

FINAL REPORT:

A STUDY INTO OPTIMIZING TECHNOLOGY TRANSFER FOR ATLANTIC CANADA'S OIL AND GAS INDUSTRY

A STUDY OF SERVICE AND SUPPLY CAPABILITIES IN ATLANTIC CANADA TO MEET CURRENT AND FUTURE DEMAND REQUIREMENTS OF OIL AND GAS VALUE CHAIN

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In co-operation with:
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Industry Canada
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EXECUTIVE SUMMARY

Atlantic Canada's oil and gas industry continues to make significant progress, with major investments being made along the value chain.

The upstream is well advanced, with the offshore leading the onshore. Several exploration and production companies, as well as numerous service and supply companies, populate this section of the value chain. A midstream has developed with the first gas from the region, along with onshore processing facilities, a gas transmission pipeline and planned laterals. The downstream has always been well represented in the region with refineries, service stations and product wholesalers.

The analysis and statistics indicate that local participation along the value chain is very promising, but not yet fully exploited. Focus needs to be directed towards several key activities in the chain. As local industry capability and capacity continues to increase, there is also a need for greater information co-ordination and measurement of technology transfer, now and in the future.

The realization of both the value chain enhancement and technology transfer capture needs to be achieved by co-ordinated inter-Provincial effort, displaying a consistent strategy and approach to the major investors.

Highlights of the findings related to the value chain include:

- Over 3,000 Atlantic Canada entries are listed in 400+ categories of activities associated with the oil and gas value chain;
- In the offshore service and supply sector only 12% of the categories are missing or under-represented;
- In the onshore sector the figure is much higher at 63%, only to be expected owing to the emerging status of this particular industry sector;
- A common approach to enhancing local participation in the industry's value chain should be sought, integrating several international approaches into an "Atlantic Canada specific" solution;
- This approach, and all information regarding the value chain, should be collected, audited and disseminated by a single co-ordinating entity, so that all jurisdictions can begin working from a common base of knowledge and understanding;
- Stronger petroleum project engineering skills must be attracted in the short term and then developed indigenously in the medium to longer term;
- Focus should be on existing capability to carry out front end project related engineering work first, then developing into participation in detailed engineering work for add-on or stand-alone projects;
- The supplier base should be broadened at the intermediate levels of project development and procurement to include capability in large components and subsystems;
- Supporting the production phases of the projects is equally important, either from an engineering perspective or from the service and supply of maintenance, repair and

- operations materials (MROs), where margins can be greater;
- Overall the strategy for the Atlantic Canada Provinces should be to act co-operatively and build capacity from within.

Highlights of the findings related to technology transfer include:

- There is a clear need for further information collection and dissemination, evidenced by the paucity of information that currently exists;
- Information from industry recipients needs to be collected once technology transfer has taken place and also the evaluation of the proponents' commitments in this area need to be scrutinized;
- 78% of the technology transfer recorded has taken place in the development phase of the projects, with 75% of that attributable to two projects - Hibernia and Sable;
- There needs to be a method identified and developed for the measurement of the amount and effectiveness of technology transfer in the region;
- Other than the Sable Offshore Energy Project, the reporting to the various Offshore Petroleum Boards on technology transfer is not systematic;
- Atlantic Canada is ahead of international statistics in successor training with respect to the replacement of foreign expertise in the operations phase of projects;
- There are still major opportunities for technology transfer capture in the region, both in the medium term and the longer term; and
- An organization that can act as an intermediary between local suppliers, operators, prime contractors and government needs to be established, similar to that instigated in other jurisdictions around the world

While a lot has been accomplished, there is still a lot to do in creating a common vision with a coherent approach, reducing inter-provincial barriers, standardizing measurement and exchange of information, auditing results and continuing to provide a stable environment in the face of changing commodity prices over the extended time periods of major project development.

1.0 INTRODUCTION

The oil and gas industry is active and flourishing in Atlantic Canada. The year 2000 saw several significant developments, with milestone activities occurring regularly. The pace quickened, the planning came to fruition and progress was achieved.

1.1 PREFACE

We have seen gas from the Sable Project reach US markets, a first for the area. Terra Nova took delivery of its Floating Production, Storage and Offloading vessel, again a first for the region in the use of such technology. The White Rose Development Plan began to take shape on its journey to becoming the next major oil project off the drawing board. PanCanadian announced the results of its most recent Deep Panuke gas test, indicating the potential for a new, major gas development. ExxonMobil received approval to drill as many as nine gas wells in the Sable Island area, further emphasizing the importance attached to the region by major international players. Both the Canada-Newfoundland Offshore Petroleum Board and Canada-Nova Scotia Offshore Petroleum Board issued Calls for Bids to keep the momentum going. The Goldsboro gas processing facility accepted raw gas from Sable Offshore Energy Inc., the first link in the gas value chain onshore. Seismic activity continues at an accelerated pace offshore, as both speculative and non-speculative seismic programs were initiated or completed. On Prince Edward Island, drilling was scheduled for the Bear River vicinity onshore and in New Brunswick laterals from the Maritimes and Northeast Pipeline were under study and gas was discovered onshore.

The positives were prevalent, but there were also issues still to be resolved. The year saw the appointment of an Arbitrator in the boundary dispute between the two Provinces with the major offshore activities. Also discussions between the incumbent fishing industry and the emergent hydrocarbon industry continued, as their individual issues were surfaced, with a desire of both parties to work towards co-existence. Furthermore the oil industry views the area as one hydrocarbon region, whereas the Provinces have several jurisdictions, each covering their own sectors.

However, in order to sustain Atlantic Canada's oil and gas sector initiatives to provide maximum benefits in the future, the sharing of information, multi-level communication between all stakeholders, informed decision-making and a unified vision of the way forward continue to be critical elements for capacity building and development. The fostering of an industry sector from early and impressive success to long-term, sustainable growth providing future and secure economic benefits, can only be achieved if timely and correct decisions are made by informed people.

Whether it is the policy makers, legislators, regulators and agencies at Federal or Provincial level, the international companies and national oil industry entrepreneurs at Board or operating level, or Atlantic Canada's business and academic community at all levels, the realization of direct, indirect and induced opportunities will only occur against a background of understanding and clarity of decision-making. This is most applicable to those geographically removed from Atlantic Canada or outside of the petroleum sector, but who,

nevertheless, have by virtue of their position, influence and responsibility a major impact on the outcomes that their decisions will impart.

This study, in two parts, is an attempt to provide information to such a varied audience within the defined fields of Value Chain capability and Technology Transfer success in Atlantic Canada's oil and gas sector.

1.2 STUDY BACKGROUND

PricewaterhouseCoopers is pleased to present our review of Atlantic Canada's Technology Transfer and Value Chain/Service and Supply Capabilities with respect to the region's oil and gas sector.

The following participants commissioned the study:

- Newfoundland Ocean Industries Association (NOIA);
- Offshore/Onshore Technologies Association of Nova Scotia (OTANS);
- Atlantic Resource Industries Association of New Brunswick (ARIA);
- Canadian Manufacturers and Exporters, Prince Edward Island;
- Atlantic Canada Opportunities Agency (ACOA);
- Natural Resources Canada (NRCan); and
- Industry Canada (IC)

NOIA acted as administrative contact for the purposes of this engagement. The other organizations, as proponents or partners, joined with NOIA to constitute the Steering Committee to monitor the activities of the engagement. ACOA acted on the Steering Committee to represent Natural Resources Canada and Industry Canada, as well as itself. This Committee was formally constituted as the Technology Transfer and Regional Supply and Service Capabilities Studies Steering Committee.

This project was commissioned following the publication in 1999 of the report "*Harnessing the Potential – Atlantic Canada's Oil and Gas Industry*", a study previously carried out under the auspices of the three industry associations listed above. "*Harnessing the Potential...*" provides a comprehensive overview of Atlantic Canada's oil and gas industry. It demonstrates the importance of oil and gas resources and related industries to Atlantic Canada. The Report also furnishes a basis for a strategy to optimize economic development opportunities within the region from the oil and gas sector. Accordingly, this PricewaterhouseCoopers engagement is a follow-on to "*Harnessing the Potential...*". It is intended to provide a basis for supporting the co-ordination and planning for the long-term growth of the region's oil and gas industry, with particular emphasis on the supply and service sector.

Essentially, the present engagement consisted of two related studies, each with specific objectives, namely:

- 1) A Study Into Optimizing Technology Transfer for Atlantic Canada's Oil and Gas Industry, with the objectives of:
 - a. preparing an overview of technology transfer activities in Atlantic Canada's oil and gas industry;
 - b. raising awareness of the importance of technology transfer; and
 - c. making recommendations for optimizing technology transfer opportunities within the industry for Atlantic Canada.
- 2) A Study of Service and Supply Capabilities in Atlantic Canada to meet Current and Future Demand Requirements of the Oil and Gas Value Chain, with the objectives of:
 - a. preparing an overview of the services and supply capabilities in Atlantic Canada within the context of the oil and gas value chain;
 - b. identifying capabilities that could be enhanced to gain greater market share; and
 - c. making recommendations that would encourage future profitable growth of the Atlantic Canada oil and gas services and supply industry.

This report integrates the findings, conclusions, and recommendations of these two studies.

1.3 STUDY APPROACH

For the purposes of continuity and consistency of approach both studies primarily focus on the following five sector projects:

- 1) Cohasset-Panuke on the Scotian Shelf;
- 2) Hibernia in the Jeanne d'Arc Basin on the Grand Banks;
- 3) Terra Nova in the same basin;
- 4) Sable Offshore Energy Project, proximate to Sable Island; and
- 5) Maritimes and Northeast Pipeline, from Nova Scotia to the US.

Other projects, such as White Rose and Hebron, were also used to amplify and exemplify the analysis as and when appropriate.

Both primary and secondary sources of information were used during the data collection phase, supplemented by many conference calls and direct meetings with the Steering Committee, who provided additional information throughout the study process.

Key sources of information included the Development Plans and Benefit Plans prepared by the various project proponents and the Records of Decisions in respect of those Plans, published by the Canada-Newfoundland Offshore Petroleum Board (CNOPB) or the Canada-Nova Scotia Offshore Petroleum Board (CNSOPB). Primary information was also obtained directly from officials of the project owners/operators on topics relevant to the study. This information was supplemented by various previously released background studies that provided historical references, as well as current profiles of supply chain capabilities in the region as documented in industry directories and the industry-specific media publications. Our information base was further augmented by Internet searches and references to relevant websites. A survey of Atlantic Canada industry, requesting technology transfer experiences,

was carried out through the offices of the three industry associations participating. A full bibliography is attached as an Appendix.

Finally, information was gathered by direct interviews to make up six case studies for technology transfer, and a profile of relevant industrial capabilities in Prince Edward Island. In conjunction with the gathered information, these case studies provided supplementary factual information, and allowed for observations and comments on the nature and extent of success in technology transfer.

For both case studies and other study components, the interviews we did conduct were developed with a view to obtaining both factual information and an informed perspective. We believe that the interviewees were significant sources of information. Our choice of individuals to participate in the interviews was guided by the following selection criteria:

- organizations with previous involvement in technology transfer;
- a senior position within the organization in question;
- the individual was recommended, or at least referenced to us, by another person known to us from our research; and
- the individual was personally involved in some way with technology transfer or value chain assessment.

As would be expected, we attempted to draw out not only facts, but also the meanings that the interviewees attached to relevant outcomes, and the rationale for explaining any given results.

1.4 REPORT STRUCTURE

In order to provide clarity of thought process and an easier understanding of the relevance of comments and recommendations, we have reversed the order of presentation of analysis and results from the listing supplied in the Request For Proposal, which calls for a two-part study of Technology Transfer matters and Value Chain assessment. There is merit to unravel the value chain first, using this as the scene-setter and explanatory vehicle, before moving on to the specific areas of the value chain where technology transfer has, or has not, occurred.

This report is organized into three major sections, followed by the relevant appendices.

Section 1.0 Introduction provides an overview of the study and sets the industry context for both studies. Specific topics covered include:

- study background, approach and report structure;
- overview of the hydrocarbon resources of Atlantic Canada; and
- brief description of five major projects and industrial benefits realized

Section 2.0 Service and Supply Capabilities deals with Atlantic Canada's ability to meet current and future demand requirements of the oil and gas value chain. Sub-sections cover:

- the value chain in context;

- how other jurisdictions have fared and the lessons learned; and
- future development prospects.

Section 3.0 Technology Transfer looks into optimizing technology transfer for the oil and gas sector in Atlantic Canada. The following topics are included:

- an overview of technology transfer, as it relates to the oil and gas industry, in Atlantic Canada to date;
- an inter-jurisdictional comparison of the project proposals and approvals, as they relate to technology transfer;
- an overview of successor training and development to date;
- results of the technology transfer case studies;
- technology transfer in other jurisdictions, and lessons learned; and
- future prospects and recommendations for enhancing technology transfer.

The appendices provide bibliographic and database material.

1.5 RESOURCE OVERVIEW

Atlantic Canada has become a major region for oil and gas production. The prospectivity of the basins is exciting, the current daily production is on the rise, reserves estimates have been increased recently and exploration activity is strong. All this activity has generated in excess of \$14 billion investment expenditures over the last decade. As new projects are developed, above and beyond Hibernia and Terra Nova, oil production is expected to reach 500,000 barrels per day. Once this expectation is reached, it will account for 50% of Canada's light crude oil production. Given current gas prices and the overall continental supply/demand characteristics, gas development projects are becoming ever more viable.

The table below indicates the current East Coast offshore projects in their various stages, giving substance to the region's present and future potential:

PROJECT	OPERATOR	PROVEN RECOVERABLE Oil/Condensate Million bbl	PROVEN RECOVERABLE Gas Tcf	ONSTREAM DATE
Nova Scotia				
Sable	SOEI	0/40	3.8	December 1999
Panuke	PanCanadian	-	-	2003-2004
Newfoundland				
Hibernia	HMDC	884/145	1.4	November 1997
Terra Nova	Petro-Canada	406/14	0.3	Mid 2001
White Rose	Husky	274/77	2.1	2003-2004
Hebron	Chevron	325/0	-	2006

Sources: CNOPB, CNSOPB

Atlantic Canada has a long history in the search for hydrocarbons, stretching back to the mid 1800s beginning in Newfoundland. The modern era ramped up in the 1960s with the emphasis placed on three offshore basins: the Jeanne d'Arc, the Scotian Shelf and the Labrador Shelf.

However, the 1990s have seen activity occur in other basins, notably the Sub-Laurentian Basin, the Flemish Pass, offshore Cape Breton Island and off the west coast of Newfoundland, as well as onshore prospecting in all four Atlantic Provinces.

Further highlights of Atlantic Canada's oil and gas resources profile include:

- There have been more than 150 wells drilled into the Grand Banks by explorationists and identified proven crude oil reserves have been increased to more than 2 billion barrels, 9.3 tcf of natural gas and 400+ barrels of natural gas liquids;
- A similar number have been drilled on the Scotian Shelf, giving postulated reserves of 18 tcf of natural gas;
- After a field life extension, Cohasset-Panuke (COPAN) has been de-commissioned, following successful production history;
- Hibernia production is aiming for 180,000 bopd;
- Terra Nova is about to tap into the 406 million barrels of oil reserves;
- White Rose and Hebron are now defined as proven oil reserves, and are starting on the road to development;
- Smaller, already discovered fields with reserves will become viable satellite projects in the future as the offshore infrastructure increases;
- The range of hydrocarbon plays is increasing with oil, gas and condensate possibilities, in shallow and deep water offshore, as well as onshore prospects;
- There are already 2.3 billion barrels of estimated oil proven reserves in the Atlantic Canada offshore region;
- Impressive gas fields have been discovered on the Labrador Shelf giving 4.2 tcf of reserves, but are limited by markets and economics;
- Sable Offshore Energy Project (SOEP) is now averaging 400 million cubic feet (Mmcf) of gas production per day;
- The Maritimes and Northeast Pipeline is delivering this gas to North American markets
- At the start of 2000 approximately \$2 billion in offshore and onshore committed licenses have been issued; and
- Overall, there is a minimum of 40 years life expectancy of oil and gas production from Atlantic Canada.

The implications of this existing profile and future prospects are that Atlantic Canada has a positive long-term economic opportunity from resource extraction. Industry has stated that one new development project every two to three years is a distinct possibility in Atlantic Canada. This pace of development would further strengthen the region's already existing service and supply sector. However, there will be a requirement for some adaptation to the changing technologies that will be required as the oil and gas industry's search intensifies into deeper water, further delineates present gas plays and expands the transportation infrastructure to get products to market.

The specific technology transfer that will occur along the value chain in the future will depend on the industry's directional mix and timing. For instance, many would suggest that

Newfoundland gas will be a medium to long-term prospect, but additional Scotian Shelf gas will be shorter term. However, FPSO and subsea collection technology will make some Grand Banks satellite oil projects viable sooner rather than later.

1.6 PROJECT AND EXPENDITURE SUMMARY

The five projects listed in section 1.3 represent a cross-section of Atlantic Canada's major resource development initiatives. As such they can be used as yardsticks to measure the degrees of success of the region's capture of economic benefits. The projects mainly represent upstream and midstream components of the value chain, that is the search for, development, production and subsequent transportation of, hydrocarbon resources. They do not represent the downstream component, namely refining and marketing.

Each project has certain unique technical characteristics, briefly described as follows:

- Cohasset-Panuke (COPAN) on the Scotian Shelf was a jack-up rig converted to a production platform to extract oil;
- Hibernia in the Jeanne d'Arc on the Grand Banks is a world-scale, permanent, gravity based oil production platform able to withstand extreme environmental conditions;
- Terra Nova in the same basin utilizes a floating vessel to store oil production with a sub-sea collector technology;
- Sable Offshore Energy Project (SOEP), proximate to Sable Island is based on several gas field production platforms and central facility, with sub-sea gathering lines feeding attendant onshore processing facilities; and
- Maritimes and Northeast Pipeline (M&NP), from Nova Scotia to the US, is a large diameter, onshore gas transmission line.

We will now detail some high-level statistics for each individual project. This will help to set in context and gauge the importance of each project to the sectoral economy, the extent of the expenditures and their possible economic or employment impacts.

The information contained in the ten tables of sections 1.6.1 to 1.6.5 has been assembled from the 1999-2000 Annual Reports of the CNSOPB and the CNOPB, supplemented by information from the "*Harnessing the Potential...*" report of January 1999 and the individual project websites.

Throughout the following sections we have used the terms direct, indirect and induced when describing employment. For the sake of completeness we reproduce the definitions of those terms as detailed in the "*Harnessing the Potential...*" report:

Direct: persons employed directly by the original project

Indirect: those employed by a supplier directly providing services to the project

Induced: those employed in the broader economy as those employed directly or indirectly spend their incomes.

1.6.1 Cohasset-Panuke

The Cohasset-Panuke field was the first commercial development for offshore Atlantic Canada and produced a total of 44.4 million barrels of oil, before reaching its economic limit. Production was terminated on December 17, 1999 with the resulting commencement of abandonment of wells and facilities. However, the possibility exists for the platform to continue in limited use during PanCanadian's Deep Panuke exploration and testing program.

COPAN was a \$1+ billion project that had a life of seven years, injecting in excess of \$480 million into the Nova Scotian economy during this period. The initial reserves estimates placed recoverable reserves at 36 million barrels, but the 40 millionth barrel was produced in mid-1998 allowing for an extension of field life beyond design capacity.

The statistics associated with this project are as follows:

SOURCE	DEVELOPMENT EXPENDITURES \$Millions	%	TOTAL EXPENDITURE \$Millions	%	TOTAL EMPLOYMENT Person Years	%
Nova Scotia	166	39	487.4	38	3,300.5	78
Other Canadian	258	61	230.9	18	507.8	12
Non Canadian			564.3	44	423.1	10
TOTALS	424	100	1282.6	100	4231.4	100

1 Person Year = 2,000 Person Hours

Despite the fact that this was the first commercial project in the offshore Atlantic Canada oil patch, without a fully developed service and supply sector in place, Nova Scotia captured nearly 40% of the expenditures and nearly 80 % of the employment. The percentage capture between the development phase and production phase, when maintenance, repairs and operating (MRO) parts and services were required, was effectively equal.

1.6.2 Hibernia

In 2000 the Hibernia platform operations reached steady-state conditions. Discovered by Chevron in 1979 and brought onto production in 1997 by the Hibernia Management and Development Company (HMDC), the Hibernia field was a world-scale offshore oil development project. The field is the fourth largest conventional oil pool in Canada, with current reserves of 884 million barrels.

Its development plan was filed just in time to see oil prices collapse in the mid-1980s. What pushed Hibernia ahead was government grants of over \$1 billion and substantial loan guarantees. According to the 1999-2000 CNOPB Annual Report, the offshore petroleum industry and associated activity now accounts for over 10 percent of Newfoundland's Gross Domestic Product, with Hibernia taking much of the credit for this figure.

Some of the statistics relating to expenditures during various phases and employment

associated with the Hibernia project are set out below:

SOURCE	DEVELOPMENT EXPENDITURES \$Millions	%	OPERATING EXPENDITURES %(*) & \$Millions
Newfoundland	2,700	46	54%
Other Canadian	3,119	54	19%
Non Canadian			27%
TOTALS	5,819	100	\$6-7,000

Operating expenditures of \$6-7 billion are based on CNOPB figures of \$300-\$350 million per annum for a 20 year life of the field, and percentages (*) are based on actual OPEX for 1999-2000. Approximately 35% of all contracts valued at over \$100,000 were awarded to Newfoundland firms during the development phase.

SOURCE	DEVELOPMENT EMPLOYMENT Person Years	%	OPERATING EMPLOYMENT Person Years	%
Newfoundland	20,800	66	639 x 20 = 12,780	88
Other Canadian	10,700	34	63 x 20 = 1,260	9
Non Canadian			25 x 20 = 500	3
TOTALS	31,500	100	727 x 20 = 14,540	100

1 Person Year = 2,000 Person Hours

During the construction phase, at Bull Arm, 90% of the 5,800 people employed were residents of Newfoundland.

The figures substantiate the normal bursts of expenditure and activity that are associated with the development phase and relatively short engineering, procurement and construction period. However, the more steady-state operating expenditures and employment, where direct, indirect and induced opportunities kick in, indicate greater overall revenue, in life cycle terms. The \$6-7 billion in OPEX quoted is solely direct expenditures that do not take into account any indirect or induced benefits. Similarly the 14,540 person years relate to HMDC's direct payroll. The operating phase spawns the emergence of a more widespread service and supply capability comprised of smaller firms, better able to generate sustained economic growth.

This is further supported by the fact industrial and employment benefits are quoted by the CNOPB as being on the increase in Newfoundland and Labrador with respect to the offshore oil and gas industry. During 1999, expenditures amounted to \$1.5 billion, bringing the cumulative total since 1966 to \$12.3 billion. At the end of the year more than 2,300 were directly employed in hydrocarbon-related activity.

1.6.3 Terra Nova

The second major oil field development project on the Grand Banks is also situated in the Jeanne d'Arc basin. Petro-Canada's Terra Nova field will go into production in late 2001.

The presently projected production life stands at 15 years, with estimated proven reserves in excess of 400 million barrels. Production will commence around 50,000 bopd rising to 130,000 bopd.

However, start-up has been delayed from the first quoted early 2001 date as design and workmanship problems with the floating production, storage and offloading facility have to be rectified. The unit, a first of its kind for offshore Canada, was built in Korea and delivered to Bull Arm for topside installation and hook-up. Remedial and modification work has had to be undertaken on several systems including seawater cooling, heat tracing, HVAC and the turret. This has resulted in an increase in the overall project costs.

Some of the statistics related to Terra Nova expenditures indicate the following estimates:

SOURCE	CONSTRUCTION EXPENDITURE		DRILLING EXPENDITURE		OPERATIONS EXPENDITURE		TOTAL EXPENDITURE	
	%	\$ Billions	%	\$ Billions	%	\$ Billions	%	\$ Billions
Newfoundland	25%	0.625	100%	0.600	95%	1.235	56%	2.46
Other Canadian	75%	1.875	0	0	5%	0.065	44%	1.94
Non Canadian								
TOTALS	100%	2.500	100%	0.600	100%	1.300	100%	4.40

The figures clearly show the increase in the percentage amount of expenditure expected to occur for the Province of Newfoundland after the construction phase, with 56 % of the project expenditure benefits accruing to Newfoundland on a full cycle basis.

And with respect to estimated employment statistics for the duration of the project:

SOURCE	DEVELOPMENT EMPLOYMENT	%	OPERATING EMPLOYMENT	%	TOTAL EMPLOYMENT	%
	Person Years		Person Years		Person Years	
Newfoundland	1,880	49	6,660	98	8,540	80
Other Canadian	1,970	51	165	2	2,135	20
Non Canadian						
TOTALS	3,850	100	6,825	100	10,675	100

As with the expenditures, the number of person years employment occurring in Newfoundland dramatically increases during the operations phase for Terra Nova.

Actual direct employment statistics as of end of March, 2000 are as follows:

SOURCE	NUMBER OF	%
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	PERSONS	
Newfoundland	1190	56
Other Canadian	100	5
Non Canadian	827	39
TOTALS	2117	100

With the project presently transitioning from development to operations, the actual employment percentages are beginning to show a marked increase. Perhaps the most telling figures relate to the actual contract award and allocation during the period of design and construction, moving to early operational contract being tendered:

SOURCE	UP TO 1998 Number of Contracts, Mostly Development Related	%	1999-2000 Number of Contracts, Mostly Operations Related	%
Newfoundland	26	16	15	75
Other Canadian	20	12	0	0
Non Canadian	118	72	5	25
TOTALS	164	100	25	100

Quite clearly, in Terra Nova's case, the capture of industrial benefits will occur to a greater extent during the operations phase, when production is onstream. This situation is not uncommon in the development of major, world scale projects, but it does pose questions for a hydrocarbon rich jurisdiction as to how best to capture the maximum amount of benefit over the full life cycle of a resource project.

1.6.4 Sable Offshore Energy Project

Industry analysts predict that offshore Nova Scotia will become a major gas-producing basin in North America. Estimated reserves currently stand at 5.8 tcf from 21 identified fields. The first commercial gas production came from the Sable project, drawing on 3 tcf from six fields in shallow water using conventional technology. So far, three of the fields are hooked in. With a project life of 25 years, production started in the last days of 1999, with gas delivered to the transmission pipeline early 2000, via the onshore Goldsboro processing plant.

Statistics for the development and the first 6 months of operation to June, 2000 are as follows:

SOURCE	DEVELOPMENT EXPENDITURES \$Millions	%	TOTAL EXPENDITURE \$Millions	%	TOTAL EMPLOYMENT Person Years	%
Nova Scotia	623.2	30	716.5	31	3,850	52
Other Canadian	282.8	14	350.7	15	850	12
Non Canadian	1,145.2	56	1,225.9	54	2,650	36
TOTALS	2,051.1	100	2,293.1	100	7,350	100

Presently the number of persons directly employed on the Sable project in operational mode are:

SOURCE	PERSONS #	%
Nova Scotia	744	82
Other Canadian	66	7
Non Canadian	96	11
TOTALS	906	100

The forecasts for expenditures in Nova Scotia for the next phase of the project, up to the year 2009, are 42% of spending. This will involve development of facilities and gathering lines for the remaining three fields, at an estimated expenditure of close to \$1 billion. On a full cycle basis for the 25-year life of the project, the aim is for 50%+

Once again the figures only indicate direct expenditures and employment and do not capture the indirect or induced benefits that have certainly occurred.

1.6.5 Maritimes & Northeast Pipeline

The Maritimes & Northeast Pipeline was built in 1999 to bring Scotian Shelf natural gas to markets in the Maritimes and northeastern United States. The Canadian portion of the 30-inch mainline stretches 568 kilometres from Goldsboro, Nova Scotia to St. Stephen, New Brunswick. The head office of the pipeline company is in Halifax, Nova Scotia with operational centres in Fredericton, New Brunswick and Stellarton, Nova Scotia.

The line has a peak daily capacity of 530 MMcfd, which could be increased to 800 MMcfd with additional compression. Total cost of both Canadian and American portions was close to \$1 billion, with the cost estimate for the Canadian portion set at \$667 million.

Pre-construction services generated benefits for Atlantic Canadians, as numerous consulting contracts were awarded to provide professional services such as property appraisals, compensation appraisals, environmental studies, geotechnical engineering work and property survey. Additional work in Right-of-Way clearing and pipe stockpiling have also generated employment.

The statistics for the Canadian portion of the main pipeline during construction are as follows:

SOURCE	CONSTRUCTION PHASE \$ Millions	%	CONSTRUCTION EMPLOYMENT #Persons	%
New Brunswick	320	48	400	24
Nova Scotia	225	34	450	26
Other	122	18	850	50
TOTALS	667	100	1700	100

The main pipeline took less than one year to complete and laterals to major population centres are either under construction or consideration.

From the five projects cited above the statistics for oil field development projects indicate that during the pre-production phase Hibernia provided the greatest percentage of expenditure benefits to its region, in excess of actuals or estimates for Sable and Terra Nova. However, Atlantic Canada did capture numerically greater employment percentages during the same phase for all the projects. Of those projects where operational expenditure statistics are available, the percentages show a marked increase in benefits capture for the region, over and above development expenditure percentages.

If the forecasts for one new development project in Atlantic Canada every two or three years proves correct, then the perennial concern over the short-term duration of the high budget front-end activities associated with bringing a major hydrocarbon project on stream will be softened by the larger number of opportunities providing a measure of insulation. Also further real benefits can be expected to be in the provision of goods and services during the longer - and sometimes greater expenditure - operational periods, as a critical mass of projects simultaneously tender for their maintenance, repair and operations (MRO) requirements.

2.0 SERVICE AND SUPPLY CAPABILITIES

As has been pointed out so accurately in the Request For Proposal, ongoing upstream and downstream activity indicates that Atlantic Canada's oil and gas sector has shifted from a series of disparate projects to a thriving and vibrant industry. The emergence of the midstream is also a factor that has to be noted, as gas processing, transportation and distribution facilities are becoming more abundant with every new lateral pipeline proposed, evaluated and constructed to bring natural gas to large centres of population.

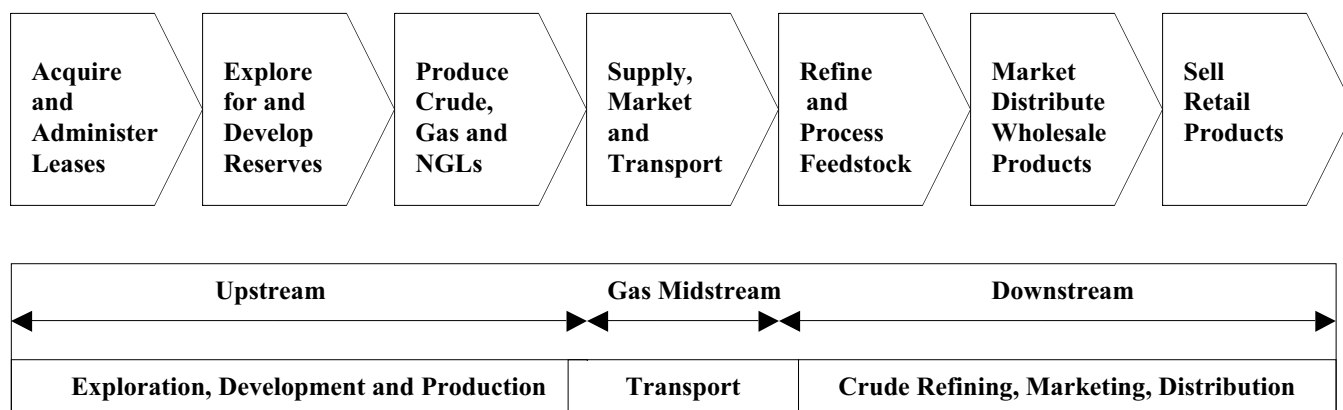
However, the onus is on the regional and local service and supply communities to fulfil as many of the elements that comprise the value chain associated with resource extraction and usage.

The more these elements exist in the region, with the necessary competency, then the greater is the possibility of cost-effectiveness of proposed projects. However, decisions regarding the existence or use of such elements must always occur within the parameters of sound economics and pragmatic principles.

2.1 VALUE CHAIN DEFINITION

There is already an accepted general scheme of classification, or definition, of the value chain for the oil and gas industry and we see no reason to change this taxonomy. It is represented in the "*Harnessing the Potential...*" report, although the existence of a midstream, between upstream and downstream, pertaining to gas transmission and distribution, has now become more prevalent.

The following block diagram displays the major elements of the value chain, as viewed from the perspective of an operating company:

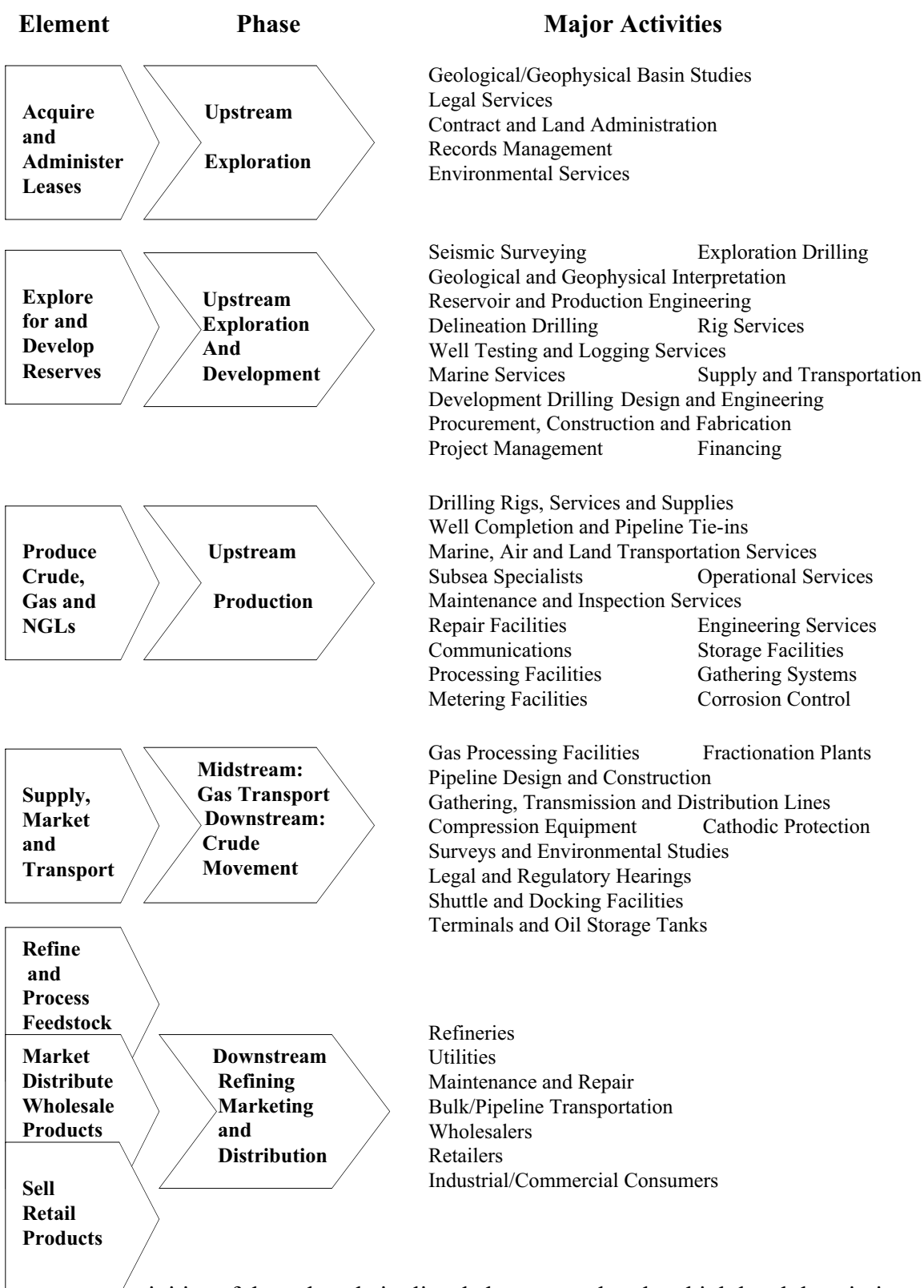


In order to better understand the nature of the inputs and outputs associated with every element of this value chain, we can expand the block diagram and allocate tasks that have to take place for each element, cross-referenced from exploration to distribution and sales. Once this has been done, it is then possible to build up a list of the major activities that constitute these tasks and, hence, begin to chart the service and supply capabilities that are required.

The first diagram shows the breakdown of elements into major tasks for each phase:

Value Chain Element	Associated Tasks	Phase
Acquire and Administer Leases	<ul style="list-style-type: none"> • Develop Acquisition Strategy • Area Studies • Negotiate Land Deal • Lease and License Acquisition • Manage Lease Contract Obligations • Verify & Maintain Ownership Records 	Upstream Exploration
Explore for and Develop Reserves	<ul style="list-style-type: none"> • Develop & Monitor Exploration Program • Conduct & Evaluate Seismic Program • Evaluate Prospect/ Reservoir • Field Development Planning • Analyze & Select Drilling Prospect • Drill Well & Analyze Results • Construct Facilities 	Upstream Exploration and Development
Produce Crude, Gas and NGLs	<ul style="list-style-type: none"> • Develop & Monitor Production Program • Operate Facilities & Wells • Measure & Allocate Produced Volumes • Evaluate Reservoir Performance 	Upstream Production
Supply, Market and Transport	<ul style="list-style-type: none"> • Forecast Demand & Supply • Product Selection & Optimization • Make & Document Deals • Secure Pipeline Transportation • Manage Risk/Exposure/Position • Settle & Analyze Deals 	Midstream Gas Transportation Downstream Crude Movement
Refine and Process Feedstock	<ul style="list-style-type: none"> • Plan/Select Feedstocks, Production Forecasting • Schedule Feedstock, Products, Units • Operate to Plans & Schedules • Enhance Operational Reliability & Safety • Blend Store & Ship Products • Adjust for Variations, Measure Performance 	Downstream Refining
Market Distribute Wholesale Products	<ul style="list-style-type: none"> • Forecast & Arrange Supplies • Develop & Implement Brand • Negotiate Contracts • Set & Manage Price & Terms • Manage Customer Orders • Settle and Analyze Performance 	Downstream Marketing Distribution
Sell Retail Products	<ul style="list-style-type: none"> • Respond to Customers • Operate Site • Promote & Sell Products • Optimize Inventories • Set Retail Prices • Process Sales Transactions 	Downstream Sales

The following diagram takes the elements and phases and allocates many of the major activities to each:



The major activities of the value chain, listed above, are already a high level description of the types of functions that are required for resource exploitation. With further refinement down to

a lower level of detail, a comprehensive picture of the types of service and supply categories can be built up for Atlantic Canada's present and future requirements.

In the next section we develop over 400 of these categories for the onshore and offshore. They represent a current, comprehensive breakdown of the individual activities of the value chain that have been captured by the region in response to the major projects of the past, present and the future.

However, we must first define what is meant by the terms "service" and "supply". For the purposes of this report, in the context of the oil and gas sector, we suggest the following explanations and definitions.

Supply means the commercial transaction of economic value embodied in the provision of goods. The dominant factor driving the transaction is a definable and tangible product. Examples would be the purchase of valves, the purchase of blow-out preventers and the purchase of meters or metering systems.

Service means the commercial transaction of economic value in the form of labour. The dominant factor in the transaction is human work and/or knowledge; any transfer of tangibles is secondary or incidental to the economic value of the service provided. Examples would be the provision of catering services, the renting of drilling rigs or the use of helicopters for transportation.

The terms **direct**, **indirect** and **induced**, as used for employment and business opportunity situations, have already been defined in the preamble to section 1.6 Industrial Benefits Summary.

2.2 THE VALUE CHAIN IN CONTEXT

In this particular section we will analyze the categories that form the building blocks of the activities associated with satisfactory completion of the elements of the value chain. We will then indicate how well Atlantic Canada is doing in capturing all the benefits along the value chain.

Although there is a certain amount of overlap, it is nevertheless beneficial to split the categories into those associated with onshore activity, where industry services the hydrocarbon deposits that are on land, and those relevant to the offshore, where industry services sub-sea hydrocarbon deposits. A further division of classification naturally separates service from supply. The 400+ categories are apportioned as follows:

Environment	Service	Supply	Total
Onshore	87	92	179
Offshore	91	149	240

Examples of categories, given in detail in the Appendices, include Data Collection and Analysis; Dielectric Non-destructive Testing; Directional Drilling; Diving Services; Drilling

Services; Drydock and Drydock Equipment; Dynamic Positioning; Detection Systems; Desalters; Downhole Tubing and Casing; Dryers; Drillstem Testing; Drill String Rental; Drill Bits; etc, using the letter D for our random examples.

As a precautionary introduction, we suggest that it is not possible to absolutely and unequivocally assign a category to a specific element of the value chain. Take Drilling for example. The world's cadre of Drilling Contractors rent rigs and equipment for particular situations, say, onshore drilling rigs, or shallow water jack-up rigs, deeper water semi-submersible outfits or even deeper water drill ships. The drill bits, drillstrings, casing, tools and equipment that are used are independent of whether we are drilling an exploratory well, a delineation well, a development well or a production well for, say, water injection. These activities span several elements of the value chain from Exploration, through Development to Production. Thus it is impossible to state that a particular drilling company is only involved in a specific piece of the chain.

So when the categories are viewed closely, meaningfully assigning them to a link in the chain is problematic. We did attempt to allocate each category to a particular element of the value chain, but have found that it is not possible to do it satisfactorily. To which part of the chain do you assign those organizations that are involved in, say, communications, safety or environmental work? These activities, and their particular detailed categories, span the whole value chain.

The categories themselves were developed from the classification system used by Industry Canada to catalogue the onshore and offshore oil and gas industry. They are not dissimilar to those in use in other jurisdictions around the world.

2.2.1 Analysis of Category Results

For each category identified, the number of organizations that fulfil the particular service or supply capability have been individually listed for each one of the four Atlantic Provinces – New Brunswick, Prince Edward Island, Nova Scotia and Newfoundland. The number of organizations throughout the rest of the oil and gas industry in Canada mostly centred on Alberta, British Columbia and Saskatchewan is also tabulated. A percentage comparison is then made between the Atlantic Provinces total and the whole of Canada.

Mathematically, of course, any percentage greater than 50% indicates that there is more capability in the Atlantic region than in the rest of Canada. This would naturally be expected for the offshore supply and service categories. An example might be the 100% figure for dry-dock and dry-dock equipment category in Atlantic Canada, with no capacity existing outside the region for oil and gas related work.

Conversely, less than 50% penetration, and indeed much lower percentages, would be expected in the still-emerging onshore oil and gas sector. Here an example might be the Rig Moving category with only 4.2 % penetration in Atlantic Canada, represented by only one company.

However, where zero or low percentages exist, either for the emerging onshore industry or in offshore categories, then the opportunities for value chain capacity enhancement may be present, provided that a suitable business case exists for establishing the capability. This latter statement should not be overlooked, as valid reasons must be present for a business opportunity to be realized.

The table below indicates the number of onshore and offshore service and supply categories where zero representation occurs in the Atlantic Canada region and also where the representation is between 1 and 10 percentage points compared to Canada as a whole. The cut-off figure of 10% is arbitrary, chosen for analytical purposes as a starting point:

Grouping	Number of Categories	Zero Present	% of Total	1-10% Present	% of Total
Onshore Service	87	31	36	20	23
Onshore Supply	92	34	37	28	30
Offshore Service	91	0	0	8	9
Offshore Supply	149	1	1	22	15

This indicates that there are 51 categories along the value chain in onshore services where there is zero to ten percent representation, or 59% of the categories. Similarly with onshore supply there are 62 categories from 0-10%, or 67% of the total number of categories.

This is only to be expected, as the onshore oil and gas industry is still in its embryonic form in Atlantic Canada, when compared to the Western Canadian Sedimentary Basin. However, once exploration, development and production activities increase with commercial discoveries in the region, the figures show that there is room for further benefits capture along the value chain, provided that the business cases exist.

Using the same parameters, for offshore services only 8 categories are missing from the value chain, or 9% of total. And for offshore supply it is 23 categories, or 16% of total. These lower figures are to be expected, as Atlantic Canada forms the nucleus of all offshore activity in Canada and has established infrastructure to deliver resources. However, it does indicate a small leakage, albeit it very small.

The table on the following page indicates the actual categories that are “missing” or under-represented in the groupings. As we have commented before, there has to be a viable business case for the existence of each category in a grouping before it can be added as value chain enhancement. An adverse business case may already have been determined, giving the reason for the category’s absence from the value chain in the first place.

Onshore Service Category		Onshore Supply Category	
Zero Present	1-10% Present	Zero Present	1-10% Present

Abandonment	Data Vendors	Bridge Plugs	Actuators
Acidizing Services	Horizontal Drilling	Carbon Dioxide	Jars
Ambulance Services	Industrial Cleaning	Casing Jacks	BOP Parts
Borehole Video	Industrial Pumping	Chokes	Casing Supply
Field Drilling Supervision	Video Inspection	Drill Pipe Screens	Chemicals – Production
Plant Operators	Milling Tools	Drill String Supply	Coatings – External
Consulting – Safety	Pipeline Plant Services	Drilling Equipment	Coiled Tubing
Drill String Rental	Pumping Services	Drilling Fluids Supply	Compressors
Drill String Repair	Rig Moving	Drilling Motors	Drill Bits
Drillstem Testing	Contract Safety Personnel	Fibreglass Sucker Rods	Drill Collars
Environmental Audits	Safety Rentals	Fracturing Equipment	Engines
Fracturing Services	Service Rig Moving	Fracturing Flowbacks	Filters
Fracturing Tracing	Software Development	Fracturing Fluids	Filtration
Inspection – Tubulars	Software Integration	H2S Monitoring	Flow Control Equipment
Oilfield Waste Recycling	Tank Moving	Packer Rubbers	Gauges
Pipe Storage	Tank Rentals	Perforating Guns	Instrumentation – Surface
Rathole Drilling Services	Trucking	Pigs, Pigging	Metal Buildings
Rig Safety Inspections	Wireline Logging Electric	Power Swivels & Tongs	Pipe
Safety Services	Logging Slickline	PPE Safety Equipment	Pumps, Submersible
Seismic Processing	Oilfield Construction	Pumpjack Bases	Safety Clothing
Slimline Logging		Pumpjack Drive Systems	Safety Equipment
Sonic Logging		Pumpjacks	Solvents
Sulphur Forming		Pumps, Downhole Rod	Testing Equipment
Sump Treatment		Pumps, Progressive	Tubing Supply
Testing Casing Leaks		Service Rig Parts	Valve Manufacture
Trailers		Shock Subs	Valve Supply
Tubing Perforating		Sucker Rods/Couplings	Wellhead Manufacture
Tubing Rentals		Tooljoints	Wellhead Completion
Underbalanced Drilling		Treaters	
Wellsite Supervision		Tubing Anchors	
Wireline Services		Tubing Rotators	
		Tubular Connections	
		Wellhead Supplies	
		Workover Fluids	

PricewaterhouseCoopers and Industry Canada data

Given that the onshore industry is still in early exploration mode in Atlantic Canada, many of the above categories would be expected to be non-existent at the moment, as they pertain to stages of the value chain that have not yet been reached, primarily production.

However, if this study is to include both present capacity and future capacity requirements, then these categories would represent the areas where possible opportunities lie for capturing additional benefits.

It can be seen that several of the zero-rated services relate to specialist exploration and drilling activities, like seismic processing, underbalanced drilling and perforating. Again several of the absent supply categories fall into major equipment areas, such as pumpjacks, compressors, and engines. All these categories would require strong business cases to advocate future inclusion in the value chain, although this is not of the question if suitable joint ventures or other business arrangements could be achieved.

The corresponding, and shorter, table for the offshore categories is as follows:

Offshore Service Category		Offshore Supply Category	
Zero Present	1-10% Present	Zero Present	1-10% Present
	Analytical Services	Sucker Rods	Alarm Systems
	Feasibility Studies		Bits
	Logistics		Communication Systems
	Personnel Services		Concrete Products
	Real Estate Development		Cooling Systems
	Swabbing		Cylinders
	Video Recording		Dryers – Industrial
	Warehousing		Enclosures
			Engines
			Fibreglass Products
			Gas Analysis Apparatus
			Laboratory Equipment
			Petroleum Products
			Refinery Equipment
			Refrigeration
			Rubber Products
			Security Systems
			Sensors
			Strainers
			Thermocouples
			Turbines
			Wellhead Equipment

PricewaterhouseCoopers and Industry Canada data

Given the titles of the “missing” categories, the table confirms that, for the offshore industry, a very large proportion of the categories associated with the value chain is already represented in Atlantic Canada. The above listed categories mainly pertain to the production stage of resource extraction projects.

Overall, the following number of companies populate the 400+ categories, as of the beginning of March 2001:

Grouping	Atlantic Canada	Rest of Canada	% Atlantic/ Whole Canada
Onshore Service	436	3324	11.6
Onshore Supply	351	3271	9.7
Offshore Service	949	2574	26.9
Offshore Supply	1355	4696	22.4

The financial strength, technical competency, management and commercial skills of the companies that presently exist up and down the value chain in both the onshore and offshore in Atlantic Canada may be a factor in whether present and future benefits can be captured or increased. Predictions as to that scenario are far beyond the scope of this examination of whether the capability exists in the first place.

However, using absolute numbers, our tabulations indicate which individual Atlantic Province, rather than Atlantic Canada as a region, lacks a particular category, by virtue of a zero number of organizations fulfilling that service or supply category. The tabulations also indicate where an individual Province has only one company meeting the local needs, a monopolistic situation that may be an opportunity for competition to develop, if a provincial approach is taken rather than an regional focus for service and supply delivery to present and future resource projects.

In the following table we examine the offshore service and supply groups in Newfoundland and Nova Scotia, the two primary Provinces in this sector. The table indicates how many categories have zero representation by a company in a particular Province and how many categories have only one company providing service or supply:

# OF COMPANIES	NOVA SCOTIA		NEWFOUNDLAND	
Offshore Service Categories (91 categories)				
Zero Companies	10	11%	4	4%
One Company	18	20%	10	11%
Total	28	31%	14	15%
Offshore Supply Categories (149 categories)				
Zero Companies	11	7%	13	9%
One Company	23	15%	30	20%
Total	34	23%	43	29%

In terms of an individual Province's value chain capacity, Nova Scotia has twice as many opportunities for enhancement in the service categories as Newfoundland, as it has more categories with zero or only one company representation. It is reversed for the supply categories, where Newfoundland has the slightly higher numbers.

We have not included Prince Edward Island, or New Brunswick in this tabulation as the status of their offshore capability shows a majority of categories with zero or only one company representation. This can be viewed as either a major opportunity to fill the gaps, or the realization that competition against existing companies in other Provinces is not yet warranted.

The appendices at the end of this study contain complete tables showing every single category in the four groupings for all four Provinces, with the representation and penetration statistics.

Given the number of companies present on these lists (in excess of 3,000 according to Industry Canada databases), and the number of categories across the value chain (over 400) covered by these companies, the conclusion has to be drawn that the capacity does exist in Atlantic Canada in the service and supply sector, certainly in the offshore industry.

We cannot, however, comment on the competency of these companies to capture revenues in the face of local, regional, national or international competition in this section. How to optimize the transfer of technology to Atlantic Canada is addressed in later sections.

2.3 SERVICE AND SUPPLY REALIZATION

The previous sections have highlighted the extent of the value chain and the categories that constitute the activities associated with its fulfilment. In this particular section we will examine each of the five projects, previously referred to, and indicate what specific elements of each project were supplied by Atlantic Canada.

The information was gathered from the literature available, particularly the Development and Benefits Plans for each project. The relevant Boards' Decisions were also used as a source of data. For some of the projects, there were also specific reports produced by the operators giving their assessments of local services and supply capabilities.

2.3.1 Cohasset-Panuke

A description of this project has been provided in section 1.6.1 of the Introduction, but as a reminder, COPAN was the first commercial project for the offshore Atlantic Canada's oil industry.

Brief descriptions of capability capture for the major activities now follow.

Engineering, Management and Systems Integration: Site-specific studies were carried out by established Nova Scotia companies. However, the available information suggests that only a portion of the project engineering was done in Atlantic Canada. We do not have specific information as to what percentage of the project engineering was accomplished in the region.

Development Drilling and Completions: The drilling rig itself was sourced outside Canada. Other major elements, such as the supply vessel and helicopters, were also manufactured outside Atlantic Canada. However, the consumables and labour services come mostly from within Nova Scotia.

Wellhead Jackets: The wellhead jackets were completed in Atlantic Canada.

Production Facilities: These were mostly outsourced beyond Atlantic Canada, although some of the final assembly labour was provided locally.

Flowlines: These were outsourced from specialized manufacturers not in Canada.

The proponents of this project indicated that their stated policy would endeavour to make maximum use of qualified Nova Scotian or Canadian firms, and to evaluate tenders for goods and services on a best total value basis. All other things being equal, local suppliers would have priority.

The seven-year project injected over \$480 million into the Nova Scotian economy as the Province captured 39% of the development and 37% of the operating expenditures. Canada as a whole received 56% of total expenditures. Nova Scotia took 78% of the employment.

2.3.2 Hibernia

This flagship Atlantic Canada offshore oilfield development, now in steady-state production, used a Gravity-Based System (GBS) physically resting on the seabed. The principal material used in construction of the GBS was concrete. Special facilities were developed in Atlantic Canada at the Bull Arm site, to allow the construction of the GBS platform to take place in the region. Although a GBS approach involved higher capital costs than the alternative of a floating production facility, given the state of the technology at that time, the large recoverable reserves of the Hibernia fields justified this more costly approach.

The Hibernia project proponents developed both a Hibernia Benefits Plan and a Hibernia Development Plan. Both involved considerable upgrading of industrial capabilities in Atlantic Canada, most notably the \$450M facility at the Bull Arm, Newfoundland, site. The Benefits Plan was based on “full and fair opportunity [for Canadians and Canadian firms, and Newfoundland province residents and firms] to participate on a competitive basis in the supply of goods and services used in any proposed work or activity referred to in the benefits plan”.

Brief descriptions of capability capture for the major activities include:

Gravity Base Structure: The GBS was primarily constructed using Atlantic Canada resources. Total Canadian content was approximately 85%. A key element here was the use of locally sourced concrete as the base material. The completed structure weighed in at over 1 million tons. At the new Bull Arm site, 90% of the 5,800 employed were residents of Newfoundland.

Topsides Fabrication: In its original 1985 Development Plan, the proponent indicated that the configuration of the topsides would include a main support frame, four major deck sections, and several topsides modules. The proponent suggested that yard capacity, in Canada in general and Atlantic Canada in particular, limited the local or Canadian content of Topsides. Three of four major deck sections were to be sourced from outside Canada; 50% of topside modules were to come from foreign yards; and fabrication of the two large GBS-mounted drilling rigs was to be done overseas. Canadian fabrication and assembly was thought possible for the main support frame; module installation and platform mating was also to be done in Newfoundland.

Subsequently, this supply plan was modified to a certain extent. Following an engineering review in 1988, the proponents indicated that the main support frame and four decks could be replaced by five large, super modules and eight topside structures. Of this total, one super module (the wellhead module) and four structures were constructed at the Bull Arm, Newfoundland site in Atlantic Canada, while the balance was fabricated globally. However, the final assembly and hook-up of all the modules and structures were carried out at Bull Arm.

Offshore Loading Systems: Originally the proponent suggested an Articulated Loading Platform configuration, but this was re-engineered into an Offshore Loading System. Fabrication of the system was done outside the country with final assembly done in Canada.

Shuttle Tankers: The proponent suggested in its 1985 Development Plan that three large, dedicated vessels were most cost-effective. This large size stipulation precluded use of Canadian yards. However, the CNOPB felt constrained and, in its original 1986 Approval Decision, put a condition on its approval of the plan. The proponents were asked to consider alternatives. The alternatives suggested were the use of five smaller tankers that could be sourced in Canada, with final outfitting in Canada. The end result was two tankers.

Ice Clearing Vessel: This service was 75% provided by Canadian resources, with 50% of it coming from Newfoundland alone.

In terms of overall results, approximately \$2.7 billion of the total of \$5.8 billion development expenditures went to Newfoundland, or about 46%. This is probably the highest proportion of any of the 4 offshore projects – Hibernia, Terra Nova, Cohasset-Panuke and Sable. The use of concrete as a base material and the expansion of industrial facilities at the Bull Arm site accounts for a significant part of this result. Nevertheless, local expenditure content still remained less than 50% for the development phase. Large mechanical and electrical packages were virtually invariably sourced from outside the region.

2.3.3 Terra Nova

The Terra Nova development employs a Floating Production, Storage and Offloading (FPSO) vessel, as opposed to the GBS in use at Hibernia. This decision was based on the economics of recovering the size of reserves present. The project's proponents believed that a GBS could not be justified on the basis of the Terra Nova recoverable reserves.

In the proponent's supply chain strategy the Terra Nova Development Plan contains some important parallels to the Hibernia project. The same "full and fair opportunity" strategy was emphasized. As well, the Plan suggests explicitly that major goals of the project would be to ensure key development functions of the project were done in Newfoundland, and to manage for optimum Canadian and Newfoundland benefits, but the ultimate result did not wholly reflect the original intent.

However, the Development Plan also indicates that goods and services were to be procured on a "best value" basis, albeit to be consistent with procurement policies and practices for benefits. As well, other conditions of the Development Plan also referred to "use of standardized equipment", and "rationalization of design, materials and construction standards". Ultimately this appears to have led to higher foreign sourcing than for other projects, such as Hibernia.

One contentious issue, as far as local industry stakeholders were concerned, was the question about how this project evolved over time. The proponent's original Development Plan indicated that the project engineering and systems integration would be done within Newfoundland. Following approval of its Development Plan by the CNOPB, however, the proponent performed the project engineering in the United Kingdom. The Board did not rescind its approval of the project, despite this apparent change of strategy by the proponent.

The local community stakeholders in St. John's believed that the UK location for the engineering team profoundly affected the ability of the Newfoundland services and supply firms to penetrate the procurement cycle. Their view was that access to the decision-makers was definitely compromised by the geographic separation. The three sides that were involved - government, industry and operator - undoubtedly held strong viewpoints in support of their actions and comments. While remote location of engineering can certainly impact local suppliers abilities to penetrate procurement, it is the author's view that situations like this are not uncommon in the worldwide arena of major oilfield developments on all continents.

Examples of both the following situations are common:

- Remote location of engineering team, due to centralization of resources; and
- Host government insistence on local representation

Absolute resolution to everybody's satisfaction is practically impossible. Brief descriptions of what did transpire are now given.

Project Engineering and Systems Integration: The overall project engineering and systems engineering were done outside Canada. In particular, the key engineering decisions were carried out by a British team near London at Leatherhead. As described above, the location of the project engineering is seen as having had substantial and negative impact on the welfare of the Atlantic Canada business community.

FPSO: The vessel was built in Korea with topside installation and hook-up occurring in Newfoundland. Unexpectedly Bull Arm had to carry out modification work to the vessel delivered.

Topsides and Other Elements: Some of the related modules and other elements were sourced in Atlantic Canada. The NEWDOCK facility helped fabricate the subsea template and manifold systems; topsides fabrication were accomplished at the Bull Arm site; and some of the topside modules were done in Atlantic Canada. However, other elements were sourced outside Canada, including topside modules, turrets and the spider buoy. Abu Dhabi supplied some components. As in other cases, packaged mechanical and electrical machinery and equipment were not sourced from Atlantic Canada.

The overall outcome was that 25% of the construction expenditures accrued to Newfoundland, according to the 1999-2000 CNOPB Annual Report. This is less than either COPAN or Hibernia. The expectancy for Terra Nova is that 95% of the operating expenditure will flow to Atlantic Canada.

2.3.4 Sable Offshore Energy Project

Unlike the previous three oil projects, Sable was a gas field development in shallow water, tapping several reservoirs from production platforms and sending gas to a central offshore gathering and processing facility before piping it to shore for further processing and then onward transportation to markets. So far three of the six fields are onstream in the first phase of the project. The proponent's strategy was to develop supplier capability in Nova Scotia. A number of initiatives were undertaken to this end, including electronic bidding, supplier seminars, and site visits.

The proponent's 1998 Assessment of Nova Scotia Supplier Capacity and Performance

explicitly says that there are “two main themes running through this assessment”. First, the proponent “highly regards the work done by its Nova Scotia contractors”. Second, the proponent felt that Nova Scotia capability was limited for this project, despite its efforts to develop a supply capability. One key limitation was local yard capacity. According to the report “offshore-related fabrication and construction is not yet competitive in Nova Scotia”.

The proponent’s 1998 assessment also asked the CNSOPB to “establish realistic reporting exemption categories and threshold levels for local content where the Nova Scotia capacity is clearly limited or currently non-existent. The focus of the Board, the project and potential contractors could then be turned to those areas where Nova Scotia can hope to be competitive.”

The proponent listed a number of opportunity areas for Nova Scotia industry in the future. These included: some offshore facilities; well construction; onshore facilities, especially systems engineering; and facilities maintenance.

This is supported by our analysis conducted on the service and supply categories, documented earlier in this section, where it was identified that Nova Scotia had twice the number of categories for opportunistic development as did Newfoundland in the offshore service sector.

Despite the limitation expressed in the proponent’s report, 30% of total expenditures have gone to local Atlantic Canada suppliers, against a proponent’s target of 34%. The targets for the tie-in of the remaining fields are for 42% of spending to accrue to Nova Scotia.

2.3.5 Maritimes & Northeast Pipeline

Unlike the three oilfield projects and one gas development project cited above, this pipeline construction was of a much shorter duration in the construction phase. Typically pipelines of this length, 60% of which was in New Brunswick, take less than a year to complete. The statistics pertaining to the pipe are more fully described in section 1.6.5.

The 568-kilometre pipeline, like the rest of the gas transportation systems in Canada, falls under the jurisdiction of the National Energy Board as the regulator and not the Provincial Boards. The point here is that industrial benefits are not a formal requirement.

Notwithstanding that fact, pipeline developers consistently use local firms for pre-construction services such as appraisals, environmental studies, geotechnical work, right-of-way clearance and surveys.

The construction of a metal pipeline consists of two major elements whose supply falls into two categories: the metal-worked pipe itself; and various packages of equipment, such as large gas turbine compressors, instrumentation and electro-mechanical controls.

The metal elements of the pipeline had a relatively large proportion of local, Atlantic Canada, sourcing. However, the fabrication of the pipeline involves more than just metalworking, for example, chemical treatment to prevent corrosion. Much of this treatment activity was

sourced in Atlantic Canada. To the extent that primary steel was required for the pipeline's main materials, this cannot be sourced in Atlantic Canada, although secondary steel can be.

The packaged electro-mechanical elements such as large gas turbine compressors cannot be sourced in Atlantic Canada. It should be borne in mind that only a handful of firms globally produce such piece of rotating equipment in the tens of thousands of horsepower output range. Most of the instrumentation and controls were also sourced outside Atlantic Canada.

Despite the above noted Atlantic Canada limitations, 82 % of the construction phase expenditures accrued to New Brunswick and Nova Scotia, with the former taking the larger portion.

2.4 SERVICE AND SUPPLY DISCUSSION

The figures quoted above for the five representative projects are the culmination of plans submitted, approaches approved and activities executed. With such major undertakings, some of which can be categorized as world-scale developments, it comes as no surprise to us that actual results may indicate a variance from plan. This is a reality.

A recent PricewaterhouseCoopers study of 350 major capital projects showed that 50% were late, 40% were significantly over budget (averaging 30%), 7% were under budget and 2% were early.

From the project proponent's perspective several reasons for this can be postulated:

- Badly defined or over-ambitious objectives;
- Mismanagement of risk and uncertainty;
- Ineffective project planning and control;
- Poor supplier management;
- Poor quality management and control;
- Unreliable progress reporting;
- Poor program management; and
- An unsupportive internal culture

Several of these factors impact supply chain management, from the proponent's side of the equation.

Equally so there are other factors on the regulating jurisdiction and service and supply industry sides of the equation that could limit the success of the project. For the Regulator one factor may be the reticence to use compliance-oriented approaches. And for the local service and supply industry it may be the relative inexperience of market entry via such major capital projects and the subsequent realization of business opportunities.

So there are factors on all sides that could produce the variances between plan and actual. Each participant will have it's own viewpoint as to what can and should be achieved.

2.4.1 Boards' Reactions to Development Plans

We will now examine some of the wording in the documents passing from the Boards to the project proponents.

For the **Sable Offshore Energy Project**, the Board's Condition #10 stated:

"For all proposed contracts, subcontracts and purchase orders, estimated by the Proponents to be in excess of \$250,000, or such other limit as the Board may determine, and for any other matters identified to be of interest to the Board, the Proponents shall provide the Board for approval, lists of all contractors that wish to prequalify, the proposed bidders lists and notices of the proposed final contract awards. The Proponents must submit sufficient information with the notifications to enable the Board to assess the subject matter and to be satisfied that the statutory requirements for "full and fair opportunity" and "first consideration" have been addressed by the Proponents."

For the **Hibernia Project**, the Board imposed four relevant conditions in its 1986 Decision, one of which has since been rescinded. The remaining three conditions were:

#1) that the Proponent consider all reasonable alternatives to provide for maximum Canadian participation in shuttle tanker production, and inform the Board of the results of these investigations;

#4) that as the project evolves, the Proponent provides to the Board comprehensive listings of all major contracts and purchase orders anticipated. The Board, in consultation with the Proponent, will determine which of these major contracts and purchase orders will subject to Board review; and

#5) that the Proponent provide advance notice of any information on major contracts and purchase orders to enable the Board to conduct its review. The Board in full consultation with the Proponent will determine the review time required.

In its 1997 Decision Amendment to the Development Plan, the Board stated that it was satisfied with the performance of the Proponent relative to these conditions up to that time.

For the **Terra Nova Project**, the Board imposed the following conditions:

"Condition #4: Upon Project Sanction, the Proponent submit for the Board's review, a listing and description to be updated quarterly of all significant contracts for the procurement of goods and services identifying those which, in the Proponent's view, could potentially offer long-term benefits opportunities to Canada and, in particular to Newfoundland.

Condition #6: As the Project evolves, the Proponent consult the Board regarding its decisions related to all contracts associated with the construction of topsides and subsea facilities, mooring systems and production risers from the initial prequalification of bidders to contract award to demonstrate that it is using its best efforts as described in the Benefits Plan to cause this work to be performed in Newfoundland."

The inferences are that the proponents should fully exhaust the possibility of employing Canadian and Atlantic Canada resources in providing services and supplies to the projects.

However, the wording used incorporates a light-handed style of approach. “May determine”, “best efforts” and “consider all reasonable alternatives” are examples. Light-handed regulation is consistent with an approach in mature oil and gas jurisdictions. Regulatory style can lie anywhere on a continuum from light-handed, to moderate, to heavy-handed or compliance oriented. When a proponent assesses a project’s economics, it must determine an appropriate calculation of net present values as well as expected rate of return. Many factors influence this calculation, one of which is regulatory risk. The more heavy-handed the regulation, the higher the regulatory risk becomes. In our opinion, heavy-handed regulation can have a negative impact on a project’s calculated net present value and expected rate of return. This might then eventually lead to reduced government royalty revenues and/or projects being declared non-commercial, a situation that Norway had to examine in 1996 as many of their future development projects foundered.

2.4.2 Evolving Service and Supply Trends

Based on the number of projects conducted so far it would be remiss to suggest that definitive trends are evolving. However, comments on past activities and how they may relate to future projects can be offered.

Consistently the services and labour employment trends show positive for the projects. Projections for resource requirements, suggested by the May 1999 “*Offshore Petroleum Engineering Task Force*” for offshore Newfoundland, indicate that both project-related and operations-related engineering will contribute to the demand. The former accounting for approximately 40% of the demand while the operations-related engineering accounts for the remaining 60%.

The supply trends have been more erratic. In particular, it could be of concern that the expenditure proportion in Atlantic Canada of Terra Nova, using the FPSO vessel concept, has been less than that of Hibernia, using GBS. Here, the size of the Hibernia reserves and the resulting economics and Government loans could justify a concrete GBS, resulting in a positive gain for local industry. New fields, such as Hebron and White Rose, are smaller. Early indicators are that the FPSO technology will be economically appropriate. This could conceivably, based on extrapolating the Terra Nova experience, lead to relatively greater use of non-Canadian and non-Atlantic Canada resources. In the future it may be possible for FPSO vessels to be built in Atlantic Canada for smaller projects.

It is possible for projects to gradually improve local supply content. An example is the evolution of the Sable project. The Deep Panuke development is likely to use production arrangements similar to COPAN and Sable, so smaller platforms might be the order of the day. This would also be more conducive to benefits enhancement for the local service and supply community.

There is a consistent trend for packaged equipment to be sourced from overseas. This is

understandable in light of limitations, even globally, for the supply of such packages. Joint ventures with some of the, say, leading turbine manufacturers could conceivably bring benefits to Atlantic Canada, if the business case warranted such arrangements.

However, there is little or no apparent trend overall for fabrication of items such as decks, topsides modules, or offshore rigs/hulls, to be increasingly sourced from Atlantic Canada so far. It has been suggested that more topside fabrication was done in Atlantic Canada for Terra Nova than Hibernia, despite the fact that the latter showed greater overall expenditures in Atlantic Canada. The conclusion could be that the smaller platforms and FPSO arrangements could provide for greater overall benefits to the region.

It is clear however that operating expenditures will accrue mainly to the Atlantic Canada region and, in the case of both Hibernia and Sable, these expenditures are estimated to be greater than the development phases over the life of the projects. In many instances, the provision of parts and services gives greater margins for the various suppliers. The opportunities to enhance security of supply and low-cost, just-in-time delivery would point to potential gains to both sides from increased sourcing in Atlantic Canada. For example, Terra Nova elements were sourced in Abu Dhabi, Norway, and Korea, as well as Atlantic Canada. This is a geographically diverse supply chain, which, without using modern technology, could lead to communication problems. MRO work may go to foreign suppliers due to the preference to contract the original equipment supplier.

It is postulated that there are constraints on all levels of Atlantic Canada supply capabilities, originating from the fact that much of the project engineering, component sourcing, or systems integration at the top of the supply chain is being done outside Atlantic Canada. This limits contact with local capabilities, and may lead to insufficient consideration of Atlantic Canada resources. Proponents consistently suggest value-added suppliers are limited in Atlantic Canada, although cases of positive evolution and supplier development certainly do exist.

We sympathize with both sides of this discussion, for reasons stated earlier. The more projects come on line in Atlantic Canada, the more the arguments will dissipate as there will be more opportunities over and above the COPAN, Sable, Hibernia and Terra Nova projects that formed the basis of the emergent industry. It was on these projects where Atlantic Canada had to cut its teeth in the industry and be accepted by the proponents, who were cautious about giving major, front-end aspects of the work to embryonic entities in the execution of the first major offshore projects in the region.

The location of the Terra Nova design team has caused vigorous debate on all sides. There is nothing that can be done about that particular situation now, but examining the event and forecasting what might happen in the future, we conclude that it could well happen again, as it is the international industry norm to concentrate certain capabilities in geographic centres of excellence, where the maximum amount of information, resources and talent are located. This particular possibility is mentioned in the 1999 *“Offshore Engineering Task Force Report”*. The section describing the International Offshore Engineering Industry, and more specifically its structure, states “The above patterns of development have been made possible

by the rapid evolution of technology. This has made it quite feasible for a project to be worked on simultaneously and seamlessly by a client and project manager in Houston, as structural engineer in London, a mechanical engineer in Oslo, computer assisted design technicians in Hyderabad and a classification society in New York.

The ability to transmit enormous volumes of detailed information between relatively inexpensive terminals in real time with total accuracy makes it possible to undertake engineering work at almost any location. This will be an increasingly important “leveller” when decisions are being taken on the location of engineering offices for offshore projects in the future.”

2.5 MEETING THE VALUE CHAIN IN FOREIGN JURISDICTIONS: NORTH SEA

There are parallels between the North Sea and Atlantic Canada, namely two jurisdictions in each case, overseeing one hydrocarbon region. The sovereign nations of United Kingdom and Norway are on either side of the various basins in the North Sea, while the Atlantic Accord and Canada-Nova Scotia Accord created two jurisdictions, along with the Federal jurisdiction as a third, supervising resource developments within their own particular geographic sphere of influence.

The industry views the North Sea as having two distinct jurisdictions, because of the existence of the two sovereign nations bordering the basins. However, only one sovereign nation borders the Atlantic Canadian basins and for that reason the industry views it as one exploration and development play, albeit with two sets of local jurisdictions.

The approaches used by the UK and Norway to deal with offshore development were entirely different, but both successful in their own way. We can examine those approaches and draw conclusions as to their suitability for Atlantic Canada.

But first a brief introduction to the history of the offshore industry. True offshore engineering was born in Houston, as a result of activity in the late 1950s in the Gulf of Mexico. Large, multi-faceted engineering and contracting organizations (Bechtel, Brown and Root, Fluor-Daniel, J. Ray McDermott, to use their modern names) emerged and flourished. As needs dictated, local or project offices were established elsewhere, in New Orleans for instance. However, Houston maintained the management, financial and engineering control.

As the search for offshore hydrocarbons expanded into other parts of the world, Houston still continued its dominant role. However, when the oil companies began to establish local offices in major centres, then the service companies followed suit. This was true for Southeast Asia and the North Sea.

London became the centre of activity for the southern sector of the North Sea, with engineering work concentrated there, despite service and supply bases at Great Yarmouth and other towns. As activity moved to the northern sector, then Aberdeen was established as a service and supply base. However, engineering work was mainly centred on London. The same pattern emerged for Norway, with Oslo serving as the main centre and Stavanger as an

operations base.

The parallels with the Gulf of Mexico are evident. From an oil and gas perspective, the relationship between Houston and New Orleans is similar to that between London and Aberdeen, or Oslo and Stavanger. That is not to say that no engineering takes place in Aberdeen or Stavanger, however, the activity is mostly concerned with servicing existing field operations rather than new project development.

Given a common evolution of major firm engineering and contracting capability in the two sovereign nations, how then did the UK and Norway approach the development of their industries, not only of engineering capability, but also more broadly for the service and supply chain as a whole.

Much of the ensuing information is taken from B. Nelson's *"The State Offshore: Petroleum, Politics, and State Intervention on the British and Norwegian Continental Shelves."* This reference was also used by the authors of *"Harnessing the Potential..."* should the wording be familiar.

2.5.1 The Norwegian Approach

The Norwegian took a three-fold approach. The first was to establish the national oil company as a financially viable and technically capable entity. In order to achieve this the Norwegian Government provided Statoil with preferential treatment during the licensing rounds, appointed the company as the operator on many licences, allocated certain blocks for Statoil or other Norwegian companies only and arranged for the international oil companies that were successful in winning blocks to train Norwegian personnel.

Secondly, the Norwegians made it a requirement that foreign operators use Norwegian supply companies, subject to stated quality, pricing and delivery considerations. This was backed up by legislated powers, with operators monitored and their future success in licensing rounds determined by their record of compliance.

The final element of the Norwegian strategy was to use licensing to encourage foreign companies to assist in the development of the Norwegian industry.

These three approaches, both singly or in combination, have resulted in the Norwegian regulatory regime being responsible for a 60% level of domestic involvement in the service and supply sector in the 1970s. Over the ensuing years, Norway has developed world-class expertise in the offshore sector, a capability that it now exports to other resource developing areas.

However, it is generally recognized that the Norwegian North Sea is highly regulated, some would suggest over-regulated. In 1996 a Task Force was established in order to determine the factors that were causing many of Norway's projects to be declared non-commercial. Development and operating costs were cited as primary reasons, brought about by many factors, including existing regulation.

2.5.2 The United Kingdom Approach

The United Kingdom took a less interventionist approach. True, preference was given to British companies in licensing rounds and British companies were, occasionally, declared outright as operators. But the main impetus was the creation of the Offshore Supplies Office (OSO), to monitor and address the possibility that British industry might be excluded, or lack the competence, to supply its own oil and gas sector.

Set up by the British Government, the mandate of the OSO was to audit the operators' procurement and also to provide financial assistance to supply companies.

The OSO used the non-coercive tactic of auditing the purchasing reports of the various oil companies; requesting lists of UK firms that were approached and the reasons for not choosing them, if such was the case; and meeting regularly with the operators to discuss their sourcing plans and to suggest possible British suppliers.

The point of this activity was to put pressure on the oil companies by the implicit threat of less favourable treatment during subsequent licensing rounds for those operators refusing to use UK suppliers.

This tacit threat, moral suasion and onerous reporting induced operators to go beyond what was expected of them.

2.5.3 Do They Apply to Atlantic Canada?

Clearly the Norwegian approach of favouring the national oil company is not an option for Atlantic Canada, as there is not a vehicle to accomplish this.

However, the practice of linking present procurement performance to future licensing success, as encouraged by both Norway and the UK, does have merit. This, coupled with persuasive techniques and rigorous reporting, could yield results.

If such an approach were taken, then there would have to be a consistency of application between the two Provincial jurisdictions and their regulators. Otherwise, the oil companies would gravitate towards developing projects in the less stringent environment only.

This approach would, however, tend to foster the continuance of separate regimes, rather than collaborative efforts to promote the region as a whole.

As it is, at the moment, the two Boards tend to lead to a duplication of effort and resources, as oil companies have head offices in both jurisdictions, as required, and service and supply companies are set up in both Provinces.

What may make more sense, then, is the UK approach of setting up a body that both audits oil company performance and nurtures local industry, across an aggregated Atlantic Canada region and not just for the benefit of individual Provinces. This was the approach of the OSO, regardless of whether the benefits were flowing to England or Scotland.

This does sound like a further level of reporting, governance and cost, over and above the Federal and Provincial jurisdictions already in place. To overcome this, it is suggested that the two Boards responsible for offshore regulation in Newfoundland and Nova Scotia, coordinate in certain areas and functions, and act in unison to create an equivalent to the OSO, thus precluding the addition of a further layer of bureaucracy.

As a first step, the standardization and publication of information gathered and disseminated should be considered, such that both jurisdictions can begin working from a common base of knowledge and understanding.

This would, of necessity, have to lead to a common vision of the manner in which the industry is evolving and a strategy to achieve it.

This commonality of vision and subsequent implementation has to be facilitated. The recommendations of the “*Harnessing the Potential...*” report suggest that the various industry associations in the Provinces should undertake this facilitation, a suggestion with which we concur.

2.6 LESSONS LEARNED IN SERVICE AND SUPPLY CAPABILITIES

The lessons learned from previous experience in services and supply capabilities suggest that any given industry evolves over time, but that there is definitely a hierarchy of activities that promote this evolution, some being of greater importance than others. General consensus within the published literature suggests that the project engineering and systems integration function is paramount because of its impact on subsequent activities. If full cycle economics are to be considered, then operational service and supply, are also important, especially from direct, indirect and induced job-creation perspective.

As we have seen there was a significant difference in how offshore engineering capabilities developed in the UK and Norway. The UK sector of the North Sea was developed earlier and, partly because there was no intervention by government until the 1970s, no locally based, world-class, systems-integration-engineering company developed in Britain. Rather, American-based firms established major offices there to carry out North Sea projects.

Such was not in the case in Norway. Its government examined developments in the UK and took a different approach, intervening through the national oil company and the licensing process to ensure that work flowed to Norwegian engineering companies, such as Aker and Kvaerner. They ensured that already existing engineering firms, albeit not in the oil and gas sector per se, profited from the new industry.

Regions where the concentration of offshore activity is not as great as in the North Sea, or where the quality of life is perceived to be a problem, developed in a different manner. For these areas, Houston has essentially retained the role of the national centre, with local bases supporting operations. West Africa and the Middle East are good examples of this.

The Canadian offshore engineering industry does not contain indigenous multi-faceted

contractors. Large international firms have offices and in some cases sizeable operations in this country, mostly in Calgary. They provide a full range of services to Canadian offshore projects, calling in support from their head offices to staff up large projects. Some Canadian specialist engineering firms have a considerable international profile in niche markets. Tri-Ocean Engineering, for example, has developed expertise in drilling facilities design, and has completed projects in the North Sea, Southeast Asia and the former Soviet Union. The last area is a natural for Canadian companies that have developed unique solutions to the problems associated with oil and gas exploration and production in extreme environments.

At present in Canada there is neither an explicit state intervention strategy, as in Norway, nor an effort to document and publicize supply development, as in the U.K. Accordingly, Canadian efforts, to use project engineering to facilitate opportunities to enhance services and supply in the value chain, are constrained.

However, project engineering and systems integration is not the only consideration. Value-added suppliers must be available to capitalize on opportunities in the oil and gas services and supply value chain. Here the Atlantic Canada record is mixed. However much the relevant Board Decisions encourage local suppliers to be used, the findings of this research are that there is inadequate available information upon which to base any realistic assessment of whether local suppliers are, or are not, qualified to obtain higher procurement proportions.

The statistics show that the capabilities exist, in as much as the organizations exist. The results of our category analysis generally indicate this. But the competitiveness, competency or correct business arrangements in the form of joint ventures, may not be present within these organizations, to give the proponents confidence in Atlantic Canada's capabilities. Hence the statements of section 2.4.2 by the operators, alluding to the non-competitive nature of some of Atlantic Canada's service and supply chain.

Certainly, this lack of information is not compatible with the UK model of developing a supplier industry, where copious information has been published. A key lesson to be learned is that adequate supply information is vital. If Canada falls down in this regard, then the appropriate authorities should rectify it, namely the relevant Boards.

2.7 THE VALUE CHAIN AND FUTURE DEVELOPMENT

The intent of this section is to enhance understanding of Atlantic Canada's future supply and service needs, and to project the ability of region's industry to meet them by building capability from within. A secondary purpose of this task is to identify areas of supply and service capability for potential future enhancement, cataloguing both advantages and barriers to viability.

Projecting services and supply capabilities must be qualified by acknowledgement of the inevitable uncertainty about oil industry investment patterns. A sharp drop in crude prices could once again have a major impact on present plans. Nevertheless, a number of important pointers can be derived from the supply successes of Atlantic Canada so far.

Section 2.2.1 Analysis of Category Results is a comprehensive indicator of the capability that exists at this point of time in Atlantic Canada, for both the offshore and onshore industry. Various tables and charts indicate the categories of service and supply activities, across the value chain, that are either absent from the region or under-represented.

The analysis indicates that the onshore industry is still in an embryonic state, as would be expected given the maturity of the sector, still in early exploration mode. In the offshore industry, the gaps are less significant and point to the conclusion that organizations exist to service and supply the majority of the value chain as defined. Whether or not these organizations are given consideration by proponents, or possess the capability, competitiveness and competency to compete is not answered under the scope of this study, as well over 3,000 entities are involved. This is a separate question.

At the micro level of category analysis however, the tables on pages 20 and 21 of section 2.2.1 can be used as a basis for future action planning to build capacity. At the macro level, we have chosen to provide a model that follows an approximate logical progression of project execution and rolls up many of the categories into major elements, namely: Project Management; Systems; Subsystems; Components; Materials; Services; Related Infrastructure.

For each major element, subheadings are given, along with an indication, in our opinion, as to whether the region can now provide, can partially provide or has to develop in the longer term that particular service and supply capability. It is indicative, but not exhaustive.

In reviewing the information, we have conducted our analysis using the following considerations:

- We have assumed that if any given element has been sourced locally, then other similar elements could also be sourced in Atlantic Canada. This is believed to be a reasonable assumption for the future, but would not likely be accepted by proponents for the entire value chain at the present time. As discussed in previous sections, typically they would cite capacity, cost and effectiveness constraints as a primary barrier.
- In many cases there is mixed evidence, for and against, concerning the prospects for justifying new suppliers from Atlantic Canada. Typically on the positive side is transportation and supply co-ordination costs. On the negative side is a lack of a large-scale manufacturing base. In general, we have assumed that elements for which there is an existing Atlantic Canada supply capability, even if small scale, can be expanded over time.
- We have assumed that any necessary technology transfer will not be a permanent barrier. This will be discussed elsewhere in this report.

The table on the next page shows the macro level projections how Atlantic Canada capabilities could be developed, or evolve, over time. The table differentiates between three scenarios: elements that Atlantic Canada can provide, now or in the near term; elements that could be partially provided in Atlantic Canada, now or in the future; and elements that require a longer term approach to capacity building, should the business case exist for doing so.

ELEMENT	ATLANTIC CANADA	CAN BE PARTIALLY	REQUIRES LONGER
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	CAN PROVIDE	PROVIDED IN AC	TERM ACTIONS
Project Management			
Integration	✓		
Engineering		✓	
Procurement	✓		
Specification		✓	
Systems			
Drilling Rigs	✓		
Offshore Platforms	✓		
Shuttle Tankers		✓	
Loading Systems		✓	
Subsea Systems		✓	
Pipelines		✓	
Subsystems			
Steel Framework	✓		
Topsides	✓		
Hulls, Outfitting	✓		
Articulated Platforms	✓		
Well Jackets	✓		
Components			
Compressors			✓
Decks	✓		
Modules	✓		
Pumps		✓	
Flexible Flow Pipe		✓	
Funnels, Engines		✓	
Gas Turbines			✓
Materials			
Primary Steel			✓
Concrete	✓		
Wire	✓		
Fibre-Optic Cable	✓		
Plastics, Resins	✓		
Electrical Cable	✓		
Secondary Steel	✓		
Services			
Maintenance and Repair		✓	
Transport	✓		
Operators	✓		
Welders		✓	
Construction Crews		✓	
Seismic		✓	
Drilling		✓	
Data Analysis		✓	
Related Infrastructure			
R & D		✓	
Business Networks	✓		
Quality Standards		✓	
Training	✓		

2.7.1 Project Management and Engineering and Systems Integration

Project management and engineering, and systems integration, covers the design and configuration of the projects. It is shown as the top level of our model. Very often the key project engineering has been done outside Atlantic Canada. For the Terra Nova project, the engineering was carried out in the UK. Consequently, this created barriers to Atlantic Canadian firms' efforts to insert themselves into the supply chain. Atlantic Canada firms obtained a relatively low proportion of the supply contracts as compared to other projects. Much of the project engineering of Hibernia was carried out in Atlantic Canada, and the Sable project's "*Supplier and Infrastructure Assessment*" explicitly refers to expansion of project engineering functions as a prime opportunity for Atlantic Canada.

It is likely that significantly higher proportions of project engineering and management would require either, or both of, physically importing skilled resources into Atlantic Canada from overseas, and the continuance of the development of specific engineering programs at regional universities. It will take time for the results of academic initiatives to reach the marketplace. Accordingly, for the short term, some efforts to import skills will be necessary to supplement graduate/co-op students entering the market.

There does not appear to be any fundamental challenges to adopting a strategy of importing skills. Quality of life, security, recreational outlets, living standards, etc., would all seem to point to Atlantic Canada being a relatively good prospective destination for petroleum engineers and managers, compared to many other locations.

When combined with graduate numbers, it seems reasonable to project that a majority of project engineering overall could be sourced in Atlantic Canada, given time. In systems integration and procurement management, Atlantic Canadian resources can probably be grown to meet all requirements.

The "*Offshore Petroleum Engineering Task Force Report*" of May 1999 indicates that about one-half of Newfoundland's current relevant pool of engineers is involved with the Hibernia and Terra Nova projects. However, the report suggests that the current capability was still sufficient to provide "a nucleus of the project team for one additional major project". Beyond that, the Report agrees that new engineering skills would have to be brought into the province. Memorial University is already addressing this issue with a dedicated petroleum engineering program. Of course, there will likely be certain elements relating to specialized functions that are always going to come from external resources.

Having experienced similar frustrations in the search for qualified project, design and engineering staff, both in the UK North Sea in the early 1970s and the Western Canadian Basin in the late 1970s and early 1980s, the consultants do not suggest that this will be an easy task to accomplish, given the paucity of such skill sets with the requisite experience. Add to this our knowledge of the historic development of offshore resource areas and, in particular, the evolution of major engineering organizations within them and we are less sanguine about the prospects of Atlantic Canada easily meeting its requirements through

importing skills, or organizations with the skill sets, in order to satisfy the region's need to have project engineering undertaken locally.

2.7.2 Value-Added Suppliers

The model identifies four levels of value-added suppliers: systems; subsystems; components; and materials. All four have a substantial potential for Atlantic Canada sourcing. These four levels reflect the usual progression of technical transformation that a product undergoes before it is completed and ready for use. For example, steel sheet (materials) can be used to manufacture deck sections (components). The deck sections are then assembled into topside assemblies (subsystems). They then become integrated into a complete offshore facility (system). Each level of the model suggests more complex products, incorporating more of the total project's value-added.

Drilling rigs and offshore platforms have been fabricated and assembled in Atlantic Canada. Hibernia is a case in point. Loading systems, subsea systems and pipelines have generally not been fabricated in Atlantic Canada, up until now. The expanded NEWDOCK facility now offers promise that these kinds of contracts could be fulfilled in Atlantic Canada. This is further substantiated by Sable project literature mentioning that subsea systems are an Atlantic Canada industrial possibility over time.

Large subsystems such as steel frameworks, topsides, outfitting, platforms and well jackets have all been fabricated in Atlantic Canada at one time or another.

Components are a variable prospect. Some modules and decks have frequently been fabricated in Atlantic Canada, but realistically, at the moment, large compressors and gas turbines cannot be anticipated to come from the region. The latter are the sourcing preserve of only a handful of locations in the world.

Materials are generally available from Atlantic Canada suppliers with the important exception of primary steel. But it is available from other regions of Canada. However, secondary steel process technology is constantly improving in terms of quality and resistance to corrosion. It is quite possible a larger proportion of secondary steel could be substituted in future projects. Secondary steel is available from Atlantic Canada sources.

An alternative or complementary strategy to capturing systems capability for the Atlantic Canada industry would be to seek out subsystems and components niche products that could be sold in the global marketplace. Such niche products would provide short-term opportunities while the systems and engineering capabilities are built up over the longer term.

2.7.3 Services and Related Infrastructure

As the category analysis shows, services are abundantly available from Atlantic Canada sources. For the offshore, the region's service offerings cover a spectrum from construction, through transportation, to maintenance and many other functions across the value chain. The one possible exception relates to the exploration stage that typically involves specialist drill

rigs, geophysical processing and mapping techniques. Only a limited number of sources can be justified. On the other hand, data analysis from exploratory drilling seems more promising. The emerging capabilities in Atlantic Canada's geomatics industry are relevant and positive.

Atlantic Canada's related infrastructure seems excellent. Our case studies, and previous studies known to us, have pointed to good public and co-operative Research and Development and Training. Business networks are in place; the presence of the three industry associations in the oil and gas sector is evidence of this. Quality standards such as ISO 9000 certifications have emerged as one possible issue. It is likely that the whole Canadian market can be serviced by the two organizations in Canada that are licensed to certify ISO 9000 compliance. Accordingly this element will likely only ever be partially sourced in the Atlantic Canada region.

2.8 STRATEGIES FOR GROWTH

It may be useful to consider some local business strategy and public policy groupings that are generally used to facilitate capability development in any industry sector. In Atlantic Canada's oil and gas sector these strategies are probably already in operation to some extent or another. The discussion is included here for those audiences not familiar with the concepts.

We suggest that the strategies generally fall into three categories:

- Grow Your Own;
- Attract External Investment; and
- Link to Another System.

The approaches can best be described as follows:

Grow Your Own: an explicit and deliberate community-wide policy and commitment to developing firms and institutions from scratch. The Terms of Reference of this engagement refer to the intent to build capacity from within Atlantic Canada. This would in fact be a Grow Your Own strategy.

The benefits of this policy would be to maximize global market opportunities in the long run and allow Atlantic Canada-based entrepreneurs the opportunity to develop the widest range of products and services that they see fit. The drawbacks to this option are the currently limited number of entrepreneurial firms and units. This condition would constrain results from this option in the short term (that is, it would be a long-term commitment), and the lack of venture financing. These factors also have the effect of raising the costs of this option.

Attract External Investment: a deliberate community-based effort to attract external investment into Atlantic Canada from a large firm, or firms, with international or at least pan-Canadian presence. An example would be to attract a firm that would act as a Systems Integrator for the whole supply, that is, a firm acting at the top layer of our macro model for the value-added supply chain.

Such a firm could act to provide relatively large-scale production facilities within the community. It would also integrate effectively the local supply capabilities by providing a

substantial marketing capability for local firms, and a supporting and encouraging function for new product development within the community.

The benefits of this policy would be to build-up rapidly the total supply capability of Atlantic Canada, almost certainly at lower cost than the Grow Your Own option. Moreover, the supply system could achieve much closer integration and reduction of economic leakage. The drawbacks to this option are that the campaign to attract external investment would have to be targetted very carefully. Any new firm making such a commitment to Atlantic Canada would, from the community's perspective, have to be willing to work with other local firms. Not all multi-national or pan-Canadian firms are willing to do this, even if evidence is mounting that positive local suppliers are a real plus to any large firm. Moreover, the research and production priorities of the large firm would have to be respected by the local community. This may constrain research and product development options by Atlantic Canada-based entrepreneurs and research institutions.

Link to Another System: a community-wide choice to establish links between the emerging Atlantic Canada supply capabilities and a larger, more established system. An illustration of this approach might be linking the Atlantic Canada oil and gas supply capabilities to its Western Canadian counterparts, for the onshore industry.

The benefits of this option are its low cost and relatively rapid implementation. The drawbacks to this option are that both entrepreneurs and research institutions would find their options for research and product development constrained. They would be accepting the customer needs and research priorities of another location or industrial sector. For example, the top layer of our model would inevitably come from outside Atlantic Canada if this option were pursued.

These three options are not mutually exclusive for the community as a whole. Moreover, they are not even mutually exclusive within any given project. All three could, and probably are, be used effectively by Atlantic Canada.

2.9 CONCLUSIONS AND RECOMMENDATIONS

Several conclusions from the data collection and analysis are represented in terms of the five projects set out in section 1.6.

Each of the five has had positive effects on the particular Provinces in which the projects reside. But they have also experienced some practical limitations in local supply and service capabilities. This would be the viewpoint of the proponents, as the purchasers of the goods and services. It would not necessarily be the view expressed by the service and supply industry at large. However, our analysis suggests that almost all of the limitations can be overcome in time.

The following table sets out, from the information gathered, how each of the five projects has been constrained in terms of local sourcing. It is natural in such reviews that more consideration is given to the issues, real or apparent, as they are more likely to determine the

success or failure of ensuing actions and programs. It is not a question of dwelling on the perceived negatives, but rather an examination of possible concerns in order to design and develop plans to accommodate or alleviate them.

PROJECT	PRIMARY LIMITATION EXPRESSED BY PROPONENTS	OTHER CONSIDERATIONS, EXPRESSED OR IMPLIED BY PROPONENTS	POSSIBLE ATLANTIC CANADA DEVELOPMENTS	STRATEGY OPTIONS
Cohasset-Panuke	Small scale limits manufacturing scale	Somewhat experimental	Technology Transfer & Training	Strategy to Incorporate COPAN experience into other projects
Hibernia	GBS approach only justified by large size of reserves	Tanker ship-building capacity limited in Atlantic Canada	Emphasize fitting-out modules	Grow Your Own
Terra Nova	Lack of local experience with floating platform technology	Ship/vessel building capacity is limited	Systems Integrator capability and value-added suppliers	Attract External Investment (and personnel as well). Grow Your Own
Sable Offshore Energy Project	Fabrication and Manufacturing Capacity	Investment for long-term by all potential suppliers	Systems Integrator capability. Funding to support value-added suppliers	Grow Your Own
Maritimes & Northeast Pipeline	No Information Available	No Information Available	Value-added suppliers	Strategy to incorporate M&NE Pipeline experience into future projects

The exhibit suggests that there are strong opportunities for Atlantic Canada to follow a Grow Your Own strategy for the offshore industry. However, it will take time.

Our recommendations are that the following areas are key priorities for value chain enhancement:

- attracting, and then developing indigenously, stronger petroleum project engineering skills;
- broadening the supplier base at intermediate levels such as large components and sub-systems;
- supporting the production phases of each major project with engineering work or other services and supplies;
- taking note of e-business developments, and specifically e-procurement and web-based collaborative engineering design technologies; and
- establishing an entity that will collect, audit and disseminate information regarding the value chain.

Most of these recommendations are more fully described in the text of section 2.0.

3.0 OPTIMIZING TECHNOLOGY TRANSFER

Atlantic Canada's oil and gas industry has made significant progress. Investments are being made along the value chain described in the previous section.

The upstream is well advanced, with the offshore leading the onshore at the moment. Several exploration and production companies as well as numerous service and supply companies populate this section of the value chain. A midstream has developed with the first gas from Sable and its attendant onshore processing facilities, gas transmission pipeline and planned laterals. The downstream has always been well represented in the region with refineries, service stations and product wholesalers.

The analysis and statistics from the previous section indicates that local participation is promising, but not yet fully exploited. As the local industry's capability and capacity increases, one critical method of accelerating and achieving expertise is through technology transfer.

This section reviews several aspects of technology transfer, in an attempt to optimize its ongoing introduction and application to Atlantic Canada's petroleum industry.

3.1 TECHNOLOGY TRANSFER DEFINITION

Technology can be defined as the application of scientific knowledge for practical purposes. In its strictest sense it can also be taken as machinery or equipment based on such knowledge. Today the word is commonly used to signify the branch of knowledge concerned with applied sciences.

Technology transfer, in the broadest sense, can therefore be taken as the transfer of new technology from the originator to the secondary user. This is the theoretical, dictionary, or semantic definition, not entirely suitable for use by the oil and gas industry.

Rather than the terms "originator" and "secondary user", we prefer "source" and "recipient". The source and recipient can be any combination or permutation of the following domains; individuals, companies, research institutions, educational and training organizations, as well as any supporting organizations such as industry associations and government agencies. The source and the recipient can be either within the same organization or in different organizations.

As far as a definition applicable to Atlantic Canada's oil and gas industry, it should be kept in mind that technology transfer could geographically come from one of two sources, namely:

- another Canadian Province or Territory outside of Atlantic Canada, where the source is either Canadian or foreign; or
- outside of Canada altogether, where the source is most likely to be foreign.

The knowledge to be transferred can be presented in documents (for example, specifications for oilrigs), procedures (for example, methodologies and processes), embedded in equipment (for example, compressors) or reside in the experience and expertise of individuals (for example, welders).

On-going interaction between the source and the recipient is important to the success of a particular transfer of technology. Research and development activities and training to improve receptor capability can also be part of the technology transfer process.

We suggest that technology transfer occurs in stages. Firstly, the actual transfer itself, then evidence of its capture, where it is put to use, usually for financial gains, and finally technology diffusion, which refers to the subsequent adoption of a technology on a wider basis.

Atlantic Canada's oil and gas industry has accepted technology transfer as a method of growing the skill and capability base to interact with a highly capital intensive industry. The preferred recipients of the technology in Atlantic Canada would be companies that can grow as they serve the offshore and onshore industry locally and abroad. Other organizations, such as research and educational institutions, can also be recipients if they have the technical capabilities to absorb given technologies, especially if these capabilities do not exist in industry. These organizations can also serve as pre-technology transfer agents in that they have developed expertise in areas in which there will be technology transfer in the future.

There are many proven mechanisms to facilitate technology transfer. These would include, but not be limited to, the following:

- the establishment of partnerships between firms from outside the region, that have the necessary expertise, and local firms. Such alliances or joint ventures permit the transfer of technology to the local firm over time as it learns;
- training is another approach that can provide local firms with the new expertise needed to successfully undertake work for offshore projects;
- there are also more informal supplier development approaches such as coaching firms to develop the necessary expertise to be better suppliers of goods and services; and
- licensing agreements to obtain a specific proprietary technology is a well-established way of transferring technology that usually requires the recipient to have some level of capability in place to absorb the technology.

As technology transfer proceeds, ancillary business practices in Atlantic Canada will be redefined to be consistent with the approaches fostered within the various projects. Specialized accounting, procurement practices, partnership formation approaches, safety and quality management systems are some of the business practices that will be altered as technology transfer activities gather momentum.

We suggest that an appropriate definition of technology transfer as it applies to the oil and gas industry in Atlantic Canada, should be the following direct, but all encompassing, statement:

“Technology transfer is the conveyance and successful application of hitherto regionally non-existent technologies, relevant equipment, practical knowledge, requisite skills, or suitable techniques from a source outside the Atlantic region to a recipient within the region involved in the oil and gas value chain, by any proven mechanism.”

This definition reflects the fact that the technology did not exist in the region before; was not solely confined to capital goods, but applied to services, systems and skills as well; had to come from outside the region; and could be transmitted by any successful methodology that was deemed suitable by the parties concerned.

In a later section we will suggest ways and means that that technology transfer can be tracked, monitored and perhaps measured.

3.2 TECHNOLOGY TRANSFER TO DATE

As a preamble to this section, for the wider audience that may be interested in certain aspects of technology transfer, we offer this high level commentary.

Critical mass is the expression commonly used to refer to internal self-sustaining capability by a region. It is reached when the leakage of expenditures and employment to the external world are less than the value-added captured inside the region. Exactly at what point this transition takes place varies from region to region. Nevertheless, the principle of the desirability of capturing benefits of technology-based innovations within a given proximity, remains.

Another way of describing such critical mass is *industrial system*. The word system conveys a sense of an integrated whole, with the following elements:

- the total capabilities are greater than the sum of its parts;
- the individual units or parts of the whole have a relationship with each other (such as customer-supplier relationship in the value-chain);
- the total capabilities allow for maximizing value-added internally; and
- the objectives in terms of both desired customer satisfaction and internal business goals of the various units are harmonious.

The key characteristics of technology-based development are:

- strong formal and informal linkages among firms and the supporting technological and business infrastructure in a region or locality, to stimulate innovation and growth. This indicates that technology transfer should be maximized;
- geographic proximity of firms, educational and research institutions, financial and other business institutions to enhance the effectiveness of the development process. This means local industrial capability development is desirable throughout the supply chain; and,
- the larger the services and supply base (e.g. large number of firms and workers) the higher the level of self-sufficiency. Key functions (e.g. supplies, financing) can be supplied from inside; there is less leakage outside the region. This means optimizing

public-private partnerships, ensuring the relevance of local educational and research institutions, and involving the maximum number of local firms.

Ideally the system works by providing two separate flow streams:

- The first is a flow of products that go through a series of technologically based transformations each of ascending value (i.e. steels sheets to deck sections, into topside assemblies, onto platforms). These transformations make them of higher value to consumers and are then sold to external and internal markets (service and supply capability).
- The second is a flow of information from the market back through the layers of the service and supply sector. This flow of information guides how the various technologically-based transformations need to be improved through new or better research, investments, organization, up-skilling and so on (technology transfer).

Accordingly, the units within each system are linked through these two flows. Problems can occur if both flows are interrupted for any reasons. For example, key supplier linkages coming from outside the region. Or lack of information, feedback and resolution.

Turning now to technology transfer in Atlantic Canada. Using our five representative projects, we have attempted to categorize by development or production activity the technologies that have been transferred, by any manner or means.

These examples were obtained from published records, oral and written statements made by the operators, either to the relevant Boards or to the consultants. The examples were supplemented by the results of a survey kindly undertaken by NOIA, OTANS and ARIA of their members for the purposes of this study.

The overall results are interesting, if for no other reason than the paucity of recorded information available, displayed in tabular form on the following page. Of the thirty-two examples, 78% are relevant to the development phase of the projects, and of those technology transfers that have taken place during this phase, 75% are attributable to two projects – Hibernia and Sable.

In terms of the small number of recorded/traceable technology transfer examples in the two phases, this can probably be partially explained by the fact that the Maritimes & Northeast Pipeline had no requirement or stipulation for technology transfer; Terra Nova is not yet into production; and the CNSOPB established its Benefits Review Committee in 1995, whereas the Cohasset-Panuke project started in 1992.

It is obvious to some that technology transfer must have taken place, given the billions of dollars that have been expended in Atlantic Canada on oil and gas projects and given the 3,000+ organizations that span the value chain and provide goods and services to these projects. It must have occurred, but to what extent and whether it has been systematically recorded, tracked, or analyzed is debatable. This conclusion may apply equally to operators,

Boards and firms supplying or servicing the sector. Our commentary above indicated the necessity for information to flow in order to balance the system.

The examples mentioned overleaf are now tabulated according to technology for each of the five projects:

TECHNOLOGY	Cohasset -Panuke	Hibernia	Sable	Terra Nova	M&NE Pipeline
Development Phase					
Shipyards Management	✓				
Project Management		✓			
Systems Integration		✓			
Logistics		✓			
Insurance		✓			
Electrical System Commissioning		✓			
Drilling Equipment		✓			
Training		✓			
Gas Plant Design			✓		
CAD Operators			✓		
Seabed Surveying			✓		
Jacket Fabrication/Assembly	✓		✓		
Heavy Lifting			✓		
Marine Mapping			✓		
Living Quarter Design			✓		
Drilling Monitoring Systems			✓		
Transport Systems	✓			✓	
Gas Detectors				✓	
Power Distribution Systems				✓	
Template and Manifold Systems				✓	
Topside Fabrication		✓		✓	
Hydro-Testing				✓	
Pipe Coating			✓		
Platform Construction		✓			
Well Construction			✓		
Production Phase					
DCS Systems		✓		✓	
Close Circuit TV		✓			
Trans-shipment		✓			
Hydraulic Power Systems		✓			
Insurance		✓			
Ice Clearing		✓			
Asset Management Systems			✓		

This brief analysis lends support to the requirement for the identification or development of a method for measuring the amount and effectiveness of technology transfer in the region.

3.2.1 Technology Transfer Measurement

The latest Annual Report of the CNOPB states that over 100 joint ventures and other business relationships have been formed between Newfoundland and Labrador firms and national or international companies. This tends to support the statement above that, directionally, technology transfer must be taking place.

Before proposing a measurement or tracking system, let us first examine the dimensions of technology transfer and where it has impacts. We see that technology transfer has two places where it can be tracked and measured. Firstly, in the region as a whole, and secondly in the individual organization.

Industry Canada databases list the 3000+ organizations that have indicated that they can service and supply the oil and gas sector in Atlantic Canada. So presumably they must have the capability. How does this compare with other hydrocarbon regions, say, the Western Canadian Basin? How penetrative has technology transfer been when benchmarked against either emerging or mature resource areas? Calculated from the figures in the table on page 21 of this report, the degree of penetration of Atlantic Canada against the Western Canadian Basin ranges from 10.7% to 36.8% for the four groupings of onshore and offshore service and supply.

We suggest that the effectiveness of technology transfer into the region can be measured by comparisons with relevant benchmarks. In this case we recommend the Western Canadian Basin as a comparator, if for no other reason than the information is available and has been collated. The statistics are derived from databases where information population is done on a purely voluntary basis. The databases are run by Industry Canada, who indicate that they are 90% correct for large company inclusion and probably 70-80% for smaller entities. It is not immediately possible to use the databases of the various Provincial industry associations across Canada, as their individual classification and category nomenclature varies, thus precluding easy consolidation.

Once we have ascertained how well the region is doing in terms of technology transfer, then we must examine the individual recipients and ask how successful have they been in capturing and diffusing the technology. Can they practice what they preach? Are the proponents satisfied with the deliverables? Did it benefit the companies financially?

As with most business enterprises, repeat business is a major objective. So for those companies that have transferred technology, one measure of success might be found in their financial results. However, it is difficult to attribute the increase, or decrease, in revenues as being wholly due to the new technology captured and the opportunities created by it. Selling prices may have risen, markets may have expanded or diversified geographically, new products or services may have been introduced, costs may have been cut, or other division or departments may have caused the change in revenues. So an external assessment of the balance sheet may not always yield results about the efficacy of technology transfer within any given company.

We therefore suggest that the companies themselves should account for their success in

technology transfer, in much the same way as the proponents have to provide information about their activities. This could be carried out as part of the informational requirements to compute the equalization payments, derived from the complex formulae in use.

Exactly who should collect and collate the information we shall return to, after our recommendations for a high level framework for the evaluation of technology transfer in Atlantic Canada.

We describe below a framework indicating the information that needs to be gathered to measure the amount and effectiveness of technology transfer. This is the methodology that we used for the case studies presented in a later section of this report. The approach, when implemented, will assemble information from the three dimensions of the evaluation of technology transfers:

- mechanisms;
- time frame; and
- impacts

We have seen this framework in use in resource developing nations, principally in those countries where World Bank, and other International Lending Agency, technical assistance is being provided and some means of quantification of results is required.

The information requirements are as follows:

- Provision of a description of the technology transfer project, including factors such as the technology being transferred, who were the participants, what was the time frame and the level of effort;
- Identification of the reasons for the technology transferred. For example technology transfer fitted the firm's business plan, deepened capabilities, brought new capabilities, was an opportunity or was a legal requirement;
- Description of the arrangement (licence, joint venture, informal, etc.) and identification of the conditions of the arrangement (scope and breadth of the transfer, rights to the technology, financial payment);
- Description of how the technology transfer occurred (exchange of personnel, training, technical advice, research and development, documentation, equipment, use of an intermediary). Is the transfer still taking place, and if so, at what stage is it at?;
- Identification of the factors that made the technology transfer a success, or failure;
- Identification of any problems and what was done to overcome them;
- Identification of new technical capabilities, number of new people hired, new contracts, export, or new business lines; and

- Quantification of any changes in financial status as a result of the conveyance and introduction of technology transfer into the company.

Returning to the discussion as to who should gather and synthesize the information, we begin by noting that it is the proponents who should provide the respective Boards with baseline information to support their Development Plan and subsequent Board Conditions, if any. It is the Boards that should monitor and track the proponents progress against plan. But that leaves nobody continuously monitoring the industry participants. One of the primary reasons for all the effort is to enhance the capabilities of the industry and create sustainable growth in Atlantic Canada.

Our studies show that there is clearly a need for further information collection and dissemination to measure technology transfer. However, if the overall responsibility is vested with the Boards to oversee proponents and industry, then too much of a province-specific emphasis will be imparted, and only operator-derived information will be collected. There will still be a need to consolidate the results to gain an overall Atlantic Canada picture. The region needs to act in unison not as individual Provinces in this respect.

This points to either a Federal agency or body, who, as co-signatories to the Atlantic Accords, do have shared responsibilities for the resources already. Or a newly inaugurated intermediary that could carry out the informational functional and other duties delegated to it. We expand on this thought in a later section.

It is useful to compare other jurisdictions. Both the UK and the US use intermediary organizations. In the case of the United Kingdom it is the Industry Technology Facilitator (ITF) that provides the dialogue between industry and government. In the United States, it is the Petroleum Technology Transfer Council (PTTC) in Washington, who “helps to accelerate the flow of technology and information”.

3.3 PROPOSAL AND APPROVALS: CROSS-JURISDICTIONAL COMPARISONS

In Atlantic Canada, the Atlantic Accord and the Canada-Nova Scotia Accord set the regulatory framework for the development of the region’s oil and gas resources. The Accords explicitly recognize the rights of Newfoundland and Labrador and of Nova Scotia to be the principal beneficiaries of the oil and gas resources off their shores. The Accords require that before the start of any work program the operators submit a plan regarding the employment of Atlantic Canadians in the development and operation of the project. As well, operators are required to indicate how Atlantic Canadian suppliers will be given full and fair opportunity to participate in the provision of goods and services for a given oil and gas development project.

The Canada-Newfoundland Offshore Petroleum Board (CNOPB) and the Canada-Nova Scotia Offshore Petroleum Board (CNSOPB) sometimes impose conditions for their approval of the Development Applications of the oil and gas license holders in their respective jurisdictions.

The Proponents are also asked to plan their approach to technology transfer. It is recognized, however, that it is the primary responsibility of industry itself, not the Boards nor Proponents, to attract and incorporate the necessary technology into their spectrum of capability, before the required services and supply can be offered to the Proponents, as purchasers of the materials and services.

The commitments and conditions imposed by the two Boards on the project operators regarding technology transfer are presented below.

3.3.1 Cohasset-Panuke

This was the first commercial project in offshore Atlantic Canada. The Proponent committed to “encourage the transfer of foreign technology and expertise to Nova Scotian and Canadian industry through joint ventures, licensing arrangements or other mechanisms.”

However, the CNSOPB did not put explicit conditions for technology transfer in its April 7th, 1992 decision approving the Cohasset Revised Benefits Plan and titled Canada-Nova Scotia Offshore Petroleum Board: Decision Report, Cohasset Project Revised Benefits Plan, April 7, 1992.

It should be noted that the CNSOPB was formed in January 1990 and did not have a Benefits Review Committee in place until 1995, three years after the start-up of the project. This should not be construed as a criticism, merely a statement that the Board was in its infancy and at that time probably did not have all the mechanisms and processes in place to measure all the parameters of the project.

3.3.2 Hibernia

The Proponent committed to “support the principle of technology transfer and support formation of joint ventures, licensing agreements and other mechanisms.”

In its approval of the Hibernia Benefits Plan in Decision 86.01, the CNOPB stated that it was satisfied with the Proponent’s commitment to this principle. No special condition for technology transfer was imposed.

There were five conditions associated with the Benefits Plan as whole, and the one condition with the nearest relevancy to technology transfer, although it was not explicitly mentioned, was Condition # 2 that stated: “Prior to the start of production, the Proponent submit a training and staffing plan reflecting the maximum reasonable employment and training of residents of Newfoundland.”

The plan was submitted in June 1996 and approved by the Board in March 1997. In a report “*Socio-Economic Benefits From Hibernia Operations in 1998*”, prepared by the co-authors of “*Harnessing the Potential...*”, the authors stated that each Hibernia employee spent an average of about five days training during 1998 and that the Hibernia Management and Development Company had spent almost \$1.7 million on direct training.

The latest Annual Report of the CNOPB offers the information that “the provincial government’s \$11 million Offshore Technology Transfer Fund enabled almost two million engineering person-hours to take place in the province.” The same report also states that “in order to defray costs related to the development of Hibernia, the \$300 million Offshore Development Fund established by the federal and provincial governments to enable Newfoundland and Labrador to prepare for offshore development was used to provide funding for physical infrastructure and education and training programs.”

This assistance appears to indicate that much of the onus for certain aspects of the project, including training, became the responsibility of the various levels of Government rather than the Proponent.

3.3.3 Sable Offshore Energy Project

Technology transfer is implicit in the Proponent’s commitment to supplier development and is made explicit in its contractor’s contracting and purchasing policy, which includes the following statement: “...endeavouring to transfer technology and knowledge into Nova Scotia and Canada, and to share technology on normal commercial terms.”

The December 1997 “*Canada-Nova Scotia Offshore Petroleum Board – Sable Offshore Energy Project - Benefits Plan Decision Report*” stipulated the following as Condition #7 for technology transfer:

“Within 90 days of the implementation of this Decision Report, the Proponents shall provide a report, satisfactory to the Board, setting out a program of planned initiatives (including succession planning) aimed at promoting the effective transfer of technologies from the Proponents, their Alliance Partners and the major contractors to Nova Scotian and other Canadian individuals and companies. The Proponents shall support technology transfer by encouraging and facilitating the formation of joint ventures and the development of licensing agreements between, Nova Scotia and other Canadian firms. The Proponents shall also submit a report to the Board annually describing these initiatives and their results.”

This was by far the most comprehensive statement of an approach to technology transfer yet made by any Board and could adequately serve as a model for future Development Plans, or Board conditions and stipulations, throughout the Atlantic Canada region.

The operator, Sable Offshore Energy Inc. (SOEI), equally comprehensively responded to the Board as follows, in its report on how it was implementing Condition #7:

- Responsibility for promoting and tracking technology transfer was assigned to the Training and Development Manager;
- A reporting system where all project teams will report on technology transfer successes, which in turn will be communicated in quarterly and annual benefits reports;
- Succession planning would involve the recruitment and training of local employees and the awarding of contracts to local firms. In particular, interactions with two Nova Scotia engineering firms, were highlighted. With respect to production phase employees, it was

expected that, eventually, all 65-70 Operations Associates would be Canadian with a large portion being from Nova Scotia;

- A commitment to hold a technology transfer symposium; and
- Encouragement of joint ventures through supplier development seminars.

This was the beginning of an on-going process between the Board and SOEI regarding the latter's commitments to technology transfer.

In the Commissioner's Report that preceded the aforementioned CNOPB Benefit Plan Decision Report, the Commissioner commented "that the Benefit Plan is intended to reflect a commitment to principles and is not designed to be a vehicle for binding them to a set of rigid targets." The consortium had set a target of 34% for local benefits for the first phase of the SOEP. As can be seen from the table at the bottom of page 11, SOEI achieved 30%, without heavy-handed regulation, but just by adhering to the plan laid out and comprehensive monitoring by the Board.

Some of the conditions required of SOEI by the Board were as follows:

- Formal report on a quarterly basis focused on the current status of the project and the requirements mandated by the Board;
- The requirement for the operator to build a clause into all the contracts with subcontractors requiring the subcontractor to "seek out and train a NS resource/Canadian resource to offer the service";
- The requirement for operator to go to the market once per year to test the Nova Scotia economy for suitable local contractors;
- The requirement for contractor to make a minimum of \$1 million in Research & Development investment annually into Nova Scotia and file an annual statement;
- The necessity to file all Bid lists and contracts with the Board. Where local bidders have not been successful, they must be debriefed as to why so they can learn for future bids;
- Conducting an annual R&D day with local industry people focused on education of R&D in the industry;
- The requirement of the operator to facilitate joint venture/licensing opportunities on an ongoing basis;
- The requirement to form a Benefits Advisory Committee, where once per quarter the contractor briefs the local industry on project progress, up and coming opportunities, skills requirement. This is to be delivered through an open public forum;
- The requirement of the operator, for the first five years of operation, to annually produce a Supplier Infrastructure Assessment. This document would focus on industry infrastructure needs as viewed from a supplier perspective. Also, it was to be a constructive critique of the local suppliers that the operator had dealt with while conducting business in the region. The report was meant to enhance the awareness of the gaps in the local industry.

We see no reason why all of this reporting mechanism could not be applied to other resource development projects in Atlantic Canada, by the relevant Board or regulatory body.

As explained to us by a CNSOPB representative, the implementation of the conditions is

monitored quite stringently, with the following actions taken:

- Non-compliance with anything is grounds for termination of rights for offshore activity. SOEI was at risk a few times, according to the Board;
- All documents and plans required for acceptance are scrutinized prior to acceptance;
- The operator is required to make quarterly reports to the Board written and verbally. These reports are scrutinized and feedback is given to the operator where they must expedite compliance. These reports are linked back to the original requirements on an ongoing basis;
- All bid lists and subcontractor contracts are scrutinized for compliance;
- The annual R&D investment is reviewed and every line is scrutinized. For example, in 1999 SOEI claimed they made \$2 million investment in R&D in the province. The Board, upon review, decided it would only accept just over \$1 million as R&D investment with the other portion not qualifying;
- Internally, the Board is compiling a Management System Manual. This manual documents the processes the Board uses to operate and regulate the industry. This is being done to have a record of activity and process but also they have Consulting and Audit Canada review their business process in the attempt to improve upon what they have done; and
- In reviewing the Technology Transfer Plan, the Board reviews each claim in detail. If the claim is that skill transfer has occurred with an organisation, the Board obtains the name(s) of the individuals for follow-up and confirmation.

The track record so far with SOEI is described by the Board as being very good. The operator has set the benchmark for the performance of future operators.

This has been independently substantiated. Annually the CNSOPB has Consulting and Audit Canada (C&AC) verify the information they have been receiving from the operator. There are essentially two flows of information in the industry, firstly from the subcontractor to the operator and secondly from the operator to the Board. C&AC reviews the accuracy of the information through both flows. The sub-contractors account for 90% of the volume with SOEI. The recommendations for improvement made by C&AC are then integrated into the quarterly reporting and follow-up cycle and they become requirements.

The Sable Offshore Energy Project's 1998 Annual Benefits Report was found to be substantially compliant, thus supporting the CNSOPB statement that SOEI's performance was very satisfactory.

In light of the outcome of the inputs from both the Operator and the Board, we would highly recommend that the system used for SOEP, that is the Operator's Plan, the Board's Conditions, the Operator's reporting requirements and the Board's monitoring style, be used as framework for other developments, together with the backend audit process, which, we note, is a feature of mature regulatory processes.

The resultant technology transfers presented in tabular form for Sable in section 3.2 were taken from a report submitted by the operator to CNSOPB in response to the Board's decision regarding technology transfer.

3.3.4 Terra Nova

In their Benefits Plan, the Proponents made the following general statement regarding technology transfer:

“The Proponents will continue to encourage the transfer of technological capabilities to Newfoundland and Canadian residents and firms through:

- participation of Newfoundland residents and firms in the development;
- encouragement of the formation of alliances and joint ventures;
- development of licensing agreements between Canadian and international firms with Newfoundland-based firms; and
- implementation of development-required training programs for Newfoundland residents.

Technology transfer information will be requested in all Requests For Proposals and Requests For Quotation. Potential suppliers and contractors will be requested to provide:

- a description of the intended technology transfer as well as the strategy and methods they propose to use to achieve the transfer to Canadians;
- a summary of the arrangements for technology transfer to Canadian participants, including their plans for the development of senior project management capability.”

In approving the project the Canada-Newfoundland Offshore Petroleum Board’s Decision 97.02, stipulated eight conditions in respect of the Benefits Plan. The CNOPB says that Condition #4 covers transfer of technology. It read:

“Upon Project Sanction, the Proponent submit for the Board’s review, a listing and description to be updated quarterly of all significant contracts for the procurement of goods and services identifying those which, in the Proponent’s view, could potentially offer long-term benefits and opportunities to Canada and, in particular, to Newfoundland.”

In the 1999-2000 Annual Report of the CNOPB, in the section under Terra Nova Benefits Plan, the Board states that it previously accepted the Proponent’s response to Conditions 1, 3, 4, 5 and 8. In May 1999, the Board accepted the Proponent’s submission respecting Condition 6. After the submission of two reports, the Board accepted them as satisfactory for Condition 7 in February 2000. The final Condition 2 is still under consideration.

However, Condition #1 proved to be contentious, as described in section 2.2.3 on page 25 of this report. The wording of the Condition was as follows:

“As soon as is practicable after Project Sanction, the Proponent relocate engineering and procurement activities for the Project to Newfoundland.”

For whatever reason, the CNOPB did not press this conditionality.

3.3.5 Maritimes & Northeast Pipeline

Since this pipeline is onshore, inter-provincial and international, it falls under the regulatory jurisdiction of the Federal Government's National Energy Board. This Board does not have a mandate for industrial benefits.

To our knowledge and from the information available, there were no technology transfers recorded for this project, but there again there was no requirement to do so.

3.3.6 Summary

The Proponents of the four offshore projects made general commitments to the transfer of technology to local firms in one form or another. These commitments were recognized in the Decisions for Approval made by the CNOPB and the CNSOPB. However, explicit conditions related to technology transfer were made by the Boards only for the Sable Offshore Energy Project and the Terra Nova Project. For the latter, the reference to technology transfer is indirect.

Other than for the Sable Project, reporting on technology transfer is not systematic.

We have suggested a framework for measuring the amount and effectiveness of technology transfer in section 3.2.1. This is directed to industry participants, once they have been recipients. It is more of a back-end process, with the evaluation occurring after the Proponents' efforts to effect technology transfer have been collected, collated and verified as per the mechanism used by the CNSOPB for SOEP. This is the front-end of the process.

It remains to be decided who carries out the back-end process, briefly alluded to on page 52.

These mechanisms will ensure that the requisite information is readily available in the future, for use by all concerned parties in their analyses.

3.4 SUCCESSOR TRAINING AND DEVELOPMENT

We should not confuse successor training with regular training and development. The connotation "successor training" implies that there is an incumbent in the position already and that steps to replace the individual need to be put in place.

Within the context of the Atlantic Canada oil and gas industry, successor training is taken to mean the displacement of "critical foreign" expertise with Atlantic Canada personnel. But what constitutes a foreign worker? From Atlantic Canada's viewpoint, is it someone from out of the country or someone from another Canadian Province or Territory?

Before discussing how successor training fits into technology transfer and mechanisms to achieve it, we should begin by defining terms. For the purposes of administering Benefits Plan requirements, the CNOPB uses definitions established in other legislation. It seems logical to continue to use these definitions, which are:

Canadian: A person who was born in Canada and who has not relinquished his/her Canadian citizenship; or, a person who has been granted Canadian citizenship; or, a person who has been granted permanent resident (landed immigrant) status in Canada.

Newfoundland Resident: A Canadian Citizen (or landed immigrant) who meets the residency requirements of the Newfoundland Election Act; i.e., a person who has resided in the Province for the immediately preceding six-month period.

The Newfoundland definition applies equally well to other Atlantic Canada Provinces. So anyone outside of these descriptions would be classified as “foreign”.

The Proponents or their sub-contractors employ foreign workers during the Development phase and in the Production phase. It is most likely that the sub-contractors will have the greater number of foreign workers during the development and construction period, with the operator employing the foreigners during the longer-term operational period.

So what sort of numbers of foreign workers are involved in our representative projects used as benchmarks? During the short, two-year development phase from 1990-1991 for the Cohasset-Panuke project, 12.5% of the labour was foreign. We suspect that it is unrealistic to plan for succession within such a short time frame. At the start of production in February 1992, LASMO, the operator, employed 3 foreign workers on the jack-up drilling unit. They planned to fill all but four positions on the storage tanker by Nova Scotians and other Canadians during the first year of production. However, they expected the crew of the shuttle tanker to be completely foreign. They commented that Canadians would be able to work on the shuttle tanker, but only at the lower end of the international wage scale.

The figures for the Sable Offshore Energy Project are comparable. During the Development period, there was 17% non-Canadian content, translating into approximately 330 people. A large number, but again over a short period of time. During the production period this figure dropped to 2%, or 5 people.

As of March 2000, Hibernia’s operating phase employs 25 non-Canadians out of a total of 727 workers, or 3.4%.

For Terra Nova, still in a development mode, the figures from the CNOPB 1999-2000 Annual report for non-Canadian workers, and their locations, are as follows:

St. John’s	Bull Arm	Offshore	UK	US	France	Norway	Korea	Abu Dhabi	Total
76	14	34	403	121	42	76	58	3	827
Totals for Newfoundland and other Canadian employees									
353	813	92	1	4	0	0	26	1	1290

This is the highest percentage of the project so far, at nearly 40% for foreign content. However, the development phase is coming to an end shortly

All these figures have been extracted from the relevant Boards' Annual Reports or Decision documents and the Proponents' Benefits Plan and updates.

The CNOBP and the CNSOPB seem to concur with our postulation that foreign expertise during development phase cannot easily be subject to succession planning, by virtue of their absence of comments regarding this situation in any documentation. Indeed, it was only the Cohasset-Panuke project and Terra Nova where the Boards in their Conditions made explicit reference to succession planning at all, and only then in reference to the operations phase.

The CNOBP Decision Summary for Terra Nova states that "the Board accepts that these contractors must be able to bring into Canada or into Newfoundland a limited number of senior personnel from their existing organizations to discharge contractual responsibilities for managing the work, as well as specialized technical personnel necessary for the execution of the work where personnel with the requisite skills and experience are not readily available locally."

The Board's Condition #3 for Terra Nova states: "Within six (6) months of Project Sanction, the Proponent submit to the Board a comprehensive human resources plan, acceptable to the Board, for the operations phase of the Development covering all drilling, producing, crude transportation and support activities. The plan should provide for the maximum practicable level of participation of residents of the Province in the operations phase workforce and, to the extent possible, the succession of Canadians, and in particular residents of the Province, to positions initially held by non-Canadians." The Board has since accepted the Proponent's response to Condition #3.

In its April 7, 1992 decision on the Revised Benefits Plan for Cohasset-Panuke, the CNSOPB stated its requirement for succession training as follows: "LASMO shall submit by May 15th, 1992, a Succession Plan satisfactory to the Board. The plan shall demonstrate how LASMO proposes to replace positions initially held by foreign workers with Nova Scotians and Canadians." 1992 was at the start of the operations phase of Cohasset-Panuke when LASMO had limited numbers of foreign workers on the jack-up, storage tanker and shuttle tanker, as indicated above.

For the Sable Offshore Energy Project, the Board's Condition #3 Employment and Training Plan stated: "The Proponents, Alliance Partners and major contractors shall notify the Board at least three months prior to bringing foreign workers into Canada. The notice must be detailed and include job titles, descriptions of responsibilities and the duration of proposed employment in Canada." No mention is made of the requirement for a succession plan, only employment information is requested.

However, the operator SOEI, has submitted a technology transfer plan that facilitates succession planning, which it defines as the replacement of foreign works with Nova Scotians and other Canadians. It is presently under review by the CNSOPB.

Our conclusion, as far as Atlantic Canada is concerned, is that succession planning is an unsuitable objective for the development phase of projects, owing to the short duration of this

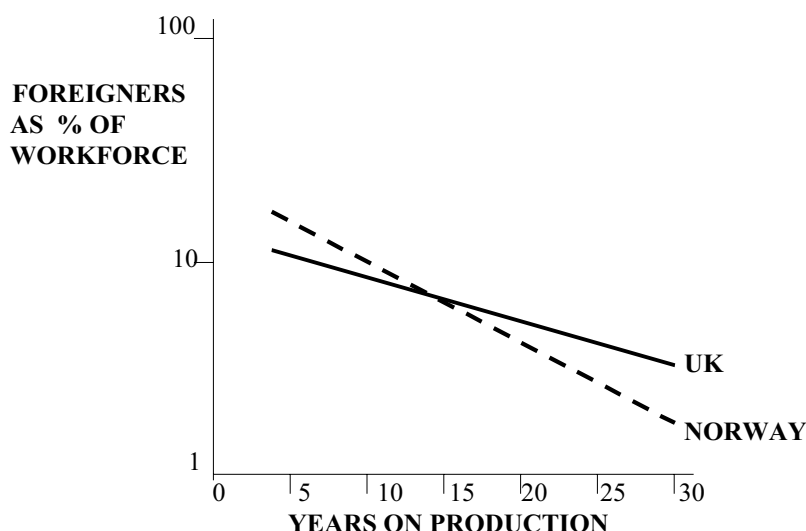
particular stage of the project. Multiple projects by the same operator could produce economies in the development phase however. Furthermore, we conclude that the numbers involved in the operations phase are not significant enough to warrant succession planning as a **key** element of technology transfer, as Atlantic Canada has captured the high value jobs already. There are probably more pressing matters requiring attention and effort, such as the collection and measurement of technology transfer in the service and supply sector. This conclusion seems to be supported by the actions of the various Boards in their written statements to Proponents.

This should not be construed as undermining the importance of training in technology transfer, which does form a key element in the conveyance of technology to recipients. However, this section deals solely with succession planning as defined at the beginning of the commentary and not generic or specialist training for positions in the oil and gas industry, which is out of scope.

However, we suggest that Atlantic Canada is doing well already with respect to succession planning. Our experience in other resource nations worldwide, where it is called indigenization, meaning the replacement of expatriates with nationals, indicates that Atlantic Canada is ahead of the curve.

In other jurisdictions almost all Concessions and Production Sharing Contract Agreements contain clauses requiring the operator to train national employees to take over jobs occupied by foreign workers. Governments take these clauses very seriously. Companies seem to start production with about 15 to 20% of the workforce being expatriates and for this percentage to halve after each eight to ten year period. Starting production in Atlantic Canada with single digit percentages is therefore good.

The following graph, taken Richard Barry's book "*The Management of International Oil Operations*", as were the figures quoted above, gives foreigner workforce percentages for Norway and the United Kingdom's offshore oil industry:



This graph also indicates that Atlantic Canada is doing well, compared to Norway and UK.

3.5 CASE STUDIES

In this section we will present six case studies related to technology transfer in Nova Scotia, Newfoundland and New Brunswick. In Prince Edward Island, where oil and gas technology transfer cases are infrequent, an alternate approach was taken. We focussed on describing the provincial technological infrastructure in two domains that could eventually be the base for technology transfer in the oil and gas sector.

Naturally, we have not identified the firms and their technology transfer partners, or the relevant provincial locations, except in the case of PEI, where their identity would be obvious anyway.

The case studies have been arranged by technology transferred, rather than by company, and all follow basically the same format of describing the background, reasons, structure of the agreement, success factors, issues and impacts of the process.

3.5.1 Engineering and Manufacturing Knowledge

The recipient firm has a long history related to the offshore oil and gas industry dating from the 1960's. It has been involved in both major East Coast offshore projects and international projects.

Technology Transfer Project Descriptions: Action involving technology transfer was present in the following three instances:

- For a major East Coast project the recipient manufactured and supplied drilling modules. This resulted in technology transfer of engineering know-how and manufacturing process knowledge;
- The recipient firm transferred engineering and process knowledge in relation to accuracy control for pontoons from a UK partner; and
- With another European firm, our recipient received technology transfer in the form of topside and programme management expertise.

Reasons for the Technology Transfer: The reason for technology transfer in the first case was to strengthen the capability present in the project team and to form a strategic bond that would result in future business opportunities.

The recipient firm worked with the source UK firm to manufacture pontoons. The value that the UK firm offered was its accuracy control system for the manufacturing. The technology was transferred in an attempt to strengthen the alliance in the hopes of future work and efficiencies between the two organizations.

The Atlantic Canada firm worked with a European firm on a number of co-operative bids. The technology transfer was received in Atlantic Canada through the exchange of documents and programme management expertise. The bid documents were co-published in those instances where they were co-produced and developed. This left the Canadian recipient with a better understanding of the issues inherent in large-scale program management.

Structure of the Agreement: All three agreements were alliances, for the purpose of business efficiency and opportunity. The transfer was primarily in the form of shared expertise and documentation.

Success Factors: The reason why the transfer of the knowledge and expertise was a success was because the organizations were allied toward a common goal – either completion of a project or acquisition of a new contract.

Barriers and Issues: The recipient's experience in working in these alliances showed that projects are too often not planned in sufficient detail to allow for their successful completion. Surprises and challenges that the company experienced included instances such as non-alignment of components, as well as haphazard communication between the different component manufacturers. Most of the projects did not have a sophisticated engineering package. The problem raised by all these issues were overcome with the intervention of the program manager – not without budget overruns however.

Impact of the Technology Transfer: The technology transfer resulted in strengthening alliances that the Atlantic Canada firm is currently using to position for future contracts. It also strengthened the firm's understanding of the program management function associated with bidding for large-scale projects. As well, it allowed the firm to validate the accuracy of control process and system in the oil and gas industry. The Atlantic Canada firm took over a contract relating to the control processes that was not on target for a successful completion.

3.5.2 Metal Fabrication Services

The Atlantic Canada firm involved specializes in complete pre-production processing of industrial mill products. It sells millions of pounds of material (aluminium, stainless steel, nickel and copper) in most sizes, shapes and types. Standard stock for this organization contains thousands of different items for application in hundreds of industries. With its sophisticated equipment it can process special orders by levelling, slitting, shearing, blanking, precision sawing and flame cutting to exact specifications. The company has a number of business relationships focused on servicing the oil and gas industry. These business relationships include enterprises in France, Germany, Holland, Italy, and the UK.

Project Description: The recipient firm worked with its UK partner to provide metal fabrication services to one of the East Coast projects. The technology transfer was in the form of a new project management system. It comprised a web-managed document management system where logistical information, such as freight forwarding information, work progress, and electronic packing slips, was placed. The purpose was to avoid the frequent miscommunications that are characteristic of this industry. Paper flow was drastically reduced and all users could share the documentation in real time. This system continues to be developed and enhanced. A document control log was created online for both partners to access. This was a new approach for both parties.

Reasons for the Technology Transfer: The primary reason was that each organization was deemed to have complementary areas of specialization and decided to utilize this to produce

the most beneficial business result. Specifically, the UK firm had a expertise in certain material grades production, very good Quality Assurance and excellent technical ability and experience from in their portfolio of previous projects. The Atlantic Canada firm offered complementary capability and depth in the area of project management.

Structure of the Agreement: The agreement with the UK firm was an alliance, but with no written agreement.

Success Factors: The reason given why the transfer of the knowledge and expertise was a success was because both organizations were allied toward a common goal. Completing the project on time and on budget was the principal factor for success.

Barriers and Issues: Though both parties judged that the new technology solution added value in the process, as with most technological change, there was some resistance, mostly from the people used to the traditional paper-driven system. These problems were overcome through consistent implementation of the solution. The recipient found that to gain acceptance it was useful to demonstrate the quantitative benefits of the solution.

Impact of the Technology Transfer: The result was an improvement in accuracy and speed of communication between partners. This integrated the partners and customer more closely. As well, the initiative potentially could reduce costs in the project management function. Specifically, there is now a residual technological ability and capability resident in the firm that did not previously exist in the state it does today.

3.5.3 Subsea Component Production

This was a joint venture between an Atlantic Canada parent and a Western Canadian company. This venture was conceived to target a specific opportunity. The initiative secured a contract for the provision of highly important subsea components, with the production process taking place onshore.

The firm saw this as an opportunity and invested thousands of corporate hours in preparing their proposal. Their efforts resulted in a very detailed site selection and local market analysis that has since been used by the Provincial Government as official records.

In the relationship the Atlantic Canada firm offered the following project related skills and expertise:

- local knowledge of Government, sub-contractors, locations and sites;
- knowledge of human resource issues like union negotiation and sourcing employees;
- product acquisition, transportation, corporate management functions, administration systems;
- manufacturing capability from previous plant operations experience; and
- site development ability.

The Western Canadian company, in turn, offered:

- the equipment to carry out the job;
- senior expertise in the process and operation of the production machines;
- industry knowledge; and
- credibility in the oil and gas sector to win the contract.

Reason for the Technology Transfer: The reason for the technology transfer was that each organization was deemed to have complementary areas of specialization. The recipient firm in Atlantic Canada could not win or complete the project without their Western partner, who would stand little chance of winning the contract without the local expertise that the recipient firm provided. The complementary abilities that underpinned the joint venture are listed above.

Structure of the Agreement: The agreement was a formal joint venture comprising a new, incorporated entity. The technology transfer took place in the following areas:

- Safety was the area of transfer of knowledge and procedures were the most profound changes took place in the operation. It occurred in the form of increased standards, a modified role of the Safety Officer in the firm, the development of formal safety plans, the institution of an ongoing training program, monitoring systems and safety incentive plans. For example, bonuses were tied to the number of accident free days and a complimentary contribution was made to a hospital;
- Secondly, the JV had to purchase a Material Resource Planning system. This was also accompanied by a much greater understanding of technology and the role that could played competing in the global marketplace; and
- Finally, there was an overall broadening of the Atlantic Canadian firm's perspective on competing in the global marketplace. This was described in the sense that this had been a local company competing in the local environment. The joint venture really demonstrated the level of commitment it takes to both deal with larger organizations and compete and sell in the global marketplace. This learned experience was best demonstrated when the recipient firm had to pull together the value proposition they could offer and sell it to a number of partners to gain commitment in targeting this opportunity.

Success Factors: Completing the project on time and on budget, openness within the Joint Venture, which was well documented and organized, and clear roles for each partner were reasons cited for success.

Barriers and Issues: The problems primarily stemmed from the project being a totally new experience for the organization. That is, identifying, hiring and training 200 men to carry out tasks that they had never undertaken before.

Fundamental changes in the way the firms did business were needed, such as increased levels of autonomy both in budget and project responsibility. They needed the ability to react to the day-to-day issues associated with taking a barren piece of land and developing it to the point where there was a production unit and corporate infrastructure present. For example, they had to get water to where there was none. It was all to be accomplished within a tight deadline. To overcome this challenge they had to adjust their business practices to draw expertise from

other areas of their business. This involved moving to a cross-skilled workforce and empowering people in a way they never had to in the past.

Further, upon working with their new partners, the recipient firm quickly discovered that each partner had sets of distinct abilities and there was a common area where both could contribute. Each party was able to define roles clearly. The subsequent result was a successful project and transfer of skills and knowledge in a very specific offshore area.

Impact of the Technology Transfer: The result of the technology transfer was an improved level of safety in the organization that exists today. This takes the form of improved programs, such as incentives for accident free days and projects and an increased corporate role for the Safety Officer. Furthermore, an increased ability to compete in, and awareness of, the global business environment that had been developed. The experience of investing thousands of corporate hours in preparation to bid for a project and the level of professionalism expected by partners in these large-scale oil and gas projects has been beneficial to the Atlantic Canada firm moving forward. This accumulated knowledge can now be applied across other industries, where they compete. Through this experience they have since invested in technology and at a corporate level, begun to embrace technology as an enabler and a vital component of success in the oil and gas industry.

The recipient did not realize how important it was to be a proven resource in the global network and cited how small this industry sector is on a global basis. They have just proposed on a package of work in France, related to the East Coast offshore. They now have relationships with companies around the world that they can call to discuss opportunities. They also discovered that the industry would pay more for a proven resource that is globally connected.

Regarding transfer, they discovered that their partners had the technical knowledge and they had stronger project management ability. Therefore, the Atlantic Canada firm took a lead role in operationalizing the opportunity.

3.5.4 Fabrication of Steel Components

This case study relates to a Canadian firm that was in a technology transfer activity with a foreign company. The technology transfer in question related to fabrication of offshore steel components.

Documents submitted to the relevant Board by the project's Proponent concerning their own Benefits Plan indicates that the recipient firm was receiving technology transfer from its foreign partner in a number of areas. These included:

- methods for fabrication and construction;
- trained riggers and crane operators; and,
- construction of drilling jackets and topsides.

However, the firm itself indicated that there was no technology transfer from the foreign

partner with respect to process knowledge, as that capability already existed. The joint venture enhanced their exposure and visibility in the global community, which was only just developing. The major benefit of the joint venture was to be associated with the foreign firm's reputation in this global community.

A point was raised concerning a senior project resource initially provided by one of the partners in the joint venture. It was suggested that such a senior position should best be filled by a local individual who is highly familiar with such key elements of the local environment as the Atlantic Canada work culture, the sub-contractors and the business of the firm. The schedule and level of decision-making required, from the outset on site in the Atlantic region, required this type of familiarity.

The firm indicated that a high level of expertise is available on the world market that can be accessed through a number of employment channels. It appears that many of the Project Managers used by larger companies, like the foreign partner, are independent contractors available for employment by any organization, subject to availability and remuneration considerations.

Structure of the Agreement: A formal joint venture, with legal agreements, was the form of business arrangement.

The Firm's Expertise: The firm works to North Sea standards and continually invests in remaining technologically advanced. They cite it as the only way that they can compete in the global market. The firm appears to be one of the more advanced organizations in the Atlantic Canada region within the oil and gas service industry.

3.5.5 Control Systems and Instrumentation

The recipient company has been very successful in the oil and gas industry and has developed many technology transfer arrangements with various partners in systems development and applications.

Reasons for the Technology Transfer: The main reason for the technology transfer was to explore new opportunities related to its core business, thereby strengthening the company's position within the industry. The main areas of focus include control systems and instrumentation for vessel controls, control processes and information presentation.

Structure of the Agreement: The various agreements were generally in the form of joint ventures. This arrangement was beneficial to both recipient and the several foreign sources in that it allowed the foreign companies access to Atlantic Canada companies and markets and the recipient firm access to new technology.

Success Factors: A mutually beneficial arrangement was at the core of these business undertakings. The recipient firm wanted to gain expertise in the industry and the foreign companies wanted to gain access to local markets and companies. Previously all parties had

been committed to the use of technology to expand business opportunities and these advancements in technology also contributed to the success of the joint ventures.

The recipient firm notes that the attitude of all interested organizations to technology development has changed. According to the firm, the attitude of the community, government, financial institutions and education organizations has changed dramatically in the last 10 years, towards a more positive environment.

Another key success factor has been the ability to recruit, train and retain good people. The Atlantic Provinces' Colleges and Universities, in particular, their Co-operative Programs, were reported as having been of great benefit.

Barriers and Issues: The selection of the right projects, particularly in the international market was a major factor, with the key limiting factor being the availability of financial and human resources.

With respect to the last point, the recruitment of appropriate and qualified staff was a key issue, which required the company to take a proactive human resources approach, including a constant recruitment campaign. As noted above, in this regard, the universities and colleges throughout the Atlantic Provinces have helped to offset this problem. These organizations have been successful in meeting the needs of the industry and have in recent years provided qualified and appropriate individuals. Approximately 90% of the local firm's staff is from the Atlantic Region.

Rapid expansion has led to challenges in both the management of change and the availability of resources and has included the support of the financial institutions.

Impact of the Technology Transfer: Technology transfer has enhanced the services and products of the recipient and has led to increased presence in the UK, USA and Germany, both in the oil and gas industry and other industry sectors, including including pulp and paper, mining and utilities.

As a result of the successful technology transfer, the company reports that it has a domestic and export edge in controls technology and instrumentation in a very specialized and important area. The successful projects have led to company growth, with increase in both its engineering and technical staff. Currently staffing levels of around 100 are up from approximately 30 five years ago, with a doubling occurring in the past two years. This increase has allowed the company to continue to bid on several projects at the same time.

As projects continue, it is important that the relationships, arrangements and support of the various infrastructure organizations (banks, government, academic institutes) involved continue to improve and adjust to meet the changing needs of the industry.

3.5.6 Materials Technology

Most organizations do not want to dwell on their less than successful ventures. However, this

particular recipient was willing to briefly discuss its experiences in technology transfer, which is why it was chosen for inclusion.

Project Description: The company was involved in a joint venture related to the provision of technical services to an offshore energy project. It did not have a good experience with respect to technology transfer

Reasons for the Technology Transfer: The company attempted to receive technology transfer so that it could better position itself within the industry. However, the company reported to us that the foreign source companies benefited more from the local company's involvement in the joint venture than the local company did from the involvement of the foreign companies

In cases where there was some technology transfer did occur, the employees involved were eventually attracted to employment opportunities with the operators.

Structure of the Agreement: The arrangements were generally for the provision of engineering services and consulting in the materials field. The agreements for fees included profit plus fixed costs and per diem rates.

Barriers and Issues: The Atlantic Canada company's experience was that the foreign companies normally presented the task, problems and issues to them, and left them to determine the solution. Limited guidance and assistance was provided.

In the company's view, the relevant Board's Offshore Agreements were written more around the number of jobs created and not around technology transfer. As a result, there was no perceived requirement, in the company's view, to transfer experience.

In addition, it was felt that the Agreements saw technology transfer going to individuals as opposed to companies. As a result the local companies were being disadvantaged when these individuals were hired by the Proponents, or left the Province. It was felt that the Agreements should have encouraged the project operators to deal with the companies rather than with their employees. From a human resources point of view, it was felt that the local workers were at a disadvantage when it came to obtaining technology transfer. The company feels that this stems from the fact that, after six months, foreigners are considered residents, and are at this stage counted in the hiring requirements, that is the number of locals required, for the projects.

Impact of the Technology Transfer: The company felt that to get the most out of the offshore, the operators need to be encouraged to deal with existing companies. "What we need is a strong local industry", "oil will come and oil will go and so will the large multinational firms..." are among the comments made where the implication by this particular company is that local companies, under the current Agreements, will be left with very little at the end of the day.

While we sympathize with this particular company's circumstances, the expertise that they

possess, which is resident in the individuals that they employ, is always going to be subject to market place employment conditions and loss of staff to the better paying situations.

3.5.7 Development and Technology, Prince Edward Island

There is presently little to no technology transfer related to oil and gas activity in Prince Edward Island. We therefore focused on the level of educational and support infrastructure present in the Province that could play a role in an overall approach to developing an oil and gas industry.

Economic development for the Province is spearheaded Technology and Development PEI, who act as the lead government agency in this area.

The key infrastructure stakeholders include:

- University of Prince Edward Island: this organization began as a Liberal Arts College and currently has a Veterinary College and an active Faculty of Science. It has a molecular biology group and a significant chemistry centre. The Technology Centre is a part of UPEI and works primarily on a cost recovery basis. The focus of the centre is to establish a dynamic Information Technology in Education Centre capable of providing training, research and development, as well as innovative solutions and products, to the business and learning communities. This would thereby support the growth of the knowledge economy on Prince Edward Island. Its revenues were about \$1.2 million, comprised mainly of public sector dollars;
- The Centre for Animal and Plant Health: this Centre is focused primarily on enhancing the effectiveness and efficiency of federal inspection and related services for food and animal and plant health;
- Agricultural Research Station: an Agency acting under the department of agriculture and forestry focused on a wide variety of agricultural research, produce and livestock; and
- Belvidier Avenue Group: an initiative focused on championing the development of the bioscience industry in Prince Edward Island.

Companies and organizations that might be of relevance to the emerging oil and gas sector are as follows:

- Northeast Biotech Corridor: a pan-Atlantic association of companies focused on the development of the industry at a regional level. It interfaces with groups in Boston and has involvement of both private and public sector entities;
- Diagnostic Chemicals Ltd: a privately held company with subsidiary companies in the United States and Mexico. The firm has more than 200 employees who research, develop, manufacture and sell innovative and synthetically challenging chemicals, biochemicals, clinical chemistry reagents, and point-of-care tests. Customers include diverse corporations and health care facilities involved in the pharmaceutical, life science and diagnostic marketplaces; and
- Atlantic Fish Health, a division of AVC Ltd.: this firm conducts research with bioactive compounds in aquatic organisms, including those of the immune response, and in the

aquatic environment, leading to benefits for those served by the division.

Of particular interest the moment for PEI is the drilling activity that is taking place on the Bear River prospect at Souris, where a small independent is looking for gas.

3.5.8 Summary

In the preceding sections we have presented six case studies that illustrate successful approaches and problem areas related to technology transfer.

The key success factors identified through the case studies were the following:

- the need to have a common goal among the partners. For example, a project completion target date;
- the achievement of mutual benefits. For example, the foreign company gains access to the local market while the local company obtains new technology;
- complementary capabilities among the partners;
- project management depth;
- a general openness towards engaging in technology transfer; and
- a high level of expertise and knowledge.

The examples of expertise and knowledge cited in the case studies were primarily in documentation and knowledge transfer focused on engineering expertise, manufacturing process expertise, safety program management, oil and gas programme management expertise, bid management expertise, and fabrication skills.

Generally, there were good reviews by industry of the educational infrastructure supporting the oil and gas industry. The case studies indicate that they source a majority of the talent required to service the oil and gas industry from Atlantic Canada educational institutions, speaking favourably of the quality of the individuals being produced. This indicates that the current educational infrastructure is responsive.

Exposure to a global marketplace has benefited Atlantic Canada organizations. Historically they have dealt only in the local marketplace, and the exposure to a wider the level of industry operations was described as beneficial. The case studies cited the advantages gained from changes in corporate philosophy to investment in technology as having positive effects. For example, in some organizations it was unusual to invest thousands of person-hours into bid preparation that may not result in the award of a new contract. Others benefited from a better understanding of the role of technology in the oil and gas industry.

The main problem areas and challenges identified were the following:

- Commercial experience: the level of experience resident in the organizations serving this industry is a critical differentiator that emerges in both the process surrounding acquisition of the contract and successfully delivery, once the contract has been awarded. Firms interviewed have cited instances when the foreign partner had to assume a portion of a project deliverable due to cost issues surrounding the local organization. The Atlantic

Canada organizations have also experienced loss of new business due to inexperience in program costing;

- Staff retention: the case studies have cited some issues around retaining the staff once they have acquired on-the-job experience. These comments were further qualified with instances when the oil companies have recruited candidates for employment from among the ranks of the Atlantic Canada firms, specifically those to whom technology has been transferred; and
- Insufficient planning: the case studies cited instances where firms have experienced projects that are not planned in sufficient detail to allow for the successful completion or do not have sophisticated engineering packages to support them. Haphazard communication between the different component manufacturers are hazards to be overcome.

The methods used to capture technology were as follows:

- alliances backed by memoranda of understanding, where the transfer was effected through sharing expertise and documentation;
- alliance with no written agreement, where the transfer was in the form of a new project management system;
- a joint venture comprising a new incorporated entity, where the technology capture took place through the transfer of knowledge and procedures, the acquisition of a material resource planning system, and a general broadening of perspective through the relationship;
- a joint venture backed by a legal agreement, where there was a difference of opinion as to the extent of the technology transfer; and
- a joint venture, which led to training opportunities in new technological areas.

These methods then ranged from an informal alliance to a joint venture with a new incorporated entity. While various modalities can be used, the success of technology capture will depend on the ability of the partners to structure a technology transfer process that incorporates the success factors mentioned above.

3.6 TECHNOLOGY TRANSFER IN FOREIGN JURISDICTIONS

Commentary on meeting the value chain in two foreign jurisdictions is provided in section 2.5, beginning on page 33. It covers Norway and the UK. A synopsis of that commentary is included below, together with a fuller discussion of the Western Canadian approach.

The UK Experience: In the early 1970s the level of British engagement in the North sea supply market was about 25-30% and, without government intervention, it was estimated would rise to no more than 40% by the end of the decade. Judged unacceptable at this level, a strategy was instigated to ensure that British firms received opportunities to provide goods and services.

The Offshore Supplies Office (OSO) was established. Its mandate was to audit company purchases and provide financial assistance to supply companies. If a contracted supplier was

not a British firm, the oil company was required to list the UK firms it did approach prior to the supply purchase and give the reasons for not choosing them. OSO officials also met regularly with oil companies to discuss purchasing plans and to suggest possible British suppliers. The implication being that companies refusing to make greater use of UK suppliers would be treated less favourably during future licensing rounds.

Concurrent with this approach was a noticeable increase in participation of UK firms in the offshore supply industry, begging the question whether this was cause and effect in operation. By the end of the seventies British engagement had risen to 79%. Since then the same British supply firms have moved on to capture foreign markets as well.

The Norwegian Experience: The Norwegian's approach had three main elements. Firstly, the government vested the responsibility of ensuring Norwegian commercial participation in the offshore oil and gas industry with Statoil, the state oil company, who were given preferential treatment in the licensing rounds. Where the state exercised its 50% participation option, it then controlled the decision-making process regarding the supply of goods and services.

Secondly, foreign companies were required to use Norwegian supply companies, subject to quality, pricing and delivery considerations. Operators were monitored according to legislated powers, which linked success in future licensing rounds to their record of using Norwegian supply companies.

Thirdly, licensing was used to encourage foreign firms to assist in the development of general Norwegian industry.

Concurrent with this approach and over an extended period, the share of goods and services accounted for by Norwegian firms rose to more than 60% in the 1970s, up from less than 20% earlier on. This level of participation is impressive given the fact that the Norwegian industrial base is much smaller than that in the UK. Norway has developed world-class expertise in the offshore oil and gas industry that it is exporting worldwide, including to Atlantic Canada.

The Western Canadian Experience: Imperial Oil's discovery of the Leduc oil field in 1947 ushered in the modern era of petroleum development in Western Canada. Since then US-based multinational firms and their attendant service and supply firms developed the oil and gas resources in Western Canada for a number of years. During this period there was an on-going concern with the lack of participation by Canadian firms. In 1957, the Gordon Commission on Canada's Economic Prospect put the situation as follows:

"One of the most significant characteristics of the energy program is its import content. Many of the specialized engineering services and much of the machinery and equipment employed by the oil and gas industry will continue to be purchased elsewhere."

In 1980, the Federal Government installed the National Energy Program (NEP). One aspect of the program was to increase the Canadian content of the oil and gas industry. After much criticism from the US and the Province of Alberta, along with the economic recession of

1981-82, falling oil prices and the election of a new Government in 1984, many of the key Canadian content elements of the NEP were largely abandoned.

The subsequent approach leaned towards a market-based strategy, allowing the private sector to develop the industry, with the government deriving benefits through the collection of royalties and corporate taxes.

The oil and gas sector, comprising producers and the equipment and services industry, which did develop in Western Canada over time, is now made up of some 1500 small and medium size firms employing tens of thousands of people. In 1996 the output of this industry was \$8 billion, \$2 billion of which was in exports, or about 2.5% of the total world export market. To put this in context, the US, UK and Norway account for 60%, 11% and 5% respectively of total world exports.

The imports into Canada in the oil and gas equipment sector in 1996 were \$2.2 billion, 97% of which came from the US. Western Canadian based companies therefore captured 73% of the market, after more than 50 years of being in business however.

Summary: The approaches used in other jurisdictions to develop their respective oil and gas supply industry range from moral persuasion to direct state intervention. In Western Canada, market forces by and large drove the development of the oil and gas supply industry.

The approaches used by the UK and Norway have resulted in the development of domestic oil and gas supply industries that are now more active in exports markets than the Canadian oil and gas industry. However, the big differences between onshore and offshore markets lead to a greater barrier to entry in the offshore.

The Norwegian approach, of having a State oil company control the resource development and thereby directing technology transfer, does not seem applicable to Atlantic Canada at the present time. However, the UK approach of moral suasion, backed up by consistent reporting of contracts and technology transfer activities, does seem applicable to Atlantic Canada.

Whatever approach is taken, it can only serve as the catalyst for technology transfer to take place. The government directives can create the environment for technology transfer to take place, either through direct intervention methods or persuasive techniques.

Industry itself must then realize the opportunities thorough the application of the most appropriate technology transfer mechanism, be it joint ventures or licensing arrangements. Government cannot execute and industry cannot set policy.

So both are important links of the chain, the decision being which chain should be used. The one that will shackle the Proponents to technology transfer by government direct intervention - the Norwegian model. Or the chain that will gently pull the Proponent to acceptance – the UK model of persuasion or the Western Canadian model of use of market forces.

3.7 LESSONS LEARNED IN TECHNOLOGY TRANSFER

In section 3.5.8 of the Case Studies we summarized the detailed lessons learned from technology transfer. Here we will take a broader view of the more high level topics that have to be considered.

Referring to our representative projects again, the requirements to undertake technology transfer varied from project to project. For example:

- there was no requirement for the Cohasset-Panuke Project and for the construction of the Maritime and Northeast Pipeline;
- no condition for technology transfer was attached to the Hibernia Decision;
- only an inferred one was attached to the Terra Nova Project by the CNOPB;
- an explicit condition was imposed by the CNSOPB for the Sable Offshore Energy Project.

This clearly indicates lack of consistency and the variability of approach and subsequent reporting on technology transfer activities, no doubt by choice in some instances. Only CNSOPB have visibly displayed a mechanism for systematically gathering and monitoring technology transfer and pertinent information.

While there are a variety of approaches possible to structure technology transfers, the principal keys to success are to share a common goal, offer complementary capabilities and have sufficient project management expertise. As well, project managers need to understand the business and work culture in Atlantic Canada.

The UK and Norwegian experiences show that a degree of intervention as well as moral persuasion was used to induce industrial benefits from the operators. There has been reluctance historically in Western Canada to use such direct methods. This may be relevant to Atlantic Canada, as we are all part of the same federal and provincial framework of governance, with the same basic ideologies and entrepreneurial character.

Today we find Nova Scotia and Newfoundland more ready to pursue technology transfer benefits through their respective regulatory processes. However, Nova Scotia appears to be more demanding, and perhaps further ahead in implementation, than Newfoundland in this regard. We recognize that it is also more realistic for Nova Scotia to take this approach, as each individual project in Nova Scotia is likely to be smaller and less costly due to the shallower water environment than those offshore Newfoundland.

We would suggest that following the direction of either the UK, Norway or Western Canada of twenty to thirty years ago, might not be the best approach. A “Made in Atlantic Canada” formula is needed, relevant to today’s economics and business situation.

We have developed a recommendation in a following section for a technology transfer mechanism that is a private-public sector partnership. This would seem more compatible with the North American public sector policy environment.

3.8 TECHNOLOGY TRANSFER AND THE FUTURE

This section identifies current technological capabilities which are at this time neither resident in, nor being transferred into, Atlantic Canada, and specifies the level of value they add to oil and gas projects. Also, the section provides estimates of their degree of practicality for future technology transfers, and identifies steps required to make specific technology transfers and to increase the probability of technology capture.

In order to identify the important technological capabilities to be highlighted, our analysis of information relied on the following important considerations:

- Whether or not a nascent Atlantic Canada receptor capability exists for the technology;
- Was there a timeframe for development and transfer compatible with the anticipated life of Atlantic Canada resource development;
- Were there indications that the global supply base could be augmented economically; and
- Was there evidence that transport costs were a factor in procurement, implying local suppliers would have an advantage.

The current technological capabilities that exist elsewhere and which could have significant impact on the future industrial development of Atlantic Canada include the following:

Engineering Design Capabilities: The location of engineering design teams affects the procurement process. It is easier for local suppliers to meet to discuss procurement requirements if the engineering design team is in the same region. The local firms can develop working relationships with the design teams and become aware of upcoming requirements. This puts them in a better position to eventually bid on contracts and to effect the technology transfers needed to have the capabilities necessary to meet future requirements.

The fact that the Terra Nova engineering team was in Leatherhead, England, may be an illustration of the problem of not having this capability close by. It was difficult for suppliers in Atlantic Canada to develop relationships with this engineering team given the distance and the costs associated with travel. Costs of pursuing business opportunities can be significant especially if the contracts to be awarded are relatively small. Major contractors tend to break out their contracts into numerous sub-contracts. However, we expect that e-business arrangements, including web-based collaborative engineering design technologies, might mitigate this circumstance in the future.

A review of 164 contracts with a procurement package over \$100,000 awarded for the Terra Nova project to the end of October 1998, posted on the Terra Nova website, indicated that Newfoundland got 16% and the UK got 33% of the contracts. Overall Canada got 28% of the contracts.

Having a local engineering design capability is a high value-added activity that has important spill over effects for the supplier community in Atlantic Canada. Because of these ramifications, obtaining such a capability should be a priority given the value that it would bring to the long-term development of the oil and gas industry in Atlantic Canada.

However, the practicality of doing this is not self-evident in the short term. According to the *“Report of the Offshore Engineering Task Force”*, May 1999, there is enough engineering capability in Newfoundland to serve only one more project beyond those currently ramping-up. However, this service capability would not extend to overall project design engineering and systems integration. These skills would have to be imported. Accordingly, extrapolating from this evidence, one would conclude that it is a long-term goal (5-8 years and beyond) to grow this level of technical capability within Atlantic Canada.

Subsea Systems: The Terra Nova project offers a major opportunity to transfer sub-sea technology to Atlantic Canada. This technology will continue to be important for future projects and its acquisition by local suppliers will be important for the future development of the industry in the region.

There are many requirements for a sub-sea system, including electronic, electrical, hydraulic and mechanical components. There is the servicing of either a wet or a dry sub-sea Christmas tree requiring diving support vessels, divers, diving capsule, and remotely operated vehicles (ROVs). Maintenance and repair activities require tasks such as damage assessment, structural analysis, fracture analysis, structural and material testing, repair design and engineering, fabrication, fabrication support, installation and underwater welding. These requirements provide major opportunities for firms in Atlantic Canada. For example, the physical assembly of the seabed constructs is being done at the NEWDOCK facility.

The breadth of the technological capabilities related to the development of sub-sea systems provides opportunities for a range of local suppliers. The technology underpinning sub-sea systems would seem quite practicable for transfer into Atlantic Canada. There is some of this knowledge already resident in the region. Key elements of the technology requirements include precision assembly of corrosion and pressure-resistant sea floor devices; much of this technology is already understood.

Arguably a more important consideration would be the degree of customization any given future seabed installation would require. There is a big technical difference between copying an existing layout (build-to-print) and being asked to design a new configuration from first principles. The former is much easier than the latter. Success hinges on availability of appropriate materials, fabrication cost-competitiveness, and quality standards. Designing and constructing a new configuration is more difficult. The specifications for the materials may have to change, to make sure they are fit for purpose. There may have to be new approaches to the operational sequences. These will have to be tested in realistic conditions. The seabed equipment may also be sensitive to the resource - for example, heavy oil or sour gas. All these factors make the engineering tasks more difficult. If the knowledge to resolve these issues is not available in Atlantic Canada, then either the knowledge must be imported through technology transfer or it must be researched anew in the region. In general, sub-sea systems seem well understood in Atlantic Canada. Hence, in principle it seems likely to be quite practicable to facilitate technology transfer in order to meet any novel requirements.

Topsides: With expected future development possibly requiring seven new production platforms to the year 2015, there appears to be an important opportunity in this area for

Atlantic Canada. In general, the technology underpinning topsides appears to be available already in Atlantic Canada. Several topside modules for each of the four major offshore projects were fabricated in Atlantic Canada. It would seem quite practicable to transfer the technology for any missing capabilities into the region.

Offshore Loading Systems (formerly known as Articulated Loading Platforms):

Fabrication and manufacturing of these platforms are carried out outside Canada with final assembly in Atlantic Canada. All components should be done together for quality assurance reasons. This represents an opportunity for Atlantic Canada. It seems practicable to transfer the technology underpinning these systems into Atlantic Canada. It is likely that quality standards, such as ISO-9000 certification or equivalent, would need to be more widespread among Atlantic Canada firms. However, in general this type of fabrication can readily be accommodated in the region.

Instrumentation: There is a range of instrumentation requirements, including emergency control systems, fire and gas detection systems, wellhead control systems, corrosion monitoring systems and sand monitoring systems. The high technology sector in Atlantic Canada could seize opportunities in this area to provide both components and complete systems. There is a mixed picture of the practicality of technology transfer into Atlantic Canada in respect of instrumentation. Analog instrumentation, relying on electro-mechanical processes for measurement or control, probably presents no problems. This type of technology is well known globally. However, more modern approaches, using digital and/or microprocessor-based approaches are more difficult to assess. Very specialized designs or instruments with very specific application are not likely to be good candidates for technology transfer, owing to the limited market. The costs would not be justified by the limited opportunities and applications. On the other hand, digital or microprocessor-based approaches to instruments that represent next-generation equipment for relatively widespread applications would be ideal candidates for technology transfer. This technology would represent future expansion of high-value-added components.

Shuttle Tankers: As offshore oil production grows the demand for shuttle tankers will increase. While the hulls of very large tankers will be made abroad, there are outfitting opportunities that could be captured in Atlantic Canada. Technology transfer for shuttle tanker hulls may or may not be very practicable or worthwhile. The available information from proponents consistently argues that there are capacity limitations in Atlantic Canada. This is only partially a technology transfer issue, however. While products from larger capacity facilities do carry certain new technical implications, for example, relating to load stresses and materials, the principles of construction are well known in theory in Atlantic Canada regardless of size. The issue, accordingly, becomes more the question of establishing the economic viability of such technical enhancements in the region, rather than the economic validity of technology transfer. The technology transfer related to outfitting, once hulls are complete, is perfectly practicable for transfer into Atlantic Canada, and already present.

FPSO Vessels: The first FPSO to operate in North American waters is scheduled to start production at Terra Nova field off Newfoundland this fall. While there are nearly 70 FPSOs in service or under development in the world, the Terra Nova FPSO will be the first of its kind

developed for the unique environmental conditions offshore Newfoundland. It has an exceptionally tough double hull and 3,000 tonnes of extra ice-strengthening steel to withstand contact with sea ice and icebergs. This vessel was built in Korea. However, future smaller FPSOs and their outfitting, for use in the smaller or satellite projects that could be the next generation of Atlantic Canada offshore developments, are an attractive opportunity for the region. There is also an expanding export market as well. Demand for FPSOs off Africa could drive a newbuild floater market forecast to grow to more than \$42.5 billion in the next 5 years, according to a report from UK-based analysts Douglas-Westwood Ltd. and data specialists Infield Systems UK Ltd. A total 123 newbuild floating productions systems of various types could be brought on stream between now and 2005 as the market for floaters rises from an estimated \$5.9 billion this year to \$10.9 billion. FPSOs are expected to account for 80% of future spending in the floater market, with demand off Africa growing to a total value of \$11.6 billion over the next 5 years, followed by Brazil, where the market should grow to \$7.9 billion.

Valves: Nova Scotia, for example, supplies about 22% of the various valves required for the Sable Offshore Energy Project. Given the various types, and the volume required, this represents an important opportunity for firms in Atlantic Canada. Like instrumentation, valves present a mixed picture with respect to the practicability of technology transfer. In principle, the technology should be easy to transfer. In practice, the limitation becomes one of industrial follow-up. The entire global industry can only support a limited number of suppliers. Very large valves are manufactured by only a few specialist manufacturers. It is unlikely that Atlantic Canada could justify itself as another supplier. However, it should not be difficult to enhance the region's technical ability to expand production of more general valves and valve components.

Pressure Vessels: Nova Scotia supplied 38% of the pressure vessels for the Sable Offshore Energy Project. Given the capabilities of local firms in this area, this represents an opportunity for Atlantic Canada firms for vessels up to a certain size. It seems practicable to transfer this technology into Atlantic Canada for several reasons. First, the industrial opportunities are good. Pressure vessels tend to be sensitive to transport costs, implying local suppliers would have an advantage. Second, there are some practical limitations on the size of such vessels anywhere in the world even with global technology. This implies that the debate on capacity constraints in Atlantic Canada would be less of a factor. Third, there is already a sizeable receptor capacity in the region.

Some qualifications need to be added. Very large pressure vessels bring problems of their own in terms of materials, quality standards, shape, instrumentation, and even insurance. There are also now some radical new approaches to pressure vessels being researched. An example is the concept of using composite materials (engineering polymers or matrices) which would be cheaper than the usual metals. Potential weaknesses in the composite can be offset by new approaches to monitoring. Fibre-optic cable can be buried in the composites. Even microscopic distortions, presaging distress within the integrity envelope of the vessel, can be detected by luminary distortions or breaks in a continuous sweep of the cable by laser-based light sources. This approach has been pioneered by the Institute for Aerospace Studies at the University of Toronto. While this technology remains unproven, it may be promising

for the oil and gas industry. Overall, pressure vessels remain promising candidates for technology transfer into the region.

Sub-contract Manufacturing: Atlantic Canada's manufacturing capabilities could be used effectively as sub-contractors in various areas requiring fabricated components. It would be very practicable to transfer this sort of technology into Atlantic Canada. It has happened innumerable times in the past.

Electrical Equipment: Atlantic Canada has capabilities that could be used to provide various switches, wiring, small motors and so on. This sort of technology could be introduced into Atlantic Canada.

Turnkey Manufacturing: There is a requirement for packaged equipment. An example is self-regulating compressors. Atlantic Canada could develop capabilities in this area by building on its existing manufacturing strengths. Technology transfer again presents a mixed picture in respect of turnkey manufacturing of packaged equipment. Complex items already mass-produced elsewhere would not make good candidates for such technology transfer. The combination of economies of scale in existing production, and the level of sophistication and automation in assembly, would likely overcome cost and distance advantages in Atlantic Canada. However, simpler assemblies, to which transportation added higher costs, relative to the value added, would be more promising.

Custom packages for the Atlantic Canada environment represent a very promising source of industrial opportunity, but these would likely require research from scratch rather than technology transfer. In essence, custom packages represent specific solutions to local problems. Atlantic Canada would likely need to upgrade its commercial research. This would be true for both situations that may occur: either the adoption or adaptation of a product or process already in existence, or the development of a discrete solution.

To begin developing technological capabilities in some of the above areas, pre-technology transfer research and development should be encouraged in the region's research institutions, especially in partnership with local firms. This will facilitate and accelerate the capture of technology. The Atlantic region is well endowed with oceans-related research institutions that could play a role in preparing the ground for, and possibly participate in, successful technology transfers.

These opportunities, and others, have to be cast within a context that illustrates how the oil and gas industry might evolve in Atlantic Canada over the longer term. Creating a future perspective, to which all stakeholders buy-in, will set a framework for technology transfer activities that will be of benefit to both the operators and the regional supply industry.

Steps required to bring these technology transfers about are identified in the following section in the context of our recommendation for a new mechanism to optimize technology transfer and value chain development.

3.9 ENHANCING THE TECHNOLOGY TRANSFER PROCESS: TECHNOLOGY CAPTURE

There is an identified need in Atlantic Canada for technology with which to further build and enhance the oil and gas service and supply industry in the region. The best mechanism identified to do this is, of course, transfer of technology from a source outside the region to a recipient in the region.

As previously described in this report, technology transfer was recognized as a way of building local industrial capability, and several commitments were made in the Benefits Plans submitted by the Proponents of projects to the two Offshore Petroleum Boards. In the Decisions of the Boards, approving the various projects, some technology transfer requirements were imposed. The stringency of these requirements varied widely. One issue has been the effectiveness of the implementation of the technology transfer commitments and requirements, including the monitoring and control of the results.

3.9.1 The Use of an Intermediary

It is widely recognized that a dedicated focus, or intermediary, can improve the effectiveness of technology transfer and development. There are several examples of this, ranging from technology transfer officers at universities to companies that operate on a fee for service basis. A pertinent example is the Industry Technology Facilitator (ITF) Company recently set up by sixteen project operators in the UK offshore oil and gas sector. The role of the ITF is to:

- Provide member companies in the upstream oil and gas industry with opportunities to access advances in scientific and engineering knowledge, and the innovative developments which will bring benefit to their business;
- Support the providers of research and innovation to bring their new ideas, capability and technology to the industry; and
- Stimulate dialogue between the supply side and technology customers to ensure all stakeholders share clarity of purpose and goal.

To increase the effectiveness of the technology transfer process in Atlantic Canada, we recommended that a Technology Transfer Office (TTO) be established and run in a co-operative manner by each industry association, such as NOIA and OTANS. The Federal and Provincial Governments, as well as the two Offshore Petroleum Boards, should also be involved in supporting the TTO.

The mandate of the TTO would be to act as an intermediary, or broker, between local suppliers, operators and prime contractors of the oil and gas development projects, by providing a number of services, which could include some or all of the following:

For the supply industry:

- Making the local supply community aware of up-coming opportunities and how to prepare themselves to capture them, if not already doing so;

- Providing “how to” information and workshops on successful mechanisms for technology transfer and their implications, and how to prepare relevant business plans;
- Working with specific suppliers to set in place the most effective mechanism to transfer a specific technology in a particular circumstance;
- Identifying sources of government and private sector financing for ventures;
- Assisting in putting together supplier consortia of critical mass to facilitate the capture of particular technologies;
- Launching major initiatives, related to the opportunities previously identified, that bring together the operators, the Boards and the supply community, to determine how these technologies will be transferred to the Atlantic region in order to maximize industrial benefits within the context of the technology transfer commitments made by the operators;
- Identifying sources of technical expertise in university, government and other R&D institutions to strengthen the technical capabilities of suppliers to better capture technology transfer opportunities and assisting in working out arrangements between the suppliers and these entities;
- Encouraging pre-technology transfer research and development in areas identified; and
- Identifying training areas related to future technology transfer opportunities and pre-technology transfer R&D to accelerate the displacement of foreign expertise.

For the Operators:

- Making the operators and prime contractors aware of the local supply capabilities; and
- Using moral persuasion to keep reminding the operators of their technology transfer and training commitments made in their benefits plans.

For the Boards:

- Keeping an inventory of past and current technology transfers, using the accepted definition, to prepare relevant analyses to present to the Canada-Newfoundland Offshore Petroleum Board (CNOPB) and the Canada-Nova Scotia Offshore Petroleum Board (CNSOPB) on the effectiveness of technology transfers within the context of the proposed benefits plans and Board Decisions.

For the Governments:

- Making specific representations to Federal and Provincial Government officials on new policies that could stimulate technology transfer and on existing regulations that inhibit technology transfer and the use of Canadian suppliers; and
- Submitting to the Federal and Provincial Governments a yearly report on the state of technology transfer to Atlantic Canada including recommendations on how to improve the technology transfer process.

Each of these services could be offered on an individual basis through a specific specialized agency. However, by being grouped within one TTO, there will be a resulting synergy among the services that will increase the effectiveness of the activities.

Such a mechanism, which brings together all the major aspects related to technology transfer, would improve the effectiveness of the technology transfer process and of the capture of specific technologies.

3.10 Conclusions and Recommendations

Based on our assessment of the technology transfer process in the oil and gas industry in Atlantic Canada, we reached the following principal **conclusions**:

- The Proponents of the offshore projects have made statements in their respective Benefits Plans related to technology transfer and training. The Boards have reviewed these statements and, in some instances, have put conditions related to technology transfer and training in their Decisions on these projects. The most explicit conditions appear to be those imposed by the CNSOPB for the Sable Offshore Energy Project;
- Technology transfer has taken place and continues to take place. However, there is no mechanism in place to systematically collect and collate this information on a comparative and on-going basis, except for the Sable Offshore Energy Project;
- There is no way of measuring the impact technology transfer, industrial benefits and potential industrial benefits from oil and gas projects in Atlantic Canada on a consistent basis due to the lack of methodology and baseline information;
- The mechanisms used to effect technology transfer range from informal exchange of expertise, to documentation, to formal agreements leading to new entities. The key success factors were: the need to have a common goal among the partners; complementary capabilities among the partners; achieving mutual benefits; project management depth; and a general openness towards engaging in technology transfer;
- The main challenges to improving the effectiveness of the technology transfer process from an industry perspective were: costing experience; retaining staff; overcoming insufficient detailed planning and unsophisticated engineering packages;
- Successor training is probably impractical for the relatively short development phase of major projects, and in the operations phase Atlantic Canada has a lower percentage of foreign expertise than other resource nations; and
- Over time, there is only a relatively small number of project elements that could not be sourced from Atlantic Canada. There are specific future technology transfers opportunities that have been identified. Much remains as potential prospects, such as large components and sub-systems;

Our **recommendations** include:

- Consistent use of reporting, monitoring and auditing procedures, similar to those employed for the Sable Offshore Energy Project as described in section 3.3.3, by the Offshore Petroleum Boards;
- The establishment of Technology Transfer Office, with roles outlined in section 3.9.1 immediately above. As pointed out, both the US and the UK use intermediary

organizations to effect this role. It may be more suitable for Atlantic Canada to utilize an already existing organization, say the industry associations working in co-operation, rather than establish a new entity;

- This office would undertake activities and offer the set of services described, importantly and specifically information collection and reporting, in Atlantic Canada. This Technology Transfer Office should also have the mandate for developing strategic growth options for future services and supply capabilities in Atlantic Canada as they relate to the value chain.
- Introduction of the method and approach outlined in section 3.2.1 Technology Transfer Measurement, based on mechanisms, time frames and impacts, for use by the TTO.

We hope that these activities and services would improve the effectiveness of the technology transfer process in Atlantic Canada.

4.0 APPENDICES

The Appendices contain information about the Value Chain categories for the four groups - services and supply for offshore and onshore - as well as a bibliography.

4.1 Value Chain Categories

The category titles themselves were taken from the Industry Canada databases entitled Onshore/Offshore Oil and Gas Equipment and Service Directory, available at: <http://strategis.ic.gc.ca/petroelum>.

Once the category titles had been chosen, then the data that populates each category was mined from the online Industry Canada database, Canadian Company Capabilities, available at: http://strategis.gc.ca/cgi-bin/sc_coinf/ccc.

The information was extracted from this database at the start of March, 2001.

PricewaterhouseCoopers do not attest to the accuracy and completeness of the information contained in the Industry Canada databases. However, use of Federal Government data, that captures information from all four of the Provinces in Atlantic Canada, was adjudged to be the more expeditious way of assembling data for analysis. The classification systems and category titles of the individual databases of the four Atlantic Provinces are all different. It would have been considerably more time consuming to use these four sources as the data would have had to be normalized to reflect identical classification system of categories. Then amalgamation could have taken place, thus allowing synthesis and analysis. This alternate approach would have been exceedingly time consuming.

The intent of the analysis is to indicate directionally which categories are missing from the value chain, rather than to absolutely determine the exact statistics, which will change with time anyway.

As tabled on page 17 of the report the 400+ categories are apportioned as follows:

Environment	Service	Supply	Total
Onshore	87	92	179
Offshore	91	149	240

Individual statistics are now presented on the following fourteen pages.

4.2 Bibliography

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Value Chain Categories

Services Categories - Offshore	Nova Scotia	New Brunswick	Newfoundland	PEI	All Atlantic	Other Canada	% Atlantic/ Total Canada
Acoustics and Noise Control	2	0	1	0	3	10	23.1 %
Aerial Surveys	3	3	3	0	9	41	18.0 %
Aircraft Welding Repairs	0	1	1	0	2	2	50.0 %
Analytical Services	6	1	1	1	9	91	9.0 %
Aviation Services	5	1	5	1	12	88	12.0 %
Base Operators	1	1	6	0	8	42	16.0 %
Boiler Service and Supplies	2	1	0	0	3	17	15.0 %
Bottom Hole Pressure Surveys	1	0	1	0	2	2	50.0 %
Business/Management Consulting	7	5	5	1	18	59	23.4 %
Calibration Services	9	6	5	0	20	67	23.0 %
Computer Systems/Data Management	4	0	9	0	13	13	50.0 %
Construction and Shutdowns	7	0	7	0	14	7	66.7 %
Container rentals/repairs/sales	2	0	2	0	4	0	100.0 %
Contractor's equipment and supplies rent/repair	3	0	6	0	9	0	100.0 %
Control Panel Fabrication	7	5	4	0	16	84	16.0 %
Cores	3	1	2	0	6	46	11.5 %
Data Collection/Analysis/Processing and Supplies	3	0	9	0	12	0	100.0 %
Dielectric Testing non-destructive	0	0	2	0	2	1	66.7 %
Directional Drilling - Equipment and Service	1	0	3	0	4	19	17.4 %
Diving Services and Equipment	6	1	5	0	12	16	42.9 %
Drilling Services/Equipment	7	0	9	0	16	18	47.1 %
Drydock and Drydocking Equipment	1	0	2	0	3	0	100.0 %
Dynamic Positioning	2	1	3	2	8	10	44.4 %
Education and Training	4	5	5	1	15	85	15.0 %
Engineering/Construction - Offshore structures	3	1	12	0	16	8	66.7 %
Engineering-Consultants	30	3	21	0	54	35	60.7 %
Environmental Consultants	12	4	7	1	24	76	24.0 %
Fabricators-General	10	3	17	0	30	10	75.0 %
Failure Analysis	5	2	4	0	11	49	18.3 %
Feasibility Studies	0	1	0	0	1	9	10.0 %
Fisheries Training, Policy and Planning	1	0	1	0	2	3	40.0 %
Forming Construction, Marine and Road Building	1	0	4	0	5	0	100.0 %
FPSO - Design, Construction, Operation	0	0	5	0	5	1	83.3 %
Freight, Cargo and Delivery Services	9	0	16	0	25	52	32.5 %
Fuels/Fuel Oil Treatment	3	0	2	0	5	0	100.0 %

Value Chain Categories

Services Categories - Offshore	Nova Scotia	New Brunswick	Newfoundland	PEI	All Atlantic	Other Canada	% Atlantic/ Total Canada
Galvanizing, Hot Dip	1	1	1	0	3	4	42.9 %
Geological/Geophysical/Geotechnical Services	7	0	3	0	10	1	90.9 %
Hook-up and Commissioning	3	0	12	0	15	0	100.0 %
Hydrographic Surveys	3	2	2	0	7	16	30.4 %
Hydrostatic Testing	2	0	3	0	5	6	45.5 %
Information Retrieval, Marine Related	0	0	3	0	3	3	50.0 %
Inspection Services	5	5	5	1	16	84	16.0 %
Logistics	1	3	6	0	10	90	10.0 %
Maintenance and Operations Support	11	5	12	0	28	73	27.7 %
Major Modifications	2	2	3	0	7	19	26.9 %
Mechanical Testing	7	6	4	0	17	83	17.0 %
Mechanical/Industrial Contractors	3	0	5	0	8	3	72.7 %
Metallurgic Analysis	1	0	2	0	3	1	75.0 %
Naval Architects	7	0	6	0	13	9	59.1 %
Non-Destructive Testing	8	5	7	0	20	62	24.4 %
Office Space/Supplies/Service	1	0	5	0	6	0	100.0 %
Offshore Oil Rig Maintenance	8	1	12	0	21	6	77.8 %
Offshore Positioning	6	2	4	1	13	5	72.2 %
Offshore Survival Training	3	0	4	0	7	0	100.0 %
Oil Well Drilling Contractors	1	0	1	0	2	9	18.2 %
Personnel Services	1	5	3	1	10	90	10.0 %
Petroleum Consultants	10	3	6	0	19	76	20.0 %
Pile Driving	4	1	4	0	9	15	37.5 %
Ports, Public	2	0	4	0	6	23	20.7 %
Preventive Maintenance Services	4	2	6	0	12	35	25.5 %
Project Management	5	7	2	2	16	85	15.8 %
Quality Assurance/Quality Control	5	0	11	0	16	10	61.5 %
Quality Surveying	2	4	5	1	12	51	19.0 %
Real Estate Development	0	1	4	1	6	83	6.7 %
Remote Site and Offshore Facilities Management	0	1	2	0	3	2	60.0 %
Remotely Operated Vehicles (ROVS)	3	0	3	0	6	1	85.7 %
Research and Development/Resource Managem	0	0	3	0	3	1	75.0 %
Salvage	2	0	7	0	9	19	32.1 %
Scaffolding	5	0	3	0	8	20	28.6 %
Sea Base Operators	1	0	4	0	5	0	100.0 %
Seismic-Services	3	0	2	0	5	2	71.4 %

Value Chain Categories

Services Categories - Offshore	Nova Scotia	New Brunswick	Newfoundland	PEI	All Atlantic	Other Canada	% Atlantic/ Total Canada
Shipyards	4	1	3	0	8	6	57.1 %
Site Investigation/planning/surveys	2	0	4	0	6	0	100.0 %
Stevedoring	2	0	3	0	5	5	50.0 %
Storage - Liquid and Bulk	5	1	3	0	9	15	37.5 %
Stress Analysis/relieving	1	0	3	0	4	0	100.0 %
Structural Monitoring	8	6	6	1	21	53	28.4 %
Supply Boats	10	1	9	0	20	21	48.8 %
Support Base Operators	1	1	5	0	7	24	22.6 %
Surveillance	6	6	2	0	14	86	14.0 %
Surveying	6	7	7	1	21	79	21.0 %
Swabbing	0	0	1	0	1	12	7.7 %
Systems Simulation	1	2	6	1	10	90	10.0 %
Threading and Threading Services	2	0	1	0	3	10	23.1 %
Tugs	7	2	6	1	16	11	59.3 %
Unions	1	1	0	1	3	15	16.7 %
Video Production	6	1	1	2	10	90	10.0 %
Warehousing	0	1	6	1	8	92	8.0 %
Waterblasting	2	0	0	0	2	1	66.7 %
Weight Control Engineers	1	2	4	0	7	15	31.8 %
Welding/Services/Sales/Certification	5	0	12	0	17	1	94.4 %
					949	2574	26.9 %

Value Chain Categories

Supply Categories - Offshore	Nova Scotia	New Brunswick	Newfoundland	PEI	All Atlantic	Other Canada	% Atlantic/ Total Canada
Abrasives	9	1	5	1	16	39	29.1 %
Air Drilling Equipment	5	1	8	0	14	44	24.1 %
Alarm Systems	2	2	4	1	9	91	9.0 %
Alternators	1	1	2	0	4	12	25.0 %
Anchors	4	2	3	0	9	31	22.5 %
Automation Systems and Equipment	4	3	5	0	12	88	12.0 %
Ballast	7	1	6	0	14	31	31.1 %
Barrels and Drums	1	0	1	0	2	7	22.2 %
Bearings and Accessories	3	2	2	0	7	12	36.8 %
Belts and Drives	2	1	3	0	6	2	75.0 %
Bits	3	2	3	0	8	89	8.2 %
Blasting	7	2	3	0	12	50	19.4 %
Block and tackle/traveling blocks	1	0	1	0	2	1	66.7 %
Blowout Preventer Controls	1	0	0	0	1	2	33.3 %
Bridges	6	5	5	0	16	84	16.0 %
Caissons	1	0	2	0	3	8	27.3 %
Casing	5	3	6	1	15	85	15.0 %
Cathodic Protection - Equipment, Service and Supp	3	0	3	0	6	4	60.0 %
Cement Equipment/Service	4	0	5	0	9	3	75.0 %
Centralizers	4	0	3	0	7	4	63.6 %
Chemical Service and Supplies	6	1	8	0	15	78	16.1 %
Clutches - Air and Mechanical	0	0	1	0	1	2	33.3 %
Coatings - Protective	9	1	11	0	21	40	34.4 %
Combustion Controls	3	1	0	0	4	9	30.8 %
Communication Systems and Equipment	4	2	2	0	8	92	8.0 %
Completion Technology	10	1	6	0	17	62	21.5 %
Compressors - Air and Gas - Service and Supplies	5	0	5	0	10	11	47.6 %
Concrete Products	3	1	3	0	7	94	6.9 %
Contract Hardware	3	4	4	2	13	87	13.0 %
Control Systems and Equipment	10	10	2	0	22	78	22.0 %
Control Valves	8	4	0	0	12	88	12.0 %
Cooling Systems	3	0	0	0	3	98	3.0 %
Cranes - renting/leasing/sales	5	0	3	0	8	2	80.0 %

Value Chain Categories

Supply Categories - Offshore	Nova Scotia	New Brunswick	Newfoundland	PEI	All Atlantic	Other Canada	% Atlantic/ Total Canada
Cylinders	3	3	2	0	8	92	8.0 %
Deck Machinery and Equipment	11	1	8	0	20	31	39.2 %
Desalters - Water Makers	1	0	1	0	2	0	100.0 %
Detection Systems	5	1	8	0	14	86	14.0 %
Downhole tubing and casing (OCTG)	2	1	3	0	6	0	100.0 %
Dryers - Industrial	1	0	1	0	2	34	5.6 %
Electrical Equipment/Service/Consulting	12	0	10	0	22	4	84.6 %
Emergency Equipment and Supplies	6	1	6	0	13	66	16.5 %
Enclosures	6	1	3	0	10	90	10.0 %
Engines	3	1	1	3	8	92	8.0 %
Explosion Proof Equipment	4	0	2	0	6	21	22.2 %
Fibreglass Products	4	2	1	0	7	64	9.9 %
Filters-Air, Gas and Liquid	4	0	4	0	8	2	80.0 %
Fire protection/Services/Equipment/Sales	7	0	8	0	15	2	88.2 %
Fishing Equipment/Tools	2	0	4	0	6	6	50.0 %
Fittings	4	5	3	0	12	88	12.0 %
Fluid Power Equipment	4	0	5	0	9	63	12.5 %
G.I.S/G.P.S	5	0	5	0	10	1	90.9 %
Gas Analysis/Apparatus	1	0	0	0	1	13	7.1 %
Gas Processing Equipment	4	3	6	0	13	87	13.0 %
Gaskets	4	1	5	0	10	89	10.1 %
Gauges/Sales and Services	0	0	1	0	1	0	100.0 %
Gears	5	4	1	0	10	66	13.2 %
Glycols	3	0	2	0	5	10	33.3 %
Gravel packages	1	0	2	0	3	2	60.0 %
Grouting	3	1	3	0	7	16	30.4 %
Hangars	2	0	4	0	6	15	28.6 %
Hardware, Marine and Rigging	9	1	5	0	15	5	75.0 %
Hazardous Gas Detection Systems	2	0	5	0	7	9	43.8 %
Health/Medical Supply/Services/Equipment	1	0	4	0	5	0	100.0 %
Heat Treating - Equipment and Supplies	4	0	1	0	5	5	50.0 %
Heat Ventilation and Air Conditioning	5	1	4	0	10	13	43.5 %
Heavy Equipment and Industrial Dealer	4	0	3	0	7	4	63.6 %
Helidecks	2	0	2	0	4	0	100.0 %

Value Chain Categories

Supply Categories - Offshore	Nova Scotia	New Brunswick	Newfoundland	PEI	All Atlantic	Other Canada	% Atlantic/ Total Canada
Hoists	7	2	4	0	13	54	19.4 %
Hoses	8	3	7	0	18	34	34.6 %
Hydraulic Equipment - Sales/Service	7	2	14	0	23	12	65.7 %
Ice Detection/Measuring Systems	0	0	4	0	4	0	100.0 %
Industrial Equipment and Supplies	13	2	5	0	20	81	19.8 %
Instrument Sales/Service/Rental	0	0	1	0	1	0	100.0 %
Insulation Materials-Cold and Heat	3	0	3	0	6	0	100.0 %
Intercommunication Equipment	2	0	4	0	6	17	26.1 %
Laboratory Equipment and Supplies	3	1	3	0	7	93	7.0 %
Leak Detectors/Sealing	1	1	2	0	4	2	66.7 %
Level Controls-Liquid	1	0	2	0	3	1	75.0 %
Lighting Systems and Equipment	6	3	4	0	13	86	13.1 %
Line Pipe	7	5	6	0	18	82	18.0 %
Lubricating Devices and Systems	0	0	1	0	1	4	20.0 %
Machine Shop/Supplies	4	1	8	0	13	3	81.3 %
Manifolds	0	1	2	1	4	29	12.1 %
Manufacturers, Agents and Distributors	5	1	11	0	17	34	33.3 %
Marine Equipment/Services	28	1	26	1	56	9	86.2 %
Material Handling Equipment	4	6	7	0	17	83	17.0 %
Meters and Metering Systems	4	0	4	0	8	9	47.1 %
Mud and Fluids	2	0	4	0	6	14	30.0 %
Navigation Aids	7	1	7	0	15	13	53.6 %
Nitrogen Service	3	0	4	0	7	19	26.9 %
Offshore Housing and Equipment	3	0	2	0	5	5	50.0 %
Offshore Loading Systems	5	1	5	0	11	5	68.8 %
Oil and gas Producers, Explorers and Developers	5	0	7	0	12	3	80.0 %
Oil Field Equipment/Services/Supplies	23	0	14	0	37	52	41.6 %
Oil Spill Control Protection Equipment/Service	6	0	7	0	13	2	86.7 %
Oil/Water Separators	8	0	4	0	12	17	41.4 %
Outfall Lines	0	0	1	0	1	0	100.0 %
Packers	6	2	4	0	12	53	18.5 %
Packing and Jointing	1	0	1	0	2	0	100.0 %
Packing Materials-Mechanical	0	0	1	0	1	0	100.0 %
Petroleum Products	4	1	2	0	7	93	7.0 %

Value Chain Categories

Supply Categories - Offshore	Nova Scotia	New Brunswick	Newfoundland	PEI	All Atlantic	Other Canada	% Atlantic/ Total Canada
Pigs	1	0	3	0	4	21	16.0 %
Pipeline Developers	2	0	3	0	5	2	71.4 %
Pressure Equipment/Services	10	0	7	0	17	32	34.7 %
Prestress Concrete	0	0	2	0	2	0	100.0 %
Pump equipment/Services	4	0	8	0	12	17	41.4 %
Radar Equipment/Systems/Services	3	0	2	0	5	0	100.0 %
Recording Instruments-Industrial and Scientific	0	0	1	0	1	0	100.0 %
Refinery Equipment	1	0	0	0	1	25	3.8 %
Refrigeration	4	3	1	2	10	91	9.9 %
Regulators	5	2	1	0	8	66	10.8 %
Rubber Products	4	1	1	0	6	94	6.0 %
Safety Equipment/Services	19	0	10	0	29	12	70.7 %
Samples and Sampling Equipment	6	0	2	0	8	13	38.1 %
Sandblasting/Equipment	4	0	6	0	10	1	90.9 %
Scanning Technologies	1	2	1	2	6	38	13.6 %
Security Systems	2	1	0	1	4	96	4.0 %
Sensors	5	2	2	0	9	91	9.0 %
Shipping Supplies and Services	9	0	13	0	22	40	35.5 %
Simulator	6	1	6	0	13	54	19.4 %
Slip Rings	1	0	1	0	2	4	33.3 %
Sonar	12	1	4	0	17	31	35.4 %
Specialty Metals	12	6	5	0	23	35	39.7 %
Steam - Heating Equipment and Systems	2	1	0	0	3	17	15.0 %
Steel Distributors and Warehouses	4	4	3	0	11	2	84.6 %
Strainers	4	0	1	0	5	48	9.4 %
Subsea Equipment/services/management	4	0	5	1	10	2	83.3 %
Sucker rods - new and used	0	0	0	0	0	2	0.0 %
Swing and swivel joints	1	0	1	0	2	1	66.7 %
Temperature Monitoring/Control	0	0	3	1	4	1	80.0 %
Testing Apparatus	3	1	1	0	5	28	15.2 %
Thermocouples	1	0	0	0	1	10	9.1 %
Time Systems	5	6	0	1	12	88	12.0 %
Tongs-Casing and Tubing	1	0	2	0	3	1	75.0 %
Trailers-Equipment and Service	0	0	2	0	2	2	50.0 %

Value Chain Categories

Supply Categories - Offshore	Nova Scotia	New Brunswick	Newfoundland	PEI	All Atlantic	Other Canada	% Atlantic/ Total Canada
Transmitters	9	1	1	0	11	64	14.7 %
Tubes and Tubing Services	4	2	5	0	11	21	34.4 %
Turbines	3	2	1	1	7	93	7.0 %
TV Systems and Equipment - Closed Circuit	1	0	1	0	2	4	33.3 %
Umbilicals	1	1	1	0	3	0	100.0 %
Underwater Navigation Systems	4	1	0	0	5	4	55.6 %
Vacuum Equipment and Systems	5	5	1	0	11	89	11.0 %
Valves/Services	7	3	9	0	19	7	73.1 %
Variable Speed Drives	0	0	3	0	3	16	15.8 %
Vibration Equipment/Services	3	0	2	0	5	1	83.3 %
Waste Purification Equipment/Removal	3	0	0	0	3	0	100.0 %
Water Treating Equipment - Service and Supplies	2	1	2	0	5	9	35.7 %
Wellhead, Equipment, Sales and Service	0	0	1	0	1	10	9.1 %
Wholesale-Plumbing, Heating, Industrial/Municipal I	1	0	3	0	4	0	100.0 %
					1355	4696	22.4 %

Value Chain Categories

Services Categories - Onshore	Nova Scotia	New Brunswick	Newfoundland	PEI	All Atlantic	Other Canada	% Atlantic/ Total Canada
Abandonments	0	0	0	0	0	28	0.0 %
Acidizing services	0	0	0	0	0	15	0.0 %
Air quality monitoring	5	5	1	1	12	88	12.0 %
Ambulance & related services	0	0	0	0	0	6	0.0 %
B.O.P Rentals	8	2	4	1	15	85	15.0 %
Borehole Video	0	0	0	0	0	4	0.0 %
Casing Storage	0	1	1	0	2	17	10.5 %
Cementing Services	2	0	3	0	5	29	14.7 %
Construction, Oilfield	6	0	4	0	10	90	10.0 %
Construction, Pipeline	7	4	4	0	15	85	15.0 %
Consulting & Field Supervision Drl. Compl. Work	0	0	0	0	0	18	0.0 %
Consulting field/plant operators	0	0	0	0	0	3	0.0 %
Consulting, Engineering	7	6	3	0	16	84	16.0 %
Consulting, Environmental	5	9	2	1	17	83	17.0 %
Consulting, Geological	2	9	3	0	14	57	19.7 %
Consulting, Safety (ERP)	0	0	0	0	0	10	0.0 %
Coring	2	0	1	0	3	21	12.5 %
Data Vendors	0	4	0	0	4	61	6.2 %
Directional Drilling Services	2	1	4	0	7	29	19.4 %
Directional Surveying	0	0	1	0	1	8	11.1 %
Drill String Rental	0	0	0	0	0	11	0.0 %
Drill String Repair	0	0	0	0	0	7	0.0 %
Drillstem Testing	0	0	0	0	0	6	0.0 %
Environmental Audits-Consultants	0	0	0	0	0	6	0.0 %
Environmental Services	3	6	3	1	13	87	13.0 %
Fabricators	12	5	15	0	32	68	32.0 %
Fire Fighting, Protection & Training	1	1	0	0	2	9	18.2 %
Fishing Tools & Services	4	1	5	0	10	19	34.5 %
Fracturing Services	0	0	0	0	0	23	0.0 %
Fracturing Tracing	0	0	0	0	0	4	0.0 %
Horizontal Drilling Services	1	0	1	0	2	26	7.1 %
Industrial Cleaning	1	2	2	0	5	95	5.0 %
Industrial Pumping Services	1	0	1	0	2	64	3.0 %
Inspection Services, Pipeline	6	0	3	0	9	28	24.3 %
Inspection Services, Tubulars	0	0	0	0	0	6	0.0 %

Value Chain Categories

Services Categories - Onshore	Nova Scotia	New Brunswick	Newfoundland	PEI	All Atlantic	Other Canada	% Atlantic/ Total Canada
Inspection Services, Video	1	0	1	0	2	19	9.5 %
Laboratory Services	6	4	1	3	14	86	14.0 %
Logging	5	8	3	0	16	84	16.0 %
Logging While Drilling	3	1	3	0	7	25	21.9 %
M.W.D. Measurement While Drilling	2	0	2	0	4	16	20.0 %
Machine Shop	6	5	0	1	12	88	12.0 %
Mapping	9	2	2	1	14	86	14.0 %
Milling Tools & Services	0	1	0	0	1	14	6.7 %
Oilfield Construction	6	0	5	0	11	89	11.0 %
Oilfield Waste Recycling & Disposal	0	0	0	0	0	11	0.0 %
Perforating	2	0	2	0	4	31	11.4 %
Pipe Storage & Transportation	0	0	0	0	0	14	0.0 %
Pipeline Plant Services	1	1	0	0	2	39	4.9 %
Pressure Testing	8	1	3	0	12	88	12.0 %
Production Equipment Rentals	5	1	3	0	9	65	12.2 %
Production Testing	8	3	1	1	13	87	13.0 %
Pumping Services	2	1	3	0	6	87	6.5 %
Rathole Drilling Services	0	0	0	0	0	1	0.0 %
Rental Equipment	5	0	7	0	12	88	12.0 %
Rig Moving	0	1	0	0	1	23	4.2 %
Rig Safety Inspections	0	0	0	0	0	6	0.0 %
Safety Services (H2S, Breathing Eq., First Aid)	0	0	0	0	0	10	0.0 %
Safety Training	2	8	3	1	14	86	14.0 %
Safety, Contract Personnel	1	1	1	0	3	28	9.7 %
Safety, Rentals	0	0	1	0	1	24	4.0 %
Sand Control	5	1	0	0	6	44	12.0 %
Seismic Processing, Archiving and Interpretation	0	0	0	0	0	1	0.0 %
Service Rig Moving	0	1	0	0	1	20	4.8 %
Slimline Logging	0	0	0	0	0	4	0.0 %
Software Development	2	8	0	0	10	90	10.0 %
Software Integration	2	2	1	1	6	94	6.0 %
Sonic Logging & Evaluation	0	0	0	0	0	7	0.0 %
Sulphur, Forming & Handling	0	0	0	0	0	2	0.0 %
Sump Treating & Disposal	0	0	0	0	0	6	0.0 %
Tank Inspection	2	2	1	1	6	15	28.6 %
Tank Moving	0	1	0	0	1	30	3.2 %

Value Chain Categories

Services Categories - Onshore	Nova Scotia	New Brunswick	Newfoundland	PEI	All Atlantic	Other Canada	% Atlantic/ Total Canada
Tank Rentals	2	0	0	0	2	25	7.4 %
Testing, A.O.F. Production	8	3	1	1	13	87	13.0 %
Testing, Casing Vent Leaks, Packer Isolation	0	0	0	0	0	4	0.0 %
Tools, Handling	8	2	4	0	14	86	14.0 %
Trailers, Wellsite Rentals	0	0	0	0	0	8	0.0 %
Training, Safety, Environmental, Production, Mar	1	4	1	0	6	28	17.6 %
Trucking	4	0	2	0	6	94	6.0 %
Tubing Conveyed Perf. Equip. & Services	0	0	0	0	0	16	0.0 %
Tubing Rentals	0	0	0	0	0	17	0.0 %
Tubular Running Services	0	1	0	0	1	7	12.5 %
Underbalanced Drilling Services	0	0	0	0	0	31	0.0 %
Well Optimization	2	3	1	2	8	62	11.4 %
Wellsite Supervision	0	0	0	0	0	20	0.0 %
Wireline Logging Electric	0	0	1	0	1	11	8.3 %
Wireline Logging Slickline	0	0	1	0	1	9	10.0 %
Wireline Services & Supply	0	0	0	0	0	31	0.0 %
					436	3324	11.6 %

Value Chain Categories

Supply Categories - Onshore	Nova Scotia	New Brunswick	Newfoundland	PEI	All Atlantic	Other Canada	% Atlantic/ Total Canada
Actuators	3	1	0	0	4	72	5.3 %
B.O.P. manufacture	7	1	1	1	10	90	10.0 %
B.O.P. Parts, Servicing & Supply	0	0	1	0	1	32	3.0 %
Bridge Plugs	0	0	0	0	0	21	0.0 %
Carbon Dioxide	0	0	0	0	0	7	0.0 %
Casing Jacks & Recovery	0	0	0	0	0	3	0.0 %
Casing Supply	1	0	0	0	1	40	2.4 %
Cathodic Protection	3	1	4	0	8	20	28.6 %
Cementing Equipment & Tools	1	0	2	0	3	23	11.5 %
Centrifuges & Separators	2	0	0	0	2	12	14.3 %
Chemicals, Processing & Production	1	0	1	1	3	53	5.4 %
Chokes	0	0	0	0	0	37	0.0 %
Coatings, External	0	0	1	0	1	14	6.7 %
Coatings, Internal	1	1	1	0	3	15	16.7 %
Coiled Tubing	0	0	1	0	1	35	2.8 %
Completion Tools	4	1	3	1	9	65	12.2 %
Compressors	7	2	1	0	10	90	10.0 %
Directional Drilling Tools	1	0	2	0	3	17	15.0 %
Drill bits	2	1	0	0	3	48	5.9 %
Drill Collars	1	0	0	0	1	22	4.3 %
Drill Pipe Screens, Protectors, etc.	0	0	0	0	0	1	0.0 %
Drill String Supply	0	0	0	0	0	11	0.0 %
Drilling Equipment (Well Servicing)	0	0	0	0	0	30	0.0 %
Drilling Fluids (Completion & Workover)	0	0	0	0	0	23	0.0 %
Drilling Fluids Supply	0	0	0	0	0	30	0.0 %
Drilling Motors & Tools	0	0	0	0	0	17	0.0 %
Drilling Supplies	7	2	11	0	20	80	20.0 %
Engines	3	1	1	3	8	92	8.0 %
Environmental Monitoring & Equipment	8	7	4	0	19	81	19.0 %
Fiberglass Sucker Rods	0	0	0	0	0	4	0.0 %
Filters	4	1	2	2	9	91	9.0 %
Filtration	4	1	1	0	6	94	6.0 %
Fittings	4	5	3	0	12	88	12.0 %

Value Chain Categories

Supply Categories - Onshore	Nova Scotia	New Brunswick	Newfoundland	PEI	All Atlantic	Other Canada	% Atlantic/ Total Canada
Flanges	1	1	2	1	5	39	11.4 %
Float Equipment	2	0	3	0	5	31	13.9 %
Flow Control Equipment	5	0	1	0	6	94	6.0 %
Fracturing Equipment	0	0	0	0	0	21	0.0 %
Fracturing Flowbacks	0	0	0	0	0	5	0.0 %
Fracturing Fluids	0	0	0	0	0	8	0.0 %
Gas Lift Equipment	3	1	2	0	6	17	26.1 %
Gauges	1	0	2	0	3	75	3.8 %
H2S Monitoring Equipment	0	0	0	0	0	18	0.0 %
Instrumentation, Surface	2	1	2	0	5	49	9.3 %
Jars	1	2	0	0	3	42	6.7 %
Line Pipe	7	5	6	0	18	82	18.0 %
Liner Equipment & Services	1	0	2	0	3	18	14.3 %
Metal Buildings	2	5	1	0	8	92	8.0 %
Nitrogen Equipment & Services	2	0	5	0	7	28	20.0 %
Offshore Drilling & Production Equipment	9	1	9	0	19	27	41.3 %
Packer Rubbers	0	0	0	0	0	7	0.0 %
Packers, Service Tools	2	0	3	0	5	17	22.7 %
Perforating Guns	0	0	0	0	0	10	0.0 %
Perforating Supplies	2	0	2	0	4	12	25.0 %
Pigs, Pigging	0	0	0	0	0	9	0.0 %
Pipe	3	3	1	0	7	93	7.0 %
Pipeline Equipment and Services	9	2	5	0	16	84	16.0 %
Pneumatics	0	0	2	0	2	18	10.0 %
Power Swivels & Tongs	0	0	0	0	0	9	0.0 %
PPE - Safety Equipment Rental	0	0	0	0	0	5	0.0 %
Pressure Vessels	8	7	2	1	18	82	18.0 %
Production Equipment Manufacturing	7	6	2	0	15	86	14.9 %
Pumpjack Concrete Base	0	0	0	0	0	1	0.0 %
Pumpjack Drive Systems	0	0	0	0	0	24	0.0 %
Pumpjacks	0	0	0	0	0	9	0.0 %
Pumps, Downhole Rod	0	0	0	0	0	6	0.0 %
Pumps, Production Pressure	5	2	1	0	8	55	12.7 %
Pumps, Progressive Cavity	0	0	0	0	0	10	0.0 %

Value Chain Categories

Supply Categories - Onshore	Nova Scotia	New Brunswick	Newfoundland	PEI	All Atlantic	Other Canada	% Atlantic/ Total Canada
Pumps, Submersible Electric	0	1	0	0	1	12	7.7 %
Reamers	1	1	0	0	2	16	11.1 %
Safety Clothing	5	2	1	0	8	92	8.0 %
Safety Equipment & Trailers	1	0	0	0	1	32	3.0 %
Service Rig Parts & Repairs	0	0	0	0	0	5	0.0 %
Shock Subs	0	0	0	0	0	8	0.0 %
Shower Units	0	1	1	1	3	18	14.3 %
Solvents	2	0	1	0	3	83	3.5 %
Sucker Rods & Coupling	0	0	0	0	0	1	0.0 %
Supply Stores	3	5	1	2	11	89	11.0 %
Swabbing Equipment & Supplies	0	0	1	0	1	9	10.0 %
Testing Equipment Manufacturing & Rental	1	0	0	0	1	20	4.8 %
Tooljoints, Tubing Premium	0	0	0	0	0	5	0.0 %
Treaters	0	0	0	0	0	20	0.0 %
Tubing Anchors	0	0	0	0	0	10	0.0 %
Tubing Supply	1	2	2	0	5	57	8.1 %
Tubing, Rotators	0	0	0	0	0	6	0.0 %
Tubular Premium Connections	0	0	0	0	0	16	0.0 %
Valve Manufacture	3	3	0	0	6	94	6.0 %
Valve Parts, Service & Repair	2	1	0	0	3	21	12.5 %
Valve Supply	0	1	2	0	3	52	5.5 %
Wellhead Completion Equipment	0	0	1	0	1	18	5.3 %
Wellhead Manufacture	0	0	1	0	1	29	3.3 %
Wellhead Supply & Servicing	0	0	0	0	0	12	0.0 %
Whipstocks	1	0	0	0	1	5	16.7 %
					351	3271	9.7 %

FINAL REPORT APPENDICES:

A STUDY INTO OPTIMIZING TECHNOLOGY TRANSFER FOR ATLANTIC CANADA'S OIL AND GAS INDUSTRY

A STUDY OF SERVICE AND SUPPLY CAPABILITIES IN ATLANTIC CANADA TO MEET CURRENT AND FUTURE DEMAND REQUIREMENTS OF OIL AND GAS VALUE CHAIN

Prepared For: Newfoundland Ocean Industries Association (NOIA)
Offshore/Onshore Technologies Association of Nova
Scotia (OTANS)
Atlantic Resource Industries Association of New
Brunswick (ARIA)
Canadian Manufacturers and Exporters -
Prince Edward Island
In co-operation with:
Atlantic Canada Opportunities Agency
Industry Canada
Natural Resources Canada

Prepared By: PricewaterhouseCoopers

Date: April, 2001

**THIS REPORT WAS PREPARED BY THE CONSULTANT FOR THE SOLE USE OF THE
NEWFOUNDLAND OCEAN INDUSTRIES ASSOCIATION. THE CONSULTANT ACCEPTS NO
LIABILITY FOR USE OF OR RELIANCE ON THE REPORT BY THIRD PARTIES.**

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1.0 CATALOGUE OF COMPANIES

The following one hundred and twenty-one pages catalogue the names, location and Provinces of the companies involved in the value chain. The lists are split into the four groups used in the main report, with over 3,000 entries. Several companies are listed as having capability in more than one category.

The data has been mined from the Industry Canada databases mentioned in section 4.1 of the main report. Again PricewaterhouseCoopers cannot attest to the accuracy and completeness of the data.

The data was mined in April, 2001. We understand from the database administrators at Industry Canada that an update of the database occurred in April. Their estimation of the coverage of the companies, which submit the data voluntarily, is said to be an accuracy of 90% for medium and large companies and 80% for smaller companies.

As a result of the April update, during which time we were extracting data, there may be some numeric discrepancies between the information presented in section 4.1 and that to follow in this section. For instance, the number of companies involved in the Offshore Services Surveying category has changed from a March figure of 21 to an April updated figure of 39 companies. We have found that these increased figures have not materially affected our value chain analysis, as the increases occurred in categories where there already was good representation in Atlantic Canada, meaning the percentages were already above 10% penetration.

Offshore Services

Acoustics and Noise Control

3M Canada Company
Kongsberg Simrad Mestech Ltd.
Romor Atlantic Limited

Mount Pearl
Dartmouth
Dartmouth

Newfoundland
Nova Scotia
Nova Scotia

Aerial Surveys

ADI Group Inc.
Caris
Three-D GeoConsultants Ltd.
CHC Helicopter Corporation
Cougar Helicopters Inc. (Newfoundland)
Fugro Jacques GeoSurveys Inc.
Cougar Helicopters Inc. (Nova Scotia)
Eastcan Geomatics Limited
Hyperspectral Data International Inc.

Fredericton
Fredericton
Fredericton
St. John's
St. John's
St. John's
Waverley
Halifax
Dartmouth

New Brunswick
New Brunswick
New Brunswick
Newfoundland
Newfoundland
Newfoundland
Nova Scotia
Nova Scotia
Nova Scotia

Aircraft Welding Repairs

Irving Shipbuilding Inc.
ProArc Fabricating Ltd.

Saint John
Mount Pearl

New Brunswick
Newfoundland

Analytical Services

Atlantic Nuclear Services Ltd.
RPC
Avalon Controls Ltd.
Siemens - Westinghouse
The Scale Shop (1985) Ltd.
ABB Inc.
BioMedica Diagnostics Inc.
BioScan
Environmental Services Laboratory Inc.
Hurley Fisheries Consulting Ltd.
Livingston International Consulting Group
Simulations Canada
Baseline Business Geographics Inc.

Fredericton
Fredericton
St. John's
St. John's
Mount Pearl
Dartmouth
Windsor
Truro
Sydney
Dartmouth
Halifax
Italy Cross
Charlottetown

New Brunswick
New Brunswick
Newfoundland
Newfoundland
Newfoundland
Nova Scotia
Nova Scotia
Nova Scotia
Nova Scotia
Nova Scotia
Nova Scotia
Nova Scotia
Nova Scotia
Prince Edward Islar

Aviation Services

Applied Courseware Technology Inc.
CHC Helicopter Corporation
Cougar Helicopters Inc. (Newfoundland)
LTS Sales Ltd. (Newfoundland)
Marine Institute
Offshore Safety and Survival Centre
Canadax Industrial Group Limited
Cougar Helicopters Inc. (Nova Scotia)
IMP Group International Inc.
IMP Group Limited (Nova Scotia)
LTS Sales Ltd. (Nova Scotia)
Stewart & Associates Safety Management Services Ltd.
Survival Systems Group Ltd.
Holland College

Miramichi West
St. John's
St. John's
Mount Pearl
St. John's
St. John's
Halifax
Waverley
Halifax
Dartmouth
Dartmouth
Chester Basin
Dartmouth
Charlottetown

New Brunswick
Newfoundland
Newfoundland
Newfoundland
Newfoundland
Newfoundland
Nova Scotia
Nova Scotia
Nova Scotia
Nova Scotia
Nova Scotia
Nova Scotia
Nova Scotia
Prince Edward Islar

Catalogue of Companies - Offshore Services

Base Operators

DPL Group	Saint John	New Brunswick
A. Harvey & Company Limited	St. John's	Newfoundland
Aramark Canada Ltd.	St. John's	Newfoundland
Newdock - St. John's Dockyard Ltd.	St. John's	Newfoundland
Pennecon Limited	St. John's	Newfoundland
Seabase Limited	St. John's	Newfoundland
Secunda Marine Services Limited (Newfoundland)	St. John's	Newfoundland
Secunda Marine Services Limited (Nova Scotia)	Dartmouth	Nova Scotia

Boiler Service and Supplies

Tilley Manufacturing Ltd.	Arthurette	New Brunswick
ABB Inc.	Dartmouth	Nova Scotia
Cooperheat of Canada Ltd.	Dartmouth	Nova Scotia

Bottom Hole Pressure Surveys

Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia

Business/Management Consulting

Azimuth Management	Fredericton	New Brunswick
Force/Robak Associates Ltd.	Fredericton	New Brunswick
Formation Papyrus Training inc.	Campbellton	New Brunswick
Fundy Computer Services Ltd.	Saint John	New Brunswick
TS Enterprises Ltd.	Fredericton	New Brunswick
A. Harvey & Company Limited	St. John's	Newfoundland
P F Collins Customs Broker Ltd.	St. John's	Newfoundland
Puglisevich Group of Companies	St. John's	Newfoundland
RTH Management Consultants Inc.	St. John's	Newfoundland
Walbourne Design Associates	St. John's	Newfoundland
AGS & Associates	Dartmouth	Nova Scotia
ATCAN Business Management Limited	Dartmouth	Nova Scotia
Guptill Consulting Services	Brookside	Nova Scotia
Innovative Planning Inc.	Dartmouth	Nova Scotia
Livingston International Consulting Group	Halifax	Nova Scotia
LN Perry Consulting Inc.	Liverpool	Nova Scotia
Vantage The Un-Agency Agency Inc.	Halifax	Nova Scotia
Coles Associates Ltd.	Charlottetown	Prince Edward Islar

Calibration Services

Advanced Energy Management Limited	Moncton	New Brunswick
AQTS	Saint John	New Brunswick
Atlantic Controls Ltd. (New Brunswick)	Saint John	New Brunswick
Atlantic Quality & Technical Serv. Ltd.	Saint John	New Brunswick
DPL Group	Saint John	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Avalon Controls Ltd.	St. John's	Newfoundland
BAE Systems Canada Inc. (Newfoundland)	St. John's	Newfoundland
Hydraulic Systems Limited (Newfoundland)	St. John's	Newfoundland
Newfoundland Service Alliance	St. John's	Newfoundland
The Scale Shop (1985) Ltd.	Mount Pearl	Newfoundland
Atlantic Controls	Halifax	Nova Scotia

Catalogue of Companies - Offshore Services

BAE Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Cooperheat of Canada Ltd.	Dartmouth	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Peacock - Industrial Products Division	Dartmouth	Nova Scotia
Pinter Consulting Services	Halifax	Nova Scotia
Satlantic Inc.	Halifax	Nova Scotia
TekMap Consulting	Lake Fletcher	Nova Scotia

Computer Systems/Data Management

Compusult Limited	Mount Pearl	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
Harris & Roome Supply Limited (St. John's)	St. John's	Newfoundland
Logical Computer Systems	St. John's	Newfoundland
Marineering Limited	St. John's	Newfoundland
Oceanic Consulting Corporation	St. John's	Newfoundland
Professional Institute of Applied Technology	St. John's	Newfoundland
The Scale Shop (1985) Ltd.	Mount Pearl	Newfoundland
xwave	St. John's	Newfoundland
Harris & Roome Supply Limited (Halifax)	Halifax	Nova Scotia
Scotia Energy Resources Limited	Halifax	Nova Scotia
Siemens Westinghouse Technical Services	Dartmouth	Nova Scotia
xwave	Dartmouth	Nova Scotia

Construction and Shutdowns

Aluma Systems Canada Inc.	St. John's	Newfoundland
AOC Brown & Root Canada Ltd.	Mount Pearl	Newfoundland
Arrow Construction Products Ltd. (Newfoundland)	Mount Pearl	Newfoundland
M & M Engineering Limited	St. John's	Newfoundland
Peter Kiewit Sons Co. Ltd.	St. John's	Newfoundland
Siemens - Westinghouse	St. John's	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
Ainsworth Atlantic (A Division of Ainsworth Inc.)	Dartmouth	Nova Scotia
Aluma Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Arrow Construction Products Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Guldfords Inc.	Dartmouth	Nova Scotia
J.D. Irving, Limited (Offshore Services)	Halifax	Nova Scotia
Nova Construction Co. Ltd.	Antigonish	Nova Scotia
PV Inspection Services Ltd. / PV Offshore Inc.	Dartmouth	Nova Scotia

Container rentals/repairs/sales

A. Harvey & Company Limited	St. John's	Newfoundland
Metal World Inc.	Torbay	Newfoundland
CKT Nova Scotia Limited	Bedford	Nova Scotia
WCC Refurb Limited/WCC Offshore	Halifax	Nova Scotia

Contractor's equipment and supplies rent/repair

Aluma Systems Canada Inc.	St. John's	Newfoundland
Emery Construction Limited	Mount Pearl	Newfoundland
Mcnamara Construction Company	Paradise	Newfoundland
M & M Engineering Limited	St. John's	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
United Rent-Alls Ltd.	Mount Pearl	Newfoundland
Aluma Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Fabco Industries Limited	Dartmouth	Nova Scotia
Superior Vallen Safety Supply Company Ltd.	Dartmouth	Nova Scotia

Control Panel Fabrication

Atlantic Controls Ltd. (New Brunswick)	Saint John	New Brunswick
DPL Group	Saint John	New Brunswick
Techmar Engineering Ltd.	Hanwell	New Brunswick
The Panel Shop	Fredericton	New Brunswick
Valron Engineers Inc	Moncton	New Brunswick
Control & Equipment Ltd.	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
Siemens - Westinghouse	St. John's	Newfoundland
Terra Nova Marine Co. Ltd.	Mount Pearl	Newfoundland
Atlantic Controls	Halifax	Nova Scotia
Dominion Biologicals Limited	Dartmouth	Nova Scotia
Fossil Power Systems Inc.	Dartmouth	Nova Scotia
I.M.P. Group Int., Aerospace Div.	Halifax	Nova Scotia
Lynk Electric Limited	Sydney	Nova Scotia
Nautel Limited	Tantallon	Nova Scotia
Sea Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia

Cores

Atelier Gerard Beaulieu inc.	Saint-Quentin	New Brunswick
Baker Hughes Canada Inc.	Mt. Pearl	Newfoundland
Sonoco Limited	Stephenville	Newfoundland
AMIRIX Systems Inc. (formerly Applied Microelectronics Inc.)	Halifax	Nova Scotia
Canadian Automotive Radiator Exchange & Manufacturing Ltd	Debert	Nova Scotia
Crown Fibre Tube Inc.	Kentville	Nova Scotia

Data Collection/Analysis/Processing and Supplies

Bailey Sea (NFLD) Ltd.	St. John's	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
Cormorant Ltd.	St. John's	Newfoundland
Fugro Jacques GeoSurveys Inc.	St. John's	Newfoundland
Marineering Limited	St. John's	Newfoundland
Oceanic Consulting Corporation	St. John's	Newfoundland
Oceans Limited	St. John's	Newfoundland
The Scale Shop (1985) Ltd.	Mount Pearl	Newfoundland

Catalogue of Companies - Offshore Services

Coastal Ocean Associates Inc.	Dartmouth	Nova Scotia
McGregor GeoScience Ltd.	Halifax	Nova Scotia
Seimac Limited	Dartmouth	Nova Scotia
Dielectric Testing non-destructive		
Ozark Electrical Marine Ltd.	St. John's	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
Directional Drilling - Equipment and Service		
Baker Hughes Canada Inc.	Mt. Pearl	Newfoundland
Halliburton Energy Services (Newfoundland) Donovan's Industrial P	Mount Pearl	Newfoundland
Hyflodraulic Limited	Mount Pearl	Newfoundland
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Diving Services and Equipment		
Irving Shipbuilding Inc.	Saint John	New Brunswick
Afonso Diving Contractors Ltd.	St. John's	Newfoundland
Air Liquide Canada Inc.	St. John's	Newfoundland
Dominion Diving Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Labrador Technologies & Development	North West River	Newfoundland
Pro-Dive Marine Services (NFLD)	Mount Pearl	Newfoundland
Dominion Diving Limited	Dartmouth	Nova Scotia
K & D Pratt Ltd.	Dartmouth	Nova Scotia
Lloyd's Register North America Inc.	Halifax	Nova Scotia
Offshore Recruiting Services (Nova Scotia)	Halifax	Nova Scotia
Pro-Dive Marine Services (N.S.) Ltd.	Dartmouth	Nova Scotia
Atlantic Alliance Offshore Ltd.	Dartmouth	Nova Scotia
Drilling Services/Equipment		
3M Canada Company	Mount Pearl	Newfoundland
ALTINEX CANADA LTD.	St. John's	Newfoundland
Bailey Sea (NFLD) Ltd.	St. John's	Newfoundland
C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
Glomar International (Canada) Drilling Co.	St. John's	Newfoundland
Import Tool Corporation Ltd. (Newfoundland)	Mount Pearl	Newfoundland
IPM Services - Division of Schlumberger Canada Limited	Mount Pearl	Newfoundland
Noble Drilling (Canada) Limited	St. John's	Newfoundland
Seabase Limited	St. John's	Newfoundland
Alfa Laval Inc.	Dartmouth	Nova Scotia
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Import Tool Corporation Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Parker Brothers Contracting Ltd.	Waverley	Nova Scotia
Santa Fe Drilling Company (Canada) Limited	Bedford	Nova Scotia
Schlumberger of Canada	Dartmouth	Nova Scotia
Smith International Canada, Ltd. (N.S.)	Boutiliers Point	Nova Scotia
Drydock and Drydocking Equipment		
Bull Arm Site Corporation	St. John's	Newfoundland
Newdock - St. John's Dockyard Ltd.	St. John's	Newfoundland
ABB Inc.	Dartmouth	Nova Scotia
Dynamic Positioning		
Irving Shipbuilding Inc.	Saint John	New Brunswick

Catalogue of Companies - Offshore Services

C-MAR Newfoundland Inc.	St. John's	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
Marine Institute	St. John's	Newfoundland
EOA Scientific Systems, Inc.	Halifax	Nova Scotia
Kongsberg Simrad Mestech Ltd.	Dartmouth	Nova Scotia
C-Mar Services (Canada) Ltd.	Summerside	Prince Edward Island
Technologies CIFTA	Wellington	Prince Edward Island

Education and Training

AccessLab Systems Ltd.	Fredericton	New Brunswick
ADI Group Inc.	Fredericton	New Brunswick
Advanced Training & Services Inc.	Saint John	New Brunswick
Applied Courseware Technology Inc.	Miramichi West	New Brunswick
Applied Management Consultants Ltd.	Fredericton	New Brunswick
BKM Research & Development Inc.	Dieppe	New Brunswick
Cabinet-Conseil Normand Corno	Edmundston	New Brunswick
CertifyOnline.com	Saint John	New Brunswick
Don Sayers & Associates Ltd.	Fredericton	New Brunswick
Formation Papyrus Training inc.	Campbellton	New Brunswick
Fundy Computer Services Ltd.	Saint John	New Brunswick
LearnStream Inc.	Fredericton	New Brunswick
Maritime Forest Ranger School	Fredericton	New Brunswick
MCD Consultant	Tide Head	New Brunswick
Millennium Education	Moncton	New Brunswick
Mosaic Technologies Corporation	Miramichi	New Brunswick
N.B. Community College Saint John	Saint John	New Brunswick
NEW BRUNSWICK SCHOOL OF FISHERIES	Caraquet	New Brunswick
OPIM International Inc.	St-Joseph-De-M	New Brunswick
Roy-Babin Multimedia Production	Shediac	New Brunswick
RPC	Fredericton	New Brunswick
Senior Watch Inc.	Saint John	New Brunswick
Silver Fox Developments, Inc.	Miramichi	New Brunswick
Sonoptic Technologies Inc.	Saint John	New Brunswick
AGRA Monenco	St. John's	Newfoundland
APA (NFLD) Ltd.	St. John's	Newfoundland
Atlantic Construction Training Centre	St. John's	Newfoundland
Atlantic Petroleum Training Centre	St. John's	Newfoundland
Atlantic Safety Centre	St. John's	Newfoundland
BPK Consultants International	Marystown	Newfoundland
Breakwater Books Ltd.	St. John's	Newfoundland
College of the North Atlantic	St. John's	Newfoundland
College Of The North Atlantic	Happy Valley-Go	Newfoundland
Cooperative Education Services Centre	St. John's	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
IDON East Corporation	St. John's	Newfoundland
KeyCorp Inc.	St. John's	Newfoundland
Marine Institute	St. John's	Newfoundland
Medserv Solutions Inc.	St. John's	Newfoundland
MI International	St. John's	Newfoundland
Offshore Safety and Survival Centre	St. John's	Newfoundland
Professional Institute of Applied Technology	St. John's	Newfoundland
Puglisevich Group of Companies	St. John's	Newfoundland
Softwaves Educational Software Inc.	A1c1a4	Newfoundland

Catalogue of Companies - Offshore Services

ACE Ltd.	Wolfville	Nova Scotia
AERDE Environmental Research	Halifax	Nova Scotia
APA (Nova Scotia) Limited	Halifax	Nova Scotia
Atlantic Canada Centre for Electrical Technologies	Halifax	Nova Scotia
Axes Inc.	Boutiliers Point	Nova Scotia
Bio-Response Systems Limited	Dartmouth	Nova Scotia
Bridgetown International Software Inc.	Upper Granville	Nova Scotia
Canadian Welding Bureau	Dartmouth	Nova Scotia
CBCL Limited (Halifax)	Halifax	Nova Scotia
C.J. Maclellan & Associates Incorporated	Antigonish	Nova Scotia
C.L. Douglas & Associates Inc.	Bedford	Nova Scotia
Coady International Institute	Antigonish	Nova Scotia
COLLEGE DE L'ACADIE	Meteghan River	Nova Scotia
Computerease Limited	Dartmouth	Nova Scotia
Dalhousie University DalTech Cont. Tech.	Halifax	Nova Scotia
DalTech, Dalhousie University	Halifax	Nova Scotia
DHL Engineering	Bedford	Nova Scotia
Digital Image FX Inc.	Dartmouth	Nova Scotia
EnvironChem Engineering Consultants	Wolfville	Nova Scotia
EOA Scientific Systems, Inc.	Halifax	Nova Scotia
Farah & Associates	Dartmouth	Nova Scotia
Fitzgerald Digital Media Creator (DMC)	Sydney	Nova Scotia
INLAND TECHNOLOGIES INC.	Truro	Nova Scotia
Intentional Futures Consulting Inc	Mahone Bay	Nova Scotia
International Language Institute	Halifax	Nova Scotia
Isle Royal Internet Consulting and Design	Glace Bay	Nova Scotia
ITI Information Technology Institute	Halifax	Nova Scotia
Kemic Bioresearch Laboratories Limited	Kentville	Nova Scotia
Landmark Decisions	Hammonds Plain	Nova Scotia
Logical Paths Training Development Inc.	Dartmouth	Nova Scotia
Marbicon Inc.	Berwick	Nova Scotia
Maritrain Ltd.	Meteghan	Nova Scotia
MathResources Inc.	Halifax	Nova Scotia
MediaSpark IT Solutions Inc.	Sydney	Nova Scotia
Nova Scotia Community College (Annapolis Valley Campus)	Lawrencetown	Nova Scotia
Nova Scotia Oceans Initiative (NSOI)	Dartmouth	Nova Scotia
OCL Services Ltd./ OCL Group	Dartmouth	Nova Scotia
ORACO Consulting Inc.	Halifax	Nova Scotia
production school house	Windsor	Nova Scotia
School Of Occupational Therapy	Halifax	Nova Scotia
Sealevel Communications	Tantallon	Nova Scotia
SHEAR. COM. SERVICES	Halifax	Nova Scotia
Simulations Canada	Italy Cross	Nova Scotia
ST. FRANCIS XAVIER UNIVERSITY	Antigonish	Nova Scotia
Survival Systems Group Ltd.	Dartmouth	Nova Scotia
Atlantic Canada Language Institute	Kensington	Prince Edward Islar
Coles Associates Ltd.	Charlottetown	Prince Edward Islar
Fortune Bay Ecolodge Designs Ltd.	Charlottetown	Prince Edward Islar
Future Learning Solutions Inc.	Charlottetown	Prince Edward Islar
GE Capital IT Solutions Inc	Charlottetown	Prince Edward Islar
Holland College	Charlottetown	Prince Edward Islar
Knowledge House Inc	Charlottetown	Prince Edward Islar
MICROAGE COMPUTER CENTRES	Charlottetown	Prince Edward Islar

Montague Computer 1997 Inc	Montague	Prince Edward Island
N.R. Computronics Ltd.	Charlottetown	Prince Edward Island
Simscape Development Corporation	Charlottetown	Prince Edward Island

Engineering/Construction - Offshore structures

Irving Shipbuilding Inc.	Saint John	New Brunswick
ALTINEX CANADA LTD.	St. John's	Newfoundland
AOC Brown & Root Canada Ltd.	Mount Pearl	Newfoundland
BAE-Newplan Group Limited	Mount Pearl	Newfoundland
ConPro Group Limited	St. John's	Newfoundland
FGA Consulting Engineers Limited	St. John's	Newfoundland
Friede Goldman Newfoundland Ltd.	Marystown	Newfoundland
Mcnamara Construction Company	Paradise	Newfoundland
Newdock - St. John's Dockyard Ltd.	St. John's	Newfoundland
Pennecon Limited	St. John's	Newfoundland
Peter Kiewit Sons Co. Ltd.	St. John's	Newfoundland
RDS Engineering Ltd.	St. John's	Newfoundland
The SGE Group Inc. (St. John's)	St. John's	Newfoundland
AGRA Whitman Benn Limited	Halifax	Nova Scotia
PV Inspection Services Ltd. / PV Offshore Inc.	Dartmouth	Nova Scotia
The SGE Group Inc. (Nova Scotia)	Halifax	Nova Scotia

Engineering-Consultants

AMEC Earth and Environmental Ltd.	Fredericton	New Brunswick
Estabrooks Consultants Inc.	Saint John	New Brunswick
Fundy Engineering & Consulting Ltd.	Saint John	New Brunswick
Acres International Limited (Newfoundland)	St. John's	Newfoundland
ALTINEX CANADA LTD.	St. John's	Newfoundland
APA (NFLD) Ltd.	St. John's	Newfoundland
Axiom Engineering Ltd.	Mount Pearl	Newfoundland
BAE-Newplan Group Limited	Mount Pearl	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
FGA Consulting Engineers Limited	St. John's	Newfoundland
Fugro Jacques GeoSurveys Inc.	St. John's	Newfoundland
FYC Associates Inc.	St. John's	Newfoundland
Hydraulic Systems Limited (Newfoundland)	St. John's	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
Jacques Whitford Environmental	St. John's	Newfoundland
Marineering Limited	St. John's	Newfoundland
Marineside Surveys Ltd.	Mount Pearl	Newfoundland
Newfoundland Design Associates Ltd.	St. John's	Newfoundland
Noble Denton Canada Limited	St. John's	Newfoundland
Norman Wade Company Limited	St. John's	Newfoundland
Oceanic Consulting Corporation	St. John's	Newfoundland
RTD Quality Services Inc.	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St. John's	Newfoundland
Siemens - Westinghouse	St. John's	Newfoundland
The SGE Group Inc. (St. John's)	St. John's	Newfoundland
Accent Engineering Consultants Incorporated	Dartmouth	Nova Scotia
Acres International Ltd. (Nova Scotia)	Halifax	Nova Scotia
ADI Limited	Halifax	Nova Scotia
AGRA Whitman Benn Limited	Halifax	Nova Scotia
APA (Nova Scotia) Limited	Halifax	Nova Scotia

Catalogue of Companies - Offshore Services

Atlantic Gas Engineers	Halifax	Nova Scotia
Canadian Seabed Research Limited	Porters Lake	Nova Scotia
CBCL Limited (Halifax)	Halifax	Nova Scotia
CSE Computronics Inc.	Dartmouth	Nova Scotia
DHL Engineering	Bedford	Nova Scotia
EnvironChem Engineering Consultants	Wolfville	Nova Scotia
Global Maritime	Dartmouth	Nova Scotia
Hobbs Materials Engineering Ltd.	Dartmouth	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Jacques Whitford Environment Limited	Dartmouth	Nova Scotia
Lewis Engineering Inc.	Halifax	Nova Scotia
MacDonnell Group	Halifax	Nova Scotia
Martec Limited	Halifax	Nova Scotia
Neill and Gunter (Nova Scotia) Limited	Dartmouth	Nova Scotia
PV Inspection Services Ltd. / PV Offshore Inc.	Dartmouth	Nova Scotia
RTD Quality Services Inc.	New Glasgow	Nova Scotia
Samson Enterprises Ltd.	Arichat	Nova Scotia
Sea Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Siemens Westinghouse Technical Services	Dartmouth	Nova Scotia
Siemens Westinghouse Technical Services	Dartmouth	Nova Scotia
Thales Survey Canada Ltd.	Enfield	Nova Scotia
The SGE Group Inc. (Nova Scotia)	Halifax	Nova Scotia
TJ Engineering Services & TJ Inspection Services	Dartmouth	Nova Scotia
Wayland Engineering Ltd.	Halifax	Nova Scotia

Environmental Consultants

AMEC Earth and Environmental Ltd.	Fredericton	New Brunswick
FGA Consultants Ltd.	Fredericton	New Brunswick
Force/Robak Associates Ltd.	Fredericton	New Brunswick
Fundy Engineering & Consulting Ltd.	Saint John	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Les Forages Lantech Drilling Services Inc.	Dieppe	New Brunswick
Lizotte Consultants Ltee	Rivière-Verte	New Brunswick
Pickett Consultants Ltd.	Riverview	New Brunswick
Roy Consultants Group Ltd./Le Groupe Roy Consultant Ltée	Bathurst	New Brunswick
AMEC Earth and Environmental	St. John's	Newfoundland
BAE-Newplan Group Limited	Mount Pearl	Newfoundland
Community Resource Services Ltd.	St. John's	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
Cormorant Ltd.	St. John's	Newfoundland
Enviromed Analytical Inc.	Mount Pearl	Newfoundland
Jacques Whitford Environmental	St. John's	Newfoundland
Newfoundland Design Associates Ltd.	St. John's	Newfoundland
Seacom Consulting Inc.	St. John's	Newfoundland
ADI Limited	Halifax	Nova Scotia
AGRA Whitman Benn Limited	Halifax	Nova Scotia
Associated Marine Equipment Limited	Dartmouth	Nova Scotia
Atlantic Gas Engineers	Halifax	Nova Scotia
Canadian Fishery Consultants Ltd.	Halifax	Nova Scotia
Canadian Seabed Research Limited	Porters Lake	Nova Scotia
CBCL Limited (Halifax)	Halifax	Nova Scotia
CEA	Seabright	Nova Scotia

Catalogue of Companies - Offshore Services

CEF Consultants Ltd.	Halifax	Nova Scotia
DHL Engineering	Bedford	Nova Scotia
EnvironChem Engineering Consultants	Wolfville	Nova Scotia
Gadus Associates	Musquodoboit H ₂	Nova Scotia
Jacques Whitford Environment Limited	Dartmouth	Nova Scotia
Land & Sea Environmental Consultants Ltd	Dartmouth	Nova Scotia
MacDonnell Group	Halifax	Nova Scotia
Martec Limited	Halifax	Nova Scotia
Novaport Int'l Consultants Ltd.	Halifax	Nova Scotia
Nova Scotia Community College (Annapolis Valley Campus)	Lawrencetown	Nova Scotia
ORACO Consulting Inc.	Halifax	Nova Scotia
PORTABILITY INTERNATIONAL	Halifax	Nova Scotia
R.A. Murray International Limited	Halifax	Nova Scotia
Seatech Ltd.	Halifax	Nova Scotia
Seatech Ltd.	Halifax	Nova Scotia
Tavel Ltd.	Halifax	Nova Scotia
Vaughan Environmental Consultants Limited	Halifax	Nova Scotia
Vaughan International Consultants Ltd.	Halifax	Nova Scotia
Abiogen Environmental Services	Charlottetown	Prince Edward Islar

Fabricators-General

Atlantic Quality & Technical Serv. Ltd.	Saint John	New Brunswick
CFM	Saint John	New Brunswick
Ocean Steel & Construction Ltd.	Saint John	New Brunswick
Basil Fearn ('93) Limited	St. John's	Newfoundland
BMS Offshore Limited (Newfoundland)	Mount Pearl	Newfoundland
Bowringer Engineering Ltd.	St. John's	Newfoundland
Bridgeport Wire Rope & Chain Limited (Newfoundland)	St. John's	Newfoundland
Bull Arm Site Corporation	St. John's	Newfoundland
C&W Industrial Fabrication & Marine Equipment Ltd.	Bay Bulls	Newfoundland
E. Tucker And Sons Limited	Topsail	Newfoundland
Friede Goldman Newfoundland Ltd.	Marystown	Newfoundland
Garland Systems Ltd.	Mount Pearl	Newfoundland
G. Pelley Limited	Springdale	Newfoundland
Metalworks Ltd.	Bay Roberts	Newfoundland
Metal World Inc.	Torbay	Newfoundland
M & M Engineering Limited	St. John's	Newfoundland
Newdock - St. John's Dockyard Ltd.	St. John's	Newfoundland
Newfoundland Service Alliance	St. John's	Newfoundland
Peter Kiewit Sons Co. Ltd.	St. John's	Newfoundland
ProArc Fabricating Ltd.	Mount Pearl	Newfoundland
ABCO Industries Limited	Lunenburg	Nova Scotia
Alscott Air Systems Limited	Dartmouth	Nova Scotia
BMS Offshore Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Bridgeport Wire Rope & Chain Ltd	Dartmouth	Nova Scotia
CFM (Nova Scotia)	Dartmouth	Nova Scotia
CKT Nova Scotia Limited	Bedford	Nova Scotia
Fabco Industries Limited	Dartmouth	Nova Scotia
J.D. Irving, Limited (Offshore Services)	Halifax	Nova Scotia
Maritime Steel And Foundries Limited	New Glasgow	Nova Scotia
Mulgrave Machine Works Limited	Mulgrave	Nova Scotia

Failure Analysis

Catalogue of Companies - Offshore Services

Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
Micro Action	Moncton	New Brunswick
Acres International Limited (Newfoundland)	St. John's	Newfoundland
C-CORE	St. John's	Newfoundland
FGA Consulting Engineers Limited	St. John's	Newfoundland
FMD International Inc.	St. John's	Newfoundland
Acres International Ltd. (Nova Scotia)	Halifax	Nova Scotia
Bert Van Leeuwen Industrial Design Ltd.	Amherst	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Nautel Limited	Tantallon	Nova Scotia
Wayland Engineering Ltd.	Halifax	Nova Scotia

Feasability Studies

A.L. Professional Services Ltd/A.L. Services Professionnels Lt	Dieppe	New Brunswick
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Fisheries Training, Policy and Planning

Marine Institute	St. John's	Newfoundland
Arctic Fisheries Ltd.	Yarmouth	Nova Scotia

Forming Construction, Marine and Road Building

Aluma Systems Canada Inc.	St. John's	Newfoundland
BAE-Newplan Group Limited	Mount Pearl	Newfoundland
Mcnamara Construction Company	Paradise	Newfoundland
Pennecon Limited	St. John's	Newfoundland
Aluma Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia

FPSO - Design, Construction, Operation

AOC Brown & Root Canada Ltd.	Mount Pearl	Newfoundland
Bull Arm Site Corporation	St. John's	Newfoundland
ConPro Group Limited	St. John's	Newfoundland
Peter Kiewit Sons Co. Ltd.	St. John's	Newfoundland
Seabase Limited	St. John's	Newfoundland

Freight, Cargo and Delivery Services

Atlantis International Ltd.	St. John's	Newfoundland
Avalon Customs Brokers Ltd.	St. John's	Newfoundland
Basil Fearn ('93) Limited	St. John's	Newfoundland
Clarke Transport	Mount Pearl	Newfoundland
East Can Transport Services Ltd.	St. John's	Newfoundland
Eimskip Newfoundland	St. John's	Newfoundland
Freightway Intl. div of Kintetsu World Express (Canada) Inc.	St. John's	Newfoundland
Geopetrol International Ltd. (Nfld.)	St. John's	Newfoundland
Harbour International Ltd.	Bay Roberts	Newfoundland
Household Movers & Shippers Ltd.	Mount Pearl	Newfoundland
Hunt's Transport Ltd.	Mount Pearl	Newfoundland
Kometik	St. John's	Newfoundland
LeDrew's Express Ltd.	Mount Pearl	Newfoundland
Oceanex Incorporated	St. John's	Newfoundland
P F Collins Customs Broker Ltd.	St. John's	Newfoundland
Quinnsway Transport Ltd.	Mount Pearl	Newfoundland
Burgess Transfer & Storage Ltd.	Dartmouth	Nova Scotia
Davis Specialized Carriers Ltd.	Sackville	Nova Scotia
Day & Ross Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Kero Transport, A division of Kero Enterprises Ltd.	Dartmouth	Nova Scotia
Midland Transport Limited	Dartmouth	Nova Scotia
Nordic Canadian Shipping Ltd.	Halifax	Nova Scotia
Owen Davis Trucking Ltd.	Sackville	Nova Scotia
RST Industries	Dartmouth	Nova Scotia
Saybolt Canada Limited	Dartmouth	Nova Scotia

Fuels/Fuel Oil Treatment

Imperial Oil	St. John's	Newfoundland
Irving Oil Limited	St. John's	Newfoundland
Alfa Laval Inc.	Dartmouth	Nova Scotia
Saybolt Canada Limited	Dartmouth	Nova Scotia
Statia Terminals Canada Inc.	Port Hawkesbury	Nova Scotia

Galvanizing, Hot Dip

Atlantic Industries Limited	Dorchester	New Brunswick
G. Pelley Limited	Springdale	Newfoundland
Parker Brothers Contracting Ltd.	Waverley	Nova Scotia

Geological/Geophysical/Geotechnical Services

AMEC Earth and Environmental	St. John's	Newfoundland
Fugro Jacques GeoSurveys Inc.	St. John's	Newfoundland
Jacques Whitford Environmental	St. John's	Newfoundland
ADI Limited	Halifax	Nova Scotia
Canadian Seabed Research Limited	Porters Lake	Nova Scotia
Fugro Jacques Geosurveys Inc.	Dartmouth	Nova Scotia
Geophysical Services Incorporated	Windsor	Nova Scotia
Jacques Whitford Environment Limited	Dartmouth	Nova Scotia
McGregor GeoScience Ltd.	Halifax	Nova Scotia
Thales Survey Canada Ltd.	Enfield	Nova Scotia

Hook-up and Commissioning

AOC Brown & Root Canada Ltd.	Mount Pearl	Newfoundland
BMS Offshore Limited (Newfoundland)	Mount Pearl	Newfoundland
Bull Arm Site Corporation	St. John's	Newfoundland
Crosbie Salamis Limited	St. John's	Newfoundland
Hyflodraulic Limited	Mount Pearl	Newfoundland
Kvaerner SNC-Lavalin Offshore	Mount Pearl	Newfoundland
Newsco Well Service Limited (Newfoundland)	St. John's	Newfoundland
Ozark Electrical Marine Ltd.	St. John's	Newfoundland
Pan Maritime Energy Services Inc.	St. John's	Newfoundland
Peter Kiewit Sons Co. Ltd.	St. John's	Newfoundland
RDS Engineering Ltd.	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St. John's	Newfoundland
Siemens - Westinghouse	St. John's	Newfoundland
Newsco Well Service Limited (Nova Scotia)	Dartmouth	Nova Scotia
Parker Brothers Contracting Ltd.	Waverley	Nova Scotia
Sea Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia

Hydrographic Surveys

Caris	Fredericton	New Brunswick
Trainor Surveys (1974) Ltd.	Fredericton	New Brunswick
Davis Shipping Ltd.	Wesleyville	Newfoundland
Fugro Jacques GeoSurveys Inc.	St. John's	Newfoundland
Eastcan Geomatics Limited	Halifax	Nova Scotia
Geomarine Associates Ltd.	Halifax	Nova Scotia
McGregor GeoScience Ltd.	Halifax	Nova Scotia
Thales Survey Canada Ltd.	Enfield	Nova Scotia

Hydrostatic Testing

Hyflodraulic Limited	Mount Pearl	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
Newsco Well Service Limited (Newfoundland)	St. John's	Newfoundland
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Newsco Well Service Limited (Nova Scotia)	Dartmouth	Nova Scotia

Information Retrieval, Marine Related

CORETEC Incorporated	St. John's	Newfoundland
Marineering Limited	St. John's	Newfoundland
Oceanic Consulting Corporation	St. John's	Newfoundland

Inspection Services

A.L. Professional Services Ltd/A.L. Services Professionnels Lt	Dieppe	New Brunswick
AQTS	Saint John	New Brunswick
Atlantic Quality & Technical Serv. Ltd.	Saint John	New Brunswick
Bretech	Saint John	New Brunswick
Brunswick Engineering Group (1996) Ltd.	Campbellton	New Brunswick
Fundy Engineering & Consulting Ltd.	Saint John	New Brunswick
Lizotte Consultants Ltee	Rivière-Verte	New Brunswick
Multiplants Inc.	Dsl De Drummon	New Brunswick
Pickett Consultants Ltd.	Riverview	New Brunswick
RPC	Fredericton	New Brunswick
Thermal Infrared Services (Canada)	Saint John	New Brunswick
Three-D GeoConsultants Ltd.	Fredericton	New Brunswick
Afonso Diving Contractors Ltd.	St. John's	Newfoundland
Avalon Customs Brokers Ltd.	St. John's	Newfoundland
BAE-Newplan Group Limited	Mount Pearl	Newfoundland
BAE Systems Canada Inc. (Newfoundland)	St. John's	Newfoundland
C-CORE	St. John's	Newfoundland
Dominion Diving Ltd. (Newfoundland)	Mount Pearl	Newfoundland
FGA Consulting Engineers Limited	St. John's	Newfoundland
Freightway Intl. div of Kintetsu World Express (Canada) Inc.	St. John's	Newfoundland
Fugro Jacques GeoSurveys Inc.	St. John's	Newfoundland
Iwis Ltd.	St. John's	Newfoundland
Marineside Surveys Ltd.	Mount Pearl	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
Newfoundland Design Associates Ltd.	St. John's	Newfoundland
Offices in Newfoundland and Nova Scotia	St. John's	Newfoundland
Poseidon Marine Consultants Ltd.	St. John's	Newfoundland
Pro-Dive Marine Services (NFLD)	Mount Pearl	Newfoundland
RTD Quality Services Inc.	St. John's	Newfoundland
TRC Hydraulics Inc.	Mount Pearl	Newfoundland
Wire Rope Industries Ltd.	Mount Pearl	Newfoundland
AFM Project Design Group	Halifax	Nova Scotia
A.F. Theriault & Son Limited	Meteghan River	Nova Scotia
Alpine Overland & Wireless, Co.	Halifax	Nova Scotia
Atlantic Power Quality Specialist	New Glasgow	Nova Scotia
BAE Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
DHL Engineering	Bedford	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
Fugro Jacques Geosurveys Inc.	Dartmouth	Nova Scotia
Garex Consultants International Inc.	Stellarton	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Hyperspectral Data International Inc.	Dartmouth	Nova Scotia
I.M.P. Group Int., Aerospace Div.	Halifax	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Lloyd's Register North America Inc.	Halifax	Nova Scotia
Novalis Technologies	Halifax	Nova Scotia
O'Halloran Campbell Consultants Limited	Halifax	Nova Scotia

Catalogue of Companies - Offshore Services

OIS-Fisher Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Pro-Dive Marine Services (N.S.) Ltd.	Dartmouth	Nova Scotia
ProInTek Systems Inc.	Dartmouth	Nova Scotia
PV Inspection Services Ltd. / PV Offshore Inc.	Dartmouth	Nova Scotia
Remote Access Technology Incorporated	Dartmouth	Nova Scotia
RTD Quality Services Inc.	New Glasgow	Nova Scotia
Siemens Westinghouse Technical Services	Dartmouth	Nova Scotia
SNC-Lavalin Inc.	Halifax	Nova Scotia
Thales Survey Canada Ltd.	Enfield	Nova Scotia
TJ Engineering Services & TJ Inspection Services	Dartmouth	Nova Scotia
Coles Associates Ltd.	Charlottetown	Prince Edward Island
P.E.I. Food technology Centre	Charlottetown	Prince Edward Island
Richard Ball & Associates	Charlottetown	Prince Edward Island

Logistics

Administrative Business Solutions	Cherry Burton	New Brunswick
Applied Management Consultants Ltd.	Fredericton	New Brunswick
Eclipse Communications	Hampton	New Brunswick
Everell Logistics Consultants Inc.	Ammon	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
JUA Engineering	Oromocto	New Brunswick
University of N.B. Extension/Summer Sess	Fredericton	New Brunswick
A. Harvey & Company Limited	St. John's	Newfoundland
Blue Peter Steamships Ltd.	St. John's	Newfoundland
ConPro Group Limited	St. John's	Newfoundland
Cormorant Ltd.	St. John's	Newfoundland
D.D. Transport	Mount Pearl	Newfoundland
Eimskip Newfoundland	St. John's	Newfoundland
Freightway Intl. div of Kintetsu World Express (Canada) Inc.	St. John's	Newfoundland
Hunt's Transport Ltd.	Mount Pearl	Newfoundland
Oceanex Incorporated	St. John's	Newfoundland
P F Collins Customs Broker Ltd.	St. John's	Newfoundland
Quinnsway Transport Ltd.	Mount Pearl	Newfoundland
Seabase Limited	St. John's	Newfoundland
Secunda Marine Services Limited (Newfoundland)	St. John's	Newfoundland
Torngait Services Inc.	St. John's	Newfoundland
Accent Engineering Consultants Incorporated	Dartmouth	Nova Scotia
Holmes Maritime Inc	Halifax	Nova Scotia
Kero Transport, A division of Kero Enterprises Ltd.	Dartmouth	Nova Scotia
OKAMLogic Incorporated	Halifax	Nova Scotia
Pro-Dive Marine Services (N.S.) Ltd.	Dartmouth	Nova Scotia
R.A. Murray International Limited	Halifax	Nova Scotia
Seaboard Offshore Services Ltd.	Port Hawkesbury	Nova Scotia
Secunda Marine Services Limited (Nova Scotia)	Dartmouth	Nova Scotia
Simscape Development Corporation	Charlottetown	Prince Edward Island

Maintenance and Operations Support

Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
Digital Edge a Division of EBSI Canada	Miramichi	New Brunswick
DPL Group	Saint John	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Pickett Consultants Ltd.	Riverview	New Brunswick
AOC Brown & Root Canada Ltd.	Mount Pearl	Newfoundland

Catalogue of Companies - Offshore Services

Bailey Sea (NFLD) Ltd.	St. John's	Newfoundland
ConPro Group Limited	St. John's	Newfoundland
Cougar Helicopters Inc. (Newfoundland)	St. John's	Newfoundland
Crosbie Salamis Limited	St. John's	Newfoundland
FMD International Inc.	St. John's	Newfoundland
Kvaerner SNC-Lavalin Offshore	Mount Pearl	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
M & M Engineering Limited	St. John's	Newfoundland
ProArc Fabricating Ltd.	Mount Pearl	Newfoundland
RTD Quality Services Inc.	St. John's	Newfoundland
Siemens - Westinghouse	St. John's	Newfoundland
Steelfab Industries Limited	Paradise	Newfoundland
Torngait Services Inc.	St. John's	Newfoundland
xwave solutions	St. John's	Newfoundland
AFM Project Design Group	Halifax	Nova Scotia
Alpha Chemical Limited	Dartmouth	Nova Scotia
AMIRIX Systems Inc. (formerly Applied Microelectronics Inc.)	Halifax	Nova Scotia
Cougar Helicopters Inc. (Nova Scotia)	Waverley	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Nova Magnetics Limited	Dartmouth	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
Pro-Dive Marine Services (N.S.) Ltd.	Dartmouth	Nova Scotia
PV Inspection Services Ltd. / PV Offshore Inc.	Dartmouth	Nova Scotia
Rolls-Royce Canada Ltd.	Dartmouth	Nova Scotia

Major Modifications

Force/Robak Associates Ltd.	Fredericton	New Brunswick
Nuratek Enterprises Inc.	Moncton	New Brunswick
AOC Brown & Root Canada Ltd.	Mount Pearl	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
Crosbie Salamis Limited	St. John's	Newfoundland
Kvaerner SNC-Lavalin Offshore	Mount Pearl	Newfoundland
I.M.P. Group Int., Aerospace Div.	Halifax	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia

Mechanical Testing

AQTS	Saint John	New Brunswick
Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
Bretech	Saint John	New Brunswick
DPL Group	Saint John	New Brunswick
Fundy Engineering & Consulting Ltd.	Saint John	New Brunswick
Mobile Valve Repairs & Manuf. N.B. Ltd.	Tracy	New Brunswick
RPC	Fredericton	New Brunswick
TRC Hydraulics Inc.	Dieppe	New Brunswick
C-CORE	St. John's	Newfoundland
FGA Consulting Engineers Limited	St. John's	Newfoundland
IMP Group Limited (Marine Division)	St. John's	Newfoundland
Offices in Newfoundland and Nova Scotia	St. John's	Newfoundland
TRC Hydraulics Inc.	Mount Pearl	Newfoundland
Atlantic Scale Company Limited	Bridgewater	Nova Scotia
CBCL Limited (Halifax)	Halifax	Nova Scotia
Coastal Ocean Associates Inc.	Dartmouth	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
IMP Group Limited (Nova Scotia)	Dartmouth	Nova Scotia
Instrument Concepts Inc.	Great Village	Nova Scotia
OIS-Fisher Inc. (Nova Scotia)	Dartmouth	Nova Scotia

Mechanical/Industrial Contractors

BMS Offshore Limited (Newfoundland)	Mount Pearl	Newfoundland
Bowringer Engineering Ltd.	St. John's	Newfoundland
Crosbie Salamis Limited	St. John's	Newfoundland
M & M Engineering Limited	St. John's	Newfoundland
Peter Kiewit Sons Co. Ltd.	St. John's	Newfoundland
AB Mechanical Limited	Westmount	Nova Scotia
BMS Offshore Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Fabco Industries Limited	Dartmouth	Nova Scotia

Metallurgic Analysis

FGA Consulting Engineers Limited	St. John's	Newfoundland
OIS-Fisher Inc. (Newfoundland)	St. John's	Newfoundland
OIS-Fisher Inc. (Nova Scotia)	Dartmouth	Nova Scotia

Naval Architects

CORETEC Incorporated	St. John's	Newfoundland
Marineering Limited	St. John's	Newfoundland
Noble Denton Canada Limited	St. John's	Newfoundland
Oceanic Consulting Corporation	St. John's	Newfoundland
Poseidon Marine Consultants Ltd.	St. John's	Newfoundland
Sheppard Case Architects Inc.	St. John's	Newfoundland
OIS-Fisher Inc. (Nova Scotia)	Dartmouth	Nova Scotia
AGRA Whitman Benn Limited	Halifax	Nova Scotia
DHL Engineering	Bedford	Nova Scotia
E.Y.E. Marine Consultants	Dartmouth	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Rolls-Royce Canada Ltd.	Dartmouth	Nova Scotia
Ship's Aid International Limited	Dartmouth	Nova Scotia

Non-Destructive Testing

AQTS	Saint John	New Brunswick
Bretech	Saint John	New Brunswick
Mathis Instruments Ltd.	Fredericton	New Brunswick
Wood Science & Technology Centre	Fredericton	New Brunswick
CHC Composites Inc.	Gander	Newfoundland
Dominion Diving Ltd. (Newfoundland)	Mount Pearl	Newfoundland
FGA Consulting Engineers Limited	St. John's	Newfoundland
Guigne Technologies Ltd.	St. John's	Newfoundland
Offices in Newfoundland and Nova Scotia	St. John's	Newfoundland
Ozark Electrical Marine Ltd.	St. John's	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
Breton ND Testing Inc.	Reserve Mines	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
I.M.P. Group Int., Aerospace Div.	Halifax	Nova Scotia
OIS-Fisher Inc. (Nova Scotia)	Dartmouth	Nova Scotia
PV Inspection Services Ltd. / PV Offshore Inc.	Dartmouth	Nova Scotia
Remote Access Technology Incorporated	Dartmouth	Nova Scotia
TJ Engineering Services & TJ Inspection Services	Dartmouth	Nova Scotia
WCC Refurb Limited/WCC Offshore	Halifax	Nova Scotia

Office Space/Supplies/Service

3M Canada Company	Mount Pearl	Newfoundland
Atlantis International Ltd.	St. John's	Newfoundland
Blue Peter Steamships Ltd.	St. John's	Newfoundland
Hunt's Transport Ltd.	Mount Pearl	Newfoundland
Matchless Group Inc.	St. John's	Newfoundland
Burgess Transfer & Storage Ltd.	Dartmouth	Nova Scotia

Offshore Oil Rig Maintenance

Irving Shipbuilding Inc.	Saint John	New Brunswick
Aluma Systems Canada Inc.	St. John's	Newfoundland
AOC Brown & Root Canada Ltd.	Mount Pearl	Newfoundland
Bailey Sea (NFLD) Ltd.	St. John's	Newfoundland
ConPro Group Limited	St. John's	Newfoundland
Friede Goldman Newfoundland Ltd.	Marystown	Newfoundland
Hydraulic Systems Limited (Newfoundland)	St. John's	Newfoundland
International Paints Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Kvaerner SNC-Lavalin Offshore	Mount Pearl	Newfoundland
Newdock - St. John's Dockyard Ltd.	St. John's	Newfoundland
Newfoundland Service Alliance	St. John's	Newfoundland
Ozark Electrical Marine Ltd.	St. John's	Newfoundland
Peter Kiewit Sons Co. Ltd.	St. John's	Newfoundland
ProArc Fabricating Ltd.	Mount Pearl	Newfoundland
Aluma Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Cooperheat of Canada Ltd.	Dartmouth	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
International Paints Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Parker Brothers Contracting Ltd.	Waverley	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia

Offshore Positioning

Irving Shipbuilding Inc.	Saint John	New Brunswick
Key Surveys & Engineering Limited	Moncton	New Brunswick
C-MAR Newfoundland Inc.	St. John's	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
Fugro Jacques GeoSurveys Inc.	St. John's	Newfoundland
Marine Institute	St. John's	Newfoundland
Canadian Seabed Research Limited	Porters Lake	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
Internav Ltd.	Sydney	Nova Scotia
Kongsberg Simrad Mestech Ltd.	Dartmouth	Nova Scotia
Romor Atlantic Limited	Dartmouth	Nova Scotia
Thales Survey Canada Ltd.	Enfield	Nova Scotia
C-Mar Services (Canada) Ltd.	Summerside	Prince Edward Islar

Offshore Survival Training

FMD International Inc.	St. John's	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
Marine Institute	St. John's	Newfoundland
Offshore Safety and Survival Centre	St. John's	Newfoundland
Nova Communications	Dartmouth	Nova Scotia
Survival Systems Group Ltd.	Dartmouth	Nova Scotia
Survival Systems Training Limited	Dartmouth	Nova Scotia

Oil Well Drilling Contractors

Newfoundland Transshipment Limited	St. John's	Newfoundland
Santa Fe Drilling Company (Canada) Limited	Bedford	Nova Scotia

Personnel Services

Administrative Business Solutions	Cherry Burton	New Brunswick
Applied Management Consultants Ltd.	Fredericton	New Brunswick
AQTS	Saint John	New Brunswick
BKM Research & Development Inc.	Dieppe	New Brunswick
Cabinet-Conseil Normand Corno	Edmundston	New Brunswick
Digital Edge a Division of EBSI Canada	Miramichi	New Brunswick
DPL Group	Saint John	New Brunswick
Eclipse Communications	Hampton	New Brunswick
Enseignes Imperial Signs	Edmundston	New Brunswick
Lexi-tech International Inc.	Dieppe	New Brunswick
Maple Leaf Homes Inc.	Fredericton	New Brunswick
OPIM International Inc.	St-Joseph-De-Me	New Brunswick
Pickett Consultants Ltd.	Riverview	New Brunswick
University of N.B. Extension/Summer Sess	Fredericton	New Brunswick
Valron Engineers Inc	Moncton	New Brunswick
Vision Multimedia Inc.	Fredericton	New Brunswick
A. Harvey & Company Limited	St. John's	Newfoundland
Atlantic Petroleum Training Centre	St. John's	Newfoundland
Atlantic Staffing Consultants	St. John's	Newfoundland
C-MAR Newfoundland Inc.	St. John's	Newfoundland
College Of The North Atlantic	Happy Valley-Go	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
Fabcon Canada Limited (FCL)	St. John's	Newfoundland
Freightway Intl. div of Kintetsu World Express (Canada) Inc.	St. John's	Newfoundland

Catalogue of Companies - Offshore Services

Guigne Technologies Ltd.	St. John's	Newfoundland
Iwis Ltd.	St. John`S	Newfoundland
Labrador Technologies & Development	North West River	Newfoundland
Matchless Group Inc.	St. John's	Newfoundland
Montship Inc.	Stephenville	Newfoundland
Newfoundland Personnel Inc.	St. John's	Newfoundland
Oceanic Consulting Corporation	St. John's	Newfoundland
Offshore Recruiting Services (Newfoundland)	St. John's	Newfoundland
Offshore Safety and Survival Centre	St. John's	Newfoundland
P F Collins Customs Broker Ltd.	St. John's	Newfoundland
Puglisevich Group of Companies	St. John's	Newfoundland
Seabase Limited	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
AFM Project Design Group	Halifax	Nova Scotia
Canadian Security & Investigations Limited	Halifax	Nova Scotia
Cooperheat of Canada Ltd.	Dartmouth	Nova Scotia
Federation Business Consulting	Windsor Junction	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Holmes Maritime Inc	Halifax	Nova Scotia
IMP Group Limited (Nova Scotia)	Dartmouth	Nova Scotia
Isle Royal Internet Consulting and Design	Glace Bay	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
KB Electronics (1989) Limited	Bedford	Nova Scotia
MathResources Inc.	Halifax	Nova Scotia
McRae Seminars	Halifax	Nova Scotia
Moran Dán Productions	Baddeck	Nova Scotia
Offshore Recruiting Services (Nova Scotia)	Halifax	Nova Scotia
Reliance Offshore	Halifax	Nova Scotia
Remote Access Technology Incorporated	Dartmouth	Nova Scotia
SHEAR. COM. SERVICES	Halifax	Nova Scotia
Technitherm Heat Treatment Services Limited	Dartmouth	Nova Scotia
Tecsult Eduplus Inc.	Dartmouth	Nova Scotia
The Defender Group	Dartmouth	Nova Scotia
AVC Inc.	Charlottetown	Prince Edward Islar
C-Mar Services (Canada) Ltd.	Summerside	Prince Edward Islar
iWave.com	Charlottetown	Prince Edward Islar

Petroleum Consultants

AMEC Earth and Evironmental Ltd.	Fredericton	New Brunswick
Fundy Engineering & Consulting Ltd.	Saint John	New Brunswick
Les Forages Lantech Drilling Services Inc.	Dieppe	New Brunswick
APA (NFLD) Ltd.	St. John's	Newfoundland
Blue Peter Steamships Ltd.	St. John's	Newfoundland
Cormorant Ltd.	St. John's	Newfoundland
Fabcon Canada Limited (FCL)	St. John's	Newfoundland
Fugro Jacques GeoSurveys Inc.	St. John's	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
Seacom Consulting Inc.	St. John's	Newfoundland
AGRA Whitman Benn Limited	Halifax	Nova Scotia
APA (Nova Scotia) Limited	Halifax	Nova Scotia
Atlantic Gas Engineers	Halifax	Nova Scotia
Canadian Seabed Research Limited	Porters Lake	Nova Scotia
Martec Limited	Halifax	Nova Scotia

Catalogue of Companies - Offshore Services

Portability International	Halifax	Nova Scotia
PV Inspection Services Ltd. / PV Offshore Inc.	Dartmouth	Nova Scotia
Saybolt Canada Limited	Dartmouth	Nova Scotia
Seatech Ltd.	Halifax	Nova Scotia

Pile Driving

Pickett Consultants Ltd.	Riverview	New Brunswick
Afonso Diving Contractors Ltd.	St. John's	Newfoundland
F I Canada Oilfield Services Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Mcnamara Construction Company	Paradise	Newfoundland
Pennecon Limited	St. John's	Newfoundland
ADI Limited	Halifax	Nova Scotia
A.W. Leil Cranes & Equipment Limited	Thorburn	Nova Scotia
F I Canada Oilfield Services Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Sagadore Cranes and Equipment	Dartmouth	Nova Scotia

Ports, Public

BAE-Newplan Group Limited	Mount Pearl	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
Newfoundland Design Associates Ltd.	St. John's	Newfoundland
St. John's Port Authority	St. John's	Newfoundland
Dragonsmoke Ink	Halifax	Nova Scotia
Land & Sea Environmental Consultants Ltd	Dartmouth	Nova Scotia

Preventive Maintenance Services

Advanced Energy Management Limited	Moncton	New Brunswick
Quality Management International Limited	Saint John	New Brunswick
AOC Brown & Root Canada Ltd.	Mount Pearl	Newfoundland
Crosbie Salamis Limited	St. John's	Newfoundland
Newfoundland Service Alliance	St. John's	Newfoundland
Ozark Electrical Marine Ltd.	St. John's	Newfoundland
Pro-Glo Ltd.	St. John's	Newfoundland
Siemens - Westinghouse	St. John's	Newfoundland
Canadian Fishery Consultants Ltd.	Halifax	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
Pinnacle Agencies Ltd.	Dartmouth	Nova Scotia

Project Management

AccessLab Systems Ltd.	Fredericton	New Brunswick
ADI Group Inc.	Fredericton	New Brunswick
ADI International Inc.	Fredericton	New Brunswick
ADI Limited	Fredericton	New Brunswick
Advanced Energy Management Limited	Moncton	New Brunswick
Alliance Building Contractors Ltd.	Moncton	New Brunswick
A.L. Professional Services Ltd/A.L. Services Professionnels Lt	Dieppe	New Brunswick
AMEC Earth and Environmental Ltd.	Fredericton	New Brunswick
Applied Management Consultants Ltd.	Fredericton	New Brunswick
Athol Buildings Systems Inc.	Campbellton	New Brunswick
Atlantic Golf Construction Ltd.	Hanwell	New Brunswick
Beaver Enterprises	Eel Ground	New Brunswick
Chapelstone Developments Inc.	Lyttleton	New Brunswick
Communications JSM	Petit-Rocher	New Brunswick

Catalogue of Companies - Offshore Services

Concept + Inc.	Moncton	New Brunswick
Construction Technology Centre Atlantic	Fredericton	New Brunswick
Crandall Engineering Ltd.	Moncton	New Brunswick
Dan Tingley Consulting Ltd.	Hopewell Cape	New Brunswick
Digital Edge a Division of EBSI Canada	Miramichi	New Brunswick
DPL Group	Saint John	New Brunswick
Eclipse Communications	Hampton	New Brunswick
Enseignes Imperial Signs	Edmundston	New Brunswick
Force/Robak Associates Ltd.	Fredericton	New Brunswick
Formation Papyrus Training inc.	Campbellton	New Brunswick
Geodat Information Services Limited	Fredericton	New Brunswick
G.F. Williamson Engineering Ltd.	Saint John	New Brunswick
Grew Design International/Architects	Rexton	New Brunswick
Ibridge	Woodstock	New Brunswick
Interface Consultants Inc.	Moncton	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Ivey Environmental Services Ltd.	Fredericton	New Brunswick
JUA Engineering	Oromocto	New Brunswick
Les Entreprises Dovico Enterprises Inc.	Moncton	New Brunswick
Lexi-tech International Inc.	Dieppe	New Brunswick
AGRA Monenco	St. John's	Newfoundland
Aluma Systems Canada Inc.	St. John's	Newfoundland
AOC Brown & Root Canada Ltd.	Mount Pearl	Newfoundland
Atlantic Safety Centre	St. John's	Newfoundland
Atlantis International Ltd.	St. John's	Newfoundland
BAE-Newplan Group Limited	Mount Pearl	Newfoundland
Bailey Sea (NFLD) Ltd.	St. John's	Newfoundland
Canning & Pitt Associates Inc.	St. John's	Newfoundland
Central Consulting Services Inc.	Gander	Newfoundland
C-MAR Newfoundland Inc.	St. John's	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
ConPro Group Limited	St. John's	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
Crosbie Salamis Limited	St. John's	Newfoundland
D.D. Transport	Mount Pearl	Newfoundland
East Coast Tubulars Ltd.	Paradise	Newfoundland
Fabcon Canada Limited (FCL)	St. John's	Newfoundland
Fisher Associates Proposals & Business Plans Division	Clareville	Newfoundland
FMC of Canada Ltd. (Newfoundland)	St. John's	Newfoundland
FMD International Inc.	St. John's	Newfoundland
Freightway Intl. div of Kintetsu World Express (Canada) Inc.	St. John's	Newfoundland
Fugro Jacques GeoSurveys Inc.	St. John's	Newfoundland
ICAN	St. John's	Newfoundland
IPM Services - Division of Schlumberger Canada Limited	Mount Pearl	Newfoundland
Kvaerner SNC-Lavalin Offshore	Mount Pearl	Newfoundland
Labrador Technologies & Development	North West River	Newfoundland
ACE Ltd.	Wolfville	Nova Scotia
AFM Project Design Group	Halifax	Nova Scotia
AGRA Whitman Benn Limited	Halifax	Nova Scotia
AGS & Associates	Dartmouth	Nova Scotia
Aluma Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
AMIRIX Systems Inc. (formerly Applied Microelectronics Inc.)	Halifax	Nova Scotia
ATCAN Business Management Limited	Dartmouth	Nova Scotia

Catalogue of Companies - Offshore Services

Atlantic Gas Engineers	Halifax	Nova Scotia
Atlantic Harbour Services & Mgmt. Ltd.	Bridgewater	Nova Scotia
Canadax Industrial Group Limited	Halifax	Nova Scotia
Canadian Fishery Consultants Ltd.	Halifax	Nova Scotia
CBCL Limited (Halifax)	Halifax	Nova Scotia
Coady International Institute	Antigonish	Nova Scotia
Communication Design Group Limited	D'escousse	Nova Scotia
DGI Ltd.	Halifax	Nova Scotia
DHL Engineering	Bedford	Nova Scotia
Digital Telehealth Inc.	Dartmouth	Nova Scotia
Dymaxion Research Limited	Halifax	Nova Scotia
EOA Scientific Systems, Inc.	Halifax	Nova Scotia
Geoforce Consultants Ltd.	Dartmouth	Nova Scotia
Guptill Consulting Services	Brookside	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
Holmes Maritime Inc	Halifax	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Intelco Ltd.	Lunenburg	Nova Scotia
Jacques Whitford	Dartmouth	Nova Scotia
James S. Landry & Associates	Halifax	Nova Scotia
KLJ Computer Solutions Inc.	Halifax	Nova Scotia
Land & Sea Environmental Consultants Ltd	Dartmouth	Nova Scotia
Lewis Engineering Inc.	Halifax	Nova Scotia
Abiogen Environmental Services	Charlottetown	Prince Edward Islar
AcA Digital Knowledge	Wellington Statio	Prince Edward Islar
Baseline Business Geographics Inc.	Charlottetown	Prince Edward Islar
Caltech Information Technologies	Charlottetown	Prince Edward Islar
C-Mar Services (Canada) Ltd.	Summerside	Prince Edward Islar
Coles Associates Ltd.	Charlottetown	Prince Edward Islar
Cymbiant Technologies Inc	Charlottetown	Prince Edward Islar
G/COM	Summerside	Prince Edward Islar
Quality Assurance/Quality Control		
AOC Brown & Root Canada Ltd.	Mount Pearl	Newfoundland
Fabcon Canada Limited (FCL)	St. John's	Newfoundland
FGA Consulting Engineers Limited	St. John's	Newfoundland
Fugro Jacques GeoSurveys Inc.	St. John's	Newfoundland
Iwis Ltd.	St. John`S	Newfoundland
Jacques Whitford Environmental	St. John's	Newfoundland
Marineside Surveys Ltd.	Mount Pearl	Newfoundland
Offices in Newfoundland and Nova Scotia	St. John's	Newfoundland
Pan Maritime Energy Services Inc.	St. John's	Newfoundland
RDS Engineering Ltd.	St. John's	Newfoundland
The SGE Group Inc. (St. John's)	St. John's	Newfoundland
Breton ND Testing Inc.	Reserve Mines	Nova Scotia
DHL Engineering	Bedford	Nova Scotia
Jacques Whitford Environment Limited	Dartmouth	Nova Scotia
OIS-Fisher Inc. (Nova Scotia)	Dartmouth	Nova Scotia
The SGE Group Inc. (Nova Scotia)	Halifax	Nova Scotia
Quality Surveying		
ADI Group Inc.	Fredericton	New Brunswick
AQTS	Saint John	New Brunswick

Catalogue of Companies - Offshore Services

Atlantic Quality & Technical Serv. Ltd.	Saint John	New Brunswick
Caris	Fredericton	New Brunswick
FGA Consulting Engineers Limited	St. John's	Newfoundland
Fugro Jacques GeoSurveys Inc.	St. John's	Newfoundland
Marineside Surveys Ltd.	Mount Pearl	Newfoundland
Noble Denton Canada Limited	St. John's	Newfoundland
The SGE Group Inc. (St. John's)	St. John's	Newfoundland
C.J. Maclellan & Associates Incorporated	Antigonish	Nova Scotia
The SGE Group Inc. (Nova Scotia)	Halifax	Nova Scotia
GeoNet Technologies Inc.	Central Bedeque	Prince Edward Islar

Real Estate Development

Force/Robak Associates Ltd.	Fredericton	New Brunswick
ConPro Group Limited	St. John's	Newfoundland
Hunt's Transport Ltd.	Mount Pearl	Newfoundland
Matchless Group Inc.	St. John's	Newfoundland
Pennecon Limited	St. John's	Newfoundland
Netnovations Enterprises Inc	Summerside	Prince Edward Islar

Remote Site and Offshore Facilities Management

Irving Shipbuilding Inc.	Saint John	New Brunswick
Bonavista Food Services	St. John's	Newfoundland
Torngait Services Inc.	St. John's	Newfoundland

Remotely Operated Vehicles (ROVS)

Afonso Diving Contractors Ltd.	St. John's	Newfoundland
Dominion Diving Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Pro-Dive Marine Services (NFLD)	Mount Pearl	Newfoundland
Atlantic Alliance Offshore Ltd.	Dartmouth	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
Pro-Dive Marine Services (N.S.) Ltd.	Dartmouth	Nova Scotia
Thales Survey Canada Ltd.	Enfield	Nova Scotia

Research and Development/Resource Management

Compusult Limited	Mount Pearl	Newfoundland
Cooperative Education Services Centre	St. John's	Newfoundland
Terra Nova Marine Co. Ltd.	Mount Pearl	Newfoundland

Salvage

Afonso Diving Contractors Ltd.	St. John's	Newfoundland
Cormorant Ltd.	St. John's	Newfoundland
Davis Shipping Ltd.	Wesleyville	Newfoundland
Dominion Diving Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Labrador Technologies & Development	North West River	Newfoundland
Poseidon Marine Consultants Ltd.	St. John's	Newfoundland
Secunda Marine Services Limited (Newfoundland)	St. John's	Newfoundland
Dominion Diving Limited	Dartmouth	Nova Scotia
Eastern Canada Towing Ltd.	Halifax	Nova Scotia
Geomarine Associates Ltd.	Halifax	Nova Scotia

Scaffolding

Aluma Systems Canada Inc.	St. John's	Newfoundland
Crosbie Salamis Limited	St. John's	Newfoundland
United Rent-Alls Ltd.	Mount Pearl	Newfoundland
Aluma Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Parker Brothers Contracting Ltd.	Waverley	Nova Scotia
Remote Access Technology Incorporated	Dartmouth	Nova Scotia
U.J. Robichaud & Son Ltd.	Meteghan Centre	Nova Scotia

Sea Base Operators

Newdock - St. John's Dockyard Ltd.	St. John's	Newfoundland
Pennecon Limited	St. John's	Newfoundland
Seabase Limited	St. John's	Newfoundland
Secunda Marine Services Limited (Newfoundland)	St. John's	Newfoundland
Secunda Marine Services Limited (Nova Scotia)	Dartmouth	Nova Scotia

Seismic-Services

Atlantis International Ltd.	St. John's	Newfoundland
Fugro Jacques GeoSurveys Inc.	St. John's	Newfoundland
Geophysical Services Incorporated	Windsor	Nova Scotia
Romor Atlantic Limited	Dartmouth	Nova Scotia
Thales Survey Canada Ltd.	Enfield	Nova Scotia

Shipyards

Irving Shipbuilding Inc.	Saint John	New Brunswick
Friede Goldman Newfoundland Ltd.	Marystown	Newfoundland
Newdock - St. John's Dockyard Ltd.	St. John's	Newfoundland
Peter Kiewit Sons Co. Ltd.	St. John's	Newfoundland
ABB Inc.	Dartmouth	Nova Scotia
Fabco Industries Limited	Dartmouth	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
Rolls-Royce Canada Ltd.	Dartmouth	Nova Scotia

Site Investigation/planning/surveys

BAE-Newplan Group Limited	Mount Pearl	Newfoundland
Fugro Jacques GeoSurveys Inc.	St. John's	Newfoundland
Jacques Whitford Environmental	St. John's	Newfoundland
Newfoundland Design Associates Ltd.	St. John's	Newfoundland
Jacques Whitford Environment Limited	Dartmouth	Nova Scotia
Thales Survey Canada Ltd.	Enfield	Nova Scotia

Stevedoring

Atlantis International Ltd.	St. John's	Newfoundland
Blue Peter Steamships Ltd.	St. John's	Newfoundland
Oceanex Incorporated	St. John's	Newfoundland
Holmes Maritime Inc	Halifax	Nova Scotia
Seaboard Offshore Services Ltd.	Port Hawkesbury	Nova Scotia

Storage - Liquid and Bulk

Irving Shipbuilding Inc.	Saint John	New Brunswick
LTS Sales Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Quinnsway Transport Ltd.	Mount Pearl	Newfoundland
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
LTS Sales Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Nordic Canadian Shipping Ltd.	Halifax	Nova Scotia
Rolls-Royce Canada Ltd.	Dartmouth	Nova Scotia
Saybolt Canada Limited	Dartmouth	Nova Scotia
Statia Terminals Canada Inc.	Port Hawkesbury	Nova Scotia

Stress Analysis/relieving

BAE-Newplan Group Limited	Mount Pearl	Newfoundland
FGA Consulting Engineers Limited	St. John's	Newfoundland
Terra Nova Marine Co. Ltd.	Mount Pearl	Newfoundland
Cooperheat of Canada Ltd.	Dartmouth	Nova Scotia

Structural Monitoring

ADI Group Inc.	Fredericton	New Brunswick
AQTS	Saint John	New Brunswick
Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick

Catalogue of Companies - Offshore Services

Atlantic Quality & Technical Serv. Ltd.	Saint John	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Ivey Environmental Services Ltd.	Fredericton	New Brunswick
BAE-Newplan Group Limited	Mount Pearl	Newfoundland
C-CORE	St. John's	Newfoundland
FGA Consulting Engineers Limited	St. John's	Newfoundland
H.T. KENDALL & ASSOCIATES LTD.	St. John's	Newfoundland
Newfoundland Service Alliance	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
ADI Limited	Halifax	Nova Scotia
AGRA Whitman Benn Limited	Halifax	Nova Scotia
Canadian Fishery Consultants Ltd.	Halifax	Nova Scotia
CBCL Limited (Halifax)	Halifax	Nova Scotia
C.J. Maclellan & Associates Incorporated	Antigonish	Nova Scotia
Jacques Whitford	Dartmouth	Nova Scotia
R.A. Murray International Limited	Halifax	Nova Scotia
Sea Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Coles Associates Ltd.	Charlottetown	Prince Edward Islar

Supply Boats

Atlantic Towing Limited	Saint John	New Brunswick
BAE Systems Canada Inc. (Newfoundland)	St. John's	Newfoundland
Blue Peter Steamships Ltd.	St. John's	Newfoundland
Cape Harrison Marine Ltd.	St. John's	Newfoundland
ConPro Group Limited	St. John's	Newfoundland
Electro Mechanical Services Limited	Mount Pearl	Newfoundland
Fogo Boat Brokerage	St. John's	Newfoundland
Puddister Trading Company Limited	St. John's	Newfoundland
Seabase Limited	St. John's	Newfoundland
Secunda Marine Services Limited (Newfoundland)	St. John's	Newfoundland
BAE Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Binnacle Navigation Instruments	Halifax	Nova Scotia
Canada Steamship Lines	Bedford	Nova Scotia
D.A. Fraser Export	Halifax	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
Karlsen Shipping Company Limited	Halifax	Nova Scotia
Levy Boats & Marine	Sober Island	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Rossway Enterprises Ltd	Digby	Nova Scotia
Secunda Marine Services Limited (Nova Scotia)	Dartmouth	Nova Scotia

Support Base Operators

DPL Group	Saint John	New Brunswick
Aramark Canada Ltd.	St. John's	Newfoundland
Newdock - St. John's Dockyard Ltd.	St. John's	Newfoundland
Pennecon Limited	St. John's	Newfoundland
Seabase Limited	St. John's	Newfoundland
Secunda Marine Services Limited (Newfoundland)	St. John's	Newfoundland
Secunda Marine Services Limited (Nova Scotia)	Dartmouth	Nova Scotia

Surveillance

ADI Limited	Fredericton	New Brunswick
Advatek Systems Inc	Moncton	New Brunswick

Catalogue of Companies - Offshore Services

AMEC Earth and Environmental Ltd.	Fredericton	New Brunswick
Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
Atlantic Quality & Technical Serv. Ltd.	Saint John	New Brunswick
Concept + Inc.	Moncton	New Brunswick
Fundy Engineering & Consulting Ltd.	Saint John	New Brunswick
Geodat Information Services Limited	Fredericton	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Ivey Environmental Services Ltd.	Fredericton	New Brunswick
Machinery Condition Monitoring Inc.	Grand Bay	New Brunswick
Malley Industries Inc.	Moncton	New Brunswick
Quality Management International Limited	Saint John	New Brunswick
RPC	Fredericton	New Brunswick
Three-D GeoConsultants Ltd.	Fredericton	New Brunswick
Atlantic Offshore Medical Services Ltd.	St. John's	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
Noble Denton Canada Limited	St. John's	Newfoundland
Northern Radar Systems Limited	St. John's	Newfoundland
AGRA Whitman Benn Limited	Halifax	Nova Scotia
Atlantic Data Group	Halifax	Nova Scotia
Canadax Industrial Group Limited	Halifax	Nova Scotia
Canadian Security & Investigations Limited	Halifax	Nova Scotia
Coady International Institute	Antigonish	Nova Scotia
Craig Investigations, Inc.	Centreville	Nova Scotia
Maritime Media Monitoring	Dartmouth	Nova Scotia
Navitrak Engineering Inc.	Halifax	Nova Scotia
PV Inspection Services Ltd. / PV Offshore Inc.	Dartmouth	Nova Scotia
Satlantic Inc.	Halifax	Nova Scotia
Tavel Ltd.	Halifax	Nova Scotia
The Defender Group	Dartmouth	Nova Scotia

Surveying

ADI Group Inc.	Fredericton	New Brunswick
ADI Limited	Fredericton	New Brunswick
AQTS	Saint John	New Brunswick
Atlantic Quality & Technical Serv. Ltd.	Saint John	New Brunswick
Caris	Fredericton	New Brunswick
FGA Consultants Ltd.	Fredericton	New Brunswick
Geodat Information Services Limited	Fredericton	New Brunswick
Key Surveys & Engineering Limited	Moncton	New Brunswick
Roy Consultants Group Ltd./Le Groupe Roy Consultant Ltée	Bathurst	New Brunswick
Three-D GeoConsultants Ltd.	Fredericton	New Brunswick
Trainor Surveys (1974) Ltd.	Fredericton	New Brunswick
Atlantic Construction Training Centre	St. John's	Newfoundland
BAE-Newplan Group Limited	Mount Pearl	Newfoundland
CHC Helicopter Corporation	St. John's	Newfoundland
Davis Shipping Ltd.	Wesleyville	Newfoundland
FGA Consulting Engineers Limited	St. John's	Newfoundland
Fugro Jacques GeoSurveys Inc.	St. John's	Newfoundland
Geodata Ltd.	St. John's	Newfoundland
Harbour International Ltd.	Bay Roberts	Newfoundland
IPM Services - Division of Schlumberger Canada Limited	Mount Pearl	Newfoundland
Marineside Surveys Ltd.	Mount Pearl	Newfoundland
Noble Denton Canada Limited	St. John's	Newfoundland

Catalogue of Companies - Offshore Services

Norman Wade Company Limited	St. John's	Newfoundland
The SGE Group Inc. (St. John's)	St. John's	Newfoundland
Universal Helicopters Newfoundland Ltd.	Happy Valley-Go	Newfoundland
Axsas Inc.	Boutiliers Point	Nova Scotia
Canadian Seabed Research Limited	Porters Lake	Nova Scotia
C.J. Maclellan & Associates Incorporated	Antigonish	Nova Scotia
Eastcan Geomatics Limited	Halifax	Nova Scotia
E.Y.E. Marine Consultants	Dartmouth	Nova Scotia
Geoforce Consultants Ltd.	Dartmouth	Nova Scotia
Geomarine Associates Ltd.	Halifax	Nova Scotia
Lloyd's Register North America Inc.	Halifax	Nova Scotia
McGregor GeoScience Ltd.	Halifax	Nova Scotia
Milton Fancy & Sons	Mahone Bay	Nova Scotia
Saybolt Canada Limited	Dartmouth	Nova Scotia
Thales Survey Canada Ltd.	Enfield	Nova Scotia
The SGE Group Inc. (Nova Scotia)	Halifax	Nova Scotia
GeoNet Technologies Inc.	Central Bedeque	Prince Edward Islar

Swabbing

Afonso Diving Contractors Ltd.	St. John's	Newfoundland
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Systems Simulation

Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
Force/Robak Associates Ltd.	Fredericton	New Brunswick
Performx Inc.	Fredericton	New Brunswick
Bailey Sea (NFLD) Ltd.	St. John's	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
Fabcon Canada Limited (FCL)	St. John's	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
Marine Institute	St. John's	Newfoundland
Oceanic Consulting Corporation	St. John's	Newfoundland
Seacom Consulting Inc.	St. John's	Newfoundland
MediaSpark IT Solutions Inc.	Sydney	Nova Scotia
Pinter Consulting Services	Halifax	Nova Scotia
Seimac Limited	Dartmouth	Nova Scotia
Simulations Canada	Italy Cross	Nova Scotia
Survival Systems Group Ltd.	Dartmouth	Nova Scotia
Survival Systems Industrial Limited	Dartmouth	Nova Scotia
Coles Associates Ltd.	Charlottetown	Prince Edward Islar
Simscape Development Corporation	Charlottetown	Prince Edward Islar

Threading and Threading Services

G. Pelley Limited	Springdale	Newfoundland
Atlantic Hardchrome Limited	Dartmouth	Nova Scotia
R-F Ironworks Ltd.	Dartmouth	Nova Scotia

Tugs

Atlantic Towing Limited	Saint John	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Blue Peter Steamships Ltd.	St. John's	Newfoundland
C-MAR Newfoundland Inc.	St. John's	Newfoundland
ConPro Group Limited	St. John's	Newfoundland
Montship Inc.	Stephenville	Newfoundland

Catalogue of Companies - Offshore Services

Seabase Limited	St. John's	Newfoundland
Secunda Marine Services Limited (Newfoundland)	St. John's	Newfoundland
Atlantic Alliance Offshore Ltd.	Dartmouth	Nova Scotia
Beaver Marine Ltd.	Halifax	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
Eastern Canada Towing Ltd.	Halifax	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
Karlsen Shipping Company Limited	Halifax	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Secunda Marine Services Limited (Nova Scotia)	Dartmouth	Nova Scotia
C-Mar Services (Canada) Ltd.	Summerside	Prince Edward Islar

Unions

Digital Edge a Division of EBSI Canada	Miramichi	New Brunswick
Focal Technologies Corp.	Dartmouth	Nova Scotia
Hamlin's Consulting	Miscouche	Prince Edward Islar

Video Production

Concept + Inc.	Moncton	New Brunswick
Houssennet	Indian Mountain	New Brunswick
Internet Marketing Facilitators	Fredericton	New Brunswick
Max Media LTD.	Fredericton	New Brunswick
Nik Design Inc.	Verret	New Brunswick
Outreach Productions	Keswick Ridge	New Brunswick
Roy-Babin Multimedia Production	Shediac	New Brunswick
Sight and Sound	Fredericton	New Brunswick
Sonoptic Technologies Inc.	Saint John	New Brunswick
Spectrum Aquatic Consultants Inc.	Dieppe	New Brunswick
Spielo Gaming International	Dieppe	New Brunswick
The Word Company	Fredericton	New Brunswick
TMT Productions Ltd.	Rothsay	New Brunswick
Vision Multimedia Inc.	Fredericton	New Brunswick
Vital Knowledge Software Inc.	Miramichi	New Brunswick
AD VANTAGE PRODUCTIONS	St. John's	Newfoundland
IDON East Corporation	St. John's	Newfoundland
Red Ochre Productions Limited	St. John's	Newfoundland
Abacus Digital Media Group	Dartmouth	Nova Scotia
Animatrix Productions	Halifax	Nova Scotia
Ardenne International Inc.	Halifax	Nova Scotia
Atlantic Data Group	Halifax	Nova Scotia
Akses Inc.	Boutiliers Point	Nova Scotia
Blink Digital	Halifax	Nova Scotia
EOA Scientific Systems, Inc.	Halifax	Nova Scotia
Fitzgerald Digital Media Creator (DMC)	Sydney	Nova Scotia
Focal Technologies Corp.	Dartmouth	Nova Scotia
Folkus Atlantic Communications Inc.	Sydney	Nova Scotia
High Tide Media Inc.	Dartmouth	Nova Scotia
Isle Royal Internet Consulting and Design	Glance Bay	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
MediaSpark IT Solutions Inc.	Sydney	Nova Scotia
Prisma Productions	Halifax	Nova Scotia
production school house	Windsor	Nova Scotia
Seabright Murphy Video	Antigonish	Nova Scotia

Catalogue of Companies - Offshore Services

Vantage The Un-Agency Agency Inc.	Halifax	Nova Scotia
Virtual Media Productions Limited	Sydney	Nova Scotia
Atlantic Visual Presentations	Charlottetown	Prince Edward Islar
Cellar Door Productions	Charlottetown	Prince Edward Islar
Graphic Communications Inc	Charlottetown	Prince Edward Islar
Moses Media Inc	Charlottetown	Prince Edward Islar
Netnovations Enterprises Inc	Summerside	Prince Edward Islar
Simscape Development Corporation	Charlottetown	Prince Edward Islar
Virtual Art Inc.	Mount Stewart	Prince Edward Islar

Warehousing

Formco Ltd.	Fredericton	New Brunswick
A. Harvey & Company Limited	St. John's	Newfoundland
AIMS Ltd.	Mount Pearl	Newfoundland
Atlantis International Ltd.	St. John's	Newfoundland
D.D. Transport	Mount Pearl	Newfoundland
East-Chem Inc.	Mount Pearl	Newfoundland
Eimskip Newfoundland	St. John's	Newfoundland
Household Movers & Shippers Ltd.	Mount Pearl	Newfoundland
Hunt's Transport Ltd.	Mount Pearl	Newfoundland
LeDrew's Express Ltd.	Mount Pearl	Newfoundland
Matchless Group Inc.	St. John's	Newfoundland
Pennecon Limited	St. John's	Newfoundland
P F Collins Customs Broker Ltd.	St. John's	Newfoundland
PHB Group Inc.	St. John's	Newfoundland
Midland Transport Limited	Dartmouth	Nova Scotia
Nicom Ltd.	Dartmouth	Nova Scotia
Owen Davis Trucking Ltd.	Sackville	Nova Scotia
Scotian Gold Co-Operative Limited	Coldbrook	Nova Scotia
Cymbiant Technologies Inc	Charlottetown	Prince Edward Islar

Waterblasting

Industrial Environmental Services Incorporated	Debert	Nova Scotia
Parker Brothers Contracting Ltd.	Waverley	Nova Scotia

Weight Control Engineers

DPL Group	Saint John	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Pan Maritime Energy Services Inc.	St. John's	Newfoundland
Poseidon Marine Consultants Ltd.	St. John's	Newfoundland
RDS Engineering Ltd.	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
Enerscan Engineering Incorporated	Halifax	Nova Scotia

Welding/Services/Sales/Certification

Air Liquide Canada Inc.	St. John's	Newfoundland
Bridgeport Wire Rope & Chain Limited (Newfoundland)	St. John's	Newfoundland
C&W Industrial Fabrication & Marine Equipment Ltd.	Bay Bulls	Newfoundland
East Coast Hydraulics Nfld. Ltd.	Mount Pearl	Newfoundland
Fishery Products International (FPI)	St. John's	Newfoundland
Friede Goldman Newfoundland Ltd.	Marystown	Newfoundland
G. Pelley Limited	Springdale	Newfoundland
Metalworks Ltd.	Bay Roberts	Newfoundland

Catalogue of Companies - Offshore Services

Metal World Inc.	Torbay	Newfoundland
M & M Engineering Limited	St. John's	Newfoundland
Newdock - St. John's Dockyard Ltd.	St. John's	Newfoundland
ProArc Fabricating Ltd. (Donovan's Industrial Park)	Mount Pearl	Newfoundland
Atlantic Hardchrome Limited	Dartmouth	Nova Scotia
Bridgeport Wire Rope & Chain Ltd	Dartmouth	Nova Scotia
Canadian Welding Bureau	Dartmouth	Nova Scotia
Eastcoast Hydraulic & Machinery Ltd.	Mulgrave	Nova Scotia
Maritime Steel And Foundries Limited	New Glasgow	Nova Scotia

Offshore Supply

Abrasives

ProCraft Industrial	Moncton	New Brunswick
3M CANADA COMPANY	Mount Pearl	Newfoundland
Bren-Kir Industrial Supplies	Mount Pearl	Newfoundland
Murray Industrial Limited	St. John's	Newfoundland
Rideout Tool & Machine Inc.	St. John's	Newfoundland
Trinity Resources & Energy Ltd.	Manuels	Newfoundland
Apex Industrial Supply Ltd.	Halifax	Nova Scotia
Gartec Industrial Supplies Inc.	Beaver Bank	Nova Scotia
Mills Painting & Sandblasting Limited	Dartmouth	Nova Scotia
Mill Supply Ltd.	Dartmouth	Nova Scotia
Parker Brothers Contracting Ltd.	Waverley	Nova Scotia
Peacock - Industrial Products Division	Dartmouth	Nova Scotia
Schooner Industrial Limited	Dartmouth	Nova Scotia
Shaw Resources	Milford	Nova Scotia
The Shaw Group Limited	Lantz	Nova Scotia
Abrasive Enterprises Inc.	Summerside	Prince Edward Isl.

Air Drilling Equipment

Irving Shipbuilding Inc.	Saint John	New Brunswick
3M CANADA COMPANY	Mount Pearl	Newfoundland
C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
Labrador Technologies & Development	North West River	Newfoundland
Maritime Drilling Supplies Inc.	St. John's	Newfoundland
P F Collins Customs Broker Ltd.	St. John's	Newfoundland
Rideout Tool & Machine Inc.	St. John's	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
United Rent-Alls Ltd.	Mount Pearl	Newfoundland
Alfa Laval Inc.	Dartmouth	Nova Scotia
Atlantic Alliance Offshore Ltd.	Dartmouth	Nova Scotia
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
Mulgrave Machine Works Limited	Mulgrave	Nova Scotia
Parker Brothers Contracting Ltd.	Waverley	Nova Scotia

Alarm Systems

Dramis Network Cabling Ltd.	Moncton	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Machinery Condition Monitoring Inc.	Grand Bay	New Brunswick
Malley Industries Inc.	Moncton	New Brunswick
The Panel Shop	Fredericton	New Brunswick
Atlantic Electronics Limited	Mount Pearl	Newfoundland
Avalon Controls Ltd.	St. John's	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
Control & Equipment Ltd.	St. John's	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
Terra Nova Marine Co. Ltd.	Mount Pearl	Newfoundland
CTH Instruments Ltd.	Dartmouth	Nova Scotia
Donald T. Matheson Engineering Limited	Halifax	Nova Scotia

Catalogue of Companies - Offshore Supply

Lewis Engineering Inc.	Halifax	Nova Scotia
Lynk Electric Limited	Sydney	Nova Scotia
Nautel Limited	Tantallon	Nova Scotia
R.C. Marine Electronics Ltd.	Dartmouth	Nova Scotia
Siemens Westinghouse Technical Services	Dartmouth	Nova Scotia
Tri-Star Industries Limited	Yarmouth	Nova Scotia
Coles Associates Ltd.	Charlottetown	Prince Edward Isl.
Wright Systems & Equipment	Charlottetown	Prince Edward Isl.

Alternators

Malley Industries Inc.	Moncton	New Brunswick
Electro Mechanical Services Limited	Mount Pearl	Newfoundland
Ozark Electrical Marine Ltd.	St. John's	Newfoundland
Dufferin Auto & Diesel Electric Co. Ltd.	Bridgewater	Nova Scotia

Anchors

Cards Aquaculture Products Ltd.	Pennfield	New Brunswick
Strait Moorings International Inc.	Shediac	New Brunswick
Arrow Construction Products Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Rideout Tool & Machine Inc.	St. John's	Newfoundland
Russel Metals Inc. (Newfoundland)	Mount Pearl	Newfoundland
Arrow Construction Products Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Associated Marine Equipment Limited	Dartmouth	Nova Scotia
Atkinson & Bower Limited	Shelburne	Nova Scotia
Russel Metals Inc. (Nova Scotia)	Lakeside	Nova Scotia

Automation Systems and Equipment

ASD Limited	Fredericton	New Brunswick
Atlantic Controls Ltd. (New Brunswick)	Saint John	New Brunswick
DPL Group	Saint John	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Les Entreprises Dovico Enterprises Inc.	Moncton	New Brunswick
Whitehill Technologies, Inc.	Moncton	New Brunswick
Avalon Controls Ltd.	St. John's	Newfoundland
Bailey Sea (NFLD) Ltd.	St. John's	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
Control & Equipment Ltd.	St. John's	Newfoundland
Hyflodraulic Limited	Mount Pearl	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
Newfoundland Service Alliance	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
Siemens - Westinghouse	St. John's	Newfoundland
The Scale Shop (1985) Ltd.	Mount Pearl	Newfoundland
TRC Hydraulics Inc.	Mount Pearl	Newfoundland
AMIRIX Systems Inc. (formerly Applied Microelectronic)	Halifax	Nova Scotia
Atlantic Controls	Halifax	Nova Scotia
CTH Instruments Ltd.	Dartmouth	Nova Scotia
Farah & Associates	Dartmouth	Nova Scotia
Kongsberg Simrad Mestech Ltd.	Dartmouth	Nova Scotia
Lewis Engineering Inc.	Halifax	Nova Scotia
Lynk Electric Limited	Sydney	Nova Scotia
Rolls-Royce Canada Ltd.	Dartmouth	Nova Scotia
Sea Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia

Catalogue of Companies - Offshore Supply

Siemens Westinghouse Technical Services	Dartmouth	Nova Scotia
Ballast		
Irving Shipbuilding Inc.	Saint John	New Brunswick
Control & Equipment Ltd.	St. John's	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
Mcnamara Construction Company	Paradise	Newfoundland
MI International	St. John's	Newfoundland
Newdock - St. John's Dockyard Ltd.	St. John's	Newfoundland
Pennecon Limited	St. John's	Newfoundland
Canada Steamship Lines	Bedford	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
R.A. Murray International Limited	Halifax	Nova Scotia
Statia Terminals Canada Inc.	Port Hawkesbury	Nova Scotia
Steel And Engine Products Limited	Liverpool	Nova Scotia
Trentonworks Ltd.	Trenton	Nova Scotia
Barrels and Drums		
Bren-Kir Industrial Supplies	Mount Pearl	Newfoundland
Gartec Industrial Supplies Inc.	Beaver Bank	Nova Scotia
Bearings and Accessories		
Tilley Manufacturing Ltd.	Arthurette	New Brunswick
Arvin Special Machinery Ltd.	Miramichi	New Brunswick
Murray Industrial Limited	St. John's	Newfoundland
Ozark Electrical Marine Ltd.	St. John's	Newfoundland
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Mulgrave Machine Works Limited	Mulgrave	Nova Scotia
Steel And Engine Products Limited	Liverpool	Nova Scotia

Catalogue of Companies - Offshore Supply

Belts and Drives

CFM	Saint John	New Brunswick
CFM Rigging and Industrial Sales (Newfoundland)	St. John's	Newfoundland
Goodall Rubber Company of Canada Limited	Dartmouth	Nova Scotia
Murray Industrial Limited	St. John's	Newfoundland
Rideout Tool & Machine Inc.	St. John's	Newfoundland
Schooner Industrial Limited	Dartmouth	Nova Scotia

Bits

Deschenes Drilling Ltd.	Saint-Quentin	New Brunswick
MAXCOR INTERNATIONAL	Fredericton	New Brunswick
Baker Hughes Canada Inc.	Mt. Pearl	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Maritime Drilling Supplies Inc.	St. John's	Newfoundland
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Smith International Canada, Ltd. (N.S.)	Boutiliers Point	Nova Scotia

Blasting

ATLANTIC SILICA INC.	Riverview	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Crosbie Salamis Limited	St. John's	Newfoundland
Labrador Technologies & Development	North West River	Newfoundland
Newdock - St. John's Dockyard Ltd.	St. John's	Newfoundland
A.F. Theriault & Son Limited	Meteghan River	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Mills Painting & Sandblasting Limited	Dartmouth	Nova Scotia
Parker Brothers Contracting Ltd.	Waverley	Nova Scotia
Shaw Resources	Milford	Nova Scotia
Steel And Engine Products Limited	Liverpool	Nova Scotia

Block and tackle/traveling blocks

Wire Rope Industries Ltd.	Mount Pearl	Newfoundland
Wire Rope Industries Ltd.	Dartmouth	Nova Scotia

Blowout Preventer Controls

Kongsberg Simrad Mestech Ltd.	Dartmouth	Nova Scotia
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Bridges

ADI Group Inc.	Fredericton	New Brunswick
AMEC Earth and Environmental Ltd.	Fredericton	New Brunswick
Apex Industries Inc.	Moncton	New Brunswick
Atlantic Industries Limited	Dorchester	New Brunswick
Estabrooks Consultants Inc.	Saint John	New Brunswick
Force/Robak Associates Ltd.	Fredericton	New Brunswick
G.F. Williamson Engineering Ltd.	Saint John	New Brunswick
Industrial Cold Milling Ltd.	Moncton	New Brunswick
Les Forages Lantech Drilling Services Inc.	Dieppe	New Brunswick
Maritime Welding Ltd.	Bathurst	New Brunswick
MQM	Tracadie-Sheila	New Brunswick
Neill and Gunter Ltd.	Fredericton	New Brunswick

Catalogue of Companies - Offshore Supply

Ocean Steel & Construction Ltd.	Saint John	New Brunswick
Pickett Consultants Ltd.	Riverview	New Brunswick
Silver Fox Developments, Inc.	Miramichi	New Brunswick
Strescon Limited	Saint John	New Brunswick
Technical Heat Treatment Services Ltd.	St-John	New Brunswick
Valron Engineers Inc	Moncton	New Brunswick
L & A Metalworks Inc.	Fredericton	New Brunswick
Afonso Diving Contractors Ltd.	St. John's	Newfoundland
AGRA Monenco	St. John's	Newfoundland
Arrow Construction Products Ltd. (Newfoundland)	Mount Pearl	Newfoundland
C-CORE	St. John's	Newfoundland
Design Management Group Ltd.	Gander	Newfoundland
Gamma Products Limited	St. John's	Newfoundland
Health Bridges Inc.	St. John's	Newfoundland
Labrador Construction Limited	Happy Valley-Goose	Newfoundland
Mcnamara Construction Company	Paradise	Newfoundland
Pennecon Limited	St. John's	Newfoundland
The SGE Group Inc. (St. John's)	St. John's	Newfoundland
AFM Project Design Group	Halifax	Nova Scotia
AGRA Whitman Benn Limited	Halifax	Nova Scotia
Arrow Construction Products Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
BEASY NICOLL ENGINEERING LIMITED	Dartmouth	Nova Scotia
Cherubini Metal Works Limited	Dartmouth	Nova Scotia
C.J. Maclellan & Associates Incorporated	Antigonish	Nova Scotia
Jacques Whitford	Dartmouth	Nova Scotia
MacDonnell Group	Halifax	Nova Scotia
Maritime Steel And Foundries Limited	New Glasgow	Nova Scotia
Martec Limited	Halifax	Nova Scotia
O'Halloran Campbell Consultants Limited	Halifax	Nova Scotia
R.A. Murray International Limited	Halifax	Nova Scotia
Remote Access Technology Incorporated	Dartmouth	Nova Scotia
SNC-Lavalin Inc.	Halifax	Nova Scotia
TJ Engineering Services & TJ Inspection Services	Dartmouth	Nova Scotia
Walter Construction (Canada) Ltd.	Halifax	Nova Scotia
Wire Rope Industries Ltd.	Dartmouth	Nova Scotia

Caissons

FMC of Canada Ltd. (Newfoundland)	St. John's	Newfoundland
Mcnamara Construction Company	Paradise	Newfoundland
Atlantic Combustion Products Limited	Amherst	Nova Scotia

Casing

Deschenes Drilling Ltd.	Saint-Quentin	New Brunswick
Jury Consulting Services	Hanwell	New Brunswick
RASCO Specialty Metals Inc.	Saint John	New Brunswick
C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
East Coast Tubulars Ltd.	Paradise	Newfoundland
F I Canada Oilfield Services Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Hyflodraulic Limited	Mount Pearl	Newfoundland
Import Tool Corporation Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Maritime Drilling Supplies Inc.	St. John's	Newfoundland
Baker Oil Tools	Dartmouth	Nova Scotia
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia

Catalogue of Companies - Offshore Supply

F I Canada Oilfield Services Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Import Tool Corporation Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Oak Environmental Equipment Supply Ltd.	Calgary	Nova Scotia
Coles Door Systems Ltd.	Charlottetown	Prince Edward Isl.

Cathodic Protection - Equipment, Service and Supplies

Dominion Diving Ltd. (Newfoundland)	Mount Pearl	Newfoundland
G. Pelley Limited	Springdale	Newfoundland
Russel Metals Inc. (Newfoundland)	Mount Pearl	Newfoundland
C.S.A. Enterprises Ltd.	Halifax	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
Russel Metals Inc. (Nova Scotia)	Lakeside	Nova Scotia

Cement Equipment/Service

Arrow Construction Products Ltd. (Newfoundland)	Mount Pearl	Newfoundland
ConPro Group Limited	St. John's	Newfoundland
F I Canada Oilfield Services Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Nowsco Well Service Limited (Newfoundland)	St. John's	Newfoundland
Arrow Construction Products Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
F I Canada Oilfield Services Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Nowsco Well Service Limited (Nova Scotia)	Dartmouth	Nova Scotia

Centralizers

F I Canada Oilfield Services Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Import Tool Corporation Ltd. (Newfoundland)	Mount Pearl	Newfoundland
F I Canada Oilfield Services Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Import Tool Corporation Ltd. (Nova Scotia)	Dartmouth	Nova Scotia

Chemical Service and Supplies

ADI Group Inc.	Fredericton	New Brunswick
3M CANADA COMPANY	Mount Pearl	Newfoundland
Baker Hughes Canada Inc.	Mt. Pearl	Newfoundland
East-Chem Inc.	Mount Pearl	Newfoundland
Gamma Products Limited	St. John's	Newfoundland
Import Tool Corporation Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
Matchless Group Inc.	St. John's	Newfoundland
Van Waters & Rogers Ltd. (Newfoundland)	Paradise	Newfoundland
Zep Manufacturing Company of Canada	Dartmouth	Nova Scotia
Alpha Chemical Limited	Dartmouth	Nova Scotia
HCI Canada Inc.	Dartmouth	Nova Scotia
Import Tool Corporation Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Seatech Ltd.	Halifax	Nova Scotia
Van Waters & Rogers Ltd. (Nova Scotia)	Dartmouth	Nova Scotia

Clutches - Air and Mechanical

TRC Hydraulics Inc.	Mount Pearl	Newfoundland
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Coatings - Protective

Atlantic Quality & Technical Serv. Ltd.	Saint John	New Brunswick
Amercoat Canada (Newfoundland)	Mount Pearl	Newfoundland
Arrow Construction Products Ltd. (Newfoundland)	Mount Pearl	Newfoundland
C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
Coating Solutions Corporation	St. John's	Newfoundland
Crosbie Salamis Limited	St. John's	Newfoundland
Friede Goldman Newfoundland Ltd.	Marystown	Newfoundland
Garland Systems Ltd.	Mount Pearl	Newfoundland
International Paints Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Matchless Group Inc.	St. John's	Newfoundland
ProArc Fabricating Ltd	Mount Pearl	Newfoundland
PPG Canada Inc. (Newfoundland Office)	St. John's	Newfoundland
PPG Canada Inc. (Nova Scotia Office)	Dartmouth	Nova Scotia
Amercoat Canada (Nova Scotia)	Dartmouth	Nova Scotia
Argo Protective Coatings Inc.	Dartmouth	Nova Scotia
Arrow Construction Products Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
International Paints Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Mills Painting & Sandblasting Limited	Dartmouth	Nova Scotia
Parker Brothers Contracting Ltd.	Waverley	Nova Scotia
The Shaw Group Limited	Lantz	Nova Scotia

Combustion Controls

Tilley Manufacturing Ltd.	Arthurette	New Brunswick
ABB Inc.	Dartmouth	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Trecan Combustion Limited	Hubley	Nova Scotia

Communication Systems and Equipment

Advatek Systems Inc	Moncton	New Brunswick
ASD Limited	Fredericton	New Brunswick
Com Dev Phase Group	Moncton	New Brunswick
DPL Group	Saint John	New Brunswick
Dramis Network Cabling Ltd.	Moncton	New Brunswick
Enseignes Imperial Signs	Edmundston	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Miller Sound Ltd.	Saint John	New Brunswick
NCA Microelectronics Inc.	Saint John	New Brunswick
Nik Design Inc.	Verret	New Brunswick
ShareLine Systems Ltd.	Moncton	New Brunswick
Valron Engineers Inc	Moncton	New Brunswick
Voice Factory (The)/La Boite Vocale	Saint John	New Brunswick
Afonso Diving Contractors Ltd.	St. John's	Newfoundland
BAE Systems Canada Inc. (Newfoundland)	St. John's	Newfoundland
Guigne Technologies Ltd.	St. John's	Newfoundland
Harris & Roome Supply Limited (St. John's)	St. John's	Newfoundland
Northern Radar Systems Limited	St. John's	Newfoundland
Provincial Airlines Limited	St. John's	Newfoundland
Ainsworth Atlantic (A Division of Ainsworth Inc.)	Dartmouth	Nova Scotia
BAE Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Baldwin & Francis Electrical	Sydney	Nova Scotia

Catalogue of Companies - Offshore Supply

Brooke Ocean Technology Limited	Dartmouth	Nova Scotia
CSE Computronics Inc.	Dartmouth	Nova Scotia
Emera	Halifax	Nova Scotia
Focal Technologies Corp.	Dartmouth	Nova Scotia
Harris & Roome Supply Limited (Halifax)	Halifax	Nova Scotia
Hart Industrial Communications	Dartmouth	Nova Scotia
Hermes Electronics Incorporated	Dartmouth	Nova Scotia
ICON Interactive Inc.	Halifax	Nova Scotia
Internav Ltd.	Sydney	Nova Scotia
KB Electronics (1989) Limited	Bedford	Nova Scotia
Kongsberg Simrad Mestech Ltd.	Dartmouth	Nova Scotia
Lynk Electric Limited	Sydney	Nova Scotia
MacDonald Dettwiler and Associates	Dartmouth	Nova Scotia
Magneto-Inductive Systems Limited	Dartmouth	Nova Scotia
METOCEAN Data Systems Limited	Dartmouth	Nova Scotia
Nova Scotia Community College (Annapolis Valley C	Lawrencetown	Nova Scotia
Orion Electronics Limited	Windsor	Nova Scotia
ProInTek Systems Inc.	Dartmouth	Nova Scotia
Pylon Atlantic Inc.	Dartmouth	Nova Scotia
R.C. Marine Electronics Ltd.	Dartmouth	Nova Scotia
R C Marine Integrated Systems Ltd.	Dartmouth	Nova Scotia
Satlantic Inc.	Halifax	Nova Scotia
Seimac Limited	Dartmouth	Nova Scotia
Telecom Applications Research Alliance	Halifax	Nova Scotia
Vemco Limited	Shad Bay	Nova Scotia
Wild Blueberry Media	Halifax	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia

Completion Technology

BKM Research & Development Inc.	Dieppe	New Brunswick
APA (NFLD) Ltd.	St. John's	Newfoundland
Fabcon Canada Limited (FCL)	St. John's	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Import Tool Corporation Ltd. (Newfoundland)	Mount Pearl	Newfoundland
M & M Engineering Limited	St. John's	Newfoundland
Newsco Well Service Limited (Newfoundland)	St. John's	Newfoundland
APA (Nova Scotia) Limited	Halifax	Nova Scotia
Baker Oil Tools	Dartmouth	Nova Scotia
COLLEGE DE L'ACADIE	Meteghan River	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
EOA Scientific Systems, Inc.	Halifax	Nova Scotia
G.N. Plastics Company Limited	Chester	Nova Scotia
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Import Tool Corporation Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Nova Scotia Community College (Annapolis Valley C	Lawrencetown	Nova Scotia
Newsco Well Service Limited (Nova Scotia)	Dartmouth	Nova Scotia

Compressors - Air and Gas - Service and Supplies

ATLANTIC SILICA INC.	Riverview	New Brunswick
Galva Industries	Moncton	New Brunswick
Hubbard Industries Limited	Fredericton	New Brunswick
Metaltech Ltd./Ltée	Dieppe	New Brunswick
Ocean Steel & Construction Ltd.	Saint John	New Brunswick

Catalogue of Companies - Offshore Supply

Shaw Brick	Fredericton	New Brunswick
Three-D GeoConsultants Ltd.	Fredericton	New Brunswick
Arrow Construction Products Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Conpro Group Limited	St. John's	Newfoundland
ConPro Group Limited	St. John's	Newfoundland
Labrador Technologies & Development	North West River	Newfoundland
Mcnamara Construction Company	Paradise	Newfoundland
Newfoundland Styro Inc.	Bishops Falls	Newfoundland
Pennecon Limited	St. John's	Newfoundland
Strescon Limited	Saint John	Newfoundland
Superior Waterproof Coatings	Gander	Newfoundland
Walter Construction (Canada) Ltd.	Halifax	Nova Scotia
Annapolis Valley Peat Moss Co. Ltd.	Berwick	Nova Scotia
Armament Technology	Halifax	Nova Scotia
Arrow Construction Products Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Everseal Contracting & Supply Co. Ltd.	Tantallon	Nova Scotia
GS Concrete	Windsor	Nova Scotia
Guildfords Inc.	Dartmouth	Nova Scotia
Heritage Memorials Limited	Windsor	Nova Scotia
Pinnacle Agencies Ltd.	Dartmouth	Nova Scotia
R.A. Murray International Limited	Halifax	Nova Scotia
Shaw Resources	Milford	Nova Scotia
The Shaw Group Limited	Lantz	Nova Scotia
Truefoam Limited	Dartmouth	Nova Scotia
U.J. Robichaud & Son Ltd.	Meteghan Centre	Nova Scotia
V.J. Rice Concrete Limited	Bridgetown	Nova Scotia

Concrete Products

ATLANTIC SILICA INC.	Riverview	New Brunswick
Galva Industries	Moncton	New Brunswick
Hubbard Industries Limited	Fredericton	New Brunswick
Metaltech Ltd./Ltée	Dieppe	New Brunswick
Ocean Steel & Construction Ltd.	Saint John	New Brunswick
Shaw Brick	Fredericton	New Brunswick
Three-D GeoConsultants Ltd.	Fredericton	New Brunswick
Advanced Energy Management Limited	Moncton	New Brunswick
Arvin Special Machinery Ltd.	Miramichi	New Brunswick
Fundy Computer Services Ltd.	Saint John	New Brunswick
Spielo Gaming International	Dieppe	New Brunswick
ADI Group Inc.	Fredericton	New Brunswick
Adtech Manufacturing Ltd.	Fredericton	New Brunswick
Advatek Systems Inc	Moncton	New Brunswick
Applied Management Consultants Ltd.	Fredericton	New Brunswick
AQTS	Saint John	New Brunswick
ASD Limited	Fredericton	New Brunswick
Atlantic Controls Ltd. (New Brunswick)	Saint John	New Brunswick
Atlantic Industries Limited	Dorchester	New Brunswick
Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
Atlantic Quality & Technical Serv. Ltd.	Saint John	New Brunswick
DPL Group	Saint John	New Brunswick
Dramis Network Cabling Ltd.	Moncton	New Brunswick
Force/Robak Associates Ltd.	Fredericton	New Brunswick
Foxboro Canada Inc.	Moncton	New Brunswick
Freeway Technologies Inc.	Saint John	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
L & A Metalworks Inc.	Fredericton	New Brunswick
Neill and Gunter Ltd.	Fredericton	New Brunswick
Nik Design Inc.	Verret	New Brunswick
Qip Equipment Ltd.	Saint John	New Brunswick
RPC	Fredericton	New Brunswick
ShareKnowledge Inc.	Moncton	New Brunswick
ShareLine Systems Ltd.	Moncton	New Brunswick
Arrow Construction Products Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Conpro Group Limited	St. John's	Newfoundland
ConPro Group Limited	St. John's	Newfoundland
Labrador Technologies & Development	North West River	Newfoundland
Mcnamara Construction Company	Paradise	Newfoundland
Newfoundland Styro Inc.	Bishops Falls	Newfoundland
Pennecon Limited	St. John's	Newfoundland
Strescon Limited	Saint John	Newfoundland
Superior Waterproof Coatings	Gander	Newfoundland
G. Pelley Limited	Springdale	Newfoundland
Hickman's Building Centre	St. John's	Newfoundland
INNOVA Multimedia Ltd.	Stephenville	Newfoundland
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
AGRA Monenco	St. John's	Newfoundland
Avalon Controls Ltd.	St. John's	Newfoundland
BAE Systems Canada Inc. (Newfoundland)	St. John's	Newfoundland
Bailey Sea (NFLD) Ltd.	St. John's	Newfoundland
Basil Fearn ('93) Limited	St. John's	Newfoundland

Catalogue of Companies - Offshore Supply

Control & Equipment Ltd.	St. John's	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
Cormorant Ltd.	St. John's	Newfoundland
FGA Consulting Engineers Limited	St. John's	Newfoundland
FMC of Canada Ltd. (Newfoundland)	St. John's	Newfoundland
G.J. Cahill & Co. Ltd (Newfoundland)	St. John's	Newfoundland
Guigne Technologies Ltd.	St. John's	Newfoundland
Hydraulic Systems Limited (Newfoundland)	St. John's	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
Jacques Whitford Environmental	St. John's	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
McLoughlan Supplies Ltd.	St. John's	Newfoundland
Newfoundland Service Alliance	St. John's	Newfoundland
Northern Radar Systems Limited	St. John's	Newfoundland
Northstar Network Ltd.	St. John's	Newfoundland
Ozark Electrical Marine Ltd.	St. John's	Newfoundland
Poseidon Marine Consultants Ltd.	St. John's	Newfoundland
Pro-Glo Ltd.	St. John's	Newfoundland
Rideout Tool & Machine Inc.	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
Siemens - Westinghouse	St. John's	Newfoundland
Annapolis Valley Peat Moss Co. Ltd.	Berwick	Nova Scotia
Armament Technology	Halifax	Nova Scotia
Arrow Construction Products Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Everseal Contracting & Supply Co. Ltd.	Tantallon	Nova Scotia
GS Concrete	Windsor	Nova Scotia
Guildfords Inc.	Dartmouth	Nova Scotia
Heritage Memorials Limited	Windsor	Nova Scotia
Pinnacle Agencies Ltd.	Dartmouth	Nova Scotia
R.A. Murray International Limited	Halifax	Nova Scotia
Shaw Resources	Milford	Nova Scotia
The Shaw Group Limited	Lantz	Nova Scotia
Truefoam Limited	Dartmouth	Nova Scotia
U.J. Robichaud & Son Ltd.	Meteghan Centre	Nova Scotia
V.J. Rice Concrete Limited	Bridgetown	Nova Scotia
Armament Technology	Halifax	Nova Scotia
Enerscan Engineering Incorporated	Halifax	Nova Scotia
MathResources Inc.	Halifax	Nova Scotia
ABB Inc.	Dartmouth	Nova Scotia
AFM Project Design Group	Halifax	Nova Scotia
AGRA Whitman Benn Limited	Halifax	Nova Scotia
Ainsworth Atlantic (A Division of Ainsworth Inc.)	Dartmouth	Nova Scotia
Alfa Laval Inc.	Dartmouth	Nova Scotia
AMIRIX Systems Inc. (formerly Applied Microelectronic)	Halifax	Nova Scotia
Atkinson & Bower Limited	Shelburne	Nova Scotia
Atlantic Controls	Halifax	Nova Scotia
Atlantic Purification Systems Ltd.	Dartmouth	Nova Scotia
Atlantic Scale Company Limited	Bridgewater	Nova Scotia
BAE Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Baldwin & Francis Electrical	Sydney	Nova Scotia
Banc Metals	Dartmouth	Nova Scotia
CBCL Limited (Halifax)	Halifax	Nova Scotia
CKT Nova Scotia Limited	Bedford	Nova Scotia

Catalogue of Companies - Offshore Supply

CTH Instruments Ltd.	Dartmouth	Nova Scotia
Dymaxion Research Limited	Halifax	Nova Scotia
Dynagen Systems Inc.	Sydney	Nova Scotia
EnvironChem Engineering Consultants	Wolfville	Nova Scotia
Environmental Control Systems (East)	Dartmouth	Nova Scotia
FARMAX Systems	Truro	Nova Scotia
Fossil Power Systems Inc.	Dartmouth	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
I.M.P. Group Limited Aerospace Division	Halifax	Nova Scotia
Industrial Environmental Services Incorporated	Debert	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Jacques Whitford Environment Limited	Dartmouth	Nova Scotia
KB Electronics (1989) Limited	Bedford	Nova Scotia
Kongsberg Simrad Mestech Ltd.	Dartmouth	Nova Scotia
Lewis Engineering Inc.	Halifax	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Lynk Electric Limited	Sydney	Nova Scotia
Martec Limited	Halifax	Nova Scotia
Mattronic Communications/Trophy Gallery	Port Hawkesbury	Nova Scotia
METOCEAN Data Systems Limited	Dartmouth	Nova Scotia
Mulgrave Machine Works Limited	Mulgrave	Nova Scotia
Nautel Limited	Tantallon	Nova Scotia
Orion Electronics Limited	Windsor	Nova Scotia
Pro-Dive Marine Services (N.S.) Ltd.	Dartmouth	Nova Scotia
ProInTek Systems Inc.	Dartmouth	Nova Scotia
R.C. Marine Electronics Ltd.	Dartmouth	Nova Scotia
R C Marine Integrated Systems Ltd.	Dartmouth	Nova Scotia
Romor Atlantic Limited	Dartmouth	Nova Scotia
Sea Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Siemens Westinghouse Technical Services	Dartmouth	Nova Scotia
Steel And Engine Products Limited	Liverpool	Nova Scotia
Walter Construction (Canada) Ltd.	Halifax	Nova Scotia
Coles Associates Ltd.	Charlottetown	Prince Edward Isl.
MICROAGE COMPUTER CENTRES	Charlottetown	Prince Edward Isl.
Baseline Business Geographics Inc.	Charlottetown	Prince Edward Isl.
P.E.I. Food Technology Centre	Charlottetown	Prince Edward Isl.

Catalogue of Companies - Offshore Supply

Contract Hardware

Advanced Energy Management Limited	Moncton	New Brunswick
Arvin Special Machinery Ltd.	Miramichi	New Brunswick
Fundy Computer Services Ltd.	Saint John	New Brunswick
Spielo Gaming International	Dieppe	New Brunswick
G.Pelley Limited	Springdale	Newfoundland
Hickman's Building Centre	St. John's	Newfoundland
INNOVA Multimedia Ltd.	Stephenville	Newfoundland
Sea Systems Limited	St. John's	Newfoundland
Armament Technology	Halifax	Nova Scotia
Enerscan Engineering Incorporated	Halifax	Nova Scotia
MathResources Inc.	Halifax	Nova Scotia
Coles Associates Ltd.	Charlottetown	Prince Edward Isl.
Microage Computer Centres	Charlottetown	Prince Edward Isl.

Control Systems and Equipment

Baseline Business Geographics Inc.	Charlottetown	Prince Edward Isl.
P.E.I. Food Technology Centre	Charlottetown	Prince Edward Isl.
AGRA Monenco	St. John's	Newfoundland
Avalon Controls Ltd.	St. John's	Newfoundland
Axiom Engineering Ltd.	Mount Pearl	Newfoundland
BAE Systems Canada Inc. (Newfoundland)	St. John's	Newfoundland
Bailey Sea (NFLD) Ltd.	St. John's	Newfoundland
Basil Fearn ('93) Limited	St. John's	Newfoundland
Canadian Centre for Marine Communication	St. John's	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
Control & Equipment Ltd.	St. John's	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
Cormorant Ltd.	St. John's	Newfoundland
FGA Consulting Engineers Limited	St. John's	Newfoundland
FMC of Canada Ltd. (Newfoundland)	St. John's	Newfoundland
G.J Cahill & Co. Ltd (Newfoundland)	St. John's	Newfoundland
Guigne Technologies Ltd.	St. John's	Newfoundland
Hydraulic Systems Limited (Newfoundland)	St. John's	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
Jacques Whitford Environmental	St. John's	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
McLoughlan Supplies Ltd.	St. John's	Newfoundland
Newfoundland Service Alliance	St. John's	Newfoundland
Northern Radar Systems Limited	St. John's	Newfoundland
Northstar Network Ltd.	St. John's	Newfoundland
Ozark Electrical Marine Ltd.	St. John's	Newfoundland
Poseidon Marine Consultants Ltd.	St. John's	Newfoundland
Pro-Glo Ltd.	St. John's	Newfoundland
Rideout Tool & Machine Inc.	St. John's	Newfoundland
Sea Sytems Limited (Newfoundland)	St. John's	Newfoundland
Siemens - Westinghouse	St. John's	Newfoundland
ADI Group Inc.	Fredericton	New Brunswick
Adtech manufacturing Ltd.	Fredericton	New Brunswick
Advatek Systems Inc.	Moncton	New Brunswick
Applied Management Consultants Ltd.	Fredericton	New Brunswick
AQTS	Saint John	New Brunswick
ASD Limited	Fredericton	New Brunswick

Catalogue of Companies - Offshore Supply

Atlantic Controls Ltd. (New Brunswick)	Saint John	New Brunswick
Atlantic Industries Limited	Dorchester	New Brunswick
Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
Atlantic Quality & Technical Serv. Ltd.	Saint John	New Brunswick
DPL Group	Saint John	New Brunswick
Dramis Network Cabling Ltd.	Moncton	New Brunswick
Force/Robak Associates Ltd.	Fredericton	New Brunswick
Foxboro Canada Inc.	Moncton	New Brunswick
Freeway Technologies Inc.	Saint John	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
L & A Metalworks Inc.	Fredericton	New Brunswick
Neill and Gunter Ltd.	Fredericton	New Brunswick
Nik Design Inc.	Verret	New Brunswick
Qip Equipment Ltd.	Saint John	New Brunswick
RPC	Fredericton	New Brunswick
ShareKnowledge Inc.	Moncton	New Brunswick
ShareLine Systems Ltd.	Moncton	New Brunswick
ABB Inc.	Dartmouth	Nova Scotia
AFM Project Design Group	Halifax	Nova Scotia
AGRA Whitman Benn Limited	Halifax	Nova Scotia
Ainsworth Atlantic (A Division of Ainsworth Inc.)	Dartmouth	Nova Scotia
Alfa Laval Inc.	Dartmouth	Nova Scotia
AMIRIX Systems Inc. (formerly Applied Microelectron	Halifax	Nova Scotia
Atkinson & Bower Limited	Shelburne	Nova Scotia
Atlantic Controls	Halifax	Nova Scotia
Atlantic Purification Systems Ltd.	Dartmouth	Nova Scotia
Atlantic Scale Company Limited	Bridgewater	Nova Scotia
BAE Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Baldwin & Francis Electrical	Sydney	Nova Scotia
Banc Metals	Dartmouth	Nova Scotia
CBCL Limited (Halifax)	Halifax	Nova Scotia
CKT Nova Scotia Limited	Bedford	Nova Scotia
CTH Instrument Ltd.	Dartmouth	Nova Scotia
Dymaxion Research Limited	Halifax	Nova Scotia
Dynagen Systems Inc.	Sydney	Nova Scotia
Environmental Control Systems 9East)	Dartmouth	Nova Scotia
FARMAX Systems	Truro	Nova Scotia
Fossil Power Systems Inc.	Dartmouth	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
I.M.P. Group Limited Aerospace Division	Halifax	Nova Scotia
Industrial Environmental Services Incorporated	Debert	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Jacques Whitford Environmental	Dartmouth	Nova Scotia
KB Electronics (1989) Limited	Bedford	Nova Scotia
Kongsberg Simrad Mestech Ltd.	Dartmouth	Nova Scotia
Lewis Engineering Inc.	Halifax	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Lynk Electric Limited	Sydney	Nova Scotia
Martec Limited	Halifax	Nova Scotia
Mattronic Communications/Trophy Gallery	Port Hawkesbury	Nova Scotia
METOCEAN Data Systems Limited	Dartmouth	Nova Scotia

Catalogue of Companies - Offshore Supply

Mulgrave Machine Works Limited	Mulgrave	Nova Scotia
Nautel Limited	Tantallon	Nova Scotia
Orion Electronics Limited	Windsor	Nova Scotia
Pro-Dive Marine Serices (N.S.) Ltd.	Dartmouth	Nova Scotia
Romor Atlantic Limited	Dartmouth	Nova Scotia
Sea Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Siemens - Westinghouse Technical Services	Dartmouth	Nova Scotia

Control Valves

Atlantic Controls Ltd. (New Brunswick)	Saint John	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Mobile Valve Repairs & Manuf. N.B. Ltd.	Tracy	New Brunswick
Qip Equipment Ltd.	Saint John	New Brunswick
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
Siemens - Westinghouse	St. John's	Newfoundland
Terra Nova Marine Co. Ltd.	Mount Pearl	Newfoundland
Atlantic Controls	Halifax	Nova Scotia
CTH Instruments Ltd.	Dartmouth	Nova Scotia
Fossil Power Systems Inc.	Dartmouth	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Nova Magnetics Limited	Dartmouth	Nova Scotia
Peacock - Industrial Products Division	Dartmouth	Nova Scotia

Cooling Systems

Alfa Laval Inc.	Dartmouth	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Nautel Limited	Tantallon	Nova Scotia
Wright Systems & Equipment	Charlottetown	Prince Edward Isl.

Cranes - renting/leasing/sales

Capital Crane Limited	Mount Pearl	Newfoundland
Hunt's Transport Ltd.	Mount Pearl	Newfoundland
TRC Hydraulics Inc.	Mount Pearl	Newfoundland
A.W. Leil Cranes & Equipment Limited	Thorburn	Nova Scotia
G.W. Holmes Trucking Limited	Thorburn	Nova Scotia
Irving Equipment Division	Halifax	Nova Scotia
Sagadore Cranes and Equipment	Dartmouth	Nova Scotia
Thyssen Dover Crane	Dartmouth	Nova Scotia

Cylinders

Grand Falls Industries Ltd.	Grand Falls	New Brunswick
Maritime Hydraulic Repair Cntr 1997 Ltd.	Moncton	New Brunswick
Pelletier Équipement Ltée	Lac Baker	New Brunswick
Rockeffects (Canada) Inc.	Cap-Pele	New Brunswick
TRC Hydraulics Inc.	Dieppe	New Brunswick
Hyflodraulic Limited	Mount Pearl	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
TRC Hydraulics Inc.	Mount Pearl	Newfoundland
Atlantic Hardchrome Limited	Dartmouth	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia

Catalogue of Companies - Offshore Supply

Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
TrentonWorks Ltd. Forging Division	Trenton	Nova Scotia
Deck Machinery and Equipment		
Irving Shipbuilding Inc.	Saint John	New Brunswick
Crosbie Salamis Limited	St. John's	Newfoundland
Fab-Tech Industries Inc.	Glovertown	Newfoundland
Fishery Products International (FPI)	St. John's	Newfoundland
Hunt's Transport Ltd.	Mount Pearl	Newfoundland
Hydraulic Systems Limited (Newfoundland)	St. John's	Newfoundland
Hyflodraulic Limited	Mount Pearl	Newfoundland
Peter Kiewit Sons Co. Ltd.	St. John's	Newfoundland
TRC Hydraulics Inc.	Mount Pearl	Newfoundland
Associated Marine Equipment Limited	Dartmouth	Nova Scotia
Atkinson & Bower Limited	Shelburne	Nova Scotia
Brooke Ocean Technology Limited	Dartmouth	Nova Scotia
G.W. Holmes Trucking Limited	Thorburn	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Mulgrave Machine Works Limited	Mulgrave	Nova Scotia
Owen Davis Trucking Ltd.	Sackville	Nova Scotia
Rolls-Royce Canada Ltd.	Dartmouth	Nova Scotia
Steel and Engine Products Limited	Liverpool	Nova Scotia
Desalters - Water Makers		
Terra Nova Marine Co. Ltd.	Mount Pearl	Newfoundland
Alfa Laval Inc.	Dartmouth	Nova Scotia
Detection Systems		
Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Avalon Controls Ltd.	St. John's	Newfoundland
Bailey Sea (NFLD) Ltd.	St. John's	Newfoundland
C-CORE	St. John's	Newfoundland
Control & Equipment Ltd.	St. John's	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
Cormorant Ltd.	St. John's	Newfoundland
Guigne Technologies Ltd.	St. John's	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
Northern Radar Systems Limited	St. John's	Newfoundland
Oceans Limited	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
Terra Nova Marine Co. Ltd.	Mount Pearl	Newfoundland
Atlantic Purification Systems Ltd.	Dartmouth	Nova Scotia
BioMedica Diagnostics Inc.	Windsor	Nova Scotia
CKT Nova Scotia Limited	Bedford	Nova Scotia
Fossil Power Systems Inc.	Dartmouth	Nova Scotia
Horizon Systems Group Inc.	Dartmouth	Nova Scotia
Jellett Biotek Ltd.	Dartmouth	Nova Scotia
Magneto-Inductive Systems Limited	Dartmouth	Nova Scotia
Operating Name: Oak Environmental Equipment Sup	Calgary	Nova Scotia

Catalogue of Companies - Offshore Supply

Sea Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Superior Vallen Safety Supply Company Ltd.	Dartmouth	Nova Scotia
Downhole tubing and casing (OCTG)		
RASCO Specialty Metals Inc.	Saint John	New Brunswick
C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
East Coast Tubulars Ltd.	Paradise	Newfoundland
Maritime Drilling Supplies Inc.	St. John's	Newfoundland
Baker Oil Tools	Dartmouth	Nova Scotia
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Dryers - Industrial		
Pro-Glo Ltd.	St. John's	Newfoundland
Atlantic Purification Systems Ltd.	Dartmouth	Nova Scotia
Electrical Equipment/Service/Consulting		
BAE Systems Canada Inc. (Newfoundland)	St. John's	Newfoundland
BMS Offshore Limited (Newfoundland)	Mount Pearl	Newfoundland
Electro Mechanical Services Limited	Mount Pearl	Newfoundland
Emery Construction Limited	Mount Pearl	Newfoundland
G.J. Cahill & Co. Ltd (Newfoundland)	St. John's	Newfoundland
Harris & Roome Supply Limited (St. John's)	St. John's	Newfoundland
McLoughlan Supplies Ltd.	St. John's	Newfoundland
Ozark Electrical Marine Ltd.	St. John's	Newfoundland
Terra Nova Marine Co. Ltd.	Mount Pearl	Newfoundland
The Scale Shop (1985) Ltd.	Mount Pearl	Newfoundland
BAE Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
BMS Offshore Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
CKT Nova Scotia Limited	Bedford	Nova Scotia
Coastal Ocean Associates Inc.	Dartmouth	Nova Scotia
C.S.A. Enterprises Ltd.	Halifax	Nova Scotia
CSE Computronics Inc.	Dartmouth	Nova Scotia
Emera	Halifax	Nova Scotia
Focal Technologies Corp.	Dartmouth	Nova Scotia
Fred C. Morrison Ltd.	Dartmouth	Nova Scotia
G.J. Cahill & Co. Ltd (Nova Scotia)	Dartmouth	Nova Scotia
Harris & Roome Supply Limited (Halifax)	Halifax	Nova Scotia
Siemens Westinghouse Technical Services	Dartmouth	Nova Scotia
Emergency Equipment and Supplies		
Malley Industries Inc.	Moncton	New Brunswick
Atlantic Offshore Medical Services Ltd.	St. John's	Newfoundland
BMS Offshore Limited (Newfoundland)	Mount Pearl	Newfoundland
Bren-Kir Industrial Supplies	Mount Pearl	Newfoundland
Maritime Drilling Supplies Inc.	St. John's	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
McLoughlan Supplies Ltd.	St. John's	Newfoundland
Alpha Chemical Limited	Dartmouth	Nova Scotia
BMS Offshore Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
EMCO Ltd.- Westlund Industrial Supply	Dartmouth	Nova Scotia
Maritime 2-Way Radio Limited	Dartmouth	Nova Scotia
Siemens Westinghouse Technical Services	Dartmouth	Nova Scotia

Catalogue of Companies - Offshore Supply

Superior Vallen Safety Supply Company Ltd.	Dartmouth	Nova Scotia
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Enclosures

Cards Aquaculture Products Ltd.	Pennfield	New Brunswick
Aluma Systems Canada Inc.	St. John's	Newfoundland
McLoughlan Supplies Ltd.	St. John's	Newfoundland
Sheppard Case Architects Inc.	St. John's	Newfoundland
Aluma Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Atlantic Scale Company Limited	Bridgewater	Nova Scotia
C.S.A. Enterprises Ltd.	Halifax	Nova Scotia
Nu-Air Ventilation Systems Inc.	Newport	Nova Scotia
Ocean Case Co. Ltd.	Enfield	Nova Scotia
Satlantic Inc.	Halifax	Nova Scotia
Thistle Dance Publishing Inc.	Dartmouth	Nova Scotia

Engines

Cedarwood Canoes Ltd.	Mouth Of Keswick	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Miller Canoes	Nictau	New Brunswick
Cummins/Onan Eastern Canada Inc.	Mount Pearl	Newfoundland
G. Pelley Limited	Springdale	Newfoundland
GSO Solutions Inc.	St. John's	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
United Rent-Alls Ltd.	Mount Pearl	Newfoundland
A B Seacraft	Sydney	Nova Scotia
Atlantic Tractors & Equipment Limited	Halifax	Nova Scotia
Detroit Diesel Allison Canada East (1995) Inc.	Dartmouth	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Liftow Limited	Dartmouth	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
MediaSpark IT Solutions Inc.	Sydney	Nova Scotia
Orenda Recip Inc.	Debert	Nova Scotia
Rolls-Royce Canada Ltd.	Dartmouth	Nova Scotia
Steel And Engine Products Limited	Liverpool	Nova Scotia
Wartsila NSD Canada Inc.	Dartmouth	Nova Scotia
3V World	Charlottetown	Prince Edward Isl.
Atlantic Turbines Inc.	Slemon Park	Prince Edward Isl.
Diversified Metal Engineering Ltd.	Charlottetown	Prince Edward Isl.
Netnovations Enterprises Inc	Summerside	Prince Edward Isl.
Tube Fab Machined Products Division	Charlottetown	Prince Edward Isl.

Explosion Proof Equipment

Newfoundland Service Alliance	St. John's	Newfoundland
Siemens - Westinghouse	St. John's	Newfoundland
Atlantic Scale Company Limited	Bridgewater	Nova Scotia
C.S.A. Enterprises Ltd.	Halifax	Nova Scotia
Process Construction & Fabrication	Windsor	Nova Scotia
Thyssen Dover Crane	Dartmouth	Nova Scotia

Fibreglass Products

Catalogue of Companies - Offshore Supply

Maritime Fibreglass Fabricators	Minto	New Brunswick
Ovatek Inc.	Bas-Caraquet	New Brunswick
Hickman's Building Centre	St. John's	Newfoundland
A.F. Theriault & Son Limited	Meteghan River	Nova Scotia
Reinforced Plastic Systems Inc.	Mahone Bay	Nova Scotia
Russel Metals Inc. (Nova Scotia)	Lakeside	Nova Scotia
The Trail Blazer	Dartmouth	Nova Scotia

Filters-Air, Gas and Liquid

C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
Hydraulic Systems Limited (Newfoundland)	St. John's	Newfoundland
Tubecraft Atlantic Ltd.	St. John's	Newfoundland
United Rent-Alls Ltd.	Mount Pearl	Newfoundland
Alfa Laval Inc.	Dartmouth	Nova Scotia
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Gartec Industrial Supplies Inc.	Beaver Bank	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia

Fire protection/Services/Equipment/Sales

3M CANADA COMPANY	Mount Pearl	Newfoundland
AMI Offshore Inc.	St. John's	Newfoundland
Bailey Sea (NFLD) Ltd.	St. John's	Newfoundland
Bren-Kir Industrial Supplies	Mount Pearl	Newfoundland
Crosbie Salamis Limited	St. John's	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
PPG Canada Inc. (Newfoundland Office)	St. John's	Newfoundland
Terra Nova Marine Co. Ltd.	Mount Pearl	Newfoundland
Aluma Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Associated Marine Equipment Limited	Dartmouth	Nova Scotia
Grinnell Fire Protection	Dartmouth	Nova Scotia
Guildfords Inc.	Dartmouth	Nova Scotia
Parker Brothers Contracting Ltd.	Waverley	Nova Scotia
PPG Canada Inc. (Nova Scotia Office)	Dartmouth	Nova Scotia
Superior Vallen Safety Supply Company Ltd.	Dartmouth	Nova Scotia

Fishing Equipment/Tools

Arrow Construction Products Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Murray Industrial Limited	St. John's	Newfoundland
The Scale Shop (1985) Ltd.	Mount Pearl	Newfoundland
Wire Rope Industries Ltd.	Mount Pearl	Newfoundland
Arrow Construction Products Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Wire Rope Industries Ltd.	Dartmouth	Nova Scotia

Fittings

Associated Industrial Rubber Co. Ltd.	Moncton	New Brunswick
Atelier Gerard Beaulieu inc.	Saint-Quentin	New Brunswick
Atlantic Industries Limited	Dorchester	New Brunswick
Atlantic Valve & Fittings Limited	Saint John	New Brunswick
CFM	Saint John	New Brunswick
Deschenes Drilling Ltd.	Saint-Quentin	New Brunswick
Imperial Sheet Metal Ltd.	Richibucto	New Brunswick
Ipex Inc.	Saint John	New Brunswick

Catalogue of Companies - Offshore Supply

Maritime Fibreglass Fabricators	Minto	New Brunswick
RASCO Specialty Metals Inc.	Saint John	New Brunswick
Associated Industrial Rubber Company Ltd. (Newfou	St. John's	Newfoundland
C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
CFM Rigging and Industrial Sales (Newfoundland)	St. John's	Newfoundland
Crane Supply (Newfoundland)	St. John's	Newfoundland
EMCO Supply (Offshore)	Mount Pearl	Newfoundland
Terra Nova Marine Co. Ltd.	Mount Pearl	Newfoundland
Tubecraft Atlantic Ltd.	St. John's	Newfoundland
Atkinson & Bower Limited	Shelburne	Nova Scotia
Atlantic Oilfield & Supplies	Dartmouth	Nova Scotia
Brooke Ocean Technology Limited	Dartmouth	Nova Scotia
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Crane Supply - Halifax	Dartmouth	Nova Scotia
CTH Instruments Ltd.	Dartmouth	Nova Scotia
EMCO Ltd.- Westlund Industrial Supply	Dartmouth	Nova Scotia
Fabco Industries Limited	Dartmouth	Nova Scotia
Goodall Rubber Company of Canada Limited	Dartmouth	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
IMP Group Limited (Nova Scotia)	Dartmouth	Nova Scotia
Industrial Marine Products Ltd.	Dartmouth	Nova Scotia
L.D. Campbell Machine Services	Antigonish	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
R.A. Murray International Limited	Halifax	Nova Scotia
Reinforced Plastic Systems Inc.	Mahone Bay	Nova Scotia
R-F Ironworks Ltd.	Dartmouth	Nova Scotia
Steel And Engine Products Limited	Liverpool	Nova Scotia
The Shaw Group Limited	Lantz	Nova Scotia
V.J. Rice Concrete Limited	Bridgetown	Nova Scotia
Hall & Stavert	Charlottetown	Prince Edward Isl.

Fluid Power Equipment

CFM Rigging and Industrial Sales (Newfoundland)	St. John's	Newfoundland
Hydraulic Systems Limited (Newfoundland)	St. John's	Newfoundland
Hyflodraulic Limited	Mount Pearl	Newfoundland
Rideout Tool & Machine Inc.	St. John's	Newfoundland
TRC Hydraulics Inc.	Mount Pearl	Newfoundland
Focal Technologies Corp.	Dartmouth	Nova Scotia
Fossil Power Systems Inc.	Dartmouth	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia

G.I.S/G.P.S

Atlantic Electronics Limited	Mount Pearl	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
Cormorant Ltd.	St. John's	Newfoundland
Fugro Jacques GeoSurveys Inc.	St. John's	Newfoundland
The SGE Group Inc. (St. John's)	St. John's	Newfoundland
CSE Computronics Inc.	Dartmouth	Nova Scotia
Eastcan Geomatics Limited	Halifax	Nova Scotia
MacDonnell Group	Halifax	Nova Scotia
Thales Survey Canada Ltd.	Enfield	Nova Scotia

Catalogue of Companies - Offshore Supply

The SGE Group Inc. (Nova Scotia)	Halifax	Nova Scotia
Gas Analysis/Apparatus		
ABB Inc.	Dartmouth	Nova Scotia
Gas Processing Equipment		
FGA Consultants Ltd.	Fredericton	New Brunswick
JUA Engineering	Oromocto	New Brunswick
Neill and Gunter Ltd.	Fredericton	New Brunswick
RPC	Fredericton	New Brunswick
Bailey Sea (NFLD) Ltd.	St. John's	Newfoundland
Control & Equipment Ltd.	St. John's	Newfoundland
Guigne Technologies Ltd.	St. John's	Newfoundland
M & M Engineering Limited	St. John's	Newfoundland
Oceans Limited	St. John's	Newfoundland
Peter Kiewit Sons Co. Ltd.	St. John's	Newfoundland
Coastal Ocean Associates Inc.	Dartmouth	Nova Scotia
Geophysical Services Incorporated	Windsor	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Romor Atlantic Limited	Dartmouth	Nova Scotia
Satlantic Inc.	Halifax	Nova Scotia
Gaskets		
Imperial Sheet Metal Ltd.	Richibucto	New Brunswick
C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
Crane Supply (Newfoundland)	St. John's	Newfoundland
EMCO Supply (Offshore)	Mount Pearl	Newfoundland
Murray Industrial Limited	St. John's	Newfoundland
Tubecraft Atlantic Ltd.	St. John's	Newfoundland
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Crane Supply - Halifax	Dartmouth	Nova Scotia
Goodall Rubber Company of Canada Limited	Dartmouth	Nova Scotia
W & A Moir Ltd.	Dartmouth	Nova Scotia
Gauges/Sales and Services		
Tubecraft Atlantic Ltd.	St. John's	Newfoundland
Gears		
Arvin Special Machinery Ltd.	Miramichi	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Maritime Industrial Machining Inc.	Saint John	New Brunswick
Meed's Machine Shop Ltd.	Bristol	New Brunswick
TRC Hydraulics Inc.	Mount Pearl	Newfoundland
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
Steel And Engine Products Limited	Liverpool	Nova Scotia
Wartsila NSD Canada Inc.	Dartmouth	Nova Scotia
Glycols		
East-Chem Inc.	Mount Pearl	Newfoundland
Van Waters & Rogers Ltd. (Newfoundland)	Paradise	Newfoundland

Catalogue of Companies - Offshore Supply

Alpha Chemical Limited	Dartmouth	Nova Scotia
HCI Canada Inc.	Dartmouth	Nova Scotia
Van Waters & Rogers Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Gravel packages		
Baker Hughes Canada Inc.	Mt. Pearl	Newfoundland
Mcnamara Construction Company	Paradise	Newfoundland
Shaw Resources	Milford	Nova Scotia
Grouting		
Vic Progressive Diamond Drilling Inc.	Sussex	New Brunswick
Arrow Construction Products Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Labrador Technologies & Development	North West River	Newfoundland
Maritime Drilling Supplies Inc.	St. John's	Newfoundland
Arrow Construction Products Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
Pro-Dive Marine Services (N.S.) Ltd.	Dartmouth	Nova Scotia
Hangars		
Baker Hughes Canada Inc.	Mt. Pearl	Newfoundland
Cougar Helicopters Inc. (Newfoundland)	St. John's	Newfoundland
Crane Supply (Newfoundland)	St. John's	Newfoundland
EMCO Supply (Offshore)	Mount Pearl	Newfoundland
Cougar Helicopters Inc. (Nova Scotia)	Waverley	Nova Scotia
Crane Supply - Halifax	Dartmouth	Nova Scotia
Hardware, Marine and Rigging		
CFM	Saint John	New Brunswick
AMI Offshore Inc.	St. John's	Newfoundland
Bridgeport Wire Rope & Chain Limited (Newfoundland)	St. John's	Newfoundland
G. Pelley Limited	Springdale	Newfoundland
Harbour International Ltd.	Bay Roberts	Newfoundland
Wire Rope Industries Ltd.	Mount Pearl	Newfoundland
A. Dauphinee & Sons Ltd.	Lunenburg	Nova Scotia
A.F. Theriault & Son Limited	Meteghan River	Nova Scotia
Atkinson & Bower Limited	Shelburne	Nova Scotia
Bridgeport Wire Rope & Chain Ltd	Dartmouth	Nova Scotia
Brooke Ocean Technology Limited	Dartmouth	Nova Scotia
CFM (Nova Scotia)	Dartmouth	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Wire Rope Industries Ltd.	Dartmouth	Nova Scotia
Hazardous Gas Detection Systems		
Avalon Controls Ltd.	St. John's	Newfoundland
Bailey Sea (NFLD) Ltd.	St. John's	Newfoundland
Control & Equipment Ltd.	St. John's	Newfoundland
Guigne Technologies Ltd.	St. John's	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
CKT Nova Scotia Limited	Bedford	Nova Scotia
Superior Vallen Safety Supply Company Ltd.	Dartmouth	Nova Scotia

Catalogue of Companies - Offshore Supply

Health/Medical Supply/Services/Equipment

3M CANADA COMPANY	Mount Pearl	Newfoundland
Atlantic Offshore Medical Services Ltd.	St. John's	Newfoundland
Atlantic Safety Centre	St. John's	Newfoundland
Medserv Solutions Inc.	St. John's	Newfoundland
Superior Vallen Safety Supply Company Ltd.	Dartmouth	Nova Scotia

Heat Treating - Equipment and Supplies

East-Chem Inc.	Mount Pearl	Newfoundland
Cooperheat of Canada Ltd.	Dartmouth	Nova Scotia
Maritime Stress Contracting Limited	Dartmouth	Nova Scotia
Technitherm Heat Treatment Services Limited	Dartmouth	Nova Scotia
TrentonWorks Ltd. Forging Division	Trenton	Nova Scotia

Heat Ventilation and Air Conditioning

A-1 Airtek Inc.	Edmundston	New Brunswick
BMS Offshore Limited (Newfoundland)	Mount Pearl	Newfoundland
Control & Equipment Ltd.	St. John's	Newfoundland
Hickman's Building Centre	St. John's	Newfoundland
Newfoundland Design Associates Ltd.	St. John's	Newfoundland
Alscott Air Systems Limited	Dartmouth	Nova Scotia
BMS Offshore Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
C.S.A. Enterprises Ltd.	Halifax	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Parker Brothers Contracting Ltd.	Waverley	Nova Scotia

Heavy Equipment and Industrial Dealer

Capital Crane Limited	Mount Pearl	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
United Rent-Alls Ltd.	Mount Pearl	Newfoundland
Atlantic Tractors & Equipment Limited	Halifax	Nova Scotia
A.W. Leil Cranes & Equipment Limited	Thorburn	Nova Scotia
G.W. Holmes Trucking Limited	Thorburn	Nova Scotia
Irving Equipment Division	Halifax	Nova Scotia

Helidecks

Cougar Helicopters Inc. (Newfoundland)	St. John's	Newfoundland
Friede Goldman Newfoundland Ltd.	Marystown	Newfoundland
ABB Inc.	Dartmouth	Nova Scotia
Cougar Helicopters Inc. (Nova Scotia)	Waverley	Nova Scotia

Hoists

Dynex Manufacturing Ltd.	Fredericton	New Brunswick
R & D Welding And Mechanical Contractors	Minto	New Brunswick
Associated Industrial Rubber Company Ltd. (Newfou	St. John's	Newfoundland
Basil Fearn ('93) Limited	St. John's	Newfoundland
Gamma Products Limited	St. John's	Newfoundland
Wire Rope Industries Ltd.	Mount Pearl	Newfoundland
Apex Industrial Supply Ltd.	Halifax	Nova Scotia
Associated Industrial Rubber Co.	Dartmouth	Nova Scotia
Atlantic Oilfield & Supplies	Dartmouth	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia

Catalogue of Companies - Offshore Supply

Mulgrave Machine Works Limited	Mulgrave	Nova Scotia
Thyssen Dover Crane	Dartmouth	Nova Scotia
Wire Rope Industries Ltd.	Dartmouth	Nova Scotia

Hoses

Associated Industrial Rubber Co. Ltd.	Moncton	New Brunswick
Atlantic Valve & Fittings Limited	Saint John	New Brunswick
CFM	Saint John	New Brunswick
Associated Industrial Rubber Company Ltd. (Newfou	St. John's	Newfoundland
C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
CFM Rigging and Industrial Sales (Newfoundland)	St. John's	Newfoundland
Hydraulic Systems Limited (Newfoundland)	St. John's	Newfoundland
LTS Sales Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
Tubecraft Atlantic Ltd.	St. John's	Newfoundland
Associated Industrial Rubber Co.	Dartmouth	Nova Scotia
Atlantic Tractors & Equipment Limited	Halifax	Nova Scotia
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Goodall Rubber Company of Canada Limited	Dartmouth	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
LTS Sales Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Schooner Industrial Limited	Dartmouth	Nova Scotia
Strictly Sales & Service Inc.	Dartmouth	Nova Scotia

Hydraulic Equipment - Sales/Service

CFM	Saint John	New Brunswick
Maritime Hydraulic Repair Cntr 1997 Ltd.	Moncton	New Brunswick
Associated Industrial Rubber Company Ltd. (Newfou	St. John's	Newfoundland
CFM Rigging and Industrial Sales (Newfoundland)	St. John's	Newfoundland
East Coast Hydraulics Nfld. Ltd.	Mount Pearl	Newfoundland
Hydraulic Systems Limited (Newfoundland)	St. John's	Newfoundland
Hyflodraulic Limited	Mount Pearl	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
Metalworks Ltd.	Bay Roberts	Newfoundland
Murray Industrial Limited	St. John's	Newfoundland
Newfoundland Service Alliance	St. John's	Newfoundland
Rideout Tool & Machine Inc.	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St. John's	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
TRC Hydraulics Inc.	Mount Pearl	Newfoundland
Tubecraft Atlantic Ltd.	St. John's	Newfoundland
Associated Industrial Rubber Co.	Dartmouth	Nova Scotia
Eastcoast Hydraulic & Machinery Ltd.	Mulgrave	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Mill Supply Ltd.	Dartmouth	Nova Scotia
Sea Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Strictly Sales & Service Inc.	Dartmouth	Nova Scotia
WCC Refurb Limited/WCC Offshore	Halifax	Nova Scotia

Ice Detection/Measuring Systems

CORETEC Incorporated	St. John's	Newfoundland
Cormorant Ltd.	St. John's	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland

Catalogue of Companies - Offshore Supply

Oceans Limited

St. John's

Newfoundland

Industrial Equipment and Supplies

ADI Group Inc.	Fredericton	New Brunswick
Malley Industries Inc.	Grand Bay	New Brunswick
Maritime Hydraulic Repair Cntr 1997 Ltd.	Moncton	New Brunswick
ProCraft Industrial	Moncton	New Brunswick
CFM	Saint John	New Brunswick
Arvin Special Machinery Ltd.	Miramichi	New Brunswick
Thermopak Ltée	Shippagan	New Brunswick
Tilley Manufacturing Ltd.	Arthurette	New Brunswick
Machinery Condition Monitoring Inc.	Saint John	New Brunswick
3M CANADA COMPANY	Mount Pearl	Newfoundland
AIMS Ltd.	Mount Pearl	Newfoundland
Air Liquide Canada Inc.	St. John's	Newfoundland
Associated Industrial Rubber Company Ltd. (Newfou	St. John's	Newfoundland
Axiom Engineering Ltd.	Mount Pearl	Newfoundland
Basil Fearn ('93) Limited	St. John's	Newfoundland
BMS Offshore Limited (Newfoundland)	Mount Pearl	Newfoundland
Bren-Kir Industrial Supplies	Mount Pearl	Newfoundland
C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
CFM Rigging and Industrial Sales (Newfoundland)	St. John's	Newfoundland
Compusult Limited	St. John's	Newfoundland
Cormorant Ltd.	Mount Pearl	Newfoundland
East Coast Hydraulics Nfld. Ltd.	Mount Pearl	Newfoundland
East-Chem Inc.	Mount Pearl	Newfoundland
Electro Mechanical Services Limited	Mount Pearl	Newfoundland
EMCO Ltd.- Westlund Industrial Supply	Mount Pearl	Newfoundland
Import Tool Corporation Ltd. (Nova Scotia)	Mount Pearl	Newfoundland
JADEnvironmental Friendly Water Treatment & Tech	Grand Bank	Newfoundland
LTS Sales Ltd. (Nova Scotia)	Mount Pearl	Newfoundland
Maritime Drilling Supplies Inc.	St. John's	Newfoundland
Matchless Group Inc.	St. John's	Newfoundland
M & M Engineering Limited	St. John's	Newfoundland
Murray Industrial Limited	St. John's	Newfoundland
Ozark Electrical Marine Ltd.	St. John's	Newfoundland
Pro-Glo Ltd.	St. John's	Newfoundland
Pro-Dive Marine Services (N.S.) Ltd.	Mount Pearl	Newfoundland
Puglisevich Group of Companies	St. John's	Newfoundland
Rideout Tool & Machine Inc.	St. John's	Newfoundland
Siemens - Westinghouse	St. John's	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
TRC Hydraulics Inc.	Mount Pearl	Newfoundland
United Rent-Alls Ltd.	Mount Pearl	Newfoundland
Western Petroleum	Riverhead Harbour C	Newfoundland
ABB Inc.	Dartmouth	Nova Scotia
ABCO Industries Limited	Lunenburg	Nova Scotia
Alpha Chemical Limited	Dartmouth	Nova Scotia
Apex Industrial Supply Ltd.	Halifax	Nova Scotia
Associated Industrial Rubber Co.	Dartmouth	Nova Scotia
Atlantic Hardchrome Limited	Dartmouth	Nova Scotia
Atlantic Oilfield & Supplies	Dartmouth	Nova Scotia
Atlantic Purification Systems Ltd.	Dartmouth	Nova Scotia
Atlantic Scale Company Limited	Bridgewater	Nova Scotia
Atlantic Tractors & Equipment Limited	Halifax	Nova Scotia

Catalogue of Companies - Offshore Supply

Baldwin & Francis Electrical	Sydney	Nova Scotia
Banc Metals	Dartmouth	Nova Scotia
BMS Offshore Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Bridgeport Wire Rope & Chain Ltd	Dartmouth	Nova Scotia
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
C.S.A. Enterprises Ltd.	Halifax	Nova Scotia
Electro Mechanical Services Limited	Dartmouth	Nova Scotia
Import Tool Corporation Ltd. (Newfoundland)	Dartmouth	Nova Scotia
Industrial Marine Products Ltd.	Dartmouth	Nova Scotia
JADEnvironmental Friendly Water Treatment & Tech	Dartmouth	Nova Scotia
J.D. Irving Limited (Offshore Services)	Halifax	
K & D Pratt Ltd.	Bedford	Nova Scotia
Kanus Administrative Services Inc.	Halifax	Nova Scotia
LTS Sales Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Matronic Communications/Trophy Gallery	Port Hawkesbury	Nova Scotia
Mill Supply Ltd.	Dartmouth	Nova Scotia
Peacock - Industrial Products Division	Dartmouth	Nova Scotia
Peacock Inc - Mechanical/Service Division	Dartmouth	Nova Scotia
Pro-Dive Marine Services (N.S) Ltd.	Dartmouth	Nova Scotia
Schlumberger of Canada	Dartmouth	Nova Scotia
Seatech Ltd.	Halifax	Nova Scotia
The Tool Box Industrial Distributor	Dartmouth	Nova Scotia
W & A Moir Ltd.	Dartmouth	Nova Scotia
Wade Company Ltd.	Halifax	Nova Scotia
Zep Manufacturing Company of Canada	Dartmouth	Nova Scotia

Instrument Sales/Service/Rental

Avalon Controls Ltd.	St. John's	Newfoundland
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Insulation Materials-Cold and Heat

Arrow Construction Products Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Crosbie Salamis Limited	St. John's	Newfoundland
East-Chem Inc.	Mount Pearl	Newfoundland
Arrow Construction Products Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Guildfords Inc.	Dartmouth	Nova Scotia
Parker Brothers Contracting Ltd.	Waverley	Nova Scotia

Intercommunication Equipment

Atlantic Electronics Limited	Mount Pearl	Newfoundland
BAE Systems Canada Inc. (Newfoundland)	St. John's	Newfoundland
DownEast TAS Communications	St. John's	Newfoundland
Provincial Airlines Limited	St. John's	Newfoundland
BAE Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Wild Blueberry Media	Halifax	Nova Scotia

Laboratory Equipment and Supplies

ADI Group Inc.	Fredericton	New Brunswick
East-Chem Inc.	Mount Pearl	Newfoundland
Gamma Products Limited	St. John's	Newfoundland
The Scale Shop (1985) Ltd.	Mount Pearl	Newfoundland
Atlantic Scale Company Limited	Bridgewater	Nova Scotia
Seatech Ltd.	Halifax	Nova Scotia

Catalogue of Companies - Offshore Supply

Van Waters & Rogers Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Leak Detectors/Sealing		
Atlantic Valve & Fittings Limited	Saint John	New Brunswick
AMI Offshore Inc.	St. John's	Newfoundland
Newsco Well Service Limited (Newfoundland)	St. John's	Newfoundland
Newsco Well Service Limited (Nova Scotia)	Dartmouth	Nova Scotia
Level Controls-Liquid		
Avalon Controls Ltd.	St. John's	Newfoundland
Control & Equipment Ltd.	St. John's	Newfoundland
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
Lighting Systems and Equipment		
Irving Shipbuilding Inc.	Saint John	New Brunswick
Malley Industries Inc.	Moncton	New Brunswick
The Panel Shop	Fredericton	New Brunswick
Mariteam Lighting Inc.	St. John's	Newfoundland
McLoughlan Supplies Ltd.	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
Terra Nova Marine Co. Ltd.	Mount Pearl	Newfoundland
20/20 Electric Company Ltd.	Sydney	Nova Scotia
Ainsworth Atlantic (A Division of Ainsworth Inc.)	Dartmouth	Nova Scotia
C.S.A. Enterprises Ltd.	Halifax	Nova Scotia
CTH Instruments Ltd.	Dartmouth	Nova Scotia
Lewis Engineering Inc.	Halifax	Nova Scotia
Sea Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Line Pipe		
Irving Shipbuilding Inc.	Saint John	New Brunswick
L & A Metalworks Inc.	Fredericton	New Brunswick
RASCO Specialty Metals Inc.	Saint John	New Brunswick
Savoie Lighting Inc.	Bouctouche	New Brunswick
Strescon Limited	Saint John	New Brunswick
Valron Engineers Inc	Moncton	New Brunswick
Acres International Limited (Newfoundland)	St. John's	Newfoundland
C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
Crane Supply (Newfoundland)	St. John's	Newfoundland
East Coast Tubulars Ltd.	Paradise	Newfoundland
Fab-Tech Industries Inc.	Glovertown	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
Acres International Ltd. (Nova Scotia)	Halifax	Nova Scotia
Atkinson & Bower Limited	Shelburne	Nova Scotia
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Crane Supply - Halifax	Dartmouth	Nova Scotia
EMCO Ltd.- Westlund Industrial Supply	Dartmouth	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
L.D. Campbell Machine Services	Antigonish	Nova Scotia
Lubricating Devices and Systems		
Pro-Glo Ltd.	St. John's	Newfoundland

Catalogue of Companies - Offshore Supply

Machine Shop/Supplies

Arvin Special Machinery Ltd.	Miramichi	New Brunswick
C&W Industrial Fabrication & Marine Equipment Ltd.	Bay Bulls	Newfoundland
E. Tucker And Sons Limited	Topsail	Newfoundland
Garland Systems Ltd.	Mount Pearl	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
Murray Industrial Limited	St. John's	Newfoundland
Rideout Tool & Machine Inc.	St. John's	Newfoundland
Steelfab Industries Limited	Paradise	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
ABCO Industries Limited	Lunenburg	Nova Scotia
Atlantic Hardchrome Limited	Dartmouth	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
Maritime Steel And Foundries Limited	New Glasgow	Nova Scotia

Manifolds

Atlantic Valve & Fittings Limited	Saint John	New Brunswick
EMCO Supply (Offshore)	Mount Pearl	Newfoundland
FMC of Canada Ltd. (Newfoundland)	St. John's	Newfoundland
Wright Systems & Equipment	Charlottetown	Prince Edward Isl.

Manufacturers, Agents and Distributors

Qip Equipment Ltd.	Saint John	New Brunswick
Aluma Systems Canada Inc.	St. John's	Newfoundland
Associated Industrial Rubber Company Ltd. (Newfou	St. John's	Newfoundland
Control & Equipment Ltd.	St. John's	Newfoundland
EMCO Supply (Offshore)	Mount Pearl	Newfoundland
Hi-Point Industries (1991) Ltd.	Bishops Falls	Newfoundland
International Paints Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Metalworks Ltd.	Bay Roberts	Newfoundland
Montship Inc.	Stephenville	Newfoundland
Rideout Tool & Machine Inc.	St. John's	Newfoundland
Tubecraft Atlantic Ltd.	St. John's	Newfoundland
Wire Rope Industries Ltd.	Mount Pearl	Newfoundland
Aluma Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Associated Industrial Rubber Co.	Dartmouth	Nova Scotia
Associated Marine Equipment Limited	Dartmouth	Nova Scotia

Catalogue of Companies - Offshore Supply

CKT Nova Scotia Limited	Bedford	Nova Scotia
International Paints Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Marine Equipment/Services		
Atlantic Towing Limited	Saint John	New Brunswick
Afonso Diving Contractors Ltd.	St. John's	Newfoundland
A.J. Maritime Inc.	St. John's	Newfoundland
AMI Offshore Inc.	St. John's	Newfoundland
Atlantis International Ltd.	St. John's	Newfoundland
Basil Fearn ('93) Limited	St. John's	Newfoundland
C-MAR Newfoundland Inc.	St. John's	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
Davis Shipping Ltd.	Wesleyville	Newfoundland
Dominion Diving Ltd. (Newfoundland)	Mount Pearl	Newfoundland
East Coast Hydraulics Nfld. Ltd.	Mount Pearl	Newfoundland
Friede Goldman Newfoundland Ltd.	Marystown	Newfoundland
Harbour International Ltd.	Bay Roberts	Newfoundland
Hydraulic Systems Limited (Newfoundland)	St. John's	Newfoundland
IMP Group Limited (Marine Division)	St. John's	Newfoundland
Kometik	St. John's	Newfoundland
Marineside Surveys Ltd.	Mount Pearl	Newfoundland
Metalworks Ltd.	Bay Roberts	Newfoundland
Newdock - St. John's Dockyard Ltd.	St. John's	Newfoundland
Ozark Electrical Marine Ltd.	St. John's	Newfoundland
Pro-Dive Marine Services (NFLD)	Mount Pearl	Newfoundland
Puddister Trading Company Limited	St. John's	Newfoundland
Seabase Limited	St. John's	Newfoundland
Secunda Marine Services Limited (Newfoundland)	St. John's	Newfoundland
Syndicated Management Services Ltd. (SMS)	St. John's	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
Associated Marine Equipment Limited	Dartmouth	Nova Scotia
Beaver Marine Ltd.	Halifax	Nova Scotia
Canada Steamship Lines	Bedford	Nova Scotia
CKT Nova Scotia Limited	Bedford	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
DSS Marine Inc.	Bedford	Nova Scotia
Eastcoast Hydraulic & Machinery Ltd.	Mulgrave	Nova Scotia
Eastern Canada Towing Ltd.	Halifax	Nova Scotia
Global Maritime	Dartmouth	Nova Scotia
Hart Industrial Communications	Dartmouth	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
IMP Group Limited (Nova Scotia)	Dartmouth	Nova Scotia
K & D Pratt Ltd.	Dartmouth	Nova Scotia
Lloyd's Register North America Inc.	Halifax	Nova Scotia
Oceanside Equipment	Dartmouth	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
Pro-Dive Marine Services (N.S.) Ltd.	Dartmouth	Nova Scotia
Reliance Offshore	Halifax	Nova Scotia
Robin Maritime Inc.	Dartmouth	Nova Scotia
Rolls-Royce Canada Ltd.	Dartmouth	Nova Scotia
Romor Atlantic Limited	Dartmouth	Nova Scotia

Catalogue of Companies - Offshore Supply

Seatech Ltd.	Halifax	Nova Scotia
Secunda Marine Services Limited (Nova Scotia)	Dartmouth	Nova Scotia
Seimac Limited	Dartmouth	Nova Scotia
Siemens Westinghouse Technical Services	Dartmouth	Nova Scotia
Survival Systems Training Limited	Dartmouth	Nova Scotia
The Binnacle Yachting Equipment & Accessories Ltd	Halifax	Nova Scotia
C-Mar Services (Canada) Ltd.	Summerside	Prince Edward Isl.

Material Handling Equipment

Allain Equipment Manufacturing Ltd.	Notre-Dame	New Brunswick
AQTS	Saint John	New Brunswick
B.I.D. Canada Ltd.	Lower Woodstock	New Brunswick
Dynex Manufacturing Ltd.	Fredericton	New Brunswick
Fundy Engineering & Consulting Ltd.	Saint John	New Brunswick
Interface Consultants Inc.	Moncton	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
L & A Metalworks Inc.	Fredericton	New Brunswick
Lizotte Consultants Ltee	Riviere-Verte	New Brunswick
Neill And Gunter Ltd.	Fredericton	New Brunswick
Rpc	Fredericton	New Brunswick
Trent Industrial Contractors Ltd.	Saint John	New Brunswick
A. Harvey & Company Limited	St. John's	Newfoundland
AIMS Ltd.	Mount Pearl	Newfoundland
Associated Industrial Rubber Company Ltd. (Newfou	St. John's	Newfoundland
Basil Fearn ('93) Limited	St. John's	Newfoundland
Bren-Kir Industrial Supplies	Mount Pearl	Newfoundland
Bridgeport Wire Rope & Chain Limited (Newfoundlar	St. John's	Newfoundland
Electro Mechanical Services Limited	Mount Pearl	Newfoundland
LTS Sales Ltd. (Nova Scotia)	Mount Pearl	Newfoundland
Trent Industrial Contractors Ltd.	Saint John	Newfoundland
United Rent-Alls Ltd.	Mount Pearl	Newfoundland
ABCO Industries Limited	Lunenburg	Nova Scotia
Associated Industrial Rubber Co.	Lunenburg	Nova Scotia
Atlantic Oilfield & Supplies	Dartmouth	Nova Scotia
Bridgeport Wire Rope & Chain Ltd	Dartmouth	Nova Scotia
LTS Sales Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Maritime Steel and Foundries Limited	Dartmouth	Nova Scotia
Peacock - Industrial Products Division	Dartmouth	Nova Scotia
Peacock Inc - Mechanical/Service Division	Dartmouth	Nova Scotia
The Shaw Group Limited	Lantz	Nova Scotia
Thyssen Dover Crane	Dartmouth	Nova Scotia
Wayland Engineering Ltd.	Halifax	Nova Scotia

Catalogue of Companies - Offshore Supply

Meters and Metering Systems

Avalon Controls Ltd.	St. John's	Newfoundland
LTS Sales Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Rideout Tool & Machine Inc.	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
LTS Sales Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
Rolls-Royce Canada Ltd.	Dartmouth	Nova Scotia
Seimac Limited	Dartmouth	Nova Scotia

Mud and Fluids

Baker Hughes Canada Inc.	Mt. Pearl	Newfoundland
IPM Services - Division of Schlumberger Canada Lin	Mount Pearl	Newfoundland
Maritime Drilling Supplies Inc.	St. John's	Newfoundland
Petro-Canada Industrial Sales Newfoundland (PRO	St. John's	Newfoundland
Atlantic Oilfield & Supplies	Dartmouth	Nova Scotia
Baker Hughes INTEQ	Dartmouth	Nova Scotia

Navigation Aids

Irving Shipbuilding Inc.	Saint John	New Brunswick
Atlantic Electronics Limited	Mount Pearl	Newfoundland
BAE Systems Canada Inc. (Newfoundland)	St. John's	Newfoundland
Canadian Centre for Marine Communication	St. John's	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
Cormorant Ltd.	St. John's	Newfoundland
Marine Institute	St. John's	Newfoundland
Oceans Limited	St. John's	Newfoundland
Terra Nova Marine Co. Ltd.	Mount Pearl	Newfoundland
Associated Marine Equipment Limited	Dartmouth	Nova Scotia
BAE Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
CTH Instruments Ltd.	Dartmouth	Nova Scotia
Eastcan Geomatics Limited	Halifax	Nova Scotia
Geophysical Services Incorporated	Windsor	Nova Scotia
Internav Ltd.	Sydney	Nova Scotia
The Binnacle Yachting Equipment & Accessories Ltd	Halifax	Nova Scotia

Nitrogen Service

Air Liquide Canada Inc.	St. John's	Newfoundland
AMI Offshore Inc.	St. John's	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Nowsco Well Service Limited (Newfoundland)	St. John's	Newfoundland
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
HCI Canada Inc.	Dartmouth	Nova Scotia
Nowsco Well Service Limited (Nova Scotia)	Dartmouth	Nova Scotia

Offshore Housing and Equipment

Friede Goldman Newfoundland Ltd.	Marystown	Newfoundland
Sheppard Case Architects Inc.	St. John's	Newfoundland
Atkinson & Bower Limited	Shelburne	Nova Scotia
Fabco Industries Limited	Dartmouth	Nova Scotia
WCC Refurb Limited/WCC Offshore	Halifax	Nova Scotia

Offshore Loading Systems

Catalogue of Companies - Offshore Supply

Irving Shipbuilding Inc.	Saint John	New Brunswick
Atlantic Safety Centre	St. John's	Newfoundland
C-CORE	St. John's	Newfoundland
Marineering Limited	St. John's	Newfoundland
Pennecon Limited	St. John's	Newfoundland
RTD Quality Services Inc.	St. John's	Newfoundland
Blue Water Agencies Ltd.	Dartmouth	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
Kongsberg Simrad Mestech Ltd.	Dartmouth	Nova Scotia
RTD Quality Services Inc.	New Glasgow	Nova Scotia

Oil and gas Producers, Explorers and Developers

Hibernia Management and Development Company L	St. John's	Newfoundland
Husky Oil Operations Ltd.	St. John's	Newfoundland
Irving Oil Limited	St. John's	Newfoundland
Newfoundland Transshipment Limited	St. John's	Newfoundland
Petro-Canada Industrial Sales Newfoundland (PRO	St. John's	Newfoundland
Petro-Canada Offshore Development and Operation:	St. John's	Newfoundland
Vinland Petroleum Inc.	St. John's	Newfoundland
Corridor Resources Inc.	Halifax	Nova Scotia
Nordic Canadian Shipping Ltd.	Halifax	Nova Scotia
PanCanadian Petroleum Limited	Halifax	Nova Scotia
Rowan Companies Inc.	Dartmouth	Nova Scotia
Sable Offshore Energy Inc.	Halifax	Nova Scotia

Oil Field Equipment/Services/Supplies

Associated Industrial Rubber Company Ltd. (Newfou	St. John's	Newfoundland
Atlantis International Ltd.	St. John's	Newfoundland
Baker Hughes Canada Inc.	Mt. Pearl	Newfoundland
C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
Davis Shipping Ltd.	Wesleyville	Newfoundland
Dominion Diving Ltd. (Newfoundland)	Mount Pearl	Newfoundland
East-Chem Inc.	Mount Pearl	Newfoundland
East Coast Hydraulics Nfld. Ltd.	Mount Pearl	Newfoundland
F I Canada Oilfield Services Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Import Tool Corporation Ltd. (Newfoundland)	Mount Pearl	Newfoundland
IPM Services - Division of Schlumberger Canada Lin	Mount Pearl	Newfoundland
Nowasco Well Service Limited (Newfoundland)	St. John's	Newfoundland
Puglisevich Group of Companies	St. John's	Newfoundland
APA (Nova Scotia) Limited	Halifax	Nova Scotia
Associated Industrial Rubber Co.	Dartmouth	Nova Scotia
Atlantic Hardchrome Limited	Dartmouth	Nova Scotia
Atlantic Oilfield & Supplies	Dartmouth	Nova Scotia
Baker Hughes INTEQ	Dartmouth	Nova Scotia
Baker Oil Tools	Dartmouth	Nova Scotia
Banc Metals	Dartmouth	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
Eastcoast Hydraulic & Machinery Ltd.	Mulgrave	Nova Scotia
F I Canada Oilfield Services Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Fred C. Morrison Ltd.	Dartmouth	Nova Scotia
Goodall Rubber Company of Canada Limited	Dartmouth	Nova Scotia
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia

Catalogue of Companies - Offshore Supply

Import Tool Corporation Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
J.D. Irving, Limited (Offshore Services)	Halifax	Nova Scotia
Mattronic Communications/Trophy Gallery	Port Hawkesbury	Nova Scotia
Nowasco Well Service Limited (Nova Scotia)	Dartmouth	Nova Scotia
Parker Brothers Contracting Ltd.	Waverley	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
Santa Fe Drilling Company (Canada) Limited	Bedford	Nova Scotia
Schlumberger of Canada	Dartmouth	Nova Scotia
Seaboard Offshore Services Ltd.	Port Hawkesbury	Nova Scotia
Smith International Canada, Ltd. (N.S.)	Boutiliers Point	Nova Scotia

Oil Spill Control Protection Equipment/Service

3M CANADA COMPANY	Mount Pearl	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
Cormorant Ltd.	St. John's	Newfoundland
Dominion Diving Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Hi-Point Industries (1991) Ltd.	Bishops Falls	Newfoundland
Maritime Drilling Supplies Inc.	St. John's	Newfoundland
Pro-Glo Ltd.	St. John's	Newfoundland
Associated Marine Equipment Limited	Dartmouth	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
F I Canada Oilfield Services Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Industrial Environmental Services Incorporated	Debert	Nova Scotia
Statia Terminals Canada Inc.	Port Hawkesbury	Nova Scotia
Superior Vallen Safety Supply Company Ltd.	Dartmouth	Nova Scotia

Oil/Water Separators

Baker Hughes Canada Inc.	Mt. Pearl	Newfoundland
Crane Supply (Newfoundland)	St. John's	Newfoundland
Hi-Point Industries (1991) Ltd.	Bishops Falls	Newfoundland
LTS Sales Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Alfa Laval Inc.	Dartmouth	Nova Scotia
Associated Marine Equipment Limited	Dartmouth	Nova Scotia
Crane Supply - Halifax	Dartmouth	Nova Scotia
GS Concrete	Windsor	Nova Scotia
LTS Sales Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Oak Environmental Equipment Supply Ltd.	Calgary	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
Steel And Engine Products Limited	Liverpool	Nova Scotia

Catalogue of Companies - Offshore Supply

Outfall Lines

Pro-Dive Marine Services (NFLD)	Mount Pearl	Newfoundland
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Packers

Cape Bald Packers Ltd.	Cap-Pele	New Brunswick
Ionizing Energy Company of Canada Ltd.	Fredericton	New Brunswick
Baker Hughes Canada Inc.	Mt. Pearl	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Import Tool Corporation Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Maritime Drilling Supplies Inc.	St. John's	Newfoundland
Adams Fisheries Limited	Shag Harbour	Nova Scotia
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Import Tool Corporation Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Larsen Packers Ltd.	Berwick	Nova Scotia
Mersey Point Fish Products Ltd.	Liverpool	Nova Scotia
Sable Fish Packers (1988) Limited	South Side	Nova Scotia

Packing and Jointing

Associated Industrial Rubber Company Ltd. (Newfou	St. John's	Newfoundland
Associated Industrial Rubber Co.	Dartmouth	Nova Scotia

Packing Materials-Mechanical

Murray Industrial Limited	St. John's	Newfoundland
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Petroleum Products

AMEC Earth and Environmental Ltd.	Fredericton	New Brunswick
Neill and Gunter Ltd.	Fredericton	New Brunswick
The Panel Shop	Fredericton	New Brunswick
Three-D GeoConsultants Ltd.	Fredericton	New Brunswick
Baker Hughes Canada Inc.	Mt. Pearl	Newfoundland
C-CORE	St. John's	Newfoundland
Husky Oil Operations Ltd.	St. John's	Newfoundland
Imperial Oil	St. John's	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
Irving Oil Limited	St. John's	Newfoundland
North Atlantic Petroleum	St. John's	Newfoundland
Petro-Canada Industrial Sales Newfoundland (PRO	St. John's	Newfoundland
Quinnsway Transport Ltd.	Mount Pearl	Newfoundland
Superior Waterproof Coatings	Gander	Newfoundland
Ultramar Canada Inc.	St. John's	Newfoundland
Western Petroleum	Riverhead Harbour C	Newfoundland
Atlantic Controls	Halifax	Nova Scotia
Bio-Response Systems Limited	Dartmouth	Nova Scotia
Cadillac Plastic Canada Ltd.	Dartmouth	Nova Scotia
DalTech, Dalhousie University	Halifax	Nova Scotia
DGI Ltd.	Halifax	Nova Scotia
Grinnell Fire Protection	Dartmouth	Nova Scotia
Guptill Consulting Services	Brookside	Nova Scotia
Industrial Environmental Services Incorporated	Debert	Nova Scotia
INLAND TECHNOLOGIES INC.	Truro	Nova Scotia
Jacques Whitford	Dartmouth	Nova Scotia
Mulgrave Machine Works Limited	Mulgrave	Nova Scotia
Quantex Technologies Incorporated	Dartmouth	Nova Scotia

Catalogue of Companies - Offshore Supply

Saybolt Canada Limited	Dartmouth	Nova Scotia
Seatech Ltd.	Halifax	Nova Scotia
Statia Terminals Canada Inc.	Port Hawkesbury	Nova Scotia
Superior Vallen Safety Supply Company Ltd.	Dartmouth	Nova Scotia
TekMap Consulting	Lake Fletcher	Nova Scotia

Pigs

Afonso Diving Contractors Ltd.	St. John's	Newfoundland
AMI Offshore Inc.	St. John's	Newfoundland
Newsco Well Service Limited (Newfoundland)	St. John's	Newfoundland
Newsco Well Service Limited (Nova Scotia)	Dartmouth	Nova Scotia

Pipeline Developers

Newfoundland Transshipment Limited	St. John's	Newfoundland
North Atlantic Petroleum	St. John's	Newfoundland
Petro-Canada Industrial Sales Newfoundland (PRO	St. John's	Newfoundland
Allseas Canada Ltd.	Halifax	Nova Scotia
Atlantic Gas Engineers	Halifax	Nova Scotia

Pressure Equipment/Services

Bowringer Engineering Ltd.	St. John's	Newfoundland
East Coast Hydraulics Nfld. Ltd.	Mount Pearl	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Hydraulic Systems Limited (Newfoundland)	St. John's	Newfoundland
Newdock - St. John's Dockyard Ltd.	St. John's	Newfoundland
Newsco Well Service Limited (Newfoundland)	St. John's	Newfoundland
Pro-Glo Ltd.	St. John's	Newfoundland
Banc Metals	Dartmouth	Nova Scotia
Eastcoast Hydraulic & Machinery Ltd.	Mulgrave	Nova Scotia
Goodall Rubber Company of Canada Limited	Dartmouth	Nova Scotia
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Mobile Valve Repairs Ltd.	Mount Uniacke	Nova Scotia
Newsco Well Service Limited (Nova Scotia)	Dartmouth	Nova Scotia
Parker Brothers Contracting Ltd.	Waverley	Nova Scotia
Romor Atlantic Limited	Dartmouth	Nova Scotia

Prestress Concrete

ConPro Group Limited	St. John's	Newfoundland
Mcnamara Construction Company	Paradise	Newfoundland

Pump Equipment/Services

Afonso Diving Contractors Ltd.	St. John's	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
LTS Sales Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Newfoundland Service Alliance	St. John's	Newfoundland
Newsco Well Service Limited (Newfoundland)	St. John's	Newfoundland
Ozark Electrical Marine Ltd.	St. John's	Newfoundland
ProArc Fabricating Ltd.	Mount Pearl	Newfoundland
United Rent-Alls Ltd.	Mount Pearl	Newfoundland
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
LTS Sales Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Newsco Well Service Limited (Nova Scotia)	Dartmouth	Nova Scotia
Peacock Inc. - Mechanical/Service Division	Dartmouth	Nova Scotia

Radar Equipment/Systems/Services

Atlantic Electronics Limited	Mount Pearl	Newfoundland
BAE Systems Canada Inc. (Newfoundland)	St. John's	Newfoundland
BAE Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Kongsberg Simrad Mestech Ltd.	Dartmouth	Nova Scotia
Nova Communications	Dartmouth	Nova Scotia

Recording Instruments-Industrial and Scientific

Cormorant Ltd.	St. John's	Newfoundland
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Refinery Equipment

Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
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Refrigeration

A-1 Airtek Inc.	Edmundston	New Brunswick
Advanced Energy Management Limited	Moncton	New Brunswick
AMF - Atlantic Mini-Fridge Co. Ltd.	Dieppe	New Brunswick
MAXCOR INTERNATIONAL	Fredericton	New Brunswick
C-CORE	St. John's	Newfoundland
Newdock - St. John's Dockyard Ltd.	St. John's	Newfoundland
Petro-Canada Industrial Sales Newfoundland (PROI	St. John's	Newfoundland
Alscott Air Systems Limited	Dartmouth	Nova Scotia
Frigidex Refrigeration Services Inc.	Kentville	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Lewis Engineering Inc.	Halifax	Nova Scotia
Newmac Mfg. Inc.	Debert	Nova Scotia
Nova Magnetics Limited	Dartmouth	Nova Scotia
Tavel Ltd.	Halifax	Nova Scotia
Thermo Dynamics Ltd.	Dartmouth	Nova Scotia
Coles Associates Ltd.	Charlottetown	Prince Edward Isl.
GORMAN CONTROLS LTD.	Bonshaw	Prince Edward Isl.

Catalogue of Companies - Offshore Supply

Regulators

Atlantic Controls Ltd. (New Brunswick)	Saint John	New Brunswick
Smith Brokerage Limited	Saint John	New Brunswick
Rideout Tool & Machine Inc.	St. John's	Newfoundland
Annapolis Valley Peat Moss Co. Ltd.	Berwick	Nova Scotia
Atlantic Controls	Halifax	Nova Scotia
Atlantic Scale Company Limited	Bridgewater	Nova Scotia
Fossil Power Systems Inc.	Dartmouth	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia

Rubber Products

Associated Industrial Rubber Co. Ltd.	Moncton	New Brunswick
Icer's Inc.	Fredericton	New Brunswick
Industrial Rubber Company Ltd.	Bathurst	New Brunswick
MAXCOR INTERNATIONAL	Fredericton	New Brunswick
RPC	Fredericton	New Brunswick
Associated Industrial Rubber Company Ltd. (Newfou	St. John's	Newfoundland
Import Tool Corporation Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Superior Waterproof Coatings	Gander	Newfoundland
Alard Plastics Inc.	Musquodoboit Harbo	Nova Scotia
Associated Industrial Rubber Co.	Dartmouth	Nova Scotia
Atkinson & Bower Limited	Shelburne	Nova Scotia
CFM (Nova Scotia)	Dartmouth	Nova Scotia
Goodall Rubber Company of Canada Limited	Dartmouth	Nova Scotia
Import Tool Corporation Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
L.D. Campbell Machine Services	Antigonish	Nova Scotia
Romor Atlantic Limited	Dartmouth	Nova Scotia
Schooner Industrial Limited	Dartmouth	Nova Scotia
Iav Capital Inc	Vernon River	Prince Edward Isl.

Safety Equipment/Services

3M CANADA COMPANY	Mount Pearl	Newfoundland
Atlantic Safety Centre	St. John's	Newfoundland
Bren-Kir Industrial Supplies	Mount Pearl	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
IMP Group Limited (Marine Division)	St. John's	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
Medserv Solutions Inc.	St. John's	Newfoundland
Murray Industrial Limited	St. John's	Newfoundland
Pro-Dive Marine Services (NFLD)	Mount Pearl	Newfoundland
Puglisevich Group of Companies	St. John's	Newfoundland
Associated Marine Equipment Limited	Dartmouth	Nova Scotia
Atlantic Oilfield & Supplies	Dartmouth	Nova Scotia
DSS Marine Inc.	Bedford	Nova Scotia
Goodall Rubber Company of Canada Limited	Dartmouth	Nova Scotia
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
IMP Group Limited (Nova Scotia)	Dartmouth	Nova Scotia
Integrated Health Services (I.H.S.) Atlantic Inc.	Dartmouth	Nova Scotia
K & D Pratt Ltd.	Dartmouth	Nova Scotia
Lloyd's Register North America Inc.	Halifax	Nova Scotia
Matronic Communications/Trophy Gallery	Port Hawkesbury	Nova Scotia
Mill Supply Ltd.	Dartmouth	Nova Scotia
Mobile Valve Repairs Ltd.	Mount Uniacke	Nova Scotia

Catalogue of Companies - Offshore Supply

Pro-Dive Marine Services (N.S.) Ltd.	Dartmouth	Nova Scotia
Reliance Offshore	Halifax	Nova Scotia
Seatech Ltd.	Halifax	Nova Scotia
Siemens Westinghouse Technical Services	Dartmouth	Nova Scotia
Superior Vallen Safety Supply Company Ltd.	Dartmouth	Nova Scotia
Survival Systems Training Limited	Dartmouth	Nova Scotia
The Tool Box Industrial Distributor	Dartmouth	Nova Scotia

Samples and Sampling Equipment

Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Jacques Whitford Environmental	St. John's	Newfoundland
EnvironChem Engineering Consultants	Wolfville	Nova Scotia
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Jacques Whitford Environment Limited	Dartmouth	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
Saybolt Canada Limited	Dartmouth	Nova Scotia
Seatech Ltd.	Halifax	Nova Scotia

Sandblasting/Equipment

Bren-Kir Industrial Supplies	Mount Pearl	Newfoundland
Coating Solutions Corporation	St. John's	Newfoundland
Crosbie Salamis Limited	St. John's	Newfoundland
Garland Systems Ltd.	Mount Pearl	Newfoundland
Metalworks Ltd.	Bay Roberts	Newfoundland
Metal World Inc.	Torbay	Newfoundland
Atlantic Purification Systems Ltd.	Dartmouth	Nova Scotia
Mills Painting & Sandblasting Limited	Dartmouth	Nova Scotia
Parker Brothers Contracting Ltd.	Waverley	Nova Scotia
Shaw Resources	Milford	Nova Scotia

Scanning Technologies

Concept + Inc.	Moncton	New Brunswick
Lexi-tech International Inc.	Dieppe	New Brunswick
Compusult Limited	Mount Pearl	Newfoundland
Kongsberg Simrad Mestech Ltd.	Dartmouth	Nova Scotia
Baseline Business Geographics Inc.	Charlottetown	Prince Edward Isl.
Lanworks Technologies Co.	Mississauga	Prince Edward Isl.

Security Systems

ASG Technologies	Fredericton	New Brunswick
Cormier Gibbs	Moncton	New Brunswick
Digital Edge a Division of EBSI Canada	Miramichi	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Kara Interactive Systems Corp	Fredericton	New Brunswick
NCA Microelectronics Inc.	Saint John	New Brunswick
Sapience Educational Systems Inc.	Miramichi	New Brunswick
Compusult Limited	Mount Pearl	Newfoundland
DownEast TAS Communications	St. John's	Newfoundland
Infotech Canada Inc.	St. John's	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
xwave solutions	St. John's	Newfoundland
Armament Technology	Halifax	Nova Scotia
Atlantic Data Group	Halifax	Nova Scotia

Catalogue of Companies - Offshore Supply

Computerease Limited	Dartmouth	Nova Scotia
Donald T. Matheson Engineering Limited	Halifax	Nova Scotia
Mattronic Communications/Trophy Gallery	Port Hawkesbury	Nova Scotia
Performance.net	Dartmouth	Nova Scotia
Sybertooth Inc.	Halifax	Nova Scotia
Wild Blueberry Media	Halifax	Nova Scotia
Coles Associates Ltd.	Charlottetown	Prince Edward Isl.
Richard Ball & Associates	Charlottetown	Prince Edward Isl.
Wright Systems & Equipment	Charlottetown	Prince Edward Isl.

Sensors

Greystone Energy Systems Inc.	Moncton	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
RPC	Fredericton	New Brunswick
Avalon Controls Ltd.	St. John's	Newfoundland
Canadian Centre for Marine Communication	St. John's	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St. John's	Newfoundland
Atlantic Scale Company Limited	Bridgewater	Nova Scotia
Coastal Ocean Associates Inc.	Dartmouth	Nova Scotia
Hermes Electronics Incorporated	Dartmouth	Nova Scotia
Instrument Concepts Inc.	Great Village	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
OPEN SEAS INSTRUMENTATION INC.	Musquodoboit Harbo	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
Pro-Oceanus Systems, Inc.	Brookside	Nova Scotia
Romor Atlantic Limited	Dartmouth	Nova Scotia
Satlantic Inc.	Halifax	Nova Scotia

Shipping Supplies and Services

Afonso Diving Contractors Ltd.	St. John's	Newfoundland
Atlantis International Ltd.	St. John's	Newfoundland
Blue Peter Steamships Ltd.	St. John's	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
Davis Shipping Ltd.	Wesleyville	Newfoundland
Eimskip Newfoundland	St. John's	Newfoundland
Harbour International Ltd.	Bay Roberts	Newfoundland
Labrador Technologies & Development	North West River	Newfoundland
LeDrew's Express Ltd.	Mount Pearl	Newfoundland
Metal World Inc.	Torbay	Newfoundland
Montship Inc.	Stephenville	Newfoundland
Pro-Dive Marine Services (NFLD)	Mount Pearl	Newfoundland
Operating Name: Secunda Marine Services Limited (I	St. John's	Newfoundland
Canada Steamship Lines	Bedford	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
K & D Pratt Ltd.	Dartmouth	Nova Scotia
Midland Transport Limited	Dartmouth	Nova Scotia
Nordic Canadian Shipping Ltd.	Halifax	Nova Scotia
Robin Maritime Inc.	Dartmouth	Nova Scotia
RST Industries	Dartmouth	Nova Scotia
Secunda Marine Services Limited (Nova Scotia)	Dartmouth	Nova Scotia
Seimac Limited	Dartmouth	Nova Scotia

Catalogue of Companies - Offshore Supply

Simulator

MONCTON FLIGHT COLLEGE LTD.	Dieppe	New Brunswick
AMI Offshore Inc.	St. John's	Newfoundland
BAE Systems Canada Inc. (Newfoundland)	St. John's	Newfoundland
Fabcon Canada Limited (FCL)	St. John's	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
Marine Institute	St. John's	Newfoundland
Oceanic Consulting Corporation	St. John's	Newfoundland
BAE Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Internav Ltd.	Sydney	Nova Scotia
Sd Software Group, The	Bedford	Nova Scotia
Simulation Technologies Limited	Dartmouth	Nova Scotia
Survival Systems Group Ltd.	Dartmouth	Nova Scotia
Survival Systems Industrial Limited	Dartmouth	Nova Scotia

Slip Rings

Electro Mechanical Services Limited	Mount Pearl	Newfoundland
Focal Technologies Corp.	Dartmouth	Nova Scotia

Sonar

Irving Shipbuilding Inc.	Saint John	New Brunswick
Atlantic Electronics Limited	Saint John	Newfoundland
BAE Systems Canada Inc. (Newfoundland)	St. John's	Newfoundland
Guigne Technologies Ltd.	St. John's	Newfoundland
Northstar Network Ltd.	St. John's	Newfoundland
AMIRIX Systems Inc. (formerly Applied Microelectronic)	Halifax	Nova Scotia
Atlantic Alliance Offshore Ltd.	Dartmouth	Nova Scotia
BAE Systems Canada Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Canadian Seabed Research Limited	Porters Lake	Nova Scotia
Composites Atlantic Limited	Lunenburg	Nova Scotia
Hermes Electronics Incorporated	Dartmouth	Nova Scotia
MacDonald Dettwiler and Associates	Dartmouth	Nova Scotia
McGregor GeoScience Ltd.	Halifax	Nova Scotia
Nova Scotia Oceans Initiative (NSOI)	Dartmouth	Nova Scotia
OPEN SEAS INSTRUMENTATION INC.	Musquodoboit Harbo	Nova Scotia
Pylon Atlantic Inc.	Dartmouth	Nova Scotia

Catalogue of Companies - Offshore Supply

Romor Atlantic Limited	Dartmouth	Nova Scotia
TekMap Consulting	Lake Fletcher	Nova Scotia
Specialty Metals		
Atlantic Valve & Fittings Limited	Saint John	New Brunswick
CFM	Saint John	New Brunswick
Leroux Steel (New Brunswick)	Sackville	New Brunswick
RASCO Specialty Metals Inc.	Saint John	New Brunswick
RPC	Fredericton	New Brunswick
Three-D GeoConsultants Ltd.	Fredericton	New Brunswick
AMI Offshore Inc.	St. John's	Newfoundland
Crane Supply (Newfoundland)	St. John's	Newfoundland
ProArc Fabricating Ltd.	Mount Pearl	Newfoundland
Russel Metals Inc. (Newfoundland)	Mount Pearl	Newfoundland
Steelfab Industries Limited	Paradise	Newfoundland
Atkinson & Bower Limited	Shelburne	Nova Scotia
Banc Metals	Dartmouth	Nova Scotia
CFM (Nova Scotia)	Dartmouth	Nova Scotia
Crane Supply - Halifax	Dartmouth	Nova Scotia
EMCO Ltd.- Westlund Industrial Supply	Dartmouth	Nova Scotia
Enerscan Engineering Incorporated	Halifax	Nova Scotia
Leroux Steel (Nova Scotia)	Dartmouth	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Mulgrave Machine Works Limited	Mulgrave	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
Russel Metals Inc. (Nova Scotia)	Lakeside	Nova Scotia
Seatech Ltd.	Halifax	Nova Scotia
Steam - Heating Equipment and Systems		
Irving Shipbuilding Inc.	Saint John	New Brunswick
ITC Canada Limited	Halifax	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Steel Distributors and Warehouses		
CFM	Saint John	New Brunswick
Leroux Steel (New Brunswick)	Sackville	New Brunswick
Ocean Steel & Construction Ltd.	Saint John	New Brunswick
RASCO Specialty Metals Inc.	Saint John	New Brunswick
C&W Industrial Fabrication & Marine Equipment Ltd.	Bay Bulls	Newfoundland
M & M Engineering Limited	St. John's	Newfoundland
Russel Metals Inc. (Newfoundland)	Mount Pearl	Newfoundland
CFM (Nova Scotia)	Dartmouth	Nova Scotia
EMCO Ltd.- Westlund Industrial Supply	Dartmouth	Nova Scotia
Leroux Steel (Nova Scotia)	Dartmouth	Nova Scotia
Russel Metals Inc. (Nova Scotia)	Lakeside	Nova Scotia
Strainers		
Crane Supply (Newfoundland)	St. John's	Newfoundland
Crane Supply - Halifax	Dartmouth	Nova Scotia
CTH Instruments Ltd.	Dartmouth	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia

Subsea Equipment/services/management

AMI Offshore Inc.	St. John's	Newfoundland
C-MAR Newfoundland Inc.	St. John's	Newfoundland
Dominion Diving Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Friede Goldman Newfoundland Ltd.	Marystown	Newfoundland
Pro-Dive Marine Services (NFLD)	Mount Pearl	Newfoundland
Allseas Canada Ltd.	Halifax	Nova Scotia
Atlantic Alliance Offshore Ltd.	Dartmouth	Nova Scotia
Canada Steamship Lines	Bedford	Nova Scotia
Pro-Dive Marine Services (N.S.) Ltd.	Dartmouth	Nova Scotia
Romor Atlantic Limited	Dartmouth	Nova Scotia
C-Mar Services (Canada) Ltd.	Summerside	Prince Edward Isl.

Swing and swivel joints

C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia

Temperature Monitoring/Control

Avalon Controls Ltd.	St. John's	Newfoundland
Bailey Sea (NFLD) Ltd.	St. John's	Newfoundland
Control & Equipment Ltd.	St. John's	Newfoundland
Wright Systems & Equipment	Charlottetown	Prince Edward Isl.

Testing Apparatus

RPC	Fredericton	New Brunswick
The Scale Shop (1985) Ltd.	Mount Pearl	Newfoundland
METOCEAN Data Systems Limited	Dartmouth	Nova Scotia
Seatech Ltd.	Halifax	Nova Scotia
TJ Engineering Services & TJ Inspection Services	Dartmouth	Nova Scotia

Thermocouples

Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
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Time Systems

Advanced Energy Management Limited	Moncton	New Brunswick
Advatek Systems Inc	Moncton	New Brunswick
Applied Courseware Technology Inc.	Fredericton	New Brunswick
ASD Limited	Fredericton	New Brunswick
ASG Technologies	Fredericton	New Brunswick
Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
CyberDesign	Moncton	New Brunswick
EDP Consultants Limited	Fredericton	New Brunswick
Enseignes Imperial Signs	Edmundston	New Brunswick
Force/Robak Associates Ltd.	Fredericton	New Brunswick
Fundy Computer Services Ltd.	Saint John	New Brunswick
Ibridge	Woodstock	New Brunswick
Interactive Visualization Systems Inc.	Fredericton	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Ivey Environmental Services Ltd.	Fredericton	New Brunswick
Les Entreprises Dovico Enterprises Inc.	Moncton	New Brunswick
Lexi-tech International Inc.	Dieppe	New Brunswick
Machinery Condition Monitoring Inc.	Grand Bay	New Brunswick
Micro Action	Moncton	New Brunswick

Catalogue of Companies - Offshore Supply

N.B. Community College Saint John	Saint John	New Brunswick
Nik Design Inc.	Verret	New Brunswick
Performx Inc.	Fredericton	New Brunswick
Sapience Educational Systems Inc.	Miramichi	New Brunswick
ShareKnowledge Inc.	Moncton	New Brunswick
ShareLine Systems Ltd.	Moncton	New Brunswick
Spielo Gaming International	Dieppe	New Brunswick
Taybridge Communications	Taymouth	New Brunswick
The Panel Shop	Fredericton	New Brunswick
Three-D GeoConsultants Ltd.	Fredericton	New Brunswick
Valron Engineers Inc	Moncton	New Brunswick
Canadian Centre for Marine Communication	St. John's	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
Guigne Technologies Ltd.	St. John's	Newfoundland
IDON East Corporation	St. John's	Newfoundland
Infotech Canada Inc.	St. John's	Newfoundland
M & M Engineering Limited	St. John's	Newfoundland
PATHFINDER Information Technologies Ltd.	St. John's	Newfoundland
xwave solutions	St. John's	Newfoundland
Ambassador Computers	Halifax	Nova Scotia
AMIRIX Systems Inc. (formerly Applied Microelectronic)	Halifax	Nova Scotia
Atkinson & Bower Limited	Shelburne	Nova Scotia
Atlantic Scale Company Limited	Bridgewater	Nova Scotia
BioMedica Diagnostics Inc.	Windsor	Nova Scotia
COLLEGE DE L'ACADIE	Meteghan River	Nova Scotia
Dymaxion Research Limited	Halifax	Nova Scotia
EOA Scientific Systems, Inc.	Halifax	Nova Scotia
e-plicity.com	Halifax	Nova Scotia
Farah & Associates	Dartmouth	Nova Scotia
Focal Technologies Corp.	Dartmouth	Nova Scotia
Internav Ltd.	Sydney	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Jacques Whitford	Dartmouth	Nova Scotia
KB Electronics (1989) Limited	Bedford	Nova Scotia
KLJ Computer Solutions Inc.	Halifax	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
MediaSpark IT Solutions Inc.	Sydney	Nova Scotia
METOCEAN Data Systems Limited	Dartmouth	Nova Scotia
Nautel Limited	Tantallon	Nova Scotia
Nova Scotia Community College (Annapolis Valley Campus)	Lawrencetown	Nova Scotia
Performance.net	Dartmouth	Nova Scotia
PlantSelect Biotechnology Systems Ltd.	Dartmouth	Nova Scotia
Precision Biologic Inc.	Dartmouth	Nova Scotia
Satlantic Inc.	Halifax	Nova Scotia
Ship's Aid International Limited	Dartmouth	Nova Scotia
SolutionInc Limited	Halifax	Nova Scotia
Tech Marine Limited	Dartmouth	Nova Scotia
Thyssen Dover Crane	Dartmouth	Nova Scotia
TM Software	Halifax	Nova Scotia
Visimetrics Inc.	Halifax	Nova Scotia
Walter Construction (Canada) Ltd.	Halifax	Nova Scotia
Baseline Business Geographics Inc.	Charlottetown	Prince Edward Isl.

Catalogue of Companies - Offshore Supply

CSC Computer Division Knowledge House Inc	Stratford Charlottetown	Prince Edward Isl. Prince Edward Isl.
Tongs-Casing and Tubing		
F I Canada Oilfield Services Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Hyflodraulic Limited	Mount Pearl	Newfoundland
F I Canada Oilfield Services Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Trailers-Equipment and Service		
East Can Transport Services Ltd	St John's	Newfoundland
Hunt's transport Ltd.	Mount Pearl	Newfoundland
Transmitters		
Atlantic Controls Ltd. (New Brunswick)	Saint John	New Brunswick
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
Axiom Engineering Ltd.	Mount Pearl	Newfoundland
ITC Canada Limited	Halifax	Nova Scotia
METOCEAN Data Systems Limited	Halifax	Nova Scotia
Nautel Limited	Dartmouth	Nova Scotia
New Scotland Communications Ltd.	Tantallon	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Lower Sackville	Nova Scotia
Romor Atlantic Limited	Dartmouth	Nova Scotia
Sea Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Seimac Limited	Dartmouth	Nova Scotia
Tubes and Tubing Services		
Atlantic Valve & Fittings Limited	Saint John	New Brunswick
RASCO Specialty Metals Inc.	Saint John	New Brunswick
Associated Industrial Rubber Company Ltd. (Newfou	St. John's	Newfoundland
Crane Supply (Newfoundland)	St. John's	Newfoundland
East Coast Tubulars Ltd.	Paradise	Newfoundland
F I Canada Oilfield Services Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Tubeecraft Atlantic Ltd.	St. John's	Newfoundland
Associated Industrial Rubber Co.	Dartmouth	Nova Scotia
Crane Supply - Halifax	Dartmouth	Nova Scotia
F I Canada Oilfield Services Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Goodall Rubber Company of Canada Limited	Dartmouth	Nova Scotia
Turbines		
Maritime Hydraulic Repair Cntr 1997 Ltd.	Moncton	New Brunswick
Pelletier Équipement Ltée	Lac Baker	New Brunswick
TRC Hydraulics Inc.	Dieppe	New Brunswick
Hydraulic Systems Limited (Newfoundland)	St. John's	Newfoundland
G.W. Holmes Trucking Limited	Thorburn	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
TrentonWorks Ltd. Forging Division	Trenton	Nova Scotia
Atlantic Turbines Inc.	Slemon Park	Prince Edward Isl.
TV Systems and Equipment - Closed Circuit		
Audio Systems Limited	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St. John's	Newfoundland
Sea Systems Limites (Nova Scotia)	Dartmouth	Nova Scotia

Catalogue of Companies - Offshore Supply

Umbilicals

Afonso Diving Contractors Ltd.	St. John's	Newfoundland
RASCO Specialty Metals Inc.	Saint John	New Brunswick
Romor Atlantic Limited	Dartmouth	Nova Scotia

Underwater Navigation Systems

Irving Shipbuilding Inc.	Saint John	New Brunswick
Instrument Concepts Inc.	Great Village	Nova Scotia
Kongsberg Simrad Mestech Ltd.	Dartmouth	Nova Scotia
Romor Atlantic Limited	Dartmouth	Nova Scotia
Thales Survey Canada Ltd.	Enfield	Nova Scotia

Vacuum Equipment and Systems

Adtech Manufacturing Ltd.	Fredericton	New Brunswick
Apex Industries Inc.	Moncton	New Brunswick
CFM	Saint John	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
L & A Metalworks Inc.	Fredericton	New Brunswick
Matchless Group Inc.	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
The Scale Shop (1985) Ltd.	Mount Pearl	Newfoundland
Industrial Environmental Services Incorporated	Debert	Nova Scotia
Inventive Marine Products Limited	Dartmouth	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Mulgrave Machine Works Limited	Mulgrave	Nova Scotia
Nautel Limited	Tantallon	Nova Scotia
Steel And Engine Products Limited	Liverpool	Nova Scotia
P.E.I. FOOD TECHNOLOGY CENTRE	Charlottetown	Prince Edward Isl.

Valves/Services

Atlantic Controls Ltd. (New Brunswick)	Saint John	New Brunswick
Atlantic Valve & Fittings Limited	Saint John	New Brunswick
Qip Equipment Ltd.	Saint John	New Brunswick
AMI Offshore Inc.	St. John's	Newfoundland
C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
Crane Supply (Newfoundland)	St. John's	Newfoundland
EMCO Supply (Offshore)	Mount Pearl	Newfoundland
Hyflodraulic Limited	Mount Pearl	Newfoundland
Newdock - St. John's Dockyard Ltd.	St. John's	Newfoundland
Siemens - Westinghouse	St. John's	Newfoundland
Terra Nova Marine Co. Ltd.	Mount Pearl	Newfoundland
Tubecraft Atlantic Ltd.	St. John's	Newfoundland
Atlantic Controls	Halifax	Nova Scotia
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Crane Supply - Halifax	Dartmouth	Nova Scotia
EMCO Ltd.- Westlund Industrial Supply	Dartmouth	Nova Scotia
Goodall Rubber Company of Canada Limited	Dartmouth	Nova Scotia
Mobile Valve Repairs Ltd.	Mount Uniacke	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia

Variable Speed Drives

Basil Fearn ('93) Limited	St. John's	Newfoundland
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Catalogue of Companies - Offshore Supply

Control & Equipment Ltd.	St. John's	Newfoundland
Siemens - Westinghouse	St. John's	Newfoundland

Vibration Equipment/Services

Basil Fearn ('93) Limited	St. John's	Newfoundland
Ozark Electrical Marine Ltd.	St. John's	Newfoundland
Atlantic Hardchrome Limited	Dartmouth	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
Siemens Westinghouse Technical Services	Dartmouth	Nova Scotia

Waste Purification Equipment/Removal

Alfa Laval Inc.	Dartmouth	Nova Scotia
Atlantic Purification Systems Ltd.	Dartmouth	Nova Scotia
Industrial Environmental Services Incorporated	Debert	Nova Scotia

Water Treating Equipment - Service and Supplies

ADI Group Inc.	Fredericton	New Brunswick
Afonso Diving Contractors Ltd.	St. John's	Newfoundland
East-Chem Inc.	Mount Pearl	Newfoundland
Atlantic Purification Systems Ltd.	Dartmouth	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia

Wellhead, Equipment, Sales and Service

FMC of Canada Ltd. (Newfoundland)	St. John's	Newfoundland
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Catalogue of Companies - Offshore Supply

Wholesale-Plumbing, Heating, Industrial/Municipal Materials

Control & Equipment Ltd.	St. John's	Newfoundland
Crane Supply (Newfoundland)	St. John's	Newfoundland
EMCO Supply (Offshore)	Mount Pearl	Newfoundland
Crane Supply - Halifax	Dartmouth	Nova Scotia

Onshore Services

Air quality monitoring

ADI Group Inc.	Fredericton	New Brunswick
AMEC Earth and Environmental Ltd.	Fredericton	New Brunswick
Fundy Engineering & Consulting Ltd.	Saint John	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Ivey Environmental Services Ltd.	Fredericton	New Brunswick
RPC	Fredericton	New Brunswick
AMEC Earth and Environmental	St. John's	Newfoundland
CBCL Limited (Halifax)	Halifax	Nova Scotia
C.J. Maclellan & Associates Incorporated	Antigonish	Nova Scotia
DalTech, Dalhousie University	Halifax	Nova Scotia
EnvironChem Engineering Consultants	Wolfville	Nova Scotia
Jacques Whitford	Dartmouth	Nova Scotia
OCL Services Ltd./ OCL Group	Dartmouth	Nova Scotia
Romor Atlantic Limited	Dartmouth	Nova Scotia
Seatech Ltd.	Halifax	Nova Scotia
Coles Associates Ltd.	Charlottetown	Prince Edward Island

B.O.P Rentals

Com Tel Answering Services Ltd.	Saint John	New Brunswick
Miller Sound Ltd.	Saint John	New Brunswick
Trent Industrial Contractors Ltd.	Saint John	New Brunswick
A. Harvey & Company Limited	St. John's	Newfoundland
AIMS Ltd.	Mount Pearl	Newfoundland
Enviromed Analytical Inc.	Mount Pearl	Newfoundland
Metal World Inc.	Torbay	Newfoundland
The Scale Shop (1985) Ltd.	Mount Pearl	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
Camille D'Eon Boatbuilders div. Martine Marie	Middle West Pubnico	Nova Scotia
CKT Nova Scotia Limited	Bedford	Nova Scotia
DFM Disposal Inc.	Sydney	Nova Scotia
Dymaxion Research Limited	Halifax	Nova Scotia
Hart Industrial Communications	Dartmouth	Nova Scotia
Hertz Equipment Rental	Dartmouth	Nova Scotia
Hyperspectral Data International Inc.	Dartmouth	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Sagadore Cranes and Equipment	Dartmouth	Nova Scotia
Seaboard Offshore Services Ltd.	Port Hawkesbury	Nova Scotia
U.J. Robichaud & Son Ltd.	Meteghan Centre	Nova Scotia
WCC Refurb Limited/WCC Offshore	Halifax	Nova Scotia
GE Capital IT Solutions Inc	Charlottetown	Prince Edward Island

Casing Storage

Deschenes Drilling Ltd.	Saint-Quentin	New Brunswick
East Coast Tubulars Ltd.	Paradise	Newfoundland

Cementing Services

Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Import Tool Corporation Ltd. (Newfoundland)	Mount Pearl	Newfoundland

Catalogue of Companies - Onshore Services

IPM Services - Division of Schlumberger Canada Li	Mount Pearl	Newfoundland
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Import Tool Corporation Ltd. (Nova Scotia)	Dartmouth	Nova Scotia

Construction, Oilfield

C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
ConPro Group Limited	St. John's	Newfoundland
Dominion Diving Ltd. (Newfoundland)	Mount Pearl	Newfoundland
F I Canada Oilfield Services Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Newfoundland Transshipment Limited	St. John's	Newfoundland
Alfa Laval Inc.	Dartmouth	Nova Scotia
Atlantic Oilfield & Supplies	Dartmouth	Nova Scotia
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Davis Specialized Carriers Ltd.	Sackville	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
F I Canada Oilfield Services Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Pro-Dive Marine Services (N.S.) Ltd.	Dartmouth	Nova Scotia
Schlumberger of Canada	Dartmouth	Nova Scotia

Consulting, Engineering

AccessLab Systems Ltd.	Fredericton	New Brunswick
ADI Group Inc.	Fredericton	New Brunswick
ADI International Inc.	Fredericton	New Brunswick
ADI Limited	Fredericton	New Brunswick
AMEC Earth and Environmental Ltd.	Fredericton	New Brunswick
Applied Management Consultants Ltd.	Fredericton	New Brunswick
Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
Atlantic Quality & Technical Serv. Ltd.	Saint John	New Brunswick
Bretech	Saint John	New Brunswick
Bretech	Saint John	New Brunswick
BrunNet Inc.	Fredericton	New Brunswick
Crandall Engineering Ltd.	Moncton	New Brunswick
Dan Tingley Consulting Ltd.	Hopewell Cape	New Brunswick
DPL Group	Saint John	New Brunswick
Dramis Network Cabling Ltd.	Moncton	New Brunswick
Estabrooks Consultants Inc.	Saint John	New Brunswick
FGA Consultants Ltd.	Fredericton	New Brunswick
Fundy Engineering & Consulting Ltd.	Saint John	New Brunswick
Geodat Information Services Limited	Fredericton	New Brunswick
G.F. Williamson Engineering Ltd.	Saint John	New Brunswick
Interface Consultants Inc.	Moncton	New Brunswick
JUA Engineering	Oromocto	New Brunswick
Key Surveys & Engineering Limited	Moncton	New Brunswick
Lizotte Consultants Ltee	Rivière-Verte	New Brunswick
Machinery Condition Monitoring Inc.	Grand Bay	New Brunswick
Neill and Gunter Ltd.	Fredericton	New Brunswick
Paradigm Engineering Inc.	Saint John	New Brunswick
Pegasus Consulting Ltd.	Fredericton	New Brunswick
Acres International Limited (Newfoundland)	St. John's	Newfoundland
AGRA Monenco	St. John's	Newfoundland
AOC Brown & Root Canada Ltd.	Mount Pearl	Newfoundland
BAE-Newplan Group Limited	Mount Pearl	Newfoundland
BMS Offshore Limited (Newfoundland)	Mount Pearl	Newfoundland

Catalogue of Companies - Onshore Services

Canadian Centre for Marine Communication	St. John's	Newfoundland
C-CORE	St. John's	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
Design Management Group Ltd.	Gander	Newfoundland
FGA Consulting Engineers Limited	St. John's	Newfoundland
Fugro Jacques GeoSurveys Inc.	St. John's	Newfoundland
H.T. KENDALL & ASSOCIATES LTD.	St. John's	Newfoundland
IDON East Corporation	St. John's	Newfoundland
IPM Services - Division of Schlumberger Canada Li	Mount Pearl	Newfoundland
Jacques Whitford Environmental	St. John's	Newfoundland
Kvaerner SNC-Lavalin Offshore	Mount Pearl	Newfoundland
Marineering Limited	St. John's	Newfoundland
Newfoundland Design Associates Ltd.	St. John's	Newfoundland
Newfoundland Power	St. John's	Newfoundland
Northstar Network Ltd.	St. John's	Newfoundland
Oceanic Consulting Corporation	St. John's	Newfoundland
Pennecon Limited	St. John's	Newfoundland
Accent Engineering Consultants Incorporated	Dartmouth	Nova Scotia
Acres International Ltd. (Nova Scotia)	Halifax	Nova Scotia
AFM Project Design Group	Halifax	Nova Scotia
AGRA Whitman Benn Limited	Halifax	Nova Scotia
Alpine Overland & Wireless, Co.	Halifax	Nova Scotia
APA (Nova Scotia) Limited	Halifax	Nova Scotia
ATCAN Business Management Limited	Dartmouth	Nova Scotia
Atlantic Gas Engineers	Halifax	Nova Scotia
Atlantic Power Quality Specialist	New Glasgow	Nova Scotia
Barrie and Langille Architects Ltd.	Halifax	Nova Scotia
BEASY NICOLL ENGINEERING LIMITED	Dartmouth	Nova Scotia
Bert Van Leeuwen Industrial Design Ltd.	Amherst	Nova Scotia
BMS Offshore Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
B@R Aquaculture / General Consultant	Yarmouth	Nova Scotia
Canadian Fishery Consultants Ltd.	Halifax	Nova Scotia
CBCL Limited (Halifax)	Halifax	Nova Scotia
CEA	Seabright	Nova Scotia
C.J. Maclellan & Associates Incorporated	Antigonish	Nova Scotia
CSE Computronics Inc.	Dartmouth	Nova Scotia
DalTech, Dalhousie University	Halifax	Nova Scotia
Darcy J. Gray & Associates	Dartmouth	Nova Scotia
DGI Ltd.	Halifax	Nova Scotia
DHL Engineering	Bedford	Nova Scotia
Donald T. Matheson Engineering Limited	Halifax	Nova Scotia
Eastcan Geomatics Limited	Halifax	Nova Scotia
Enerscan Engineering Incorporated	Halifax	Nova Scotia
EnvironChem Engineering Consultants	Wolfville	Nova Scotia
E.Y.E. Marine Consultants	Dartmouth	Nova Scotia
Guptill Consulting Services	Brookside	Nova Scotia
Haggis Geophysics	Dartmouth	Nova Scotia
Hurley Fisheries Consulting Ltd.	Dartmouth	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Jacques Whitford	Dartmouth	Nova Scotia
Lewis Engineering Inc.	Halifax	Nova Scotia
LN Perry Consulting Inc.	Liverpool	Nova Scotia
MacDonnell Group	Halifax	Nova Scotia

Catalogue of Companies - Onshore Services

Martec Limited	Halifax	Nova Scotia
Neill and Gunter (Nova Scotia) Limited	Dartmouth	Nova Scotia
Novaport Int'l Consultants Ltd.	Halifax	Nova Scotia
O'Halloran Campbell Consultants Limited	Halifax	Nova Scotia
Pinter Consulting Services	Halifax	Nova Scotia
Baseline Business Geographics Inc.	Charlottetown	Prince Edward Island
Caltech Information Technologies	Charlottetown	Prince Edward Island
Coles Associates Ltd.	Charlottetown	Prince Edward Island
Diversified Metal Engineering Ltd.	Charlottetown	Prince Edward Island
Engineering Technologies Canada	Stratford	Prince Edward Island
G/COM	Summerside	Prince Edward Island
Iav Capital Inc	Vernon River	Prince Edward Island
iWave.com	Charlottetown	Prince Edward Island

Consulting, Environmental

ADI Group Inc.	Fredericton	New Brunswick
ADI Limited	Fredericton	New Brunswick
AMEC Earth and Environmental Ltd.	Fredericton	New Brunswick
AQTS	Saint John	New Brunswick
Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
Atlantic Quality & Technical Serv. Ltd.	Saint John	New Brunswick
Crandall Engineering Ltd.	Moncton	New Brunswick
FGA Consultants Ltd.	Fredericton	New Brunswick
Force/Robak Associates Ltd.	Fredericton	New Brunswick
Fundy Engineering & Consulting Ltd.	Saint John	New Brunswick
Geodat Information Services Limited	Fredericton	New Brunswick
JUA Engineering	Oromocto	New Brunswick
Jury Consulting Services	Hanwell	New Brunswick
Lizotte Consultants Ltee	Rivière-Verte	New Brunswick
Machinery Condition Monitoring Inc.	Grand Bay	New Brunswick
Neill and Gunter Ltd.	Fredericton	New Brunswick
Paradigm Engineering Inc.	Saint John	New Brunswick
Roy Consultants Group Ltd./Le Groupe Roy Consul	Bathurst	New Brunswick
RPC	Fredericton	New Brunswick
Three-D GeoConsultants Ltd.	Fredericton	New Brunswick
Woodlot Service (1978) Ltd.	Fredericton	New Brunswick
AGRA Monenco	St. John's	Newfoundland
BAE-Newplan Group Limited	Mount Pearl	Newfoundland
Canadian Centre for Marine Communication	St. John's	Newfoundland
Canning & Pitt Associates Inc.	St. John's	Newfoundland
Community Resource Services Ltd.	St. John's	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
H.T. KENDALL & ASSOCIATES LTD.	St. John's	Newfoundland
Jacques Whitford Environmental	St. John's	Newfoundland
Medserv Solutions Inc.	St. John's	Newfoundland
Newfoundland Design Associates Ltd.	St. John's	Newfoundland
Petrell Technologies Ltd.	St. John's	Newfoundland
Seacom Consulting Inc.	St. John's	Newfoundland
AERDE Environmental Research	Halifax	Nova Scotia
AGRA Whitman Benn Limited	Halifax	Nova Scotia
Atlantic Gas Engineers	Halifax	Nova Scotia
Atlantic Harbour Services & Mgmt. Ltd.	Bridgewater	Nova Scotia

Catalogue of Companies - Onshore Services

Akses Inc.	Boutiliers Point	Nova Scotia
BEASY NICOLL ENGINEERING LIMITED	Dartmouth	Nova Scotia
Bio-Response Systems Limited	Dartmouth	Nova Scotia
B@R Aquaculture / General Consultant	Yarmouth	Nova Scotia
Canadax Industrial Group Limited	Halifax	Nova Scotia
Canadian Fishery Consultants Ltd.	Halifax	Nova Scotia
CBCL Limited (Halifax)	Halifax	Nova Scotia
CEA	Seabright	Nova Scotia
C.J. Maclellan & Associates Incorporated	Antigonish	Nova Scotia
DalTech, Dalhousie University	Halifax	Nova Scotia
DHL Engineering	Bedford	Nova Scotia
Enerscan Engineering Incorporated	Halifax	Nova Scotia
EnvironChem Engineering Consultants	Wolfville	Nova Scotia
EOA Scientific Systems, Inc.	Halifax	Nova Scotia
Focal Technologies Corp.	Dartmouth	Nova Scotia
Forest Insight Limited	Marion Bridge	Nova Scotia
Fred C. Morrison Ltd.	Dartmouth	Nova Scotia
Haggis Geophysics	Dartmouth	Nova Scotia
Horizon Systems Group Inc.	Dartmouth	Nova Scotia
Hurley Fisheries Consulting Ltd.	Dartmouth	Nova Scotia
Hyperspectral Data International Inc.	Dartmouth	Nova Scotia
INLAND TECHNOLOGIES INC.	Truro	Nova Scotia
INTERFOREST INCORPORATED	Truro	Nova Scotia
Jacques Whitford Environment Limited	Dartmouth	Nova Scotia
Jellett Biotech Ltd.	Dartmouth	Nova Scotia
Kemic Bioresearch Laboratories Limited	Kentville	Nova Scotia
Land & Sea Environmental Consultants Ltd	Dartmouth	Nova Scotia
MacDonnell Group	Halifax	Nova Scotia
Marbicon Inc.	Berwick	Nova Scotia
Martec Limited	Halifax	Nova Scotia
Novaport Int'l Consultants Ltd.	Halifax	Nova Scotia
OCL Services Ltd./ OCL Group	Dartmouth	Nova Scotia
ORACO Consulting Inc.	Halifax	Nova Scotia
Pinter Consulting Services	Halifax	Nova Scotia
PlantSelect Biotechnology Systems Ltd.	Dartmouth	Nova Scotia
PORTABILITY INTERNATIONAL	Halifax	Nova Scotia
Quantex Technologies Incorporated	Dartmouth	Nova Scotia
R.A. Murray International Limited	Halifax	Nova Scotia
Seatech Ltd.	Halifax	Nova Scotia
SNC-Lavalin Inc.	Halifax	Nova Scotia
Synmap Technical Services	Halifax	Nova Scotia
Tavel Ltd.	Halifax	Nova Scotia
Vaughan International Consultants Ltd.	Halifax	Nova Scotia
WILLIAM NYCUM & ASSOCIATES LIMITED	Halifax	Nova Scotia
Abiogen Environmental Services	Charlottetown	Prince Edward Island
Atlantic Nutrition Enterprises Inc.	Little York	Prince Edward Island
Coles Associates Ltd.	Charlottetown	Prince Edward Island
Engineering Technologies Canada	Stratford	Prince Edward Island
Fortune Bay Ecolodge Designs Ltd.	Charlottetown	Prince Edward Island
Iav Capital Inc	Vernon River	Prince Edward Island
INNOTAG Atlantic Inc	Hunter River	Prince Edward Island

Consulting, Geological

Catalogue of Companies - Onshore Services

Geodat Information Services Limited	Fredericton	New Brunswick
Jury Consulting Services	Hanwell	New Brunswick
Neill and Gunter Ltd.	Fredericton	New Brunswick
Three-D GeoConsultants Ltd.	Fredericton	New Brunswick
Fugro Jacques GeoSurveys Inc.	St. John's	Newfoundland
Jacques Whitford Environmental	St. John's	Newfoundland
Jacques Whitford Environment Limited	Dartmouth	Nova Scotia
Thales Survey Canada Ltd.	Enfield	Nova Scotia

Coring

IPM Services - Division of Schlumberger Canada Li	Mount Pearl	Newfoundland
Baker Hughes INTEQ	Dartmouth	Nova Scotia
Brooke Ocean Technology Limited	Dartmouth	Nova Scotia

Data Vendors

Fundy Computer Services Ltd.	Saint John	New Brunswick
ShareLine Systems Ltd.	Moncton	New Brunswick
TS Enterprises Ltd.	Fredericton	New Brunswick
Xylaur Enterprises Limited	Fredericton	New Brunswick

Directional Drilling Services

Baker Hughes Canada Inc.	Mt. Pearl	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Hyflodraulic Limited	Mount Pearl	Newfoundland
IPM Services - Division of Schlumberger Canada Li	Mount Pearl	Newfoundland
Baker Hughes INTEQ	Dartmouth	Nova Scotia
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Vic Progressive Diamond Drilling Inc.	Sussex	New Brunswick

Directional Surveying

IPM Services - Division of Schlumberger Canada Li	Mount Pearl	Newfoundland
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Environmental Services

ADI Group Inc.	Fredericton	New Brunswick
ADI Limited	Fredericton	New Brunswick
ADI Systems Inc.	Fredericton	New Brunswick
Advanced Energy Management Limited	Moncton	New Brunswick
AMEC Earth and Environmental Ltd.	Fredericton	New Brunswick
AQTS	Saint John	New Brunswick
Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
Atlantic Quality & Technical Serv. Ltd.	Saint John	New Brunswick
Atlantic Salmon Federation (Canada)	Chamcook	New Brunswick
Brunswick Engineering Group (1996) Ltd.	Campbellton	New Brunswick
Crandall Engineering Ltd.	Moncton	New Brunswick
FGA Consultants Ltd.	Fredericton	New Brunswick
Force/Robak Associates Ltd.	Fredericton	New Brunswick
Fundy Engineering & Consulting Ltd.	Saint John	New Brunswick
Geodat Information Services Limited	Fredericton	New Brunswick
GeoResearch Systems Inc.	Fredericton	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Ivey Environmental Services Ltd.	Fredericton	New Brunswick
JUA Engineering	Oromocto	New Brunswick

Catalogue of Companies - Onshore Services

Jury Consulting Services	Hanwell	New Brunswick
L & A Metalworks Inc.	Fredericton	New Brunswick
Les Forages Lantech Drilling Services Inc.	Dieppe	New Brunswick
Lizotte Consultants Ltee	Rivière-Verte	New Brunswick
3M CANADA COMPANY	Mount Pearl	Newfoundland
AGRA Monenco	St. John's	Newfoundland
AMEC Earth and Environmental	St. John's	Newfoundland
BAE-Newplan Group Limited	Mount Pearl	Newfoundland
Breakwater Books Ltd.	St. John's	Newfoundland
Canadian Centre for Marine Communication	St. John's	Newfoundland
Canning & Pitt Associates Inc.	St. John's	Newfoundland
Celebrity Photo Studios	St. John's	Newfoundland
Community Resource Services Ltd.	St. John's	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
Cormorant Ltd.	St. John's	Newfoundland
Creative Business Solutions Inc.	St. John's	Newfoundland
Dominion Diving Ltd. (Newfoundland)	Mount Pearl	Newfoundland
FMC of Canada Ltd. (Newfoundland)	St. John's	Newfoundland
Guigne Technologies Ltd.	St. John's	Newfoundland
H.T. KENDALL & ASSOCIATES LTD.	St. John's	Newfoundland
Jacques Whitford Environmental	St. John's	Newfoundland
LTS Sales Ltd. (Newfoundland)	Mount Pearl	Newfoundland
ADI Limited	Halifax	Nova Scotia
AERDE Environmental Research	Halifax	Nova Scotia
AGRA Whitman Benn Limited	Halifax	Nova Scotia
Associated Marine Equipment Limited	Dartmouth	Nova Scotia
Atlantic Gas Engineers	Halifax	Nova Scotia
Atlantic Harbour Services & Mgmt. Ltd.	Bridgewater	Nova Scotia
Atlantic Oilfield & Supplies	Dartmouth	Nova Scotia
Atlantic Purification Systems Ltd.	Dartmouth	Nova Scotia
Axes Inc.	Boutiliers Point	Nova Scotia
BEASY NICOLL ENGINEERING LIMITED	Dartmouth	Nova Scotia
BioMedica Diagnostics Inc.	Windsor	Nova Scotia
Bio-Response Systems Limited	Dartmouth	Nova Scotia
BioScan	Truro	Nova Scotia
BioScan	Truro	Nova Scotia
B@R Aquaculture / General Consultant	Yarmouth	Nova Scotia
Canadax Industrial Group Limited	Halifax	Nova Scotia
Canadian Fishery Consultants Ltd.	Halifax	Nova Scotia
Canadian Seabed Research Limited	Porters Lake	Nova Scotia
CBCL Limited (Halifax)	Halifax	Nova Scotia
CEA	Seabright	Nova Scotia
CEF Consultants Ltd.	Halifax	Nova Scotia
C.J. Maclellan & Associates Incorporated	Antigonish	Nova Scotia
Dalhousie University DalTech Cont. Tech.	Halifax	Nova Scotia
DalTech, Dalhousie University	Halifax	Nova Scotia
DHL Engineering	Bedford	Nova Scotia
DSS Marine Inc.	Bedford	Nova Scotia
Enerscan Engineering Incorporated	Halifax	Nova Scotia
EnvironChem Engineering Consultants	Wolfville	Nova Scotia
Environmental Control Systems (East)	Dartmouth	Nova Scotia
Environmental Services Laboratory Inc.	Sydney	Nova Scotia

Catalogue of Companies - Onshore Services

EOA Scientific Systems, Inc.	Halifax	Nova Scotia
FARMAX Systems	Truro	Nova Scotia
Focal Technologies Corp.	Dartmouth	Nova Scotia
Forest Insight Limited	Marion Bridge	Nova Scotia
Fred C. Morrison Ltd.	Dartmouth	Nova Scotia
Fugro Jacques Geosurveys Inc.	Dartmouth	Nova Scotia
Gadus Associates	Musquodoboit Harbo	Nova Scotia
Haggis Geophysics	Dartmouth	Nova Scotia
Horizon Systems Group Inc.	Dartmouth	Nova Scotia
Hurley Fisheries Consulting Ltd.	Dartmouth	Nova Scotia
Hyperspectral Data International Inc.	Dartmouth	Nova Scotia
Industrial Environmental Services Incorporated	Debert	Nova Scotia
INTERFOREST INCORPORATED	Truro	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Jacques Whitford Environment Limited	Dartmouth	Nova Scotia
Jellett Biotech Ltd.	Dartmouth	Nova Scotia
Kemic Bioresearch Laboratories Limited	Kentville	Nova Scotia
Land & Sea Environmental Consultants Ltd	Dartmouth	Nova Scotia
LTS Sales Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Abiogen Environmental Services	Charlottetown	Prince Edward Island
Atlantic Nutrition Enterprises Inc.	Little York	Prince Edward Island
Coles Associates Ltd.	Charlottetown	Prince Edward Island
Engineering Technologies Canada	Stratford	Prince Edward Island
Fortune Bay Ecolodge Designs Ltd.	Charlottetown	Prince Edward Island
Holland College	Charlottetown	Prince Edward Island
Iav Capital Inc	Vernon River	Prince Edward Island
INNOTAG Atlantic Inc	Hunter River	Prince Edward Island

Fabricators

Atlantic Quality & Technical Serv. Ltd.	Saint John	New Brunswick
CFM	Saint John	New Brunswick
Maritime Fibreglass Fabricators	Minto	New Brunswick
McSheffery Industries Ltd.	Moncton	New Brunswick
Ocean Steel & Construction Ltd.	Saint John	New Brunswick
Valron Engineers Inc	Moncton	New Brunswick
Basil Fearn ('93) Limited	St. John's	Newfoundland
BMS Offshore Limited (Newfoundland)	Mount Pearl	Newfoundland
Bowringer Engineering Ltd.	St. John's	Newfoundland
Bridgeport Wire Rope & Chain Limited (Newfoundland)	St. John's	Newfoundland
Bull Arm Site Corporation	St. John's	Newfoundland
C&W Industrial Fabrication & Marine Equipment Ltd	Bay Bulls	Newfoundland
E. Tucker And Sons Limited	Topsail	Newfoundland
Friede Goldman Newfoundland Ltd.	Marystown	Newfoundland
Garland Systems Ltd.	Mount Pearl	Newfoundland
G. Pelley Limited	Springdale	Newfoundland
Metalworks Ltd.	Bay Roberts	Newfoundland
Metal World Inc.	Torbay	Newfoundland
M & M Engineering Limited	St. John's	Newfoundland
Newdock - St. John's Dockyard Ltd.	St. John's	Newfoundland
Newfoundland Service Alliance	St. John's	Newfoundland
Peter Kiewit Sons Co. Ltd.	St. John's	Newfoundland
ProArc Fabricating Ltd.	Mount Pearl	Newfoundland
Seacraft Limited	Hermitage	Newfoundland

Catalogue of Companies - Onshore Services

ABCO Industries Limited	Lunenburg	Nova Scotia
Alscott Air Systems Limited	Dartmouth	Nova Scotia
BMS Offshore Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Bridgeport Wire Rope & Chain Ltd	Dartmouth	Nova Scotia
CFM (Nova Scotia)	Dartmouth	Nova Scotia
CKT Nova Scotia Limited	Bedford	Nova Scotia
Creative Canvas Manufacturing Incorporated	Dartmouth	Nova Scotia
Fabco Industries Limited	Dartmouth	Nova Scotia
J.D. Irving, Limited (Offshore Services)	Halifax	Nova Scotia
King Metal Fabricators Limited	Dartmouth	Nova Scotia
Maritime Steel And Foundries Limited	New Glasgow	Nova Scotia
Mulgrave Machine Works Limited	Mulgrave	Nova Scotia
Fire Fighting, Protection & Training		
Irving Shipbuilding Inc.	Saint John	New Brunswick
Survival Systems Industrial Limited	Dartmouth	Nova Scotia

Catalogue of Companies - Onshore Services

Fishing Tools & Services

Arvin Special Machinery Ltd.	Miramichi	New Brunswick
Arrow Construction Products Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Guigne Technologies Ltd.	St. John's	Newfoundland
Murray Industrial Limited	St. John's	Newfoundland
The Scale Shop (1985) Ltd.	Mount Pearl	Newfoundland
Wire Rope Industries Ltd.	Mount Pearl	Newfoundland
Arrow Construction Products Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Baker Oil Tools	Dartmouth	Nova Scotia
IMP Group Limited (Nova Scotia)	Dartmouth	Nova Scotia
Wire Rope Industries Ltd.	Dartmouth	Nova Scotia

Horizontal Drilling Services

Import Tool Corporation Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Import Tool Corporation Ltd. (Nova Scotia)	Dartmouth	Nova Scotia

Industrial Cleaning

Canbrands Products	Moncton	New Brunswick
Easy-Kleen High Pressure Systems Ltd.	Sussex	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Tilley Manufacturing Ltd.	Arthurette	New Brunswick
Carol-Wabush Distributing Company Ltd.	Labrador City	Newfoundland
Crosbie Salamis Limited	St. John's	Newfoundland
Matchless Group Inc.	St. John's	Newfoundland
Pro-Glo Ltd.	St. John's	Newfoundland
Avance Laboratories Limited	Head Of Chezzetco	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Mills Painting & Sandblasting Limited	Dartmouth	Nova Scotia
Shaw Resources	Milford	Nova Scotia
Zep Manufacturing Company of Canada	Dartmouth	Nova Scotia

Industrial Pumping Services

M & M Engineering Limited	St. John's	Newfoundland
ITC Canada Limited	Halifax	Nova Scotia

Inspection Services, Pipeline

C-CORE	St. John's	Newfoundland
Fugro Jacques GeoSurveys Inc.	St. John's	Newfoundland
Pro-Dive Marine Services (NFLD)	Mount Pearl	Newfoundland
Alpine Overland & Wireless, Co.	Halifax	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
Fugro Jacques Geosurveys Inc.	Dartmouth	Nova Scotia
Pro-Dive Marine Services (N.S.) Ltd.	Dartmouth	Nova Scotia
PV Inspection Services Ltd. / PV Offshore Inc.	Dartmouth	Nova Scotia
Thales Survey Canada Ltd.	Enfield	Nova Scotia

Catalogue of Companies - Onshore Services

Inspection Services, Video

Afonso Diving Contractors Ltd.	St. John's	Newfoundland
Canadian Centre for Marine Communication	St. John's	Newfoundland
ITC Canada Limited	Halifax	Nova Scotia

Laboratory Services

ADI Group Inc.	Fredericton	New Brunswick
ADI Systems Inc.	Fredericton	New Brunswick
Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
Brunswick Engineering Group (1996) Ltd.	Campbellton	New Brunswick
Micro Optics Design Corporation	Moncton	New Brunswick
Multiplants Inc.	Dsl De Drummond	New Brunswick
N.B. Community College Saint John	Saint John	New Brunswick
Optical Software Inc.	Moncton	New Brunswick
RPC	Fredericton	New Brunswick
Silver Fox Developments, Inc.	Miramichi	New Brunswick
Wood Science & Technology Centre	Fredericton	New Brunswick
C-CORE	St. John's	Newfoundland
East-Chem Inc.	Mount Pearl	Newfoundland
The Scale Shop (1985) Ltd.	Mount Pearl	Newfoundland
Van Waters & Rogers Ltd. (Newfoundland)	Paradise	Newfoundland
BioScan	Truro	Nova Scotia
BioScan	Truro	Nova Scotia
Canadian Fishery Consultants Ltd.	Halifax	Nova Scotia
CBCL Limited (Halifax)	Halifax	Nova Scotia
CEA	Seabright	Nova Scotia
C.J. Maclellan & Associates Incorporated	Antigonish	Nova Scotia
DalTech, Dalhousie University	Halifax	Nova Scotia
EnvironChem Engineering Consultants	Wolfville	Nova Scotia
Environmental Services Laboratory Inc.	Sydney	Nova Scotia
EOA Scientific Systems, Inc.	Halifax	Nova Scotia
Focal Technologies Corp.	Dartmouth	Nova Scotia
Hurley Fisheries Consulting Ltd.	Dartmouth	Nova Scotia
Instrument Concepts Inc.	Great Village	Nova Scotia
Quantex Technologies Incorporated	Dartmouth	Nova Scotia
Seatech Ltd.	Halifax	Nova Scotia
Abiogen Environmental Services	Charlottetown	Prince Edward Island
AVC Inc.	Charlottetown	Prince Edward Island
Canadian Aquaculture Institute	Charlottetown	Prince Edward Island
P.E.I. FOOD TECHNOLOGY CENTRE	Charlottetown	Prince Edward Island

Logging

ADF Services Inc.	South Nelson	New Brunswick
ADI Group Inc.	Fredericton	New Brunswick
ASG Technologies	Fredericton	New Brunswick
Atlantic Pressure Treating Ltd.	Tracyville	New Brunswick
BWS Manufacturing Ltd.	Centreville	New Brunswick
Craig Manufacturing Ltd.	Hartland	New Brunswick
Green's Logging	Cross Creek	New Brunswick
Groupe Savoie Inc.	Saint-Quentin	New Brunswick
Jury Consulting Services	Hanwell	New Brunswick
Rocan Forestry Service Ltd.	Dieppe	New Brunswick
SofDevCo	New Maryland	New Brunswick

Catalogue of Companies - Onshore Services

Canadian Centre for Marine Communication	St. John's	Newfoundland
CHC Helicopter Corporation	St. John's	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
IMP Group Limited (Marine Division)	St. John's	Newfoundland
IPM Services - Division of Schlumberger Canada Li	Mount Pearl	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
Atlantic Scale Company Limited	Bridgewater	Nova Scotia
Baker Hughes INTEQ	Dartmouth	Nova Scotia
C. T. S. CONTAINER & TRAILER SERVICES LTD.	Dartmouth	Nova Scotia
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
IMP Group Limited (Nova Scotia)	Dartmouth	Nova Scotia
Jacques Whitford	Dartmouth	Nova Scotia
LAKE PAUL PULP & LOGGING LTD.	Aylesford	Nova Scotia
Lees Logging & Milling	Westville	Nova Scotia
Rounded Wood Products Co-Op Ltd.	Truro	Nova Scotia
Schlumberger of Canada	Dartmouth	Nova Scotia
Trihedral Engineering Limited	Bedford	Nova Scotia
Wire Rope Industries Ltd.	Dartmouth	Nova Scotia

Logging While Drilling

Jury Consulting Services	Hanwell	New Brunswick
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
IPM Services - Division of Schlumberger Canada Li	Mount Pearl	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
Baker Hughes INTEQ	Dartmouth	Nova Scotia
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Schlumberger of Canada	Dartmouth	Nova Scotia

M.W.D. Measurement While Drilling

Rideout Tool & Machine Inc.	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
Baker Hughes INTEQ	Dartmouth	Nova Scotia
Sea Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia

Machine Shop

Allain Equipment Manufacturing Ltd.	Notre-Dame	New Brunswick
Apex Industries Inc.	Moncton	New Brunswick
Arvin Special Machinery Ltd.	Miramichi	New Brunswick
Atelier Gerard Beaulieu inc.	Saint-Quentin	New Brunswick
Canada Industrial Castings Limited	Saint John	New Brunswick
CFM	Saint John	New Brunswick
Forgey Brothers Machine Shop 1991 Ltd.	Saint John	New Brunswick
Gagnon Ornamental Works Ltd.	Grand-Sault/Grand F	New Brunswick
Gautreau Machine Shop Ltd.	Dieppe	New Brunswick
Grand Falls Industries Ltd.	Grand Falls	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
L & A Metalworks Inc.	Fredericton	New Brunswick
Maritime Industrial Machining Inc.	Saint John	New Brunswick
Maritime Welding Ltd.	Bathurst	New Brunswick
Meed's Machine Shop Ltd.	Bristol	New Brunswick
Minto Machine & Welding Ltd.	Minto	New Brunswick
Pelletier Équipement Ltée	Lac Baker	New Brunswick
P & E Manufacturing Ltd.	Cap-Pele	New Brunswick

Catalogue of Companies - Onshore Services

Precision Metal Works Ltd.	Mactaquac	New Brunswick
PRW Mechanical and Fabricating Ltd.	St. George	New Brunswick
R & D Welding And Mechanical Contractors	Minto	New Brunswick
Tilley Manufacturing Ltd.	Arthurette	New Brunswick
Tooltek Inc.	Edmundston	New Brunswick
CFM Rigging and Industrial Sales (Newfoundland)	St. John's	Newfoundland
C&W Industrial Fabrication & Marine Equipment Ltd	Bay Bulls	Newfoundland
East Coast Hydraulics Nfld. Ltd.	Mount Pearl	Newfoundland
E. Tucker And Sons Limited	Topsail	Newfoundland
Garland Systems Ltd.	Mount Pearl	Newfoundland
Martin's Fire Safety Ltd.	St. John's	Newfoundland
Metalworks Ltd.	Bay Roberts	Newfoundland
Murray Industrial Limited	St. John's	Newfoundland
ProArc Fabricating Ltd.	Mount Pearl	Newfoundland
Rideout Tool & Machine Inc.	St. John's	Newfoundland
Steelfab Industries Limited	Paradise	Newfoundland
The Scale Shop (1985) Ltd.	Mount Pearl	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
ABCO Industries Limited	Lunenburg	Nova Scotia
A.F. Theriault & Son Limited	Meteghan River	Nova Scotia
Atkinson & Bower Limited	Shelburne	Nova Scotia
Atlantic Engine Control and Equipment	Dartmouth	Nova Scotia
Atlantic Hardchrome Limited	Dartmouth	Nova Scotia
Banc Metals	Dartmouth	Nova Scotia
CFM (Nova Scotia)	Dartmouth	Nova Scotia
Eastcoast Hydraulic & Machinery Ltd.	Mulgrave	Nova Scotia
Fabco Industries Limited	Dartmouth	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Liberty Enterprises Ltd.	Amherst	Nova Scotia
Liftow Limited	Dartmouth	Nova Scotia
LN Perry Consulting Inc.	Liverpool	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Maritime Steel and Foundries Limited	Dartmouth	Nova Scotia
Maritime Steel And Foundries Limited	New Glasgow	Nova Scotia
Mattronic Communications/Trophy Gallery	Port Hawkesbury	Nova Scotia
Mobile Valve Repairs Ltd.	Mount Uniacke	Nova Scotia
Mulgrave Machine Works Limited	Mulgrave	Nova Scotia
Precision Finished Components	North Sydney	Nova Scotia
Process Construction & Fabrication	Windsor	Nova Scotia
Reinforced Plastic Systems Inc.	Mahone Bay	Nova Scotia
R-F Ironworks Ltd.	Dartmouth	Nova Scotia
Steel And Engine Products Limited	Liverpool	Nova Scotia
TrentonWorks Ltd. Forging Division	Trenton	Nova Scotia
W & A Moir Ltd.	Dartmouth	Nova Scotia
Atlantic Systems Manufacturing Ltd.	Charlottetown	Prince Edward Island
Precision Products & Services Ltd.	York	Prince Edward Island
Mapping		
ADI Group Inc.	Fredericton	New Brunswick
Caris	Fredericton	New Brunswick

Catalogue of Companies - Onshore Services

Digital Edge a Division of EBSI Canada	Miramichi	New Brunswick
FGA Consultants Ltd.	Fredericton	New Brunswick
Geodat Information Services Limited	Fredericton	New Brunswick
GeoResearch Systems Inc.	Fredericton	New Brunswick
JUA Engineering	Oromocto	New Brunswick
Jury Consulting Services	Hanwell	New Brunswick
Roy Consultants Group Ltd./Le Groupe Roy Consul	Bathurst	New Brunswick
Three-D GeoConsultants Ltd.	Fredericton	New Brunswick
WaterMark Industries Inc.	Fredericton	New Brunswick
Woodlot Service (1978) Ltd.	Fredericton	New Brunswick
Canadian Centre for Marine Communication	St. John's	Newfoundland
Canning & Pitt Associates Inc.	St. John's	Newfoundland
Cormorant Ltd.	St. John's	Newfoundland
Fugro Jacques GeoSurveys Inc.	St. John's	Newfoundland
Geodata Ltd.	St. John's	Newfoundland
Northern Radar Systems Limited	St. John's	Newfoundland
Paul Saunders	Cox's Cove	Newfoundland
Universal Helicopters Newfoundland Ltd.	Happy Valley-Goose	Newfoundland
AERDE Environmental Research	Halifax	Nova Scotia
Alpine Overland & Wireless, Co.	Halifax	Nova Scotia
Axes Inc.	Boutiliers Point	Nova Scotia
Binnacle Navigation Instruments	Halifax	Nova Scotia
Canadian Seabed Research Limited	Porters Lake	Nova Scotia
Canadian Security & Investigations Limited	Halifax	Nova Scotia
C.J. Maclellan & Associates Incorporated	Antigonish	Nova Scotia
Coastal Ocean Associates Inc.	Dartmouth	Nova Scotia
CSE Computronics Inc.	Dartmouth	Nova Scotia
Earth Information Technologies	Halifax	Nova Scotia
Eastcan Geomatics Limited	Halifax	Nova Scotia
E.Y.E. Marine Consultants	Dartmouth	Nova Scotia
Forest Insight Limited	Marion Bridge	Nova Scotia
Geoforce Consultants Ltd.	Dartmouth	Nova Scotia
Hurley Fisheries Consulting Ltd.	Dartmouth	Nova Scotia
Hyperspectral Data International Inc.	Dartmouth	Nova Scotia
INTERFOREST INCORPORATED	Truro	Nova Scotia
MacDonnell Group	Halifax	Nova Scotia
Marbicon Inc.	Berwick	Nova Scotia
McGregor GeoScience Ltd.	Halifax	Nova Scotia
NEWEDGE TECHNOLOGIES INC.	Waverley	Nova Scotia
Novalis Technologies	Halifax	Nova Scotia
Nova Scotia Community College (Annapolis Valley)	Lawrencetown	Nova Scotia
Romor Atlantic Limited	Dartmouth	Nova Scotia
TekMap Consulting	Lake Fletcher	Nova Scotia
Thales Survey Canada Ltd.	Enfield	Nova Scotia
Vaughan International Consultants Ltd.	Halifax	Nova Scotia
Baseline Business Geographics Inc.	Charlottetown	Prince Edward Island
GeoNet Technologies Inc.	Central Bedeque	Prince Edward Island
INNOTAG Atlantic Inc	Hunter River	Prince Edward Island

Milling Tools & Services

Arvin Special Machinery Ltd.	Miramichi	New Brunswick
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Oilfield Construction

Catalogue of Companies - Onshore Services

C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
ConPro Group Limited	St. John's	Newfoundland
Dominion Diving Ltd. (Newfoundland)	Mount Pearl	Newfoundland
F I Canada Oilfield Services Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Newfoundland Transshipment Limited	St. John's	Newfoundland
Alfa Laval Inc.	Dartmouth	Nova Scotia
Atlantic Oilfield & Supplies	Dartmouth	Nova Scotia
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Davis Specialized Carriers Ltd.	Sackville	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
F I Canada Oilfield Services Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Pro-Dive Marine Services (N.S.) Ltd.	Dartmouth	Nova Scotia
Schlumberger of Canada	Dartmouth	Nova Scotia

Perforating

Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
IPM Services - Division of Schlumberger Canada Li	Mount Pearl	Newfoundland
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Schlumberger of Canada	Dartmouth	Nova Scotia

Pipeline Plant Services

JUA Engineering	Oromocto	New Brunswick
Alpine Overland & Wireless, Co.	Halifax	Nova Scotia

Pressure Testing

Irving Shipbuilding Inc.	Saint John	New Brunswick
C-CORE	St. John's	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Nowsco Well Service Limited (Newfoundland)	St. John's	Newfoundland
Banc Metals	Dartmouth	Nova Scotia
Brooke Ocean Technology Limited	Dartmouth	Nova Scotia
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Instrument Concepts Inc.	Great Village	Nova Scotia
Nowsco Well Service Limited (Nova Scotia)	Dartmouth	Nova Scotia
Pro-Oceanus Systems, Inc.	Brookside	Nova Scotia

Production Equipment Rentals

Miller Sound Ltd.	Saint John	New Brunswick
Metal World Inc.	Torbay	Newfoundland
The Scale Shop (1985) Ltd.	Mount Pearl	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
CKT Nova Scotia Limited	Bedford	Nova Scotia
Hart Industrial Communications	Dartmouth	Nova Scotia
Hertz Equipment Rental	Dartmouth	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
WCC Refurb Limited/WCC Offshore	Halifax	Nova Scotia

Production Testing

ADI Group Inc.	Fredericton	New Brunswick
AQTS	Saint John	New Brunswick

Catalogue of Companies - Onshore Services

Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
DPL Group	Saint John	New Brunswick
Icer's Inc.	Fredericton	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Jury Consulting Services	Hanwell	New Brunswick
Malley Industries Inc.	Moncton	New Brunswick
Mathis Instruments Ltd.	Fredericton	New Brunswick
Mobile Valve Repairs & Manuf. N.B. Ltd.	Tracy	New Brunswick
The Panel Shop	Fredericton	New Brunswick
Three-D GeoConsultants Ltd.	Fredericton	New Brunswick
TRC Hydraulics Inc.	Dieppe	New Brunswick
Atlantic Offshore Medical Services Ltd.	St. John's	Newfoundland
C-CORE	St. John's	Newfoundland
CHC Composites Inc.	Gander	Newfoundland
Dominion Diving Ltd. (Newfoundland)	Mount Pearl	Newfoundland
FMC of Canada Ltd. (Newfoundland)	St. John's	Newfoundland
Guigne Technologies Ltd.	St. John's	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Hyflodraulic Limited	Mount Pearl	Newfoundland
IDON East Corporation	St. John's	Newfoundland
JADEnvironmental Friendly Water Treatment & Tec	Grand Bank	Newfoundland
Marineering Limited	St. John's	Newfoundland
MI International	St. John's	Newfoundland
Nowasco Well Service Limited (Newfoundland)	St. John's	Newfoundland
Ozark Electrical Marine Ltd.	St. John's	Newfoundland
Seabright Corporation Limited	St. John's	Newfoundland
Seacraft Limited	Hermitage	Newfoundland
Terra Nova Biotechnology	St. John's	Newfoundland
The Scale Shop (1985) Ltd.	Mount Pearl	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
TRC Hydraulics Inc.	Mount Pearl	Newfoundland
Wire Rope Industries Ltd.	Mount Pearl	Newfoundland
Armament Technology	Halifax	Nova Scotia
Atkinson & Bower Limited	Shelburne	Nova Scotia
Atlantic Scale Company Limited	Bridgewater	Nova Scotia
Banc Metals	Dartmouth	Nova Scotia
Bert Van Leeuwen Industrial Design Ltd.	Amherst	Nova Scotia
BioMedica Diagnostics Inc.	Windsor	Nova Scotia
BioScan	Truro	Nova Scotia
Breton ND Testing Inc.	Reserve Mines	Nova Scotia
ClearSpan	Truro	Nova Scotia
Digital Recordings	Halifax	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
Fugro Jacques Geosurveys Inc.	Dartmouth	Nova Scotia
GeoSpectrum Technologies	Dartmouth	Nova Scotia
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
I.M.P. Group Limited Aerospace Division	Halifax	Nova Scotia
IMP Group Limited (Nova Scotia)	Dartmouth	Nova Scotia
INLAND TECHNOLOGIES INC.	Truro	Nova Scotia
Instrument Concepts Inc.	Great Village	Nova Scotia
Internav Ltd.	Sydney	Nova Scotia

Catalogue of Companies - Onshore Services

Jellett Biotek Ltd.	Dartmouth	Nova Scotia
KB Electronics (1989) Limited	Bedford	Nova Scotia
Magneto-Inductive Systems Limited	Dartmouth	Nova Scotia
meadoworks	New Germany	Nova Scotia
METOCEAN Data Systems Limited	Dartmouth	Nova Scotia
Newmac Mfg. Inc.	Debert	Nova Scotia
Newsco Well Service Limited (Nova Scotia)	Dartmouth	Nova Scotia
Oceanside Equipment	Dartmouth	Nova Scotia
OIS-Fisher Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Pro-Oceanus Systems, Inc.	Brookside	Nova Scotia
PV Inspection Services Ltd. / PV Offshore Inc.	Dartmouth	Nova Scotia
Samson Enterprises Ltd.	Arichat	Nova Scotia
Schlumberger of Canada	Dartmouth	Nova Scotia
Telecom Applications Research Alliance	Halifax	Nova Scotia
Wayland Engineering Ltd.	Halifax	Nova Scotia
WCC Refurb Limited/WCC Offshore	Halifax	Nova Scotia
Wire Rope Industries Ltd.	Dartmouth	Nova Scotia
Abiogen Environmental Services	Charlottetown	Prince Edward Island
P.E.I. FOOD TECHNOLOGY CENTRE	Charlottetown	Prince Edward Island

Pumping Services

Ivey Environmental Services Ltd.	Fredericton	New Brunswick
Labrador Technologies & Development	North West River	Newfoundland
M & M Engineering Limited	St. John's	Newfoundland
Newsco Well Service Limited (Newfoundland)	St. John's	Newfoundland
ITC Canada Limited	Halifax	Nova Scotia
Newsco Well Service Limited (Nova Scotia)	Dartmouth	Nova Scotia

Rental Equipment

Aluma Systems Canada Inc.	St. John's	Newfoundland
Avalon Controls Ltd.	St. John's	Newfoundland
Avcon Limited	Bay Roberts	Newfoundland
BAE Systems Canada Inc. (Newfoundland)	St. John's	Newfoundland
BMS Offshore Limited (Newfoundland)	Mount Pearl	Newfoundland
DownEast TAS Communications	St. John's	Newfoundland
Enviromed Analytical Inc.	Mount Pearl	Newfoundland
Pro-Dive Marine Services (NFLD)	Mount Pearl	Newfoundland
Rideout Tool & Machine Inc.	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St. John's	Newfoundland
Terra Nova Marine Co. Ltd.	Mount Pearl	Newfoundland
The Scale Shop (1985) Ltd.	Mount Pearl	Newfoundland
Tubecraft Atlantic Ltd.	St. John's	Newfoundland
United Rent-Alls Ltd.	Mount Pearl	Newfoundland
Ainsworth Atlantic (A Division of Ainsworth Inc.)	Dartmouth	Nova Scotia
BMS Offshore Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Dymaxion Research Limited	Halifax	Nova Scotia
Haggis Geophysics	Dartmouth	Nova Scotia
Hertz Equipment Rental	Dartmouth	Nova Scotia
Irving Equipment Division	Halifax	Nova Scotia
Maritime 2-Way Radio Limited	Dartmouth	Nova Scotia
Maritime Stress Contracting Limited	Dartmouth	Nova Scotia
Municipal Ready-Mix Limited	Sydney	Nova Scotia
Nova Construction Co. Ltd.	Antigonish	Nova Scotia

Catalogue of Companies - Onshore Services

Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
Pro-Dive Marine Services (N.S.) Ltd.	Dartmouth	Nova Scotia
Romor Atlantic Limited	Dartmouth	Nova Scotia
Sea Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
Superior Vallen Safety Supply Company Ltd.	Dartmouth	Nova Scotia
U.J. Robichaud & Son Ltd.	Meteghan Centre	Nova Scotia
Web Site Advantage Inc	Charlottetown	Prince Edward Island

Rig Moving

Irving Shipbuilding Inc.	Saint John	New Brunswick
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Safety Training

ADI Group Inc.	Fredericton	New Brunswick
Applied Courseware Technology Inc.	Miramichi West	New Brunswick
Applied Management Consultants Ltd.	Fredericton	New Brunswick
AQTS	Saint John	New Brunswick
Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
Digital Edge a Division of EBSI Canada	Miramichi	New Brunswick
Don Sayers & Associates Ltd.	Fredericton	New Brunswick
Ensignes Imperial Signs	Edmundston	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
MONCTON FLIGHT COLLEGE LTD.	Dieppe	New Brunswick
NEW BRUNSWICK SCHOOL OF FISHERIES	Caraquet	New Brunswick
OPIM International Inc.	St-Joseph-De-Made	New Brunswick
RPC	Fredericton	New Brunswick
Senior Watch Inc.	Saint John	New Brunswick
University of N.B. Extension/Summer Sess	Fredericton	New Brunswick
Atlantic Construction Training Centre	St. John's	Newfoundland
Atlantic Safety Centre	St. John's	Newfoundland
College Of The North Atlantic	Happy Valley-Goose	Newfoundland
FMD International Inc.	St. John's	Newfoundland
Marine Institute	St. John's	Newfoundland
Medserv Solutions Inc.	St. John's	Newfoundland
Offshore Safety and Survival Centre	St. John's	Newfoundland
Puglisevich Group of Companies	St. John's	Newfoundland
Rogers Enterprises Limited	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
BioMedica Diagnostics Inc.	Windsor	Nova Scotia
Dalhousie University DalTech Cont. Tech.	Halifax	Nova Scotia
Integrated Health Services (I.H.S.) Atlantic Inc.	Dartmouth	Nova Scotia
Internav Ltd.	Sydney	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Maritrain Ltd.	Meteghan	Nova Scotia
OCL Services Ltd./ OCL Group	Dartmouth	Nova Scotia
School Of Occupational Therapy	Halifax	Nova Scotia
Seatech Ltd.	Halifax	Nova Scotia
Siemens Westinghouse Technical Services	Dartmouth	Nova Scotia
Simulation Technologies Limited	Dartmouth	Nova Scotia
Stewart & Associates Safety Management Services	Chester Basin	Nova Scotia
Superior Vallen Safety Supply Company Ltd.	Dartmouth	Nova Scotia
Survival Systems Group Ltd.	Dartmouth	Nova Scotia
Survival Systems Industrial Limited	Dartmouth	Nova Scotia
Survival Systems Training Limited	Dartmouth	Nova Scotia

Catalogue of Companies - Onshore Services

Technitherm Heat Treatment Services Limited	Dartmouth	Nova Scotia
TecKnowledge Healthcare Systems Inc.	Dartmouth	Nova Scotia
Coles Associates Ltd.	Charlottetown	Prince Edward Island
P.E.I. Food Technology Centre	Charlottetown	Prince Edward Island

Safety, Contract Personnel

Enseignes Imperial Signs	Edmundston	New Brunswick
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
Technitherm Heat Treatment Services Limited	Dartmouth	Nova Scotia

Safety, Rentals

Enviromed Analytical Inc.	Mount Pearl	Newfoundland
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Sand Control

Irving Shipbuilding Inc.	Saint John	New Brunswick
Atlantic Purification Systems Ltd.	Dartmouth	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Steel And Engine Products Limited	Liverpool	Nova Scotia

Service Rig Moving

Irving Shipbuilding Inc.	Saint John	New Brunswick
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Software Development

AccessLab Systems Ltd.	Fredericton	New Brunswick
Administrative Business Solutions	Cherry Burton	New Brunswick
Advanced Business Services Ltd.	Fredericton	New Brunswick
Advanced Training & Services Inc.	Saint John	New Brunswick
AMEC Earth and Environmental Ltd.	Fredericton	New Brunswick
Applied Courseware Technology Inc.	Miramichi West	New Brunswick
Applied Courseware Technology Inc.	Fredericton	New Brunswick
Applied Spatial Information Inc.	Fredericton	New Brunswick
AQTS	Saint John	New Brunswick
ASG Technologies	Fredericton	New Brunswick
Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
Atlantic Speakers Bureau	Scotch Ridge	New Brunswick
Beltek Systems Design Inc.	Dieppe	New Brunswick
BKM Research & Development Inc.	Dieppe	New Brunswick
Caris	Fredericton	New Brunswick
Concept + Inc.	Moncton	New Brunswick
Construction Technology Centre Atlantic	Fredericton	New Brunswick
Cormier Gibbs	Moncton	New Brunswick
CyberDesign	Moncton	New Brunswick
Digital Edge a Division of EBSI Canada	Miramichi	New Brunswick
DISCscribe Ltd.	Fredericton	New Brunswick
Document Searching Services	Saint John	New Brunswick
DPL Group	Saint John	New Brunswick
EDP Consultants Limited	Fredericton	New Brunswick
FGA Consultants Ltd.	Fredericton	New Brunswick
Force/Robak Associates Ltd.	Fredericton	New Brunswick
Geodat Information Services Limited	Fredericton	New Brunswick

Catalogue of Companies - Onshore Services

HEYnetwork.com Canada Inc	Moncton	New Brunswick
HLS Multimedia	Miramichi	New Brunswick
Ibridge	Woodstock	New Brunswick
Indipro Systems Inc.	Fredericton	New Brunswick
Interactive Visualization Systems Inc.	Fredericton	New Brunswick
JVH Market Design	Campbellton	New Brunswick
Micro Action	Moncton	New Brunswick
Micro Optics Design Corporation	Moncton	New Brunswick
Mosaic Technologies Corporation	Miramichi	New Brunswick
Neill and Gunter Ltd.	Fredericton	New Brunswick
Avalon InterConnect	St. John's	Newfoundland
Canadian Centre for Marine Communication	St. John's	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
Computers & Communications Ltd.	Deer Lake	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
FGA Consulting Engineers Limited	St. John's	Newfoundland
Geodata Ltd.	St. John's	Newfoundland
GSO Solutions Inc.	St. John's	Newfoundland
Guigne Technologies Ltd.	St. John's	Newfoundland
ICAN	St. John's	Newfoundland
IDON East Corporation	St. John's	Newfoundland
Infotech Canada Inc.	St. John's	Newfoundland
INNOVA Multimedia Ltd.	St. John's	Newfoundland
INSTRUMAR Limited	Stephenville	Newfoundland
Media Touch Technologies	St. John's	Newfoundland
Northstar Network Ltd.	St. John's	Newfoundland
AGRA Whitman Benn Limited	Halifax	Nova Scotia
AMIRIX Systems Inc. (formerly Applied Microelectr	Halifax	Nova Scotia
ATCAN Business Management Limited	Dartmouth	Nova Scotia
Atlantic Data Group	Halifax	Nova Scotia
Axes Inc.	Boutiliers Point	Nova Scotia
BioMedica Diagnostics Inc.	Windsor	Nova Scotia
Canadax Industrial Group Limited	Halifax	Nova Scotia
Clear Picture Corporation	Halifax	Nova Scotia
Computerease Limited	Dartmouth	Nova Scotia
Customized Financial Delivery Systems Inc	Southampton	Nova Scotia
David R. Miller and Associates Ltd.	Musquodoboit Harbo	Nova Scotia
Digital Image FX Inc.	Dartmouth	Nova Scotia
Dymaxion Research Limited	Halifax	Nova Scotia
Earth Information Technologies	Halifax	Nova Scotia
Eclectic Services	Boutiliers Point	Nova Scotia
EOA Scientific Systems, Inc.	Halifax	Nova Scotia
e-plicity.com	Halifax	Nova Scotia
Fastlane Technologies Inc.	Halifax	Nova Scotia
Garvin-Allen Solutions Limited	Halifax	Nova Scotia
Horizon Systems Group Inc.	Dartmouth	Nova Scotia
ICON Interactive Inc.	Halifax	Nova Scotia
Instrument Concepts Inc.	Great Village	Nova Scotia
Internav Ltd.	Sydney	Nova Scotia
Isle Royal Internet Consulting and Design	Glace Bay	Nova Scotia
KLJ Computer Solutions Inc.	Halifax	Nova Scotia
Landmark Decisions	Hammonds Plains	Nova Scotia
Links Network Solutions Inc	Wolfville	Nova Scotia

Catalogue of Companies - Onshore Services

Maritrain Ltd.	Meteghan	Nova Scotia
MathResources Inc.	Halifax	Nova Scotia
MediaSpark IT Solutions Inc.	Sydney	Nova Scotia
Minus 13 Media	Halifax	Nova Scotia
Navitrak Engineering Inc.	Halifax	Nova Scotia
Nicom Ltd.	Dartmouth	Nova Scotia
Novalis Technologies	Halifax	Nova Scotia
Nova Scotia Community College (Annapolis Valley)	Lawrencetown	Nova Scotia
Baseline Business Geographics Inc.	Charlottetown	Prince Edward Island
Coles Associates Ltd.	Charlottetown	Prince Edward Island
CSC Computer Division	Stratford	Prince Edward Island
G/COM	Summerside	Prince Edward Island
GE Capital IT Solutions Inc	Charlottetown	Prince Edward Island
Graphic Communications Inc	Charlottetown	Prince Edward Island
Holland College	Charlottetown	Prince Edward Island
Imageworks PEI Inc.	Charlottetown	Prince Edward Island
iWave.com	Charlottetown	Prince Edward Island
Knowledge House Inc	Charlottetown	Prince Edward Island
K & R Management	Charlottetown	Prince Edward Island
MICROAGE COMPUTER CENTRES	Charlottetown	Prince Edward Island

Software Integration

ASG Technologies	Fredericton	New Brunswick
Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
Caris	Fredericton	New Brunswick
Digital Edge a Division of EBSI Canada	Miramichi	New Brunswick
Document Searching Services	Saint John	New Brunswick
DPL Group	Saint John	New Brunswick
FGA Consultants Ltd.	Fredericton	New Brunswick
Fundy Computer Services Ltd.	Saint John	New Brunswick
Micro Action	Moncton	New Brunswick
Roy-Babin Multimedia Production	Shediac	New Brunswick
Valron Engineers Inc	Moncton	New Brunswick
Whitehill Technologies, Inc.	Moncton	New Brunswick
xwave	Fredericton	New Brunswick
Avalon InterConnect	St. John's	Newfoundland
Canadian Centre for Marine Communication	St. John's	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
Infotech Canada Inc.	St. John's	Newfoundland
Northstar Network Ltd.	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
xwave solutions	St. John's	Newfoundland
AMIRIX Systems Inc. (formerly Applied Microelectr	Halifax	Nova Scotia
Axes Inc.	Boutiliers Point	Nova Scotia
Computerease Limited	Dartmouth	Nova Scotia
CSE Computronics Inc.	Dartmouth	Nova Scotia
Customized Financial Delivery Systems Inc	Southampton	Nova Scotia
Digital Image FX Inc.	Dartmouth	Nova Scotia
Dymaxion Research Limited	Halifax	Nova Scotia
Earth Information Technologies	Halifax	Nova Scotia
EOA Scientific Systems, Inc.	Halifax	Nova Scotia
e-plicity.com	Halifax	Nova Scotia

Catalogue of Companies - Onshore Services

Garvin-Allen Solutions Limited	Halifax	Nova Scotia
KLJ Computer Solutions Inc.	Halifax	Nova Scotia
Maritrain Ltd.	Meteghan	Nova Scotia
Navitrak Engineering Inc.	Halifax	Nova Scotia
Nicom Ltd.	Dartmouth	Nova Scotia
Novalis Technologies	Halifax	Nova Scotia
Nova Scotia Oceans Initiative (NSOI)	Dartmouth	Nova Scotia
Siemens Westinghouse Technical Services	Dartmouth	Nova Scotia
Trihedral Engineering Limited	Bedford	Nova Scotia
Baseline Business Geographics Inc.	Charlottetown	Prince Edward Island
Coles Associates Ltd.	Charlottetown	Prince Edward Island
CSC Computer Division	Stratford	Prince Edward Island
G/COM	Summerside	Prince Edward Island
GE Capital IT Solutions Inc	Charlottetown	Prince Edward Island
MICROAGE COMPUTER CENTRES	Charlottetown	Prince Edward Island
N.R. Computronics Ltd.	Charlottetown	Prince Edward Island
PriceWaterhouseCoopers	Charlottetown	Prince Edward Island
Wireless Island Ltd	Charlottetown	Prince Edward Island

Tank Inspection

AQTS	Saint John	New Brunswick
Atlantic Quality & Technical Serv. Ltd.	Saint John	New Brunswick
RTD Quality Services Inc.	St. John's	Newfoundland
RTD Quality Services Inc.	New Glasgow	Nova Scotia
Coles Associates Ltd.	Charlottetown	Prince Edward Island

Tank Moving

Irving Shipbuilding Inc.	Saint John	New Brunswick
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Tank Rentals

CKT Nova Scotia Limited	Bedford	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia

Testing, A.O.F. Production

ADI Group Inc.	Fredericton	New Brunswick
AQTS	Saint John	New Brunswick
Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
DPL Group	Saint John	New Brunswick
Icer's Inc.	Fredericton	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Jury Consulting Services	Hanwell	New Brunswick
Malley Industries Inc.	Moncton	New Brunswick
Mathis Instruments Ltd.	Fredericton	New Brunswick
Mobile Valve Repairs & Manuf. N.B. Ltd.	Tracy	New Brunswick
The Panel Shop	Fredericton	New Brunswick
Three-D GeoConsultants Ltd.	Fredericton	New Brunswick
TRC Hydraulics Inc.	Dieppe	New Brunswick
Atlantic Offshore Medical Services Ltd.	St. John's	Newfoundland
C-CORE	St. John's	Newfoundland
CHC Composites Inc.	Gander	Newfoundland
Dominion Diving Ltd. (Newfoundland)	Mount Pearl	Newfoundland
FMC of Canada Ltd. (Newfoundland)	St. John's	Newfoundland

Catalogue of Companies - Onshore Services

Guigne Technologies Ltd.	St. John's	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Hyflodraulic Limited	Mount Pearl	Newfoundland
IDON East Corporation	St. John's	Newfoundland
JADEnvironmental Friendly Water Treatment & Tec	Grand Bank	Newfoundland
Marineering Limited	St. John's	Newfoundland
MI International	St. John's	Newfoundland
NowSCO Well Service Limited (Newfoundland)	St. John's	Newfoundland
Ozark Electrical Marine Ltd.	St. John's	Newfoundland
Seabright Corporation Limited	St. John's	Newfoundland
Seacraft Limited	Hermitage	Newfoundland
Terra Nova Biotechnology	St. John's	Newfoundland
The Scale Shop (1985) Ltd.	Mount Pearl	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
TRC Hydraulics Inc.	Mount Pearl	Newfoundland
Wire Rope Industries Ltd.	Mount Pearl	Newfoundland
Armament Technology	Halifax	Nova Scotia
Atkinson & Bower Limited	Shelburne	Nova Scotia
Atlantic Scale Company Limited	Bridgewater	Nova Scotia
Banc Metals	Dartmouth	Nova Scotia
Bert Van Leeuwen Industrial Design Ltd.	Amherst	Nova Scotia
BioMedica Diagnostics Inc.	Windsor	Nova Scotia
BioScan	Truro	Nova Scotia
Breton ND Testing Inc.	Reserve Mines	Nova Scotia
ClearSpan	Truro	Nova Scotia
Digital Recordings	Halifax	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
Fugro Jacques Geosurveys Inc.	Dartmouth	Nova Scotia
GeoSpectrum Technologies	Dartmouth	Nova Scotia
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
I.M.P. Group Limited Aerospace Division	Halifax	Nova Scotia
IMP Group Limited (Nova Scotia)	Dartmouth	Nova Scotia
INLAND TECHNOLOGIES INC.	Truro	Nova Scotia
Instrument Concepts Inc.	Great Village	Nova Scotia
Internav Ltd.	Sydney	Nova Scotia
Jellett Biotek Ltd.	Dartmouth	Nova Scotia
KB Electronics (1989) Limited	Bedford	Nova Scotia
Magneto-Inductive Systems Limited	Dartmouth	Nova Scotia
meadoworks	New Germany	Nova Scotia
METOCEAN Data Systems Limited	Dartmouth	Nova Scotia
Newmac Mfg. Inc.	Debert	Nova Scotia
NowSCO Well Service Limited (Nova Scotia)	Dartmouth	Nova Scotia
Oceanside Equipment	Dartmouth	Nova Scotia
OIS-Fisher Inc. (Nova Scotia)	Dartmouth	Nova Scotia
Pro-Oceanus Systems, Inc.	Brookside	Nova Scotia
PV Inspection Services Ltd. / PV Offshore Inc.	Dartmouth	Nova Scotia
Samson Enterprises Ltd.	Arichat	Nova Scotia
Schlumberger of Canada	Dartmouth	Nova Scotia
Telecom Applications Research Alliance	Halifax	Nova Scotia
Wayland Engineering Ltd.	Halifax	Nova Scotia
WCC Refurb Limited/WCC Offshore	Halifax	Nova Scotia

Catalogue of Companies - Onshore Services

Wire Rope Industries Ltd.	Dartmouth	Nova Scotia
Abiogen Environmental Services	Charlottetown	Prince Edward Island
P.E.I. Food Technology Centre	Charlottetown	Prince Edward Island

Tools, Handling

Arvin Special Machinery Ltd.	Miramichi	New Brunswick
Deschenes Drilling Ltd.	Saint-Quentin	New Brunswick
Interface Consultants Inc.	Moncton	New Brunswick
Arrow Construction Products Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Baker Hughes Canada Inc.	Mt. Pearl	Newfoundland
F I Canada Oilfield Services Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Murray Industrial Limited	St. John's	Newfoundland
Rideout Tool & Machine Inc.	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
Wire Rope Industries Ltd.	Mount Pearl	Newfoundland
Arrow Construction Products Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Atlantic Oilfield & Supplies	Dartmouth	Nova Scotia
Baker Oil Tools	Dartmouth	Nova Scotia
F I Canada Oilfield Services Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Gartec Industrial Supplies Inc.	Beaver Bank	Nova Scotia
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
IMP Group Limited (Nova Scotia)	Dartmouth	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
KLJ Computer Solutions Inc.	Halifax	Nova Scotia
Martec Limited	Halifax	Nova Scotia
Nautel Limited	Tantallon	Nova Scotia
Romor Atlantic Limited	Dartmouth	Nova Scotia
The Binnacle Yachting Equipment & Accessories Lt	Halifax	Nova Scotia
Wire Rope Industries Ltd.	Dartmouth	Nova Scotia

Training, Safety, Environmental, Production, Management

ADI Group Inc.	Fredericton	New Brunswick
AQTS	Saint John	New Brunswick
Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Medserv Solutions Inc.	St. John's	Newfoundland
ITC Canada Limited	Halifax	Nova Scotia

Trucking

Clarke Transport	Mount Pearl	Newfoundland
Labrador Technologies & Development	North West River	Newfoundland
Quinnsway Transport Ltd.	Mount Pearl	Newfoundland
Day & Ross Inc. (Nova Scotia)	Dartmouth	Nova Scotia
G.W. Holmes Trucking Limited	Thorburn	Nova Scotia
Kero Transport, A division of Kero Enterprises Ltd.	Dartmouth	Nova Scotia
Midland Transport Limited	Dartmouth	Nova Scotia
Owen Davis Trucking Ltd.	Sackville	Nova Scotia

Tubular Running Services

Irving Shipbuilding Inc.	Saint John	New Brunswick
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Catalogue of Companies - Onshore Services

Well Optimization

Concept + Inc.	Moncton	New Brunswick
Force/Robak Associates Ltd.	Fredericton	New Brunswick
Valron Engineers Inc	Moncton	New Brunswick
APA (NFLD) Ltd.	St. John's	Newfoundland
AFM Project Design Group	Halifax	Nova Scotia
APA (Nova Scotia) Limited	Halifax	Nova Scotia
Baseline Business Geographics Inc.	Charlottetown	Prince Edward Island
Coles Associates Ltd.	Charlottetown	Prince Edward Island

Wireline Logging Electric

IPM Services - Division of Schlumberger Canada Ltd.	Mount Pearl	Newfoundland
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Wireline Logging Slickline

IPM Services - Division of Schlumberger Canada Ltd.	Mount Pearl	Newfoundland
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Onshore Supply

Actuators

Atlantic Controls Ltd. (New Brunswick)	Saint John	New Brunswick
Atlantic Controls	Halifax	Nova Scotia
CTH Instruments Ltd.	Dartmouth	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia

B.O.P. Parts, Servicing & Supply

Sea Systems Limited (Newfoundland)	St John's	Newfoundland
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Casing Supply

Oak Environmental Equipment Supply Ltd.	Calgary	Nova Scotia
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Cathodic Protection

Irving Shipbuilding Inc.	Saint John	New Brunswick
Dominion Diving Ltd. (Newfoundland)	Mount Pearl	Newfoundland
G.J. Cahill & Co. Ltd (Newfoundland)	St. John's	Newfoundland
G. Pelley Limited	Springdale	Newfoundland
Russel Metals Inc. (Newfoundland)	Mount Pearl	Newfoundland
C.S.A. Enterprises Ltd.	Halifax	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
Russel Metals Inc. (Nova Scotia)	Lakeside	Nova Scotia

Cementing Equipment & Tools

Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Import Tool Corporation Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Import Tool Corporation Ltd. (Nova Scotia)	Dartmouth	Nova Scotia

Centrifuges & Separators

Alfa Laval Inc.	Dartmouth	Nova Scotia
Branded Products Limited	Dartmouth	Nova Scotia

Chemicals, Processing & Production

Genesis Organic Incorporated	Corner Brook	Newfoundland
Ocean Produce International	Shelburne	Nova Scotia
PEI Innovations Inc.	Cardigan	Prince Edward Island

Coatings, External

Crosbie Salamis Limited	St. John's	Newfoundland
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Catalogue of Companies -Onshore Supply

Coatings, Internal

AQTS	Saint John	New Brunswick
Crosbie Salamis Limited	St. John's	Newfoundland
Mills Painting & Sandblasting Limited	Dartmouth	Nova Scotia

Coiled Tubing

IPM Services - Division of Schlumberger Canada Lin	Mount Pearl	Newfoundland
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Completion Tools

BKM Research & Development Inc.	Dieppe	New Brunswick
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Import Tool Corporation Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Media Touch Technologies	St. John's	Newfoundland
Baker Oil Tools	Dartmouth	Nova Scotia
EOA Scientific Systems, Inc.	Halifax	Nova Scotia
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Import Tool Corporation Ltd. (Nova Scotia)	Dartmouth	Nova Scotia

Compressors

MAXCOR INTERNATIONAL	Fredericton	New Brunswick
Reel North Recording Studios	Fredericton	New Brunswick
Basil Fearn ('93) Limited	St. John's	Newfoundland
Pro-Dive Marine Services (NFLD)	Mount Pearl	Newfoundland
Rideout Tool & Machine Inc.	St. John's	Newfoundland
TRC Hydraulics Inc.	Mount Pearl	Newfoundland
United Rent-Alls Ltd.	Mount Pearl	Newfoundland
Atlantic Gas Engineers	Halifax	Nova Scotia
Gartec Industrial Supplies Inc.	Beaver Bank	Nova Scotia
Hertz Equipment Rental	Dartmouth	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Mill Supply Ltd.	Dartmouth	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
Pro-Dive Marine Services (N.S.) Ltd.	Dartmouth	Nova Scotia

Directional Drilling Tools

Baker Hughes Canada Inc.	Mt. Pearl	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia

Drill Bits

MAXCOR INTERNATIONAL	Fredericton	New Brunswick
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Smith International Canada, Ltd. (N.S.)	Boutiliers Point	Nova Scotia

Drill Collars

Smith International Canada, Ltd. (N.S.)	Boutiliers Point	Nova Scotia
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Drilling Supplies

Les Forages Lantech Drilling Services Inc.	Dieppe	New Brunswick
3M CANADA COMPANY	Mount Pearl	Newfoundland

Catalogue of Companies -Onshore Supply

Bailey Sea (NFLD) Ltd.	St. John's	Newfoundland
Baker Hughes Canada Inc.	Mt. Pearl	Newfoundland
C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
Guigne Technologies Ltd.	St. John's	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Hyflodraulic Limited	Mount Pearl	Newfoundland
Import Tool Corporation Ltd. (Newfoundland)	Mount Pearl	Newfoundland
IPM Services - Division of Schlumberger Canada Lin	Mount Pearl	Newfoundland
Labrador Technologies & Development	North West River	Newfoundland
Maritime Drilling Supplies Inc.	St. John's	Newfoundland
Rideout Tool & Machine Inc.	St. John's	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
United Rent-Alls Ltd.	Mount Pearl	Newfoundland
Atlantic Oilfield & Supplies	Dartmouth	Nova Scotia
Baker Hughes INTEQ	Dartmouth	Nova Scotia
Banc Metals	Dartmouth	Nova Scotia
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Import Tool Corporation Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Parker Brothers Contracting Ltd.	Waverley	Nova Scotia
Santa Fe Drilling Company (Canada) Limited	Bedford	Nova Scotia
Schlumberger of Canada	Dartmouth	Nova Scotia
Seaboard Offshore Services Ltd.	Port Hawkesbury	Nova Scotia
Smith International Canada, Ltd. (N.S.)	Boutiliers Point	Nova Scotia

Engines

Cedarwood Canoes Ltd.	Mouth Of Keswick	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
Miller Canoes	Nictau	New Brunswick
Cummins/Onan Eastern Canada Inc.	Mount Pearl	Newfoundland
G. Pelley Limited	Springdale	Newfoundland
GSO Solutions Inc.	St. John's	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
United Rent-Alls Ltd.	Mount Pearl	Newfoundland
A B Seacraft	Sydney	Nova Scotia
Atlantic Tractors & Equipment Limited	Halifax	Nova Scotia
Detroit Diesel Allison Canada East (1995) Inc.	Dartmouth	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Liftow Limited	Dartmouth	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
MediaSpark IT Solutions Inc.	Sydney	Nova Scotia
Orenda Recip Inc.	Debert	Nova Scotia
Rolls-Royce Canada Ltd.	Dartmouth	Nova Scotia
Steel and Engine Products Limited	Liverpool	Nova Scotia
Wartsila NSD Canada inc.	Dartmouth	Nova Scotia
3V World	Charlottetown	Prince Edward Island
Atlantic Turbines Inc.	Slemon Park	Prince Edward Island
Diversified Metal Engineering Ltd.	Charlottetown	Prince Edward Island
Netnovations Enterprises Inc.	Summerside	Prince Edward Island
Tube Fab Machined Products Division	Charlottetown	Prince Edward Island

Environmental Monitoring & Equipment

ADI Group Inc.	Fredericton	New Brunswick
AQTS	Saint John	New Brunswick
Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
Atlantic Quality & Technical Serv. Ltd.	Saint John	New Brunswick
Force/Robak Associates Ltd.	Fredericton	New Brunswick
Fundy Engineering & Consulting Ltd.	Saint John	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
JUA Engineering	Oromocto	New Brunswick
Machinery Condition Monitoring Inc.	Grand Bay	New Brunswick
RPC	Fredericton	New Brunswick
BAE-Newplan Group Limited	Mount Pearl	Newfoundland
Compusult Limited	Mount Pearl	Newfoundland
CORETEC Incorporated	St. John's	Newfoundland
Cormorant Ltd.	St. John's	Newfoundland
Jacques Whitford Environmental	St. John's	Newfoundland
Oceans Limited	St. John's	Newfoundland
AGRA Whitman Benn Limited	Halifax	Nova Scotia
Canadian Fishery Consultants Ltd.	Halifax	Nova Scotia
CBCL Limited (Halifax)	Halifax	Nova Scotia
DalTech, Dalhousie University	Halifax	Nova Scotia
EnvironChem Engineering Consultants	Wolfville	Nova Scotia
Forest Insight Limited	Marion Bridge	Nova Scotia
Fugro Jacques Geosurveys Inc.	Dartmouth	Nova Scotia
Hermes Electronics Incorporated	Dartmouth	Nova Scotia
Hurley Fisheries Consulting Ltd.	Dartmouth	Nova Scotia
Jacques Whitford Environment Limited	Dartmouth	Nova Scotia
METOCEAN Data Systems Limited	Dartmouth	Nova Scotia
Oak Environmental Equipment Supply Ltd.	Calgary	Nova Scotia
Pylon Atlantic Inc.	Dartmouth	Nova Scotia
R.A. Murray International Limited	Halifax	Nova Scotia
Seatech Ltd.	Halifax	Nova Scotia
Wright Systems & Equipment	Charlottetown	Prince Edward Island

Filters

Arvin Special Machinery Ltd.	Miramichi	New Brunswick
Imperial Sheet Metal Ltd.	Richibucto	New Brunswick
C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
Cummins/Onan Eastern Canada Inc.	Mount Pearl	Newfoundland
Hydraulic Systems Limited (Newfoundland)	St. John's	Newfoundland
Tubecraft Atlantic Ltd.	St. John's	Newfoundland
United Rent-Alls Ltd.	Mount Pearl	Newfoundland
Alfa Laval Inc.	Dartmouth	Nova Scotia
Atlantic Engine Control and Equipment	Dartmouth	Nova Scotia
Atlantic Purification Systems Ltd.	Dartmouth	Nova Scotia
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Gartec Industrial Supplies Inc.	Beaver Bank	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Nautel Limited	Tantallon	Nova Scotia
Seatech Ltd.	Halifax	Nova Scotia

Catalogue of Companies -Onshore Supply

Alchem Industries	Charlottetown	Prince Edward Island
Clipper Services	Charlottetown	Prince Edward Island

Filtration

Atlantic Silica inc.	Riverview	New Brunswick
Basil Fearn ('93) Limited	St. John's	Newfoundland
Hydraulic Systems Limited (Newfoundland)	St. John's	Newfoundland
JADEnvironmental Friendly Water Treatment & Tech	Grand Bank	Newfoundland
LTS Sales Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Newfoundland Design Associates Ltd.	St. John's	Newfoundland
Apex Industrial Supply Ltd.	Halifax	Nova Scotia
Beasy Nicoll Engineering Limited	Dartmouth	Nova Scotia
CBCL Limited (Halifax)	Halifax	Nova Scotia
C.J. Maclellan & Associates Incorporated	Antigonish	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
LTS Sales Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Shaw Resources	Milford	Nova Scotia
Wright Systems & Equipment	Charlottetown	Prince Edward Island

Fittings

Associated Industrial Rubber Co. Ltd.	Moncton	New Brunswick
Atelier Gerard Beaulieu inc.	Saint-Quentin	New Brunswick
Atlantic Industries Limited	Dorchester	New Brunswick
Atlantic Valve & Fittings Limited	Saint John	New Brunswick
CFM	Saint John	New Brunswick
Deschenes Drilling Ltd.	Saint-Quentin	New Brunswick
Imperial Sheet Metal Ltd.	Richibucto	New Brunswick
Ipex Inc.	Saint John	New Brunswick
Maritime Fibreglass Fabricators	Minto	New Brunswick
RASCO Specialty Metals Inc.	Saint John	New Brunswick
Associated Industrial Rubber Company Ltd. (Newfou	St. John's	Newfoundland
C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
CFM Rigging and Industrial Sales (Newfoundland)	St. John's	Newfoundland
Crane Supply (Newfoundland)	St. John's	Newfoundland
EMCO Supply (Offshore)	Mount Pearl	Newfoundland
Terra Nova Marine Co. Ltd.	Mount Pearl	Newfoundland
Tubecraft Atlantic Ltd.	St. John's	Newfoundland
Atkinson & Bower Limited	Shelburne	Nova Scotia
Atlantic Oilfield & Supplies	Dartmouth	Nova Scotia
Brooke Ocean Technology Limited	Dartmouth	Nova Scotia
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Crane Supply - Halifax	Dartmouth	Nova Scotia
CTH Instruments Ltd.	Dartmouth	Nova Scotia
EMCO Ltd.- Westlund Industrial Supply	Dartmouth	Nova Scotia
Fabco Industries Limited	Dartmouth	Nova Scotia
Goodall Rubber Company of Canada Limited	Dartmouth	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
IMP Group Limited (Nova Scotia)	Dartmouth	Nova Scotia
Industrial Marine Products Ltd.	Dartmouth	Nova Scotia
L.D. Campbell Machine Services	Antigonish	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
R.A. Murray International Limited	Halifax	Nova Scotia

Catalogue of Companies -Onshore Supply

Reinforced Plastic Systems Inc.	Mahone Bay	Nova Scotia
R-F Ironworks Ltd.	Dartmouth	Nova Scotia
Steel And Engine Products Limited	Liverpool	Nova Scotia
The Shaw Group Limited	Lantz	Nova Scotia
V.J. Rice Concrete Limited	Bridgetown	Nova Scotia
Hall & Stavert	Charlottetown	Prince Edward Island

Flanges

RASCO Specialty Metals Inc.	Saint John	New Brunswick
Crane Supply (Newfoundland)	St. John's	Newfoundland
EMCO Supply (Offshore)	Mount Pearl	Newfoundland
Crane Supply - Halifax	Dartmouth	Nova Scotia
Hall & Stavert	Charlottetown	Prince Edward Island

Float Equipment

Import Tool Corporation Ltd. (Newfoundland)	Mount Pearl	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
Labrador Technologies & Development	North West River	Newfoundland
G.W. Holmes Trucking Limited	Thorburn	Nova Scotia
Import Tool Corporation Ltd. (Nova Scotia)	Dartmouth	Nova Scotia

Flow Control Equipment

Metaltech Ltd./Ltée	Dieppe	New Brunswick
Nik Design Inc.	Verret	New Brunswick
INSTRUMAR Limited	St. John's	Newfoundland
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
Atkinson & Bower Limited	Shelburne	Nova Scotia
Atlantic Purification Systems Ltd.	Dartmouth	Nova Scotia
EnvironChem Engineering Consultants	Wolfville	Nova Scotia
Fossil Power Systems Inc.	Dartmouth	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Matronic Communications/Trophy Gallery	Port Hawkesbury	Nova Scotia

Gas Lift Equipment

Irving Shipbuilding Inc.	Saint John	New Brunswick
Import Tool Corporation Ltd. (Newfoundland)	Mount Pearl	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
A.W. Leil Cranes & Equipment Limited	Thorburn	Nova Scotia
Import Tool Corporation Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Pro-Dive Marine Services (N.S.) Ltd.	Dartmouth	Nova Scotia

Gauges

Associated Industrial Rubber Company Ltd. (Newfoundland)	St. John's	Newfoundland
Tubeecraft Atlantic Ltd.	St. John's	Newfoundland
Atlantic Scale Company Limited	Bridgewater	Nova Scotia

Instrumentation, Surface

Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
C-CORE	St. John's	Newfoundland
Guigne Technologies Ltd.	St. John's	Newfoundland
Instrument Concepts Inc.	Great Village	Nova Scotia

Catalogue of Companies -Onshore Supply

Romor Atlantic Limited	Dartmouth	Nova Scotia
Jars		
Blue Cove Group (1993) Inc.	Grande-Anse	New Brunswick
C.L. Decor Ltée	Saint-François-De	New Brunswick
Spots Pots Handmade Art Pottery	Halifax	Nova Scotia
Line Pipe		
Irving Shipbuilding Inc.	Saint John	New Brunswick
L & A Metalworks Inc.	Fredericton	New Brunswick
RASCO Specialty Metals Inc.	Saint John	New Brunswick
Savoie Lighting Inc.	Bouctouche	New Brunswick
Strescon Limited	Saint John	New Brunswick
Valron Engineers Inc	Moncton	New Brunswick
Acres International Limited (Newfoundland)	St. John's	Newfoundland
C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
Crane Supply (Newfoundland)	St. John's	Newfoundland
East Coast Tubulars Ltd.	Paradise	Newfoundland
Fab-Tech Industries Inc.	Glovertown	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
Acres International Ltd. (Nova Scotia)	Halifax	Nova Scotia
Atkinson & Bower Limited	Shelburne	Nova Scotia
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Crane Supply - Halifax	Dartmouth	Nova Scotia
EMCO Ltd.- Westlund Industrial Supply	Dartmouth	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
L.D. Campbell Machine Services	Antigonish	Nova Scotia

Liner Equipment & Services

Import Tool Corporation Ltd. (Newfoundland)	Mount Pearl	Newfoundland
IPM Services - Division of Schlumberger Canada Lin	Mount Pearl	Newfoundland
Import Tool Corporation Ltd. (Nova Scotia)	Dartmouth	Nova Scotia

Metal Buildings

Alliance Building Contractors Ltd.	Moncton	New Brunswick
Allsco Building Products Ltd.	Moncton	New Brunswick
ANOTEC	Moncton	New Brunswick
Apex Industries Inc.	Moncton	New Brunswick
Athol Buildings Systems Inc.	Campbellton	New Brunswick
Dugas, J.L. & Son Ltd.	Bertrand	New Brunswick
Gagnon Ornamental Works Ltd.	Grand-Sault/Gran	New Brunswick
Imperial Sheet Metal Ltd.	Richibucto	New Brunswick
L & A Metalworks Inc.	Fredericton	New Brunswick
Maritime Welding Ltd.	Bathurst	New Brunswick
Ocean Steel & Construction Ltd.	Saint John	New Brunswick
Technical Heat Treatment Services Ltd.	St-John	New Brunswick
Three-D GeoConsultants Ltd.	Fredericton	New Brunswick
Valron Engineers Inc	Moncton	New Brunswick
C-CORE	St. John's	Newfoundland
BEASY NICOLL ENGINEERING LIMITED	Dartmouth	Nova Scotia
Cherubini Metal Works Limited	Dartmouth	Nova Scotia
Jacques Whitford	Dartmouth	Nova Scotia
King Metal Fabricators Limited	Dartmouth	Nova Scotia
Mulgrave Machine Works Limited	Mulgrave	Nova Scotia
P.P.G. Canada Inc.	Bedford	Nova Scotia
Simpson Installations Limited	Oxford	Nova Scotia

Nitrogen Equipment & Services

Air Liquide Canada Inc.	St. John's	Newfoundland
AMI Offshore Inc.	St. John's	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
IPM Services - Division of Schlumberger Canada Lin	Mount Pearl	Newfoundland
Nowasco Well Service Limited (Newfoundland)	St. John's	Newfoundland
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Nowasco Well Service Limited (Nova Scotia)	Dartmouth	Nova Scotia

Offshore Drilling & Production Equipment

Irving Shipbuilding Inc.	Saint John	New Brunswick
ALTINEX CANADA LTD.	St. John's	Newfoundland
Bailey Sea (NFLD) Ltd.	St. John's	Newfoundland
C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
Friede Goldman Newfoundland Ltd.	Marystown	Newfoundland
Glomar International (Canada) Drilling Co.	St. John's	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
Toromont Cat Power Systems	St. John's	Newfoundland
Atkinson & Bower Limited	Shelburne	Nova Scotia
Atlantic Alliance Offshore Ltd.	Dartmouth	Nova Scotia
Banc Metals	Dartmouth	Nova Scotia
C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia

Catalogue of Companies -Onshore Supply

Halifax Shipyard	Halifax	Nova Scotia
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Mulgrave Machine Works Limited	Mulgrave	Nova Scotia
Offshore Recruiting Services (Nova Scotia)	Halifax	Nova Scotia
Schlumberger of Canada	Dartmouth	Nova Scotia
Sea Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia

Packers, Service Tools

Baker Hughes Canada Inc.	Mt. Pearl	Newfoundland
Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
Import Tool Corporation Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Import Tool Corporation Ltd. (Nova Scotia)	Dartmouth	Nova Scotia

Perforating supplies

Halliburton Energy Services (Newfoundland)	Mount Pearl	Newfoundland
IPM Services - Division of Schlumberger Canada Lin	Mount Pearl	Newfoundland
Halliburton Energy Services (Nova Scotia)	Dartmouth	Nova Scotia
Schlumberger of Canada	Dartmouth	Nova Scotia

Pipe

Associated Industrial Rubber Co. Ltd.	Moncton	New Brunswick
Atlantic Industries Limited	Dorchester	New Brunswick
Atlantic Valve & Fittings Limited	Saint John	New Brunswick
Imperial Sheet Metal Ltd.	Richibucto	New Brunswick
Ipex Inc.	Saint John	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
JUA Engineering	Oromocto	New Brunswick
L & A Metalworks Inc.	Fredericton	New Brunswick
Maritime Fibreglass Fabricators	Minto	New Brunswick
MAXCOR INTERNATIONAL	Fredericton	New Brunswick
Metaltech Ltd./Ltée	Dieppe	New Brunswick
Northern Plastics Ltd.	Grand Manan	New Brunswick
Pickett Consultants Ltd.	Riverview	New Brunswick
RASCO Specialty Metals Inc.	Saint John	New Brunswick
Savoie Lighting Inc.	Bouctouche	New Brunswick
Strescon Limited	Saint John	New Brunswick
Valron Engineers Inc	Moncton	New Brunswick
Acres International Limited (Newfoundland)	St. John's	Newfoundland
C.E. Franklin Ltd. (Newfoundland)	St. John's	Newfoundland
Crane Supply (Newfoundland)	St. John's	Newfoundland
East Coast Hydraulics Nfld. Ltd.	Mount Pearl	Newfoundland
East Coast Tubulars Ltd.	Paradise	Newfoundland
EMCO Supply (Offshore)	Mount Pearl	Newfoundland
Fab-Tech Industries Inc.	Glovertown	Newfoundland
F I Canada Oilfield Services Ltd. (Newfoundland)	Mount Pearl	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
Russel Metals Inc. (Newfoundland)	Mount Pearl	Newfoundland
Tubecraft Atlantic Ltd.	St. John's	Newfoundland
Acres International Ltd. (Nova Scotia)	Halifax	Nova Scotia
Atkinson & Bower Limited	Shelburne	Nova Scotia
Avance Laboratories Limited	Head Of Chezzetc	Nova Scotia

Catalogue of Companies -Onshore Supply

C.E. Franklin Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Crane Supply - Halifax	Dartmouth	Nova Scotia
EMCO Ltd.- Westlund Industrial Supply	Dartmouth	Nova Scotia
Fabco Industries Limited	Dartmouth	Nova Scotia
F I Canada Oilfield Services Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Gartec Industrial Supplies Inc.	Beaver Bank	Nova Scotia
G.W. Holmes Trucking Limited	Thorburn	Nova Scotia
Industrial Marine Products Ltd.	Dartmouth	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
L.D. Campbell Machine Services	Antigonish	Nova Scotia
Mills Painting & Sandblasting Limited	Dartmouth	Nova Scotia
Pioneer Metal Worx	Dartmouth	Nova Scotia
Reinforced Plastic Systems Inc.	Mahone Bay	Nova Scotia
R-F Ironworks Ltd.	Dartmouth	Nova Scotia
Romor Atlantic Limited	Dartmouth	Nova Scotia
Russel Metals Inc. (Nova Scotia)	Lakeside	Nova Scotia
Samson Enterprises Ltd.	Arichat	Nova Scotia
Seaboard Offshore Services Ltd.	Port Hawkesbury	Nova Scotia
Steel And Engine Products Limited	Liverpool	Nova Scotia
The Shaw Group Limited	Lantz	Nova Scotia
V.J. Rice Concrete Limited	Bridgetown	Nova Scotia
Coles Associates Ltd.	Charlottetown	Prince Edward Island

Pipeline Equipment and Services

FGA Consultants Ltd.	Fredericton	New Brunswick
JUA Engineering	Oromocto	New Brunswick
Cougar Helicopters Inc. (Newfoundland)	St. John's	Newfoundland
M & M Engineering Limited	St. John's	Newfoundland
Nowsco Well Service Limited (Newfoundland)	St. John's	Newfoundland
Pro-Dive Marine Services (NFLD)	Mount Pearl	Newfoundland
Allseas Canada Ltd.	Halifax	Nova Scotia
Atlantic Alliance Offshore Ltd.	Dartmouth	Nova Scotia
Cougar Helicopters Inc. (Nova Scotia)	Waverley	Nova Scotia
Dominion Diving Limited	Dartmouth	Nova Scotia
Fugro Jacques Geosurveys Inc.	Dartmouth	Nova Scotia
Geomarine Associates Ltd.	Halifax	Nova Scotia
Nowsco Well Service Limited (Nova Scotia)	Dartmouth	Nova Scotia
Pro-Dive Marine Services (N.S.) Ltd.	Dartmouth	Nova Scotia
PV Inspection Services Ltd. / PV Offshore Inc.	Dartmouth	Nova Scotia
R-F Ironworks Ltd.	Dartmouth	Nova Scotia
Romor Atlantic Limited	Dartmouth	Nova Scotia

Pneumatics

C-CORE	St. John's	Newfoundland
Tubecraft Atlantic Ltd.	St. John's	Newfoundland

Pressure Vessels

Apex Industries Inc.	Moncton	New Brunswick
CFM	Saint John	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
L & A Metalworks Inc.	Fredericton	New Brunswick
MQM	Tracadie-Sheila	New Brunswick

Catalogue of Companies -Onshore Supply

Ocean Steel & Construction Ltd.	Saint John	New Brunswick
Precision Metal Works Ltd.	Mactaquac	New Brunswick
Bowringer Engineering Ltd.	St. John's	Newfoundland
Fishery Products International (FPI)	St. John's	Newfoundland
A.F. Theriault & Son Limited	Meteghan River	Nova Scotia
Banc Metals	Dartmouth	Nova Scotia
Composites Atlantic Limited	Lunenburg	Nova Scotia
G.W. Holmes Trucking Limited	Thorburn	Nova Scotia
Halifax Shipyard	Halifax	Nova Scotia
Hermes Electronics Incorporated	Dartmouth	Nova Scotia
I. Matheson & Co. (1974) Limited	New Glasgow	Nova Scotia
Mulgrave Machine Works Limited	Mulgrave	Nova Scotia
R.A. Murray International Limited	Halifax	Nova Scotia
Steel And Engine Products Limited	Liverpool	Nova Scotia
TrentonWorks Ltd. Forging Division	Trenton	Nova Scotia
Atlantic Systems Manufacturing Ltd.	Charlottetown	Prince Edward Island

Production Equipment Manufacturing

ADI Group Inc.	Fredericton	New Brunswick
Adtech Manufacturing Ltd.	Fredericton	New Brunswick
AMF - Atlantic Mini-Fridge Co. Ltd.	Dieppe	New Brunswick
Apex Technologies Div. of Apex Industries Inc.	Moncton	New Brunswick
Arvin Special Machinery Ltd.	Miramichi	New Brunswick
Atlantic Nuclear Services Ltd.	Fredericton	New Brunswick
BWS Manufacturing Ltd.	Centreville	New Brunswick
Cards Aquaculture Products Ltd.	Pennfield	New Brunswick
Chemises J.M.L. Shirts Inc.	Edmundston	New Brunswick
Craig Manufacturing Ltd.	Hartland	New Brunswick
Dynex Manufacturing Ltd.	Fredericton	New Brunswick
Enseignes Imperial Signs	Edmundston	New Brunswick
Grand Falls Industries Ltd.	Grand Falls	New Brunswick
Kanalfakt Inc.	Bouctouche	New Brunswick
Les Entreprises Dovico Enterprises Inc.	Moncton	New Brunswick
Malley Industries Inc.	Moncton	New Brunswick
Maritime Hydraulic Repair Cntr 1997 Ltd.	Moncton	New Brunswick
Micro Optics Design Corporation	Moncton	New Brunswick
Nanoptix, Inc.	Dieppe	New Brunswick
Ocean Steel & Construction Ltd.	Saint John	New Brunswick
Roger C. Ouellette Ltd./Ltée	Grand Falls	New Brunswick
SDI Aviation	Nackawic	New Brunswick
Spielo Gaming International	Dieppe	New Brunswick
Strait Moorings International Inc.	Shediac	New Brunswick
The Panel Shop	Fredericton	New Brunswick
Thomas Equipment Ltd.	Centreville	New Brunswick
Tilley Manufacturing Ltd.	Arthurette	New Brunswick
Xylaur Enterprises Limited	Fredericton	New Brunswick
AGRA Monenco	St. John's	Newfoundland
Arrow Construction Products Ltd. (Newfoundland)	Mount Pearl	Newfoundland
Bowringer Engineering Ltd.	St. John's	Newfoundland
CFM Rigging and Industrial Sales (Newfoundland)	St. John's	Newfoundland
C&W Industrial Fabrication & Marine Equipment Ltd.	Bay Bulls	Newfoundland
FMC of Canada Ltd. (Newfoundland)	St. John's	Newfoundland
G.J. Cahill & Co. Ltd (Newfoundland)	St. John's	Newfoundland

Catalogue of Companies -Onshore Supply

Hunt's Transport Ltd.	Mount Pearl	Newfoundland
Hyflodraulic Limited	Mount Pearl	Newfoundland
INSTRUMAR Limited	St. John's	Newfoundland
M & M Engineering Limited	St. John's	Newfoundland
ABCO Industries Limited	Lunenburg	Nova Scotia
A.C. Dispensing Equipment Inc.	Lower Sackville	Nova Scotia
Armament Technology	Halifax	Nova Scotia
Arrow Construction Products Ltd. (Nova Scotia)	Dartmouth	Nova Scotia
Associated Industrial Rubber Co.	Dartmouth	Nova Scotia
Atkinson & Bower Limited	Shelburne	Nova Scotia
Atlantic Engine Control and Equipment	Dartmouth	Nova Scotia
Bert Van Leeuwen Industrial Design Ltd.	Amherst	Nova Scotia
Cottage Woodworkers	Hampton	Nova Scotia
Creative Canvas Manufacturing Incorporated	Dartmouth	Nova Scotia
Detroit Diesel Allison Canada East (1995) Inc.	Dartmouth	Nova Scotia
Heritage Memorials Limited	Windsor	Nova Scotia
Hermes Electronics Incorporated	Dartmouth	Nova Scotia
I.M.P. Group Limited Aerospace Division	Halifax	Nova Scotia
Industrial Environmental Services Incorporated	Debert	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
KB Electronics (1989) Limited	Bedford	Nova Scotia
Lake City Employment Services Assoc.	Dartmouth	Nova Scotia
Lunenburg Industrial Foundry & Engineering Ltd.	Lunenburg	Nova Scotia
Maritime Stress Contracting Limited	Dartmouth	Nova Scotia
Metro Micro Products	Dartmouth	Nova Scotia
Municipal Ready-Mix Limited	Sydney	Nova Scotia
Nautel Limited	Tantallon	Nova Scotia
Newmac Mfg. Inc.	Debert	Nova Scotia
Nova Crystals Ltd.	Halifax	Nova Scotia
Nu-Air Ventilation Systems Inc.	Newport	Nova Scotia
Orion Electronics Limited	Windsor	Nova Scotia
Peacock Inc. - Mechanical/ Service Division	Dartmouth	Nova Scotia
Pure Energy Battery Inc.	Amherst	Nova Scotia
Pylon Atlantic Inc.	Dartmouth	Nova Scotia
Rosborough Boats	Halifax	Nova Scotia
Rossway Enterprises Ltd	Digby	Nova Scotia
Schneider Canada Inc.	Truro	Nova Scotia
Star Machine Limited	Oxford	Nova Scotia
Strictly Sales & Service Inc.	Dartmouth	Nova Scotia
Thermo-Cell Industries Ltd.	Debert	Nova Scotia
The Shaw Group Limited	Lantz	Nova Scotia
The Trail Blazer	Dartmouth	Nova Scotia
Ven-Rez Products Ltd.	Shelburne	Nova Scotia
Vernon D'Eon Lobster Plugs Limited	Middle West Pubn	Nova Scotia
WCC Refurb Limited/WCC Offshore	Halifax	Nova Scotia
Wire Rope Industries Ltd.	Dartmouth	Nova Scotia
Zep Manufacturing Company of Canada	Dartmouth	Nova Scotia
Atlantic Systems Manufacturing Ltd.	Charlottetown	Prince Edward Island
Diversified Metal Engineering Ltd.	Charlottetown	Prince Edward Island
PEI Innovations Inc.	Cardigan	Prince Edward Island

Pumps, Production Pressure

Deschenes Drilling Ltd.	Saint-Quentin	New Brunswick
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Catalogue of Companies -Onshore Supply

Irving Shipbuilding Inc.	Saint John	New Brunswick
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
G.W. Holmes Trucking Limited	Thorburn	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
Hydraulic Systems Limited (Nova Scotia)	Dartmouth	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia
Nova Magnetics Limited	Dartmouth	Nova Scotia

Pumps, Submersible Electric

Irving Shipbuilding Inc.	Saint John	New Brunswick
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Reamers

Irving Shipbuilding Inc.	Saint John	New Brunswick
Smith International Canada, Ltd. (N.S.)	Boutilliers Point	Nova Scotia

Safety Clothing

Morgan Rapps Corporation	St. Andrews	New Brunswick
Rant Promotions	Riverview	New Brunswick
Unitex N.B. Company Ltd.	Moncton	New Brunswick
IMP Group Limited (Marine Division)	St. John's	Newfoundland
A.F. Theriault & Son Limited	Meteghan River	Nova Scotia
Bugs Buzz Off	Truro	Nova Scotia
Co-Operative Artisanale De Cheticamp	Cheticamp	Nova Scotia
IMP Group Limited (Nova Scotia)	Dartmouth	Nova Scotia
Mill Supply Ltd.	Dartmouth	Nova Scotia

Catalogue of Companies -Onshore Supply

Safety Equipment & Trailers

Mulgrave Machine Works Limited	Mulgrave	Nova Scotia
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Shower Units

Irving Shipbuilding Inc.	Saint John	New Brunswick
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Solvents

Superior Waterproof Coatings	Gander	Newfoundland
Alpha Chemical Limited	Dartmouth	Nova Scotia
HCI Canada Inc.	Dartmouth	Nova Scotia

Supply Stores

Catherine Karnes Munn Collection	Fredericton	New Brunswick
Classic Paint & Paper Ltd.	Sussex	New Brunswick
Irving Shipbuilding Inc.	Saint John	New Brunswick
La Difference Fine Craft and Art	Moncton	New Brunswick
Savoie Lighting Inc.	Bouctouche	New Brunswick
Compusult Limited	Mount Pearl	Newfoundland
Bay Life Art Limited	Halifax	Nova Scotia
Frame Express Inc.	Dartmouth	Nova Scotia
Micmac Heritage Gallery	Truro	Nova Scotia
U.J. Robichaud & Son Ltd.	Meteghan Centre	Nova Scotia
Islandscapes etc.	Charlottetown	Prince Edward Island
Marco's Key Advantages For Sports, Work & Play	Wellington Station	Prince Edward Island

Swabbing Equipment & Supplies

Afonso Diving Contractors Ltd.	St. John's	Newfoundland
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Testing Equipment Manufacturing & Rentals

WCC Refurb Limited/WCC Offshore	Halifax	Nova Scotia
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Tubing Supply

Atlantic Valve & Fittings Limited	Saint John	New Brunswick
Maritime Fibreglass Fabricators	Minto	New Brunswick
Crane Supply (Newfoundland)	St. John's	Newfoundland
Tubecraft Atlantic Ltd.	St. John's	Newfoundland
Crane Supply - Halifax	Dartmouth	Nova Scotia

Valve Manufacture

Atlantic Controls Ltd. (New Brunswick)	Saint John	New Brunswick
Atlantic Valve & Fittings Limited	Saint John	New Brunswick
Maritime Industrial Machining Inc.	Saint John	New Brunswick
Mobile Valve Repairs & Manuf. N.B. Ltd.	Tracy	New Brunswick
Nik Design Inc.	Verret	New Brunswick
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
Tubecraft Atlantic Ltd.	St. John's	Newfoundland
Banc Metals	Dartmouth	Nova Scotia
Hawboldt Industries (1989) Ltd.	Chester	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia

Catalogue of Companies -Onshore Supply

Valve Parts, Service & Repair

Mobile Valve Repairs & Manuf. N.B. Ltd.	Tracy	New Brunswick
Banc Metals	Dartmouth	Nova Scotia
ITC Canada Limited	Halifax	Nova Scotia

Valve Supply

Atlantic Valve & Fittings Limited	Saint John	New Brunswick
Sea Systems Limited (Newfoundland)	St John's	Newfoundland
Tubeecraft Atlantic Ltd.	St. John's	Newfoundland

Wellhead Completion Equipment

FMC of Canada Ltd. (Newfoundland)	St. John's	Newfoundland
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Wellhead Manufacture

FMC of Canada Ltd. (Newfoundland)	St. John's	Newfoundland
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Whipstocks

Smith International Canada, Ltd. (N.S.)	Boutiliers Point	Nova Scotia
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