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U.S. Lifts Controls on Export Of Drilling Gear to Soviets

By Anne Swardson
Washington Post Staff Writer

The Reagan administration, responding to pressure from the domestic oil and gas industry, yesterday lifted controls on the export of drilling equipment to the Soviet Union that had been imposed in 1978 to force a change in that nation's human rights policy.

Officials emphasized that the Soviets had shown no improvement on human rights. Instead, Commerce Secretary Malcolm Baldrige said the controls were being lifted because they "have lost their impact in the face of widespread foreign availability of like products" and have had a "debilitating effect" on the U.S. oil and gas industry.

The restrictions were imposed by President Carter in response to the jailing of dissidents Anatoly Shcharansky—who has since been allowed to emigrate to Israel—and Alexander Ginzburg, and other human-rights violations.

Baldrige said the decision to lift the controls was made in conjunction with Secretary of State George P. Shultz.

Baldrige said the step was taken "despite our dissatisfaction with Soviet human rights efforts." He noted that the number of Soviet Jews permitted to emigrate from the Soviet Union declined last year. But, Baldrige said, "it is no longer in our national interest" to maintain the unilateral controls.

Hyman H. Bookbinder, special representative for the American Jewish Committee, said he was disappointed that the administration had lifted the controls without obtaining in return a Soviet promise for freer emigration and better treatment of Soviet Jews.

"We've gone from 51,000 allowed to emigrate in 1979 to less

than 1,000 last year," Bookbinder said. While he said he had no detailed knowledge of the economic reasons for lifting the restrictions, "I'm sure most of us will feel disappointed that it is not accompanied by some meaningful improvement in human rights."

The end of the controls on the drilling equipment came after heavy pressure from legislators from oil-producing states, where the local economies are in a tailspin as a result of the decline in petroleum prices.

Sen. Lloyd Bentsen (D-Tex.), who hailed the end of the export curbs, said in a statement that a study by the Central Intelligence Agency found that nearly all kinds of oil equipment and technology were "freely available to the Soviets from the countries which do not have these export controls."

"I am pleased that the administration has heeded my repeated request to end these controls, which have done great damage to the U.S. industry but have not prevented the Soviet Union from getting all of the equipment it wants," Bentsen said.

Alexander B. Trowbridge, president of the National Association of Manufacturers, said the controls had cost U.S. companies \$2 billion in lost business, and their elimination could add 46,000 jobs to the oil industry, according to The Associated Press.

Their removal will provide aid to an industry that "really needs the help," and will end a policy that "no longer has any relevance," Trowbridge said. Oil and gas industry groups also praised the decision.

The Soviet Union is the largest foreign market for oil and gas drilling equipment—drills, bits and rigs, among other items—and has the world's largest crude oil reserves and 40 percent of the world's natural gas reserves, according to industry executives.

The controls cost the United States a sizable chunk of that market. According to Bentsen, the United States once had 35 percent of Western sales to the Soviets but that share has shrunk to 0.4 percent. In 1983, according to industry figures, the Soviets bought \$1.7 billion in oil and gas equipment from noncommunist nations, most of it from West Germany and Italy.

The decision to lift the restrictions followed by a day the release of a report by the National Academy of Sciences that said all export controls cost the U.S. economy \$9

billion and almost 200,000 jobs a year, without significantly improving national security. Commerce officials said, however, that the timing was coincidental: The Export Administration Act requires that the president renew the curbs each year or they will expire. The deadline was Jan. 20.

Other controls on exports, such as those of high-technology and military-related goods to the Soviet Union and of a wide range of goods to South Africa and Libya, were retained yesterday.

The end of the curbs comes as Congress is preparing to write legislation attempting to shrink the nation's trade deficit, which is expected to set a record of more than \$170 billion in 1986 when final figures are in. Congressional leaders have expressed their intention to force other nations to open their markets further to American exports. The administration would have been open to criticism that it was restricting U.S. exports if it had continued the drilling controls.

In 1983, the Reagan administration ended its opposition to supplying equipment for a Siberian natural-gas pipeline and lifted a ban on exports to the Soviets of oil and gas pipe-laying equipment.

THE WASHINGTON POST

FRIDAY, JANUARY 16, 1987



National Association
of Manufacturers

ALEXANDER B. TROWBRIDGE
President

January 6, 1987

The Honorable Frank C. Carlucci
Assistant to the President,
National Security Affairs
National Security Council
The White House
Washington, D.C. 20500

Dear Frank:

A decision is about to be made within the Administration on whether to extend U.S. foreign policy controls on petroleum equipment and technology exports to the USSR.

NAM's views on the need to lift foreign policy controls on petroleum equipment and technology exports to the USSR have been raised in numerous meetings with Administration officials this year and in a joint NAM-Chamber letter to President Reagan on October 6, 1986 (copy attached).

To review the facts behind these controls demonstrates the strong case for not renewing them when they automatically expire on January 20, 1987:

- 1) The original reason for their imposition in 1978 no longer exists
- 2) The petroleum equipment and technology involved is not militarily critical.
- 3) The controls have not denied the Soviet Union access to Western oil/gas equipment or technology.
- 4) The Commerce Department itself has estimated that the controls have cost \$2 billion in lost exports since they were imposed.

With regard to the last two points, it should be pointed out that both industry and government sources estimate that 500 to 600 major foreign firms offer competitive equipment in this field and that the Soviet Union has wide access to these foreign suppliers. An unclassified CIA report released last year confirms the fact that the Soviets are able to acquire necessary petroleum equipment and technology from non-U.S. sources. The CIA report indicated that this equipment is available not only from non-CoCom sources in Europe but in most cases from developing nations as well.

The Hon. Frank C. Carlucci
January 6, 1987
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Because of this widespread foreign availability, the U.S. share of the Soviet market, the largest export market for petroleum equipment and technology in the world outside the U.S., has slipped dramatically. In the mid-1970s the U.S. was the leading foreign supplier to the USSR of petroleum equipment with approximately 25 percent of the market. By 1983, the figure had dropped to less than 1 percent.

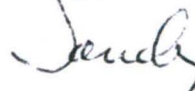
The costs of U.S. foreign policy controls for American industry and agriculture were illustrated this past year when the Administration announced that it would allow subsidized wheat sales to the Soviet Union. The irony of the situation was hard to overlook. What the U.S. Government was busy denying the Soviet Union access to in 1980, it was busy subsidizing only six years later. And, in the end, even with the subsidies the sale could not be made in large part because other countries had replaced the U.S. as a supplier.

U.S. policies toward agricultural exports to the Soviet Union provides a sharp contrast to petroleum equipment exports. In addition to trying to subsidize grain sales this year, the Reagan Administration lifted controls on grain in 1981. Controls came off pipelaying equipment a year later. Airline services resumed this past year. The Administration even sent up a request to Congress in 1986 to remove import restrictions on Soviet furskin imports. The time has come to stop singling out the petroleum equipment industry as the target for our foreign policy controls.

The NAM urges the Administration not to renew foreign policy controls on the petroleum equipment and technology exports to the Soviet Union when these controls lapse this month. I hope that you will support Mac Baldrige and others in the Administration in their efforts to eliminate this unnecessary burden on an important American industry.

*I've also added a letter
Lloyd Bentsen sent to Mac
Baldrige making some important
points to factor into the
discussion —*

Sincerely,



Alexander B. Trowbridge
President
National Association of Manufacturers

Enclosures

cc: **Stephen I. Danzansky**
Lucien S. Pugliaresi

October 6, 1986

The President
The White House
Washington, D.C. 20500

Dear Mr. President:

We are writing to urge you to terminate U.S. unilateral foreign policy export controls on oil and gas exploration and production equipment for sales to the Soviet Union.

The controls were not imposed for strategic reasons and do not benefit U.S. national security interests. They were first imposed in 1978 to signal U.S. displeasure with certain Soviet actions, including the trial and conviction of the Soviet dissident Anatoly Shcharansky. The controls continue today despite the fact that the original reasons for their imposition no longer exists.

As a consequence of these controls, U.S. oil and gas equipment manufacturers have been unable to compete in the largest international market for oil and gas exploration and production equipment, the Soviet Union. U.S. businesses cannot compete because, unlike our NATO allies and other trade competitors, our exports are controlled unilaterally for foreign policy purposes.

Several years ago, the United States attempted to get our allies to adopt controls on oil and gas equipment and technology exports to the Soviets. Our allies agreed to place controls on a small number of highly technological items but refused to control most categories of exploration and production equipment. This refusal was based correctly upon the fact that the equipment in question, such as rock bits, mud systems, blow-out preventers, and drilling rigs, is not strategic within the definition jointly agreed to by the United States, our NATO allies, and Japan. Well over 600 major foreign firms offer this type of equipment and are pleased to service a market from which the United States excludes itself.

The consequence of our unilateral controls have been devastating for the U.S. oil and gas equipment industry. In the mid-1970s, the United States was the leading foreign supplier to the Soviet Union of machinery for oil and gas drilling, production and processing. By 1983, the U.S. foreign market share in the USSR had dropped to less than .4 percent, whereas the Germans, Italians, French, British, and Japanese held a combined share of over 70 percent of the nearly \$1.7 billion worth of oil and gas equipment purchased by the Soviets from foreign suppliers.

The U.S. oil and gas equipment industry is presently at a critical crossroads. Domestic drilling rig count has fallen from 4500 to less than 700, or a drop of more than 85 percent since 1981; twelve of the industry's largest publicly held companies reported losses totalling \$1.1 billion over the past year; and the work force has been cut to less than half of its 1982 peak, or from 139,000 to 48,500 jobs. While other factors must play a role in the industry's recovery, allowing U.S. firms to compete without unnecessary hindrance for the Soviet market is one very important step.

The Soviet Union today represents a market of roughly \$2-3 billion annually in foreign oil and gas equipment sales. The Soviets view U.S. manufacturers as unreliable because of the unilateral export licensing requirements imposed by our own government. As a consequence, our industry has been virtually cut out of the Soviet market in favor of companies in Western Europe and Japan. Were our foreign policy controls to be dropped, we believe our manufacturers would once again play a major role in the Soviet market, as we are still respected for the high quality of American products.

Mr. President, we urge you to terminate current unilateral U.S. foreign policy export controls on oil and gas equipment. This can help the U.S. balance of trade, allow use of idle capacity and labor, and assist a vital industry which we clearly need to restore to good health. We believe this is good policy, which will have a positive impact not only upon the health of the U.S. oil and gas equipment industry but the economic well-being of our nation.

Thank you very much for your attention on this most urgent issue.



Richard L. Leshner
President
U.S. Chamber of Commerce

Respectfully yours,



Alexander B. Trowbridge
President
National Association of Manufacturers

LLOYD BENTSEN
TEXAS

COMMITTEES
FINANCE
ENVIRONMENT AND PUBLIC WORKS
JOINT ECONOMIC
JOINT COMMITTEE ON TAXATION
SELECT COMMITTEE ON INTELLIGENCE

United States Senate
WASHINGTON, DC 20510

December 15, 1986

The Honorable Malcolm Baldrige
Secretary
U.S. Department of Commerce
Washington, D.C. 20232

Dear Mr. Secretary:

As required by law, you are now reviewing the foreign policy controls on the export of oilfield equipment and technology to the Soviet Union. As I have said repeatedly, these controls cannot meet the requirements set down by the Export Administration Act of 1985 and should not be renewed.

The Export Administration Act of 1985 directs that a number of factors be considered before renewing export controls. Included among those factors are the availability of the controlled items from other countries and whether the damage to the U.S. from the embargo exceeds the foreign policy benefit. The current controls on oilfield equipment and technology clearly fail both of these tests.

We cannot hope to be a major trading nation if we unilaterally restrict trade and leave our allies free to take advantage of a major market without U.S. competition. This unilateral U.S. embargo has in effect subsidized the foreign competition of major U.S. companies by giving them a major market. This has cost the U.S. hundreds of millions of dollars in sales and thousands of jobs, and it has also greatly damaged our image as a reliable supplier in a market where reliability is all-important. Given the financial and technological strength and economies of scale being developed by Japanese and European firms, it is likely that the next upturn in U.S. drilling will be done with foreign equipment instead of Texas equipment. This will cost additional thousands of jobs.

The U.S.S.R. is the largest petroleum equipment market outside of the U.S. As a result of the embargo, American oil and gas firms dropped from about 35 percent of that huge market to only 0.4 percent. Had the U.S. market share only remained constant we would have had \$1.8 billion in orders during 1979-83 instead of the actual \$118 million. This is a loss of over a 90 percent in potential sales and a loss of over 8,000 jobs. Texas companies have borne an estimated 50 percent of these losses.

The Honorable Malcolm Baldrige
December 15, 1986
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In September of 1983 the Commerce Department lifted restrictions on the sale of pipe-laying tractors to the Soviet Union, saying that they "do not represent high technology and are available from a number of other countries." No explanation was given as to why these tractors differ from most other oil and gas equipment, which is also freely available from other suppliers and which is not generally considered "high technology" by anyone familiar with the industry.

This equipment is freely available even from foreign subsidiaries of U.S. companies. There are few if any restrictions on shipment of technology to our allies. These unilateral U.S. export controls thus mean lost jobs for U.S. workers and encourage U.S. companies to move their research and production operations overseas. They also encourage foreign companies to "engineer out" U.S. products in favor of more assured sources of supply.

This is not good foreign policy or good economic policy for America. We should never impose export controls unless we hurt others worse than we hurt ourselves. We should never impose export controls unless other countries which produce the same products also agree to those controls. These are basic principles both of law and of common sense. The current unilateral restrictions on the sale of oilfield equipment to the Soviet Union violate both of those principles and should be lifted immediately before even more jobs and contracts are lost.

Sincerely,

Lloyd Bentsen

File XV D

EXPORT CONTROL IN TRADING WITH THE U.S.S.R.

ON

OIL AND GAS EQUIPMENT, SERVICES AND TECHNOLOGY

McDermott International, Inc.
New Orleans, Louisiana
January, 1987

Executive Summary: Why We Should Lift Export Administration Act
Control Of Trade With The U.S.S.R. On Oil And Gas
Technology And Equipment

- o Retaining control contravenes the legislative intent of the export administration act which in essence requires that export controls be imposed only if they can be effective and if there is a foreign policy justification.

- o Retaining control is inconsistent with the policy of seeking improved relations with the U.S.S.R.; instead of harming the Soviet Union retaining control only harms the U.S. economy.

- o Retaining control is likely to exacerbate the present U.S. all-time high \$160 billion plus balance of trade and balance of payments deficits.

- o Retaining control encourages the Soviet Union to continue to ignore U.S. suppliers and instead seek even closer trading ties with government-subsidized foreign competitors who already have sold or are selling the Soviets the same state of the art technology that could have been obtained in the U.S. had the control not been imposed.

o Retaining control could result in loss of U.S. competitiveness in world markets for oil and gas technology because continued control enables foreign government-subsidized competitors to obtain and retain an expanded market share.

o Retaining control provides foreign competitors with an opportunity to learn as they work and thereby refine and improve their technology, edging even further ahead of lagging U.S. suppliers; put another way - currently available technology for Soviet Arctic applications will be replaced by new technologies evolving out of Soviet operating experience within the next two to two and one-half years: if foreign competitors develop the new technologies then they, not American companies, will be selling it to the U.S. when American Arctic oil exploration resumes following world oil price increases.

* * *

o Lifting control is consistent with the legislative intent of the export administration act.

o Lifting control could result in improved relations with the Soviet Union without allowing the U.S.S.R. to acquire state of the art technologies not otherwise available in the world market.

o Lifting control could provide a significant opportunity to reduce U.S. balance of trade and balances of payments deficits inasmuch as the Soviet requirements could account for up to 20-25% of the world market for oil and gas technology.

o Lifting control could allow U.S. companies to enter the only significantly expanding market in an otherwise depressed world market and thereby avoid further losses of market share to foreign government-subsidized competitors.

o Lifting control would give U.S. companies the opportunity to provide the U.S.S.R. state of the art technologies while gaining the on the ground learning experience essential to generate technological innovations necessary to regain and maintain international competitiveness.

o Lifting control would provide American companies access to the operating environment necessary to develop new cutting edge harsh weather technologies that will be required for future development of Alaskan oil and gas resources.

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I. THE ISSUE

The Administration has issued a number of pronouncements this year asserting that it continues to seek improved trade ties between the United States and the Soviet Union in non-strategic items. If the Administration is serious about stimulating peaceful, non-strategic trade between the United States and the Soviet Union, then it should re-examine existing obstacles in one of the most promising areas for U.S. sales to the Soviet Union -- namely, oil and gas equipment and technology.

A key obstacle to increasing non-strategic trade with the Soviet Union is the U.S. foreign policy control on exports to that country of oil and gas equipment and technology, which has cost the U.S. petroleum equipment and services industry hundreds of millions (and quite possibly billions) of dollars, and thousands of U.S. jobs. The licensing policy under this foreign policy control was changed at the end of the last annual review period (i.e., January, 1986), but the change was so marginal that it has produced few benefits for the industry. The new "case-by-case" review policy for non-manufacturing exploration and production technology is hardly designed to provide U.S. sellers or Soviet purchasers with a clear signal as to licensing prospects. More fundamentally, the very existence of this foreign policy control -- regardless of stated licensing policy -- poses uncertainties and delays that the Soviets need not face in purchasing from petroleum equipment and technology suppliers in other countries.

It is only through termination of the oil and gas control that the U.S. industry will have a reasonable chance of reasserting itself in the huge Soviet market -- to the long-run benefit of the U.S. economy and, perhaps, to broader U.S.-Soviet relations as well.

II. EXPORT ADMINISTRATION ACT - REASONS FOR IMPLEMENTING EXPORTS CONTROLS

Section 6(b) (1) of the Export Administration Act specifies that the President may extend export controls only if he determines that:

a. the control is likely to achieve its intended foreign policy purpose;

b. the control is compatible with U.S. foreign policy objectives and with overall U.S. policy toward the country which is the target of the control;

c. the reaction of other countries to the extension of the control is not likely to render the control ineffective;

d. the effect of the control on U.S. competitiveness, its reputation as a supplier, or of the economic well-being of individual U.S. communities does not exceed the benefits to U.S. foreign policy objectives; and

e. the control can be enforced effectively.

Section 6(b) (2) additionally provides that the President shall also consider the foreign policy consequences of modifying the controls.

III. MAJOR REASONS TO LIFT THE EXPORTS CONTROLS IN TRADING WITH THE SOVIETS ON OIL AND GAS EQUIPMENT, SERVICES AND TECHNOLOGY

a. the control failed to achieve its intended foreign policy purpose; that is, denying Soviet access to oil and gas equipment and technology;

b. Japanese, Western European, and other manufacturers of oil and gas equipment were proceeding to sell the Soviet Union nearly all of the equipment that the export control denied the Soviets purchasing from U.S. companies;

c. the effect of the control was to knock U.S. companies out of the competition for sales to the Soviets with a resultant loss of market potential amounting to many billions of dollars;

d. the control could not be effectively enforced by virtue of the fact that foreign competitors were able to sell to the Soviets essentially the same equipment that U.S. export control denied them.

e. it has already used up whatever power it may have had to "signal" U.S. displeasure with the Shcharansky and Ginzburg trials; the invasion of Afghanistan, and the imposition of martial law in Poland;

f. it is inadequate to the goal of effecting positive change in Soviet human rights or foreign policies;

g. it does not significantly impede Soviet energy development efforts, in light of indigenous Soviet capacity and the wide-ranging foreign availability of comparable oil and gas equipment and technology (indeed the control has served to accelerate the development of Soviet indigenous capacity); and

h. any benefits it provides are outweighed by its costs to U.S. business and employment.

IV. COST OF THE CONTROL TO U.S. BUSINESS

a. the direct losses associated with ceding to foreign competitors the U.S. share of the Soviet market for petroleum equipment and services;

b. the pressure it places on U.S. manufacturers to move their production and R&D activities abroad;

c. the tremendous damage it does to the international reputation for reliability of U.S. suppliers of petroleum equipment and services;

d. the spill-over effect that exclusion from the major economic and technological benefits of participating in the Soviet market has on the competitive position of the U.S. industry in other markets around the world; and

e. the indirect effect that these costs to the industry have on its own suppliers and the U.S. economy at large.

V. U.S.S.R. MARKET FOR U.S. COMPANIES INVOLVED IN OIL AND GAS EQUIPMENT, SERVICES AND TECHNOLOGY

A. THE U.S.S.R. MARKET

In order to understand and appreciate the tremendous market for the oil and gas equipment and services required by the U.S.S.R. we must compare the Production of Oil and Natural Gas of the U.S.S.R. and the U.S.

	OIL		NAT. GAS	
	<u>(MILLIONS B/D)</u>		<u>(BILLIONS M³/D)</u>	
	<u>U.S.S.R.</u>	<u>U.S.</u>	<u>U.S.S.R.</u>	<u>U.S.</u>
1981	11.8	8.6	1.27	1.55
1982	11.8	8.7	1.37	1.44
1983	11.8	8.7	1.47	1.31
1984	11.7	8.7	1.60	1.35
1985	11.3	8.9	1.76	1.28
1986 (1ST HALF)	11.6	8.9	1.87	1.33

The American share of total Western exports of oil and gas equipment has fallen from 25 percent before the ban eight years ago to less than 2 percent today, according to figures from the Petroleum Equipment Suppliers Association.

- B. SERVICES THAT McDERMOTT INTERNATIONAL, INC. CAN PROVIDE TO THE U.S.S.R. - SEE ATTACHED REPORT -
- C. OTHER COMPANIES THAT CAN PROVIDE TO THE U.S.S.R. THE SAME TYPE OF SERVICES PROVIDED BY McDERMOTT MARINE CONSTRUCTION - SEE ATTACHED REPORT -

B. SERVICES THAT McDERMOTT INTERNATIONAL, INC.

CAN PROVIDE TO THE U.S.S.R.

A. SYSTEMS, PRODUCTS AND SERVICES BY McDERMOTT MARINE CONSTRUCTION, AN OPERATING UNIT OF McDERMOTT INTERNATIONAL, INC.

1. ONSHORE OIL AND GAS FACILITIES

DESIGN, PROJECT MANAGEMENT, PROCUREMENT, FABRICATION, CONSTRUCTION AND OPERATION OF ONSHORE PLANTS

Since 1940 McDermott Marine Construction (MMC) has engineered over 100 onshore plants throughout the world wherever oil and gas are produced. MMC can provide technical and economic feasibility studies, basic and conceptual engineering, detailed engineering, project management, material procurement and construction management.

The majority of the plants have been for the processing of natural gas which include dehydration, gas sweetening and natural gas liquid recovery and separation. MMC has also been involved in the design and construction of associated utility systems and sulphur recovery plants, petrochemical facilities and crude oil stabilization and hydro-skimming plants. MMC is prepared to participate in gas pipeline projects similar to those from the Yamal Peninsula to Western Europe.

2. OFFSHORE OIL AND GAS FACILITIES

DESIGN, PROJECT MANAGEMENT, PROCUREMENT, FABRICATION, INSTALLATION AND OPERATION OF EXPLORATION AND PRODUCTION FACILITIES

With 63 years of Marine Engineering, Fabrication and Marine Operations experience in the offshore industry, McDermott Marine Construction (MMC) is the world leader in the development of oil and gas projects in both conventional and frontier areas. Engineering and fabrication centers located at the hub of every major offshore region support 30 spreads of marine construction equipment. MMC can provide complete turn key services including design, material/equipment procurement, project management, fabrication, installation, hook-up, commissioning, operation and maintenance of platforms, pipelines and loading terminals. MMC has pioneered the world's most important oil and gas provinces starting with the Gulf of Mexico, progressing through the Middle East, India, Africa, Far

East, and advancing into the harsh environment fields of Alaska, North Sea, Australia, and South America. MMC is prepared to accept the challenge of the Barents Sea, Kara Sea, Caspian Sea and the Sea of Okhotsk.

3. FLOATING PRODUCTION SYSTEMS

DESIGN, PROJECT MANAGEMENT, PROCUREMENT, CONSTRUCTION, INSTALLATION, AND OPERATION OF FIELD DEVELOPMENT CONCEPTS INCLUDING FLOATING PRODUCTION SYSTEMS

McDermott Marine Construction (MMC) can provide a wide range of services in the design installation and operation of Floating Production Services extending from conceptual field development studies through detailed cost feasibility and engineering analysis to complete construction and operation services. MMC covers the complete spectrum including extended well testing and production, semi-submersible and tanker based systems, tension leg platforms, as well as subsea completion and production. MMC is prepared to apply its technology to the development of marine oil and gas projects. This service can be provided in the Barents Sea, Kara Sea, Caspian Sea and the Sea of Okhotsk.

4. ENHANCE OIL RECOVERY SYSTEMS

ENHANCE OIL RECOVERY PROJECT DEVELOPMENT SERVICES

Conventional recovery methods will produce, on the average, less than one third of the original oil in place (OOIP). McDermott Marine Construction (MMC) can provide services to enable recovery of significant portions of the remaining two thirds of OOIP through economical applications of enhanced oil recovery (EOR) technology.

MMC has more than 20 years experience in EOR project development, including feasibility studies, detailed design, construction, commissioning and start up of EOR facilities, both offshore and onshore, and including thermal, chemical and miscible flooding methods.

Babcock and Wilcox, a wholly-owned subsidiary of McDermott International, is a leader in the design and manufacture of equipment required for thermal EOR recovery methods. Among its recent technological advances is the development of insulated steam injection tubing which can be used in secondary/tertiary recovery of heavy sour crude with high paraffin content in depths of up to 1200 meters. This technology and the skilled engineers of Babcock & Wilcox form an integral part of the MMC project team.

This integration of advanced technology and multiskilled personnel is essential to the state-of-the-art EOR design. MMC is cognizant of the multidisciplinary and integrated approach

required for successful implementation of EOR projects and has the technical understanding of all the pertinent areas. Using the resources of the large family of companies of the McDermott Group in association with respected specialists in the areas of reservoir analysis and drilling, through an automated and integrated database system, MMC can provide the unified management and services required to assure the success of any cooperative EOR venture in the U.S.S.R.

5. FABRICATION FACILITIES FOR HARSH ENVIRONMENT ICE RESISTANT PLATFORMS

DESIGN, PROCUREMENT, CONSTRUCTION AND OPERATION OF FABRICATION YARDS AND SHIPYARDS

McDermott Marine Construction (MMC) conceived, developed and has been operating continuously since its inception the first offshore steel platform fabrication yard in Morgan City, La. Other MMC fabrication yards have been developed in Venezuela, Nigeria, Egypt, U.A.E., Kuwait, Indonesia, Singapore, and Scotland. In association with local joint venture partners, MMC has developed many other fabrication yards in other parts of the world such as Australia, India, and Mexico.

MMC can provide all services ranging from the initial feasibility and economic studies through site selection analysis, detailed design, specification and procurement of equipment, project management and construction of the facilities. Because of our vast experience in the recruiting and training of the local work forces in the specialized skills of the offshore industry, MMC can accelerate and optimize the start up of the local work force. MMC can provide this service anywhere in the Soviet Union where the fabrication and shipyard facilities need to be located.

6. HARSH ENVIRONMENT MARINE CONSTRUCTION EQUIPMENT

DESIGN, PROCUREMENT, CONSTRUCTION MANAGEMENT, AND OPERATION OF MARINE EQUIPMENT

MMC designed, built, and operated the first derrick barge and pipelaying spread specifically conceived for the development of the offshore oil field in the early forties. Since then, McDermott Marine Construction (MMC) has advanced the state-of-the-art with every new generation of equipment, culminating in the realization of the largest and most sophisticated harsh environment marine construction equipment spreads operating in the world today - the self-propelled and dynamically positioned semi-submersible DB 102, with a lifting capacity 13,000 short tons.

McDermott Marine Construction's expertise extends to the design, construction, and operation of the auxiliary floating equipment such as tugboats, supply boats, diving support

vessels, marine support vessels, crewboats, deck transportation barges, launch barges, pipelaying, derrick and combination vessels (semi-submersible and mono hulls) floating and semi-submersible, jack up and platform drilling rigs, oil skimmers, underwater habitats, submersibles, etc.. Any and all types of vessels in various combinations may be required in different areas. For each individual operating area, the Barents Sea, Kara Sea, Caspian Sea and the Sea of Okhotsk, MMC working with its Soviet partners can assure the venture will make the right selection.

B. **SYSTEMS, PRODUCTS AND SERVICES BY BABCOCK AND WILCOX COMPANY, AN OPERATING UNIT OF McDERMOTT INTERNATIONAL, INC.**

1. PROCESS CONTROL SYSTEMS, PRODUCTS AND PRODUCTION QUALITY IMPROVEMENT SERVICES

The Babcock and Wilcox Company, a wholly-owned subsidiary of McDermott, is a world leader in process control systems, products and services through its Bailey Controls Company subsidiary. Headquartered in Wickliffe, Ohio, U.S.A., Bailey has subsidiaries, joint ventures and licensees located strategically throughout the world.

The centerpiece of Bailey's product line is the Network 90. Network 90 control systems are used to control processes in a wide variety of industries throughout the world, onshore and offshore. Network 90's major features are its flexibility, modular design, architectural simplicity with fewer interconnections required between components, and its unmatched versatility for a comprehensive range of process control applications, and reliable, cost effective performance.

Industries which are using the Network 90 systems and other 'wise' and 'smart' measurement products which can stand-alone or interface with Network 90, include, utilities, petroleum and petrochemical, pharmaceutical, specialty chemicals, iron and steel manufacturing, food and beverage, pulp and paper, oil and gas production, transmission and processing, and others.

2. CITY REFUSE TO THERMAL AND/OR ELECTRICAL ENERGY PLANTS

Babcock & Wilcox, a wholly-owned subsidiary of McDermott, is the leader in the U.S.A. municipal solid waste incineration market. Capabilities include the supply of the total plant facility, including complete start up and training of plant operators; alternatively, Babcock & Wilcox can also be the boiler technology supplier, including instrumentation, to a consortium who supplies the complete refuse plant. Babcock & Wilcox has more U.S.A. operating refuse-to-energy experience in both mass and RDF (refuse derived fuel) fired units than any other competitor in the U.S.A. refuse market -- 27 in commercial operation with design refuse capacity of 11,600 tons

per day; an additional 13 units are under construction with a combined design capacity of 7,180 tons per day. Babcock & Wilcox participates in the U.S.A. refuse market as a full service supplier, including long term operation and maintenance of plants. Babcock & Wilcox is prepared to accept the challenge of participating in joint ventures in this field in the USSR.

3. PLANT LIFE EXTENSION SERVICES FOR POWER GENERATION PLANTS

The life of any power plant or industrial plant or equipment is dependent upon the operation and maintenance of the plant or equipment. Babcock & Wilcox performs a service for its customers called "life extension". This service is concentrated on the physical examination of those pressure parts, such as superheater headers, that tend to limit plant life time or to cause unscheduled outages particularly in older plants.

4. LICENSING OF CERTAIN TECHNOLOGIES RELATED TO POWER GENERATION AND ENHANCED OIL RECOVERY

The Babcock and Wilcox Company has several systems and products which can be licensed and which can benefit energy users. These products include sootblowers and insulated steam injection tubing (ISIT) from Diamond Power Specialty Company; air-cooled heat exchangers, fan blades and air-cooled steam condensers from Hudson Products Corporation and boilers including industrial, recovery, refuse fired and utility boilers from Babcock and Wilcox's Power Generation Group.

All these systems and products are backed by extensive research and development, a highly professional staff, and technicians and other experts in their design, fabrication, installation and services.

5. CONTRACT RESEARCH IN AREAS RELATED TO POWER GENERATION, INCLUDING FUELS

Babcock and Wilcox conducts research for its own systems and products and contracts its services to customers, as well. The headquarters for research activities for B&W is in Alliance, Ohio, with additional facilities in Lynchburg, Virginia.

A broad range of research activities can be conducted. Historically research in combustion, fuels, design, materials, process control, nondestructive methods and diagnostics, advanced energy and thermal fuels have been the focal points of activity.

The Alliance Research Laboratory has the lead for combustion research and burner development and for correlating combustion performance with coal characteristics. An interesting recent development is an excellent coal water fuel burner together with its complete operating support system providing safe,

reliable, and efficient combustion over a broad load range without supplementary ignition support fuel.

C. INTERNATIONAL TRADING SERVICES BY McDERMOTT INTERNATIONAL TRADING COMPANY, AN OPERATING COMPANY OF McDERMOTT INTERNATIONAL INC.

1. JOINT VENTURE PARTNERS IN INDUSTRIAL PROJECTS

Coutinho, Caro & Co. AG, a wholly-owned subsidiary of McDermott International, Inc. has over 20 years of worldwide experience in large industrial joint venture projects.

These projects relate to the design, engineering and construction of industrial plants in the specific areas of wood, paper and pulp, cement, food processing, glass, ceramics and steel. Projects are performed on a turnkey basis, in conjunction with local expertise applying the latest technology, and whereby the Joint Venture agrees to export part of the production thus providing needed foreign exchange to justify the project.

2. PROJECT MANAGEMENT SERVICES IN THIRD WORLD COUNTRIES

Coutinho, Caro & Co. AG, a wholly-owned subsidiary of McDermott International, Inc. has extensive experience relating to combining technology, engineering, design and execution of industrial plants and/or services in Consortium with other European or American industries to be built on behalf of the USSR in third world countries. This unit's expertise in Project Management in Africa, the Middle and Far East is a major guarantee for fulfilling contracts of this nature on time and within the scope of the original quotation.

3. BUY-BACK AGREEMENTS, EXPORT OF SOVIET PRODUCTS

McDermott International Trading Co., Inc. (MITCO) conducts various activities that relate to straight Barter Trading without a requirement for or a minimum of foreign currency.

This service involves the supply of goods of one nature (import) at a specific value, replaced by export goods (export) of USSR products of a similar value, within a specific time frame.

MITCO's worldwide sales network, with its own staff and offices in 26 countries around the globe, guarantees the optimum in sales efforts and resulting contracts through a "state-of-the-art" communication network.

4. WORLDWIDE TRADING SERVICES IN COMMODITIES (IMPORT-EXPORT)

McDermott International Trading Co., Inc. (MITCO) provides trading services in commodities. These activities form the core of the business with close to 100 years of experience in commodity buying and selling in all five continents.

Products vary from area to area but the principal expertises are in steel and steel related products, non-ferrous metals and ores, chemicals and petrochemicals, paper and pulp as well as paper related products, coal, oil and lubricants, food products and the total range of electrical cables.

The shipping division of the company has over 100 time and voyage ocean charters on the high seas at any one time, thereby securing the lowest possible freight costs and timely deliveries.

5. CONSULTING SERVICES IN INTERNATIONAL FINANCING AND LEASING AGREEMENTS

McDermott International Trading Company, Inc. (MITCO) provides professional consulting services in finance and leasing agreements in the international arena. These services are often combined with projects or services mentioned under points 1 through 4 above. This unit's long standing relationship with most international banks and leasing companies in the world enable it to combine a project or service contract, with a specific financing or leasing contract, in one package, often combined with counter-trade packages to produce the most advantageous economic solution for all parties involved.

McDermott International, Inc.'s strategic philosophy allows the majority of the above mentioned activities and services to be applied as well for its other Operating Units, McDermott Marine and Babcock and Wilcox, which creates unique opportunities for our industrial and trading partners.

C. OTHER COMPANIES THAT CAN PROVIDE TO THE U.S.S.R. THE SAME TYPE OF SERVICES PROVIDED BY McDERMOTT MARINE CONSTRUCTION

\$50 billion over years

MAJOR MARINE CONSTRUCTION COMPANIES

LIST SORTED COUNTRY/COMPANY

13-Nov-84

COMPANY	COUNTRY	DESIGN	PROJECT			INSTALLATION	
			PROCUREMENT	MANAGEMENT	FABRICATION	OFFSHORE	ONSHORE
!AALBORG VAERFT OFFSHORE	!DENMARK	! S/C	! YES	! S/C	! YES	! NO	! NO
!BROWN & ROOT - WIMPEY	!ENGLAND	! YES	! YES	! YES	! YES	! YES	! YES
!BROWN, JOHN ENGR'S & CONSTR. LTD	!ENGLAND	! YES	! YES	! YES	! S/C	! S/C	! YES
!DAVY MCKEE LTD	!ENGLAND	! YES	! YES	! YES	! NO	! NO	! YES
!FOSTER WHEELER	!ENGLAND	! YES	! YES	! YES	! S/C	! S/C	! YES
!HUMPHREYS & GLASGOW LTD	!ENGLAND	! YES	! YES	! YES	! S/C	! S/C	! YES
!TAYLOR WOODROW ENERGY LTD	!ENGLAND	! NO	! YES	! YES	! YES	! S/C	! YES
!TAYWOOD SANTA FE LTD	!ENGLAND	! YES	! YES	! YES	! YES	! S/C	! YES
!THE LUMMUS CO LTD	!ENGLAND	! YES	! YES	! YES	! S/C	! S/C	! YES
!E.T.P.M.	!FRANCE	! YES	! YES	! YES	! YES	! YES	! YES
!PROTECH INTERNATIONAL LTD	!FRANCE	! YES	! YES	! YES	! NO	! NO	! YES
!BLOHM & VOSS AG	!GERMANY	! NO	! YES	! NO	! YES	! NO	! NO
!MICOPERI S.p.A.	!ITALY	! YES	! YES	! YES	! YES	! YES	! YES
!SAIPEM S.p. A.	!ITALY	! YES	! YES	! YES	! YES	! YES	! YES
!SNAMPROGETTI LTD	!ITALY	! YES	! YES	! YES	! YES	! YES	! YES
!CHIYODA	!JAPAN	! NO	! YES	! NO	! YES	! NO	! NO
!HITACHI ZOSEN	!JAPAN	! NO	! YES	! YES	! YES	! YES	! YES
!ISHIKAWAJIMA-HARIMA HVY IND CO	!JAPAN	! NO	! YES	! YES	! YES	! YES	! YES
!KAWASAKI HVY IND LTD	!JAPAN	! NO	! YES	! NO	! YES	! S/C	! YES
!MITSUI	!JAPAN	! YES	! YES	! YES	! YES	! S/C	! YES
!NIPPON STEEL	!JAPAN	! NO	! YES	! YES	! YES	! S/C	! YES
!NKK (NIPPON KOKAN)	!JAPAN	! YES	! YES	! YES	! YES	! S/C	! YES
!SASEBO HVY IND CO	!JAPAN	! NO	! YES	! NO	! YES	! S/C	! YES
!SUMITOMO HVY IND LTD	!JAPAN	! NO	! YES	! NO	! YES	! S/C	! YES
!DAEWOO SHIPBUILDING	!KOREA	! NO	! YES	! NO	! YES	! S/C	! YES
!HYUNDAI CORPORATION	!KOREA	! NO	! YES	! YES	! YES	! S/C	! YES
!KHIC	!KOREA	! NO	! YES	! NO	! YES	! S/C	! YES
!SAMSUNG	!KOREA	! NO	! YES	! NO	! YES	! S/C	! YES
!DEGROOT	!NETHERLANDS	! YES	! YES	! YES	! YES	! S/C	! YES
!HEEREMA	!NETHERLANDS	! YES	! YES	! YES	! YES	! YES	! YES
!IHC GUSTO BV	!NETHERLANDS	! YES	! YES	! YES	! YES	! S/C	! YES
!AKER ENGINEERING A/S	!NORWAY	! YES	! YES	! YES	! YES	! S/C	! YES
!BERGAN MEKANISKE VERKSTEDER	!NORWAY	! NO	! YES	! NO	! YES	! NO	! NO
!KVAERNER ENGINEERING A/S	!NORWAY	! YES	! YES	! YES	! S/C	! S/C	! YES
!DRAGADOS Y CONSTRUCCIONES S.A	!SPAIN	! NO	! YES	! NO	! YES	! NO	! NO
!GOTAVERKEN ARENDAL AB	!SWEDEN	! YES	! YES	! YES	! YES	! S/C	! S/C
!BECHTEL INC.	!USA	! YES	! YES	! YES	! S/C	! S/C	! YES
!FLOUR OCEAN SERVICES	!USA	! YES	! YES	! YES	! S/C	! S/C	! YES
!GULF MARINE FABRICATORS	!USA	! YES	! YES	! YES	! YES	! S/C	! YES
!RAYMOND INT'L	!USA	! YES	! YES	! YES	! YES	! YES	! YES
!SANTA FE INTERNATIONAL	!USA	! YES	! YES	! YES	! S/C	! YES	! YES

MAJOR CONSTRUCTION COMPANIES THAT CAN DO ALL OR PART OF WORK AS PROPOSED TO THE "USSR"

LIST SORTED COMPANY/COUNTRY

13-Nov-86

COMPANY	COUNTRY	DESIGN	PROCUREMENT	PROJECT		INSTALLATION	
				MANAGEMENT	FABRICATION	OFFSHORE	ONSHORE
AALBORG VAERFT OFFSHORE	DENMARK	S/C	YES	S/C	YES	NO	NO
AKER ENGINEERING A/S	NORWAY	YES	YES	YES	YES	S/C	YES
BECHTEL INC.	USA	YES	YES	YES	S/C	S/C	YES
BERGAN MEKANISKE VERKSTEDER	NORWAY	NO	YES	NO	YES	NO	NO
BLOHM & VOSS AG	GERMANY	NO	YES	NO	YES	NO	NO
BROWN & ROOT - WIMPEY	ENGLAND	YES	YES	YES	YES	YES	YES
BROWN, JOHN ENGR'S & CONSTR.LTD	ENGLAND	YES	YES	YES	S/C	S/C	YES
CHIYODA	JAPAN	NO	YES	NO	YES	NO	NO
DAEWOO SHIPBUILDING	KOREA	NO	YES	NO	YES	S/C	YES
DAVY MCKEE LTD	ENGLAND	YES	YES	YES	NO	NO	YES
DEGROOT	NETHERLANDS	YES	YES	YES	YES	S/C	YES
DRAGADOS Y CONSTRUCCIONES S.A	SPAIN	NO	YES	NO	YES	NO	NO
E.T.P.M.	FRANCE	YES	YES	YES	YES	YES	YES
FLOUR OCEAN SERVICES	USA	YES	YES	YES	S/C	S/C	YES
FOSTER WHEELER	ENGLAND	YES	YES	YES	S/C	S/C	YES
GOTAVERKEN ARENDAL AB	SWEDEN	YES	YES	YES	YES	S/C	S/C
GULF MARINE FABRICATORS	USA	YES	YES	YES	YES	S/C	YES
HEEREMA	NETHERLANDS	YES	YES	YES	YES	YES	YES
HITACHI ZOSEN	JAPAN	NO	YES	YES	YES	YES	YES
HUMPHREYS & GLASGOW LTD	ENGLAND	YES	YES	YES	S/C	S/C	YES
HYUNDAI CORPORATION	KOREA	NO	YES	YES	YES	S/C	YES
IHC GUSTO BV	NETHERLANDS	YES	YES	YES	YES	S/C	YES
ISHIKAWAJINA-HARIMA HVY IND CO	JAPAN	NO	YES	YES	YES	YES	YES
KAWASAKI HVY IND LTD	JAPAN	NO	YES	NO	YES	S/C	YES
KHIC	KOREA	NO	YES	NO	YES	S/C	YES
KVAERNER ENGINEERING A/S	NORWAY	YES	YES	YES	S/C	S/C	YES
MICOPERI S.p.A.	ITALY	YES	YES	YES	YES	YES	YES
MIITSUI	JAPAN	YES	YES	YES	YES	S/C	YES
NIPPON STEEL	JAPAN	NO	YES	YES	YES	S/C	YES
NKK (NIPPON KOKAN)	JAPAN	YES	YES	YES	YES	S/C	YES
PROTECH INTERNATIONAL LTD	FRANCE	YES	YES	YES	NO	NO	YES
RAYMOND INT'L	USA	YES	YES	YES	YES	YES	YES
SAIPEM S.p. A.	ITALY	YES	YES	YES	YES	YES	YES
SAMSUNG	KOREA	NO	YES	NO	YES	S/C	YES
SANTA FE INTERNATIONAL	USA	YES	YES	YES	S/C	YES	YES
SASEBO HVY IND CO	JAPAN	NO	YES	NO	YES	S/C	YES
SHAMPROGETTI LTD	ITALY	YES	YES	YES	YES	YES	YES
SUMITOMO HVY IND LTD	JAPAN	NO	YES	NO	YES	S/C	YES
TAYLOR WOODROW ENERGY LTD	ENGLAND	NO	YES	YES	YES	S/C	YES
TAYWOOD SANTA FE LTD	ENGLAND	YES	YES	YES	YES	S/C	YES
THE LUMMUS CO LTD	ENGLAND	YES	YES	YES	S/C	S/C	YES

MAJOR CONSTRUCTION COMPANIES THAT CAN DO ALL OR PART OF WORK AS PROPOSED TO THE "USSR"

LIST SORTED DESIGN /COMPANY/COUNTRY

13-Nov-86

COMPANY	COUNTRY	DESIGN	PROCUREMENT	PROJECT MANAGEMENT	FABRICATION	INSTALLATION	
						OFFSHORE	ONSHORE
AKER ENGINEERING A/S	NORWAY	YES	YES	YES	YES	S/C	YES
BECHTEL INC.	USA	YES	YES	YES	S/C	S/C	YES
BROWN & ROOT - WIMPEY	ENGLAND	YES	YES	YES	YES	YES	YES
BROWN, JOHN ENGR'S & CONSTR. LTD	ENGLAND	YES	YES	YES	S/C	S/C	YES
DAVY MCKEE LTD	ENGLAND	YES	YES	YES	NO	NO	YES
DEGROOT	NETHERLANDS	YES	YES	YES	YES	S/C	YES
E.T.P.M.	FRANCE	YES	YES	YES	YES	YES	YES
FLOUR OCEAN SERVICES	USA	YES	YES	YES	S/C	S/C	YES
FOSTER WHEELER	ENGLAND	YES	YES	YES	S/C	S/C	YES
GOTAVERKEN ARENDAL AB	SWEDEN	YES	YES	YES	YES	S/C	S/C
GULF MARINE FABRICATORS	USA	YES	YES	YES	YES	S/C	YES
HEEREMA	NETHERLANDS	YES	YES	YES	YES	YES	YES
HUMPHREYS & GLASGOW LTD	ENGLAND	YES	YES	YES	S/C	S/C	YES
IHC GUSTO BV	NETHERLANDS	YES	YES	YES	YES	S/C	YES
KVAERNER ENGINEERING A/S	NORWAY	YES	YES	YES	S/C	S/C	YES
MICOPERI S.p.A.	ITALY	YES	YES	YES	YES	YES	YES
MITSUI	JAPAN	YES	YES	YES	YES	S/C	YES
NKK (NIPPON KOKAN)	JAPAN	YES	YES	YES	YES	S/C	YES
PROTECH INTERNATIONAL LTD	FRANCE	YES	YES	YES	NO	NO	YES
RAYMOND INT'L	USA	YES	YES	YES	YES	YES	YES
SAIPEM S.p. A.	ITALY	YES	YES	YES	YES	YES	YES
SANTA FE INTERNATIONAL	USA	YES	YES	YES	S/C	YES	YES
SNAMPROGETTI LTD	ITALY	YES	YES	YES	YES	YES	YES
TAYWOOD SANTA FE LTD	ENGLAND	YES	YES	YES	YES	S/C	YES
THE LUMMUS CO LTD	ENGLAND	YES	YES	YES	S/C	S/C	YES
AALBORG VAERFT OFFSHORE	DENMARK	S/C	YES	S/C	YES	NO	NO
BERGAN MEKANISKE VERKSTEDER	NORWAY	NO	YES	NO	YES	NO	NO
BLOHM & VOSS AG	GERMANY	NO	YES	NO	YES	NO	NO
CHIYODA	JAPAN	NO	YES	NO	YES	NO	NO
DAEWOO SHIPBUILDING	KOREA	NO	YES	NO	YES	S/C	YES
DRAGADOS Y CONSTRUCCIONES S.A	SPAIN	NO	YES	NO	YES	NO	NO
HITACHI Zosen	JAPAN	NO	YES	YES	YES	YES	YES
HYUNDAI CORPORATION	KOREA	NO	YES	YES	YES	S/C	YES
ISHIKAWAJIMA-HARIMA HVY IND CO	JAPAN	NO	YES	YES	YES	YES	YES
KAWASAKI HVY IND LTD	JAPAN	NO	YES	NO	YES	S/C	YES
KHIC	KOREA	NO	YES	NO	YES	S/C	YES
NIPPON STEEL	JAPAN	NO	YES	YES	YES	S/C	YES
SAMSUNG	KOREA	NO	YES	NO	YES	S/C	YES
SASEBO HVY IND CO	JAPAN	NO	YES	NO	YES	S/C	YES
SUMITOMO HVY IND LTD	JAPAN	NO	YES	NO	YES	S/C	YES
TAYLOR WOODROW ENERGY LTD	ENGLAND	NO	YES	YES	YES	S/C	YES

MAJOR CONSTRUCTION COMPANIES THAT CAN DO ALL OR PART OF WORK AS PROPOSED TO THE "USSR"

LIST SORTED PROJECT MANAGEMENT /COMPANY/COUNTRY

13-Nov-86

COMPANY	COUNTRY	DESIGN	PROJECT			INSTALLATION	
			PROCUREMENT	MANAGEMENT	FABRICATION	OFFSHORE	ONSHORE
AKER ENGINEERING A/S	NORWAY	YES	YES	YES	YES	S/C	YES
BECHTEL INC.	USA	YES	YES	YES	S/C	S/C	YES
BROWN & ROOT - WIMPEY	ENGLAND	YES	YES	YES	YES	YES	YES
BROWN, JOHN ENGR'S & CONSTR.LTD	ENGLAND	YES	YES	YES	S/C	S/C	YES
DAVY MCKEE LTD	ENGLAND	YES	YES	YES	NO	NO	YES
DEGROOT	NETHERLANDS	YES	YES	YES	YES	S/C	YES
E.T.P.M.	FRANCE	YES	YES	YES	YES	YES	YES
FLOUR OCEAN SERVICES	USA	YES	YES	YES	S/C	S/C	YES
FOSTER WHEELER	ENGLAND	YES	YES	YES	S/C	S/C	YES
GOTAVERKEN ARENDAL AB	SWEDEN	YES	YES	YES	YES	S/C	S/C
GULF MARINE FABRICATORS	USA	YES	YES	YES	YES	S/C	YES
HEEREMA	NETHERLANDS	YES	YES	YES	YES	YES	YES
HITACHI ZOSEN	JAPAN	NO	YES	YES	YES	YES	YES
HUMPHREYS & GLASGOW LTD	ENGLAND	YES	YES	YES	S/C	S/C	YES
HYUNDAI CORPORATION	KOREA	NO	YES	YES	YES	S/C	YES
IHC GUSTO BV	NETHERLANDS	YES	YES	YES	YES	S/C	YES
ISHIKAWAJIMA-HARIMA HVY IND CO	JAPAN	NO	YES	YES	YES	YES	YES
KVAERNER ENGINEERING A/S	NORWAY	YES	YES	YES	S/C	S/C	YES
MICOPERI S.p.A.	ITALY	YES	YES	YES	YES	YES	YES
mitsui	JAPAN	YES	YES	YES	YES	S/C	YES
NIPPON STEEL	JAPAN	NO	YES	YES	YES	S/C	YES
NKK (NIPPON KOKAN)	JAPAN	YES	YES	YES	YES	S/C	YES
PROTECH INTERNATIONAL LTD	FRANCE	YES	YES	YES	NO	NO	YES
RAYMOND INT'L	USA	YES	YES	YES	YES	YES	YES
SAIFEM S.p. A.	ITALY	YES	YES	YES	YES	YES	YES
SANTA FE INTERNATIONAL	USA	YES	YES	YES	S/C	YES	YES
SNAMPROGETTI LTD	ITALY	YES	YES	YES	YES	YES	YES
TAYLOR WOODROW ENERGY LTD	ENGLAND	NO	YES	YES	YES	S/C	YES
TAYWOOD SANTA FE LTD	ENGLAND	YES	YES	YES	YES	S/C	YES
THE LUMMUS CO LTD	ENGLAND	YES	YES	YES	S/C	S/C	YES
AALBORG VAERFT OFFSHORE	DENMARK	S/C	YES	S/C	YES	NO	NO
BERGAN MEKANISKE VERKSTEDER	NORWAY	NO	YES	NO	YES	NO	NO
BLOHM & VOSS AG	GERMANY	NO	YES	NO	YES	NO	NO
CHIYODA	JAPAN	NO	YES	NO	YES	NO	NO
DAEWOO SHIPBUILDING	KOREA	NO	YES	NO	YES	S/C	YES
DRAGADOS Y CONSTRUCCIONES S.A	SPAIN	NO	YES	NO	YES	NO	NO
KAWASAKI HVY IND LTD	JAPAN	NO	YES	NO	YES	S/C	YES
KHIC	KOREA	NO	YES	NO	YES	S/C	YES
SANSUNG	KOREA	NO	YES	NO	YES	S/C	YES
SASERO HVY IND CO	JAPAN	NO	YES	NO	YES	S/C	YES
SUMITOMO HVY IND LTD	JAPAN	NO	YES	NO	YES	S/C	YES

MAJOR CONSTRUCTION COMPANIES THAT CAN DO ALL OR PART OF WORK AS PROPOSED TO THE "USSR"

LIST SORTED FABRICATION /COMPANY/COUNTRY

13-Nov-86

COMPANY	COUNTRY	DESIGN	PROJECT			INSTALLATION	
			PROCUREMENT	MANAGEMENT	FABRICATION	OFFSHORE	ONSHORE
!AALBORG VAERFT OFFSHORE	!DENMARK	! S/C	! YES	! S/C	! YES	! NO	! NO
!AKER ENGINEERING A/S	!NORWAY	! YES	! YES	! YES	! YES	! S/C	! YES
!BERGAN MEKANISKE VERKSTEDER	!NORWAY	! NO	! YES	! NO	! YES	! NO	! NO
!BLOHM & VOSS AG	!GERMANY	! NO	! YES	! NO	! YES	! NO	! NO
!BROWN & ROOT - WIMPEY	!ENGLAND	! YES	! YES	! YES	! YES	! YES	! YES
!CHIYODA	!JAPAN	! NO	! YES	! NO	! YES	! NO	! NO
!DAEWOO SHIPBUILDING	!KOREA	! NO	! YES	! NO	! YES	! S/C	! YES
!DEGROOT	!NETHERLANDS	! YES	! YES	! YES	! YES	! S/C	! YES
!DRAGADOS Y CONSTRUCCIONES S.A	!SPAIN	! NO	! YES	! NO	! YES	! NO	! NO
!E.T.P.M.	!FRANCE	! YES	! YES	! YES	! YES	! YES	! YES
!GOTAVERKEN ARENDAL AB	!SWEDEN	! YES	! YES	! YES	! YES	! S/C	! S/C
!GULF MARINE FABRICATORS	!USA	! YES	! YES	! YES	! YES	! S/C	! YES
!HEEREMA	!NETHERLANDS	! YES	! YES	! YES	! YES	! YES	! YES
!HITACHI ZOSEN	!JAPAN	! NO	! YES	! YES	! YES	! YES	! YES
!HYUNDAI CORPORATION	!KOREA	! NO	! YES	! YES	! YES	! S/C	! YES
!IHC GUSTO BV	!NETHERLANDS	! YES	! YES	! YES	! YES	! S/C	! YES
!ISHIKAWAJINA-HARIMA HVY IND CO	!JAPAN	! NO	! YES	! YES	! YES	! YES	! YES
!KAWASAKI HVY IND LTD	!JAPAN	! NO	! YES	! NO	! YES	! S/C	! YES
!KHIC	!KOREA	! NO	! YES	! NO	! YES	! S/C	! YES
!MICOPERI S.p.A.	!ITALY	! YES	! YES	! YES	! YES	! YES	! YES
!MITSUI	!JAPAN	! YES	! YES	! YES	! YES	! S/C	! YES
!NIPPON STEEL	!JAPAN	! NO	! YES	! YES	! YES	! S/C	! YES
!NKK (NIPPON KOKAN)	!JAPAN	! YES	! YES	! YES	! YES	! S/C	! YES
!RAYMOND INT'L	!USA	! YES	! YES	! YES	! YES	! YES	! YES
!SAIPEM S.p. A.	!ITALY	! YES	! YES	! YES	! YES	! YES	! YES
!SAMSUNG	!KOREA	! NO	! YES	! NO	! YES	! S/C	! YES
!SASEBO HVY IND CO	!JAPAN	! NO	! YES	! NO	! YES	! S/C	! YES
!SNAMPROGETTI LTD	!ITALY	! YES	! YES	! YES	! YES	! YES	! YES
!SUMITOMO HVY IND LTD	!JAPAN	! NO	! YES	! NO	! YES	! S/C	! YES
!TAYLOR WOODROW ENERGY LTD	!ENGLAND	! NO	! YES	! YES	! YES	! S/C	! YES
!TAYWOOD SANTA FE LTD	!ENGLAND	! YES	! YES	! YES	! YES	! S/C	! YES
!BECHTEL INC.	!USA	! YES	! YES	! YES	! S/C	! S/C	! YES
!BROWN, JOHN ENGR'S & CONSTR. LTD	!ENGLAND	! YES	! YES	! YES	! S/C	! S/C	! YES
!FLOUR OCEAN SERVICES	!USA	! YES	! YES	! YES	! S/C	! S/C	! YES
!FOSTER WHEELER	!ENGLAND	! YES	! YES	! YES	! S/C	! S/C	! YES
!HUMPHREYS & GLASGOW LTD	!ENGLAND	! YES	! YES	! YES	! S/C	! S/C	! YES
!KVAERNER ENGINEERING A/S	!NORWAY	! YES	! YES	! YES	! S/C	! S/C	! YES
!SANTA FE INTERNATIONAL	!USA	! YES	! YES	! YES	! S/C	! YES	! YES
!THE LUMMUS CO LTD	!ENGLAND	! YES	! YES	! YES	! S/C	! S/C	! YES
!DAVY MCKEE LTD	!ENGLAND	! YES	! YES	! YES	! NO	! NO	! YES
!PROTECH INTERNATIONAL LTD	!FRANCE	! YES	! YES	! YES	! NO	! NO	! YES

MAJOR CONSTRUCTION COMPANIES THAT CAN DO ALL OR PART OF WORK AS PROPOSED TO THE "USSR"

LIST SORTED OFFSHORE INSTALLATION /COMPANY/COUNTRY

13-Nov-86

COMPANY	COUNTRY	DESIGN	PROJECT			INSTALLATION	
			PROCUREMENT	MANAGEMENT	FABRICATION	OFFSHORE	ONSHORE
BROWN & ROOT - WIMPEY	ENGLAND	YES	YES	YES	YES	YES	YES
E.T.P.M.	FRANCE	YES	YES	YES	YES	YES	YES
HEEREMA	NETHERLANDS	YES	YES	YES	YES	YES	YES
HITACHI ZOSEN	JAPAN	NO	YES	YES	YES	YES	YES
ISHIKAWAJIMA-HARIHA HVY IND CO	JAPAN	NO	YES	YES	YES	YES	YES
MICOPERI S.p.A.	ITALY	YES	YES	YES	YES	YES	YES
RAYMOND INT'L	USA	YES	YES	YES	YES	YES	YES
SAIPEM S.p. A.	ITALY	YES	YES	YES	YES	YES	YES
SANTA FE INTERNATIONAL	USA	YES	YES	YES	S/C	YES	YES
SNAMPROGETTI LTD	ITALY	YES	YES	YES	YES	YES	YES
AKER ENGINEERING A/S	NORWAY	YES	YES	YES	YES	S/C	YES
RECHTEL INC.	USA	YES	YES	YES	S/C	S/C	YES
BROWN, JOHN ENGR'S & CONSTR.LTD	ENGLAND	YES	YES	YES	S/C	S/C	YES
DAEWOO SHIPBUILDING	KOREA	NO	YES	NO	YES	S/C	YES
DEGROOT	NETHERLANDS	YES	YES	YES	YES	S/C	YES
FLOUR OCEAN SERVICES	USA	YES	YES	YES	S/C	S/C	YES
FOSTER WHEELER	ENGLAND	YES	YES	YES	S/C	S/C	YES
GOTAVERKEN ARENDAL AB	SWEDEN	YES	YES	YES	YES	S/C	S/C
GULF MARINE FABRICATORS	USA	YES	YES	YES	YES	S/C	YES
HUMPHREYS & GLASGOW LTD	ENGLAND	YES	YES	YES	S/C	S/C	YES
HYUNDAI CORPORATION	KOREA	NO	YES	YES	YES	S/C	YES
IHC GUSTO BV	NETHERLANDS	YES	YES	YES	YES	S/C	YES
KAWASAKI HVY IND LTD	JAPAN	NO	YES	NO	YES	S/C	YES
KHIC	KOREA	NO	YES	NO	YES	S/C	YES
KVAERNER ENGINEERING A/S	NORWAY	YES	YES	YES	S/C	S/C	YES
MIITSUI	JAPAN	YES	YES	YES	YES	S/C	YES
NIPPON STEEL	JAPAN	NO	YES	YES	YES	S/C	YES
NKK (NIPPON KOKAN)	JAPAN	YES	YES	YES	YES	S/C	YES
SAMSUNG	KOREA	NO	YES	NO	YES	S/C	YES
SASEBO HVY IND CO	JAPAN	NO	YES	NO	YES	S/C	YES
SUMITOMO HVY IND LTD	JAPAN	NO	YES	NO	YES	S/C	YES
TAYLOR WOODROW ENERGY LTD	ENGLAND	NO	YES	YES	YES	S/C	YES
TAYWOOD SANTA FE LTD	ENGLAND	YES	YES	YES	YES	S/C	YES
THE LUMMUS CO LTD	ENGLAND	YES	YES	YES	S/C	S/C	YES
AALBORG VAERFT OFFSHORE	DENMARK	S/C	YES	S/C	YES	NO	NO
BERGAN MEKANISKE VERKSTEDER	NORWAY	NO	YES	NO	YES	NO	NO
BLOHM & VOSS AG	GERMANY	NO	YES	NO	YES	NO	NO
CHIYODA	JAPAN	NO	YES	NO	YES	NO	NO
DAVY MCKEE LTD	ENGLAND	YES	YES	YES	NO	NO	YES
DRAGADOS Y CONSTRUCCIONES S.A	SPAIN	NO	YES	NO	YES	NO	NO
PROTECH INTERNATIONAL LTD	FRANCE	YES	YES	YES	NO	NO	YES

MAJOR CONSTRUCTION COMPANIES THAT CAN DO ALL OR PART OF WORK AS PROPOSED TO THE "USSR"

LIST SORTED ONSHORE INSTALLATION /COMPANY/COUNTRY

13-Nov-86

COMPANY	COUNTRY	DESIGN	PROCUREMENT	PROJECT		INSTALLATION	
				MANAGEMENT	FABRICATION	OFFSHORE	ONSHORE
AKER ENGINEERING A/S	NORWAY	YES	YES	YES	YES	S/C	YES
BECHTEL INC.	USA	YES	YES	YES	S/C	S/C	YES
BROWN & ROOT - WIMPEY	ENGLAND	YES	YES	YES	YES	YES	YES
BROWN, JOHN ENGR'S & CONSTR. LTD	ENGLAND	YES	YES	YES	S/C	S/C	YES
DAEWOO SHIPBUILDING	KOREA	NO	YES	NO	YES	S/C	YES
DAVY MCKEE LTD	ENGLAND	YES	YES	YES	NO	NO	YES
DEGROOT	NETHERLANDS	YES	YES	YES	YES	S/C	YES
E.T.P.M.	FRANCE	YES	YES	YES	YES	YES	YES
FLOUR OCEAN SERVICES	USA	YES	YES	YES	S/C	S/C	YES
FOSTER WHEELER	ENGLAND	YES	YES	YES	S/C	S/C	YES
GULF MARINE FABRICATORS	USA	YES	YES	YES	YES	S/C	YES
HEEREMA	NETHERLANDS	YES	YES	YES	YES	YES	YES
HITACHI Zosen	JAPAN	NO	YES	YES	YES	YES	YES
HUMPHREYS & GLASGOW LTD	ENGLAND	YES	YES	YES	S/C	S/C	YES
HYUNDAI CORPORATION	KOREA	NO	YES	YES	YES	S/C	YES
IHC GUSTO BV	NETHERLANDS	YES	YES	YES	YES	S/C	YES
ISHIKAWAJINA-HARIMA HVY IND CO	JAPAN	NO	YES	YES	YES	YES	YES
KAWASAKI HVY IND LTD	JAPAN	NO	YES	NO	YES	S/C	YES
KHIC	KOREA	NO	YES	NO	YES	S/C	YES
KVAERNER ENGINEERING A/S	NORWAY	YES	YES	YES	S/C	S/C	YES
MICOPERI S.p.A.	ITALY	YES	YES	YES	YES	YES	YES
mitsui	JAPAN	YES	YES	YES	YES	S/C	YES
NIPPON STEEL	JAPAN	NO	YES	YES	YES	S/C	YES
NKK (NIPPON KOKAN)	JAPAN	YES	YES	YES	YES	S/C	YES
PROTECH INTERNATIONAL LTD	FRANCE	YES	YES	YES	NO	NO	YES
RAYMOND INT'L	USA	YES	YES	YES	YES	YES	YES
SAIFEM S.p. A.	ITALY	YES	YES	YES	YES	YES	YES
SAMSUNG	KOREA	NO	YES	NO	YES	S/C	YES
SANTA FE INTERNATIONAL	USA	YES	YES	YES	S/C	YES	YES
SASEBO HVY IND CO	JAPAN	NO	YES	NO	YES	S/C	YES
SNAMPROGETTI LTD	ITALY	YES	YES	YES	YES	YES	YES
SUMITOMO HVY IND LTD	JAPAN	NO	YES	NO	YES	S/C	YES
TAYLOR WOODROW ENERGY LTD	ENGLAND	NO	YES	YES	YES	S/C	YES
TAYWOOD SANTA FE LTD	ENGLAND	YES	YES	YES	YES	S/C	YES
THE LUMMUS CO LTD	ENGLAND	YES	YES	YES	S/C	S/C	YES
GOTAVERKEN ARENDAL AB	SWEDEN	YES	YES	YES	YES	S/C	S/C
AALBORG VAERFT OFFSHORE	DENMARK	S/C	YES	S/C	YES	NO	NO
BERGAN MEKANISKE VERKSTEDER	NORWAY	NO	YES	NO	YES	NO	NO
BLOHM & VOSS AG	GERMANY	NO	YES	NO	YES	NO	NO
CHIYODA	JAPAN	NO	YES	NO	YES	NO	NO
DRAGADOS Y CONSTRUCCIONES S.A	SPAIN	NO	YES	NO	YES	NO	NO

Major Worldwide Industrial Instrumentation and Control Suppliers

Company	Base Country	Markets Served	Specialty Products	Broad Range Products	Application Engineering	Installation Start-Up Services
AccuRay	U.S.A.	Primarily (Pulp & Paper)	Yes	No	Yes	Yes
Bailey	U.S.A.	All	Yes	Yes	Yes	Yes
Foxboro	U.S.A.	All	Yes	Yes	Yes	Yes
Fisher Controls	U.S.A.	All	Yes	Yes	Yes	Yes
Fischer & Porter	U.S.A.	All	Yes	Yes	Yes	Yes
Emerson Electric	U.S.A.	All	Yes	Yes	Yes	Yes
Honeywell	U.S.A.	All	Yes	Yes	Yes	Yes
Leeds & Northrup	U.S.A.	All	Yes	Yes	Yes	Yes
Moore Products	U.S.A.	All	Yes	Yes	No	Yes
Measurex	U.S.A.	Primarily (Pulp & Paper)	Yes	No	Yes	Yes
Taylor	U.S.A.	All	Yes	Yes	Yes	Yes
Vaisala	Finland	All	Yes	Yes	Yes	Yes
VEB/Alstom (Contrôle Bailey)	France	All	Yes	Yes	Yes	Yes
LSEA	Sveden	All	Yes	Yes	Yes	Yes
Siemens	W.Germany	All	Yes	Yes	Yes	Yes
SBC	Switzerland/ W.Germany	All	Yes	Yes	Yes	Yes
SBC/Kent	U.K.	All	Yes	Yes	Yes	Yes
tertmann & Braun	W.Germany	All	Yes	Yes	Yes	Yes
Tanaka Honeywell	Japan	All	Yes	Yes	Yes	Yes
Tokogawa	Japan	All	Yes	Yes	Yes	Yes
Toshiba	Japan	All	Yes	Yes	Yes	Yes
Yamazu	Japan	All	Yes	Yes	Yes	Yes
Mitsubishi	Japan	All	Yes	Yes	Yes	Yes
Yokogawa Electric	Japan	All	Yes	Yes	Yes	Yes
Philips	Holland	All	Yes	Yes	Yes	Yes
Rockwell	W.Germany	All	Yes	Yes	Yes	Yes

MAJOR MARINE CONSTRUCTION COMPETITORS ON FABRICATION, DERRICK BARGE WORK
AND LAY BARGE WORK - FY 1987 & 1988

Sheet 1 of 6

FY 1987 Fabrication At 9/30/86

Manhours (Ex Bottles)	Brown & Root												Total Awd.	Wted. Unawd.	Misc. Fcst.	Total Mkt.
	McDermott	ETPM	Avondale	RGC	Bouygues	NPCC	Gunanusa	Nippon Steel	Daewoo	Hyundai	Other					
NA/USG	1198	73	0	517	0	0	0	0	0	0	0	1967	3755	459	250	4464
NA/W. Coast	0	0	0	0	0	0	0	0	0	0	1565	924	2489	0	0	2489
Arc/Can	0	1009	0	0	0	0	0	0	0	120	0	65	1194	0	0	1194
Mexico	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C&S America	0	0	0	0	0	0	0	0	0	0	0	0	0	680	0	680
N.SEA	1624	1519	0	0	2729	0	0	0	0	0	0	11927	17799	1287	0	19086
Europe	576	0	0	0	0	0	0	0	0	0	99	304	979	0	0	979
W. Africa	0	0	29	0	0	63	0	0	0	0	0	388	480	305	0	785
A. Gulf	1621	0	54	0	0	0	1635	0	0	0	0	645	3955	496	0	4451
India	1799	0	0	0	0	0	1100	0	1000	0	0	1138	5037	1225	0	6262
Egypt	453	0	0	0	0	0	0	0	0	0	0	727	1180	86	0	1266
Singapore/China	1327	0	0	0	0	0	0	645	0	0	0	1787	3759	222	0	3981
Australia	0	0	0	0	0	0	0	0	0	0	0	1494	1494	0	0	1494
TOTAL	8598	2601	83	517	2729	63	2735	645	1000	120	1664	21366	42121	4760	250	47131
% OF TOTAL AWD	20%	6%	0%	1%	6%	0%	6%	2%	2%	0%	4%	51%	100%			

FY 1988 Fabrication At 9/30/86

Manhours (Ex Bottles)	Brown & Root												Total Awd.	Wted. Unawd.	Misc. Fcst.	Total Mkt.
	McDermott	ETPM	Avondale	RGC	Bouygues	NPCC	Gunanusa	Nippon Steel	Daewoo	Hyundai	Other					
NA/USG	59	0	0	5	0	0	0	0	0	0	0	610	674	2364	1462	4500
NA/W. Coast	0	0	0	0	0	0	0	0	0	0	1441	31	1472	605	0	2077
Arc/Can	0	56	0	0	0	0	0	0	0	0	0	0	56	0	0	56
Mexico	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C&S America	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N.SEA	558	1018	0	0	1491	0	0	0	0	0	0	2394	5461	12187	0	17648
Europe	0	0	0	0	0	0	0	0	0	0	0	0	0	864	0	864
W. Africa	0	0	0	0	0	37	0	0	0	0	0	613	650	524	0	1174
A. Gulf	0	0	0	0	0	0	0	0	0	0	0	10	10	5829	-1500	4339
India	233	0	0	0	0	0	0	0	0	0	0	402	635	7509	-1144	7000
Egypt	0	0	0	0	0	0	0	0	0	0	0	17	17	777	206	1000
Singapore/China	232	0	0	0	0	0	0	125	0	0	0	224	581	6666	-747	6500
Australia	0	0	0	0	0	0	0	0	0	0	0	310	310	0		310
TOTAL	1082	1074	0	5	1491	37	0	125	0	0	1441	4611	9866	37325	-1723	45468
% OF TOTAL AWD	11%	11%	0%	0%	15%	0%	0%	1%	0%	0%	15%	47%	100%			

FY 1987 Derrick Days At 9/30/86

	McDermott	Brown & Root	Raymond	Heerema	ETPM	Saipem	Micoperi	Bouygues	Nippon Steel	NPCC	Hyundai	Other	Total Awd.	Wted. Unawd.	Misc. Fcst.	Total Mkt.
NA/USG	422	164	95	170	0	0	0	0	0	0	0	283	1134	120	0	1254
NA/W. Coast	217	0	0	0	0	0	0	0	0	0	0	0	217	49	0	266
ARC/CAN	0	146	0	0	0	0	0	0	0	0	0	0	146	0	0	146
Mexico	584	0	0	0	0	0	0	0	0	0	0	0	584	131	0	715
C&S America	0	0	0	0	0	0	0	0	0	0	0	1460	1460	77	0	1537
N. Sea	98	0	0	197	13	0	0	0	0	0	0	33	341	0	0	341
Europe	0	0	0	0	0	37	107	0	0	0	0	0	144	0	0	144
W. Africa	35	0	0	0	32	10	0	0	0	0	0	0	77	145	50	272
A. Gulf	114	0	30	0	9	0	0	0	0	203	0	654	1010	7	30	1047
India	112	0	0	20	69	0	0	0	129	31	0	20	381	0	0	381
Egypt	431	0	0	0	0	0	0	0	0	0	0	168	599	0	0	599
Singapore/China	240	0	0	35	0	0	0	0	12	0	0	224	511	150	0	661
Australia	149	0	0	0	0	0	0	0	0	0	0	0	149	0	0	149
TOTAL	2402	310	125	422	123	47	107	0	141	234	0	2842	6753	679	80	7512
% OF TOTAL AWD	36%	5%	2%	6%	2%	1%	2%	0%	2%	3%	0%	42%	100%			
% OF TOTAL CAP.	29%	12%	0%	10%	6%	2%	3%	3%	2%	3%	6%	24%	100%			

FY 1988 Derrick Days At 9/30/86

	McDermott	Brown & Root	Raymond	Heerema	ETPM	Saipem	Micoperi	Bouygues	Nippon Steel	NPCC	Hyundai	Other	Total Awd.	Wted. Unawd.	Misc. Fcst.	Total Mkt.
NA/USG	0	0	10	0	0	0	0	0	0	0	0	0	10	360	780	1150
NA/W. Coast	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ARC/CAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mexico	61	0	0	0	0	0	0	0	0	0	0	0	61	604	0	665
C&S America	0	0	0	0	0	0	270	0	0	0	0	1464	1734	166	0	1900
N. Sea	121	0	0	115	0	0	0	0	0	0	0	0	236	42	0	278
Europe	0	0	0	0	0	10	50	0	0	0	0	0	60	0	0	60
W. Africa	2	0	0	0	0	0	0	8	0	0	0	0	10	105	135	250
A. Gulf	0	0	0	0	0	0	0	0	0	0	0	366	366	349	100	815
India	225	0	0	0	0	0	0	0	0	51	0	0	276	469	-145	600
Egypt	61	0	0	0	0	0	0	0	0	0	0	0	61	299	100	460
Singapore/China	71	0	0	0	0	0	0	0	0	0	0	58	129	491	172	792
Australia	101	0	0	0	0	0	0	0	0	0	0	0	101	123	0	224
TOTAL	642	0	10	115	0	10	320	8	0	51	0	1888	3044	3008	1142	7194
% OF TOTAL AWD	21%	0%	0%	4%	0%	0%	11%	0%	0%	2%	0%	62%	100%			
% OF TOTAL CAP.	30%	11%	0%	9%	6%	2%	4%	3%	2%	3%	6%	24%	100%			

FY 1987 Lay Days

At 9/30/86

	McDermott	Brown & Root	Santa Fe	ETPM	Saipem	Micoperi	Bouygues	Nippon Steel	NPCC	Other	Total Awd.	Wted. Unawd.	Misc. Fcst.	Total Mkt.
NA/USG	103	157	105	0	0	0	0	0	0	395	760	59	0	819
NA/W. Coast	283	0	0	0	0	0	0	0	0	46	329	19	0	348
Arc/Can	0	18	0	0	0	0	0	0	0	0	18	0	0	18
Mexico	75	0	0	0	0	0	0	0	0	0	75	81	0	156
C&S America	0	0	0	0	0	0	0	0	0	0	0	40	0	40
N. Sea	50	77	30	7	80	0	0	0	0	35	279	0	0	279
Europe	0	0	0	0	87	0	0	0	0	0	87	0	0	87
W. Africa	62	0	0	0	0	0	0	0	0	10	72	156	30	258
A. Gulf	78	0	0	13	0	0	0	0	95	162	348	45	30	423
India	153	0	0	0	0	0	0	18	0	64	235	201	0	436
Egypt	0	0	0	0	25	0	0	0	0	77	102	0	0	102
Singapore/China	387	0	0	0	0	0	0	13	0	195	595	5	0	600
Australia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1191	252	135	20	192	0	0	31	95	984	2900	606	60	3566
% OF TOTAL AWD	41%	9%	5%	1%	7%	0%	0%	1%	3%	34%	100%			
% OF TOTAL CAP.	27%	18%	4%	7%	10%	1%	3%	3%	5%	24%	100%			

FY 1988 Lay Days

At 9/30/86

	McDermott	Brown & Root	Santa Fe	ETPM	Saipem	Micoperi	Bouygues	Nippon Steel	NPCC	Other	Total Awd.	Wted. Unawd.	Misc. Fcst.	Total Mkt.
NA/USG	0	103	0	0	0	0	0	0	0	14	117	169	514	800
NA/W. Coast	0	0	0	0	0	0	0	0	0	0	0	97	0	97
Arc/Can	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mexico	0	0	0	0	0	0	0	0	0	0	0	329	0	329
C&S America	0	0	0	0	0	242	0	0	0	0	242	143	0	385
N. Sea	71	0	0	0	47	0	0	0	0	0	118	158	0	276
Europe	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W. Africa	0	0	0	0	0	0	10	0	0	0	10	126	100	236
A. Gulf	0	0	0	0	0	0	0	0	0	0	0	281	58	339
India	59	0	0	0	81	0	0	0	0	0	140	625	-200	565
Egypt	0	0	0	0	0	0	0	0	0	0	0	45	100	145
Singapore/China	27	0	0	0	0	0	0	0	0	5	32	162	100	294
Australia	66	0	0	0	0	0	0	0	0	0	66	0	0	66
TOTAL	223	103	0	0	128	242	10	0	0	19	725	2135	672	3532
% OF TOTAL AWD	31%	14%	0%	0%	18%	33%	1%	0%	0%	3%	100%			
% OF TOTAL CAP.	27%	18%	4%	7%	10%	1%	3%	3%	5%	24%	100%			