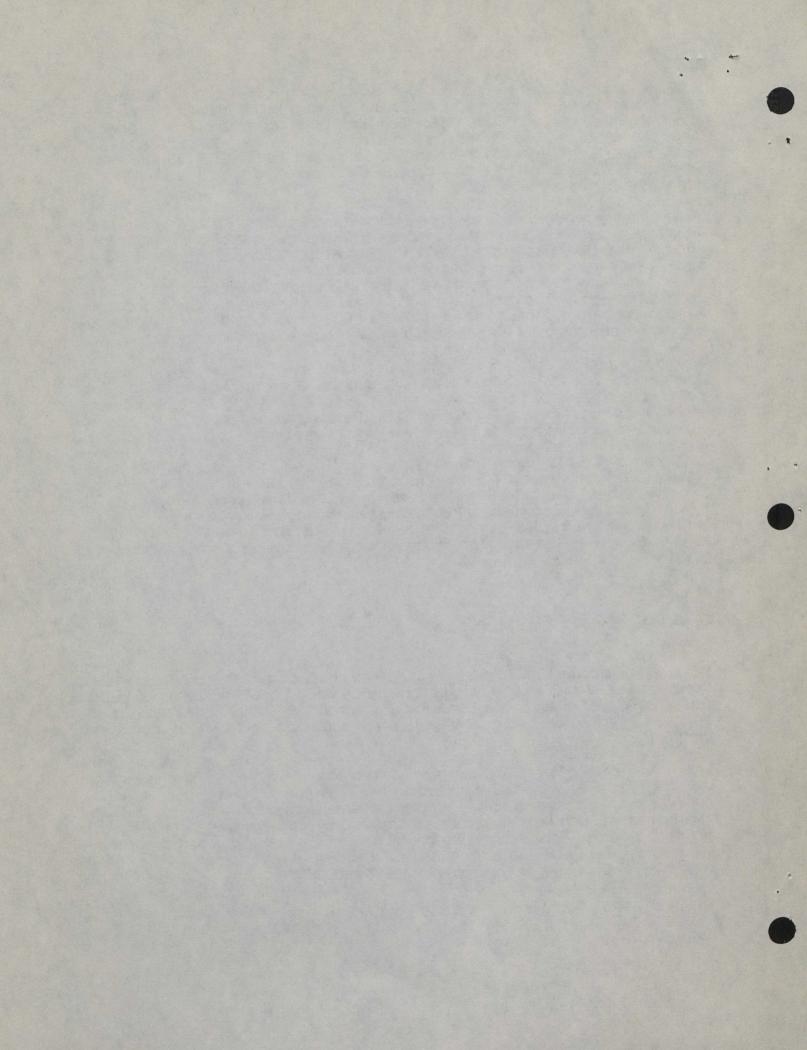
According to official data from the Mexican Secretariat of Commerce and Industrial Development (SECOFI), Mexico's trade surplus in 1988 was only \$1.75 billion. Total exports in 1988 remained practically the same as in 1987, totalling \$20.65 billion, while imports increased 48% from \$12.2 billion to \$18.9 billion. Imports of consumer products increased 150%, while those of intermediate goods grew by 45% and capital goods by 55% in 1988. January-September figures for 1989, place total exports at \$17.1 billion and imports at \$17.0 billion reflecting an annual growth rate of 8.8% and 26.2% respectively. Total Mexican imports from Canada increased 24% in 1989 and amounted to Cdn\$603 million, while total Mexican exports to Canada were valued at Cdn\$1,698 million. Mexico and Canada have traditionally been strong trading partners. According to Mexican figures, in 1989, 1.9% of Mexico's imports came from Canada, while 1.3% of its exports were to Canada. This makes Canada Mexico's fifth largest exporter and sixth largest importer.

3. MARKET ASSESSMENT

PEMEX's initial budget for I988 was set at \$5.6 billion dollars or 13 trillion pesos, having increased 24% over the \$4.5 billion assigned to PEMEX in 1987. In 1989, the budget was set at \$6.2 billion and it is estimated at \$7 billion in 1990. Of this total, 39% is for the purchase of materials, equipment and parts according to PEMEX's purchasing program.

The market for oil and gas field equipment and machinery, as estimated in this report, includes drilling equipment, pipes and tubes, accessories thereof, pumps, valves, compressors, winches and cranes, turbines, internal combustion engines, geological instruments, and parts and attachments for the above categories, all used in the oil and gas field industry. The results were based on data on Mexican import and exports published by the Secretariat of Commerce and Industrial Development (SECOFI) and on PEMEX's purchasing program for 1987, 1988 and 1990.

^{1.} NOTE: All values in this report, unless otherwise stated (\$ Mexican pesos, Canadian dollars Cdn\$, etc.) are quoted in United States dollar equivalents.



Total apparent consumption of oil and gas field equipment, as defined above, increased from \$577.2 million in 1987 to \$665.9 million in 1988 and further to \$702.4 million in 1989, as a result of PEMEX's increase in earnings due to more favorable oil prices between 1987 and 1989. The total market is estimated to grow at an average annual rate of 4.5% and reach \$801.6 million by 1992. However, given the present volatility in crude oil prices, it is difficult at this time to estimate the future behavior of PEMEX. Nevertheless, if the development plans are fulfilled and the country's foreign exchange reserves maintained, equipment purchases by PEMEX will continue to grow. Given the strategic importance of PEMEX as the major earner of foreign exchange and of income for the public finance, it is considered a priority development area for the country and will continue to be promoted in the future.

THE MEXICAN MARKET FOR OIL AND GAS FIELD EQUIPMENT (U.S. million \$)

	1987	1988	<u>1989e</u>	<u>1992</u> p
Production + Imports - Exports	553.6 167.4 143.8	687.6 213.1 234.8	740.4 238.8 276.8	832.8 280.4 311.6
TOTAL	577.2	665.9	702.4	801.6

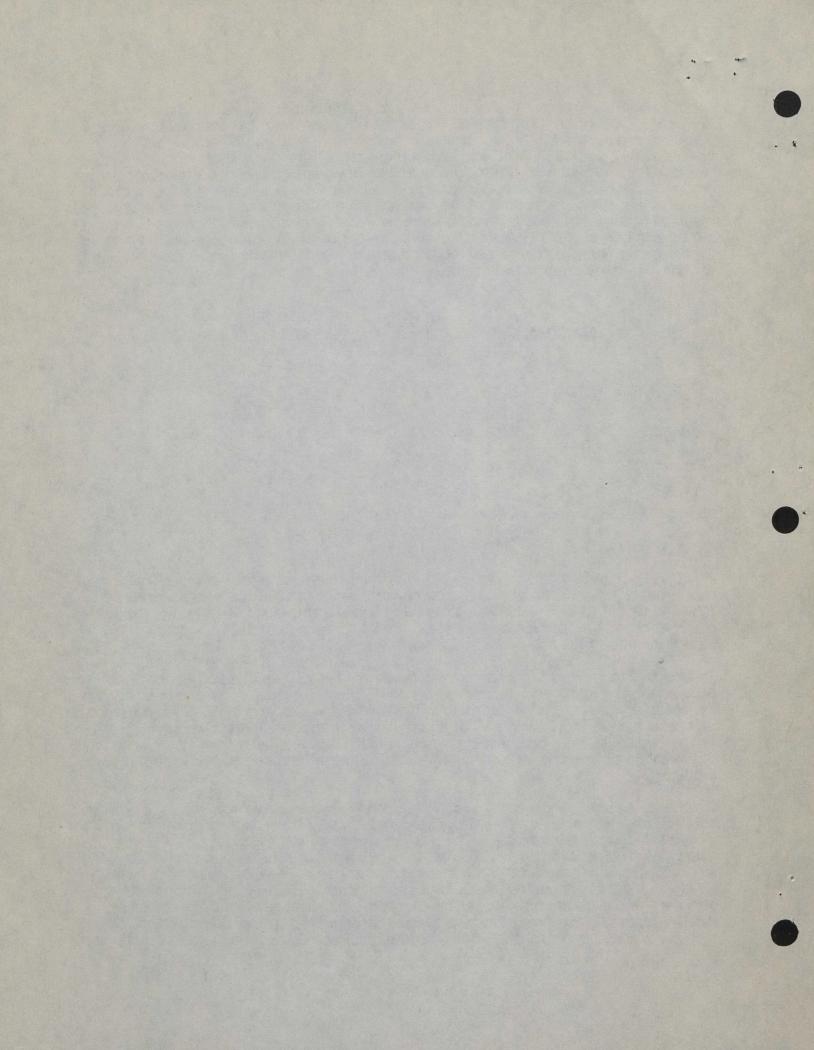
Source:

Import and export data published by SECOFI PEMEX purchasing program 1987, 1988, 1990.

Imports have traditionally played a very important role in total demand. In 1987 they represented 29% of total equipment purchases, while in 1988 this share increased to 32% and further to 34% in 1989 as a result of liberalized policies that have made imports relatively cheaper. Total imports are expected to increase from \$213.1 million in 1988 to \$238.8 million in 1989 and further to \$280.4 million by 1992.

The continued increase in imports is a result of: Mexico's accession to the General Agreement on Tariffs and Trade (GATT) in 1986, which has set the framework for increased access by foreign suppliers to this market; also, delays in PEMEX's payments to local suppliers (now up to 120 days) have discouraged them from pursuing PEMEX orders, while foreign purchases are paid within approximately 30 days after the presentation of the fully documented invoice; and the impossibility of cutting imports further.

On the other hand, the events described in the first section of this report, singularly shaped the Mexican petroleum industry. Traditionally the Mexican government has limited foreign capital participation to a minimum in the petroleum industry, and it has specifically worked to decrease its dependence on foreign made equipment, technology and services. AS a result, Mexico has had to develop its own technology, which, by world standards, is quite sophisticated. PEMEX has supported local suppliers under its import substitution program and maintained the absolute level of local purchases. Exports have also played a major role in the domestic equipment industry and amounted to \$277 million in 1989. Mexico is a major exporter of pipes and



tubes, accessories thereof, internal combustion engines and valves. Total domestic production of oil and gas field equipment was estimated to be \$687.6 million in 1988 and \$740.4 million in 1989. It is expected to grow at an average annual rate of four percent through 1992.

The most important foreign suppliers of oil and gas field equipment to PEMEX are the U.S. (72%), Japan (5%), West Germany (4%), Italy (3%), Canada (2%) and Spain (2%). As part of its savings campaign, PEMEX has reduced its staff in the Tokyo and London offices and has closed the Paris office. Most foreign purchases are therefore made through the Houston office. U.S. equipment is also well known and generally preferred by PEMEX. The geographical proximity of the U.S. is an advantage in competing for Mexican business since it permits faster delivery and better after sales service.

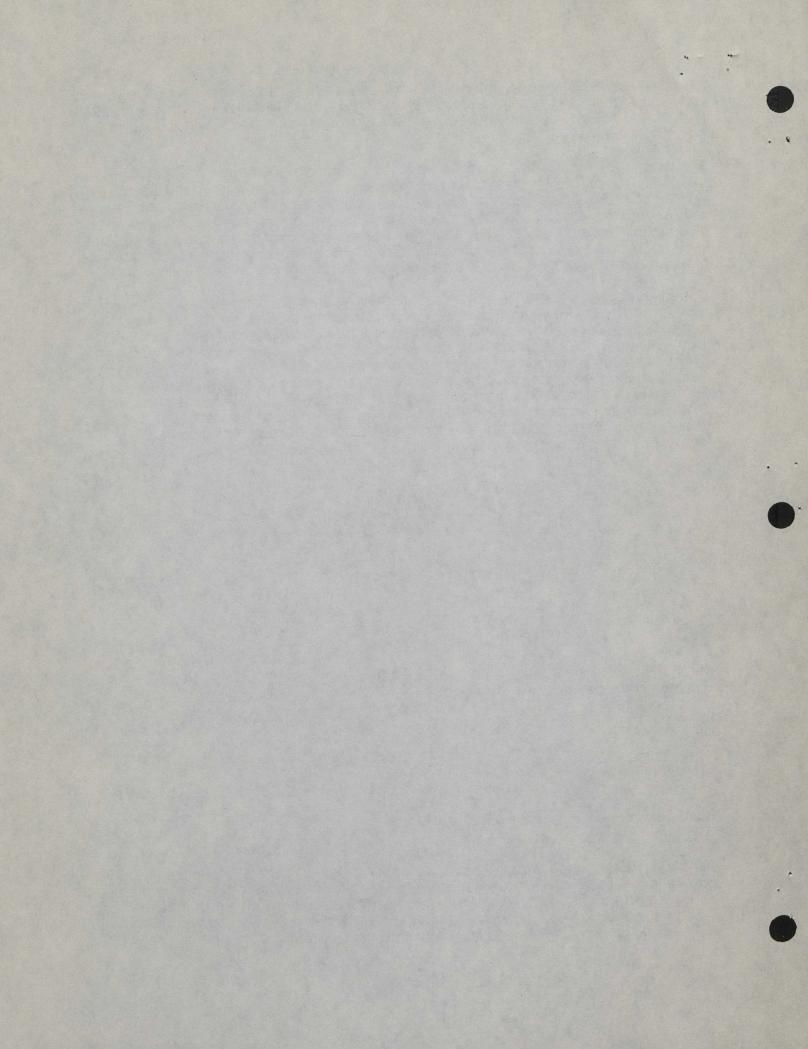
Canadian suppliers can take advantage of their relative proximity to Mexico to market their products more aggressively. Total Canadian exports of oil and gas field equipment to Mexico have remained fairly stable during the last few years. In 1988, they amounted to Cdn\$2.7 million and decreased to Cdn\$2.4 million in 1989 despite the overall increase in imports. This reflects a generally passive marketing approach of Canadian suppliers, who could greatly benefit from this growing market by being more aggressive. This could include participating in trade shows in Mexico and the United States, directly marketing their products with PEMEX, both at the central and regional level and establishing a distributor or representative in Mexico, or setting up an office locally, or finding a joint evnture partner.

TABLE 2
CANADIAN IMPORTS AND EXPORTS
(000 Canadian dollars)

	IMPORTS 1988	EXPORTS 1988	IMPORTS 1989	EXPORTS 1989
Pipes and tubes Accesories for pipes and tubes	402 100	15 8	8 635	0 6
Pumps	0	146	46	101
Winches and Cranes	26	17	0	38
Drilling equipment	0	1,243	0	1,063
Valves	1,059	458	1,395	273
Parts	473	677	598	806
Geological instruments	4	130	0	105
TOTAL	2,064	2,694	2,682	2,392

Source: Statistics Canada - International Trade Division

Although PEMEX has strong technical support in its own staff and the Instituto Mexicano del Petroleo (Mexican Institute of Petroleum), it has, in the past, contracted services and licensed processes from international suppliers. Some of these include: Ethylene production process from Lummus; low-density polyethylene from ICI; styrene from Monsanto-Lumus; oxylene from Atlantic Richfield; and propylene from Chevron, all



of the above in the Cangrejera complex. For the Pajaritos complex, the oil monopoly has the license and production process from McKee and Lummus for ethylene; and for vynil chloride from Shell, Monsanto-Scientific Design and B.F. Goodrich-Badger. At the Cosoleacaque complex PEMEX uses production processes for ammonia from British Petroleum and methanol from Gulf Oil, among other companies.

Approximately 5,000 local firms manufacture equipment and materials for the Mexican petroleum industry. Additionally, many international suppliers to PEMEX have a distributor and/or representative in Mexico considered by PEMEX as a local supplier.

International companies which produce chemicals and petrochemicals, and are represented in Mexico through joint-ventures with local companies, include:

International company

Akso N.V. (Holland)
American Cyanamid (U.S.)
BASF (Germany)
B.F. Goodrich (U.S.)
Borden (U.S.)
Celanese (U.S.)
Du Pont de Nemours (U.S.)
DSM N.V. (Holland)
Monsanto (U.S.)
Petrofina (Great Britain)
Phillips Petroleum (U.S.)
Polisar (Canada)
Reichhold Chemicals (U.S.)
Rhone Poulenc (France)
Standard Oil (U.S.).

Mexican subsidiary

Tanatex Mexicana S.A. de C.V. Cyanamid de México S.A. BASF de México S.A. Policyd S.A. Química Borden S.A. Celanese Mexicana S.A. Du Pont S.A.

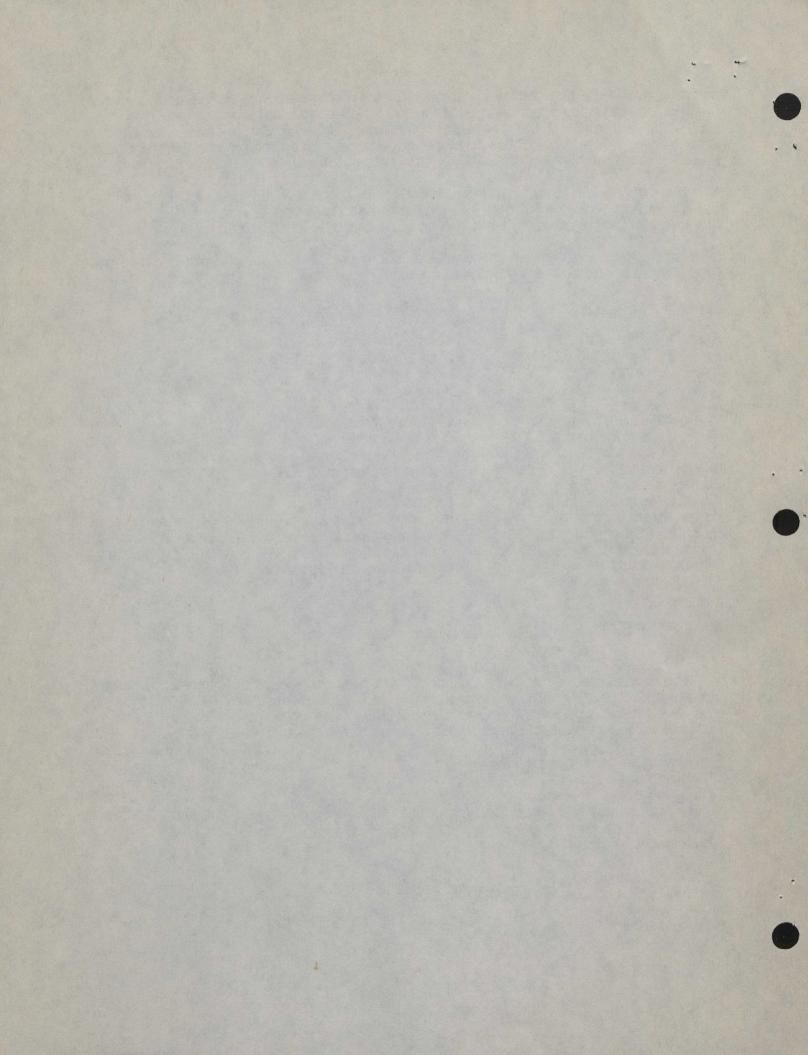
Monsanto Comercial S.A.

Phillips Química S.A.
Hules Mexicanos S.A.
Reichhold Química México S.A.
Fran Química S.A. de C.V.
Cía. Nacional de Abrasivos

4. BEST SALES PROSPECTS

In general, imported equipment prospects are best for technologically sophisticated equipment. Based on foreign trade statistics and on publications by PEMEX, following is a list of items traditionally imported by PEMEX. The order followed is in terms of estimated value as published by PEMEX in its purchasing program for 1990:

Steel line pipe, mostly seamless;
Chemical substances;
Drilling tools and equipment;
Valves, particularly gate and control;
Process plant parts;
Hoists and cranes;
Drilling bits;
electric motors;
Pumps, particularly centrifugal and reciprocating;
storage tanks;
Cars and trucks;
Compressors;



Processing equipment such as columns, heat exchangers, air coolers, reactors, bins and recipients:

Railroad and marine transportation equipment;

Measuring and control instruments, such as analyzers, flow meters, testing and pressure instruments, chromatographers, security valves, displacer level instruments; Telecommunications equipment:

Steam and gas turbines;

Connections and accessories for pipes, mostly carbon steel;

internal combustion engines;

Electrical equipment such as motors, generators, transformers and control panels;

Fire fighting and other security equipment; Repair and spare parts for the above items.

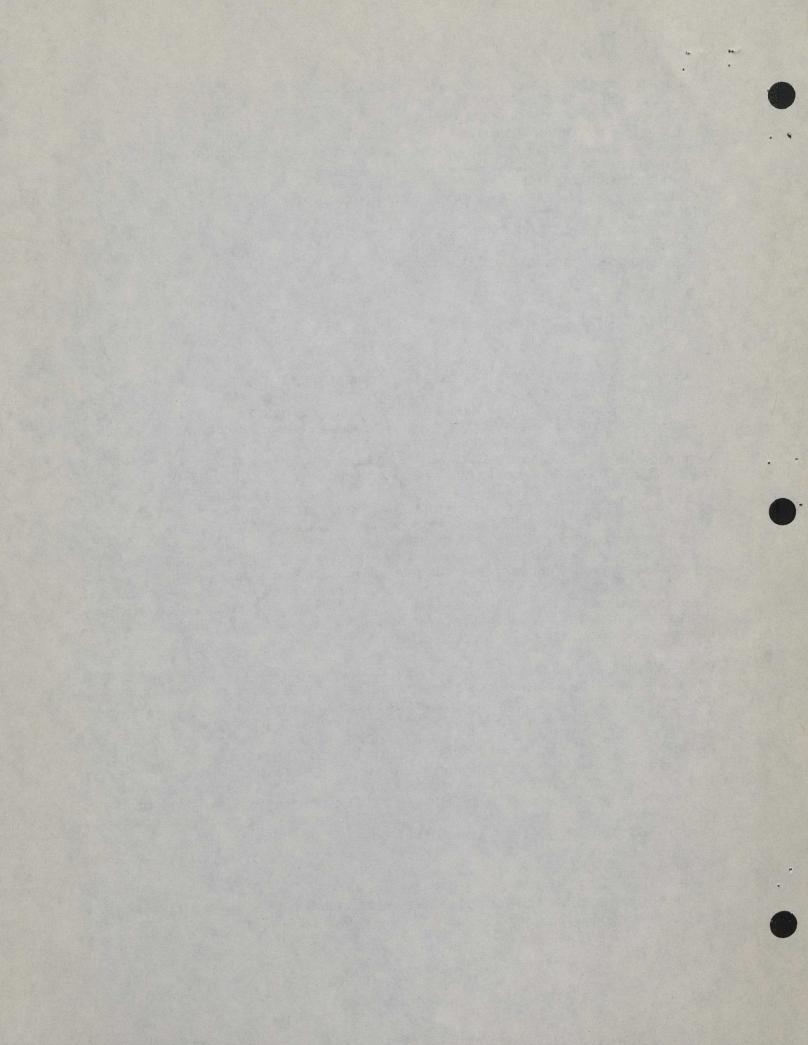
5. END USER PROFILE

Virtually all purchases of oil and gas field equipment are made by the national oil monopoly PEMEX, a decentralized public agency owned directly by the State. Its activities include exploration, production and marketing of crude oil, refining of gasoline and oil products. PEMEX is also the sole producer of basic petrochemicals. Among Fortune's "500 Largest International Companies", PEMEX is ranked as the number 36 corporation in the world as measured by its sales of \$14.2 billion dollars during 1989. It is the largest enterprise in Latin-America and employs over 100,000 people

Technically, PEMEX falls under the direction of the Secretariat of Energy and Parastate Industries (SEMIP), which is roughly equivalent to Canada's Department of Energy, Mines and Resources. SEMIP is principally, but not exlusively, responsible for overall management of the oil sector. It oversees oil pricing and marketing policy and the general development of the sector. The minister of SEMIP acts as the formal chairman of PEMEX's board of directors. PEMEX itself is headed by a Director General and seven Sub-directors for the departments of projects and construction; primary production; industrial transformation; commecial; finance; technical administration; and planning and coordination.

In 1989, PEMEX operated 82 exploration and development wells of an average depth of 3,657.5 meters, 129 plants in nine refinery centers and 106 plants in 20 petrochemical centers. It has built over 13,000 kilometers of roads and 59,000 kilometers of pipelines. It operates 21 port installations and has the largest fleet in the country with 213 ships, 35 of which are tankers and have a total cargo capacity of 7.5 million barrels. In addition, PEMEX has 1,347 tank trucks, 1,505 rail tank cars, 90 storage and distribution installations, 37 helicopters in the Marine zone and 33 more in the rest of the country and 21 airplanes. PEMEX's microwave network is equivalent to approximately 40% of the federal network operated by the Secretariat of Communications and Transportation. PEMEX also offers medical services to its 253,000 workers and their families through 168 facilities including hospitals, clinics and medical offices (2).

^{2.} Data on PEMEX are mostly based on "Memoria de Labores 1989", PEMEX, Mexico.



5.1 PEMEX'S ACTIVITIES DURING 1989

As a result of the stabilization of world oil prices in 1989, PEMEX continued work begun on old projects and began several new projects. PEMEX's financial situation was improved by the increases in the price of crude oil in 1989. Total PEMEX revenues increased 24% in 1989 to \$20.5 billion, of which \$14.2 billion corresponded to sales income. Of these, 47% were from internal sales and 53% from export sales. PEMEX paid \$11.8 billion taxes to the Federal Government. The oil giant is the most important single source of income to the State, both through direct income and value added tax payments, as well as through taxes levied on fuel and hydrocarbon sales. Given the tight conditions of the international credit market, Mexico is also highly dependent on the foreign exchange earned by PEMEX to cover payments on imports and on its debt. The company's total foreign currency income amounted to \$3.2 billion, of which \$1.2 billion were used to cover its foreign investment and foreign exchange operational needs, as well as payments on its foreign currency debt. The remaining 60.5% was put at the disposition of the country's general foreign exchange needs.

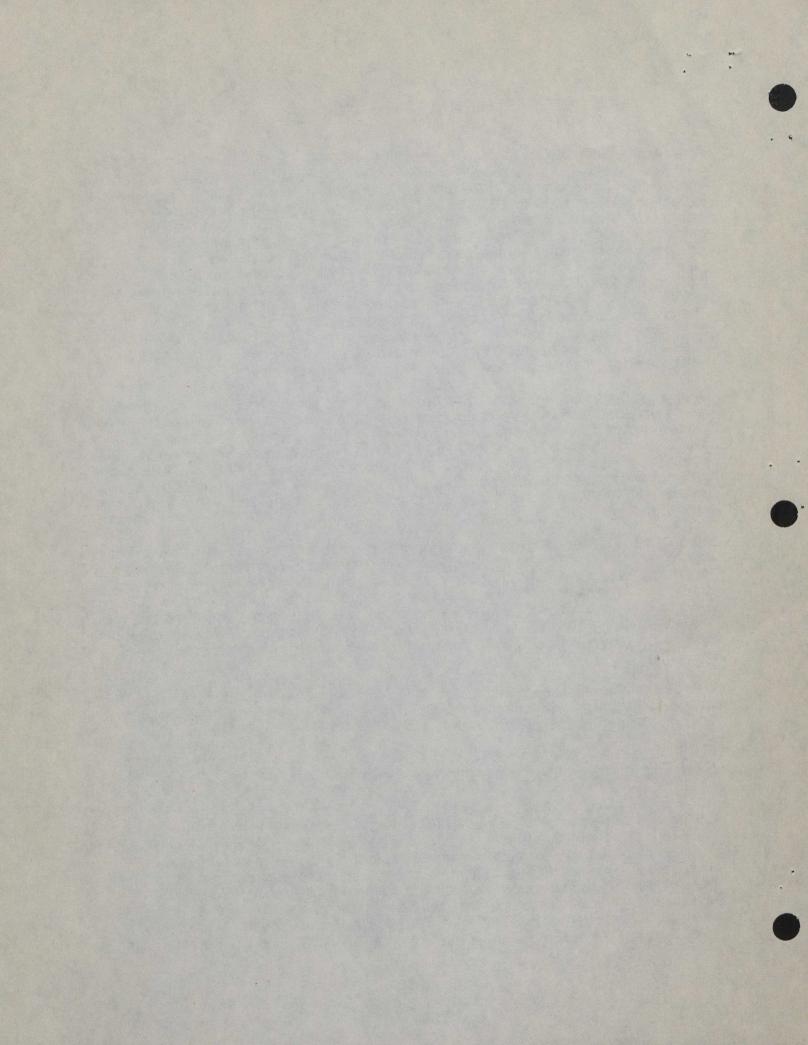
During 1989, work progressed in 467 projects in the areas of exploration, exploitation, refining, petrochemicals, transportation, distribution and administration; 81 projects were completed for a total investment of \$411 million. Additionally, the projects in the execution phase are valued at \$9.2 billion and 14 new projects were undertaken for an estimated investment of \$103 million. Of total disbursements of \$542.4 million in 1989, 42% were channeled to construction, 42% to purchases of domestic equipment and materials, 7% to foreign purchases, 4% to project engineering and 5% to administrative expenses.

Among the projects completed were five drilling platforms, the gas dehydration system in three compression platforms, the Cuenca de Papaloapan gas separation system, the installation of a 52,660 HP turbocompressor, a 38km gas pipe and a 3km oil and gas pipe, two propane-propelene fractioning plants, one petrochemicals plant in Texmelucan, eight projects related to the pipe transportation system, three projects in the warehousing and distribution areas and several other projects related to pollution control, security, navigation, telecommunications, research, housing and hospitals.

PEMEX also created a new company "Petroleos Mexicanos Internacional" (PMI) in charge of international marketing activities. This will allow PEMEX to achieve better purchase and sales efficiency by taking advantage of trading and other opportunities open to an international oil firm.

5.1.1 Exploration, Development and Research

Exploration remained a priority activity in 1989. Exploration drilling was focused on discovery of new fields to increase hydrocarbon reserves and to evaluate areas with possible oil potential. During this year, 98 exploratory locations were defined, of which 39 were approved for drilling. In 1989, 42 exploratory wells were completed, of which 14 were confirmed as productive, five for gas and nine for oil. Therefore, 41% of these explorations were successful, an average reported to be above the average international standard. Exploration in 1989 led to the discovery of six oil producing fields and four of gas in the areas of the Sonda de Campeche marine zone, Chiapas-



Tabasco mesozoic area, the Cerro Azul district and the Northeast border district.

Also, 81 development wells were drilled, of which six were gas producers and 51 oil producers, plus six injection wells for secondary recuperation and waste disposal. Therefore, 77% of these wells were successful and confirmed PEMEX's knowledge of the explored areas. The average depth of these wells was 3,498 meters. Drilling is generally between the 1,800 and 6,500 meter range but PEMEX has reported that wildcat drilling is having to go deeper. The Menonita No. 1 well in the State of Chihuahua went down to 7,050 meters, the deepest in Latin-America and only one of two wells deeper than the 7,000 meter range.

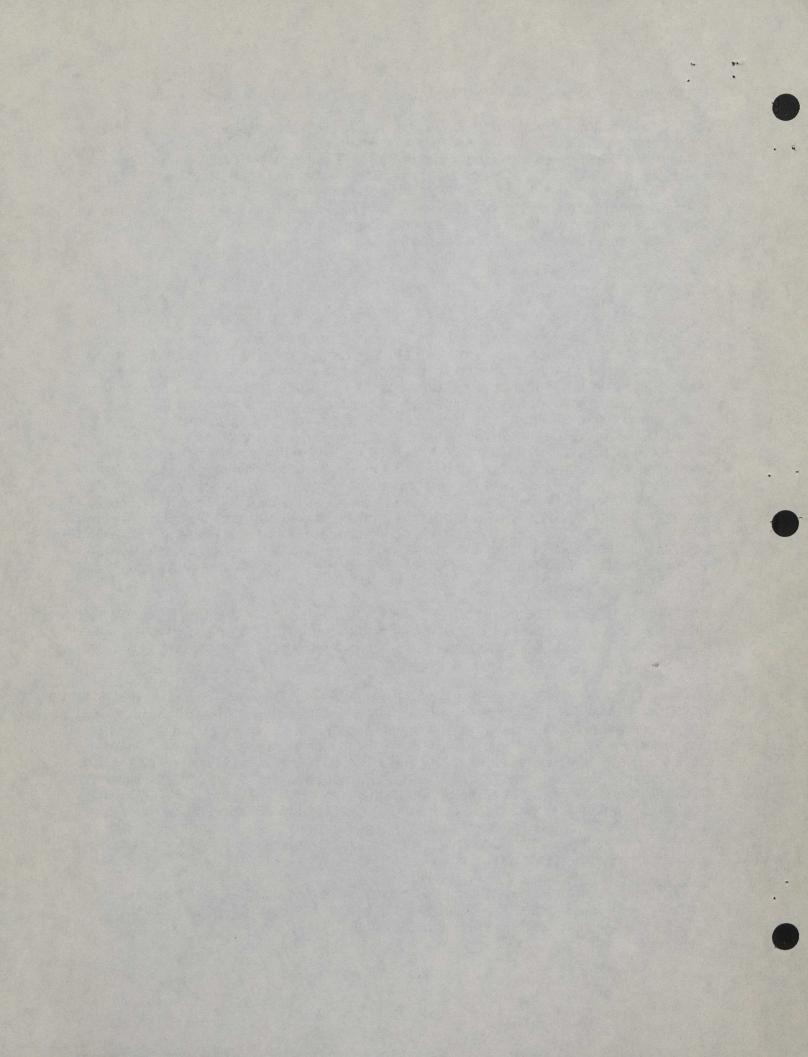
5.1.2 Primary Production

Up to 1976, the primary source of hydrocarbon reserves was beneath the Poza Rica district in Central Mexico. However, in that year, significant amounts of hydrocarbons were discovered in the southeastern part of Mexico, both in the Chiapas-Tabasco regions and offshore, in the bay of Campeche. The Chiapas-Tabasco area covers close to 2,000 square miles and is the primary source of Mexico's light crude known as Olmeca and Isthmus. Productive reservoirs are deep, roughly 4,000 meters and have thick (100-500m) oil-bearing strata. These exceptionally deep columns account for the high per well production (6,700-16,000 bd). The Campeche marine zone, also called Zonda de Campeche, consists of 12 separate fields, and covers an area of 3,000 square miles. These fields have been discovered at more conventional depths (1,100-4,000m) and productive well columns are estimated at up to 8,400 feet. This coupled with high buoyancy levels make productivity of these wells among the highest in the world (28,000-40,000 bd). The remaining hydrocarbon producing area is called Chicontepec, located between the states of Puebla and Veracruz, covering a 4,300 square mile area. Only small amounts are produced in this area and wells have rapid rates of decline.

Total proven reserves at the end of 1989 were calculated at 66,450 million barrels, 1.7%, lower than those reported in 1988, despite the discovery of 12 new oil fields. Of these reserves, 46.2% are in the Campeche marine zone, followed by 26.4% in Chicontepec and 19.7% in the Southeast zone.

Between 1978 and 1989 crude production has increased at an average annual rate of 7%. During 1989, PEMEX extracted a total of 917.3 million barrels (mb) of crude oil, that is 2.51 million barrels a day (mbd), an increase of 0.3% over 2.50 mbd in 1988, distributed between light Olmeca oil (14.3%), light Isthmus (22.5%) and heavy Maya crude oil (63.2%). Geographically, the production of crude was distributed as follows: 1.74 mbd (69.3%) from the Marine Zone of Campeche, 0.61 mbd (24.2%) from the Southeastern Chiapas-Tabasco fields, the remaining 6.5% was produced in the fields located in the North, Center and South zones. Total crude production was distributed as follows: 468.2 mb (50.9%) were exported, 368.5 mb (40.0%) sent to refining, 80.6 mb (8.8%) to petrochemical production and the remainder either lost through accidents and evaporation or added to inventories.

PEMEX also operates eleven water injection systems to obtain an additional oil recovery. In 1989, an average of 555,640 bd of water were injected for an oil recovery of 211,170 bd, of which 52.5% in the Southeast zone.



Crude found in Mexico has a very wide density range, from 10^o API to 42.5^o API, with an average 30^o. Its sulphur contents also varies proportionately to its density. High density oils are among those with the highest sulphur contents in the world (5.5%), while the lowest contain less that those found in the Middle East (0.2%). Some oils also contain large quantities of sulfhydric acid (bitter crude). Most crudes obtained in Mexico have an intermediate character (naftenic-paraffinic). The characterization factors (Bureau of Mines) range from 11.4 to 12.2. The density of distilled products are 0.72 for gasoline, 0.8 for kerosene and 0.85 for fuel oils. All of this indicates moderate contents of cyclic components. Paraffine contents vary. The dripping point of some crudes is as high as 8^oC, while other, non wax crudes, have -37^oC. The vanadium and nickel contens are moderate to high (16-500 ppm vanadium and 3-70 ppm nickel).

Natural gas production was 3.57 billion cubic-feet a day (bcfd) in 1989, 2.7% over the 3.48 bcfd of 1988. Of total gas production, 85% was associated with oil. The Southeastern zone produced 54%, the Campeche marine zone 30.2% and the North, Center and South zones 15.8%.

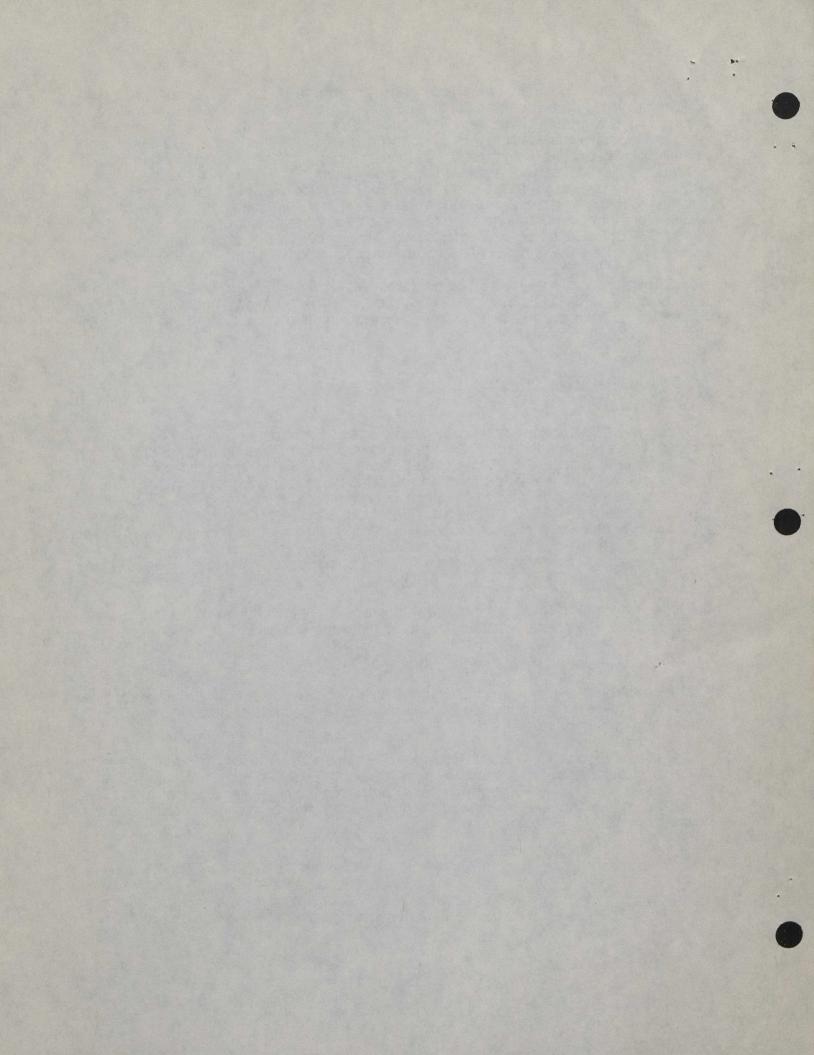
5.1.3 Industrial Transformation

During 1989, the volume of crude, liquid gas, secondary process liquids and condensates processed in the refineries and petrochemical centers was 539.9 mb or 1.47 mbd, an increase of 3.4% over 1988, of which 83.2% corresponds to crude. The amount of heavy crude used in Mexican refineries has continued increasing in order to lower raw material costs and to free light oil for exports at higher prices. Total Maya crude processed in 1989 was a record 402,230 bd, 2.1% higher than in 1988. The total production of petroleum products in 1989 consisted of 155.8 mb of fuel oil, 143.7 mb of gasoline, 85.5 mb of diesel, 79.5 mb of liquefied gas, 15.9 mb of turbosine and 18.2 mb of miscellaneous products, including kerosene, lubricants, asphalts, greases and paraffin.

Mexico's principal refinery centers are located in: Azcapotzalco D.F. (10 plants), Cadereyta N.L. (13 plants), Madero Tamps. (21 plants), Minatitlán Ver. (22 plants), Poza Rica Ver. (5 plants), Reynosa Tamps. (2 plants), Salamanca Gto. (29 plants), Salina Cruz Oax. (12 plants), Tula Hgo. (15 plants).

A total of 3.2 bcfd of gas were processed, 86.1% of bitter gas and 13.9% of sweet gas. A total of 381,500 bd of liquids were recovered, 45% in liquid petrochemical gas, 37% in ethane and 18% in gasoline.

At present, 175 companies are operating 490 basic and secondary petrochemical plants in Mexico, giving direct employment to about 130,000 people. Mexico currently produces approximately 400 petrochemical products, representing 2.5% of total GDP. PEMEX is by law the sole producer of the following petrochemicals, considered basic petrochemicals:



BASIC PETROCHEMICALS

Ammonia
Benzene
Butadiene
DDB
Ethane
Methyl Tertiary Butil Ether
Ethylene
Heptene
Hexane
Carbon Black Feedstock

Methanol N-Paraffins O-Xylene P-Xylene Pentanes Propylene Dodecen Toluene M-Xylenes

In 1987, the Federal Government reclassified the following 36 petrochemicals from basic to secondary, thereby nominally opening their production to private investors and up to 40% foreign ownership.

PETROCHEMICALS RECLASSIFIED FROM BASIC TO SECONDARY

acetic acid
acetic anhydride
acetylene
acrolein
acrylic acid
aliphatic solvents
allyl alcohol
allyl
chlorides
aromin 150
butyl alcohols
butyraldehyde
chloroprene

chlorogrom
ethyl chloride
ethyl hexanol
ethylene chlorhydride
ethylene dibromide
hydrogen
cyanide
isopropane
lauryl alcohol
methyl chloride
methylene chloride
naphtalene

carbon tetrachloride

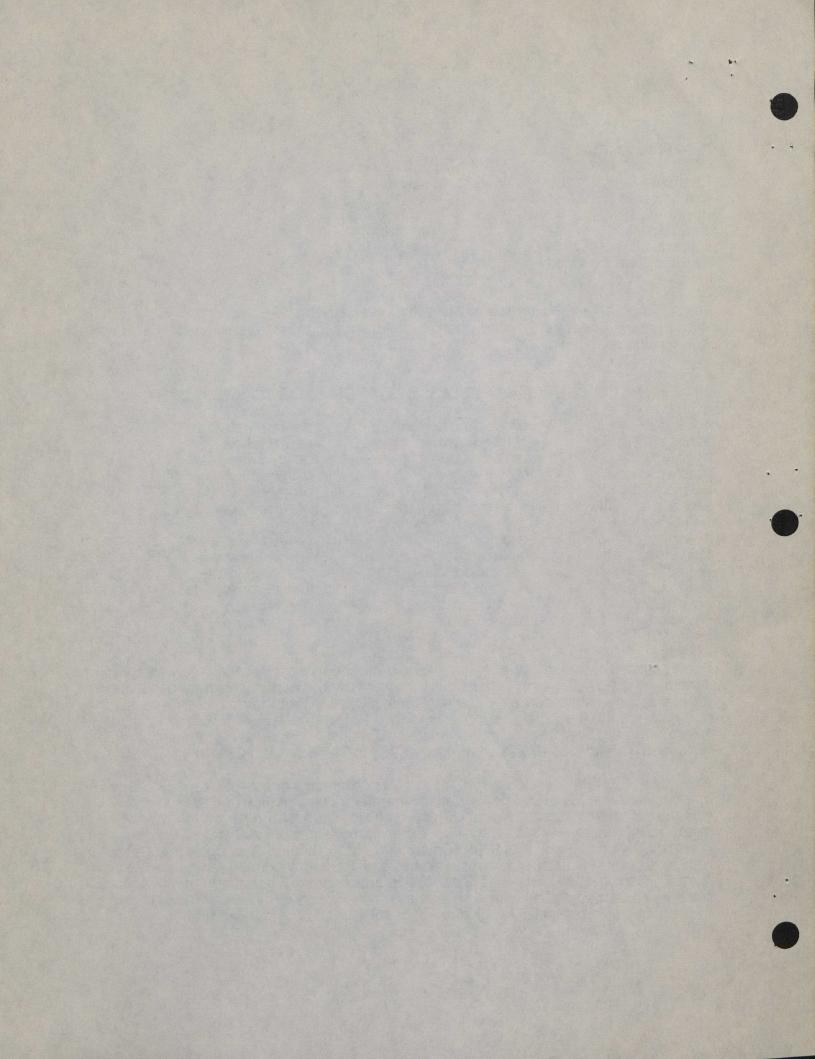
polybutylene dichloride propylene oxide polypropylene resins propylene tetrachlorethane trichlorethylene trichloretane vinyl acetate vinyl toluene

nonene

oso alcohols

PEMEX's total installed capacity for basic petrochemicals was 19 million tons/year in addition to 9.7 million tons/year of secondary petrochemicals. The total production of basic petrochemicals increased 9.2% in 1989, to 16.9 million metric tons. Of these, 21% corresponded to the production of ammonia, 17% to ethane 15% to carbon anhydride, 7% to ethilene and 6% to carbon black. Total exports of petrochemical products increased 50% in 1989 to \$110.4 million, while imports increased 23% to \$21.7 million.

At present, PEMEX operates a sum total of 20 petrochemical complexes, 106 plants and 40 complementary plants. The biggest of them is La Cangrejera (Veracruz), which now includes 21 petrochemical plants. This complex, with a 4.3 million ton/year capacity, ranks fourth in the world in size. Other important complexes include: Pajaritos (Veracruz) with 13 plants, Cactus (Chiapas) with 13 plants, Cosoleacaque (Veracruz) with nine plants, Minatitlán with nine plants and Ciudad Madero (Tamaulipas) with six plants. During 1989, four petrochemical plants started operating: an ethylene and propylene plant and a polyethylene plant in the Morelos complex, an acrylonitrile and hydrocyanic acid plant in Texmelucan and a sulphur plant in Matapionche.



5.1.4. Transportation and Distribution

PEMEX has a wide network of 407 pipelines covering a total length of 59,851 kms. The longest lines are 30,031 kms. of collection and service pipes. Gas pipelines cover 13,166 kms., divided into two big arteries going from Ciudad Pemex (Tabasco) to Guadalajara (Jalisco), San Luis Potosí (SLP) and Lázaro Cárdenas and from Chihuahua (Chihuahua) to Reynosa (Tamaulipas) and Ciudad Juárez, mostly to cover exports to the U.S. A wide network of poli-ducts, covering 9,652 kms, carry refined products throughout the country in two main arteries: from Tabasco to Jalisco and Aguascalientes; and from Nuevo León to the U.S. border at Ciudad Juárez, Durango and Veracruz. Oil pipelines measure 5,142 kms. and basically link Salamanca (Gto.), Tabasco, Salina Cruz and Cadereyta. Additionally, there are 1,414 kms. of petrochemical and 222 kms. of fuel oil pipelines.

PEMEX has a tanker fleet of 35 ships with a total deadweight capacity of one million tons ang 7.5 mb. In 1989, 146.5 mb. of crude oil, gas, refined products and petrochemicals were transported by sea, 64% through PEMEX's fleet and the remainder through rented vessels. For land transportation, PEMEX operates 7,047 tank trucks, of which it owns 1,347, in addition to 1,636 rail tank cars, 1,505 of which are PEMEX's property. In 1989, it moved 20.7 million tons of petroleum and petrochemical products over land.

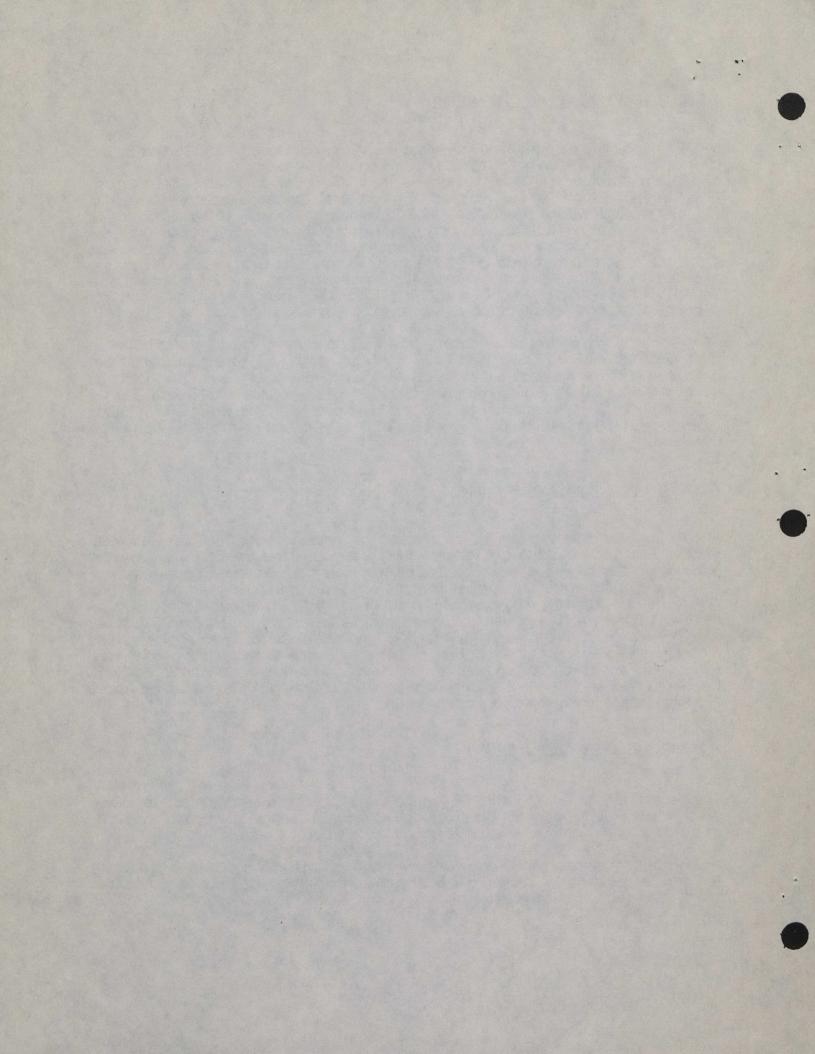
5.1.5 Research and Development

A very important organization in the Mexican oil industry is the Mexican Petroleum Institute (Instituto Mexicano del Petroleo IMP). Although Mexican industry in general lacks broad-based product research and development tradition, in the petroleum area, it has a distinguished record. Almost all of the petroleum industry related research and development is carried out by the government owned IMP, which was established as a research, training and engineering consulting organization separate from PEMEX but with PEMEX as its principal client. The IMP employs close to 3,500 engineers and technicians who conduct most of PEMEX's projected engineering work. It is also free ti hire local as well as foreign consultants to assist in project design and planning. PEMEX also relies heavily on the IMP for technical advice and testing in Mexico bejore it buys products of new technologies or from new suppliers.

5.2 PROJECTED ACTIVITIES

The general objectives set for PEMEX in the years to come are to increase efficiency, satisfy internal demand for petroleum products, increase exports, improve the quality of its products and contribute to strengthening Mexico's public finances.

Areas of priority investment are development drilling; exploration drilling in areas with the greatest potential; refineries, particularly those that are already in the construction phase; and petrochemical plants.



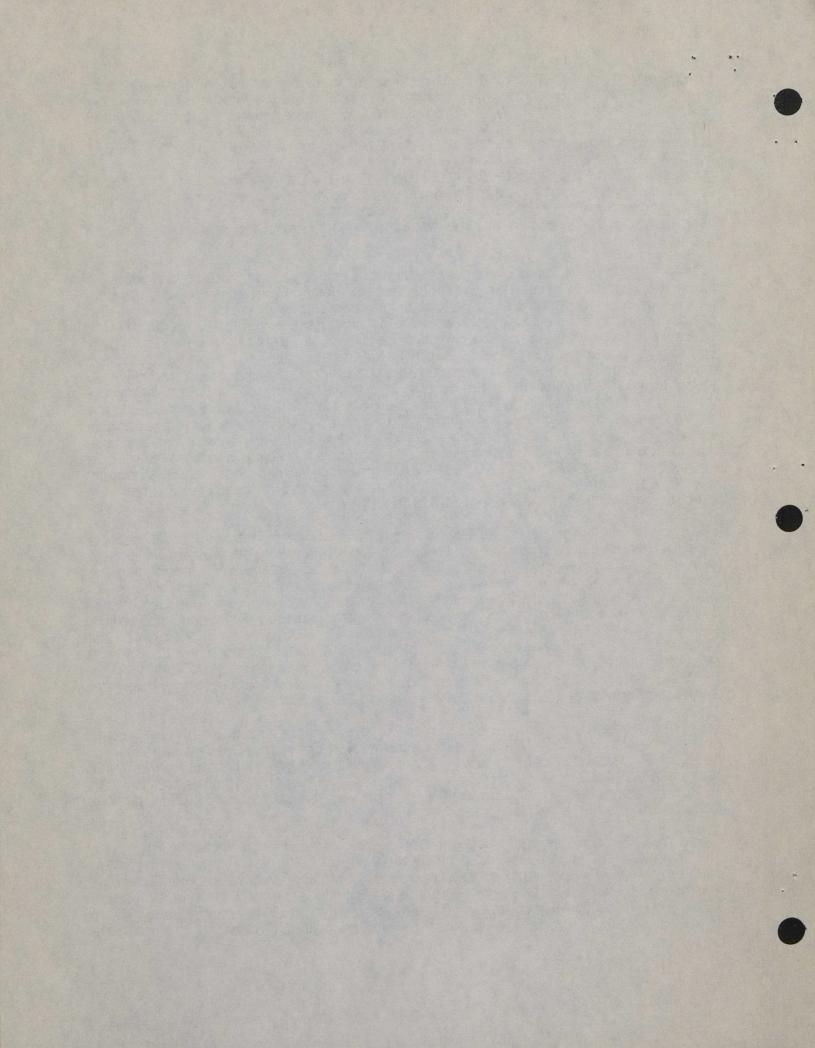
PEMEX announced that in 1990 it will continue to work on the 481 projects presently under construction, of which 14 were started in 1989, in the following areas: exloration, well maintenance, refining, petrochemicals, transportation, distribution and administration. The total cost of these projects is valued at \$9.3 billion and is mostly concentrated in the industrial transformation (47%) and primary production (24%) areas. PEMEX received a major \$3 billion credit in 1989, granted by 80 banks in 13 countries in addition to \$380 million granted by 40 European banks. These amounts will be invested in the operation, repair and modernization of refining and petrochemical plants, continuing work on 12 underground salt caves in the state of Veracruz, which will eventually double PEMEX's storage capacity and continue the construction of the Pacific Project.

In May 1987, PEMEX initiated the construction of a major project partially financed by a Japanese Eximbank loan. This project, called the "Pacific Petroleum Project", consists of a series of interconnected installations to process and store crude, natural gas and petrochemicals for eventual shipment to the Far East. PEMEX expects this to strengthen its marketing position in the Pacific basin through integration, freight economies and increased physical capacity for transportation. The project includes four large construction works: an underground storage facility for crude and oil in 12 saline domes in Tuzandepetl, Veracruz, with a total capacity of 10 million barrels; a trans-isthmic, 265 kms long, 48" oil pipeline from Nueva Teapa to Salina Cruz; the second stage construction of the Salina Cruz refinery, which is expected to double refining capacity, and the improvement and increase of port infrastructure and gas liquification capacity; the construction of an ammonia complex in Lázaro Cárdenas, Michoacán with a 500,000 tons/year capacity. This project has received priority attention and important advances have been made in several areas. Total projects in execution are 37 with a total cost of \$1.5 billion.

The biggest challenge facing PEMEX is to produce sufficient petrochemicals to meet national demand, since imports of these have been an unacceptable drain on the nation's foreign currency holdings. PEMEX is particularly interested in producing the petrochemicals needed by Fertimex, the country's parastatal fertilizer manufacturer, as well as basic petrochemicals. New investment in basic and secondary petrochemicals by PEMEX and private sector companies totalling between \$4.7 and \$5.5 billion between now and 1994 are needed. It appears that PEMEX will enter into joint ventures with Mexican and foreign investors, allowing the latter to construct and run petrochemical plants for a specified number of years, after which they would transfer to PEMEX ownership. The petrochemical industry as a whole is expected to increase at an average annual rate of eight percent between 1990 and 1994.

PEMEX expects to attract new joint venture or direct investment capital thanks to the reclassification, under the Mexican Government's Petrochemical Development Plan of 1986, of 36 petrochemical products from the "basic" category, investment in which is restricted by the Mexican Constitution to PEMEX, to the "secondary" category, in which foreign capital participation of up to 40% is permitted. Officials of the SEMIP indicated that this share might even be increased to 49%.

Since 1980, PEMEX has embarked on a major expansion of its petrochemical facilities. The first stages of the 14 plant, \$1.3 billion Morelos Petrochemical Complex, producing ethylene, propylene, polyethylene and oxygen for domestic consumption have been put into operation between 1988 and 1989. This complex is estimated to be completed in 1993. The Nuevo PEMEX complex in Tabasco opened in 1988 with a steady production of sulphur, ethane, propane and butane which are further processed into industrial



products at la Cangrejera. Several expansions of this complex are now being considered, including an ethylene plant and a wastewater treatment facility. Three plants were put in operation at the San Martin Texmelucan Independence Complex in 1989, for the production of acrylic nitrile and dodecilbenzene.

6. MARKET ACCESS

A company wishing to sell to the Mexican petroleum industry should first establish if there is a market for its goods or services by discussions with PEMEX and/or private companies and through trade shows. Decisions should be taken on whether to use an agent, joint venturing or licensing with a Mexican company. Mexico's market is highly competitive and companies which maintain an active presence in the market and establish a good track record by virtue of product performance, competitive price and service will do well.

All suppliers of equipment or services, whether local or foreign, to a Mexican Government entity, such as PEMEX, must be registered with the Secretariat of Programming and Budget (SPP) and with the Purchasing Department of PEMEX.

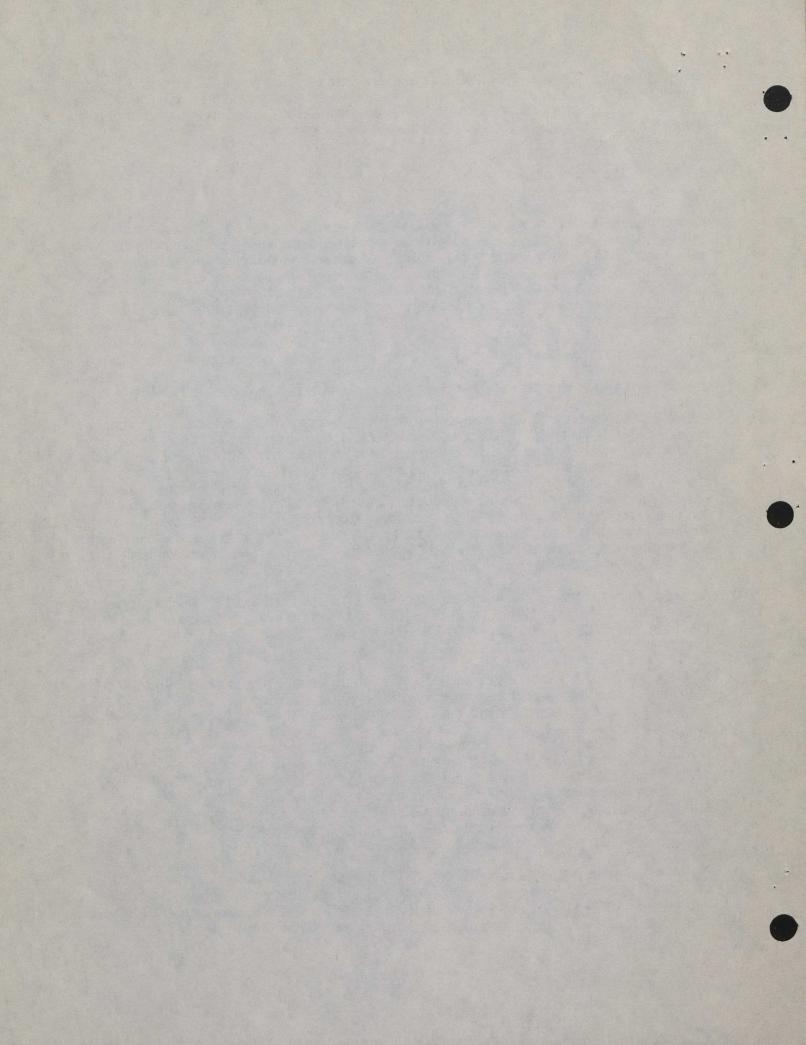
PEMEX purchasing policy follows well-specified government regulations. All purchases of up to \$180,000 can be made directly without bids, whether at the central offices or at the regional level. Bidding is divided into two basic groups: minor and major bids. Minor bidding procedures are followed for bids worth roughly \$180,000 to \$720,000. In such cases, qualified suppliers obtain the bidding terms from PEMEX and enter the competition with their quote at a predetermined date. Major bidding procedures are followed for larger purchases. The general description of the products desired by PEMEX are published in major newspapers throughout the country. Details of the acquisitions can be obtained from PEMEX's open bidding units. For international bids, the company can deal with PEMEX headquarters in Mexico and offices abroad.

Most foreign purchases are made through PEMEX's purchasing office in Houston. It is headed by Mr. Ramón Guerrero Esquivel located on 3600 South Gessner, Suite 100, Houston TX. 77065 (telex Nos. 791397, fax No. (713) 978-6298 and telephone Nos. (713) 978-7996 978-6269 and 978-5997.

PEMEX generally buys on an open account system, usually making payments 30 days after the invoice date when dealing through the Houston office. Occasionally, PEMEX pays new suppliers with letters of credit when the product is not available elsewhere or if its price is lower.

PEMEX has been delaying payments to Mexican suppliers up to approximately 120 days. This has made some of them hesitant to continue to supply PEMEX without assurance of prompt payment. Since, in order to maintain good commercial relations and its good image in international markets, PEMEX continues to pay foreign suppliers within 30 days, these companies, have supplied the Mexican market even though some of the products are also manufactured in Mexico.

As a result of Mexico's accession to GATT, the Mexican Government has gradually opened the economy to international suppliers. Import duties have been lowered from a maximum 100% in 1983, to 20% in December, 1988. The official import price system has been totally eliminated and import permits are required on only 340 of the total

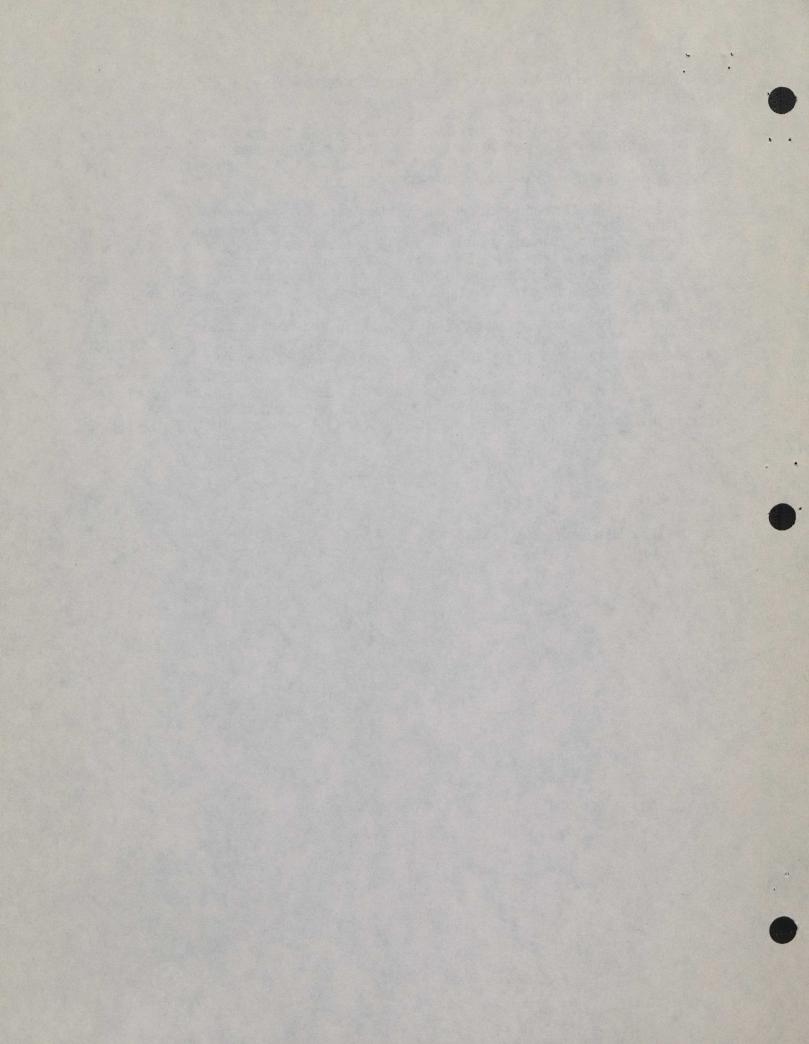


11,950 items in the Mexican Tariff Act. Mexico adopted the Harmonized System of Tariff Nomenclature on July 1, 1988.

Imports of oil and gas field equipment are subject to a 5% to 20% ad valorem duty assessed on the F.O.B. invoice value. In addition, a 0.8% customs processing fee is assessed on the invoice value. A 15% value added tax is then assessed on the cumulative value of invoice plus the above taxes.

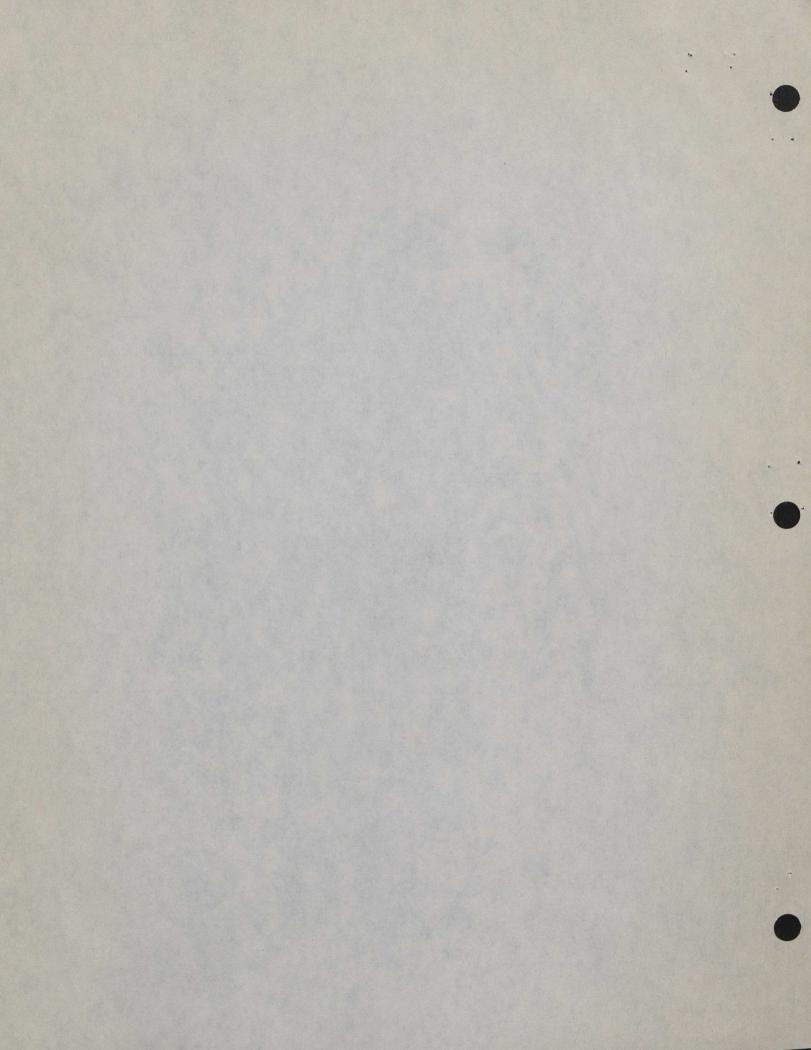
There are no official metric requirements applicable to imports into Mexico, However, since the metric system of units is by law the official standard of weights and measures in Mexico, importers will usually require metric labeling for packaged goods, although the English system is also used. Dual labeling is acceptable. Imported products should be labeled in Spanish containing the following information: name of the product, trade name and address of the manufacturer, net contents, serial number of equipment, date of manufacture, electrical specifications, precautionary information on dangerous products, instructions for use, handling and/or product conservation and mandatory standards. Mexico adheres to the International System of Units (SI). Electrical standards are the same as in Canadat. Electric power is 60 cycles with normal voltage being 110, 220 and 400. Three phase and single phase 230 volt current is also available. In addition to the technical standards adhered to in most industrialized countries, Mexico follows standards from ASME (American Society of Mechanical Engineers), ASTM (American Society for Testing of Materials) and SAE (Society of Automotive Engineers).

Prepared by: Caroline Verut for the Canadian Embassy Mexico City May 1990



APPENDIX

- I. LISTING OF PETROLEOS MEXICANOS (PEMEX) AND MEXICAN PETROLEUM INSTITUTE AS WELL AS KEY CONTACTS-EXECUTIVE OFFICERS.
- II. INSTRUCTIONS FOR REGISTRATION OF FOREIGN FIRM AS ACCEPTED SUPPLIER TO MEXICAN GOVERNMENT AND ITS DECENTRALIZED AGENCIES.
- III. SHORT LIST OF POTENTIAL IMPORTER/AGENTS FOR OIL EQUIPMENT AND RELATED SUPPLIES.
- IV. MAPS.



USEFUL MEXICAN GOVERNMENT AND DECENTRALIZED GOVERNMENT MINISTRIES AND AGENCIES

<u>PETROLEOS MEXICANOS (SEMIP) (PEMEX)</u> Mexican Petroleum Company

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Phones 250 26 11 254 20 44

C.P. Francisco Rojas Gutiérrez Director General Av. Marina Nacional No. 329 Torre Ejecutiva Piso 44 Col. Huasteca 11311 México, D.F.

Phone 250 34 57

Office in New York City

Representación en Nueva York 655 Madison Av. 16th Floor Nueva York, Nueva York U.S.A. Telex 421694

Office in Houston, Texas

Representación en Houston 3600 South Gessner Suite 100 Houston, Texas, U.S.A. Telex 791397 Lic. Adrian Lajous Vargas Subdirector de Planeación y Coordinación Av. Marina Nacional No. 329 Torre Ejecutiva Piso 36 Col. Huasteca 11311 México, D.F.

Phones 545 99 04 254 33 35

Ing. Jaime Hernández Balboa Subdirector de Proyecto Y Construcción de Obras Av. Marina Nacional No. 329 Torre Ejecutiva Piso 39 Col. Huasteca 11311 México, D.F.

INSTITUTO MEXICANO DEL PETROLEO (SEMIP)

Mexican petroleum institute. Investigation and tech develop.

Av. Lázaro Cárdenas No. 152 Col. San Bartolo Atepehuacan 07730 México, D.F.

Telex 017 73 116

Phones 567 91 00 567 66 00

Ing. Fernando Manzanilla Sevilla Director General Av. Lázaro Cárdenas No. 152 Col. San Bartolo Atepehuacan 07730 México, D.F.

Phones 567 29 62 587 43 37

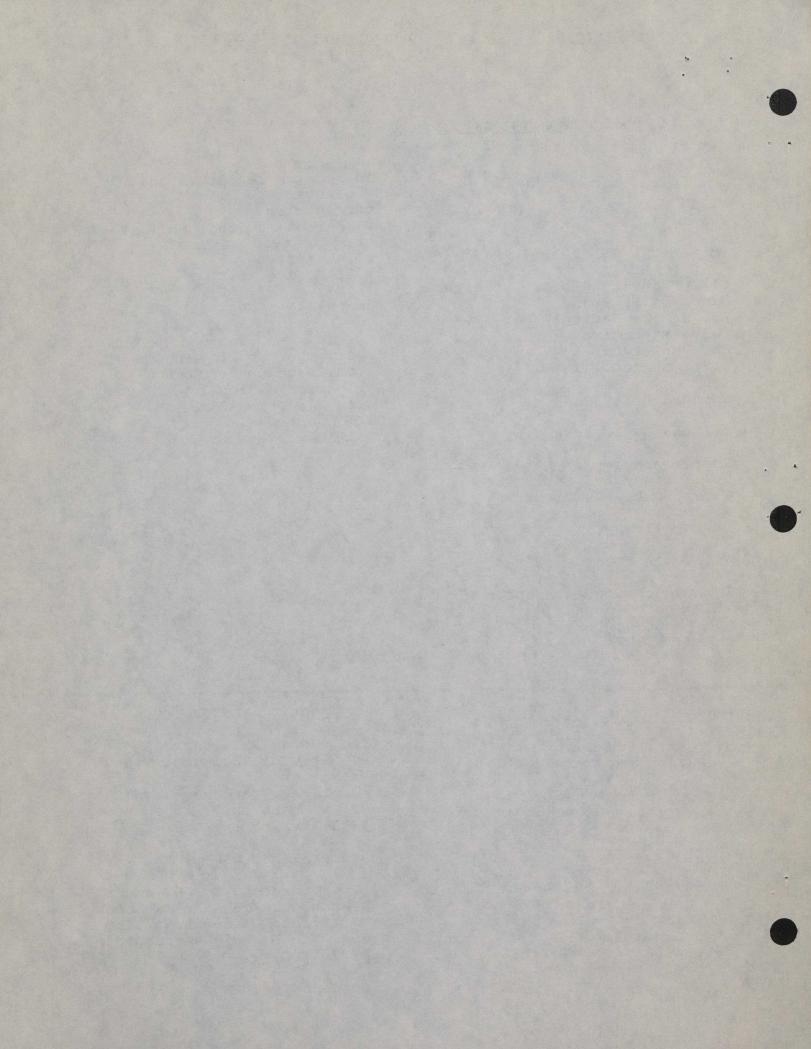
Engineering and projects

Ing. Oscar Ruíz Carmona Subdirector de Ingeniería y Proyectos Av. Lázaro Cárdenas No. 152 Col. San Bartolo Atepehuacan 07730 México, D.F.

Phone 368 45 03

Lic. Lourdes Ortíz Uruchurtu Responsable de Adquisiciones Av. Lázaro Cárdenas No. 152 Col. San Bartolo Atepehuacan 07730 México, D.F.

Phone 567 66 00



PETROLEOS MEXICANOS Av. Marina Nacional 319 Col. Huasteca 11320 México, D.F.

PRINCIPAL EXECUTIVE OFFICERS

(1)

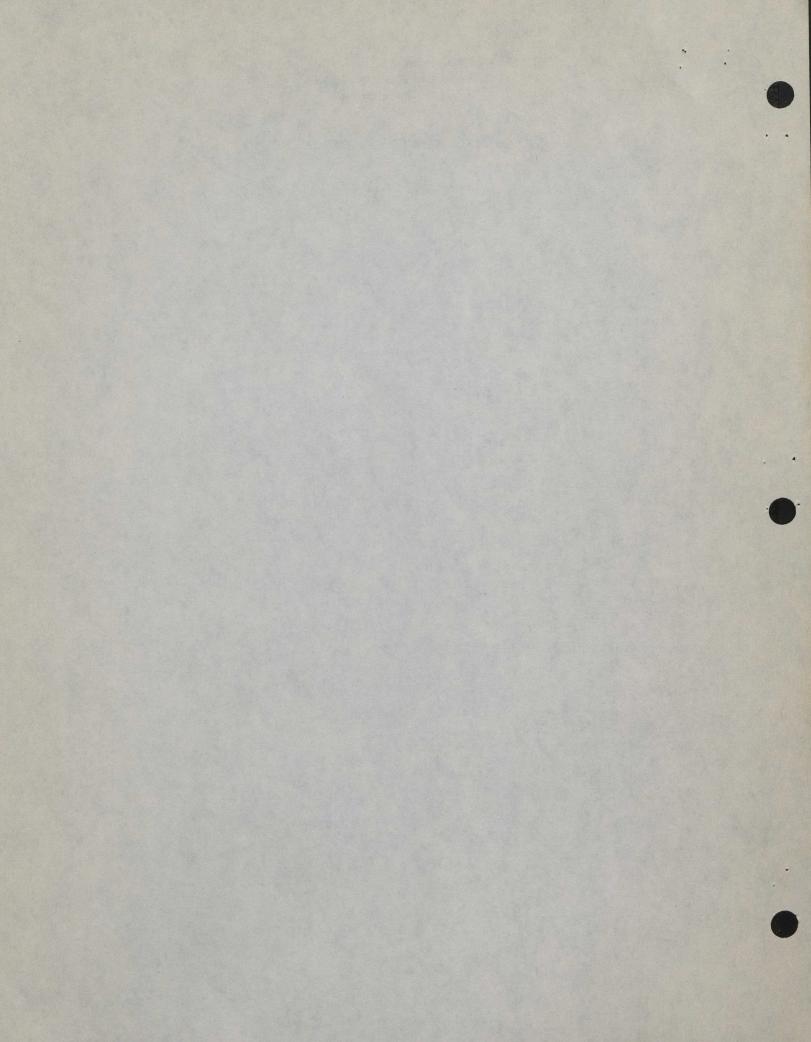
Sr. Francisco Rojas Director General (General Director) Torre Ejecutiva Piso: 44 Tel: 286-1055 Ext. 22216

Lic. Victor M. Montanez Morfin Secretario Particular (Private Secretary) Torre Ejecutiva Piso 44 Tel: 250-3457/250-1055 Ext. 22216

Lic. José Mario Cobo González Asesor (Adviser) Torre Ejecutiva Piso: 44 Tel: 254-3863/531-6236 Ext. 24381, 24547

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Subdirector de Transformación Industrial
(Industrial Transformation Subdirector)
Torre Ejecutiva
Piso: 40
Tel: 545-1463/545-9022
Ext. 22202, 22198

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(Petrochemical Coordinator)
Torre Ejecutiva
Piso: 40
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Ext.: 22166, 26108



Ing. Héctor Islas Juárez Gerente de Operación Petroquímica (Manager Petrochemical Operations) Torre Ejecutiva Piso 6

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Ing. J. Alberto Celestinos Isaacs Coordinador Ejecutivo de Producción de Refinados (Coordinator Refined Products) Torre Ejecutiva Piso 40

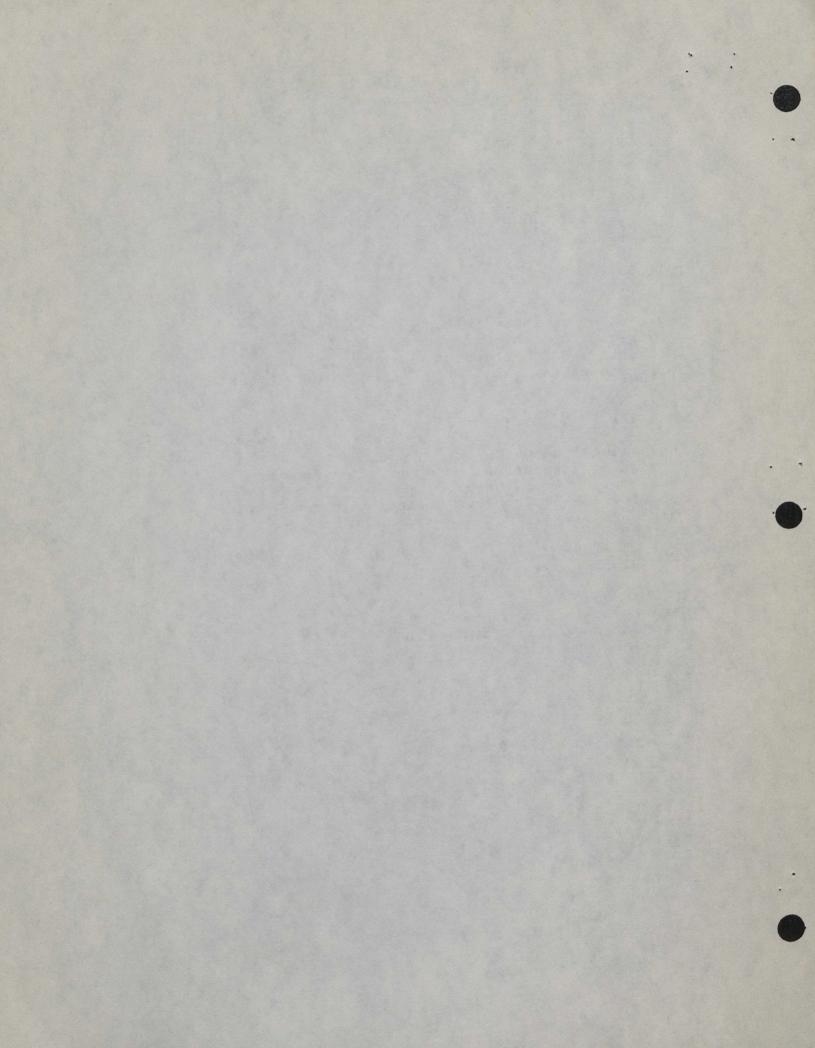
Tel: 531-6023 Ext: 22203, 25503

Ing. Jaime Hernández Balboa
Subdirector de Proyecto y Construcción de Obras
(Projects and Construction Subdirector)
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Gerente de Ingeniería de Proyecto
(Project Engineering Manager)
Coordinación Ejecutiva de Ingeniería y Servicios
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Tel: 531-1995
Ext. 23539

Ing. Antonio Acuña Rosado
Coordinador Ejecutivo de Construcción
(Construction Coordinator)
Subdirección de Proyecto y Construcción de Obras
Torre Ejecutiva
Piso 39
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Ext: 22124



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Tel: 531-6200/250-7723 Ext: 22110, 22210

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Piso 41

Tel: 254-7608/531-6035

Ext: 27909, 27908

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(Exploration Coordinator)
(Exploitation Coordinator)
Subdirección de Producción Primaria
Torre Ejecutiva
Piso 41

Tel: 254-0558/531-6356 Ext: 22215, 22669

Ing. José Santiago Acevedo Coordinador Ejecutivo de Exploración Subdirección de Producción Primaria Torre Ejecutiva Piso 11 Tel: 531-6366/254-0846

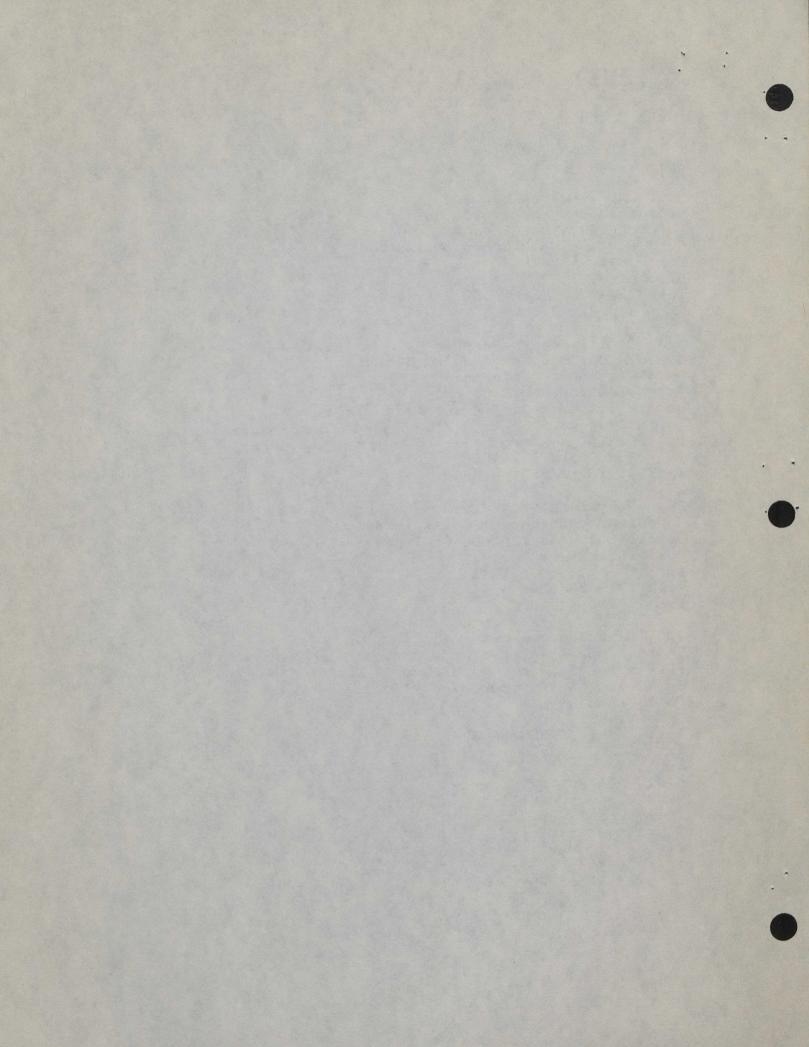
Ext: 22280, 22800

Ing. Ramón Perera González
Coordinador Ejecutivo de Desarrollo de Campos
(Field Development Coordinator)
Subdirección de Producción Primaria
Torre Ejecutiva
Piso 41
Tel: 250-5738/250-8666

Tel: 250-5738/250-8666 Ext: 23110, 23210

C.P. Raúl Robles Segura Subdirector Comercial (Commercial Subdirector) Torre Ejecutiva Piso 42 Tel: 250-5485/545-3395

Ext: 23595, 23399



·Lic. Ramón Carlos Torres Flores Gerente de Promoción Industrial (Industrial Promotion Manager) Subdirección Comercial Ejército Nacional 216 Piso 14 Tel:28401, 28600

Dr. Mario M. Rozenstein
Gerente de Proveeduría y Almacenes
(Supplies and Stores Manager)
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Piso: 9
Tel: 531-5755/5310918
Ext: 22865

Ing. J. Antonio Ceballos Soberanis
Coordinador Ejecutivo de Comercio Interior
(Domestic Marketing Coordinator)
Subdirección Comercial
Torre Ejecutiva
Piso 25
Tel: 250-5919/545-9197
Ext: 22137

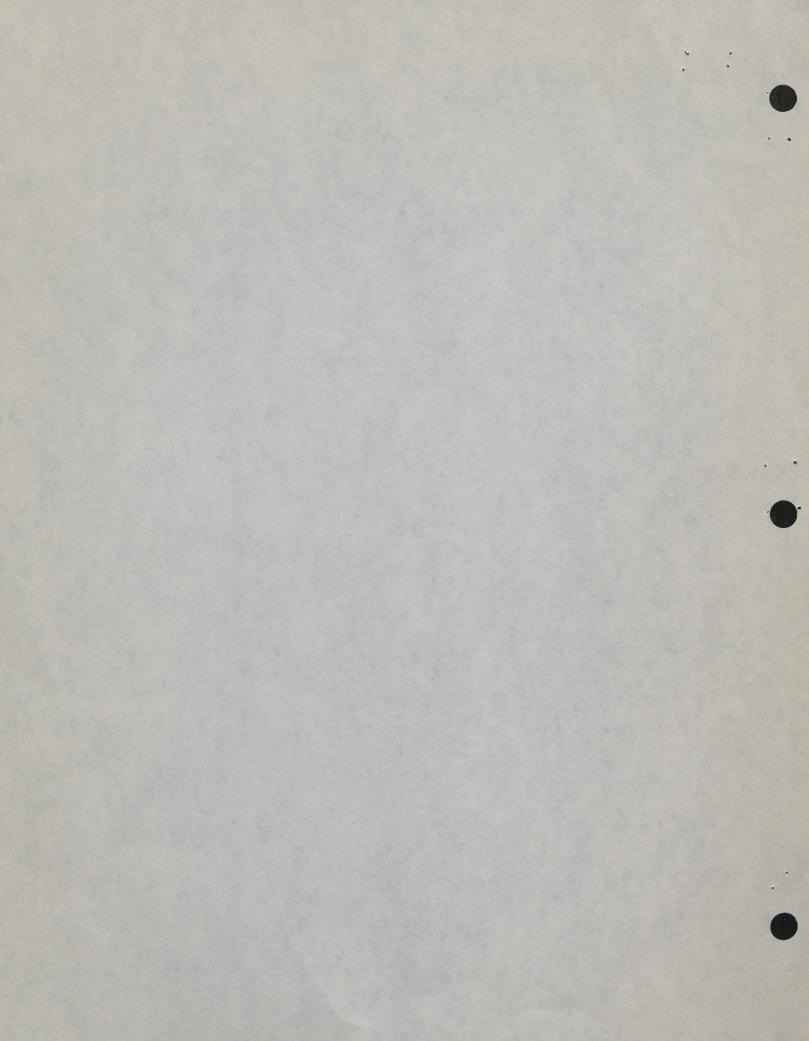
Lic. Pedro Haas
Coordinador Ejecutivo de Comercio Internacional
(International Marketing Coordinator)
Subdirección Comercial
Torre Ejecutiva
Piso 20
Tel: 254-0280/254- 4607
Ext: 24730/24729

Ing. Carlos Mena Brito
Coordinador Ejecutivo de Distribución
(Product Distribution Coordinator)
Subdirección Comercial
Torre Ejecutiva
Piso 24
Tel: 254-4850

Dr. Ernesto Marcos Giacoman Subdirector de Finanazas (Finance Subdirector) Torre Ejecutiva

Piso 38 Tel: 531-6054/531-6146 Ext: 22383, 27617

Ext. 25801, 25802



C.P. Juan Manuel Portal Martínez
Coordinador Ejecutivo de Contraloría
(Comptrollership Coordinator)
Subdirector de Finanzas
Torre Ejecutiva
Piso 30
Tel: 531-6057
Ext: 23156

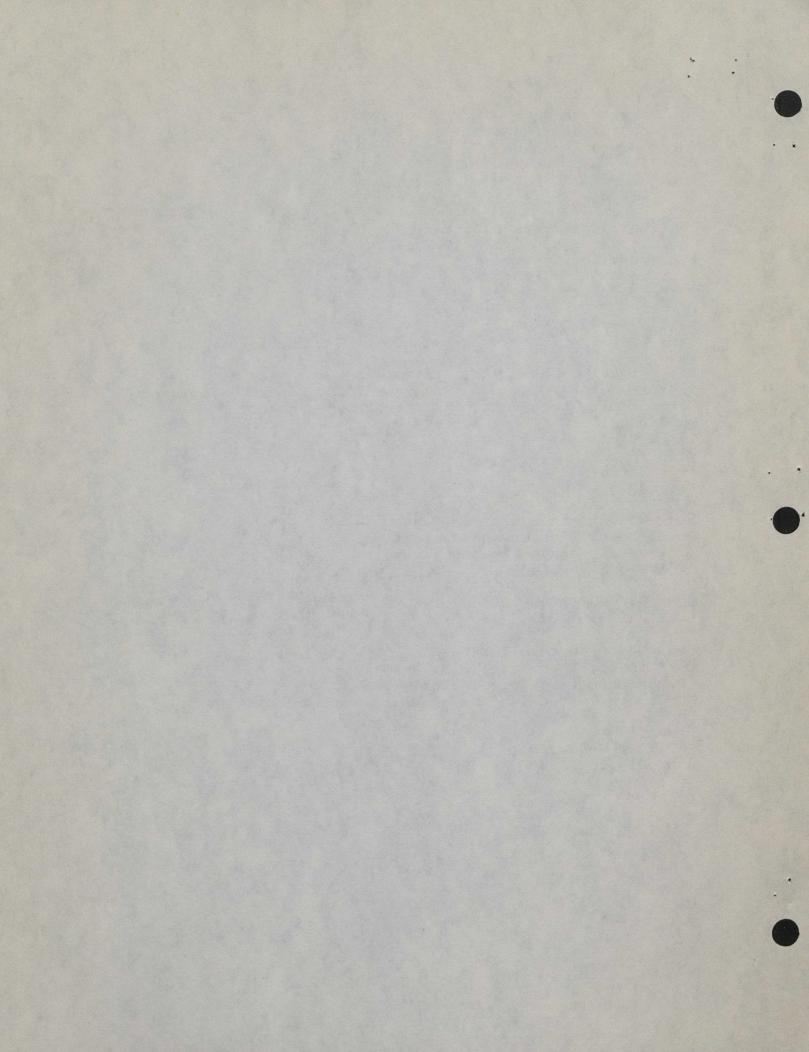
C.P. Luis Contreras Aguirre Coordinador Ejecutivo de Tesorería (Treasury Coordinator) Subdirección de Finanzas Torre Ejecutiva Piso 38 Tel: 531-6082/254-0291 Ext: 22403

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Ext: 22232, 26002

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Lic. Pedro Cabrera Vázquez
Coordinador Ejecutivo de Recursos Humanos
(Human Resources Coordinator)
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Tel: 254-4972/254-0749 Ext: 23411, 22258



Ing. Alfonso Sierra Guerrero Coordinador Ejecutivo de Servicios Generales y Seguridad Industrial (Industrial Safety and General Services Coordinator) Subdirección Técnica Administrativa Edificio "A" 1810 Piso 12 Tel: 254-3883/531-6413

Ext: 23260, 26801

Lic. Antonio Brambila Meda Coordinador Ejecutivo para el Desarrollo de Zonas Petroleras (Zonal Development Coordinator) Subdirección Técnica Administrativa Torre Ejecutiva Piso 42

Tel: 254-4597/531-6248

Ext: 25401

Lic. Adrián Lajous Vargas (Planning & Coordination Subdirector) Subdirector de Planeación y Coordinación Torre Ejecutiva

Piso 36

Tel: 545-9904/254-3335

Ext: 22138

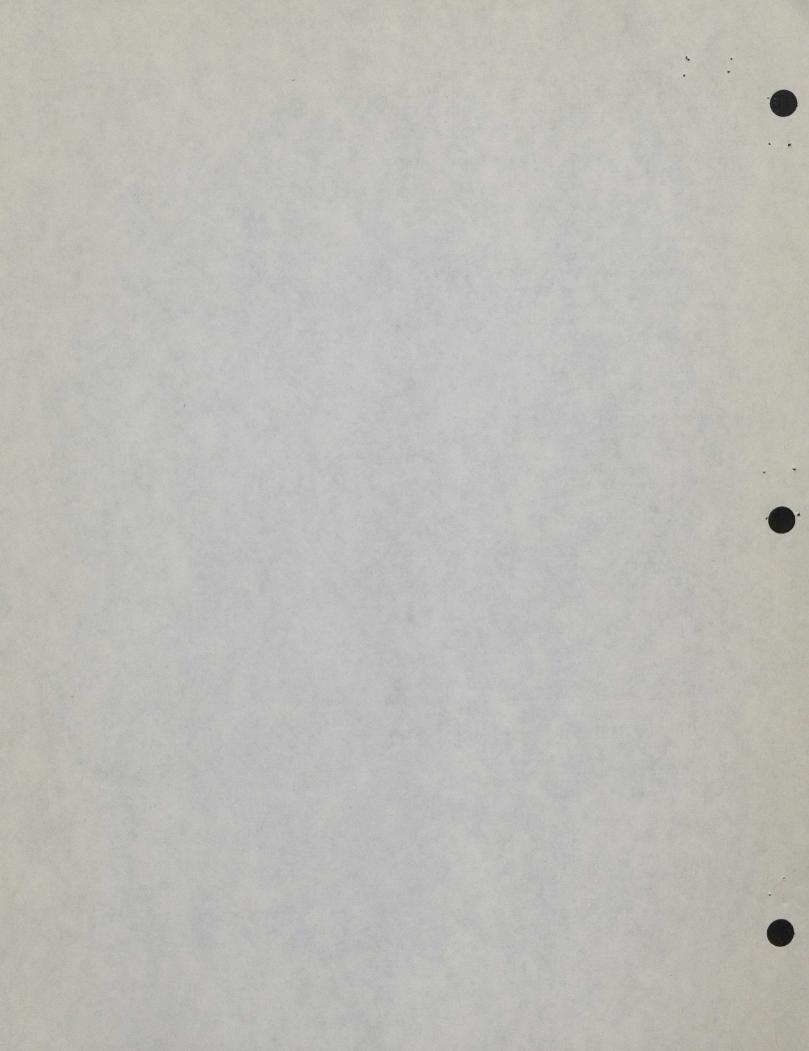
Dr. Jaime Mario Willard Andrade Coordinador Ejecutivo de Planeación (Planning Coordinator) Torre Ejecutiva Piso 36

Tel: 254-0935/250-8919 Ext: 23789, 28521

C.P. Ernesto Yáñez de la Barrera Coordinador Ejecutivo de Presupuestos y Desarrollo (Budget and Development Coordinator) Subdirección de Planeación y Coordinación Torre Ejecutiva Piso 35

Tel: 531-7383/254-2679

Ext: 24337



WHEN SELLING TO THE MEXICAN GOVERNMENT AND ITS AGENCIES, IT IS REQUIRED TO HAVE REGISTRY NUMBER AS FOREIGN SUPPLIER. FOLLOWING IS RELATED INFORMATION.

REGISTRATION WITH SECRETARIA DE PROGRMACION Y PRESUPUESTO

(SPP)

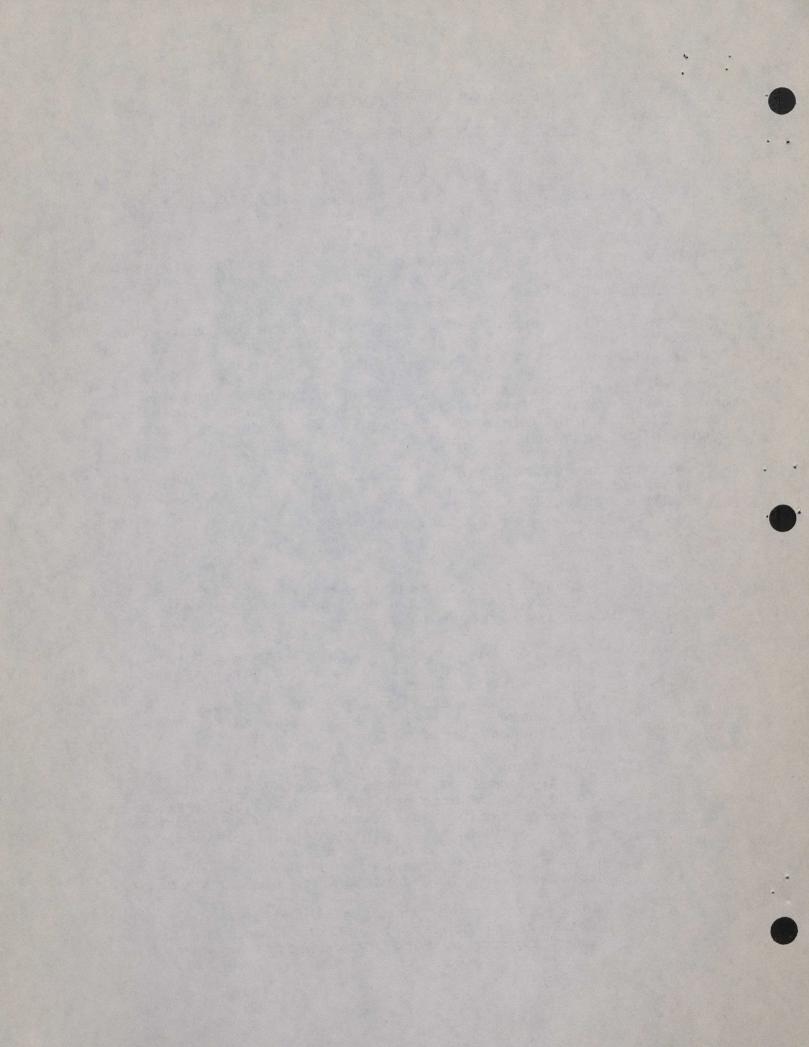
Following is a summary of Registration Procedures for Canadian Companies wishing to sell to the Mexican Government and its decentralized agencies.

Note: Registration procedures now cannot be done by the foreign (Canadian) supplier, and <u>must be done</u> by the company's official local agent/representative in Mexico.

To obtain registry, the following documents should be submitted to the Registro de Proveedores Office of the Secretaría de Progrmación y Presupuesto (SPP) (Ministry of Planning and Budgeting) located at the following address:

Registro de Contratistas y Proveedores de la Administración Pública Federal S.P.P. Av. San Antonio Abad No. 124 - Piso 1 Col. Tránsito 06380 México, D.F.

- a) Applications for registration of foreign supplier forms SPP in original and 3 copies, all signed separately.
- b) A copy of the company's balance sheet and profit and loss stateent with data not older than two months with respect to the date of application entry into the Foreign suppliers registry, also translated into Spanish and legalized by the Mexican Consulate.
- Copy of power of company's legal representatives in Canada notarized, and certified by Mexican Consul (documents mentioning full name of person or persons, legally authorized to sign documents on behalf of company showing his (their) signature.
- d) Copy of agency/representative contract in Mexico notarized and then certified by Mexican Consul.
- e) Copy of a document that proves and guarantees legal existence of company in Canada.
 A certificate of incorporation from a Canadian



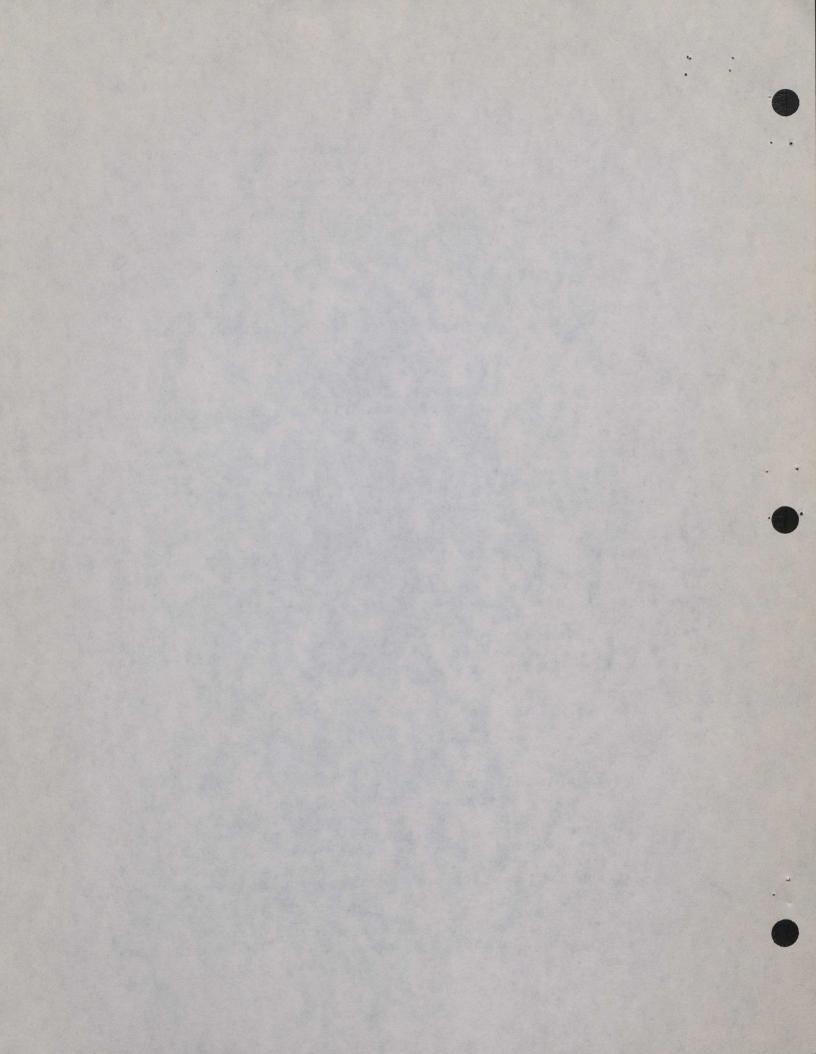
Chamber of Commerce or Industry Chamber. This letter must be presented in its original form and must state that interested company has been legally incorporated in accordance to the laws of the country and must include the date of incorporation. The letter cannot be more than six months old from the date it was issued. In addition it must be translated into Spanish and legalized by the Mexican Consulate.

- f) Limited power to local agent to act on behalf of foreign firm on disputes and collection matters.
- A photocopy of sample past invoices for each product to be supplied duly translated and legalized by the Mexican Consulate with the date and the names of the buyer and the seller underlined and highlighted.
- 2. Once application forms and supporting documents are approved, registration number is issued in two to four weeks time. To claim registration number, foreign firm's representative will have to present original and copy of HD-1 form "Declaración General de Pago de Derechos" duly paid.
- As first step, payment of \$366,000 Mexican Pesos (as of April 1990 and rate subject to changes) should be made at any office of the Secretaría de Hacienda y Crédito Público (SHCP) in cash, or with Mex. Peso bank draft in favor of the "TESORERIA DE LA FEDRACION" payable through a Mexican bank located in Mexico City and should be accompanied by four (4) payment forms DH1. Each form should be signed separately. Forms can be obtained at any SHCP's offices.

IMPORTANT

TO AVOID REFUSAL OF APPLICATIONS

- Copies of documents b, c, d, e, f, g, must be translated into Spanish by certified local translator if done in Mexico. However if documents b, c, d, e, f, g and respective translations are done into Spanish in Canada, these do not have to be done by certified translator, as above, but documents and translations must be duly notarized, and then certified by nearest Mexican Consul in your area.
- Original and copies of application forms must be signed separately by company's legal representative.



III Corporate name should appear exactly the same in all documents: (i.e.: spelling, company names which have changed over the years).

Legal representative's signature should be signed separately on following documents:

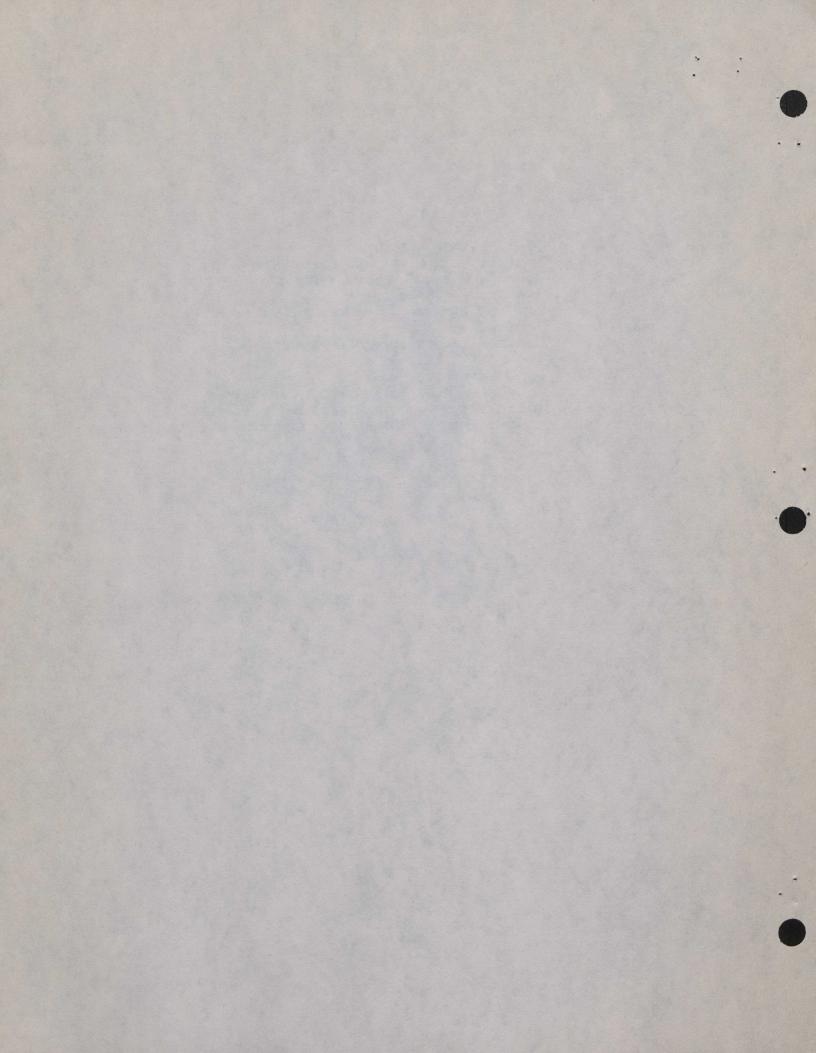
. DH-1 Payment forms

. Registry application forms (both pages)

- . Power of legal representative of company in Canada.
- Copy of agency/representative contract in Mexico.
- . Limited power to local agent.

While every effort has been made to provide the above information accurately, the Canadian Embassy cannot assume responsibility for errors, omissions or subsequent changes in procedure which may occur.

Information updated April/90 Canadian Embassy Mexico City



HOW TO USE THE LISTINGS OF THE MEXICAN INDUSTRIAL REGISTRY (REGISTRO INDUSTRIAL MEXICANO)

- 1. HEADING OF PRODUCT/LINE FOLLOWED BY STATE AREA E.G. DISTRITO FEDERAL EDO. DE MEXICO JALISCO, ETC.
- 2. UNDER EACH STATE AREA IS LISTED THE COMPANY DEALING IN THE PRODUCT LINE
 - NAME OF COMPANY
 - (FOLLOWED BY CLASSIFICATION OF OPERATION)
 - STREET ADDRESS, POSTAL CODE
 - TOWN, CITY (WITHIN STATE)
 - RIGHT HAND SIDE TELEPHONE NUMBER

CLASSIFICATION (INITIALS IN BRACKET) CODE

F = MANUFACTURER R = REPRESENTATIVE I = IMPORTER

D = DISTRIBUTOR S = SERVICING

E = EXPORTER

EXAMPLE **JALISCO**

BICO S.A. (D)

KUNHARDT 59 44100

GUADALAJARA 36/13-2600

COMPANY

BICO SA

(CLASSIFICATION - DISTRIBUTOR)

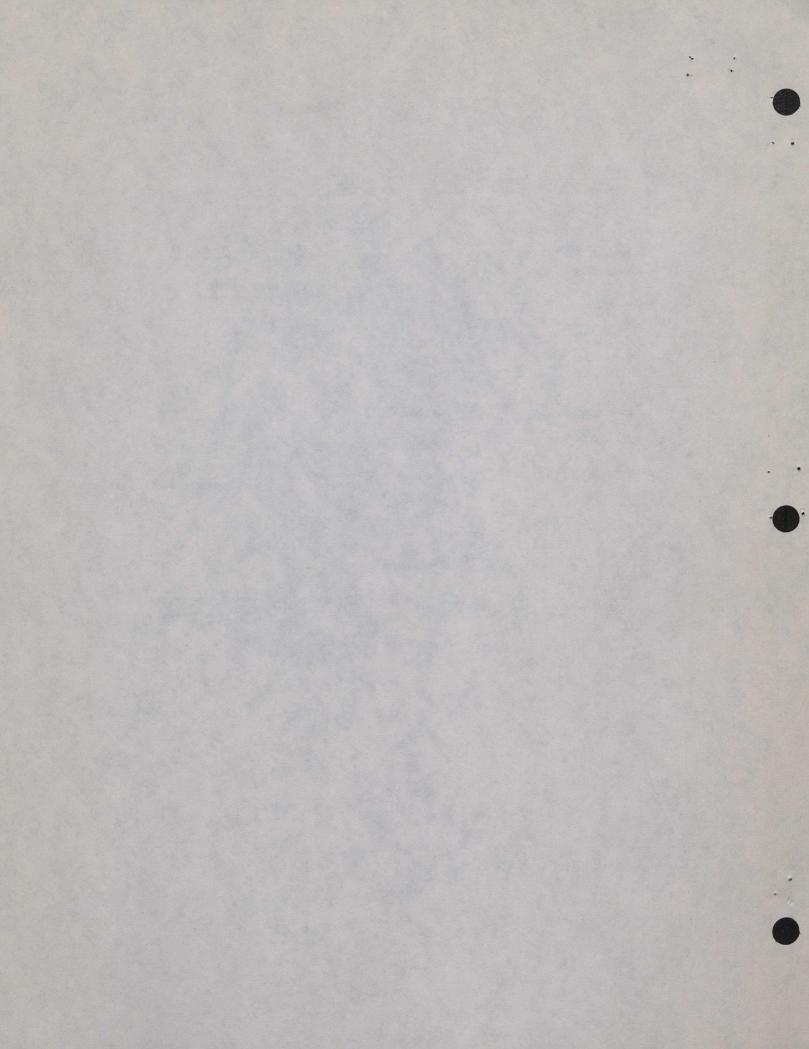
ADDRESS KUNHARD 59

(PHONE (36 AREA CODE) 13-2600 (NUMERAL))

POSTAL CODE

TOWN/STATE 44100 GUADALAJARA, JALISCO

COUNTRY MEXICO



OIL EXTRACTION EQUIPMENT

DISTRITO PEDERAL Artesanías San Francisco, S.A. (F,D) Londres No. 187, 06600 5/525-4213 D.F. Bosnor, S.A. de C.V. (F) Carolina No. 157, 03700 5/598-5300 D.F. Cía. Mexicana de Exploraciones, S.A. Río Balsas No. 101 Piso 1 al 8, 06500 5/533-6246 D.P. Constructora Subacuática Diavaz, S.A. (S) Revolución No. 468, 03800 5/271-1011 Construexport, S.A. de C.V.(E) Av. del Parque No. 91, 03800 5/660-3596 D.F. Corporación de Const. de Camp., S.A. de C.V. (I,S) Blvd. Miguel C. Saavedra No. 157, 11500 5/254-0511 D.F. Grupo Unión Dinámica Empresarial, S.A. (R) Carlos B. Zetina No. 79-A Mezzanine, 11800 D.F. Halliburton de México, S.A. de ['.V.(S) Reforma No. 76-1203 Piso 12, 06600 5/592-5328 D.F. Harry Mazal, S.A. (R,D) Laguna de Tamiahua No. 204, 11300 5/396-1133 D.F. Hydril, S.A. de C.V.(P) Campos Elíseos No. 345, 11500 5/596-8966 D.F. Industrias Frei, S.A. (F) Genaro García No. 164, 15900 5/762-8477 D.F. Inmaco, S.A. (I,D) Calz. Las Aguilas No. 1062, 01700 5/657-3160 D.F. Inpasex, S.A. (F, I) Laguna de Mayran No. 258, 11300 5/250-6455 Impanex de Lerma, S.A. de C.V. (F,D) Laguna de Mayran No. 250, 11300 5/250-3449 Peerless Tisa, S.A. (F,D) Insurgentes Sur No. 753 Piso 4, 5/543-7447 D.F. Schlumberger Surenco, S.A.(S)

Bahía de San Hipólito No. 56-102, 11300 D.F. 5/250-1477 EDO DE MEXICO Hughes Tool Co. de México, S.A. de C.V. (F) Via Morelos No. 474, 55300 5/569-3911 Cameron Iron Works de México, S.A. (F, I,E) San Nicolas No. 116, 54000 Tlalnepantla 5/565-9688 Tiex, S.A. de C.V. (R) Blvd. M. A. Canacho No. 1994-305,

5/398-7069

54000 Tlalnepantla . NUEVO LEON Construcciones y Eqps. Latinoamericanos, S.A. (F) Carr. Monterrey-Saltillo Km. 339-6350, 66300 Santa Catarina 83/ 48-9263 TABASCO Grupo Unión Dinámica Empresarial, 8.A. (R) Ruiz Cortines No. 714, 86000 Villahermosa 931/ 2-3836 TAMAULIPAS Talleres Especiids. del Noreste, S.A. de C.V. (F) Av. El Pasito y Argentino, 88700 Reynosa . 892/ 3-4669

OIL PRODUCTION & REFINING EQUIPMENT

DISTRITO FEDERAL Petroleos Mexicanos (F,E) Marina Nacional No. 329 Edif. B-2 Piso 10, 11300 D.F. 5/531-6390 EDO DE MEXICO Arenera Texcalucan, S.A.(D)
Lista de Correos / Av. de la Cañada No.'1, 53800 Naucalpan 5/589-0507 NUEVO LEON Tecnolub, S.A. de C.V.(S) Rayon No. 2803 Nte., 64400 Monterrey 83/ 31-1742 VERACRUZ Complejo Petroquímico Pajaritos(S) Apartado Postal No. 479, 96400 Coatzacoalcos 491/ 3-0209

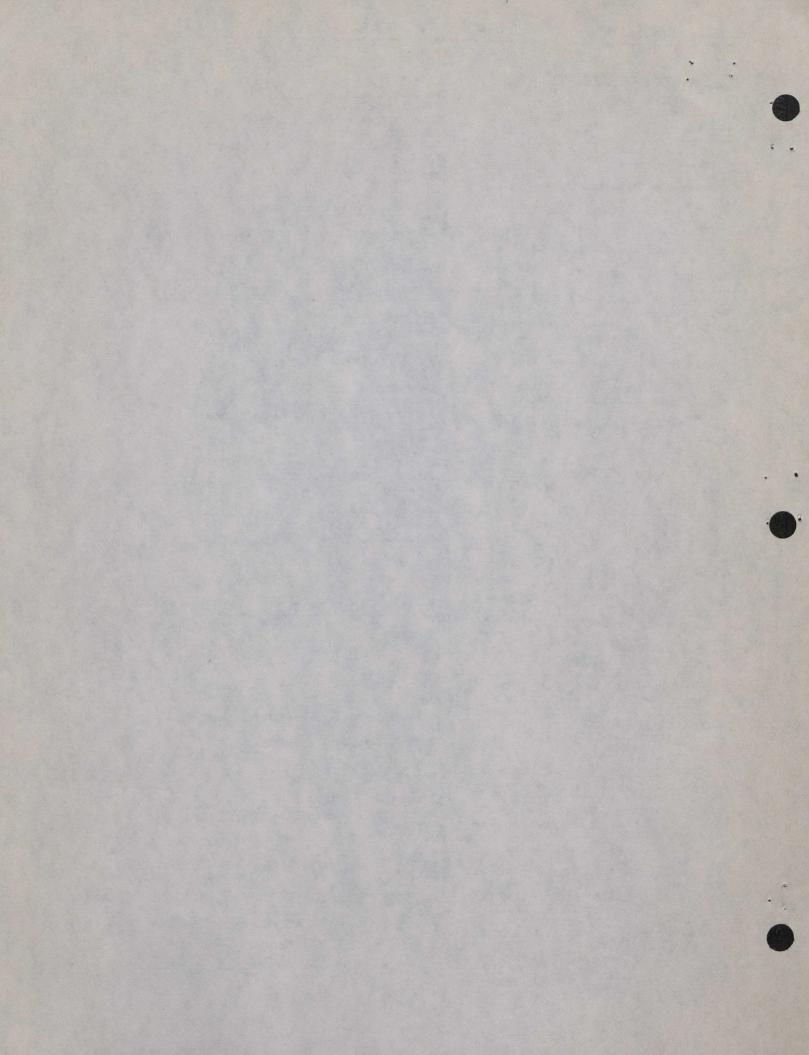
PETROCHEMICAL PROCESSING EQUIPMENT

CHIHUAHUA Troqueladora Magicolor, S.A. de C.V. (P) Revilla No. 5807, 31000 Chihuahua 14/ 15-8011 DISTRITO FEDERAL Asesores Técnicos Industriales, S.A. (P) Mendelssohn No. 166, 07800 D.F. 5/537-9071 Atmos, S.A. (P,I) Oso No. 127-205, 03100 D.F. Avante Ingenieros, S.A. (P,E,D,S) Av. Ejercito Nacional No. 752, 11500 D.F. Bepex de México, S.A. de C.V.(R) Parral No. 78 Bis 602-603, 06100 D.F. 5/286-3544

CODE LETTERS AFTER COMPANY NAMES: F - Fabricator;

I - Importer: E - Exporter: D - Distributor;

S - Service: R - Representative



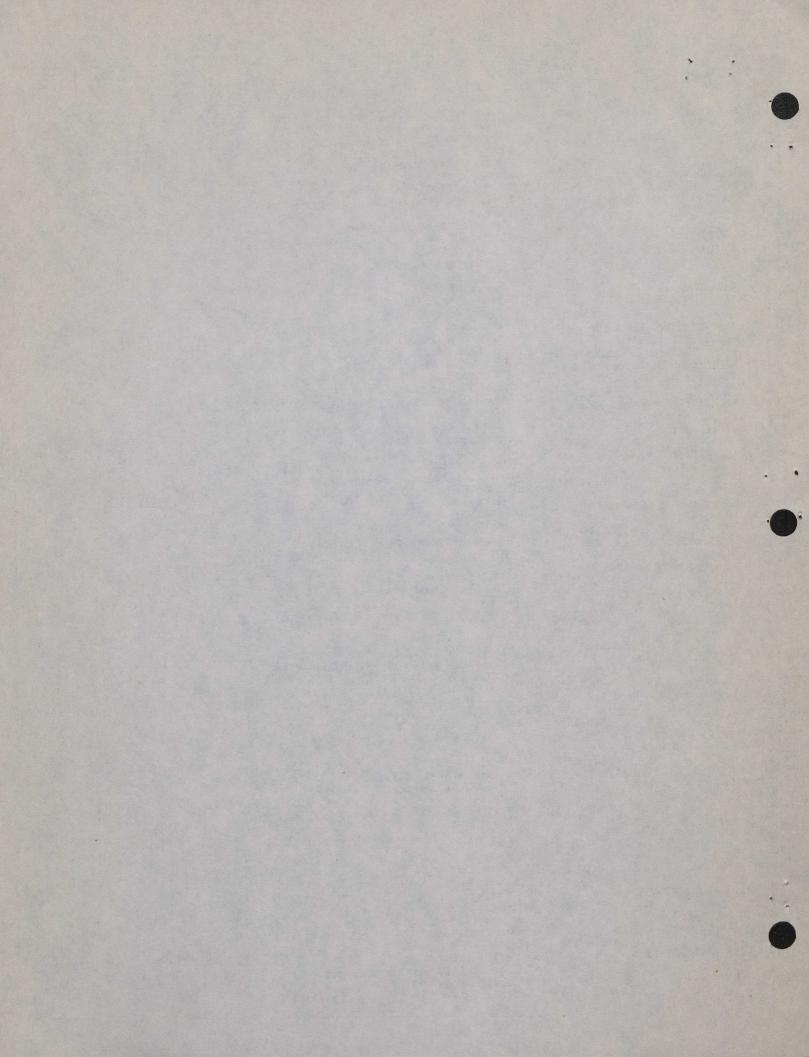
Binks de Máxico, S.A. (P) Floresta No. 104, 02000 -D.F. 5/527-2251 Bosnor, S.A. de C.V. (F) n.@ Carolina No. 157, 03700 5/598-5300 sercio y Tráfico Técnico de Héxico, 5.A. (R) Ret. Miguel Lanz Duret No. 44, recession - 11200 Continental de Robratos. y Calz. México-Tulyehualco No. 187, 09800 D.F. 5/582-7809 E.P.N. (F,R,I,E) Sierra Mojada No. 626 Piso 4, 11000 D.P. 5/294-3377 E.P.N. Gray, S.A.(P) Av. Central No. 235, 07700 cores: 5/586-7500 Electrónica y Control de México (D) RIMIO Avante Ingenieros, S.A. de C.V. (P,I) D.F. 5/657-2052 Equipos y Empaques Metálicos, S.A. (F) Av. San Esteban No. 67, 02000 5/561-6933 Industrias Plastimecánicas, S.A. de C.V. (F,I,D,E) Fénix No. 48, 07400 5/577-4461 Louisiana Chemical Equipment(D) Calle de los Deltas No. 12, 07200 D.F. 5/392-2837 Makrotek, S.A. (P, I, E) Insurgentes Sur No. 667 Piso 9, 5/536-6034 Haquinaria Diesel de México, S.A. (D.I Martires de Tacubaya No. 34, 11800 5/516-2553 Necánica Palk, S.A. de C.V.(P) Poniente_150 No. 842, 02300 5/587-1811 Nutter-Niro Ingenieria, S.A. de C.V. (F,I,E)Newton No. 7 P.H., 11500 5/254-2899 Paxell Internacional, S.A. de C.V.(R) Campos Eliseos No. 400 Piso 6, 11500 D.P. 5/540-3332 Perkin-Elmer de México, S.A. (R,D,I,S) Eacedonio Alcala No. 54, 01000 5/651-7077 Pfaudler, S.A. de C.V. (F,R,I,D,E) Av. Encarnación Ortiz No. 1860 (Antes Torres), 02600 D.F. 5/355-0100 Polioles, S.A. (F,E) Fernando Montes de Oca No. 71, 06100 D.F. 5/553-8811 Salzgitter de México, S.A. de C.V. (I, :,5) FElix Parra No. 187, 03900 D.F. 5/651-4509 iemens, S.A. de C.V. (P) dente 116 No. 590, 02300 5/567-0722 Scarca Comercial Vilsa, S.A. de C.V. San Francisco No. 503-1102, 03100

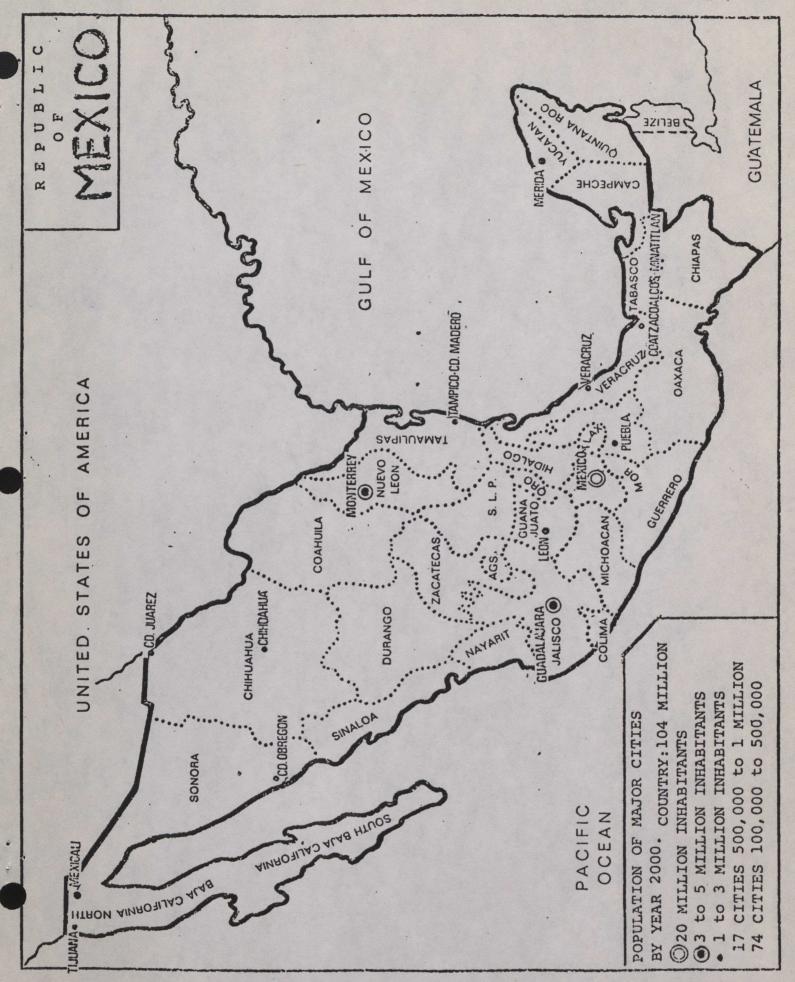
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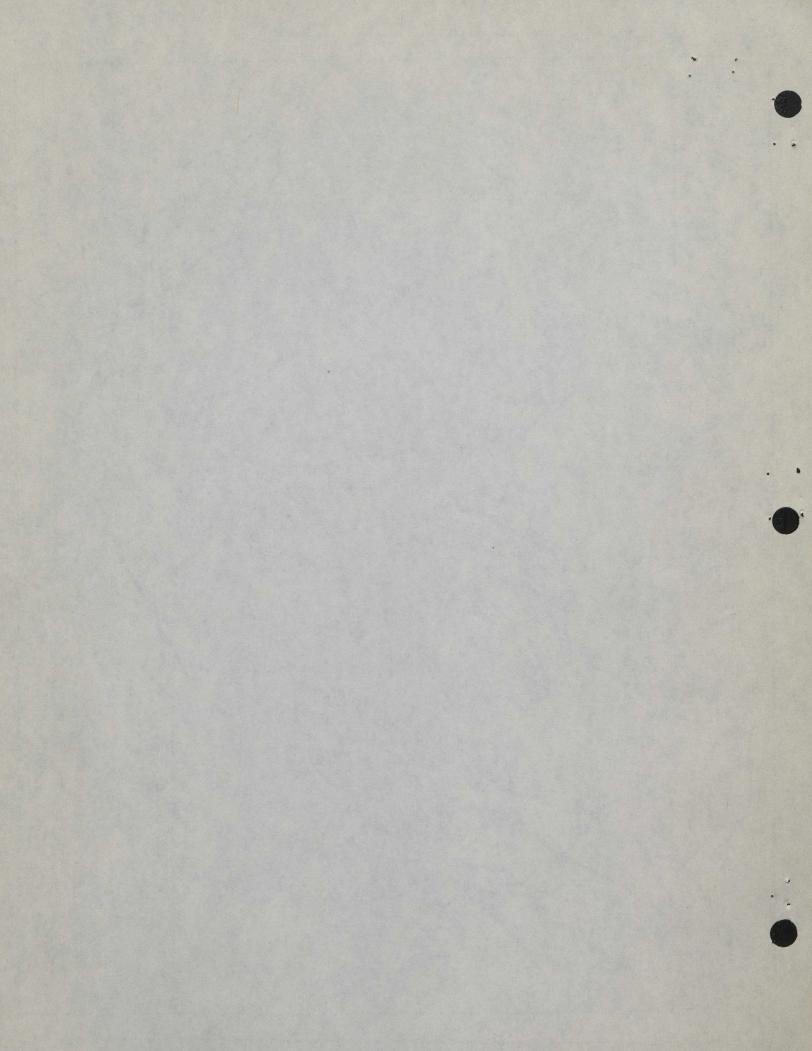
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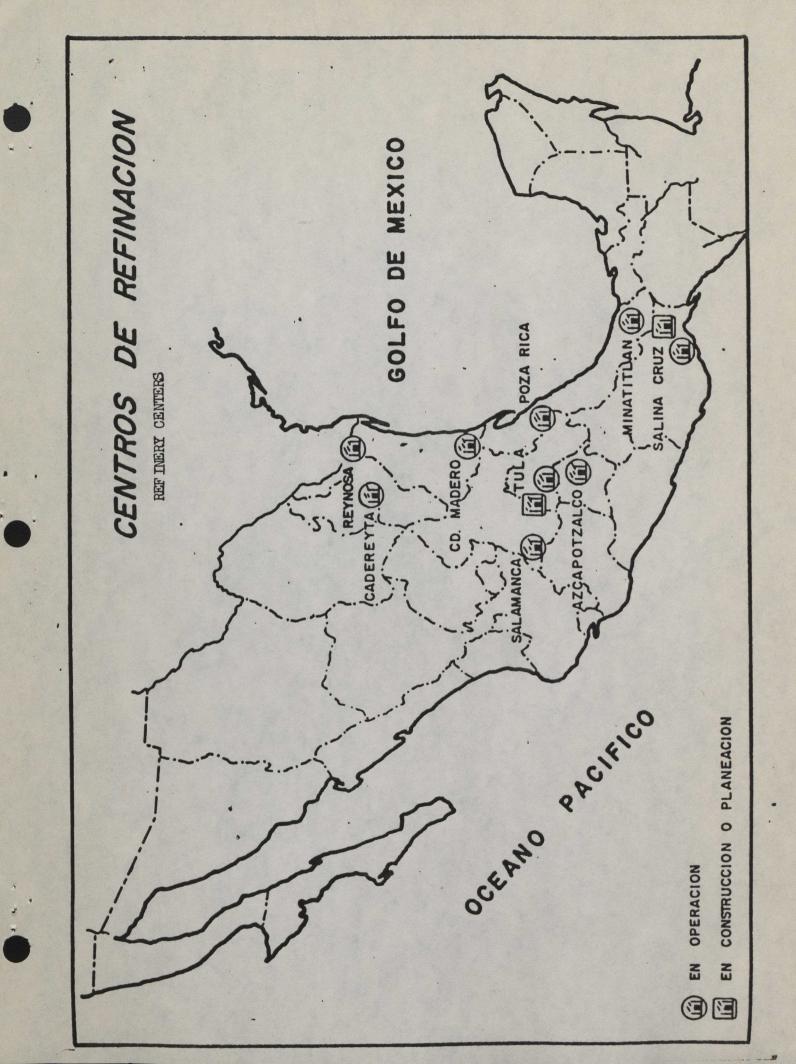
Técnica S.T., S.A. de C.V.(R) Ret. de Miguel Lanz Duret No. 44, 11200 D.F. 5/395-3219 Vălvulas de Seguridad, S.A. de C.V.(F ,E,S) Schumann No. 232, 07800 D.F. 5/517-1132 Wangner de México, S.A. de C.V. (P,I,D Calz. Tulyehualco No. 4761, 09800 D.F. EDO DE MEXICO Ingeniería y Procesos, S.A. de C.V.(P Xicoténcati No. 9, 55300 Ecatepec .5/569-4811 Acemex, S.A. (D) Av. Circunvalación Pte. No. 124; ... 53200 Naucalpan 5/360-1910 Extrumex, S.A. (P) Protón No. 18, 53000 5/576-7300 Km. 23.2 Carr. México-Querétaro/A.P. 298, 54000 1 Tlalnepantla Thermo Mac de México, S.A. (F,I,E) Priv. de Recursos Hidraulicos No. 3, 54000 . Tlalnepantla 5/360-3795 Weatherford Fabrimex, S.A. de C.V. (F) Francisco Villa No. 10, 54000 Tlalnepantla 5/565-9944 Industrias Alder, S.A. de C.V. (F,E) Matamoros No. 300 Piso 2, 50000 Toluca 721/ 4-6930 DOL GUANAJUATO Milsa(F,I,D,E) Apartado Postal No. 507, 37000 León 173 1 or + 1 471/ 4-2486 HIDALGO Silos y Camiones, S.A. (P,E) Elvd. Gral. Felipe Angeles No. 1606, 42000 JALISCO Extrumex, S.A. (F) Gigante No. 1216, 44400 Guadalajara 36/ 17-5831 Mecanogas, S.A. de C.V. (R,E,S) Calle 26 No. 2256 Edif. C-103, 44900 Guadalajara 36/10-2645 NUEVO LEON Glitsch Monterrey & S.A. (P, I, E) Av. Churubusco y Via F.C. a Tampico, 64500 Monterrey 83/ -79-5154 Pfaudler, S.A. de C.V.() Andes No. 619 Desp. 101, 64600 Monterrey 83/ 48-8626 Salzgitter de México, S.A. de C.V. (R, I,E) J.I. Ramon Ote. No. 506-1901, 64000 Monterrey 83/ 42-2691 Verificación, S.A. (R) Av. Jordan No. 1131, 64400 Monterrey 83/ 47-3338 Extrumex, S.A.(P) Leandro Valle No. 539, 66300 Santa Catarina , 83/ 48-1221 PUEBLA Grupo Idesa (F, I, D, E) Km. 112.8 Aut. Méx-Pue-Tehuacan Sintesis Org., 72300 Cholula 22/ 35-2644

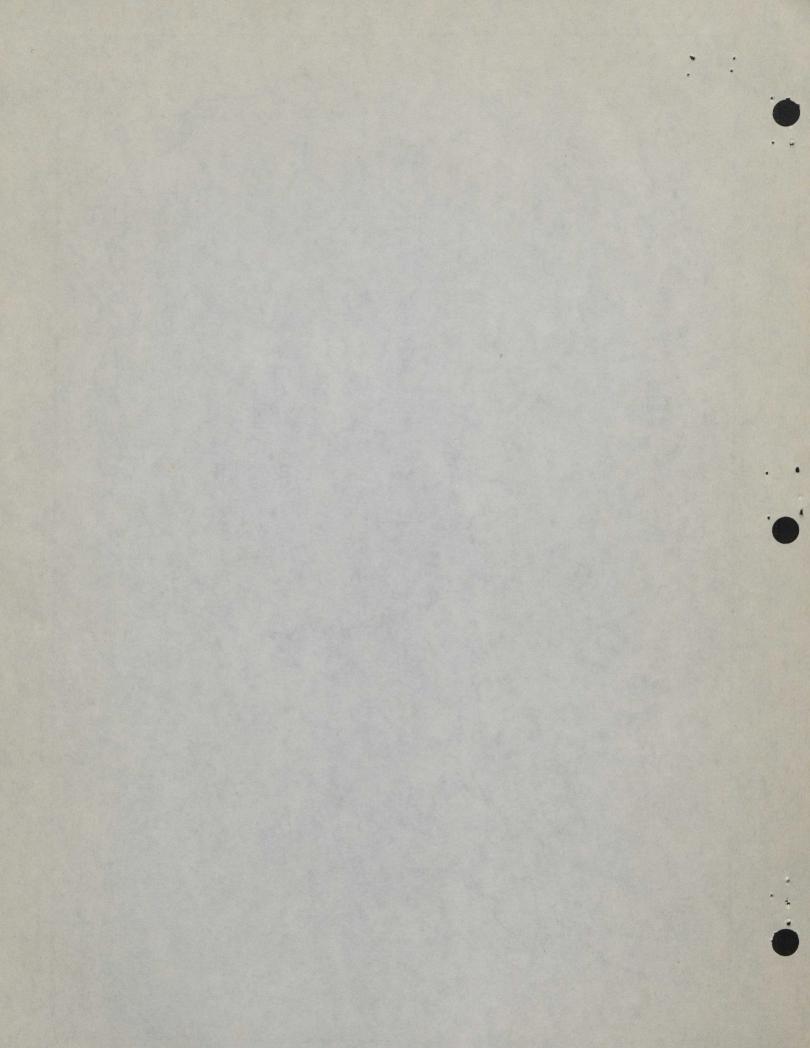
QUERETARO Técnica S.T., S.A. de C.V.(R) Avenida del 57 No. 52, 76000 Querétaro 463/ 2-41 .0 SAN LUIS POTOSI Quínica Avangar, S.A. de C.V. (F) Eje 120 y Av. Producción/A.P. 293, 78000

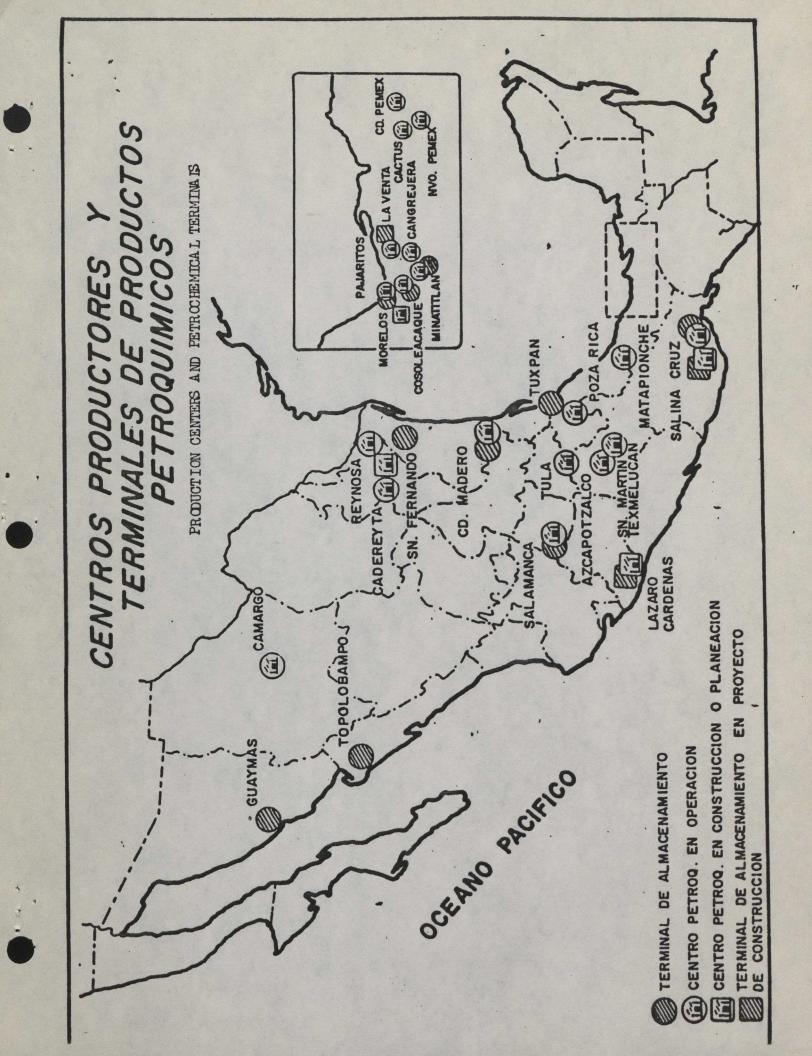


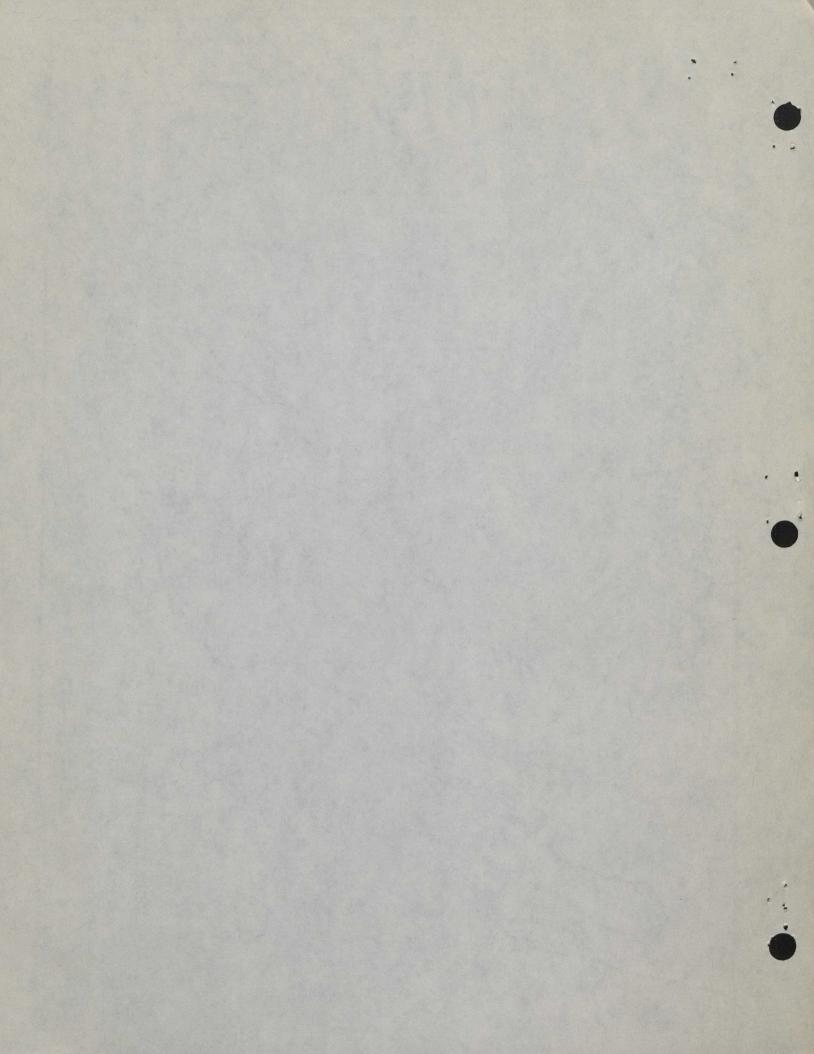


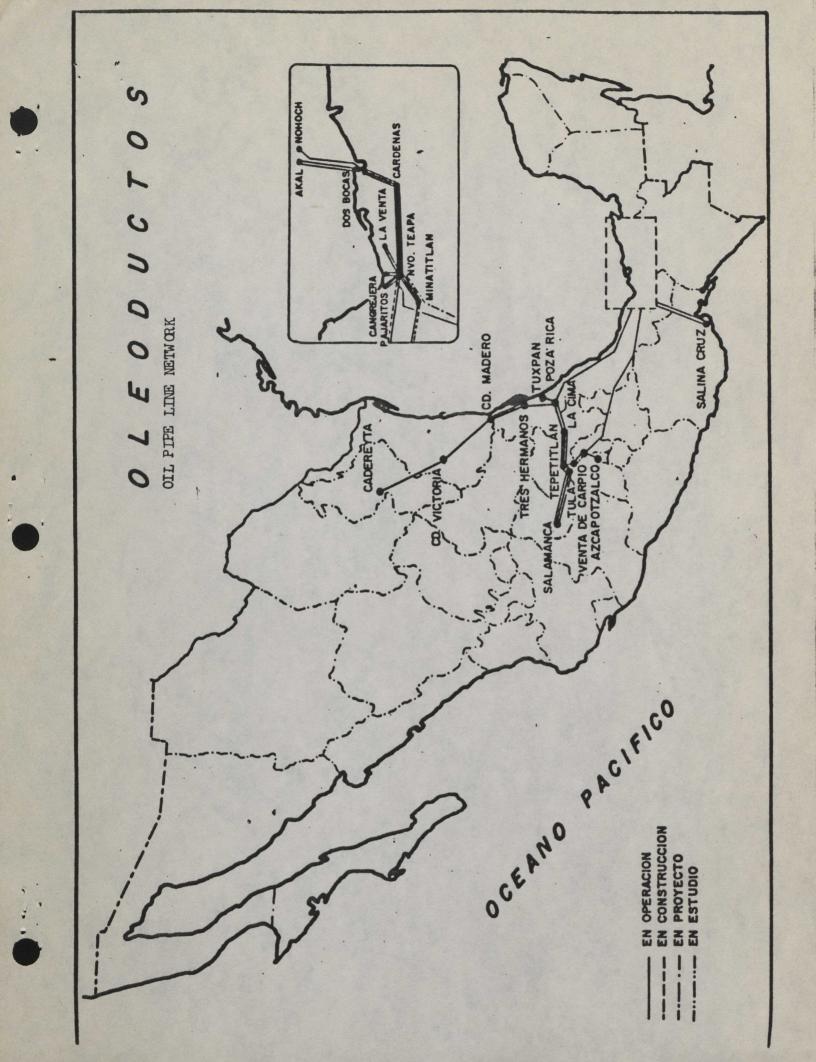


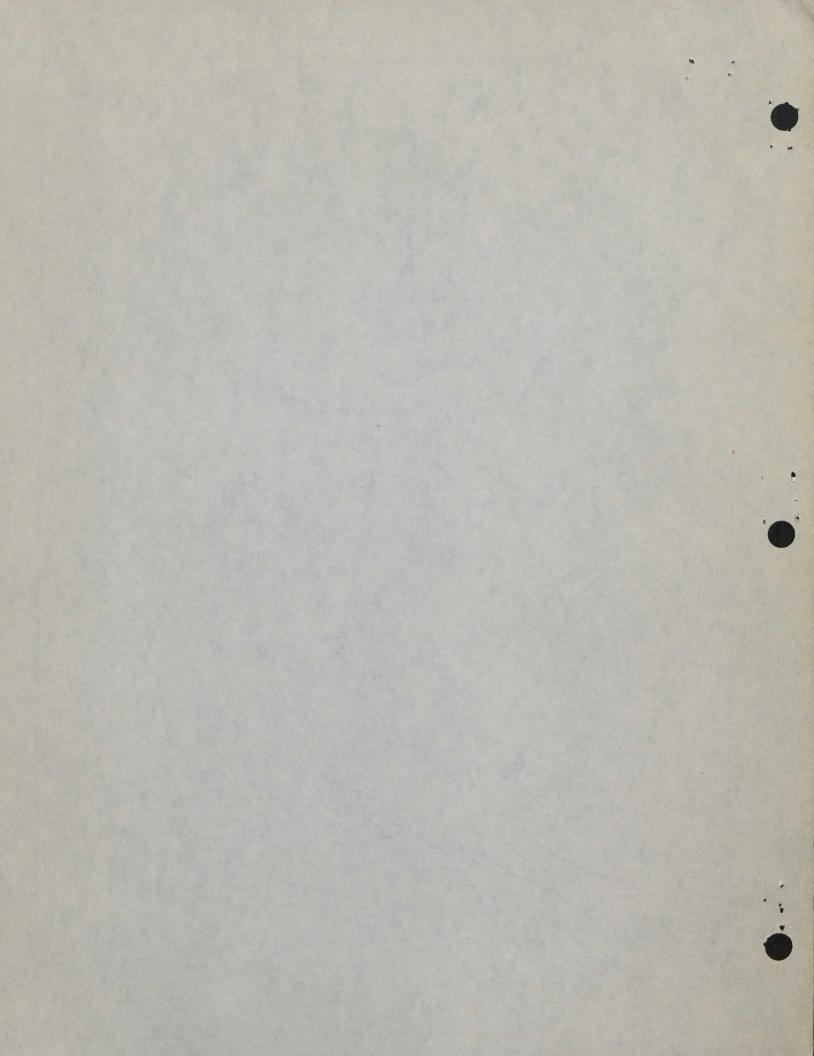


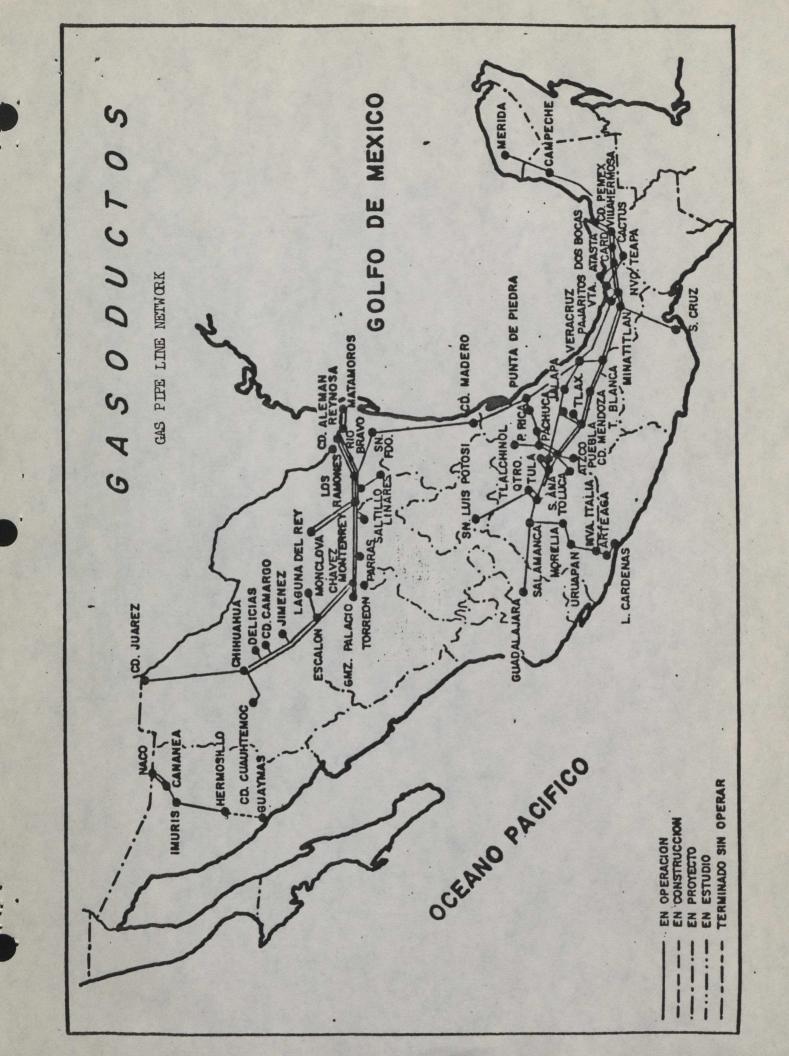


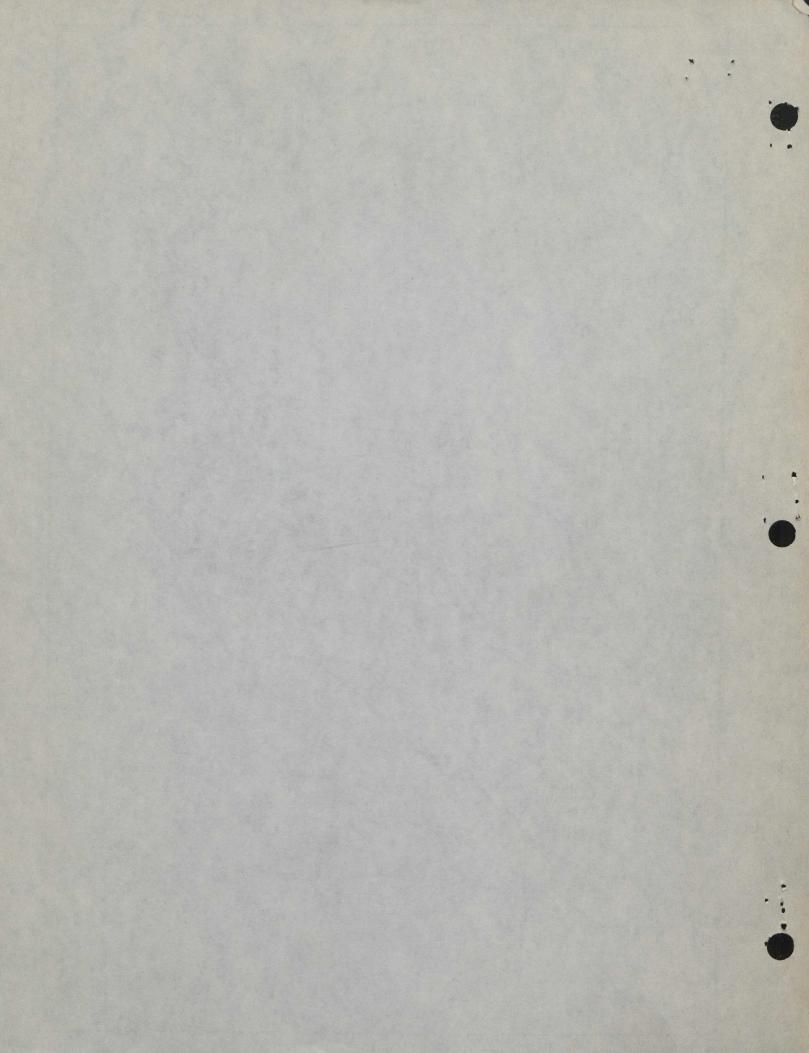














DOCS
CA1 EA953 90M13 ENG
Market study on the oil and
petroleum industry in Mexico. -43257558





